

SURVEY RECORD No 238.

Field notes of the survey of sections 4, 5, and 6, Township 138, Range 29, and sections 31, 32 and 33, Township 139, Range 29 as made by A. W. Moulster, Deputy County Surveyor of Cass County Minnesota.

Wednesday May 11th 1910. A. W. Moulster transitman, George Roscoe & Ed Parker chairmen, John Edwards, Ruben Smith, Charles Westfall apmen; John P. Seef & Mr Stingley assisting. Beginning at the N.W. corner of section 6, Twp. 138, Range 29, being the S.W. corner of section 31, Twp. 138, Rg. 29, setting on stake which had been set by Curo Iron east on 8°15' var: at 200 pin: @ 400 set pin: at 416 set hub: at 450 set pin: at 648 set hub: at 650 set pin: at 710 set pin: at 761.50 Meander corner No. 17, of Twp. 138, Rg. 29, on the west side of Lake Hattie, sets North 5.70 feet. Found S.E. dry stub plainly marked and the N.W. stump plainly marked: I set post by flat measurement.

I then walk around the lake and find the bearing trees to Meander Corner to No. 16 of Twp. 138-29 plainly marked, from which I set a post by flat measurement after which the bearing trees stand as follows:

White Pine stump 30, S1°52'E. 9.24 feet. White Pine stump 30, N53°49'E 31.02 ft. distant. Quit for night.

Thursday May 12th 1910 Stingley, Charley Westfall, Edwards, Ed. Parker, Geo. Roscoe, R. Smith and I. (Roscoe & Parker chairmen) setting on M.C. No. 16 and backsighting on M.C. No. 17, Iron East on 8°30' var: at 27 set hub: at 200 pin: at 400 pin: at 498.96 I look for 1/4 corner between sections 6, T. 138-Rg. 29 + sec. 31-T. 139-Rg. 29. evidently burned out so I continue line East: at 463.85 set hub: at 600 pin: at 800 pin: at 975.75 hub in log: at 1000 set pin: 1200 pin: 1400 set hub west side of old wagon road bearing N. + S.: 1600 pin 1800 pin. 2000 set hub: 2400 pin: 2600 pin: 2645 set hub: 2800 pin: 2920 enter Norway Brook: 2965 leave brook: 3000 pin: at 3159.25 feet the true N.E. corner of section 6, sets South 33.30 feet. I set corner by flat measurement old B.T.S. then stands as follows: N. Pine stump, N30°53'E. Oak stump, N51°17'W: at 8°15' var.

I set an oak post marked "31, 32, 5 and 6" This is the corner to sec. 5 and 6 Twp. 138-Rg. 29 and sec. 32 + 31 Twp. 139-Rg. 29, where Gov't notes call for: Yellow Pine 16, N28°E 33 lks. (= 21.78 feet.) Oak 8 N 50°W 82 lks. (= 54.12 ft.) Aspen 9, S 35°E 173 links. (= 114.18 ft.) Run East on 8°15' var. between north boundary of sec. 5, -138-29 and south boundary of sec. 32, 139-29:

At 200 pin: at 296.60 set hub: at 400 pin: 600 pin: 789.90 hub: cross wire fence: 800 pin: 1000 pin: 1200 set hub: 1300 enter open wet meadow: at 1400, 1600, 1800 set stake in meadow: at 2000 set hub and lv. meadow.

Friday May 13th 1910. Charley Westfall, Ruben Smith, John Edwards, Stingley, Geo. Roscoe and Parker chairmen continue East. At 2200, 2400, and 2600 ft. set pin. At the 1/4 corner between sec. 5 and 32 U.S. notes call for: Yellow Pine 14, N 31°W 71 lks. (= 46.86 feet.) Black Pine 12, S 7°E. 74 links (= 48.84 feet.) The 1/4 corner is burned out and we continue East. At 2800 set pin: at 3000 enter small marsh: at 3100 lv. same: at 3200 hub: at 3400, 3600, 3800 pin: at 4000 hub enter wet marsh: at 4200 pin in marsh: at 4400 lv. marsh: 4600 hub: 4800 pin: 4850 enter slough: 4900 lv. same: 5000 pin: 5200 hub: at the N.E. corner of sec. 5-138-29, Gov't notes call for:

Black Pine 9, N54°E 27 links (= 17.82 ft.) Black Pine 7, N 62°W 19 lks. (= 12.54 ft.) Black Pine 5 S 60°W 24 lks. (= 15.84 ft.) Black Pine 6 S 47°E 8 ... (= 5.28 ft.)

Twp cor

Run E 8°15'

M.C. 17

M.C. No. 16

M.C. 16

Run E 8°30'

1/4 corner 6 and 31

Brook

Sec. 6 corner 5-6-31-32

Run E 8°15'

1/4 5+31

Sec Cor 4-5-32-33

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4-5-32-37
Min E
800
1/4
4-32-30
Sec cor
3-4-33-34

We find the hub set by Russ for the true corner with old bearing trees plain, where we set a three corner rock for the true corner to sections 4, 5, 32 & 33, between Township 138-29 & 139-29. At 5311.70 E. the N.E. corner of sec. 5 sets South 67.35 feet. Setting on the corner to sec. 4, 5, 32 & 33, run East on 8° var. at 200, 400, set pin: at 481.80 set hub, tack in log: 600, 800, 1000, 1200 set pin: at 1320 hub: 1400, 1600, 1800, 2000 set pin: at 2200 hub: 2400, 2600 2640 set pin: the 1/4 corner is lost. Gov't notes call for: Aspen 8, S 63° W 6. Aspen 10 N 27° E 40. Continue East: at 2800 pin: 3000 pin: - Old stage road bears N.E. & S.W. at 3200 hub on hill: 3400 pin on hill: 3503.70 hub on hill: 3600 pin side of hill: 3800, 4000, 4200, 4400, 4600, 4800 set pin: 5000 hub on small hill: at 5310.90 the N.E. corner of sec. 4 (being the S.E. corner of sec. 33) bears South 79.35 feet, where Gov't notes call for: N. Pine 12, N 40° E 132 links (= 87.12 ft.) N. Pine 14, N 73° W 126 links (= 83.16 ft.) N. Pine 14, S 70° 30' W 66 links (= 43.56 ft.) Old N.P. Stump 14 bears N 73° 35' W. Old N.P. Stump 14 bears S 72° 17' W. Old N.P. Stump bears N 40° 24' E. Saturday May 14th 1910. Geo. Roscoe, Charley Westfall & Moulster: Correcting correct line: Edwards, Parker, Stingley and Smith cutting road around Lake Hattie Correcting North boundary of sec. 4-138-29, (being the South boundary of sec. 33, 139-29). At 5310.90 true N.E. corner sets South 79.35 feet. 5000 sets South 74.73 feet. 3503.70 sets South 52.34 feet. 3200 sets South 47.82 feet. 2200 sets South 32.90 ft. 1320 sets South 19.57 ft. 481.80 sets South 7.20 ft. Correcting North Boundary of sec. 5-138-29, (being South bdy of sec. 32-139-29) At 5311.70 true N.E. cor. of sec. 5, sets South 67.35 ft. 4600 sets South 58.33 ft. 4000 sets S. 50.72 ft. 3200 sets S. 40.56 ft. 2000 sets S. 25.36 ft. 1200 sets S. 15.21 ft. 789.90 sets S. 10.00 ft. 296.60 sets S. 3.70 feet. Correcting North boundary of sec. 6-138-29, (being South line of sec. 31-139-29) East of Lake. At 3159.25 feet East of M.C. No. 16 true N.E. cor. of sec. 6, sets South 33.30 feet. 2645 sets South 27.80 ft. 2000 sets S. 21.15 ft. 1400 sets S. 14.70 ft. 975.25 sets S. 10.27 ft. 463.85 sets S. 4.80 ft. 27. sets S 0.30 of a foot. Correcting West side of Lake. At 761.50 M.C. No. 17, sets North 5.70 feet. 648 sets N. 4.85 feet. 416. sets N. 3.10 feet. Section 6-138-29, North Boundary. At a point 600 ft. East of M.C. No. 16, East side of Lake Hattie the road angles and measurements are as follows: The Town line between M.C. No. 16, and the N.E. of sec. 6 used as a base line var. 8° 10'. S 47° 53' W, 244.30 feet: S 64° 20' W, 1424.70 feet. N 79° 38' W, 405.70 feet: N 61° 29' W, 237.10 feet. N 54° 06' W, 128.40 ft. N 13° W, 199 feet. N 31° 50' W, 128.15 ft.: N 78° 42' W, 223.30 feet: N 23° 02' W, 162 ft. Intersects at a point 425 feet East of N.W. cor. of sec. 6.

Round angle

Surveyed May 11th 1910 to May 14th 1910
Recorded Sept. 30th 1913.

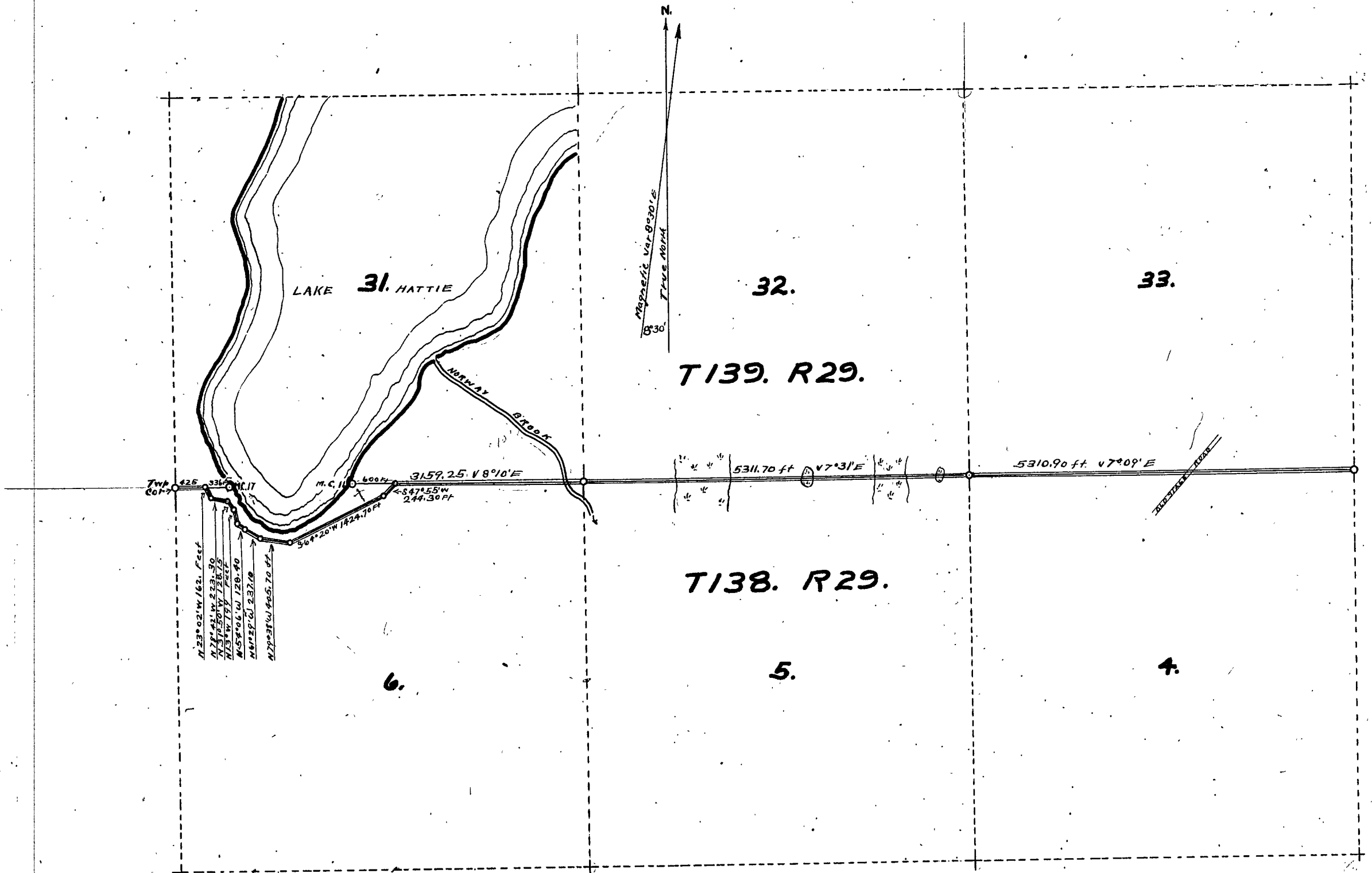
John W. Curo
County Surveyor Cass Co Minn

138-29			
Sec	Cont'd to Page of	Box	
4	35	"	"
5	"	"	"
6	"	"	"
139-29			
31	"	"	"
32	"	"	"
33	"	"	"

PLAT OF
SECTIONS 4, 5, 6, T138 R29-5th P.M.
" 31, 32, 33, T139 R29 W 5, P.M.

SCALE: 1 INCH = 1500 FEET.

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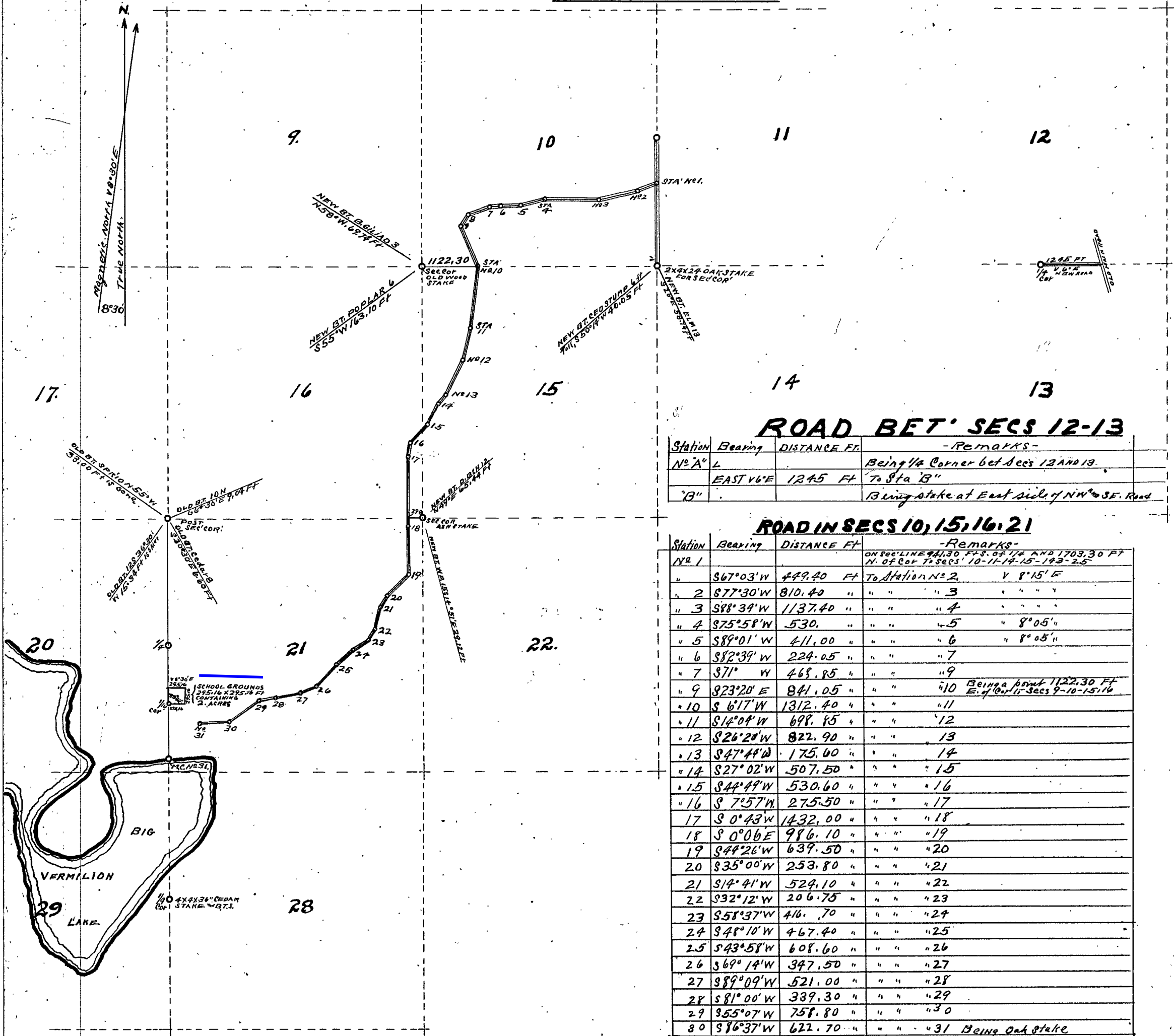
Survey begun May 11th 1910
" finished " 14th 1910
" Recorded Sept 30th 1913
John W. Cuss & Surveyors
Cass Co. Minnesota

138-29			
4	"	35	" B"
5	"	"	"
6	"	"	"
139-29			
31	"	"	"
32	"	"	"
33	"	"	"

PLAT OF
TWP 143^N R₉ 25^W 5.P.M.
Sections 9.10.11.12.13.14.15.16.17.20.
21.22.28.29.

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Scale: - 1/4 INCH = 2000. Feet.



ROAD BET' SECS 12-13

Station	Bearing	DISTANCE FT.	Remarks
N ^o A			Being 1/4 Corner bet Secs 12 and 13.
	EAST V6'E	1245 FT	To Sta B
B			Being stake at East side of NW 1/4 SE. Road

ROAD IN SECS 10, 15, 16, 21

Station	Bearing	DISTANCE FT.	Remarks
N ^o 1			ON SEC LINE 941.30 FT. S. OF 1/4 AND 1703.30 FT N. OF COR TO SECS 10-11-14-15-19-25
"	S67°03'W	449.40 FT	To Station N ^o 2. V 8'15" E
"	S77°30'W	810.40 "	" " " 3
"	S88°39'W	1137.40 "	" " " 4
"	S75°58'W	530. "	" " " 5 " 8°05"
"	S89°01'W	411.00 "	" " " 6 " 8°05"
"	S82°39'W	224.05 "	" " " 7
"	S71° W	468.85 "	" " " 9
"	S23°20' E	841.05 "	" " " 10 Being back 1122.30 FT E. of Cor. 15 Secs 9-10-15-16
"	S 6'17'W	1312.40 "	" " " 11
"	S12°04'W	698.85 "	" " " 12
"	S26°20'W	822.90 "	" " " 13
"	S47°44'W	175.60 "	" " " 14
"	S27°02'W	507.50 "	" " " 15
"	S44°49'W	530.60 "	" " " 16
"	S 7°57'W	275.50 "	" " " 17
"	S 0°43'W	1432.00 "	" " " 18
"	S 0°06'E	986.10 "	" " " 19
"	S44°26'W	639.50 "	" " " 20
"	S35°00'W	253.80 "	" " " 21
"	S12°41'W	524.10 "	" " " 22
"	S32°12'W	206.75 "	" " " 23
"	S58°37'W	416.70 "	" " " 24
"	S48°10'W	467.40 "	" " " 25
"	S43°58'W	608.60 "	" " " 26
"	S69°14'W	347.50 "	" " " 27
"	S89°09'W	521.00 "	" " " 28
"	S81°00'W	339.30 "	" " " 29
"	S55°07'W	758.80 "	" " " 30
"	S16°37'W	622.70 "	" " " 31 Being Oak stake Oak stake
31			

Survey begun September 23rd 1913
Survey Completed " 29th 1913
Survey Recorded October 1st 1913
John W. Curran, Cass Co. Minn.

Sec	Cont'd To	Page	Book
9	"	"	"
10	"	"	"
11	"	"	"
12	"	"	"
13	"	"	"
14	"	"	"
15	"	"	"
16	"	"	"
17	"	"	"
20	"	"	"
21	"	"	"
22	"	"	"
28	"	"	"
29	"	"	"

SURVEY RECORD NO. 239.

143-25

Field notes of a survey in sections 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 28 and 29, Township No. 143 N, Range No. 25 W, 5th Principal Meridian, as made by John W. Curo, County Surveyor of Cass County Minnesota.

Tuesday Sept. 23rd 1913, John W. Curo, Transitman and chairman. C. E. Coggeshall, chairman; James Ross and Frank Sterns apmen.

We use a Heller & Brightly Engineers transit in perfect adjustment & a 100 foot Monarch steel tape and a 300 foot Chicago steel tape double center hubs and plumb-bob used in chaining. We go to the 1/4 corner bet.

17-20-21

secs. 20 & 21, T. 143, Rg. 25, where U.S. notes call for post and: Sine 6 N 79° W 10 links. Fir 4 S 80° E 6 links. We find the body of the fir on the ground plainly marked "1/4" B.T." and the stumps of both old bearing trees from which we roughly establish the 1/4 corner and then run a compass line North, Curo uses a Gurley compass and paces the line var. 8° 30' E. At 300 paces Mr Coggeshall quits and goes home while Curo, Sterns and Ross continue North: at 1000 paces the corner to sections 16, 17, 20 & 21 sets East about 75 feet.

17-14

20-21

At the corner to sections 16-17-20-21-T. 143, Rg. 25, U.S. notes call for a post and: Cedar 10, N 76° E 8 links (= 5.28 feet) Cedar 8 S 44° E 10 links (= 6.60 ft.) Cedar 12 S 25° W 30 lks. (= 19.80 ft.) Spruce 10 N 55° W 5.0 links. (= 33.00 ft.)

The N.W. spruce is gone but there is an old Tamarac, down and out by the roots: this may have been marked, but as it is not "Spruce" and is out by the roots we do not use it. We find the N.E. S.W. & S.E. Cedars standing green and plainly marked, from which we set the true corner by proportionate measurement from face of trees as follows: We find the U.S. distance between the N.E. & S.W. trees 5.28 ft. plus 19.80 ft. equals 25.08 ft. total U.S. chain and my chain only gives the total distance 19.43 ft. or 5.65 feet short the U.S. chain. By proportionate measure the S.W. distance of 19.80 feet U.S. chain equals 15.34 ft. my chain; or 4.46 feet short: And the N.E. distance of 5.28 ft. U.S. chain, equals 4.09 ft. my chain or 1.19 ft. short: We drive a 4x4x75 inch dry cedar post, five feet into the swamp for the true corner to secs. 16-17-20-21 T. 143, R 25

17-16

20-21

5th P.M. and at 7° var E. we drive a 20 d spike in flat spot at base of old U.S. bearing trees which bears as follows: Old B.T. being Cedar 10, bears N 66° 30' E 4.09 feet distant: Old B.T. being Cedar 8 bears S 30° 30' E 6.60 feet distant: Old Cedar bearing tree 12, bears S 36° 30' W 15.34 feet distant: We mark new bearings as follows: Dead Tamarac 12, N 1° 10' E. 15.42 feet distant: Dead Cedar 6 N 67° 20' E 28.49 feet to spike head in flat spot at base of trees: set with Gurley compass, Curo & Ross chaining. Cold, sleet & snow quit for night.

17-14

20-21

Wednesday Sept. 24th 1913. rained all A.M. Beginning at the corner to secs. 16-17-20-21-T. 143-25 run South on variation about 7° E. thro heavy down cedar and wet solid swamp: At 610 feet cross 6 foot creek, runs S.E. medium current: at 300, 600, 900, 1200, 1500 set stakes and quit for night. Curo & Coggeshall chained Sterns & Ross cut brush.

14

29-28

Thursday Sept. 25th 1913 A.M. still raining but we work. Ross & Coggeshall go to Cohasset, Sterns & Curo row across Big Vermillion lake "pick up" Elise "Lizzie" Poirier and Tom McLaughlin who show us the 1/4 corner between sections 28 & 29, Twp. 143-Rg. 25, where U.S. notes call for a post and: Sine 6 S 88° W, 15 links distant (= 9.90 feet) Cedar 8 S 35° E, 14 lks. (= 9.24 ft.) We find the S.W. Sine, standing green and plainly marked, and the

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143-25

14
29-28

stump of the Cedar with figures partly burned off, tree down stump 4 feet high: We find the distance between the trees by way of courses to be 9.26 feet to long, so we set the 1/4 corner by proportionate measurement from face of the trees: By proportion, 9.90 ft. U.S. plus 4.79 ft. equals 14.69 ft. my chain: 9.24 ft. U.S. plus 4.47 ft. equals 13.71 ft. my chain: total distance via courses is 28.40 feet: We set a 4x4x36 inch cedar stake with tack in top for

14
29-28

the true 1/4 corner between sec. 28 + 29 - T. 143 - R. 25 and mark new bearings as follows: Cedar stump 24, bears S 73° E, 32.60 feet distant: Cedar stump 24 bears S 29° E 72.98 feet distant: Balcon 10, v 9° W 51.95 feet distant to head of 20 d spike driven in flat spot at base of bearings, var. 8° 30' E. Set with a curly compass and 100 ft. Monarch steel tape Curo & Sterns chainmen.

Big
Vermillion
Lk
No 29
So side

Curo compassman. Poirier & McLaughlin apmen: We run North: var. 8° 30' E. to M.C. No. 29 on south side of Big Vermillion Lake, where U.S. notes call for post and: Aspen 4 S 50° E 78 links: Aspen 4 S 84° W 28 links:

As it begins to rain hard, and it is nearly noon, and as Mr. James J. Flynn a Surveyor, and Mr. Poirier have looked for this corner and pronounced it lost, we quit and go to dinner. P.M. Rained all P.M. crew laid up.

17 14
20 21

Friday Sept. 26th 1913. Curo transhuan and chain. Jas. Ross chain & flag: Sterns, McLaughlin and Poirier, apmen continue transit line South from corner to sections 16-17-20-21 - T. 143 - R. 25: At 1800 set stake: at 1852 center of 10. foot creek runs East quite fast current: at 2100 stake: at 2150 leave swamp, enter low land: at 2273.10 tack in log: 2400 stake.

14
20 21

At 2621 the 1/4 corner between sec. 20 + 21 bears East 3.40 feet: at 2625.90 good wire fence built by Jas. Ross runs E. & W.: at 2700, 3000 set stakes: at 3255 - set hub: at 3300, 3600 set stake: at 3601.15 set hub: at 3613 cross main road, bears S.E. + N.W. at 3900 hub: at 4200, 4500 set stakes: at 4717.30 hub: at 4800 set stake, enter meadow: at 4950 hub on lake shore: at 4957 enter Big Vermillion Lake and set stake: At this point being Meander corner

M.C. 31
N side
Big
Vermillion

No. 31, on North side of Big Vermillion Lake, between fractional sec. 20 + 21 T. 143 - R. 25, U.S. notes call for a post and the following bearing tree:

Spruce 3, v 28° E. 315 links: We find what may have been the old B.T. stump, and it stands about correct for course and distance, but in locating this section line we decide to run the sec. line straight

17 14
20 21

from the corner to sections 16-17-20-21 through the 1/4 corner between sec. 20 + 21 with an intersection with the water's edge. The sec. corner and the 1/4 corner fix the position of the section line, but its length is fixed by its actual intersection with the water's edge, so at 4957 feet South, we run East 6.43 feet where we drive a stake for the true

14
20-21

Meander corner. Correcting North: As the length of the line from the 1/4 corner bet. sec. 20 + 21 - 143-25, South to the Meander corner No. 31, is 2552.88 feet Gov't chain, and equals 2336. feet my chain. We find it 216.88 ft. short. To put in the 1/4 corner south of the 1/4 corner bet. sec. 20 + 21 - 143-25, we begin at a point 1320. feet South of the 1/4 corner and chain North 112.14 ft. to a point 1207.86 feet South of the 1/4 cor. being 3828.86 ft. South of the sec. cor. so we begin at hub. 3900, S. and chain North 71.14 feet to 3828.86, then East 4.97 ft. where we drive a hub and tack for the true 1/4 corner South of the 1/4 corner bet. sec. 20 + 21 - 143-25.

M.C. 3

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with bearings as follows: Poplar 3 ν $54^{\circ}52'W$ 32.70 feet. Norway Pine 3, ν $81^{\circ}06'E$ 39.45 feet. Pine Stump 15, S $17^{\circ}29'E$, 28.01 feet: to head of nails driven in each bearing: course turned from the true section line with $A+B$ transit: var. $7^{\circ}E$. 1320 U.S. is short 112.14 ft and equals 1207.86 feet my chain. Length of Sots 4 of 1232.88 ft U.S. chain, is short 104.74 ft. and equals 1128.14 ft. my chain.

We go North to the $\frac{1}{4}$ corner bet. secs. 20 + 21-143-25 where U.S. notes call for a post and: Sine 6, ν $79^{\circ}W$ 10 links (= 6.60 ft.) Fir 4, S $80^{\circ}E$ 6 lks (= 3.96 ft.) We find the stumps of both old trees which stand perfect for course but the distance between them is 6.00 feet, too long, total distance of 10.56 ft. U.S. chain equals 16.56 ft. our chain from face of stumps: By proportionate measurement 6.60 plus 3.75 equals 10.35 feet, and 3.96 plus 2.25 ft. equals 6.21 ft. making a total of 16.56 feet. We set a $4 \times 4 \times 36$ inch Cedar post well into the ground for the true $\frac{1}{4}$ corner bet. secs. 20 + 21-T. 143, R. 25, after which the old bearing trees stand as follows: Sine 6, ν $79^{\circ}W$ 10.35 feet. Fir 4 S 80° 6.21 feet distant: We mark up new bearings as follows: var. $7^{\circ}E$: Norway Pine Stump 16, ν $57^{\circ}10'W$, 39.02 ft. Dead White Pine tree 10, ν $65^{\circ}06'E$ 18.22 feet. Cedar fence Post 7, S $33^{\circ}28'E$ 6.02 feet. Cedar fence Post 8 S $53^{\circ}17'W$ 8.25 ft. to head of 20 d spikes driven in flat spot at base of bearings.

To put in the $\frac{1}{16}$ corner South of the corner to secs. 16-17-20-21-143-25, we begin at a point 1200 ft. South and chain 110.50 ft. to 1310.50 South, then East 1.70 ft. to the true $\frac{1}{16}$ corner.

To chain out the grounds for a new proposed school house, being a square two (2) acres, in the Northwest $\frac{1}{4}$ of the Southwest $\frac{1}{4}$ (N.W. $\frac{1}{4}$ of S.W. $\frac{1}{4}$) sec. 21, T. 143-N, R. 25-W, we begin at the Southwest corner of the forty and chain North along to sec. line 295.16 feet to a stake, at var. $7^{\circ}E$. thence East var. $8^{\circ}30'$ 295.16 feet to a stake, thence South var. $7^{\circ}E$. parallel to the sec. line, 295.16 feet, to a stake; thence West, var. $8^{\circ}30'E$ 295.16 ft. to the place of beginning, containing as near as can be two (2) acres. Angles turned from true section line with $A+B$ transit, and chained with 300 foot steel tape.

Saturday, Sept. 27th 1913. I work all day for Wahpeton Township chaining up road grade and looking up section corners preparatory to running out the old road just graded thro the Township so as to get it on record. Gas Ross & his team take Curo, Lewis Kirk and Pat Gannon to the $\frac{1}{4}$ corner between secs. 12 + 13-T. 143-R. 25 where a new road has just been completed, runs East. The road was built under contract for Wahpeton Township, by Art Clusian and Andrew Anderson thro quite a heavy timber and well graded, 21 ft. wide at 2.60 per. rod and is built on a line surveyed about five years ago, by James J. Flynn. Beginning at the $\frac{1}{4}$ corner bet. secs. 12 + 13-T. 143-25 run East var. $6^{\circ}E$. Curo and Kirk chaining: Gannon sets stakes:

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300 feet steel tape: at 300, 600, 900, 1200 set stakes: at 1245 feet set stake just East of an old road running N.W. & S.E. as the newly completed grade extends S.E. a few rods over the old road, we call the total length of the new road $75\frac{1}{2}$ rods @ \$2.60 pr. rod amounts to \$196.30 and I submit a written report of the same to the Board of Supervisors of Wahneua Township, Cass Co. Minnesota.

Sept. 28th 1913. Curo, Ross, Kirt and Wm. Kersting, go to the corner to sec. 10-11-14-15-T. 143-R. 25, previously established from old Gov't bearing trees by James J. Flynn in August 1908.

U.S. notes call for a post and the following bearing trees: Spruce 10 N 59° E, 10 links: Fir 10 N 87° W 25 links: Fir 16 S 12° W 30 links: Sind 6 S 40° E 8 links.

A report filed in the office of the Town Clerk of Wahneua Township, by James J. Flynn, a Surveyor and dated Aug. 12, 1908, gives this corner established by James Flynn, who found the old S.E. and S.W. Gov't bearing trees from which we set a stake for the true corner, and marked up new bearing trees as follows: Elm 13 S 26° E 89 links (= 58.74 ft.)

Dry White Oak 38° W 115 links (= 75.90 feet) After Mr. Flynn set this corner Mr. Lewis Kirt pulled up Mr. Flynn's stake and put in its place an iron sled shoe driven its full length in the ground. We find the sled shoe and both of the bearing trees established by Mr. Flynn, & we also find the old S.W. Gov't bearing tree, from which we find that the old sled shoe has been knocked half an inch out of place and in trying to straighten it in place, Mr. Lewis Kirt, breaks it off a foot or so under ground. We put in its place a 2x4x24 inch dry oak stake, tack in top, and set its full length in the ground for the true corner to sections 10-11-14-15-T. 143-R. 25, after which the old U.S. bearing tree and the bearing trees established by Mr. Flynn stand correct for course and distance to face of trees: The N.W. tree established by M. Flynn is down.

We take new bearings as follows: A 20¢ spike in a cedar stump 6 ft tall, bears S $50^{\circ} 14'$ W 40.05 feet distant: The nearest point of stone in the foundation of the S.W. corner of the school house, bears N $36^{\circ} 45'$ E 81.45 ft. A 20¢ spike in the 13 inch Elm bearing tree marked by Mr. Flynn, bears S 26° E 58.74 feet distant: var. 8° E. Run North along the graded road var. $8^{\circ} 15'$ E. Kersting, Kirt and Curo, chaining perfect 300 ft. chain: at 300, 600, 900 set spikes, @ 936 ft. center of 10 foot culvert: at 1134 enter river bottom, south end of road fill: at 1200 set spike: at 1337 south end of Bridge across Vermillion river - runs East: @ 1399 North end of Bridge: @ 1500 set spike: @ 1550 foot of hill: We leave a spike at 1500 N, and walk to the $\frac{1}{4}$ corner bet. sec. 10 & 11-143-25, where U.S. notes call for a post and the following bearing trees: Spruce 6 N 84° W 12 links: Birch 7 N 75° E 15 links:

The report of Surveyor Flynn, dated August 12th 1908 and filed with the Town Clerk of Wahneua Township, shows that these trees were found by Mr. Flynn, who drove a stake for the true $\frac{1}{4}$ corner and marked up new bearing trees as follows: White Pine stump 30 S 84° E, 40 links distant (= 26.40 ft.) Aspen 4 N 76° W, 72 links distant (= 47.52 ft.)

Mr. Flynn set a stake for the true $\frac{1}{4}$ corner and Mr. Lewis Kirt and

SURVEY RECORD No 239.

Mr. Kersting and others carefully took up Mr. Flynn's stake and put in its place an iron pipe, 5 feet long, driven its full length in the ground. Mrs. Lewis Kirt and Mr. Wm. Kersting get a shovel and uncover the iron pipe over which I set the transit and find that Mr. Flynn turned his angles from the magnetic needle instead of from the true meridian, and the N.W. bearing tree is about 2 links too far away. The White Pine Stump "30" marked by Mr. Flynn, bears S 84° E (magnetic) 26.40 feet distant; Aspen 4, bears N $77^{\circ} 40'$ W (magnetic) 48.47 feet distant. As the iron pipe is driven in the exact spot established by Mr. Flynn for the true $\frac{1}{4}$ corner to sec. 10-11-T. 143-25, I accept it as the true $\frac{1}{4}$ corner and take new bearings as follows: Poplar 4, N $69^{\circ} 22'$ W 48.47 feet distant to spike head at base. Cedar fence corner 10 bears S $87^{\circ} 31'$ W 36.85 feet to spike head. Balw Gilead 6 N $27^{\circ} 11'$ W 75.30 ft. to spike head, var. $8^{\circ} 15'$ E. Focus telescope on flag half a mile South at the corner to sec. 10-11-14-15, and run south along true section line var. $8^{\circ} 15'$ E. At 300, 600, 900 set spike in road: at 941.30 set 2x2x24 inch dry oak stake, tack in top: at 1144.60 intersect spike set 1500 ft. North of sec. cor. making total length of line 2644.60 feet. There is an old road running a few miles West from this point, and as it has been traveled for 25 years, and public money has been spent out for the past 6 years, and as it is a well graded road, the Board of Supervisors of Wahneua Township, Cass Co. Minnesota wish to have it surveyed and properly recorded. Beginning at Station 1 being an oak stake on the sec. line 941.30 feet South of the $\frac{1}{4}$ corner bet. sec. 10-11 and 1703.30 feet North of the corner to sec. 10-11-14-15-T. 143-25, and taking the sec. line as a true North and South line magnetic var. $8^{\circ} 15'$ E. we run, South $67^{\circ} 03'$ W. 449.40 feet to oak stake being Sta. No. 2. Station No. 2 run S $77^{\circ} 30'$ W 810.40 ft. to oak stake being sta. 3, with bearings as follows: Elm 6 S $70^{\circ} 56'$ W 68.50 ft.: Oak 6 S $34^{\circ} 28'$ E 41.79 feet distant: From sta. 3 run North $88^{\circ} 34'$ W 1137.40 feet to Oak stake at sta. 4. set 1 foot East of a fence running North and with bearing trees as follows: Poplar 8 N $68^{\circ} 47'$ W 55.50 ft. Poplar 5 N $4^{\circ} 3'$ E 58.25 ft. distant: From Sta. 4 run S $75^{\circ} 58'$ W 530 ft. to oak stake at sta. 5 from which: Birch 15 bears S $39^{\circ} 29'$ E 41.45 feet: Elm 15 bears N $43^{\circ} 40'$ E. 59.85 feet, to spike head at base. Magnetic variation changes to $8^{\circ} 05'$ E. but we are still running our line carefully turned from the true section line as a meridian. From Station 5 run S $89^{\circ} 01'$ W 411. ft. to oak stake being sta. 6, set 18 ft. Nor. of the North bank of Vermillion Brook, var. reads $8^{\circ} 05'$ E. From Sta. 6 run S $82^{\circ} 39'$ W 224.05 ft to oak stake at sta. 7. From Sta. 7 run S 71° W 468.85 feet to oak stake at sta. 8, from which the S.W. corner of Pat Gannon's house bears N $7^{\circ} 35'$ E. 97.94 feet distant: From Station 8 run S $32^{\circ} 39'$ W 228.60 feet to oak stake at sta. 9. set 58 ft. Westerly of 16 foot bridge across small stream running S.E. From Sta. 9. run S $23^{\circ} 20'$ E. 841.05 ft. to oak stake being station 10 set 58 feet South of center of 6 ft. culvert, and on line with an East and West wire fence and 1122.30 ft. East of the corner to sec. 9-10-15-16-T. 143. R. 25. We mark new bearings to Sta. 10 as follows: Fence post 8 bears S $88^{\circ} 46'$ E 15.34 ft. distant: Ash tree 8 N $87^{\circ} 38'$ W 33.73 ft. to spike head in each bearing: Going to the corner to Sections 9-10-15-16 T. 143-25 U.S. notes call for a stake and the following bearing trees: Birch 5 N 56° E 5. lks. distant: White Pine 10 S 13° W 15 lks. White Pine 4 S 29° E 10 lks. Birch 12 N 69° W 55 lks.

SURVEY RECORD No. 239

We find an old marked stake set half a foot west of the N.W. corner post of a fence running East & South. We find the roots of the N.W. S.W. and S.E. old bearing trees which check out almost exact with the stake, but as to N.E. bearing tree is gone, and we send for Mr. Frank Kopley who has watched this stake for 15 years, and who built the fence East and S. from the stake. Mr. Kopley says he has always considered the stake as being correct and Mr. Pat Gannon who is present and who owns the land adjoining the stake on the North and N.W. says he always considered the stake the true corner: and as the stake checks out within a few inches with the three remaining old bearing trees: and as the N.E. bearing tree is gone; we have no positive proof that it is not in the right place, and as it has been recognized for the past fifteen years as the true corner and as I probably could not move it if I tried, I accept the old stake as the true corner to sections 9-15-10-16 T. 143-R. 25 and from a tack in the top, I mark up new bearing trees as follows: Balm Giliad 3 bears $N 58^{\circ} W 69.74$ feet distant: Poplar 6 $S 55^{\circ} W 163.10$ feet distant: Black Ash 8 $N 88^{\circ} E 168.10$ feet. Crooked poplar 4 $S 10^{\circ} E, 114.40$ ft. to spikes driven in each bearing tree: on account of not being able to get my transit exactly over the stake on account of the fence corner the courses may not check within $\frac{1}{4}$ of a degree, but the measurements are perfect: Chain East along the fence line, and at 1122.30 intersect oak stake in the center of the road at station 10. From Sta. 10 run $S 6^{\circ} 17' W 1312.40$ ft. to oak stake set for sta. 11, set half a foot south of wire fence running E & W. Station 11 run $S 14^{\circ} 04' W 698.85$ feet to oak stake, sta. 12 from which: Black Ash bears $S 42^{\circ} 45' W 67.34$ ft. distant: Balm Giliad 5 $S 83^{\circ} 03' E, 49.87$ feet to spike heads: Sta. 12. run $S 26^{\circ} 20' W 822.90$ ft. to oak stake at sta. 13. Magnetic variation changes to $8^{\circ} 30' E$. Curro, Ross, Kirt and Kersting work all day for Wahneua Twp. #8 & B. transit, 300 feet steel tape: back sights in tack set in each station, perfect line: Kirt set stakes, flags and chains, Kersting helping Curro, transit and chain. Quit for night.

Monday Sept. 29th 1913. Continuing: Same crew:

From Station 13. run $S 47^{\circ} 44' W 175.60$ ft. to oak stake at sta. 14 from which: White Pine Stump 36 bears $S 1^{\circ} 14' W 43.39$ ft. distant: White Pine Stump 36 bears $S 55^{\circ} 40' E. 23.46$ ft. distant: to head of 60 d spike driven in each bearing magnetic variation changes to $8^{\circ} 35' E$. Station 14 run $S 27^{\circ} 02' W, 507.50$ ft. to oak stake at sta. 15 from which: Poplar 3 bears $S 18^{\circ} 51' W 48.64$ feet. Poplar 3 bears $N 80^{\circ} 47' E 59.64$ ft. to small nail heads in flat spot. var. reads $8^{\circ} 30' E$. Sta. 15 run $S 44^{\circ} 49' W 530.60$ ft. to oak stake at sta. 16 in new road grade 235 ft. S.W. of small culvert at East end of newly graded road. Station 16. run $S 7^{\circ} 57' W 275.50$ ft. to oak stake at sta. 17 from which: Black Ash 6, bears $S 38^{\circ} 54' W 35.92$ feet distant: Poplar 6 $S 29^{\circ} 13' E. 111.16$ feet to 60 d spike heads. var. $8^{\circ} 30' E$. Station 17 run $S 0^{\circ} 43' W$ at about 1270 feet cross section line 298. feet west of the cor. to secs. 15-16-21-22-T. 143-R. 25 (the center of the road grades where it is built now, corner 307 feet west of the sec. cor.) at 1432 set oak stake for sta. 18. in center of road grade. Station 18. run $S 0^{\circ} 06' E. at 940.50$ ft. set hub in road center: at 986.10 set oak hub East of road for sta. 19. Sta. 19 run $S 44^{\circ} 26' W. at 249.$ center of culvert at West end of newly graded road: at 639.50 set oak

SURVEY RECORD N^o 239.

stake sta. 20. Total length of new grade is 3177.60 feet. From Sta. 20 we run S 35° W, 253.80 ft. to oak stake at sta 21. Station 21, run S 14° 41' W 524.10 ft. to oak stake at Sta. 22. Variation changes to 8° 21' E. Sta. 22 run S 32° 12' W 206.75 ft. to oak stake set for sta. 23, where we mark bearings as follows:
 Dry Spruce 12 N 81° 07' E 23.91 feet. Spruce 12 S 7° W 20.08 ft. to head of 60¢ spikehead
 Sta 23 we run S 58.37' W 416.70 ft. to oak stake at Sta. 24. Sta. 24 run S 48° 10' W 467.40 ft. to oak stake at Sta 25. Sta. 25 run S 43° 58' W 608.60 ft. to oak stake at sta 26. From Sta 26 we run S 69.14 W 347.50 ft. to oak stake at Sta 27. Sta. 27 run S 89° 09' W 521 feet to oak stake at sta. 28. Sta. 28 run S 81° W 339.30 ft. to oak stake at sta 29. run S 55° 07' W 758.80 ft. to oak stake at station 30. Sta. 30 run S 86° 37' W, at 467 ft. center of 16 foot bridge across "Daw Dick" creek in center of 100 foot meadow runs south: at 622.70 set oak stake for Sta. No. 31. which ends the survey for a time. The road continues Northwesterly but the Town Board do not want me to survey it any further until they have had time to make a few changes in the road running further West.

At the corner to Sections 15-16-21-22 T. 143 R. 25, U.S. notes call for post and the following bearing trees: Birch 12, N 29° W, 20 links (= 13.20 ft.)
 Aspen 14, N 24° E 10 lks. (= 6.60 ft.) Spruce 5, S 60° E 16 lks (= 10.56 ft.)
 White Pine 15 S 24° W 40 lks. (= 26.40 ft.) We find all four old U.S. trees and stumps: the S.W. White Pine is turned out by the roots, but lay where the roots hold it and is plainly marked. As all the old stumps or rotted trees check out for course and distance we set a 4 x 4 x 48 inch black ash stake, tack in top for true corner to sec. 15-16-21-22, T. 143 R. 25 with new bearings as follows: Dead Birch 12 N 49° E. 65.44 ft.
 Dead White Pine 15, S 14° 51' E 29.12 ft. Dead White Pine 8, S 52° 04' W, 46.91 ft. to head of 60¢ spikes drove in flat spot at base of all three trees: var. 8° 30' E, set with A & B transit, 100 foot steel tape.
 Curo, Ross, Kirt and Kersting work all day for Wahneena Township Frank Sterns cuts brush in P.M. on school grounds for school district No. 1. We spend 15 minutes checking up on the corners of the school grounds and quit for night.

Recorded October 1st 1913.
Survey begun Sept 23rd 1913
Survey Completed Sept 29th 1913

John W. Curo
County Surveyor Cass Co Minn

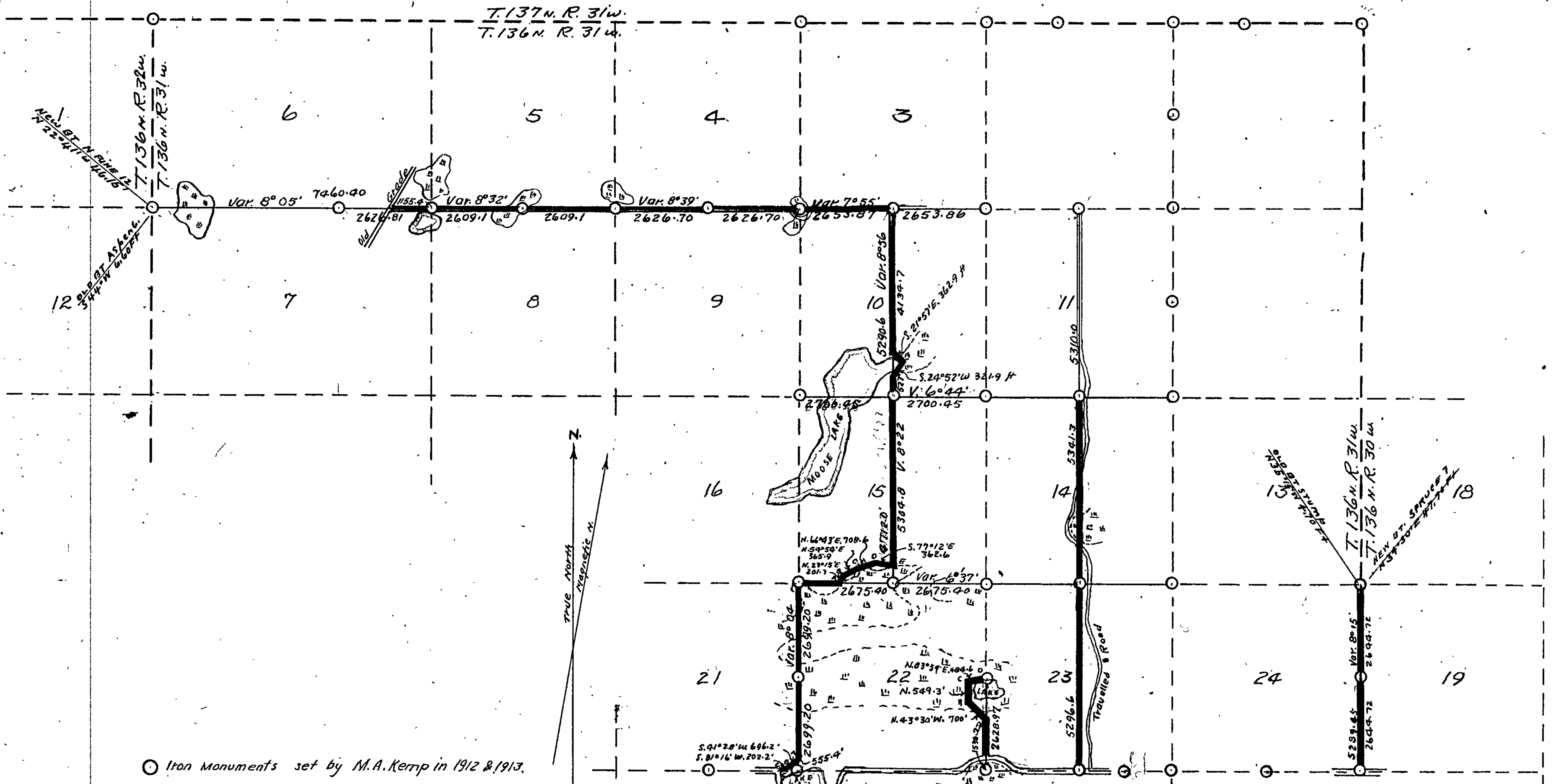
T143 R25			
Sec	CONT'D TO	PAGE	BOOK
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10	"	"	
11	"	"	
12	"	"	
13	"	"	
14	"	"	
15	"	"	
16	"	"	
17	"	"	
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21	"	"	
22	"	"	
28	"	"	
29	"	"	

PLAT

Twp 136^N R₉ 30^W Sec's 18-19.
 " 135^N " 31^W " 2-3-4-5
 " 136^N " 31^W " 3-4-5-6-7-8
 9-10-11-13-14-15-16-21-22-23-24
 32-33-34-35
 Twp 136^N R₉ 32^W Sec's 1-12.

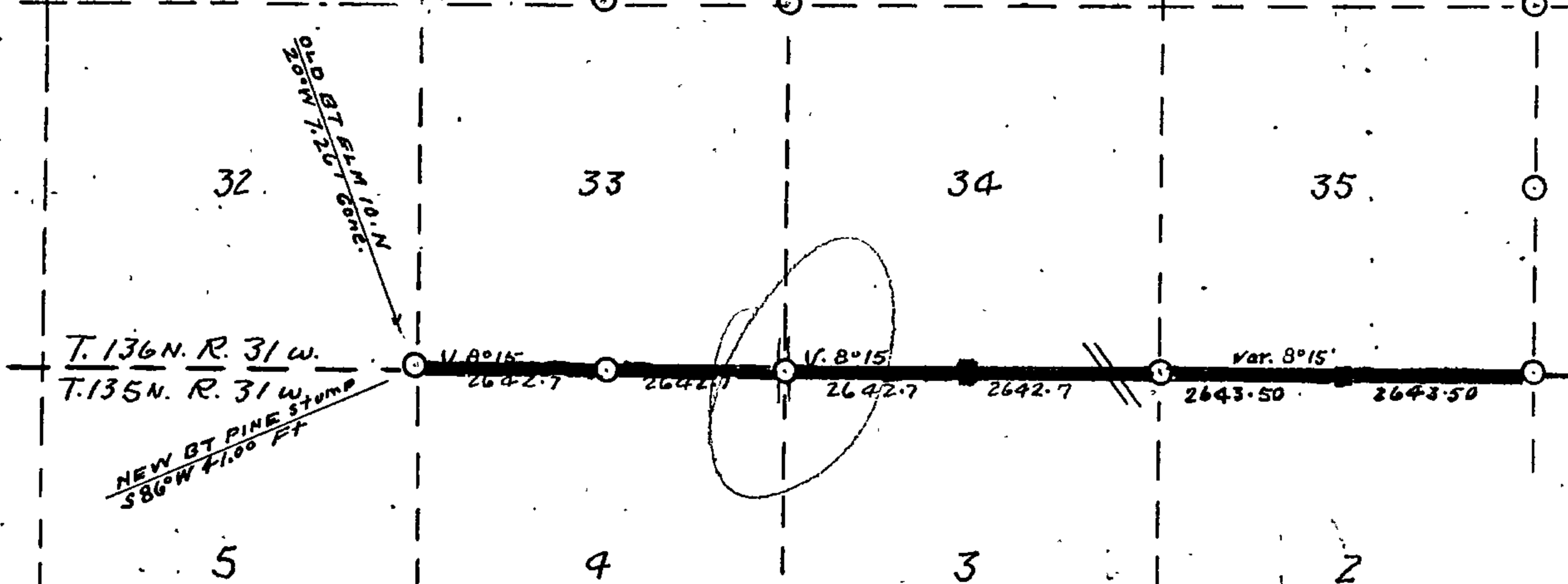
Scale: 1/2 INCHES = 1 Mile.

SURVEY RECORD No. 240.



- Iron monuments set by M.A. Kemp in 1912 & 1913.
- " " " " A.W. Moulster
- Road survey

Survey Begun Sept 14th 1912.
 Finished Oct 19th 1913
 Recorded 29th 1913
 John W. Cuss
 County Surveyor
 Cass County, Minnesota



T136 R30			
Sec	CONT'D TO	PAGE	BOOK
18			
19			

T135 R31			
Sec	CONT'D TO	PAGE	BOOK
2			
3			
4			
5			

T136 R31			
Sec	CONT'D TO	PAGE	BOOK
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T136 R32			
Sec	CONT'D TO	PAGE	BOOK
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12			

SURVEY RECORD No 240.

T. 136 N., R. 30 W., SEC. 18, 19.

.. 135 " . 31 " .. 2-3-4-5.

.. 136 " . 31 " .. 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15.

16, 21, 22, 23, 24, 32, 33, 34, 35.

.. 136 " . 32 " .. 1-12.

5th P.M.

Field notes of the survey of Sections 18 and 19, Township 136 N., Range 30 W, and Sections 2-3-4-5, Township 135 N., Range 31 W, and sections, 3-4-5-6-7-8-9-10-11-13-14-15-16-21-22-23-24-32-33-34-35, of Township 136 N., Range 31 W, and Sections 1 and 12, of Township 136 N., Range 32 W, of the 5th Principal Meridian, as surveyed under the direction of John H. Curo, County Surveyor of Cass County Minnesota, assisted by Melville, A. Kemp, Deputy County Surveyor

Saturday, Sept. 14th 1912: We go to the corner Section corner set by A. H. Moulster, at the corner to Sections 19-24-25 and 30, on the range line between Townships 136 N. Ranges 30 and 31 W, from which we run North magnetic variation $8^{\circ} 15'$ East.

At 409.90 set hub and tack: at 975.80 tack in log: at 1100. enter swamp:

at 1320 set hub and tack for temporary 1/16 corner: at 1350 ft. leave swamp:

at 1475.70 tack in log: at 1628. old E & W road: at 2485.10 tack in log.

At 2640. set temporary 1/4 corner: The old Government post and bearing trees are gone, and we continue north: at 2744.40 tack in log: at 3050.70 tack in log:

We use a Keuffel and Esser Engineers' transit in perfect adjustment and a 300 foot Chicago steel tape: set double center tacked hubs, and a plumb bob in taking measurements: M. A. Kemp, transitman and chainman: Frank Countryman, chainman: Carl Nelson and Ole Murren axmen: John Olson cut brush in the afternoon.

Quit for night.

Monday, September 16th 1912: Rained: Couldn't work.

Tuesday, September 17th 1912: Couldn't work in A.M. on account of rain: M. A. Kemp, Frank Countryman, and Herbert Henholz cut brush in the Afternoon, continued North

Wednesday, September 18th 1912 continue North: Frank Countryman and M. A. Kemp chainmen: M. A. Kemp, transitman: Herbert Henholz axman: at 3400.75 tack in stump: at 3611.90 tack in log: at 3750. enter tam. swamp: at 3960 set hub and tack for temporary 1/16 corner: at 4048.30 tack in log: at 4350 leave swamp: at 4598.80 tack in log: at 5013.10 tack in log: at 5280 tack in log: at 5289.45 the true corner to

Sections 13-18-19; and 24, sets East two tenths of a foot (0.20 ft)

At this point Government notes call for a stake and the following bearing trees:

Tamarack $63^{\circ} 29' W$ - 27 links = 17.82 ft. Jam. 63 $43^{\circ} E$ 24 links = 15.84 ft.

" 5 N. $40^{\circ} W$, 7 links = 4.62 ft. " 5 N. $40^{\circ} E$ 13 links = 8.58 ft.

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We find the rotted stumps of all four bearing trees plainly marked from which we set the true corner by flat measurement from face of the marks: the courses do not quite check, by the measurements do, and we set an iron pipe 1x30 inches in size for the true corner after which the old bearing tree stumps stand as follows:

Old stump N. $35^{\circ}15'$ W. 4.70 feet.

Old stump N. $36^{\circ}15'$ E 8.60 ft.

Old stump S $34^{\circ}15'$ E 16.00 feet.

Old stump S 25° W. 17.80 ft.

We mark up new bearings as follows:

Spruce 7 N $34^{\circ}30'$ E 47.70 feet distant

Calm Giliad 8 S $88^{\circ}18'$ W 27.35 feet distant to tack heads.

Magnetic Variation is $8^{\circ}15'$ E. This is the true corner to Sections 13, 18, 19, 24, on the Range line between Townships 136 Range 30^{and} 31. Hub 3960 goes North 7.08 feet and East 0.15 of a foot where we set the true $1/16$ corner being a stake with the following new bearing trees: White Pine 18, N $64^{\circ}10'$ E 25.20 ft. Balsam 7 S $88^{\circ}05'$ W 21.20 feet distant. At hub 2640 we chain North 4.72 feet and East 0.10 of a foot where we set the true $1/4$ corner between Sections 19, and 24, Township 136, Range 30^{and} 31, being an iron sled shoe $1/2 \times 4 \times 30$ inches in size with notch in top from which we mark up the following new bearing trees. Magnetic Variation $8^{\circ}15'$ East.

Dead Birch 10 S 59° W 41.10 feet distant Birch Stub 10 S $77^{\circ}30'$ East 33.90 feet distant. At hub 1320 we chain North 2.36 feet and East 0.05 of a foot where we set the true $1/16$ corner being a $4 \times 4 \times 20$ inch hub and tack from which we mark up the following bearing trees. Poplar Stub 10 S $24^{\circ}35'$ W 32.80 ft. White Pine Stub 10 N $71^{\circ}42'$ E 23.80 feet distant to tack heads a variation of $8^{\circ}15'$ East set for true $1/16$ corner South of the $1/4$ corner between Sections 19 and 24. In the afternoon, after finishing the survey on the East side of Township 136 Range 31, we go to the $1/4$ corner between Sections 23^{and} 26 Township 136, Range 31, with the following crew: M. A. Kemp transitman and chainman, F. Countryman, chainman, Herbert Henholz and Syvrix E. Flategraff, axmen. We set the $1/4$ corner between Sections 23^{and} 26 Township 136 Range 31, and run North, Magnetic Variation $8^{\circ}15'$ East.

For the first mile our line runs parallel to the N^{and} S wagon road and about 30 feet west of the center of the road. N^{and} E. transit, double centered hubs: 300 foot Chicago Steel tape, and plumb bob chaining: at 300 set stake: at 600 stake. September 19-1912: Same crew as yesterday with E. H. Flategraff assisting: continue north: at 900 stake: at 969.40 Hub^{and} tack: at 1100 enter low ground: at 1200 stake where the traveled N^{and} S road bears East about 36.00 feet. At 1250 leave low ground: at 1500 stake about 27 feet west of N^{and} S. traveled road. At 1680.70 tack in log: at 1800 stake 24 feet west of road: at 2100 set stake 33 west of road: at 2400 stake: At 2680.50 Hub^{and} tack on hill: at 2700 stake 20 feet west of road: at 2750 enter tamarack swamp: at 2900 leave same: at 3000 stake 50. feet west of road: at 3127.15 hub^{and} tack: at 3300 stake 40 feet west of road: at 3600 hub and tack 35 feet west of road.

Friday September 20th 1912: Rained, but Kemp, Countryman and Henholz started at 9 A.M. and continued north: at 3900 set stake 25 feet west of road: at 4200 stake 10 feet from road: at 4400 center of

RECORD No 240.

Stoney Brook: at 4500 set stake 10 feet west of road: at 4800 set stake at edge of road: at 5100 set stake on edge of road: at 5280 hub and tack in road center for temporary 1/4 corner between Sections 14 and 23 Township 136 Range 31. We hunt for bearing trees, but all seem to be grubbed out. S.E. and F.H. Flattegraff assist in P.M. We walk west and hunt for corner to Sections 14-15-22 and 23, Township 136, Range 31, in big wet tamarack swamp, where U.S. notes call for stake, and the following bearing trees:
 Tamarack 7. N 66° E 3 links = 1.98 feet. Tamarack 8 S 44° 30' E 12 links = 7.92 feet.
 Tamarack 9 N 27° W 13 links = 8.58 feet. Tamarack 7 S 32° W 4 links = 2.64 feet. We find the old Government stake in position but rotted in the ground, and also find the S.E. bearing tree blown over, which we chop off and set up after which the old Government stake bears correct course and distance from it. We put in a 6x6x40 inch tamarack post and tack for the true corner to Sections 14-15-22-23, Township 136 Range 31, after which we find the rotted stumps of the other old W.M. King S.E. bearing trees: we mark up new bearings as follows: Variation 8° 15' E: Spruce 4 N 39° W 42.80 feet distant. Spruce 2 N 83° E 20.80 feet distant Birch 4 S 29° 40' W 47.30 feet distant.

Saturday September 21, 1912: Set over the new corner to Sections 14-15-22-23 Township 136 - Range 31, and run East Magnetic Variation 8° 15' East: at 1900 feet leave swamp: at 1991.70 tack in log: at 2446.50 tack in stump on hill: at 2614.59 hub and tack for temporary 1/4 corner between Sections 14-23. at 2635 road center. The temporary and station 2640 on our South and North line bears South about 8 feet: at 3050 enter swamp: at 3400 leave swamp: at 3500 point in log: at 4203.60 point in log: at 4300 enter tamarack swamp: at 5219.40 corner to Sections 13-14-23-24, Township 136 Range 31, bears North 13.50 feet, at which point U.S. notes call for post and the following bearing trees:
 Tamarack 16 S 60° W 15 links = 9.90 feet. Tamarack 9 N 47° W 64 links = 42.24 feet.
 Tamarack 18 S 65° E 35 links = 23.10 feet. W. Birch 8 N 45° E 65 links = 42.90 feet.

We find the rotted stumps of the S.W. and S.E. bearing trees with iron marks plainly visible. M.A. Kemp, F. Countryman, H. Menholz, E.H. and S.C. Flattegraff work all day: it rained in the P.M. but we worked.

Monday, September 23-1912: Same crew as Saturday: We chained our line over and find it correct: set corner to Sections 13-14-23-24, Township 136 Range 31, from the two bearing trees from flat measurement from face of marks, putting in a 5x5x40 inch tamarack post in the swamp, and mark up new bearings as follows: Variation 8° 15' East. Old B.J. stump bears S 57° W 99.04. Old B.J. Stump bears S 60° E 23.10 feet. New B.J. Ash 8 N 53° 45' E 32.70 feet. New B.J. Soft Maple 6 N 45° W 36.50 feet. New B.J. Balsam 7 S 37° 25' E 24.30 feet: to tack heads 5229.18 feet Government chain equals 5219.40 feet my chain, being short 9.78 feet. Correcting back west: Hub 2614.59 goes west 4.89 feet and north 7.75 feet where we set a 6x6x30 inch Oak hub and tack for true 1/4 corner between Sections 14-23, Township 136 - Range 31, and mark up the following new bearings:
 White Pine 9 N 52° 25' E 127 feet distant. White Pine 9 S 18° 12' E 198.70 feet distant.
 We correct our line through Section 23 as follows.
 Hub 3600 goes west 17.23 feet. Old road is 50 feet East.
 Hub 3127.15 goes west 14.97 feet. Old road is 63 feet East.
 Hub 2680.50 goes west 12.83 feet. Old road is 30 feet East.

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Hub. 1680.70 goes west 8.04 feet: old road is 30 feet East.

Hub 969.40 goes west 4.64 feet: old road is 40 feet East. At 5296.60 North the true corner between Sections 14-23 sets west 25.35 feet, and 5280 feet government chain equals 5296.60 feet of my chain.

Tuesday September 24-1912: M. A. Kemp, J. Countryman, C. H. and S. G. Plattgraff, and Les Leverington work: Setting over the new 1/4 corner just set between Sections 14-23, Township 136 Range 31, we run north: Magnetic Variation $8^{\circ}45'$ East: at 965.10 hub and tack on hill: at 1200 set stake 20 feet west of road: at 1500 stake 15 feet west of road center: at 1550 cross old road center: at 16.50 enter swamp: at 1800 set stake 150 feet East of road at 1950 leave swamp: at 2400 intersect road: at 2600 set stake 6. feet East of road: at 3720 set hub and tack: at 4264.70 set hub and tack: at 5280 set hub and tack for temporary 1/4 corner between Sections 11-14, Township 136 Range 31, where the old U.S. stake is lost, and the old bearing trees have been grubbed out. We go to the iron Section corner to Sections 11-12-13-14 Township 136 Range 31, set in the Swamp by Deputy County Surveyor, A. H. Moulster in A. D. 1911 from which we run west: Magnetic Variation $8^{\circ}45'$ East: at 700 leave swamp: at 709.90 tack in log: at 1222.85 hub and tack on hill at 2615.91 hub and tack for temporary 1/4 corner, being about 30 feet north and 25 feet west of hub 5280 on N and S. line, in center of wagon road.

Thursday, September 26-1912. M. A. Kemp and J. Countryman continue line west: at 3217.20 hub and tack: at 3425 enter long N. E. and S. open swamp: at 4506.75 tack in log: at 5261.57 the true corner to Sections 10-11-14-15, Township 136 Range 31, sets North 22.70 feet: at this point U. S. notes call for stake and the following bearing trees:
 White Birch 9 S $25^{\circ}30' E$ 13 links = 8.58 feet. White Birch 8 N $64^{\circ}30' W$ 30 links = 19.80 feet.
 White Birch 10 N $6^{\circ}30' E$ 22 links = 14.52 feet. Black Oak 6 S $68^{\circ}30' W$ 19 links = 12.54 feet.
 We find the rotted stump of all four trees from which we set a $3 \times 3 \times 24$ inch stake for the true corner by proportionate measurement after which we take bearings as follows. Old B. J. Stump bears N. $62^{\circ}30' W$ 19.30 feet distant.
 Old B. J. Stump bears N. $5^{\circ}30' E$ 14.20 feet distant. Old B. J. stump bears S. $32^{\circ} E$ 8.40 feet.
 Old B. J. Stump bears S. $70^{\circ}30' W$ 12.10 feet. We mark up new bearing trees as follows.
 Pine Stump 36 N. $85^{\circ}30' E$ 125.30 feet. Pine Stump 30 N $81^{\circ}45' W$ 45.70 feet.
 Tamarack 4 S $52^{\circ}40' E$ 130.80 feet to tacks in blazes on bearings at $8^{\circ}45'$ variation for the true corner to sections 10-11-14-15, Township 136 Range 31. The total of 5261.57 feet my chain, equals 5231.82 feet U. S. chain, being 29.70 feet long.

Friday September 27-1912. M. A. Kemp and J. Countryman correct line between Sections 11-14, Township 136-Range 31 as follows: at hub 2615.91 we chain west 14.87 feet, then north 11.35 feet where we set a $5 \times 3 \times 30$ inch oak stake for the true 1/4 corner between Sections 11-14, Township 136 Range 31 and mark new bearings as follows: Spruce 4 S $83^{\circ}33' E$ 42.60 feet.
 Balsam 5 N $45^{\circ}24' E$ 57.60 feet: to tack heads at $8^{\circ}45'$ Variation E. Setting transit over the true 1/4 corner just set between sections 11-14 Township 136 Range 31, we run north thru Section 11 Magnetic Var. $8^{\circ}45' E$. At 600 set stake 22 feet west of old road: at 1500 set stake 9 feet west of old road: at 1800 set stake 12 feet west of old road: at 3290. set hub and tack on hill in E wheel of track of wagon road, where we set bearing as follows: Black Oak 4 N 28.90 feet. Telephone pole 8 S. W. 29.40 feet. From here

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North our line follows center of wagon road to 5310 feet North to where we intersect the iron 1/4 corner between Sections 2-11, Township 136 Range 31. Correcting the mile running North thru Section 14 - Township 136 Range 31 at 5341.30 N the true 1/4 corner between Sections 11-14, sets west 45 feet; the total distance of 5280 feet Gov't chain equals 5341.30 feet my chain, being 61.30 feet long. Hub 4265.70 goes west 35.93 feet being 15 feet west of road center. 3720 goes west 31.34 feet being 12 feet west of road center. 965.10 goes 8.13 feet west being 25 feet west of road center. At 1620 we set a hub 13.65 feet west on true line, from which we ran along old road where it meanders around swamp as follows. N 53° 55' W. 131.70 feet. N 11° 07' W. 108.50 N 25° 50' E 291.10 feet, to hub on corrected line set 17.41 feet west of Station 2066.25 N. on random line; this old road is going to be changed so as to run on the true N and S center line thru the swamp.

Saturday Sept. 28 - 1912. M. A. Kemp, J. Countryman, H. Henholz, E. H. Klattgraff and Olof Loo, go to the iron corner to Sections 22-23-26-27 Township 136 Range 31 set by A. H. Moulster in big open swamp from which we run north, Var. 8° 15' East. We use a X & E transit double center hubs, and a 300 foot Chicago steel tape, plumb bob chaining, Kemp and Countryman chaining perfect. Kemp transitman; at 350 leave swamp; at 470 intersect old E. and W. road where it meanders around swamp; at 476.50 set hub and tack. at 802.40 hub and tack; our line all along follows old blazed trees closely; at 1320 hub and tack for temporary 1/16 corner; at 1600 enter tamarack swamp. at 1874.22 hub and tack "A"; at 1950 edge of water; we set over "A" and set hub "B" across lake on line. Angle reads 75° 9' 30"; distance across lake from hub "A" to hub "B" is 754.75 feet added to 1874.22 equals 2628.97 feet to hub "B" on line over lake 54 feet North of water edge on north side of lake. From hub "B" being 2628.97 N we chain South and set hub 2640 N, for temporary 1/4 corner between Sections 22-23, Township 136 Range 31, where U. S. notes say: Witness corner north 200 links with bearing trees as follows: Tamarack 6 N 35° W. 72 links = 47.52 feet. Tamarack 5 N 36° E 55 links = 36.30 feet. We find the stump of the N. W. bearing tree plainly marked from which we set a hub and tack for the true witness corner, over which we set the hub and tack for the true witness corner, over which we set the transit and find the rotted stump of the other old bearing tree which stands correct for course and distance. At 2640 North a stake set by Mr. Olson is about 20 feet North. At 2770.50 feet North the true witness corner sets East 14.70 feet. 2770.50 feet my chain equals 2772 feet Government chain and is 1.50 feet short. Correcting back. Hub 2640 goes South 1.93 feet and East 14.00 feet, where we set a 5 x 5 x 20 inch oak stake for the true 1/4 corner between Sections 22-23 Township 136 Range 31, and mark new bearing trees as follows: Tamarack 3 N 45° 48' E 71.90 feet distant Tamarack 4 N 30° 58' W. 103.40 feet distant. Hub 1320 goes south 0.70 of a foot and East 7.00 feet where we set a 2 x 2 x 24 inch hub and tack for the true 1/16 corner and mark the following new bearing trees: Maple 6 N 52° 20' E 35.80 feet. Maple 8 N 59° 38' W. 49.70 feet distant Variation 8° 15' East. Hub 802.40 goes East 4.23 to true line. Hub 476.50 goes East 2.51 feet to true line between Sections 22-23 Township 136 Range 31.

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Oct. 4th 1912. M. A. Kemp, Frank Countryman and Herbert Wenholtz still correcting our random line between sections 22 + 23 - T. 136 - R. 31. At "A" 1530.70 feet North of the corner to sections 22-23-26-27 we run East 8.12 feet where we set a hub on the true section line with bearing trees as follows: Basswood 5 N.E. 20.60 feet distant; Maple 6, S.E. 18.50 feet distant. Setting transit on corrected hub on true line 1530.70 and backsighting on true corrected line between secs 22 + 23 which we use as a true meridian we run N 43° 30' W 700 feet and set hub "B". From hub "B" we run north 549.30 feet and set hub "C" from which we take bearings as follows: A 12 inch birch bears NW 28.70 ft. distant; and a 9 inch Elm bears West 23.50 ft. distant. From hub "C" we run N 83° 59' E 484.60 feet to the true 1/4 corner just set bet. sections 22 + 23 - T. 136 - R. 31. The line just run for the center line of a new road between secs. 22 + 23 - T. 136 - R. 31 is as follows: Beginning at the corner to secs. 22-23-26-27 thence North on the section line a distance of 1530.70 ft. to a hub and tack; thence North 43° 30' W in sec. 22, a distance of 700 feet to a hub and tack; thence N. 549.30 ft. to hub & tack still in sec. 22; thence N. 83° 59' E 484.60 feet to the 1/4 corner between sections 22 + 23 - T. 136 - R. 31. W. 5th P.M.

Sept. 30th 1913. We walk to the iron section corner, set in A.D. by Deputy Co. Surveyor A. W. Moulster, at the true corner to sec. 1 & 2, 35 + 36 on the township line between townships 135 and 136 N, R. 31 W, from which we run West. Magnetic variation is 8° 15' E. At 258.50 set hub and tack; at 750 ft. enter meadow; at 950 lv. meadow; at 1288.80 set hub and tack on hill; at 1450 enter meadow; at 1800 lv. meadow; at 1884.50 set hub & tack; at 2250 enter meadow; at 2375 lv. same; at 2600 enter meadow; at 2710 leave meadow; at 2969.30 set hub and tack on hill; @ 3388.80 set hub and tack on hill; @ 3400 enter meadow; @ 3500 lv. meadow; at 3746.70 set hub and tack on hill; at 3850 enter meadow; @ 4050 lv. same; @ 4235.10 set hub & tack on hill. Quit for night. Kemp, Countryman and Wenholtz work in morning. Erickson and Harry Presler joined us in the afternoon. Kemp transitman; Kemp and Countryman chaining.

Tuesday Oct 1st 1912. Kemp transit, Kemp and Countryman chaining. Wenholtz, Erickson and Presler apmen. continue West. @ 5287.00 the true corner to sections 2-3-34-35 on the Town line bet. Twp. 135 and 136 N R. 31 W. bears South 39.20 feet at which point the U.S. field notes call for a stake and the following bearing trees: Pine 24 S. 82 E 43 lks (= 28.38 ft.) Pine 30 S. 40 W 33 links (= 21.78 ft.) White Birch 18 N. 77 W 52 links (= 34.32 ft.) B. Oak 7 N. 18 E 20 lks. (= 13.20 ft.) We find the stumps of the N.E. S.E. & S.W. and a stake which checks fairly well for course and distance. By proportionate measurement we set a 2x2x30 inch oak hub and tack for the true corner after which the old stumps stand as follows: Old B.T. stump stands S 40° W 22 ft. distant; Old B.T. stump stands S 83° E 28.40 feet distant; Old B.T. stump stands N 17° E 13.30 ft. distant. From the true section corner just set we mark up new bearings as follows: A 7 inch black oak bears N 23° 42' W 67.60 feet distant. 6 inch Poplar bears N 50° E 70.90 ft. distant. Blaze on old S.W. B.T. stump bears S 38° 43' W 22.20 ft. distant; to tack heads: var. 8° 15' E at the true corner.

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to Secs. 2-3-34-35 between Twp. 135 and 136 N., Rg. 31 W. From this corner we run West between Secs. 3 & 34 var. $9^{\circ}05' E$. at 700 ft enter meadow; @ 825 cross old N.W. & S.E. R.R. grade now being used for a wagon road; @ 900 set stake, leave meadow; @ 981.70 point in log; @ 1456.20 hub & tack on hill; @ 1881.70 tack in stump; @ 2350 enter meadow; @ 2550 lv. same; @ 2671.80 hub and tack on hill; @ 2359.20 set hub & tack; at 3350 enter meadow; @ 3500 lv. same; Quit for night.

Wednesday Oct. 2nd 1912. Continue West: at 4200 enter meadow at 4700 lv. same; @ 5025.70 hub & tack; @ 5125 cross old S.W. & N.E. road; @ 5280 set hub and tack on E. side of N. & S. graded road. The stake and bearing trees to the corner of sections 3-4-33 & 34 is gone and we continue West. @ 5350 enter meadow; @ 5800 lv. same; @ 5846.40 tack in log; @ 6050 enter meadow; at 6500 lv. same; at 7500 enter swamp; at 7650 cross old N & S road corduroy begins; our line runs along South side of E & W. corduroy road not yet graded; at 8559.20 tack in log in corduroy; @ 10570.80 the corner to Secs. 4-5-32 & 33 sets South 1.50 feet; At this point Gov't notes call for a stake and the following bearing trees: Elm 10 N $20^{\circ} W$ 11 lks. (= 72.0 ft.) Fir S $53^{\circ} W$ 6 lks. (= 40.26 ft.) Lind 10 S $5^{\circ} E$ 45 lks. (= 29.70 ft.) Lind 7 N $87^{\circ} E$ 43 lks. (= 28.38 ft.)

We find a 2x2x30 inch oak stake which Erickson says was set by former County Surveyor James M. Canfield. The iron marks on the stake correspond with iron marks on a large pine stump which Canfield marked as a bearing, and it stands from the stake N $27^{\circ} 10' E$ 60 feet distant; this stake has been here for years and has rotted in the ground; people living here have used it in running their lines, so we consider it the true section corner and replace it with a 3x3x30 inch tamarac stake and tack and take bearings to tack heads as follows: var. $8^{\circ} 35' E$. Tack in Canfield's old bearing stump, bears N $27^{\circ} 10' E$ 60 ft. tack in pine stump S $86^{\circ} W$ 41.00 ft. tack in pine stump bears S $2^{\circ} 38' E$ 72.90 ft. distant to the true corner to Secs. 4-5-32-33 on town line between Twp. 135 & 136 N., Rg. 31 W. Kemp, Countryman, Wenholz and Presler work all day. Erickson works in P.M. Quit for night.

Thursday October 3rd 1912. Kemp, Countryman & Wenholz correcting back. From the corner to Secs. 2-3-34 & 35 West to the corner of 4-5-32 & 33 of 10560 feet U.S. chain equals 10570.80 feet my chain being 10.80 feet long. @ 7928.10 W, we run South 1.12 ft. where we set a 4x4x60 inch tamarac post for the true $\frac{1}{4}$ corner between Secs. 4 and 33 between Townships 135 & 136 N. Rg. 31 W, and mark new bearing trees as follows: Tack in pine stump bears S $76^{\circ} 28' W$ 205 feet distant. Tack in overturned stump bears N $29^{\circ} 28' E$ 34.60 feet distant. Magnetic variation is $8^{\circ} 35' E$.

At hub 5280 W, we chain west 5.40 feet to 5285.40 West, then South 0.75 of a foot where we set a 8x12x18 inch granite boulder marked with an "X" on top for true corner to Secs. 3-4-33-34 between Twp. 135 & 136 N., Rg. 31 W. and mark new bearings as follows: var. $9^{\circ} 05' E$. Pine Stump, S $24^{\circ} 09' W$ 175.40 feet Elm S bears S $55^{\circ} 19' E$ 221.60 ft. distant.

At 3964.05 feet West of the corner to Secs. 2-3-34-35 we run South 0.56 of a foot where we set a 2x2x24 inch stake for the true $\frac{1}{4}$ corner

from which a 6 inch poplar tree bears $S 2^{\circ} 35' E 69$ ft. 4 inch poplar tree bears $N 56^{\circ} 41' E 41.10$ ft. distant to tack heads var. $9^{\circ} 05' E$.

At 2640 West, we chain 2.70 ft. west to 2642.70 West, then South 0.37 of a foot where we set a $2 \times 2 \times 24$ inch oak stake for the true $\frac{1}{4}$ corner between secs. 3 and 34, T. 135 + 136 R. 31, W. and mark the following new bearings:

6 inch oak bears $S 44^{\circ} 45' W 36.70$ ft. distant: 5 inch oak bears $N 21^{\circ} 16' E 125.90$ ft. distant: var. $9^{\circ} 05' E$. To correct the line between secs. 2 and 35, 5280 ft U.S. chain equals 5287. ft my chain or 7.00 ft. long: at 5287.00 W, the corner to sec. 2-3-34-35, sets South 39.20 feet: Hub 4235.11 goes South 31.40 feet. Hub 3746.70 goes South 27.78 ft.: hub 3388.80 goes South 25.12 ft. hub 2969.30 goes South 22.00 ft. At 2643.50 W, we run South 19.60 feet where we set a $3 \times 3 \times 27$ inch oak stake for the true $\frac{1}{4}$ corner bet. sec. 2 & 35 on line bet. Twp. 135 + 136 N, R. 31 W. and mark new bearings as follows: Poplar 6 bears $S 13^{\circ} 19' E 34.30$ ft. distant Oak 8 bears $N 64^{\circ} 23' E 90.70$ ft. dist.: At hub 1884.50 we run South 14.00 ft. to true Twp. line. @ 1288.80 we run South 9.55 ft. to true Twp. line. @ 208.50 we run South 1.91 ft. to Twp. line, set stake on true line, blazed on both sides and marked "road center"

October 4th 1912. Kemp, Countryman + Wenholy set over a hub 29 feet East of the iron $\frac{1}{4}$ corner on the South side of sec. 23-136-31 and run a line Northerly following the crooks of the old main traveled road 3918.60 feet to a point 175 feet South of the center of Stony Brook Bridge just East of the N. + S. center line of sec. 23, but as the Township of Moose Lake intend to change the road so as to follow the true N. + S. center line of sec. 23, they do not want this old road recorded, and as some of the notes are lost and the survey not important we do not record it here.

Sept. 16th 1913. In afternoon M. A. Kemp, Perry Countryman and Arthur Countryman walk to the iron monument being the corner to sec. 2-3-10-11. Twp. 136 + R. 31 W. and chain West along the graded road half a mile rough chain & look for the $\frac{1}{4}$ cor. bet. secs. 3 + 10, where U.S. notes call for a stake and the following bearing trees: Oak 15 $S 30^{\circ} E 15$ links (= 9.90 ft.) Oak 18 $N 25^{\circ} W 19$ links (= 12.54 ft.) We find one old stump South of the grade and an 18 inch oak badly burned but no marks. In a field North of the road we find a fallen 15 inch oak which is plainly marked, but has been dragged away from its original position, and as we could not find any bearing trees that we could be sure of we decide to survey the whole mile Secs. 3 and 10.

September 17th 1913 M. A. Kemp transitman: Art Countryman picket and chain: Ed. Brownell apman & chainman: N. + E. transit and 300 foot Chicago steel tape: double center hubs; & perfect plumb-bob chain. Set over iron corner to sec. 2-3-10-11-T. 136, R. 31, and run west: Magnetic variation is $8^{\circ} 30' E$, at 1500 ft. set hub & tack: @ 2100 ft. set hub & tack: @ 3300 enter swamp: @ 3500 leave same: @ 3669 set hub & tack: @ 4204 set hub & tack: at 4596.60 hub & tack: @ 4864. set hub & tack: at 4900 land drops about 10 feet to wet swamp: @ 5307.73 the cor. to sec. 3-4-9-10 sets North 53.44 feet at which point the Gov't notes call for "Witness Corner 275 links South" with bearing trees as follows: Pine 10 $S 25^{\circ} E 37$ links (= 24.42 ft.) Pine 10 $S 22^{\circ} 30' W 24$ links (= 15.84 ft.) We find the S.E. tree plainly marked, but the S.W. one has disappeared. From the remaining bearing tree we set a hub for the witness corner and from the

Witness corner we run north 181.50 feet and set a hub and tack for the true cor. to secs. 3-4-9-10-T. 136, R. 31, then correct our random line between secs. 3 & 10 as follows: @ hub 4864 we run N 49.13 feet and set stake on true line @ 4559.60 we run north 46.05 ft. and set hub on true line: @ 4204. we run north 42.46 ft. and set hub on true line: @ 3669. we run North 37.06 ft and set hub on true line: At 2653.86 turn 90° angle North and chain 26.72 feet where we set a hub and tack for the true 1/4 corner bet. secs. 3 & 10, T. 136-R. 31. @ hub 2100 we run North 21.21 ft. to true line: @ 1500 we run North 15.15 ft. to true line @ all correction points we drove an oak hub and tack and set tall stake.

Setting over the true 1/4 corner just set between sec. 3 & 10 we run South thro sec. 10 var. 9° E very little cutting and level for 1/4 mile.

Thursday Sept. 18th 1913. M. A. Kemp transitman: Art Countryman Ed. Brownell & Howard Myers chain up line: @ 1566.40 hub & tack: @ 2047.00 hub & tack: at 2400 hub & tack: @ 3203.10 hub & tack: @ 3700 enter swamp bears N.E. at 3825 leave same, bears N.E. @ 4134.70 hub & tack on hill: @ 4275 bottom of hill enter meadow: at 4375 enter lake: at 4605 lv. lake: @ 4700 lv. meadow on south side: @ 4763.60 hub & tack on high bank: at 5270.50 hub & tack: For the 1/4 corner on the south side of sec. 10 bet. secs. 10 & 15, T. 136 R. 31, Gov't notes call for a stake and the following bearing trees: Aspen 10 N 28° W 17 links distant: Aspen 8 S 36° 30' E 23 links distant: We could find no trace of either of them as the fires have destroyed nearly everything, so we walk East 1/2 mile to the cor. of secs. 10-11-14-15 set last year by M. A. Kemp, from which we run West: Magnetic variation is 8° 45' E. @ 856.20 set hub: @ 1374.30 set hub:

Friday Sept. 19th 1913. Heavy rain in A.M. but in P.M. continue west: M. A. Kemp, Art Countryman: Perry Countryman: Ed Brownell & M. Myers: @ 1750 enter meadow. @ 1950 lv. same: @ 2446.20 set hub: at 2628.78 stake: @ 2705 West, we cross our N. & S. line at about 5380 ft. South: at 2992.50 hub & tack: @ 3274 set hub: @ 3360 old shore line @ 3380 water edge on East side of Moose Lake: @ 3373. set hub: "A" on shore East side of Moose Lake. Cause hub "B" to be set on line on West shore of Moose Lake, Art Countryman flagman. Quit for night.

Saturday Sept. 20th 1913. Cold & Very Windy: M. A. Kemp, A. Countryman Ed. Brownell, & M. Myers. Set transit on hub "B" on line on west side of Moose Lake, back sight on Hub "A" and turn 90° angle South 300 feet & set hub "C" set transit on hub "C", back sight on hub "B" and turn 77° to hub "A". The distance from hub "A" to hub "B" is 1299.44 feet, added to 3373. equals 4672.44 to hub "B" on line over lake: Continue West: @ 5400.90 the cor. to secs. 9-10-15-16, sets North 190.11 feet, at which point U.S. notes call for a stake and the following bearing trees. Maple 5 S 28° W 6 links (= 3.96 ft.) Aspen 6 S 16° 30' E 5 links (= 3.30 ft.) White pine 24 N 44° W 26 lks. (= 17.16 ft.) Bl. Oak 5 N 65° E 11 links (= 7.26 ft.) We find a white pine stump with the blazes still visible & the rotted stump of the three other trees, all of which check for course & distance, and from these we set a 2x2x20-inch hub & tack, for the true cor. to secs. 9-10-15-16, T. 136, R. 31, at var. 8° 45' E and mark new bearings as follows: @ 8° 45' E, to tackhead. Poplar 3 S 24° 30' W 6.90 feet. Poplar 4 S 75° E 19.80 feet.

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Poplar 3 $N 65^{\circ} E$ 27.60 ft. Tack in blaze on old B.T. stump bears $N 44^{\circ} W$ 17.16 feet.
 Correcting back at Station 2700.45 West, we turn 90° angle and run North 95.05 ft. where we set a $3 \times 3 \times 20$ inch hub & tack for the true $\frac{1}{4}$ corner bet. sec. 10 & 15, T. 136 R. 31. Setting over $\frac{1}{4}$ cor. just set bet. sec. 10 & 15 run South thro sec. 15, var. $8^{\circ} 45' E$. @ 332. South set hub & tack then correct over N & S random line through sec. 10 as follows: @ 5290.60 South the $\frac{1}{4}$ cor. bet. sec. 10 & 15, sets East 6 feet: hub 4736.40 goes East 5.21 ft. to true N & S. centerline of sec. 10: hub 4134.70 goes East 4.55 ft., and hub 3203.10 goes East 3.52 ft. and hub 2400 goes East 2.64 ft. and hub 2047.00 goes East 2.25 ft. & hub 1566.40 goes East 1.72 ft. @ which points we set a hub & tack & tall stake marked "road center" along the true N & S. center line of sec. 10. T. 136 R. 31. Quit for night.

Monday Sept 22nd 1913. M.A. Kemp, A. Countryman & Ed. Brownell begin at hub 332. ft. South of the $\frac{1}{4}$ cor. bet. sec. 10 & 15, T. 136 R. 31 and continue the line South on $8^{\circ} 45'$ var. thro sec. 15. @ 571.50 set hub. @ 1600 stake. @ 2056.20 tack in log: @ 2817. set hub: @ 3050 enter swamp: @ 3210 lv. swamp: @ 3334.50 set hub: @ 3350 enter same swamp which is an open swamp: @ 3800 lv. open swamp: @ 3873.20 set hub: @ 4449.70 set hub: @ 4775 enter wet open swp: @ 5300 lv. same swamp which bears N.E. enter low ridge. @ 5400 set hub & tack: @ the $\frac{1}{4}$ cor. bet. sec. 15 & 22, T. 136 R. 31, U.S. notes call for a stake and following bearing trees: Tamarac 5 $N 10^{\circ} W$ 12 lks. (= 7.92 ft.) Tamarac 6 $S 30^{\circ} E$ 5 links (= 3.30 ft.) We hunt carefully for a long time, but all of the tamaracs are down in the wet swamp which has been burned also long grass hides everything & as the $\frac{1}{4}$ cor. appears to be gone we quit for night. Mr. E.H. F. Lategriff worked in the afternoon.

Tuesday September 23rd 1913. Same crew working. We go to the cor. to sec. 15-16-21-22, T. 136 R. 31 where U.S. notes call for a stake and Tamarac 10 $N 76^{\circ} W$ 10 links (= 6.60 ft.) Tamarac 8 $N 58^{\circ} E$ 5 lks (= 3.30 ft.) Tamarac 6 $S 65^{\circ} W$ 9 lks (= 5.94 ft.) Tamarac 12 $S 54^{\circ} E$ 14.52 feet distant: We find the N.W. & S.E. trees dead but plainly marked from which we set the cor. by flat chain from face of the figures, after which the old bearing tree stumps stand correct for course & distance at $6^{\circ} 30'$ var. The other two bearing trees are gone. We set a $3 \times 3 \times 15$ inch hub & tack for the true cor. to sec. 15-16-21-22, T. 136 R. 31, over which we set the transit & run South at $8^{\circ} 30'$ variation East: @ 855 ft. set hub & tack: @ 1447.70 set hub. Cloudy & drizzling all day: as it is raining hard we quit work about 5 o'clock.

Wednesday Sept. 24th 1913. Rained all day, we did not work.

Thursday September 25th 1913. Said up in A.M. on account of rain, worked in P.M. M.A. Kemp, A. Countryman, Ed. Brownell, E.A. & Sylvester F. Lategriff worked. Beginning at hub 1447.70 South we continue line south bet. sec. 21-22: @ 1775 enter swamp: @ 2210 lv. swamp enter high ridge bears E & W: @ 2413.50 set hub on ridge: @ 2675 enter swamp again, full of dead down windfalls & roots @ 3000 our random line touches the East end of a high ridge: @ 3500 lv. swamp: @ 3628.50 set hub: @ 4025 enter swamp: @ 4074.10 set hub: @ 4848 set hub: @ 4900 lv. swamp. - Lategriff chaining: @ 5119.60 set

RECORD No 240.

hub: @ 5398.40 the iron monument at the true cor. to secs. 21+22-27-28-136-31 sets West 40.46 ft. Quit for night: it is so dark at 5.30 o'clock could not see the cross hairs in the transit.

Friday Sept. 26th 1913 Same crew: Correcting the line bet. secs 21+22 @ hub S. we chain West 36.27 feet and set angle point "A" on true line @ 40.74 South we chain West 30.51 ft. to true line. To run the angles around the lake at S.W. corner of sec. 22, we set transit on corrected hub 4843., then back sight on corrected hub 4074. & run S 41° 28' W 696.20 feet where we set angle point "B." on the North side of a "post hole." Set over hub "B". back sight on hub "A" and run S 81° 16' W 202.20 ft. to hub "C". being in center of road on South boundary of sec. 21. Hub 3628.50 goes West 27.78 ft. @ 3000 set road center stake on ridge 22.47 ft. West @ 2699.20 run West 20.23 ft. where we set a hub & tack for the true 1/4 cor. bet. secs. 21+22-T. 136-P. 31. and mark the following bearings: var. 8° E. Dead Tamarac root S 5° E 12 feet. Dead Tamarac root N 38° W 32.50 feet. Hub 2413.50 goes West 18.07 ft. hub 1447.20 goes West 10.84 ft. hub 855.00 goes West 6.40 ft. at all correction points, we drive a hub and tack & tall stake marked "Road center". sec. line." Going to the corner to secs. 15-16-21-22-T. 136-P. 31, we run East on 8° 30' variation at 350 enter wet swamp: @ 475 lv. same: @ 930.10 hub & tack: @ 1295.50 hub & tack "A" @ 1320 enter swamp, wet, tall grass: set over hub "A" and turn North 90° & run North 240.87 feet to hub "B." we set hub "C" on ridge across swamp & on line: set over "B" back sight on "A" and turn 74° 49' to "C" the distance "A" to "C" is 887.31 added to 1295.50 equals 2182.81.

Tuesday September 30th 1913. M. A. Kemp, A. Countryman, Ed. Brownell, E. H. and Sylvan Flategraff, beginning at hub 2182.81 Continue East: @ 2150 enter Island. @ 2525 lv. island: @ 2830 lv. swamp: @ 2989.30 set hub & tack on high ground: @ 3238.30 set hub & tack: @ 3575 enter brushy wet swamp which bears N.W. & S.E. @ 3900 enter ash timber: @ 3942.70 tack in log: @ 4100 enter green spruce & dead Tam. timber. Ground swampy but not wet: @ 4585 tack in log: @ 4800 green tan. & wet bottom: @ 5350.80 stake set last year by us at the true cor. to secs. 14-15-22-23-T. 136 Rg. 31, sets South 175.40 feet.

Correcting back: @ 2675.40 turn 90° angle & run South 87.70 ft. & set a 4x4x30 inch hub & tack for the true 1/4 cor. bet. secs. 15 and 22, T. 136 R. 31.

Oct. 1st 1913. Fine and warm. Kemp, Countryman, Brownell and S. Flategraff. Correcting the lines between secs. 15 and 22: hub 930.10 goes South 30.49 ft. @ 1271.10 run South 41.67 ft. and set angle point "A" set over "A" back sight on corrected hub 930.10 and run from "A" to "B" North 23° 15' E. 201.75 ft. from "B" to "C" run N. 54° 54' E. 365.90 ft. run from "C" to "D" run North 66° 43' E. 708.60 ft. @ a point 200 ft. from point "C" enter dry slough 120 ft. wide. from "D" to E. run S. 70° 12' E. 362.60 ft. at E. back sight on "D" and turn 75° 10' North to corrected N. & S. center line of sec. 15.

Correcting N. & S. center line of sec. 15: @ 5304.80 the 1/4 cor. on S. side of sec. 15 bears West 34.77 feet. hub 4712.00 goes West 30.91 ft. to angle point "E": hub 4449.70 goes West 29.19 ft. at hub 3873.20 run West 25.41 ft. hub 3334.50 goes West 21.87 ft. hub 2817.00 goes West 18.48 ft. hub 2056.20 goes West 13.50 ft. hub

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1600 goes west 10.50 ft. hub 571.50 goes west 3.75 ft. hub 332.00 goes west 2.18 ft. at all of these points we put in a hub and tack and a tall stake marked "road center".

To run the angles around the East end of Moose Lake in sec. 10 T. 136, R. 31, on our N. & S. center line: hub 4134.70 on true line is point "A". set over "A" and run South $21^{\circ}57'E$ 36290 ft. to hub "B" in marsh: set over hub "B" backsight on "A" and run $S 24^{\circ}52'W$, 321.90 ft. to hub "C" which is hub 4763.60 on true line N. & S. This completes our survey of road N. & S. through center of sec. 10 & 15 & across the West half of the South boundary of sec. 15, and the West boundary of sec. 22, T. 136, R. 31. Over night at Countryman's.

Thursday Oct. 2nd 1913. Fine & warm: M. A. Kemp, transit & chain. A. Countryman picket & chain: Ed. Brownell & S. Flategraff apmen: double center set hubs, and plumb-bob used in chaining perfect: set over cor. to sec. 3-4-9-10-T. 136, R. 31, set by us this year & run West on $8^{\circ}45'E$ var: @ 60 ft. west lv. swamp: @ 193.70 set hub: @ 500.90 set hub: @ 1120.50 set hub: @ 1308 cross Farley's N. & S. rail fence: @ 1369. cross picket fence; enter garden: @ 1515 cross picket fence & leave garden: @ 1565 Farley's house sets North 30 feet. @ 1610 cross S.W. cor. of root house: @ 1653.70 hub & tack on hill: @ 1725 cross rail fence - enter potato patch: @ 2057.40 hub on West side of Farley's clearing: @ 2780.60 hub on N. slope of high hill: @ 2640 we look for the $\frac{1}{4}$ cor. bet. sec. 4 & 9, but all traces of it has been burned out: @ 3426.30 set hub: @ 3525 enter meadow, bears S.E. & N.W., old lake bottom @ 3900 leave same bears N.E. & S.W. @ 4323.30 set hub: @ 4730.90 set hub on South slope of high hill: @ 4930 enter small slough: @ 5100 lv. same: @ 5280 set stake for the temporary corner to sec. 4-5-8-9-T. 136-R. 31, where U.S. notes call for a stake and: Oak $N 31^{\circ}W$ 12 links: White pine 24, $N 46^{\circ}E$ 76 links distant. We find the white pine down but plainly marked. Oak is all rotted out, too late to set corner to night.

Friday Oct. 3rd 1913. Fine & warm. M. A. Kemp. A. Countryman Ed. Brownell. & S. Flategraff: we set a 4x4x15 inch hub & tack for the true cor. to sec. 4-5-8-9-T. 136-R. 31, from the White Pine bearing tree and mark new bearings as follows: Poplar 5 $N 17^{\circ}W$ 47.75 ft. Poplar 3 $N 64^{\circ}46'E$ 44.75 ft. dist. Poplar 3 $S 43^{\circ}45'E$ 23.65 ft. Poplar 5 $S 6^{\circ}30'W$ 37.85 ft. dist. @ 5253.40 West, the cor. sets North 8.30 ft. We continue west on our random line and at 5596.70 ft. set hub & tack: @ 5850.90 set hub on hill. @ 6489.80 set hub on high hill: @ 6985 enter wet swamp, bears N.E. & S.W. @ 7290 lv. same: @ 7424.20 set hub: @ 7660.00 hub & tack on hill: @ 7920 near the $\frac{1}{4}$ cor. to sec. 5-8-F 136-R. 31, govt notes call for: Witness corner 201.96 ft. East & the following bearing trees: Norway Pine 16 $N 50^{\circ}E$ 8.58 ft. White Pine 18 $S 60^{\circ}W$ 11.22 ft. all stumps burned out could identify nothing so continue West: @ 7850 enter dry lake bed, bears S.W. & N.E. @ 8260 leave same, bears S.E. & N.W. @ 8553.30 set hub on hill: @ 8933.00 set hub:

Oct. 7th 1913. Same crew, continues West; fine & warm: @ 9065. cross old R.R. grade which bears $N 40^{\circ}W$: @ 9575 enter wet slough; bears N. & S. @ 9650 lv. same: @ 9800 set hub: @ 10225 set hub: @ 10600 touch North edge of slough - old lake bed. @ the cor. to sec. 5-6-7-8, T. 136 R. 31. U.S. notes call for stake and: Dead W. pine 16 $N 2^{\circ}W$ 7.92 ft. dist. Dead White Pine 15 $N 35^{\circ}E$ 46.20 ft. dist. Dead W. pine 12 $S 1^{\circ}30'W$, 19.80 feet. Norway pine 20 $S 80^{\circ}E$ 49.50 feet distant. We hunted several hours for this corner but everything has been so badly burned we could find nothing

so continue our line West:

October 8th 1913. Same crew continue West: @ 11213.70 set hub on high ridge about 30 about 30 feet wide which bears N.E. & S.W. @ 11644.00 set hub on edge of road: @ 11660 intersect old grade -- County road which bears N.E. & S.W. @ 11953.30 set hub on high ridge: @ 13200 set hub on hill: @ 15105.70 set hub on hill: @ 15900 set hub:

Thursday October 9th 1913. Foggy day: In the A.M. we drove to the Northwest cor. of Moose Lake Twp. looking for roads; too foggy to work. In P.M. we continue our line West, same crew as yesterday: @ 16253.20 set hub on hill: @ 17023.10 set hub: @ 17200 enter dry lake bed: @ 17700 lv. same: @ 17793. set hub: & tack for the temporary cor. to secs. 6 & 7-T. 136-R. 31, & secs. 1 & 12-T. 136-R. 32, where U.S. notes call for a stake and: Aspen 11 N 66° E 42 links (= 27.72 feet) Aspen 9 N 8° 30' W 48 links (= 31.68 ft.) Aspen 6 S 44° W 10 links (= 6.60 ft.) White Birch 5 S 16° E 14 links (= 9.24 ft. distant: We find an oak stake in place, also the point of a very old stake which checks for course and distance with the rotted stumps of all four trees, we set in its place a 4 X 4 X 20 inch pine stake & tack, for the true corner & mark new bearings as follows:

Jack pine 8, N 47° 03' E 69.85 feet. Poplar 3 N 11° 50' W 15.50 feet. Norway pine 12 N 22° 41' W 46.15 feet. to tack heads in each. var. 9° E. At 17932 feet West, the corner to secs. 1-6-7-12, on the range line bet. Towns 136 N, Range 31 & 32 W, bears North 116.00 feet.

Friday October 10th 1913. Cold & cloudy, same crew. We go to the cor. to secs. 5-6-7-8-T. 136 R. 31, and hunt further East. We find the stumps of the N.E. & S.W. old Gov't bearing trees badly burned, but they check for course & distance @ 8° 30', and from these old bearing tree stumps, we set a 3 X 3 X 20 inch oak hub & tack for the true cor. to secs. 5-6-7-8 and mark new bearings as follows: White pine stub 20 N 56° 13' W 80.55 ft. dist. Black Oak 3 N 42° 35' E 30.65 feet. Poplar 8 S 78° 08' W 44.95 ft. to tack heads, at 8° var. E. @ 10471.60 West the corner to sec. 5-6-7-8, sets North 28.70 ft. Correcting back the line between sec. 6 & 7-T. 136 R. 31, @ station 13098.41 West, we run North 59.43 feet where we set a 3 X 3 X 20 inch stake & tack for the true $\frac{1}{4}$ cor. bet. secs. 6 & 7, no trees near for bearings: This is 2626.81 feet West of the cor. to sec. 5-6-7-8-T. 136 R. 31, Gov't chain for the South boundary of sec. 6, T. 136, R. 31, is 7496.94 feet & equals 7460.40 feet my chain. At 11627 West, set hub & tack 42.22 feet North on the West side of County road on old Rail Road grade, where we set a tall stake marked "Section line": @ 11198 W. we run North 37.20 feet where we set a hub & tack & tall stake on top of high ridge & mark the tall stake "section line"

Saturday Oct. 11th 1913, same crew, fine & cold, we correct the line between secs. 5 & 8, T. 136 R. 31, as follows: @ hub 10225 W. we run North 27.83 ft. to true line: hub 9800 goes North 2617 ft. hub 8933. W. goes N. 22.79 ft. @ 8553.30 W. we run North 21.31 feet. @ 7862.50 we run North 18.50 ft. where we set a 4 X 4 X 30 inch hub & tack for the true $\frac{1}{4}$ cor. bet. sec. 5 & 8-T. 136 R. 31, no trees near to mark for bearings: @ hub 7660. we chain North 17.68 ft. to true line: hub 7424.20 goes North 16.77 ft. hub 6489.80 goes North 13.26 feet: hub 5850.90 goes North 10.67 ft. hub 5596.70 goes North 9.78 ft. At all correction hubs we have placed a hard wood hub & tack and set a tall stake marked "road center": "section line": Correcting the line between sec. 4 & 9 hub 4730.90 goes North 7.57 ft. hub 4323.30 goes North 6.92 feet: hub 3426.30 goes North 5.48 feet. hub 2780.60 goes North 4.45 ft. At 2626.70 we chain North 4.15 ft. and set a 3 X 3 X 20 inch hub & tack for the true $\frac{1}{4}$ corner bet. sec. 4 & 9-T. 136 R. 31, and mark new

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bearings as follows: var. $8^{\circ}30' E$. Poplar 6 N $38^{\circ}08' E$ 43.52 ft. Poplar 6 S $66^{\circ}23' E$. 44.15 feet to tack heads in the trees. hub 2057.40 goes North 3.29 feet; hub 1653.30 goes North 2.65 ft. hub 1120.50 goes North 1.79 ft. hub 500.90 goes North 0.80 of a foot. at all correction hubs we place a hard wood hub & tack & set a tall stake marked "road center" "section line."

Monday October 13th 1913. M. A. Kemp; Art. Countryman, and Ed Brownell commence setting iron monuments: We drive to the Northwest corner of sec. 6, T. 136 N. R. 31, W. being the Twp. cor. and also being the Northwest cor. of sec. 1, Twp. 136, R. 32, where we find a stake set by M. A. Kemp & John W. Lars when they were working for Ansel Twp. in July 1913. We pull up the stake and put in its place an iron Twp. corner post, being a galvanized iron pipe, $2\frac{1}{2}$ by 48 inches in size, capped on top and anchor rod through bottom set nearly its full length in the ground in a good bed of cement for the true Township corner. At the corner to secs. 6 & 7, T. 136, R. 31, being also the corner to secs. 1 & 2, of Twp. 136, R. 32, we pull up the hub & tack set by M. A. Kemp, Oct 9th 1913 and put in its place an iron sec. cor. being an galvanized iron pipe, $2\frac{1}{2}$ by 48 inches in size, anchor rod through the bottom and set nearly its full length in the ground in a bed of cement so that the top of the iron is 6 inches above ground for the true sec. cor. At the following corners in Moose Lake Twp. being Township 136 N. Range 31 W. 5th P. M. set by Kemp on this survey we pull up the wood hubs and put in the place of each an iron post as follows: At the $\frac{1}{4}$ cor. bet. secs. 6 & 7, we pull up the wood hub & put in its place a galvanized iron pipe $2\frac{1}{2}$ by 48 inches in size & set nearly its full length in the ground with an anchor rod thro the bottom & set in a bed of concrete.

At the cor. to secs. 5-6-7 & 8, we pull up the wood hub & put in its place a galvanized iron pipe $2\frac{1}{2}$ by 48 inches in size, anchor rod thro the bottom & set nearly its full length in the ground in a bed of cement for the true sec. corner. Tuesday October 14th 1913. Same crew: at the $\frac{1}{4}$ corner between secs. 5 & 8 and at the corner to secs. 4-5-8 & 9 and at the $\frac{1}{4}$ cor. between secs. 4 & 9, and at the corner to secs. 3-4-9 & 10, and at the $\frac{1}{4}$ corner bet. secs. 3 & 10, and at the $\frac{1}{4}$ cor. bet. secs. 10 & 15, we pull up the wood stakes set by us for the true corners & put in each place a galvanized iron pipe $2\frac{1}{2}$ by 48 inches in size, anchor rod through bottom & set nearly its full length in the ground in a bed of concrete for the true section and quarter section corners.

Wednesday Oct. 15th 1913. M. A. Kemp, Countryman and Brownell, still working: at the corner to secs. 9-10-15 & 16 and at the corner to secs. 15-16-21 & 22, and at the $\frac{1}{4}$ corner bet. secs. 15 & 22, and at the corner to secs. 14-15-22 & 23, and at the $\frac{1}{4}$ corner bet. secs. 14 & 23, set by us in this survey we pull up the wood corners and put in the place of each a galvanized iron pipe $2\frac{1}{2}$ by 48 inches in size, anchor rod through bottom, and set their full length in the ground in a bed of concrete for the true section and quarter section corners.

Thursday October 16th 1913. M. A. Kemp, & Art. Countryman, Sylvain. Felategraff, go to the $\frac{1}{4}$ cor. bet. secs. 22 & 23 & the corner to secs. 13-14-23 & 24 established by us in this survey, where we pull up the wood stakes

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and put in the place of each a galvanized iron pipe, 2 1/2 by 4 1/2 inches in size with anchor rod thro bottom and set the full length in the ground in a bed of concrete for the true section and quarter section corners.

Friday Oct. 17th 1913. same crew as yesterday, Hlatigraff's team; we go to the 1/4 corner bet. secs. 21 & 22, T. 136 R. 31 where we pull up the wood corner established by us and put in its place a galvanized iron pipe, 2 1/2 by 4 1/2 inches in size, anchor rod through bottom; and set its full length in the ground in a bed of concrete for the true 1/4 corner.

Going to the corner to secs. 4-5-32 & 33 and to the 1/4 corner bet. secs. 4 & 33, and at the corners to sec. 3-4-33 & 34, and at the corner to sec. 2-3-34 & 35, established by us in this survey along the Twp. line bet. Townships 135 N. and 136 N. Range 31, we pull up the wood hubs & put in the place of each a galvanized iron pipe, 2 1/2 by 4 1/2 inches in size, anchor rod thro bottom set the full length in the ground in a bed of concrete for the true section and quarter section corners.

Saturday October 18th 1913. M. A. Kemp, S. Hlatigraff and Swan Nelson make a short survey of a cemetery in S.W. 1/4 of S.E. 1/4 of sec. 23, Twp. 136, R. 31, for the Twp. of Moose Lake. We start at the 1/4 corner West of the S.E. of sec. 23, previously established by Deputy Co. Surveyor. R. W. Moulster, and from this iron 1/4 corner we run North 90° angle to the South boundary of sec. 23, T. 136-R. 31, a distance of 26.4 feet North to an iron monument thence East parallel to the sec. line 16.5 feet to an iron monument thence South 26.4 feet to the section line; thence West along the sec. line 16.5 ft. to the place of beginning; all to be used for cemetery purposes, excepting there from a strip of land 33 feet wide along the South boundary being the right of way of the main traveled wagon road where it now exists. Swan Nelson made oak hubs & stakes all day.

October 19th 1913. M. A. Kemp and Hlatigraff staked out the cemetery grounds and drove oak stakes at the corners of all lots and blocks.

Survey begun September 14th 1912.

Completed October 19th 1913.

Recorded October 29th 1913.

John W. Curo

T 136		R 30	
Sec	Cont'd To	Page	Book
18	"	"	"
19	"	"	"

T 135		R 31	
Sec	Cont'd To	Page	Book
2	"	"	"
3	"	"	"
4	"	"	"
5	"	"	"

T 136		R 31	
Sec	Cont'd To	Page	Book
3	"	"	"
4	"	"	"
5	"	"	"
6	"	"	"
7	"	"	"
8	"	"	"
9	"	"	"
10	"	"	"
11	"	"	"
13	"	"	"
14	"	"	"
15	"	"	"
16	"	"	"
21	"	"	"
22	"	"	"
23	"	"	"
24	"	"	"
32	"	"	"
33	"	"	"
34	"	"	"
35	"	"	"

T 136		R 32	
Sec	Cont'd To	Page	Book
1	"	"	"
12	"	"	"

T140, R30, SEC 19-30
-140, -31, " 24-25

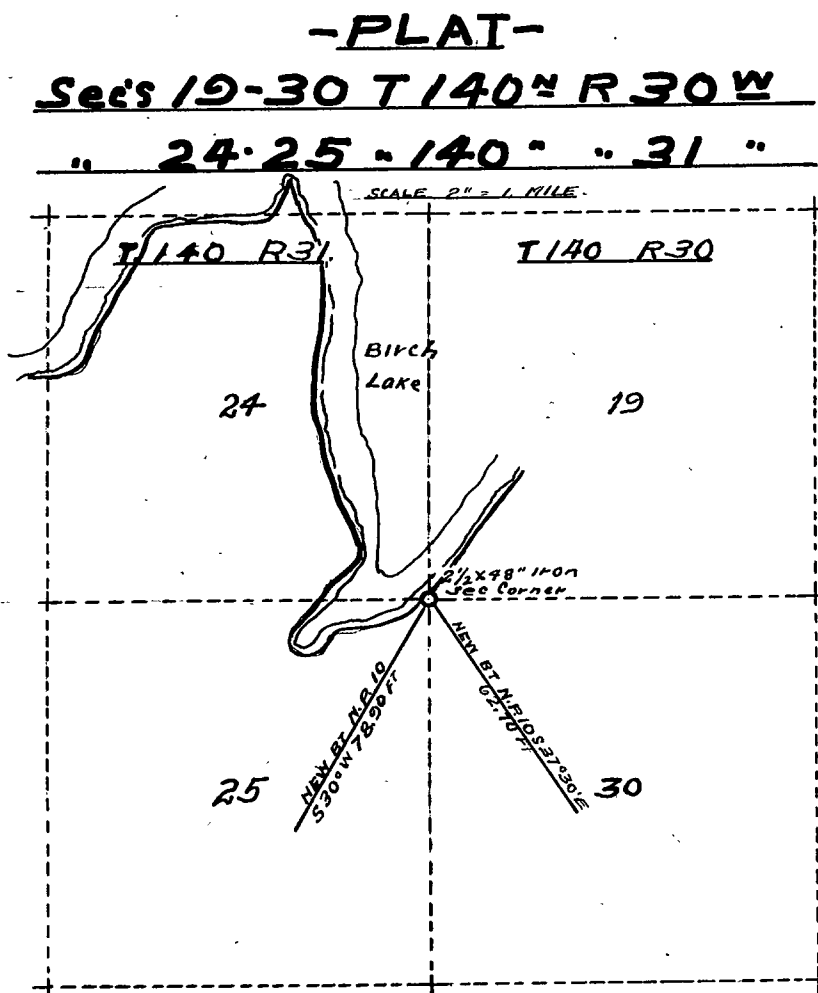
SURVEY RECORD No. 241.

Field notes of the survey and establishment of a permanent iron corner with new bearing trees at the S.W. Cor. of sec. 19, being the N.W. corner of section 30, of Township 140 N, Range 30 W, and the S.E. corner of section 24, and the N.E. corner of sec. 25, T. 140 N, R. 31 W, 5th P.M. as surveyed and established by John W. Curo, County Surveyor of Cass Co. Minn.

Saturday, Oct. 18th, 1913. John W. Curo compassman, A. Curo and E. Mellon chaining: As the land owners want the corner to sections 19-30 24-25, bet. Twp. 140, R. 30 & 31, permanently established & recorded we take an iron monument and walk to the corner where U.S. notes call for a stake and the following bearing trees. Norway pine 9, S 65° E 177 links. Norway Pine 12, S 52° 42' 200 links. We find the stumps both plainly marked and an old stake previously established by Curo for the true corner. We take up the stake & put in its place a iron monument being a galvanized iron pipe, capped on top pipe is 2 1/2 inches thick by 4 feet long and the cap is 3 inches in diam. & we set it by first driving an 8 foot tamarac 2 1/2 inches thick well down into the wet swamp over which we force the hollow pipe and then drive the whole thing solidly into the swamp until it takes several big blows of a big post to make it move, and leave the iron monument sticking two feet above the level of the swamp: this is the true corner to sec. 19-30-24-25 bet. Twp. 140, R. 30 & 31, from which we mark new bearings as follows: Norway pine 10 bears S 37° 30' E 62.70 feet. Norway pine 10, S 30° W, 78.90 ft. distant to the head of a 20^d spike driven in a flat spot at the base of each tree. Set with a Gurley compass and a 100 foot "Monarch" steel tape. Var. 8° 30' E.

Surveyed October 18th 1913
Survey recorded Jan. 3rd 1914.

John W. Curo C. Surveyor Cass Co. Minn.



NOTES			
T 140 R 30			
Sec	CONT'D TO	PAGE	BOOK
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30	"	"	"

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T 140 R 30			
Sec	CONT'D TO	PAGE	BOOK
19	"	"	"
30	"	"	"

NOTES			
T 140 R 31			
Sec	CONT'D TO	PAGE	BOOK
24	"	"	"
25	"	"	"

PLAT			
T 140 R 31			
Sec	CONT'D TO	PAGE	BOOK
24	"	"	"
25	"	"	"

Field notes of the survey and establishment of permanent iron sections corners in Secs. 19-20-21-28-29+30 of Township 138 N, Range 30 W, 5th P.M. as surveyed by John W. Curo, Co Surveyor of Cass Co. Minnesota.

December 13th 1913, John W. Curo, R. B. Millard, Robert E. Snell and Albert Eastwald go to the 1/4 corner between sections 21 & 28, Twp. 138 Rg. 30 where we find some old tree which may be the bearing trees from which we run half a mile west to the corner to sections 20-21-28+29. T. 138, Rg. 30 where U.S. notes call for: Tan. 5 N 70 1/2 E. 92 lks. Tan. 6 N 87° W 195 lks. Aspen 14 S 52° W 176 lks. Tan. 4 S 29° 30' E. 324 lks. We find the stump of the N.W. bearing tree from which we find the old U.S. stake, quite well preserved because it sets deep in the set moss & water. We place a red flag at the stake and run a compass line South var. 8° E. and at about 1/2 mile we find an old stake set for the 1/4 corner between secs. 28-29 where U.S. notes call for: White Pine 14 N 20° E 27 lks; White Pine 14 N 59° W 80 lks. We find the stump of both old bearing trees: The stump and a part of the body of the N.E. tree are plainly marked: We pull up the old stake and put in a new 2x2x20 inch stake, with tack in top for the true 1/4 corner bet. sec. 28 & 29, after which both old bearings check out perfect for course and distance going back to the corner to sec. 20-21-28-29 we run a compass line and pace half a mile West and as the old bearings and stake at the 1/4 corner bet. sec. 20 & 29 are gone, we set a stake for the temporary 1/4 cor. from which we run a rough line half a mile South & square up an old stub for a temp. center to sec. 29. Then run a rough line a half mile East & quit this survey for a few days.

Jan 3rd 1914. John W. Curo, transit & chainman. H. & B. transit 300 ft. steel tape. B. F. Rhodes, apman & chain. Albert Eastwald apman.

At the corner to sec. 20-21-28+29-T. 138-R. 30, we pull up the wood stake & put in its place a 2 inch galvanized iron pipe, 7 ft. long driven over an 8 ft. piece of Tamarac piling, and the whole thing driven solidly into the swamp until it sets on solid bottom & the top of the iron left sticking two feet above the swamp level and mark new bearings as follows: J. Pine 7 S 48° 47' W. 145.90 ft. Tan. 4 N 76° 47' W 114.90 ft. and from this corner we run West var. 8° 20' E: At 200 lv. swamp. @ 2700 ft. set hub: @ 5316.70 corner to sec. 19-20-29-30 sets South 22.00 ft. We find the N.W. N.E., & S.E. stumps of the old U.S. bearings from which we set a 1 3/4 x 48 inch galvanized iron pipe, for the true corner to sec. 19-20-28-30, & mark new bearings as follows: Jack Pine 12 S. 20° 30' W 43.78 ft. Jack Pine 9 S. 83° W 47.34 ft. Jack Pine 3 N 34° W 40.76 ft. Correcting the line East: @ 2658.35 W., we run South 11.00 ft. where we set a 1 3/4 x 48 inch galv. iron pipe for the true 1/4 corner, bet. sec. 20 & 29, & mark new bearings as follows: N. Pine 15 S 70° E 65.85 ft. N. Pine 12 N 2° 30' W 41.25 ft. Pull up the wood stake and put in its place a 1 3/4 by 48 inch galvanized iron pipe at the true 1/4 cor between Secs 28 and 29 138-30. set by Rhodes and Eastwald.

T138 R30			
Sec	CONT'D TO	PAGE	BOOK
19			
20			
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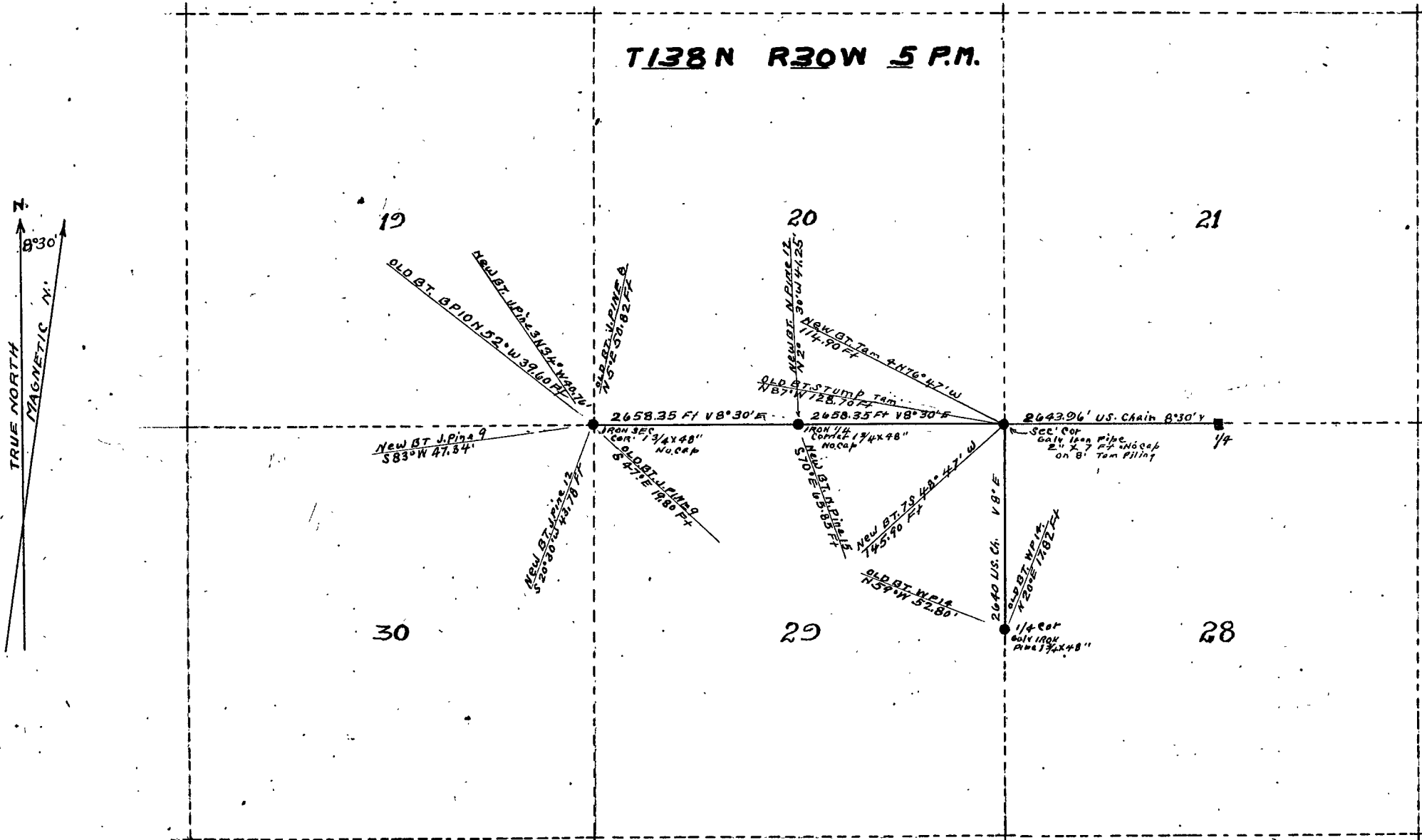
Surveyed December 13th 1913 to Jan 3rd 1914
Recorded Jan 3rd 1914 John W. Curo
Co Surveyor Cass Co. Minn

- PLAT - B

T 138 R 30.
SECS 19-20-21-28-29-30.

SURVEY RECORD No 242

SCALE: 3 INCHES = ONE MILE



Surveyed Dec 13th 1913.
 To Jan 3 1914 Recorded Jan 3rd 1914
 John W. Cress
 County Surveyor Cass Co. Minn.

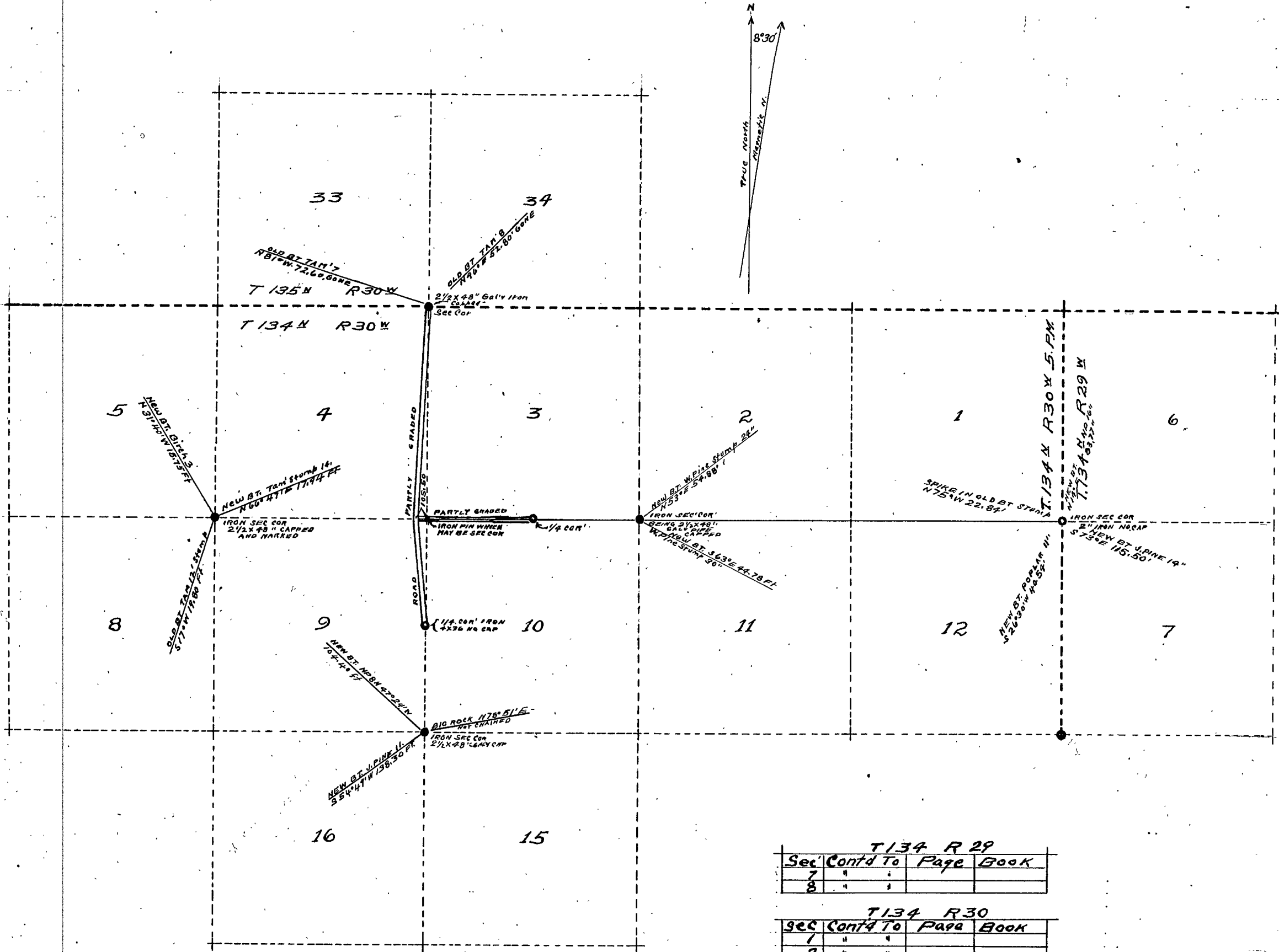
T138 R30			
Sec	CONT'D To	PAGE	BOOK
19	"	"	
20	"	"	
21	"	"	
28	"	"	
29	"	"	
30	"	"	

-PLAT-

RECORD No 243.

T.134 R.29 Sections 6-7.
 T.134 R.30 " 12-2-4-5-8-9-10-11-12-15-16
 T.135 R.30 " 33-34.

SCALE 2 INCHES = 1 MILE



T.134 R.29

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7	"	"	"
8	"	"	"

T.134 R.30

Sec	Cont'd To	Page	Book
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T.135 R.30

Sec	Cont'd To	Page	Book
33	"	"	"
34	"	"	"

Surveyed January 19th to 23rd 1914
 Recorded January 31st 1914
 John A. Pius
 County Surveyor Cass Co. Minn.

SURVEY RECORD No 243

T. 134, R. 29. Sec's 6-7.

T. 134, R. 30. .. 1-2-3-4-5-8-9-10-11-12-15-16.

T. 135 R. 30 .. 33-34.

Field notes of the survey and establishment of iron section corners in sections 6 and 7, T. 134 N., R. 29 W., and sections 1-2-3-4-5-8-9-10-11-12-15 & 16-T. 134 N., R. 30 W., and sections 33 & 34, T. 135 N., R. 30 W., as surveyed and established by John W. Curo, County Surveyor of Cass County Minnesota

Jan. 21. 1914. John W. Curo & Geo. Collins go to the 1/4 corner bet. secs. 9 & 10, of Township 134 N., R. 30 W., where we find a wood stake previously established by A. W. Moulster for the true 1/4 corner. We take up the wood stake and put in its place a black iron pipe, 4 inches in diameter and 3 feet long, anchor rod thro bottom and set its full length in the ground in a mound of mound of sand 8 inches high, after which the stumps of both old U.S. bearing trees plainly marked, check out for course & distance with the iron 1/4 corner just set. On the side of top of iron we mark, "1/4 S, 9-10-134-30."

Jan. 22. 1914. John W. Curo, A. W. Moulster and Henry Hemphill, roughly chain the mile of line between sections 3 and 4, T. 134, R. 30, chaining from the North, South to a point near the corner to sec. 3-4-9-10, where the newly graded State road No. 16, runs North & South thro the swamp, & another newly graded and ditched County road comes from the East and makes an intersection with the State road: at a point 105.50 feet East of the intersection of the County and State road; Assistant State Engineer Moulster has established the sec. cor. to secs. 3-4-9 & 10-T. 134, R. 30, by surveying and chaining very carefully. North, South, East & West and has driven an iron pin for the section corner.

In order to hold this iron pin as the true section corner Mr. Moulster and myself have decided to take the matter up with the County board & see if Cass County will assist in the expense of submitting the matter to the courts to settle the question as to wheather the true section corner will come at the intersection of the roads, or at the point established by Mr. Moulster, as this would settle the matter for all time.

Geo. Collins, Curo, Moulster & Hemphill go to the 1/4 corner between secs. 3 & 10, -134-30, where U.S. notes call for post and the following bearing trees. N. Pine 22, N 43° E. 44 lks. Pine 6, S 43° W 10 lks. We find a small iron set by the State forestry surveyors, for the 1/4 corner: We take up the iron & put in its place a black iron pipe, 3 ft. long by 4 inches thro, no cap on top, anchor rod thro bottom & set its full length in a 6 inch mound of dirt, after which the stumps of both old U.S. bearing trees stand correct for course and distance: We mark the side of the top of the iron just set, "1/4 S-3-10-134-30"

Curo & Collins go to the corner to sections 9-10-15-16-T. 134, R. 30, where we pull up the wood stake previously established by Deputy Co. Surveyor for the true corner and put in its place a galvanized iron pipe, 2 1/2 inches thro by 4 ft. long, capped on top, anchor rod thro bottom and set in the swamp untill the bottom rests on solid ground, and the top sticks 2. ft. above swamp level, we pile a foot of dirt around pipe and mark the cap on top, "9-10-15-16" This is the true sec. corner, & new bearings marked by Moulster stand as follows: N. Pine 8 N 47° 24' W 104.40 ft. distant. Jack Pine 11 S 54° 49' W 138.30 ft. dist.

RECORD No 243. Continued

Highest point of big rock in N. side of meadow bears N. 78° 51' E.

Jan. 23rd. 1914: A. W. Moulster, goes to the small iron corner previously established by him for the true corner to sec. 3 & 4 of T. 134 R. 30, being the corner to sec. 33 & 34, T. 135, R. 30, where he pulls up the small iron & puts in its place a 2 1/2 inch galvanized iron pipe, 4 ft. long, capped on top, anchor rod thro bottom and set its full length in a 6. inch mound of dirt, This is the true corner & we mark the cap, "33-34-4-3". Moulster then goes to the corner to sec. 4-5-8-9-T. 134 R. 30, where they pull up the wood stake previously set by Moulster for the true corner and put in its place a galvanized iron pipe, 2 1/2 inches thick, by 4 ft. long capped on top, & driven solidly into the swamp; this is the true sec. cor. & we have marked the cap, "4-5-8-9". Henry Kempfill assists Moulster in setting these corners.

Ruro and Collins go to the corner to sec. 2-3-10-11-T. 134 R. 30, where we find all the old U.S. bearing trees from which we set a galvanized iron pipe, 4 ft. long by 2 1/2 inches thro, anchor rod thro bottom and capped on top and marked "3-2-10-11" and set its full length in a mound of dirt 1 ft. high from which we mark new bearings as follows: W. P. Stump 30 S 63° E 44.78 ft. to 20^d spike; W. P. stump 24, N 53° E, 54.88 ft. to head of nail. Var. 9° E, set with Gurley compass. In order to check on the position of the corner to the iron pin set by Moulster for said cor. & run a compass line three miles East, to the corner to sec. 1-12-6 & 7, on Range line between T. 134 R. 29 and 134-R. 30, where we find a 2. inch iron pipe which sets correct for course & distance, with the stumps of all four old U.S. bearing trees which still stand plainly marked and in order to preserve this corner we mark new bearings as follows: Scrub. N. Pine 16, N 14° 40' E 83.77 ft. to 60^d spike. Jack Pine 14, S 73° E. 115.50 ft. to 60^d spike; Poplar 11 S 26° 30' W 40.54 ft. to nail head. Nail in old B.T. stump bears N 75° W 22.84 ft. Nail in old B.T. stump bears N. 45° 45' E 15.14 ft. 20^d spike in root of old B.T. stump bears S 64° 30' E, 15.48 ft. a 60^d spike in old B.T. stump bears S. 26° 30' W 3.98 ft. set with Gurley compass & 100 ft. steel tape. Var. 9° E.

Survey made Jan. 19th to 23rd. 1914.

Recorded Jan. 31st. 1914.

John W. Cuss
County Surveyor Cass Co. Minn

T134 R29			
Sec	Cont'd To	Page	Book
7	"	"	"
8	"	"	"

T134 R30			
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T135 R30			
Sec	Cont'd To	Page	Book
33			
34			

T138^W R29^W Sec's 4-9.

NOTES	
Sec	Brot From Page of Book
4	2 "B"
PLAT	
4	3 "B"

SURVEY RECORD No 244.

Field notes of the survey and establishment of the quarter corner (1/4 cor) between sections 4 and 9, of Township 138^W, Range 29^W, 5th P.M. in Cass County, Minnesota, as made by John W. Curo, Co. Surveyor of Cass Co. Minn., assisted by M. A. Kemp, Deputy Co. Surveyor.

October 4th 1913, M. A. Kemp, compassman, George Moulster + M. A. Kemp, chainmen, go to the 1/4 corner between sections 4 + 9, T. 138, Rg. 29, being Meander Corner No. 6. on south side of West arm of Horse shoe lake where

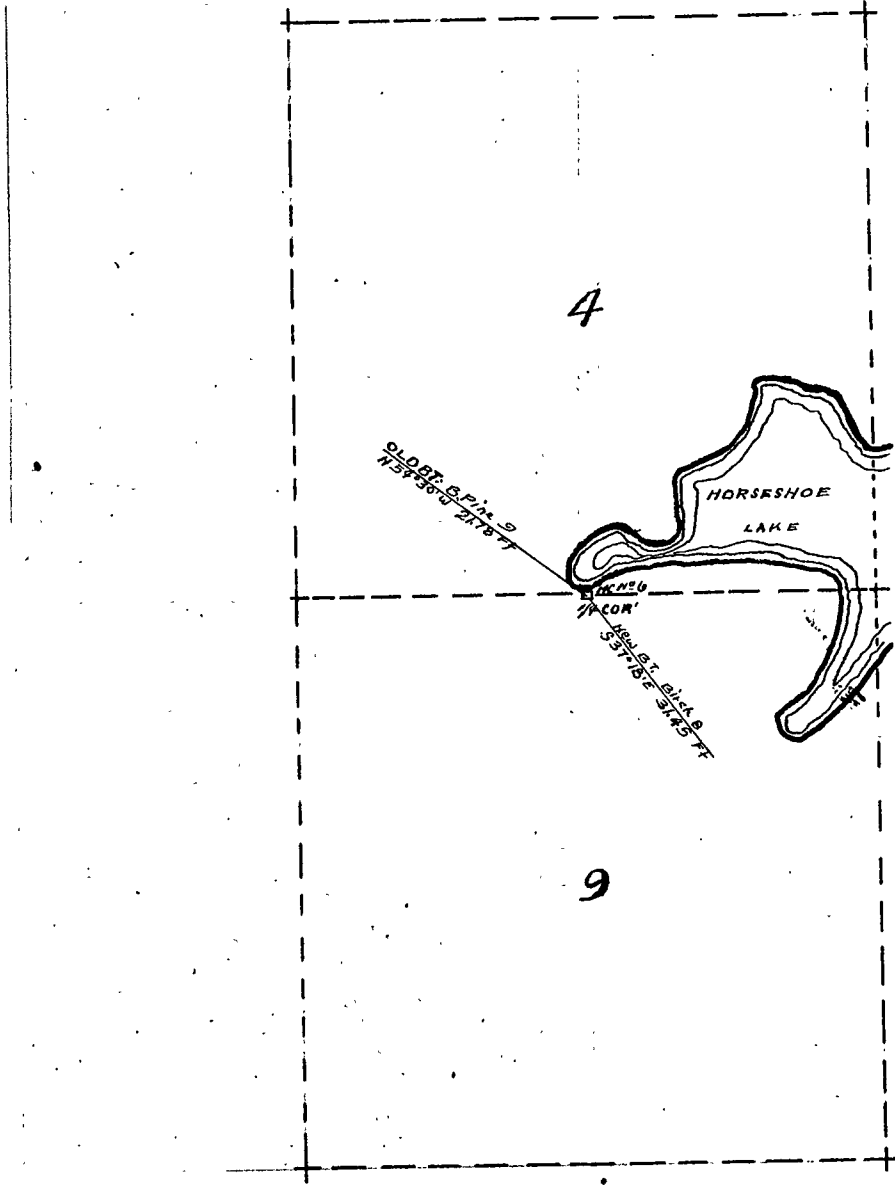
U.S. notes call for a post and the following bearing trees:
 Black pine 9, N 54 1/2° W, 33 lbs. dist. = 21.78 feet. Black pine 4, S 12° W, 77 lbs. = 50.82 ft.
 We find the Northwest bearing tree plainly marked but down, and from the stump of this old bearing tree we set a 2 x 2 x 24 inch Tamarac stack with stack in top for the true Meander corner No. 6, being the true 1/4 corner between sections 4 and 9, of Twp. 138, Rg. 29, and mark new bearings which stands as follows: Tamarac 12, N 61° 30' E 17.65 ft. distant.
 Birch 8, S 37° 18' E 34.45 ft. dist. Var. 7° 30' E. The old S.W. bearing tree has been burned out. Jan. 9th 1914. I examine the survey and find it correct.

Survey made October 4th 1913 and Jan 9th 1914.
 Recorded Jan. 31st 1914.

John W. Curo County Surveyor Cass Co. Minn.

PLAT
 Sec 4-9. T138 R 29.

SCALE: 3 INCHES = 1 MILE



NOTES		
T138 R29		
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- PLAT -

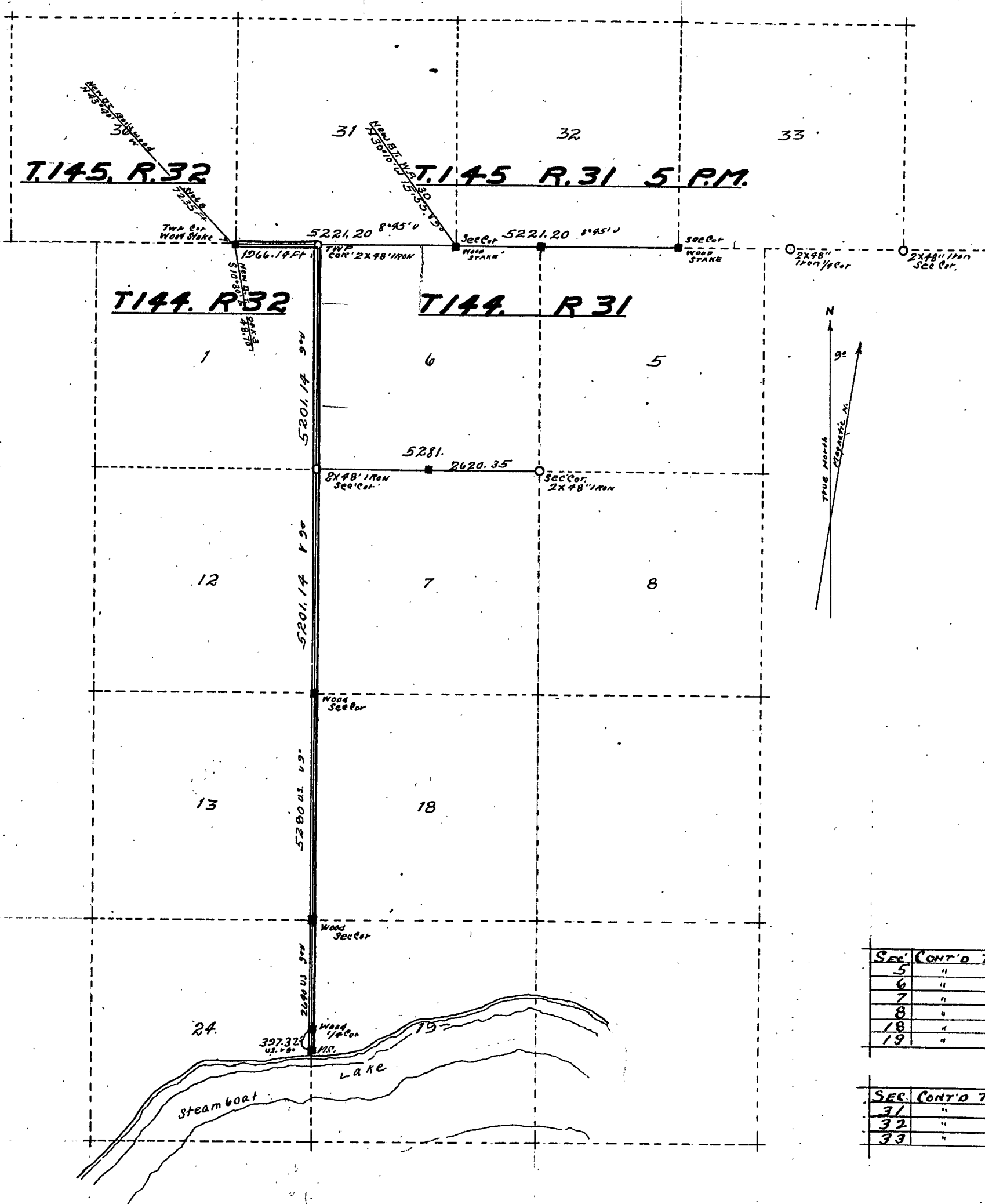
Sections 5-6-7-8-18-19-

T144 R31.

31-32-33. T145 R31.

SURVEY RECORD 245

SCALE 2 INCHES = 1 MILE



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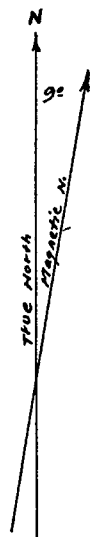
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SEC	CONT'D TO	PAGE	BOOK
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Surveyed May 13th 1913 To March 24th 1914
 Recorded April 1st 1914
 John W. O'Neil Co. Surveyors, Cass Co. Minn.

RECORD No 245

Field notes of the survey and establishment of wood and iron corners in sections 5, 6, 7, 8, 18 & 19, Township 144 N, Range 31 W, and sections 31, 32 & 33 of Township 145 N, Range 31 W, 5th P.M. as made by John W. Luro, County Surveyor of Cass County Minnesota, assisted by Melville A. Kemp, Assistant Engineer.

Tuesday May 13th 1913. M.A. Kemp transitman, Kenffel & Esser engineers transit; M. Selberg flagman; S. Anderson & Nels J. Erickson chainmen; Selberg, Anderson and Erickson all cutting brush. 300 foot "Chicago" steel tape. Beginning at the corner to secs. 5, 6, 7 & 8, T. 144, R. 31, run west along cut out road: @ 117.80 hub on knoll: @ 3900 set hub: @ 5280 ft set hub: We go to the S.W. corner of sec. 7, T. 144, R. 31 and run North, along an old line cut out by surveyor Middleton, var. $7^{\circ}30' E$: @ 400 ft set hub: @ 1200 hub: @ 3000 hub: @ 5280 ft. set hub: @ 5400 hub: @ 6400 enter open bog: @ 6501 set hub "A" turn 90° East & run 200 feet and set hub "B" set hub "C" on line North across pond: set over hub "B" back sight on "A" and turn $80^{\circ}31'$ to hub "C" distance across pond is 1197.30 added to 6501.00 equals 7698.30 to hub across pond: @ 6600 South edge of pond: 6900 North edge of pond: @ 8150 lv. bog: @ 8742.50 hub: 8900 wet bog: @ 9300 lv. bog: @ 10005 set hub; & tack for temporary N.W. corner of sec. 6, T. 144, R. 31 where U.S. notes call for: W. Pine 30 $N 80^{\circ} E 100$: Tamarac 10, $N 55^{\circ} W 58$ lks: W. Pine 30 $S 4^{\circ} E 442$ lks: W. Pine 30 $S 5^{\circ} W 441$ lks: We could find nothing so go to the S.W. corner of sec. 31, T. 145, R. 31, where we find a hub & tack set by Surveyor Middleton for the true corner, and as he did not mark any new bearings we put in the following bearings. var. $8^{\circ} E$: Oak 3, $S 10^{\circ} 30' E 48.70$ ft: Basswood stub 8, $N 43^{\circ} 40' W, 72.35$ ft.

From this true S.W. corner of T. 145, R. 31 we run East, var. $8^{\circ} E$. @ 650.20 set hub: @ 1940.80 set hub on North side of plowed swamp field:

May 14th 1913: Continue East: @ 2200 enter slough: @ 2500 lv. same: At $\frac{1}{4}$ corner on South side of sec. 31, Twp. 145, R. 31, U.S. notes call for: W. Pine 10, $N 34^{\circ} W 147$ lks. dist: W. Pine 30, $N 5^{\circ} W 170$ lks: We could find no traces of the old corner so continue East, same crew as yesterday. @ 3153.30 hub: @ 3200 enter open slough: @ 3400 lv. same: @ 4619 set hub: @ 5456.80 set hub: @ corner to secs. 31 & 32, T. 145, R. 31, U.S. notes call for: Aspen 5 $N 73^{\circ} E 56$ lks: Aspen 9, $N 40^{\circ} W 60$ lks: We could find no trace of the old bearing trees so continue East: @ 5650. enter open bog: @ 6100 lv. same: @ 6194 set hub: @ 7276.50 set hub "A" on N. & S. road; on East side of section 6, T. 144, R. 31, turn 90° & run North 184 ft and set hub "B" set transit over hub "B" backsight on hub "A" and turn $89^{\circ} 07'$ and run East along graded road: @ 7281.50 intersect corner to secs. 5 & 6, T. 144 R. 31, set by Surveyor Middleton: @ 10442.40 intersect corner to secs. 32 & 33 T. 145, R. 31 set by Surveyor Middleton: Correcting back. At 5221.20 run north 67.50 feet where we set a $2 \times 2 \times 24$ inch oak stake for the corner to secs. 31 & 32, T. 145, R. 31 from which a tack head in a new bearing tree being a 30 inch White Pine bears $N. 35^{\circ} 10' W 15.55$ ft. dist. var. $9^{\circ} E$: No other trees near. @ 1966.14 run North 25.36 ft. where we set a $2 \times 2 \times 24$ inch oak stake for the true N.W. corner of sec. 6 being the true Northwest corner of township 144 N. R. 31 W, 5th P.M. Correcting the West boundary of secs. 6 & 7, T. 144, R. 31; @ Station 10402.28 North of the S.W. corner of sec. 7, the N.W. cor. of T. 144, R. 31 bears West 276.46 feet:

Correcting back: @ 5201.14 v, we run west 138.23 feet where we set a hub & tack for the true S.W. cor. of sec. 6, 144-31. Correcting South boundary of sec. 6 T, 144, R. 31. At a point 5281. feet west of the corner to sections 5, 6, 7, 8, the South west corner of section 6, sets 82.36 feet South: Correcting East, hub 3900 goes South 60.84 feet: at 2620.35 we run South 40.88 feet where we set a stake for the true $\frac{1}{4}$ corner bet. sec. 6 & 7, T 144, R. 31 with new bearings as follows:

Pine stump 30, $\nu 30^{\circ} E 97.00$ feet: Pine stump 20, $\nu 10^{\circ} E 149.70$ ft. The Gov't chain of the South side of sec. 6, 144-31, is 5319.60 feet and equals 5281 ft. my chain: At the corner to sec. 5, 6, 7, & 8 - T 144, R. 31 which checks out with the old government bearing trees in each of these sec. we pull up the wood stake & put in its place a 2 x 48 inch galvanized iron pipe, capped on top & set nearly its full length in the ground for the true sec. cor.

At the corner to sec. 6 & 7, on West bdy. of T 144 R. 31 we pull up the wood stake and put in its place a 2 x 48 inch galvanized iron pipe, capped on top & set its full length in the ground for the true sec. cor.

At the North-west corner of sec. 6, T 144, R. 31 we pull up the wood stake & put in its place a 2 x 48 inch galvanized iron pipe, capped on top & set nearly its full length in the ground for the true North-West cor. of Twp. 144, R. 31, which is also the North-east corner of Twp. 144, R. 32.

Tuesday March 24th. 1914. John W. Aurs, compassman & chainman using a "Gurly" Surveyors compass & a 100 foot "Monarch" steel tape & a 300 foot "Chicago" steel tape. I am surveying a Judicial road, order by Hon. C. W. Stanton, Judge of the 15th Judicial District, with M. N. Koll, Nels Erickson and J. M. Goss as special Commissioners, who have appointed Andrew St. Bruegger & Charles Erickson as chainmen & Hjalmer Erickson & Ben Johnson as aimers.

We go to the Southwest cor. of T 145, R. 31, previously established by M. A. Kemp & James D. Middleton from which we run a compass line East, var. $8^{\circ} 45' E$. 1966.14 feet to the iron corner set at the N.W. cor. of T. 144, R. 31, previously established. as this has been previously chained, and as the ground is frozen too hard to set stakes we only pace the distance, this entire distance is over level ground, a part of which is solid swamp, easily drained, & at a point about 500 feet east we may need a small culvert. It is nearly all open, easily cleared & the cost of building this 1966.14 feet will be about \$200.

From the iron N.W. cor. of T. 144, R. 31 we turn compass on tall flag set a mile south at the iron S.W. cor. of sec. 6, 144-31 & run south on true line var. $9^{\circ} E$. As the ground is frozen too hard to set stakes & as this distance has been previously chained, we only pace the distance to get an approximate idea of the cost of building the road: @ about 1200 ft. enter open meadow: @ 1250 culvert site: @ 1300 enter solid land: @ 1600 enter open marsh: @ 2000 ft. lv. marsh enter scattering oak timber: @ 2500 enter open marsh, bears N.E. & S.W. @ 2800 lv. marsh N.W. & S.E. enter sharp point of land on raise E. of hill: @ 3000 enter open marsh N.E. & S.W.: @ 3350 enter cat-tail bog: @ 3500 culvert site in cat-tails, 75 ft W. of small lake, which will drain S.E. @ 3600 lv. cat-tails: @ 3900 lv. open marsh E. & W. @ 5201.14 intersect iron corner at S.W. cor. of sec. 6, T. 144, R. 31, previously established: At this point a good graded road runs E. & W. This entire mile is almost level & open & can be built for about \$400.

RECORD No 245

Beginning at the iron N.W. cor. of sec. 7, T. 144, R. 31, we run South on true R. line, var. 9° E. @ 5201.14 feet previously chained, we intersect the corner of sec. 7 & 18, T. 144, R. 31 previously established by James D. Middleton & M. A. Kemp, where U.S. notes call for a post and: Sugar maple 7 v, 50° E 11 lks. Sugar maple 7, S 10° E 8 lks. Sugar maple 6 S, 12° W 13 lks. Sugar maple 6 v 85° W 3 lks. The S.E. & N.W. trees are gone but we find the N.E. & S.W. trees standing green & check out for course & distance with a 3 inch tamarac hub & tack set for the true cor. from which we mark the following new bearings: Birch 8 S 46° 30' W 47.72 feet. Poplar 10 v 48° 30' E, 56.69 ft. Basswood 16 v 44° 30' W 48.55 ft. Basswood 8, S 69° E 43.50 feet; to spikes driven in flat spot at base of trees, var. 9° E. chained by Curo & Koll & Curo & Goss taken with compass & 100 ft chain. This entire mile is almost level & there is not much heavy timber to clear off and can be built for about \$400. As it is nearly noon & ground is frozen too hard to drive stakes and we only intend to run a little over 1 1/2 miles South to Steamboat lake & establish new bearing trees to the sec. cor. along the way, we discharge all of the crew, except Curo, Koll & Nels Erickson. we run a mile South the cor. to sec. 18 & 19 - T. 144 - R. 31 where Mr. Goss shows us the old stake. Quit for dinner. P. M. Curo, Koll & Erickson. We go to the old stake previously established by surveyor Middleton for the corner to sec. 18 & 19, T. 144 - R. 31, from which we find the following new bearing trees. V. 9° E. W. Pine stump 28, v 66° W 42.00 ft. Poplar 8 S 81° E 39.30 ft. We drive a spike in each one of these bearings & mark the following new bearings: Pop. 6, v 31° 30' E 53.05 ft. Balsam 5, S 56° W 59.00 ft to spike driven in flat spot at base. set with Gurley compass & 100 ft steel tape. At this point U.S. notes call for Aspen 9 S 78° E 8 lks. Aspen 8 v 73° W 5 lks. We do not find any of the old bearings. At the 1/4 corner on West side of sec. 18 - 144 - 31, U.S. notes call for: Aspen 10 v 70° E 21 lks. W. Birch 8 S 70° W 6 lks. We do not find them. This mile is 5280 ft. U.S. chain. The mile along the west. bdy of 18, is almost level, quite a lot of small timber & can be built for about 500.00. From the N.W. cor. of sec. 19 - 144 - 31 - just set we run South, var 9° E. as the ground is frozen so hard we cannot set stakes, we only pace the distance South half a mile to the 1/4 cor. on West side of sec. 19 - T. 144 - R. 31 where U.S. notes call for a post & the following bearing trees: Fir 8 S 35° W 10 lks. Fir 7 S 30° E 13 lks. We find the stump of both trees standing - plainly marked. from which we set a small stake for the true 1/4 cor. by flat chain from face of figures, after which the stumps stand correct for course: some one has marked up a new bearing as follows: Oak 10 v 47° 30' E 45.65 feet. We drive a spike in flat spot at base of this tree & mark the following: Oak 16 v 43° W 45.80 ft. to spike @ base. a 4x4x 36 inch stake stands N.W. 1/2 for, chained by Curo, Koll & Erickson. var. 9°. This half mile is 2640 ft. U.S. chain it is quite heavily timbered & almost level. From the 1/4 on W. side of 19 just set we run S. 9° var. @ 210 ft. enter swampy land; @ 397.32 ft. U.S. chain intersect Steamboat lake & set small stake for M.C. Where U.S. notes for: "Cln 8 for corner." Aspen 16 v 30° E 27 lks. Ash 8 West 24 lks. The trees are uprooted & we do not stop to locate them. This last half mile & a fraction being 3037.32 ft. U.S. chain from the 1/4 on W. side of 19. S. to Steamboat lake is almost level, quite heavily timbered & can be built for about 300.00.

Surveyed May 13th 1913 To March 24th 1914 Read April 1914
 John H. Curo Co Surveyors Dan C. Minn

NOTES	BOOK				
T144 R31	CONT'D				
	To PAGE				
	Sec No	96	78	79	

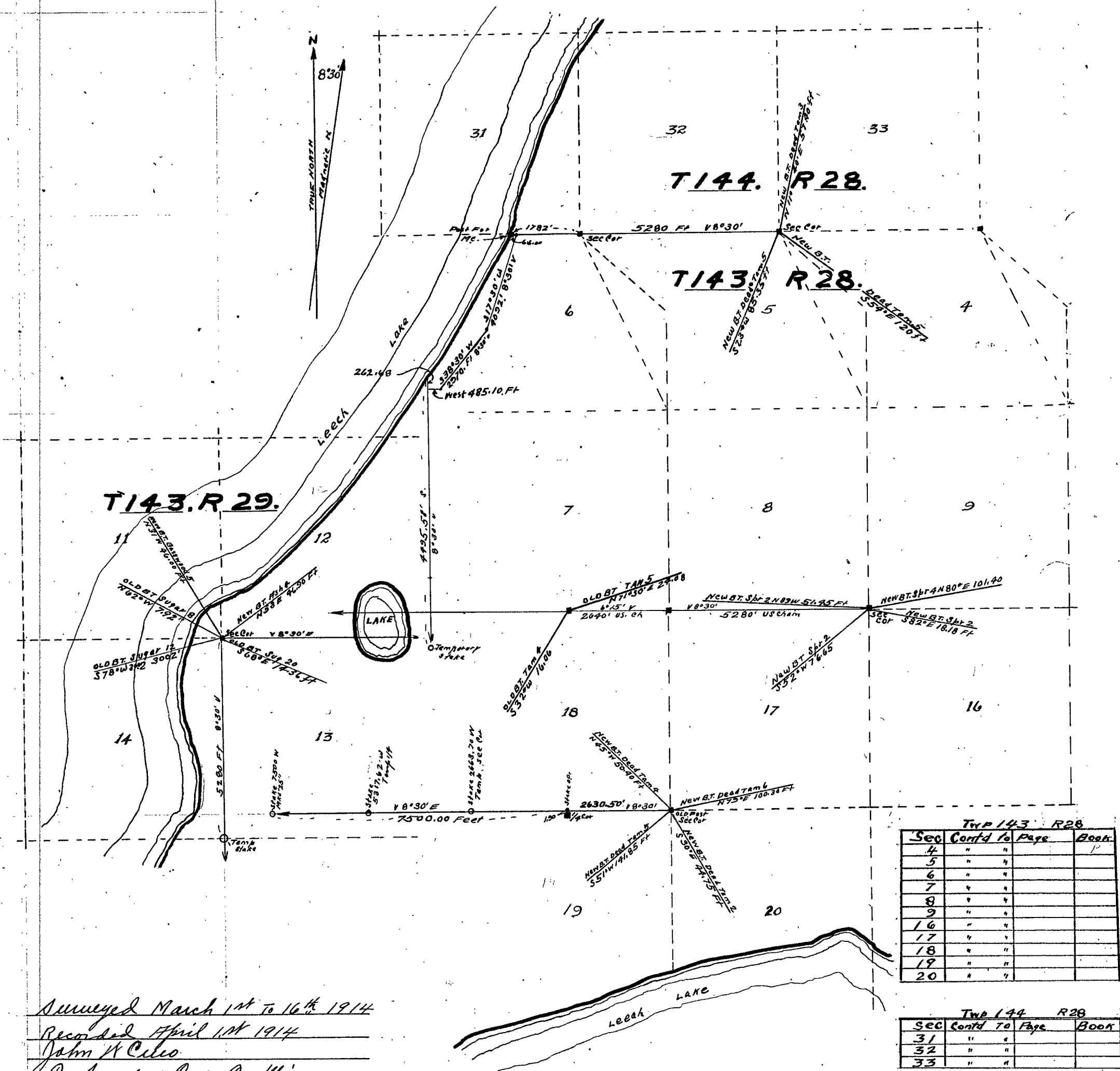
NOTES	BOOK				
T145 R31	CONT'D				
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- PLAT -

Sections 4-5-6-7-8-9-16-17-18-19-20 T143. R28.
" 11-12-13-14- T143. R29.
" 31-32-33 T144. R28.

SCALE 2 INCHES = 1 MILE

RECORD No 246.



*Surveyed March 1st to 16th 1914
Recorded April 1st 1914
John H. Cilio
Co. Surveyors Cass Co. Minn.*

Twp 143 R28

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Twp 144 R28

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Twp 143 R29

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SURVEY RECORD No 246

Field notes of the survey & establishment of new corners and new bearing trees in sections 31 & 32 & 33 - Twp. No. 144ⁿ, R. 28^w, & secs. 4, 5, 6, 7, 8, 9, 16, 17, 18, 19 & 20, of Township No. 143ⁿ, R. 28^w. And secs. 11-12-13 & 14, of Township 143ⁿ, R. 29^w, all of the 5th principal meridian, as surveyed by John W. Curo, County Surveyor of Cass County, Minn. assisted by Frank Broker of Federal Dam, Minn.

143-29
11-12-13-14

March 1st. 1914. John W. Curo, Frank Broker & Charles H. Graham go to the cor. to secs. 11-12-13 & 14 of Twp. 143ⁿ, R. 29^w, 5th P.M. where U.S. notes call for a post & the following bearing trees: Sugar 8, $\nu 62^\circ W$ 12 lks: Sugar 20 $S 68^\circ E$, 22 lks: Sugar 24, $S 28^\circ W$ 50 lks: Sugar 12, $S 78^\circ W$ 46 lks. We find the 8 inch sugar tree standing $\nu 62^\circ W$, 12 links = 7.92 feet. We also find the 12 inch sugar tree standing $S 78^\circ W$ & the 20 inch sugar tree standing S.E. but the distance between them is 0.50 of a foot long so by proportionate measurement we find the distance as follows:

Total distance of 46 links (= 30.36) & 22 links (= 14.52) ft. equals 44.88 feet. U.S. chain & is 44.38 ft. my chain. We cannot find the 24 inch sugar tree called for in the notes so set a tall red flag for the true corner after which the old bearing trees stands as follows: Old B.T. being sugar 8, bears $\nu 62^\circ W$, 7.92 ft. distant. Old B.T. being sugar 12, bears $S 78^\circ W$ 30.36 ft. U.S. chain equals 30.02 ft. my chain. Old B.T. being sugar 20, bears $S 68^\circ E$ 14.52 ft. U.S. chain equals 14.36 ft. my chain. From the cor. to secs. 11-12-13 & 14 - T. 143 - R. 29, just set, I start a line East @ $8^\circ 30'$ var. and another line south @ $8^\circ 30'$ var. & instruct Graham to cut it out. We use a Gurley compass & a 100 ft. "Monarch" steel tape.

143-29
11-12-13-14

143-28
17-18-19-20

We then go to the cor. to secs. 17-18-19 & 20 - T. 143 - R. 28, where U.S. notes call for a post & the following bearing trees. Jam. 5 $\nu 60^\circ E$ 50 lks: Jam. $\nu 1^\circ W$ 41 lks. distant Jam. 5 $S 8^\circ E$ 43 lks. dist. Spruce 4 $S 5^\circ W$ 30 lks. dist. We find the stump of the N.E. & N.W. trees plainly marked from which an old stake stands correct for course & distance at which place, I place a tall red flag & start a line West $8^\circ 30'$ var. The old S.E. & S.W. trees are gone.

March 3rd & 4th 1914. Frank Broker, Howard Warren, Fred Beaulieu, cut line west from the corner to secs. 17-18-19-20, & run about $1\frac{3}{4}$ miles finishing over in T. 143, R. 29.

143-28
17-18-19-20

March 12, 1914. John W. Curo, Fred Beaulieu, James Mc. Keig & Ed Mc. Keig work all day for H. J. Mochling. Beginning at the red flag placed at the corner to 17-18-19 & 20 T. 143 - R. 28 run west along our cut out line. Curo & Beaulieu chaining: 300 foot steel tape, over level land no plump bob: @ $8^\circ 30'$ var. picket & compass line: @ 1000 ft. lv. open swamp, scattering dead small tamarac trees: enter hard wood timber: @ 1900 lv. hard wood enter open tamarac swp. @ 2630.50 the $\frac{1}{4}$ corner bet. secs. 18 & 19, T 143 - R. 28 sets S. 190 feet at which point U.S. notes call for a post and: "K to W @ 6" Cedar $S 48^\circ E$ 28 lks: Jam. $\nu 64^\circ E$ 26 lks: We find both trees tipped out by the roots but plainly marked, and as the roots still hold in the ground showing that the trees have not been moved we locate the point of the tap root of each tree & from a place where the face of the figures would come if the trees were stood up, we chain to the point for the $\frac{1}{4}$ cor. where we set a 2x2x10 inch hub in the frozen swamp for the true $\frac{1}{4}$ cor.

143-28
18-19-14

RECORD No 246

143-28
18-19-1/4

bet. sec. 18 & 19, T. 143, R. 28. Beginning at a point in the E. & W. cut-out line, 1.90 ft. N of the 1/4 corner bet. sec. 18 & 19, 143, R. 28 we chain West $8^{\circ}30'$ var along the cut-out picket line: at 300 ft. lv. swamp, enter poplar timber: @ 802 ft. center of road between Federal Dam & Sugar point, bears N.E. & S.W. in beautiful tall green 6 inch poplar trees, land level: @ 2450 enter open meadow: @ 2600 lv. same, enter poplar: @ 2663.70 set stake for temporary corner to sec. 13-18-19 & 24 on range line bet. T. 143 N, R. 28 & 29 W, where U.S. notes call for a post and Tam. 5 N $20^{\circ}W$ 16 lks. Tam. 7, S $60^{\circ}W$ 22 lks; Tam. 6 N $70^{\circ}E$ 12 lks; Tam. 5 S, $20^{\circ}E$ 30 lks; We do not find these and continue West: @ 2700 set stake: @ 2900 enter open solid tamarac swamp: thence continue west in long narrow swamp with poplar timber 100 feet away on either side: @ 3500 enter big open saanberry bog which bears N.W. & S.E. @ 4800 lv. bog N. & S. @ 4900 center of hay road N & S. enter hardwood timber: @ 5317.62 set stake in cen. of 4 rod swamp for temporary 1/4 cor. bet. sec. 13 & 24, T. 143, R. 29: on account of the deep snow we do not attempt to find the old U.S. bearing trees, but continue West: @ 5400 set stake: @ 6310 old road not traveled bears N.W. & S.E. @ 6566 strike center of 16 inch maple tree on line offset 1. foot North & continue west: @ 6873 cross hay road N. & S. @ 6900 set stake @ 7500 leave hardwood timber & enter small trees & willow brush, set stake marked "25" and quit this line for the present.

143-28-29
13-18-19-24
Town Line

143-29
13-24-1/4

March 13th 1914: J.W. Curo, Frank, Fred Beaulieu, Jim McKie & Ed. McKie go to the 1/4 corner, bet. sec. 7: & 18-T. 143, R. 28 where U.S. notes call for post and: Tam. 5 N $78^{\circ}E$ 36 links (= 23.76 ft.) Tam. 4 S $32^{\circ}W$ 24 lks (= 15.84 ft.) We find the S.W. tree standing dead but plainly marked, and the stump of the N.E. tree plainly marked and from the two old trees we set the 1/4 cor. by proportion, chained from face of each old tree: as the line from here 1/2 mile East runs on a variation of $6^{\circ}15'E$, I set compass vernier at $6^{\circ}15'$ and find the distance bet. old B.T.S. by way of courses to be 0.54 of a foot too long: I proportion the distance & set a 2x2x8 inch tam. stake for the true 1/4 cor. to sec. 7: & 18-143-28 after which the old trees stand as follows: Old S.W. tree stands S $32^{\circ}W$ 16.06 ft. distant & the old N.E. stump bears N $71^{\circ}30'E$ 24.08 ft. distant var $6^{\circ}15'E$ as turned with the compass from the true section line running half a mile East. From the 1/4 corner bet. sec. 7: & 18 T. 143-R. 28 we run a picket line west over level land var $8^{\circ}30'E$. Gurlay compass through level swamp but do not chain the distance, about 3/4 of a mile west we cross a small lake and quit for dinner. The entire distance has been in a tam. swp. covered with small dead scattering timber. quit for dinner & eat with Geo. Poppe & Mike Brown in Graham's camp.

143-28
7-18-1/4

143-29
7-18-1/4 cor

143-144-28
4-5-32-33

March 15th. 1914: John W. Curo & Frank Broker go to the cor. of sec. 4-5-32 & 33 on town line bet. Twp. 143 & 144 N. R. 28 W. where U.S. notes call for a post and the following bearing trees: Tam. 3 S $22^{\circ}E$ 17 lks. (= 11.22 ft.) Tam. 4 N $7^{\circ}W$ 28 lks. (= 18.48 ft.) Tam. 3 N $64^{\circ}E$ 38 lks. (= 25.08 ft.) Tam. 2 S $70^{\circ}W$ 84 lks. (= 55.44 ft.) We find the old post called for in the U.S. field notes and it is a 2 inch tree, squared up on all four sides, marked plainly with a small marking iron, & on account of the marking iron being small, I recognize it as the one used by the U.S. surveyors in marking other corners in these Twp. & is only 3/8 of an inch in diameter of the ring cutter. This was the same marking iron that marked up the bearing trees at the cor. to sec. 11-12-13 & 14

RECORD No 246

of T 143 Rg 29 which I know to be the true U.S. corner called for in the field notes
 At this corner to Sections 4, 5, 32 and 33, T 143 and 144 N. Range 28 W. the little old
 dead Spruce tree at the true corner, has been squared on all four sides, and the numbers
 of "Sec 4, 5, 32, 33" still show plain: On account of the ice and melted snow, we do
 not look up all of the old U.S. bearing trees, but the S.E. old bearing tree stands dead
 but plainly marked: it is only a two inch tree and the U.S. surveyors made a mistake
 in marking it as they marked it "Sec 5": again the small rings of the small
 marking iron identify this tree as one made by the original U.S. surveyors but
 we have to ignore it somewhat, in locating the true corner, and consider the 2x2
 inch dead tree squared up and plainly marked on all four sides, above mentioned
 as the true corner and from this we mark the following new bearing trees:

- Dead tamarac 5, S 54° E, 120 feet to lock in flat spot at base of tree
- Dead tamarac 4, S 23° W, 85.35 feet to lock head in flat spot at base of tree
- Dead tamarac 3, N 11° 40' E, 57.40 feet to lock in flat spot at base of tree
- Dead tamarac 2, being old S.E. bearing tree, bears S 51° E, 9.15 feet.

Set with 100 foot "Monarch" steel tape and Gurly Compass, Var 8° 30' E. for the true
 corner to Sections 4, 5, 32 and 33, T 143 and 144 N. Rg 28 W. 5th P.M. from which
 we run West, compass line thro big open bog, covered with small dead scattering
 tamarac trees: At 250 feet intersect an old transit line run by the old
 water survey engineers, bears NW and S.E.: at 400 feet enter south end of a
 little sanded "island" in the swamp: at 660 ft leave small island: There is another
 small "island" just south of the one we have crossed: Continue West: at 2640 feet
 we do not find the 1/4 corner between Sections 5 and 32 and continue West:

At 5280 feet we set a stake for the corner to Sections 5, 6, 31 and 32 T 143 and 144 N.
 range 28 W, where U.S. notes call for a post and the following bearing trees:

- Tamarac 4 N 68° 30' W 40 links
- Tamarac 3 N 3° W 60 links
- Tamarac 5 S 12° W 50 links

We run a short line in each one of the sections, trying
 to find the old bearing trees but on account of the ice and snow are unable to
 find them, and as there are no trees near we do not mark any new bearing trees

The entire mile just surveyed is level swamp covered with small dead
 tamarac trees, excepting the small island of solid land we crossed in the swamp.

Our best reason for knowing that we are on the correct section line, is because
 all along the mile just surveyed we found old dead trees which showed a
 depression, and on being chopped out showed plainly the blaze made by the
 original U.S. survey.

From the corner to Sections 5, 6, 31 and 32 just set, we run West between
 Sections 6 and 31, Var 8° 30' E. @ 250 feet we again intersect an old transit line
 run by the old water survey engineers, bears NW and S.E.: @ 1782. feet intersect
 East bank of Leech Lake and set small stake for Meander Corner to fractional sections
 6 and 31, T 143 and 144, Rg 28, from which in order to retrace the old U.S. survey

We run East 66.00 feet, thence South 17° 30' W 4092 feet: thence S 38° 30' W, 2970 feet:
 thence West 485.10 feet: thence North 262.68 feet to Meander Corner on South side
 of Leech Lake: thence South between Sections 7 and 12 on Range line between
 T 143 N, Ranges 28 and 29 W: at 4425.58 feet set temporary corner to Sections
 7, 12, 13 and 18 which comes about 3800 West and 500 feet South of the 1/4 Cor
 between Sections 7 and 18 of T 143 Rg 28. This shows that there is something

143-144-28
4-5-32-33

143-144-28
4-5-32-33

5-32

143-144-28
5-6-31-32

143-144-28
5-6-31-32
7-12-13-18

me

143-28-28
1-12-13-18

14
7-18

RECORD No 246

wrong with the U.S. survey: We are unable to find any of the old U.S. bearing trees along the Range line between Twp 143, Rg 28 and 29 and there appears to be a strip of land about 1/4 of a mile wide, more than is shown by the U.S. survey notes

Walking about 3/4 of a mile East to the 1/4 corner between Sections 7 and 18 of T. 143 Rg 28 we set a 3x3x12 inch stake for the line 1/4 corner and mark new bearings as follows Dead Tamarac 5, S 10° 45' W, 89.50 feet distant Dead Tamarac 6, N 89° W 19.50 feet distant to lock heads in flat spot in base of each tree.

143-28
7-18
114

An old stake set by some "cruser" bears N 50° E, 2.50 feet distant. Broken breaks two inches off the end of the tape.

We then walk 1/2 mile East to the corners Sections 7, 8, 17, 18, T 143 Rg 28 where U.S. notes call for a post and the following bearing trees:

143-28
7-8-17-18

Spruce 4 N 1° E 5 links distant Spruce 4, N 14° W, 40 links distant
Spruce 4 S 44° E 41 links distant Spruce 4 S 3° W, 14 links distant

We find the post and one old S.E. bearing tree plainly marked, but as there are no trees near for us to mark as new bearings, we continue 1/2 mile East to the 1/4 corner between Sections 8 and 17, T 143 Rg 28 where U.S. notes call for a post and the following bearing trees:

143-28
8-17
114

Tamarac 4 N 70° W 17 links distant: Spruce 4, S 46° W 5 links distant:

We do not find them and continue half a mile East to the corner to Sections 8, 9, 16 and 17, T 143, Rg 28 where U.S. notes call for a post and the following bearing trees: Tamarac 4, N 20° W 4 links: Tamarac 4, N 25° E 27 links

143-28
8-9-16-17

Tamarac 4, S 36° E 10 links: Tamarac 4, S 54° W 58 links
We find the S.W. tree standing dead but plainly marked, and the stump of the N.W. tree plainly marked from which we set the true corner by flat chain from face of the trees, at which point we find the old U.S. stake, down in the moss: old roots check out for course and distance for the old N.E. and N.W. trees:

We set a 2x2x48 inch stake for the true corner and mark new bearings as follows:
Spruce 2, N 89° W, 51.45 feet Spruce 4, N 80° E 101.40 feet
Spruce 2, S 52° W, 76.65 feet Spruce 2, S 82° E 18.18 feet

New 1375

Stump of old U.S. bearing tree bears N 64° W, 2.64 feet: old U.S. bearing tree bears S 54° W 38.28 feet: to flat spot at base of trees: Set with 100 foot steel tape and "Kubly" compass. Ver 8° 30' E.

As it is getting dark, with cold N.W. wind blowing a gale, we quit for night.
March 16th 1914. Going to the corner to Sections 11, 12, 13, 14, T 143

143-29
11-12-13-14

Rg 29, I take up the red flag and put in its place, a 2x2x12 inch stake for the true section corner, and mark up new bearing trees as follows:

Basswood 5, N 31° W, 46.00 feet to lock head in flat spot at base of tree:
Ash 4, N 53° E, 46.90 feet to lock head in flat spot at base of tree:

A surveyor by the name of "Gardner" set this corner about 16 years ago and has used a large marking iron in marking up two new bearing trees which are as follows:

Basswood 12, S 83° E, 12.60 feet: Basswood 33, S 1° W 52.60 feet

The three (3) old U.S. bearing trees which I have found at this corner are marked with a small marking iron

As Mr Mike Brown, foreman for H. J. Mochring refuses to furnish me a crew to assist me, and as I wish to preserve these old U.S. corners

RECORD No 246

because Brown and Mochring may have cut some timber they did not own; and because the United States may need these corners in checking up on the timber cut by Brown and Mochring, I am compelled to establish these new bearing ties, and without the assistance of a chainman I get the distance to my new bearing ties by passing a heavy buckskin string around the tree and tying it to the end of the chain - then pulling up the chain lightly while standing close to the tree to see how much sag there is in the string, and the distance from the end of my chain to the flat spot on the side of my new bearing tie. Then while standing at the Section corner and pulling up my chain and adding the amount of the sag in my string, gives me the true distance from the stake to the new bearing tie.

143-29
13-14-23-24
11-12-13-14

As the Indians are anxious for me to find the corner to Sections 13, 14, 23 and 24, T 143, R 29 in order to locate the Range line a mile East, to see if there has been any trespass on Indian lands, I begin at the corner to Sections 11, 12, 13 and 14, and run a compass line South $8^{\circ}30' E$. I pace the distance, and at 1320 feet about, I find a $1/16$ corner stake, with two new bearing ties, evidently set by surveyor "Gardner" 16 years ago; continue South; at 2640 feet about, I look for the $1/4$ corner between Sections 13 and 14, T 143, R 29, where U.S. notes call for a post and the following bearing ties: Tamarac 4, N $37^{\circ} E$, 47 links distant; Tamarac 4 N, $19^{\circ}30' W$, 64 links distant.

143-27
13-14-17
gone

I cannot find the stake or bearing ties and continue South; at 5280 about, I look for the corner to Sections 13, 14, 23, 24, T 143, R 29 where U.S. notes call for post and: Tamarac 5, N $20^{\circ} W$ 16 links; Tam 4, S $15^{\circ} W$ 27 links; Tamarac 7, S $41^{\circ} E$, 40 links; Willow 3, N $27^{\circ} E$, 10 links; all appear to be gone.

143-29
13-14-23-24
gone

Going to the corner to Sections 17-18-19 and 20 T 143, Range 28, previously established by me, I mark new bearings or fallows: Dead Tamarac 5, S $51^{\circ} W$ 141.85 feet distant; Dead Tamarac 2, S $30^{\circ} E$, 44.75 feet distant; Dead Tamarac 6, N $79^{\circ} E$, 100.30 feet distant; Dead Tamarac 4, N $45^{\circ} W$ 50.40 feet distant; to flat spot at base of each tree; Variation $8^{\circ}30' E$. Courses taken with Quily compass and chained with a 300 foot Chicago steel tape and a heavy buckskin string.

143-28
17-18-19-20
NWATS

Survey begun March 1st 1914. finished March 16-1914
Recorded April 1st 1914.

John W. Cuss
County Surveyor Cass Co Minn

T 143 - R 28		
SEC NO	CONT'D ON PAGE	OF BOOK
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T 143 - R 29		
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FBSC1

Field notes of the survey of a part of sections 2, 3, 4, Township 135 N. Range 30 W. & a part of sections 26, 27, 33, 34, 35 Township 136 N. Range 30 W, 5th P.M. Cass County, Minn. ^{as made by John W. Curran County Surveyor pass co minn} assisted by Frank A. Donner, Deputy County Surveyor.

October 30th 1914. Frank A. Donner, transitman & chainman, Heller & Brightly Engineers transit & steel tape. Adolph Hagen, Frank Hagen & Todd De Groat axmen and chainmen.

Go to the corner to secs. 26, 27, 34 & 35 Twp. 136, Rg. 30 where U.S. notes call for a post and the following bearing trees: White Pine 30, N 80° E 23 links dist. (= 15.18 ft.) White Pine 10, S 10° E 125 links (= 82.50 ft.) Dead White Pine 14, N 22° W. 29 links (= 19.14 ft.) We find the N.E. tree still standing plainly marked and the stump of the N.W. tree, from which we set a 4x4x48 inch aspen stake, full length in the ground, for the true corner to secs. 26, 27, 34 & 35 Rg. 30.

We drive to the $\frac{1}{4}$ corner between secs. 34 & 35 T. 136 Rg. 30 where U.S. notes call for a post and: Jack Pine 10, N 54° E 16 links (= 10.56 ft.) Jack Pine 11, N 50° W 19 links dist. (= 12.54 ft.) We are unable to find any evidence of the stake or bearing trees; and as there are no jack pine trees standing near at this time, and as none of the settlers here ever saw the corner we consider it lost.

We drive to the corner to secs. 2, 3, 34-35 bet. Townships 135 and 136, N. Range 30, W. where U.S. notes call for a stake and: Maple 7 S 77° W 8 links dist. (= 5.28 ft.) White Pine 5 S 43° E 15 links (= 9.90 ft.) B. Oak 2 N 46° E 25 links dist. (= 16.50 ft.) B. Oak 24 N 36° W 61 links (= 40.26 ft.) We find the stump of the old N.E. bearing tree from which we set a two foot iron pipe for the true corner, and mark new bearings as follows: Red Oak 8, N 36° 58' E 105.15 ft. dist to tack in flat spot at base of tree. A tack in corner post of fence bears S 34° 21' E 43.50 ft. distant. Angles turned from the true meridian magnetic variation 9° E. We find an old stake set years ago by some private surveyor, but it is four feet out of place.

We drive to the $\frac{1}{4}$ corner bet. secs. 3 and 34, bet. Twp. 135 & 136, Rg. 30 where U.S. notes call for post and following bearing trees: Tamarac 14, S 7° E 532 links dist. (= 351.12 ft.) Tamarac 6 N 42° W, 458 links dist. (= 302.28 ft.) We find a pointed stone set a foot into the ground, which the settlers say was set by some previous surveyor years ago. We set the transit over the stone and chain to where the bearing trees should be; we find a stump badly burned which checks out for course and distance for the old S.E. bearing tree, and which the settlers say is the stump of old bearing tree to $\frac{1}{4}$ corner.

We drive west half a mile to the corner to secs. 3, 4, 33 and 34, bet. Twp. 135 and 136 N, Rg. 30 W, where U.S. notes call for a post and the following bearing trees: - Aspen 16, N 48° E, 120 links dist (= 79.20 ft.) Pine 24 N 12° W 106 links dist. (= 69.96 ft.) Pine 18 S 74° W 94 links dist. (= 62.04 ft.) We find the stump of the N.W. and the stump of the S.W. bearing trees from which I set a hub in the center of the road for the temporary corner: both stumps check for course and the N.W. stump checks for measurement. Mag. var. 12'; the settlers say there is a ^{iron} corner set here, but we are unable to find it.

We drive half a mile north to the $\frac{1}{4}$ corner between secs. 33 and 34 T. 136 Rg. 30 where U.S. notes call for post and: Bk. Ash 7 S 50° E 17 links. Elm 8 S 46° W 55 links. All appear to be gone and the settlers say they have never saw the corner.

We drive half a mile further north to the corner to secs. 27, 28, 33 & 34 T. 136 Rg. 30, where we find no evidence of a stake or bearings and as we have no field notes and the country is badly burned we quit for night.

RECORD N° 247

October 19th 1914. Same crew and survey tools: - Beginning at the corner to secs. 2, 3, 34 + 35, between Twp. 135 + 136 N. Rg. 30. W, we run North, var 10° E. At 2457.50 set hub. @ 5211.80 set hub from which the true corner to secs. 26, 27, 34 + 35 T. 136, Rg. 30, bears N 40° 47' E 99 feet. Correcting back on N. + S. random line bet 34 + 35. @ 3605.90 x I run N 40° 47' E 490.50 ft. where we set a 4x4x48 inch oak stake for the true 1/4 corner between sections 34 and 35; T. 136. R. 30. Spent for night. Field book signed Frank A. Donner.

Survey made October 30th + 31st 1914
 Recorded February 27th 1915.

John H. Curo
 County Surveyor Cass Co

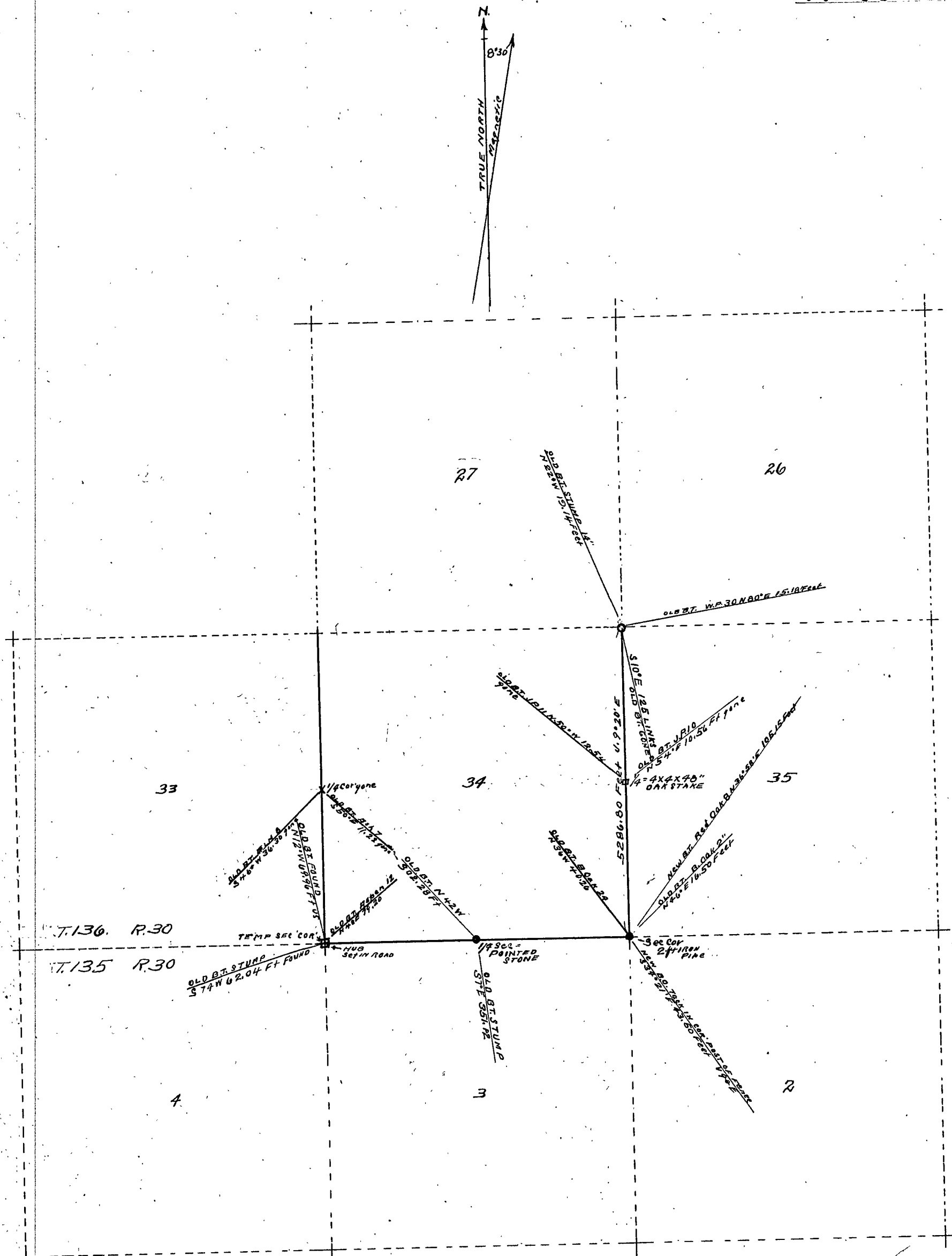
T135 R30		
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PLAT
T.135 R.30 Sec 2,3,4.
136 " 30 " 26,27,33,34,35
 FBSC.

SCALE 3 INCHES = 1 MILE

RECORD No 247



T135-R30

SEC NO	CONT'D TO PAGE	BOOK NO
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T136-R30

SEC NO	CONT'D TO PAGE	BOOK NO
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Surveyed October 30th and 31st 1914.
Recorded Feb. 27th 1915
John H. Curro, County Surveyor Cass Co. Minn.

T. 137, R. 30, Sec 6

.. 138 .. 30 .. 7. 18. 19. 30. 31.

.. 137 .. 31 .. 1

.. 138 .. 31 .. 12. 13. 24. 25. 36.

Field notes of the survey of a part of sections 6 Township 137 N. Range 30 W, and sections 7-18-19-30-31-Township 138 N, Rg. 30 W, and sec. 1 Township 137 N Rg. 31 W. and sections 12-13-24-25-36 Twp. 138 N Rg. 31 W, 5th P.M. Cass Co. Minnesota, as surveyed by John W. Curo, County Surveyor of Cass County Minnesota, assisted by Frank A. Donner, Deputy Co. Surveyor.

August 24th. 1914. John W. Curo and Frank A. Donner go to the corner to Twp. 137 & 138 N Ranges 30 & 31 W. which is the N.W. corner of sec 6 Twp 137-Rg. 30 and the S.W. corner of sec 31, Twp 138 Rg. 30 and the N.E. corner of sec. 1, T. 137, Rg. 31. and the S.E. cor. of sec. 36, Twp. 138 Rg. 31 previously established by Co. Surveyor Curo as recorded on pages 330 to 340 in the county record book of surveys, Record No 158 book "A" kept in the office of the Register of Deeds, Cass Co Minn. where the field notes call for a stake and the following new bearings: Aspen 4 NW 48.90 ft. Fence corner North and a little West 34.50 feet. Poplar 2 S.W. 24.70 ft. Jack Pine 4, S.E. 35.05 ft. Jack Pine 2 Easterly & South 47.82 ft. to tack heads.

The stake has been pulled up and lost in the grading of a new road which runs south from the E. & W graded road, but we locate the point for the true corner by measuring in from the bearings: We find the 4 inch aspen called for in the field notes, also the 2 inch & 4 inch jack pines called for in the notes: the tack heads still show plainly & from these we chain into an intersection which checks out perfect for distance, at which point we drive a hub and tack for the true Twp. corner: The fence is gone, but the hole where the post once stood checks out perfect for course and measurement, with the wood hub just set for the true corner: The 2 inch poplar called for in the field notes has been grubbed out, and is gone.

August 26th. 1914. Frank A. Donner, John Norman and Ellis Norman pull up the wood hub, & put in its place a 2 x 48 inch galvanized iron pipe, no cap or anchor rod and driven its full length in the ground for the true corner to sec. 6-31-36 and 1- Townships 137 and 138 N. Rgs. 30 and 31 W.

To survey four miles of county road, north along the Range line, from the corner to Townships 137 and 138 Rgs. 30 & 31, we begin in an old transit line, at a point 9.60 feet West of the iron Township corner just set and run North following an old ^{point out} transit line. var. 7° 30' E. @ 1050 ft. enter open swamp or meadow @ 1320 set hub for temporary 1/6 corner: leave swamp: @ 2350 set hub and tack: @ 2640 ft set hub & tack for temporary 1/4 corner between sec. 31 & 36 Twp. 138 N Rg. 30 & 31 W the old U.S. 1/4 corner is gone and we continue transit line North: @ 3160 hub & tack: @ 3200 set hub & tack: @ 3390 center of 15 ft creek, runs East: @ 4000 enter swamp: 4500 lv. same: @ 4530.60 set hub & tack: @ 4834 set hub & tack: @ 5000 enter swamp: @ 5300 set hub & tack: @ 5303.20 the true corner to sec. 30-31-25-36 between townships 138-Rg. 30 & 31, set East 4354 ft. at which point we find the wood corner, previously established by Co. Surveyor Curo as recorded on page 334, County Record book of surveys, Record no. 158 book "A" kept in the office of the Register of Deeds, Cass Co. Minn.

Continue our transit line North without setting over a true line: @ 6430 lv. swamp: @ 6654.70 set hub and tack. Apol Norman cut brush in P.M. quit for night.

August 27th 1914. Frank A. Donner, transitman and chainman.
 John Norman, Ellis Norman, Axel Norman, Erick Norman and Marcellus Dege-
 rom assisting: @ 7358.80 set hub & tack: @ 7425 enter swamp: @ 7943.20 we
 look for the $\frac{1}{4}$ corner, bet 30 and 25, but it is lost and we continue North; @
 8700 lv. swamp: @ 8757 hub: @ 9394 hub: @ 10351 set hub: @ 10589 the true section
 corner sets east 7740 feet, at this point which is the corner to sec. 19-24-25 & 30
 T. 138 Rgs 30 & 31. U.S. notes call for post and: Norway pine 12, N $71^{\circ}30'$ E 70 lks.
 dist. (= 46.20 ft.) Norway pine 14 S $76^{\circ}30'$ E 214 lks. dist. (= 147.24 ft.) Black pine $2\frac{1}{2}$ N
 $27^{\circ}30'$ W, 27 lks. (= 17.82 ft.) Black pine $2\frac{1}{2}$ S $53^{\circ}30'$ W, 18 lks. (= 11.88 ft.)
 We find an old stake which checks out with the two old Norway pine bearing
 tree stumps, and we set a new wood stake for the true corner, over which
 we set the transit & run North, var $7^{\circ}30'$ E: @ 1428 ft set hub: @ 1836.10
 set hub: @ 1925 enter swamp: @ 2640 set hub and quit for night.

August 28th 1914. The $\frac{1}{4}$ corner between sec. 19 and 24 is lost
 and we continue our transit line North: @ 3500 leave swamp: @ 3542.80
 set hub: @ 3813. set hub: @ 4731 set hub: @ 5183.60 set hub: @ 5280 set hub:
 the corner to sec. 13-18-19 and 24 is gone and we continue North: @ 6140
 set hub "A" on south side of small lake and in order to get distance
 across lake I cause hub "B" to be set on line on North side of lake.
 From hub "A" I turn N 60° W and chain 600 feet to hub "B": from hub "C"
 I turn N 60° E and chain 600 feet, intersecting our transit line 74 feet
 South of hub "B." distance across lake 600 feet added to 6140 equals
 6740 feet thence 74 feet to 6814 N, which is hub "B" continue North:
 @ 7946 the true $\frac{1}{4}$ corner between sections 13 and 18 sets East 92.80 feet: this
 $\frac{1}{4}$ corner sets about 100 feet north of solid ground, and about 50 feet south
 of waters edge of a shallow muddy lake which in on the range line and
 is about $\frac{1}{4}$ of a mile across. In order to get the distance across this
 lake we set the transit on a hub set at 7814, which we mark hub "A"
 and is about 182 feet south of waters edge: We cause a hub to be set
 about $\frac{1}{4}$ mile away and on the North side of the lake and sets in the soft bog
 about 40 feet North of the waters edge. I then to get the distance across lake
 with transit at 7814, turn N. 75° W and run 791 feet where we set hub "C"
 Setting on hub "C" focus on hub "A" turn telescope on hub "B" and the angle
 reads $72^{\circ}45'$: as it is too soft to set transit on hub "B" we decide to abandon
 the measurement across the water. quit for night.

August 29th 1914. John W. Curo, Frank A. Donner & John Norman, go to the
 corner to sec. 7-12-13 and 18, between Twp. 138 Range 30 and 138 Rg. 31 where U.S. notes
 call for a post and the following bearing trees: White pine 8 N $20^{\circ}15'$ E 138 lks. dist.
 (= 91.08 ft.) Spruce 6 N 54° W 70 lks. dist. (= 46.20 ft.) Norway pine 20 S 25° E 170 lks. (= 112.20 ft.)
 Frank Modak shows around 4 inch hub with tack in top which he says was
 set by Moulster for the true corner. We set the transit over this hub from which
 we run N $20^{\circ}15'$ 91.08 feet into sec. 7 T. 138, Rg. 30 where the measurements checks with
 what may have been the roots of the old N.E. bearing tree. From the hub we
 run N 54° W a distance of 46.20 feet into section 12 T. 138 Rg. 31 where we find some
 old roots which may have been the old spruce bearing tree.
 From the hub we run S 25° E 112.20 feet into sec. 13, T. 138 Rg. 31 where the
 courses & distance checks out with the old Norway pine bearing tree stump.

RECORD No 248.

We place a tall stake with red flag, over the 4 inch hub for the true corner to secs. 7-12-13 and 18-T. 138-Rg. 30 & 31 with new bearings as follows: Green Norway pine stump 14 bears S $65^{\circ}36'W$ 36.02 feet dist. Green Norway pine stump 14, bears S $65^{\circ}36'W$ 36.02 ft dist. to a tack in flat spot at base of stump; angle turned from the true line south var. reads 7° magnetic E. there are no other bearing trees near. Going to the $\frac{1}{4}$ corner between secs. 13 and 18, T. 138-30 and 138-31 where U.S. notes call for post and Tamarac 6 $N 48^{\circ}30'W$ 42 lbs dist. (= 27.72 ft.) Tamarac 5 $N 22^{\circ}E$ 20 lbs. (= 13.20 ft.) We find the stumps of both old bearing trees standing and plainly marked and a square stake set for the true $\frac{1}{4}$ corner which checked out correct for old bearings. We set transit over the stake and mark new bearings as follows: Dead Tamarac 8 S $63^{\circ}45'E$ 81.90 feet. Dead Tamarac 10 S $28^{\circ}9'W$ 78.95 feet. to tack heads in flat spot at base of trees; mag. var. $6^{\circ}45'E$. Over the stake we place a tall stick and red flag to mark the $\frac{1}{4}$ corner, then taking transit nearly half a mile North we work it on line bet. the two red flags and set a line of true line stakes between the $\frac{1}{4}$ corner to 13 & 18 and the cor. to secs. 7-12-13 and 18 T. 138 R. 30 & 31. Distance from the sec. cor. south to the lake, is about $\frac{1}{4}$ of a mile and is nearly all swampy & low. This half mile has been previously cut out and surveyed by A.W. Moulster & the cutting is less than a foot off the true line but it was not corrected by Moulster. Entire survey made with H. & B. Engineers transit.

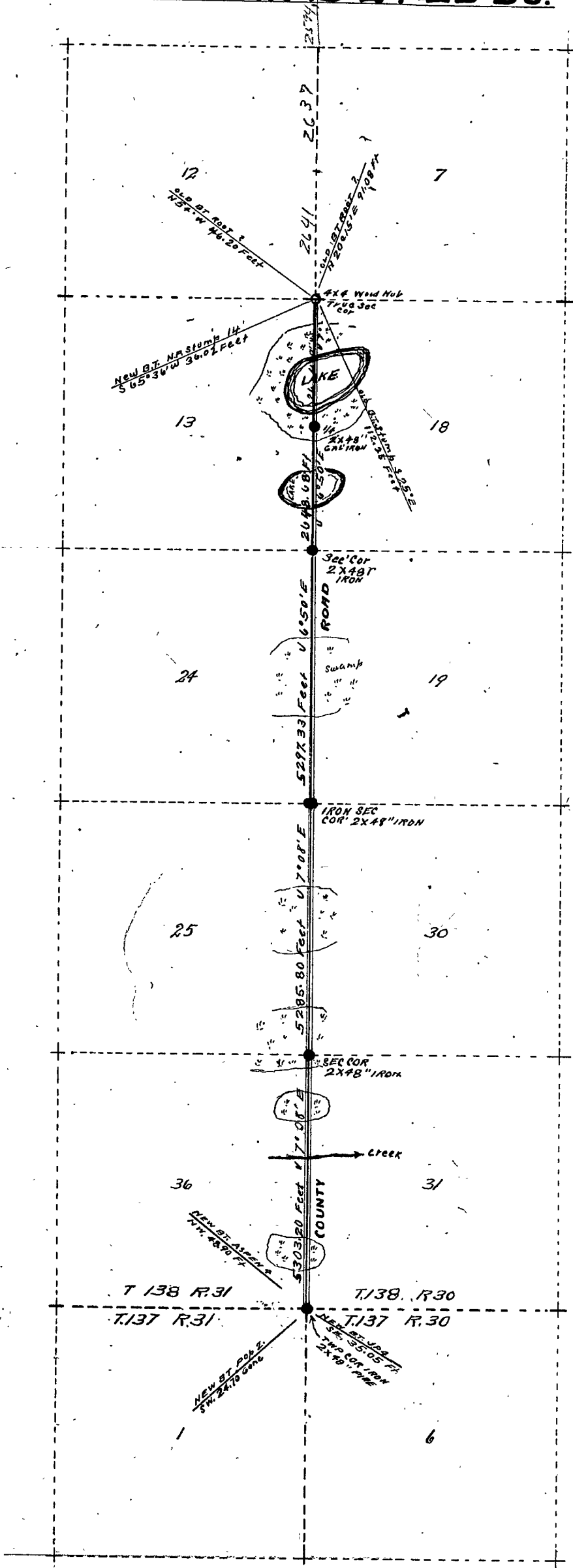
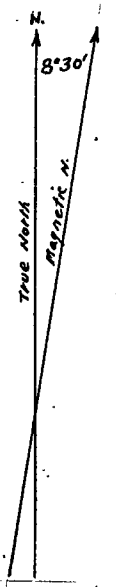
Aug. 30th 1914. John, Erick, Ellis & Apel, Norman and their team, also Curo & Danner correct the $3\frac{1}{2}$ miles of Range line just run and set large iron monuments between Twp. 138, Rge. 30 & T. 138-R. 31 as follows. At the $\frac{1}{4}$ corner between secs. 13 & 18, we pull up the wood hub and put in its place a 2 x 48 inch galvanized iron pipe, with no cap or anchor rod, but driven over a six foot tamarac piling, till the top of the iron sticks 18 inches above the swamp level. at a point on our random line, 79.46 feet North of the corner to secs. 19-24-25 and 30 T. 138 R. 30 & 31, the $\frac{1}{4}$ corner to 13 and 18 sets East 92.80 ft. Correcting back (001167) Random hub 79.46 N, goes East 92.80 ft. to true line. Hub 7700 goes East 89.86 ft. to true line. Hub 7100 goes East 81.69 ft. Hub 6740 goes East 78.66 ft. hub 6140 goes East 71.65 ft. to true line @ which point we place five foot stakes marked "True Range Line" "Road Center". At 5280 we chain North 17.33 ft. to 5397.33 north thence 61.87 ft. East to the true corner. to secs. 13-18-19 and 24 Twp. 138, Rg. 30 & 31 at which point we place a 2 x 48 inch galvanized iron pipe, with no cap or anchor rod, but driven three feet into the solid ground for the true corner where we mark new bearing trees as follows. Aspen 5 bears $N 48^{\circ}45'E$ 56.40 ft. Aspen 7 $N 66^{\circ}30'W$ 60.35 ft. to tacks driven in flat spot at base of trees. Courses taken with Gurley compass & 100 ft. steel tape, var. about $6^{\circ}50'E$. Correcting still further south 5183.60 goes East 60.50 ft. 4730 goes East 55.21 ft. 3815 goes East 44.50 ft. 3542.80 goes East 41.34 ft. 1836.10 goes East 31.42 ft. 1428.60 goes East 16.67 ft. to true line at which points we place five foot stakes marked "True Line" "Road Center" At the cor. to secs. 19-24-25 and 30 we pull up the wood stake & put in its place a 2 x 48 galvanized iron pipe, no cap or anchor rod, but driven 3 feet into the solid ground for the true sec. cor., from which we mark new bearings as follows, Norway pine 14 S $66^{\circ}E$ 45.18 ft. Norway pine 12 S $36^{\circ}15'W$ 84.08 ft. to tacks driven in flat spot at base of trees. Set with Gurley compass & 100 ft. steel tape. Mag. var. $6^{\circ}30'E$. At a point in our random line 9.60 ft. W. 105.89 ft. North of the iron Twp. cor., the corner to secs. 19-24-25 & 30 sets East 77.40 feet. Correcting back (00624) 9.60 ft. 105.89. goes East

PLAT

T 137. R 30. Sec 6
 ..138..30.. 7-18-19-30-31
 ..137..31.. 1.
 ..138..31.. 12-13-24-25-36.

RECORD No 248

-SCALE-
 one inch = 5880 Feet



Surveyed Aug 29th to 31st 1914
 Recorded February 27th 1915
 John H. Cress, Co. Surveyor Cass Co. Minn.

T137-R30

SEC No	CONT'D To PAGE	BOOK No
6		

T138 R30

SEC No	CONT'D To PAGE	BOOK No
7		
18		
19		
30		
31		

T137-R31

SEC No	CONT'D To PAGE	BOOK No
1		

T138-R31

SEC No	CONT'D To PAGE	BOOK No
12		
13		
24		
25		
36		

RECORD No 248

66.80 + 9.60 = 77.40 ft to true line: 10351 goes East 66.25 + 9.60 = 75.85 ft. 9394. goes East 60.12 + 9.60 = 69.72 ft. 8757 goes East 56.04 + 9.60 = 65.64 ft. 7358.80 goes East 47.10 + 9.60 = 56.70 ft. 6654.70 goes East 42.59 + 9.60 = 52.20 ft to true range line at which points we set six foot stakes marked "True line" "Road Center": at 5303.20 we chain East 33.94 + 9.60 = 43.54 at which point we intersect the stake previously established by County Surveyor Curo, for the true corner, we pull up the stake and put in its place a 2 x 4 8 inch galvanized iron pipe no cap or anchor rod, but driven over a 6 foot Lammarae piling driven down until the top of the iron sets 20 inches above swamp level, this is the true corner to secs. 25-30-31 and 36 T-138- Rg. 30 + 31, at which place we set a red flag and continue correcting line South, 4830 goes East 30.91 + 9.60 = 40.51 ft. 4530.60 goes East 28.99 + 9.60 = 38.60 ft. 3160 goes East 20.22 + 9.60 = 29.82 ft. 2640. goes East 16.89 + 9.60 = 26.50 ft. 2350. goes East 15.04 + 9.60 = 24.64 ft. 1320. goes East 8.44 + 9.60 = 18.04 ft. to true line at which points we set 5 ft. stakes to mark the true range line, and mark the stakes "True line" "Road Center" At 0.0 the Lwp. corner set W East 9.60 feet. quit for night.

Survey made August 24th to 31st. 1914
 Recorded February 27th 1915

John W. Curo,
 County Surveyor Cass Co. Minn

T137 R30		
SEC No	CONT'D To PAGE	BOOK No
6		

T138 R30		
SEC No	CONT'D To PAGE	BOOK No
7		
18		
19		
30		
31		

T137-R31		
SEC No	CONT'D To PAGE	BOOK No
7		

T138-R31		
SEC No	CONT'D To PAGE	BOOK No
12		
13		
24		
25		
36		

Field notes of the survey of a part of sections 16-17-20 & 21 - Township 142 N. Range 31 W, 5th P.M. Cass County, Minnesota, as surveyed by John W. Curd, Co. Surveyor of Cass County Minnesota.

August 13th. 1913. At the request of Absalom K. McPherson, Albert Erickson and Hans A. Hansen, who wish to establish and record iron monuments at corners in the above sections where the old U.S. corners are becoming obliterated, I and the above mentioned men go to the $\frac{1}{4}$ corner between sections 16 and 21 Township 142 N. Range 31 W 5th P.M. where U.S. field notes call for a post and the following bearing trees. Birch 3, N 22° E. 10 lks. (= 6.60 ft.) Birch 3 S 25° E 12 lks. (= 7.92 ft.) We find the remains of the old stake badly rotted and both old bearing trees dead but standing plainly marked. The trees check out perfect for measurement but are a little off for course, but as measurements hold over courses, we set a new $\frac{1}{4}$ corner by flat chain from face of old "B.T." marks, after which @ a variation of $8^{\circ} 15'$ E the old trees stand as follows: Old 3 inch Birch bears N 14° E 6.60 ft. distant. Old 3 inch Birch bears S $21^{\circ} 15'$ E 7.92 ft. distant, to face of figures. We take up the old stake and put in its place a galvanized iron pipe 4 ft. long by $2\frac{1}{4}$ inches thick having a cap on top which we mark with a punch marker "14" and having a 2 foot anchor rod thro' the bottom, we set the pipe its full length in the ground in a mound of dirt 1 foot high from which we mark new bearings as follows: Oak 14 bears S $40^{\circ} 30'$ E 21.47 ft. distant. Oak 7 bears S 62° W 31.31 ft. to head of nails driven in flat spot at base of trees. We set this $\frac{1}{4}$ corner with a 100 ft. standard steel tape and a "Gurley" surveyors compass. Magnetic var. bears N $8^{\circ} 30'$ E.

From this $\frac{1}{4}$ corner an old stake set about five years ago by Wm. H. Hallett bears East 65.05 ft. distant, where Hallett has established the $\frac{1}{4}$ corner in the wrong place and marked up four new bearing trees. The old bearing trees which we have used in setting this $\frac{1}{4}$ corner bet. sec. 16 & 21 T. 142, Rg. 31 are the old original bearing trees called for in the field notes of the Government survey of this land, and were saw by me when I worked on the survey of a proposed rail road for the old Manitoba Ry Company about A. D. 1887 Summer and Fall, and I saw them again ten years later when I worked on the survey of the Great Northern Ry. about A. D. 1897, Summer and Fall.

We walk about half a mile west to the corner to sections 16-17-20 and 21, Twp. 142, Rg. 31 where U.S. notes call for a stake and the following bearing trees: Birch 3 N 60° E 6 lks. distant. Poplar 3 N 30° W 10 lks. dist. Poplar 3 S 40° W 4 lks. dist. Poplar 3 S 38° E 3 lks. dist. We find the tall stump of the birch standing plainly marked, and the short stump of the SE + SW Poplar trees standing plainly marked and the stump of the N.W. poplar with the marks burned off, and from the face of the four stumps we locate the point for the true sec. corner, by proportionate measurement, from the face of the B.T. marks, and find the distance bet. the N.E. + S.W. trees to be 0.10 of a foot too long or too far apart, and the distance bet. the S.E. + N.W. trees is 0.15 of a foot too short, or too close together, which is a very close check with the U.S. chainage, and by proportion we intersect a point where the U.S. stake once set, and where a Mr. Wm. H. Hallett has set a post, which we take up and put in its place a galvanized iron pipe 4 ft. long by $2\frac{1}{4}$ inches thick with anchor rod thro' bottom and having a cap on top which we mark with a punch "17-16-20-21" set its full length in the ground in a mound of dirt 1 foot high and from the iron corner we mark new bearings as follows:

B

RECORD No 249

Norway Pine 6 in sec. 17, bears $N 15^{\circ} 30' W$ 54.96 ft. distant; Norway pine 14. in sec. 20 bears $S 63^{\circ} W$ 43.18 ft. distant to head of nails driven in flat spot at base of trees; var. $9^{\circ} E$. Set with a "Gurley" Surveyors compass and standard steel tape. The stumps of the old bearing trees stand correct for course & proportionate measurement. Absalom H. McPherson, chairman, Albert Erickson apman & chairman, Hans A. Hanson, apman & chairman. John W. Curo, Compassman & chairman.

Surveyed August 13th. 1913,
Recorded Feb. 27th. 1915.

John W. Curo
County Surveyor Cass Co Minn

NOTES

T. 142. R. 31		
SEC NO	CONT'D TO PAGE	BOOK NO
16		
17		
20		
21		

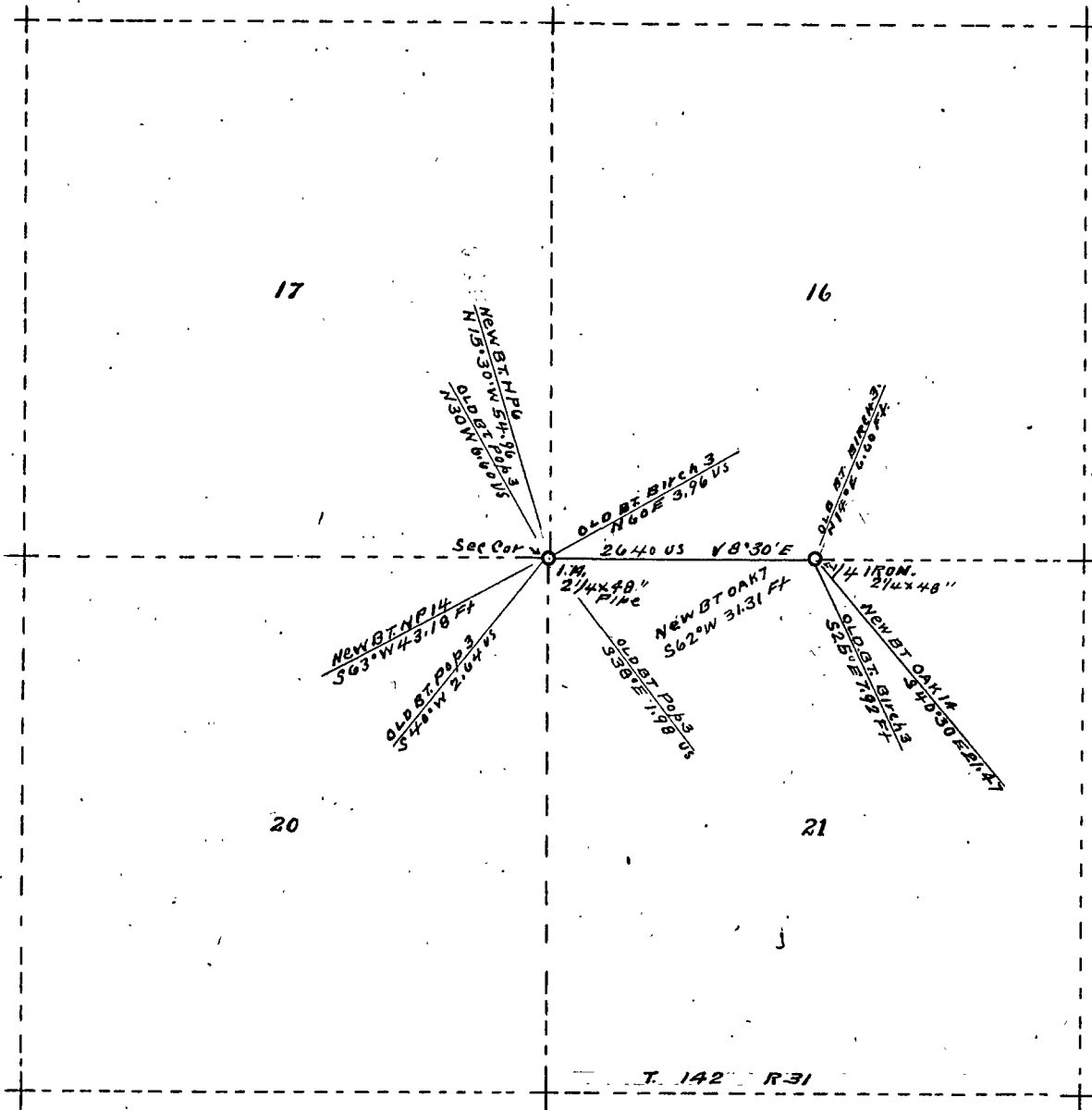
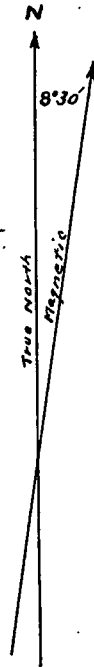
B

PLAT

Sec 16, 17, 20, 21. T. 142 R. 31.

SCALE 3" = 1 MILE

RECORD No 249.



Surveyed August 13th 1913
 Recorded Feb 27th 1915
 John H. Curo Co Surveyors Pass Co. Minn.

PLAT
T 142 R 31

SEC	CONT'D	IO	PAGE	BOOK
16	"	"		
17	"	"		
20	"	"		
21	"	"		

F.B.S.C.

T. 135 R 29. Sec 19-30T. 134. R 30. " 2-3.T. 135. R 30. " 5. 6. 7. 8. 9. 16. 17. 18. 21. 22. 23. 24. 25. 26. 27. 28. 34. 35.T. 136. R 30. " 31. 32T. 135. R 31. " 1.T. 136. R 31. " 36.

Field notes of the survey of a part of sections 19 and 30 Township 135 N Range 29 W and sections 5-6-7-8-9-16-17-18-21-22-23-24-25-26-27-28-34 & 35 Township 135 N Range 30 W and sections 31 and 32 Township 136 N, Range 30 W, and sec. 1 Township 135 N Range 31 W and sec. 36 Twp. 136 N, Rg. 31 W 5th P.M. all in Cass County Minnesota as made by John W. Luro, County Surveyor of Cass County Minnesota, assisted by Frank A. Donner, Deputy County Surveyor.

December 22nd. 1914. We are working for Home Brook Township in survey of wagon roads and to locate land marks, stakes and bearing trees of all kinds, in the re-establishment of U.S. corners which are becoming obliterated and lost and are requested to record our survey and findings for the use of future surveys.

Frank A. Donner, transitman & chainman, S. C. Barnard, apman & chainman. We use a 100 ft. steel tape, & a new "Heller" & "Brightly" Engineers transit in good adjustment. Go to the corners to sections 8-9-16 and 17. T. 135, Rg. 30 where U.S. field notes call for a post and the following bearing trees: Maple 10 S 40° E 23 lks. distant (= 15.18 ft.) Oak 7 N 50° E 18 lks. dist. (= 11.88 ft.) Oak 5 N 68° W 27 lks. distant (= 17.82 ft.) Oak 6 S 25° W 10 lks. dist. (= 6.60 ft.) We find a stone in the center of the road which Mr. S. C. Barnard says was set in the place of a stake set years ago by Co. Surveyor B. B. Bartlett, at which time the old U.S. bearing trees stood plainly marked from which the stake was established. We set the transit over the stone and chain S 40° E 23 lks. in sec. 16 and N 50° E 18 lks. in sec. 9; and N 68° W 27 lks. in sec. 8; and S 25° W 10 links in sec. 17; and find no evidence of the old trees, stumps or even roots.

We walk to the corner to sections 7-8-17 and 18. T. 135 Rg. 30, where U.S. notes call for a post and the following bearing trees: Fir 14 S 10° W 7 links dist. (= 4.62 ft.) Spruce 5 S 78° E 18 links dist. (= 11.88 ft.) White pine 7 N 70° E 8 links dist. (= 5.28 ft.) Norway pine 12. N 46° W 29 lks. dist. (= 19.14 ft.) We find an old stake here, from which we run a line the required course and distance in each of the last mentioned sections, but find no bearing trees, or stumps from which to verify the correctness of the stake.

We then walk to the corner to sec. 5-6-31 and 32, between Twp. 135 and 136 N Rg. 30 W, where U.S. notes call for a post and the following bearing trees: Tamarac 6 N 20° W 22 lks. distant (= 14.52 ft.) Tam. 6 S 41° E 14 lks. (= 9.24 ft.) Spruce 6 N 2° E 19 lks. dist. (= 12.54 ft.) Fir 5 S 35° W 16 lks. dist. (= 10.56 ft.) We find some of the old bearing trees, but as they are all down and it is getting late, we quit for night.

December 23, 1914: Frank A. Donner transit and chainman, S. C. Barnard ap & chain, Fred Butler apman with W. Barnard and team, drive back to the corner to sections 5-6-31 and 32; between Twp. 135 and 136, Rg. 30 where we manage to get the old U.S. bearing trees back in their original position. The N.W. tree in sec. 31, and the S.E. tree in sec. 5 are plainly marked from which

we establish the point for the true section corner; from which we run a line the required course and distance in sections 32 and 6 but do not find the old trees. We set an iron pin for the true corner and mark new bearing trees as follows: Aspen 10 N 69° 2' W 80.05 feet distant; Balsam 8 S 6° 42' E 112.20 feet distant to head of tacks driven in flat spot at base of trees; var 10° E. and from this corner we run N 89° 45' W var 9° E. Random line between sect. 6 and 31: At 148.30 feet set hub and tack, then run to about 1200 or 1300 feet and quit for night.

December 24th 1914. J. A. Donner, S. L. Barnard, W. G. Schultz and team belonging to W. Barnard, continue line west: @ 902.70 ft. set hub and tack @ 2100 ft enter meadow: @ 2600 leave meadow: @ 2640 we look for the $\frac{1}{4}$ corner bet. sect. 6 and 31 T 135 and 136 N Rq 30 W where U.S. notes call for a post and the following bearing trees: Pine 4 S 83° E 31 lks dist (= 20.46 ft.) Tamarac 10 N 60° W 93 lks dist (= 61.38 ft.) We are unable to find any trace of the old trees at corner and continue our transit line west. We continue chaining to 2900 ft west then cut line still west to about 3800 ft. and quit for night.

December 26th 1914 same crew: continue west: We cut line west but snow storm comes up and we are compelled to quit for a few days.

Jan. 11th 1915. J. A. Donner, transit and chain. Seow Barnard, J. Goble, Sam Goble flagmen, apmen and chainmen same survey tools: continue west. @ 3338 ft. set hub & tack: @ 4980.50 set hub & tack: @ 5493.60 ft. West the corner to sect. 1-6-31 and 36, Twp. 135 and 136 N Range 30 and 31 W. sets North 23.20 ft. at which point U.S. notes call for a post and the following bearing trees:

Maple 12 N 38° E 24 links; Br Oak 16 S 23° E 41 links; Lind 14 S 75° W 14 lks; Black Oak 14 N 55° W 56 lks. We find all of the old bearing tree stumps from which we establish the true corner by flat chain from face of stumps and set an iron stake 1 inch thick by 3 feet long, its full length in the ground for the true Twp. corner with new bearings as follows: White Oak 3 S 27° 56' E 182.25 feet distant; Red Oak snag 14 S 71° 30' W 91.70 feet distant; Oak Stump 16 N 65° 26' E 60.09 feet distant; var. 9° E. We walk East over the cut out transit line and mark the true line between sect. 31 and 6 as follows:

@ 5493.60 W the true Twp. corner sets North 23.20 ft. The mile between 31 & 6 just run is 15.60 ft. too long. 54.78.00 feet Gov't chain equals 5493.60 feet my chain or 15.60 ft. long: To correct the random line just run each hub should be moved West .002848 of a foot in each foot and North .0042231 of a foot in each foot. Correcting 5478. W goes West 15.60 to 5493.60 thence North 23.20 ft. to true corner to sect. 1-6-31 & 36-T. 135 & 136 N Rqs. 30 & 31 W. @ 3960 W we chain west 11.28 feet to 3971.28 ft. W. then North 16.77 ft. where we set a 1 inch pin 3 ft. long set its full length in the ground for the true West $\frac{1}{4}$ corner bet. sect. 31 & 6. Temporary $\frac{1}{4}$ hub 2640 W should be 7.52 ft. west to 2647.52 W. thence North 11.18 ft. to a point for the true $\frac{1}{4}$ corner between sect. 31 & 6, T. 135 & 136 N Rq 30 W. but as Donner made a mistake in figuring this correction they begin at 2664.09 west and chain North 11.18 ft. where they set a 1 x 36 inch iron pin, its full length into the ground at a point 16.57 ft. West of the point for the true $\frac{1}{4}$ corner. Temporary hub 1320 W should go 3.76 feet West to 1323.76 W. thence N. 5.59 to a point for the true East $\frac{1}{4}$ corner bet. sect. 6 & 31-T. 135 N. R. 30 W. but as Donner made a mistake in figuring this correction they begin at 1332.04 W. and chain 5.59 ft. North where they set a 1 x 36 inch iron pin its full length in the ground

RECORD N^o 250.

828 feet West of the point for the true East No corner between secs. 6 & 31

At the corner to secs. 5-6-31 & 32 - T. 135 - and 136 - Rg. 30 W, we set an iron pin 1 inch thick by 3 ft. long, its full length in the ground for the true sec. corner.
January 12th, 1915. F. A. Donner transit and chainman; Leon Barnard and Frank Rebmann, at and chain: Beginning at the stone in the road center, which we consider the corner to secs. 8-9-16-17-T. 135 Rg. 30 We run ν $89^{\circ}45'W$ var. $10^{\circ}30'E$. @ 2825 enter meadow; @ 3185 cross 3 foot ditch; @ 3300 leave meadow; @ 4848.70 set hub: We look again for bearing trees to the corner of secs. 7-8-17 & 18-135-30 but find none, quit:

January 13th, 1915. F. A. Donner, S. R. Barnard, F. Rebmann, Wm. & Sec. Goble Continue West: @ 5600 enter balsam swamp; @ 6025.70 set hub; @ 7103.60 set hub; @ 8626.90 set hub: quit for night.

Jan. 14th, 1915. Donner, Barnard & Rebmann, Wm. & Sec. Goble, continue West random transit line between secs. 7 & 18-135-30: @ 9200 enter swamp; @ 9449.20 set hub; @ 10000 ft leave swamp; @ 10350 set hub; @ 11000 ft set hub: We look for the corner to secs. 7-12-13 & 18 between Twp. 135 ν Rgs. 30 & 31 W. where U. S. notes call for a post and the following bearing trees: Black Oak 5 S $19^{\circ}W$ 36 links. Aspen 10, ν $52^{\circ}W$ 58 links; Birch 6 S $82^{\circ}30'E$ 14 links; Birch 7 ν $85^{\circ}E$ 11 links: We are unable to find them and quit for night:

January 16th, 1915. F. A. Donner, Wm. Schultz and Albert Brecht; go to the cor. to secs. 21-22-27 & 28-T. 135-Rg. 30 where U. S. notes call for a post and the following bearing trees: Oak 4 ν $43^{\circ}E$ 39 links; White Pine 20 ν $62^{\circ}W$ 120 links; Birch 3 S $74^{\circ}W$ 44 links; Birch 3 S $80^{\circ}E$ 11 links distant: We find a 4 inch stake, previously set by Deputy County Surveyor A. W. Moulster, for the true section corner, over which we set the transit and run the required course and distance in each of the last mentioned sections in search of old bearing trees and then run East on $9^{\circ}30'$ var. E. @ 640 ft cross 15 foot creek: @ 897 ft set hub and tack; @ 5291.80 ft set hub & tack: quit for night:

January 18th, 1915. F. A. Donner; A. Brecht; F. Jacholski, Joe Jacholski and Schultz. Continue East. @ 5300 enter tamarac swamp; @ 6400 leave same; @ 7710.20 set hub and tack; @ 10160.10 set hub and tack; @ 11500 ft. enter old swamp; quit for night:

January 19th, 1915 Same crew. Continue East. @ 11950 leave swamp; @ 12450.10 set hub; @ 13450 cross Ap Handle Creek. 3 feet wide; @ 14293.10 set hub; @ 15863.70 the true corner to secs. 19-24-25 and 30, bet. Twp. 135, Rgs. 29 & 30 sets South 411.50 at which point U. S. notes call for a post and the following bearing trees: White pine 8 S $72^{\circ}15'W$ 176 links (= 116.16 ft. distant). Aspen 12 ν $11^{\circ}30'E$ 260 links (= 171.60 ft. distant). Spruce 14 ν $22^{\circ}15'W$ 240 links (= 158.40 ft. distant). We find the S. W. bearing tree plainly marked but blown down; we start work to get it back in its original position, but as we do not have the right kind of tools we quit for night.

January 20th, 1915. Same crew except Joe Jacholski: We spend all day getting the old bearing tree back in its original position.

Jan. 21st, 1915. Donner, Brecht, and F. Jacholski working: We get the old bearing tree back in its true position from which we set the true corner to secs. 19-24-25 & 30 between Twp. 135 Rg. 29 & 135 Rg. 30, where we set a stake and mark new bearings as follows: Jack pine 14 S $31^{\circ}56'E$ 115.95 ft. dist. Corner fence post bears S $32^{\circ}3'W$ 35.35 ft. distant. Aspen 5 bears ν $37^{\circ}35'E$ 66.15 ft. distant with tacks at base of bearings. var. $8^{\circ}45'E$.

To correct the random line just run East and West so that the line will be straight between the terminal points each hub should be

PLAT. B

TWP 135. R29. Sec 19-30

" 134. 30. " 2-3.

" 135. 30. " 5.6.7.8.9.16.17.18.21.22.23.24.25.26.27.28.34.35.

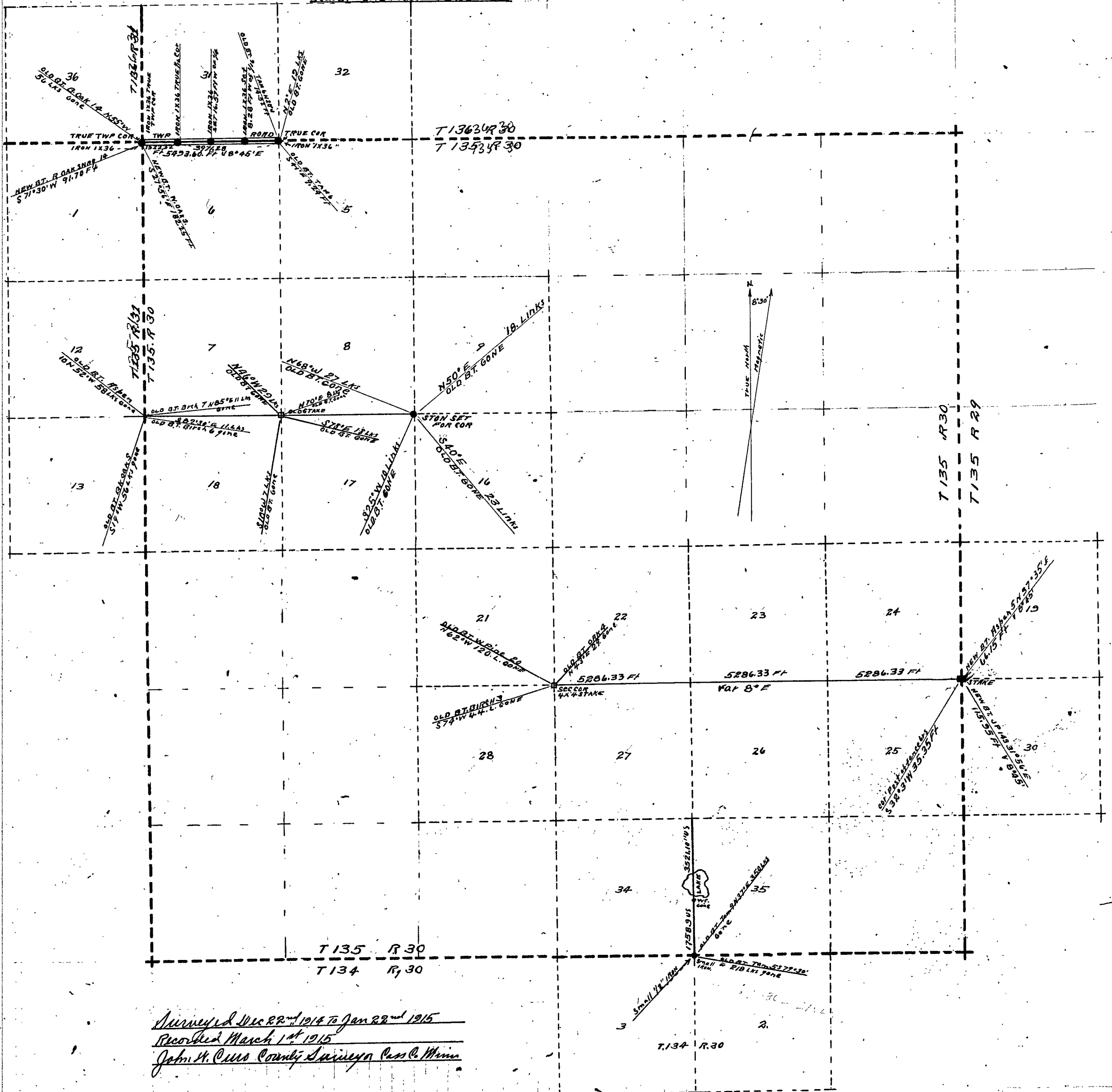
" 136. 30. " 31.32.

" 135. 31. " 1.

" 136. 31. " 36.

RECORD No 250.

Scale: one inch = 3580 Feet



Surveyed Dec RR^d 1914 to Jan 22nd 1915
 Recorded March 1st 1915
 John H. Cull County Surveyor Cass Co. Minn.

T135-R29

SEC NO	CONT'D	BOOK
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T134-R30

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T135-R30

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5	TO PAGE	6
7	TO PAGE	8
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T136-R30

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T135-R31

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1	TO PAGE	1

T136-R31

SEC NO	CONT'D	BOOK
36	TO PAGE	36

moved South .02594 of a foot for each foot it is East of the point of beginning, as follows. Hub 15863.70 E, goes South 411.50 to true section corner: Hub 14293.10 E, goes South 270.76 ft. Hub 12450.10 E, goes South 322.96 feet: Hub 10160.10 E. goes South 263.55 feet: Hub 7710.20 E. goes South 200.08 feet: Hub 5291.80 E. goes South 137.27 feet: Hub 897.00 E, goes South 23.27 feet.

January 22nd. 1915. Donner, Bricht & Scholtz: Go to the corner to secs. 26-27-34 + 35-T. 135-Rq. 30, where U.S. notes call for a post and the following bearing trees: Tamarac 5 S 60° E 13 links distant: Tamarac 3 S 36° W 22 links distant: Tamarac 4 N 85° W 35 links distant: We are unable to locate the post or any of the bearing trees in the secs. last mentioned; and run half a mile South to the 1/4 corner between secs. 34 + 35-T. 135-Rq. 30 where U.S. notes call for a post for witness corner 1335 links South with the following bearing trees Tamarac 3 S 80° E 34 links distant: Tamarac 4 N 33° W 62 links distant: As this 1/4 corner falls in a lake we search for the witness corner, 1335 links South and for the bearing trees in the last two mentioned secs. but are unable to find any evidence of the 1/4 corner or bearings: We continue half a mile South of the corner to secs. 2-3-34+35, between Twp. 134 + 135-N. Rq. 30 W, where U.S. notes call for a post and the following bearing trees: Tamarac 5 S 79° 30' E 218 lks. distant. Tamarac 9, N 37° E 350 lks. distant: We find a half inch iron pin here, sticking 8 inches above the ground, but we find no evidence of any old or new bearing trees. The iron may be the corner, or it may not be the true corner. The town Board decide to do no more surveying now, and this ends this survey.

Surveyed December 22nd. 1914 to January 22nd. 1915.
Recorded March 1st. 1915.

T135-R29

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T134-R30

SEC NO	CONT'D TO PAGE	BOOK NO
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3		

T135-R30

SEC NO	CONT'D TO PAGE	BOOK NO
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T136-R30

SEC	CONT'D TO PAGE	BOOK
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32		

T135-R31

SEC NO	CONT'D TO PAGE	BOOK NO
1		

T136-R31

SEC NO	CONT'D TO PAGE	BOOK NO
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Field notes of the survey as established and ordered surveyed by the Town Board of Shingobee Township through Sections 21 and 22, Township 142, Range 31 W, Cass County Minnesota, assisted by Paul R. Boese a Civil Engineer and Mr. J.W. Rice, Chairman of the Township Board of Shingobee Township.

We use a Gurley surveyors compass and 200 foot steel tape and 75 foot metallic tape:

April 8th 1915: We begin at the North $\frac{1}{4}$ corner between Sections 21 & 22, Twp 142, R 31, previously established by Curo, and from this point we run South following the section line a distance of 1075.35 feet where we set a birch stake on the section line 838.93 feet North of the $\frac{1}{4}$ corner, said birch stake sets in the center of an old wagon road which bears NE on SW and from this point we run: N45°40'E partly following the old crooked wagon road, a distance of 258 feet to a point on the West boundary of the Right of Way of the Minnesota and International Rly. and the Great Northern Rly, thence N76°26'E, crossing both tracks at right angles, a distance of 158 feet to the center of the main wagon road where it now exists along the East boundary of the Right of Way of the said railways and there terminating.

Survey made April 8th 1915

Recorded April 22nd 1915

John W. Curo
County Surveyor Cass County Minn.

T142-R31		
SEC No	CONT'D To PAGE	BOOK No
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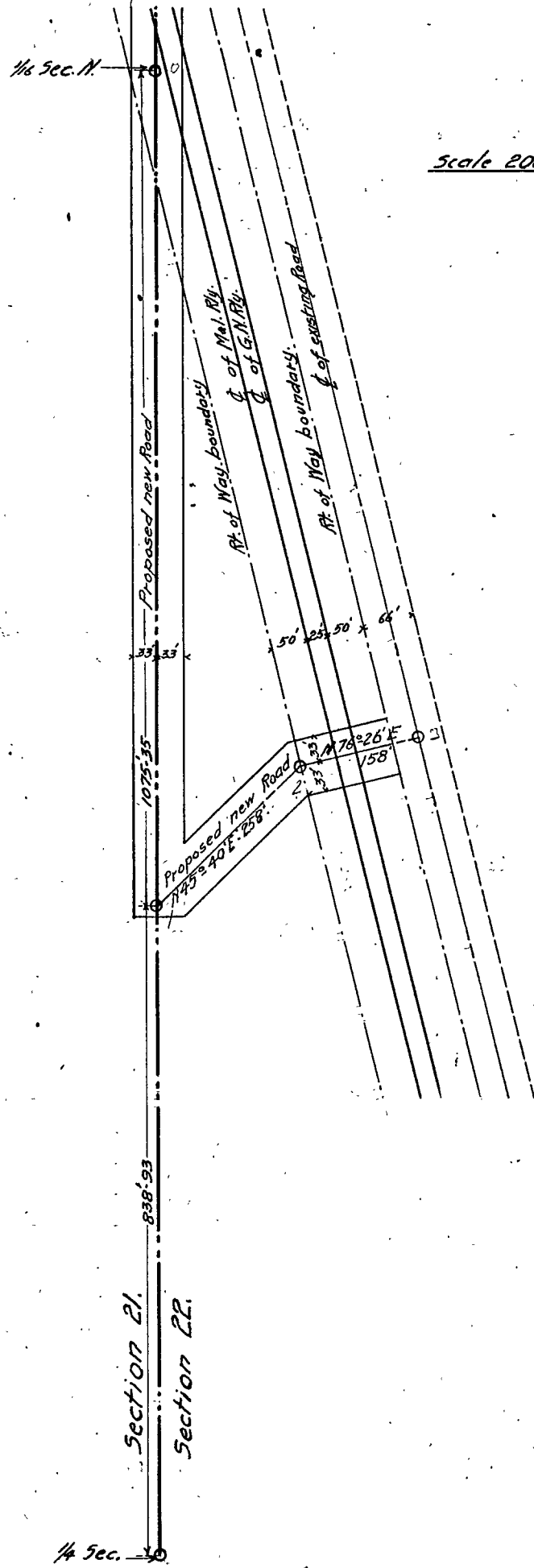
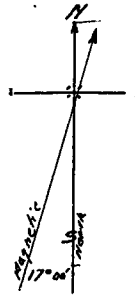
Sections 21. 22.
Township 142
Range 31.

B

B3.30

107533-
 83873
 1914.28

RECORD NO. 251.



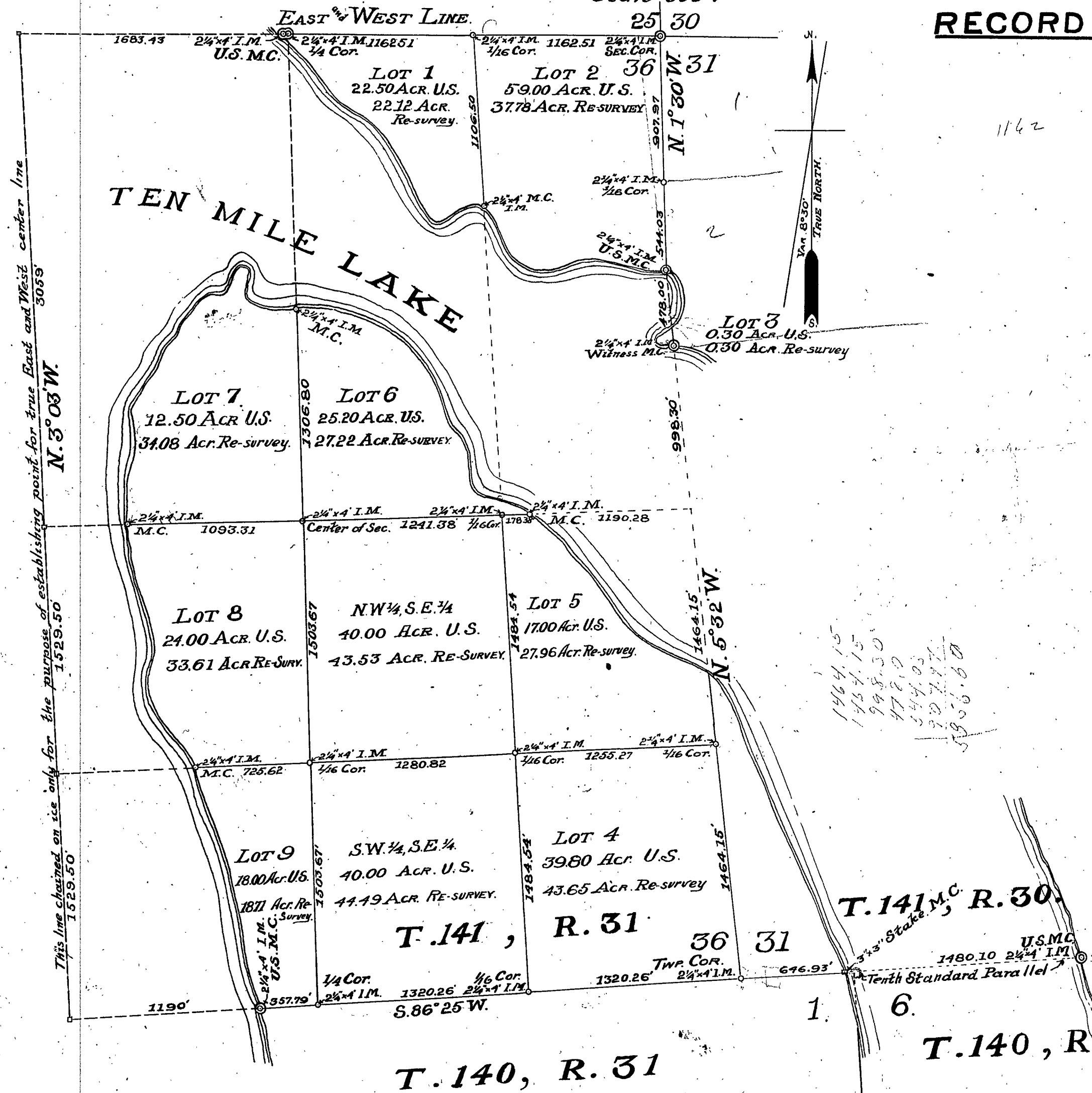
Approved April 8th 1915
 Record 22
 John H. Case, Civil Eng. Co. Minn

T142 R31

SEC NO	CONT'D TO PAGE	BOOK NO
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22		

RECORD No 252

Scale 600'-1"



This line chained on ice only for the purpose of establishing point for true East and West center line N. 3° 03' W. 1529.50

1464.15
1454.15
998.50
478.00
344.05
907.97
5306.60

○ Corners established by this survey.
⊙ Known corners set from old bearing trees.

T140-R30		
SEC No	CONT'D PAGE No	BOOK No
6		

T141-R30		
SEC No	CONT'D PAGE No	BOOK No
30		
31		

T140 R31		
SEC No	CONT'D PAGE No	BOOK No
1		

T141 R31		
SEC No	CONT'D PAGE No	BOOK No
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36		

F.K.M.

TWP. 141 - Rg. 31 - SEC'S 25 - 36

TWP. 141 - Rg. 30 - SEC. 31

TWP. 140 - Rg. 31 - SEC. 1

TWP. 140 - Rg. 30 - SEC. 6

Field notes of the survey of section 36, Township 141 N Range 31 W Cass County Minnesota as made by and under the direction of John W. Curo County Surveyor of Cass Co. Minn. in accordance with his contract of March 2nd, 1915, on file in the office of the County Auditor and marked "Curo" contract No. 4" These notes also cover a part of the adjoining sections effected by this survey which are as follows: Sec. 6 Twp. 140 Rg. 30. Sec. 1 Twp. 140 - Rg. 31. Sec. 31 Twp. 141 Rg. 30 and secs 25 and 36 of Twp. 141, Rg. 31 all in Cass Co. Minn.

March 20th 1915 As this is the day we are to begin the survey of sec. 36 T. 141 Rg. 31 under my contract with Cass County, Frank A. Donner Engineer and John W. Curo prepare field notes and plates, at Walker. Donner boarding at Chase Hotel at Walker, using A+B new Engineers transit, Gurley Compass, steel tapes and other survey tools belonging to Curo. Take the 9:30 train at Walker to Ten Mile Lake thence to section 36 - T. 141 - R. 31. At the S.E. corner of sec. 36 T. 141 - R. 31 being the S.W. corner of sec. 31 - T. 141 - Rg. 30 U.S. notes call for: White Birch 15 for corner with the following bearing trees: Lind 8 N 30° W 23 links distant: Ironwood 5 N 27° E 15 links: all appear to be gone. At the $\frac{1}{4}$ corner on the South side of section 36 - T. 141 - Rg. 31 - U.S. notes call for a post and the following bearing trees: White Birch 3 N 19° W 36 links distant: Br. Oak 12 N 30° E 23 links All appear to be gone. At Meander corner No 2 of T. 141 - Rg. 31 U.S. notes call for a post and the following bearing trees: Aspew 6 S 20° W 17 links distant: Birch 8 S 17° W 32 links distant: All appear to be gone. As the S.E. corner of sec. 36 T. 141 - Rg. 31 is lost and will have to be established by beginning at some point further East or West along the 10th Standard Parallel we will have to look up previous surveys, and special notes.

March 22nd. 1915. Curo looks up previous surveys, copies old U.S. field notes, figures and checks the measurements given by the U.S. surveyors in establishing Meander Corners &c and prepares a few plates.

March 23rd. 1915. Mr. N.D. Gorman, Assistant Engineer and Surveyor boarding at Chase Hotel at Walker, using new Gurley's Engineers transit steel tapes &c belonging to Curo. Takes 9:30 A.M. train, Walker to Hackensack, thence to Anton Simmerberg's ^{office} offers to board Gorman @ \$1. pr. day while in survey of sec. 36. All day on preliminary work in sec. 36 - 141 - 31.

March 24th. 1915. Anton Simmerberg apman, N.D. Gorman transit man & chainman, Simmerberg helping chain go to Meander Co. No. 35 T. 141 - R. 30 - on East side of Ten Mile Lake and West of the $\frac{1}{4}$ corner on South side of sec. 31 - T. 141 - R. 30 and on North side of sec. 6 T. 140 - Rg. 30 being on the 10th Standard Parallel being M.C. No. 48 of Twp. 140 - Rg. 30 where U.S. notes call for post and the following bearing trees. White pine 12 N 60° E 7 links (= 4.62 ft. dist.) White pine 14 S 7° W 13 lks. (= 7.58 ft.) We find the stumps of the old bearing trees standing and plainly marked, which check out for course and distance with a galvanized iron pipe set for the true M.C. said pipe is 4 feet long by 2 inches thick, capped on top, set nearly its full length in a

SURVEY RECORD No 252.

bed of cement and rock as established by County Surveyor Curo and recorded in survey record No. 170 - page 385 Book "A" County Record book of surveys. From this true M.C. on the 10th Standard Parallel we run West on ice in Ten Mile Lake, var. $9^{\circ}30' E$. At 764.75 set hub on ice. Albert Thomas assists as chainman and apman. in P.M. and we run preliminary lines in sec. 36.

March 25th. 1915. N.D. Gorman transit and chainman. Anton Linnberg chainman and apman. Albert Thomas chainman & apman. continue West from hub 764.75. @ 1479.72 temporary Meander Corner, leave lake, look for Meander Corner No. 34 of Twp. 141 - Rg. 30, being M.C. No. 19 of Twp. 140 - Rg. 31 bet. sec. 31 - T. 141 - R. 30 and sec. 1 T. 140 Rg. 31 where U.S. notes call for post & the following bearing trees: Tamarac 5 ν $51^{\circ} W$ 142 lks. distant. Jam. 4 S $83^{\circ} W$ 300 links. All are gone & we continue West: @ 2126.52 set temporary Twp corner being S.W. cor. of sec. 31 - T. 141 Rg. 30 and S.E. corner of sec. 36 - T. 141 Rg. 31 where U.S. notes call for: White Birch 15 for corner. Linden 8 ν $30^{\circ} W$ 23 links distant.

Ironwood 5 ν $27^{\circ} E$ 15 links dist. All are gone and we continue West:

@ 2210.10 set hub: @ 3065.00 set hub: @ 3562.75 set hub: @ 4647.65 set hub: @ 4766.52 set temporary $\frac{1}{4}$ corner on south side of section 36 - T. 141 - Rg. 31, where U.S. notes call for post and the following bearing trees: Dead poplar 24 ν $49^{\circ} W$ 125 links distant: White Birch 3 ν $11^{\circ}30' E$ 29 links distant: All are gone and we continue West: @ 5165.00 set hub: @ 5124.24 set temporary Meander corner.

The true M.C. sets South 248.70 feet and West 1.01 feet and at 5125.25 W. the true M.C. sets South 248.70 feet. at this point being Meander corner No. 1 of Twp. 141 Rg. 31 and M.C. No. 20 of Twp. 140, Rg. 31 - bet. sec. 36 & 1 of said Townships. East bank of Ten Mile Lake, where U.S. notes call for post and the following bearing trees:

Yellow pine 16 ν $20^{\circ} E$ 14 links (= 9.24 ft.) Yellow pine 15 S $21^{\circ} E$ 39 lks. (= 25.74 ft.)

We find the S.E. tree standing green and plainly marked also stump of N.E. tree from which we set the true M.C. by flat chain from "B.T." marks set 80 d spikes.

To correct back: - Each hub goes .000197 of a foot West in each foot West and .04852 of a foot South for each foot West (.000197 W) (.04852 - S) Quit for night.

March 26th. 1915 N.D. Gorman transit and chain. A. Linnberg chain & apman: A. Thomas apman. New Gurley's Engineers transit in perfect adjustment and a 300 foot steel tape: plumb-bob chain, double center hubs:

Curo arrives from Walker and assists us. We go to Meander corner No. 32 of Twp. 141 - Rg. 30 being No. 5 of Twp. 141 Rg. 31 on North shore of Ten Mile Lake between fractional sections 31 and 36 of said Townships where U.S. notes call for a post and the following bearing trees: White pine 20 ν $9^{\circ}30' W$ 120 links (= 79.20 ft.) Aspen 14 ν $2^{\circ}30' E$ 177 links (= 116.82 ft.) We find the stump of the old N.E. bearing tree and we find the old N.W. pine, dead & down but plainly marked. This White pine bearing tree has been blown ^{over} but roots still hold in the ground and from the original position of the tree, we set point for the true M.C. where we set a hub and tack from which the old N.E. bearing tree stump, checks for course and distance.

We go to corner of sec. 25 - 30 - 31 & 36, between Twp. 141 Rg. 30 & Twp. 141 Rg. 31 where U.S. notes call for a post and the following bearing trees: Yellow pine 10 ν $7^{\circ}30' E$ 148 links (= 97.68 ft.) distant. Yellow pine 13 ν $3^{\circ}30' W$ 147 links (= 97.02 ft.) distant. Aspen 3 S $16^{\circ} W$ 38 lks. Aspen 3 S $19^{\circ}30' E$ 35 links: The S.E. and S.W. trees are gone, but we find stump of N.W. tree, also N.E. tree, standing green and plainly marked, which check for course & distance

with galvanized iron pipe, previously set by County Surveyor Duro for true section corner. This corner is a galvanized iron pipe 4 feet long by 2 inches thick, capped on top and set nearly its full length into the ground, as recorded in survey records nos. 170 & 171 on pages 384-387, book "A" County record book of surveys. We work transit on line between N. E. cor. of 36 and M.C. No. 5. Twp. 141 Rg. 31 and cut line N.S. along true range line.

At Meander Corner No. 5 T. 141, Rg. 31 where we have set hub and tack for the true M.C. we mark new bearing trees as follows: var $9^{\circ}30' E$. Poplar 8 $N 22^{\circ}10' E$ 85.30 feet distant. Norway pine 12 $N 47^{\circ}7' W$ 207.10 feet distant to head of spikes driven in flat spot at base of trees: This is M.C. No. 32, of Twp. 141 Rg. 30. quit for night.

March 27th 1915. N.D. Gorman, transit and chain. Albert Thomas ap and chain. Robert Thomas, apman. Beginning at the iron corner to secs. 25-30-31 & 36 bet. Twp. 141 Rgs. 30 & 31, focus telescope on M.C. No. 32-5 and run South on true line, var. $9^{\circ}30' E$. @ 25 ft. enter marsh: @ 315 lv. same: @ 669.40 hub on high hill: @ 900 enter marsh: @ 1320 set temporary No corner: @ 1330 narrow pine ridge: @ 1452 intersect Meander corner No. 32-5 enter wet marshy land which was once considered lake: @ 1800 leave Ten Mile Lake enter high ridge of solid land: @ 1949 enter Ten Mile Lake: The solid point of land just crossed, extends West about 75 feet into the lake where it terminates in a sharp point. We continue our transit line South. @ 3572 lv. Ten Mile Lake: @ 4161.60 set hub: @ 4721.00 enter marsh: @ 5100 cross pine ridge: @ 5700 lv. marsh: @ 5815 set hub. Meander corners No. 31-38 & 33 of Twp. 141 Rg. 30 being No. 4-3 & 2 of Twp. 141 Rg. 31 are gone and the distance from the corner to secs. 25-30-31 & 36 South to Meander Corner on North bank of Ten Mile Lake is 659.34 feet short as follows: 2111.34 ft. gov't chain equals 1452.00 feet in chain, being 659.34 ft short. @ 2111.34 ft. South the true Meander Corner No. 32-5 sets North 659.34 feet.

Correcting back (.312285 v) each hub goes 312285 of a foot north for each foot we have chained South as follows: At our temporary No hub 1320 ft South we chain North 412.22 feet to 907.78 South, at which point we drive a spike for the true North No corner between secs. 31 & 36 Twp. 141 Rgs. 30 & 31 where we mark new bearing trees as follows: var. $9^{\circ}30' E$. Norway pine 4 $N 86^{\circ}45' W$ 63.65 feet distant. Poplar 8 $N 55^{\circ} W$ 1.45 feet distant. quit for night.

Sunday March 28th 1915. All day at Sinnibergs.

Monday March 29th 1915. N.D. Gorman, transit and chain. Anton Sinniberg apman and chainman, A. Thomas apman. Start at corner to secs. 25, 30-31 & 36 and run West between secs. 25 & 36 T. 141 Rg. 31. var. $8^{\circ}30' E$. @ 445.50 set hub: @ 575 enter marsh: @ 750 lv. same: @ 873.75 set hub: @ 1320 temporary No corner: @ 1566.10 set hub: @ 2348 set hub: @ 2368 enter Ten Mile Lake: @ 4042.75 hub on ice, from which we run south on var. $9^{\circ}30' E$ on ice in Ten Mile Lake: @ 1500 set hub on ice: @ 2700 set hub on ice: @ 3900 set hub on ice: @ 5700 set hub on ice & quit.

March 30th 1915. N.D. Gorman transit and chain. A. Sinniberg ap & chain. A. Thomas apman. Correcting 15th Standard Parallel on Town line bet. secs. 1 and 36, Twp. 140, and 141 Rg. 31. @ 5124.24 West, find temporary Meander corner: The true Meander Corner No. 1-20 on East bank of Ten Mile Lake, sets 1.01 feet West

SURVEY RECORD No 252. continued

and 248.70 feet South. Correcting back each hub goes West .000197 of a foot for each foot West and .04852 of a foot South for each foot West (.000197 W) (.04852 S). @ 4766.52 West, we chain West 94 of a foot to 4767.46 West, Thence South (90° to random) 231.32 true $\frac{1}{4}$ corner on South side of section 36-T. 141 Pg. 31 where we set a spike for true $\frac{1}{4}$ corner, from which (var 11° 30' E) we mark the following bearing trees: Birch 6 \backslash 42° 16' W 67.40 feet distant; Birch 4 \backslash 45° 25' E 19.50 ft. @ 4647.65 chain South 225.51 to true line. @ 3562.75 chain South 172.86 to true line. @ 3446.52 West, we chain West .69 of a foot to 3447.20 thence South 167.26 feet where we set a spike for the true East $\frac{1}{6}$ corner on the South side of sec. 36 T. 141 Pg. 31 in swamp @ hub 3063 we chain South 148.62 to true line. @ hub 2210.10 we chain South 107.23 to true line. @ 2126.52 West, we chain West .42 of a foot to 2126.94, thence South 103.20 where we set true Twp. corner, being southwest corner of section 31, Township 141 Pg. 30, also Southeast corner of section 36-Twp. 141, Pg. 31, @ which point we drive a 1 inch iron rod 3 feet in the ground for the true Twp. corner. We find that Robert Thomas's house is not built all on his own land, as the true Twp. line, being the 10th standard parallel, passes East and West, about through center of building which sets about 150 feet East of S.W. cor. of Twp. 141 Pg. 30. This building is partly in Sec. 31, Twp. 141, Pg. 30 and sec. 1 T. 140, Pg. 31. Beginning at $\frac{1}{4}$ corner on South side of sec. 36, T. 141-Pg. 31 var. 9° 30' E. we run North: @ 88 set hub: @ 650 enter marsh: @ 1275 lv. marsh: @ 1351.60 set hub: @ 1975 enter swamp: @ 2800 lv. swamp: Quit for night.

March 31st. 1915. Same crew as yesterday. Continue North: at 3014.20 set hub: at 3337.50 set hub: at 4165.50 set hub at 4450 set hub enter ten mile Lake; at 6358.75 set hub on North bank of Lake. Lv. lake: Going back on random line between Secs 31 and 36, T. 141, Pgs. 30 & 31, at a point 5856.60 feet South of the corner to Sections 25, 30, 31, 36, the Twp. corner sets East (90° to random) 310.00 feet. Quit for night April 1, 1915 N. D. Gorman, transit and chain; A. Linnberg chain and ax; Robert and Albert Thomas, axmen. Beginning at a hub on our random line 3150 feet South 103.90 feet West of the $\frac{1}{4}$ corner on East side of section 36, T. 141 Pg. 31 on ice, run West, var 9° 30' E: at 900 lv. lake: at 418.50 set hub: ^{#2462 set hub} at 2936.75 set hub: at 2982, enter small pond: at 3416 lv. pond: at 3634.80 set hub, enter lake: at 3955.75 hub on ice. Quit for night.

April 2, 1915. Same crew as yesterday. Euro arrives from Walker to assist me: Beginning at a point on our random line 206.95 feet West and 1100 feet South of the South $\frac{1}{6}$ corner between Secs 31 and 36, run West: at 910.75 set hub: at 1780.35 set hub: at 2417.50 set hub at 3264.95 set hub: enter lake: at 4131.70 set hub on ice: We then start crew cutting North through center of East half of Section 36, T. 141, Pg. 31, while Euro and Gorman go to Meander corner No. 6 on East bank of ten mile lake, in T. 141, Pg. 31 between sections 25 and 36 where U.S. notes call for a post and the following bearing trees: White Pine 36, N 15° E, 15 links (= 9.90 ft.) distant yellow pine 30

S. 61° E, 12 Links (=7.92 feet) distant. We find stumps of both old trees plainly marked from which we set true Meander corner, and witness to $\frac{1}{4}$ corner by flat chain, from face of bearing trees, after which stumps stand perfect for course and distance. We set a birch stake for true corner; this corner sets 2359.30 feet West and 6. feet North of the corner to sections 25, 30, 31, 36. To correct line between Secs 25 and 36. At 2678.94 feet (U.S. chain) Meander corner No. 6, sets 319.46 feet East to 2359.48 feet West and North 6.00 feet (.11925 E) (.002542 N) Correcting 2678.94 West, goes East 319.46 to 2359.48 W and North 6.00 feet; 2640.00 goes East 314.82 feet to 2325.18 West, thence North 5.91 feet to point for $\frac{1}{4}$ corner between Secs 25 and 36. Hub 1566.10 goes north 3.98 ft. 1320 W. goes East 157.41 feet to 116.59 W, thence North 2.96 feet to point for East $\frac{1}{6}$ corner between sec 25 and 36, 141, Rq. 31. Hub 873.75 goes North 2.22 feet to true line: 445.50 W, goes North 1.13 ft. to true line. Quit for night.

April 3rd, 1915. N. D. Gorman, Robert and A. Thomas, work. Continue $\frac{1}{6}$ line North through East half of Sec. 36 T141, Rq 31. Beginning at East $\frac{1}{6}$ on South side of Sec. 36, run North: at 1198.75 hub: at 1680.00 set hub: at 2978.00 enter lake: at 4735.50 set hub, leave lake: at 4835.80 set hub, at 5577.75 set hub: at 5810.20 set hub: at 5956.00 set hub: at 5942 North, the east $\frac{1}{6}$ between Secs 25 and 36, set West (90° to random) 19.00 feet. Correcting (.003197 W) 5942.00 goes West 19.00 feet: 5810.50 goes West 18.57 ft. 4835.50 goes West 15.47 feet to true Meander corner on North bank of ten mile lake, where we drive a spike with new bearings as follows: Oak 4, N. $80^{\circ} 15'$ E. 4.65 feet distant Poplar 5, S $42^{\circ} 30'$ E, 5.75 feet distant. Hub 4735.50 goes West 15.14 feet to true line: Hub 1680, goes West 5.37 feet: hub 1198.75 goes West 3.82 feet. Quit for night.

April 4, 1915 Gorman takes 2.21 A.M. train from Hackensack to Walker to figure corrections of Section 36, T141, Rq. 31, all day in office.

April 5, 1915. In order to rush work on survey of Sec. 36, T141, Rq. 31, Guro decides to send Paul R. Boese with a new "Gurley" Engineers transit and survey out-fit to work in another crew and to run lines while Gorman corrects the lines already run. Gorman and Boese leave Walker at 9:30 A.M. to Hackensack 10.01 P.P. fare 28¢ + 28¢ = 56¢ - thence to Sec 36-141-31. Gorman figures and makes corrections while Boese sets the two temporary $\frac{1}{6}$ corners and the temporary $\frac{1}{4}$ corner on east side of Sec 36, but as the section is very irregular we may have to run several random and trial lines in order to determine where the true lines go - Both stay with Linniberg, Albert Thomas cuts brush.

April 6, 1915. Assistant Surveyor Boese with Albert and

No 252. continued.

Robert Thomas run trial E and West center line from a temporary $\frac{1}{4}$ corner set by proportion from T.M.C. 71032-5 and Southeast corner of Sec. 36: this $\frac{1}{4}$ corner and line may have to be changed, but we cannot determine this until we see how line comes out with acreage of Lots 6 and 7. Sec. 36 T141 Rq 31. Anton Linniberg and Gorman correct $\frac{1}{16}$ lines in East half of the section. Quit for night.

April 7, 1915 Boese and crew run random $\frac{1}{16}$ line through south half of Sec. 36: line runs from temporary $\frac{1}{16}$ on east side of the section which has been established by proportion between Meander corner and Twp corner, but this may have to be changed later. Linniberg and Gorman correct center lines of Sec 36-141, 31 then Boese and Gorman go to Walker to plat this work done and figure the acreage of the lots, so as to give each fraction of land its correct proportion. We get to Spain's where we go to bed and arrange to take midnight train to Walker.

April 8, 1915: Leave Hackensack at 2.21 A.M. Arrive at Walker 3 A.M. Sleep at Hotel Chase. Gorman figures corrections all day in office assisted by Euro and Boese and will take midnight train to ~~Walker~~ Hackensack and Secs 36. Sleep till mid. night at Hotel Chase.

April 9, 1915. Leave Walker 1 A.M. Arrive Hackensack 1.30 A.M. R.P. Fare 28¢ Bed and breakfast at Spain's hotel thence to Sec 36 where Robert Thomas and Anton Linniberg help in corrections. As Meander corner No. 5, Sec 36 T141 Rq 31 is so fearfully out of place we cannot use it in establishing East and West center lines in section 36: Said M.C. No. 5 is so far north that to use it would leave no land in Lots 6 & 7 of Sec. 36, therefore we decide to ignore M.C. No. 5 as to measurements North and South effecting land South of ten mile Lake but we will use it in establishing the lines on land North of ten mile Lake; namely the north $\frac{1}{16}$ corner between Secs 31 and 36. Twp 141 Rq 31 and 30. To establish the east and West center line of Secs 36-141-31 we place a temporary $\frac{1}{4}$ corner hub on ice at the point for the true $\frac{1}{4}$ corner between sec. 31 and 36 half way between the S.E. corner and N.E. corner of Sec. 36 and from this $\frac{1}{4}$ we run West with due parallelism.

to the north boundary and the south boundary of said section 36 to a point on the ice in Ten mile lake, half way between the northwest corner and the SW. corner of said Sec. 36 T41, R 31 (points fixed by extending true lines West on ice) and the center of this section we will locate where this E and West center line, intersects the true North and South center line. because the U.S. in their survey of Sec 36-141-31 did not establish the $\frac{1}{4}$ corner on east side of Sec. 36 and as no such corner exists in the U.S. notes, we cannot follow the rule of establishing the center of the East half of this section, half way between the center of the section and $\frac{1}{4}$ on the east side, but will run the line the whole mile (U.S. chain) straight from the east $\frac{1}{4}$ on the south side of Sec. 36, a mile north (U.S. chain) to the east $\frac{1}{4}$ on the north side of Sec. 36. Beginning at $\frac{1}{4}$ on south side of Sec. 36-141-31. Retrace transit line N @ 60 27.50 $\frac{1}{4}$ sets east 262.28. connecting back (04351) E. We set 60 27.50 east 262.28 to $\frac{1}{4}$ corner 4300 chain east 187.09 when we set Meander corner on south bank of Ten mile lake Bts by Gov 8.30' Poplar 10 S 19° 18' - east 6.20, Poplar 10 N 87° West 7.45. @ 3537.50 chain east 153.72, @ hub N - 3014.20 chain east 131.14, @ 2993.20 chain east 130.23 @ 1351.60 chain east 58.83, @ 88.00 chain east 3.83.

April 10, 1915, Correcting east boundary of Sec. 36 we run a random line as follows: Beginning at M.C. No. 5, Sec. 36-141-31, already established we chain South: @ 388.08 temp M.C. No. 4, @ 410.18 temp Meander corner No. 3, @ 428.66, Temp $\frac{1}{4}$ corner on ice, @ 1777.04 temp Meander corner No. 2, @ 3068.66, Temp. Swp corner. The true corner sets S. 1335.94 to 4404.60 and East 310 to true Swp corner already established. Correcting. Each shut goes South .43535 of a foot in each foot South and East .07038 of a foot for each foot South (0.43535) S (0.07038) E. M.C. at 388.08 goes S 168.95 to 557.03 E 39.20, 410.18 goes South 178.57 to 588.75 and E 41.44; 428.66 goes S 186.62 to 615.25, and East 43.30 to $\frac{1}{4}$ cor. 1748.66 goes S 761.28 to 2509.94 and E 176.65, 1777.04 goes South 773.63 to 2550.67 and east 179.52, 3068.66 goes South 1335.94 to 4404.60 and East 310. to true Swp corner. We find we cannot use this correct as it would leave no land in lots 6 and 7, so we establish the East and West center line half way between North and South boundaries of said sec. 36-141-31 as herein before explained. To establish the true point for the $\frac{1}{4}$ corner on the East side of Sec. 36, we begin at a point at the random line 2928.30 feet south of the N.E. corner and 2928.30 north of the S.E. corner and 1476.30 feet South of Meander corner No. 5 and chain east 103.90 feet where we place a hub on ice for true $\frac{1}{4}$ corner east side of sec. 36. At a point at the random line 1464.15 feet North of the S.E. corner and 1464.15 south

No 252. continued.

of the $\frac{1}{4}$ corner. We chain east 206.95 feet and set a spike for true South $\frac{1}{16}$ between sec 31 and 36, 141, Rgs. 30 and 31. N.D. Gorman, transit man, Anton Linneberg, Robert and Albert Thomas work.

April 11, 1915. We extend the true south line from MC on south side of Sec. 36 West on ice 1190 feet and set flag "A", then extend the line between 25 and 36, 1683.45 and set flag "B" also on ice; distance between flag "A" and "B" chain on ice is 6118 feet. At a point 3059 feet south of flag "B" and 3059 feet north of flag "A" we set temporary $\frac{1}{4}$ corner on West side of Sec. 36 and set flag "C". At a point 1529.50 south of flag "C" and 1529.50 north of flag "A" we set temp south $\frac{1}{16}$ corner on West side of 36, and set flag "D". Tracing a random line run East and West through center of Sec. 36 for correction purposes, we correct over each hub so as to make true East and West center line between flag "C" and $\frac{1}{4}$ corner East side of Sec. 36 and where the East and West center line intersects the true North and South center line. We set a spike for the true center of Sec. 36 and at the point where the true east and West center line intersects the true North and South $\frac{1}{16}$ line we set a spike for the true $\frac{1}{16}$ corner in the center of the East half of Sec. 36. Correcting East and West center line through South half of Sec. 36, we retrace a random line for correction purposes and correct over each hub so as to make a straight line East and West through the center of the South half, and where this line intersects the true North and South center line we drive a spike for the true $\frac{1}{16}$ corner in the center of the South half of the Section; this $\frac{1}{16}$ sets on a straight line between flag "B" and the true South $\frac{1}{16}$ on the East side of the Sec. To put in the center of the Southeast $\frac{1}{4}$ we drive a spike where the North and South line intersects the East and West line. We drive a spike for the true meander corner on East bank of Ten mile Lake on the East and West center line at a point 1093.31 feet West of the true center of said sec. We drive a spike for true $\frac{1}{16}$ corner between Sec. 25 and 36 and mark new bearings as follows: Dry N.A. 10 S 10.30 W. 55.10 feet, dry N.A. 12 S 80° 28' E 84.20

From a point on our random line 478 feet S. of U.S. M.C. 32-5 on North bank of Ten mile lake and between sec. 31 and 36, we chain east 26.64 feet and set spike for witness corner which also marks the line between lot 2 of Sec. 31, T.P. 141, R. 30 and lot 3 of Sec. 36, Twp 141, R. 31 Anton Linneberg and N.D. Gorman worked.

April 13, 1915. I get word from Euro that the iron corners have arrived at Ten Mile Lake station and go there with J.W. Spain's team, accompanied by James Dyer and James Tierman 2 by 48 inch galvanized iron pipes, capped on top at all corners and meander corners established north of Ten mile lake, being 4 corners

in all. I drive back to Spain for night. N. D. Gorman, engineer.
 April 14, 1915. N. D. Gorman takes Spain's team accompanied by J. C. Tierman
 and the remaining 13 iron corners, and drives to Robert Thomas'
 place where we get Anton Linneberg and Robert Thomas and set 2/48
 inch capped galvanized iron pipes at all corners and Meander
 corners established in and around, and adjoining sec 36, T^p 141- R. 31,
 with Robert Thomas, Anton Linneberg, J. Tidman, N. D. Gorman; as we
 pull up the wood hubs and iron spikes and put in their place
 the galvanized iron pipes above mentioned, set at the following
 places. 1st. S.E. corner of 36 T^p 141, R. 31 being the North boundary of
 Sec. 1, T^p 141-31, being north of boundary of Sec. 1, 140-31 S.W. corner
 of Sec 31-141-30. 2nd. At the East 1/6 corner on the South side of
 36-141-31, being North of boundary of Sec. 1, 140-31. 3rd. At the 1/4 corner
 on South side of Sec. 36-141-31 being North of Boundary of Sec 1-140-31
 4th. At M.C. no 1-20 on east bank of ten mile lake, between sec 36
 and one between T^p 140-141-R. 31. 5th. At M.C. at East bank of Ten
 mile lake between lots 8 and 9 of Sec. 36, 141-31. 6th. At 1/6
 corner in center of South half of 36-141-31. 7th. At 1/6 corner in center
 of the 1/6 quarter of 36-141-31. 8th. At the South 1/6 corner between
 sec. 36-141-30 and 31. 9th. At 1/6 corner on East bank of Ten mile
 lake between lot 7 and 8, sec. 36-141-31. 10th. In center of 36-141-31.
 11th. At 1/6 corner in center of East half of 36-141-31. 12th. At M.C. at
 left bank of Ten Mile lake between lots 5 and 6 sec 31-141-31.
 13th. At M.C. on South side of Ten mile Lake between lots 6 and 7, Sec 36
 T^p 141-31. 14th. Witness to M.C. between lots 3, sec 36-141-31 and lot 2
 of Sec 31-141-30. 15th. At M.C. 32-5 on North bank of Ten mile Lake
 between lot 2 of Sec 36-141-31 and lot 2 of Sec 31-141-30. 16th. At M.C.
 corner between Sec. 36 and 31-141-30 and 31. 17th. On North bank of Ten
 Mile lake between lots 1 and 2, Sec. 36-141-31. 18th. At E 1/6 corner
 between Sec 25 and 36-141-31. 19th. At 1/4 corner between Sec. 25 and 36
 141-31. 20th. At M.C. 6 on East bank of Ten mile lake between Sec 25
 and 36-141-31 and 21 we find already set at N.E. corner of Sec 36
 141-31 being the corner of Sec 25-30-31-36 between T^p 141 R. 30, and 141-31
 as established from old U.S. bearing trees and recorded in previous
 survey. record 171 on page 386 to 387, book "A", County Record Book
 of Survey. In correction of the South boundary of Sec. 31-141-30
 and Sec. 36-141-31 and North boundary Sec. 1-140-31 along the 10th
 standard parallel, the line checks the U.S. chain within one foot.
 $5124.24 \text{ U.S.} + 1.01 = 5125.25 \text{ my chain}$, $357.72 \text{ U.S.} + .07 = 357.79 \text{ ft. my chain}$.
 $4766.52 \text{ U.S.} + .94 = 4767.46 \text{ my chain}$, $1320.00 \text{ U.S.} + .26 = 1320.6 \text{ my chain}$, 3446.52
 $\text{U.S.} + .68 = 3447.20 \text{ my chain}$, $1320.00 \text{ U.S.} + .26 = 1320 \text{ and } 26 \text{ my chain}$, 2126.52 U.S.
 $+ .42 = 2126.94 \text{ my chain}$, $646.80 \text{ U.S.} + .13 = 646.93$, $1479.72 \text{ U.S.} + .29 = 1480.01 \text{ ft. my}$
 chain.

April 27, 1915 As Cur and Gorman have been working on the plat and
 figuring acreage on sec. 36 and as the U.S. Meander lines
 are so much out of place it would be impossible to run
 them in retracing the shore line of Ten mile lake in Sec 36

141-31. We decide to run a base line from which we will figure the lake shore, and we will also run a meander line along what we consider the shore line and while it would be impossible to define the exact shore line on account of various swamps and low lands, we run a base line to determine the acreage of the various lots as follows: Beginning at S.E. corner of Lot 5 Sec 36, we run $N. 5^{\circ} 32' W$ along true line, 500 ft. to S. shore of Ten Mile Lake, thence $N. 57^{\circ} 30' W$, 1150 ft. thence $N. 26^{\circ} 45' W$, 345 to M.C. on East and West center lines; thence West 198.38 ft. to S.E. corner of Lot 6; thence $N. 72^{\circ} W$, 295.60 thence $N. 70^{\circ} E$, 359 feet, thence $N. 31^{\circ} W$, 323.70 feet, thence $N. 8^{\circ} W$, 332.60 feet thence $N. 63^{\circ} W$, 488 ft; thence $S 88^{\circ} W$, 458 feet to M.C. on North and South center line. From M.C. we run North $59^{\circ} 30' W$, 541 feet, thence $50^{\circ} W$, 565 feet, thence $S. 28^{\circ} W$, 404 feet, thence $S 2^{\circ}$, 180 feet. Beginning at N. line of Sec. 36 on east boundary of Ten Mile Lake thence $S. 32^{\circ} 30' E$, 380 feet, thence $S 54^{\circ} 30' E$, 488 feet; thence $S. 23^{\circ} 30' E$, 350 feet, $S 37^{\circ} 30' E$, 450 feet; thence $N. 52^{\circ} 30' E$, 300 ft, to M.C. on S.W. corner of Lot 2. From M.C. on S.W. corner of lot 2; we run $S. 20^{\circ} E$, 266.6 ft; thence $S. 48^{\circ} E$, 277.20 feet; thence $N. 68^{\circ} 30'$, 306 feet; thence $S 89^{\circ} E$, 56 feet. From M.C. on east and West center line on East bank of Lake being S.W. corner of lot 7 we run South $21^{\circ} E$, 690 feet, thence $S. 13^{\circ} 30' W$, 440 feet, thence $S. 31^{\circ}$, E 500 ft, to M.C. on S.W. corner of lot 8; thence South $15^{\circ} E$, 1540 feet to M.C.

1-20. Cliff Long with launch assists with survey crew and surveyor Gorman, in taking Meanders.

Survey from March 20 to April 27th, 1915.
Recorded

John H. Curo
County Surveyor.

NOTES
T140-R30

SEC No	CONT'D TO PAGE	BOOK No
6		

T141-R30

SEC No	CONT'D TO PAGE	BOOK No
30		
31		

T140-R31

SEC No	CONT'D TO PAGE	BOOK No
1		

T141-R31

SEC No	CONT'D TO PAGE	BOOK No
25		
36		

(Last Record entered previous to employ of E.B. Horsti)

PLAT B

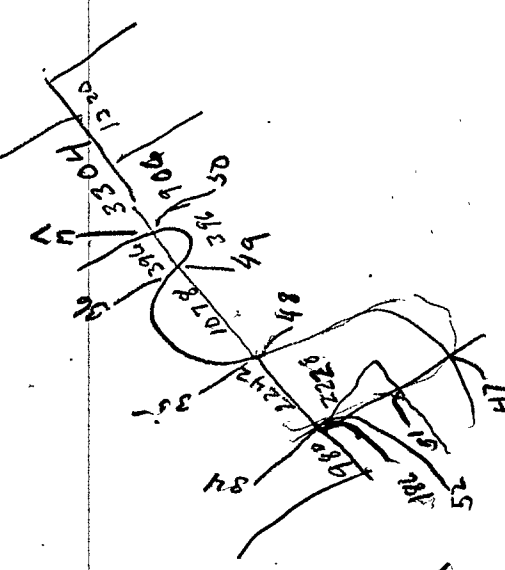
SHOWING THAT PART OF HACKENSACK-BACKUS COUNTY ROAD THROUGH CORPORATE LIMITS VILLAGE OF HACKNSACK AND SURVEY IN SEC 17, 18, 19, 20, 21, 29 & 30, T. 140, R. 30. IN LOCATION OF SAME.

RECORD No 253

1480.10

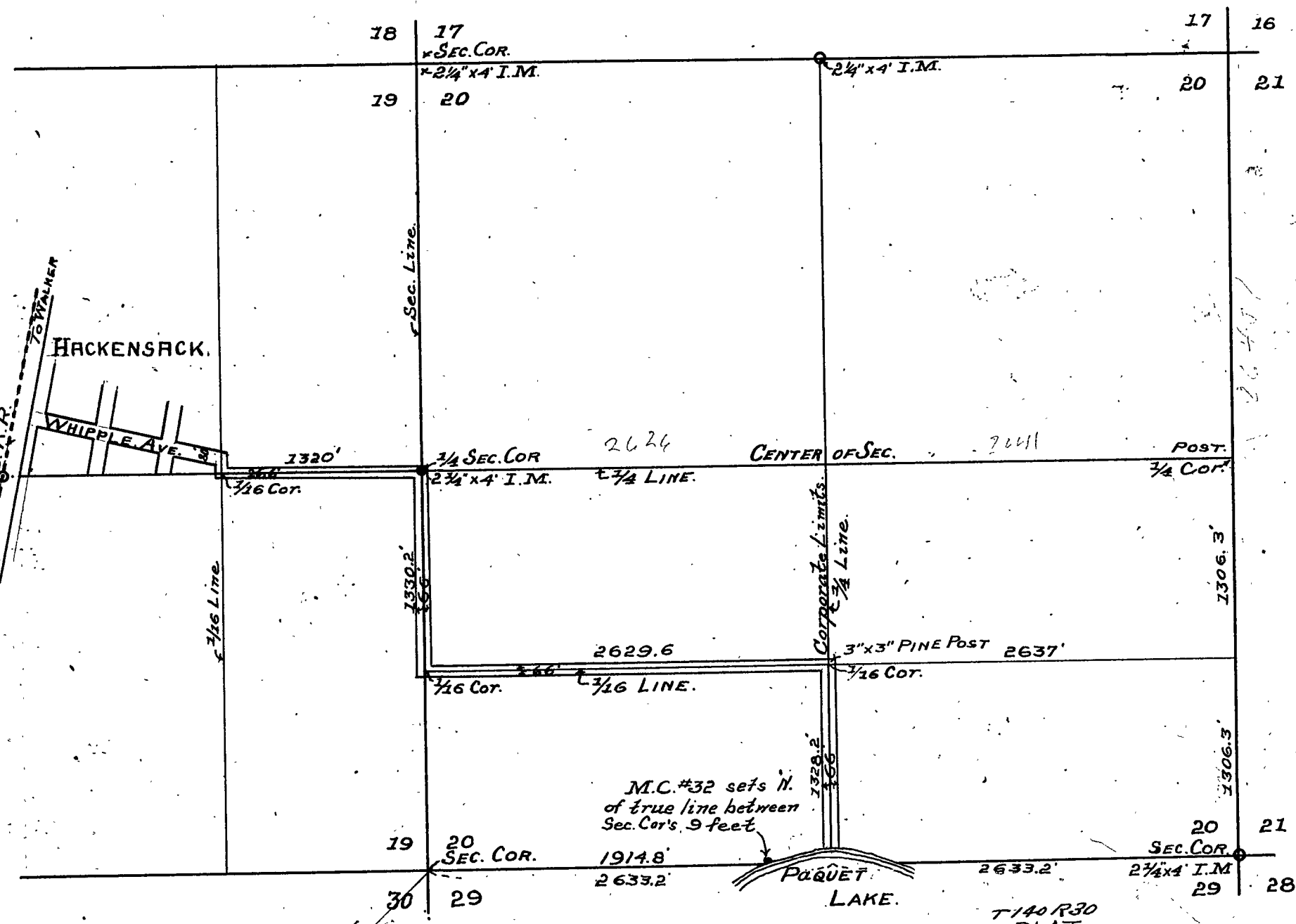
SCALE 1" = 880'

7960



8201

762



Surveyed Feb. 1910 and Dec. 1915.
Recorded Dec. 29 1915
John W. C. Co. Surveyor, Cass Co.

Tom Stump, Old B.T.
S. 47° N. 27.72° E.

SEC	CONT TO	PAGE	OF	BOOK	F.N.M.
17	"	"	"	"	
18	"	"	"	"	
19	"	"	"	"	
20	"	"	"	"	
21	"	"	"	"	
29	"	"	"	"	
30	"	"	"	"	

SURVEY RECORD No 253.

Twp 140. R₃ 30
Sections 19. 20. 21. 29. 30.

Field notes of the survey of Sections 19, 20, 21, 29 and 30, Twp 140 Range 30, Cass County, Minnesota, as surveyed by John W. Caro assisted by A. W. Moulster, H. F. Baldwin and John A. Johnston.

February 8, 1910: John W. Caro, A. W. Moulster, D. B. Bartlett, and Mr. Lukem, K. & C. transit, 300 ft. Chicago steel tape, 6 inch shoulder plum ball line. Beginning at the $\frac{1}{4}$ corner between sections 19 and 20, Twp 140 - Range 30, the government notes call for Norway Pine South 68° W 80 links (= 52.80 ft.) N 10° S 27° East, 285 links (= 188.10 ft.). We find a hub and tack set for the true $\frac{1}{4}$ corner, established by John W. Caro, County Surveyor, corner set from both government bearing trees. At this time the Southeast bearing tree is gone having been burned by forest fires but we find the stumps of the old Southwest bearing tree, plainly marked, from which we test the $\frac{1}{4}$ corner set by Caro and find it to be correct. Setting transit on hub above mentioned, a tack in the face of the old Southwest stump bearing South 68° W 52.88 feet distant. We find a new bearing point set by Caro being a tack in a 20 inch Norway Pine stump which bears South $10^{\circ} 34'$ East, 30.83 feet distance. We establish a new bearing tree being a 4 inch Jack Pine which bears North $47^{\circ} 58'$ W, 48.06 feet to tack head " $\frac{1}{4}$ Section New B.T." These courses are turned from the true meridian, variation being $8^{\circ} 46'$ at this time. With transit set on $\frac{1}{4}$ corner post we back-sight north along East boundary of the Northeast $\frac{1}{4}$ of section 19; transit telescope end run South. @ 300, 600 set pin. @ 746.40 feet set hub. @ 900 feet set pin, @ 1060 enter swamp. @ 1180 leave same. @ 1200 pin in South wheel track of road running East and West. @ 1299.50 tack in White Pine log - @ 1320 stake - temporary $\frac{1}{16}$. @ 1340 enter open meadow. @ 1620 pin, 1920 pin, 2220 pin. 2640 creek runs Southeast. @ 2520, pin, 2540 pin. @ 2640 + 29.80 (= 2669.80) tack in pole hub-double center line. @ 2660.45 South the true corner to sections 19, 20, 29, and 30 sets W 29.12 feet. At this point government notes call for stake and bearing trees, Tam 45 5° E 125 links (= 82.50 ft.) Tam 55 47° W 42 links (= 27.72) Tam 5 N 6° W 255 links (= 168.30 ft.). We find this corner previously established by Caro; testing it we find it correct with new bearings as follows: Tam stump 3 Northeast 1.70 feet. Tam stump 3 Northwest 8.25 feet to tack head. One old government bearing tree standing in section 30 still plainly marked and as a 5 inch Tamarack which bears South 47° W, 27.72 feet to tack head on B.T. mark. Courses turn from true meridian at $8^{\circ} 46'$ variation. We plant a new Tam post 3|3|60 inches for the true corner marked 19, 20, 29, 30 Twp 140 Range 30. Quit for night. A. W. Moulster, engineer.

February 9, 1910: Correcting back at a point 1330.2 South we chain West 14.56 feet where we set the South $\frac{1}{16}$ corner between sections 19 and 20, Twp 140, Range 30. We test the East boundary of section 19 set transit at $\frac{1}{4}$ post on each side, back-sight to flag on Northeast corner and find that the line run yesterday to be straight. Beginning at the Southeast corner of section 19-140-30, we

run West through swamp - variation 90° . @ 300, 600, 1200, and 1320 set pin. @ 1320.13 tack in Tam log. 1490 leave swamp. 1559.15 set hub 1620 pin. 1907 old government road North and South, 1920 pin, 2220 pin. Lukens, Curro, chain, flag, and axe. A. W. Moulster engineer. Quit for the night.

February 10, 1910. Continue West. @ 2520 pin, @ 2601.30 the $\frac{1}{4}$ corner between sections 19 and 30, set South 4.80 ft. At this point the Government notes call for post and following bearing trees. Norway Pine 125 19 W 23 links. White Pine 12 North, 24 West, 32 links. We find the stumps of both old bearing trees which check out with the $\frac{1}{4}$ corner previously established by County Surveyor Curro. With transit near Southeast corner of section 19 and on our random line 2660.45 South of the $\frac{1}{4}$ corner we take the angle of the South and East lines which is $89^{\circ}44'$ - above angle taken from East random line and true South line of section 19, 140-30. A. W. Moulster, transit man.

March 16, 1910. Lukens, John W. Curro and A. W. Moulster start on the $\frac{1}{4}$ corner of sections 19, 140-30 and run North. Variations 90° . We run into buildings so back up and change our line.

March 17, 1910. Laid up.

March 18, 1910 Starting at $\frac{1}{4}$ corner South side of 19, run North $8^{\circ}15'$ variation. 300 pin, 495.85 pin on hill. @ 600, 900, 1200 and 1500 set pin. @ 1691.08 set hub. @ 1800, 2100, 2400, 2500 set pin. 2640 into creek. 2700 iron spike. @ 2943.22 tack in tie in main line of M. & T. Railway @ 3000 set pin. 3300, 3600, 3900 set pin. At 4048 tack in hub. 4180 enter open bog. @ 4200 pin in bog. 4390 leave bog. 4500 pin, 4700.40 tack in hub on hill. 4800 pin in West bank of track. 4840 Railway center. 5073.85 tack in stump on hill. 5100, 5280 pin. 5326.20 feet, set pin North side of road, thence West 90° angle 120.25 feet to center of Railway track. Starting at $\frac{1}{4}$ corner between sections 19 and 20 - 140-30 chain North. @ 272 pin. @ 4472.10 hub. @ 474 pin, @ 500, 800, 1100 pin. @ 1250.50, hub and tack. 1400 pin, 1462 enter lake - 1500, 1800, 2100. @ pin on ice. 2195 leave lake. 2300 pin, 2600 pin in bog. @ 2639.90 intersect corner to sections 17, 18, 19 and 20. A. W. Moulster, transit man.

March 19, 1911. John W. Curro and Harry S. Todd begin at the center of section 19 - 140-30 and run East 2440 feet to the $\frac{1}{4}$ corner between section 19 and 20.

November 23, 1915. H. F. Baldwin, transit and chain. Geo. Dilworth axe and chain. Follow the already laid out County road from the end of Whipple Ave. in the village of Hackensack, South to the $\frac{1}{16}$ in center of East $\frac{1}{2}$ of section 19 - 140-30, thence East along the $\frac{1}{4}$ line 1320 feet, to an iron monument, previously established for the $\frac{1}{4}$ corner between section 19 and 20 thence South along the section line, 1330.29 ft. to the South $\frac{1}{16}$ corner between sections 19 and 20 where we set our transit and continue the survey of the Hackensack - Backus road. Run East $8^{\circ}45'$ variation. Set 6 spikes with red caps as line hubs but do not chain. Quit for night.

November 24, 1915. Warm, snow melting. Baldwin and Leo Dilworth. Aloc transit. Continue east on South $\frac{1}{16}$ line of Section 20-140-30, 100 foot Chicago steel tape, stake set each 100 feet at 446.90 set six inch spike at 550 cross road, running Southeast. @ 698.40 tack in 12 inch Jack Pine stump - @ 915 enter wet marsh, @ 1085 leave same - @ 1165.60 set inch hub - @ 1585.00 set inch hub - @ 2104.70 hub and tack. Quit for night.

November 25, 1915. Thanksgiving day. Baldwin with Aloc transit 100 foot chain. Dilworth, axe and flag. Continue east at 2745.40 set inch spike for hub. @ 3462.00 set inch spike for hub. 3740 enter swamp, 3830 leave same. @ 3876.50 hub and tack, 3890 enter Tam swamp, 4160 leave same. Quit for night.

Friday November 26, 1915. Same crew continue east. @ 4275.60 set inch spike for hub, 4721.50 set inch spike for hub. @ 4865 enter swamp and marsh. Quit this line and walk to corner of Sections 20, 21, 28 and 29, where we find an iron monument previously established by County Surveyor Curw for the true corner from which we run North on 45° variation. Enter marsh. 190 leave marsh. 359.00 set inch spike for hub, 510 enter swamp. 670 leave swamp, 754.30 set inch spike for hub. The Tam swamp is W 40 feet. Quit for night.

November 27, 1915 Baldwin and Dilworth continue N between Sections 20 and 21, 140-30. @ 977.50 spike for hub, at 1100 enter swamp and marsh, 1500 leave same, 1552 hub and tack. 1600 enter Tam swamp, 1829.00 hub and tack, @ 2612.60 true $\frac{1}{4}$ corner sets West 42.60 feet. The $\frac{1}{4}$ corner is on high land as 2612 is edge of swamp. At $\frac{1}{4}$ corner between Sec. 20 and 21, 140-30 Government notes call for stake and bearing trees as follows: - White Pine 18 South 62° W 19 links (= 12.54 ft.) Aspen 55 29° W 20 links (= 13.20 ft.) We find the stump of the white pine plainly marked from which we set a 3/3/36 inch white ash for the $\frac{1}{4}$ corner. Quit for night.

Monday 29, 1915. Same crew. Correcting South, we put in the South $\frac{1}{16}$ corner between sections 20 and 21, where we set a 3/3/30 inch square Tam post for the true $\frac{1}{16}$ and bring our random line from the West at 5266.60 east. The South $\frac{1}{16}$ corner between 20 and 21 set South 22.60 feet. The first half East from the $\frac{1}{16}$ corner between sections 19 and 20 will be corrected as follows. .0043 of a foot South for each foot East. 5266.60 east goes South 22.60 feet. 2633.30 east goes South 1130 feet. 2104.70 east goes South 9.03 ft. 1585 goes South 6.80 feet. 1165.60 east goes South 5.00 feet. 689.40 east goes South 3.00 feet. 446.90 east goes South 1.92 feet. Beginning at the iron corner to Sec. 20, 21, 28, and 29, 140-30, we run West following about line of fence which we crossed several times. At 953.80 set spike hub, at 1764.80 set spike hub, at 1955 cross drive way to Mr. Quicks house. At 2000 set stake. Set hub across arm of Paquet

lake and quit for night.

November 30, 1915. Baldwin is not able to work. Geo. Dilworth walks to the corner of sections 19, 20, 29 and 30 where he finds the old stakes and bearing trees still in place.

December 2, 1915. John A. Johnston takes Baldwin's place at the transit and with Geo. Dilworth as assistant chain and axe-man, continues the line West between sections 20 and 29. At 2421.54 we look for U.S. meander corner No. 31. Our government notes call for a post and the following bearing trees Tam 9 north $40^{\circ} 83'$ links distance. Tam 12 South 59 - East 150 links distance all appear to be gone and we continue West. With transit at hub 1764.80 we set point on ice at 2600.20 for use later in placing $\frac{1}{4}$ corner. Cut out and hubbed over line to point opposite corner to Section 19, 20, 29 and 30, chaining between hubs 2600.20 and 4351.60 down on ice by off setting South @ 2457 enter lake. At 5254.60 hub in meadow. The corner to 19, 20, 29 and 30 sets 97.50 feet left at angle of $96^{\circ} 58'$. At 5266.40 West, corner post sets South 96.80 feet. At station 3351.60 West meander corner No. 32 sets South 52.70 feet. Quit for night.

December 3, 1915. John A. Johnston, engineer in charge. Geo. Dilworth assisting as axe and chainman. At U.S. meander corner No. 32 where U.S. notes call for post and following bearing trees: Tam 14 N 25 E 12 links distance. We find the Tam plainly marked and a tack previously driven in the face of the red figures by Surveyor Curo. We do not take time to set the post but calculate the position. The tack in the figures on the face of the old B.T. is 45.50 feet South of our random line at a point 3348.20 feet West. In figuring correction for the whole mile straight, meander corner No. 32 sets 3351.60 W and 1914.80 E of the South corners of Sec. 20, and 9 feet out of line at the corners. In order to establish the North and South center line of Sec. 20, we ignore Meander corner No. 32 and set a temporary $\frac{1}{4}$ corner on South side by driving a spike in ice 48.40 feet South of a point on our random line 2633.20 feet West and from the spike just set on ice, we mark new bearing trees: Poplar 10, bears North $50^{\circ} 20'$ West 86.40 feet. Poplar 5 bears N $54^{\circ} 30'$ E 165.30 feet, variation 8° . This fixes the position of the North and South center line as to East and West but the true $\frac{1}{4}$ corner if set on ice should go a few feet further North to be in line with Meander corner, No. 32 but as we do not care to establish the $\frac{1}{4}$ corner, but only establish the North and South center line, we run North on $7^{\circ} 45'$ variation. Intersects the East and West random line ($\frac{1}{16}$) at noon. P.M. continue North all day without chaining. Quit for night.

December 4, 1915. Same crew continue North without chaining. Intersect North boundary of Section 20, at a point 28.80 feet West of the iron $\frac{1}{4}$ corner previously established by County Surveyor Curo from old government bearing trees. We walk $\frac{3}{4}$ of a mile South and correct over the West half mile of the South $\frac{1}{16}$ line as given above, then correct the South $\frac{1}{4}$ mile of the North and South random line just run and at the intersection of the two straight lines, corrected we set the true $\frac{1}{16}$ corner in the center of the South $\frac{1}{2}$ of Section 20 where we set a $\frac{3}{3}$ pine post from which a dry pine

post from which a dry pine stub 8 inches in diameter bears $N 9^{\circ} 10' \text{ West}$ 23.44 distance. An 8 inch pine stump bears $N 71^{\circ} 40' \text{ E}$ 26.00 feet distance to tack heads, variation 8° . From chainage 2629.60 ~~E~~ on random line run by Baldwin. The true $\frac{1}{16}$ corner just set bears South 11.30 feet. On lake shore at old saw-mill, a hub we drive in saw dust, and mark a point on true North and South $\frac{1}{4}$ line is 93.90 ft. North of $\frac{1}{4}$ temporary corner - spike driven in ice and is 86.80 feet North of the point for the true $\frac{1}{4}$ corner if placed on ice. We correct the East $\frac{1}{2}$ of the line between section 20 and 29 as follows: Hub 953.80 West goes South 14.95, hub 1764.80 West, goes South 2771. In P.M. Johnston shows chairman Lindberg over the lines just run and Lindberg approves the survey for road purposes inside the Corporate Village limits as run along the true sub-division line from the North shore of Paquet Lake to the east end of Whipple Ave., a distance of one mile more or less. The plat hereunto is a true plat of said survey.

SURVEY RECORD No 254.

Twp. 142 N. - Rg. 26 W. 5TH P. M.
 SEC'S. 5 AND 6
 Twp. 143 N. - Rg. 26 W. 5TH P. M.
 SEC'S 17-18-19-20-29-30-31-32

Field notes of the survey of County road known as the Slater road extension, as surveyed by John W. Curo, County Surveyor of Cass County, Minn., assisted by P. M. Scott, surveyed through Sections 5 and 6, Twp 142 - range 26, and sections 18, 19, 20, 29, 30, 31, and 32, Twp 143 - R 26

October 9, 1915. P. M. Scott copies field notes of previous surveys of Slater road, Twp 142 - Range 26.

October 10, 1915. P. M. Scott copies necessary field notes of Twp 143 - range 26, and takes night train to Bemidji.

October 11, 1915. P. M. Scott - Bemidji to Twp 142 - range 26. Look up corners previously established along Slater road.

October 12, 1915. P. M. Scott, transit man, "H. & B" transit. D. Slater flag and chainman. H. Slater, and C. Holt, asman. 100 ft. chain. We start at the corner to Sections 5, 6, 31, 32, between Twp 142 - 143 - range 26, established from old government bearing trees in June 1911 by John W. Curo, County Surveyor of Cass County. Run North random between Sections 31 and 32, @ 1456.30, set hub, @ 2116.70 set hub, @ 2630.80 true $\frac{1}{4}$ corner sets W 17.20 feet, at this point being the $\frac{1}{4}$ corner between sections 31, and 32 Twp 143 - R 26, U.S. notes call for post and the following bearing trees: WP 65, N 45° E 15 links = (9.90 feet) WP 5, S 82° W 5 links = (3.30 ft.). We find the stumps of both old bearing trees plainly marked, but they do not check as to course or distance with the Government notes. We establish the $\frac{1}{4}$ corner at the original point where the old stake stood after which the old U. S. B.T. stands as follows: WP 6' S 44° E, 11.40 ft. WP 5 S 82° W 4.10 feet. Correcting back our random line is .006537 of a foot east for each foot North. At hub 2116.70 we chain W 13.80 feet, and set hub on true line over which we set transit, focus telescope on true $\frac{1}{4}$ corner just established and continue North between 31 and 32. @ 3051.70 set hub. @ 3654.00 set hub. @ 4234.40 set hub. Quit for night. P. M. Scott, transit.

October 13, 1915. P. M. Scott, transit man. H. & B transit, 100 foot tape. Chas. Holt and Dewey Slater, as, chain, and flag, continue North to the corner of 29, 30, 31, 32, 143 - 26. @ 5253.80, the corner to Sections 29, 30, 31, 32 sets E. 62.15 feet. At this point Government notes call for a stake and bearing trees as follows: Aspen 5555 W 6 links = (3.96 feet) WP 5 N 22° E 15 links = (9.90 feet) WP 6 N 26° W 20 links = (13.20 feet) NP 14 S 28° E 45 links = (29.70 feet). We find the stumps of all the bearing trees, except the 5 inch aspen, and from these we set the true corner to Sec's 29, 30, 31, and 32, Twp 143 - 26, from which we run North variation 8' east between Sec's 29 and 30 - @ 100 enter marsh, 200 leave same. 807.90 set hub. @ 1734.00 set hub, @ 2285.20 tack in stump. Quit for night. P. M. Scott

October 14, 1915. Continue North with same crew. @ 33.90 set hub, @ 4246.00 set hub, @ 4916.00 set hub. We cut about a mile and quit for night.

October 15, 1915. Continue North @ 5350.80 set hub from which the corner to Sections 19, 20, 29, and 30 bears North $67^{\circ}14'$ W 290.50 feet distance.

@ 5463.20 the corner sets W 267.80 feet. At this point being the corner of the Section 19, 20, 29, and 30 Twp 143-26. U.S. notes call for stake and following bearing trees. Fir S South 22° E 15 links distance. Maple 6 N 45 E 30 links = (319.80 feet) Spruce 10 S 22 W 21 links = (13.90 feet) WP 26 N 45° W 56 links = (36.46 feet). We find the Maple and the Spruce plainly marked from which we set the true corner from which we run North between sections 19 and 20, variation 9° E., @ 500 enter bog, 639.30 set hub. Quit for night. Scott, transit-man.

October 16, 1915. Same crew continue North, 1250 enter ridge in swamp, 1350 leave ridge in swamp, 1293.00 hub on ridge, @ 1469 leave swamp, @ 1500 enter of 4 ft. creek, NW and SE. @ 1852.80 hub, brush further North and quit for night.

October 18, 1915. P.M. Scott. H. & B. transit, 100 foot chain. H. Slater flag and chain. D. Slater and C. Holt, upman, continue North between 19 and 20. @ 2137.60 set hub, from which we off set 85 feet West to get around Cedar swamp and continue North @ 2753.80 the $\frac{1}{4}$ corner sets W 124.10 feet, or 209.10 feet West of our random line first produced. At this point being the $\frac{1}{4}$ corner between sections 19 and 20, Twp 143-26 government notes call for post and Cedar 14.5 41° E 7 links = (4.62 feet) Cedar 6 N 40 W 8 links = (5.28 feet) we find the old post still standing and both old bearing trees plainly marked, but down. They check for course and distance at the $\frac{1}{4}$ corner post which sets 154 north of South edge of swamp, and from this we run North 9.30' variation. @ 200 ridge in swamp, 300 leave swamp, 612.90 set hub, enter heavy timber, 1072.20 hub, 1695.20 set hub. Quit for night.

October 19, 1915. P.M. Scott, transit-man. D. Slater, C. Holt, and F. Nelson assistants. Continue North 1984.70 set hub, 2650.30 set hub, then look for the corner to Sections 17, 18, 19, and 20 where U.S. notes call for post and the following bearing trees, Cedar 10 North 24 W 30 links = (19.80 feet) Spruce 14 N 62 E 35 links = (23.10 feet). We run a line in Sec's 17 and 18, the required course and distance but find no trace of the old bearing trees, and as the new state road has just been built east and West of this point the old stake has been graded out. I send Mr. D. Slater to see if he can find the engineer in charge of the construction of this road who may have some ties to the original corner. Slater returns with no notes but says the engineer will be back tomorrow and we may be able to find out from him the location of this corner to Section 17, 18, 19, and 20. We walk more than one half mile South to a hub on our random line 2137.60 feet North of the corner to Sec's 19, 20, 29, and 30, from which we run West @ 90° angle, a distance of 162.30 feet, where we place hub on true line over which we set the transit, back site on the $\frac{1}{4}$ corner between 19 and 20, transit telescope and run South cutting out brush along true line then go to the $\frac{1}{4}$ corner between sections 19 and 20, where we put in new bearing trees as follows: 8 inch Balsam S 37° 44' W 114.10 feet, 5 inch ash North 66° West 108.10 feet, variation 12° 30' East.

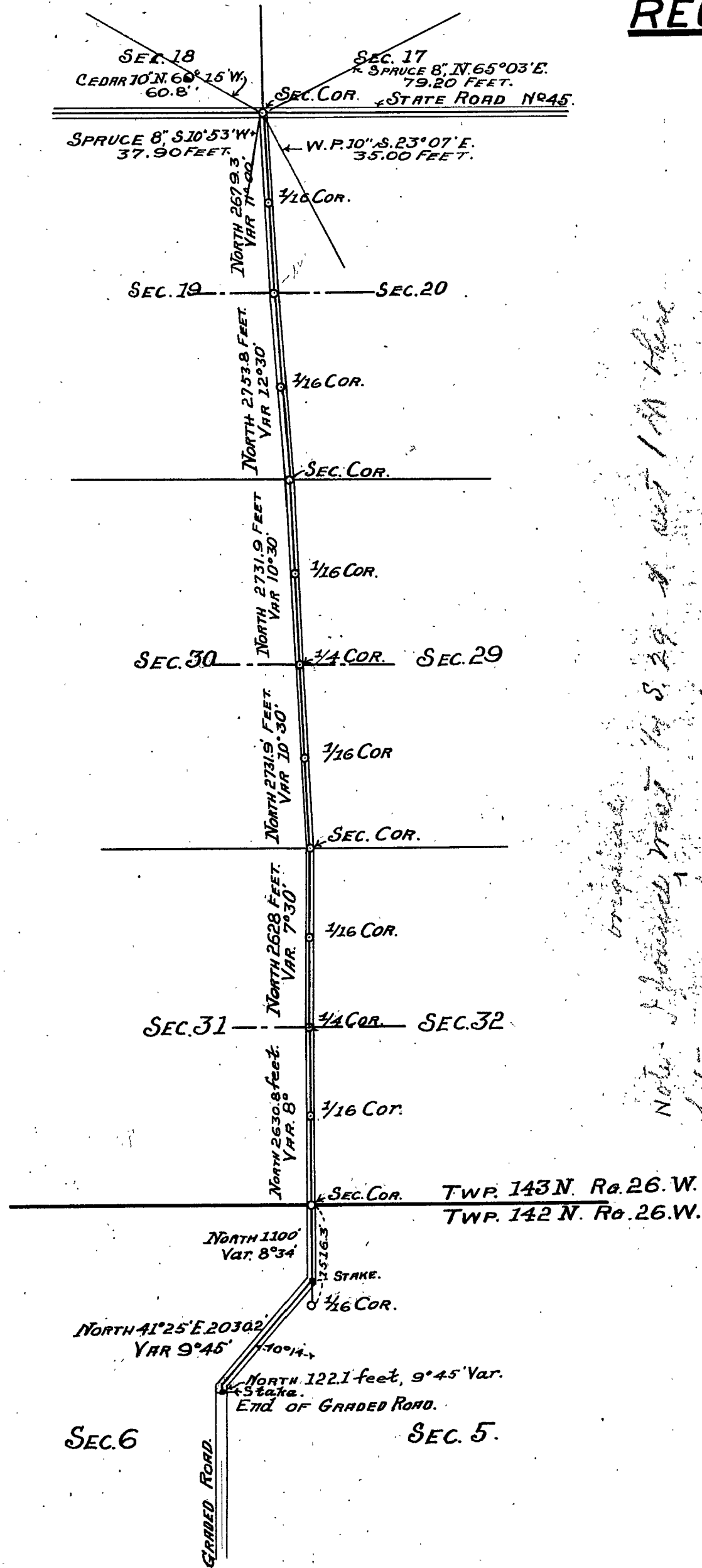
October 20, 1915. Scott, Slater and Son, Holt and Nelson. At hub 1376.90 on our random line North of the corner to Sec's 19, 20, 29, 30, 143-26 we run West 104.60 feet where we set South $\frac{1}{16}$ corner between sections 19 and 20 with new bearings as follows: 9 inch Ash North 33° 55' W 105.70 feet. 9 inch ash North 62° 30' East 99.00 feet variation 12° 30' East, from this $\frac{1}{16}$ we run

PLAT OF SLATER ROAD ^B COUNTY ROAD.

AS SURVEYED IN SECTIONS 5 AND 6, TWP. 142, RG. 26 W., AND SECTIONS 17, 18, 19, 20, 29, 30, 31 AND 32, TWP. 143 N., RG. 26 W. IN LOCATION OF SAME.

SCALE 1" = 1800 FT.

RECORD NO. 254.



*original
Note: I found that 14 S. 29 & out 1 A. Here
Sept 1916, therefore above line is correct
in this survey done about 1907-14 S.
J. H. H. H. H.
9/19/16*

T142 R26			
PLAT.			
SEC.	CONT TO	PAGE	BOOK
5			
6			
T143 R26			
SEC.	CONT TO	PAGE	BOOK
17			
18			
19			
20			
29			
30			
31			
32			

South cutting out the true line intersecting 1.30 feet east of the corner to sections 19, 20, 29, and 30, at which corner we establish new bearings as follows: 12 inch Cedar North $61^{\circ}18'$ east. 66.60 feet. 18 inch white Oak, South 32° east 41.70 feet, 6 inch Ironwood, South $72^{\circ}30'$ W 47.30 feet, 12 inch Basswood North $59^{\circ}43'$ West 36.20 feet. We walked to the corners of Section 17, 18, 19, and 20 where Mr. Olson assists us in finding the stake set for the true corner by Mr. Call, engineer in charge of State road No. 45 and at 2679.30 North on our random line. This corner sets 148.50 feet W. We mark new bearings as follows: Cedar 10, North $60^{\circ}15'$ West 60.80 feet, Spruce 8 S $10^{\circ}53'$ W 37.90 feet, White Pine 16 South $23^{\circ}07'$ east, 35.00 feet, Spruce 8 north $65^{\circ}03'$ east 79.20 feet. At the North $\frac{1}{16}$ corner between sections 19 and 20, we establish same with new bearings as follows, 8 inch Birch, North $31^{\circ}43'$ W 54.40 feet. 7 inch Spruce South $87^{\circ}11'$ east 40.50 feet. Quit for night.

October 21, 1915. We correct all hubs between sections 19 and 20, .05542 West for each foot North 1984.70 goes West 109.90 feet, 1695.20 goes W 93.90 feet, 1339.70 run West 74.80 feet to the North $\frac{1}{16}$ corner between sections 19 and 20. @ 1072.20 North chain 59.40 West to true line. @ 612.90 we chain 34.00 feet West to true line. We go to the corner of section 19 and 20, 29, 30 and from our hub 807.90 feet North we chain West 3960 feet, where we set the transit, focus telescope on 29, 30, 31 and 32, and cut out the true line, then go to the corner of sections 29, 30, 31, 32, where we mark new bearings as follows: Poplar 3 South $44^{\circ}20'$ W 61.80 feet. Poplar 4 North $56^{\circ}55'$ east 39.80 feet. Poplar 4 North $50^{\circ}21'$ West 84.90 feet. White Pine 5 inch stub, South $46^{\circ}25'$ east 27.00 feet, variation $10^{\circ}30'$ east, then follow our random line North to station 1365.80 North from which we run W 67.00 feet and set South $\frac{1}{16}$ corner between sections 29 and 30 with new bearings as follows: Norway stub 7 South $76^{\circ}42'$ West 44.00 feet. WP stub 8 North $82^{\circ}23'$ east 44.40 feet. At station 2731.60 North, we chain West 133.90 feet, where we set the $\frac{1}{4}$ corner between sections 29, and 30 with new bearings as follows: WP 7 N $85^{\circ}06'$ east 130.80 feet, Tam 4 North $74^{\circ}13'$ West 150.70 feet, variation $10^{\circ}30'$ east. At station 4097.40 North we run West 200.85 and set North $\frac{1}{16}$ corner between sections 29, and 30 with new bearings as follows: Poplar 3 South $72^{\circ}51'$ east 58.80 feet, Poplar 4 north $33^{\circ}45'$ West 49.00 feet, variation $10^{\circ}30'$ east. At the North $\frac{1}{16}$ corner between sections 31 and 32 we set new bearings as follows: NP 7 South $39^{\circ}06'$ West 45.95 feet, then correct the balance of the $\frac{1}{2}$ mile setting hubs along the true line. Quit for night.

October 22, 1915. South, Slater and son, and Holt. At the $\frac{1}{4}$ corner between section 31 and 32 we mark new bearings as follows: Poplar 4 North $83^{\circ}57'$ West 51.40 feet. Poplar 3 North $40^{\circ}19'$ east, 59.80 feet. variation 8° . At 2116.70 feet, north of the corner to 31, 32, 5 and 6, we chain West 13.80 feet to true line @ 1436.40 North, S.C. Chain West 9.40 feet on true line. @ 1315.40 we chain West 8.60 feet where we set the South $\frac{1}{16}$ corner between section 31 and 32 with new bearing as follows, Tam stub 6, North $85^{\circ}05'$ east 79.60 feet. Tam stub 8 North $41^{\circ}43'$ W 93.50 feet, variation 8° east. We then go to the corner of section 5, 6, 31, and 32, Townships 142 and 143, range 26 West previously established from which we run South variation 9° . At 401.30 set hub. @ 550.00 enter marsh, @ 700 leave same @ 1045.70 set hub. @ 1273.70 set hub, @ 1450 enter bog, @ 1516.30 the North $\frac{1}{16}$ corner previously

established by Harry S Todd, and County Surveyor Curo, for the North $\frac{1}{16}$ corner between sections 5 and 6 - 142-26, sets West 13.00 feet. This $\frac{1}{16}$ corner was set in 1912. We correct this line back and at a point 1100.00 feet South of 5, 6 31 and 32, we set hub on true line and for this point run South $40^{\circ} 14'$ West. Angle turns from true line at $9^{\circ} 45'$ variation. @ 325 feet enter swamp, @ 510 leave same, 560 enter swamp, 700 leave same, 780.60 set hub, 930 enter bog, 1150 leave bog, @ 1259.00 set hub, @ 1620.40 set hub, @ 2030.20 set hub, 122.10 feet North of an old hub which sets in the North end of the newly graded Slater road. This old hub in the North end of the newly graded Slater road, using the Slater road as a meridian the angle line just run bears North $41^{\circ} 25'$ to the right. The old hub in the North end of the graded Slater road is a temporary $\frac{1}{16}$ corner, supposed to have been set by a Surveyor named Flynn. At the corners of section 5, 6, 31 and 32, we mark new bearings as follows: Ironwood 4 South $38^{\circ} 26'$ West 75.20 feet. Maple 10 S $37^{\circ} 28'$ east 78 feet. At the North $\frac{1}{16}$ corner between sections 5 and 6, 142-26, we mark new bearings as follows: Norway Pine 7 North $79^{\circ} 04'$ east 102.40 feet, variation 9° east

T141. R26. Sections 1.2.11.12.
13.14.15.22.23.27.34.

Field notes of the survey of part of STATE RURAL HIGHWAY #83 through sections 1,2,11,12,13,14,15,22,23,27,34 Twp. 141, N., Rg. 26 W. and the ties and bearing trees to corners in said sections as surveyed under the direction of Mr. Geo. A. Ralph as copied from the field books of Mr. Ralph's Assistant Engineer Mr. H.R. Colwell who handed in his field books of said survey to be copied and recorded.

Sec. Cor. 1,2,11,12. 16' @ one way

1/4 Cor. Sec. 11,12

Sec. Cor. 11,12,13,14

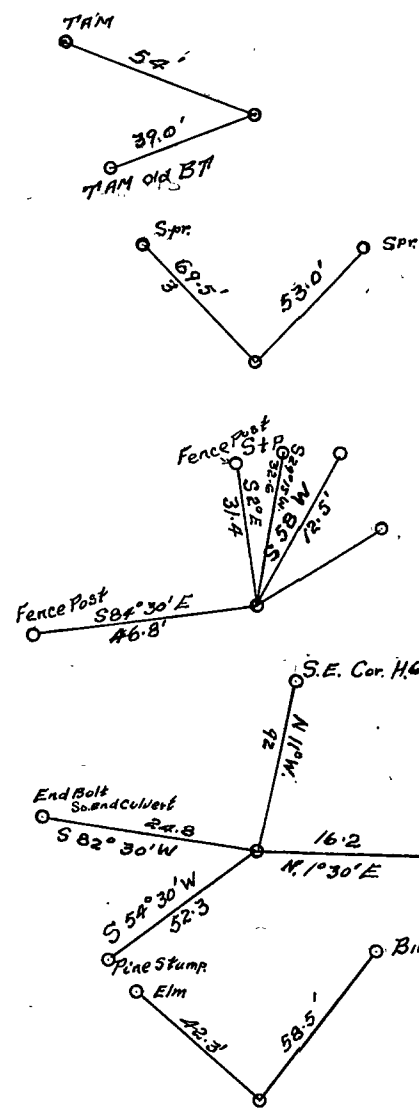
1/4 Cor. 13,14

1/16 Cor. 14,15

1/16 Cor. Sec 14,15

Sec. Cor. 14,15,22,23

1/4 Cor. 22,23



0+00	Sec. Cor. 1,2,11,12.
25+64	1/4 Cor. Sec. 11,12.
53+00	Sec. Cor. 11,12,13,14
79+51.5	1/4 Sec. Cor. 13,14 Δ 90°00' Right
107+15.6	1/4 Cor. Sec. 14,15
120+47	1/16 Cor. Δ 90°00' Left
146+92.4	1/16 Cor. Δ 90°00' Right
160+22.6	Sec. Cor. 14,15,22,23 Δ 90°00' Left
183+91.3	Δ 34°00' Right
185+69.8	1/4 Cor. Sec. 22,23. 4" Oak.
190+74.5	Δ 12°24' Right
201+76.7	Δ 17°35' Left
206+13.6	Δ 21°27' Right
218+00	Δ 19°29' Left
219+79.5	Δ 34°32' Left
238+19.8	Δ 26°10' Right
250+95	Δ 24°10' Left
272+11.8	Δ 4°11' Right
284+00	Δ 13°15' Right
290+35.2	Δ 14°00' Right
297+73.6	Δ 2°02' Right
302	Δ 12°12' Left
306	Δ 4°48' Left
311	Δ 4°50' Left
315+77	Δ 23°52' Right
318	Δ 25°35' Left
324+48	Δ 16°20' Right
327+32.8	Δ 0°18' Right
331+80 N	Δ 113°16' Left
= 331+26 S	No equation going round Curve
{ 335+30 S }	Δ 23°54' Right
{ 338+72 N }	Δ 6°56' Left
337+00 S	Δ 23°54' Right
338+72 N	Δ 23°54' Right
338+30 S	Δ 20°48' Left
341+36.5	Δ 20°48' Left
348+32.5 S	Δ 13°11' Left
= 348+21 N	

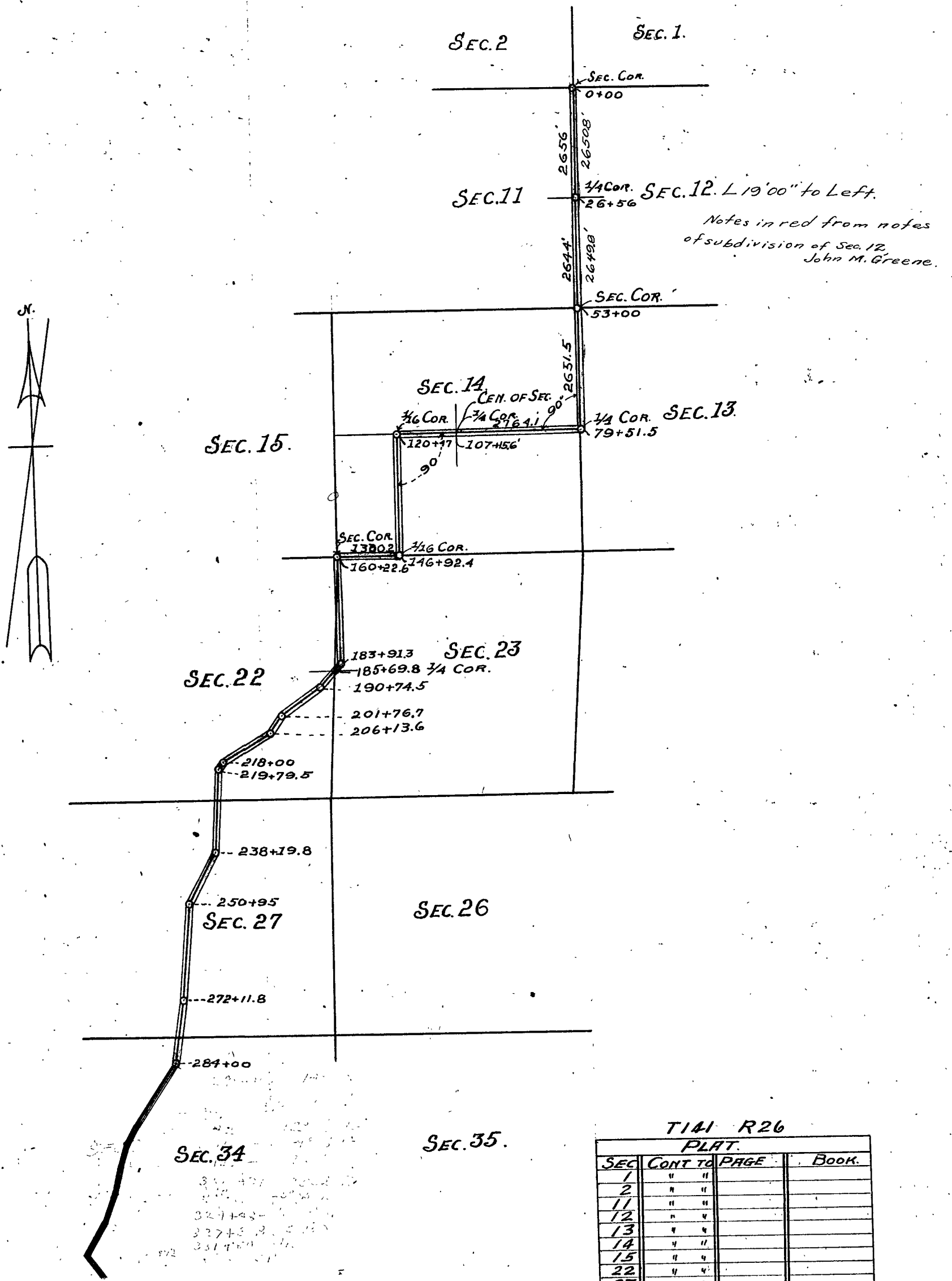
PLAT OF STATE RURAL HIGHWAY No 83

AS SURVEYED IN SECTIONS 1, 2, 11, 12, 13, 14, 15, 22, 23,
27, 34

TWP. 141 N., R₂ 26 W.

SCALE 1" = 2400 FT.

RECORD No 255



T141 R26
PLAT

SEC	CONT TO PAGE	BOOK
1	" "	
2	" "	
11	" "	
12	" "	
13	" "	
14	" "	
15	" "	
22	" "	
23	" "	
27	" "	
34	" "	

SEC. 34

SEC. 35.

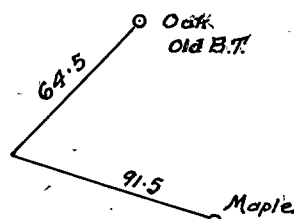
327+43
327+52
331+50

SURVEY RECORD No 256.

TWP. 140 N Rg. 26 W-5TH P. M.
SEC'S. 10-11-14-15-22-23-26-27-34-35

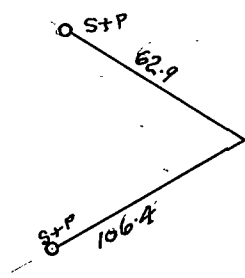
Field notes of the survey of a part of STATE RURAL HIGHWAY No 83 through sections 10, 11, 14, 15, 22, 23, 26, 27, 34, 35. Twp. 140, Rg. 26 W. and the ties and bearing trees to corners in said sections as surveyed under the direction of Mr Geo. A. Ralph as copied from the field books of Mr Ralph's Assistant Engineer Mr H. L. Colwell who handed in his field books of said survey to be copied and recorded.

1/4 Cor. Sec. 10, 11,



444+23.3 4" Oak Post

Sec. Cor. 10, 11, 14, 15.



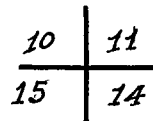
470 + 87

470 + 87.6 Ang. 0° 53' Stake 33' each side

497 + 13.4

1/4 Cor. Sec. 14, 15

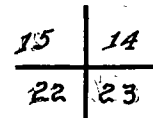
Stake 33' Each side



523+48 Ang. 0° 06' Left
S 6° 45' E

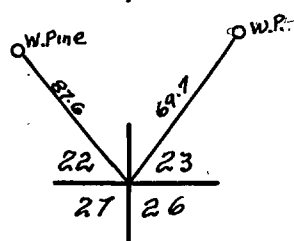
1/4 Cor. Sec. 22, 23

Stake 33' Each side



549+91 Ang. 0° 00'
S 6° 51' E

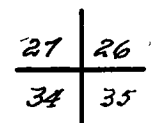
Sec. Cor. 22, 23, 26, 27.



576+34.8 Ang. 1° 22' L
S 8° 13' E

1/4 Cor. Sec. 26, 27

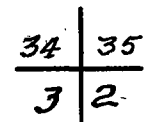
Stake 33' Each side



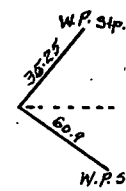
602+80 Ang. 0° 00'

1/4 Cor. Sec. 34, 35,

Stake 33' Each side



629+26 Ang. 1° 28' R
S 6° 45' E



655 + 56 Ang. 0° 00' Stake 33' each side
S 36° 22' 662 + 00 Ang. 28° 57' Left
668 + 00 Ang. 22° 10' Right
S 18° 32' E 674 + 12.3 Ang. 24° 10' Right Stake 33' each side
S 10° 31' W 679 + 20 Ang. 4° 24' Left
W.P. Sp. 36° 44' W 683 + 90

629+26
602+80
26.40
602+80
576+34.8
26.45-2

NOTES

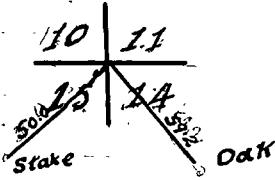
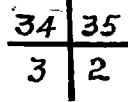
SEC	CONT'D TO	PAGE	BOOK
10			
11			
14			
15			
22			
23			
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27			
34			
35			

SURVEY RECORD No 257

Twp. 139 N-Rg. 26 W-5TH P.M.
 SEC'S. 2-3-10-11-14-15-22-23-25-26-27

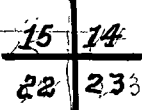
Field notes of the survey of a part of STATE RURAL HIGHWAY No 83 through sections 2, 3, 10, 11, 14, 15, 22, 23, 25, 26, 27 Twp. 139, N, Rg. 26, W. and the ties and bearing trees to corners in said sections as surveyed under the direction of Mr. Geo. A. Ralph as copied from the field books of Mr. Ralph's Assistant Engineer Mr. H.R. Colwell who handed in his books of said survey to be copied and recorded.

683+90
 720+00 S 7° 04' W Δ 15° 17' 51° 04' W Stake 33' each side
 727+12.4 S 2° 34' W Δ 4° 30' L S 2° 34' W
 736+00 S 10° 39' W 8° 05' R
 738+00 S 4° 46' W 5° 35' L
 744+29.8 S 14° 12' E 19° L
 746+02 S 3° 16' W 17° 30' R
 755+75 S 26° 44' E 30° 02' L
 759+25 S 28° 04' E 2° 42' L
 779+01.6 S 9° 01' E 15° 04' R
 784+17 S 13° 51' E 4° 58' L
 792+38 S 5° 04' R Sec. Cor. 10, 11, 14, 15
 68° 55' E



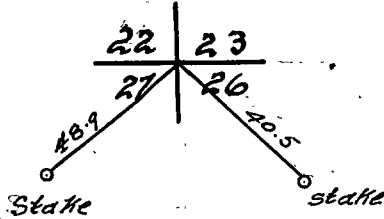
818+70 0° 00' 1/4 Cor. Sec. 14, 15.

844+09.5 1° 16' R
 S 7° 38' E



871+30 0° 00' 1/4 Cor. Sec. 22, 23

897+70 0° 29' S 8° 07' E
 907+04.5 33° 47' R S 25° 20' W
 928+16.6 30° 51' L S 5° 11' E
 944+49 B.C. 80° Ang. 91° 52' L



945+64 E.C. N 86° 41' E
 948+00 B.C. 38° C Ang. 64° 36' R
 949+70 P.R.C. 38° C L = 45° 36' L
 950+90 E.C.
 952+60 B.C. 14° C L Ang 20° 51'
 954+08.8 E.C.
 954+30.5 West end of bridge

NOTES
 T139-R26

SEC	CONT'D TO	PAGE	BOOK
2			
3			
10			
11			
14			
15			
22			
23			
25			
26			
27			

PLAT OF B

T139-R26

STATE RURAL HIGHWAY NO 83

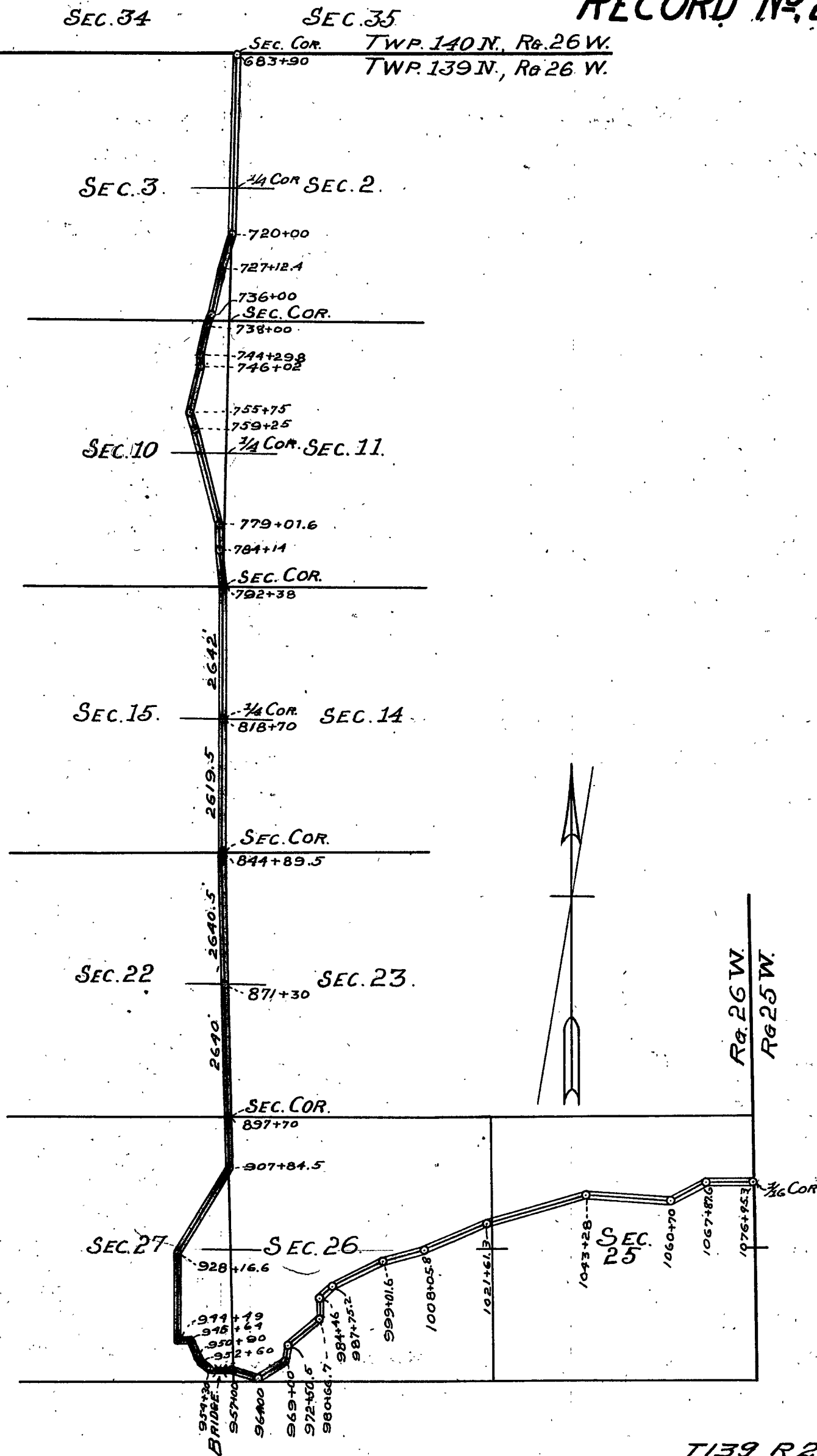
AS SURVEYED IN SECTIONS 2, 3, 10, 11, 14, 15

22, 23, 25, 26 AND 27 TWP. 139 N., Rg. 26 W.

SCALE 1" = 2400 FT.

RECORD NO. 257.

PLAT			
SEC	Brought From	Page	Book



957+00
954+30
270

T139 R26
PLAT

SEC	Cont'd To	PAGE	BOOK
2	"	"	"
3	"	"	"
10	"	"	"
11	"	"	"
14	"	"	"
15	"	"	"
22	"	"	"
23	"	"	"
25	"	"	"
26	"	"	"
27	"	"	"

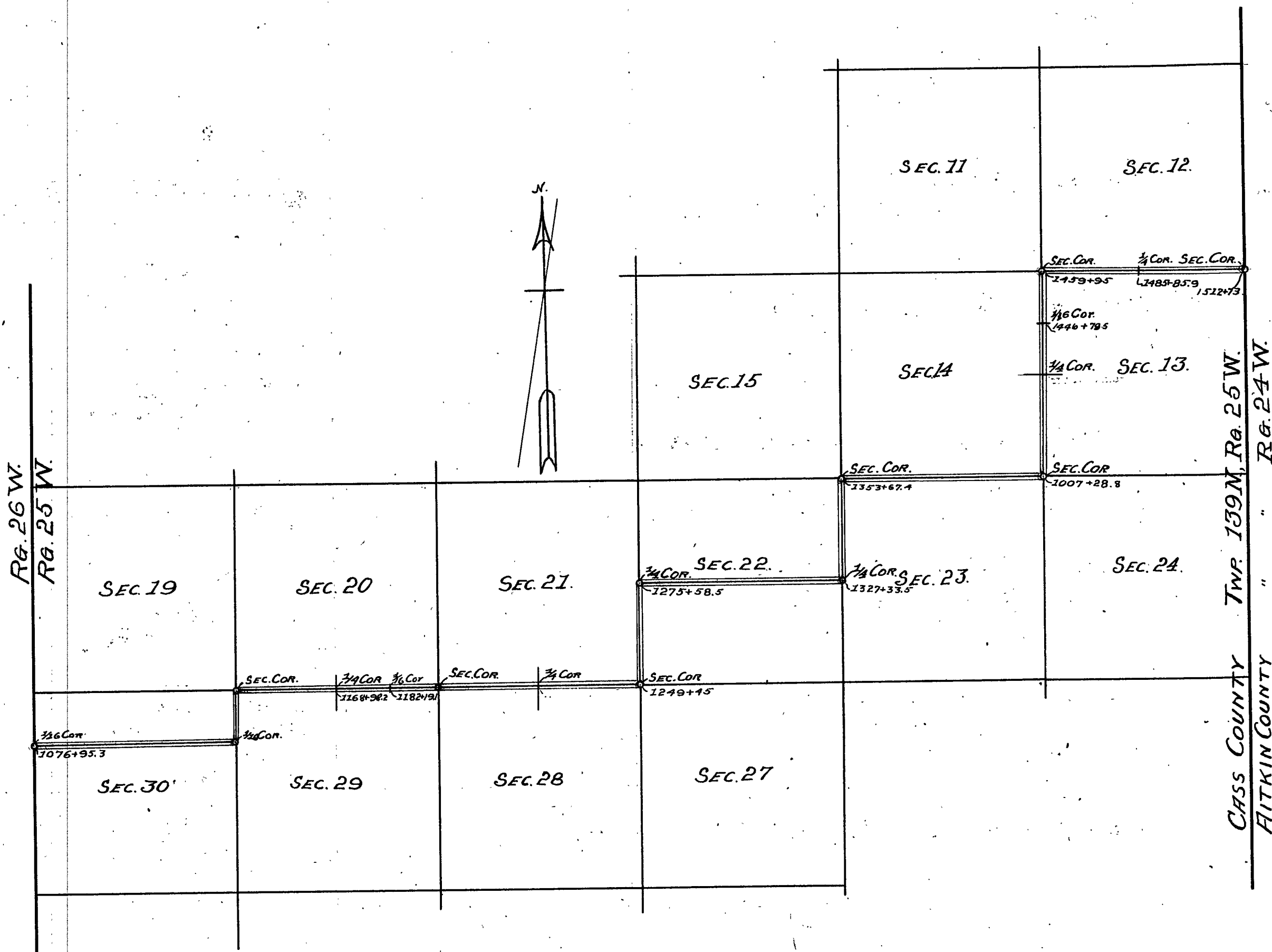
PLAT OF

STATE RURAL HIGHWAY NO 83

AS SURVEYED IN SECTIONS 11, 12, 13, 14, 15, 19, 20, 21, 22, 23, 24, 27, 28, 29, 30, TWP. 139N., Rg. 25W.
SCALE 1"=2640 FT.

RECORD NO 258

PLAT



T 139-25

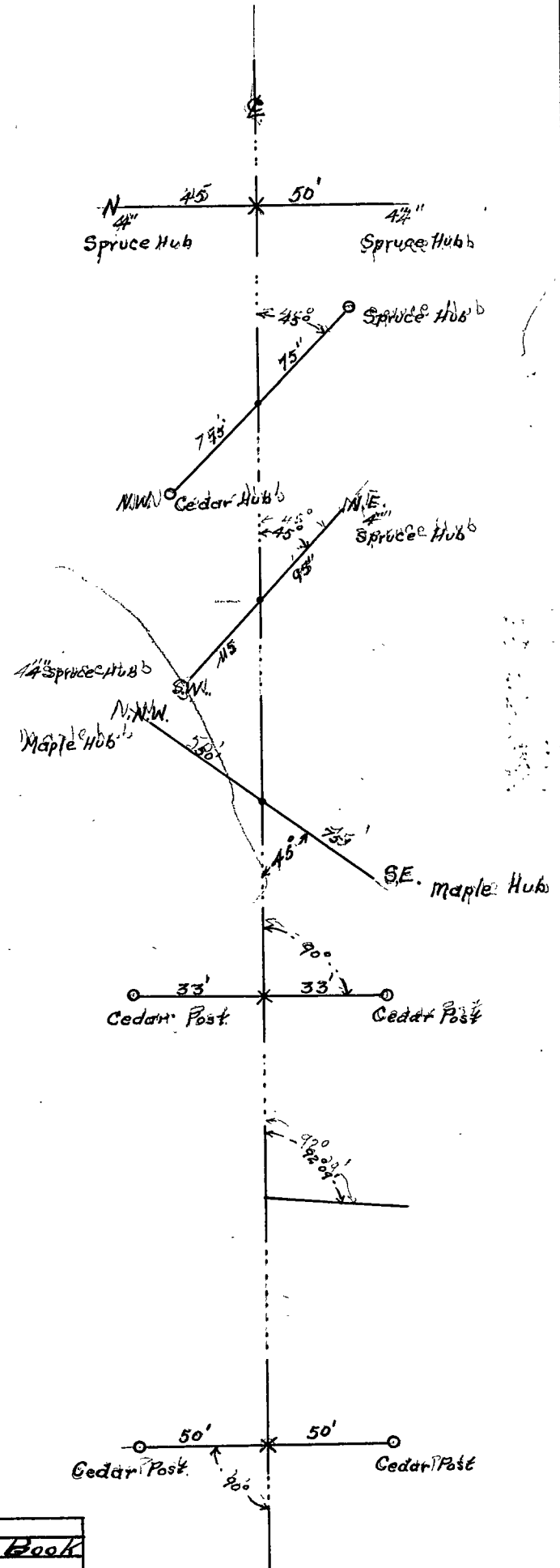
PLAT		
SEC	CONT'D TO	PAGE BOOK
11		
12		
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14		
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19		
20		
21		
22		
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24		
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28		
29		
30		

SURVEY RECORD No 258.

TWP. 139 N - Rg. 25 W - 5TH P.M.
SEC'S. 11-12-13-14-15-19-20-21-22-23-24-27-28-29-30

Field notes of the survey of part of STATE RURAL HIGHWAY No 83 through sections 11, 12, 13, 14, 15, 19, 20, 21, 22, 23, 24, 27, 28, 29, 30, Twp. 139 N, Rg. 25 W. according to notes sent in by Geo. A. Ralph and H. L. Colwell Engineers. with a request that the same be recorded

- 1168 + 98 1/4 Cor between Sec. 20, 29
T. 139 Rg. 25 W
- 1182 + 19A 1 E 1/4 Cor. N. Side Sec. 29
- 1249 + 45 5 Sec. Cor. 21, 22, 28, 27. T. 139 N. Rg. 25 W
- 1275 + 58 6 1/4 Between Sec. 21, 22.
T. 139, N. Rg. 25, W.
- 1446 + 179.55 1/16 Cor. Sec. 14, 13. N
- 1459 + 95 Sec. Cor. 11, 12, 14, 13. T. 139 N. Rg. 25, W.
- 1485 + 85.9 1/4 Cor Bet. Sec. 12, 13. T. 139 N. R. 25 W.



Sec	CONT'D to	PAGE	BOOK
11			
12			
13			
14			
15			
19			
20			
21			
22			
23			
24			
27			
28			
29			
30			

TWP. 144 Rg. 28 SEC'S 33-34
 TWP. 143 Rg. 28 SEC'S 1-2-3-11-12-13-24
 TWP. 143. Rg. 27 SEC'S 6-7-18-19

Field notes of the survey of a part of STATE RURAL HIGHWAY No 45 through sections 33, 34 Twp. 144, Rg. 28 W. and sections 1, 2, 3, 11, 12, 13, 24. Twp. 143 N. Rg. 28 W. sections 6, 7, 18, 19. Twp. 143, N. Rg. 27 W. and the ties and bearing trees to corners in said sections as surveyed by under the direction of Mr. Geo. A. Ralph as copied from the field books of Mr. Ralph's Assistant Engineer Mr. H. L. Colwell who handed in his field books of said survey to be copied and recorded.

77+67 $\frac{1}{4}$ Cor. Sec. 2, 11 Iron post
 New B.T. 14" Aspin S 10° 30' W 54'
 " " 12" Birch N 62° 30' E 82.2'

103+60 Sec. Cor. 1, 2, 11, 12. Old post.
 New B.T. 8" Ash S 21° 30' W 74'
 " " 9" Spruce S 65° E 69.5'
 " " 12" Cedar N 64° E 56.8'

130+12 $\frac{1}{4}$ Cor. Sec. 1, 12 Old Govt post
 Old B.T. Spruce N.E. 16' Lying down
 New B.T. 16" Ash S 72° W. 96.3'
 " " 12" Birch N 74° W. 126.2'

Sec. Line between R. 27 & 28 Twp. 143

156+80 Sec. Cor. 6, 7, 1, 12. Old post been re-established.
 B.T. 15" Birch S-W 59.4' (no check)
 B.T. 12" " N.W. 49'
 B.T. 12" " N.E. 54.8' (cant find)

183+44 $\frac{1}{4}$ Cor. Sec. 7, 12
 Old B.T. Rotten Popal Stp. N. 90° W. 44'
 " " " " N 76° E 8'
 New B.T. 10" Birch N 64° 30' W. 42.6'
 " " 10" Birch N 85° E 64.8'

210+00 Sec. Cor. 7, 18, 12, 13. Iron Stake No B.T.
 New B.T. 10" Maple N 55° 30' E. 66.4'
 " " 12" Birch S 37° 30' W. 72.0'

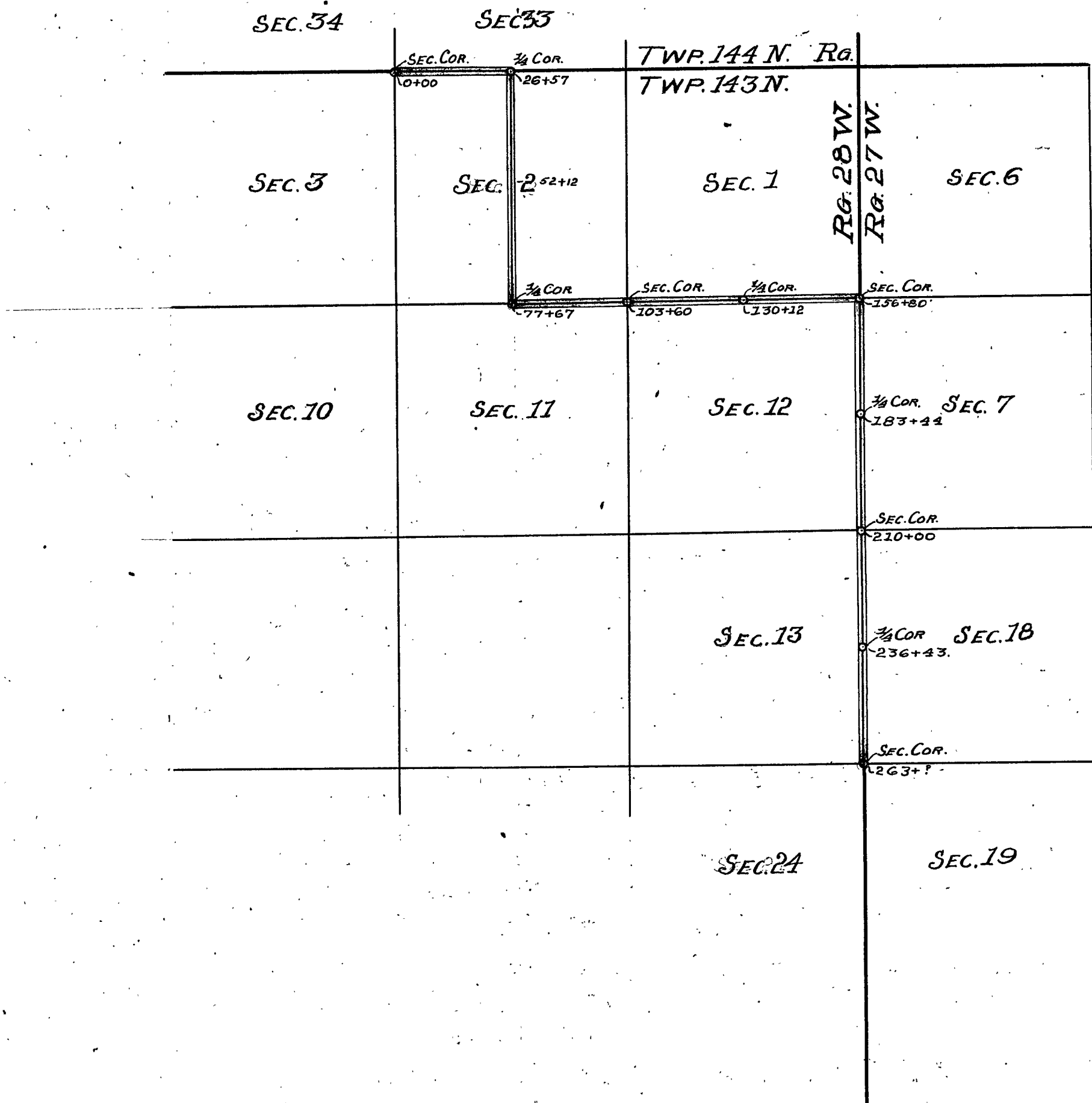
236+43 $\frac{1}{4}$ Cor. Sec. 13, 18. Old Post
 Old B.T. Stump S 44° 30' W. 13'
 " " " " N 55° 30' E. 13'
 New B.T. 10" Ash N 79° W. 42.4'
 " " 12" Birch S 87° 30' E. 4.5'

263+ Sec. Cor. 13, 24, 18, 19. Old Post No B.T.
 New B.T. 10" Basswood N 81° 30' W. 56.4'
 " " 8" " S 43° W. 49'
 " " 4" Balsam S 34° 30' E. 48'
 " " 12" Birch N 44° 30' E. 44.8'

B
PLAT OF
STATE RURAL HIGHWAY NO. 45

AS SURVEYED IN SECTIONS 33 AND 34 TWP. 144
N., Rg. 28 W., SECTIONS 1, 2, 3, 11, 12, 13 AND 24 TWP.
143 N. Rg. 28 W., SECTIONS 6, 7, 18 & 19 T. 143, R. 27.
SCALE 1" = 2640 FT.

RECORD No 259.



PLAT OF STATE RURAL HIGHWAY NO. 45.

AS SURVEYED IN SECTIONS

Sections 6, 7, & 13 to 24 inc. Twp. 143 N. Rg. 27 W.

Scale-1 in = 2640 ft.

RECORD NO 260

156+00 Sec. Cor.												
Sec. 7 1/4 Cor.	Sec. 8	Sec. 9	Sec. 10	Sec. 11	Sec. 12	Rg. 27 W. Rg. 26 W.						
Sec. Cor. 230+00		T 143 N	R 27 W									
Sec. 18 1/4 Cor.	Sec. 17	Sec. 16	Sec. 15	Sec. 14	Sec. 13							
Sec. Cor. 1/4 Cor.	Sec. Cor. 1/4 Cor.	Sec. Cor. 1/4 Cor.	Sec. Cor. 1/4 Cor.	Sec. Cor. 1/4 Cor.	Sec. Cor. 1/4 Cor.	Sec. Cor.						
263+	289	314+66	340+75	366+85	392+65	418+50	445+03	471+72	498+54	524+92	551+34	577+14
Sec. 19	Sec. 20	Sec. 21	Sec. 22	Sec. 23	Sec. 24							
Sec. 30	Sec. 29	Sec. 28	Sec. 27	Sec. 26	Sec. 25							
Sec. 31	Sec. 32	Sec. 33	Sec. 34	Sec. 35	Sec. 36							

TWP 143 N - Rg. 27 W. 5TH P.M.
SEC'S 6-7-13-14-15-16-17-18-19-20-21-22-23-24

Sections 6-7-13-14-15-16-17-18-19-20-21-22-23-24. Twp. 143 N, Rg. 27. and the ties and bearing trees to corners in said sections as surveyed under the direction of Mr. Geo. A. Ralph as copied from the field books of Mr. Ralph's Assistant Engineer Mr. H. K. Colwell who handed in his field books of said survey to be copied and recorded.

289+	1/4 Cor. 18, 19	Old Post			
	Old B.T.	Stump	S.E	lying on the ground	
	New B.T.	6" Birch	N 28° 30' W	58.5'	to nail in B.T.
	" "	12" "	S 26° E	86.2'	" " " "
314+66	Sec. Cor. 17, 18, 19, 20.	Old Post	no B.T.		
	New B.T.	3" Poplar	S 25° W	84.4'	to nail in B.T.
	" "	4" "	S 70° 30' E	114.2'	" " " "
	" "	4" "	N 82° E	115'	" " " "
	" "	4" "	N 1° E	76.6'	" " " "
340+75	1/4 Cor. Sec. 17, 20	Old Post			
	New B.T.	6" Tamrac	N 37° 30' E	38.6'	to nail in B.T.
	" "	6" Cedar	S 27° 30' E	43.6'	" " " "
	Old B.T.	8" Tam.	N 31° 30' E	116'	to nail in B.T.
	" "	5" "	S 52° 30' E	139'	" " " "
366+85	Sec. Cor. 16, 17, 20, 21	Old Post			
	New B.T.	12" Tam.	S 34° 30' E	47.5'	to nail in B.T.
	" "	8" "	N 28° 30' E	42'	" " " "
	" "	10" Spruce Sp.	N 64° W	82.9'	" " " "
	" "	6" Cedar	S 29° W	57.2'	" " " "
	Old B.T.	8" Tam.	N 50° E	4'	
	" "	Spruce	S 65° E	11'	
	" "	" "	N 52° W	4'	
392+65	1/4 Cor. Sec. 16, 21,	No Post			
	New B.T.	4" Tam.	S 52° 30' W	56.2'	to nail in B.T.
	" "	5" "	N 31° 30' W	49'	" " " "
	Old B.T.	5" Tam.	N	W 17'	to nail in B.T.
418+50	Sec. Cor. 15, 16, 21, 22.	Post			
	New B.T.	8" Balsam	S 6° W	41'	to nail in B.T.
	" "	12" "	S 38° 30' E	59'	" " " "
	" "	12" "	N 15° 30' E	57.4'	" " " "
	" "	6" "	N 32° 30' E	50.9'	" " " "
	Old B.T.	6" Birch	S 39° 30' E	11'	
	" "	Maple stump	N 31° 30' W	17'	
445+03A	1/4 Cor. Sec. 15, 22	Old Post			
	New B.T.	6" Poplar	N 37° 30' W	41.8'	to nail in B.T.
	Old B.T.	6" Ash	S 38° 30' W	47.6'	to nail in B.T.
471+72	Sec. Cor. 14, 15, 22, 23	Post			
	New B.T.	6" Cedar	S 44° E	50'	to nail in B.T.
	" "	4" Tam.	S 22° E	41'	" " " "
	" "	6" Spruce	N 44° W	50.9'	" " " "
	" "	6" "	N 36° 30' E	56.3'	" " " "
	Old B.T.	cut down			
498+54	1/4 Cor. Sec. 14, 23,	Old Post	2'		
	New B.T.	3" Tam.	N 30° W	39'	to nail in B.T.
	" "	3" Tam.	S 29° E	37.7'	" " " "
	Old B.T.	cut down			
524+94	Sec. Cor. 13, 14, 23, 24.	Old Post			
	New B.T.	8" Cedar	N 41° 30' W	44.6'	to nail in B.T.
	" "	" "	S 45° E	25.4'	to screw end of culvert
	" "	" "	N 46° E	27.9'	" " " "
	Old B.T.	12" Tam	S	119'	
	" "	6" Cedar	S 63° 30' W	7'	
551+34	1/4 Cor. Sec. 13, 24.	Old Post			
	New B.T.	4" Pine	S 11° 30' W	50'	to nail in B.T.
	" "	15" Poplar	N 4° W	39.5'	" " " "
	No B.T.				
577+74	Sec. Cor. 13, 24, 18, 19	Old Post			
	New B.T.	8" Tam.	N 26° 30' E	47'	to nail in B.T.
	" "	12" Cedar	S 80° W	59.2'	" " " "
	" "	16" Tam.	S 25° E	52.6'	" " " "
	Old B.T.	12" Tam	S 54° 30' W	8.4'	
	" "	8" "	N 16° 30' W	7.4'	
	" "	6" Spruce	S	E 7.3'	

SURVEY RECORD No 261.

TWP. 143-N-RG. 26W
SEC'S. 13-14-15-16-17-18-19-20-21-22-23-24

Field notes of the survey of a part of STATE RURAL HIGHWAY No 45 through Sections 18, 17, 16, 15, 14, 13, 19, 20, 21, 22, 23, 24, Twp. 143 N. Rg. 26 W. and the ties and bearing trees to corners in said sections as surveyed under the supervision of Mr. Geo. A. Ralph as copied from the field books of Mr. Ralph's Assistant Engineer Mr. H. L. Colewell who handed in his ^{field} books of said survey to be copied and recorded.

896+55		896+55 Sec. Cor. 18, 19, 13, 24. New B.T. 3" Maple 12" Birch 12" Stub	Old Post S 41° E 44.3' to nail in B.T. N 1° E 58.1' " " " " S 13° W 51.2' " " " "	Old B.T. 12" Birch N 49° E 14'
868+88		868+88 1/4 Cor Sec 13, 24. New B.T. 3" Poplar Tine Stump	Old Post S 33° 30' E 58.0' to nail Head N 8° E 59.3' " " " "	Old B.T. 4" Pine S 12° 30' W 11.8' 14" Birch N 42° E 3.5'
841+52		841+52 Sec. Cor. 13, 14, 23, 24 Re-established.	No Old Post or B.T.	
815+12		815+12 1/4 Cor Sec. 14, 23, New B.T. 8" Tam 8" Spruce	Old Post S 8° 30' W 51' to nail Head N 16° 30' W 59' " " " "	Old B.T. 12" Birch S 78° W 18.5'
788+54				
761+161				
734+60		734+6 Sec. Cor. 15, 16, 21, 22. New B.T. 4" Poplar " Stump 12" " 5" Cedar	Post. N 20° W 37.4' to nail in B.T. S 19° E 46.7' " " " " S 3° W 53. " " " " N 47° 30' E 54.5' " " " "	Old B.T. Cedar S 27° E 3'
707+59		707+00 1/4 Cor. Sec. 16, 21 New B.T. Poplar Stump 5" Cedar	Old Post S 28° E 40.6' to nail in B.T. N 28° 30' W 35.6' " " " "	No B.T.
681+41		681+41 Sec. Cor 16, 17, 20, 21. New B.T. 8" Cedar 10" Spruce 12" Buck Stump	No Post S 8° 30' W 71.4' to nail in B.T. S 21° E 44' " " " " N 18° E 44.7' " " " "	Old B.T. 5" Cedar N 54° E 9'
654+87		654+87 1/4 Cor Sec. 17, 20, New B.T. 14" Birch 12" Birch	No Post S 4° 30' W 40.1' to nail in B.T. N 2° W 53.2' " " " "	Old B.T. 6" Birch N 46° W 4'
627+12		627+12 Sec. Cor. 17, 18, 19, 20 New B.T. 8" Maple 12" Cedar 10" "	Old Post N 51° E 45.9' to nail in B.T. N 32° 30' E 37.8 " " " " S 23° 30' W 56.9 " " " "	Old B.T. 10" Cedar S 73° W 13.3' 12" " N 25° 30' W 16.9'
604+9		604+9 1/4 Cor. Sec 18, 19, New B.T. 8" Birch 6" Spruce	Old Post N 3° 30' W 46' to nail in B.T. S 23° E 43.2' " " " "	Old B.T. 8" Birch N 35° 30' W 11'

B

PLAT OF STATE RURAL HIGHWAY NO. 45

As SURVEYED IN SECTIONS 18, 17, 16, 15, 14, 13, 19, 20, 21, 22, 23, 24.

TWP. 143 N. Rg. 26 W.

Scale - 1 in = 2640 ft.

RECORD NO 261

Sec. 18	Sec. 17	Sec. 16	Sec. 15	Sec. 14	Sec. 13
Sec. Cor. 1/4 Cor.	Sec. Cor. 1/4 Cor.	Sec. Cor. 1/4 Cor.	Sec. Cor. 1/4 Cor.	Sec. Cor. 1/4 Cor.	Sec. Cor. 1/4 Cor. Sec. Cor.
577+47 604+9	627+2 654+87	681+41 708+0	734+6 762+62	788+54 815+12	841+52 868+88 896+8
Sec. 19	Sec. 20	Sec. 21	Sec. 22	Sec. 23	Sec. 24

700

PLAT OF STATE RURAL HIGHWAY NO. 45.

RECORD Nº 262

	5	4	3		
7	8	9	10	11	12
18	17	16	15	14	13
896+55 922+62			1166+		
19	20	21	22	23	24

SURVEY RECORD N^o 262.

SECTION

1

k

896 55

922 68

1001

1021 + 89

1/4 Cor Sec, 14 19
 NEW BT 10" pine stump S 1° W 35.5' to nail head
 " " " " N 16° 30' W 49.0' "

935+88 1/16 Cor

STP 69.5

STP 35

STP 30.2

46.3 P.M.

TWP. 142-RG. 28 - SEC'S 30-31

TWP. 142-RG. 29 - SEC'S 25-36

Field Notes of the survey of a part of sec. 30. and 31, Township 142, Range 28 and sections 25 and 36, Township 142, Range 29, including one mile of a County road to be known as the "Brevik" Road running North and South between sections 31 and 36.

Surveyed by and under the direction of John W. Curo, County Surveyor, Cass Co. Minn., assisted by E.B. Horst, Deputy County Surveyor.

April 9, 1916, E.B. Horst with transit and other survey tools belonging to Curo, and special field notes provided by Curo, leaves Walker with Walter Haberman and team, at 4:30 A.M. and drives across Seech Lake to Brevik and takes dinner with Haberman. P.M. Horst looks up boarding place with Olaf Engen who agrees to board Horst at \$1.00 pr. day.

April 10, 1916. E.B. Horst, Engineer, Alfred Boe and John Berger, Armen, chainmen + flagmen go to the corner to sec. 30, 31, 25 and 36 on range line between Township 142 N, ranges 28 & 29 W, where U.S. Notes call for a post and bearing trees as follows -

Poplar 18, S 24° E, 25 links distant (= 16.50 feet). Poplar 6, S 80° W, 20 links distant (= 13.20 ft.)

ELM 6, N 4° W, 10 links distant (= 6.60 ft.). Maple 16, N 80° E 65 links distant (= 42.90 ft.).

We find the 24 inch poplar and the 16 inch maple from which we set a square post for the true section corner and mark the following new bearing trees:

Maple 12 inches in diameter, bears N 72° W, 59 feet distant. Maple 16 inches in diameter, bears S 80° E, 37.50 feet distant. Maple 10 inches in diameter, bears N 16° E, 49.70 ft. distant.

Elm 7 inches in diameter bears S 51° W, 43.50 feet distant. We set up a large pole at this corner, then place the line about a half a mile south to the 1/4 corner between sections 31 and 36 which is on a hill and at which point U.S. Notes call for a post and the following bearing trees: Norway Pine 24, S 55° W, 47 links (= 31.02 feet). Norway Pine 24, S 75° E, 20 links (= 13.20 feet). We find one stump marked, and the other stump is cut off below the scribe marks: there are no other trees or stumps near. We set a square post for the true 1/4 corner, over which we set the transit, then focus telescope on flag half a mile north at the corner to sections 25, 30, 31 and 36, and run North on true line between sections 31 and 36, Twp 142, Rgs 28 and 29.

At 325 feet enter Marsh: At 430 feet leave Marsh: At 443.50 ft. set stake for road center: at 835 enter small pond: At 870 leave same: At 1018 enter Marsh: At 1100 leave Marsh: At 1124 feet set stake for road center: at 1200 enter small pond: at 1340 leave same. at 1878 set stake for road center: At 2686 feet intersect the true corner to sections 25, 30, 31 and 36.

April 11, 1916. E.B. Horst transitman: H. Boer and J. Berger ak, chain and flagmen. We go to the iron monument previously established for the true corner to Twp. 141 and 142 N, Ranges 28 and 29 W, from which we run North, variation 9° 31' E.

At 10. ft. enter Marsh: At 250 leave Marsh: At 477 ft. set hub: At 780 feet enter Marsh: At 1000 leave Marsh. At 1133 ft. set hub: At 1533.20 ft. set hub: at 1956.00 set hub: At 2627.60 the 1/4 corner between sections 31 and 36, sets west, 20.50 ft.

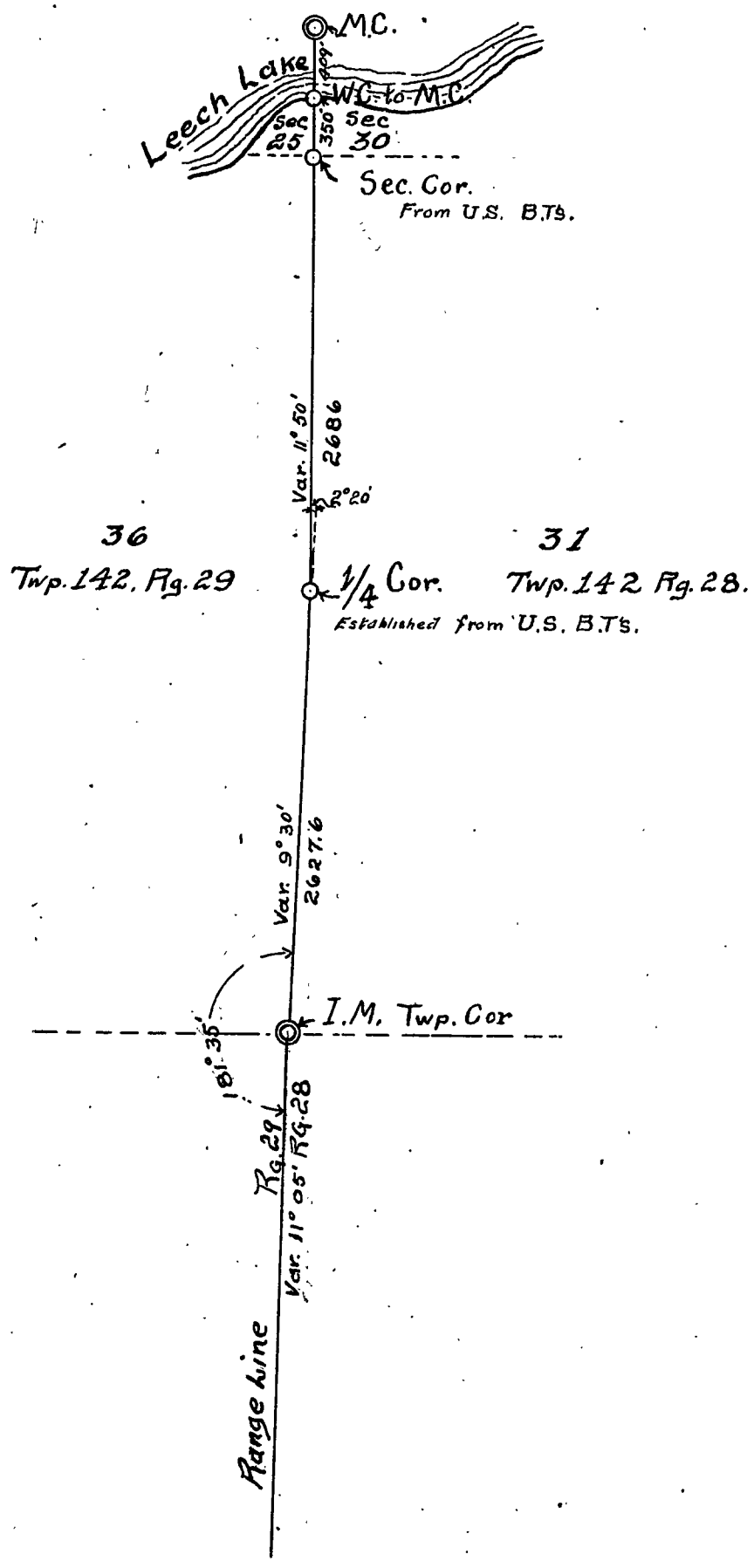
Correcting back, each hub goes .0076 of a foot west for each foot North.

At hub 1956 we chain west, 1525 ft. and set hub on true line. At hub 1533.20 we chain west 11.95 ft. and set hub on true line: At hub 1133 we chain W 8.84 ft. and set hub on true line: At hub 477 we chain West 3.70 ft. where we set hub on true line: We set transit over iron Twp. corner, sight south on hub on true Twp. line, transit the telescope and sight North, the true North line angles east 1° 35'.

BREVIK ROAD

PLAT NO 263

COUNTY ROAD BETWEEN SECTIONS 31 & 36 Twp's 142 Rgs. 28 & 29
AND
NORTH TO LEECH LAKE



No 263. continued

We walk to the 1/4 corner between sections 31 and 36, over which I set the transit and sight south along true line, then reverse telescope and find that from here North, the line angles West, $2^{\circ}30'$.

Going to the true corner to section 25, 30, 31 and 36 Twp 142, Rgs 28 and 29, just established I set transit over section corner, sight south on true section line: transit telescope and run North between sections 25 and 30, to Seck Lake, and look for Meander corner between fractional sections 25 and 30 where T. S. notes call for a post and the following bearing trees: Ash 12, $N 35^{\circ} E 4'$ links. Willow 10, $S 15^{\circ} W 60$ links. We chain down hill to Seck Lake: the Government chainage of this line is 1150 links, being 759 feet but as the lake shore has been washed away, the Meander corner and bearing trees are all gone: $N 25^{\circ} 34'$ North we set a large cedar post for Witness Corner to Meander Corner, 409 ft. south of Meander Corner which is in the lake.

April 12, 1916 Horst hires Walter Haberman and team to take him to Sugar Point, thence to Federal Dam with survey outfit: Thomas Bungo driver, cross on ice in Seck Lake.

E. B. Horst, Deputy County Surveyor
Cass County, Minnesota

Surveyed April 9th to 12th, 1916.

Recorded May 29th - 1916.

SURVEY RECORD No 264.

TWP. 137N - Rg. 30W - 5TH P.M.

SEC'S. 2-3-10-11.

Field notes of the survey of 1/4 mile of Township road surveyed for Walden Township, to begin at the corner to sections 2, 3, 10 and 11, T. 137, Rg. 30 and to run 1/4 mile more or less south to intersect with the East and West "South River Road."

Use the established of permanent cement monuments at the corners in sections 2, 3, 11 and 14 and 15, of said Township 137, Range 30, Cass County Minnesota, as surveyed by John W. Curo, County surveyor and assisted by Elmer B. Horst, Deputy County Surveyor.

May 5th 1916 John W. Curo and E. B. Horst copy necessary notes of previous surveys and take 9:30 A.M. train to Pine River, get Auto of Homer Andrews and with Seyott as driver go to the corner to sections 2, 3, 10 and 11, Twp. 137, Rg. 30 where U.S. notes call for a post and the following bearing trees. Tamarac 7, S 66° E, 45 links distant, Norway Pine 18, N 33° W, 60 links distant, Norway Pine 7, S 79° W, 75 links distant, Norway Pine 20, N 41° E, 55 links distant. We find a 4x4, post previously established by Curo for this corner, from which we run N 41° E, 55 links distant in section 2, and look for old bearing trees, which appears to be gone, thence from the post we run N 33° W, 60 links distant in section 3, and look for old bearing tree which seems to be gone, but we find the stumps of the SE and SW old bearing trees which check out for course and distance with Curo's notes of previous surveys, so that Curo positively identifies the old stake as the exact true corner. From this old stake an old fence runs North and another fence runs South. Curo goes back to Pine River in Auto and Horst takes dinner and stay over night with Ole Haugen who lives in the Old School House on NE 1/4 of NE 1/4, sec. 10, Twp. 137, Rg. 30.

May 6th 1916 E. B. Horst, transitman, and assisting in chaining new Hurley transit and 100 feet Chicago tape which belong to Curo. Ole Haugen, Ademan, and assisting Horst in chaining, go to the corner to sections 2, 3, 10 and 11 Twp. 137, Rg. 30, established by Curo as per notes of June 18th 1908 and identified by Curo May 5th 1916 as the true corner, run south:

At 10. ft. enter wet swamp: at 470 ft. leave same: enter sandy lard: at 1135 ft. enter Creek bottom: at 1235 creek 5 feet wide runs easterly: at 1265 feet leave creek bottom enter sandy lard: at 1303.75 feet intersect the North 1/6 post between sec 10 and 11 previously established by Curo and which sets in the center of a graded road which runs East and West and which is situated at the North end of a graded road which runs South.

In order to check this 1/6 post and to be sure of its true location we continue our transit line south along the graded wagon road: at 2268.50 we set white pine hub and tack at 2727.50 we find the old 1/4 corner previously established by Curo for the true 1/4 corner between sections 10 and 11 to further check this survey we continue still South along graded road and at 5455 feet we intersect old stake called for in Curo's notes of June 18th - 1908, set by him for the true corner to sections 10, 11, 14 and 15, Twp. 137, Rg. 30, where U.S. notes call for a post and the following bearing trees. White pine 17, N 69° W, 27 links distant, White pine 8, S 53° W, 70 links distant. Pine, white 18, S 60° E 25 links distant. Norway Pine 17, N 57° E 47 links distant. Curo's notes of June 18th, 1908 show that at that time he found the old government bearing trees at this point from which he set the true corner and at our re. survey now checks perfect with his survey we are sure our survey is correct.

At the 1/4 corner between sections 10 and 11, Twp. 137, Rg. 30. U.S. notes call for a post and the following bearing trees: Dead Asp. 12, N 26° 30' E, 20 links distant.

Dead Pine 12, S 80° 20' W, 30 links distant. As these appear to be gone and Curro's notes show that they could not be found at the time of his survey of June 18, 1908, we consider them lost and the post at 2727.50 the correct 1/4 corner.

In the afternoon Anton Haugen brings a sack of cement which we mix with sand and at the corner to sections 2, 3, 10 and 11, Twp. 137, Rg. 30, we pull up the wood post and put in its place a round cement post 8 inches in diameter by 3 feet long, set its full length in the ground for the true section corner.

At the north 1/4 between sections 10 and 11, we pull up the wood stake & put in its place a round cement post 8 inches in diameter by 3 ft. long, set its full length in the ground for the true 1/4 corner.

At the 1/4 corner between sec. 10 and 11, we pull up the wood stake and put in its place a round cement post 8 inches in diameter by 3 ft. long, set its full length in the ground for the true 1/4 corner, and at the corner to sections 10, 11, 14 and 15, we pull up the wood stake and put in its place a round cement post, 8 inches thru by 3 feet long set its full length in the ground for the true section corner, which completed this survey.

At 6 o'clock P.M., Mr. Peter O.M. Anderson comes for Deputy County Surveyor Horst, who he drives to Anderson's place on section 32, all in Twp 137, Rg 30.

Survey made May 5th and 6th 1916.

Deputy County Surveyor,
Cass County, Minnesota.

County Surveyor, Cass Co. Minn.

Recorded June 3rd 1916.

T137-R30
NOTES

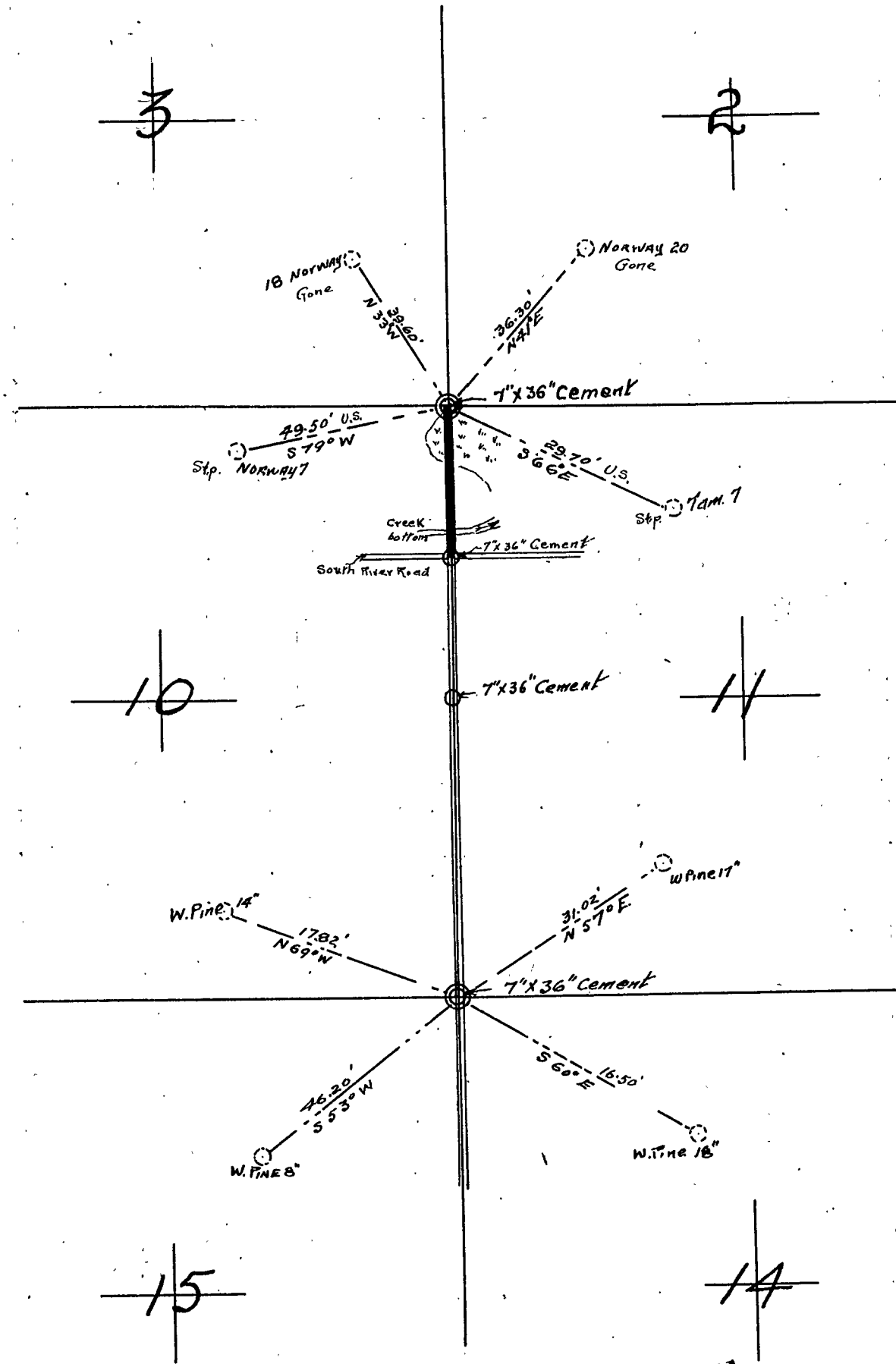
SEC No	CONT'D TO PAGE	BOOK No
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B
PLAT OF
HAUGEN ROAD

RECORD N^o 264

TOWNSHIP ROAD as surveyed for WALDEN TOWNSHIP
Twp. 137 Rq. 30

SECTIONS 2, 3 - Sections 7, 8, 10, 11, 14, 15.



7137 R 30
NOTES

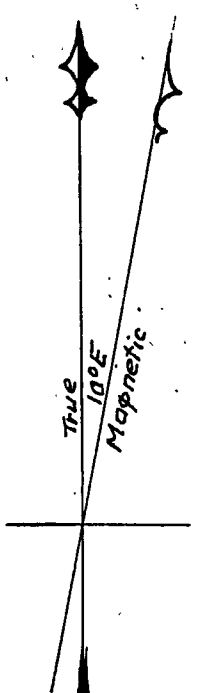
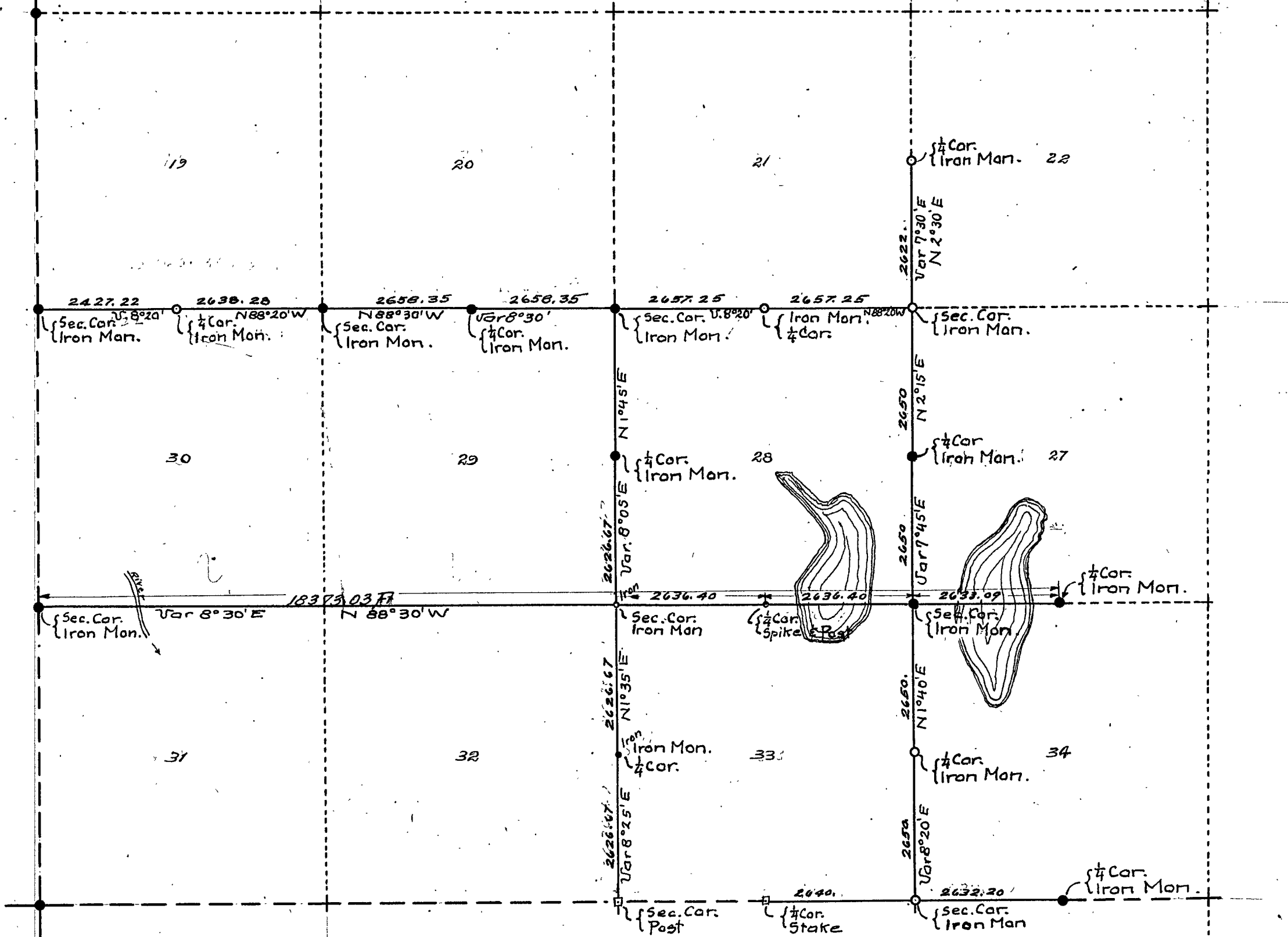
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B

SURVEY RECORD No 265.

PLAT

TWP 138. RG 30.
SECTIONS 19. 20. 21. 22. 27. 28. 29. 30.
31. 32. 33. 34.



Note:
All Courses are turned
from true Meridian

SURVEY RECORD No 265

TWP 138 RG 30.
SECTIONS. 19. 20. 21. 22.
27. 28. 29. 30. 31. 32. 33. 34.

Field notes of survey of Twp. roads and the establishment of new corners and iron monuments in sec - 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33, 34.

Township 138, Rg 30 as surveyed by and under the direction of John W. Curo, County Surveyor, Cass County Minnesota assisted by N. D. Gorman, Deputy County Surveyor.

Feb. 15th 1915 N. D. Gorman leaves Hackensack at 10:01 A.M. via M+D. R.R. with transit and other survey equipments belonging to Curo. R.R. fare 28 cents. Arrive at Mildred at 10:29 A.M. Dinner with Eastwood.

In afternoon, Albert Eastwood and N. D. Gorman walked to A. D. Trout's farm, one mile SW of Mildred, where Mr. Trout accompanied them to the corner of sections 21, 22, 27, 28, Twp 138, R. 30 where U. S. Notes call for post and the following bearing trees: Norway Pine 13, N 45° 30' E, 21 links, N.P. 15 N 34° W 11 links, N.P. 20 S, 60° W, 63 links, N.P. 17 S, 49° E, 56 links. Start at hub set by Curo set from old U. S. bearing trees for the true corners to sec, 21, 22, 27, 28, Twp 138, R. 30. Start a random line south, setting stakes every 300 ft. and hubs as follows -

1003 set hub and tack. At 1906.30 set hub and tack. At 2792.40 set hub and tack. At 2640 set temporary 1/4 corner between sections 27 & 28 where U. S. Notes call for post and U. S. bearing trees as follows: Norway Pine 14, 48° 30' E 55 links distant. N.P. 18, 58° W, 96 links distant, all appear to be gone and we quit for night.

Feb. 16 Tuesday 1915, N. D. Gorman transitman, A. Hoffman, A. Eastwood, A. D. Trout, continue south between sec. 27 & 28 Twp 138, R. 30; at 1792.40 set hub and tack and continue setting stakes every 300 ft. At 3801.80 set hub and tack.

At 4261.90 set hub and tack. At 5222.90 set hub and tack. We look for the corner to sections 27, 28, 33 & 34, where U. S. Notes call for a post and the following bearing trees. Bir 8, N 74° E 39 links. Norway Pine 5, N 88° W, 82 links, Bir 6, S 52° E, 35 links, I find no trace of the old bearing trees or stake and continue south.

P.M.

At 6249.10 set hub and tack. At 7920 set temporary 1/4 cor. between sec 33 & 34 where U. S. Notes call for post and the following bearing trees, Jam 5, S 88° W, 57 links, Jam 4, N 77° 30' E 21 links, all appear to be gone and we continue south. At 8473.50 set hub and tack and quit for night - N. D. Gorman.

Wed. Feb. 17, 1915 Hoffman and Trout cutting, Eastwood and Gorman chaining. Gorman transitman. Beginning at hub 8473.50 continue south. At 9091.40 set hub and tack. At 10217.50 set hub and tack. At 10628.55 set hub and tack. At sec. Cor. on the S. town line sec 33 & 34, T. 138, R. 30, U. S. Notes call for post and the following bearing trees -

WP. 16, N 13° E, 213 links, Asp. 6, N 14° W, 89 links, Asp. 6, S 55° W 27 links, Asp. 5, S 3° E, 33 links. No trace could be found. We go to the iron 1/4 cor. set by Curo and Moulster on the south side of sec 34 and chain west along state road to the 1/4 cor. stake on the south side of sec. 33 and find distance to be 5272.20 ft. Set transit on hill and line in the flagmen at 2636.10 and set temporary sec. corner on town line between sec 33 & 34. I met Mr. Corrie who said there is an oak stake as permanent corner to sec 33 & 34. He helps us locate the stake and we find it two ft. N. out of line with the 1/4 post on south side of sec. 33 & 34 and it sets 2632.20

ft. from the $\frac{1}{4}$ stake on south side of sec 34, and 2640 ft. E of the $\frac{1}{4}$ stake on the south side of sec. 33. I continue the north and south random line and find it missed the corner stake to sec 33 & 34, 87.40 ft. to west and find whole line from the corner to sec 21, 22, 27, 28 to be 10600 ft. quit for night.

Thursday Feb 18, 1915. I start at $\frac{1}{4}$ corner between sec 27 & 34, T138-R30 and run a random line west setting stakes every 300 ft. Hoffman and Trout cutting, Eastvold and Gorman chaining. Gorman transitman, at 440 enter lake. At 1092 leave lake. At 2196.90 set hub and tack. At 2744 set hub and tack, and look for bearing trees to Meander corners No. 14 & 15 and find nothing and continue west. At 3490 enter Hoffman lake. At 4700 leave same. At 5718 set hub and tack. At 6716.90 set hub and tack.

Friday Feb 19, 1915. Trout and Hoffman cutting, Eastvold chaining, Gorman transit and chain. Start at hub 6716.90 continue west. At 7844 set hub and tack. At 7920 look for bearing trees to corner of sec's 28, 29, 32 & 33. T138-R-30, where U.S. notes call for a post and the following bearing trees: Jam 4, N 47° E, 9 links, Jam 4, N 61° W, 34 links, Jam 5, S 55° W, 41 links, Jam 4, S 69° 30' E, 70 links. I find no trace of old U.S. bearing trees and continue west

P.M.

At 8479.70 set hub and tack. At 9304.50 set hub and tack. At 10560 I look for bearing trees to $\frac{1}{4}$ cor. between sec's 29 & 32, where U.S. notes call for U.S.P. 12, N 9° E, 20 links, U.S.P. 24 S 40° W, 35 links all are gone and we continue west. Curio comes from Hackensack to see how we are getting along and helps try to find above bearing trees. He leaves for Mildred from where he will take M & G. train for Walker. We continue west. At 10865.10 set hub and tack. At 12455 set hub and tack. At 13200 look for cor. to sec's 29, 30, 31 & 32. T138, R 30, where U.S. notes call for post and, -- Jam 7 N, 4° E, 144 links, Spruce 8 N, 28° W, 146 links. Jam 5 S, 58° E 68 links. All are missing and we continue west. At 13324.90 set hub and tack. I am using a quibley transit in good adjustment and a 300 ft. Chicago Steel tape. quit for night.

Saturday Feb 20, 1915. Gorman, Trout, Eastvold and Hoffman. Beginning at hub 13324.90 continue west setting stakes every 300 ft. between sec's 30 & 31. At 14658.80 set hub and tack. At 15840 I look for $\frac{1}{4}$ cor. between sec's 30 & 31, T138, R 30, where U.S. notes call for stake and; -- Asp. 4 N, 29° E 65 links, W. Bir 4 S, 41° W 39 links, All are gone and we continue west. At 16500 enter east bank of Pine River-16,550 leave same. At 16782.20 set hub and tack. At 18372 the true corner to sec 30 & 31 on west boundary of Twp 138, R 30, set south 1987.25 ft. This true corner is marked by a galvanized iron pipe previously established by County Surveyor Curio and sets with its top 10 inches above ground in a mound of dirt. quit for night.

Sunday Feb 21, 1915 Gorman stay all day at Trout's.

Monday Feb 22, 1915. N.D. Gorman, Transitman, A. Eastvold chairman, assisted by Gorman, A. Hoffman & A.D. Trout Axemen. Start a random line west between sec 21 & 28. T. 138, R 30. At 394.10 set hub and tack. At 1052.80 set hub and tack. At 1836.90 set hub and tack. At 2100.00 set hub and tack. At 2640 I look for $\frac{1}{4}$ corner between sec's 21 & 28. No trees can be found, and continue west, setting stakes every 300 ft. At 3577 set hub and tack. At 4041.50 set hub and tack. I missed the cor. to sec's 20, 21, 28 & 29 a distance of 33 ft. to the south. At 5314.50 the corner sets north 33 ft. being a galvanized iron post previously

No 265 continued

established by County Surveyor Curo for the true corner from which I run west 600 ft. where I set up the transit and back sight on the sec. corner, fore-sight on the galvanized iron pipe previously established by County Surveyor Curo for the true $\frac{1}{4}$ corner between secs 20+29, T. 138, R. 30, and we set a line of stakes marked "True Line". I run a true line west to a galvanized iron pipe previously set by County Surveyor Curo for the true corner to sec. 19, 20, 29+30 and set a line of stakes marked "True Line". Beginning at the iron corner to secs 19, 20, 29+30 I run west setting stakes every 300 ft. At 73.25 set hub and tack. At 1155.50 set hub and tack and quit for night.

Tuesday Feb. 23, 1915. Eadold and Gorman correcting line establishing corner to secs. 27, 28, 33+34, T. 138, R. 30. At 2623.50 the corner goes west 95.9 ft. to 2633.09 west. At 5280 south corner goes 520 ft. to 5300.00 from hub at 5222.90, I chain south 77.10 to 5300 at which point I set up transit, backsight on hub at 5222.90 and turn right angle to east and run a line of pickets east from hub at 2744 on east and west random line I chain east 110.91 to 2633.09 west where I set transit, turn right angle and run south to intersection with the picket line. I intersect picket line at 110 ft. S of E+W random line and 1725 ft. E of N+S random line. At this point I establish the true cor. to secs. 27, 28, 33+34, T. 138, R. 30, and drive a 80 lb spike in the ground for the true corner, and at 9° var. I establish new bearing trees as follows: Oak 10 N. 24° 2' E, 48.00 ft. Jack Pine 4 N. 62° 40' W, 52.25 ft. distant. Correcting back on random line between sec. 27+28 each hub goes .003255 off a foot east for each foot it is south. At hub 10035, we chain east 3.26 ft. to true line. At hub 1906.30 goes E 6.10 ft. to true line. Hub 2792.40 goes E 9.09 ft. to true line. Hub 3801.80 goes E 12.38 to true line. Hub 4361.90 goes E 14.20 ft. to true line. Hub 5222.90 goes E 17.00 to true line. At 5300.00 the corner to secs. 27, 28, 33+34 sets E 17.25 ft.

Correcting the random line E+W between secs. 21+28 T. 138-30; Chaining from the corner to secs. 21, 22, 27+28 W. to the corner of secs. 20, 21, 28+29 along the random line the distance is 5314.50 ft. W. from which point the iron sets N 33 ft. to correct this line each hub goes N .006209 off a foot for each foot west. Hub at 394.10 W goes N 2.45 ft. to true line. Hub at 1052.80 W goes N 6.54 ft. to true line. Hub at 1936.90 W goes N 11.40 ft. to true line. Hub at 2657.25 W goes N 16.50 to the true $\frac{1}{4}$ cor. between secs. 21+28. Hub at 3577.00 W goes N 22.70 ft. to true line. Hub at 4041.00 W goes N 25.09 ft. to true line. At hub 2657.25 W, I run north 16.50 ft. where I drive a 80 lb spike for the true $\frac{1}{4}$ cor. between secs. 21+28 and mark the following new bearing trees: NP 12 bears N. 15° 10' W, 29.10 ft. distant, JP 10 bears S 20° 28' W, 44.40 ft. distant. To head of nail driven in flat spot at base of trees var. 9° E. Over spike set for $\frac{1}{4}$ cor. I place a 2x2 square post braced on three sides, because we can not drive it in the frozen ground, we mark the post "True $\frac{1}{4}$ cor. to secs. 21, 28, Feb. 23, 1915 set by Curo per Gorman.

Establishing the $\frac{1}{4}$ corner bet. secs. 27+28, 138-30 from hub 2792.40, I chain N. 142.40 ft. to 2650.00, at which point I set transit and run east 8.61 ft. where I drive a 80 lb spike for the true $\frac{1}{4}$ cor. with new bearings as follows:

NP 4, S 79° E, 37.25 ft., JP 5 S, 30° 8' E, 41.60 ft. Over the spike I set a 2x2 post marked "True $\frac{1}{4}$ cor. between secs. 27, 28, - 138-30 set by Curo, per Gorman.

Quit for night

Wed. Feb. 24, 1915. Starting at $\frac{1}{4}$ Cor. between secs. 28+29 T. 138 R. 30, Gorman

transitman, Eastwood chainman, J. Adamson cutting brush, I run a random line S on 8° variation; At 224.50 set hub and tack. At 942.50 set hub and tack. At 1933 set hub and tack. At 3734.75 set hub and tack.

T.M.

Trout Gd. Hoffman come to cut brush, continue south. At 4582.50 set hub and tack. At 5664.85 set hub and tack. 7154.25 set hub and tack. At 7920 I look for post set by Curo for the corners to sec 32+33 but do not find it. Quit for night.

Thursday Feb 25, 1915. We go to the south trap line between secs 32+33, 138-30, and try to locate stake. Mr. J. Rice had seen the stake but was not able to locate it. I find old bearing trees for which I have no field notes, so go to the line between secs 19+30--138-30 and continue our line W. from hub 1155.50; At 2366.50 set hub and tack. At 2490 enter swamp. At 3960 leave swamp. At 4421.85 set hub and tack. At 4867 set hub and tack. At 5065.50, the iron cor. to sec 19+30 established by Curo on the range line sets N 22.00 ft. The length of the whole line just run is 5068.80 ft. U.S. Chain and equals 5065.50 ft, My Chain being 3.30 ft short, my chain. Correcting back each corner goes .000652 of a foot East for each foot west my chain, and .00432 off a foot N for each foot I have chained W. At hub 5064 W. I chain E 1.72 ft. to 2638.28 W, thence N 1139 ft., where I drive a 20¢ spike for the true $\frac{1}{4}$ cor. between secs 19+30, T-138-R30, with new bearings as follows: J.P. 7, N. 74° 30' E 267.70 ft. distant oak 4 N, 37° 22' E, 82.30 ft. var. 9° E. Over the spike I set a pine post marked "True $\frac{1}{4}$ Cor. bet. secs 19+30, T-138-R30 set by Curo per Gorman". Correcting balance of line hub 173.25 W goes N .75 ft. off to true line. Hub 1155.50 W goes N 15.00.

Hub 4421.85 goes N 19.10 ft. Hub 4867.00 goes N 21.02 true line. Quit for night.

Feb. 26, 1915, starting at the corner post to secs. 21, 22, 27+28, Trap 138, R30, Hoffman Gd. Trout Apeman, Eastwood and Gorman chaining. Gorman transitman. Run a random line N, var. 8° setting stake every 300 ft. At 934 set hub and tack. At 1157 set hub and tack. At 1357 intersect road running east and west, and from this point a road also runs north. I find by off setting 14 ft. to the east I can run N along the graded road on off set random line I set hub at 1800 N and at 2100 set hub, at 2622 the true $\frac{1}{4}$ corner between secs 21+22 sets east 21.50 ft.

Correcting back.

The random line first started if continued start N would miss the $\frac{1}{4}$ corner between 21+22, 35.50 ft. to the west. The correction for this would be .01354 of a foot east for each foot N, minus the off set. Hub 934 goes E 12.65 ft. to true line. Hub 1357 goes E 18.37 ft. to true line. Hub 1800 goes E 24.37 minus 14 foot off set, equals 10.37 ft. Hub 2100 goes E 28.43 minus the 14 foot off set equals 14.43 ft. to true line. Quit for night. N.D. GORMAN. Transitman.

Saturday Feb 27, 1915. I walked to Pine River to see Curo about field notes. We work on notes until 2 P.M. and walk back to Mildred. N.D. Gorman.

Sunday Feb 28, 1915. I go to south town line between secs 32+34, 138-30, where we find a corner post set by Deputy County Surveyor, Moulster. Continue a random line S between secs 32+33 and at 7880 S we find the corner sets E 64 ft. -

Correcting Back.

Establishing the corner to secs 28, 29, 32, 33, 138-30, from hub on east and west random line at 8100 W I chain E along random line 194.11 to 7905.89, W which is 1.40 ft. W. of the N+5 random line.

From hub 26.35 on N & S random line I chain N 8.33 ft. to 2626.67 ft. S, thence W. 1.40 ft. where I set the true corner to secs 28, 29, 32 & 33, T. 138-30, where I drive a spike in the ground with the following bearing trees: Jam 4, S 54° W, 46.05 ft., Poplar S N 11° 27' W, 139.50 ft., at 9° variation. This corner sets 27.10 ft. S of the E & W random line.

To establish the 1/4 corner between secs 32 & 33, I set up transit on point on the random line 52.53.34 ft. S of the 1/4 cor. between secs 28 & 29 and 2626.67 ft. S of the true corner to secs 28, 29, 32 & 33, and run E 31.30 ft., where I drive a spike in the ground for the true 1/4 cor. bet. secs. 32 & 33 with the following bearing trees. Tam 75, 73° 55' W, 112.35 ft. Balsam 71, 38° 15' W, 100.40 ft. var 9°. Over this spike I set a 4x4 post braced on three sides and marked "True 1/4 cor. between secs 32 & 33".

In establishing the true 1/4 cor. between sec 28 & 33, 138-30, I begin at a point on the random line 54 ft. W. and chain E along the transit line to a point 5269.48 ft. W, thence S 19.10 ft. where I drive a spike for the true 1/4 cor. between secs 28 & 33 with the following bearing trees: Norway Pine, S, 13° 45' E, 57.20 ft. Poplar, N 20° 47' W, 4.20 ft. var 9°. Over the spike I set a pine post marked "True 1/4 cor. between sec. 28 & 33, 138-30". Trout and Gorman work. Quit for night.

Monday Mar. 1, 1915. A.D. Trout chainman. N.D. Gorman transit and chains. Establishing the 1/4 cor. between secs 33 & 34, 138-30. At a point on random line 79.50 ft. S I chain E 52.32 ft. to the true 1/4 cor. between secs 33 & 34, in correcting the balance of this line each hub goes .013235 off a foot E for each foot it is south, plus 17.25. Hub 62.48.10 S on random line is 948.10 ft. S of the corner to section 27, 28, 33 & 34, and goes E 29.80 ft. to true line. Hub 84.73.50 is 3193.50 S of the corner to secs, 27, 28, 33 & 34 and goes E 59.25 ft. Hub 90.91.40 S is 4791.40 ft. S of the corner to sec. 27, 28, 33 & 34 and goes E 79.66 ft. to true line. Quit at 4 P.M. and take train to Hackmeack. N.D. Gorman, Deputy County Surveyor.

Friday May 7, 1915. As the ground has thawed out I go to Pine River Stop. to set Iron Monuments and road center stakes. Take train from Walker to Mildred; R.R. fare 54 cents. Arrive in Mildred and call John Seef by phone, who drives to Mildred with iron monuments. Gorman and A.D. Trout set iron monuments, being galvanized iron pipe, 2 1/4 inches in diameter by 4 ft long as follows: At the S.W. Cor. of 34, being the SE cor. of sec 33 on the S boundary of Twp. 138-30, we pull up the spike and put in its place a galvanized iron pipe, 2 1/4 inches thick by 4 ft. long, set its full length in the ground for the true corner. At the Cor. to secs 27, 28, 33 & 34, 138-30, we pull up the spike and put in its place galvanized iron pipe, 2 1/4 inches thick by 4 ft. long set in the ground its full length, for the true corner. At the 1/4 cor. between secs 27 & 28, we pull up the spike and put in its place a 2 1/4 inch by 4 ft. galvanized iron pipe set its full length in the ground. N.D. Gorman, Deputy County Surveyor, Cass County, Minn.

Saturday May 8 1915. N.D. Gorman and A.D. Trout continue setting iron monuments. We use A.D. Trout's house and wagon. At the cor to secs 21, 22, 27 & 28, 138-30, we set a 2 1/4 inch by 4 ft. long galvanized iron pipe, its full length in the ground for the true section corner. At the 1/4 cor. between secs. 21 & 22 we set a 2 1/4 inch by 4 ft. long galvanized iron pipe its full length

in the ground for the true 1/4 cor. At the 1/4 cor. between secs 21+28 we set a 2 1/4 inch by 4 ft. galvanized iron pipe its full length in the ground for the true 1/4 corner. At the 1/4 cor. between secs 19-30 we set a 2 1/4 inch by 4 ft. galvanized iron pipe its full length in the ground for the true 1/4 corner. At the 1/4 cor. between secs 33+34, we set a 2 1/4 inch by 4 ft. galvanized iron pipe its full length in the ground for the true 1/4 corner. The town-board refuse to have any more iron sets.

May 14, 1915. N.D. Gorman and A.D. Trout, set road center as follows: At 3092.40 S on random line between secs 27+28, chain E 10 ft. and set stake for road center. At 5222.90 S chain E 17.01 and set stake for road center. At 5300 the iron section corner sets E 17.25 ft. At 5700 S chain E 23.54. Set stake on section line between 33+34. At 6000 S chain E 26.51 set stake on section line. At 6600 S chain E 34.4, set stake on section line. At 6900 chain E 38.42, set stake on section line, for road center. Stay with Trout.

N.D. Gorman, Deputy County Surveyor.
John W. Curo, County Surveyor.

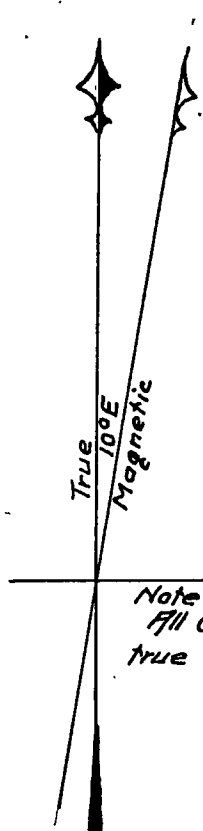
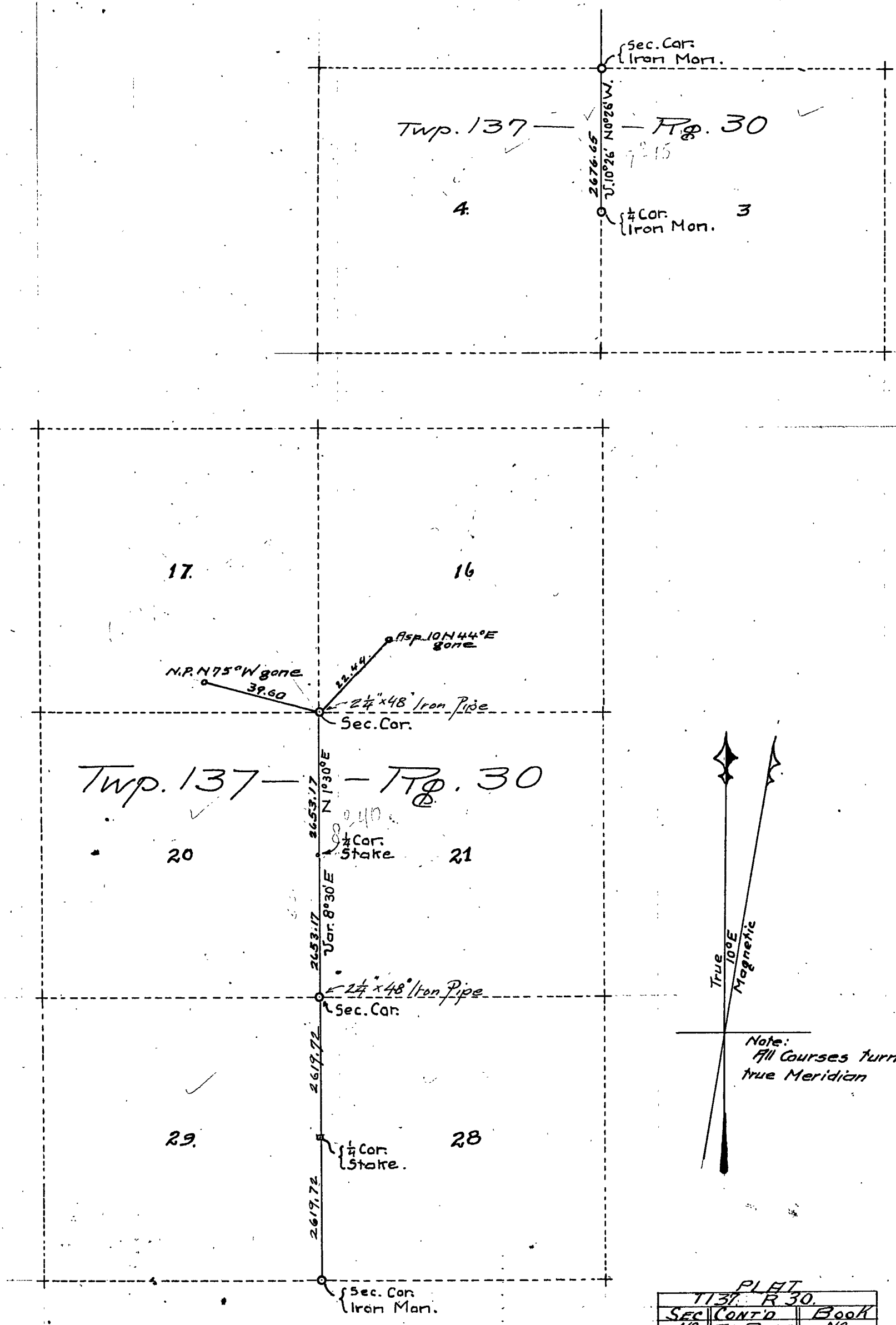
Surveyed Feb. 15, 1915 to May 14th, 1915.
Recorded June 7th, 1916.

NOTES
T/38 - R30.

SEC NO.	CONT'D TO PAGE	BOOK NO.
19		
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PLAT B
TWP 137. RANGE 30
SECTIONS. 3. 4. 16. 17. 20. 21. 28. 29.

SURVEY RECORD No 266.



Note:
All Courses turned from
True Meridian

PLAT
TWP 137. R 30.

SEC No	CONT'D TO PAGE	BOOK No
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Twp. 137-N. Rg. 30 W.- 5TH P.M.
 SEC'S. 3-4-16-17-20-21-28-29

Field notes of the survey of township roads and the establishment of new corners and iron monuments in sections 3, 4, 16, 17, 20, 21, 28, 29. Twp 137-R. 30 as surveyed by and under the direction of John W. Curo, County surveyor, Cass County, Minnesota, assisted by N.D. Gorman, Deputy County surveyor.

Feb. 17, 1915. N.D. Gorman, transitman, assisted by Albert Eastvold, A. Hoffman and A.D. Trout. Run south 1628.55 ft. set hub and tack, near the corner to secs 3+4 on the N boundary of Twp 137-30, where U.S. notes call for a post and the following bearing trees: White Pine 16, N 13° E, 213 links. Asp. 6 N 14° W, 59 links. Asp. 6 S, 5° W, 27 links, Asp. 5 S, 3° E 33 links, no trace could be found so we go to the iron 1/4 corner on the N side of sec 3 and chain west along the state road to the 1/4 corner stake on the N side of sec 4 and find the distance to be 5272.20 ft. Set up transit on hill and line in flagman at 2636.10 and set temporary corner on town line between secs 3+4. I met Mr. Corrie who said there is an Oak stake as permanent cor. to secs 3+4. He helps us locate the stake and we find it 2 ft. N out of line with 1/4 cor. on the N side of secs 3+4, and sets 2632.20 ft. from the 1/4 cor. in the N side of sec 3, and 2640 ft. E of the 1/4 cor. on the N side of sec 4. I continue our random line south and find it missed the corner stake between secs 3+4, a distance of 87.40 ft. to the west, and the distance to the cor. to secs 21, 22, 27+28, of the Twp. N is 10,600.

Feb. 24, 1915. Gorman, Eastvold, J. Adamson, Trout and Hoffman. Run line S 7920 ft. and look for the post set by Curo for the cor. to secs 4+5, Twp 137-30, but do not find it.

Feb. 25, 1915. We go to the same cor. where a Mr. J. Rice claims to have seen it. Mr. Rice is not able to locate the stake. I find old bearing trees for which I have no notes. N.D. Gorman.

Saturday Feb. 27, 1915. I walked to Pine River to see Curo about field notes of this cor.

Feb. 28, 1915. I go south to the Twp. line where I find the post set by Deputy County surveyor, Moulster, and County Surveyor, Curo, for the true cor. to secs 3+4 on the N boundary of Twp. 137-30. By continuing our random line S we find that at 7880 ft. S. of the 1/4 cor. between secs 28+29 of the Twp. N. This cor. sets E 64 ft. N.D. Gorman.

May 7, 1915. N.D. Gorman and A.D. Trout go to the NW cor. of sec 3, being the SE cor. of sec 4 on the N boundary of Twp 137-30, where we place a galvanized iron pipe 2 1/4 inches thick by 4 ft. long, set its full length in the ground for the true corner. The above work was done while making surveys for Pine River Twp in Twp 138-30.

Monday May 17, 1915. I am working for Welden Twp. in the establishment of wagon roads & sec. corners and leave Pine River at 10:39 A.M. R.R. fare 17 cents. Arrive at Jenkins where I meet Alf Olson. He sends me to George Ellis and I begin surveying road in sec. 20 of the Twp. E.

May 18, 1915. N.D. Gorman, transitman, assisted by B. Jokela and J. Sarkis, begin surveying Twp. road between secs 3+4, Twp. 137-30. Beginning at iron monument on N. Twp. line between secs 3+4, I off set 2 ft. W on account of a fence and run transit line S., Var. 9° 15' E. At 330.50 set hub and tack. At 707.75 set hub and tack. At 1158.75 set hub and tack. At 1554.30 set hub and tack. At 2103.60 set hub and tack. At 2635.75 set hub and tack. At 2676.65 the 1/4 cor. between secs 3+4 sets E 55.25 ft. Correcting back each hub goes E .019894 off a foot, plus 2 ft. E. for each foot it is south of the place of bearings.

Hub 330.50 goes E 6.55 plus 2 ft. equals 8.55 ft. to true line. Hub 707.60 goes E 14.02 plus 2 ft. equals 16.02 ft. to true line. Hub 1158.75 goes E 23.05 plus 2 equals 25.05 ft. to true line. Hub 1554.30 goes E 30.92 plus 2 ft. equals 32.92 to true line. Hub 2103.60 goes E 41.85 plus 2 ft. equals 43.85 to true line. Hub 2635.75 goes E 52.43 plus 2 ft. equals 54.43 to true line. 2076.65 goes E 55.25 to the true 1/4 cor. between secs 3 & 4. N. D. Gorman.

May 19, 1915. N. D. Gorman and Mr. Durnell of the Walden Town Board take Auto and go to the 1/4 Cor. between secs 3 & 4, Twp 137-39, and set a galvanized iron Monument 2 1/4 inches thick by 4 ft. long, set its full length in the ground in a bed of cement and concrete. In P.M. leave Pine River for Pete Anderson's farm to start survey of road between sec, 20, 21, 28 & 29. T. 137-R-30.

Thursday May 20, 1915. Start survey for road. N. D. Gorman, transitman and Chain. Pete Anderson Chainman. A. Anderson, Atman. B. Olson - Atman. Go to the cor. to secs 20, 21, 28 & 29, where U.S. Notes call for a post and the following bearing trees: Asp. 8 N, 35 W 57 links distant, Asp. 9 N, 18° E, 70 links distant. Dry Bir. 6, S 60° E, 22 links distant. Bur Oak 85 37° W, 138 links, I find the stump of the Bur Oak still standing. There is a tree of the old blaze. Pete Anderson & J. Johnson will testify that they saw scribe marks before blaze was destroyed. I set this cor. from the Bur Oak stump and place a flag at this corner, and another flag I place a mile S at the iron monument at Cor. to sec 28, 29, 32 & 33. Twp 137-30. Then work transit on line between the two flags and set road center hub about every 600 ft. the entire distance N & S between secs 28 & 29. At 2619.72 being half way between the two section corners, I established the true 1/4 cor. between secs 28 & 29 - 137-30. N. D. Gorman, Deputy County Surveyor.

May 21, 1915. N. D. Gorman transit and Chain. P. O. M. Anderson - chainman. A. Anderson and B. Olson Atman. Beginning at the cor. of secs 16, 17, 20 & 21, 137-30, corner is marked by large gray stone which is recognized by land owners as being the correct corner, from which I run a transit line S var 8° 40' E. At 423.60 set hub and tack. At 735.75 set hub and tack. At 1601.20 set hub and tack. At 2280.90 set hub and tack. At 3158.30 set hub and tack. At 3919.90 set hub and tack. At 4386.25 set hub and tack. At 5306.35 the cor. to secs 20, 21, 28 & 29 sets W. 14 ft. Correcting back each hub goes .00 2638 off a foot west for each foot it is south. Hub at 423.60 goes W 1.12 ft. to true line. Hub at 735.75 goes W 1.95 ft. to true line. Hub at 1601.20 goes W 4.22 ft. to true line. Hub 2280.90 goes W 6.01 ft. to true line. Hub at 2653.17 goes W 7 ft. where we establish the true 1/4 cor. between secs 20 & 21, Twp 137-R-30, and drive a 1x12 inch iron pipe. Hub at 3158.30 goes W 8.33 ft. to true line. Hub at 3919.90 goes W 10.33 ft. to true line. Hub at 4386.25 goes W 11.57 to true line. Hub at 5396.35 goes W 14 ft. to the true cor. to secs 20, 21, 28 & 29. I set 2 1/4 by 48' galvanized iron monuments at the corner to secs 20, 21, 28 & 29 and at the cor to secs 16, 17, 20 & 21, Twp 137-R-30. N. D. Gorman, Deputy County Surveyor, Cass County, Minnesota

Survey Made Feb. 17, 1915,
to May 21, 1915.
Recorded - June 9th, 1916.

NOTES
T137-R30.

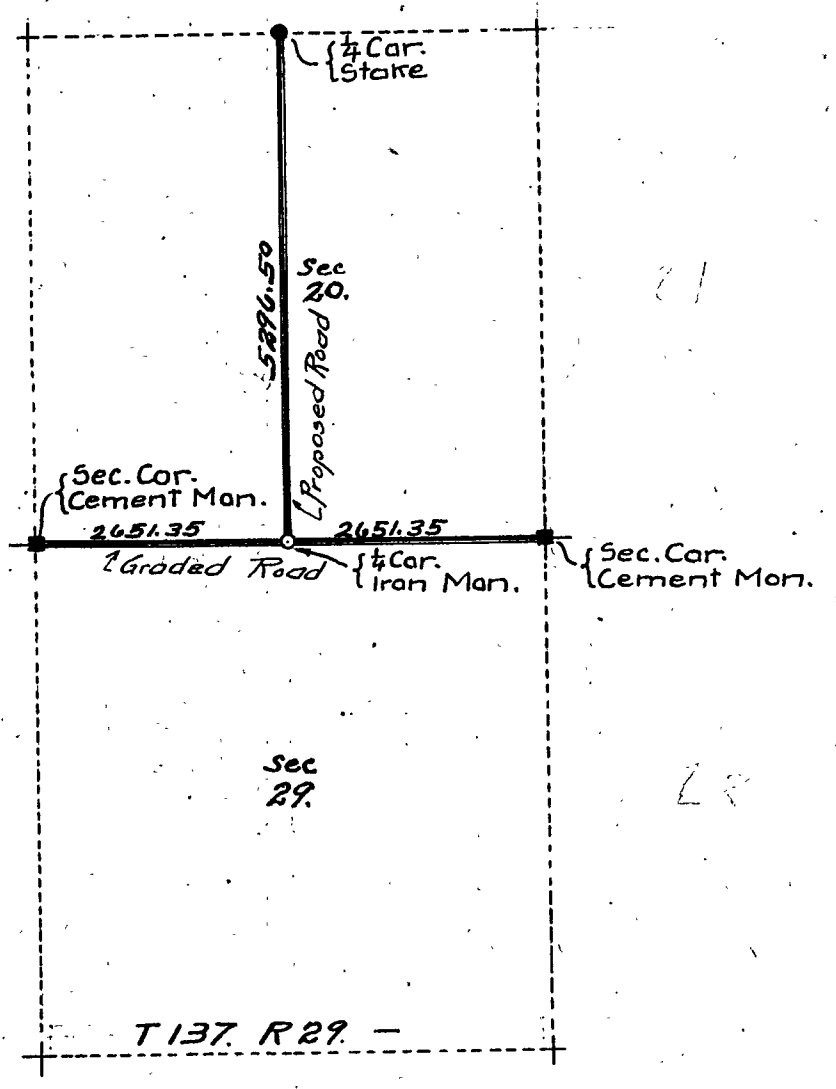
SEC NO	CONF'D TO PAGE	BOOK NO
3		
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16		
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SURVEY RECORD No 267.

PLAT.

TWP 137 RG 29.
SECTION. 20. 29.
SCALE 1. INCH = 2000 FT.



Jan 9-1916

PLAT		
137 R29		
SEC NO	CONT'D TO PAGE	BOOK NO
20		
29		

Twp. 137-Rg. 29-Secs. 20 & 29

Twp. 137-29

Sections 20-29

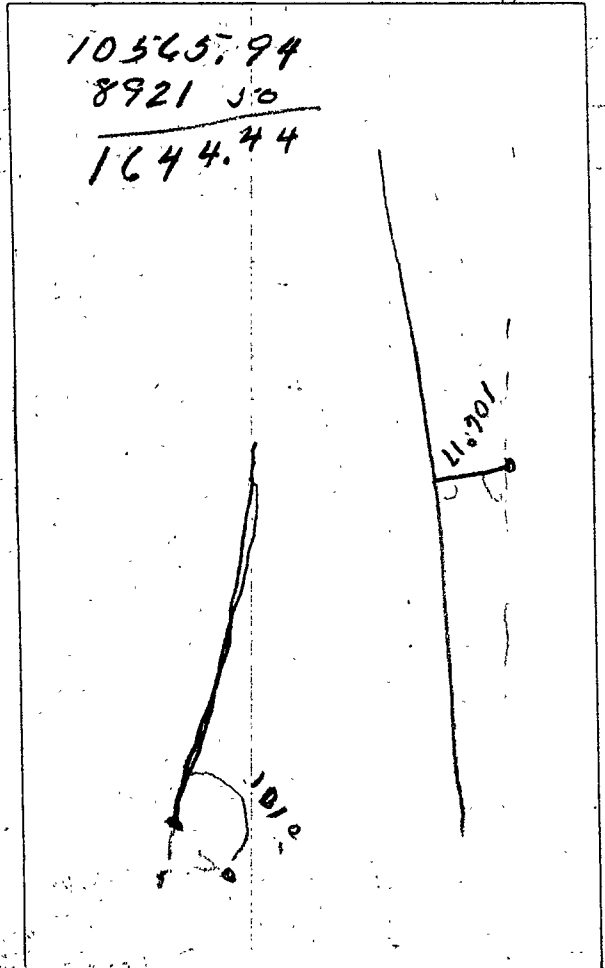
Field notes of the survey of Twp roads and establishment of new corners and iron monuments in secs 20 and 29. Twp 137-R-29, as surveyed for Walden Twp. Cass County, Minnesota, by and under the direction of John W. Curo, County Surveyor, Assisted by N. D. Gorman, Deputy County Surveyor.

Monday May 17, 1915. N. D. Gorman leaves Pine River at 10:39 A.M. R.R. fare 17 cents. Arrive in Jenkins where I met Alf Olson who sends me to George Ellis and I begin surveying road in sec. 20 Twp. 137-29. N. D. Gorman, transit man & chainman. B. Jokela, A. Jokela, C. Sarkiho, and S. Sarkiho assisting. Beginning at the cement monument being the cor. to secs 20, 21, 28 & 29, T. 137-29. I chain west along road to the cement monument being the cor. to secs 19, 20, 29 & 30, 137-29, distance being 5302.75 ft. Setting flags on both ends of the line I work transit on line and establish the 1/4 cor. between secs 20 & 29 half way between the sec. corner, being 2651.35 ft. in either direction. I drive a 2 1/8 inch poplar stake and place stone for this 1/4 cor. from which I run a transit line N thru sec 20. At 523.00 set hub and tack. At 896.50 set hub and tack. At 1559.35 set hub and tack. At 2200.00 set hub and tack. At 2450 enter swamp. At 4435 enter poplar ridge. At 4600 enter swamp. At 5296.50 the 1/4 cor. between secs 20 & 29 where west 49.30 ft. in ten inches of water. N. D. Gorman, Deputy County Surveyor.

Tuesday May 18, 1915. N. D. Gorman transit man and chain. B. Jokela Chainman. A. Jokela and S. Sarkiho - Assmen. Correcting back on N & S. center line of sec 20, 137-29; each hub goes .00930992 off a foot W for each foot N. Hub at 2200 goes W 2'0.47 ft. to true line. Hub at 1559.35 goes W 14.21 ft. to true line. Hub at 896.50 goes W 8.34 ft. to true line. Hub at 523.00 goes W 4.86 ft. to true line. Finished at noon and leave for Pine River. Peterson's livery.

Saturday May 22, 1915. P.O.M. Anderson and N. D. Gorman go to the 1/4 cor. between secs 20 & 29. Twp 137-R-29, where they set a 2 1/4 by 4 1/8 inch galvanized iron pipe its full length in the ground for the true 1/4 cor. Gorman goes to Jenkins and takes 3:30 P.M. train to Pine River. N. D. Gorman, Deputy County Surveyor. Cass County, Minnesota.

Survey Made May 17, 1915
to May 22, 1915
Recorded June 9th, 1916.



NOTES
137-29

Sec	Cont'd	Book
N ^o	To Page	N ^o
20		
29		

SURVEY RECORD N° 268.

TWP. 140-RG. 28 - SEC'S 18-19-20 & 30.

TWP. 140-RG. 29 - SEC'S 13-24-25.

Twp. 140 - Rg. 28.

Sections 18, 19, 20 & 30.

Twp. 140 - Rg. 29.

Sections 13, 24 & 25.

Field notes of the survey of a Township road for Wabedo township thru sections 19 & 30, Twp. 140, Rg. 28 and the establishment of lines and new corners in sections 18, 19, 20 & 30, Twp. 140, Rg. 28, & sections 13, 24, & 25, of Township 140, Rg. 29. The road to be surveyed begins at the Southwest Corner of sec 19, T. 140, Rg. 28 and runs E. $\frac{1}{2}$ mile to the $\frac{1}{4}$ cor. thence North $\frac{1}{4}$ mile to the $\frac{1}{16}$ corner, thence East $\frac{1}{2}$ mile to the $\frac{1}{16}$ corner, thence North $\frac{1}{4}$ mile to the $\frac{1}{4}$ corner between sections 19 and 20, Twp. 140, Rg. 28, being $\frac{1}{4}$ miles or more.

Surveyed by E. B. Horst, Deputy County Surveyor and assistant engineer, under the direction of John W. Curo, County Surveyor.

July 13th, 1916, E. B. Horst leaves Walker at 12.47 A.M. with field notes previously prepared by Curo. Arrive in Pine River about 2 o'clock A.M. Leave Pine River by stage at 7 A.M. Arrive at Lynn C. Richardson's on the Murphy farm on Govt lot 7, sec 19, T. 140, Rg. 28, at 6 P.M. Horst with Richardson and team drive to the H. W. Moats' farm in NE $\frac{1}{4}$ of SE $\frac{1}{4}$ sec 17, same Twp. to look up a crew.

Supper and over night with Richardson.

July 14th, 1916. E. B. Horst. transitman with Hurley transit and chainmen with 300 foot Chicago steel tape.

Isaac Norman chain ^{2d} flagman. H. W. Moats and Emil Mork Akmen as the corner to secs 19, 24, 25 & 30, is lost we go to Meander Corner No. 44 of Twp. 140, Rg. 28 being No. 5 for Twp. 140, Rg. 29, and on the Range line on North side of Mule Lake between fractional sections 25 and 30, where U. S. Notes call for a stake and bearing trees as follows,

Norway Pine 20, N 60° W, 10 links distant (= 6.60 feet)

Norway Pine —, N 80° E 16 links distant (= 10.56 feet).

We find the stump of each old bearing tree, the NE stump being dimly marked and the NW stump being plainly marked from which we set a wood hub by flat chain from face of each old stump, the hub falls in the edge of the water at which point we find an old stake previously established for the true Meander Corner. We establish a witness corner for this Meander by driving a wood post 9 feet North and we mark new bearings to our witness corner as follows,

Oak 4 inches, bears N 10° E, 14.90 feet distant

Poplar 5 " bears N 9° W 24.50 ft. distant, Var. 9° .

From the true Meander we run North on $8^{\circ} 21'$ Variation, following a graded road, which intersects the range line about 100 ft. North of the Meander. At 1200 ft. set hub and tack in road, at 2050.00 set hub and tack in road center. From which point the road bears N 61° E we continue our transit line cutting.

hush about 1/2 mile North and quit for night. Horst stay with Richardson.

Saturday July 15-1916. Same crew, continue North. At 2497 set hub and tack, At 2587.86 we look for the corner to sections 19, 24, 25 & 30, on range line between Town 140, Rg. 28 and Twp. 140 - Rg. 29, where U. S. Notes call for a post and the following bearing trees;

Rock Maple 10 N 51° E 16 links (= 11.56 feet).

Rock Maple 7 N 3° W 46 links (= 30.36 feet).

Rock Maple 8 S 15° E 57 links (= 37.62 feet).

Casswood 10 S 8° W 53 links (= 34.98 feet).

All appear to be gone and we continue North, At 3306.60 set hub and tack, at 3665.50 set hub and tack, at 3903.10 set hub and tack, at 4145.00 set hub and tack, at 4672.60 set hub and tack, at 5050.00 enter slough, at 5150. leave slough. At 5227.86 we look for the 1/4 corner between sections 19 & 24, where U. S. Notes call for a stake and the following bearing trees

Aspen 6 N 70° E, 13 links (= 8.58 ft.)

Aspen 8 S 73° W, 7 links (= 4.62 ft.)

All appear to be gone and we continue North, At 5150 leave slough, At 5563 set hub, at 5700 enter slough, at 5800 leave slough, at 6326.60 set hub and tack, at 6888.50 set hub and tack. At 7350 enter sink hole bog, at 7590 leave sink hole, At 7611.00 set hub and tack on sea wall on south shore of Woman Lake, and quit for night. Horst still staying with S. C. Richardson.

Sunday July 16, 1916 do not work, Horst at Richardson's.

Monday July 17th 1916, E. B. Horst transit and chainman. Isaac Norman flag and chain, James Douglas and H. W. Moats and Emil Mork, axemen. At a point on our random line 2503.40 North, Horst starts Douglas and Moats cutting a random line East, then with Mork & Norman go to hub 7611.00 N. and look for the corner to secs, 18, 19, 13 & 24 on range line between Twp. 140, Rg. 28 and 140, Rg. 29, where U. S. Notes call for a post and the following bearing trees.

Rock Maple 5 N 76° E 38 links (= 25.08 feet).

Pine 30 N 86° W 53 links (= 34.98 feet).

Rock Maple 6 S 54° E 54 links (= 34.32 feet).

White Birch 6 S 25° W 19 links (= 12.54 feet).

we find the 30 inch old Pine bearing tree standing dead but plainly marked, and we also find the 5 inch rock Maple standing dead but plainly marked. We also find the old U. S. post badly rotted, and a post about 10 years old probably set by Curo in the same hole with the U. S. post and from these old posts the old U. S. bearing trees stand correct for course and distance, these old posts set in the neck of the Northeast part of a swamp, in place of two old posts we set a new post 4x4 inches thru by about 6 feet long, driven about 4 feet into the swampy land. At this corner the swamp is very soft but has a sandy bottom about three feet down.

We mark new bearings as follows:-

Norway Pine stub about 15 ft. tall, 28 thru, bears N. 60° 30' W 32.80 feet distant in section 13.

White Pine stub 24 inches thru and about 12 ft. tall bears

208.

No 268 CONT'D

N 60° E, 53.50 feet distant in section 18. Maple stub 10 inches thru, and about 6 feet tall, bears N 79° 30' E, 39.00 ft. in section 18. White Pine stub 20 inches thru and 30 ft. tall bears S 21° 31' E, 53.20 ft. distance in section 19. Courses and distance taken to a tack in flat spot at base of bearings
Mar 9°

At Meander Corner No. 15, on the East bank of Woman Lake between secs. 13 & 24, Twp. 140 - Range 29, T. S. notes call for a post and the following bearing trees -

We find the stump of the 10 inch Norway Pine which has been sawed off about 18 inches high, standing at edge of Lake bank, the stump is burned over but the "73.7" marks show plainly. The 5 inch Pinch bearing tree is gone, having apparently been washed away with the lake shore. This corner should be preserved as it will soon be gone, but as the Town Board will not take time to set it as it is 361 links West of their Township line, we pass it up.

we go back to our transit line and set over hub 7611.00 North, from which point the corner to sections 18, 19, 13 & 24, bears S 83° 37' E, 118.00 feet distant and from a point on our random line 7598.00 North, the true corner sets East 117.30 feet.

we go south to a point on our random line 5050.70 ft. N. from which we run E. 77.97 ft. where we place the true 1/4 corner bet. sections 19 & 24 on range line bet. Twp. 140, Rgs 28 & 29. where we drive a stake with new bearing trees as follows: Poplar 63.39° W 63.20 ft. distant in sec. 24. Wh. Pine stub in section 19 bears S 65° E 37.70 ft. distant. Then going south on our random line to a point 2503.40 ft. N and run E 58.65 ft. where we find a post previously established by County Surveyor Curo, for the corner to sections, 19, 24, 25 & 30 on range line bet. Twp. 140, Rgs 28 & 29 with new bearing trees as follows: Wh. Birch 9 bears N 39° 30' E, 63.20 ft. distant, Wh. Pine stub bears S 28° 30' W, 40.20 ft. distant. No other trees near.

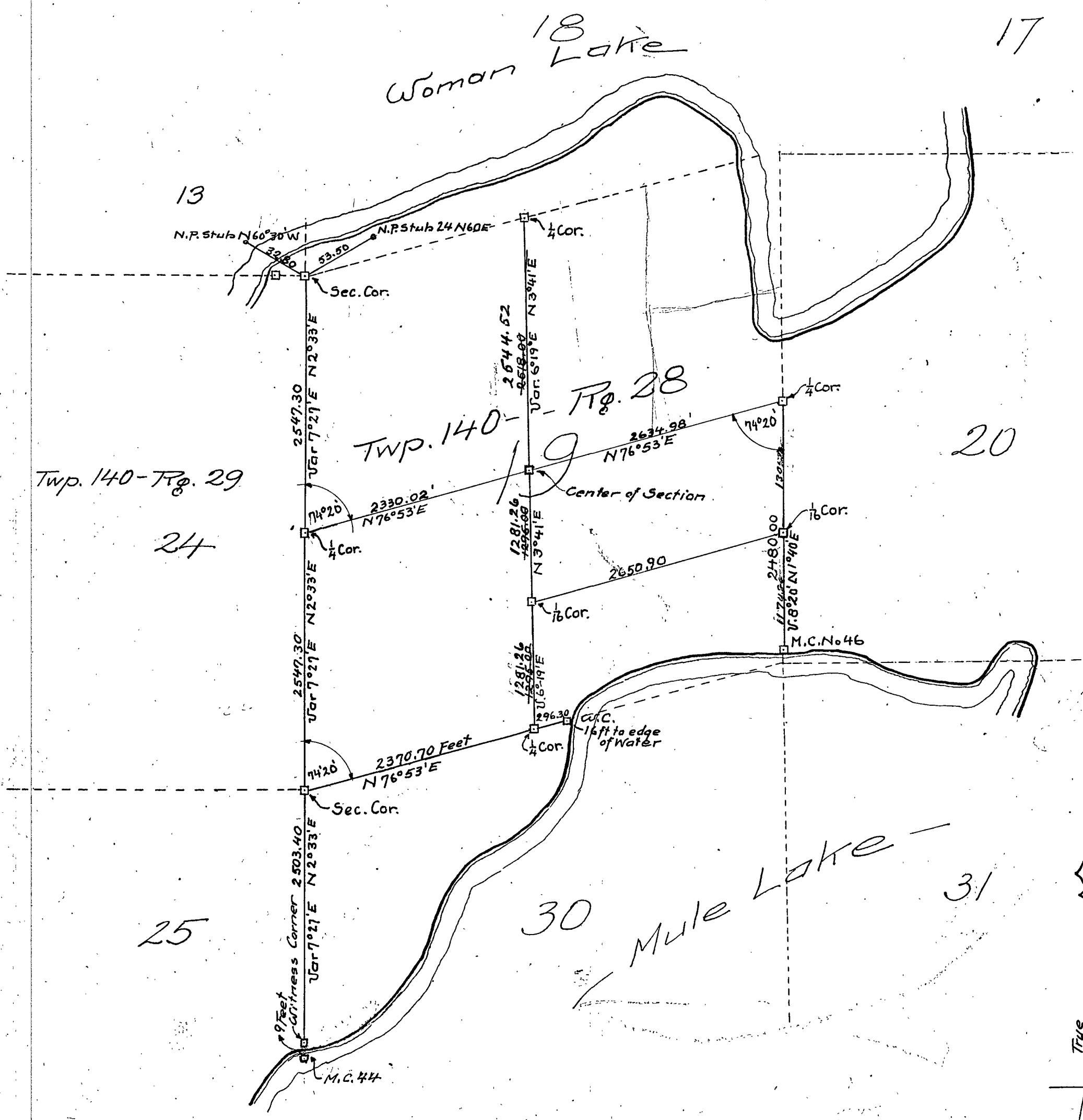
In the correction of this line we have chained .015438 of a foot East for each foot North of the point of beginning. And the length of the entire line North & South bet. secs. 19, 24, 25 & 30 equals .96489 of a foot, my chain, for each foot Government chain.

Beginning at the S.W. corner of 19, Twp. 140, Rg. 28, just established we run East on 6° Variation, over line being cut by Moats and Douglas for the random line bet. secs. 19 & 30. At 694.80 set hub and tack. At 678.00 The Pine River - Songville Stage Road bears NE & SW, At 1160.00 we again cross the Pine River - Songville stage road which bears NW & SE. At 1225.00 cross same road, which bears NE & SW, At 1450.90 set hub and tack. At 1889 we are near Mule Lake, where we turn an angle of 60° to the left and run North-easterly along the west shore of Mule Lake. Quit for night. Horst still staying with Richardson's.

PLAT.

TWP. 140-RG. 29-SEC'S 13-24-25

TWP. 140-RG. 28-SEC'S 18-19-20-30



True 10° Magnetic

 Note: All Courses turned from true Meridian

Tuesday July 18th, 1916. E. B. Horst, transitman, doing his own chaining. Harold Gamble flag and chain man. Isaac Norman, James Douglas, & Arthur Hyde - Axemen. Continue our line along west shore of Mule Lake. At 123.20 set hub & tack. At 430.10 set hub and tack. At 895.70 set hub & tack. At 1327.50 set hub and tack, from which we turn 43° to the right and run North-eastaly along W. shore of Mule Lake. At 296.40 set hub and tack. At 650. enter Mule Lake. At 850 leave lake. At 1196.00 set hub and tack on hill. At 1850 enter field. At 1961.60 set hub & tack. At 2490.30 set hub and tack, at end of line.

We go to Meander Corner No. 46. where U.S. notes call for a post & the following bearing trees: Tampk $7N 29^\circ E 28$ links distant (= equals 18.48 ft.) Dry Tampk $9N 37^\circ W 17$ links (= 11.22 ft.) We find the old post and the two tamarac stumps which are badly burnt but which check for course and distant with the post, we also find an old pine tree blaze North and South, for the line bet. secs 19 & 20.

We set a new Oak post for M.C. No. 46. on the N. side of Mule Lake bet. secs. 19 & 20, Twp. 140, Rg. 28, with new bearings as follows: Poplar stump 6 North 3.50 ft. Wh. Pine stump $10N 45^\circ E 9.30$ ft. distant. Nor. Pine stump $10N 25^\circ W 8.00$ ft. Then take transit N. to the top of hill, back sight on M.C. just set and run North bet. secs. 19 & 20 on $8^\circ 20'$ variation. At 311.30 set hub and tack & quit for night.

Emil Mork assisted us in P.M. as flag man. Horst still staying with Richardson.

Wednesday July 19, 1916. E. B. Horst transitman, also chaining. H. Gamble flag and chain. Hyde, Douglas & Norman Axemen. Continue North. At 520.70 we intersect our traverse line run yesterday, coming up from the SW. At station 2440.70 at which point the S.W. angle reads $71^\circ 45'$.

At 647.00 N. we intersect the Pine River-Songville Road. At 886.50 set hub and tack. At 1561.00 set hub and tack. At 1699.00 set hub and tack. At 1784 enter slough. At 1869 leave same. At 2004.00 set hub and tack. At 2433.00 set hub and tack. At 2480.00 set hub and tack, from which point the $\frac{1}{4}$ corner bet. secs 19 & 20, T. 140, Rg. 28, bears East 8 ft. At this point U.S. Notes call for a post and the following bearing trees: W.P. $28 S 40^\circ E 6$ links distant. (= 3.96 ft.) Nor. Pine $18 N 55^\circ E 41$ links, we find the stump of the 28' White Pine plainly marked from which we set the $\frac{1}{4}$ corner, but the 18' Wh. Pine appears to be gone having been dug out by the building of a logging road, years ago. We re-mark the old 28' White Pine stump, "B. P." Quit for night. Horst still at Richardson.

Thursday July 20, 1916. Same crew. Beginning at hub 2480.00 ft. N. of M.C. No. 46. Back sight South along transit line and turn telescope $74^\circ 20'$ to the right, for SW. angle & cut random for E. & W. Center line of sec 19, T. 140, Rg. 28. At 8 ft. West of $\frac{1}{4}$ cor. a hub. At 165 set hub at foot of hill. At 521.70 hub on top of hill. At 994.00 set hub and tack.

At 1616.50 hub, 2311.30-hub. 2742.50-hub. 3219.60 hub. 3982.00-hub. 4815.00-hub. 4965.00 hub, from which the $\frac{1}{4}$ cor. just established on correction (= .003226) Emil Mark comes to help us at 9:30 A.M. Horst staying, still, with Richardson.

Friday July 21, 1916. Horst transit man, also Chinking, H. Gamble flag & Chain Norman, Hyde & Douglas Axemen.

At station 2684.60 on random line W. of the $\frac{1}{4}$ corner on E. side of 19, I set transit over hub back sight easterly, turn telescope $74^{\circ}20'$ to the left, for the NE angle and to establish the North and South center line of 19, I run North $\frac{1}{2}$ mile & look for the $\frac{1}{4}$ cor. bet. secs 18 & 19. T. 140, Rq 28, where U.S. Notes call for a post and the following bearing trees: W.P. 305 20 E 55 links, W. Pine 20 N 15 W 28 links, we find a 30' W. Pine stump lying on the ground and badly burnt, from which we set the $\frac{1}{4}$ cor. as near as we can tell from the original position of the stump & roots of same. Set stake & mark new bearings as follows: Based 16 N 71° W 53.80 ft. distant. W. Oak 65 $73^{\circ}30'$ W 34.30 ft. distant. I take transit to random line & set hub on random line at a 90° angle from the $\frac{1}{4}$ cor., which sets 100.50 ft. E. of the random line. We begin chaining at this hub using it as station 0.00 from which we chain S. along cut out transit line. At 150.50 set hub. At 728.70 set hub. At 1049.80 set hub. At 1635.00 set hub. At 2156.50 set hub. At 2365.00 set hub. At 2522.40 set hub, on E. & W. $\frac{1}{4}$ line, over which I set transit and back sight North on line just run, & run line south to $\frac{1}{4}$ cor. on S. side of 19. At 3052.60 set hub. At 3744.50 set hub. At 4000.00 enter slough. At 4185 leave same. At 4294.50 North end of barn on line. At 4310.50 spike on top of barn. At 4316.80 South end of barn. At 4597.80 set hub. At 4727.00 Center of Pine River-Songville Road. At 4911.30 set hub. At 5108.00 an old stake on line. Evidently the point where the U. S. Corner had been. Quit for night. Horst still with Richardson.

Saturday July 22, 1916. E. B. Horst, Isaac Norman & James Douglas look for the $\frac{1}{4}$ cor. bet. secs. 19 & 30, T. 140, Rq. 28, where U. S. Notes call for a post and the following bearing trees: - W. Pine 16 N 10 E 18 or 18. W. Pine 20 S 30 W 21. We find the S.W. stump badly burnt and the NE stump completely rotted, but checks with notes at 78 links distant. The old stake we found being at the point called for. I set a new stake and mark new bearings as follows: Based 18 N 52° E 56.20 ft. dist., Maple 10 S 41 E 30.70 ft. dist. We go to the S.W. cor. of sec. 19, T. 140, Rq. 28, where we set transit & from our random line running east we turn $13^{\circ}52'$ to the left & run easterly along the true line bet. secs. 19 & 30. At 200.40 set hub. At 675.00 set hub. At 1020.00 enter swamp. At 1240.00 leave same. At 1542.60 set hub. At 1873.00 intersect Pine River-Songville Road. At 1904.70 set hub. At 2293.00 we cross our 60° angle line. At 2370.70 intersect the $\frac{1}{4}$ cor. bet. secs 19 & 30. At 2667.00 set W.C. to M.C. No. 45, bet. secs. 19 & 30, & on the W. bank of Mule Lake with bearing trees as follows: - B. Oak 5 S 24° W 41.70 ft. B. Oak 5 N 84° W 25.60 ft. At 2683.00 enter west edge of Mule Lake & quit for night. Horst still at Richardson.

Sunday July 23, 1916. Horst all day at S. C. Richardson.

Monday July 24, 1916. E. B. Horst and Isaac Norman working. At a point on our North and South random line 3813.00 ft. South we chain E 24.90 feet and set the $\frac{1}{4}$ cor. the center of the south half of sec 19 where we drive

2 post with the following bearings: W. Pine stub 18 N 43 E 54.20 ft. W. Birch 5 N 71 W 73.00 ft.
 I back sight from this corner to a hub on random line, then turn angle 15° 17' North
 and cut line easterly along the South 16th line thru center of SE quarter of sec.
 19, Twp. 140. Rg. 28, then we return to the 1/16 corner in the center of the S. half of
 section 19 and chain easterly along the line just cut. At 321.10 hub and tack.
 At 585.00 enter meadow. At 825.00 leave meadow. At 1179.60 hub and tack; At
 1300.00 enter meadow. At 1600.00 leave meadow. At 1750.00 enter meadow.
 At 1850.00 leave meadow. At 1972.10 hub and tack; At 2647.10 set hub and tack,
 for point of intersection on section line between section 19 and 20, T. 140. Rg. 28.
 At 1163.00 ft. North of meander corner No. 46.

The distance from meander corner No. 46 North to the 1/4 cor. bet. secs. 19 & 20, T. 140-28,
 is 2508.00 ft. U.S. chain and = 2480.00 my chain. One foot Government chain equals
 .9888 of a foot my chain. Correcting the random line between sec. 19 & 20,
 each hub goes East .003225 of a foot East for each foot it is N. of M.C. No. 46. At
 station 1774.80 ft. North of M.C. No. 46 we chain E 3.80 ft. where we set a post for
 the S. 1/16 cor. bet. secs. 19 & 20, T. 140-28, with new bearings as follows: W. Birch 6
 SE, 68.00 ft. distant. W. Pine 16, SW, 279.00 ft. dist. The distance from this 1/16 cor. West
 to 1/16 cor. in center of S. half of section 19 is 2650.90 ft. Quit for night.

Tuesday July 25th, 1916. E.B. Horst & Isaac Norman setting road centers in
 correcting lines in section 19, T. 140, Rg. 28. In the correction of the N. & S. Center
 line each hub goes .01967 of a foot E for each foot it is North.

In the correcting of the E & W random line thru the center of 19, each hub
 goes .003226 of a foot N, minus 4 ft., for each foot it is West. The reason we sub.
 track 4 ft. from the correction of each hub, is because our E & W random line begins
 at a point 4 ft. North of the quarter post on the E side of section 19.

To put in the center of section 19 we begin at the point of intersection, where our
 random lines cross, from which we chain E 49.90 ft., thence N 4.66 ft. At which
 point we set post for the true center with bearing trees as follows: Pop. 4 bears SE
 14.70 ft., Pop. 4 bears NE 58.60 ft.

We then go to S. 1/16 line running East from the North and south quarter line and
 set road center. The correction for this line equals .00264 of a foot North for each
 foot East. At hub 321.10 E we chain North .86 of a foot; At hub 1179.60 E we chain
 North 3.10 ft. At hub 1972.10 E, we chain N 5.20 ft. at which points we set stakes
 for the road center along the true 1/16 line. Raining slowly all day. This com-
 pletes the field work of the survey, unless the Town Board decides to have iron
 monuments set at some future date.

Wednesday July 26, 1916. E.B. Horst returns to Walker, via stage from Long-
 ville to Pontoria and Pine River, and M. & I. R.R. to Walker. Arrived 5:00 P.M.

Recorded July 27 1916

NOTES
T140-R28

Sec No	CONT'D To PAGE	BOOK No
18		
19		
20		
30		

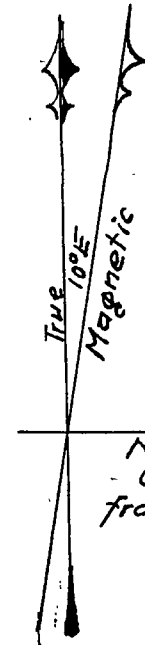
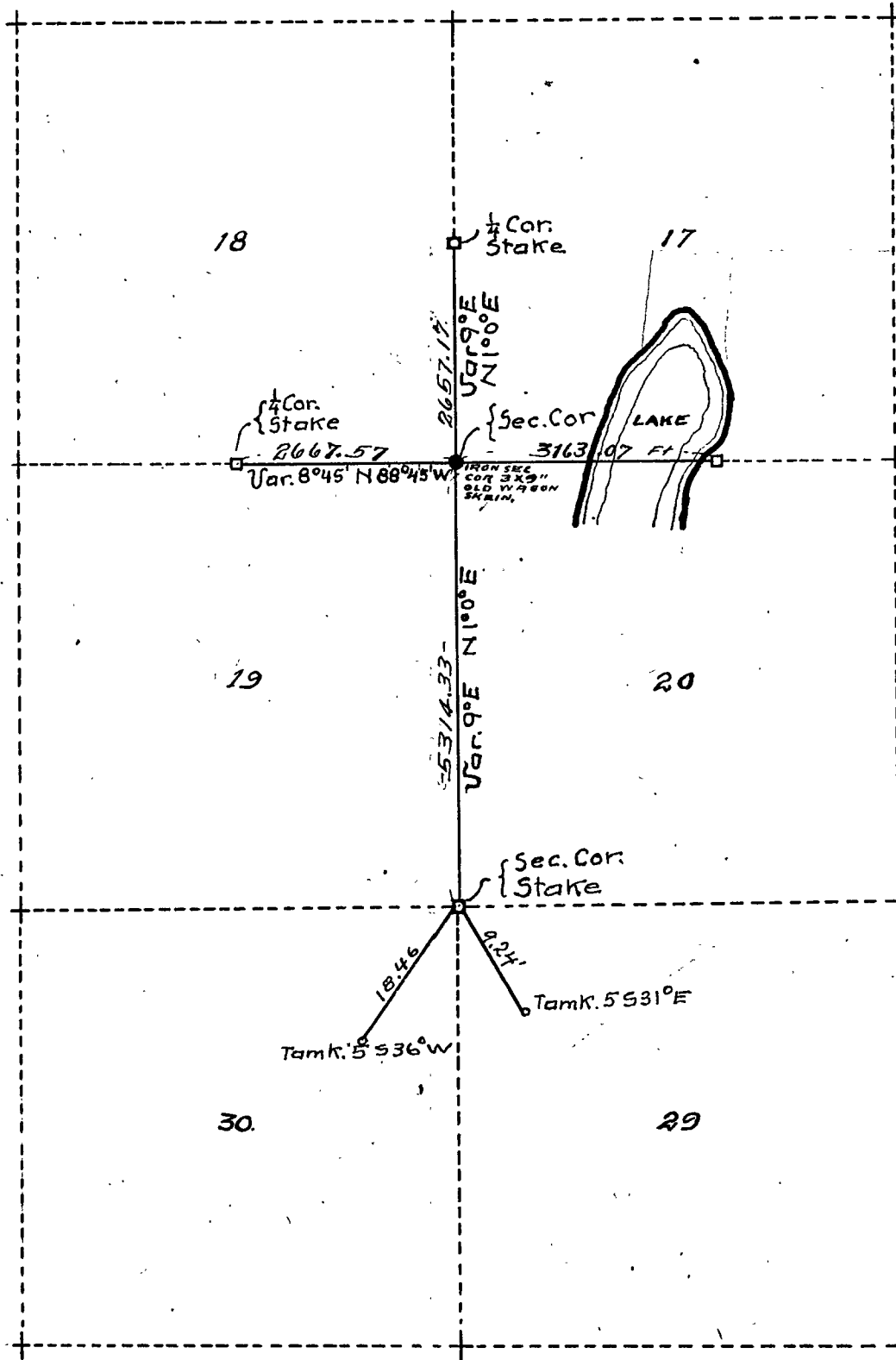
NOTES
T140-R29

Sec No	CONT'D To PAGE	BOOK No
13		
24		
25		

SURVEY RECORD No 269.

PLAT
TWP 135 RG 29.
SECTIONS 17. 18. 19. 20. 29. 30.

SCALE 1 INCH = 2000 FEET



Note:
Courses are turned from true Meridian

SURVEY RECORD No 269.

TWP 135. RANGE 29.
Sections. 17.18.19.20.29.30.

Twp. 135-29.

Sections-- 17, 18, 19, 20, 29 & 30.

Field notes of the survey and establishment of new corners in a part of secs. 17, 18, 19, 20, 29 & 30, T. 135, R. 29, Cass County Minnesota as surveyed by John W. Curo, County Surveyor.

Friday June 8th, 1906. John W. Curo transitman, with new Keuffel and Esser Engineer's transit, 100 ft. Chicago Steel tape & plumb. bob. Curo chaining. Swore in Charles Kelly and John Williams as chainmen, Jas. Carson - Axeman.

We go to the corner of sections 19, 20, 29 & 30, T. 135-29, where U. S. notes call for a post and the following bearing trees: Asp. 14 N 22° E, 93 lks. dist. Tank 4, N 51° W, 32 lks. dist. Tank 5 S, 36° W 28 lks. dist., Tank 5 S 31° E, 14 lks. dist. We find a post recently established by Wm H. Hallett, for the corner to secs. 29 & 30, but as this post appears to be about a rod to far North we hunt for the stumps of the old U. S. bearing trees. We find the stump of the old 14" Asp. plainly marked with the old Government timber-scribe marks from which we run S 22° W 93 lks. = (61.58 ft.) at which point we find the old government stake 1 ft. below the surface of the water in the moss in a big bog. From the old government stake we run S 36° W 28 lks. = (18.48 ft.) in section 30, and look for the old 5 inch tank bearing tree, but find nothing except old roots, we also run S 31° E 14 lks. equals (9.24 ft.) in section 29, but find only the roots of the old 5 inch tank. Called for in the notes. We also run N 51° W, 32 lks. = (21.12 ft.) in section 19, but do not find the 4 inch tank. called for in the notes. We set a new 4x4 post at the point where we find the old Government stake for the true corner to secs. 19, 20, 29 & 30, which checks out with what remains of the old government bearing trees. As the stake set by Wm H. Hallett is about a rod to far North, and as Hallett is near I go get him and show him both stakes; he decides my stake is correct and pulls up his stake and places it along side of the new stake I have just set for the true corner. Beginning at this point we run North on 9° variation bet. secs. 19 & 20, at 1215. ft. set hub and tack on hill. At 1320 set temporary 1/16 corner. Quit for night.

June 9th, 1906. Same crew. Continue North. At 2517.60 set hub & tack. At 2640 we look for the 1/4 corner bet. secs. 19 & 20, where U. S. notes call for a post and the following bearing trees: Asp. 16, N 27 1/4° W, 850 lks. dist., we find nothing except a stake which is probably wrong as it was set by Hallett. Continue North. At 3416.60 ft. set hub and tack. At 3920 ft. set hub and tack. At 5280 ft. set hub and tack for temporary corner to sections 17, 18, 19 & 20, T. 135-R. 29, where U. S. notes call for a post and the following bearing trees: Nor. Pine 18, N 22° E, 25 lks. dist., W.P. 12 N, 31° W 98 lks. dist. All appear to be gone and we continue North.

At 5326.30 ft. set hub and tack. At 6600. ft. set hub and tack for temporary 1/16 corner. At 7920 ft. set hub and tack for temporary 1/4 cor. bet. secs. 17 & 18 where U. S. notes call for a post and the following bearing trees: Oak 15 N, 66° W, 16 lks. = (10.56 ft.), W. Birch 6, N 85° E, 50 lks. dist. = (33.00 ft.). We find the Oak standing plainly marked but with some of the figures & markings.

Chopped out, apparently having been cut out to-day. The marks of the old Government timber-scribe still plainly show on the chips. From this oak we establish the true $\frac{1}{4}$ cor. bet. secs. 17 & 18 where we drive a 4x4 stake. Setting transit over hub 7920, the $\frac{1}{4}$ cor. just established bears North $8^{\circ}10'E$, 52.10 ft. dist. or 51.50 ft. North and 7.40 ft. East, making the total one mile and a half, just run 51.50 ft. longer than the government chain calls for. Total length 7971.50 ft. Correcting back: Hub 6600 goes North $8^{\circ}10'E$, 43.42 ft. which fixes its position as to distance N. Hub 5280 goes N. $8^{\circ}10'E$, 34.73 ft. which fixes its position as to distance North. This puts corrected hubs No. 6600 & 5280, on a true line bet. established corners N & S, and at the same time at the true proportionate distance as to N & S. Quit for night.

June 10, 1906. Same crew. As we are to establish the corner to secs. 17, 18, 19 & 20, T. 135-29, from measurements North, South, East & West we go to M.C. No. 54, where U.S. notes call for a post and the following bearing trees: Blk. Pine $5N, 9^{\circ}30'W$, no distance given. Blk. P. & S, $33^{\circ}W$, no distance given. All appear to be gone, and we cross over lake to M.C. No. 51 on East side of lake bet. fractional secs. 17 & 20, where U.S. notes call for a post and the following bearing trees: Nor. Pine $15S 72^{\circ}E$, 33 lks. dist. = (21.78 ft.), Nor. Pine $16N 26^{\circ}W$, 5 lks. dist. = (3.30 ft.). We tri-angulate the distance west across the lake and as a check on our tri-angulation we run a line of 90° angles around the North end of the lake, as follows: From M.C. No. 51, I run North on $8^{\circ}45'$ var. and set hub on North end of lake, then turn 90° to the left and run West 1600.65 ft. and set hub, then turn 90° angle to the left and run South, chaining along the West side of the lake, 2310 ft. and set hub on W. shore of lake 1600.65 ft. W. of M.C. No. 51, over which I set the transit, back sight on M.C. No. 51, and run West 1529.73 ft. added to 1600.65 = 3130.38 ft. W. of M.C. No. 51 where I set temporary cor. to secs. 17, 18, 19 & 20 and drive hub & tack. Continue West, 2640, to 5770.38 feet West of M.C. No. 51, and set hub and tack for temporary $\frac{1}{4}$ Cor. bet. sections 18 & 19, T. 135, Rg. 29, where U.S. notes call for a post and the following bearing trees: Oak $12, S 29^{\circ}W$, 40 links (= 26.40 ft.) distant, Lind. $9, N 9^{\circ}E$, 32 links (= 21.12 ft.) distant. We find the stump of the 12 inch Oak, plainly marked but lying on its side, and as the roots of the stump still cling to the ground we are able to locate the exact original location from which we establish the point for the true $\frac{1}{4}$ corner, we are unable to drive a stake at this point as the $\frac{1}{4}$ corner on top of a big stone just below the surface, with transit set on hub 5770.38 the stone $\frac{1}{4}$ cor. bet. secs. 18 & 19 stands to the right $53^{\circ}40'$, 101.70 ft. dist., or North $36^{\circ}20'W$, 101.70 ft., or 82.02 ft. N. and 60.26 ft. W. 5770.38 U.S. chain equals 5830.64 ft. my chain, or 60.26 ft. longer than government chain calls for. Correcting back at hub 3130.38 we run N $36^{\circ}20'W$, 55.17 ft. where we set a hub and tack, which fixes the position as to E. & W. for the corner to secs. 17, 18, 19 & 20 and from this hub I run South a few feet to an intersection with an E. & W. line which runs thru a hub we established yesterday, fixing the position of this corner as to N & S, at which point we placed the true section corner to sections 17, 18, 19 & 20, T. 135-Rg. 29, established by proportionate chainage, North, South, East and West, where we set an iron monument being an old iron wagon-

No 269. continued

spein about 3×9 inch size set its full length in the ground with the small end up and mark new bearings as follows: Pine stump 15 inches in diameter bears $N 10^{\circ} E$ 58.80 ft. dist., J. Pine Tree 8 inches in diameter bears $S 26^{\circ} 15' W$, 119.30 ft. dist. An old stake set by Hallett stands about 24 feet west and about 13 feet north. JUNE 11th 1906.

From the true corner to secs. 17, 18, 19 + 20, we set a line of hubs & stakes East along the true sec. line to the West shore of the lake near Meander Corner No. 54. the line running east strikes a building owned by Mrs. Carson.

Survey begun June 8th, 1906., Completed June 11th, 1906.
Recorded ^{July 28} July 24th, 1916.

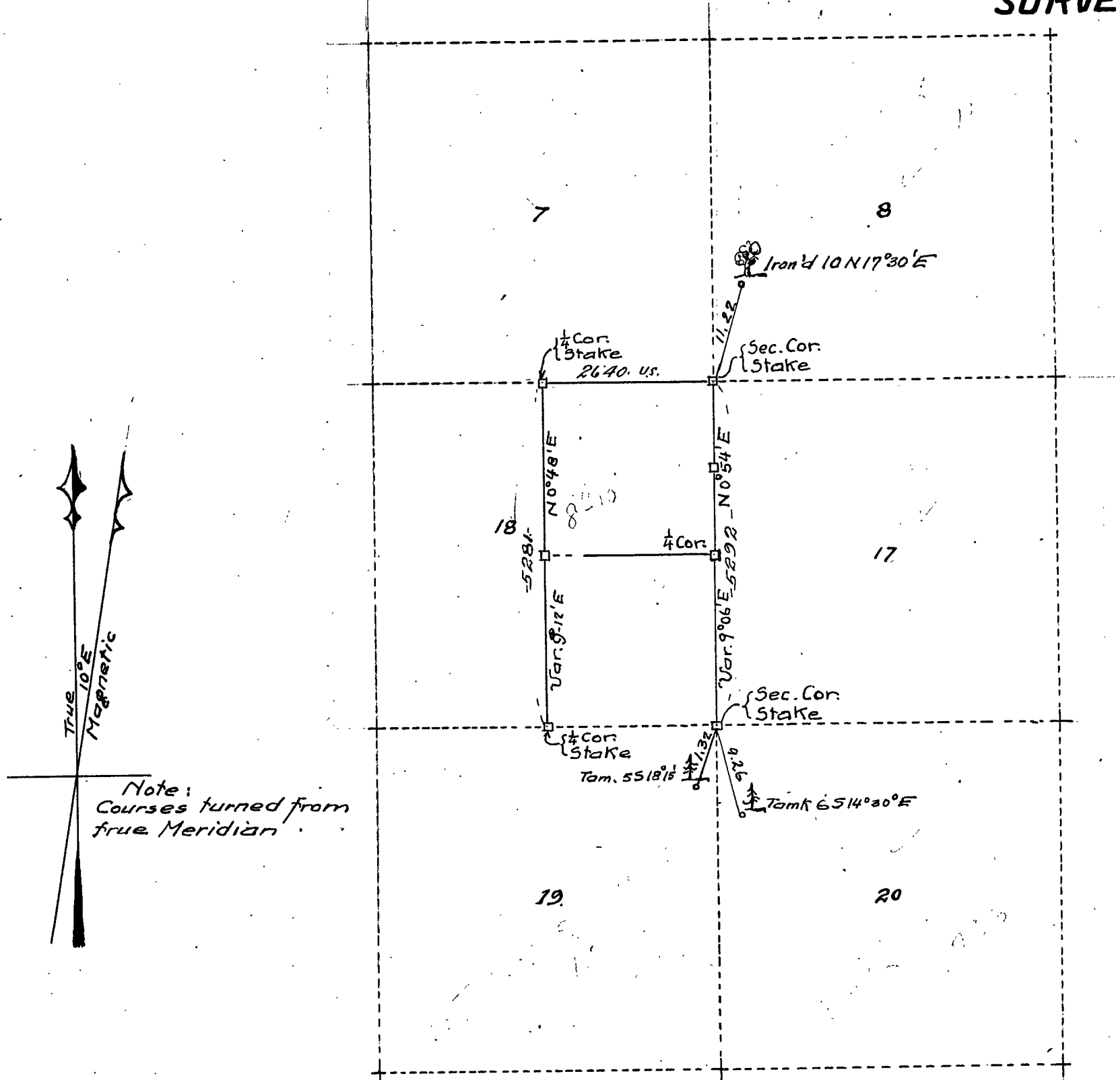
County Surveyor, Cass Co. Minn.

July 28 - 1916

PLAT
TWP. 140 RG. 27.
Sections. 7. 8. 17. 18. 19. 20.

SCALE ONE INCH - 2000 FEET.

SURVEY RECORD No 270.



TWP 140 RG 27.
Sections 7, 8, 17, 18, 19, 20.

T. 140-27.

Sections 7, 8, 17, 18, 19 & 20.

Field Notes of the survey of a part of sections 7, 8, 17, 18, 19, 20, Township 140, Range 27, and the finding of old U.S. Government Corners and establishment of new corners where the old ones were supposed to be lost, as surveyed by John W. Curo, County Surveyor of Cass County Minnesota.

March 19, 1906. I am working for "Cap" Withrell and am assisted by him and Mark Snell in this survey and use a Keuffel & Esser Engineer's transit, 100. foot steel tape and plumb. bob.

We go to corner to sections 7, 8, 17, 18, where we establish the corner from old U.S. bearing trees and as the $\frac{1}{4}$ corner between sections 7 & 18 is supposed to be lost we run a compass line west and chain roughly thru the brush a distance of 2640. feet and look for the $\frac{1}{4}$ post where U.S. notes call for a post and bearing trees as follows:

Asp. 8 N 72° W, 72 links distant. Birch 9, S 10° 40' E 10 links distant.

All we find is the remains of the badly rotted Birch which is a short stump, plainly marked "B. T." and from this stump we set a stake for the true $\frac{1}{4}$ corner between sections 7 and 18, T. 140, Rg. 27,

from which we run a transit line South on 8° 10' E Variation, cutting out all trees and brush: At 333.20 feet set hub and tack:

At 660. feet set hub and tack: At 921.30 set hub and tack: At 1320 feet

set hub and tack: At 1523.40 feet set hub and tack: At 1980. feet set hub

and tack: At 2320. feet set hub and tack: 2474.20 feet set hub and tack.

At 3832. set hub and tack: At 4160 set hub and tack: At 4836 feet set hub and

tack: At 5280 feet set hub and tack, from which the $\frac{1}{4}$ corner between sec-

tions 18 and 19, bears S 89° 30' E, 94.50 feet distant, At this point, being the $\frac{1}{4}$

corner between sections 18 and 19, T. 140, Rg. 27. U.S. notes call for a post and

the following bearing trees: Asp. 7, S 6° 50' E, 18 links distant: Asp. 6, N 51° 15' W,

35 links distant. We find the remains of the old bearing trees from which

we set a new stake; Correcting back, at hub 2640, South, we run

S 89° 30' E, 47.25 feet and set temporary $\frac{1}{4}$ post in the center of section 18.

March 20th, 1906. Same crew working: We begin at the corner to

sections 7, 8, 17, 18, from which we run a transit line South on 8° 12' Var. E,

cutting out all trees and brush: At 660. feet set hub and tack: At 695.

feet set hub and tack: At 1224.20 feet set hub and tack; At 1320. feet set

hub and tack for temporary $\frac{1}{16}$ corner: At 1591.20 feet set hub and tack:

At 1980. feet set hub and tack: At 2138.70 feet set hub and tack: At 2640

set hub and tack for temporary $\frac{1}{4}$ corner between sections 17 and 18, where

U.S. notes call for a post and the following bearing trees: Jack Pine 8, S 84°

30' W, 35 links distant: Norway Pine 10, N 21° E 15 links distant.

All appear to be gone and we continue South: At 3740 set hub & tack: At

3960 feet set hub and tack: At 4660.70 feet set hub and tack: At 5280.

feet set hub and tack for temporary corner from which the true corner

to sections 17, 18, 19, 20, bears S 81° 37' E, 82.80 feet distant: At this point U.S.

notes call for a post and the following bearing trees:

Spruce 5, N 52° 20' E 4 links distant. Tank 5, S 18° 15' W 2 links distant.
 Tank 6, S 14° 30' E 11 links distant. Tank 6, S 51° 15' W 6 links distant.
 we find all of the trees from which we set a new stake for the
 true corner to sections 17, 18, 19, 20, T. 140, Rq. 27. Correcting back,
 we set hub 2640, S 81° 37' E 41.40 feet where we set a stake for the true 1/4
corner between sections 17 and 18, T. 140, Rq. 27.

At hub 1980. we chain S 81° 37' E 31.05 feet and set a stake to mark the
 true N+S. line. At hub 1320. we chain S 81° 37' E 20.70 feet where we
 set a stake for the true North 1/16 corner between sections 17 and 18.
 At hub 660. we chain S 81° 37' E 10.35 feet and set stake to mark the
 true North and South line.

March 21st. 1906. Same crew. Beginning at the 1/4 corner between
 sections 17 and 18, T. 140, Rq. 27. we run West on 8° variation: At 1320.
 feet set hub: At 2008, feet set hub.

Note:

I find the above field notes in an old field book which has been
 lost for years, and I record them here for the guidance of future
 surveys in the above sections, and to show the true lengths of the
 various lines and to also show that the corners were really estab-
 lished by the Government Surveyors. In case the old stakes and
 bearing trees are gone, a surveyor can relocate the same very closely
 by finding the stumps of the trees we cut down along my transit
 lines, and follow my old line to the intersection of corners and stakes.

Surveyed March 19th to 21st 1906.

July 28th 1916

B

SURVEY RECORD N^o 271.

PLAT and NOTES:
TWP 138. RG 29. Sections 3. 4.
" 139. " 29. " 33. 34.

Surveyed April 27th 1906.
 Recorded 1916.

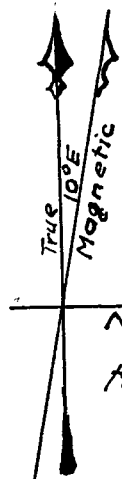
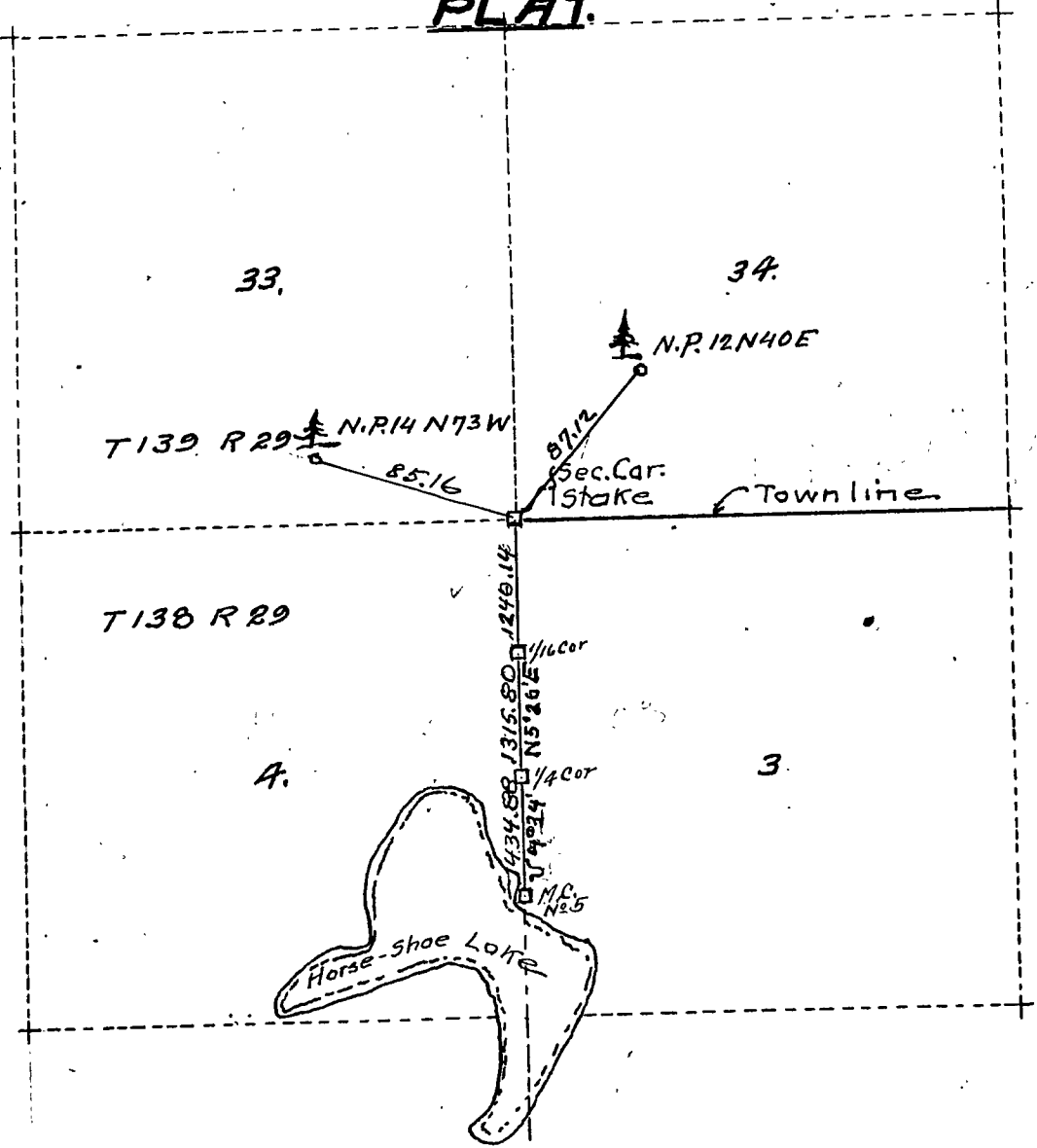
County Surveyor, Cass Co. Minn.

Field Notes of the survey of a part of sections 3 & 4, Township 138, Range 29, along the County line between Cass and Crow Wing Counties Minnesota, as surveyed by John W. Curo, County Surveyor of Cass County Minnesota, assisted by Mr. Toltzine who owned land in the above sections and wanted the line established.

April 27th, 1906. We go to the Meander Corner No. 5 on North side of Horse-Shoe Lake between sections 3 & 4, where U. S. Notes call for a post and: Black Pine 8, N. 55° W, 32 links. Black Pine 5 N 85° E, 42 links. We find both bearing trees from which we set the true N.C. and run North on 5° variation. At 119.46 set hub and tack for temporary 1/16 cor. At 199.46 enter stream which runs West: At 1019.46 leave stream: At 1439.46 set hub and tack for temporary 1/4 corner between sections 3 and 4: where U. S. notes call for a post and bearing trees as follows: Wh. Pine 24, S. 15° E, 192 links. All appear to be gone and we continue North: At 2272.76 set hub and tack: At 2759.46 set hub & tack for temporary 1/16 corner: At 3059.46 set hub and tack: At 4003.56 set hub & tack for temporary section corner to sections 3 & 4, on Township line, and from this point the true corner stands S 67° 26' E, 33.30 feet distant. We correct the line back, setting stakes at all forty corners and setting hubs and stakes on the true line. This survey is made with a new transit and 100 foot steel tape and is correct.

NOTE: I find the above field notes in an old field book which has been mislaid for years and I record the notes here for the benefit of other surveyors and a guidance to future surveys.

TWP 138. RG 29. Secs 3. 4.
 TWP 139. RG 29. Secs 33. 34.
PLAT.



Note: Course turned from true Meridian

NOTES
138-29

Sec No	CONT'D To PAGE	BOOK No
4		

139-29

33	CONT. Pg	BOOK

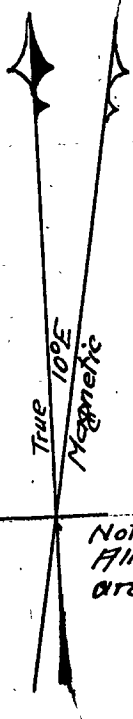
PLAT
138-29

Sec No	CONT'D To PAGE	BOOK No
4		

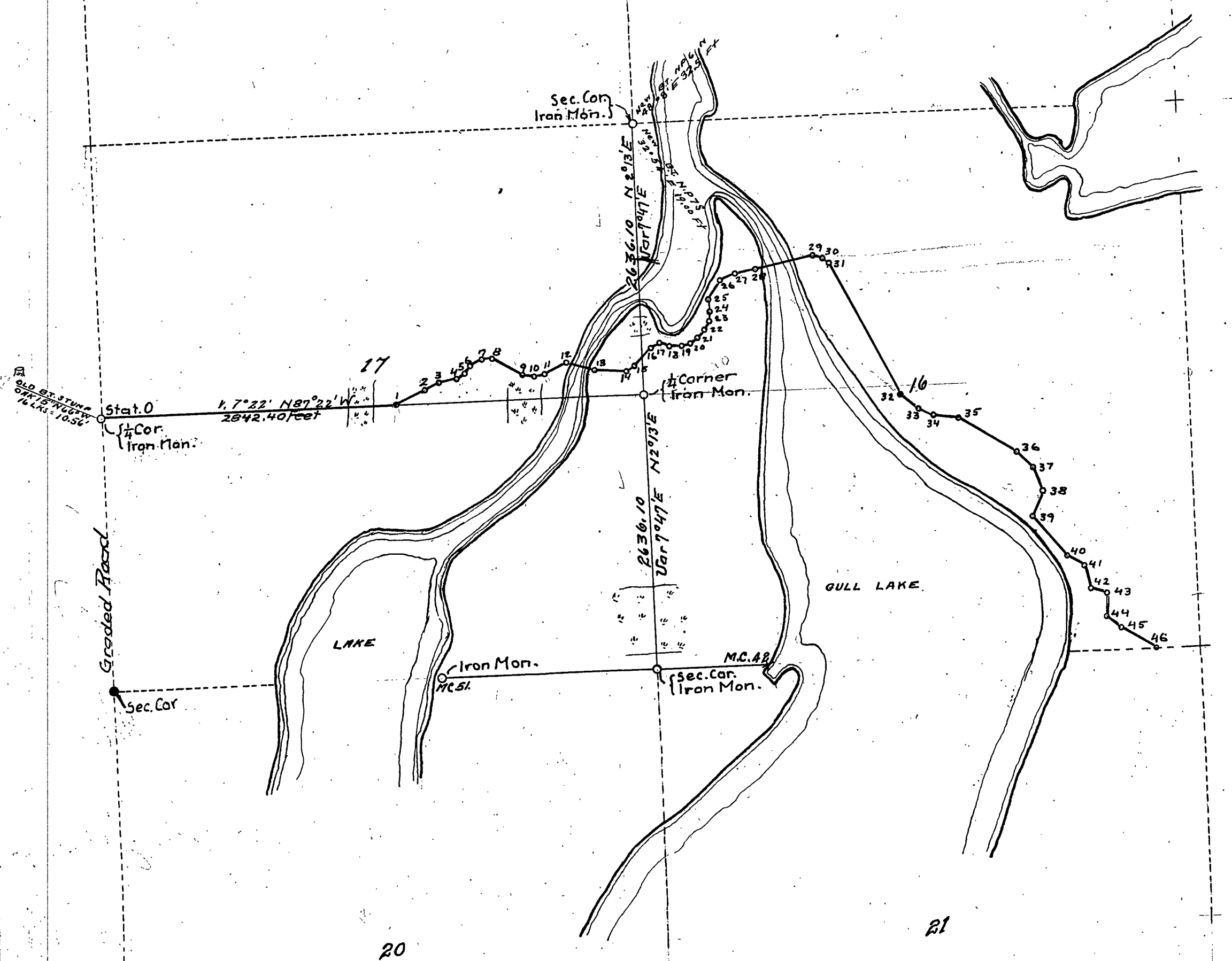
139-29

33	CONT. Pg	BOOK

SURVEY RECORD No 272
PLAT
TWP. 135. RG. 29.
Sections 8. 9. 16. 17. 20. 21.



Note:
 All Courses marked on this plat
 are turned from true Meridian.



SURVEY RECORD No 272.

TWP 135. RG 29.
SEC'S 8.9.16.17.20.21.

Field notes of the survey of a part of sections 8, 9, 16, 17, 20 and 21, Township 135, Range 29, Cass County Minn. for the purpose of establishing a township road and the establishment of iron section corners in the above sections, as surveyed by Frank A. Donner, Deputy County Surveyor of Cass Co. Minn. and examined by John W. Curo, County Surveyor. Donners Notes are as follows:

135-29, working for Home Brook Township.

April 27, 1915. Leave Hachensack on the 1.19 train for Pequot, R.R. fare 55¢ Breakfast at Taugers hotel: Call up Meidell and he says he will send a team in to take me out to Mrs. Carsons where I am to board while working for Home Brook. Dinner at Tauger Hotel, Tuttle (Town Treasurer) takes me and my outfit out to Mrs. Carsons. Hotel bill at Pequot \$1.35. Supper with Mrs. Carson. Signed - F. A. Donner.

135-29 - April 28th, 1915. Working for Home Brook. A.M. Windy. I call up Mr. Anderson and he says he will be over and he would walk over and view the road together which we did. Herbert Anderson takes up across thoroughfare with launch. We meet Mr. Knutson (Surveyor of Crow Wing County) and he shows us the route the road will take where it does not follow the old grade on account of some lots he had platted along the lake shore. We agree to follow that route altho' it does not follow the old grade. Dinner with Mrs. Carson. P.M. John Carson, Herbert Anderson and I, walk to the 1/4 corner on west side

17-18
117
E

of sec. 17, 135-29, between 17 and 18, where U.S. notes call for, viz: Oak 15, N 66° W 16: Bir. 6 N 85° E 50. We find the NW oak stump still there from which I set a 3x3x24" Aspen hub with tack, full length in the ground: for the true 1/4 corner from true 1/4 corner just set by me, I run S 89° 45' E, Variation 9°: At 4+2.10 set hub: At 6+01.20 set hub: Quit for night. Over night with Carsons, Signed F. A. Donner.

April 29th, 1915. Continue for Home Brook: A.M. We continue East: At 18+76.70 set hub: At 23.67.10 set hub: At 24 enter bog: At 26+50 leave bog: At 26+72.70 set hub: At 28+42.4 set hub: Dinner with Carsons. P.M. We continue East: At 34+11.7 set hub: At 34+58.7 set hub: At 35+93.3 set hub: At 38+75.3 set hub: At 39+70 enter Marsh: At 43 leave Marsh: At 43+94.1 set hub: Over night with Carson. Signed F. A. Donner.

14-17
111

8-9-16-17

April 30th, 1915. Continue for Home Brook: A.M. At 45+15 enter lake: At 47+75 leave lake: At 48+81.70 set hub: At 50+10 enter meadow: At 52+30 leave meadow: At 53 set hub: We look for the 1/4 section corner between sections 16 and 17, 135-29, where U.S. Notes call for viz: Norway Pine 24, S 66° E 12. Oak 8 S 54° W 17. We are unable to find any of these old B. F. S. So we row up the lake and look for the section corner of sections 8, 9, 16, 17, 135-29, where U.S. Notes call for, viz: Norway Pine 24, N 29° 30' E 197. Norway Pine 20, S 14° E 180. I find both the old stumps standing and the SE B. F. plainly marked from which I set 3x3x48 inch Oak post 24 inches in the ground for the true section corner, with new B. F. S. viz: Norway Pine 6 N 48° 8' E 32.5 feet. Norway Pine 7, S 32° 54' E 19.00 feet, with tacks. Var. 9°. Dinner with Mrs. Carson.

South

P.M. Windy. I run South from true section corner. Variation 9°

Sobert
16-17

At 6+24.9 set hub. At 8+18.6 set hub: Over night with Carsons, Signed F.A. Donner.
 May 1st 1915. Continue for Home Brook: A.M. we continue South: At 12+28.1 set hub:
 At 13+36 set hub: At 14+80 enter lake: At 17+65 leave lake: At 18+18.2 set hub:
 Dinner with Mrs. Carson: P.M. -- We continue South: At 19 enter
 swamp: At 20+70 leave swamp: At 22+25.8 set hub: At 25+3.6 set hub:
 At 29+45.3 set hub: Over night with Carsons. Signed F.A. Donner.

May 2nd 1915. Continue for Home Brook: A.M. we continue South: At 34.24 set
 hub: At 38+7.9 set hub: Dinner with Mrs. Carson.

P.M. we continue South: At 40+21.4 set hub: At 42+44.2 set hub: At 45
 enter Marsh: At 51+5 leave Marsh: At 52+64.7 set hub: Over night with Carsons.

16-17-20-21

May 3rd, 1915. Continue for Home Brook: A.M. We look for section corner of sections
 16, 17, 20 and 21, 135-29, where U.S. Notes Call for: viz: Birch $8 N 16^{\circ} E 57 = 35.64$ feet:

Birch $7 S 35^{\circ} W 4 = 2.64$ feet. Aspen $8 N 58^{\circ} W 59 = 38.93$ feet. Aspen $10 S 54^{\circ} W 66 = 43.56$
 feet. We are unable to find anything here and we quit for it starts to rain.
 Dinner with Mrs. Carson. P.M. -- As Knutson promised me that he would set
 this corner and he said he had found it, we row over to Song's but Mrs. Song
 tells me Knutson went to Brainerd and would not be back until Wednesday,
 supper and over night with Mrs. Carson. Signed F.A. Donner.

May 4th, 1915. Continue for Home Brook: A.M. I go over and check on a few
 of the old stumps that might have been the old B.T.S. but do not find any that check
 with U.S. notes. Quit for rain. Dinner with Mrs. Carson. P.M. -- We row
 across lake and get transit and set Meander Corner No. 51. From the old N.W.
 B.T. stump which is still there and plainly marked: Over night with Carsons.

14 C 51

17-20

May 5th, 1915. Continue for Home Brook, Nobody works. I am waiting to
 get some notes from Knutson: F.A. Donner.

May 6th, 1915. Continue for Home Brook. Nobody works. F.A. Donner.

May 7th, 1915. Continue for Home Brook. A.M. I call up Knutson at
 Brainerd and he gives me the distance the true section corner of sections,
 16, 17, 20 & 21, 135-29, goes south from East and West random line which he run
 from Meander Corner No. 42, to Meander Corner No. 51. Jack Carson & I go over &
 set the true section corner of sections 16, 17, 20 and 21, 135-29, on the true line
 North and South 5 feet from random line running East and West.

16-17-20-21

On the East side of sec. 17, 135-29, at 5272.20 S, the section corner (set by me)
 set West 112. feet. Correcting back on East side of sec. 17: Hub at 2636.1 goes
 West 56. feet, where I set a 4x4x36 inch aspen post for the true $\frac{1}{4}$ corner bet-
 ween sections 16 and 17, 135-29. In East and West $\frac{1}{4}$ line thru section 17,
 135-29, at 5282.8 East the $\frac{1}{4}$ corner on East side of section 17, sets South 150.30 ft.
 Dinner with Carsons. P.M. -- Correcting back on East and West $\frac{1}{4}$ line thru
 sec. 17, hub at 2842.4 goes South 80.86 feet. John Gumbrenner joins us.

Starting from true line at 2842.4 I run $22^{\circ} L 322.9$ ft. thence $1^{\circ} 30' L 174.80$
 feet: thence $15^{\circ} 15' R 181.10$ feet. thence $26^{\circ} 25' L 83.00$ feet. thence $16^{\circ} 15' L 94.00$ feet.
 Town Board comes out to look over road. Quit for rain about 4 o'clock.
 Over night with Carsons. F.A. Donner.

May 8, 1915. Continue for Home Brook. A.M. Ernest Wolf and Godlieb Zilke
 joins us: We continue traverse: thence $27^{\circ} R 137.60$ feet. thence $21^{\circ} 21' R$
 95.40 feet: thence $35^{\circ} 49' R 348.60$ feet: thence $19^{\circ} 48' L 109.00$ feet. Thence
 $21^{\circ} 35' L 120.70$ feet: thence $16^{\circ} 5' L 222.80$ feet. thence $42^{\circ} 33' R 292.70$ feet:

Cross lake, 200 feet of water: thence $10^{\circ}51' L$ 313.10 feet: thence $38^{\circ}27' L$ 100.80 feet:
 Dinner with Mrs. Carson. P.M. We continue: thence $13^{\circ}32' L$ 208.40
 feet: thence $17^{\circ} R$ 94.30 feet: thence $45^{\circ}35' R$ 102.20 feet: thence $19^{\circ}28' L$ 122.70 feet:
 thence $12^{\circ}45' L$ 82.30 feet: thence $23^{\circ}10' L$ 83.50 feet: thence $5^{\circ}47' L$ 77.40 feet: thence
 $11^{\circ}23' L$ 91.20 feet: thence $27^{\circ}18' L$ 76.50 feet: thence $7^{\circ}2' L$ 110.80 feet: thence $6^{\circ}27' R$
 200.60 feet. Quit for night. At Carsons. F. A. Donner.

May 9, 1915. Continue for Home Brook: Sunday A.M. We continue traverse:
 thence $28^{\circ}51' R$ 141.20 feet: thence $16^{\circ}40' R$ 215.00 feet: thence $1^{\circ}24' L$ 565.70 feet: Cross
 lake 270. feet across water: thence $26^{\circ}14' R$ 103.80 feet: thence $10^{\circ}15' R$ 70.40 feet:
 thence $38^{\circ}21' R$ 1427.90 feet: thence $22^{\circ}57' L$ 221.80 feet: thence $7^{\circ}15' L$ 159.40 feet,
 leave old grade: thence $25^{\circ}28' L$ 248.20 feet: thence $27^{\circ}4' R$ 651.70 feet: thence
 $11^{\circ}36' R$ 220.70 feet: thence $35^{\circ}23' R$ 229.50 feet: thence $41^{\circ}29' R$ 259.60 feet: thence
 $63^{\circ} L$ 515 feet on old grade: thence $18^{\circ}38' L$ 170.30 feet: thence $40^{\circ}12' R$ 240.00 feet:
 thence $5^{\circ}30' L$ 155.10 feet: thence $7^{\circ}25' R$ 225.00 feet: thence $48^{\circ}50' L$ 152.90 feet
 on old grade: thence $13^{\circ}30' L$ 427.10 feet on old grade: I intersect true sec-
 tion line between sections 15 and 16, 135-29, at 433 feet North of section
 corner of sections 15, 16, 21, 22, 135-29. Dinner with Carsons.

P.M. - Jack Carson & I correct 1/4 line East and West thru section 17. Hub
 at 40.21 goes South 11.43 feet: Hub at 661.2 goes South 19.47 feet: Hub at
 1876.7 goes South 53.39 feet: Hub at 2307.1 goes South 67.34 feet: Hub at
 2262.7 goes South 75.75 feet: Quit for night. With Carsons. Frank A. Donner.

May 10, 1915. Continue for Home Brook. Waiting for iron corners, Town Board
 tells me to wait and set irons. Frank A. Donner.

May 11, 1915. Continue for Home Brook: Jack Carson and I set 5 galvanized
 iron pipes with cap: One for 1/4 corner between sections 16 and 17: One for
 Meander Corner No. 51: One for section corner of sections 8, 9, 16, 17: One for 1/4
 corner between sections 17 and 18. And one for the section corner of
 sections 16, 17, 20 & 21, T. 135, R. 29. Frank A. Donner.

May 12, 1915. Continue for Home Brook A.M. we have a meeting at Fred Bressler's
 place and I have in all my bills, for survey, which are allowed. I get my
 check for \$70.96 and Mr. Tuttle takes me to Tiquot. Dinner at Sanger Hotel,
 50 cents. P.M. I take the 3.24 train for Walker. R.R. fare 80 cents. Cars gets
 on at Backus, we both go thru to Walker. Supper at Chase Hotel. Over night
 at Chase Hotel. Signed - Frank A. Donner.

Surveyed April 27th, 1915 to May 12th, 1915.
 Recorded

County Surveyor, Cass Co. Minn.

July 31-1916

SURVEY RECORD No 273.

Twp. 136. R_g 30. Sec. 5. 6. 7. 8.

T. 137. R 30. Sec. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33.

T. 136. R 31. Sec. 1. 2. 12.

T. 137. R 31. Sec 25. 35. 36.

Field Notes of the survey and establishment of new corners in secs. 5, 6, 7 & 8, Township 136, R_g 30, and secs. 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, Twp. 137, R_g 30 and secs. 1, 2, 12 Twp. 136, R_g 31, and secs. 25, 35, 36, Twp. 137, R_g 31; as surveyed by John W. Curo, County Surveyor, Cass County, Minnesota.

Tuesday Nov. 10, 1908. I am working for Walden Twp. Leave Pine River at 3 o'clock P.M., and arrive with P.O.M. Anderson, and my wife to Anderson's place in sec. 32, Twp. 137, R_g 30, where I set up my new tent in Anderson's yard, adjust transit. Supper and over night with Anderson. One day for Walden Twp. John W. Curo
 Wednesday Nov. 11, 1908. Breakfast and dinner with Anderson. Fix up tent and in P.M. move in. Supper and over night in tent. No work to-day, only test survey instruments. John W. Curo.

Thursday Nov. 12, 1908. I am working for Walden Twp., using a Keuffel & Esser transit in perfect adjustment, and a 90 foot Chicago steel tape. John Johnson, John A. Johnson, Joe Francis, Alfred Anderson and P.O.M. Anderson assisting. We go to corner of sections 29, 29, 32 & 33, Twp. 137, R_g 30, where U.S. notes call for a post and the following bearing trees: Wk. Pine 10 N 80° W, 4 links = 2.64 ft. distant, Wk. Pine 8, S 47° E, 9 lks. = 5.94 ft. dist., Wk. Pine 12 N 19° E, 51 lks. = 33.66 ft. dist., Birch 6, S 50° W, 38 lks. = 25.08 ft. dist., At this point we find the three Pine stumps of the old bearing trees but only the NE one was marked. The 6 inch Birch is gone. We set the true corner by measurement from the face of the old bearing trees stumps and drive a 1x12" iron pin for the true corner from which we run West, Variation 9° 30' E. Joe Francis, and P.O.M. Anderson chaining down an old cut out line run by Fallett. At 2640 ft. rough chain we find Fallett's stake near the 1/4 corner between sections 29 and 32, Twp. 137, R_g 30, where U.S. notes call for a post and the following bearing trees: Blk. Oak 7 N 19° E, 50 lks. = 33.00 ft. dist., Blk. Oak 9, S 52° E, 140 lks. = 92.40 ft. dist.; I find both trees standing green and plainly marked from which I set the true 1/4 corner by flat chain from the face of the B.T. marks, with transit set on true 1/4 corner the old bearing trees stand as follows: Blk. Oak, 7, bears North 12° 12' E, 33.00 ft. dist., Blk. Oak 9, S 46° 30' E, 92.40 ft., at 8° 46' Var. East.

With a back shot at the NE corner of sec. 32, and another at the true 1/4 corner just set I work transit on line between the two points and set a row of stakes the whole half mile along the section line between the NE Quarter of section 32 & SE Quarter of section 29, to mark the road center. Fallett's 1/4 post sets about one foot east of mine. P.M. Beginning at the 1/4 post between secs. 29 & 32, Twp. 137, R_g 30, we run West on 9° 30' Var. East being a transit line with row of stakes just set on North line of NE Quarter of sec. 32 for back shots, (I could not see the NE corner of sec. 32 on account of hills) At 1320 ft. set hub for temp 1/4 corner. At 1909 ft. set hub near stump. At 2640 ft. set hub and tack for temporary corner to sections 29, 30, 31 & 32, Twp. 137 - R_g 30. The true corner stands North 5° 14' W, 42.00 ft. dist. showing that there is a heavy crook in the whole mile of section line. P.O.M. Anderson and I chained this half

Mile correct with steel tape and plumb-bob, run with K and E transit, double center hubs. At this corner, being corner to secs 29, 30, 31 & 32, Twp 137, Rq. 30 U.S. notes call for a post and the following bearing trees: Wh. Pine 8, N 80° 30' E, 50 lks, = 33 ft. distant, Wh. Pine 7, N 50° W, 70 links = 46.20 ft. dist., Wh. Pine 16, S 29° E, 45 links = 29.70 distant, Asp. 12, S 61° W, 65 links = 42.90 ft. dist. The 12 inch Aspen is gone, but we find the stumps of the three Wh. Pine bearing trees, the N.E. stump is not marked, tho' Francis says he has seen the plain figures on the stump before it was burned; The distance between the NW and SE bearing trees via courses is 0.45 of a foot so long, so I proportion the measurement and set the true corner after which the three Pine stumps stand as follows: Var. 8° 46' E. Wh. Pine 7, N 50° W, 46.45 ft: Wh. Pine 16, S 29° E, 29.90 ft: to face of B.T. marks, an old stump claimed by Joe Francis, to be the old bearing trees stands N 80° 30' E, 37.00 ft. All measurements taken to face of B.T. marks. The NW stump is plainly marked B.T., but is down, burned off at roots, tho' the stump is still there. We do not use the NE stump. Correcting the North boundary of the NW Quarter of sec 32, T. 137, Rq. 30. Hub 2640 goes N 5° 14' W, 42.00 ft: Hub 1909 goes N 5° 14' W, 30.37 ft: Hub 1320 goes N 5° 14' W, 21.00 ft; where we place a short square Oak stake for John A. Johnson's true NW corner being the West 1/16 cor. between secs. 29 & 32, with new bearing trees as follows: Top 8, N (about) 10° E, 41.50 ft. to tack head, Top 6, S (about) 10° E, 55.70 ft. to tack head in flat spot at base of tree; P.O.M. Anderson and I chained this line perfect. Quit for night. Over night at home in tent.

P.O.M. & Alfred Anderson, John Alfred Johnson and John Johnson, Joe Francis and I all got in full day for Walden Twp. John W. Curo.

Friday Nov. 13, 1908. Beginning at true corner to secs. 29, 30, 31 & 32, T. 137, R. 30, we run West on 8° 30' Var. At 700 ft. set hub. At 1320 ft. set hub. for temporary 1/16 post (Joe Francis' SE corner) At 1540 ft. enter open meadow: At 1950 ft. set hub and leave meadow. At 2397.60 ft. set hub: At 2640 ft. set hub. True 1/4 corner stands S 1° 44' E, 32.20 ft. At this point being the 1/4 corner between secs. 30 & 31, T. 137, Rq. 30., Government notes call for a post and the following bearing trees, Wh. Pine 7, N 59° E 29 links. = 1914 ft.; Asp. 8 335° W, 54 lks, = 35.64 ft: We find a 1/4 post set by W.H. Hallett near the school House. At 8° 46' Var. this post is correctly placed from the NE Wh. Pine bearing tree which is still there but down the 8 inch Asp. is gone. I established new bearing trees to Hallett's post as follows: Top 10, S 6° 22' E, 35.53 ft. Top 8, S 63° 50' E, 49.93 ft. to tack heads in flat spots at base of trees. Correcting North boundary of NE quarter of section 31-137-30. Hub 2640 goes S 1° 44' E, 32.20 ft., Hub 2397.60 goes S 1° 44' E, 29.25 ft: Hub 1950 goes S 1° 44' E, 23.78 ft: Hub 1320 goes S 1° 44' E, 16.10 ft: where we set a post for the corner to Joe Francis' land, being the East 1/16 post between sections 30 & 31, with new bearing trees viz: Top 6, S about 10° W, 48.08 ft: Top 3, SE 50.70 ft to tack heads: At hub 700 runs South 1° 44' E, 8.54 ft: Quit for night. All got in full day for Walden Twp. Over night in tent.

Saturday Nov. 14, 1908. I am working for P.O.M. Anderson, John A. Johnson, John Johnson, Jacob Johnson, Nels Sevang. P.O.M. owns NE quarter of sec 32, 137-30 = 60 acres. John Alfred Johnson owns E 1/2 of NW quarter of sec 32 = 80 acres. Jacob Johnson owns E 1/2 of SE quarter sec 32 = 80 acres. Nels Sevang owns E 1/2 of SW quarter and W 1/2 of SE quarter sec 32 = 160 acres. Swiert Eikos owns SW quarter of NW quarter, and NW quarter of SW quarter, sec 32, = 80 acres, but does not live here. Land is looked after by John Johnson. NW quarter of NW quarter of sec 32 = 40 acres, owner unknown. The SW quarter of SW quarter sec 32 = 40 acres. owned by John A. Johnson.

I am to sub. divide this section 32, T. 137-30, for the owners and begin at the true NW corner we run S $74^{\circ} 8' 30''$; carefully taken. T.O.M. and I chain, plumb-bob line, land level. At 1320 ft. set hub: At 1337 ft. cross wire fence: which bears E+W, fence seems to run E+W several hundred feet as I cannot see the end. At 2040 ft. set hub: At 2640 ft. set hub for temporary $\frac{1}{4}$ cor. bet. secs. 31 & 32, T. 137-30, where U.S. notes call for: Spruce 6, S $62^{\circ} E$, 38 lks., Wh. Birch 8, S $56^{\circ} W$, 28 links, both gone, we continue South: At 3011 ft. set hub: At 3325 enter swamp. At 3520 leave swamp. At 3960 set hub: At 4463 set hub on hill: At 4726.80 set hub: Variation changes to $8^{\circ} 05'$: At 5280 ft. set hub, for temporary SW corner of sec 32, being the ^{SE} SW corner of sec 31, T. 137-Reg. 30, and the North corner secs 5 & 6, 136-30, where U.S. notes call for, Wh. Birch 7, N $42^{\circ} 30' E$, 23 lks., Wh. Bir. 6 N, $81^{\circ} W$, 16 lks. (only two). Both are gone. T.O.M. and I take dinner with John Johnson. In P.M. we go to the SE corner of section 32, 137-30, being the corner to secs. 32, 33, 44, 45, bet. trps 136 & 137, Reg. 30, where U.S. notes call for a post: Tank 4, N $45^{\circ} 15' E$, 5 lks: Tank 6, N $13^{\circ} 45' W$, 37 lks., both bearing trees are gone, and were never seen by any of the old settlers, but James M. Canfield, former County surveyor of Cass County Minnesota, found the old Government stake years ago and replaced it with a new stake and the new stake, set by Canfield has carefully guarded by Nels Sevang, T.O.M. Anderson, Jacob Johnson who are present, and others. We dig Canfield's old stake out of the corduroy after an hour hard work and I make bearings to it as follows: Var. $8^{\circ} 46' E$. Fence Post N $34^{\circ} 15' W$, 31.85 ft: fence post S $34^{\circ} 54' W$, 38.80 ft. to tack heads driven in post.

Nels Sevang and his son John show us a stake set by Canfield for the NE corner sec 6, being the NW corner of sec 5, T. 136-30, also both Norway Pine B.T. stumps, but as I have not got the field notes I could not check up on the stake tho' I am quite sure this stake is too far North and East. I will look this up later. Chaining from the SE corner of 32-137-30, west to the stakes set by Canfield for the NE corner of 6, 136-30, I find the distance 1470.50 ft. or 31.46 ft. shorter than Government chain. The Government chain calls for 2606 links, being 1529.96 ft. T.O.M. Anderson and I chain correct. Careful transit line. I go in one day for owners of sec. 32, 137-30, J. Sevang, J.A. & J. Johnson cut brush. Quit for night. Over night in tent. John W. Curd.

Sunday Nov. 15, 1908. Said up.

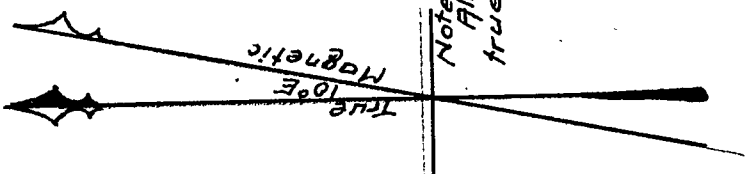
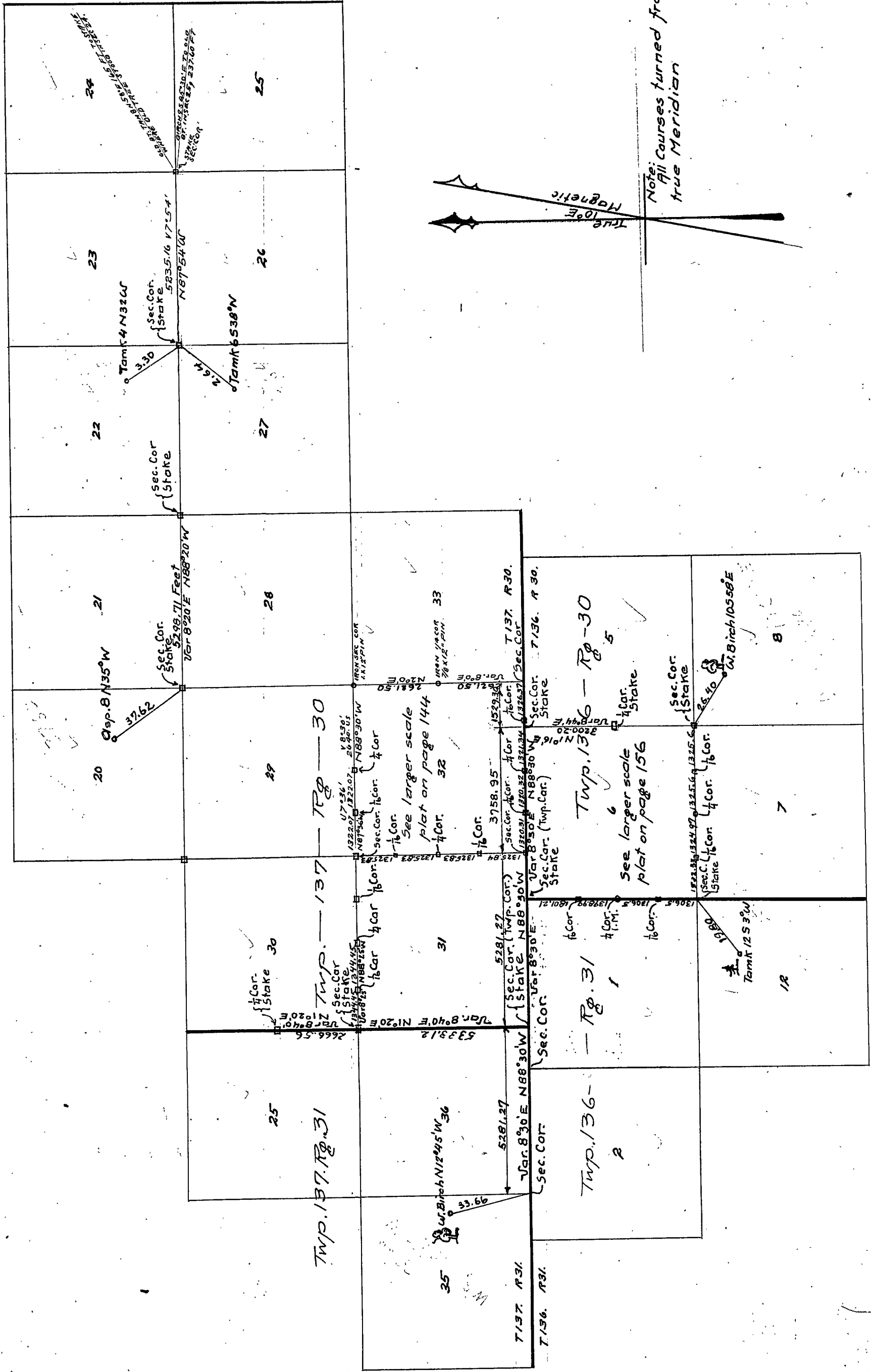
Monday Nov. 16, 1908. I am working for the owners of sec. 32, 137-30, sub-dividing the same. Going to the $\frac{1}{4}$ post on North side of sec. 32. I put part of the crew cutting a line South thru the center of sec, then go to the NE corner and put up a flag, and by working the transit on line in the wagon road between the NE corner and SE corner, I find the true line and drive a line of short stakes the entire mile. Var. reads $8^{\circ} E$. Pete O.M. Anderson and I then chain the whole mile very carefully with Jacob Johnson helping. Beginning at the NE corner we chain S bet. 32 and 33, 137-30. At 1320 ft. set wood pin. At 2640 ft. set temporary $\frac{1}{4}$ cor. where U.S. notes call for post and: Asp. 9, S $60^{\circ} E$, 15 lks., Asp. 10, N $73^{\circ} W$ 11 lks, all are gone and we continue South. At 3960 set pin: At 5243 ft. intersect SE corner of 32 showing that 5280 ft. Government chain = 5243 ft. my chain and it 37 ft. short. Correcting back we set hub 2640, N 18.50 ft. and drive an iron pin $\frac{7}{8}$ inch by 1 ft. long for the true $\frac{1}{4}$ between 32 & 33. The crew I put cutting brush thru the center of 32, run into Nels

SURVEY RECORD No 273.

PLAT

T136 R30. Sec. 5. 6. 7. 8.
 T137 R30. Sec. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33.
 T136 R31. Sec. 1. 2. 18.
 T137 R31. Sec. 25. 35. 36.

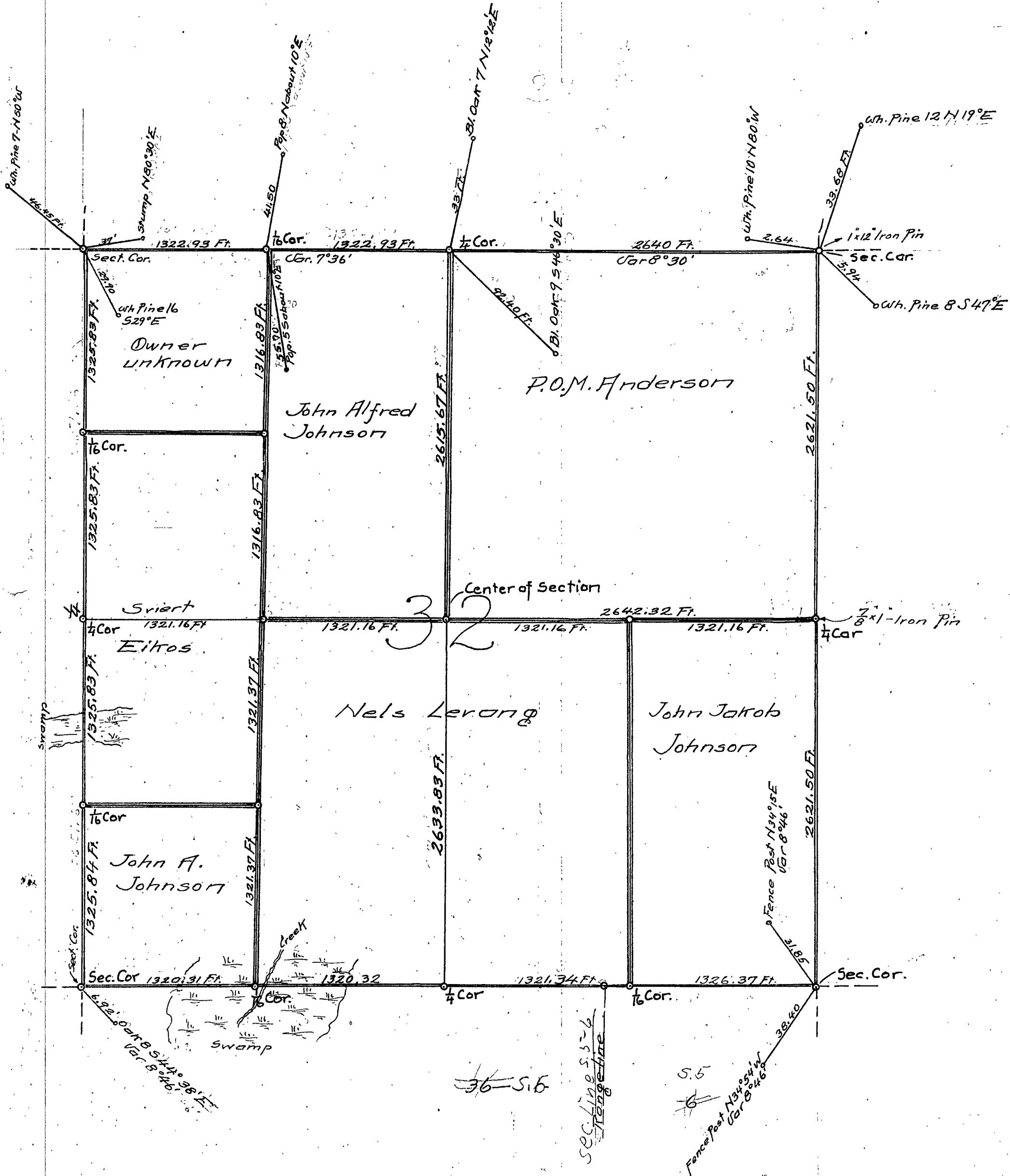
Scale: 1. INCH = 3000 Feet



Note: All Courses turned from True Meridian

SURVEY-RECORD-273

PLAT.
Twp. 137R6 30 SECT. 32



Swang's house and quit. I start the same crew cutting brush west thru the center of 32 on $8^{\circ}30'$ Var. I and part of the crew begin at the SE corner of 32 and run west thru Canfield's Closing Corner Near NW Corner of sec. 5, 136-30: At 1320 set stake: At 1490.50 Canfield's stake: At 2640 hub for temporary $\frac{1}{4}$ on S. side of 32, 137-30, where U.S. Notes call for post and: Bal. 7, $N 3^{\circ}2'E$, 23 lks., Bek. Ash $10 N 5^{\circ} W$, 19 lks., All are gone and we continue W. At 3647.70 set hub in swamp. At 3960 ft. set stake in swamp and quit for night. I got in another day for owners of 32, 137-30. P.O.M. Anderson, John Johnson, John Swang, Jacob Johnson, Iver Iversen, and I work all day. Later: We throw up this line and we run a new one for the South. Over night in tent. John W. Curo.

Tuesday Nov. 17, 1908. Continuing West from SE corner 32, 137-30. At 1320 hub: At 1490.50 Canfield's C.C.: At 2640 hub: At 3400 enter green tank, and ash swamp. At 3647.70 hub, At 3960 hub: Beginning at 3960 we continue West. K&E transit line, P.O.M. and I chain correct. At 3980 cross two foot creek runs South. +600 leave swamp: 5280 set hub "B" for temporary SW corner of 32, 137-30. At this point hub "A" sets 34.70 ft. S and 3 ft. East. Then hub "A" is the temporary corner set on our random line 5280 ft. S of the NW corner of sec. 2. We throw up this line and come back to iron pin set for true $\frac{1}{4}$ corner on E side of sec. 32 from which we run W along the Tickett line just cut., Transit line P.O.M. and I perfect chain. At 1320 set hub. At 2640 set temporary center hub "A": At 3960 set hub: At 5280 set hub marked "B" for temporary $\frac{1}{4}$ post on W. side of sec. 32. Then beginning at the true $\frac{1}{4}$ post on the N side of sec. 32 we chain roughly S along perfect run transit line. At 287. hub on hill. At 1320 set hub: At 1950 hub: At 2640 set hub "B" for temporary center sec 32. At 3284 set hub on rise: At 3960 hub: Quit for night. Jacob Johnson, John Johnson, John Swang, P.O.M. Anderson, Willie Nicholson worked for and in place of John Alfred Johnson. All worked all day except that Ole Hauggyard worked in P.M. in place of and for John Johnson. John W. Curo.

Wednesday Nov. 18, 1908. Beginning at hub 3960 continue S on center line of sec. 32, T. 137, R. 30, Rough chain, perfect transit line. +726 set hub: off set 29.36 ft. W. to get around Nels Swang's house, thence S 400.10 ft: thence East 29.36 ft. to line: thence S 154 ft. and set hub 5280. Coming back to the $\frac{1}{16}$ on N side of NW quarter of sec 32, we run South on $8^{\circ}10'$ Var. At 563 ft. set hub: At 1320 ft. set hub: At 2640 ft. set hub: Quit for dinner and will begin surveying in P.M. for Walden Township. P.M. - I am working for Walden Sup. P.O.M. and I chaining: Alfred Anderson, Joe Francis, John & Jacob Johnson cut brush. Beginning at the true $\frac{1}{4}$ corner between secs. 30 & 31, T. 137-30, Previously set by me, we run West. At 1320 set hub: At 2659.14 set hub temp. SW corner to sec. 30.

T. 137, R. 30, being the cor. to secs. 25, 30, 31 & 36, T. 137-30 & 31, where U.S. Notes call for post and: Div. 8, $N 3^{\circ}2'E$, 6 lks., Asp. 8, $N 17^{\circ}30' W$, 18 lks., Asp. 9, $S 31^{\circ} W$, 14 lks., Div. 7, $S 37^{\circ} E$, 14 lks., All are gone and we quit for night. My wife runs transit all day. I got in $\frac{1}{4}$ day for Walden Sup in P.M. Over night at home in tent.

Thursday Nov. 19, 1908. I am working for Walden Sup. Beginning at $\frac{1}{4}$ post on W. side of 30, 137-30, the government notes call for post and: Nor. Pine 24, $N 35^{\circ} E$, 83 lks. = 5478 ft., Nor. Pine 16, $N 2^{\circ} W$, 208 lks. = 137.28 ft. We find the NW bearing tree stumps plainly marked B.T. and an up-rotted Norway pine nearly buried in dirt, lies NE in just the right place for the other trees. I set the stake at

8°46' Var. and measured from the face of B.T. Our measurement and course brings us exactly in the center of the old government stake point which we chopped out of the frozen bog. We set a new 4x4x8 inch Oak stake drove well down into the bog for the true 1/4 corner from which we run South on 8°46' Var. on range line across the Meadow. At 1320 set hub on S side of Meadow. At ft. hub on side hill. At 2108.80 set hub. At 2640 set hub marked "B" for temporary SW corner sec 30, 137-30. We find an old oak stake 4x4x60 inches which has been set for the corner to secs. 25, 39, 31 & 36 and the roots of the trees standing near indicate very strongly that the post once stood near this place, but the NE bearing tree root is poplar instead of "Birch" and the roots of the NW tree are all gone as there are no iron marks to be found, we have to pass it up and continue South between secs. 31 & 36, T. 137 - Rg. 30 & 31: At 3536.50 set hub: At 3960 set hub and quit for night. P.O.M. and Alfred Anderson, Francis, John Johnson and I get in whole day for Walden Twp. Mrs. Chycklund wonders to our tent for supper. Signed - John W. Curo.

Friday Nov. 20, 1908. Working for Walden Twp. Beginning at hub 3960 ft. S. of 1/4 post on W. side of sec. 30, 137-30, we continue transit line S. At ft. set hub. At 5280 set hub: for temporary 1/4 on W. side of sec. 31, 137-30, where U.S. Notes call for post and: Bir. 10, S 53°30'E, 16 lbs., Bir. 6, S 80°W, 25 lbs. All are gone, continue South. At 6209.50 set hub: At 6600 set hub: temp. 1/16. At 7059.50 set hub: At 7920 set hub "A" for temp. SW corner of sec 31, being the corner to secs 31, 36 and Township corner of Twp. 137, Rg. 30 & 31, where U.S. Notes call for post and: Asp. 13, N 45°E, 53 lbs., Asp. 9, N 25°30'W, 38 lbs., all are gone. Joe Francis, John Johnson, P.O.M. and I work. Francis pays himself and Ole Johnson is to pay John Johnson as this line benefits him, and if he fails to pay, Francis will pay John Johnson. P.O.M. and I get in full day for Walden Twp. We re-chain the whole mile and a half North and find it correct. I set my transit on hub 1320 S. and give Joe Francis a rough line E at 9° Var. to show where his S line might be. On account of cost we hang up this survey until the County or someone else puts in the Twp. corner. Over night in tent. John W. Curo.

Saturday Nov. 21, 1908. Beginning a new survey for Walden Twp. P.O.M. Anderson and I chaining. John Johnson and August Klatt, Axemen. Beginning at the true corner to secs 22, 23, 26, 27, T. 137, Rg. 30, previously established by me we run East 8°15' Var. At 695.50 set hub: At 948.40 set hub: At 1300 Culvert site: At 1320 set hub, temporary 1/16 in little stream: At 1760 ft. center of two foot creek, runs NW and SE, Bridge site. Low wet land: At 2040 enter open marsh: At 2240 leave same. At 2444 set hub on rise: At 2640 set hub: temp. 1/4 bet. secs 23 & 26, 137-30, where U.S. Notes call for post and: Dead Balsam 6, S 28°E, 20 lbs., D. Bal. 4, N 30°W, 31 lbs. All are gone and we continue East. At 2680 enter open meadow. At 2760. center of two ft. creek runs South. At 2900 leave meadow: At 3370.40 set hub on hill: At 3960 set hub: temp. 1/16. At 4372.40 set hub: At 5280 set hub: The true section cor. stands North 54°26'W, 55.40 ft. distant. At this point being the corner to secs, 23, 24, 25 & 26, 137-30, U.S. Notes call for post and: Tank 6, N, 85°30'E, 250 lbs. = 165 ft., Wh. Bir. 9, S 58°E, 360 lbs. = 237.60 ft. The Tank has been

plowed out but birch stump still stands. James M. Canfield, former County Surveyor, established this corner from both bearing trees and set a square stake, but in doing so he had to reverse the courses so that the bearing trees stood as follows: Tank 8, N 58° E, 165 ft., Bir. 9, S 85° 30' E, 237.60 ft. At 8° 46' Variations. Measured to face of B.T. marks. I set a stake marked "True section corner" and also drove a Tamarac stake in the field where the old bearing trees stood. All got in full day for Walden. Over night at home in tent.

Sunday Nov. 22, 1908. Sailed up.

Monday Nov. 23, 1908. P.O. M. Anderson, John Johnson, August Klatt, Ayle Framling, and I worked for Walden Twp., Correcting line bet. 23 & 26, 137-30, 528.0 goes N 54° 26' W, 55.40 ft. Hub 4372.40 goes N 54° 26' W, 45.88 ft.; Hub 3960 goes N 54° 26' W, 41.55 ft.; Hub 3377.40 goes N 54° 26' W, 35.44 ft.; Hub 2640 goes N 27.70 ft.; Hub 2444 goes N 25.64'; Hub 1320 goes N 13.85 ft.; Hub 948.40 goes N 54° 26' W, 9.95 ft.; Hub 695.50 goes N 54° 26' W 7.30 ft. Quit for night. All got in full day for Walden. John W. Curro.

Tues. Nov. 24, 1908. Working for Walden Twp. P.O. M. went to see Bungs Town Board. Ayle Framling and I chained. Alfred Anderson and August Klatt, axemen. Beginning at the true corner to secs 21, 22, 27 & 28, 137-30, previously set by me we run West 8° 30' Var. Second rate chaining. At 250 ft. enter bog. At 1175 leave same. At 1320 ft. set hub near fence. At 2070 hub on side hill. At 2640 set hub, for temp. 1/4 cor bet. 21 & 28 where U.S. notes call for post and Blk. Oak 10, N 57° E, 65 lbs., Blk. Oak 7, S 30° W, 30 lbs., all are gone and we continue west: At 3960 set hub; At 4621.60 set hub on hill. At 4950.50 set hub; At 5280 set hub: True corner sets North 19° 10' W, 57.15 ft. At this point being the corner to secs 20, 21, 28 & 29, 137-30, U.S. notes call for a post and: Asp. 8 N 35° W, 57 lbs., Asp. 9 N 18°, 70 lbs., D. Bir. 6, S 60° E, 22 lbs., Blk. Oak 8, S 37° W, 138 lbs. Quit for night. All got in full day for Walden Twp. John W. Curro.

Wed. Nov. 25, 1908. P.O. M. Anderson, Ayle Framling and I work, 3/4 day for Walden Twp. At the corners to secs 20, 21, 28 & 29, we find the SW Oak and the NW Aspen plainly marked and standing dead, but the Government Surveyors got the measurements to the NE and the NW Aspen bearings mixed, so by reversing the measurements to the Aspen we set the true corner and then the old bearing trees stand as follows: At 10° Var: Blk. Oak 8, S 37° W, 138 lbs., to face, D. Asp. 8, N 25° W, 70 lbs. to face: a D. Asp. about 9 inches thru which I am sure was one of the old bearing trees and which has been burned and is down, bears N 18° E, 57 lbs., distant, and a Birch root bears South 60° E, 22 lbs. dist. setting transit on hub 5280 W on the preliminary line just run, the SW corner of 21 bears N 19° 10' W, 57.15 ft. Correcting East bet. 21 & 28, hub 4950.50 goes N 19° 10' W, 53.58 ft. 4621.60 goes N 19° 10' W, 50.02 ft., 3960 goes N 19° 10' W, 28.57 ft. 2070 goes N 19° 10' W, 22.40 ft., Hub 1320 goes N 19° 10' W, 14.29 ft. Quit for the day and got in 3/4 day for Walden Twp. This ends the Walden survey for the present. Jacob Johnson paid P.O. M. Anderson \$280 to be handed to me for him, for 1/5 of the cost of sub-division of sec. 32, 137-30. My bill against Walden Twp. to date is 10 3/4 days.

Nov. 25, 1908. I worked 1/4 day in P.M. for Ole O. Hauggyarde in sub-division of sec. 6, 136-30: At the North cor. of secs 5 & 6, 136-30, U.S. notes call for post and the following bearing trees: W. Pine 11, S 82° 15' E, 218 lbs. = 143.88 ft., N. Pine 12 S 32° W, 166 lbs. = 109.56 ft. We find both stumps marked plainly, "C.C." etc. from which we set the true corner by measurement from face of B.T. marks, after which the stumps stand fine for course except that the SE stump is about 1° to 2° south. Going to the 1/4 post between secs 5 & 6, where U.S. notes call for a post and: W. Bir 8, S 40° W,

17 lks. = 11.22 ft. W. Bis. $7N50^{\circ}E$, 12 lks. = 7.92 ft. I find the stumps and dist. via courses at $2^{\circ}46'$ var. is 4.00 ft. to long by a proportionate measurement I make them as follows: $7.92 + 1.65 = 9.57$ ft., $11.22 + 2.35 = 13.57$ ft. to face of stumps. Morris Finnie, with Oscar also who is a son of Ole O. Hoggysarde and Ole O. Hoggysarde with myself work $\frac{1}{4}$ day in P.M. for owners of sec. 6, 136-30, beginning at $\frac{1}{4}$ post we run North 1320 ft and quit for night. John W. Curo, Thursday Nov 26, 1908. Thanksgiving. Cecyl, Lou and I hunt a deer in A.M. on new snow. Cecyl went home in A.M. Lou killed his first deer in P.M. over night in tent. John W. Curo.

Friday Nov 27, 1908. I am working for owners of sec. 6, 136-30, beginning at the $\frac{1}{4}$ corner run North bet. 5 & 6, Var. $8^{\circ}10'$ on new cut out road. 1320 set hub, for temp $\frac{1}{4}$, then chain 1699.50 ft. more and set temp. closing corner for North corner to sec 5 and 6, being hub 3019.50 from which the true corner sets North 180.70 ft and 31.30 ft West.

Government chain calls for 3019.50 ft, and I find the true length to be 3200.20 ft. or 180.70 ft. longer than government chain calls for. Correcting hub 1320 goes N 78.99° ft. to 1398.99 N then West 13.68 where I set the true N $\frac{1}{4}$ corner between sec. 5 & 6 Temp. 136, Rg. 30, with new bearing trees as follows: T. Pine 6, S $42^{\circ}42'W$, 9.27 ft., T. Pine 5, S $50^{\circ}30'E$, 54.27 ft., two nail heads. Var. $8^{\circ}46'E$. This is the NE corner of Finnie's land. Ole O. Hoggysarde & Morris Finnie chained at one end and I held the other, true chain and transit line. From the SE corner of sec. 32, 137-30, West to the NE cor. of sec. 6, 136-30. Gov't notes call for 2506 lks., being 1521.96 ft. I find the true measurement to be 1529.30 ft. or 7.34 ft. longer than Gov't chain. Setting transit on true C.C. at NE corner of sec. 6, 136-30. I backsight on true, SE corner of sec. 32, 137-30, and run West, chaining from the NE corner of sec. 6, at 1111.10 ft. set hub. At 1320 set hub. At 2640 set hub. No $\frac{1}{4}$ cor given in U.S. notes for N side of 6, 136-30. I got in one day for owners of sec. 6, being Ole O. Hoggysarde, Morris Finnie, etc. Left transit with Revang. John W. Curo.

Saturday Nov. 28, 1908. Beginning at hub 2640 W. of NE cor. of 6 Continue West. At 3960 set hub. At 5280 set hub. Then chain 200.64 ft. W and set hub 5480.64 for temp. NW cor. of sec. 6, 136-30, and NE cor. of sec. 1, 136-31, where U.S. notes call for post and: Tamarac 5, S $30^{\circ}E$, 17 lks., Tamarac 6, S $30^{\circ}W$, 21 lks., all are gone. I took dinner with Norstrom. P.M. Continue West. At $5480.64 + 1320 = 6800.64$ set hub. At $5480.64 + 2640$ set hub Number 8120.64 W near $\frac{1}{4}$ post on N side of sec. 1, 136-31.

No bearing trees given. Quit for night. One day for Hoggysarde, Finnie & Company, John Johnson and I re-chain the whole line to find $\frac{1}{2}$ inch difference in $\frac{1}{2}$ miles. Ole and I chained perfect. John W. Curo.

Sunday Nov. 29, 1908. Packed in Lou's deer. Lou and Cecyl helped. All the deer have left for the big swamp in sec. 12 & 13, 136-31. big storm coming I guess.

Monday Nov. 30, 1908. Stormed. I laid up.

Tuesday Dec. 1, 1908. Cold. I am working for owners of sec. 6, 136-30. Ole O. Hoggysarde and I chain perfect. John Johnson, and I re-chained. P. O. M. Anderson and Nels Sivang cut brush. Beginning at hub 8120.64 temp.

1/4 N side of sec. 1, 136-31, continue West 900 ft. and set hub 9020.64 ft. near SW corner of Twp. 137-30, At 5480+3960 set hub 9440.64 ft. for temp. 1/16. At 5480.64+5280 set hub 10760.64 for temp. NE corner of sec 2, 136-31, where U.S. notes call for post and: D. Pine 12, S 12° W, 128-lks., Asp. 8, S 19° E, 207-lks., all are gone. Continue West: At 10760.64 Chain 30 ft. W and set hub. At about 60 ft. W of hub 10760.64 we find a marked stake setting 10 ft. South, and another marked stake staked 20 ft. N and 6 ft. East. We cannot use either of these stakes and quit for night. I walk a mile West to see Mr. Finch regarding these corners, then walk home via Joe Francis' place. John W. Curo.

Wednesday Dec. 2, 1908. I am working for owners of sec 32, 137-30, Beginning at hub 10760.64 ft. W of NE cor. of sec 6, 136-30, we continue West. Ole O. Hauggyards and I chain correct. M. Fennie and I check Chain Oscar Olson and Nels Levang apenew. At 9 chains (90 foot chain) + 48 ft. set hub 11618.64 ft. W and look for 1/4 post on S side of sec. 36, 137-31, where U.S. notes call for post and: Tank. 11 N 35° E, 10 lks., Pine 5, N 52° W, 16 lks. all are gone. Continue West, 1320 ft. set hub: At 2640 set hub. Then 10 chains and 20 ft. and set hub 14320.64 ft. W. At 14321.49 ft. set iron survey pin from which the true SW cor. of 36 and the SE cor. of 35, T. 137, Rq. 31, sets South 33.40 ft., At this point U.S. notes call for post and: Pine 10 N 85° 30' E, 19 lks. = 12.54 ft. W. Pin 7, N 12° 45' W, 51 lks., = 33.66 ft.. I set a hub and task for the true cor. from the 10 inch pine which is plainly marked and standing but cut off 14 ft. above the ground. It had been up-rooted by wind and cut off while down. Then the roots sprung it back in place. I find the roots of the "Birch" called for in notes, but it is not marked and a post too far away so I do not use it. Check, Chain back and quit for night. John W. Curo.

Thursday Dec. 3rd, 1908: I am working for Walden Twp. P. O. M. Anderson; John Johnson helping; Correcting the South boundary of section 32, T. 137, Rq. 30; The total distance from the NE corner of sec 6, T. 136, R. 30, C.C., West to the S.W. corner of sec 36, T. 137, Rq. 31, is 14321.49 ft. my chain and is 14318.04 feet U.S. Chain, making 3.45 feet too long. The distance from the S.E. corner of sec 32, T. 137, Rq. 30, West to the N.E. closing corner of sec 6, T. 136, Rq. 30, is 1529.30 feet my chain, and 1521.96 ft. U.S. Chain, making 7.34 feet too much land. In setting the 1/16 post West of the S.E. corner of sec 32, T. 137, Rq. 30, I chain West 1320 feet, set up pins; then at 1521.96 feet I set another pin; The true N.E. corner of sec 6, 136, Rq. 30, sets West 7.34 feet; Correcting back I set pin, 1320, West 6.37 feet at which point we drive a 3x3x36 inch oak stake marked "True 1/16 post" I set no new bearing trees. The 1/4 post on South side of sec 32, T. 137, Rq. 30, should stand 1694 links (= 1118.04 ft.) West of the N.E. corner of sec. 6, T. 136, Rq. 30 U.S. Chain, but as the total distance of 14318.04 feet West is 3.45 feet long and 33.40 feet South, hub 1118.04 goes West 0.27 of a foot West making total dist. West 1118.31 feet and as 14321.49 goes 33.40 feet South, 1118.31 goes South 2.61 feet to true point for 1/4 cor. where we set an oak stake with no bearing trees for the 1/4 cor. on South side of sec. 32, T. 137, Rq. 30. This is my

Last days work for Walden Twp. Quit for night. John W. Curo.

Friday, December 4th, 1908. I am working for owners of sec. 32, T. 137, Rg. 30. John Johnson and P. O. M. Anderson working for Walden & helping. The $\frac{1}{16}$ post East of S.W. corner of sec. 32, should stand 3694 links (= 2438.04 ft.) west of NE corner of 6, T. 136, Rg. 30, U.S. Chain, but as the total distance west of 14318.04 ft. U.S. Chain, is really 14321.49 ft. or 3.45 ft. long, but 2438.04 goes west 0.59 of a foot to 2438.63 west, and South 5.69 ft. to true west $\frac{1}{16}$ on South side of sec. 32, T. 137, Rg. 30 where we set a 3x3x36 inch oak post with no bearing trees. To set this $\frac{1}{16}$ post we began at hub 2640. West Twp. cor. of T. 136, Rg. 30 and chain East 201.37 feet, then South 5.69 feet. The S.W. corner of section 32, T. 137, Rg. 30, should stand 5694 links (being 3758.04 feet) west of NE corner of sec. 6, T. 136, Rg. 30, U.S. chain, but as our total chain is 3.45 feet too long, but 3758.04 goes west 0.91 of a foot to 3758.95 west, thence South 8.77 feet, where we set the true S.W. corner of sec. 32, being the S.E. corner of sec. 31, T. 137, Rg. 30, where we set a post with new bearing tree as follows: Oak S 47° 38' E, 6.92 feet to nail head, Var 8'46". To set this corner we chain E from hub 3960, 201.05 feet, then South 8.77 feet. The South West corner of sec. 31, T. 137, Rg. 30, being the Twp. corner, should stand 9038.04 feet U.S. Chain, west of N.E. cor. of T. 136, Rg. 30, but as the total distance is 3.45 ft. too long, 9038.04 goes west 2.18 ft. to 9040.22 west, and South 21.08 ft. where we set the true S.W. corner of sec. 31, T. 137, Rg. 30, being the S.E. corner of sec. 36, T. 137, Rg. 31, where we drive a stake with new bearings as follows: Elm S 41° 42' E, 27.18 feet to nail head: Oak S, N 45° 51' W 49.34 feet to nail head: Var. 8'46" E. To set this post we went to hub 9020.64 and chain west 19.58 feet to hub 9040.22, then South 21.08.

With transit on random hub 7920 feet South of the $\frac{1}{4}$ corner on west side of sec. 30, T. 137-30, the S.W. corner of said Township just established, bears S 7° 38' W, 80.35 feet. Then going a mile North to a hub 2640 ft. South, I run S 7° 38' W, 26.78 feet where I set a post for the true corner to sections 25, 30, 31 & 36, on range line between Twp. 137, Ranges 30 and 31, with new bearings as follows: Dead Black Oak 12, S 41° 38' E, 26.56 feet. Dead Poplar 12, N 47° 56' W 40.03 feet to nail heads in trees Var. 8'46" E. To correct North boundary of N.W. quarter of sec. 31, T. 137-30, I set transit on random hub 2659.14 feet west of $\frac{1}{4}$ post on South side of sec. 30, from which the new S.W. corner of sec. 30, bears S 62° 17' W, 33.60 feet. Coming East to hub 1320, we run S 62° 17' W, 16.68 feet, where we set the true west $\frac{1}{16}$ post between secs 30 and 31, T. 137, Rg. 30, with no bearing. To correct the west side of sec. 32, T. 137, Rg. 30, at 5280 ft. S. of N.W. corner, the new S.W. cor. bears S 24° 22' W, 25.60 feet: 1320 hub goes S 24° 22' W, 6.70 feet to true North $\frac{1}{16}$ between secs. 31 and 32. set no bearing trees. At 2640, S, we run S 24° 22' W, 12.80 feet where we set the true $\frac{1}{4}$ corner between secs. 31 and 32, but set no bearing trees. At 3960 S, we run S 42° 22' W, 19.20 feet where we set a post for the South $\frac{1}{16}$ between secs 31 and 32, T. 137-30, but mark no bearing trees. Going to the $\frac{1}{4}$ corner on South side of sec. 32, T. 137, Rg. 30, we find out how much our N. and S. preliminary center line is off, and quit for night. I got in one day for owners of sec. 32, T. 137-30. P. O. M. Anderson and John Johnson got in full day for Walden Twp. John W. Curo.

Saturday Dec. 5, 1908. I am working for owners of sec. 32, T. 137, Rg. 30.

Nels Sivang; Willie Nickolson; Ole A. Hauggyarde; P. S. M. Anderson; John Johnson and I work all day. To find the true East and West center line of sec. 32, I set transit on hub 5280. W. from which the true $\frac{1}{4}$ post on West side, bears $N 7^{\circ} 50' W$, 33.50 feet, or 32.20 ft. North and 4.65 feet West. Coming East on our random line to hub 2640 West, we run $N 7^{\circ} 50' W$, 16.75 feet and set hub "A" for temporary center of sec. 32, on E & W center line, then setting transit on hub 5280 South on N & S random center line of sec. 32, the true $\frac{1}{4}$ on South side bears $N 47^{\circ} 15' W$, 44.90 feet, or 30.50 ft. North and 33.00 feet West, so that the depth of the section North & South (rough chain) is 5249.50 feet, so that at 5249.50 feet South, and $\frac{1}{4}$ bears West 33.00 ft. Coming North half a mile to hub 2640. South we run West 16.58 feet and set hub "B" on true North and South center line of sec. 32, T. 137, Rg. 30, then running North, we find that the true center of sec. 32, is just $\frac{1}{2}$ inch West of the tack in hub "A" at which point we drive a 6 foot oak fence post, marked "True Center of sec. 32, 137.30". Then setting

transit on hub 2640 ft. West of $\frac{1}{4}$ on East side of sec. 32, the true center sets $N 7^{\circ} 50' W$, 16.75 feet. Then coming East to 1320, West, the true $\frac{1}{16}$ post sets $N 7^{\circ} 50' W$, 8.37 feet at which point I drive short oak stake for true center of East half of sec. 32, T. 137, Rg. 30. Then going West to hub 3960 W. we run $N 7^{\circ} 50' W$, 25.11 feet where we drive a square tamarac post for true center of West half of sec. 32, with no bearing trees. Setting transit on hub 1950 ft. S of $\frac{1}{4}$ on North side of sec. 32, we run West 12.26 feet and set stake marked: "True N & S Center line of sec. 32". At 1320 ft. South of $\frac{1}{4}$ post on North side of sec. 32, we run West 8.30 feet and set another stake for true N. and S. center line of sec. 32.

Beginning at $\frac{1}{16}$ post East of S. W. Corner of sec. 32, we run North: At 1820 ft. set hub: At 2640 ft. set hub: the true $\frac{1}{16}$ post in center of West half, sets $N 72^{\circ} 27' W$, 7.10 feet: 1320 goes $N 72^{\circ} 27' W$, 3.55 feet where we set an oak stake for true center of South West quarter of sec. 32. Then going to the $\frac{1}{16}$ cor. West of the S. E. Corner of sec. 32, we run North on 8° variation: At 900 ft. set hub: At 1320 ft. tack in log: At 2640 ft. (rough chain) the true $\frac{1}{16}$ in center of East half, sets West 15.55 feet: Going South to hub 1320, we run 7.77 ft. West and set stake marked "True line": At 900 we run West 4.65 feet and set stake marked "true line", being Jacob Johnson's west boundary. Got in full day for owners of sec. 32, T. 137, Rg. 30, which finishes up my work for them being $6\frac{1}{2}$ days at \$4. per day = \$26.00. John W. Curtis.

Sunday Dec. 26, 1908. P. S. M. Anderson and I set a few correction stakes and this finishes up my work for Walden Twp. and the owners of sec. 32, T. 137, Rg. 30. No pay for to day. My account against Walden is $1\frac{1}{4}$ days at \$4. = \$45. John W. Curtis.

Monday December 7th, 1908. I am working for owners of sec. 6, T. 136, Rg. 30, dividing the same Hauggyarde and Finnie. helping. A. M. The $\frac{1}{4}$ on North side of sec. 6, should stand 2640 feet West of the N. E. corner, but as the total distance West of 14318.04 U. S. Chain is 14321.49 ft. my chain, being 3.45 feet over length, hub 2640 goes West 0.64 of a foot to 2640.64 West, and as the true S. W. corner of sec. 36, T. 137, Rg. 31, sets 33.40 feet South of hub 14321.49 West, hub 2640.64 goes South 6.16 feet, where I set a post for the true $\frac{1}{4}$ corner on North side of sec. 6, T. 136, Rg. 30, being a nail driven into the SE edge of a short sawed off 10 inch tamarac stump. No bearings necessary. At 3960 West, we chain 0.95 of a foot West to 3960.95, then South 9.24 feet where we set a stake for the true West $\frac{1}{16}$ corner on North

side of sec. 6, T. 136, R. 30 with new bearings as follows: Oak stump 6, bears $N 10^{\circ} 41' E$, 54.80 feet. Balsam 6, $S 76^{\circ} 30' E$, 75.90 feet to nail heads @ $8^{\circ} 46'$ Var.

The N.W. corner of sec. 6, should stand 8304 links being 5480.64 feet west of the N.E. corner, but as the total distance west to S.W. corner of sec. 36, T. 137, R. 31, is 5445 feet over length, 5480.64 goes west 1.32 feet to 5481.96 west, then south 12.78 feet where we drive a 4x4x66 inch tamarac post well into the meadow to mark the true North Cor. to sections 6, Twp. 136, R. 30 and NE cor., sec. 1, T. 136, R. 31. There are no bearing trees near. From this corner we run south bet. sec. 6, Var. $8^{\circ} 30' E$: At 1320 feet set pin: At 1551 feet set hub for temporary North $1/4$ corner between secs. 6. At 2871.00 feet South set hub for temporary $1/4$ corner sec. 6, T. 136, R. 30 and 31, from which the true $1/4$ corner sets $N 49^{\circ} 38' E$, 27.80 feet, or about 18.10 feet North and 21.10 feet East: At this point U.S. notes call for post and: Tamarac 8, $S 57^{\circ} E$, 9 links being 5.94 ft. Tamarac 5, $N 57^{\circ} W$ 5 links, being 3.30 feet. we find them both, but they are down and out by the roots, tho' in place from which we set a 3 foot ash post for the true $1/4$ corner. I am using a K & E transit and Chicago steel tape. Hauggyarde and I chaining perfect with plumb. bob. Hauggyarde and Finnie worked all day. Nels Sevang and Iver Iverson worked in P.M., I get in full day for owners of sec. 6, T. 136, R. 30. John W. Curo.

Tuesday Dec. 8th, 1908. I am working for owners of sec. 6, T. 136, R. 30. Hauggyarde, Finnie, Iverson, Sevang worked in A.M. and John Johnson worked in place of Sevang in P.M. Beginning at the $1/4$ corner which is a 3 foot ash post on west side of sec. 6, T. 136, R. 30 we run East on 5° variation: At 900 ft. set tack in log: At 1320 ft. set hub: At 2175 set hub 4 feet East of Creek bank: At 2640 ft. set hub: At 2856.20 set tack in big birch log: At _____ ft. set tack in another birch log: At 3960 ft. set hub: then along line set tack in spruce log, and tack in poplar log, and at 4522 set hub in west edge of swamp at 5280 ft. set pin and quit for night. John W. Curo.

Wednesday Dec. 9th, 1908. I am working for owners of sec. 6, Hauggyarde, Sevang, Finnie and Iverson work: Beginning at pin 5280 ft. East, set last night, we continue East: At 5495.40 ft. the $1/4$ corner on East side of sec. 6, T. 136 - R. 30, sets North, 38.90 ft. The depth of this section East and West calculated as per U.S. Chain, is 1523.71 feet plus 39.60 ft. total 5483.71 feet and equal 5495.40 feet my chain, and is 11.69 feet over-length. The East and West center line at this time runs on about $5^{\circ} 26'$ Magnet variation East, and the center of the North half, should run East and West on about $6^{\circ} 20'$ variation East. We go to the $1/4$ corner on South side of sec. 6, being the North side of sec. 7, Twp. 136, R. 30, where U.S. notes call for post and: Wh. Bir 8, $N 50^{\circ} E$, 25 links, being 16.50 feet distant. Wh. Bir 9, $S 10^{\circ} E$, 17 links, being 11.22 feet distant. We find both bearing trees standing green and plainly marked from which we set the true $1/4$ corner by flat chain from face of B.T. figures after which the trees stand as follows: Var. $8^{\circ} E$: White Bir 8, bears $N 50^{\circ} 50' E$, 25 links: White Bir 9, $S 5^{\circ} 35' E$, 17 links to face of B.T. marks. From this $1/4$ we run North on $8^{\circ} 35'$ variation: At 1320 ft.

set hub: At 2640 ft. set hub: At 2647.60 we cross our East & West cut out line at 2875.30 ft. East: Chained 7 chains North and quit for night. Over night at home with my wife in the new tent at Anderson's. John W. Guro.

Thursday Dec. 10, 1908. I am working for the owners of sec 6, T. 136, Rg. 30. Ole O. Hauggjarda, Morris Finnie, Iver Everson, Nels Sevang and I all day: Oscar Olsen cut brush in P.M. Ole and I chained perfect: Beginning at pin 7, we continue North on center line of sec. 6: At 3960 ft. set hub: At 4332.20 tack in tamarac log: at 5480 set stake: At 5702.00 feet the true $\frac{1}{4}$ post on North side of 6, sets West 46.10 feet. To correct the N & S center line, 5702 goes West 46.10 feet: 2640 goes West 21.34: 2453 goes West 19.83 ft: At 2669.10 the true center set West. To correct the E & W center line, hub 5495.40 E, goes North 38.90 feet: hub 4522 in swamp, goes North 32.01 feet. 3960 goes North 28.03: 2640 goes North 18.69 feet. I take the crew to the North $\frac{1}{16}$ post bet. secs 5 and 6, T. 136, Rg. 30 and start them cutting another new line west on $6^{\circ}20'$ Var: Ole and I then go and put in the center of sec. 6, by intersection of the cross lines: We set transit on hub 2640 North and run West 21.34 feet and set hub: Then going to tack in log at 2453 N, we run N. 19.83 ft. to true line N & S. Then run a line North and South thru hub 19.83 and hub 21.34 setting a line of pickets to mark the true N & S line.

Then setting transit on hub 2856.20 E, we run North 20.22 ft. to true E & W, center line, thence West 3.90 feet to a intersection with the picket line N & S, where we place a 4x4x50 inch Maple post for the true center of sections 6, Twp. 136, Rg. with bearing trees as follows: Tamarac stump 14, bears NW 2.35 feet: Pin stump 16, bears SE 9.57 feet dist. to tacks driven in stumps. Quit for night. John W. Guro.

Friday December 11th, 1908. I am working for owners of sec. 6: At a point 2852.30 feet East, the true center of sec. 6, T. 136-Rg. 30, sets North 20.19 ft. and at point on the random line 2669.10 feet North, the center sets West 21.58 feet. To put in the North $\frac{1}{16}$ corner between sections 5, T. 136-Rg. 31,

6, T. 136-Rg. 30, we set up on temporary $\frac{1}{16}$ being a hub 15.51 feet South of the North corners, from which we run $N49^{\circ}38'E$ 15.02 feet where I drive a good stake for the true North $\frac{1}{16}$ corner. U.S. Chain from this $\frac{1}{16}$ North to the closing corner is 1551 feet. and is 1541.22 feet my chain, and is 9.78 feet short. As the total length of the North half of sections 6, along the range line is 18.10 feet short, the distance from the North $\frac{1}{16}$ South to the $\frac{1}{4}$ corner would be 8.32 making the length 1311.68 feet. To set the $\frac{1}{16}$ in the center of the West half of sec. 6, according to Calculations made from U.S. field notes, the distance from the $\frac{1}{4}$ on West side, East to the center is 1523.73 plus 1320 ft. = 2843.73 feet U.S. Chain and the distance my chain is 2852.30 feet being 8.57 feet long. Following our random line East to temporary $\frac{1}{16}$ hub at 1523.73 East. I run East 4.59 feet to 1528.32 East, then North 10.82 feet where I place a stake for the true $\frac{1}{16}$ corner in center of West half of sec 6, T. 136-Rg. 30 with new bearings as follows: Birch 6, bears NE, 4.58 feet: Pop. 10, bears SW 9.71 ft. to tacks driven in bearing trees. Hauggjarda, Finnie and I work in A.M. and I and my wife takes dinner with Finnie.

To set the center of the East half of this section 6, we begin at hub 3960 East of our random line and chain East 213.85 ft. to 4173.85 E, thence North 29.55 feet where we place the true $\frac{1}{16}$ in the center of the East half of the section. Iverson, Olson, Hauggyarde, Finnie and I work in P. M. Beginning at true North $\frac{1}{16}$ bet. sections 5 and 6, T. 136, Rg. 30, we run west on cut out line, Var. $6^{\circ}20'E$: At 1320 ft. rough chain set hub: At 2640 ft. set hub: At 2740 ft. set hub: At 3960 feet set hub: At 4063 set tack in log: At 5280 set pin: At 5491.50 west, the true North $\frac{1}{16}$ corner between sections 6, T. 136-Rg. 30, and section 1, T. 136, Rg. 31, sets North 15.53 ft. Quit for night John W. Cwis.

Saturday December 12th, 1908. I am working for owners of sec. 6. To correct the East & West center line thru North half of sec. 6, T. 136, Rg. 30, at hub 1320 ft. West on our random line, I run North 3.73 ft., and at hub 2640 West, I run North 7.47 feet and at hub 2740 I run North 7.57 feet and at hub 3960 W, I run North 11.20 feet and at hub 4063, I run North 11.49 ft. where I place hubs to mark the true East and West center line thru the North half of sec. 6. I set the true center of the N.W. quarter of sec. 6 by intersecting the true N & S, line with the true E & W line. I set transit on true N.E. corner of Govt Lot No. 4 of section 6, T. 136, Rg. 30, then focus telescope of post at true center of West half of sec 6, and set a hub or two on true North and South line, then corrected up the rest of the true East and West center line of the North half of the section, but only set the $\frac{1}{16}$ corner in the center of the NW quarter, and the balance of the mile East I only set stakes to mark the lines and not forty corners, as the land owners does not want them set, as Hauggyarde owns the three forties in a string on one side and Finnie owns three forties in a string on the other side of the line. Hauggyarde's forties North and Finnie's forties South of the line. Going to hub 3960 East on the E and W center line of sec 6, T. 136, Rg. 30, we chain 213.85 ft. E to 4173.85 E, thence N 29.55 ft. where we place a stake for the true center of the E half of said section. I get in $\frac{1}{2}$ day for owners of sec. 6, T. 136-30. Hauggyarde and I did all the chaining. John W. Cwis.

Sunday Dec. 13, 1908. I made out John Johnson's account against Walden Sup. being $7\frac{1}{2}$ days @ \$1.50 = \$11.25. Also John Alfred Johnson's account against Walden, 3 days @ \$1.50 = \$4.50. I laid up to day. over night at home in tent.

Monday Dec-14, 1908. I worked all day for owners of sec 6, 136-30, Hauggyarde, Finnie, Olson & I worked, and also Iverson. Going to the SE corner of sec. 6, being the corner to secs 5, 6, 7 and 8, 136-30-- Government notes call for a post and the following bearing trees:

Wh. Birch $7N57^{\circ}E$ 31 links = 20.76 ft., Bir. $8S67^{\circ}W$, 18 lks = 11.88 ft.
 Wh. Birch $10S58^{\circ}E$ 40 lks = 26.40 ft. T. Pine 18, $N65^{\circ}W$, 25 lks. = 16.50 ft.
 we find all of the trees plainly marked and standing but the

"Jack Pine" called for in the notes is a wh. Pine, and considering that we could not make it check out for measurement with the other three trees I am compelled to pass it up and not use it. I first set the corner from flat measurement from face of the three Birch bearing trees, and it all checked out fine, but the old white Pine I could not use, because the Government notes call for J. Pine. After setting transit on my new corner the trees stand as follows: Var. $8^{\circ} 46' E$: W. Bir 7, N $63^{\circ} 20' E$, 31 lks. = 20.46 ft., W. Bir 10, S $54^{\circ} 53' E$, 40 lks. = 26.40 feet.; W. Bir 8, S $77^{\circ} 10' W$, 18 lks. = 11.88 feet.; W. Pine 18, N $72^{\circ} 22' W$, 19.75 feet. From this corner we run West, Var. $6^{\circ} E$, bet. secs. 6 & 7. At 715 feet tack in log: at 1320 feet hub and tack: At 2640 feet hub: The true $\frac{1}{4}$ corner between secs. 6 & 7 sets N $50^{\circ} 7' W$, 14.60 feet. Correcting back --- Hub 1320 goes N $50^{\circ} 7' W$, 7.30 feet to true $\frac{1}{16}$ corner, being the E $\frac{1}{16}$ bet. secs. 6 and 7, where I place a hub and tack from which I run N. Var. $8^{\circ} 50' E$: At 827 feet tack in stump. At 1320 hub: At 1410.35 tack in old log. At 2640 hub: The true center of E. half of sec. 6 sets N $84^{\circ} 05' 2'' W$, 19.46 feet, making the distance rough chain about 1.80 feet long. I get in full day for owners of sec. 6, John W. Curs.

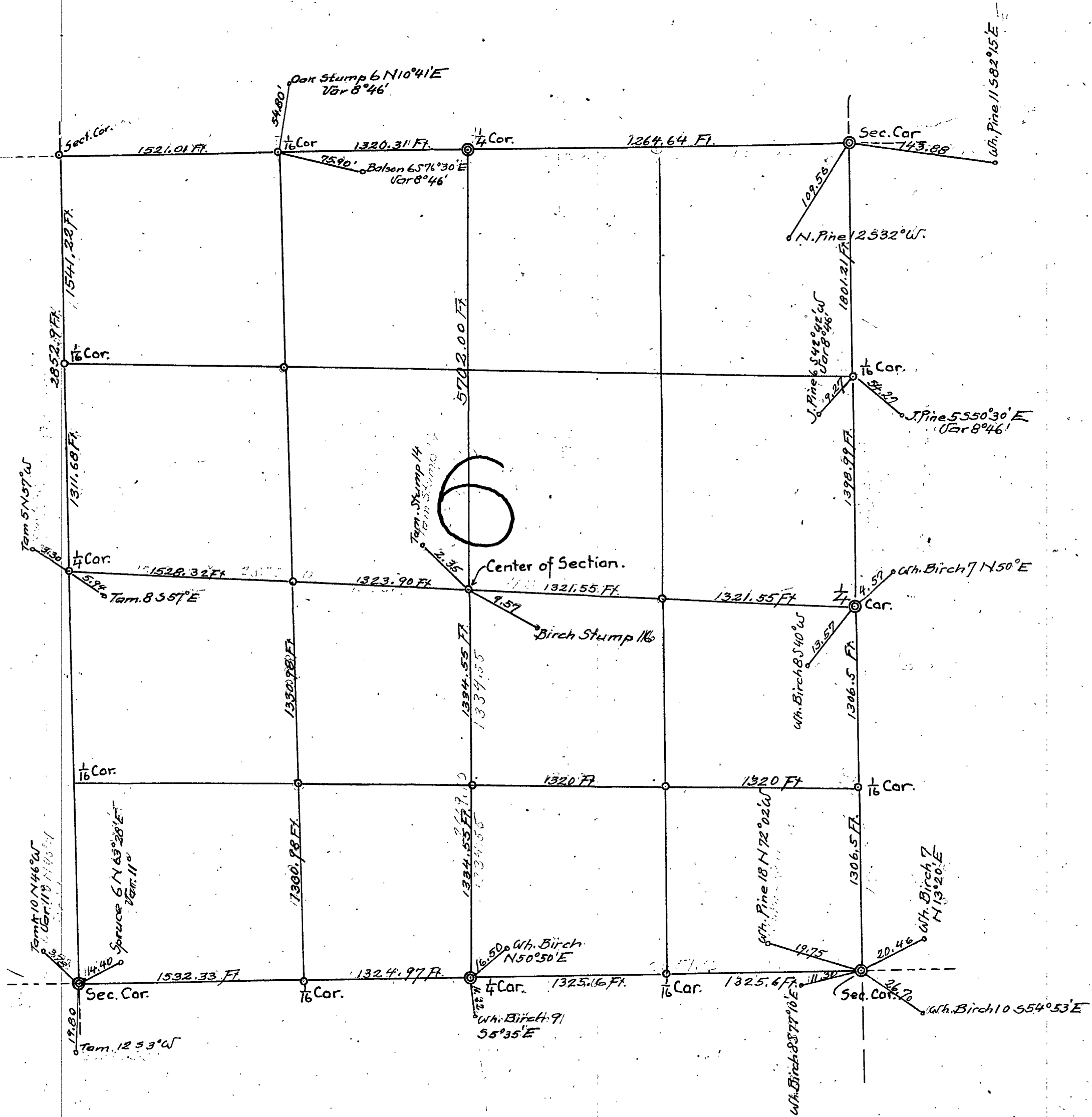
Tuesday Dec. 15, 1908. To put in the center of the S half of sec. 6, T. 136-30, at a point on the N & S preliminary line 2669.10 feet N. of the $\frac{1}{4}$ cor. on S. side of sec. 6, the true center sets West 21.85 feet. Correcting South, Hub 1320 goes N 14.55 feet to hub 1334.55 N, thence 10.79 ft. where we place a post for the true center of the S half of sec. 6, T. 136-30. Beginning at the $\frac{1}{4}$ cor. bet. secs. 5 & 6 we run S., At 1320 set hub: At 2640 set hub, from which the true corner to secs. 5, 6, 7 & 8 sets North $36^{\circ} 20' E$, 34.50 feet. Correcting 1320 goes N $36^{\circ} 20' E$, 17.55 feet where we place a post for the true S $\frac{1}{16}$ cor. bet. secs. 5 & 6, T. 136-30. Hauggyarde and I chained perfect, and from this $\frac{1}{16}$ cor. we run West, Var. $5^{\circ} 45' E$: At 1320 feet rough chain set hub: At 2640 feet rough chain set hub; from which the true $\frac{1}{16}$ cor. in the center of the S half of sec. 6 sets North 0.46 of a foot. Correcting back Hub 1320 W goes North 0.23 of a foot, where we drive a stake to mark the true E and W center line of the SE quarter of sec. 6. Hauggyarde and Iverson did the chaining. Beginning at the $\frac{1}{4}$ corner bet. secs. 6 & 7, T. 136-30 run West, Var. $6^{\circ} E$. At 1320 ft set hub: Hauggyarde, Finnie, Olson, Iverson, Sevany and I worked all day for the owners of sec. 6.

Wednesday Dec. 16, 1908. Hauggyarde, Oscar Olson, Finnie, I and Sevany worked all day for owners of sec. 6. Beginning at hub 1320 W of $\frac{1}{4}$ cor. bet. sec. 6 & 7 we continue West: At 2646 feet set pin: At 2640 + 2 chains and 37.30 feet = 2857.30 feet. set hub from which the true corner of secs. 1, 6, 7, & 12 on the range line bet. T. 136-R. 30, and S. 136, Rq. 31 sets North 47.00 ft (we are using a 90 ft. chain, steel tape.) As the Goit measurement of this one half mile calls for 1320 ft. + 1526.58 ft. making in all 2846.58 feet U.S. chain, I find the true chainage 10.72 ft. longer than Government chain calls for. Correcting back: 1320 goes west 4.97 feet to hub 1324.97 West, thence North 21.79 ft., where I place a post for the true W $\frac{1}{16}$ corner bet. secs. 6 & 7, T. 136-30. At the corner to sec. 1, 6, 7 & 12 on range line bet. T. 136, Rq. 30 & 31, Goit

SURVEY-RECORD No 273

PLAT

Twp. 136 - R_o. 30 - SECT. 6.



273-cont.

Notes call for a post and the following bearing trees: Tank 10, $N 46^{\circ} W$, 4 lks. = 2.67 ft., Tank 12, $S 3^{\circ} W$, 30 lks. = 19.85 ft., Tank 10 $S 25^{\circ} E$, 20 lks. = 13.20 ft.; Spruce 6, $N 48^{\circ} E$, 4 lks. = 29.04 feet. We find the NW bearing tree in sec 1 and the SW bearing tree in sec 12, standing plainly marked, but the others are gone except the roots, which are not marked; We find it impossible to set the stake by measurement from the two bearing trees as it would throw the SW bearing tree to far East and over into another Township, and as we positively can not do this, we are compelled to ignore the NW bearing tree as to measurement and courses except that I set the true cor. stake as far West as it is possible to get it and at the same time leave the SW bearing tree over in its own section., I set transit on my new post just established for this true cor. After which the old bearing trees at 11° var. stand as follows: Tank 12, $S 3^{\circ} W$, 30 lks. = 19.85 ft. Tank 10, $N 46^{\circ} W$, 3.78 feet. to tack head in flat spot at base of trees. I put a tack in a new bearing tree as follows: 6 inch Spruce standing North $63^{\circ} 28' E$, 17.40 ft. dist. This is the best I can do. Going to the true center of the W. half of sec 6, we run South. At 1320 ft. set hub. At 2640 ft. set hub.; from which the true $W 1/16$ post bet. secs. 6 & 7, T. 136-30, stands South $3^{\circ} 35' 10''$, 29.00 ft. Correcting North: 1320 goes $S 3^{\circ} 35' W$, 14.50 ft. where we place a post for the true $1/16$ cor. in the center of the SW quarter of sec. 6, 136-30, with no bearing trees. Going to the center of the SE quarter of sec. 6, 136-30, we place a stake at its correct location by intersecting the true E and W and N & S center lines of said quarter, placing transit on hub 1320 ft. N of the E $1/16$ cor. bet. sec. 6 & 7. We run $N 84^{\circ} 52' W$, 9.73 ft. to find the true N & S line of the quarter. Then setting transit on hub 1320 ft. W of the S $1/16$ cor. bet. secs 5 & 6 we run North 0.23 of a foot, to the true E & W line of the quarter, and as the two temporary stakes are only two inches apart we drive tacks in some old logs to hold our line while we are setting out the true center of SE quarter of sec. 6. I set the final tack in the true $1/16$ corner with my eye and the tape line as the two temporary stakes are too close together to use the transit. Quit for night. This ends the sub. division of sec 6., T. 136. R. 30. I have set every corner, $1/4$ corner and $1/16$ corner in the section except the $1/16$ West of the NE corner, and the center of the NE quarter and except also the center of the North half and the South $1/16$ bet. sections 6 & 7, on the range line. Ole O. Hauggerde, and I chained it all with plumb-bob and 90 ft. steel tape, and I have run my line correctly with double center hubs and tacks. Keuffel & Esser, first class transit, in perfect adjustment; I had most, but not all of the lines re-chained am sure they are correct.

Thurs. Dec. 17, 1908. We pulled down our new tent and came home to Pine River. Got in one day for Walden Twp, "Going Home."

John W. Curo, County Surveyor

Cass County, Minnesota.

Survey commenced Nov. 10, 1908.

Survey finished Dec. 17, 1908.

Recorded _____ 1916.

B

PLAT & NOTES

TWP. 139. RG. 29.
SECTIONS 10-11-14-15

SURVEY-RECORD-274

SURVEY RECORD

Field notes of the survey of a part of sections 10, 11, 14 & 15, Twp. 139-29, as surveyed by A.W. Moulster, Deputy County Surveyor, Cass County, Minnesota.

Tuesday May 17, 1910. In Afternoon Parker hauled me from Pine River to Parkers. Stayed with Parkers over night.

Wednesday May 18, 1910. Parker, Mike Smith, Siltman and I found old stake at corner to sections 10, 11, 14 & 15. At SE corner sections 10, which Canfield had set. Setting transit on old stake, the NW bearing tree checked out O.K. Measurements checked out also. No other B.T.S. except old burnt stump standing NE. We walked up to the 1/4 post East side of sec. 10., I found Canfield's old stake and NW bearing tree identified by Siltman. Stake sets five ft. to far West and about 2 1/2 feet to far South. I set a pole for a foresight. Found stake at 1/4 post on S side of sec. 10, which was set by Canfield. No bearing trees. I set a foresight at this stake chaining back to the SE corner I find distance to be 2643 feet. Distance from SE corner sec 10 to 1/4 post North is 2571.40 + 2 1/2 feet, Canfield stake to far South. Setting transit on SE corner sec 10, I find the angle to be 88° 4' sighting to the 1/4 posts.

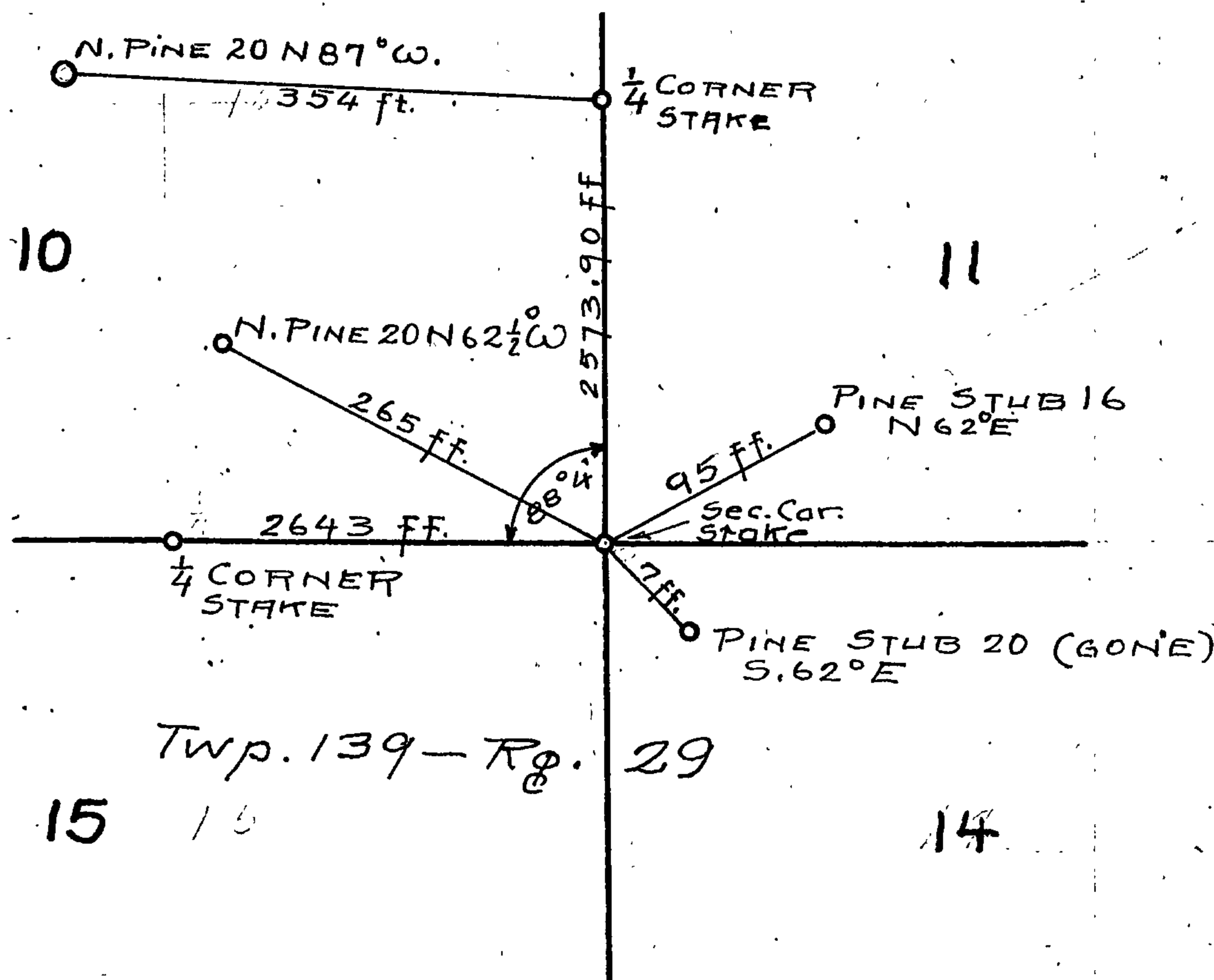
Thursday May 19, 1910. Ed. Parker, Siltman, Siltman Jr., and I stake Cemetery.

Friday May 20, 1910. Parker hauled me to Pine River.

Recorded - Oct. 18.

A.W. Moulster.
Deputy County Surveyor, Cass Co. Minn.

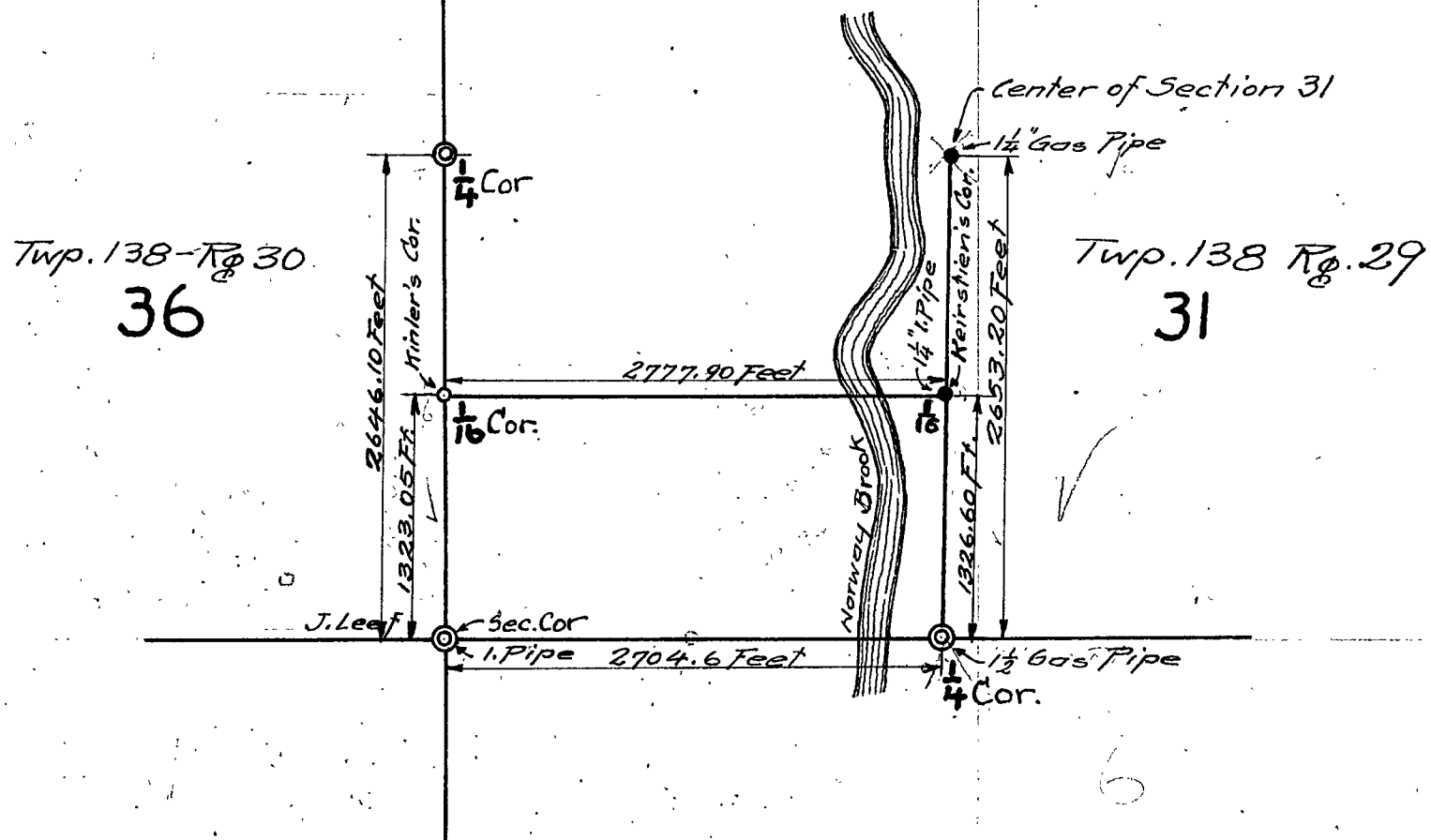
PLAT TWP. 139. RG. 29. SECTIONS 10-11-14-15



SURVEY-RECORD-275.

PLAT

TWP. 138. RG. 29. SECT. 31.
TWP. 138. RG. 30. SECT. 36.



$$\begin{array}{r} 2777.9 \\ 1349.3 \\ \hline 1428.6 \end{array}$$

6

NOTES.

SURVEY-RECORD-275

TWP. 138. RG. 29. SECT. 31.
TWP. 138. RG. 30. SECT. 36.

Field notes of a Survey in section 31, T. 138, Rg. 29, and section 36, T. 138-30, as surveyed by A. W. Moulster, Deputy County Surveyor, Cass County Minnesota. Examined by John W. Curo, County Surveyor, Cass County Minnesota.

Friday May 27, 1910. A. W. Moulster Transitman and chain; William Wagner. Chainman. William Wagner and I found the SW corner of sec. 31, 138-29, which was set by Curo sometime ago. We find the iron pipe and all the bearings that Curo put in. The pipe is S of the wagon road by John Seep's house at SE corner of sec. 36, 138-30. We then walk North $\frac{1}{2}$ a mile to the $\frac{1}{4}$ corner by Holmquist's fence, found the two stumps for bearings that Curo had put in but the fence post bearing was gone, as they had moved their fence since the corner was put in. Setting transit on the $\frac{1}{4}$ post on N. side of sec 31, T. 138-Rg. 29, I foresight to a flag set at the SW corner sec 31, and set a line of chaining stakes: 1320 pin. Between 36 & 31, T. 138-Rs. 29 & 30. length of line is 2646.10 ft. Pine 1320 goes south 3.05 ft. to 1323.05 ft. where I set a $\frac{1}{16}$ corner by foresighting to the plumbed flag at SW Prop. corner. I drove a wooden plug in the ground and put in bearings as follows: 8°45' Variation. J. Pine 3, S46°30'E, 52.45 ft. N. Pine stump 12, S69°28'W 7.95 ft.

Walking to the $\frac{1}{4}$ post on the south side of sec 31, 138-29, we could not find the iron that Curo put in so I set a hub for the $\frac{1}{4}$ corner from Hallett's bearing trees, which Curo said stood 40 & 50 lks. After setting the hub I find the bearings stood as follows: J. Pine SW, 40 links = 26.40 ft.; J. Pine NW, 50 lks = 33.00 ft. At this corner I set an iron $\frac{1}{2}$ inches in diameter by 16 inches long. Chaining North we could not find Curo's $\frac{1}{16}$ corner at 1326.60, so we chain N to 2655.20 or the center of the section 31, finding Curo's $\frac{1}{4}$ inch gas pipe. Setting transit on gas pipe and foresighting on $\frac{1}{4}$ corner post S side of sec 31, I run a line of stakes past the $\frac{1}{16}$ corner, chaining S from the center of the section, when I stick the pin in at 1326.60 it strikes Curo's iron which he had put in for $\frac{1}{16}$ corner -- it was exactly in line.

Saturday May 28, 1910. William Wagner and I work in the forenoon setting stakes on the Park. We found one stone Monument and used it. We also used Wideman's fence and stakes around the alley, from Wideman's.

Monday May 30, 1910. William Wagner and I work all day at the park. Notes of $\frac{1}{16}$ line East and West: Chaining E from Kinler's corner, 2265 enter Norway Brook: 145 ft. across brook: 2410 leave brook: 2446.40 Hub by lumber--pile: 2446.40 + 131.50 = 2577.90 ft. At 2577.90 the $\frac{1}{16}$ corner by Keirstien's sets S. 5.66. I then set transit on corrected hub No. 1742.50 and back sighting on true corner by Kinler's, I run E on true line, missing the $\frac{1}{16}$ by Kinler's $\frac{3}{4}$ inch, I then stake out the park from the corner I had set and the true $\frac{1}{16}$ line.

Tuesday May 31, 1910. I set bearings at the center of the section by William Rohrs as follows: turn from true N & S line. Oak S 57°36'W, 35.75 ft.; N. Pine 10, S 33°15'E, 29.57 ft. I also set bearings at the $\frac{1}{16}$ cor. at 1326.60 ft. S. of the center as follows: Var. 5°. J. Pine 6N 67°22'W 50.70 ft.; Nov. Pine 9S 17°21'W 96.80 ft. I put the measurements of the park on the tracing that I had.

Recorded - Oct. 18.

A. W. Moulster - Deputy, County Surveyor,
Cass County Minnesota

TWP. 137. RG. 30. SECT. 31

TWP. 137. RG. 31. SECT. 33-34-35-36-

Field notes of the survey and establishment of corners in section 31, Township 137, Range 30 and sections 33, 34, 35, 36, Township 137, Range 31, as surveyed and established by A. W. Moulster, Deputy County Surveyor, Cass County, Minnesota, examined and recorded by John W. Curo, County Surveyor.

Thursday Sept. 28, 1911. A. W. Moulster goes to Walker to get special field notes for survey. Friday Sept. 29, 1911 return from Walker to Pine River.

Monday October 2, 1911, rode to Countryman's place with Andrew on stage. I am working for Moose Lake Township, stage fare \$1.00.

At the SW corner of sec 31, Twp. 137, Rg. 31, which is the Township corner at the SE corner of sec. 36, T. 137, Rg. 31. Curo established same and put in new bearings as follows: $8^{\circ}41'$ Var: Eln 8, $541^{\circ}42'E$ 27.15 feet distant, Ash 8, $N45^{\circ}51'W$ 49.54 feet distant.

At the Northeast corner of Twp. 136, Rg. 31, Curo's notes call for post: At the SW corner of sec 36, T. 137, Rg. 31, Bingso Township, Goit notes call for post and: Pine 10, $N85\frac{1}{2}^{\circ}E$ 19 links = 12.54 feet. Wk. Birch 7, $N12\frac{3}{4}^{\circ}W$ 51 links = 33.66 feet.

Wednesday October 4, 1911: to establish the N.W. corner of sec. 1, T. 136, Rg. 31. A. W. Moulster Surveyor, with John Jewell, Herbert Wenholz, Frank Countryman assisting go to the SE corner of sec. 36, T. 137, Rg. 31, (which is the SW corner of sec 31, T. 137, Rg. 31) I find stake set by Curo, and both bearing trees present: Setting on corner, I run west on $8^{\circ}40'$ variation: run down road: at 200, 400, 600, 800, feet stick pins; At 999.70 ft. set hub: At 1000, -1200, 1400: 1600: feet set pins. At 1782 feet set hub and tack for temporary NW corner of section 1, T. 136, Rg. 31: At 1800 enter low land -- Marsh: At 2000 & 2200 ft. set pin: At 2400 ft. leave low land, which bears East and South: At 2600 -- 2800: 3000: 3200: 3400: set pins: At 3600 ft. set hub in center of road: At 3800: 4000: 4200: 4400: 4600: 4800: 5000: set pins: At 5200 ft. set hub in road near South cor. to sections 35 and 36, Twp. 137, Rg. 31, where U.S. notes call for a post and the following bearing trees: Pine 10, $N85\frac{1}{2}^{\circ}E$, 19 links = 12.54 feet: W. Birch 7, $N12\frac{3}{4}^{\circ}W$, 51 links = 33.66 feet. I find the pine cut about 10 feet long, plainly marked but grubbed out and lying South of the road: Mr. Hinck and Mr. Countryman both agree as to where the post set before the grader took it out, at which place I set a square hub for corner at SW corner sec 36, T. 137, Rg. 31. At 5278.60 West, the SW corner of 36, 137-31 sets South 5.25 feet: I then continue West on same line: At 5400 and 5600 ft. set pin: At 5800 set hub 20. inches North of North wheel track -- leave road: At 6000: 6200: 6400: 6600: 6800: 7000: set pins: At 7093.60 set hub in front of Hinckes house for temporary NW corner of sec. 2, T. 136, Rg. 31, (hub .15 of a foot too far East) at 7200: 7400: 7600: 7800: 8000: 8200: 8400: 8600: 8800: 9000: 9200: 9400: 9600: 9800: 10000: set pins: At 10100 feet set hub, quit for the day, Countryman brought out our dinner at noon, with rig.

Thursday Oct 5th, 1911. Same crew etc: P.E.C. brings dinner with rig: In Curo's notes I find that he has run this same line beginning at the SW corner of sec. 36, 127-31 and running west: he did not find any Goit cor. until he got to the $\frac{1}{4}$ corner on the South side of sec. 33, Town 137-31,

No 276-CONTIN.

where he found both old bearing trees stumps plainly marked; his measure from SW corner of 36, to $\frac{1}{4}$ on South side of 33, being 0.82 of a foot long; he then established the South West corner of section 34 and put in new bearings at $8^{\circ}46'$ Var. being Birch 3, $S. 87^{\circ}54' E. 31.60$ feet; Birch 5, $S. 2^{\circ}8' W. 47.47$ feet to tack heads: We continue West: At 10200 east edge of Meadow: At 10400 pin in Meadow: At 10560.60 ft. West, Hallett's stake sets South 3.40 feet (near SW corner of sec. 35) At 10600 South side of sea wall at 10800 new road: at 11000 set pin: At 11100 set hub in road: At 11200, West side slope to slough: At 11250 low land: At 11400 set pin: At 11500 set pin 50 ft. East of waters edge: At 11700 set pin in low land West waters edge: At 11750 high land: At 11800: 12000: 12200: 12400: 12600: set pins: At 12800 pin in small meadow: At 13000: set hub in center of old road which bears NE and SW: At 13200: 13400: 13600: set pins: At 13800 set hub on hill: At 14000: 14200: 14400: 14600: 14800: set pins: At 14883.20 ft. set hub: At 15000: 15200: set pin: At 15400 set hub: At 15600: 15800 set pins, at the SW corner of sec 34, being the SE corner of sec 33, T. 137, R. 31, I find the South West bearing tree which was put in by Curo -- the South-east bearing tree and the corner stake have been grubbed out: I set the corner by courses and measurement from the South-West bearing tree and drive a $3 \times 3 \times 16$ inch birch stake for the true corner and put in new bearings as follows: White Birch 4, $S. 51^{\circ}51' E. 58.35$ feet. Same variation as Curo's being $8^{\circ}46'$.

At 15838.30 feet West the South east corner of sec. 33, sets North 0.15 of a foot: My chain from South-West corner of sec 36, T. 137, R. 31, West to the South-West corner of sec. 34, T. 137, R. 31 equals 15838.30 ft. Minus 5278.60 ft. equals 10559.70 feet. Curo's chain equals 10560.60 feet being less than one foot difference between Curo's chain and my chain, which proves that I have set both corners correctly.

To put in N.W. corner of sec. 1, T. 136, R. 31, on ~~South~~ boundary of sec 36, T. 137, R. 31: Goit chain from S.E. corner of sec. 36, T. 137, R. 31, to the S.W. corner of section 36, T. 137, R. 31, equals 5280 feet; My chain equals 5278.60 ft. Goit chain from S.E. corner of sec. 36, T. 137, R. 31, to N.W. corner of sec. 1, T. 136, R. 31, equals 27.00 chains being 1782 feet: 5280 ft. U.S. Chain equals 5278.60 ft. My chain: And 1782 ft. U.S. Chain equals 1781.52 ft. My chain, so that the N.W. corner of sec. 1, T. 136, R. 31, sets 1781.52 feet My chain, West of the S.E. corner of sec. 36, T. 137, R. 31. At 1782 the N.W. corner of sec. 1, sets East .48 of a foot and South 1.77 feet. To put in the North West corner of sec. 2, T. 136, R. 31, we find that the U.S. Chain of South side of sec. 35, T. 137, R. 31 is 5280 feet; My chain of the South side of sections 35 and 36 is 10559.70 feet divided by two, leaves the length of the South side of sec. 35, to be 5279.85 feet my chain.

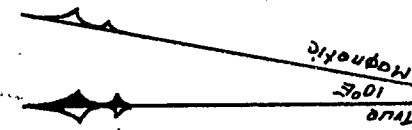
U.S. Chain from S.E. corner of sec. 35, West to the N.W. corner of sec. 2, is 27.50 chains and equals 1815 feet; 5280 ft. U.S. Chain equals 5279.85 ft. My chain so that 1815 feet U.S. Chain equals 1814.95 feet My chain: 5280.60 plus 1814.95 equals 7093.55 from place of beginning survey at S.E. corner of sec. 36, T. 137, R. 31. Temporary hub 7093.6 W., goes E. .05 of a foot and as this hub is already .15 of a foot to far West we chain E. .20 of a foot to a point 7093.55 feet West of the place of beginning thence $S. 4.34$ ft. to the true N.W. corner of sec. 2. To put in the N.W. corner of sec. 3, T. 136, R. 31, Goit chain of S side of

SURVEY-RECORD-276.

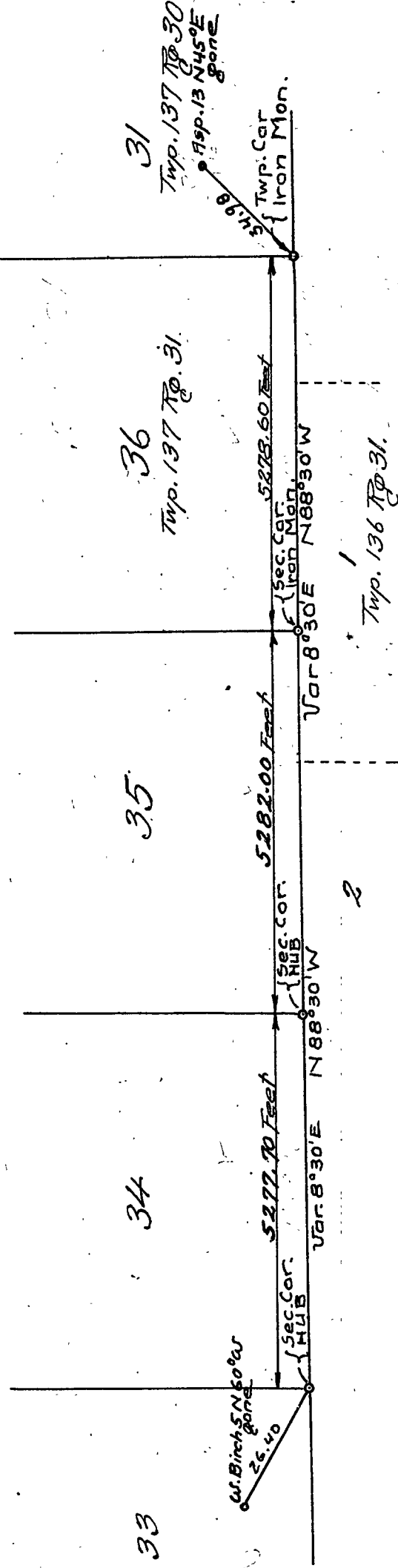
PLAT.

TWP. 137. RANGE 30. SECT. 31

TWP. 137. RG. 31. SECT. 33-34-35-36



Note: Courses turned from true Meridian



FILE 276

sec. 34, T. 137, Rg. 31, is 5280 ft. and equals 5279.85 ft. my chain and the Goat chain from the SE corner of sec. 34, T. 137, Rg. 31, to the NW cor. of sec. 31, 136-31, is 27.54 chains being 1817.64 ft. and equals 1817.60 feet. my chain. At hub 1237.05 runs south 1.70 feet. to NW corner of sec. 3.

Friday Oct. 6, 1911. A. W. Moulster transitman. Herbert Wenholz and Frank Countryman working. P. E. Countryman brings dinner with rig. SW corner of sec. 35, T. 137-31 sets west at 1055.45 and S 2.62 where we set square hub. Setting on the SE corner of Twp. 137, Rg. 31, run E on S side of sec. 31, T. 137, Rg. 30, Var. 8°10'. At 3556.50 East the NE corner of Twp. 136-31 sets south 2.00 ft. This corner previously established by Curo. We then went home, arriving at Countryman's at 4:45 P.M. Frank and Herbert making a mortar-box. I wrote notes and went out to the mail box. Signed - A. W. Moulster.

Saturday Oct. 7, 1911. Frank Countryman, Herbert Wenholz, A. W. Moulster with Countryman's team set the following monuments being two inch galvanized iron pipe 4 ft. long, capped on top with anchor rod thru bottom of pipe, well set in concrete and rock at the following places: NW corner sec. 3, NW cor. of sec. 2, and NW cor. of sec. 1, in Twp. 136, Rg. 31, and at the SE cor. of sec. 35, Twp. 137, Rg. 31, and at the SE cor. of sec. 36, Twp. 137, Rg. 31, which is the SW corner of sec. 31, Twp. 137, Rg. 30. Bungo Twp. is to pay for the setting of their corners as agreed by Mr. Hinch.

Sunday Oct. 8, 1911. Wrote notes and went hunting.

Friday Oct. 20, 1911. A. W. Moulster transitman. Frank Countryman, Herbert Wenholz and team setting iron monuments. At the NE cor. of sec. 1, Twp. 136, Rg. 31, being on the S boundary of section 31, Twp. 137, Rg. 30, which is the 9th standard Parallel, we pull up the wood post previously set by Curo for the true Twp. corner and put in its place a 1 1/4 x 48 inch galvanized iron pipe set its full length in the ground in a bed of concrete for the true Twp. corner.

A. W. Moulster,
Deputy County Surveyor,
Edso County, Minnesota.

Rec'd Oct - Oct 19-20

TWP. 136-RG. 30. W 5TH P.M.

SEC'S. 6-19-30

Field notes of the survey and establishment of iron section corners in secs 6, 19 and 30, Township 136, Range 30, Cass Co. Minnesota as surveyed and established by A. W. Moulater, Deputy County Surveyor, Cass Co. Minn., examined, approved by John W. Curs, County Surveyor.

October 4th 1911. A. W. Moulater Transit: John Jewell, Herbert Wenholz and Frank Countryman ax and chainmen go to the SE corner of Twp. 137, Rg. 31, (this is the S.W. corner of T. 137, Rg. 30) I find a stake previously set by Curs for the true Township corner where his notes call for the following bearing trees @ 8°41' variation: Elm 8, S 41°42'E, 27.18 feet. Ash 8, N 45°51' W, 49.34 feet. We find both bearing trees which check out correct: Setting on corner I run West down road at 9°40' variation: At 5278.60 feet the South West corner of section 36, T. 137, Rg. 31, sets South 5.25 feet where U.S. notes call for post and bearing trees as follows: Pine 10, N 85°30'E 19 links, (= 12.54 feet) White Birch 7, N 12°45' W 51 links (= 33.66 ft.) We find the pins, cut about 10 feet long, plainly marked but grubbed out and lying south of the road; Mr. Hinck and Mr. Countryman both agree as to where the post set, as established by Curs from the old goat bearing trees, at which point I set a square hub for the true corner.

October 6, 1911. A. W. Moulater, Frank Countryman, Herbert Wenholz working, P.E. Countryman brings dinner with rig: Going to the S.E. corner of Twp. 137, Rg. 31, which is the Southwest corner of Township 137, Rg. 30, run East, Variation 8°10': At 1200 set hub in center of road: 3556.50 the North West corner of sec. 6, T. 136, R. 30, sets South 2 ft. this cor. was previously established by Curs.

October 11, 1911. Same crew working, begin the corner to sections 23, 24, 25 & 26, T. 136, Rg. 31 and run East on 8°48' variation: At 700 ft. set hub on hill: At 2600 set hub on hill: At 2640 temporary 1/4 corner ----- gone: At 4760 cross stoney brook, br N 45: At 5280. ft. set hub North of wagon road for temporary corner to sections 19, 24, 25 and 30 on Range line between Township 136, Ranges 30 and 31 W, where U.S. notes call for a post and the following bearing trees: Tamarac 6, S 34° W, 4 links (= 2.64 feet) Tamarac 4, N 74° W, 5 links (= 3.30 feet) Spruce 8, N 22° E, 9 links (= 5.94 feet) Fir 10, S 36° E 8 links (= 5.28 feet).

At 5248.50 feet a stone in center of road set for cor. to sections 19 and 30, T. 136, Rg. 30, sets South 19.85 feet: At this point which is the East corner to section 24 and 25, T. 136, Rg. 31, John Nelson, who lives on the S.E. quarter of sec. 24, T. 136, Rg. 31, testifies as follows: "Ole Munson's brother moved here 17 years ago--- found the goat stake, being partly rotten then-- and piled rock around the stake" that "the trees were dead and down when Munson came--- just as they are now" that he, John Nelson, "moved here 14 years ago" that "Hallett surveyed the road bet. sections 24 and 25, T. 136, Rg. 31" (the Township road book shows that Hallett surveyed said road in 1903) and Nelson "helped him" that "Hallett put his stake in the center of the pile of rock" when road was worked Nelson was road boss-- takes up stake and places a rock in place of stake "we find the rock, also Hallett's stake against stump: Ole

B

Munson and Nelson live in same house. Munson's brother died some years ago. I find a 9 inch white pine tree, green and standing North about 6 rods, (Var. 5³⁰) flayed on both sides. On North blaze is marked "Town Line X" evidently done by Hallett as the Mark X is his private mark. Some of the blazes appear to be older than Hallett's. Said Nelson testifies that Hallett established the 1/4 cor. bet. secs. 24 and 25, T.136, Rg. 31, and that he found no bearing trees; that he nor Munson ever saw any bearing trees for the N.E. cor. of sec. 25."

Wednesday Oct. 18, 1911. A. W. Moulster, 7 Countryman, H. Wenholz working in P.M. Setting on Cor. to secs. 19, 24, 25 and 30. Township 136, Ranges 30 and 31, run South along range line, Var. 8³⁰ this work being done to check on the corner to sections 19, 24, 25 and 30: At 0.0 swamp: At 200. and 400 ft. set pin: At 455.30 ft. set hub: At 600 and 800 feet set pins: At 959.25 feet set hub: At 900 enter tag alder and meadow land, bear NE and SW: At 1000: 1200: 1400: 1600, set pins: At 1800 set hub: At 1830 a pole fence runs East and West: At 1850 enter open meadow.

Thursday Oct. 19, 1911. Same crew, Continue South: At 1900 set pin: 2000 center of Stony Brook - East and West: 2100 pin: At 2250 ft. leave meadow, enter brush: At 2300 set hub 2 ft. South of rail fence: At 2500 and 2600, set pin: At 2638.50 ft. South, the 1/4 cor. bet. sec. 25 + 30, sets West 7.70 feet. At this point U.S. notes call for post and the following bearing trees: Fir 10, N. 15⁰W, 7 links = 4.62 feet: Aspen 7, 55⁰E, 12 links = 7.92 feet: Magnus Olson who lives on section 30, T.136, Rg. 31, testifies as follows:

"At the N.E. corner of section 25, T.136, Rg. 31, (which is the West corner bet. secs. 19 + 30, T.136, Rg. 30) he saw a spruce bearing tree about 15 years ago: Also the old goit stake, being partly rotted then." "About 13 years ago James M. Canfield, County Surveyor of Cass County Minnesota surveyed from the East, (between sections 19 and 30, T.136, Rg. 30) to the N.E. corner of sec. 25, where he also found the spruce bearing tree and also the stake" Olson says that the present rock is at the place where the stake formerly stood: Olson also states that about 5 years ago a competent surveyor surveyed the east boundary of sec. 25, (which is the west boundary of sec. 30) for a logging company: starting at the rock at N.E. corner of sec. 25 he run South: finding no goit corner at the 1/4 he continued South to the S.E. corner of sec. 25, he then "correctly established the 1/4" I found the above 1/4 corner and it seems O.K. the surveyor put in a post marked 1/4 S" with rock around the bottom and bearing trees being - Pop. 5, S.E. White Pine 12, now down, waterly. Taking all evidence into consideration the rock at the corner to secs. 19, 24, 25 + 30 is correct.

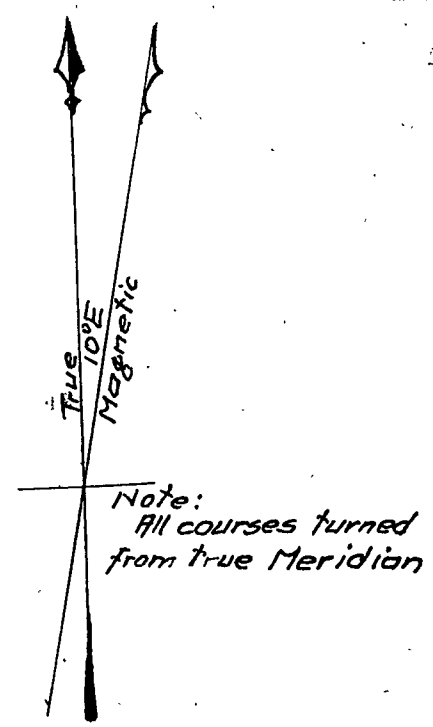
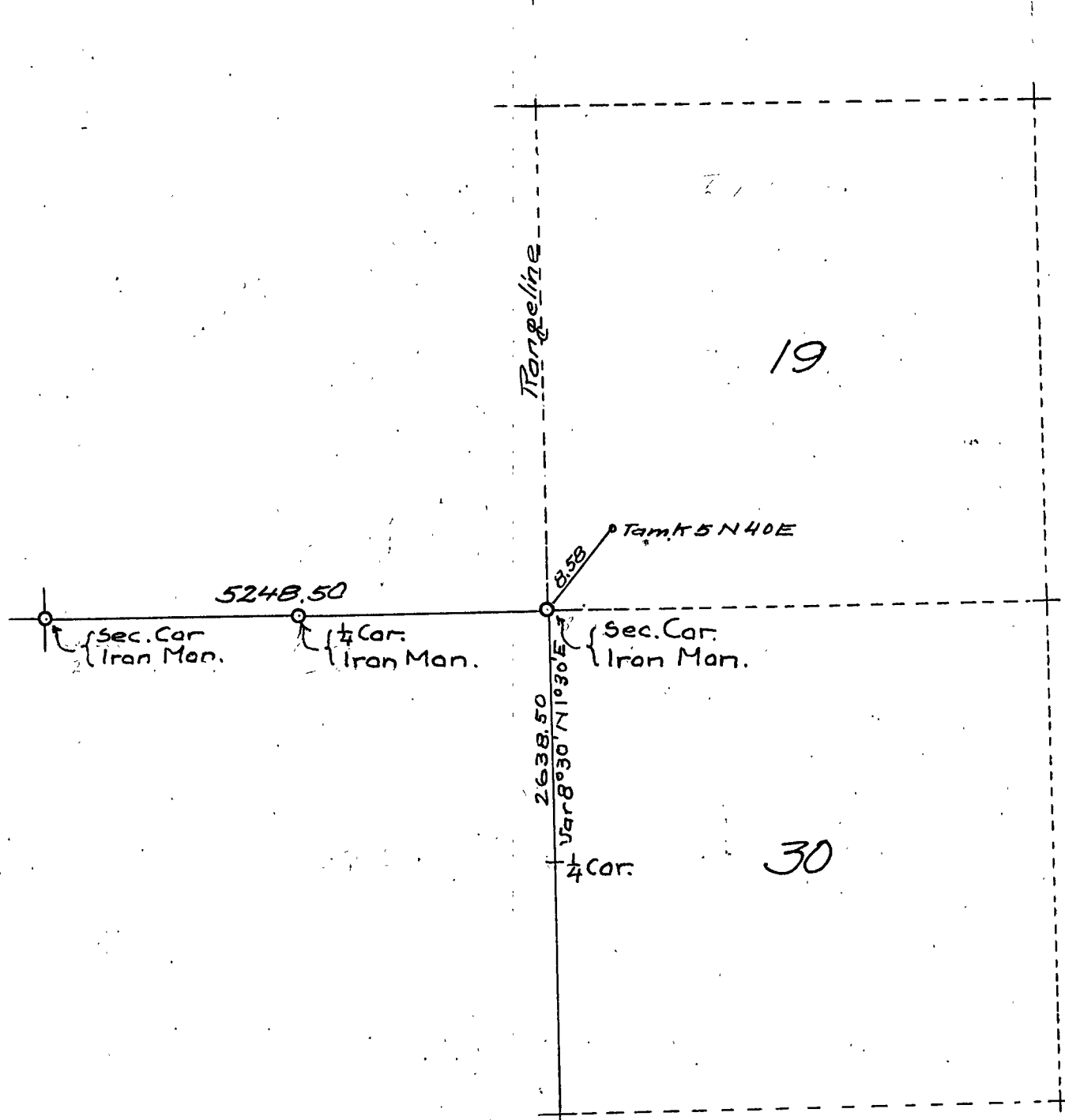
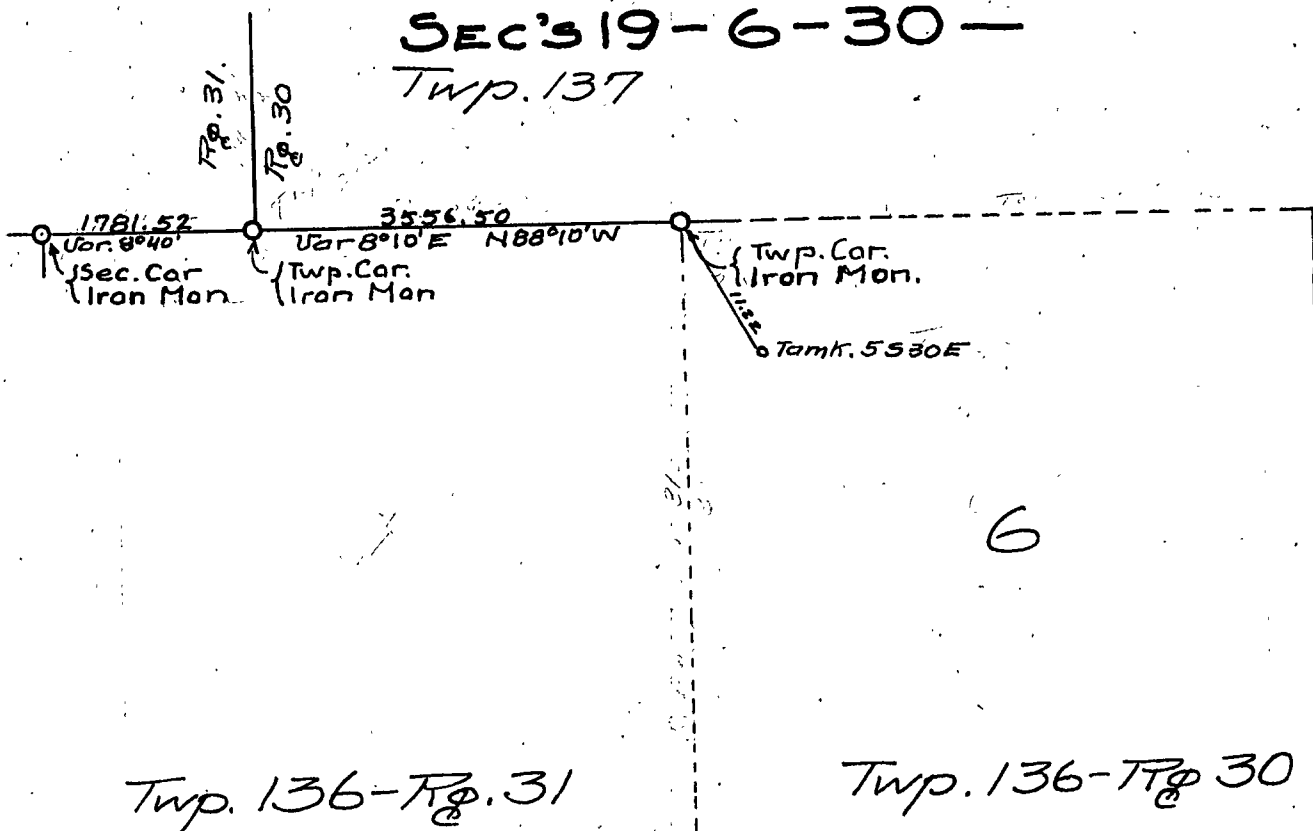
Friday Oct. 20, 1911. A. W. Moulster, H. Wenholz: 7 Countryman, and Wenholz 4 team setting iron monuments: At the N.E. cor. of sec. 1, T.136, Rg. 31, being the Top corner at the North West corner of section 6, Twp. 136, Rg. 30, we pull up the wood hub and put in its place a 1 1/4 inch by 4 foot galvanized iron pipe with no cap. At the corner to sections 19, 24, 25 and 30, on the range line between Twp. 136, Ranges 30 and 31, we set a 1 1/4 inch galvanized iron pipe 4 feet long not capped.

Surveyed Oct. 4th 1911 to Oct. 20th, 1911.
Recorded

A. W. Moulster Deputy Co. Surveyor, Cass Co. Minn.

County Surveyor, Cass Co. Minn.

PLAT.
Twp. 136 N. Rg. 30 W 5TH P.M.
SEC'S 19-6-30-
Twp. 137



Note:
All courses turned
from True Meridian

TWP. 141 N. RG. 29 - SECT. 1-12-13-24-25-36
 TWP. 141 N. RG. 28 - SECT. 2-3-4-5-6-7-8-9-10-11-18-19-30-31

Field notes of the survey of a County road and the establishment of iron section corners in sections 1, 12, 13, 24, 25 and 36, of Township 141 N, Range 29 W, and sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 18, 19, 30 and 31 of Township 141 N, Range 28 W, 5th Principal Meridian Cass Co. Minnesota as surveyed under the direction of John W. Curo, County Surveyor of Cass County Minnesota, assisted by Geo. W. Miller, E. B. Horst and H. F. Baldwin, Engineers: Miller's notes of the field work read as follows:

Monday June 7th 1915, Cloudy: Geo. W. Miller, transit and chain: Harry Williams, Axman and chain: Frank Williams, Bert Carnahan and Geo. Mankins, Axmen: We use a new "Gurley" engineers transit in perfect adjustment and a new 100 foot Chicago steel tape: We proceed to the S.E. corner of sec. 36, T. 141, R. 29, being S.W. corner of sec. 31, T. 141, R. 28 W, 5th Mer. where we find a 2 1/4 inch by 4 foot galvanized iron pipe capped on top set nearly its full length in the ground as recorded in survey record No. 225 Book "A" Page 556 of County record book of surveys. I set the transit over this corner, back sight on random North run by Curo during the winter of 1912 and 1913: turn 5° 47' to the left and run North on a new random:

Assuming Curo's measurements of his former survey, to be correct this new random should follow the true range line very closely: We shoot this line ahead until we intersect the N.E. corner of sec. 36, T. 141, R. 29 (being the corner to sections 25, 30, 31 & 36, on range line between Twp. 141, R. 28 and 29) as set by Curo and recorded on survey record No. 225, Book "A" page 556, County record book of surveys, which shows that we are on the true range line.

From the notes of Curo's former survey I figure the correct distance between this N.E. corner sec 36, 141, 29 and the S.E. corner of 141, 29, to be 5460.54 feet.

Continue North: At 7156.50 set hub: quit for night, Geo. W. Miller.

Tuesday June 8, 1915, same crew and tools continue North on range line between Township 141, R. 28 and Township 141, Range 29: At 8188.40 set hub: At 8190.81 set hub and tack for temporary 1/4 corner on East side of sec. 25, T. 141, R. 29 (being temporary 1/4 on West side of sec. 30, T. 141, R. 28) quit for night. Geo. W. Miller.

Wednesday, June 9th, 1915, Fair and Warm: same tools and crew: Continue North on range line: triangle lake as follows: Setting transit on hub 8188.40 marked "A" cause hub "B" to be set on line on North side of lake: Walk around lake and set transit on hub "B", back sight on hub "A" and turn 90° to the left and run East 100 feet and set hub "C", place transit over hub "C" back sight on hub "A" turn telescope to the Right to hub "B", angle at "C" is 84° 05': Angle "A" figures 5° 55': Cotangent of 5° 55' times 100 feet (being length of base line) = 964.90 feet between hubs "A" and "B". 964.90 feet added to 8188.40 feet equals 9153.30 feet to hub, "B" over lake, Continue North: At 9903.40 set hub and triangle another lake as follows: transit at 9903.40 being hub "A" cause hub "B" to be set on North side of lake and walk around lake and set transit on hub "B", back sight on hub "A" and run West 50 feet and set hub "C" and continue west 50 ft. more and set hub "D" 100 ft. West of "B" set transit on hub "D" back sight on "A"

then turn telescope to left on hub "B" angle reads $87^{\circ}01'30''$: With transit on hub "C" back sight on hub "A" turn telescope to left to hub "B" angle reads $88^{\circ}31'$ distance over lake by proportion of both angles is 1927.54 feet added to 9905.40 = 11830.94 Continue North at 12085.00 set hub: 12430.90 set hub: At 12940.10 set hub 13601.40 set hub: At 13651.35 set hub and tack for temporary $\frac{1}{4}$ corner between sections 19 and 24 on range line: At 14065.00 set hub: At 14713.50 set hub and quit for night. Geo. W. Miller.

Friday June 11, 1915. same crew and tools, continue North: At 15595.80 set hub: At 16234.90 set hub: At 16381.62 set hub and tack for temporary corner to secs 13, 18, 19 and 24. At 17781.30 set hub: At 18453.50 set hub: At 19111.89 set hub and tack for temporary $\frac{1}{4}$ corner between sections 13 and 18, At 19300 set stake and quit for night. Geo. W. Miller.

Saturday, October 16th, 1915. H. F. Baldwin transitman, also transit and compass, assisted by Elmer H. Atwood find the corner to secs, 5, 6, 7+8, and sections 4, 5, 8+9 of Township 141, Range 28; these are corners as used by the farmers here: they have been re-established by some one since Government survey: Baldwin and Atwood take also transit and go to S.W. corner at section 7, (being corner to sections 7, 12, 13, and 18 on range line between Township 141, Ranges 28 and 29) established by Curo and which has the following new bearing trees as per County record book of which Baldwin has a tracing: Poplar 4, N $66^{\circ}W$, 21.70 ft., Poplar 4, N $79^{\circ}25'E$ 82.60 feet, white Pine stump 30, S $20^{\circ}20'W$ 73.82 feet: A corner post sets in ground, correct for course and distance, but it is loose: We drive oak hub and put tack in center from which we start random line North, on 9° variation. And quit for night.

Monday October 18th, 1915. H. F. Baldwin and Elmer H. Atwood, continue North on range line from S.W. corner of sec. 7, T. 141, R. 28: At 810 a barbed wire fence runs East and West: At 829.10 set hub: At 1290 cross barbed wire fence nearly North and South: At 1636.10 set hub on East and West road. At 2691.20 set hub: look for bearing trees to $\frac{1}{4}$ corner between sections 7 and 12, but find none, continue North: At 2800 enter wet marsh: At 2895. leave same: At 3100 set hub: Quit for night.

Tuesday October 19, 1915. Baldwin transitman, also chaining: Atwood, Ax, flag and chainman: Helds Anderson ax and brush scythe: Continue North: At 2665. we find old $\frac{1}{4}$ post 40 feet East (distance paced) find 6 inch poplar marked with scribe sets N $30^{\circ}W$, 60 feet, paced: another old poplar with scribed and sets NE of post: these do not appear to be U.S. Government bearing trees: At 3631.00 N set hub: At 3994.70 set hub: At 4380.50 set hub: At 4650.60 set hub: Quit for night.

Wednesday, October 20, 1915. H. F. Baldwin transitman, same crew and tools, continue North: At 4952.50 set hub: At 5017.60 set hub: At 5035. Water edge of small lake, triangulate the lake: 5017.60 hub "A", cause hub "B" to be set on North side of lake from which run East 100 feet and set hub "C": Angle at hub "A" reads $17^{\circ}30'$: Angle at hub "B" reads 90° : Angle at hub "C" reads $72^{\circ}30'$ distance hub "A" to "B" is 317.20 feet added to 5017.60 makes 5334.80 feet to hub "B".

Leave North shore of lake at 5290. At 5334.80 hub: Near corner to secs. 1, 6,

7 and 12, on range line between Township 141, ranges 28 and 29: At 5340.30 the corner sets East 81.60 feet: We find the stump of the 12 inch Norway pine bearing tree S 85° W 191 links being 126.06 feet distant with the "B.T." Marks plainly showing and the well rotted stump of "poplar 12, S 26° W 29 links" being 19.14 feet, from which we set the section corner from distances given in U.S. notes: To correct this mile each hub goes .01528 of a foot East for each foot it is North as follows: hub 829.10 N, goes East 12.67 feet to tree line: hub 1636.10 N, goes East 25.00 feet. Hub 2000 goes East, 30.56 ft. Hub 2691.20 goes East 41.12 ft. At 2670.15 ft. North, the 1/4 corner will go East 40.80 feet. 3100 goes East 47.37 feet: 3631.60 goes East 55.49 ft. 3999.70 goes East 61.12 feet: 4380.50 goes East 66.93 ft. 4650.60 goes East 71.06 ft. 4952.50 goes East 75.67 feet. We do not set the correction hubs on this line today, but start a random line East between sections 6 and 7, T. 141, Rg. 28, Var. 8° 30' E: At 100 ft East set hub: At 120 feet East enter water edge of small lake: triangulate lake to get the distance across: hub 100 = hub "A", cause hub "C" to be set on East side of lake: transit at hub "C", focus on hub "A" turn 90° to right and run North 100 ft. and set hub "B". Angle at hub "A" is 14° 41' 30": Angle at hub "B" is 75° 18' 30": Angle at hub "C" is 90°: distance between hubs "A" and "C" is 381.40 feet added to 100 makes 481.40 feet At 435 East edge of water in lake: At 481.40 hub, continue East with crew cutting brush.

Thursday October 21st, 1915, same crew, continue East: At 636.40 set hub: At 1000 E. wet Marsh: At 1080 leave Marsh: At 1180.70 set hub: At 1639.10 set hub: At 2009.80 set hub on top of hill: At 2585. E, we find an old 1/4 post sets South about 50 feet (distance paced) but find no U.S. bearing trees: At 2597.70 set hub: Continue cutting line East and quit for night.

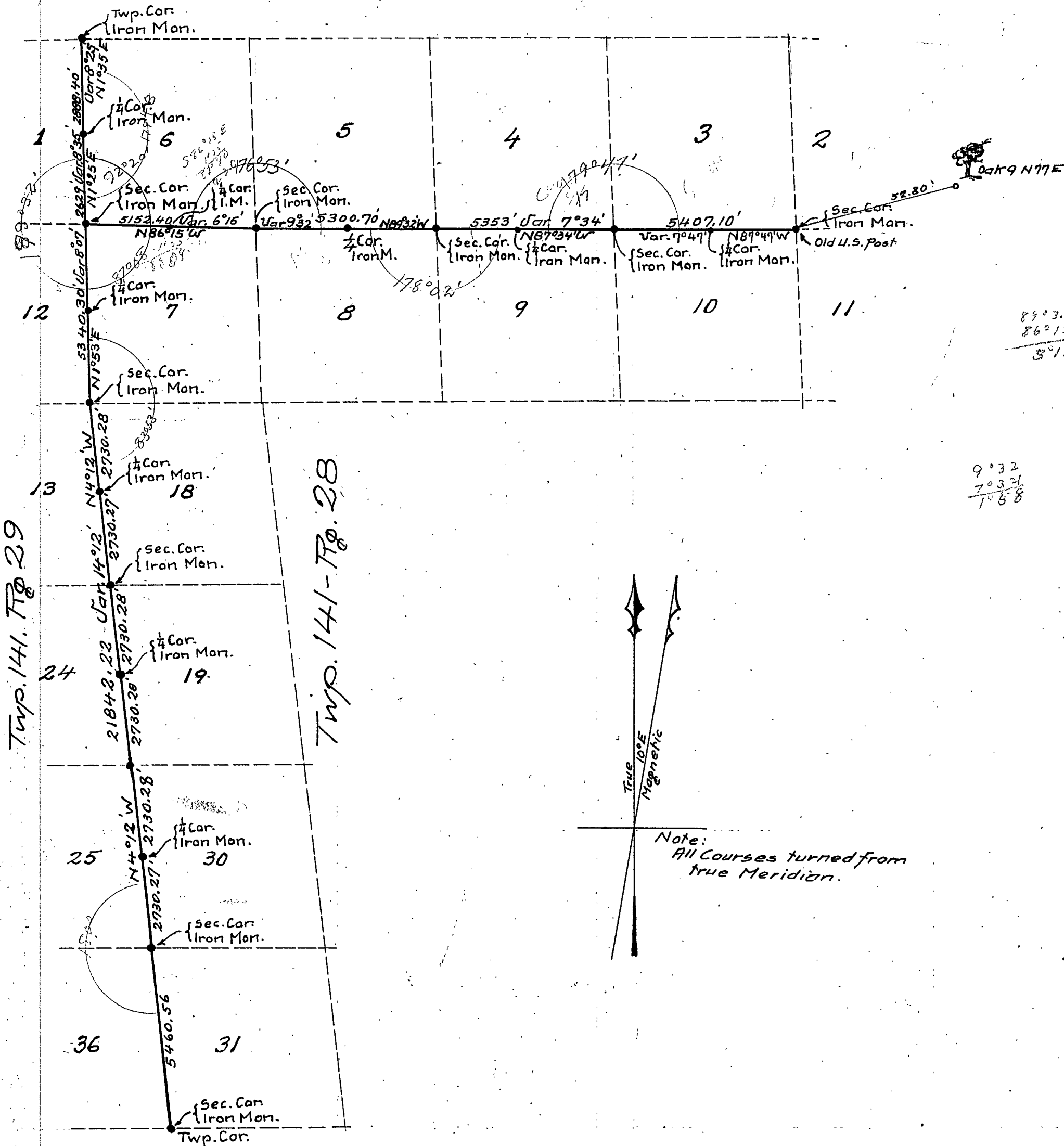
Friday October 22nd, 1915, same crew, continue East: At 3075.50 set hub: At 3338.60 set hub: At 3400 cross wagon road to Anderson's Homestead: At 4137.70 set hub: At 4815 E, cross a road running to Anderson's and Wilbert's: At 5070 set hub: At 5152.40 East the true corner to sections 5, 6, 7 and 8, T. 141, range 28, sets South 202.50 feet At this point U.S. notes call for a post and the following bearing trees: White pine 20, N 75° E, 10 links (= 6.60 feet). White pine 30, S 56° E 36 links (= 23.76 feet) White pine 24, S 62° W, 67 links (= 44.22 feet) These bearing trees have been re-marked with scribe and as white pine 30, S 56° E 36" is badly decayed another 18 inch pine, 5 feet further away has been marked (same bearing). We set corner by proportion from the old bearing trees after which the old bearings stand as follows: Old white pine 20, N 24° E 6.40 feet: Old white pine 30, S 52° E, 23.06 feet: Old white pine 24, S 75° W, 42.92 feet: the new bearing trees at this corner stand as follows: white pine stub, 3.0 inch, bears N 6° E 57.10 feet, blazed with tack in center: To correct the random line between sections 6 and 7, each hub goes .0393 of a foot South for each foot it is East from the corner to sections 5, 6, 7 and 8, we start the crew cutting a line East and quit for night.

Saturday October 23rd, 1915. At ~~two~~ and Anderson continue cutting line East between sections 5 and 8: Baldwin transcriber: at 543.70 set hub:

PLAT.

Twp. 141 N. Rg. 29 W. SECT. 1-12-13-24-25-36

Twp. 141 N. Rg. 28 W. SECT. 2-3-4-5-6-7-8-9-10-11-18-19-30-31



B

At 1329.40 set hub: At 1900 intersect road which runs to Sorenson's house:
 At 2031.50 set hub: At 2170 road to Longville: At 2179.50 E, set a hub from
 which we triangulate a lake. At 2179.50 hub "A" cause hub "B" to be
 set on East side of lake: transit on hub "A" turn 90° and run to left,
 North 300 feet and set hub "C". Angle at "A" is 90°: Angle at hub "B" is 27°:
 Angle at hub "C" is 63°: Distance between hubs "A" and "B" is 588.80 feet
 added to 2179.50 equals 2768.30 feet. At 2210 enter wet meadow: At
 2400 enter lake, (distance estimated) at 2580 leave lake: At 2750
 East, leave wet meadow: At 2768.30 hub: continue cutting line East
 and quit for night.

Monday October 25, 1915. Baldwin with Alce transit in one crew and
 E. B. Horst with K. & E. transit in another crew Nick Harig runs Alce for
 Baldwin, while Baldwin with big compass looks up corners. Harig
 and Atwood running East between secs 5 and 8, T. 141, Rg. 28: At 3008.80
 set hub: At 3169.40 set hub "C" from which they triangle a small lake by
 setting hub "A" on line across lake, and from hub "C" turn angle 90° to left
 and run North 100 ft and set hub "B". Angle at "B" reads 76° 49': Angle at
 "A" is 13° 11': Angle at "C" is 90°: Distance from "C" to "A" is 426.90 feet added
 to 3169.40 equals 3596.30: Chaining East: At 3220 E, enter wet Marsh:
 At 3596.30 hub over lake: then cut line East to section corner:
 E. B. Horst, transitman, assisted by H. F. Baldwin and Hilda Anderson,
 go to range line and continue Miller's line North, beginning at Miller's
 hub 19111.89 and Miller's stake 19300 North: at 19488.80 set hub: At 21468.90
 set hub: At 21842.22 we intersect the center of corner to sections 7, 12,
 13 and 18, on range line between Townships 141N, Ranges 28 and 29 W, set by
 John W. Curo in 1913:

Tuesday October 26th, 1915. E. B. Horst transitman, also chaining and Hilda
 Anderson Ax and chain walk to corner of sections 1, 6, 7 & 12 on range line,
 set by H. F. Baldwin from old U.S. bearing trees, and start a random line
 North between sections 1 and 6, Variation 10° 30' E. At 617.70 North set hub:
 At 954.50 set hub: At 1890.60 set hub: At 2120.50 set hub: And quit for night.
 H. F. Baldwin with sight compass establishes the corner to sections 4, 5, 8 & 9,
 T. 141, Rg. 28, from the stumps of the old U.S. bearing trees, stump with scribe
 marks showing: White pine 15, N 29° E 20 lbs. = 13.20 feet: Norway Pine 12,
 S 13° E 35 lbs. = 23.10 feet: Norway pine 11, S 39° W 55 lbs. = 36.30 feet: Norway
 Pine 12, N 71° W 38 lbs. = 25.08 feet: Baldwin places a hub with tack for the
 true corner: the distance then to the old bearing trees, proportioned is as
 follows: 13.20 U.S. = 13.00 My chain: 36.30 ft. U.S. = 35.74 My chain: 23.10 U.S. =
 22.74 ft. My chain: 25.08 ft. U.S. chain equals 24.74 feet My chain
 Nick Harig with Alce transit (running transit in place of Baldwin) and
 E. H. Atwood with Ax and flag, continue East on random line between
 sections 5 and 8, T. 141, Rg. 28: At 3708.10 set hub "C" then triangle distance
 across a lake cause hub "A" to be set on East side of lake and from hub
 "C" turn 90° angle to the right and run South 100 feet and set hub "B".
 Angle at hub "B" is 79° 00': Angle at hub "A" is 11° 00': Angle at hub "C" is 90°:
 Distance between hubs "A" and "C" is 514.50 feet added to 3708.10 equals
 4222.60. At 2730 enter wet Marsh: At 4150 leave Marsh: At 4222.60
 continue East: At 4506.20 set hub: At 4897.20 set hub:

At 4960 enter wet Marsh which we triangulate to get distance across. Transit at hub 4897.20 marked "C" set hub "A" across lake on East side; From hub "C" turn 90° angle to right and run South 100 ft. and set hub "B". Angle at "B" is $76^\circ 24'$ angle at hub "A" is $13^\circ 56'$: Angle at hub "C" is $90^\circ 00'$ distance between hubs "A" and "C" is 413.40 feet added to 4897.20 equals 5310.60 to hub over lake: At 5230 E, leave wet Marsh: 5310.60 hub: At 5300.70 feet East the corner to sections 4, 5, 8 and 9, sets North 95.10 feet:

From the corner to sections 4, 5, 8 & 9, T. 141, Rg. 28, we start a line East on $6^\circ 45'$ Variation E: At 15 feet East cross farm road: At 660 enter wet Marsh: At 1000 leave wet Marsh: balance of P.M. cut line East and quit for night.

Wednesday October 27, 1915. Baldwin, Harzig and Atwood continue East on random line between sections 4 and 9, T. 141, Rg. 28: At 1241.10 set hub: At 1917.00 set hub: At 2360.40 set hub: At 3000 set hub: At 3526.00 set hub: At 4069.50 set hub: At 42.00 enter Swamp: At 4800 leave swamp: At 5352.80 set hub: At 5353.00, East the true corner to secs 3, 4, 9 and 10, sets North 76.50 feet: At this corner U.S. Notes call for post and poplar 8, S $26^\circ W$ 40 links = 26.40 feet: this is gone: White pine $26^\circ S 62^\circ E$ 59 links = 38.94 feet. We find the stub of this tree with the "B.T." marks showing: White pine 13, N $43^\circ E$ 35 links = 23.10 feet. We find the roots of this tree only: From the latter two bearing trees we set a hub with tack in center for the true corner from which an Oak 12 inch, bears S $65^\circ W$ 39.85 feet distance. This Oak has been marked with a timber scribe by some surveyor: Baldwin starts a new random line East at $6^\circ 45'$ Variation E, running between sections 3 and 10: At 100.30 East set hub: At 827.60 set hub: And quit for night.

F. B. Horst with K. & E. transit, assisted by Anderson and Anderson, continue their random line North between sections 1 & 6, on range line Town 141, Rgs. 28 & 29: At 2359.00 set hub: At 2640.00 set hub and look for U.S. bearings to $\frac{1}{4}$ corner where U.S. Notes call for post and white pine 25 inch, N $56^\circ E$, 14 links = 9.25 feet: White pine 20 inch, N $56^\circ 30' W$ 74 links = 48.84 feet, we find the 25 inch white pine with the "B.T." marks showing plainly and the stump of the 20 inch N.W. tree but the marks are all rotted off: Stumps check for course and distance and we drive a square hub for true $\frac{1}{4}$ corner. At 2629.00 feet North the $\frac{1}{4}$ corner just set between sections 1 & 6 sets East 88.30 feet: We only take the measurement to this $\frac{1}{4}$ corner and continue our original transit North: At 3048.00 set hub: At 3382.80 set triangulation hub "A" set hub "B" on line on North side of lake, then walk around lake and set transit on hub "B", back sight to "A" turn telescope 90° to the right and run West 57.40 ft. and set hub "C". Angle at "C" is $52^\circ 34'$: Angle at "A" is $7^\circ 26'$, distance between "A" and "B" is 439.90 feet added to 3382.80 equals 3822.70 to hub over lake. At 3470 enter lake: At 3800 leave lake: At 3822.70 hub: At 4183.60 hub: At 4963.40 set hub and quit for night.

Thursday October 28th 1915. Horst and same crew continue North between secs 1 & 6: At 5280 set hub and look for bearing trees to corner

17 sections 1, 6, 31 and 36, being the township corner to townships 141 and 142 N, Range 28 and 29 W, where U.S. notes call for post and bearing trees as follows: White Birch 6 inch, S 45° W, 23 lbs = 15.18 feet: White Birch 5 inch, S 25° W, 25 lbs = 16.50 feet: White Oak 14 N 5° E 22 lbs = 15.52 ft: White Oak 18, S 20° W, 18 lbs = 11.88 feet: We find both Oak bearing trees down, but plainly marked, both birch stumps are still here but the sap wood bearing the old marks has rotted away: the old post 5 inch x 5 inch x 4 feet, still stands at true point for corner but is almost rotted off at surface of ground. We drive a 2 1/2 inch by 4 foot iron pipe, capped on top, 3 feet into the ground to mark the township corner and mark new bearings as follows: Poplar 7, N 15° 30' W, 55.00 ft: Birch 4 S 7° 30' E 28.00 feet: White pine stump 24, S 54° 30' W, 38.00 feet. This corner sets in heavy brush on small island surrounded by wet marsh. We return to hub 5280 N, and continue line North to 5517.40 from which the true township corner just set, bears East 176.50 ft. H. F. Baldwin transitman, using big compass assisted by W. Olson in one crew, while Nick Harig runs Albe transit in Baldwin's place, assisted by Elmer H. Atwood. Baldwin corrects the line between sections 5 & 8, T. 141, Rg. 28 as follows: Correction equals .01794 of a foot North for each foot it is East. Set 2 1/2 x 48" Iron Monument for corner to 5, 6, 7, 8 - 141 - 28. Hub 543.70 goes North 9.75 feet to true line: Hub 1329.40 goes N 23.84 feet: Hub 2031.50 goes North 36.44 feet: Hub 2179.50 goes North 39.11 feet: At 2650.35, we run North 47.55 feet between sections 5 and 8, where we set an iron Monument 2 1/2 by 48 inches in size for the true 1/4 corner. Hub at 2768.30 goes North 49.66 feet to true line: Hub 3008.80 goes North 53.98 feet: Hub 3169.40 goes North 56.87 feet: Hub 3596.30 goes North 64.51 feet: Hub 3718.10 goes N 66.52 feet: Hub 4222.60 goes North 75.75 feet: Hub 4506.20 goes North 80.84 feet: Hub 4897.20 goes North 87.85 ft: Set 2 1/2 x 48" Iron Monument for Cor. to 4, 5, 8 & 9. Harig and Atwood chaining East between sections 3 & 10, T. 141, Rg. 28: At 1125.30 Hub: At 1780.50 hub: At 2306.60 hub: At 2334 enter Marsh: At 2700 leave Marsh: At 2703.50 hub: At 2820 enter Marsh: At 2900 leave Marsh: At 3000 set hub: At 3100 enter Marsh: At 3275 leave Marsh: 3400 enter Marsh: 3615 leave Marsh: At 3784.00 hub: At 4200 farm road, quit for night.

Friday October 29, 1915: Baldwin, Harig, Atwood and Olson continue random line East between sections 3 and 10, T. 141, Rg. 28: At 4661.40 set hub where we offset South 200 feet at 90° to avoid a wet Marsh: At 5061.00 East set a hub where we offset back North 89 feet at 90° then continue East: At 5140 enter Marsh: At 5230 leave Marsh: At 5407.10 set hub where we offset back North 111 feet to bring us on original course of random line where we look for bearings to corner of sections 2, 3, 10 and 11, T. 141, Rg. 28. We find the White Oak, Government stake at this corner and put in its place a 2 1/2 x 48" iron Monument: this corner sets 97.40 feet North of our random line. At 5407.10 the true corner to secs. 2, 3, 10 & 11 sets North 97.40 ft.

E. B. Horst, K. & E. transit, Hilda Anderson flag and chain, ride with O. B. Anderson's team to a point where the range line intersects a logging road, being used

for wagon road. This is the old railroad grade and crosses the range line about 20 ft. South of the $\frac{1}{4}$ corner between sections 19 & 24, and where George C. Williams according to our orders has delivered 19 iron monuments brought from Harry Savalli's place in sec. 11, T. 40, R. 29. We take three of these irons and walk south along the range line to the corner of secs 25, 30, 31 & 36 established by County Surveyor, Curs. We find his wood post, which we pull up and put in its place a $2\frac{1}{2} \times 48$ inch iron monument capped on top and set three feet into the ground for the true corner. This corner is only a few rods NE of Frank Kinkeli's house. We find an iron monument at Mr. Kinkeli's place but we leave it there as we all ready have to much to carry. We walk half a mile North on the cut-out range line, where we find a hub set by Miller at 819.83 North. We pull up this hub and put in its place an iron monument $2\frac{1}{2} \times 48$ inches, capped on top for the true $\frac{1}{4}$ cor. between secs. 25 and 30, from which we mark a new bearing as follows:

White Birch 4, N 68° W, 20.20 feet. No station 10921.11 N being the point for the true section corner to sections 19, 24, 25 & 30. Falls in lake, Forest sets a witness corner 653 ft. North to the North shore of lake, where he places a $2\frac{1}{2} \times 48$ inch iron monument capped on top and set on the true range line with bearing trees as follows: Poplar 7 N 36° W, 28.50 ft., Poplar 4, N $15^\circ 30'$ E, 53.86 ft. We walk North along the range line to station 13651.39 where we set the true $\frac{1}{4}$ corner between sections 19 & 24, and drive a $2\frac{1}{2} \times 48$ inch capped iron monument with no bearing trees. We follow the range line North to station 16381.67, where we place the true corner to sections 13, 18, 19 & 24, setting a $2\frac{1}{2} \times 48$ inch capped iron pipe with bearings as follows: White pine snag 30 inches, N 87° E, 72.50, White Birch 6, N 31° W, 47.00 ft. Following the range line North to station 19111.94 we set the $\frac{1}{4}$ corner between secs 13 & 18, placing a $2\frac{1}{2} \times 48$ inch capped iron monument which sets in North side of dry meadow, as there are no bearing trees here we set a large yard stake at this corner. Following the range line N to station 21842.22 being the true corner to secs. 7, 12, 13 & 18, we pull up the oak stake set by Curs and put in its place a $2\frac{1}{2} \times 48$ inch capped iron monument, all above iron monuments are set on the true range line between Twp. 141 N, Rgs. 28 & 29 West. Quit for night.

Saturday October 30, 1915 Forest with K. & E. transit, Hells. Anderson & O. B. Anderson go to the SW corner of sec 7, T. 141, R. 28, and correct the Mile North between secs. 7 & 12, setting road centers and iron monuments. Hub 829.10 N. goes E 12.67 ft.: Hub 1636.10 N goes E 25.00 ft.: Hub 2000 N goes E 30.56 ft.: At 2670.15 N we run E 40.80 ft., where we set a $2\frac{1}{2} \times 48$ inch iron monument capped and set for the true $\frac{1}{4}$ corner between secs. 7 & 12 with new bearing trees being Poplar 6, N 23° W, 62.50 ft., At 3100 N chain East 47.37 feet to true line, Hub 3631.60 goes E 55.50 ft., 3999.70 N goes E 61.12 ft., Hub 4380.50 N goes E 66.93 ft.: Hub 4650.60 N goes E 71.05 ft.: Hub 4952.50 N goes E 75.67 ft.: At 5340.30 N the true corner sets E 81.60 ft., where we set a $2\frac{1}{2} \times 48$ inch iron monument capped on top for the true corner to sections, 1, 6, 7 & 12, with new bearings as follows: Poplar 8, S 2° W, 83.50 ft., (standing at small lake) Poplar 10, S $55^\circ 45'$ E, 32.90 ft., along this entire mile we set hubs and tall

stakes at each correction to mark the true center of the County road.

We set Road Centers going East between sections 6 & 7, T.141, Rg. 28, at each Correction of the random line as follows: Each hub goes South .0393 of a foot South for each foot it is East. Hub 481.40 E goes S 18.90 ft. to true line. Hub 636.40 E goes S 24.99 ft., 1180.70 E goes S 46.41 ft., 1639.10 E goes S 64.41 ft., 2069.80 E goes S 78.99 ft. At 2576.20 E we run S 101.25 ft., where we set a 2 1/2 x 48 inch capped iron Monument for the true 1/4 corner between sections 6 & 7, T.141, Rg. 28, with new bearings as follows: Poplar 8, N 27° 35' W, 53.90 ft., Poplar 8, N 23° 10' E 44.80 ft., Harig and Atwood correct the balance of this line East, Baldwin keeping the notes. Harig and Atwood correct the East half mile between sections 6 & 7 as follows: At hub 2597.70 E they chain South 102.10 ft., where they set a road center stake and set road center stakes for the balance of this half mile as follows: At hub 3075.50 E chain South 120.86 ft.; at 3330.60 E chain South 130.91 ft. At 4137.70 E run South 162.62 ft. At 5070.00 E chain South 199.25. At 5152.40 E chain S 202.05 ft.; where iron Monument has been placed at corner to 5, 6, 7 & 8.

Baldwin, Harig, Olson & Atwood, go to the mile between sections 3 & 10, where they correct it as follows: 100.3 goes N 11.70 ft., 827.60 goes N 13.96 ft., 1125.30 E goes N 18.98 ft., 1780.50 E goes N 30.03, 2386.60 goes N 38.90 ft., 2703.50 E goes N 45.60 ft., At 2756.40 E the true 1/4 Cor. bet. secs. 3 & 10 sets N 46.30 ft. to iron Monument., Hub 3000 E goes N 51.00 ft., 3784.00 goes N 66.10 ft. At 5487.10 E the true corner to sections 2, 3, 10 & 11, T.141, Rg. 28, sets N 97.40 ft. where there is an iron Monument.

Baldwin and Harig with compass and 50 foot metallic tape correct the mile between secs. 4 & 9 as follows: Hub 600 E goes N 8.57 ft., 1241.10 goes N 17.73 ft., 1917.00 E goes N 27.39 ft., 2360.40 E goes N 33.72 ft., At 2776.50 E the true 1/4 corner sets N 38.25 ft., where we drive a 2 1/2 x 48 inch capped iron Monument 30 inches in the ground for the true 1/4 Cor. bet. secs 4 & 9, 141-28, continue correcting East., Hub 3000 E goes N 42.87 ft., 3526.00 goes N 50.38 ft., 4069.50 E goes N 58.16 ft., At 5353.00 E the true corner sets N 76.50 ft., where we drive a 2 1/2 x 48 inch capped iron pipe 30 inches in the ground for the true corner to secs. 3, 4, 9 & 10, T.141, Rg. 28. 12 iron Monuments are left where the range line crosses the main wagon road on old railroad grade, near school House, about 80 ft. North and 40 feet west of the crossing.

Surveyed---

Recorded-----

SURVEY-RECORD-№279

TWP. 143 RG. 31. SECT. 13-14-23-24

Field notes of the survey in the following sections, and establishment of iron monuments at corners to same, as surveyed by John W. Curo, County Surveyor, Cass County Minnesota.

October 8, 1916. As we are on our way to Sugar Point to make a survey of a county road, and as Mr. Fisher offers to take us over free of charge, we offer to assist him an hour, by establishing a corner and running a few lines in the above sections, on our way past Squaw Point.

John W. Curo, transitman and checking the chain. Delois, Nowak, Harold W. Curo and Frank J. Fisher, flag, ax and chainmen. We use a big sight compass and 100 foot steel tape. Leave the launch on the point and walk a mile or so north to the corner to sections 13, 14, 23, 24, Township 143, Rg. 31, where U.S. notes call for a post and the following bearing trees:

Norway pine 10 inch, $N 2^{\circ} W$ 54 links = 35.64 feet: Nor. pine 12 inch, $S 43^{\circ} E$, 26 links = 17.16 feet: Norway pine 8 inch, $S 6^{\circ} W$, 269 links = 177.54 feet: Norway pine 14 inch, $N 2^{\circ} 30' E$, 617 links = 407.22 feet. We find the NE tree standing green and plainly marked and we find the stumps of all the other trees plainly marked from which we set the corner by flat chain from face of the B.T. marks. We first set a pin for temporary corner by flat chain from the face of the NW and SE stumps. Then going to the NE tree in sec. 13, we chain to the temporary corner 407.22 feet, then going to the SW B.T. stump we chain in the direction of the temporary corner 177.54 feet, and find the distance between the NE and SW trees to be 1.90 ft. short. $407.22 + 177.54 = 584.76$ ft. U.S. chain = 582.86 ft. My chain being .00325 of a foot short per foot. 177.54 U.S. chain = .60 of a foot short and is 176.94 ft. My chain 407.22 U.S. chain = 1.30 of a foot short and is 405.92 ft. My chain. We drive a 2 x 48 inch boiler tube iron pipe its full length in an 18 inch mound of dirt after which the old bearing trees stand as follows: Var. $8^{\circ} 45'$

Norway pine tree $N 4^{\circ} E$, in sec 13, 405.92 ft., Nor. pine stump $N 3^{\circ} 30' W$, in sec 14, 35.64 ft., Nor. pine stump $S 7^{\circ} W$, in sec. 23, 176.94 ft., Norway pine stump $S 42^{\circ} E$, in sec. 24, 17.16 ft. The NW corner post of a wire fence sets west 1.20 ft. to the center of post. Fence bears $S 2^{\circ} 30' W$. Var. $8^{\circ} 45'$. We start a pickett line S. bet. secs 24 and 25 and set a stake about 30 rods south and cut a notch in top rail of south fence, so that if the stake gets moved, Mr. Fisher can line the notch in fence with true corner and cut pickett line S. Mr. Fisher takes us to the Glenn Judy place on Sugar Point, where we stay over night.

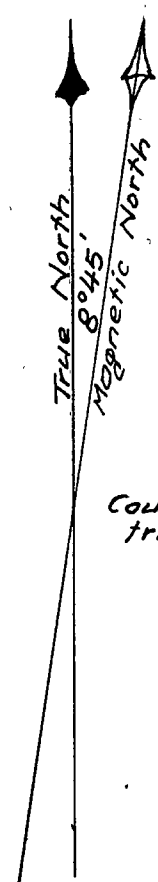
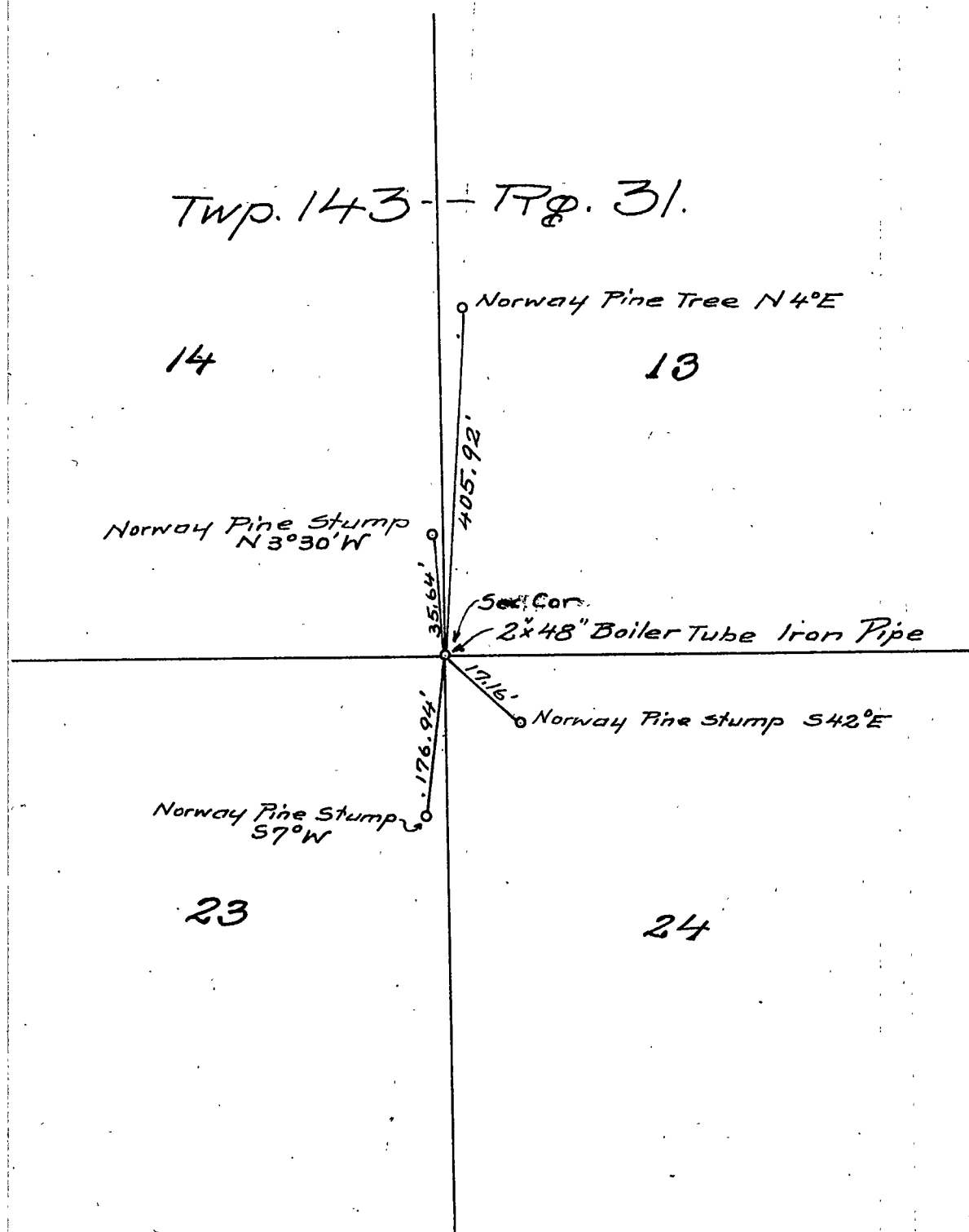
Surveyed October 8, 1916.

Recorded --

SURVEY-RECORD-279

PLAT.

TWP. 143 Rg. 31. SECT. 13-14-23-24.

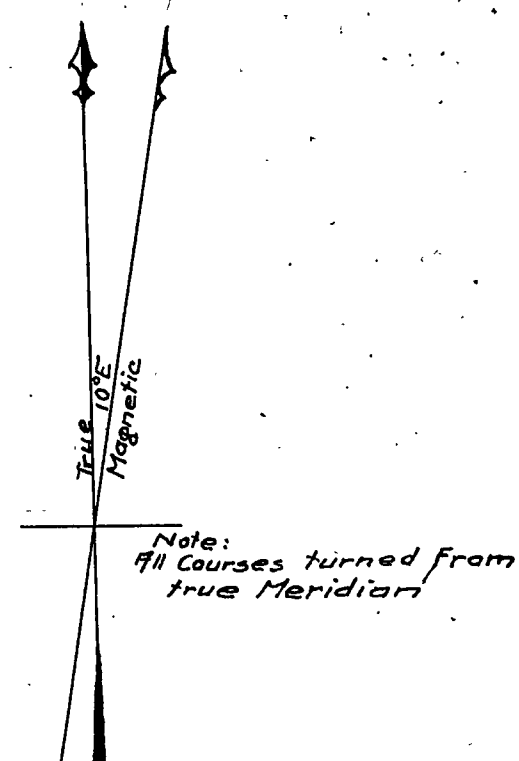
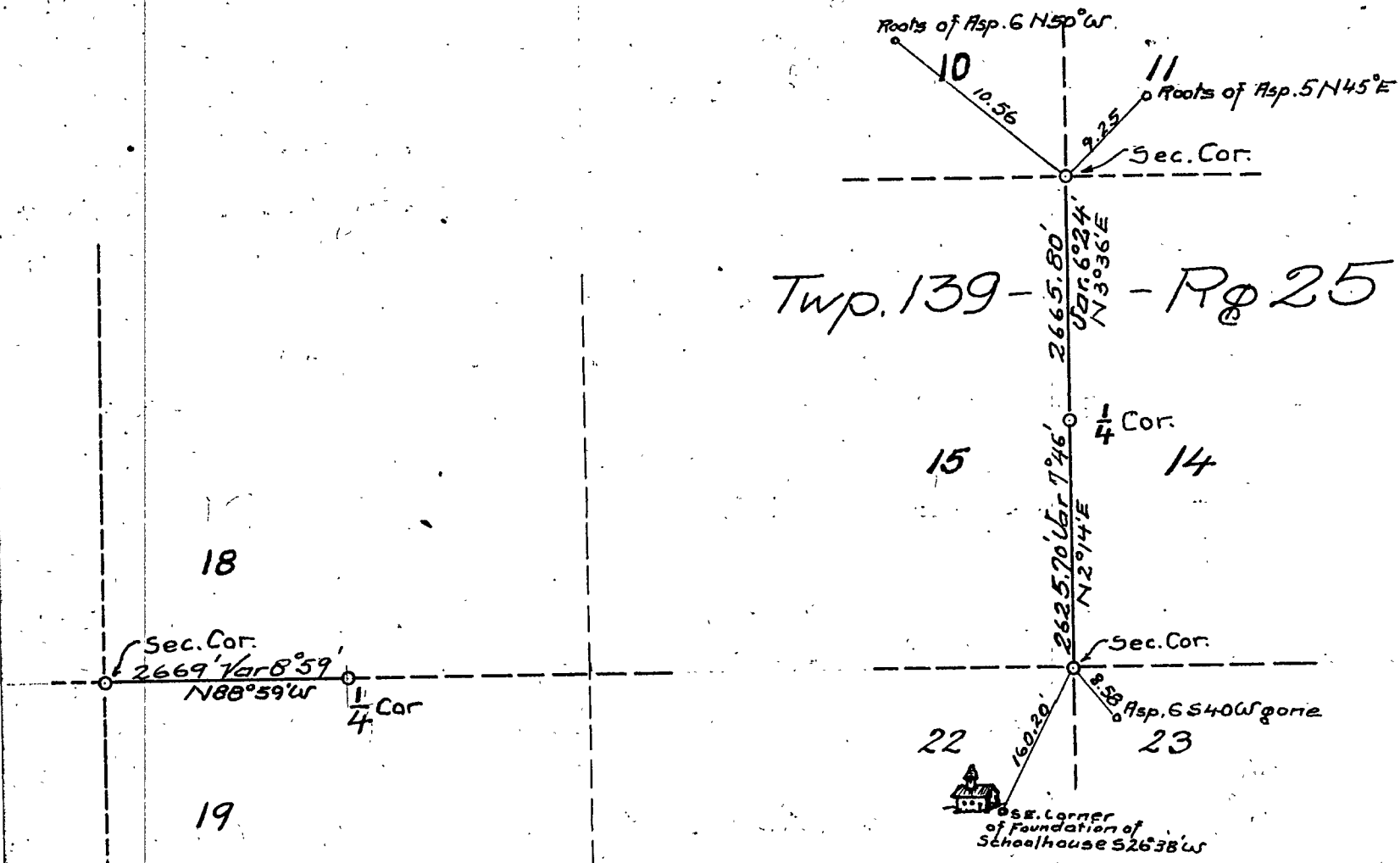


Courses are turned from true Meridian

SURVEY-RECORD No 280

PLAT.

Twp. 139. Rg. 25 W. SECT. 10-11-14-15-18-19-22-23



SURVEY-RECORD-280.

Twp. 139 N. Rq. 25 W. SECT. 10-11-14-15-18-19-22-23.

Field notes of the survey and establishment of corners in sections 10-11-14-15-18-19-22-23, Twp. 139 N. Range 25 W, 5th P.M. Cass County Minnesota, as surveyed by and under the direction of John W. Curo, County Surveyor of Cass County Minnesota, assisted by M. A. Kemp, Deputy County Surveyor.

August 26, 1912. M. A. Kemp, transitman, K. & E. transit, with 300 foot Chicago steel tape-plump-bob chaining. After waiting over Sunday in Pine River for part of my survey outfit which was carried to Brainerd, I started at 2:30 A.M. with William Andrews and drive to Beulah Township. Had dinner with W. J. Stratton and started work in P.M. with W. J. Stratton and J. C. Stratton helping. Set on corner to sections 14, 15, 22, 23, Twp. 139 Rq. 25, previously established by Curo. I took the following bearings at 8° Variation:

N.E. corner of school-house bears S. 26° 38' W. 160.20 ft. to corner of foundation in section 22. Stump of Curo's bearing tree stands N. 41° 19' 14.35 ft. Run N. on 7° 30' Variation. At 830.25 hub, at 1320 hub; at 1718 East and West road; 1900 enter open bog; at 26.25.70 true $\frac{1}{4}$ corner between secs. 14 & 15 sets W. 12.60 ft. The Government notes at this point call for post and: Y. Pine 6, S. 38° E. 181 links (= 119.46 feet); Aspen 7, S. 20° W 243 links (= 160.38 ft.); We find the SE tree standing plainly marked and set a 4" x 4" x 48" hub for the true $\frac{1}{4}$ corner and took the following bearings to tacks in trees. At 8° Variation.

Old SE tree bears S 38° E, 119.46 ft. distant. A new bearing tree being yellow pine 8 inch bears S 16° 20' E, 143.70 Ft. Over night with W. J. Stratton.

M. A. Kemp.

Tuesday, August 27, 1912. M. A. Kemp transitman with W. J. Stratton and A. Olds helping. Beginning at the new $\frac{1}{4}$ corner just set betw. secs. 14 & 15 Twp. 139-25, run N. on 7° 30' Variation. At 650 leave bog; at 746.50 tack in log; at 1124.15 tack in log; at 1433.15 tack in log; at 1960 tack in log; at 2516.65 tack in log; at the corner to secs 10-11-14-15, Gov't notes call for post and: Aspen 5, N 45° E, 14 links; Aspen 6 N 50° W 16 links; Aspen 4 S 50° E, 18 links; W. Birch 8 S 12° W 35 links (= 23.10 Ft.) We find the burnt stump of the S.W. Tree and the fallen body of the tree. Quit for night.

M. A. Kemp.

Wednesday, August 28, 1912. It rained in the morning. In the afternoon, Stratton, Olds, Kemp, set 4" x 4" x 36" hub and tack for the section corner to secs. 10-11-14-15 Twp. 139-Rq. 25, with new bearings as follows: S 55° 30' W 32.70 Ft. to tack in 10" Maple; S 36° 55' E 32.10 Ft. to tack in 8 inch White Birch; At 2665.80 N on our Random line the corner just set is E 52.60 Ft. Set over new corner and find the rotted roots of the old bearing trees correct for course and distance for the old NW and SE trees. We correct back on our line north half sections 14, 15. Hub 746.50 goes E 14.70 Ft. Hub 1124.15 goes E 22.20 Ft. Hub 1433.15 goes E 28.30 Ft. Hub 1960 goes E 38.60 Ft. Hub 2516.65 goes E 49.70 Ft. Correcting south half of secs 14 & 15 Hub 1320 goes S 7.15 Ft. and W 6.30 Ft. to the $\frac{3}{16}$ corner betw. sect. 14 & 15. Hub 830.25 goes W 4 Ft. runs S.E. in Sect. 23. old bearing trees gone.

M. A. Kemp.

Thursday, August 29, 1912. In A.M. : M. A. Kemp, W. J. Stratton, and "Peg" Olds, walked to the Westside of Twp. 139 R_g 25, and hunt for the section corner to secs. 18 & 19 but fail to find anything.

Dinner at Waldrop. In P.M. chain half a mile East and find the corner to secs. 18 & 19 on Westside of Twp 139-25. Gov't. notes call for post and Pine 8, N 72° E 223 links (= 147.18 Ft.); Pine 8, S 12° E, 304 links (= 200.64 Ft.) Pine 6, S 87° W 145 links (= 95.70 Ft.) Pine 7 N 46½° W 95 links (= 62.70 Ft) by courses the distance betw. the NW and SE trees is .21 of a foot too long and the distance betw. the NE and SW trees is 1.88 Ft. too short. We set the corner by proportionate measurement putting in a 4x4x30 inch hub and tack for the true corner after which we took the following bearings: Old B.T. Stump S 86° 40' W 95.63 Ft. Old B.T. Stump N 46° 08' W 62.40 Ft. Old B.T. Stump S 10° 30' E 200.50 Ft. (tack) Old B.T. Stump N 73° 53' E 146.47 Ft. Tack in White Pine 10 inch, N 53° 25' E 161 Ft. Over night at Waldrop's. M. A. Kemp

Friday, August 30, 1912. with Kemp, transit and chain, Stratton chaining, Old and Jasper Waldrop cutting brush. Set over West corner to sec's 18 & 19, 139-25 and run East on 8° 06' Variation. At 679 set hub. Quit for night. Over night with Waldrop's. M. A. Kemp.

Saturday, August 31, -1912. Continue East. At 1200 enter Cedar and Ash swamp. At 1937.90 tack in log; at 2669 the ¼ corner betw. sect. 18 & 19 sets N 41.50 Ft. Gov't. notes call for post and Tamk. 10 N 30° E 69 links. Ash 6 S 35° W 50 links (= 33 Ft.) We find the Ash standing green and plainly marked and set a 4x4x30 inch hub and tack in the swamp for the true ¼ corner at 8° 06' Var.

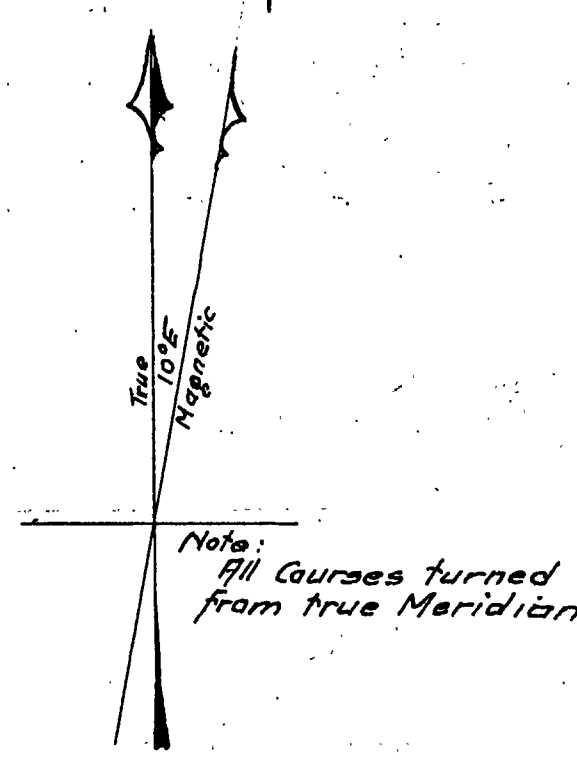
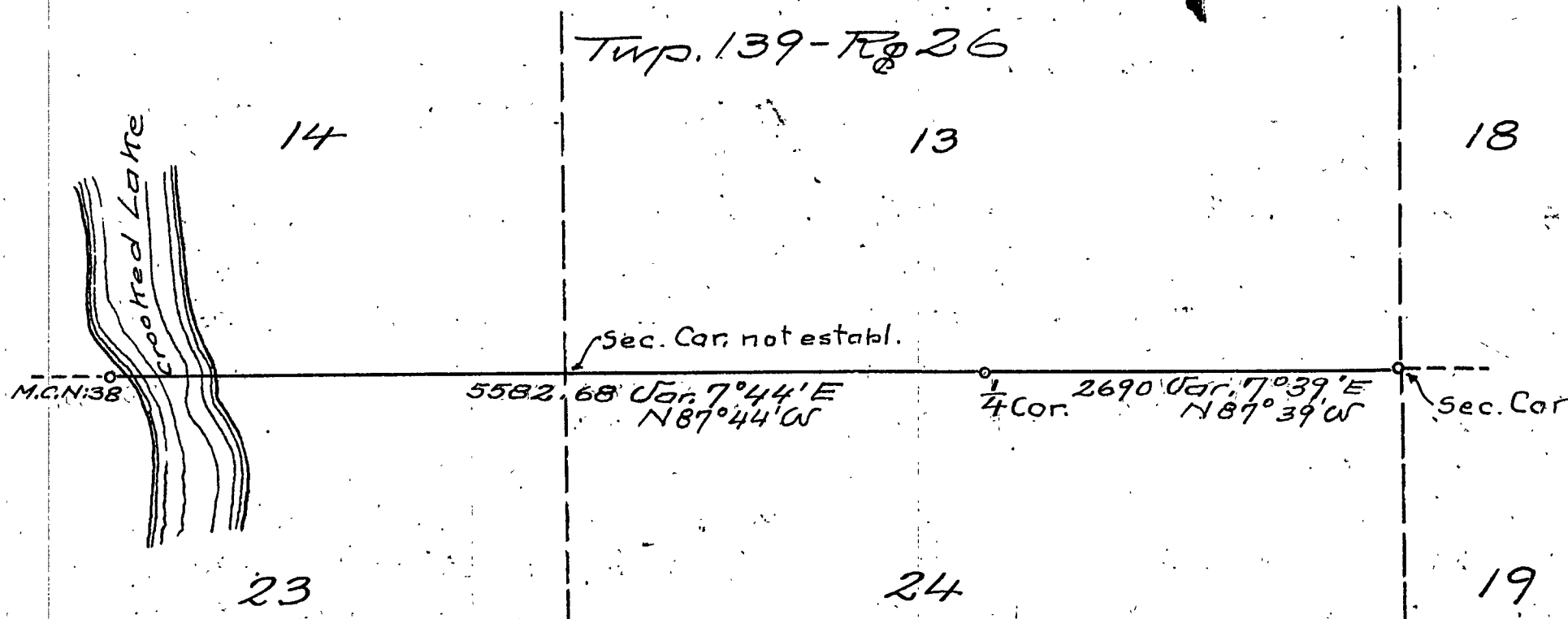
After which we take bearings as follows: Tack in new blaze on old Ash B.T. bears S 35° 05' W 32.60 Ft. 9 inch Ash N 42° 35' W 30 Ft. In afternoon we correct back the West half mile of secs. 18 & 19. Hub 1937.90 goes N 30.13 Ft. Hub 1166 goes N 18.13 Ft. 677 goes N. 10.56 Ft. M. A. Kemp.

12 in. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10.

SURVEY-RECORD No 281

PLAT

Twp. 139 - Rg 26 - SECT. 13 - 14 - 23 - 24



SURVEY-RECORD 281

Twp. 139-Rg. 26-SECT. 13-14-23-24

Field notes of the survey and establishment of corners in Secs. 13-14-23-24 - Twp. 139-Rg. 26 5th P.M. Cass County, Minnesota, as surveyed by and under the direction of John W. Curo, County Surveyor of Cass County, Minnesota, assisted by M. A. Kemp, Deputy County Surveyor.

Thursday, August 29, 1912. M. A. Kemp, transitman, K & E Transit 300 Foot Chicago Steel Tape, plumb-bob chaining. Kemp chaining and transit, W. J. Stratton and Reg. Olds walk to the East corner of secs. 13 & 24. Fail to find same, take dinner at Waldrop's and in afternoon walk to the $\frac{1}{4}$ corner betw. secs. 13 & 24. Twp. 139-Rg. 26 just West of Thompson's house in big open bog, where Gov't notes call for post and Tamk 3 $S 35^{\circ} E$ 21-links (= 13.86 ft) Tamk 3, $N 10^{\circ} W$, 20-links (= 13.20 ft) We find the NW stump but burnt though plainly marked from which we set a 4x4x30 inch hub and tack for the $\frac{1}{4}$ corner and at $8^{\circ} 15'$ Var take the following bearings: to tack-heads in: Tamk stub 5, $N 67^{\circ} E$, 31.25 ft, Tamk stub 7, $S 23^{\circ} 10' W$ 65.90 ft., set over corner and run East betw. secs. 13 & 24, $8^{\circ} 15'$ Var. At 500 leave bog; at 651.20 hub; at 800 enter bog; at 1050 leave bog; at 1330 old N & S Tote road; at 1468.50 set hub; at 1840 enter meadow; at 2640 leave meadow; at 2690 the E corner to secs. 13 & 24 bears $S 28.30$ ft. Gov't notes call for Pine 8 $N 72^{\circ} E$, 223-links (= 147.18 ft) Pine 8 $S 12^{\circ} E$ 304-links (= 200.64 ft) Pine 6 $S 87^{\circ} W$, 145-links (= 95.70 ft) Pine 7 $N 46^{\circ} 30' W$ 95-links (= 62.70 ft). By courses the distance betw. the NW & SE trees is .21 of a foot too long, Distance betw. NE & SW trees is 1.88 ft. too short. We set the corner by proportionate measurement putting in a 4x4x30 inch hub and tack for the true corner after which we take the following bearings: Old B.T. stump $S 86^{\circ} 40' W$ 95.63 ft. Old B.T. Stump $N 46^{\circ} 08' W$ 62.40 ft. Old B.T. stub $S 10^{\circ} 30' E$ 200.50 ft. (Tack) Old B.T. Stump $N 73^{\circ} 53' E$, 146.47 ft., tack in White Pine 10 inch $N 53^{\circ} 25' E$ 161 ft. Over night with Waldrop's
M. A. Kemp.

Friday, August 30, 1912. It rained in A.M. Kemp transit and chain, Stratton chaining, Olds and Jasper Waldrop cutting brush. We correct E half mile between Sec's. 13 & 24 Hub 1468.50 goes $S 75.45$ ft. Hub 651.20 goes $S 6.85$ ft.

We walked ahead $\frac{1}{2}$ mile and Thompson showed us a post for the corner to sec's. 13 & 14 & 23 & 24 in floating bog. We quit for night and walk back to Strattons.
M. A. Kemp.

Monday, September 2, -1912. Stratton and Kemp walk to Waldrop's and with Waldrop to help set transit over $\frac{1}{4}$ corner betw. sec's. Band 24 - 139-26 just established and run West on $8^{\circ}30'$ Var. At 298.60 tack in log at 550 meadow; at 900 small island; at 1000 leave island; enter meadow; at 1200 leave meadow; at 1335.20 hub; at 1950 enter bog; at 2019.50 tack in log; over which we set transit and put hub "A" (being tack in log) across pond turn 90° angle and set hub "B" to the right 150 Ft. N. Set transit on hub "B", back sight on hub 2019.50 and turn $81^{\circ}02'30''$ to hub "A", distance from hub 2019.50 to hub "A" is 994.47 Ft. added to 2019.50 = 3013.97 Ft. to hub "A". Set transit over hub "A" and set a hub at 2998.97, chaining West, at 2050 enter open water; at 2625 leave same; at about 2650 a stake set by some cruiser for the temporary corner to 13, 14, 23, 24 sets N about 75 Ft. We hunted for the bearing trees and not being able to find the same decided to continue West. Over night at Waldrop's
M. A. Kemp.

Tuesday, September 3, 1912. Same crew, continue West: Kemp and Stratton chaining; at 4167.40 tack in log; at 4311 old NW and SE road; at 4756.90 tack in log; at 4855.80 hub and tack "A" set over "A" and set hub on line across lake being hub "B" on Westside of Crooked Lake on water line; at 4960 edge of lake; cross lake in boat and from "B" back sight on "A" turn 90° to left and set hub "C" 133 Feet North; set over hub "C" back sight on "B" and turn $77^{\circ}38'30''$ to "A"; distance between A and B is 624.38 Feet added to 4855.80 equals 5480.18 Feet; at 5582.68 West Meander Corner No 38 set by Curo in 1909 stands 74.80 North; the bottom of Curo's stake still remains but the top is burnt off so we set a new stake being oak $4 \times 4 \times 24$ inch with Tack for true M.C. As the Birch bearing tree marked by Curo is down, we mark a new one, being Elm 12 inch $N30^{\circ}W$, 29.10 Feet. From the $\frac{1}{4}$ corner between Sections 13 & 24 T 139 R 26 to M.C. No 38 on Westside of Crooked Lake 5821.20 feet U.S. chain and 5582.68 Feet my chain, we correct line as follows: We make no attempt to establish the corner to sections 13, 14, 23, 24, T. 139 R. 26 as no one knows of any corners closer than two miles North or South to be found. At 4374 we set a hub and stake marked "True Line" "Road Center" 58.40 Feet North on Westside of old road near Crooked Lake. 4167.40 goes North 55.40 Feet; 3491.80 goes North 46.40 Feet; 2998.97 goes N 39.80 Ft; 2019.50 goes N. 26.80 Ft; 1333.20 goes E 54.63 Ft. and N. 17 Ft. which fixes its position as to East and West for the true $W\frac{1}{2}$ between sec's. 13 & 24. 298.60 goes N 3.90 Feet. — Sept. 4 - 1912. Same crew; we went back over line corrected yesterday which we found correct. Meacham drove Stratton and I to Stratton's and then drove me to Outing where I had supper and spent night with Mr. W. Andrews.
M. A. Kemp

Twp. 139N. Rg. 26W. 5th P.M.
Sec's. 27-28-29-30-31-32-33-34.

Field notes of the survey and establishment of iron corners in sections 27, 28, 29, 30, 31, 32, 33 and 34, Township 139N, Range 26W, 5th P.M. Cass County Minnesota, as surveyed by and under the direction of John W. Curo, County Surveyor, assisted by E. B. Horst, Deputy.

Thursday September 28, 1916. E. B. Horst working for Crooked Lake Township, 145-26, in survey of Township roads. Walker to Pine River via M & I. R.R. thence by auto with J. Whitney to Outing. Over night with J. N. Waldrop, who lives on Government Lot 3, sec. 28, Twp. 139, Rg. 26, on west side of Crooked Lake Narrows and on east side of New State Highway Number —.

Friday September 29, 1916. Horst with new Gurley transit and 300 foot Chicago steel tape. Horst transit and chain. Henry Susscher flag and chain. John Doty and J. N. Waldrop axmen. We begin survey of a township road to run from S.R. Highway Number —, west to the Crooked Lake Narrows bridge, by the most practical route to the $\frac{1}{4}$ corner on south side of section 27-139-26, thence west on true section line between sections 27 and 34, sections 28-33, secs 29-32, to $\frac{1}{4}$ corner between sections 29-32, thence south thru center of sec 32 to $\frac{1}{4}$ corner on S side of sec 32 which is on Twp. line, also County line, bet. Cass and Crow Wing Counties. Road to connect with Emily Road at this point. To locate the section line I begin a random line between secs. 27+34, at the $\frac{1}{4}$ corner which I check and find to be correct with U.S. notes and Curo's notes of previous surveys. Stumps of both U.S. B.T.S. still remain plainly marked. Run West $8^{\circ}30'$ Variation between sections 27+34. At 294 set hub: surface rolling. At 1354.80 set hub: At 2665.30 set hub: and look for the corner to secs 27, 28, 33 and 34. T. 139-26, where U.S. notes call for post and: White pine 20 N 25° E, 37 links (= 24.42 ft.) W. pine 15 N 28° W, 62 links, (= 40.92 ft.) W. pine 16, S 58° W 22 links (= 14.24 ft.) W. pine 20, S 22° E, 48 links (= 31.68 ft.). We find nothing now but will look later after running our lines to some other corners. Continue random west. At 2835.80 hub: At 2985 East bank of small lake: We stretch tape across lake at south end: At 3202 west bank of lake: At 3224 nail in log: At 3758 cross wire fence: 3870.80 set hub: 4372 nail in root of pine stump: Quit for night. E. B. Horst.

Saturday September 30, 1916. same crew continue west. At 4914 enter swamp. 5204 leave swamp: 5300.20 set hub and look for $\frac{1}{4}$ corner bet. secs 28 and 33, where U.S. notes call for post and: Yellow pine 18, S 65° E 54 links (= 53.64 ft.) White pine 11, N 66° W 82 links (= 54.12 ft.) Find nothing, all stumps badly burnt. Continue west. At 5631.60 set hub: 5848 enter swamp: 5911 leave swamp. 6954.70 set hub: 7216 set hub on high hill: Quit for night. E. B. Horst.

Monday October 2, 1916. Horst transit and chain. H. Susscher Axe, flag and chain. J. N. Waldrop goes to look for men. Continue west. 7450.20 hub on hill: 7867.60 set hub East of wire fence running N & S. Look for corner to secs. 28, 29, 32, 33, where U.S. notes call for post and W. pine 18, N 53° E, 58 links (= 38.28 ft.) B. oak 14, S 68° E, 55 lks, (= 36.30 ft.) Lind. 10 S 37° W, 57 lks. (= 38.28 ft.) W. pine 20 N 46° W, 50 lks. (= 33.00 ft.) We find a post set by some Cruiser and White pine stump of N.E. B.T. plainly marked. All other stumps check perfect for course and distance but marks are burnt. I set new 3x3x48 inch oak post for

true corner and take new bearing trees scribed with tack in face being White Oak 6, N $17^{\circ}40'W$, 32.30 ft., Poplar 7, S $47^{\circ}20'W$, 36.40 ft., W. Oak 4, S $64^{\circ}30'E$, 82.90 ft., I set transit over hub, 7867.60 W and turn angle from random line to section corner NE angle reads $103^{\circ}47'$ distance = 94.00 ft. sine of $13^{\circ}47' = 22.40$ ft. West cosine of $13^{\circ}47' = 91.30$ ft. N. 7867.60. Added to 22.40 = 7890. At station 7891.00 W corner to sections 28, 29, 32, 33, T. 139-26 sets N 91.30 ft. In P.M., J. N. Waldrop and William Robinson join us and I start a random line on 8' Var. and run West bet 29 & 32. NOTE: All new bearings in this survey taken at 8' Var. unless otherwise stated. E. B. Horst.

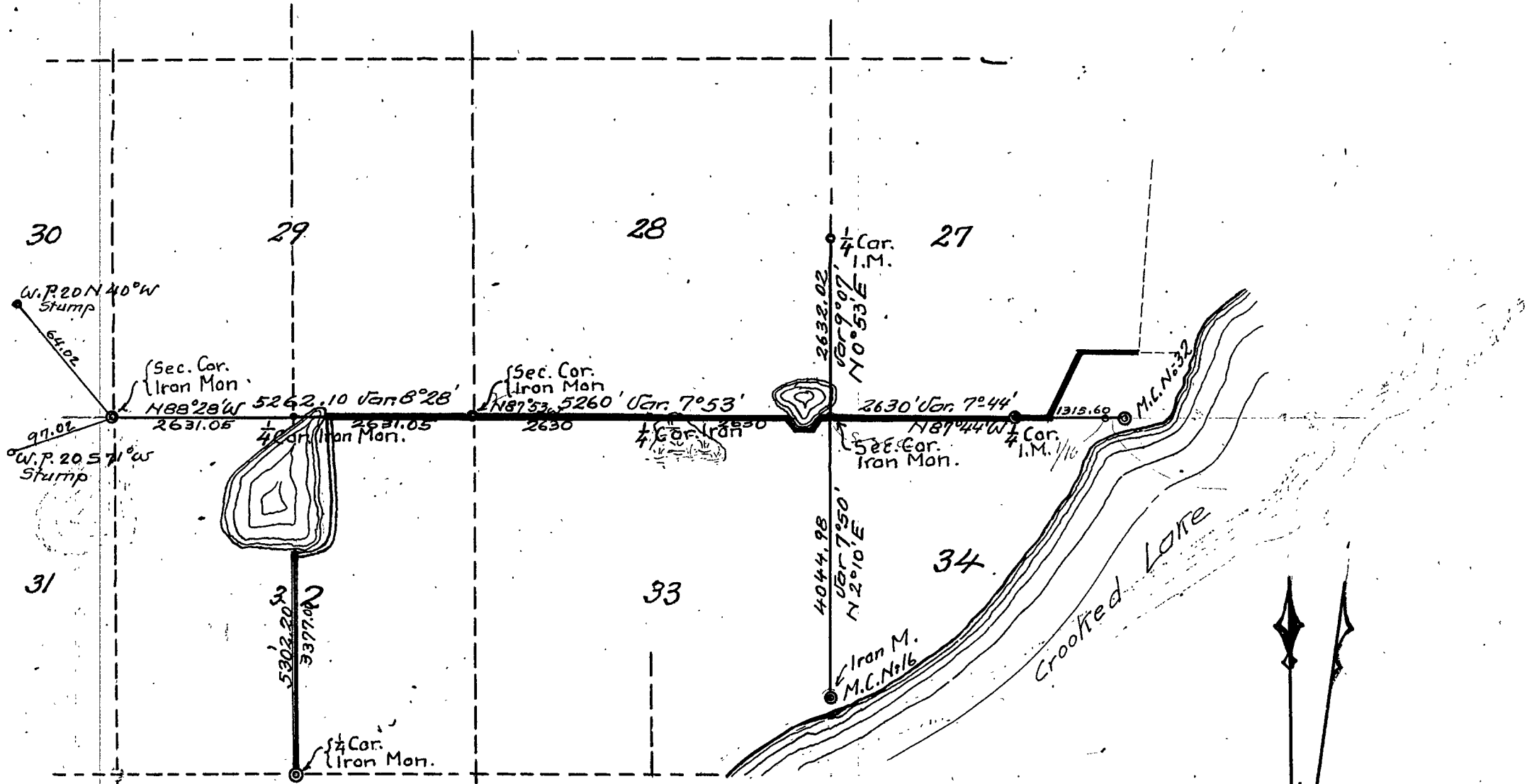
Tuesday Oct. 3, 1916. Hoist transit, H. J. Dickerson and Henry Suescher - Chainmen. William Robinson and J. N. Waldrop - Axe. Continue West between 29-32. At 220.50 set hub: 583 enter swamp: 658 leave swamp: 859.50 set hub: 1074 enter swamp: 1232 leave swamp: 1737.60 set hub: 2085.80 set triangulation hub: 2248 East bank of lake: At 2085.80 being hub "A" turn 90° angle to left and run 8234 ft. and set hub "B". Set hub "C" cross lake: Setting transit on "B" backsight on "A", turn angle to hub "C" which = $72^{\circ}15'$. I cross lake to hub "C" where angle reads $17^{\circ}45'$. Distance bet. hub "A" and "C" is 731 ft. added to 2085.80 equals 2816.80 to hub over lake. We return to station 2631.75 W where we look for bearing trees, where U. S. notes call for post and: W. Birch 6, N $34^{\circ}W$, 16 lbs (= 10.56 ft.), W. Birch 5, S $73^{\circ}W$, 28 lbs (= 18.48 ft.) all are gone and we continue west. At 445.170 set hub: At 5073 enter swamp: 5240 leave swamp: 5280 set hub, and look for corner to 29, 30, 31, 32, 139-26, where U. S. notes call for a post and: W. pine 24, N, $79^{\circ}E$, 433 lbs (= 285.78 ft.) W. pine 20 N $40^{\circ}W$, 97 lbs. (= 64.02 ft.) W. pine 20, S $71^{\circ}W$, 147 lbs. (= 97.02 ft.) W. pine 24, S $27^{\circ}E$, 173 lbs. (= 114.18 ft.) We find the four stumps, each bearing the blaze but marks are all burnt except NE B.T. where we find a part of the tree bearing the scribe marks as the trees all check for courses and distance except SE stump which is about 20 ft. to far away and which I am not certain was an old B.T. I set the corner from the face of the other stump setting a 4x4x48 inch post for true corner in W part of meadow, with bearings as follows: Gray Quartz Rock N $44^{\circ}10'E$, 46.60 ft., Gray Quartz Rock N $21^{\circ}10'W$, 114 ft., A Red Quartz Rock S $67^{\circ}40'W$, 12.20 ft., W. Oak 10, S $57^{\circ}30'E$, 234.60 ft. No other trees near. I set transit on hub 5280 W and turn angle from random line to section corner, SE angle = $26^{\circ}35'$. The distance to corner = 38.80 ft. At station 5262.10 W the corner to secs 29, 30, 31 & 32, T. 139, R. 26, sets S 34.40 ft. We return East on random line $\frac{1}{2}$ mile and at station 2631.05 ft. W on W bank of small lake 22 ft. from water edge, we chain S from random line, 17.20 ft. and set a 4x4x48 inch Norway pine post for the true $\frac{1}{4}$ corner between 29 & 32, with bearings as follows: Nor. Pine 10, S $62^{\circ}20'W$, 40.60 ft. No other trees. Quit for night. E. B. Horst.

October 4, 1916. Wednesday. Hoist transit and chain. H. Suescher, axe, flag and chain. Robinson and Dickerson Axemen. We go to S. side of lake near $\frac{1}{4}$ line S of $\frac{1}{4}$ corner. Set secs. 29 & 32 and set a hub: S backsight N to $\frac{1}{4}$ corner and turn a 90° angle and cut base line East 480 ft. to get distance across lake, and set hub "C" over which I set transit, backsight to hub "B" read NW angle to hub "A" at $\frac{1}{4}$ corner which is 76° . Tangent of $76^{\circ} \times 480$ ft. base line equals 1925.20 ft. dist. across lake, to hub "B", over which I set transit and continue South. At 2137 set hub: 2690.20 set hub: 3709.40 set hub: 4926.50 set hub: 5160.60 set hub: and look for bearing to $\frac{1}{4}$ corner on South side of 32, T. 139-26, on Trip line, also on County line bet. Cass and Crow Wing Counties, where U. S. notes

SURVEY-RECORD-282

PLAT.

TWP. 139 - RG. 26. SECT. 27, 28, 29, 30, 31, 32, 33, 34.



Call for post and: White pine 28, S 44° W, 186 lbs (= 118.80 ft.) W. Pine 28, N 67° E, 107 lbs. (= 70.62 ft.) We find stump of SW tree plainly marked, also stump of the NE tree, which is burnt within a foot of the ground. Stumps check perfect for course and distance. I set a 4x4x36 inch pine post driven 2 1/2 ft. into the ground from which, W. pine stump 28, bears S 44° W, 118.80 ft., Gray Rock N, 45° W, 46.67 ft., hurried, no other trees near. I set transit on hub 5160.60 and sight to 1/4 cor. which sets S 24° W, 155 ft., being 141.60 ft. S, and 63 ft. West. 141.60 Added to 5160.60 = 5302.20 ft., At 5302.20 S, 1/4 corner sets W 63 ft., Correcting back, setting road centers the correction is .01788 W for each foot S: 5160.60 goes W 61.31 ft. 4926.80 goes W 58.51 ft. 3709.40 goes W 44.07 ft. 2690.20 goes W 31.96 ft. 2137 goes W 25.39 ft., 1925.20 goes W 22.78 ft. At this point the road turns East and follows the lake shore, intersecting the North section line of sec. 32, At station 2172.00 ft. W. Correcting the line bet secs 29 & 32 E 1/4 mile. Correction = .006537 of a foot S for each foot W, 2085.80 W goes S, 13.63 ft. 1737.60 W goes S 11.36 ft., 559.50 W goes S 5.62 ft. Hub 220.50 W goes S 1.44 ft. Quit for night. E. B. Horst.

Thursday October 5, 1916. same crew. Look for bearings at cor. to 27, 28, 33 & 34, 139-26, but find nothing and to establish this corner we begin at a hub 2630 ft. W of the 1/4 corner bet 27 & 34 and from a straight line figured from this quarter post to the SW corner of sec. 28, I turn a 90° angle and run S bet secs 33 & 34, runs S 4010.00 ft. and intersect U.S. M.C. No. 16, where I find a post set by some one. correct for course and distance from bearing called for in the Govt notes being, Norway pine 18, N 30° E, 38 lbs. (= 25.08 ft.) Nor. pine 18, N 45° W, 10 lbs. (= 6.60 ft.), I mark two new bearings without courses being, Nor. pine 12, NE 29 ft., Nor. pine 22, NW 19.80 ft. Quit for night. E. B. Horst.

Friday October 6, 1916. Horst transit, Suscher and Dickerson chain, Robinson axe. Beginning at station 2630 W of 1/4 bet 27 & 34, turn NW angle 90° 04' on random line and run N bet 27 & 28. At 2668 1/4 corner sets W 32 ft. We return to hub at beginning of this line and establish corner to sections 27, 28, 33 & 34 by proportionate measurement. At 2630 W the corner goes N of random line 54.97 ft. We correct line and set road centers bet sections 28 & 33. Beginning at corner to 27, 28, 33 & 34, hub 205.80 W goes N 37.20 ft., I set transit over this hub and backsight East to sec. cor. sighting West I set hub 327.00 ft. W of corner on section line and 53 ft. E of small lake. Setting over this hub I turn angle to left 36° 05' and run 287.70 ft., and set hub, thence to the right 48° 00' and run 267.40 ft. and set hub, from which I run to the right 47° 33' and run 137.40 ft. and set hub on true sec. line, 808 ft. W. of the corner. Deflection angle to section line is 56° 28'. Continue west setting road centers, Hub 1240.80 W goes N 48.28, 1742 W goes N 53.64 ft., at 2630.00 W the 1/4 corner goes N 63.15 ft., where we drive a 4x4x48 inch Oak post with new bearings being, Red Oak 7, S 8° W, 45.20 ft., Red Oak 4, N 57° 30' W, 53 ft., marked with scribe and tack. Hub 3001.60 W goes N 67.12 ft., 4324.70 goes N 81.27 ft., 4586 goes N 84.07, 4820.20 goes N 86.58. Quit for night. E. B. Horst.

Saturday October 7, 1916. E. B. Horst transit and chain. Henry Suscher flag and chain. John F. Reed and John Reed. Axemen

Correct the west $\frac{1}{2}$ mile bet. 27+34. Correction equals .013311 of a foot North for each foot West. Hub 135480 goes N 18.03 ft. Hub 294 goes N. 3.91 ft., at $\frac{1}{4}$ corner bet. secs. 27+34, I find an old hub 15.60 ft. S of $\frac{1}{4}$ corner. From this hub I chain E on an old cut out line 374.50 ft. and find another hub. I estimate the distance from the $\frac{1}{4}$ corner E to the lake to be 1623.60 ft. Correcting to U.S. plat. I set hub 374.50 E, 12 ft. N (rough chain.)

P.M. Henry Suscher goes to town-Board meeting. I set transit over hub just set and backright to the $\frac{1}{4}$ corner and start John F. Reed and John Reed cutting line E to M.C. No. 32, I go to J. N. Waldrop to meet Town-Board in regard to getting iron Monuments. E. B. Horst.

Monday, October 9, 1916. Horst transit and chain, J. Suscher flag and chain. J. F. and J. Reed Admen: We continue line E. bet. 27+34, E of $\frac{1}{4}$ corner. At 374.50 set hub: 461 hub: 862 hub: 1315.60 E $\frac{1}{16}$ corner set by curs with bearing trees standing. At 1481.20 hub: 1618.20 ft. E an old post on lake shore set for M.C. I check same with notes and find it to be correct, being M.C. No. 32. We intersect center of old post. No corrections necessary. We return to hub 461 just west of deep ravine and turn NE angle to the left of section line $64^{\circ}30'$ and cut center line of road, Northeastly, west of ravine, as directed by H. J. Suscher, John Doty, and Chairman Jesse Lasky, Members of the Town-Board. At 468.20 set hub: at 1004.40 set hub and turn to the right $64^{\circ}05'$ and run line east at 8° Var.: at 995 ft. E.P.I. of state Rural Highway No. —, at P.I. of S.R.H. and Twp. Road I set a large Oak hub 4x56 inches, driven 30 inches in the ground. Quit for night. E. B. Horst.

Saturday, October 14, 1916. Henry Suscher distributes iron Monuments along line going West from M.C. 32, bet. secs. 27+34, and on west. I go to Outing and call curs by telephone regarding U.S. Chain on sec. line N. of M.C. No. 7, to sec. cor. and find the Jewett plat is correct. I return and take some iron Monuments and west to meet Suscher. We set 2'x4 ft. iron boiler tube at the following corners and mound same with stone and dirt where corner is not in road line. We place irons at the following points: At U.S. M.C. No. 32, and at the East $\frac{1}{16}$ corner bet. secs. 27+34 and at the $\frac{1}{4}$ corner bet. secs. 27+34, and at the corner to secs. 27, 28, 33+34, and at the $\frac{1}{4}$ corner bet. secs. 27+28, and at U.S. M.C. No. 16, and at the $\frac{1}{4}$ corner bet. secs. 28+33, and at the corner to sections 28, 29, 32+33, and at the $\frac{1}{4}$ corner bet. secs. 29+32, and at the corner to 29, 30, 31+32, and at the $\frac{1}{4}$ corner on south side of sec. 32, all in township 139, Rg. 26. Quit for night. E. B. Horst.

Surveyed - 1

Recorded - Oct. 30-16

SURVEY RECORD-283

TWP. 139-RG. 26 W. 5TH P. M.
SEC'S. 13-14-23-24-25-26-35-36

Field Notes of the survey and establishment of iron corners in sections 13, 14, 23, & 24, 25, 26, 35 & 36, T. 139, N. Rg. 26 W, 5th P. M. Cass County Minnesota, as surveyed by and under the direction of John W. Curo, County Surveyor, Assisted by E. B. Horst.

Tuesday October 10, 1916. E. B. Horst working for Crooked Lake Township 139; Rg. 26 in survey of township roads, new girley transit and 300 foot Chicago steel tape. Horst-transit and chain. Henry Puscher, axe, flag and chain. John Reed and John F. Reed, Axemen. At a large post in a bog which Will Robinson says was established by a surveyor for the temporary corner of sections 13, 14, 23, 24, T. 139-26. We begin survey for road to begin here and run South on sec line to intersect State Rural Highway Number —, bet. secs 25 & 26. By looking for the bearing trees to above corner U. S. notes call for post and Yellow pine 5, N. 10° E, 417 links equals 275.22 ft. Yellow Pine 12, N. 5° W, 571 links or 551 links (= 376.86 ft., or 363.66 ft., W. Birch 5, S 25° W, 507 lbs (= 334.62 ft.) Pine 6 S. 5° E, 736 links (= 485.76 ft.) We look about an hour but find nothing so I begin a random line S to keep the crew busy. Robinson says a compass line was run S at 8° Var. and came out 40 rods West of the section line on S side of Lawrence Lake. I condense this information and run a random line S at 11° 45' Variation on a partly bushed line. At 591.70 set hub: At 1744.60 set hub: At 2563.80 set hub: At 2640 we look for bearing trees to the 1/4 corner bet. secs. 23 & 24, where U. S. notes call for post and: W. pine 28, N 22° E, 43 links (= 28.38 ft.) W. pine 20, S 70° W, 30 links, (= 19.80 ft.) We look three hours for these trees and find nothing and decide we are not looking at the right place as most stumps are in good condition. Continue South. 2970.80 set hub: 3853.46 set hub: 4686.70 set hub: 5275.00 set hub: Look for the corner to sections 23, 24, 25, 26, where U. S. Notes call for post and: W. pine 5, N 10° E, 59 links (= 38.94 ft.) W. pine 7, N. 70° W, 30 links (= 19.80 ft.) W. pine 8, S 65° E, 6 links (= 3.96 ft.) W. pine 8 S. 40° W, 34 lbs. (= 22.44 ft.) All timber badly burnt. Find nothing and continue South: At 5462.70 set hub: At 5491 enter tank swamp. Cut about 200 ft. and quit for night. E. B. Horst.

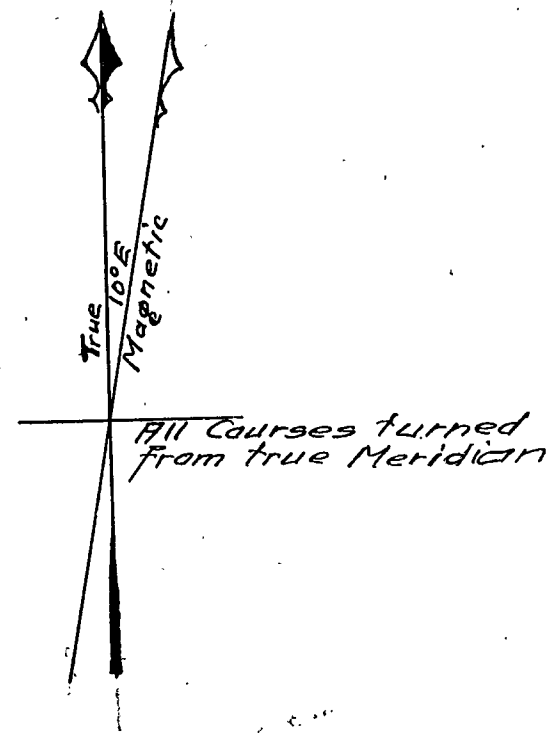
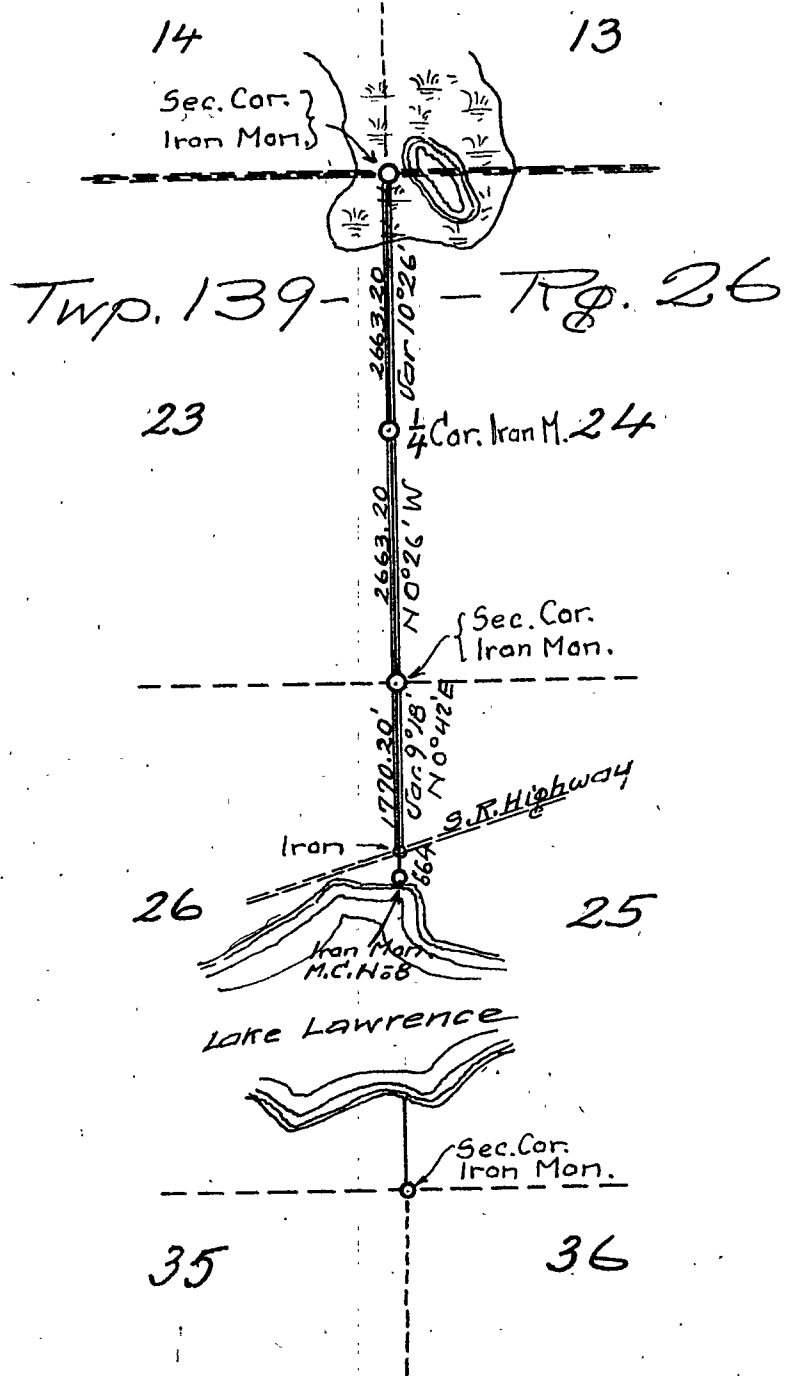
Wednesday Oct 11, 1916. Horst with same crew continue South, between 25 & 26. At 5491 enter tank swamp. At 6016 leave same. 6124.40 set hub: 7112.60 set hub. N of S. R. H. No. — At 7144.30 set hub in center of S. R. H. No. —, SE angle reads 105° 00'. At 7301.70 set hub: At 7627.80 set hub. N of lake. At 7776 edge of Lake Lawrence; at top of Jack Pine ridge. Puscher and John Reed go for Puscher's boat. Puscher takes Reed to S side of Lawrence Lake where he sets a hub on S shore of lake at water's edge and Puscher comes after us with boat and we cross lake and look for bearing trees for U. S. M. C. No. 7, where U. S. Notes call for post and: Elm 10, S 62° E, 45 lbs. (= 29.70 ft.) Bl. Ash 7, S 45° W, 24 links (= 15.84 feet.) We find some elm stumps but none are bearing trees. E. B. Horst.

Thursday Oct. 12, 1916. Horst and same crew begin at hub on S side of Lake Lawrence and run line S to an E & W road, as we have not triangulated lake we chain hub S of lake marked station 0.00 at water's edge:
At 342.70 set hub: At 1051.70 S the corner to secs. 25, 26, 35, 36, T. 139, Rg. 26,

SURVEY-RECORD-283

PLAT.

TWP. 139-RG. 26. SECT. 13-14-23-24-25-26-35-36



set by Curo sets W 66.90 ft. in center of a road, where I find a cast sled shoe driven at the corner, we also find SW and NW bearing tree stumps. The SE was pulled in building the road. I break the sled shoe and drive one piece at each of the N. S. bearing trees and drive a 2x48 inch iron boiler tube for the true sec. Cor. There are no trees near for bearings. We return N. to hub 342.70 S of lake and on top of ridge and triangulate Lake Lawrence, sighting N across lake to hub 7627.80 S. Turn a 90° angle to left and cut a line west 449 ft. to hub "C" over which I set transit and sight to "B" 7627.80 across lake, and turn NE angle to hub "A" at 342.70, angle reads 78°43'. Tangent of 78°43' = 5.0121 times 449 = 2250.45 ft. distance bet. hubs "A" and "C". Distance bet. hubs at water's edge of lake is 1759.50 ft. We return to the corner of secs 23, 24, 25, 26, look several hours for the bearing trees. We find a tree cut down bearing a blaze but no scribe marks. I also find a stump of which the heart has fallen out and I also find a piece bearing the old B.T. marks which is evidently the SE bearing tree. The tree bearing the blaze checks for course and distance for the NW B.T. from the face of these I set a 2x48 inch iron boiler tube for the true corner and mark new bearings as follows: Nor. pine 14, N 40°30' W, 38.40 ft., W. pine 15, N 47°05' E, 100.56 ft., W. pine 14, S 32°15' E 130.70 ft. I then set transit over hub 5275.5 back sight on random line, turn angle SE to sections corner, angle reads 74°10' to the left. Distance equals 214.00 ft. At station 5333.40 S, the corner to sections 23, 24, 25, 26, T. 139-26, sets E 205.90 ft. Quit for night E. B. Horst.

Friday October 13, 1916. E. B. Horst, transit and chain. H. Lischer flag and chain, J. F. Reed, Arman; Having received by mail from Curo. Mr. M. A. Kemp's notes of a survey made by him between secs 13-24 and 14-23. I find that the post we were told was the sec. corner, was a large hub used by Mr. Kemp in triangulating a point East of the section corner. We again look for the bearing trees at the true corner and find the S.E. tree broken off and lying on the ground. The tree is rotten but still bears a few scribe marks; we also find stump of the N.W. bearing tree cut off below scribe marks. I set a 2 by 48 inch iron boiler tube driven over a 10 foot tamarac piling, driven into the swamp for the true corner to sections 13, 14, 23, 24, T. 139, R. 26, with 4 tamarac stakes, standing NE, NW, SE and SW of the iron, and 46.70 feet distant for bearings, all set at 8° variation. I set transit over hub at North end of random line and turn 90° from South to East, and at 328.00 ft. East, the true section corner sets 7.00 feet South. Reducting 7.00 feet from 5333.40 leaves 5326.40 feet, which is the true length of the sec. line bet. secs. 23 and 24. We set road centers bet. secs 23 & 24 as follows: Hub 591.70 goes 314.27 feet to true line, Hub 1744.60 S, goes East 287.85 feet to true line., At 2670.20 South on random line, the 1/4 corner sets East 266.95 feet where we set a 2 by 48 inch iron boiler tube, 28 inches into the ground, and set up a large guard stake, Hub 2970.80 S goes east, 259.74 feet to true line., Hub 3553.40 S, goes East 239.50 ft. to true line., Hub 4686.70 S, goes East 220.40 feet to

true line. Quit for night E. B. Horst.

Saturday Oct. 15, 1916. Horst - transit and chain. Suscher Ave; flag & chain. we go to the corrected line between sec. 25 and 26, near Lake at M.C. No. 8, to get steel tape, and by searching, finally find the NE bearing tree to U. S. Meander Corner Number 8, for which we have hunted several times before:

I go North to corner of sections 23, 24, 25, 26, to get transit, and we set a 2 by 48 inch iron boiler tube for the true M.C. No. 8 set from stub of N.E. bearing tree and from stump which checks for N.W. bearing tree, and we mark new bearing trees as follows: Norway pine 10, N $73^{\circ}W$, 23.00 feet; Norway pine 10 N $34^{\circ}30'E$ 14.50 feet; I take transit to hub 7627.85 on line and turn from S to E, 36° to M.C. No. 8, distance = 172.80 feet; at station 7767.60 M.C. No. 8 sets East 101.60 feet; Corner to sections 23, 24, 25, 26 at station 5333.40 on random line, sets East 205.90 feet. 205.90 feet, minus 101.60 feet, = 104.30 feet; 7767.60 feet, minus 5333.40 equal 2434.20 feet being length of section line between sections 25 and 26, N. of M.C. No. 8.

We set road centers at station 7103.60 on random line, we set a 2 by 48 inch iron boiler tube in center of State Rural Highway No. —, 130.10 feet East of random line the S.E. angle to true sec. line is $107^{\circ}27'$. Setting road centers North of State rural highway, hub 6124.40 goes E 172.00 feet to true line. Hub 5462.70 S goes E 200.38 feet to true line.

At M.C. No. 8 U. S. Notes call for post and following bearing trees: white pine 5, N $80^{\circ}E$, 15 lks, = 9.90 feet; white pine 6, N $45^{\circ}W$, 9 links = 5.94 ft. Note: All new bearing trees in this survey, are set at 8° variation E. This concludes survey for Crooked Lake Trp. I return to J.N. Waldrop's for dinner. E. B. Horst.

Surveyed October 10, 1916 to Oct. 15, 1916.

Recorded: October 31, 1916.

County Surveyor,
Cass County, Minnesota.

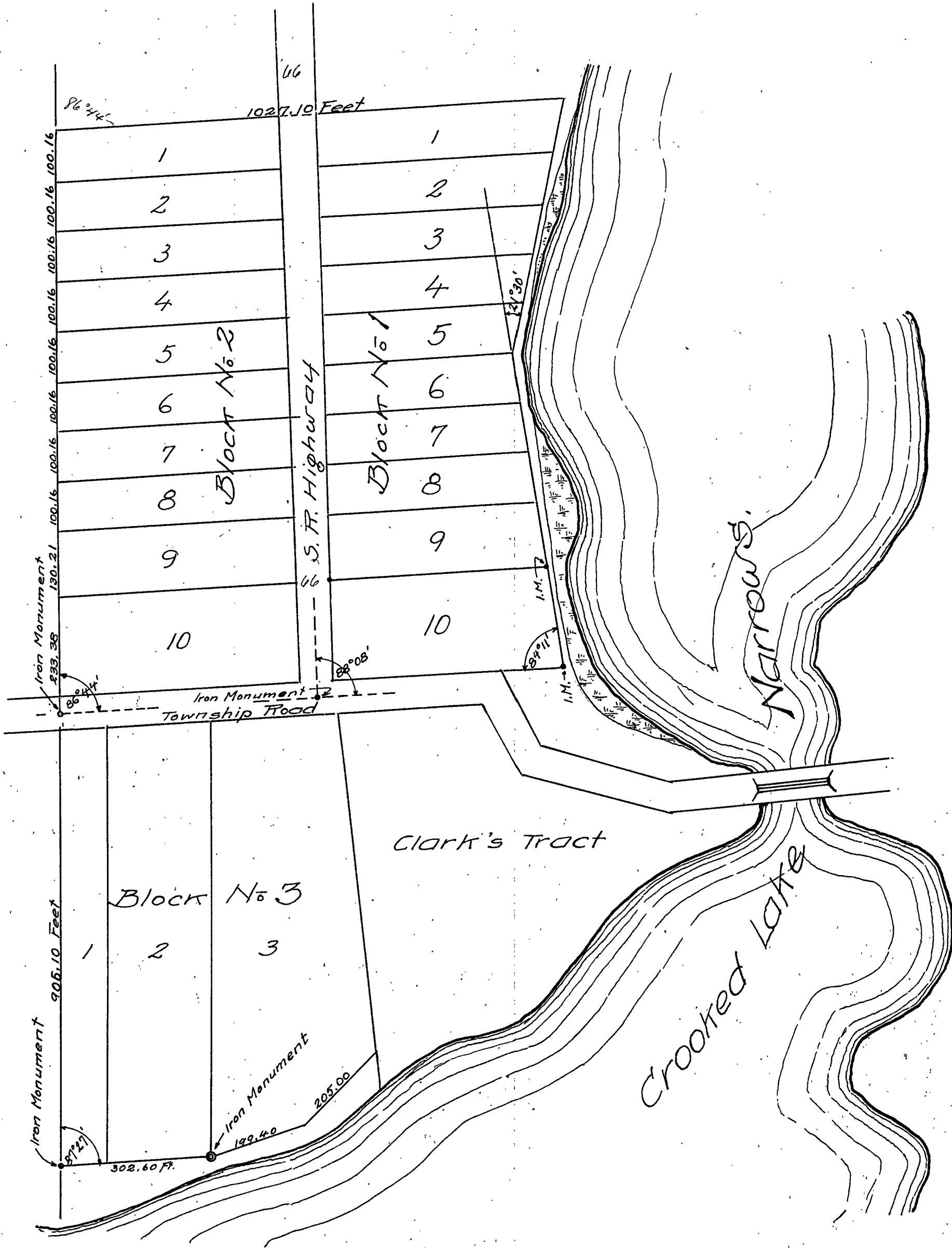
SURVEY-RECORD N: 284

TOWNSHIP 139 N. R. 26 W. SECT. 27

Field notes of the survey of the partial sub-division of sec. 27, Twp. 139, R. 26, Cass County Minnesota, and the platting of the Town right in said section as surveyed by and under the direction of John W. Cude, County Surveyor of Cass County, assisted by E. B. Horst, Deputy County Surveyor. Monday Oct. 16, 1916. We are working for W. H. Andrews in the platting of said Townright. E. B. Horst transit and chain. W. H. Andrews axe and chain. Charles Taylor and J. N. Waldrop axe. I take Curo's notes of July 1909, & A. W. Moulter's field notes of April 1910, and from these I hunt up their hub 942.40 ft. N. of the East $\frac{1}{16}$ corner on said $\frac{1}{16}$ line, sec. 27, T. 139-26, and also hub 1530.80 on random line. From these I find correction hub on true E $\frac{1}{16}$ line. Setting over hub 942.40 I sight N to 1530.80, Traverse telescope and cut line S to $\frac{1}{16}$ corner on S side of sec. I intersect the $\frac{1}{16}$ corner at exact center. We return to hub 1530.80 ft. N and produce the true $\frac{1}{16}$ line N to station 2658.92. At this point I set a 4' x 4' square oak post for the center of the E $\frac{1}{2}$ of sec. 27 with new bearing lines taken by measurement only: W. Oak 9, NE 68.50 ft., N. Pine 9, NW 80 ft. We return S to a point where the E $\frac{1}{16}$ line intersects the new Twp. Road known as the Woods road. Intersection comes at station 906.10 ft. N on E $\frac{1}{16}$ line and 524.00 ft. W of point of intersection of state Rural Highway No. —. NE angle at P.I. of Township road = $86^{\circ}44'$. We walk East on Township road line to P.I. of curve of S.R.H. and produce center line of Twp. Road E along center of State Road to a point about 410 ft. E on S.R.H. Curve, leave same. At 440.80 set hub; At edge of High. Bank: At 496.60 E set hub on low sea wall on W side of Crooked Lake. I then set transit on hub at sea wall, sight W and turn telescope parallel to lake shore. I chain N along this line 33.17 ft. and set 1' x 4' pipe at SE corner of J. N. Waldrop's lot. Mr. Waldrop has bought a 2 acre lot N + E of road limits and W of Crooked Lake. Deducting 33 ft. for road on the W side of lot, leave S side of lot 458.91 ft. long. Quit for night. Over night with Waldrop's. E. B. Horst.

Tuesday October 17, 1916. Horst, Andrews and Waldrop working. Beginning at hub on sea wall on W side of Crooked Lake and on center line of new State Highway and Twp. Road, I sight W on center and turn angle from W to N $84^{\circ}11'$ parallel to lake shore. This line passes thru lot corner set last night, 33.17 ft. N. We chain from SE corner of Waldrop's lot, N 201.04 ft., being distance across the 200 ft. lot at angle of $84^{\circ}11'$, and set 1' gas pipe 4 ft. long at NE corner of Waldrop's lot. We chain 130.67 ft. from this corner along same line and set a 2' x 3' wood post for NE corner of Corbin's lot: Chain North 100.52 ft. set lot stake being 2' x 3' post, thence North 100.52 ft. set lot stake: thence North 100.52 ft. set lot stake at edge of water: thence to the right $21^{\circ}30'$ and 103.87 set lot stake, 2 ft. in water: thence 103.87 ft. set lot stake at edge of water: thence 103.87 ft. set lot stake 15 ft. from lake: thence 103.87 ft. set lot stake (at 461.50 set hub) at 103.87 ft. set lot stake. Total distance = 519.35 ft. We go to P.I. of State Road and Township road and chain E 33 ft. and N 33 ft. At angle of $87^{\circ}40'$ and set wood post for SW corner of J. N. Waldrop's 2 acre lot. We walk W to P.I.

PLAT
TOWNSHIP 139N. Rq. 26W. 5TH P.M.
SECTION - 27



of E $\frac{1}{16}$ line and Township road line, NE angle = $86^{\circ}44'$ from the center of the road we chain N on $\frac{1}{16}$ line, 233.38 ft. set 2x4x36 inch lot stake: thence 130.21 ft. set lot stake: thence 100.16 set lot stake: thence 100.16 ft. set lot stake: thence 100.16 ft. set lot stake: thence 100.16 ft. set lot stake: thence 100.16 ft. set lot stake: thence 100.16 ft. set lot stake: thence 100.16 ft. set lot stake: thence 100.16 ft. set lot stake: Total distance P.I. = 1167.37 ft. Returning to P.I. on E $\frac{1}{16}$ we chain 92.24 ft. on Road center and set lot stake 53.05 ft. At $93^{\circ}16'$ angle from E to South, 92.24 plus 210.70 ft. on same line. Turn $93^{\circ}16'$ E to South and set lot stake 33.05 ft. on south road limit. We walk to the $\frac{1}{16}$ cor. on S line of sec. 27 and chain E. on sec. line 92.25 ft. and set lot stake. Lot lines to extent S in sec 34 to Crooked Lake thru this point. Next lot corner = M.C. No. 32. From M.C. No. 32 I backsight W. on section line, reverse telescope and turn left $14^{\circ}30'$ and run 99.40 ft. then left $28^{\circ}00'$ and run 205.00 ft. to stake set by Surveyor, Knutson for lot corner to Barner Clark's lot: thence to the right 23° on Knutson's course to his hub 266.40 ft. This course runs $N 70^{\circ}45' E$. At 8 Var. Quit for night. E.B. Horst.

Wednesday Oct. 18, 1916. In A.M. I check calculations in yesterday's work with notes and calculate acreage. The instruments used in this survey is a new Gurley transit and 300 ft. Chicago steel tape, both belonging to Curv. In P.M. W. J. Whitney takes me to Pine River, where I take the 3:45 P.M. train to Walker. E.B. Horst.

Surveyed -
Recorded - Nov. 1, 1916.

TOWNSHIP 139 N. R. 29 W. 5TH P. M.

SECTIONS: 2-3-4-7-8-10-11-17-18-19-20-29-30-31-32

Field notes of the survey of sections 2, 3, 4, 7, 8, 10, 11, 17, 18, 19, 20, 29, 30, 31, 32, Township 139 N, Range 29 W, 5th P. M. Cass County, Minnesota as surveyed by John W. Curo, County Surveyor.

February 13th 1912 John W. Curo, worked all day in the office at Walker on field notes of T 139, Rg 29, and take night train to Pine River to meet the stage and drive to Twp 139, Rg 29, to finish setting iron monuments and perhaps run the County road through sec 3, T 139, Rg 29. RR fare to Pine River 91¢: over night with Geo Eisenhaur

February 14th 1912, pay hotel bill #1. and take stage to Mike Smith's: Pay Bill Burrell 75¢ stage fare and take dinner with Mike Smith.

P. M.: Mike Smith takes his team and drives us to the iron corner to sections 19, 20, 29 and 30. T 139 Rg 29: Rube Smith and Glenn Smith helping me as ax and chain men: Run south 7°50' variation E over cut out line between sections 29 and 30: At 215.70 set snow hub on top of hill: thence over level land along East side of plowed field: at 1320 feet set snow hub: at 2398.30 feet set "snow" hub: at 2640. set pin from which the true 1/4 corner between sections 29 and 30 sets 1.30 feet South, and 5.08 feet West.

at this point U. S. notes call for a post and the following bearing trees: Black Pine 4, N 56° W, 20 links (=13.20 feet) Black Pine 4, S 52° 30' E, 17 links, (=11.22 feet)

We find the stump of the S.E. tree, standing plainly marked, from which we set a wood stake for the true 1/4 corner at 7°50' variations, chained from face of figures on old bearing tree stump: we mark the following new bearings: Jack Pine 12 inch, bears N 64° 33' E 50.62 feet distant: Jack Pine 5 inch, bears S 34° 25' E 17.08 feet distant to tack heads, Variations 7°50'

Correcting back:

2641.30, goes West 5.08 feet: Hub 2398.30 S, goes West 4.61 feet: Hub 1320 South, goes West 2.53 feet. Hub 215.70 S, goes West 0.41 of a foot.

From the true 1/4 just set, we back right North on the true line and run South: at 203.45 tack in stump: at 304.30 set snow hub: at 470.58 set temporary M. C. No 31, where U. S. notes call for post and white Birch 7, N 27° W 19 links (=12.54 feet) white Birch 8, N 52° E 60 links (=39.60 feet) we do not look for the trees, but drive a good stake. All got in 1/2 day in P. M.

February 15th 1912 Beginning at iron corner to sections 28, 29, 32, 33, T 139, Rg 29, run West on 7°45' variation between sections 29 and 32: at 1320 feet set pin: at 1502.70 set "snow" hub in road center: at 1521.30 set hub: at 2640 set pin: at 2651.88 set snow hub for temporary 1/4 corner where U. S. notes call for post and: Norway pine 24, S 79° W 28 links (=18.48 feet) distant: Norway pine 10, N 64° E 47 links (=31.02 feet) All are gone and we continue West: at 3000 feet West set pin: at

3

17-20
29-30

29-30

114

114

28-29
32-33

114

3040 cross road which bears SW and NE: at 3300 set pin: at 3483.25 set hub: at 3600 set pin: at 3650. cross road which bears NW and SE: at 3900 set pin: at 3977.82 set pin for temporary West $\frac{1}{2}$ corner: at 4176.50 set snow hub: at 4200 set pin: at 4211.46 set hub for temporary Meander Corner No. 30 on East side of Lake Hattie between fractional sections 29 and 32, T139, Rg 29 where U.S. notes call for a post and the following bearing trees: Norway pine 12, S 42° E, 52 links (= 34.32 feet) Norway pine 12, N 64° E 66 links (= 43.56 feet) We find the stumps of both old trees from which we set a wood stake for true M.C. No. 30 but continue our original random transit line a mile West as a check: at 4258 set stake: at 4261.50 Meander corner No. 30, sets South 13.90 feet: Ruben and Glenn Smith chain: Andrew J. Hall, axman: H & B transit, 300 feet Chicago steel tape: John W. Curo, transitman. Over night with Mike Smith. February 16th 1912, Glenn and Ruben Smith assisting me in chaining perfect: A. J. Hall ax, continue West on ice in Lake Hattie, Variation $7^{\circ}45'$ E: at 4258 set stake on sea wall: at 4500 set stake on ice: at 5303.76 set stake on ice for temporary section corner of sections 29, 30, 31 and 32: at 5400, 5700 feet West set pin on ice: at 6000 set pin on ice 350 feet South of hard wood Island or point of main land which bears N. E, and West: at 6300 set pin in ice 350 feet South of solid hard wood land which bears East and NW: swampy land curves SW: at 6620 feet West, enter solid open swamp which bears NE, and SE 150 feet then SW: This open swamp has dry dead tamarack trees and is 4 feet above lake level: at 6900 set pin in open swamp and it is 500 feet South to edge of solid land which runs NE and SW: at 6925 enter poplar: at 7200 set pin: at 7225 foot of hill - enter hard wood ridge which bears SE and NW: it is about 600 feet South to lake:

at 7410 center of N and S wagon road: at 7481.75 a tack in the heart of an 8 inch green birch stump is South 0.50 of a foot (6 inches South) at 7500 set stake 200 feet North of house: at 7700 leave solid land, enter meadow which bears SW and NE: goes NE 150 feet then turn NW: at 7800 set stake in meadow: at 8025 enter lake, bears NW 300 feet, then West 300 feet, then NW: at 8100 feet West, set pin on ice: at 8400 and 8700 and 9000 and 9300 feet west set stake on ice: at 9575.50 feet West, thru Meander Corner No. 32, bears South 16.20 feet.

At Meander Corner No. 32 on West side of Lake Hattie between fractional sections 30 and 31, T139, Rg 29 U.S. notes call for post and: Norway pine 16, N 9° E 81 links (= 53.46 feet) Norway pine S 17° E 14 links (= 9.24 feet) We find the SE tree well preserved and every figure plainly showing, but it is down and partly rolled over on its side. We also find the stump of the old NW bearing tree dimly marked, and from these we set the true Meander Corner No. 32, in line with an old line of spots running West: We drive a 2x48 inch galvanized iron pipe, capped on top for the true Meander corner and marked new bearings which stand as follows: Norway Pine 6, N $12^{\circ}04'$ E 49.90 feet distant. Poplar 7 inch, S 46° W 29.80 feet to tacks driven in flat spot at base of trees, at $7^{\circ}45'$ variation East.

Coming East to M.C. No. 30 on East side of Lake Hattie, we pull

up the wood hub, and drive a 2×4 inch capped galvanized iron pipe half its length in the ground of the true Meander Corner and mark new bearings as follows: Jack Pine 4, $N 51^{\circ} 44' E$ 58.93 feet. Jack Pine 8 $S 86^{\circ} 30' E$ 37.50 feet. Norway pine 4 $S 5^{\circ} 19' E$ 65.05 feet to tacks driven in flat spot at base of trees, variations $7^{\circ} 45' E$. We use H+B transit and 300 foot Chicago steel tape. John W. Curo transitman. Over night with Mike Smith.

29-32 February 17th 1912 Correcting East between sections 29 and 32, T 139, R 29, at temporary M.C. No 30, being hub 4211.46 feet West, we chain 50.04 feet West to hub 4261.50 West, thence South 13.90 feet to M.C. No 30 at temporary hub 3977.72 feet West we chain West 47.26 feet to 4024.98 West, thence South 13.12 feet where we place the true West corner between sections 29 and 32. Hub 3483.25 West, goes South 11.36 feet. Hub 2651.88 West, goes West 31.51 feet to 2683.39 feet West, thence South 8.75 feet where we place a stake for the true corner between sections 29 and 32, T 139, R 29 with new bearings as follows: Norway pine stump 16 inch, SW 50.75 feet to tack. Jack Pine tree, 4 inch South and a little West, 45. feet distant. measured with an 8. foot flag pole and courses taken or approximated by using my field book with which to turn the angles. The old bearing trees here are gone Hub 1521.30 West, goes South 4.96 feet. Hub 1502.70 West, goes South 4.90 feet in true line.

We begin at hub 4176.50 West and chain South 13.62 feet to true section line, thence West along the section line 8.50 feet to a point 4185. feet West of the corner of sections 28, 29, 32-33, and 76.50 feet East of M.C. No 30 then to run the road line around the East side of Lake Hattie we run at 8° magnetic variation East, $N 23^{\circ} 12' E$ 660. feet to station 1: thence $N 16^{\circ} 22' W$ 110 feet to station 2: thence $N 20^{\circ} 55' W$ 175 feet to station 3: thence $N 29^{\circ} 55' W$ 180 feet to station 4: at foot of hill, 40 feet West of old logging road which bears $E \& W$: thence up hill, $N 37^{\circ} 11' W$ 125 feet to station 5: thence $N 54^{\circ} 23' W$ 105 feet to station 6 in old camp grounds in handsome Jack Pine and Norway Pine timber: thence $N 85^{\circ} 23' W$ 355 feet to station 7 on sharp point of hill: thence down hill $N 54^{\circ} 12' W$, 85 feet to station 8 at foot of hill: thence along low solid land $N 5^{\circ} 55' W$ - at 300 set pin, at 475 top of small hill: thence down hill: at 575 enter solid creek bottom: at 595 enter creek runs SW: at 600 set pin on ice in creek: Creek has solid sand bottom and there is six inches of water and six inches of ice, at 614 leave creek, enter solid high creek bottom; at 745 foot of hill, thence up hill; at 825 top of hill; at 890 set station 9; thence $N 29^{\circ} 46' W$ down slope 217 feet to station 10; thence $N 73^{\circ} 30' W$; at 90 feet, foot of slope; thence up long slope; at 382.50 set station 11, intersecting section line at top of hill, 304 feet South of the corner between sections 29 and 30. This line just run is with compass needle in a new H+B transit @ 8° var magnetic; in running the traverse we set up at every other station; no back sights used, and the line can be retraced in the same manner. We used a 300 foot Chicago steel tape and plumb-bob measured line, chained by Glen Smith and John W. Curo; Ruben Smith and Andrew J. Hall, a sinner.

Thence North along section line which runs at about 7°50' variation 304 feet to station 12, being the (14) corner between sections (29) and (30) thence North along section line 7°50' var. 2641.30 feet to station 13, being the iron corner to sections 19, 20, 29, 30, T 139, Rq 29.

19-20
29-30

Beginning at iron corner to sections 19, 20, 29, 30 run North on 8° magnetic variation: at 1037 center of road East and West: at 1065.10 set snow hub: at 1320. set stake for South temporary (16) corner: at 2023.70 set snow hub: at 2100 set hub and quit for night. John W. Curo, transitman, over night with Mike Smith.

Sunday, February 18th 1912 Curo and Glenn Smith check up the section lines, while Ruben Smith, Albert Smith and Ed Logee begin at hub 2023.70 and cut line North between sections 19 and 20. (Logee arrived at 11 a.m.) Curo and Smith then chain what has been cut, North: at 2100 set pin: at 2400 set pin at 2640. set pin: at 2700 set snow hub and look for (14) between sections (19) and (20), T 139 Rq 29 where U.S. notes call for post and: Black pine 9 inch, N 85° E 33 links. Yellow pine 16, S 42° W 19 links, they appear to be gone and we continue North: at 2760 cross a road bet NW and SW: at 3000 set pin: at 3270.10 set snow hub: at 3300 set pin: magnetic variation changes to 8°25'

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19-20

P.M. Ruben Smith and Curo chaining, continue North: at 3600 and 3900 set pin: at 3960 set snow hub: at 4200 set pin: at 4400 enter cranberry bog which bears NW and SW: at 4500 set stake in bog 40 feet west of East end: at 4585 leave bog which bears SE and NW: at 4698 set hub: at 4800 and 5100 set pin: at 5280 set hub 17 feet North of road: at 5262.50 feet North, the true corner to sections 17, 18, 19, 20, T 139, Rq 29, sets East ——— feet

17-18
17-20

at the corner to sections 17, 18, 19, 20, T 139, Rq 29, U.S. notes call for a post and: Black pine 12 inch, N 63° W 132 links, (= 87.12 feet) Black pine 10 inch, S 86° 30' W 73 links (= 48.18 feet) dead pine 10 inch, N 30° E 44 links (= 29.04 feet) dead pine 9 inch, S 57° E 25 links (= 16.50 feet)

State road No 5. coming from Backus, comes East to this corner, then turns North and runs (14) mile or less and thence East, and as it has been graded and the snow is deep we do not seem to find the old bearing trees or stake, so as a check up, I turned the transit on the iron corner, (or a point near it) a mile West, then transit the telescope and start a line East: then start another line North at 11° variation. A team drives over our tape and breaks it at the 181 foot mark Ruben Smith and I take the 181 foot tape and walk a mile West and chain East over the straight graded road, using 180 feet of the tape:

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at 7 chains plus 57 feet = 1319 feet East, a fence runs North. at 16 chains (180 ft chain) plus 175 feet, = 2880 feet East, a fence runs North: This is near the (14) corner between sections (18) and (19), T 139 Rq 29 where U.S. notes call for a post and the following bearing trees: Norway pine 18, S 21° 30' E 66 links. Black pine 7 inch, N 35° W 8 links. We do not find them and continue East: at 31 chains plus 126 feet = 5706 intersect hub under transit being the assumed corner.

114
18-19

Total distance Government chain calls for 2508 links plus 6000 links equals 8508 links, being 5615.28 feet U. S. chain. Quit for night, over night with Mike Smith. Albert Smith, Glenn Smith, Ruben Smith, Edward Logee and John W. Curo worked all day.

Monday, February 19th 1912 John W. Curo, transitman and chain. H & B transit and 180 foot steel tape: Glenn Smith drives me to the corner to sections 3, 4, 9 and 10, T139, Rg 29, being an iron monument set in a bed of cement, set from old U. S. bearing trees by Harry S. Todd, Deputy County Surveyor and from this corner I start a line North @ $8^{\circ}45'$ variation with John Dorey and Hosey King, axmen, who I instruct to cut a picket line a mile North: I leave them the tail end of my broken 300 foot steel tape, and tell them to chain, using 118 feet and to number each stake set.

Glenn Smith then drives me to the $\frac{1}{4}$ corner between sections 2 and 3, T139, Rg 29 where U. S. notes call for a post and: Norway pine 24 inch, East 104 links, (= 68.64 feet) White Pine 15 inch, $S 67^{\circ} W$ 116 links (= 76.56 feet.)

We find the stump of the East bearing tree plainly marked "B. J." from which we set the true $\frac{1}{4}$ corner @ $7^{\circ}30'$ variation, chained from face of "B. J." figures.

We then mark new bearings as follows:
Pine stub 15 inch, $S 56^{\circ}30' E$ 31.85 feet. Jack pine 6 inch, $S 30^{\circ}18' W$ 57.65 feet distant, and from this $\frac{1}{4}$ corner we start a picket line West on 8° variation.

Ruben Smith, Andrew Hall and Ed Logee cut line and continue transit line North from assumed corner to sections 17, 18, 19 and 20, T139, R 29.

Glenn Smith and Curo begin again at station 00. being the assumed corner to sections 17, 18, 19, 20, T139, R 29, and chain East on line cut on $8^{\circ}10'$ variation: using a 180 feet chain and plumb-bob:

at 180 feet enter bog: at 620 leave same: at 1800 set pin on ice: at 1821.36 feet East, true Meander Corner No. 43 bears North 25.60 feet. At this point being the Meander Corner on West side of small lake on the North side of Government lot 1. of section 20 and on the South side of Government lot 2. of section 17., U. S. notes call for post and Aspen 5 inch, $N 3^{\circ}30' E$ 41 links (= 27.06 feet) Norway pine 20 inch, $S 70^{\circ} W$ 95 links (= 62.70 feet)

We find the Aspen standing green and plainly marked and the stump of the old SW tree from which we set the point for the true M.C. and mark a new bearing tree as follows: Aspen 7, $S 77^{\circ} W$ 22.20 feet.

The distance U. S. chain from this corner West to the section corner is 2784 links or 1837.44 feet My chain from station O.O. being the assumed section corner is 1821.36 feet. Again looking for the corner to sections 17, 18, 19, 20 - 139-29 we find stump of old NW B. J. and roots of the other stumps which places the corner 3.42 feet West of our hub O.O.

Tuesday February 20th 1912: 180 foot Chicago steel tape: H & B

3-4-
9-10

T.S.

transit. Curo transit and chain: Glenn Smith, Ruben Smith, Andrew Hall and Ed Logee working. We begin at hub O.O. being a point 3.42 feet East of the true corner to sections 17, 18, 19, 20 T139 R29, we run North on $10^{\circ} 25'$ variation: Ruben and Glenn chaining roughly: at 1300 feet north, the County road runs East: 540 feet N, set stake No. 3. at 1260 feet north, set stake No. 7: at 1800 feet north, set stake No. 10. at 2700 feet north set stake No. 15. at 3240 feet north, set stake No. 18. at 3960 feet north, set stake No. 22. at 4860 feet north, set stake 27. at 5308 feet north set stake No. 29, plus 88 feet at which point the corner to sections 7, 8, 17, 18, sets East 173.80 feet. At this point U.S. notes call for post and the following bearing trees: Jack pine 6 inch, $N 71^{\circ} E 50$ links (= 33.00 feet) Norway pine 15 inch, $N 65^{\circ} 30' W 103$ links (= 67.98 feet) Jack pine 4 inch, $S 36^{\circ} 45' W 76$ links (= 50.16 feet) Black pine 9 inch, $S 60^{\circ} E 72$ links (or 47.52 feet)

We find the N6 and SE old trees standing green plainly marked from which we set the true section corner by flat chain from face of the figures, after which they stand as follows: at 9° variation East. Old SE tree stands $S 58^{\circ} 30' E 47.52$ feet: old N6 tree stands $N 14^{\circ} 30' E 33.00$ feet: we mark a new bearing tree, being Norway pine 8 inch, $N 42^{\circ} E 59.50$ feet to tack in flat spot at base of tree.

Beginning at the corner to sections 7, 8, 17, 18, T139 R29, run North variation $9^{\circ} E$. at 540 set stake 3. at 900 set stake 5. at 1440 set stake 8. at 1711.30 set snow hub: at 2643. feet North, the $\frac{1}{4}$ corner between sections 7 and 8 bears East 54.70 feet, at this point U.S. notes call for post and: Norway pine 12 inch, $S 76^{\circ} E 27$ links (or 17.82 feet) Black pine 12 inch, $N 69^{\circ} W 36$ links (or 23.76 feet) We find both trees standing plainly marked and they check out for course and distance, perfect at 9° variation, and .05 of a foot ($\frac{1}{2}$ inch) long for measure. We set stake and mark a new bearing, being 8 inch pine stump, $S 32^{\circ} 11' W 48.40$ feet to tack head. Correcting back, hub 2643 goes East 54.70 feet: Hub 1711.30 goes East 35.41 feet: at stake 8, we chain South 118.50 feet to 1321.50, then East 27.35 feet and set (roughly) the South $\frac{1}{16}$ corner between sections 7 and 8, T139, R29. 980 goes East 18.62 feet: 540 goes East 11.18 feet

February 21st 1912 Glenn Smith and John W. Curo, go to the corner to sections 17, 18, 19, 20, T139, R29 and mark new bearings as follows: Jack pine 5 inch, $S 45^{\circ} 14' W 75.68$ feet. Jack pine 6 inch, $S 56^{\circ} 18' E 83.02$ feet to pencil mark in flat spot near root of trees. Total distance from SW corner of section 18, East to M.C. No 43, is 7452.72 feet U.S. chain and 7527.36 feet my chain being 74.64 feet too long.

From M.C. 43 West to section corner is 1837.44 feet U.S. chain and 1824.78 feet my chain being 12.66 feet short.

Correcting the line between sections 19 and 20, hub 5280 N. goes 17.50 feet South and 58.38 feet East. at 5262.50 feet North, the corner to sections 17, 18, 19 and 20, sets East 58.38 feet: Hub 4698 feet North, goes East 52.12 feet to true line: Hub 3960 goes South 13.12 feet. 3946.88 North. then East 43.78 feet to the North $\frac{1}{16}$ between sections

19 and 20. Hub 3270.10 N, goes East 36.26 feet: Hub 2640 North, goes South 8.75 feet to 2631.25 N, then East 29.19 feet to the $\frac{1}{4}$ corner between sections 19 and 20. Hub 2023.70 goes East 22.45 feet. Hub 1320. goes South 4.37 feet to 1315.63 then East 14.59 feet to South $\frac{1}{16}$ corner between sections 19 and 20. Hub 1065.10 goes East 11.82 feet

John Dorey helps us in this correction, and we then correct the mile of line between sections 17 and 18, as follows: the correction is .033387 of a foot East for each foot North minus 3.42 feet at each correction point. Hub 5308 goes East 173.80 feet: Hub 4860 goes East 158.84 feet: Hub 3960 goes East 128.79 feet: Hub 3240 goes East 104.75 feet: Hub 2700 goes East 86.73 feet: Hub 1800 goes East 56.68 feet: Hub 1260 goes East 38.65 feet: Hub 540 goes East 14.61 feet. We correct up these two miles and take our dinner on the run and get thru at 2.05 P.M. Smith drives me to Backus where I catch the P.M. train to Walker to get Moulster's old notes on the $\frac{1}{4}$ corner between sections 10 and 11, T 139, R 29, as I must have them to put in the corner to sections 2, 3, 10 and 11, T 139, R 29.

February 22nd 1912 at Walker copy notes of A. W. Moulster's survey for County road thru section 3, T 139, R 29.

March 14th 1912 I copy more notes of Moulster's surveys in T 139, R 29 and compare them with Government notes, and take night train to Pine River

March 15th 1912, Friday, I go from Pine River to Mike Smith's place on Wm. Burrell's stage: arrive at noon pay 75¢ stage fare get dinner at Smith's.

In P.M. Glenn Smith and team drives me to Oscar Sales, where we get John Dorey, axman, then drive to $\frac{1}{4}$ corner between sections 2 and 3, T 139, R 29, and run a transit line West across the lake at 8° variation. We leave Dorey cutting line and Smith and I drive to iron corner of sections 3, 4, 9 and 10 and cut a line East.

March 16th 1912 Saturday: Curio transitman: Glenn Smith and team: Oscar Gooden and Herman Siltman axmen: work in a.m. Hosey King arrives while we are eating our lunch and works in afternoon: Siltman continues the picket line West thru section 3. Smith, Gooden, King and Curio run transit line from iron corner North between sections 3 and 4, T 139, R 29, variation $8^\circ 30' E$: over cut out line: at $\frac{1}{4}$ corner between sections 3 and 4, U.S. notes call for post and: Black pine 10 inch, N $88^\circ W$ 340 links (or 224.40 feet) Black pine, 8 inch, N $46^\circ E$ 20 links (or 13.20 feet) All are gone and we continue North: at 3150 feet enter round marshy lake which bears NW and East: at 3375 leave lake where it bears SW and East: at 5138.10 set temporary corner to sections 3, 4, 33, 34, between Township 139, and Twp. 140, range 29. the corner sets 20.40 feet North and 99.20 feet West. At 5158.50 feet North, the corner sets West 99.20 feet where U.S. notes call for post and: Black Pine 16 inches N $37^\circ 30' E$ 142 links (or 93.72 feet) Aspen 15 inches N $19^\circ 30' W$ 92 links (or 60.72 feet)

Black Pine 8 31° 20' 60 links (or 39.60 feet)

Black Pine 8 inches 34° 30' 65 links (or 42.90 feet)

We find the tall stump of the SW tree plainly marked from which we set a wood stake for the true corner at 8° 30' variation, chained from face of the "B. J." marks, and mark new bearings as follows;

Birch 8 inches, S 3° 20' W 25.55 feet to cross (+) in flat spot made at base; Poplar 8 inch, N 75° 05' E 41.02 feet to cross (+) in flat spot at base.

Beginning on our random line at a point 99.20 feet East of this corner, we chain carefully South using a plumb-bob, 180 foot steel tape. Glenn Smith and Curo chaining perfect. We also use H. & B transit, setting double center hubs and tack, Curo also run transit.

At 1780 feet south enter lake bearing SW and East.

At 2180 feet leave lake which bears East and NW.

At 18 chains (180 ft chain) plus 118.50 feet equals 5158.50 feet. South we intersect the iron corner to sections 3, 4, 9 & 10, T 139, Rg 29. 5158.50 feet my chains equals 5138.10 feet Government chain being 20.40 feet longer than Government chain calls for. Correcting back:

At pin No. 22 South being 3960 feet south, we chain North 126.74 feet to a point 1325.24 feet North of corner to sec 3, 4, 9 & 10 thence West 25.49 feet where we place the true South $\frac{1}{16}$ post between sections 3 and 4 with bearings at 8° 30' variation as follows:

Poplar 5 inch, S 39° 16' W 70.00 feet. Poplar 5 inch N 62° 55' W 57.35 feet to flat spot at base of trees.

This $\frac{1}{16}$ is 3833.26 feet South of the North corner to section 3 and 4. T 139, R. 29.

To put in the $\frac{1}{4}$ corner between sections 3 and 4, T 139 Rg 29, we begin at stake 14, being 2520 feet South, then chain North 11.98 feet to hub 2508.02 South being 2650.48 feet North, thence West 50.97 feet where we place a wood stake for the true $\frac{1}{4}$ corner with new bearings at 8° 45' variation, as follows:

Jack pine 10 inch, S 33° 11' W 33.80 feet. Poplar 6 inch, N 48° 18' W 24.10 feet.

at a point 236 feet North we chain West 4.54 feet and set stake on section line for road center.

at 472 feet North, we chain West 7.08 feet and set stake on road center: at 780 feet North we chain West 13.62 feet 944 feet North, goes West 18.20 feet.

March 17th 1912, Working for Cass County: H & B transit 180 foot chains: double center hubs, plumb-bob chaining. Curo transit and chain: Glenn Smith chaining. Oscar Gooden, Hosey King and Herman Siltman axmen.

From the iron corner, cut line East between sections 3 and 10, T 139, Rg 29, and also cut line East from the South $\frac{1}{16}$ between sections 3 and 4. Both lines run on 8° variation;

Smith and team, Siltman and Curo go to the $\frac{1}{4}$ corner

between sections 10 and 11, T 139, R 29, where U. S. notes call for post and: Norway pine 20 inch, N 87° W 354 links (or 233.64 feet) we find the stump of the old bearing tree from which we set the 1/4 corner @ 9° 50' variation: set wood stake with new bearing trees at 9° 50' variation as follows: Norway pine 15 inch, S 17° 17' W 160.60 feet to spot at base. Norway pine 15 inch, N 64° 46' W 123.34 feet to spot at base.

Set transit on new 1/4 corner, back sight half a mile South on flag placed at corner to sections 10, 11, 14, 15. Vernier set at 0.0. Needle reading 9° 50' E: turn telescope on old bearing tree heart of stump: Vernier reads N 87° W, and it is 233.64 feet to the face of the "B. J." marks, showing that I am using the true section line as a meridian.

going to the 1/4 corner between sections 2 and 3, we run South on 7° 45' variation.

March 18th 1912: To put in the lost corner to sections 2, 3, 10 and 11, T 139, R 29, Glenn Smith and Curo chaining, John Dorey, Hoesey King and Oscar Gooden axmen, plumb-bob chain and double center hubs, begin at iron iron corner to sections 3, 4, 9 and 10, run East on 8° variation:

at 180 feet set pin in old main road, bears N and South. at 420 set pin in sea wall of lake: at 440 enter Ponto Lake which bears N and SW: at this point U. S. notes call for post for Meander Corner No 56 and bearing trees as follows:

Black pine 9 inch, S 64° W 10 links. Black pine 6 inch, N 66° W 21 links all are gone and we continue East: at 540 feet East, set pin 3. on ice: at 1224 set snow hub on ice: at 1929.60 set snow hub on ice: at 2750 set snow hub on ice: at 2770 leave Ponto Lake which bears N and SW: at 2843 set hub on point of land: at 2935 enter bog NW and S: at 3220 leave bog, NW & SE: at 3238 set hub on point of land coming from the North: at 3240 set pin No 18: at 3270 enter same swamp NE & SW: at 3600 leave swamp N & S: at 3894.85 set hub: at 4311.40 set hub: at 4320 set stake No 24: at 5097.50 set hub: at 5114 main traveled stage road bears N and S: Variation changes to 7° 35': at 5898.40 set hub: at 6660 road bears N and S: at 6675 enter swamp N & S: at 7332.50 set hub and leave swampy lake: at 7343 cross wire fence about 15 feet South of NW corner of fence: at 7380 set pin No 41.: at 7425.60 set snow hub: at 7740 set pin No 43: at 7774.80 the true 1/4 corner between sections 2 and 11, sets North 30.50 feet: at 7788.80 a post set by James M. Canfield, bears North 18. feet: The corner I have just set is 12.70 feet North of an East and West wire fence.

The post set by Canfield in NE corner of fence bears S 47° 45' E 19.25 feet from my true 1/4 corner. U. S. notes call for a post and the following bearing trees: Black pine 5 inch, S 32° W 98 links (= 64.68 feet) Aspen 4 inch, N 49° E 29 links (= 19.14 feet) We find both old bearing trees, the Black pine still standing green plainly marked: the bearing trees check

1/4 2/3

4/3
9/10

1/4 2/11

perfect with the $\frac{1}{4}$ corner I have just set: It would appear from this that some one has moved the stake set by Mr. Canfield from the place in which he originally set it.

$\frac{1}{4}$ -2/3 going to the $\frac{1}{4}$ corner between sections 2 and 3, T139, R. 29 just established by us, we run South @ $7^{\circ}45'$ variation, following new road: at 1600 feet leave road which runs East: at 1675 enter open bog which bears E & SW: at 2300 leave bog: at 2470 set hub: 2500 intersect main traveled stage road which bears South and NE: at 2520 set pin No. 14: at 3300 leave road which bears N and SW: at 3340.80 set snow hub: at 3450 enter open bog E & W: at 4050 leave bog bears N & SE: at 4180 main road is 10 feet West, it bears NW & South: at 4320 set pin number 24, East of road 5 feet:

at 5220 set pin No. 29 plus 130.20 feet equals 5350.20 feet South:
 $\frac{1}{4}$ 10/11 The true $\frac{1}{4}$ corner between sections 10 and 11 sets East 33.20 feet. March 19th 1912 Glenn Smith and team: Oscar Gooden, John Storey and Curro working for Cass County: H & B transit 180 foot steel tape.

We continue the center line of section 3, West without chaining, and at approximately 5200 feet the true $\frac{1}{4}$ corner between sections 3 and 4, bears South 30.50 feet.

$\frac{1}{4}$ 4/3 Beginning at the South $\frac{1}{6}$ corner between sections 3 and 4 T139, Rq 29 we run East on 8° variation: at 1850 cross old main present traveled stage road, Pine River to Kabekona Camp bears NE and SW: continue East without chaining and at about 5200 feet East, the South $\frac{1}{6}$ between sections 2 and 3, sets North 23.50 feet.

$\frac{2-3-10-11}{139-29}$ To put in the corner to sections 2, 3, 10 and 11, T139, Rq 29, we begin at hub 5097.50 East, and chain East 27.40 feet to hub 5124.90 East. As the U.S. notes do not show the distance across Ponto Lake, and do show the distance from this corner East to the $\frac{1}{4}$ corner to be 2649.90 feet, we take the U.S. Chain for it and fix this corner 2649.90 feet West of the $\frac{1}{4}$ corner, which fixes its position as to East and West, then run East 13.40 feet to the true corner to sections 2, 3, 10 and 11, Township 139, Range 29, where we place a 4x4 post with new bearing trees as follows:

sec. cor. Jack pine 6 inch, N $82^{\circ}48'E$ 53.60 feet.
Norway Pine 14 inch, S $41^{\circ}25'W$ 75.75 feet.
The SW corner stone of the school house entrance, bears N $46^{\circ}05'E$ 102.10 feet distant, variation $8^{\circ}E$.
Supper, bed and lodging with Herman Siltman.

John W. Curro, Surveyor.

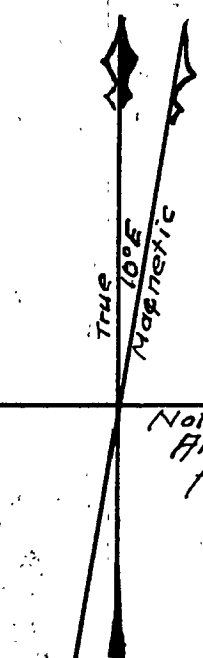
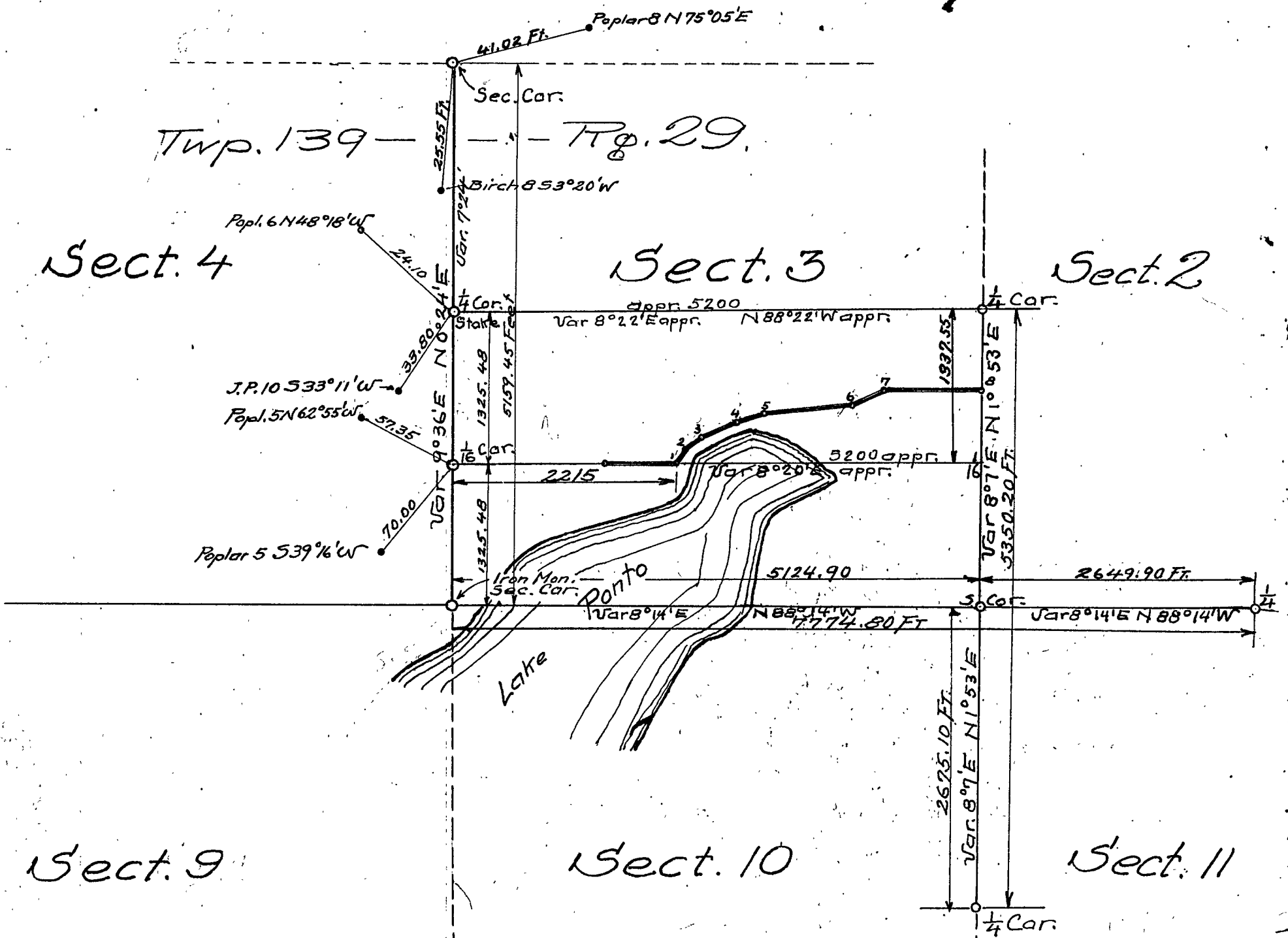
$\frac{3/16}{3/2}$ March 20th 1912 To put in the South $\frac{1}{6}$ corner between sections 2 and 3. From pine No 7, being 1260 feet South we chain 17.55 feet South to 1337.55 feet South, thence East 6.70 feet where we place a post for the true $\frac{1}{6}$ corner with bearings as follows:
cross in 3. foot white pine stump bears S $59^{\circ}22'W$ 48.75 feet.

PLAT.

TOWNSHIP 139 Rg. 29-

SECTIONS: 2-3-4-9-10-11

Scale: 1250 Feet = 1 inch



Note:
All courses turned
from true Meridian

14

Jack pine tree bunch, bears $N 25^{\circ} 30' W$ 90.40 feet courses turned from the true section line at 8° variation East.

To correct the South $\frac{1}{4}$ line, being the East and West center line through the South half of Section 3, we proceed as follows: at a point approximately 5200 feet East on our random line, the $\frac{1}{4}$ corner sets North 23.50 feet, so that at a point on our random line 1260 feet East, we chain North 5.70 feet and set a stake on the true $\frac{1}{4}$ line for a road center: at a point on our random line 2215 feet East we chain North 10. feet and set a stake on the true $\frac{1}{4}$ line for road center which we mark "Sta 1" with bearings as follows:

Jack pine tree, SE 29.40 feet: Pine stump NE 26.45 feet.

Then to run center line of County road we run: $N 35^{\circ} E$ 150 feet to sta. 2. Thence $N 55^{\circ} E$ 150 feet to sta 3. thence $N 64^{\circ} 45' E$ 270 feet to sta 4. thence $N 76^{\circ} E$ 217 feet to sta 5. thence $N 84^{\circ} 27' E$: at 197 feet intersect center to 10. foot ditch which runs $N + S$: at 1080 set station 6.

From here on we may change the line but for the present we run a trial line as follows:

thence $N 58^{\circ} 50' E$ down hill: at 243 intersect center of 10 foot ditch which runs $N + S$: at 289.60 set station 7. thence North along East side of marsh: at 55 feet a narrow neck of marsh bears $SW + SE$: at 115 we leave marsh which bears $N 20^{\circ} W$, and East: at 708.50 we intersect the East and West center line of Section 3, and set station 8. thence East along the center line 954 feet to station 9, being the $\frac{1}{4}$ corner between sections 2 and 3, T139, Rq 29.

To correct the random East and West center line of section 3, we proceed as follows:

at a point on our transit line, approximately 5200 feet West the $\frac{1}{4}$ corner sets South 30.50 feet, so that at a point on our transit line 954. feet West, we chain South 5.60 feet to the true E and W center line: at 472 feet West, we chain South 2.80 feet to the true E and W center line.

John Alroy, Oscar Gooden, and Curo work all day on survey.

Glenn Smith and team go to Buckus in a.m. to bring out Commissioner Perry, and works in afternoon on survey.

Curo takes dinner, supper and stays over night with Mike Smith.

March 21st 1912 Glenn Smith and Curo work all day for Cass County: I pay Mike Smith \$15. on account of board and livery which may be more or less than what I owe him but have not got time to figure it up till I get back to Walker.

Glenn Smith and I drive with his team to Section 3.

Township 139, Range 29, where we run a change in the road as follows:

Beginning at station "6" we "back up" 50 feet so that station 6 is 1030 feet from station 5, and from here we run to a point 27 feet south of station No. 7, thence East to the section line.

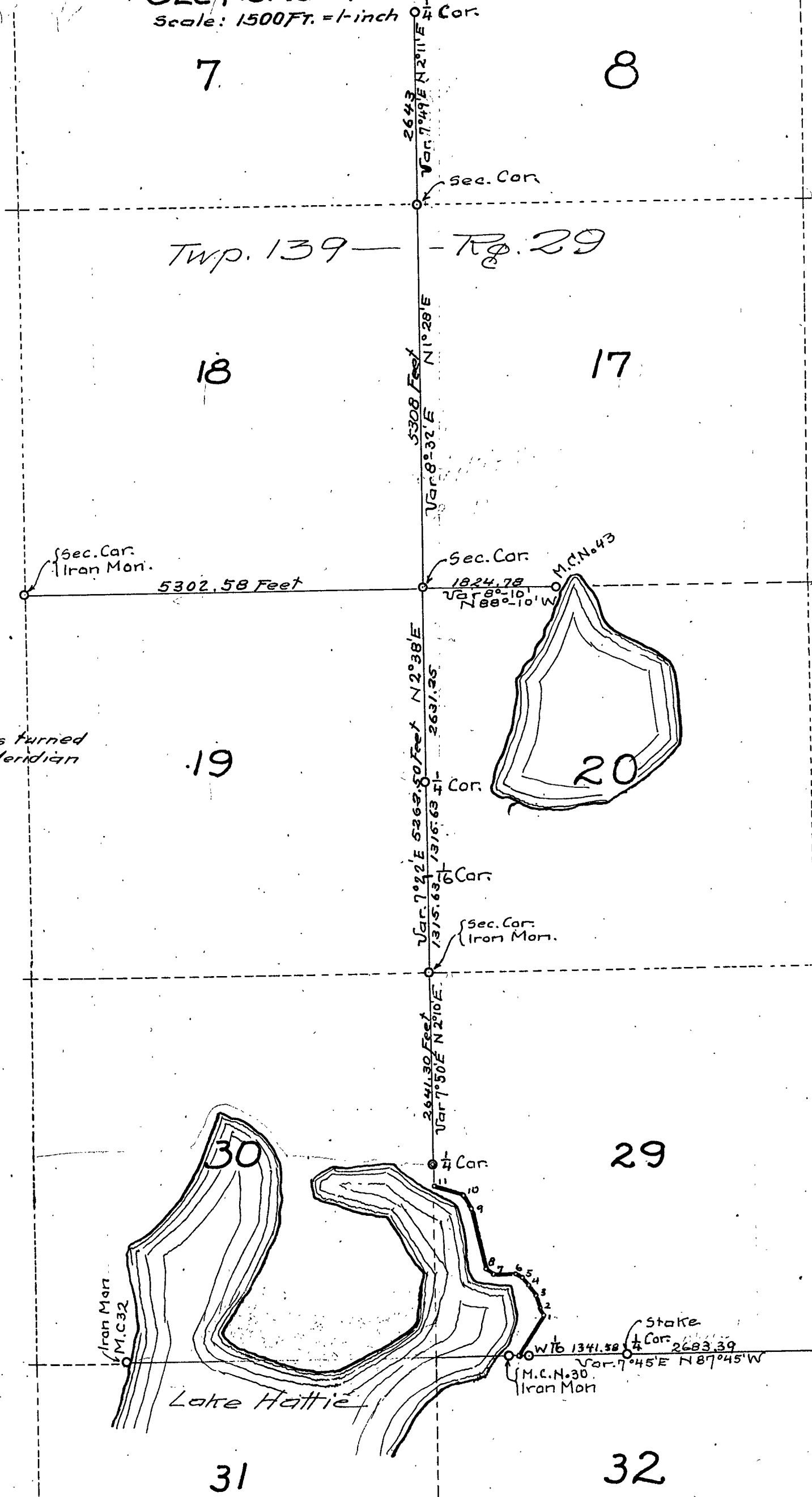
From station 6, we run $N 67^{\circ}50' E$ 325 feet to station 7, thence East to the section line.

John W. Curo, Surveyor.
Surveyed February 13th, 1912 to March 21st, 1912.

B

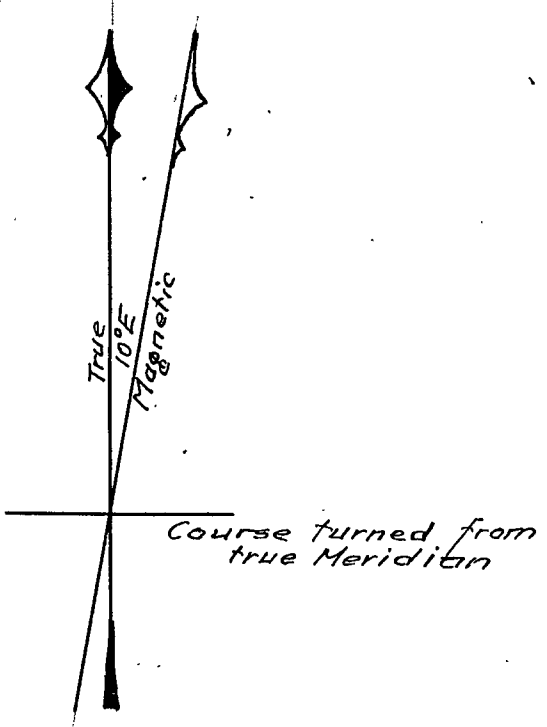
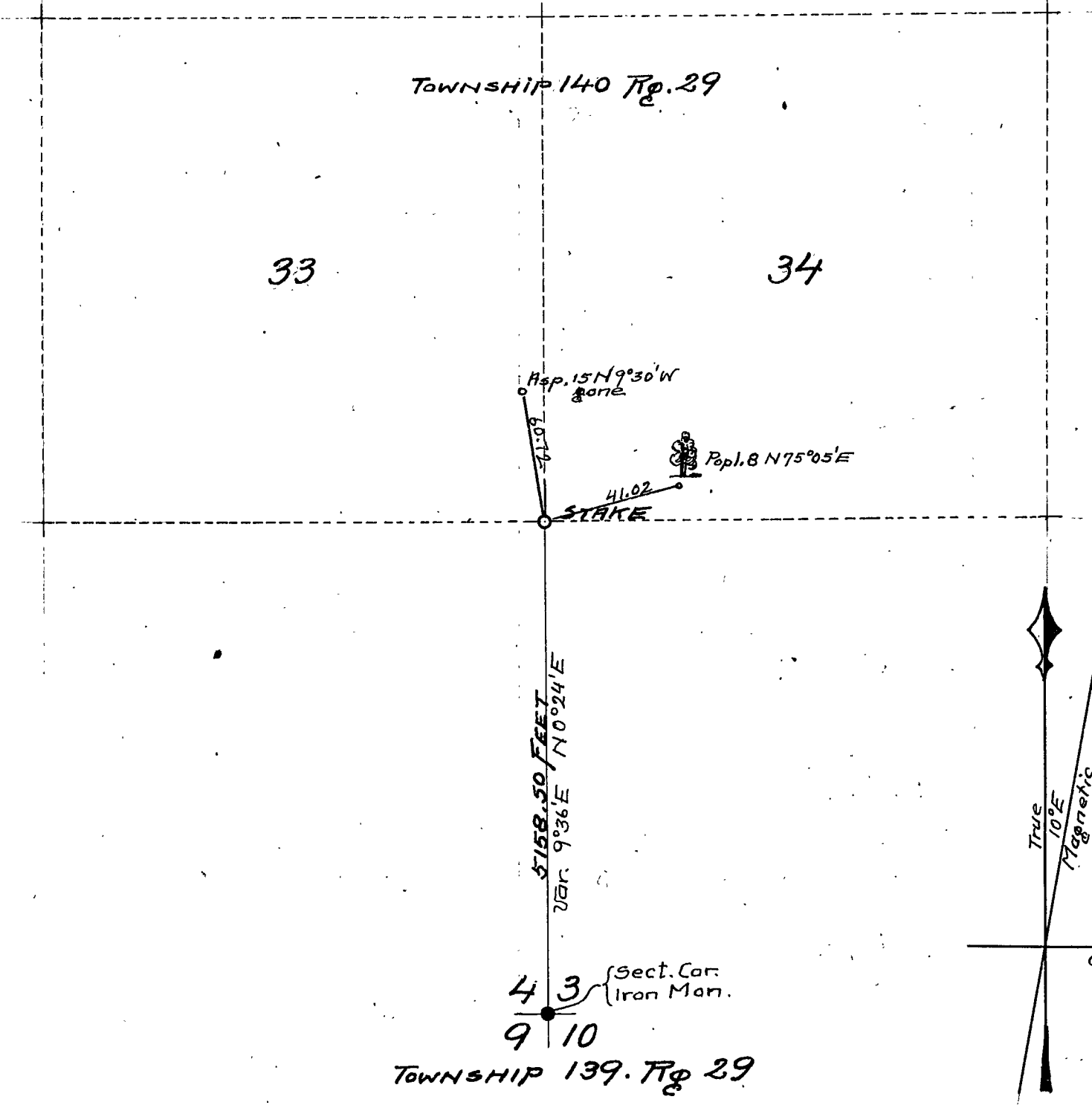
PLAT

TOWNSHIP 139. N. R. G. 29 W. 5TH P. M.
SECTIONS: 7-8-18-17-19-20-29-30-31-32
Scale: 1500 FT. = 1-inch



SURVEY RECORD - 286

PLAT
TOWNSHIP 140 N. Rg 29. W. 5TH P. M.
SECTIONS : 33 - 34.



To

Field notes of a survey made in sections 33 and 34, Township 140 N, Range 29 W, 5th Principal Meridian, Cass County, Minnesota, as made by John W. Curo, County Surveyor.

March 16th 1912, Saturday: John W. Curo transitman also chaining. H & B transit and 180 foot steel tape. Glenn Smith chaining: Oscar Gooden and Herman Siltman and Hosey King, axmen.

Beginning at the Iron corner to sections 3, 4, 9 and 10, Township 139, Rg 29, run north between sections 3 and 4, variation $8^{\circ} 30' E$:

at $\frac{1}{4}$ corner between sections 3 and 4, U. S. notes call for a post and: Black pine 10 inch, $N 80^{\circ} W 340$ links: Black pine 8 inch, $N 46^{\circ} E 20$ links:

all are gone and we continue North: at 3150 feet enter round marshy lake which bears NW and East: at 3375 leave same which bears SW and East: at 5138.10 set temporary corner for sections 3, 4, 33 and 34, between Township 139 Range 29 and Township 140 Range 29: the corner sets 20.40 feet North and 90.20 feet West: at 5158.50 feet North the corner sets West 99.20 feet where U. S. notes call for post and the following bearing trees.

Black pine 16 inch, $N 37^{\circ} 30' E 142$ links (or 93.72 feet)

Aspen 15 inch, $N 9^{\circ} 30' W 92$ links (or 60.72 feet)

Black pine 8 S. $1^{\circ} W 60$ links (or 39.60 feet)

Black pine 8 inch, $S 4^{\circ} 30' E 65$ links (or 42.90 feet)

We find the tall stump of the SW tree plainly marked from which we set a wood stake for the true corner at $8^{\circ} 30'$ variation: chained from the face of "B. J." marks

Mark new bearings as follows:

Birch 8 inch, $S 30^{\circ} 20' W 25.55$ feet to cross (+) in flat spot made at base.

Poplar 8 inch $N 75^{\circ} 05' E 41.02$ feet to cross (+) in flat spot at base of tree: This poplar tree sets in Section 34, T 140, Rg 29.

From the post just set we run $N 37^{\circ} 30' E 93.72$ feet in Section 34, T 140, Rg 29, and look for the old 16 inch, black pine bearing tree but it appears to be gone.

Then from the true corner we run $N 9^{\circ} 30' W 60.72$ feet in Section 33, T 139, Rg 29, and look for the old 15 inch Aspen U. S. bearing tree but it appears to be gone.

John W. Curo,
County Surveyor, Cass Co., Minn.

Surveyed March, 16th, 1912.

3.4.33.34

TOWNSHIP 142N Rg. 28W. 5TH P.M.
SECTIONS: 1-2-11-12-13-14

Field notes of the survey of a part of the new County road to be known as the Rogers Road and the establishments of corners in sections 1, 2, 11, 12, 13 and 14, Township 142, Range 28, Cass County Minnesota as surveyed by and under the direction of John W. Curo, County surveyor, assisted by H. F. Baldwin, Deputy.

Tuesday May 16th 1916. Baldwin and Curo are working in survey of North two miles of Rogers road as ordered surveyed at County Commissioners meeting of May 2nd 1916. We copy notes of the Government survey and search and search records for previous surveys. Adjust instruments and with the assistance of Ernest Jusler (chainman) assemble survey equipment and start to cross Leech Lake with Walter Haberman and his launch.

As the wind is high we wait till 9 P.M. for it to go down, and as it is still blowing we are compelled to wait till morning.

Baldwin and Jusler boarding with Curo. H. F. Baldwin Wednesday May 17th 1916: As the wind is still blowing a gale we decide to go around by rail. We sharpen brush hooks and axes as this will save time when we are on the work and take train for Boy River by way of Cass Lake bus fare, Baldwin and tools 25¢ bus Jusler and tools 25¢. RR fare Jusler and Baldwin Walker to Cass Lake 49¢ and 49¢. Supper and lodging at Endion Hotel Baldwin #1. Jusler #1. Total \$3.48 Over night at Endion Hotel.

Signed H. F. Baldwin.

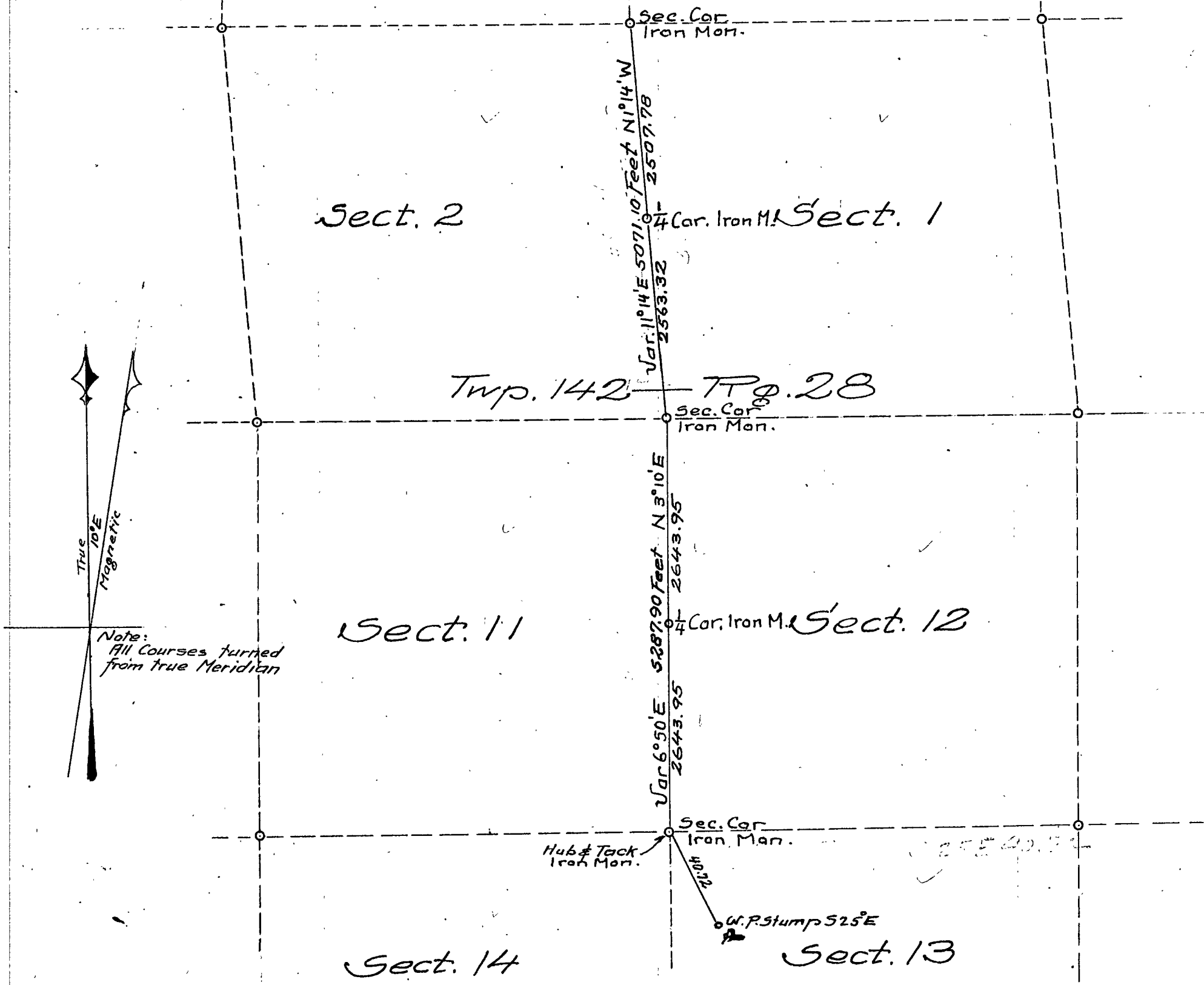
Thursday May 18th 1916. Horst and Jusler Breakfast at Endion #1. RR fare Cass Lake to Boy River 65¢ and 65¢ Baldwin and Jusler: Arrive at Boy River get dinner at hotel and prepare to survey Rogers road: Petition of the road reads about as follows:

Beginning at a point 80 rods South of Cor. to sections 7, 8, 17 & 18, T 142, Rg 27: thence West 1. mile: thence North to SE corner of section 12: Thence West 1. mile to corner of sections 11, 12, 13, 14, T 142, Rg 28: thence North 2. miles to the North corner of sections 1 and 2. As the North two miles of this road is ordered surveyed and we must cross the river we try to get a row boat but as none are available we hire a launch from Mr. Foote for which they charge us \$1.50 for this trip to camp B, about two miles: The motor boat returns and we go

SURVEY RECORD 287.

B

PLAT
TOWNSHIP 142 N. RANGE 28 W. 5TH P. M.
SECTIONS 1-2-11-12-13-14-



to corner of sections 12-35-36, between Townships 142, 143, Rq 28 where U. S. notes call for post and the following bearing trees: Birch 12 inch, N 66° E 7 links (or 4.62 feet). Birch 8 N 64° W 13 links (or 8.58 feet): Birch 6 S 20° W 16 links (or 10.56 feet) Spruce 5 inch S 64° E 10 links (or 6.60 feet). We find corner with three bearing trees standing: they are badly out of place as follows: Birch 12 inch, bears N 81° E 20.50 feet: Birch 6 inch, S 61° W 36.30 feet: Spruce 5 inch, S 59° E 35.70 feet: we walk back to Mix farm and talk with Mr. L. E. Mix who takes us to 1/4 corner between sections 1 and 2 T 142, Rq. 28. Mr. Mix agrees to board us while we are working this side of the river. Ray Mix takes us to Boy River Hotel, from Camp 3. in Evenwude motor boat. We have supper at hotel and return to Camp 3. with Ray Mix we spend night at Mix farm. Boat fare to Boy River and return in Mix boat, \$1. Baldwin and Jusler work all day.

Signed H. F. Baldwin.

Friday May 19th 1916. Weather fine, warm, Breakfast 6.30 a. m. with L. E. Mix in sec. 1, T 142, Rq. 28. Baldwin and Jusler go to corner of secs. 1, 2, 11, 12, T 142, Rq. 28 where U. S. notes call for post and following bearing trees: Maple 5 inch, S 42° W 16 links (= 10.56 feet) Maple 4 inch, S 10° E 42 links (gone) Birch 6, N 45° W 26 links (= 17.16 feet) Fir 12 inch, N 40° E 22 links: Two of these trees, the 5 inch maple, (dead) and the stub of the birch Birch are standing, properly inscribed and from these two bearing trees I set a hub and tack, in true position for corner, this at side of wheel track of tote road. The old corner is here, but has been set over from the road: From the true corner just set, a bearing tree of more recent date than the U. S. survey 14 inch spruce stub about 5. feet high, stands S 22° East 41.50 feet.

With Gurley compass we start a random line north on 8° 30' var: this line follows a little East of tote road all low wet land and heavy brush: at 394.00 North set hub: at 1043.30 feet North set hub: we quit for dinner and go to Mix farm. In P. M. Mr. B. N. Ingebretsen sends his man out to cut brush (his man is Mr. Fred Aesum) continue transit line North: at 1563.20 ft. N, set hub: at 2013.00 ft. N set hub: at 2609.60 ft. N, set hub: The brush is thick and the ground has been low and wet but this comes on high ground and our line is now further from tote road. H. F. Baldwin, dep. Surveyor, run transit and chained: E. L. Jusler ax, flag, and chain, Ingebretsen furnish axman: Quit for night: Baldwin and Jusler return to Mix farm.

Signed H. F. Baldwin.

Saturday May 20th 1916: Warm beautiful day: Baldwin and Jusler breakfast 6-30 a. m. with L. E. Mix in sec. 1 T 142, Rq. 28. H. F. Baldwin, with Aloe transit and chain: E. L. Jusler flag, chain and ax: B. N. Ingebretsen, axman: Continue line North between sections 1 and 2, T 142, Rq. 28: at 3175.70 N, set hub: at 3800 enter tamarack swamp: at 3938.60 set hub: at 3940. N, enter open marsh: at 4160 feet leave marsh: at 4960 N, leave tamarack swamp: at 4969.90 N, set hub on old E & W road: at 5125 ft N, cross E & W wagon road:

At 5065.40 North, the true corner to sections 1, 2, 35, 36 sets West 241.60 feet: We accept the old original corner as correct: Quit for dinner taking transit and tools with us: Jusler and Baldwin go to Mix for dinner: Ingebretsen sharpens ax and brush hook at noon: P.M. same crew: Starting at corner to secs 1, 2, 11 and 12, T142, Rg. 28, we deflect $2^{\circ} 30'$ from random line between sections 1 and 2, making 11° variation which we run South between sections 11 and 12: at 428.00 set hub: Road 3 feet Left: at 455 feet South, School house stands 60 feet Right. at 1335.00 set hub: Road 2 feet to Right. at 2255.10 set hub: Road 2 feet left: 2800.00 set hub: Road 20 ft. Right: The road crosses and re-crosses this line but the general direction is South. The $\frac{1}{4}$ corner is near the trail but we see no bearing trees that tally with notes: We quit for night and return to Mix place.

Signed H. F. Baldwin.

Sunday May 21st 1916: Breakfast at Mix farm in Sec. 1- T142-Rg 28, at 6-30 A.M. Cloudy Baldwin also transit: Jusler, chain, flag and axe: Ingebretsen axman: Baldwin and Jusler take lunch and start to continue random line South between sections 11 and 12, T142, Rg 28 as we walk to work it starts to rain and as there is no sign of rain stopping, we quit and take our transit and lunch and leave same in school house and return to house.

Baldwin writes notes and writes to Curro regarding setting NW corner to Sec 1, T142, Rg 28. Rain all day steady: we stay at Mix house. Signed H. F. Baldwin.

Monday May 22nd 1916 Breakfast Mix farm 7.00 A.M. in Sec 1 T142, Rg 28. Raining: quite raining at 10.15 A.M.

Baldwin and also transit and chain: Jusler, ax, flag and chain: Ingebretsen axman in P.M. Baldwin and Jusler take lunch and go to random line between sections 11 and 12, T142, Rg 28 where we continue South: Ingebretsen come out after dinner and cuts brush: Chaining South: at 3298.70 set hub: at 3805.30 tack in log: at 4125.30 set hub: at 4633.90 set hub: at 5283.40 set hub: Baldwin and Jusler return to Mix house for night: we found heavy cutting all afternoon.

Signed H. F. Baldwin.

Tuesday May 23rd 1916: Breakfast 6.30 A.M. with Mix: Baldwin also transit and chain: Jusler, axe, flag and chain: Ingebretsen axman: We take lunch and look for the $\frac{1}{4}$ corner between sections 11 and 12 but find no bearing trees and walk to corner of sections 11, 12, 13, and 14, Twp. 142, Rg 28 where U.S. notes call for:

Cedar 10, $N 5^{\circ} E$ 29 links (= 19.14 feet) (Gone)

White Pine 30, $S 23^{\circ} E$ 62 links: (= 40.92 feet)

White Pine 16, $N 26^{\circ} W$ 83 links (= 54.78 feet)

We find the stumps of both white pine bearing trees.

plainly marked and from them we set hub with tack at true section corners: the bearing trees now stand as follows: white pine stump, S 25° E 40.72 feet: white pine stump, N 26° W 54.51 feet: white birch stub bears N 21° E 32.40 feet:

An out random line at stake 5274.00 South, the true corner to sections 11, 12, 13, 14, sets 384.50 feet West at 90° to random:

Correcting back we use .072905 to the foot:

Hub at 4633.90 S, goes West 337.84 feet: Hub at 4125.30 South, goes West 300.75 feet: Hub at 3805.30 South, goes West 277.53 feet: Hub at 3298.70 South, goes West 240.50 feet: 1/4 corner at 2637.00 South, goes West 192.25 feet:

Hub at 2255.10 South, goes West 164.40 feet: Hub at 1335.00 South, goes West 97.33 feet: Hub at 428.00 South, goes West 31.20 feet:

After correcting up this line as shown, we grind axe and brush hook on Ingebretsen's grind stone and go to random line between sections 1 and 2 and cut line for offsets at nearly all the hubs: As we have not tied into random into corner of sections 1, 2, 35, 36, we do not know exact distance but will chain it at a later date. Baldwin and Jusler return to Mix farm for night:

H. F. Baldwin.

Friday June 2nd 1916: Breakfast at 6:30, Baldwin takes Gurley compass and 50 foot metallic tape and goes to Ingebretsen's to see if he will help correct line, but as he cannot go today Baldwin corrects as far as offsets can be taken with 50. foot tape: Baldwin then goes over to where Jusler is cutting on Boy Lake road: the corrections for random line between sections 1 and 2, T142, Rg 28, are as follows:

Hub at 394.00 North, goes West 18.80 feet: Hub at 1043.30 North, goes West 49.75 feet: Hub at 1563.20 North, goes West 74.55 feet: Hub at 2013.00 North, goes West 96.02 feet: Temporary 1/4 corner at 2640.00 North, goes South 81.84 feet to 2558.16 North, thence West 122.02 feet: Hub at 2659.60 North, goes West 124.45 feet:

Hub at 3175.70 North, goes West 151.45 feet: Hub at 3933.60 North, goes West 187.84 feet: 5222.60 U. S. Chain, equals 5065.40 feet our chain, therefore 5222.60 goes South 157.10 feet to 5065.40 North, being .031014 of a foot South for each foot chained North:

At 5065.40 North, the true section corner sets West 241.60 feet, being .047696 of a foot West for each foot North

After dinner Baldwin takes Mr. Reinke, an axman, working for Cass County on Boy Lake road, and finishes correcting random line between sections 1 and 2.

After finishing this we spend balance of P.M. on Boy Lake Road survey: Baldwin charges full day to Rogers road and Reinke full day to Boy Lake road, the work was done on that portion: This survey might have cost less, had we been able to secure plenty of brush cutters: The farmers are busy putting in crops, and do not wish to work on survey.

Baldwin spends night at Mix house. In evening Baldwin makes out bills to Cass County for expense of Rogers road. Monday June 12th 1916. Jusler leaves Harmon's place after breakfast and goes to Bay River where Mix boat fare costs \$1. Dinner with Mix. Mix team 1/2 day distributes iron monuments. Jusler spends night at Clark's. There are 16 iron monuments to set, and 4 of these are on Rogers road: balance on Bay Lake road.

Tuesday June 13th 1916, Rain 6 a.m. clears at 7 a.m. Jusler has breakfast at Clark's and then with Clark takes lunch and goes out to set iron monuments. He puts in new bearing trees to 1/4 corner between sections 1 and 3, T 142, Rg 28 as follows: white oak 9 inch, N 35° E 33.80 feet: white Birch 12 inch, S 57° E 33.60 feet. Also new bearing trees to 1/4 corner between sections 11 and 12, T 142, Rg 28 as follows: Maple 6 inch, S 85° W 31.70 feet: Maple 16 inch, S 75° E 37.00 feet.

Jusler and Clark place iron monuments at all section corners and 1/4 corners as follows: At section corner 11, 12, 13 and 14; at 1/4 corner between 11 and 2; section corner to 1, 2, 11 and 12; at 1/4 corner between sections 1 and 2. Twp. 142, Rg 28; also at corner to sections 1, 2, 35 and 36, between Twp. 142 and 143 N, Range 28 W: this last iron set is both on the Rogers road and Bay Lake road.

When iron monuments are set, Jusler returns to Bay River Village, via Mix motor boat, and returns for supper and lodging to Harmon's place.

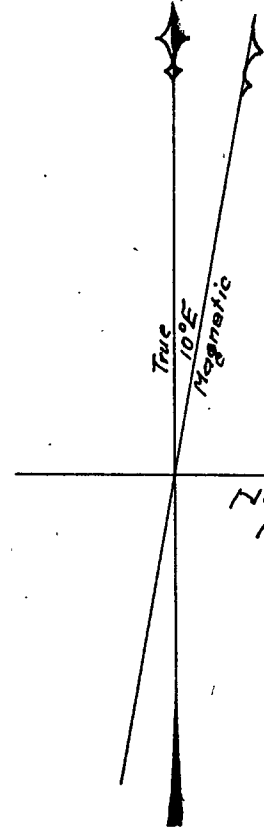
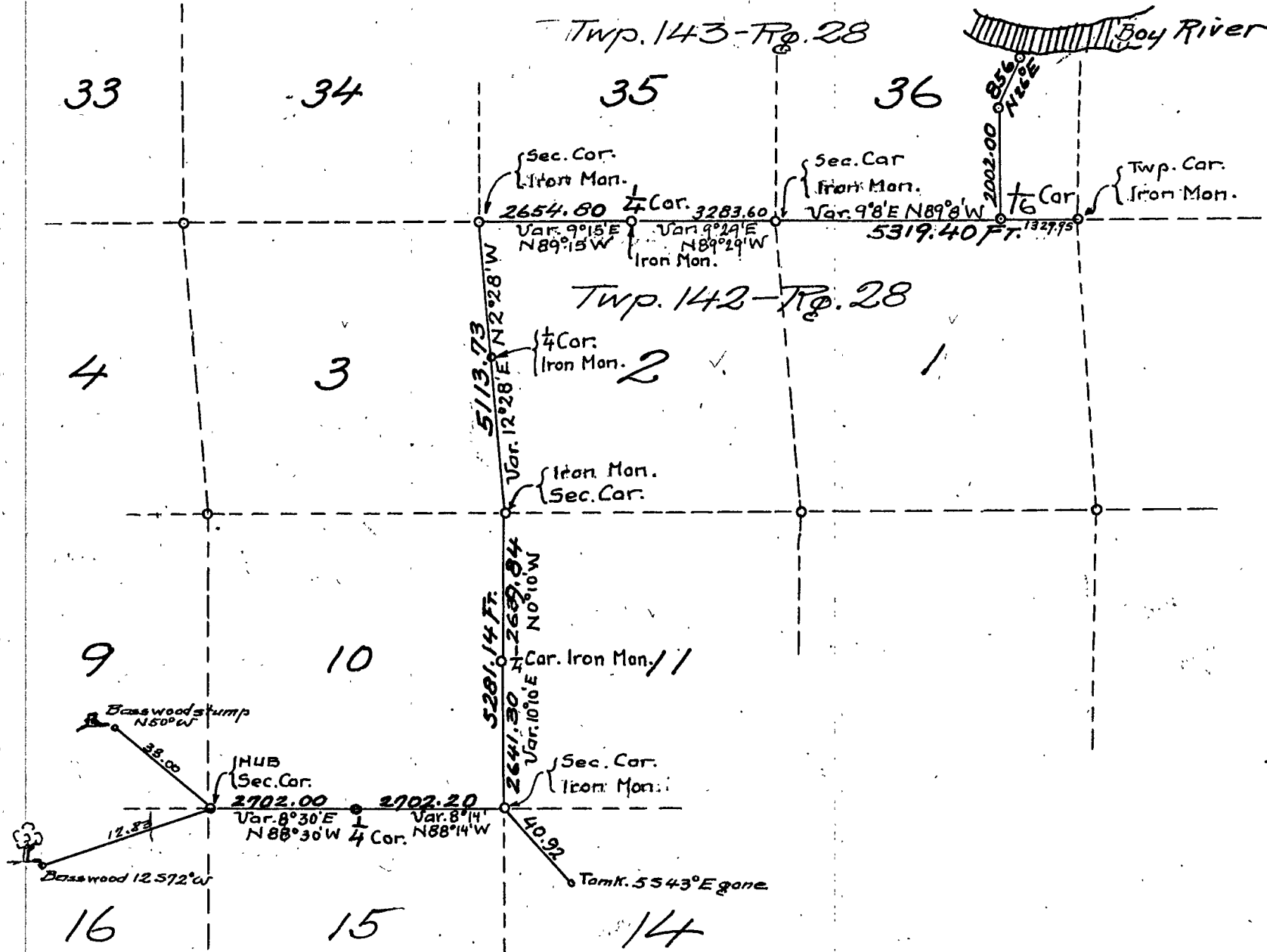
Signed H. F. Baldwin.

Surveyed May 16th 1916 to June 13th 1916.

John W. Curo,
County Surveyor Cass Co. Minn.

PLAT

TOWNSHIP 142 N. R. 28 W. 5TH P. M.
SECTIONS: 1-2-3-9-10-11-14-15-16-



Note:
All Courses turned from
true Meridian

16

SURVEY RECORD 288

TOWNSHIP 142 N. RG. 28 W. 5TH P. M

SECTIONS: 1-2-3-9-10-11-14-15-16

Also T 143 R 28: Sec's 2-3-10-11-12-13-14-15-23-24-25-26-34-35-36
AND T 143 R 27: Sec's 30-31.

Field notes of the survey of a part of the Boy Lake County Road and the running of lines and establishment of corners in Section 6, Township 142, Range 27, and Sections 30, 31, Township 143, Range 27, and Sections 1, 2, 3, 9, 10, 11, 14, 15, 16, Township 142, Range 28 and Sections 2, 3, 10, 11, 12, 13, 14, 15, 23, 24, 25, 26, 34, 35, 36, Township 143, Range 28, as surveyed by and under the direction of John W. Curo, County Surveyor, assisted by H. F. Baldwin, Deputy.

Wednesday May 24th 1916: Breakfast at 6-30 on Mix farm: Baldwin and Jusler take transit and other survey tools etc start from Mix place to start survey of the Boy Lake Road.

We go to $\frac{1}{4}$ corner between sections 10 and 15, Twp. 142 N, Range 28 W, where we find U. S. bearing trees. We continue $\frac{1}{2}$ mile west to the corner to sections 9, 10, 15, 16, where U. S. notes call for: Maple 6, N 27° E 24 links (= 15.84 ft.) Iron Wood 12 N 31° W 18 links (= 11.88 feet) gone. Bass Wood 5 S 56° W 21 links (= 13.86 feet) Bass Wood 9 S 38° E 13 links (= 8.58 ft) gone. We find the Maple and the 5 inch Bass wood:

We now go to Dave Clark's place in Sec 15, Twp. 142, Rg 28, and who agrees to board us while we are working near by.

Baldwin and Jusler have dinner at Clark's and hire Dave Clark and Herb Aiton as brush cutters. P. M. Baldwin with aloe transit and chain; Jusler flag and chain; Clark and Aiton axmen. Jusler and Clark go for transit a mile North, while Baldwin and Aiton go to corner of sections 9, 10, 15, 16, T 142, Rg 28, where Baldwin sets hub from old trees for true corner: trees now stand as follows: Maple 6 N 73° E 14.67 feet Basswood 12, S 72° W 12.83 feet (the U. S. notes call this bearing tree "5 inch" Basswood.

The roots of the Iron wood bearing tree remain and the stump of a basswood some Cruiser has marked, stands N 50° W 33 feet: some cruiser has marked this stump "BT".

We start random line East on $8^{\circ} 30'$ variation E. at 1080.10 feet East set hub: at 1700.80 E, set hub: at 2173.00 East set hub: at 2437.20 E set hub: at 2702.00 E, the true $\frac{1}{4}$ corner sets South 1.10 feet: as this is so near true line we will set no correction stakes on this half mile. Fairly good place for road, some low places. Quit for night: Baldwin and Jusler go to Clarks.

H. F. Baldwin.

Thursday May 25th 1916: Breakfast at 6-30 at Clarks:

Baldwin aloe transit and chain; Jusler flag and chain:

Clark and Aiton, axmen: Going to $\frac{1}{4}$ corner between sections 10 and 15, Twp. 142, Rq 28 where U. S. notes call for:

Elm 13 N 10° W 8 links (= 5.28 feet). This is a basswood.

Maple 6 S 16° W 23 links (= 15.18 feet) From these we set a hub for the true $\frac{1}{4}$ corner after which the trees stand as follows:

Basswood 13 inch, N 20° W 6.40 feet; Maple 6 S 26° E 18.10 ft.

We deflect 30 minutes North and start random line East on 9° variation: at 225.20 East, set hub: at 933.70 E, set hub: at 1260. East, the school house sets 70 feet North: at 1401.70 E, a hub: at 1565.80 East, set hub: at 1879.60 E set hub: at 2041.80 E, set hub: fair place for road, few low places.

At 2130. feet East enter tamarack swamp: this is fairly well drained at 2670 cross drainage ditch: At corner of Secs. 10, 11, 14, 15, T142, Rq 28, U. S. notes call for following bearing trees:

Tamarack 6 inch, N 80° E 26 links (= 17.16 feet) Stump

White pine 8 inch, N 25° W 65 links (= 42.90 feet) stands plainly

marked: Tamarack 5 inch S 43° E 62 links (= 40.92 ft.) gone.

Spruce 4 inch S 70° W 89 links (= 58.74 feet) gone.

A tamarack corner post with scribe marks, sets correct from bearing tree. Quit for dinner. P.M. at 2702.20 feet East, the true section corner of 10, 11, 14 and 15, T142, Rq 28, sets South 36.30 feet. Correction of this line equals .013441 of a foot in each foot.

Hub at 225.20 goes South 3.03 feet: Hub at 933.70 goes South 12.55 feet: Hub at 1401.70 goes South 18.84 feet: Hub at 1565.80 goes South 21.05 feet: Hub at 1879.60 goes South 25.27 feet: Hub at 2041.80 goes South 27.44 feet:

After starting a random line North from section corner 10, 11, 14 and 15, on $8^{\circ}30'$ variation Baldwin and Aiton correct East random line as shown above: Jusler and Clark continue North on random line between sections 10 and 11, T. 142, Rq 28:

at 76.00 set hub: at 350. feet North leave tamarack swamp: at 498.60 feet North, set hub: at 710.20 set hub: Quit for night, Baldwin and Jusler at Clarks.

Signed H. F. Baldwin.

Friday May 26th 1916: Breakfast at Clarks, 6-30 a.m. Baldwin transit and chain; Jusler flag, axe and chain: Clark and Aiton axmen: We take lunch and continue random line North between sections 10 and 11:

at 960 feet North, cross logging road East and West: at 1263.30 North set hub: at 1600 feet North, cross a logging road NW and SE: at 1870.30 N set hub: at 2514.80 N, set hub: at 2630. N, fence E and W: at 3106.80 N, set hub: at 3700. N, cross log road NW & SE: at 3800 set hub: at 4641.00 set hub in clearing: at 5279.00 North, the true section corner to 2, 3, 10, 11 sets West 154.30 feet at 90° angle: at this point U. S. notes call for post and:

poplar 15 inch, S 40° E 3 links (= 1.98 ft) roots of stump:
 poplar 12 inch, N 45° W 4 links (= 2.64 ft) roots of stump:
 maple 4, S 30° E 18 links (= 11.88 ft) gone:
 maple 4, N 20° W 32 links (= 21.12 ft) scribe marks show here.

We set a hub for the true section corner from the remaining bearing trees and mark new bearing trees with tack as follows:

soft maple 8 inch, N 78° W 37.40 feet: maple 7 inch, S 53° E 78.00 feet. The stumps of two old bearing trees set by cruisers remain, but I ignore them in setting this corner:

We start a random line north between sections 2 and 3 on 10° variation: Jusler and Aiton continue random line north between sections 2 and 3.

Baldwin and Clark go to 1/4 corner between sections 10 and 11, Twp. 142, R. 28, where U. S. notes call for:

white pine 20 inch, N 33° E 15 links (= 9.90 feet) no scribe marks, burned stumps. It is probably a Government "B. T." white pine 18 inch, N 37° W 22 links (= 14.52 feet) found lying flat on ground with "B. T." marks plainly showing.

We set stake by chain from old U. S. bearings after which the bearings stand as follows: 20 inch white pine stump bears N 38° E. 18 inch white pine lying on ground bears N 33° W. a new bearing tree with tack in center of blaze, being hard maple 6 inch, S 60° W 38.50 feet. At 2639.50 ft, on our random line, the true 1/4 corner sets west (on 90°) turned with surley compass, 96.30 feet. We quit for night: Baldwin, Clark and Jusler reach Clark's house at 6.00 o'clock P. M. Baldwin and Jusler remain at Clark's house over night. In evening Baldwin figures correction for random line between sections 10 and 11, T 142, R 28 as follows: $2639.50 \div 96.30 = .036484$ and $2639.50 \div 58.00 = .021974 + 96.30$ feet. Hub at 498.60 goes West 18.21 feet: Hub at 710.20 goes West 25.90 feet. Hub at 1263.30 goes West 46.08 feet: Hub at 1870.30 goes West 68.23 feet: Hub at 2514.80 goes West 91.66 feet: Stake at 2639.50 goes West 96.30 feet set for bearing trees: Hub at 3106.80 goes West 108.76 feet: Hub 3800.00 goes West 121.94 feet: Hub at 4641.00 goes West 140.26 feet: Stake at 5279.00 goes West 154.30 feet set from bearing trees. Signed H. F. Baldwin.

May 27th 1916 Saturday: Breakfast at Clark's 6-30 A. M. Jusler and Aiton taking lunch for all go to where they quit last night and continue random line north between sections 2 and 3, T 142, Rq 28: Baldwin and Clark taking surley compass and 100 foot chain correct random line between sections 10 and 11. When this line is corrected we chain north on random line between secs. 2 and 3: Chaining north from corner to sections 2, 3, 10, 11: At 739.10 ft, set hub: at 1115.50 ft set hub: at 1630.20 ft set hub: at 2211.90 ft, set hub:

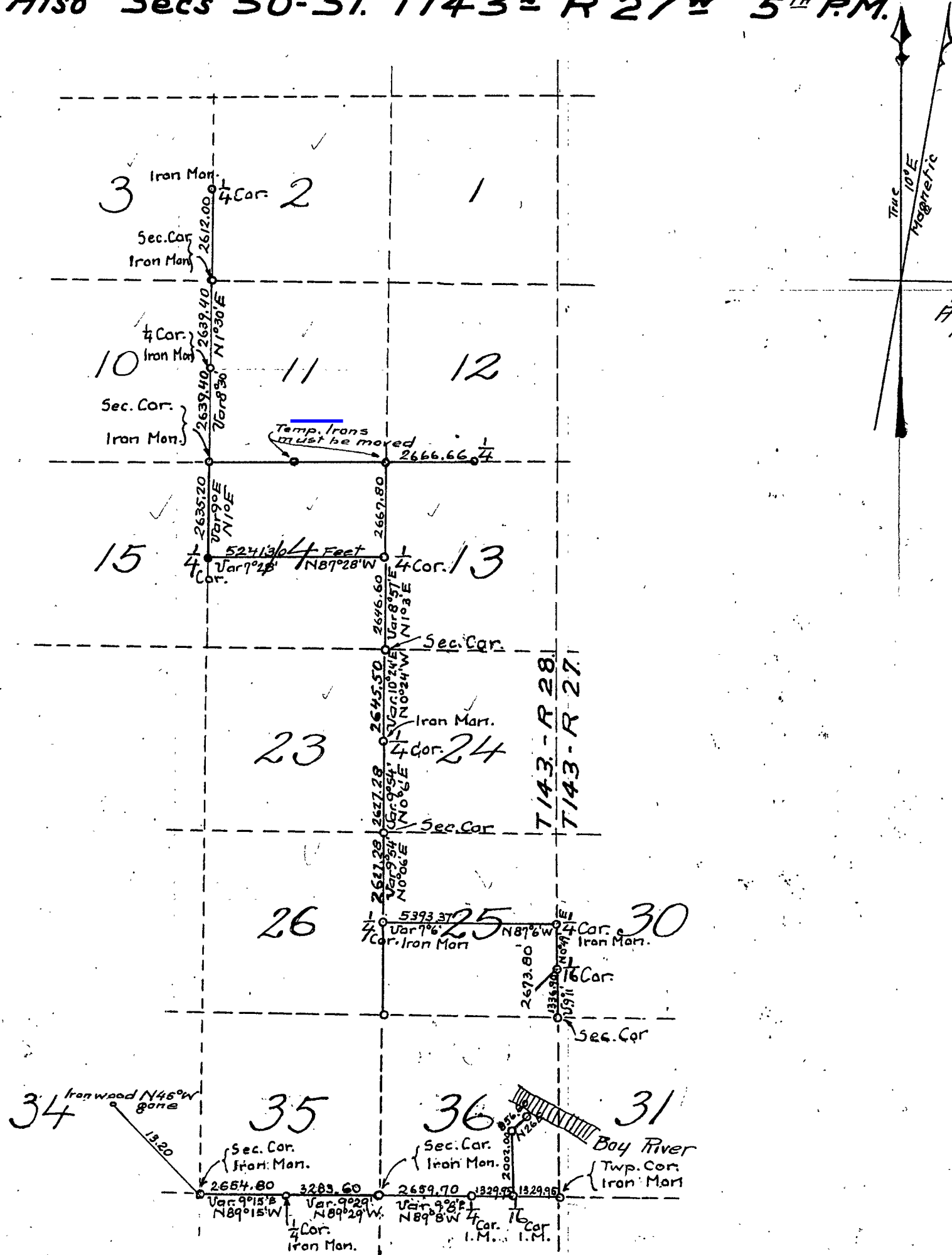
SURVEY RECORD-288

PLAT

TOWNSHIP 143 N. R. 28 W. 5TH P.M.

SECTIONS: 2-3-10-11-12-13-14-15-23-24-25-26-34-35-36

Also Sec's 30-31. T143^N R 27^W 5TH P.M.



Note: All Courses turned from true Meridian

this line mostly low and wet and will have to be well ditched, we quit for dinner. P.M. Continue north between sections 2 and 3 working same crew as in a.m. at 2378.40 N, set hub: at 2586.50 feet North, a cruiser corner sets 1.00 foot West: at 2673.70 N, set hub: at 2750.00 N, logging road bears NW and SE: at 3030.50 N, a tack on white pine root in wagon trail: at 3200.00 N, a saw mill sets East 3.00 feet: This is mostly low wet land and must be ditched to have good road. at 3300.00 N, enter tamarack swamp: at 3450.00 N, leave tamarack swamp: at 3580.00 N, set hub: at 4219.00 N, set hub on wagon road: at 4400.00 N, set hub: at 4450.00 N, cross wagon road west of North; This is all heavy cutting - small brush and some big trees: we quit for night: Baldwin and Jusler go to Clark's for night, reaching there 6:30 P.M. It is an hours walk, we must quit earlier to-morrow. Signed H. F. Baldwin.

Sunday May 28th 1916. Breakfast at Clark's at 7:00 a.m. Baldwin, Jusler, Clark and Aiton go to random line between sections 2 and 3, continue North: at 5109.00 N, the true section corner sets West (90° turned with transit) 220.00 feet: at corner of sections 2, 3, 34, 35, U.S. notes call for post and: Ash 12 inch, N 20° E 8 links, (= 5.28 feet) gone. Ironwood 6 inch, N 45° W 20 links (= 13.20 feet) gone. Ash 8 inch, S 75° E 18 links (= 11.88 feet) stump stands "B.T." plainly shown: Spruce 5 inch, S 35° W 20 links (= 13.20 feet) gone. One of these bearing trees remain: In order to find the "B.T." scribe marks, on this tree we have to chop 3. or 4. inches. I set a hub and tack from B.T. as follows: Ash 8 inch, S 75° E 18 links (= 11.88 ft) By the time we have found this "B.T." and set corner and tied into random line, we quit for dinner. P.M. We start random line East on 8° 30' variation: at 220.00 East, equals 5103.40 North is "P.D." of random lines. The SW angle reads 91° 27': at 200.00 East, cross road which runs nearly North: at 721.00 East, set hub: at 1509.10 E, set hub: good place for road.

While Jusler, Clark and Aiton are continuing East on random line, Baldwin goes to look for "B.T." marks, between sections 2 and 3, T 142, Rq 28. (finds none) we quit for night: Baldwin and Jusler go to Mix farm for the night and supper: at Mix place we find letters from Curo containing some of the transcript field notes of U.S. survey of Twp. 142, Rq 28.

Signed H. F. Baldwin

Monday May 29th 1916: Breakfast at Mix farm 6-20 a.m. Baldwin, Jusler, Clark and Aiton, continue East on random line on north side T 142, Rq 28, betw sec 2 and 35

→ at 2334.00 East, set hub: at 2654.80 E, the true $\frac{1}{4}$ corner between sections 2 and 35, sets north 34.80 feet: Correction of line = .01311 of a foot off in each foot East. At this corner the U.S. notes call for following bearing trees: Ironwood 6 inch, N 3° E 10 links (= 6.60 feet) gone. Sugar Maple 12 inch, S 50° W 40 links (= 26.40 feet) the "B. T." scribe marks plainly showing: By chopping into the Maple 3 or 4 inches, we see the old scribe marks "BT" are plain. I re-set this corner at distance and course as called for in U.S. notes. The Ironwood stood where is now a wagon road and has been grubbed out: at 2666.70 East, set hub: we continue line East and quit for dinner.

P.M. Tusler, Clark and Aiton continue random line East: at 3015.10 East, set hub: at 4392.00 E, set hub: It will be hard to build a part of this road: Baldwin remains in house and figures corrections and then takes Clark and goes to random line between sections 2 and 3, where we correct line as follows: 5109.00 N, our chain, equals 5245.02 feet U.S. chain: 5245.02 goes South 136.02 South to 5109.00: at 5109.00 North, the true corner sets West 220.00 feet: (Correction = .043061) Hub at 739.10 goes West 31.83 feet: Hub at 1115.50 goes West 48.03 feet: Hub at 1680.20 goes West 72.34 feet: Hub at 2211.90 goes West 95.26 feet: The temporary $\frac{1}{4}$ corner at 2640.00 North, goes South to 2571.50 North, thence West 110.73 feet to the $\frac{1}{4}$ corner: Hub at 3030.50 goes West 130.50 feet: Hub at 3580.00 goes West 154.56 feet: Hub at 4400.00 goes West 189.47 feet: Stake at 5109.00 goes West 220.00 feet to true section corner. Tusler and Aiton are continuing East on random line between sections 2 and 35: Baldwin and Tusler at Mix farm over night.

If the day is fine tomorrow and no rain tonight Clark and Aiton will not work with us, but must do their planting: signed H. F. Baldwin

Tuesday May 30th 1916: Breakfast at Mix farm 6-20 AM: Baldwin hires Bill Reinke to cut brush: Baldwin also transit and chain: Tusler, flag and chain, Reinke, arman: Continue East on random line between sections 2 and 35, T 142, 143, Rq 28: At 4850. East, crosslog road and creek, N & S:

at 5129.20 E, set hub: at 5519.60 E, set hub: This was out yesterday but not chained: at 5938.40 E, the true section corner 1, 2, 35, 36, sets North 91.00 feet at this corner the U.S. notes call for the following bearing trees: Birch 12, N 66° E 7 links (= 4.62 ft.) Birch 8 N 64° W 13 links (= 8.58 feet) Birch 6 inch S 20° W 16 links (= 10.56 feet) Spruce 5 inch S 64° E 10 links (= 6.60 feet) These trees are gone, but the corner post has been established by a later survey as is accepted by the natives as correct, since this country was opened for homestead entry: While we tie in this corner to random

line, Rinke drives his axe into log and cuts in two, our 100 foot steel chain: Baldwin sends him to Remer to have chain mended: Baldwin and Jusler start a random line East, from section corner 1, 2, 35, 36. along Twp line on $8^{\circ}30'$ variation:

At 241.60 East set hub at point on intersection on N and S random line, between sections 1 and 2: the SW angle reads $89^{\circ}11'$. We quit for dinner.

In P.M.: Baldwin and Jusler take Gurley compass and pace East along Twp line between sections 1 and 36, in Twp corner, 1, 6, 31 and 36, where we find the true corner:

The U. S. notes call for post and following bearing trees: White Oak 5 inch South 12 links (= 7.92 feet) Birch 5 inch, $N40^{\circ}E17$ links, Gone. White pine 36 inch, West 9 links, (= 5.94 feet) the stump of the 36 inch white pine and 5 inch white oak remain, but no scribe marks, visible: This country was burned last summer Guy Mix is willing to testify that he saw scribe marks on white pine, before the fire: This without doubt, is the true Township corner: Both stumps check out for distance with present wood corner: Baldwin and Jusler return and continue to cut random line East between sections 1 and 36:

Baldwin and Jusler at Mix farm over night: Rinke returns with 100 foot chain, mended: Signed H. F. Baldwin.

Wednesday, May 31st 1916: Breakfast at Mix farm at 6-15 a.m. Light showers in morning: Baldwin with alce transit and chain: Jusler flag and chain: Rinke, ax man: Chaining East on random line between sections 1 and 36: at 405.60 E set hub: wagon road 3 feet right: at 747.70 East set hub: wagon road 15 feet left: at 1372.40 E, set hub: wagon road 6 feet Right: at 2068.60 E, set hub: wagon road 8 feet left: at 2246.70 E, set hub: wagon road 30 feet left: Good place for road: at 2430. East, enter wet meadow: at 2610.00 E leave meadow: at 2616.60 East, set hub: at 3038.00 East, set hub: when the rain strikes us about 3 P.M. we quit work: It continues to rain and we go to house where we remain the balance of the day: Baldwin and Jusler at Mix farm over night:

Signed H. F. Baldwin.

Thursday June 1st 1916: Breakfast at Mix farm 6-20, cloudy: Baldwin alce transit and chain: Jusler flag, chain and axe: Rinke ax man: Going to random line between sections 1 and 36 we continue East: at 3275.00 E, set hub: at 3699.50 E, set hub: 4263.00 E, set hub: at 4800.00 E, set hub, fair place for road: some good ditches needed: at 5319.40 East, true twp corner sets North 59.40 feet: quit for dinner.

P.M. Rain: Baldwin makes out some bills to Cass County: Jusler starts out to work but as it begins to rain he returns, bringing in transit: About 4-30 P.M. we go out and start correcting random line between sections 1 and 36. Then quit for night: went in house during rain: Baldwin

figures corrections: Baldwin and Jusler at Mix over night:

Signed H. F. Baldwin.

Friday June 2nd 1916: Breakfast at Mix 6-15 a.m. Jusler and Rinke go to $\frac{1}{4}$ corner between sections 1 and 36, and start random line North toward river. Baldwin comes over about noon and helps chain up as follows: at 386.50 N, a hub: at 770.70 N, a hub: this chainage starts from random line and not from $\frac{1}{4}$ corner. Quit for dinner.

P.M. Jusler with Bob Mix, goes to random line running North from $\frac{1}{4}$ corner between sections 1 and 36 and cut brush and chain North: Baldwin has chain correcting other random line. After Baldwin and Rinke finish correcting Rogers Road, they correct random line between sections 2 and 35, as follows:

Hub at 220.00 goes North 2.88 feet: Hub at 721.00 goes North 9.45 feet: Hub at 1509.10 goes North 19.78 feet: Hub at 2334.00 goes North 30.60 feet: Stake at 2654.80 sets North 34.80 feet to true $\frac{1}{4}$ corner between sections 2 and 35. T 142, and 143, N, Rq 28 W. (correction = .01311)

Continuing East Baldwin and Rinke correct random line Hub at 3015.10 E, goes North 6.16 ft + 34.80 ft = 40.96 feet: Hub at 4392.00 E, goes North 29.74 + 34.80 = 64.54 feet: Hub at 5129.20 E, goes North 42.35 + 34.80 = 77.15 feet: Stake at 5938.40 East, goes North 56.20 + 34.80 = 91.00 feet to true section corner at 1, 2, 35, 36: (correction equals .01712) (+34.80 feet)

Baldwin charges his time to Rogers road, and Rinke to Boy Lake road: as the work was done in about this proportion: Baldwin and Jusler at Mix over night:

Receive mail from Curo and notice to go for mail at Boy River tomorrow: On random line East between sections 1 and 36, Hub at 405.60 E, goes North 4.53 feet: Hub at 747.70 E, goes North 8.53 feet: Hub at 1372.40 E goes North 15.33 feet: Hub at 2068.60 E, goes North 23.11 feet: Hub at 2246.70 E, goes North 25.10 feet: Stake at 2659.70 E, goes North 29.70 feet being $\frac{1}{4}$ corner. Hub at 3038.00 E, goes North 33.93 feet: Hub at 3275.00 E, goes N, 36.58 feet: Hub at 3699.50 E, goes N, 41.32 feet: Hub at 3989.55 E, goes N, 44.55 feet: being $\frac{1}{4}$ corner: Stake 5319.40 E, goes North 59.40 feet: (correction = .01117)

Saturday June 3rd 1916: Cloudy in morning: light showers: Breakfast at Mix 6-00 a.m. Baldwin busy making out bills, writing notes, etc: Jusler with Rinke continues random line North on East $\frac{1}{4}$ line thru Section 36, T 143 Rq 28: at 1675.30 N a hub: at 2002.00 N, a hub: Here we deflect $26^{\circ}00'$ NE, and start in to chain on this course with this hub as zero. at 329.30 NE, a hub: at 770.00 NE, old log stables 180 feet: at 780 ft NE, Root house 2 feet left: at 830 ft N.E. log ice house 20 feet to Right: at 856.60 ft NE, a hub boat pier 25 feet to Right: This hub is on South shore of Boy River:

The river here is about 300 feet across and the North shore is a swamp of dead cedar about 3 feet under water unless the water goes down, we will have to wade: The water

is cold. We will survey the road that is on the dry land and leave this to the last when the weather is warmer.

Baldwin comes down and we all quit and return for dinner. In P. M., Baldwin and Jusler at Mix., pack up outfit and after dinner carry to camp 3. where Bob Mix with Rinke takes us to Boy River - fare \$1.00. Arrive at Boy River, we go to post office for mail receive County bill from Curo which with bills for Boy Lake road and Rogers road, we sign before a Notary: Baldwin pays Notary fees, 75¢ & 2 bills for self and 1. for Jusler. We post above bills to Curo together with note book on Rogers road: Parcel post insured for \$5. Postage paid by Baldwin 10¢. Baldwin and Jusler go to hotel and wait for heavy shower to be over: Rain continues for some time until it is too late to go out cruising: We remain at hotel at Boy River over night.

H. F. Baldwin.

Sunday June 4th 1916: Breakfast in hotel at Boy River 7-30 A.M. Cloudy in morning: Baldwin and Jusler taking lunch and Gurley compass, and 50 foot tape walk up Soo line track toward Federal dam: We find no one in Boy River who knows anything about corners on south side of Soo line tracks: We see Pierson - a homesteader, on south side of track but he cannot or will not tell us much: Mr. Lettman who lives on north side of track, shows us $\frac{1}{4}$ corner in section 13, T 143, R 28: Here, with Gurley compass we pace $\frac{1}{4}$ mile west, mostly thru tamarack swamp, to blazed section line between sections 13 and 14, we pace south to section corner 13, 14, 23, 24, T 143, R 28 where U. S. notes call for following bearing trees:

Tamarack 10 inch,	S 50° W 9 links	(= 5.94 feet)
" 10 "	N 36° W 20 "	(= 13.20 feet)
" 8 "	N 9° E 39 "	(= 25.74 feet)
" 6 "	S 73° E 25 "	(= 16.50 feet) gone.

Three of these bearing trees remain with scribe plainly showing: From corner they stand as follows: Tamarack 10 inch, S 42° W 5.94 feet: Tamarack 10 inch, N 31° W 13.20 feet. Tamarack 8 inch, N 11° E 25.74 feet: We find old corner post which sets O. K. for course and distance. After cutting a little brush around corner to make it more easily found we walk north $\frac{1}{2}$ mile, to $\frac{1}{4}$ corner between sections 13 and 14, where U. S. notes call for: Fir 12 inch, S 73° W 48 links (= 31.68 feet) decayed stump remains: Fir 5 inch, N 10° E 62 links (= 40.92 feet) Tree standing with scribe marks showing:

We set a hub at true $\frac{1}{4}$ corner at above distance from "B. J." and stump, both of which check with above.

notes for bearings:

Baldwin and Jusler now walk out to Soo Line Track which we follow back to Bay River hotel, where we arrive shortly after 5.00 P.M. We remain at hotel over night. Both make inquiries for men to cut brush, but all men willing to work are busy. We can use two or three good men to good advantage. Signed H. F. Baldwin.

Monday June 5th 1916: Breakfast in Bay River hotel, 6-15 A.M. We try to hire men for brush cutters but with no success. Baldwin writes letters to Curo: We find no one willing to work for us, but one boy with a sore hand and cannot use axe. They are paying 25 and 30 cents an hour for loading ties, pulp wood, etc.

Baldwin and Jusler take lunch and walk up track. We meet a man by name of Atherton, who is building a shack on the north half of the N.E. quarter of section 30, T143, Rg. 27. We walk to his shack with Atherton about $\frac{3}{4}$ of a mile along old log road, all the way wading in water to boot tops or over. We go to shack and rest up and write notes and eat lunch. Baldwin and Jusler directed by Atherton, go to the $\frac{1}{4}$ corner between sections 30, T143, Rg. 27, and section 25, T143, Rg. 28. This is on a ridge of high ground with the big swamp, North and East. At this $\frac{1}{4}$ corner U.S. notes call for:

Sugar 10 inch N 30° E 17 links, (= 11.88 feet) gone.

Sugar 12 inch S 75° W 11 links, (= 7.26 feet) still standing.

From the 12 inch tree we set a hub with tack for the true $\frac{1}{4}$ corner. Atherton can work for us in a few days, but he is at present busy making his shack, so we decide to run these lines later, and will work near Federal Dam for the present. We return thru the big swamp to the Soo Line tracks where Jusler walks to Bay River to get outfit and go via train to Federal Dam. Baldwin walks up track toward Federal Dam and tries at farm houses for men to work and a place for us to board. Mr. Way is willing to work when the line is near his home. We find a place to board with Mr. B.A. Harmon: after making arrangements for board, etc, Baldwin walks to Federal Dam and meets Jusler. We take part of survey outfit and pack it to Harmon's: Baldwin and Jusler supper and over night with Harmon: H. F. Baldwin.

Tuesday June 6th 1916: Breakfast at Harmon's 6-15: A.M. Baldwin also transit: Jusler flag and chain: Eugene Way, axman: Going to $\frac{1}{4}$ corner between sections ¹³12 & ¹⁴13, T143, Rg. 28, where Baldwin and Jusler established the $\frac{1}{4}$ corner on June 4th, 1916 at N.W. corner of hay meadow, we chain south on $8^{\circ}30'$ variation: at 100 feet south, leave meadow: at 186.30 S, a hub on top of ridge: at 300 south

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enter swamp of cedar and tamarack: at 405.40 S a hub in swamp:
at 831.60 ft S, a hub in swamp: at 1225.60 ft S, a hub in swamp:
at 1648.70 ft South a hub in swamp: at 2103.70 ft S, a hub in
swamp. This will be an expensive half mile of road: some
of it very wet and shaky. It rains and we quit for the day
in the field. We reach home about 4.30 P.M. Wet: The rain
continues at intervals. The balance of day Baldwin write field
notes: Baldwin and Jusler stay at Harmon's over night.

H. F. Baldwin

Wednesday June 7th 1916: Cloudy, threatens rain: Breakfast at
Harmon's at 6-15 A.M. and with H. F. Baldwin, E. L. Jusler,
Eugene Way and Mr. Comstock (a man working for and
furnished by Mr. B. A. Harmon) go to random line and
continue South between sections 13 and 14, at 2646.60 feet
South, the true section corner to 13, 14, 23, 24, sets East 20.60 feet.
This corner sets in swamp and was located by Baldwin
and Jusler when cruising June 4th 1916. The correction equals
.007784 East. Connecting random line, hub at 186.30 goes East 1.45
ft. Hub at 405.40 S, goes East 3.16 feet: Hub at 831.60 S, goes East
6.47 feet: Hub at 1225.60 S, goes East 9.54 feet: Hub at 1648.70 S,
goes East 12.83 feet: Hub at 2103.70 S, goes East 16.27 feet: Hub
at 2646.60 S, goes East 20.60 feet to section corner. From
the corner to sections 13, 14, 23, 24, we start a new random
line South on $8^{\circ}30'$ variation. Chaining South between
sections 23 and 24, T 143, Rg 28: at 300 ft S, leave swamp,
cedar and tamarack: at 441.40 ft S, a hub: at 719.60 S, a
hub: at 850 ft South enter swamp, not very wet: we
quit for lunch.

after lunch, Baldwin walks up to Herbert Fosberg's
place in NW $\frac{1}{4}$ of Sec 24, T 143, Rg 28. Fosberg agrees to work
for us in P.M. Baldwin, Jusler, Way, Harmon and Fosberg
continue South between secs. 23 and 24:

at 1400 S, leave wet ground, enter high land: at
1424.60 S, a hub: at 1700.00 S, a hub: at 2449.50 S, a hub: at
2634.20 feet South set hub: From here back to hub 1400 S,
is very good place to build road.

about 3 P.M. Baldwin and Comstock (Comstock is man
furnished by Harmon) go to random line South from $\frac{1}{4}$
corner between sections 13 and 14, and correct hubs as
shown above: Jusler, Way and Fosberg continue South
between sections 23 and 24.

upon reaching Harmon's we find Howard Swanberg
who brings litter from Curo: saying he is to work on
this survey. Swanberg has been hunting iron
monuments for use in survey of Boy Lake road:
Baldwin, Jusler and Swanberg supper and over night
with Harmon.

Signed H. F. Baldwin.

Thursday June 8th 1916: Breakfast at Harmon's 6-15 a.m. Rain till about 9:00 a.m. Baldwin writes notes, do not go out to work on account of rain; but wait at Harmon's for weather to clear. We have an early dinner and leave about 12:00 o'clock for random line between sections 23 and 24 which we continue South. Baldwin Aloc transit and chain: Swanberg flag and chain: Jusler ax and chain: Way and Forsberg, axmen: at 3254.80 S, a hub: at 3586.60 S, a hub: at 4072.00 S, a hub: at 4805.70 S, a hub: at 5200. S, enter swamp: at 5480 S leave swamp: at 5576.00 S, a hub: at 5800. S, enter swamp. We look for corner to sec. 23, 24, 25, 26, T 143, R 28 but this country has been burned off a couple of times and we find no bearing trees so continue random line South: Baldwin, Jusler and Swanberg at Harmon's. We reached home 6:00 P.M.

Signed H. F. Baldwin.

Friday June 9th 1916: Rained at 5-30 a.m. then light showers. Baldwin and Howard Swanberg go to Swanberg's place and get 27 iron monuments with caps, which belong to Cass County and take Swanberg's team and take the irons to Soo line Depot at Federal Blam. Baldwin waits for train to see if there is any letters from Curo - none comes: Swanberg takes team back - we reach Harmon's for dinner at 12-30 P.M. Jusler takes Way and Forsberg to random line between sections 26 and 26, T 143, R 28, and continues South: at 5995.00 S, a hub: at 6300 South, leave swamp: at 6459.30 S, a hub: at 6650 S, enter cedar swamp. at 6888.00 S, a hub: This is an easy place to build a road:

Quit at about 7300 feet South: This is very hard cutting. The rain starts before 2 o'clock and lasts more than an hour. After dinner at Harmon's, Baldwin and Swanberg start to walk to work with Jusler but rain strikes us on the way and we stay in shack till rain is over: Jusler and Way are returning wet to the skin. It is now too late to return to work today, as we have so far to walk.

Baldwin sends Swanberg to Federal Blam to ship 16 iron monuments via Soo freight to Bay River to be set on the "Island." Freight paid by Baldwin 26¢: Baldwin and Jusler reach Harmon's 3-30 P.M. Baldwin writes notes: Jusler, Baldwin and Swanberg still staying at Harmon's.

Signed H. F. Baldwin.

Saturday June 10th 1916: Breakfast at 6-15 a.m. Baldwin with Aloc transit and chain: Jusler ax and flag: Swanberg flag and chain: Way and Forsberg, axmen: We all take lunch and go to random line between sections 25 and 26, arrive 7:00 a.m. Continue South: at 7305.80 S, a hub in burnt space: at 7600 S, leave swamp: at 8360.70 S, a hub on high ground: at 9126.00 S, a hub on high ground: at 9450. South enter water backed up from Bay River. Good place to build road cheap: We cruise some time trying to find 1/4 corner or

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bearing trees between sections 25 and 26, T143, R28, and as we do not find this continue random line south to try and find the corner to sections 25, 26, 35, 36. The water for 1100 feet is waist deep; this is full of dead tamarac to marsh or edge of river. At 10560. S, we set stake on random line and hunt East & West, for corner. As we are all the time wading waist deep in the water, and the footing is a springy bog, we are at a disadvantage.

We find no bearing trees, but at about 10380 feet south on random line a cruiser line of blazed trees run north and south, and East & West, intersecting about 200 feet East of our random line. Being unable to find bearing trees, we return to dry land and look for $\frac{1}{4}$ corner between sections 25 and 26, again and about 180 feet west of random line we find a $\frac{1}{4}$ post squared up but so badly burned, no scribe marks show. Two cedar trees here check for course and distance very near to present $\frac{1}{4}$ post.

We quit for night and arrive at Harmon's 6:15 P.M. where Baldwin, Tusler & Swanberg stay. H. F. Baldwin Sunday June 11th 1916: Baldwin, Tusler and Swanberg all day at Harmon's.

Monday June 12th 1916: Breakfast 6-15a.m. Tusler walks to Boy River on way to "Island" to set iron monuments: Baldwin, Swanberg, Way and Forsberg take lunch and walk to $\frac{1}{4}$ corner on range line between sections 25 and 30, between Twp. 143, Rg. 27 and 28: We have a hard time to find this corner which Baldwin and Tusler set a week ago, but they walked to it from Boy River: It takes whole forenoon to find it:

In P.M. we start from $\frac{1}{4}$ corner and run random line west on $8^{\circ}30'$ variation: (In section 25, T143, Rg28) at 202.30 feet west, set hub: at 285. W, cross big road cut last year. This runs SE to Range line, thence south to the river: at 300 W, enter swamp, spruce, tamarack, cedar, at 600 W, a hub in swamp: at 1227.20 W, a hub in swamp: This cutting is all in thick cedar swamp. We quit work for night: Baldwin and Swanberg have supper and lodging at Harmon's.

Tusler leaves Harmon's after breakfast and walks to Boy River gets Ray Mix with motor boat to take him and 16 iron monuments across to #3. Fare \$1. Mix team hauls irons to Mix farm where Tusler takes dinner, and in P.M. Tusler goes with Mix and team and distributes irons to be set later: Team returns from Wallis place about 3:00 P.M. Tusler drives iron monuments at corner to sections 9, 10, 15, 16, also at $\frac{1}{4}$ corner between sections 10 and 15, in Twp. 142, Rg 28, then goes to Clarke's for supper and lodging.

Signed H. F. Baldwin.

Tuesday June 13th 1916: Rain 6:00 a.m. Clear 7:00 a.m. Jusler has breakfast at Clarke, Jusler and Clark take lunch and go to corner of sections 10, 11, 14, 15, T 142, Rq 28, and drives iron corner, and drives iron corner also at $\frac{1}{4}$ sections 10 and 11, T 142, R 28, and at corner to sections 2, 3, 10 and 11, T 142, R 28. also drives iron corner at $\frac{1}{4}$ corner between sections 2 and 3, T 142, R 28 with two bearings as follows: R. Oak 2 2 inch, due East 42.60 feet. Maple 10 inch, S 75° W 32.20 feet.

They now drive iron monuments at corner to sections 2, 3, 34 and 35, on town line between T 142 and 143 N, Range 28 W, with following new bearings: Elm 24 inch, S 50° W 42.60 feet (this has old "B. J." scribe marks) Basswood 10 inch, N 11° E 39.30 feet (marked with tack)

at $\frac{1}{4}$ corner between sections 2 and 35, T 142, and 143 N, Rq 28 W, set iron monument and mark new bearings with tack as follows: Maple 8 inch, N 43° E 32.40 feet. at corner to sections 1, 2, 35 and 36, between T 142 and 143 N, Rq 28 W, they set iron monument and at the $\frac{1}{4}$ corner between sections 1 and 36, between T 142 and 143 N, Rq 28 W, they drive iron monument and set new bearing tree with tack as follows - Spruce 8 inch, N 26° E 44.00 feet:

at the East $\frac{1}{6}$ corner between sections 1 and 36, T 142 & 143 N, Rq 28 W, where the Bay Lake road turns North to Camp #3. drive iron monument. also drive iron monument at North east corner of section 1, T 142, Rq 28, being the Northwest corner of section 6, Twp. 142, Rq 27, being also the Southwest corner of section 31, T 143, Rq 27, and the Southeast corner of section 36, Twp 143, Rq 28. (Cwd)

Jusler also sets irons on Rogers road the cost of setting 16. irons is: Jusler 2 days \$4.00 and 2 days board \$2. Mix team $\frac{1}{2}$ day \$2. Mix boat livery \$2. Clark 1 day \$2. Total cost \$12. Four of these irons are on Rogers road, so will charge Jusler's June 13th and board \$2. and \$1. = \$3. to Rogers road and balance to Bay Lake road. Return to Bay River fare \$1. Jusler walks to Harmon's.

Heavy rain at 6:00 a.m. then clears: Baldwin gets breakfast at 7.45 a.m. at Harmon's: Start to work about 8:00 a.m. taking lunch: H. F. Baldwin with aloe transit and chain: Howard Swanberg flag and chain: Way and Forsberg axmen:

Going to random line about center of section 25, T 143, Rq 28, chain West: at 1651.20 West, a hub in swamp: low wet land: at 1700 W, leave timber, enter brush and willows: at 2184.60 a hub, wet land, willows, down dead cedar: at 2910. W, a hub, land higher and drier: at 3300 West, land high and dry: at 3547.30 W, a hub, land high and dry: at 3700 West, enter clearing: at 3980 West, a shack sets North 50 feet: at 4030. W, leave clearing, enter willows and swamp: at 4250 W, leave swamp and enter high land: then quit for night and reach Harmon's about 6.00 P.M. where we find Jusler. Baldwin, Swanberg and Jusler stay with Harmon.

Signed H. F. Baldwin.

Wednesday June 14th 1916: Rains at 6:00 a.m. clears about 10 a.m., heavy showers 11:30 a.m. Breakfast 6:30 a.m., and Baldwin and Jusler compile and copy notes all a.m. We have an early dinner and plan to leave for work but heavy showers at 11-30 to noon. We leave for random line thru section 25, a little after 12:00 o'clock. Continuing West: at 4349. W, a hub on high land: at 4600 W, a hub on high land: at 5390.80 West, the true $\frac{1}{4}$ corner between sections 25 and 26, sets North on 90° angle, 159.90 feet: Correction for each foot is 0.2966 of a foot North for each foot West. We continue random line West to "P.D." of N & S random line between secs. 25 and 26: NE angle reads $86^\circ 53'$. "P.D." 5615.90 W, = 8069.20 South: We tie in this random line to $\frac{1}{4}$ corner, going South between secs. 25 and 26 as follows: at 7897.40 South, the $\frac{1}{4}$ corner sets East 216.00 feet: We take transit and tools to log road that will be on the way to the range line, and walk home arriving at Harmon's 6:00 P.M. Baldwin, Jusler and Swanberg stay at Harmon's. Signed H. F. Baldwin.

Thursday June 15th 1916: Breakfast at 6:00 a.m. Baldwin and Jusler and Swanberg at Harmon's waiting for weather to clear: Rain in forenoon. showers till 10:30 a.m. Baldwin figures corrections and writes notes, corrections for random line thru sec. 25, Twp. 143, Rq 28, are as follows: Hub at 202.30 W, corrects North 5.99 feet: Hub at 600 ft. West corrects North 17.80 feet: Hub at 1227.20 W, goes North 36.40 feet: Hub at 1651.20 W, goes North 48.97 feet: Hub at 2184.60 W, goes North 64.80 feet: Hub at 2910.00 W, goes north 86.31 feet: Hub at 3547.30 W, goes north 105.21 feet: Hub at 4349.00 W, goes north 128.96 feet: Hub at 4600 West, goes north 136.44 feet north: Hub at 5390.80 W, goes North 159.90 feet to $\frac{1}{4}$ corner between sections 25 and 26, T143, Rq 28, where N. S. notes call for post and following "P.D." Cedar 10 inch, N 36° W 24 links (=15.86 feet) Cedar 14 inch, N 80° E 25 links (=16.50 feet) The 10 inch cedar is on the ground badly burned with no scribe marks showing, but this is undoubtedly the bearing tree: The burned and rotted roots of the 14 inch tree remains, and a $\frac{1}{4}$ corner post badly burned sets about 5 feet away.

Baldwin writes letter to Curo and goes to Federal Dam to post same: get mail and make arrangements to have irons hauled down from Soo Line Depot: Mr. Shoemaker kindly agrees to deliver same and makes no charge for services: Baldwin receives letter from Curo and form for release of damages for change of Boy Lake Road from center of sec. 14, to follow section line north to corner of 11, 12, 13 and 14, T143, Rq 28, thence West between secs 11 and 14, and continuing to Federal Dam as before stated in petition if Baldwin says $\frac{1}{4}$ line thru section 14, he impractical for road.

Jusler, Swanberg and Fousberg after dinner, go to the $\frac{1}{4}$ corner on range line between secs. 25 and 30 T143 Rq 27 and 28, and start line South on 11° variation, turned 90° with transit: Baldwin and Way, correct $\frac{1}{4}$ line thro section 25 as above: Beginning at hub 3547.30 West, we correct East to $\frac{1}{4}$ corner between secs. 25 and 30

where we chain south on random line between 25 and 30 on which Jusler and crew are cutting: at 215.90 South, a hub: at 702.20 S, a hub: at 1191.00 S, a hub: We quit for night at 4:30 P.M. and reach home at 6:00 o'clock: Baldwin, Jusler and Swanberg at Harmon's over night
Signed H. F. Baldwin

Friday June 16th 1916: Breakfast at 6:20 A.M. Rain slightly in a.m. Jusler, Swanberg, Way, Forsberg go to range line and continue line south thro very heavy cutting between secs. 25 and 30: Baldwin cruising for "B. J." along random between secs. 23, and 24, - 25 and 26: we all take lunch with us. Baldwin finds the old corner and "B. J." to $\frac{1}{4}$ corner between secs. 25 and 26, then goes and takes lunch with rest of crew. P.M. all continue south between secs. 25 and 30, very hard cutting: at 1628.20 S, a hub in heavy cedar and balsam: at 1998.60 S, a hub in heavy cedar and balsam: at 2540.00 S, enter water backed up from Boy River: not very good place for road, very swampy: at 2673.80 S, in water backed up from Boy River: the true corner to secs. 25, 30, 31, 36, sets W 84.50 feet: Correction West, is .03160: The South 130 feet off line is in water about waist deep: U. S. notes call for tamarack 8 inch, N 40° E 16 links (= 10.56 feet) stump and scribe mark "B. J." plainly showing: tamarack 5 inch, N 78° W 11 links (= 7.26 feet) stump and scribe marks here are plainly showing: tamarack 7 inch, S 30° W 20 links (= 13.20 feet) this stump blazed, but no scribe marks: tamarack 8 inch, S 45° E 22 links (= 14.52 feet) this tree stands dead with all marks showing: all old U. S. trees now stand as follows:

tamarack stump 8, N 48° E 11.56 feet.
" " 5, N 73° W 7.26 feet
" " 7, S 16° W 13.20 feet. Head tamarack 8, S 26° E 14.52 feet distant. New bearings set as follows:

Cedar 6 inch, N 75° W 1.56 feet: At this corner we set 4 inch cedar post 6 feet long, marked "true corner" with water-proof pencil. We all return home taking tools, transit and so on.

Reach Harmon's for supper 6-30 P.M. Baldwin, Jusler and Swanberg still staying at Harmon's: Signed H. F. Baldwin.

Saturday June 17th 1916: Breakfast at 6-15 A.M. Jusler, Swanberg and Way, go to $\frac{1}{4}$ corner between secs. 13 and 14, T 143, Rq 28, and start random line west on 8° 30' variation: (turn 90° to South random line) Chaining West thro section 14: at 410.60 W, a hub: at 991.20 W, a hub: at 1353.40 W, a hub: go to Harmon's for lunch: continue West: at 1717.20 W, a hub: at 2100 W, cross old road: at 2152.80 W, a hub: at 2300 W, enter cedar swamp, not wet: high land, good place for road.

Baldwin and Forsberg take lunch and 4 iron monuments and go to range line between ranges 27 and 28, T 143, sections 25 and 30, leaving irons near corner posts along route: at $\frac{1}{4}$ corner between 25 and 30, we drive iron corner and correct random line as follows: Hub at 215.90 S, goes West 6.91: Hub at 702.20 S, goes West 22.19 feet: Hub at 1191.00 S, goes West 37.64 feet: Stake at

1336.90 South, goes West 42.25 feet to south $\frac{1}{4}$ corner where we place birch corner post 3 inches square. It looks as if road should run southwest from this corner post: Hub at 1628.20 South, goes West 51.45 feet: Hub at 1998.60 S, goes West 63.16 feet: at each of these hubs, we set stake marked "True section line" but do not mark them road center. It still looks as tho the road should run southwest from $\frac{1}{4}$ corner: We now walk about $\frac{3}{4}$ mile West along random line West thro Sec. 25 and Baldwin, Forsberg, eat lunch an in P.M. finish correcting random $\frac{1}{4}$ line West, thro section 25 and we set iron at $\frac{1}{4}$ corner between sections 25 and 36, Twp. 143, R 28.

Now going to $\frac{1}{4}$ corner between sections 23 and 24, Twp 143, R 28 where U. S. notes call for following bearing trees. Maple 6 inch, N 70° W 6 links, (= 3.96 feet) gone. Maple 5 inch, S 12° E 23 links (= 15.18 feet) this stump standing - this 5 inch stub shows scribe marks from which we set a corner post. at 2644.40 South, the true $\frac{1}{4}$ corner between sections 23 and 24, sets East 87.80 feet: Correction East per foot equals .0332 of a foot: Baldwin figures correction: hub at 441.40 South, goes East 14.66 feet: hub at 919.60 S, goes East 23.89 feet: hub at 1424.60 S, goes East 47.20 feet: hub at 1700.00 S, goes East 56.44 feet: hub at 2449.50 S, goes East 81.32 feet: Stake 2644.40 South, goes East 87.80 feet. We correct three hubs north from $\frac{1}{4}$ and quit for night. Arrive at Harmon's 5.40 P.M. where Jusler and Swanberg are already here.

signed H. F. Baldwin.

Sunday June 18th 1916: No work in the field, but Baldwin writing notes and figuring corrections nearly all afternoon

signed H. F. Baldwin.

Monday June 19th 1916: Breakfast at 6-15 A.M. Jusler, Forsberg, and Way go to $\frac{1}{4}$ line in sec. 14, and continue West on random line: at 2567.30 W, a hub in cedar, dry ground. at 2962.50 W, a hub in cedar, dry ground: at 3300 W ground wet, will have to be corduroyed: at 3496.90 W, a hub: at 4250 W, enter birch and poplar high ground: at 4254.80 a hub: there is higher ground North 60 feet:

Baldwin and Swanberg go to random line between secs. 23 and 24, Twp 143, R 28, and finish correcting line north to section corner of 13, 14, 23, 24, Twp 143, R 28, where we drive an iron corner:

We now go one mile South where we have been unable to find U. S. bearing trees, to corner of 23, 24, 25, 26, Twp. 143, R 28: No old corner post is here, this has been burned a couple of times, so at a point half way between $\frac{1}{4}$ corner between secs 23 and 24 and the $\frac{1}{4}$ corner between secs. 25 and 26, on our random line South 151.90 feet East of 5270.90 we drive iron for true

section corner. hub at 3254.80 S, is South of $\frac{1}{4}$ corner, 610.40 feet and goes East 14.89 plus 87.80 feet equals 102.69 feet: hub at 3586.60 South, is south of $\frac{1}{4}$ corner 942.20 feet and goes East 22.99 feet, plus 87.80 feet, = 110.79 feet: hub at 4072.00 South is South of $\frac{1}{4}$ corner 1427.60 feet and goes East 34.83 feet + 87.80 feet = 122.63 feet: Hub 4805.70 South, is South of $\frac{1}{4}$ corner 2161.30 feet and goes East 52.74 ft. + 87.80 ft = 140.54 feet. Hub at 5270.90 South, is South of $\frac{1}{4}$ corner 2626.50 feet and goes East 64.10 feet + 87.80 feet = 151.90 feet: Hub 5576.00 South, is South of $\frac{1}{4}$ corner 2931.60 feet and goes East 71.44 + 87.80 = 159.24 feet. hub 5995.00 South, is South of $\frac{1}{4}$ corner 3350.60 feet and goes East 81.76, + 87.80, = 169.56 feet: hub at 6459.30 S, is South of $\frac{1}{4}$ corner 3814.90 feet and goes East 93.10, + 87.80, = 180.90 feet. hub at 7305.80 S, is South of $\frac{1}{4}$ corner 4661.40 feet and goes East 113.76 + 87.80 = 201.56 feet and hub at 7897.40 S, is South of $\frac{1}{4}$ corner 5253.00 feet and goes East 128.20, + 87.80, = 216.00 feet. This correction East, = .0244 of a foot, + 87.80 feet. Baldwin and Swanberg correct line as shown above.

At $\frac{1}{4}$ corner between secs. 23 and 24, Twp 143, Rg 28, we drive a standard iron corner with cap, and set new bearing trees tack as follows: Balsam Birch, S 42° E 18.85 feet: and return to Harmon's at 6-15 P.M. Baldwin, Jusler and Swanberg at Harmon's.

This was primary election day, but neither Way nor Forsberg cared to vote, tho' I gave them the opportunity.

Signed H. F. Baldwin.

Tuesday June 20th 1916: Breakfast 6-15 A.M. Baldwin, Jusler, Forsberg, Way, and Swanberg all taking lunch, go to random line thro section 14, Twp 143, R 28, and continue West: at 5241.30 West, the true $\frac{1}{4}$ corner between sections 14 and 15, sets North 93.70 feet. Here U. S. notes call for: Spruce Birch, N 56° W 19 links (= 12.54 feet) scribe marks here are plainly showing: Spruce 5 inch, S 88° E 6 links, (= 3.96 feet) gone. We set a 4 inch square a cedar corner post, 5 feet long in true position from the remaining bearing tree and set two new bearings with tack, as follows: 8 inch tamarack, S 76° W 15.56 feet: 9 inch tamarack, S 72° 30' E 27.90 feet:

We now walk North $\frac{1}{2}$ mile to section corner of 10, 11, 14, 15, where only one of the U. S. trees remain, namely "cedar Birch, N 77° W 48 links (= 31.68 feet)" This tree was O.K. d by Deputy County Surveyor E. B. Horst in April 1916: we set hub in true position for section corner and start random line South on 9' variation: Also set hub in road North and quit for dinner:

P.M. we chain North along road between sections 10 and 11, a distance of 3400 feet: Chaining South between sections 14 and 15: at 553.80 S, a hub: at 1155.50 S, a hub: at

B

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1600 S, enter clearing: at 1738.20 S, a hub in clearing: at 2230 S, enter swamp, willows: at 2600 South, enter tamarack: at 2635.20 S, the true $\frac{1}{4}$ corner sets East 2.00 feet. Going back we set one correction stake half way. It is now 4 o'clock and too late to run North so we set transit at true corner 10, 11, 14, 15, and turn S.E. angle $90^{\circ}34'$ and run East, chaining East along township road: at 2105.30 E, a hub: at 3506.90 E, a hub: at 4202.80 E, cross Soo Line tracks: at 5291.50 E, a hub: all bearing trees to this corner are gone and we quit for night.

Baldwin, Jusler and Swanberg at Harmon's over night, signed H. F. Baldwin. Wednesday June 21st 1916: Breakfast at 6-15 a.m. Baldwin, Jusler, Swanberg, Way and Forsberg, all take lunch and go to random between sections 10 and 11, Twp 143, R. 28, which we continue North: at 1330.20 N, a hub in road: at 3966.60 N, a hub in road: at 5278.80 N, the true section corner to 2, 3, 10, 11, sets East 10.60 feet:

Correction equals .00201 of a foot:

The old U. S. bearing trees have been shot out when the road was built, but a corner post sets out with roots of a poplar for course and distance: also there are a number of line trees North, which show this corner to be O. K.

Mr. E. B. Horst, April 20th 1916 put his name on this post:

We continue this random line North: at 5280 N, enter brush: at 5964.80 N, a hub: we quit at 11.30 and have lunch:

P.M. at 6541.10 N, a hub: at 6600 in cattle guards. at 6611.90 N, cross Soo Line Ry: at P. D. read S.E. angle which is $31^{\circ}14'$: Baldwin goes to Federal Dam while men continue North: Post letter to Curo and gets mail: Baldwin also goes to Depot hoping to see a blue print of Soo Line yards at Federal Dam. Depot Agent says there is not a blue print there, but right of way is 100 feet from center line: Continuing North on random line between sections 2 and 3, cross siding track at 6630 N, at 7890.80 N, the true $\frac{1}{4}$ corner between sections 2 and 3, sets East 19.20 feet:

This corner is marked by standard iron monument with cap, and checks with stumps of old U. S. trees as follows: Spruce 8 inch, S 62° E 10 links, (= 6.60 feet)

Returning to Soo Line tracks, walking toward Federal Dam we set stakes at three different points marked "center of Boy Lake road" at right angle to Soo Line Ry, at a distance of 133 feet

We will arrive at Harmon's at 5.40 P.M. Baldwin, Jusler and Swanberg still with Harmon:

Thursday June 22nd 1916: Breakfast at 6-15, Baldwin and Way taking irons, correct line between sections 10, and 11, and sections 2 and 3, Twp 143, R. 28. Iron at $\frac{1}{4}$ corner between 10 and 11, sets 5.30 feet East: Random line North: Iron at corner of 2, 3, 10 and 11, sets East 10.60 feet East of random line North:

B

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Iron at $\frac{1}{4}$ corner between secs. 2 and 3, sets 19.20 feet East of random line North: Starts to rain about 10. o'clock and we quit work till after dinner: Correction: Hub at 1330.20 N, goes East 2.67 feet: Stake at 2639.40 N, goes East 5.30 feet: = $\frac{1}{4}$ corner Hub at 3466.60 N, goes East 6.97 feet: Hub at 5278.80 N, goes East 10.60 feet: Hub. 5964.80 N, goes East 2.26 + 10.60 = 12.86 feet:

Hub 6541.10 N, goes East 4.17 + 10.60 = 14.77 feet:

after breakfast Jusler, Forsberg and Swanberg take transit and goes to $\frac{1}{4}$ corner between sections 13 and 14, already established and run North on the random line previously run South from $\frac{1}{4}$ corner, chaining North: at 635.00 N, set hub: at 1000 N, quit work on account of rain.

In P.M. — Baldwin, Jusler, Swanberg and Way, go to random between 13 and 14, and continue North: at 1132.80 N, a hub: at 1586.40 N P. I. Soo line Rg: the N.E. angle reads $137^{\circ}48'$ at 1633.50 N, a hub: at 2666.90 N, a hub: at 2667.80 N, the iron corner sets East 111.00 feet:

It rains part of P.M. but we work hoping to finish tomorrow. Baldwin, Jusler, Swanberg, over night at Harmon's, signed H. F. Baldwin.

Friday June 23rd 1916. Breakfast 6-30 Rains slightly: Jusler and Swanberg from corner on random line near section corner 11, 12, 13, 14, North to state road, distance 5234.20 feet North.

In order to fix corner to 10, ¹¹/₄, 13, 14, we continue transit line East between 12 and 13, half a mile where we find one of the U. S. trees as follows:

Cedar 10 inch, $S48^{\circ}E$ 25 links, (= 16.50 feet)

We set a 4 inch wood corner post in true position.

at 7963.00 East, the true $\frac{1}{4}$ corner between 12 and 13, sets North 3.30 feet. By proportion, 80 chains and 12 links, equals 5287.92 feet: By proportion 40 chains and 17 links, equals 2662.44 feet: added, equals 7950.36 feet: 7950.36, goes East to 7963.00 our chain, therefore the mile between 11 and 14, equals 5296.34 feet our chain, and $\frac{1}{2}$ mile between 12 and 13, = 2666.66 feet, our chain.

Baldwin goes to Federal Ham to get mail from Curo- none there. In P.M. — at 5296.34 East, between 11 and 14, and 2.20 feet North of random line, we drive iron for section corner 11, 12, 13, 14, Twp 143, R 28. at 2648.17 East, we drive iron for $\frac{1}{4}$ corner between 11 and 14.

Way works with Baldwin till 2:30 P.M. This is the last of the 27 iron corners got at Swanberg's place. We get our survey outfit to Federal Ham, 75¢ charges. Swanberg goes to Cass Lake. Baldwin and Jusler go to Bemidji. Fare 83¢ each = \$1.66 paid by Baldwin.

at Bemidji we have supper at Markham

hotel 50¢ each = \$1. paid by Baldwin.

R.R. fare Bemidji to Walker via M & I, 69¢ each = \$1.38. paid by Baldwin.

at Walker we go to Chase hotel where we stay for lodging and breakfast.

Signed H. F. Baldwin.

Saturday June 24th 1916: Baldwin and Juster at Chase hotel - Baldwin goes to County Surveyor's office and works all day writing notes and making out bills for work done on Bay Lake road.

Signed H. F. Baldwin.

Survey made May 24th 1916 to June 24th 1916 -
Recorded -

John W. Curo - County Surveyor.
Cass County, Minnesota.

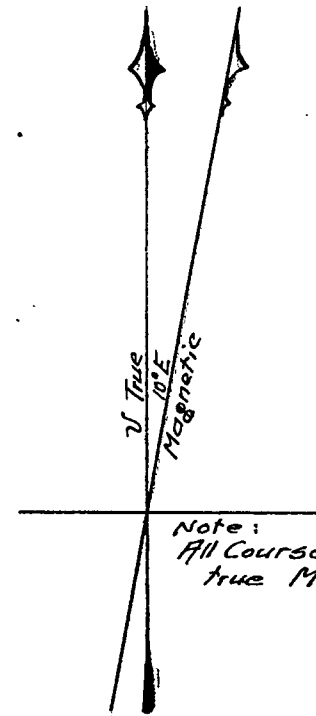
SURVEY RECORD-289

PLAT

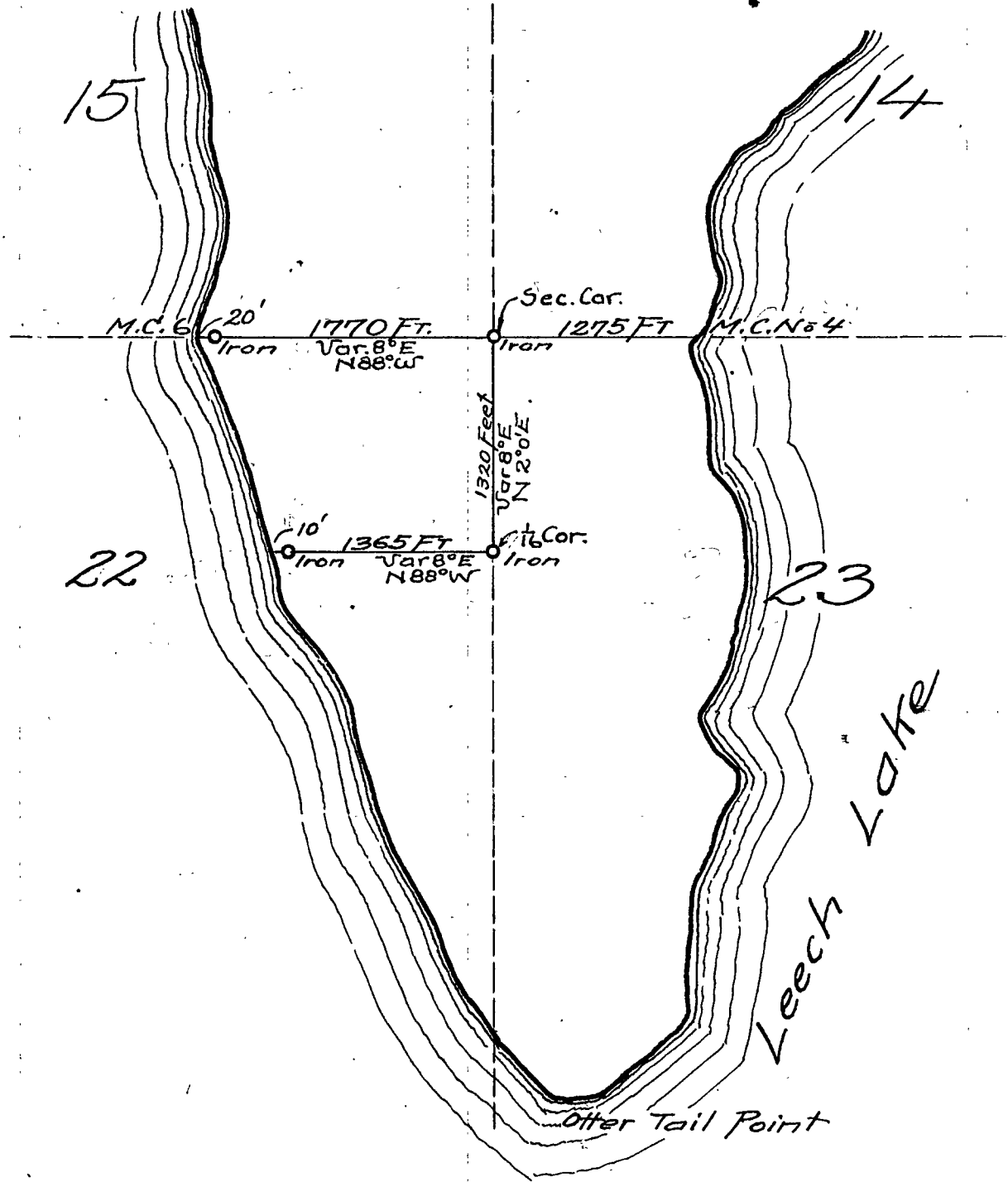
TOWNSHIP 143 N. R. 30 W. 5TH P. M.

SECTIONS: 14-15-22-23-

Scale: 1000 Feet = 1-inch



Note:
All Courses turned from
true Meridian



TOWNSHIP 143 N. R. 30 W. 5TH P. M.

SECTIONS: 14-15-22-23-

Field notes of the survey of Government lot No. 1, of section 22, Twp. 143 N., Range 30 W., 5th P. M. and the establishment of corners and lines run in sections 14, 15, 22, 23, in said Twp. as surveyed by and under the direction of John W. Curo, County Surveyor, of Cass County, Minnesota.

Thursday, August 15th 1916, working for Mr. W. L. Kennett of Louisville, Ky.

John W. Curo, Alce transit and 100 foot Chicago steel tape. M. S. Morical, Knute Runnestrand, W. L. Kennett and Curo go to Ottertail Point with Lil James and his launch "Pumpkinseed". Leave Walker at 8 A. M. Land on South end of Goose Island where I set up transit and at 8° variation, turn telescope N 70° E to get a line on the spot where meander corner No. 6 ought to be, 2 1/2 miles away; then all get in launch and run to Oak tree we have sighted to about 2 1/2 miles NE, near M. C. No. 6, Twp. 143, R. 30, where U. S. notes call for a post and: Oak 3 inch, N 20° E 26 links. Lind 6 inch, S 15° W 16 links. all appear to be gone: Curo and Runnestrand spend all forenoon looking for lines while the rest catch fish.

In afternoon, all take lunch and go around point to place on East side near M. C. No. 4, where U. S. notes say: Lind 14 inch, South 21 links. Sugar 18 inch, N 62° W 33 links. for fractional sections 14 and 23, Twp 143, R. 30. all appear to be gone and we set up transit near the place and run rough picket line West on 8° var., to try to find corner to secs. 14, 15, 22, 23, Twp 143, R. 30, where U. S. notes call for post and: Elm 6 inch, S 80° W 19 links, (= 12.54 feet) Sugar 15 inch, N 14° 30' W, 57 links, (= 37.62 feet) Sugar 14 inch, N 73° 30' E 40 links, (= 26.40 feet) Sugar 10 inch, S 78° E 22 links (= 14.52 feet) at about 1275 feet West we find the corner about 30 feet North will all trees standing green plainly marked, except the 10 inch maple SE, and we find the rotted stump of this, not marked: We find the point of the old stake and set a new hub with tack by flat chain from face of "BT" marks, which check out to a frazzle. Start a line West and one S at 8° variation, and quit for night: all go back to Walker: signed John W. Curo.

August 16th 1916: Leave Walker with E. L. Alexander and launch "Kitterwain" John W. Curo, transit and chain: Alce transit and 100 foot Chicago steel tape and plumb-bob. W. L. Kennett, chairman: Knute Runnestrand and M. S. Morical, axmen: We begin at corner to secs. 14, 15, 22, 23, Twp 143, R. 30, and run West on 8° var. setting hubs and stakes: at 1084.70 tack in stump of old line tree: at 1600 set stake, from which the SE corner of an Indian house sets, North 9.20 feet: the house 18.50 feet North and South and 18.00 feet East and West: door in East end, roof runs E & W: at 1668.00 hub and stake: at 1770 set iron monument being 2 x 48 inch boiler tube, no cap or iron rod and set in 18 inch mound of dirt with pits a rod away, about N. E., N. W., S. W., S. E.: We mark new bearings as follows: Elm 6 inch, N 83° 10' E. 43.50 feet: Basswood, 6 inch, S 25° 30' E 34.25 feet: Elm 4 inch, N 13° 10' E 66.50 feet to spikes in flat spot at base of trees at 8° var.: continue West: at 1790 top of sharp edge of bank, 5 feet water: at 1790 edge of water on East shore of Leech Lake. Coming back to the corner of secs. 14, 15, 22, 23, we set an iron monument being a 2 x 48 inch boiler tube, set in an 18 inch mound of dirt for the true corner to secs. 14, 15, 22, 23, Twp. 143 N., R. 30 W., from which we run random line South on about 8° var. at 270.80 set hub: at 321. set hub: at 510.80 set hub: 779.00 cross Indian Trail, which bears E and W, at 837.00 set hub: at 1221.50 set hub: at 1300. set stake: at 1345.30 set hub: at 1635.70 set hub: at 1787.20 set hub: at 1867.70 set hub: at 2041.00 set hub: at 2082.00 set hub: at 2114.30 set hub: All go back to Walker.

Thursday August 17th 1916: Stay at Walker.

Friday August 18th 1916: still working for W. L. Kennett's: John W. Curo transit and chain, Alce transit and 100 foot Chicago steel tape, chaining with the use of plumb-bob on uneven ground.

W. L. Kennett, chainman: Knute Runnestrand and Amel Johnson axmen: continue south, at 2640, set temporary $\frac{1}{4}$ corner between sections 22 and 23, T143, Rg 30.

This corner appears to be gone and we walk back to hub 1320 feet south, from which we run a random line West, cutting rough line on Leech Lake just to show Mr. Kennett about where the south line will come of Gov't lot 1. Sec. 22, T143, R 30. Quit for night and all go back to Walker.

Tuesday September 12th 1916: E. L. Alexander and his launch takes Curo, Knute Runnestrand, and Ferd Martin to Ottertail Point and will call for them later. We begin at 2460 feet south of corner to sections 13, 14, 23, 24, Twp 143, R 30, and again look for $\frac{1}{4}$ corner between sections 23 and 24, but find nothing and continue line South: at about 230 feet cross old crooked wire fence which runs about East and West: pace remainder of distance South and find it checks about O.K. for U.S. chain. Coming back to $\frac{1}{4}$ corner we pick up the iron monuments we have brought, and put it in the fork of a triple tree, where we can find it later. We then go back to boat landing and as it is raining hard, wait for boat and go home where I go to bed sick.

Saturday September 23rd 1916: I figure the latitude and departure of the entire shore line of Ottertail Point and decide to place the $\frac{1}{4}$ corner between secs. 22 and 23, its proportionate distance East and West from the original shore line of the lake, at 2640 feet south of the section corner.

Sunday Sept. 24th 1916: E. L. Alexander and launch, takes, John W. Curo, Harold J. Curo, Frank A. Monner and Knute Runnestrand to Ottertail Point, then goes on and will call for us later. Surley transit and 100 foot steel tape and compass, we walk to corner of sections ¹⁴13, ¹⁵14, ²²23, ²³24, T143, Rg 30, set transit, over iron monument in big mound at true corner and take bearings to new bearing trees as follows: Ash 8 inch, S 32° 16' W, 63.50 feet: Ash 10 inch, S 42° 30' E 46.30 feet: Ash 4 inch N 60° 15' E 39.15 feet. Ash 12 inch, N 46° 57' W 49.10 feet. To tacks in flat spot in base of trees, var' 8°. We then take angle of true line running West, with random line running South: the S.W. angle, reads 89° 44' so assuming the East and West line as a meridian, the transit line runs S 0° 16' W.

Walking half a mile south to 2640 temp. $\frac{1}{4}$ corner. Curo runs compass line West: Harold and Monner chain roughly 630 feet West to high bank of Leech Lake, 10 feet above water: Bank seems to have been washed away 100 feet. We then begin at same point of temporary $\frac{1}{4}$ corner and chain East about 8° 30' var', to 1300 feet at high bank of Leech Lake, 30 feet high: this shore may have been washed away 150 feet. We do not have time to set the $\frac{1}{4}$ corner, but decide to make the north and south section line between secs. 22 and 23, at 90° to the north boundary of section 22, and will run South side of Gov't lot 1, parallel to the North boundary and 1320 feet away. We figure the correction of the north and south random line as follows: as the N & S random runs S 0° 16' W we figure .00465 of a foot East, for each foot South. at hub 321.00 S, we chain East 1.49 feet and set hub and tall stake, marked "true section line" at hub 837.00 S, we chain East 3.89 feet and set hub and tall stake marked "true section line" at 1320.00 South, we chain East 6.14 feet.

where we set an iron monument being boiler tube 2x48 inches, half its length in the ground for the true North $\frac{1}{4}$ corner between secs 22 and 23, Twp 143, R 30: we have no time to put in new bearings or make a mound. In order to get our angle, to run West, we find that at hub on random line 1221.50 S, we are unable to correct the same East, on account of an old line tree, so we chain South to station 1225. feet South, where we set a hub, then chain East 5.70 feet and set hub and tack on true line just South of old blazed line tree: then with transit on iron $\frac{1}{4}$ corner just set, he back right on tack in corrected hub 5.70 feet East of 1225, and find an old blazed maple tree 24 inches thru on line at 1220 S, showing that our Nord line is on the true section line: Turn 90° angle from true line and run West parallel to North boundary of section 22:

Going West on carefully run transit line: Harold Curo and John W. Curo chaining perfect plumb-bob line: Frank A. Honner at transit: Knute Runnestrand, axman: at 347.00 set hub: at 545.50 set hub: at 683.80 cut down big tree and put spike in green stump: at 841.10 hub in Indian trail, which bears N and SW: at 1365, set 2x48 inch iron boiler tube for monument 5, feet East of sea wall and 10. feet East of waters edge of Leech Lake:

Alexander gets back in time to help us cut the last few hundred feet, and holds the boat for us, or we would not have finished.

This finishes the survey, we get home to Walker after dark.

John W. Curo.

Surveyed Aug. 15th 1916 to Sept 24th 1916.

Recorded

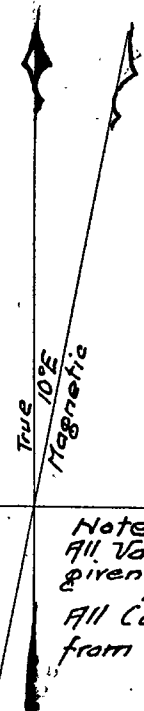
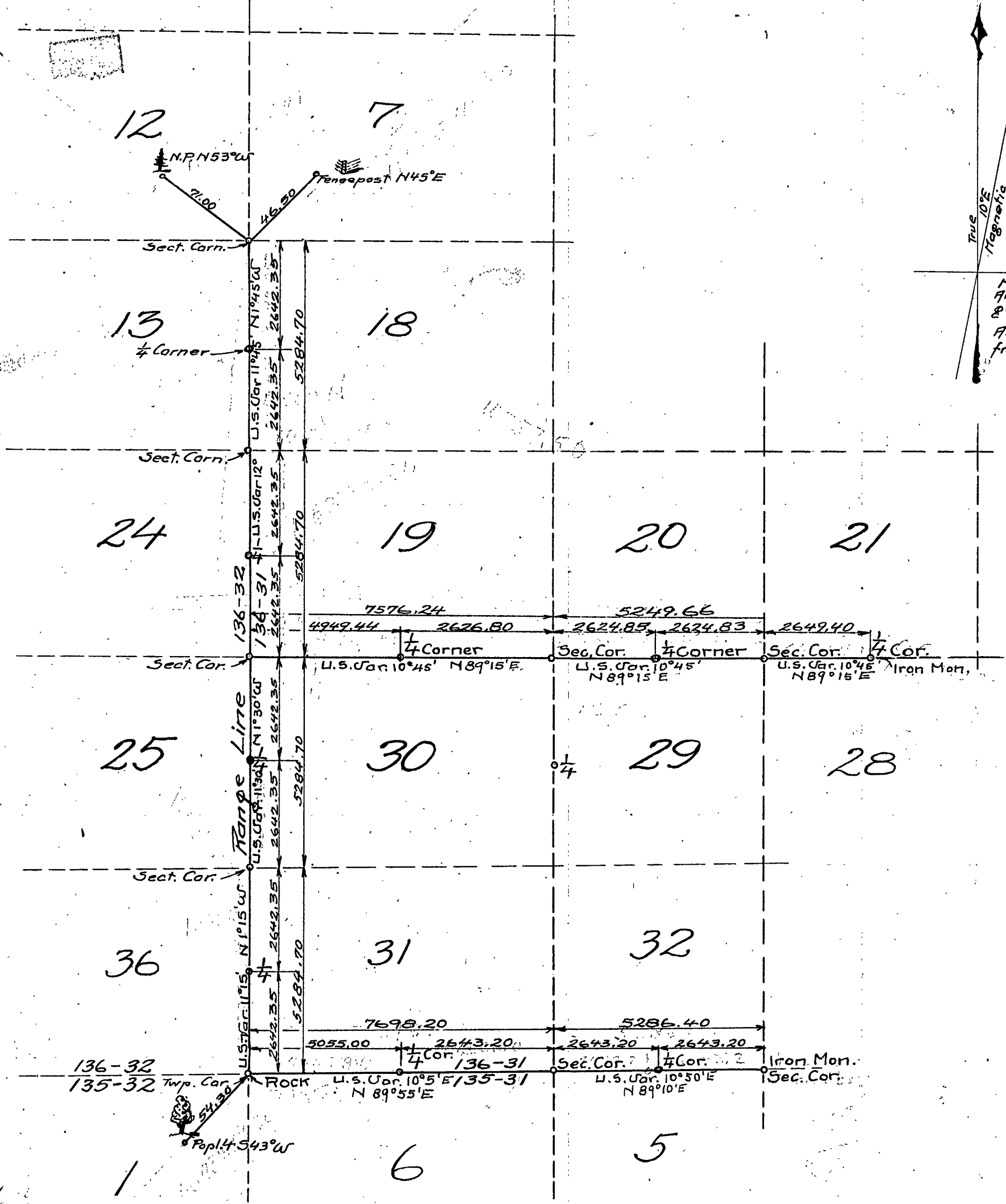
John W. Curo - County Surveyor
Case County, Minnesota.

SURVEY-RECORD-290

PLAT

TOWNSHIP 135 Rg. 31-SECT. 5-6 - TWP. 136 Rg 31. SEC. 7-18-19-20-21-28-29
 Twp. 135 Rg 32-SECT. 1 - TWP. 136 Rg. 32-SEC. 12-13-24-25-36.

Scale: 1-mile = 2-inches



Note:
 All Var. and Courses are given from U.S. notes.
 All Courses are turned from true Meridian.

TWP. 135-RG. 31-SEC'S 5-6

TWP. 136-RG. 31-SEC'S 7-18-19-20-21-28-29-30-31-32

TWP. 135-RG. 32-SEC. 1

TWP. 136-RG. 32-SEC'S 12-13-24-25-36

Twp. 135, Rg 31, Sections 5-6.

Twp. 136, Rg 31, Sections 7-18-19-20-21-28-29-30-31-32.

Twp. 135, Rg 32, Section 1.

Twp. 136, Rg 32, Sections 12-13-24-25-36.

Field notes of the survey of the West four miles of the Maple-Moose Lake County road and the West two miles of the Leader-Stony Brook County road, and the establishment of lines and corners in Sections 5 and 6, Twp. 135, Rg 31, and sections 7, 18, 19, 20, 21, 28, 29, 30, 31, 32, Twp. 136, Rg 31, and Section 1, Twp. 135 Rg. 32, and sections 12, 13, 24, 25 and 36 Twp. 136, Rg 32, Cass County, Minnesota, as surveyed by and under the direction of John W. Curo, County Surveyor, assisted by H. F. Baldwin, Deputy.

The petition for the Maple and Moose Lake road reads in part as follows: "Beginning at the corner between the towns of Moose Lake, Poplar, Byron and Meadow Brook: thence running North Two (2) miles on line between Moose Lake and Poplar townships, thence running East nine (9) miles on the line between sections 19 and 30, 20 and 29, 21 and 28, 22 and 27, 23 and 26, 24 and 25 in Township of Moose Lake; thence in sections 19 and 30, 20 and 29, 21 and 28, to the corner between sections 21, 28, 22, 27, Twp. of Maple (136-30) and terminating thereat."

The Leader-Stony Brook County road runs East along the South side, Township 136, Range 31. The Commissioners has ordered the survey of the West four miles of the Maple-Moose Lake road and the West two miles Leader-Stony Brook road.

June 24th 1916: We prepare necessary field notes, H. F. Baldwin prepares to leave Walker on night train: to make the above survey: John W. Curo.

June 25th 1916: Harold F. Baldwin and E. L. Jusler take 12:47 a.m. train South from Walker to Backus: Fare 49¢ each = 98¢, paid by Baldwin: Arrive at Backus, we go to Lake View Hotel and sleep until 7:30 a.m. After breakfast, Baldwin makes arrangements with Norton's livery to have auto drive Baldwin and Jusler with survey outfit to some point near work of survey of road above described.

Although the rain has not stopped, Norton sends car around for us at 11 a.m. Baldwin pays bill at Lake View Hotel: 2 lodgings @ 50¢ = 1.00. 2 breakfasts @ 35¢ = 70¢, total \$1.70. At noon we stop at Hans Larson's place and have dinner: 25¢ each = 75¢. Arrive in vicinity of our work, we try in several places to be boarded, but they will not take us, but we succeed in finding a boarding place with Mr. E. D. Dennings - where we stay over night.

June 26th 1916: Breakfast at 6:30 a.m. at Dennings: Baldwin and Jusler take lunch: Also transit: 100 foot Chicago steel tape, and other tools, go to twp. corner of Moose Lake (136-31) - Poplar (136-32) Byron (135-32) and Meadow Brook (135-31) This is on State Rural Highway, all the U.S. bearing trees are gone: We find a stone at P. D. of State Rural Highway running West along Twp. line and South along Range line.

We use this as a starting point to chain from and produce the center line of State Rural Highway, North: Run transit line as follows: at 1848.70 N, a hub, road 4 feet Right: at 2380.90 N, set hub - the road bears away East: at 2860.00 N, enter wet meadow: at 3100 N, enter wet land, willows: at 3320 N, enter south bank of brook: at 3325 N, enter north bank of brook: at 3475 N, leave wet land: at 3740.50 N, set hub on high ground: at 4000 N, road 5 feet to the Right: at 4121.40 N, a hub in edge of road: at 4884 N, a hub in road: at 6100 N, enter willows - getting wet: at 6400 N, in willows - wet land:

We quit for night: Baldwin and Jusler over night at Hennings.

Signed H. F. Baldwin.

Tuesday June 27th 1916: Breakfast 6-30 a.m. at Hennings: Baldwin and Jusler take lunch, and beginning at stone at P.D. of center line of State Rural Highway at Township corner, we chain north on line where we cut brush and run transit line yesterday as shown above: We continue North: at 7150 N, leave swamp: at 7447.50 N, a hub in clover field: at 9161.30 N, a hub: Cory house stands 70 feet to the left: It is raining and we come home arriving at Hennings about 5 P.M. where we remain over night. H. F. Baldwin.

Wednesday June 28th 1916: Breakfast 6-30 a.m. Baldwin and Jusler take lunch and continue North on random range line: at 10015 N, cross road running East and West: at 10044.70 N, a hub on hill top: at 10600 N, a hub near cross roads: Here about 80 feet East of our random line the trails cross: We work between showers, and leave early and arrive at Hennings soon after 4.00 P.M. soon after we arrive a very heavy rain storm breaks from NW:

Baldwin writes letters to Curo, and William Moulster for information regarding lost corners, etc.

We make arrangements to start tomorrow at noon and board at Smiths, two miles North of Township corner, this saving us about 6 miles a day walk, while working along here:

Baldwin and Jusler at Hennings over night. Signed H. F. Baldwin.

Thursday June 29th 1916: Breakfast 6-45 a.m. at Hennings. Baldwin and Jusler go to hub at 10600.00 N, on random line and offset East 150 feet and continue North: at 11200.00 N, enter brush: The transit is foggy and so much dampness has accumulated that it is impossible to set a hub at long shots: We take transit and go to Smiths house, and Baldwin cleans transit and we get dinner at Smiths. After dinner Baldwin adjusts transit and puts new set of cross hairs in telescope: Jusler goes North to corner of 18, 19, 24, 13, T136, Pgs 31 and 32, but finds no bearing trees, tho' a corner post sets in logging road:

Jusler and Ed Smith go to corner of 19, 20, 29, 30, T136, Pg 31, where U.S. notes call for post and:

tamarack 7 inch, N46° E 2 links: (= 7.92 feet)

tamarack 8 inch, N. 49° 30' W 8 links: (= 5.28 feet)

tamarack 6 inch, $S 18^{\circ} E 16$ links (= 10.56 feet)
 tamarack 9 " $S 21^{\circ} W 28$ " (= 18.48 feet). An old corner post
 which natives say was set by surveyor Hallett from U.S.
 bearing trees, checks for course and distance with two old
 stumps which are badly burned and show no scribe marks:

Baldwin and Tinsler now continue North on line offset 150
 feet East of random: at 11454.80 N, a hub on hill: at 11640 N, enter
 wet meadow: at 11800 N, we leave off chaining and quit
 for the day: Baldwin makes a few further adjustments on
 transit and stay over night with C. A. Smith. Signed H. F. Baldwin.

Friday June 30th 1916: Breakfast at Smith 6-30 a.m. Then Baldwin
 and Tinsler take transit and tools and go to $\frac{1}{4}$ corner between
 sections 21 and 28, Twp. 136, Rg. 31, where U.S. notes call for
 post and following bearings: Black Oak 11 inch, $S 59^{\circ} 30' W 9$ links
 (= 5.94 feet) Maple 10 inch, $N 46^{\circ} 30' W 19$ links (= 12.54 feet)

We find an iron monument with cap on top, set in
 concrete in the road, and we find two decayed stumps, which
 check for course and distance, but no scribe marks are to
 be seen. We set two new bearing trees as follows:

Basswood 8 inch, $N 6^{\circ} W 44.10$ feet: Maple 8 inch, $S 5^{\circ} E 50.00$ feet:

From this iron we start random line West, cut brush
 and set hubs but do not chain today:

Saturday July 1st 1916: Breakfast 6-20 a.m. at Smith's, then Baldwin
 and Tinsler take lunch and go to $\frac{1}{4}$ corner between sections 21
 and 28, Twp. 136, Rg. 31, and chain West: At 200. West, center line
 of road is 3. feet South: at 300. feet West, center line of road
 is 10. feet South: at 420.60 feet West set hub: cut bank of road
 is 3. feet South: at 500 feet West, center line of road is 15. feet
 South: at 905.70 feet West, a hub in North ditch of road: at
 1275.90 feet West, set hub from which, center line of road
 is 6. feet South: at 1746.50 feet West, set hub from which, center
 line of road is 10 feet South: at 2200 feet West, cross center
 line of road: at 2472.00 W, a hub in center of road: at 2649.40
 West, the true corner of sections 20, 21, 28, 29, Twp. 136, Rg. 31,
 sets North 1.60 feet:

We drive hub for temporary corner: U.S. notes call for
 post and following bearings: White birch 7 inch, $N 61^{\circ} 30' W 13$ links
 (= 8.58 feet) white birch, 7 inch, $S 53^{\circ} W 6$ links (= 3.96 feet) white birch
 6 inch, $S 28^{\circ} E 17$ links (= 11.22 feet) Balsam 3 inch, $N 24^{\circ} 30' E 11$ links (= 7.26 feet)

All birch bearing trees are gone and the balsam stump
 badly decayed checks for course and distance.

We find two section corner posts badly burned but all
 right for chainage. This old section corner was set by
 Surveyor Hallett, from U.S. bearing trees, about 15 or 16 years
 ago, when he surveyed the line off this road.

Beginning at the corner of sections 20, 21, 28, 29, Twp. 136
 Rg. 31, we deflect North, $0^{\circ} 18'$ from old random line, and
 continue West: at 620.30 West, a hub, 5.20 feet North of old random.

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line: at 1700 West leave road: at 1737.70 West a hub on ridge: From hub at 1737.70 West on random line, we turn NE angle which reads $147^{\circ}48'$ and begin chaining at station 0.00 and mark stake "J" for traverse: at 218.20 set hub: deflect $13^{\circ}21'$ Left: and at 571.00 set hub: then deflect $51^{\circ}49'$ Left: at 931.80 set hub, then deflect $41^{\circ}33'$ Left: 1187.00 set hub and deflect $66^{\circ}43'$ Right: at 1505.20 set hub and deflect $90^{\circ}00'$ Left: at 1744.30 set hub, still on Traverse at P.I. of random line, which equals 3074.90 feet West, turn NE angle which reads $71^{\circ}46'$: Quit for day. Baldwin and Jusler at Smith's over night.
Signed H. F. Baldwin.

Sunday July 2nd, 1916: Baldwin writes notes in a.m. and in P.M. takes compass and letter from State Engineer Moulster, regarding Twp. corner of Moose Lake, Byron, Poplar, and Meadow Brook: The stone from which we started random line North on range line is at true Twp. corner. Jusler remains at Smith's all day, no work for him, both over night at Smith's.
Signed H. F. Baldwin.

Monday July 3rd 1916: Breakfast at 6-20 a.m. at Smith's. Baldwin and Jusler continue West on random line between sec. 20 and 29, Twp. 136, R. 31: at 1780 West into marsh: at 1900 West enter lake: at 2470 West leave lake: at 2577.40 West set hub from which we turn North 90° angle and chain 100 feet base line for triangulation of lake: hub "A" $6^{\circ}47'30''$ hub "B" $87^{\circ}12'30''$:
"f" = 839.70 feet + 1737.70 = 2577.40 feet:

continue West on random line at 2990 West leave marsh: at 3074.90 West, a hub = 1744.30 off Traverse: at 3100 West center of road: at 3754.00 West a hub in road: at 4700 West enter corduroy swamp at 5363.30 West a hub on corduroy: at 5860 West leave swamp: at 6159.60 West a hub: at 6200 West Granger's house sets 100 feet to the left: at 7300 West bridge 30 feet Right at 8015 West $\frac{1}{4}$ corner post sets 6 feet North at fence corner: at 8324.60 West a hub: we quit for day taking transit and chain to Smith's where we stay over night.

Signed H. F. Baldwin.

Tuesday July 4th 1916: Rain in a.m. Fair and hot in P.M. Baldwin and Jusler at Smith's all day, no work in field.

Signed H. F. Baldwin.

Wednesday July 5th 1916: Breakfast 6-30 a.m. Baldwin, Jusler and Smith go to random line between sections 19 and 30 Twp. 136 R 31 (work done by Ed. Smith) continue West: at 9618.00 West a hub: at 10100 West enter wet meadow: 10300 West leave wet meadow: at 10612.90 West set hub, the road is 35 paces North: at 11982.40 a hub: at 12630.20 West a hub, this random line is South of the road and we are cutting considerable brush. Dinner at Smith's. Baldwin, Jusler and Smith go to corner of sections 7, 18, 12, 13 Twp. 136, Rgs 31 and 32: the old U. S. bearing trees are gone, but fences are set here from Hallett's survey: digging in road, we find hub of Hallett's old stake where we drive a hub a set new bearings, being Norway 4 inch, N53° West 71.00 feet Fence post 9 inch N 45° East 46.50 feet.

Chaining South at 2500.00 set hub; at 3000. South, we quit work for day. Baldwin and Jusler at Smith's.

Signed H. F. Baldwin.

Thursday, July 6th, 1916: Breakfast 6-20 a.m. Then Baldwin, Jusler and Ed Smith continue South on random line between ranges 31 and 32. We shoot in hub over swamp without much cutting and chain along old road: at 52.80 South an old post sets East: at 7737.70 South a hub in road: at 9689.30 South a hub in old road: at 10538.80 South the hub on the other random line running North from Twp. corner 10600.00 North sets West 82.50 feet: 10538.80 South + 10600.00 North = 21138.80 Feet. therefore $\frac{1}{2}$ of this is 10569.40 feet and 10569.40 South = 10569.40 North. Here we set hub in wheel track. at 10569.40 North. Here this hub sets 82.20 feet: With transit at hub 10538.80 South turn the NW angle 80° 42' to hub at 10600.00 North on the random line. Baldwin turns the angles while Jusler and Smith chain West on random line to intersect Random running South. The P. D. of Random running West and Random running South: 12819.10 West = 10757.50 South: Turn NE angle 91° 02' we quit for day: Baldwin and Jusler at Smith's over night.

H. F. Baldwin

Random line produced South would be East of the Twp. corner 82.20 - 49. = 43.20 feet. at 12825.90 sec. corner sets North 188.10 feet. 12825.90 our chain = 12890.46 U. S. 64.56 difference (.0050)

Friday July 7th, 1916: Fair day. Breakfast at Smith's: Baldwin, Jusler and Smith (Charles Jr.) go to Twp. corner, Moose Lake, Poplar, Byron and Meadow Brook and with transit, check corner from information received from State Engineer Moulster with transit at Twp. corner. Turn 90° NE and start East on Random line at 220 East enter wet meadow. Baldwin goes to Leader for mail and gets information from Curro, regards work, and makes arrangements for board at E. D. Klenning's, where we have dinner. Jusler and Smith continue East.

P. M. The same crew, chaining East. at 1790 E cross ditch NW and SE. at 2010 E leave meadow: at 2091.10 East a hub: at 2452.50 East a hub: at 2828.20 E a hub: at 3000 E quit work for day. This is hard cutting and weather very hot. Baldwin and Jusler for

supper and lodging at Hennings. - Signed H. F. Baldwin.
 Saturday July 8th, 1916: Breakfast at Hennings 6-30 a.m. Then
 Baldwin, Tusler, Smith work all day. Baldwin writes letter
 to Curo in a.m. and writes notes, then goes out where Tusler
 and Smith are continuing East. We all carry lunch.
 Chaining West we have at 3109.00 E a hub: at 3360 E enter
 very wet meadow: at 4050 E leave wet meadow, Water knee
 deep: at 4351.30 E a hub: at 4739.60 E a hub: at 4950 E Harry
 Presler house sets North 40 paces: at 5300 E enter meadow.
 at 5830 E leave meadow: at 5995.60 E a hub: at 6239.00 E
 a hub, Mrs. Presler's barn sets South 50 paces. We go East
 and try and find an Iron Monument, which natives say
 Deputy County Surveyor Kemp set about four years ago.
 We search for two hours and found none.

We leave transit and chain and return to Hennings,
 arriving 6-20 P.M. Have letter from Curo, wishing us to
 run line for ditch in Becker Twp., near Motley, Tusler
 supper and lodging at Smith's. Baldwin, supper and
 lodgings at Hennings. Signed H. F. Baldwin.

July 9th 1916: Tusler at Smith's all day for meals: In forenoon
 takes Gurley compass and 50 foot metallic tape and goes
 to section corner of sections 19, 20, 29, 30, Twp. 136, Rg 31, and
 looks for bearing trees to Witness Corner: He finds none and
 remains at Smith's for supper and lodging.

Baldwin for meals all day at Hennings: makes out
 bills for Cass County for work of self and men on County
 road and bills for board for self and Tusler: Baldwin
 remains at Hennings for supper and lodging.
 Signed H. F. Baldwin.

July 10th 1916: Baldwin and Tusler go to Motley to work on
 County Ditch No. 2.

July 14th 1916: Baldwin and Tusler return from Motley to
 Smith's place to continue of road survey. John W. Curo.

July 15th 1916; Saturday: Breakfast at Smith's 6-15 a.m., Then Baldwin
 and Tusler take lunch and go to Presler farm and as we
 could not find the iron monument, which they say was
 set by Kemp, Harry Presler says he knows where this
 corner is, and we will give him 1/2 day for finding
 this corner for us:

We find the iron monument at corner to sections 4, 5, 32
 and 33, between Twp. 135 and 136 N, Range 31 W, and we
 chain West from this iron monument:

at 400 enter wet meadow: at 900 leave same: at 3500
 West, we quit chaining and have lunch: Presler goes
 home, continue West: at 4042.60 W, a hub: at 5155.60 W, a hub:
 at 5293.00 West, a fence bears North and South: at 6745.60 W,
 equals a point 121.80 feet South of hub: 6239.00 East at
 90° angle to hub 6239.00. With transit at 6745.60 West, the

N. E. angle reads $90^{\circ} 23'$ to hub at 6239.00 East; therefore 6239.00, plus 6745.60 = 12984.60 feet total.

12984.60 feet, our chain, = 12969.00 feet U. S. chain. Our chain is 15.60 feet longer than U. S. chain.

We return to Smith's at 6-15 P. M. where we remain for supper and lodging.

Signed H. F. Baldwin.

July 16th 1916: Baldwin and Jusler all day at Smith's: Baldwin figures corrections, no work in field. Signed H. F. Baldwin.

July 17th 1916: Monday: Baldwin and Jusler take lunch and go to corner of sections 5, 6, 31, 32, between Twp. 135 and 136 N, Range 31 West, where all U. S. bearing trees are gone: We establish corner in road by proportionate chainage East and West. at 5286.40 feet West on random line, the true section corner sets North, 8.30 feet, the correction North = .0016 of a foot North for each foot West: Hub at 2643.20 W, goes North 4.15 feet to true $\frac{1}{4}$ corner between sections 5 and 32, Twp. 135-136 N, Rg 31 W, where we drive a hub for the true $\frac{1}{4}$ corner with the following new bearing trees: 5 inch poplar, bears $N 40^{\circ} W$ 67.40 feet:

24 inch white pine stump, bears $N 21^{\circ} 30' E$ 26.90 feet: after setting road centers at intervals, set the following new bearing trees to corner of sections 5, 6, 31, 32, between Twp. 135 and 136, N, Rg 31 W: 6 inch poplar, $N 60^{\circ} W$ 40.70 feet: 5 inch poplar, $N 4^{\circ} E$ 26.35 feet:

The true line produced West: at 6239.00 East, the corner sets 90° South 111.00 feet distant: We have lunch: In P. M. Baldwin figures corrections and Jusler makes stakes for "road center" marked on one side and "true section line" on the other side. The random line East, if produced to section corner 5, 6, 31, 32, at 7698.20 East, sets South, 123.20 feet being .016 of a foot South for each foot East: Hub at 6239.00 E, goes South 99.82 feet: Hub at 5995.60 E, goes South 95.93 feet: Hub at 5055.00 East, goes South 80.88 feet to the $\frac{1}{4}$ corner between sections 6 and 31, on line between Twp. 135 and 136 N, Range 31 W: Hub at 4739.60 E, goes South 75.83 feet: Hub at 4351.30 E, goes South 69.62 feet: Hub at 3109.00 E, goes South 49.74 feet: Hub at 2828.20 E, goes South 45.25 feet: Hub at 2452.50 E, goes South 39.24 feet: Hub at 2091.10 E, goes South 33.46 feet:

at $\frac{1}{4}$ corner between sections 6 and 31, we put in a wood corner post 3 inches square and the following new bearing trees marked with tacks: 9 inch poplar $S 39^{\circ} E$ 42.00 feet:

8 inch poplar, $S 45^{\circ} W$ 50.90 feet: We quit work for day and return to Smith's: Baldwin and Jusler all night at Smith's.

Signed H. F. Baldwin.

July 18th 1916: Breakfast 6-30 A. M. then Baldwin and Jusler take lunch and go to section line between sections 6 and 31 where we finish correcting line to the Twp. corner:

at Twp. corner, where a rock, 4 inches square on top, marks the corner to sections 6, Twp 135, Rg 31, being corner to sec.

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31, Twp. 136, Rq. 31, also the corner to section 1, Twp. 135, Rq. 32, and the corner to section 36, Twp. 136, Rq. 32, we mark the following bearing trees with tack. Poplar 4 inch, S 43° W 54.30 feet: Poplar 6 inch, S 52° E, 47.00 feet: Poplar 5 inch, N 56° E, 31.40 feet: We now quit for noon:

In afternoon we correct the range line being mile of random line between sections 31 and 36, as follows: Hub at 500.00 N, goes East 0.50 of a foot: Hub at 1848.70 N, goes East 1.85 feet: Hub at 2380.90 N goes East 2.38 feet: Hub at 2642.35 N, goes East 2.64 feet to the $\frac{1}{4}$ corner: Hub at 3740.50 N, goes East 3.74 feet: Hub at 4121.40 N, goes East 4.12 feet: Hub at 4884.00 N, goes East 4.88 feet: Hub at 5284.70 N, goes East 5.28 feet to the section corner of sections 25, 30, 31, 36, Twp. 136 N, Rqs. 31 and 32 W.

at the $\frac{1}{4}$ corner between sections 31 and 36, we find an old hub, which was probably set by Hallett: We move it North and West a little and drive it for true $\frac{1}{4}$ corner between sections 31 and 36, Twp. 136, Rq. 31 and 32, and put in the following bearing trees: 5 inch Oak, N 57° E 25.30 feet: 10 inch Oak, stub 5 feet tall, bears S 10° E 77.00 feet, the scribe marks on this show that it was probably Hallett's:

at true section corner to 25, 30, 31 and 36, Twp. 136, Rq. 31 and 32, we set the following bearing trees with tacks:

Elm 8 inch, N 28° W 54.70 feet - Elm 3 inch, N 71° 30' E 44.40 feet:

We continue correcting North between sections 25 and 30: at 7927.05 N the $\frac{1}{4}$ corner between sections 25 and 30, goes East 36.76 feet + 5.28 ft. = 42.04 feet, where we drive hub for $\frac{1}{4}$ corner with the following new bearings: Fence post, S 81° 30' W 29.90 feet: Fence post N 52° 30' W 36.90 feet: Stake marked "R.P." bears S 45° W 46.70 feet: I set transit over hub at true $\frac{1}{4}$ corner, then back sight on true section corner to sections 25, 30, 31, 36, and set stake marked "True section line" on one side, and "road center" on the other at intervals along line and produce to section corner of secs. 19, 30, 24 and 25, where we drive hub for corner and mark the following bearings:

Sign board bears N 32° E 43.00 feet: Oak 8 inch, N 33° W 213.60 feet:

We adjust transit and go to Smith's for supper and lodging.

Signed H. F. Baldwin

Wednesday July 19th 1916: Breakfast at Smith's 6-30 a.m. - then Baldwin and Juster take lunch and goes to corner of secs. 19, 20, 29 and 30, Twp. 136, Rq. 31, where all U. S. bearing trees are gone: We establish corner by chainage East and West: 12825.90 feet our chain, equals 12890.46 feet U. S. chain: Our chainage is 64.56 shorter than U. S. chain. The correction = .0005 of a foot East. 5276.04 goes East to 5249.66 for section corner where true corner sets 1.00 feet South: Here we drive a wagon spoke with tack for true corner to sections 19, 20, 29, 30, Twp. 136, Rq. 31, and drive 4 stakes, marked: "Reference point" NE, NW, SE & SW, each 46.70 feet distant

We set stakes at intervals for road centers and at 2624.85 W, we drive a square corner post 0.50 of a foot South from true $\frac{1}{4}$ corner between sections 20 and 29, Twp. 136, Rg. 31, with the following bearings:

Norway 1 1/2 inch, N 23° E 101.40 feet: Continue East to section corner of 20, 21, 28, 29, Twp. 136, Rg. 31, previously established, we set following bearings:

Maple 6 inch, 35° 30' E 48.70 feet: white oak 7 inch, S 36° 30' W 41.00 feet:

We hunt for U. S. bearing trees to $\frac{1}{4}$ corner between sections 19 and 30 and find none: Hub at 5249.66 sets South 1.00 feet: at 6159.60 = 909.90 feet West of section corner corrects North 22.59 feet minus 0.87 of a foot, equals 21.72 feet: Hub at 6849.70 equals 1600 feet West of the section corner, corrects North 39.73 minus 0.80 = 38.93 feet: Hub at 7876.50 = 2626.80 feet being $\frac{1}{4}$ corner ¹⁹⁻³⁰, corrects North 65.22, minus 0.66 = 64.56 feet: Hub at 8324.60 = 3074.90 feet West of section corner and corrects North 76.35 feet minus 0.61 = 75.74 feet: Hub 9618.00, = 4368.30 feet West of section corner and corrects North 108.44 feet minus 0.44 = 108.00 feet: Hub at 10612.90 = 5363.20 feet West of section corner and corrects North 133.17 minus 0.30 = 132.87 feet: Hub at 11982.40 = 6732.70 feet West of section corner and corrects North 167.17 feet minus 0.14 = 167.03 feet: Hub at 12630.20 equals 7380.50 feet West of section corner and corrects North 183.26, minus 0.06 equals 183.20 feet: Hub at 12825.70 equals 7576.24 W of section corner corrects North 188.10, minus 0.00, equals 188.10 and is the section corner to secs 19, 24, 25 & 30 on Rg. line: We reach Smith at 5:40 P.M. and Baldwin figures corrections as shown above: Baldwin and Jusler over night at Smiths. Signed - H. F. Baldwin.

Thursday, July 20, 1916. Breakfast at 6:30 A.M. then Baldwin checks figures of corrections as shown above, then Baldwin and Jusler go to random line running West between sections 19 and 30, and make corrections. At $\frac{1}{4}$ corner between sections 19 and 30, T. 136, Rg. 31, we set post and 4 stakes for bearings marked "R.F." for reference points: One NE, NW, SE, SW, at 46.70 feet distant then return to Smiths for dinner. In afternoon Baldwin writes notes in the house for 1 1/2 hours, then, with Jusler goes to corner of sections 13, 18, 19, & 24, between Twp. 136, Rg. 31 and 32, where all U. S. bearing trees are gone and move old corner post 4.70 feet South to be straight in line and half way between the section corner a mile North and a mile South.

At 5284.70 South, the true section corner sets West 1.70 feet, with following new bearing, 14 inch tamarac stub, N 72° E 32.80 feet: 18 inch tamarac stub, S 29° W 39.90 feet:

At $\frac{1}{4}$ corner between 19 and 24, we drive a 1 1/2 inch iron pipe, 12 inches long, for post, then return to Smiths for supper and lodging, Signed - H. F. Baldwin.

Friday July 21, 1916: Breakfast 6:30 A.M. then Smith's team hauls Baldwin and Jusler with survey outfit to Seader - Charge \$1.00. Baldwin and Jusler take stage and go to Motley with survey outfit: Stage fare 75 cents each --- paid by Baldwin, dinner at City hotel: Get Mail from Curro, who wishes us to go to Pine River and run 3 miles of ditch. Baldwin and Jusler R. R. fare to Pine River \$1.22 each.

Moculster takes us to Traveler's hotel for supper and lodging. Signed - H. F. Baldwin.

Saturday July 29, 1916, Baldwin and Jusler take early morning train

Pine River to Walker; R. R. fare 6.75 each. Paid by Baldwin: We go to Hotel Chase; Breakfast at Hotel Chase 7-15 A.M., then Baldwin works in County Surveyor's Office making out bills for survey crew on County road in Sup. 136, pg. 31: Baldwin and Curo go over notes and hunt records for information regarding these roads; Baldwin and Fusler boarding all day at Hotel Chase, also for lodging. Signed H. F. Baldwin July 30th, 1916. No work: Baldwin and Fusler sleep at Hotel Chase. Signed - H. F. Baldwin.

In recording the above survey, I have copied the notes in Mr. Baldwin's field book as it was handed in to me, and have copied everything bearing directly or indirectly on the work, to show the time actually put in, including minor detail which I consider necessary, but have left out some of his daily memoranda which would have no bearing on the actual survey. John W. Curo.

Survey begun June 25, 1916: Finished July 29, 1916.
Recorded - Nov-27-1916.

County Surveyor,
Cass Co. Minnesota.

SURVEY-RECORD-291

TOWNSHIP 136. R6. 30, SECS. 2-3-4-5-6

TOWNSHIP 137. R6. 30, SECS. 14-15-22-23-26-27-28-29-32-33-34-35

Field notes of the survey and establishment of iron and wood corners and lines run in secs. 2, 3, 4, 5, 6, T. 136, R. 30 and secs. 14, 15, 22, 23, 26, 27, 28, 29, 32, 33, 34, 35, T. 137, R. 30, Cass County Minnesota, as surveyed by A. W. Thoulster, Deputy County Surveyor, Cass County Minnesota.

Thursday May 18, 1911. A. W. Thoulster transit man, Emil Kulla, Arman, A. Rounds. Arman, Clyde Hall Chainman. No bearings at corner to secs. 22, 23, 26, 27, T. 137, R. 30. Starting at SE corner of sec. 22, T. 137, R. 30, which was previously set by, Cass County Surveyor. I run South 8° Variation ($\frac{1}{2}$ mile cut-out 2 rods wide) Corner sets in North edge of Marsh: At 200 pin in small round Marsh: At 400 leave same: At 600 pin on N side of raise: At 765.30 set hub on raise, then gradually sloping South: At 800 + 1000, + 1200 + 1400 ft. South set pin: At 1475 enter small meadow which bro. NW + E: At 1600 pin in meadow: At 1800 pin in meadow: At 1900 leave meadow which bears SW + E: At 2000 pin - gently slopes upward to $\frac{1}{4}$ corner - then down: At 2200 + 2400, + 2600 set pin: At 2640 set hub for temporary $\frac{1}{4}$ corner bet. secs. 22 and 23, T. 137, R. 30, where U.S. notes call for post and:

W. Pine 24 inch, North 50 links = 33.00 ft. W. Pine 32 inch, North 27° W, 76 lks. = 50.16 ft. No trees, trees badly burnt, continue South and at 2800 set pin. At 3000 enter green poplar timber: At 3200 + 3400 + 3600 set pin: At 3732 cross path E + W: At 3800 pin: At 3805.40 set hub - land gently slopes S: At 4000 + 4200 + 4400 set pin: At 4509.75 set hub: At 4600 + 4800 set pin: At 4900 center of small ravine 100 ft. across: At 5000 + 5200 set pin: At 5280 set hub for temp. corner to secs. 26, 27, 34, 35, where U.S. notes call for post and:

Aspen 7 inch, $S40^{\circ}$ E, 2 links = 1.32 ft. Aspen 6 inch, $S21^{\circ}$ W, 3 links = 1.98 ft.

Aspen 6 inch, $N79^{\circ}$ E, 7 links = 4.62 ft. Aspen 7 inch, $N51^{\circ}$ W, 8 links = 5.28 ft.

No trace of section corner, continue line South. At 5400 set pin.

Friday May 19, 1911. Same crew + etc, continue yesterday's line South.

At 5505.10 set hub: 5600 pin: 5613.50 set hub: At 5800 + 6000 + 6200 + 6400 + 6600 set pin: At 6800 leave green timber, and enter open small brush and fir trees: 6850 set hub: 7000 set pin: At 7200.15 set hub: 7400 pin: At 7572 center of old road bro. SE + NW: 7600 pin: At 7628.10 set hub: land begins to slope down to valley: 7800 set pin: 7920 set temp. $\frac{1}{4}$ corner bet. secs. 34 + 35, T. 137, R. 30, where U.S. notes call for post and: J. Pine 10 inch, $S37^{\circ}$ E, 9 lks = 5.94 ft. J. Pine 7 inch, $N24^{\circ}$ W 27 lks. = 17.82 ft. No trace of $\frac{1}{4}$ and continue South: At 8000 set pin: At 8112.50 wire fence E + W: At 8200 enter creek bottom, E + W: At 8249 creek bro. NW + SE: At 8400 pin in bottoms: At 8450 leave bottoms which rise to 8900: At 8600 + 8800 set pin: At 8870 enter small field: At 8976.60 set hub in field: At 9000 pin in field: At 9139 cross fence leave field: At 9200 enter thick poplar brush: At 9400 pin in poplar brush: At 9600 set pin: At 9726 enter small field: At 9800 pin in field: At 9823.75 hub in field: At 9922 leave field enter timber: At 10000 + 10200 + 10400 set pin in timber: At 10425.70 set hub N side of road which bro. E + W: At 10432 center of main road E + W: At 10560 set pin for temp. S corner to secs. 34 + 35, T. 137, R. 30, where U.S. notes call for post and:

Dead Tank. 5 inch, $N63^{\circ}$ E, 34 lks. = 22.44 ft. Dead Pine 5 inch, $N77^{\circ}$ W 31 lks = 20.46 ft. There is no trace of the corner and we continue S to 10440 ft. and set hub on S side

of road. Var. $8^{\circ}30'$

Saturday May 20, 1911. A. W. Moulster transit and chain. Emil Kulla and A. Rounds Axemen. Clyde Hall Chain. At $\frac{1}{4}$ corner on S side of sec. 35, T. 137, R. 30, N. S. Notes call for post and: Pine 8 inch N $6^{\circ}E$, 48 lbs, Pine 6 inch, N $26^{\circ}W$, 32 lbs. At the SE corner of sec. 35 being the SW corner of sec. 36, T. 137, R. 30, N. S. Notes call for post and: Pine 12 inch, N $2^{\circ}30'E$, 50 lbs = 33.00 ft., W. Bir. 14 inch, N $33^{\circ}30'W$, 31 lbs = 20.46 ft. Going to to the SE corner of sec. 35, T. 137, R. 30, we find an $8 \times 8 \times 36'$ cement post (set by Curo from the pine bearing tree. I set a hub 1 foot North as there is a telephone pole in line, and run West on $8^{\circ}20'Var.$ ("On random line North side of sec. 2, T. 136, R. 30, and S side of sec. 35, T. 137, R. 30, Curo") At 200 + 400 set pin: At 470.55 West set hub: At 600 + 800 ft. West set pin: At 926 ft. W center of driveway bro. S: At 1000 set pin: At 1052.25 ft. W set hub: At 1200 set pin: At 1400 enter dry low land: At 1600 pin on low land: At 1800 set hub on low land: At 2000 set pin on low land: At 2200 leave low land: At 2400 + 2600 set pin: At 2640 temp. $\frac{1}{4}$ corner on S side of sec. 35: At 2730 enter Meadow land: At 2800 pin on Meadow: At 2932 creek 2 ft. across N + S - flowing South: At 3000 Meadow: At 3200 leave Meadow: At 3400 + 3600 + 3800 set pin: At 3885.80 set hub:

Sunday May 21, 1911. At home.

Monday May 22, 1911. Rained in A. M.

Tuesday May 23, 1911. Continues Saturday's line West. At 3975 enter wet swamp, S + NE: At 4000 pin in swamp: At 4170 leave swamp: At 4191 cross road, SW + N: At 4200 set pin: At 4354.50 cross wire fence N + S: At 4370 enter tank swamp: At 4400 + 4600 + 4800 set pin: At 5000 leave swamp, which bro. N + SW, enter knoll: At 5200 pin in woods: At 5280.30 set hub: I then offset North 64 ft. (+1 = 65) by turning 90° angle, and walking back to hub 3885.80 I set a new hub North 64 ft. for a backsight, then continue W from hub: At 5280.30 W and 64 ft. N, (This is the random line West on North side of sec. 3, T. 136, R. 30, and S side of sec. 34, T. 137, R. 30). At 5400 pin in road: At 5600 + 5800 + 6000 set pin: At 6104.50 center of 2 ft. creek, bro. N + S: At 6200 + 6400 set pin: At 6600 ft. W set hub: At 6800 set pin: At 7000 W.P.B. Tree to cor. of secs. 34 + 4, T. 136, R. 30 stands SW: At 7200 + 7400 set pin: At 7500 set hub: At 7600 + 7800 set pin: At 7876.50 cross five foot Culvert N + S in small ditch: At 7920 temp. $\frac{1}{4}$ corner on S side of sec. 34, T. 137, R. 30, where N. S. Notes call for: Tank 13 inch, N $58^{\circ}E$, 38 lbs = 25.08 ft.: Tank 8 inch, N $40^{\circ}W$, 4 lbs. = 2.64 ft. No trace of $\frac{1}{4}$ corner: At 8000 + 8200 + 8400 + 8600 + 8800 + 9000 + 9200 + 9400 ft. W. set pin.

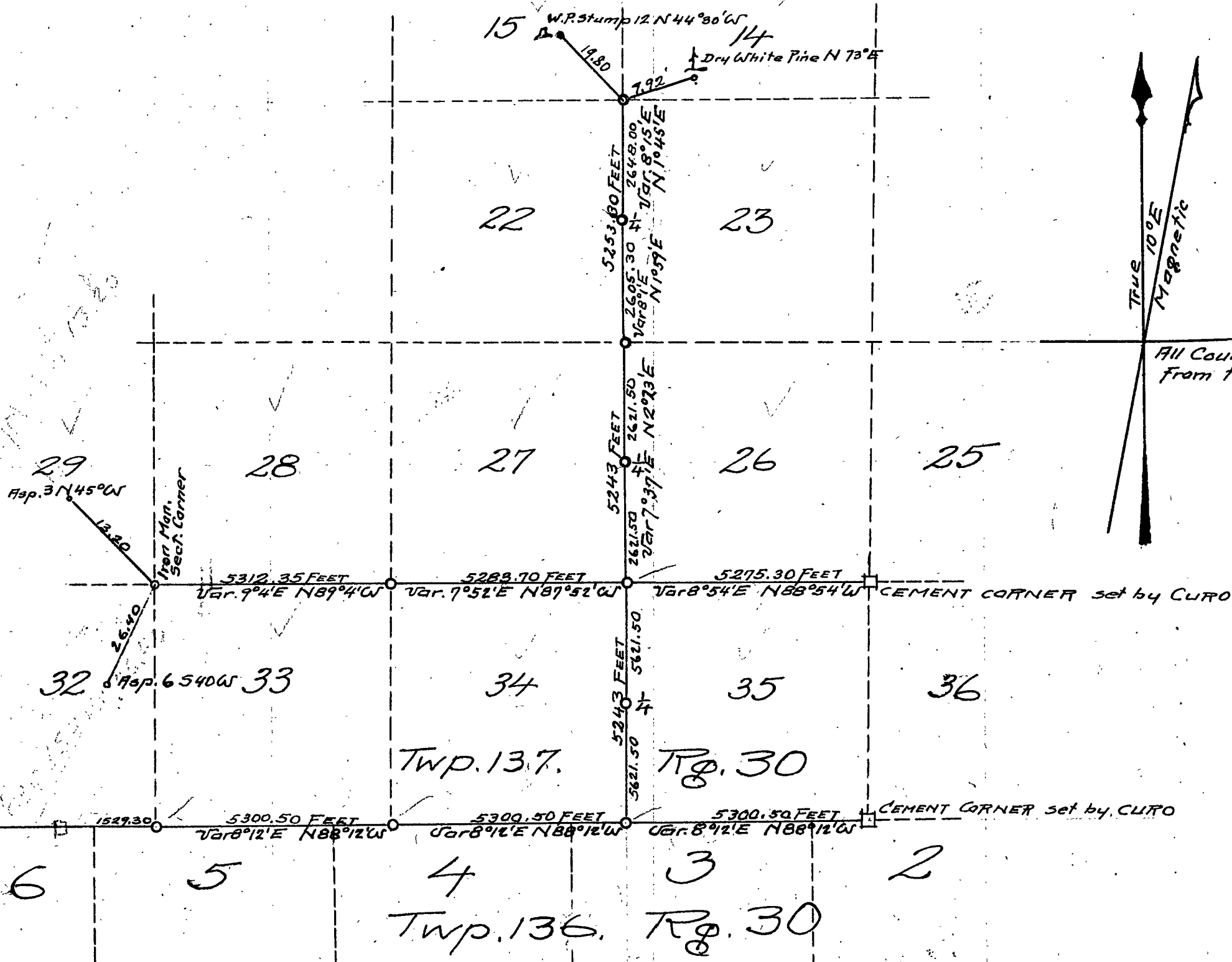
Wednesday May 24, 1911. Same crew except Mr. A. Rounds who is absent. Continue West. At 9534.45 set hub: At 9600 + 9800 + 10000 set pin: At 10043.60 set hub: At 10200 + 10400 set pin: At 10560 ft. W set hub for temp. cor. to secs. 33 + 34, T. 137, R. 30, where N. S. Notes call for post and: Aspen 11 inch, N $29^{\circ}E$, 9 lbs = 5.94 ft.: Aspen 11 inch, N $38^{\circ}30'W$, 27 lbs = 18.48 ft. No trace of same and continue West. (Random line on North side of sec. 4, T. 136, R. 30, being S side of sec. 33, T. 137, R. 30, Curo). At 10600 + 10800 set pin: At 10833 ft. W center of 5-foot Culvert, no water. 11000 + 11200 + 11400 set pin: At 11592 ft. W. set hub: At 11600 + 11800 set pin: At 11919 ft. W center of 2 foot

SURVEY-RECORD-291

PLAT.

TOWNSHIP 136. RG. 30, SEC. 2-3-4-5-6

TWP. 137, RG. 30, SEC. 14-15-22-23-26-27-28-29-32-33-34-35



Culvert. No water. At 12000 & 12200 & 12400 set pin: At 12476 ft. W. set hub: At 12600 & 12800 & 13000 & 13200 set pin: At 1/4 cor. S side of sec 33, T. 137, R. 30, U.S. notes call for post and:

W. Birch 6 inch, N52°15'E, 170 lbs. = 112.20 ft.
Dead Aspen 6 inch, N61°30'W, 26 lbs. = 17.16 ft.

All are gone, continue West. At 13239.13 ft. W set hub: Then offset S 15 ft. (telephone pole in line) Then going back to hub 12476 I set a hub 15 ft. S for a back shot. This now makes me 65 ft. minus 15 ft. = 50 ft. N of the original random line I started on, continue West:

Thursday May 25, 1911. A.W. Moulter-transitman, assisted by A. Rounds, Emil Keller, and Clyde Hall. At 13306.50 ft. W center of 4 1/2 ft. Culvert, dry: At 13400 & 13600 & 13800 & 14000 & 14200 & 14400 set pin: At 14406.75 ft. W set hub: At 14600 & 14800 & 15000 & 15200 & 15400 & 15600 set pin: At 15800 set pin: At 15840 temporary cor. to secs 32 & 33, T. 137, R. 30, where U.S. notes call for post and: Tank 4 inch, N45°15'E, 5 lbs. = 3.30 ft.

Tank 6 inch, N13°45'W, 37 lbs. = 24.42 ft. I find an old stake 2x3x18" in size on S side of the grade, which Mr. F.O.M. Anderson says Curo put in, I also find a fence post standing NW and blazed with a tack in. I write to Curo regarding this corner. Continue West: At 15780-a branch telephone line runs N: At 15885 center of 3 ft. Culvert, dry. At 15898 center of road running N: At 15892.60 ft. W set hub: Var. reads 8°30'.

At hub 15892.60 ft. W I offset S 10 ft., then going back to hub East, I set a hub 10 ft. South. This now makes me 50 ft. minus 10 ft. = 40 ft. N. of the random line I started on, continue W. (on North side of secs 5 & 6, T. 136, R. 30, and S side of sec. 32, T. 137, R. 30, Curo). At 16000 & 16200 & 16400 & 16600 & 16800 & 17000 & 17200 & 17400 set pin: At 17430.20 ft. W set hub: At 17430.20 I offset S 20 ft. (telephone pole in line) also set a hub 20 ft. S: At 15892.60. for a backshot. This makes the line 40 ft. minus 20 ft. = 20 ft. N of the line I started on and continue West: At 17600 & 17800 & 18000 & 18200 & 18400 set pin: At 18480 set hub for temp. 1/4 cor. on South side of sec. 32., T. 137, R. 30. (This is on the N boundary of sec. 6, T. 136, R. 30, Curo). I find no trees on corner.

Friday May 26, 1911. Same crew and tools. Going to the corners of sec. 25, 26, 35 & 36, T. 137, R. 30, I find an 8x8x36" cement monument, which was set by Curo. Goit Notes call for the following bearing trees:

Dead Aspen 14 inch, N10°E, 15 lbs. - - Dead Aspen 10 inch, N71°W, 24 lbs.
Dead Aspen 8 inch, S75°W, 27 lbs. - - Dead Aspen 7 inch, S54°E, 28 lbs.

Run West on 8°5' var.: At 30 ft. enter thick poplar brush: At 200 cross old road:- SW & E.: At 400 & 600 & 800 & 1000 set pin: At 1106.40 set hub: At 1200 set pin: At 1270 enter dry low land: At 1400 set pin: At 1460 center of old road-NE & SW: At 1600 & 1800 & 2000 set pin: At 2091.50 ft. W set hub: At 2200 enter tay Alders: At 2275 leave same. At 2400 & 2600 set pin: No trace of 1/4 corner bet. 26 & 35, T. 137, R. 30, where U.S. notes call for post and: Aspen 5 inch, N3°30'E, 25 lbs. = 16.50 ft.: W. Birch 7 inch, S12°30'E, 12 lbs = 7.92 ft. Continue West: At 2795.80 ft. set hub: At 2800 & 3000 & 3200 & 3400 & 3600 set pin: At 3800 leave low land: At 4000 set pin: At 4125.25 ft. West set hub in center of road N & S. At 4200 enter poplar timber. At 4400 & 4600 set pin: At 4611.50 ft. set hub: At 4800 & 5000 set pin: At 5130.60 ft. W set hub: At 5200 set pin:

Saturday May 27, 1911. School Election.

Sunday May 28, 1911. At home.

Monday May 29, 1911. A.W. Moulter with same crew continue west: At 5280. fr. W. set hub for temp. corner to secs. 26, 27, 34 & 35, T. 137, R. 30. At 5400 & 5600 set pin: At 5670 enter low land: At 5750 leave same: At 5800 & 6000 set pin: At 6127.10 ft. W set hub: At 6200 set pin: At 6400 ft. W set hub: At 6600 & 6800 set pin: At 7000 set pin: At 7061 ft. W set hub: At 7200 & 7400 set pin: At 7540 enter tank swamp - NW & SE: At 7600 & 7800 pin in swamp: At 7870 leave swamp NW & SE: At 7920 no trace of 1/4 corner bet. secs. 27 & 34, T. 137, R. 30, where U.S. notes call for post and:

W. Pine 16 inch, N 12° 30' E, 15 lbs. = 9.90 ft: W. Pine 17 inch, S 50° E, 28 lbs. = 18.48 ft.

Fire burns stumps, continue west. At 8000 set pin: At 8164.80 ft. W set hub on hill: At 8200 & 8400 & 8600 & 8800 & 9000 set pin: At 9129 ft. W set hub: At 9200 & 9400 & 9600 & 9800 set pin:

Tuesday May 30, 1911. It rained.

Wednesday May 31, 1911. A.W. Moulter with same crew continue west: At 10000 & 10200 set pin: At 10226.10 ft. W set hub: At 10375 enter old land: At 10400 pin: At 10500 leave low land: At 10500 temp. corner to secs 27, 28, 33, 34, T. 137, R. 30, where U.S. notes call for post and:

W. Pine 20 inch, S 70° E, 21 lbs. = 13.86 ft: W. Pine 18 inch, S 23° W, 29 lbs. = 19.14 ft.

W. Pine 22 inch, N 40° E, 104 lbs. = 68.64 ft: J. Pine 7 inch, N 46° W, 50 lbs. = 33.00 ft.

I find a 30 inch W. Pine tree marked "R. 30 W" which I think is one of the bearing trees, but continue west for a check: At 10600 enter marsh: At 10700

leave same: At 10800 & 11000 & 11200 & 11400 set pin: At 11459.50 ft. West set hub: At 11600 & 11800 & 12000 & 12200 & 12400 set pin: At 12495.10 ft. W set hub: At 12600 pin: At 12700. Maple hill (I guess). At 12800 and 13000 set pin: At 13200 ft. W temp. 1/4 corner bet secs. 28 & 33, T. 137, R. 30, where U.S. notes call for post and: Dead Oak 20 inch, N 63° E, 110 lbs. = 72.60 ft: Bl. Oak 8 in. S 27° E, 95 lbs. = 62.70 ft. No trace of 1/4 corner, continue west. At 13295.35 ft. W set hub:

At 13400 & 13600 & 13800 & 14000 & 14200 set pins: At 15111.10 ft. W set hub: At 15867.70 ft. W set hub East of wagon track in main road. Var. 7° 45'.

Thursday June 1, 1911. A.W. Moulter with same crew. Setting on corner to secs 22, 23, 26, 27, T. 137, R. 30, run North, 8° 15' Variation.

At 200 pin: At 258.25 ft. N set hub: At 400 & 600 & 800 & 1000 & 1200 & 1400 & 1600 set pin: At 1787.70 ft. N set hub: At 1800 & 2000 & 2400 set pin: At 2454 ft. N set hub: At 1/4 corner bet secs 22 & 23, T. 137, R. 30, U.S. notes call for post and: W. Pine 30 inch, N 44° W, 25 lbs. = 16.50 ft: Dead Pine 24 inch, S 57° E, 115 lbs. = 75.90 ft. I find a stub about 30 ft. high being the NW bearing tree with scribe marks visible. I also find an old rotten stump evident of the SE bearing tree. I set hub from the NW bearing tree for the true 1/4 corner. Var. 8° 15'.

At 2605.30 ft. N. the true 1/4 corner bet. secs. 22 & 23, T. 137, R. 30, sets E 10.30 ft., from which I run North on 9° 10' Var. At 200 & 400 & 600 & 800 & 1000 & 1200 & 1400 & 1600 & 1800 & 2000 & 2200 set pin: At 2400 ft. N set hub: At 2600 set pin: At 2648.00 ft. N. the corner to secs 14, 15, 22 & 23, T. 137, R. 30 sets East 4.70 ft., where U.S. notes call for post and:

W. Pine 18 inch, N 53° E, 12 lbs. = 7.92 ft: J. Pine 16 inch, S 19° E, 33 lbs. = 21.78 ft.

J. Pine 8 inch, S 59° W, 20 lbs. = 13.20 ft: W. Pine 7 inch, N 74° W, 30 lbs. = 19.80 ft.

I find the NE and NW bearing trees. The NE is a dry stub: Full height. The NW is a stump with "B.T." marks plain. Set hub for corner by measurements, after which the old bearings, at 9° Var., then stand as follows:

Dry White Pine 30 inch bears N 73° E, 7.92 ft. W. Pine stump 12 inch, bears N 44° 30' W, 19.80 ft.

Friday June 2, 1911. A. W. Moulton transcriber with Rounds and Hall assisting. I set the NW corner to sec. 34, (being the cor. to secs. 27, 28, 33 & 34) T. 137, R. 30. From the SW bearing tree being a stub 12 ft high badly burnt, but "R. 30 W." being plainly shown. Could not find the other bearing trees, except old roots of the SE tree.

Set corner by course and measurement, at 8° 30' Variation. Old bearing tree then stands as follows: Stub 20 inch, S 23° W, 19.14 ft.

At 10 559.00 ft. W. the corner to secs. 27, 28, 33, 34, T. 137, R. 30, sets S 55.73 ft.

At 15871.35 ft. W. the corner to secs. 28, 29, 32, 33, T. 137, R. 30, sets S 147.85 ft. Where I found iron sec. cor. set by Curo.

At the S corner to secs. 32 & 33, T. 137, R. 30, measurement taken from hub 15892.60 W, which is 50 ft. N of line, I started on.

At 15901.50 ft. W this corner sets S 11.70 ft. Hub 15892.60 ft. W is 50 ft. N of line I started on, so that 50 ft. minus 11.70 ft. = 38.30 ft. Length of line from the

SE corner of sec. 35 to the SE cor. of sec. 32, T. 137, R. 30 is 15901.50 ft. The SE corner of sec. 34 being corner to secs. 34 & 35, T. 137, R. 30, is 5300.50 ft. W and the distance

off is 38.30 ft., divided by three = 12.766 ft. The SE corner of 34 sets 5300.50 ft. W + N 12.766 ft.

Hub 5280 W being 1 foot N of line at SE corner of sec. 34, T. 137, R. 30, sets 11.766 ft. N. At 10486 ft. S on North & South line, the SE corner of sec. 34, T. 137, R. 30, sets W 23 ft.

New bearing trees at SE corner of sec. 34 being the S corner to secs. 34 & 35, T. 137, R. 30. The new bearing trees are:

J. Pine 9 inch, S 6° 39' E, 6.85 ft. J. Pine stump 9 inch, East 1.45 ft.

Saturday June 3, 1911. A. W. Moulton making survey, assisted by Rounds and Hall. Correcting line. At NW corner of sec. 35, being the corner to

secs. 26, 27, 34 & 35, T. 137, R. 30, distance E + W, length of line by my survey from the NE corner of sec. 35 to the NW corner of sec. 35 is 10559.80 ft.

Goit Chain calls for 8000 links + 9787 links = 10551.42 ft. The NW corner of sec. 35 sets at 5275.3 W and the distance N + S, Goit Chain from the SE cor. of sec. 27 to the

SE corner of sec. 34 is 10560 ft. and my chain = 10486 ft. Position of this corner N + S is 10486 ft. divided by 2 = 5243 ft. S of the cor. to secs. 22, 23, 26 & 27.

At 5243 ft. S the corner to secs. 26, 27, 34 & 35, T. 137, R. 30 sets W 35.55 ft. New bearings at 8° 30' Variation as follows:

Poplar 11 inch, N 42° 56' W, 42.70 ft. Oak 10 inch, S 57° 6' W, 51.80 ft.

At 5275.30 ft. W the NW corner to sec. 35 sets S 75.10 ft.

Correction for line between sections 26 and 27 are as follows: At 5243 South the NW corner of section 35 sets west 35.55 feet: 765.30 S sets west 5.15 feet:

2640.3, goes west 17.18 feet: 3705.40 S, goes west 25.70 ft: 4509.75 S goes west 30.50 feet:

Correcting the line bet. secs. 34 and 35: At 10486 feet South, the S. E. corner of sec. 34 sets west 23 feet, 5883.50 S, goes west 33.90 feet: 6850 S goes west 31.60 feet: 7200.15 S goes west 30.80 ft:

7628.10 S goes west 29.70 feet: 8976.60 S, goes west 26.60 ft. 9823.75 S, goes west 24.50 feet.

Position of 1/4 corner between sections 26 and 27, T. 137, R. 30, at 2021.50 feet South and West 17.11 feet:

Position of SW corner of sec. 34, at 10601 West and South 39.48 ft.

Position of 1/4 corner between sections 27 and 34, sets at 7917.10 West & South 65.41 ft.

Position of $\frac{1}{4}$ post between sections 34 and 35, is at 78.64.50 South and West 29.27 feet. Position of $\frac{1}{4}$ corner between sections 28 and 33, is 10215.17 West and South 101.79 feet.

Monday June 12, 1911. A. W. Moulter and A. Rounds with Horst and rig set 2x48" galvanized iron pipes. Monuments well filled in with rock at the following places: In T. 137, R. 30, the NE corner of sec. 22 being the cor. of secs 14, 15, 22 & 23 and the SE corner of sec. 22, being the corner to secs 22, 23, 26 & 27, and at the $\frac{1}{4}$ corner on the east side of sec. 22, bet. secs. 22 & 23, and at the SE corner of sec. 27, being the cor. to secs 26, 27, 34 & 35, and at the $\frac{1}{4}$ corner on the east side of sec. 27, bet. sections 26 and 27.

Tuesday June 13, 1911. A. W. Moulter and A. Rounds, continue setting iron monuments in rock in T. 137, R. 30 at the following places: SE corner of sec. 28, being the cor. to secs 27, 28, 33 & 34, and at the SW cor. of sec. 28, being the cor. to secs 28, 29, 32 & 33, and at the SW corner of sec. 33 being the S corner to secs 32 & 33, and at the SE corner of sec. 34 being the S cor. of sec. 34 & 35, and at the $\frac{1}{4}$ corner on the E side of sec. 34, bet. secs. 34 & 35.

Surveyed by A. W. Moulter, Deputy County Surveyor, Cass County Minnesota,
May 18, 1911 to June 13, 1911.
Recorded

County Surveyor - 1916
Cass Co. Minnesota

B

SURVEY-RECORD - 292 NOT CORRECT

TOWNSHIP 140 N. RG. 28 W 5TH P.M.

SECTIONS : 1, 2, 3, 4, 5, 6.

TOWNSHIP 141 N RG. 28 W. 5TH P.M.

SECTIONS: 31, 32, 33, 34, 35, 36.

Field Notes of the survey of secs 1, 2, 3, 4, 5, 6, Twp. 140, Rg. 28, and sections 31, 32, 33, 34, 35, 36, Twp. 141, Rg. 28, and establishment of new corners and new bearing trees in said secs as surveyed by and under the direction of John W. Curo, County Surveyor of Cass County Minnesota, assisted by Harry S. Todd, Deputy.

March 14th, 1912. Harry S. Todd transitman. Beginning at the SE cor. of sec 36, Twp. 141, R. 28, previously established by A. W. Moulster, backsight E on true corrected line and run W on 9° variation. At 1495 set hub. At 2603 cross wagon road; bears N 4 S. At 2640 temp. 1/4 corner on S side of sec. 36, T. 141, R. 28, being the North line of sec. 1, T. 140-28, we search here for bearing trees but everything has been burnt so that we find nothing and continue W: At 2752.86 set hub. At 2977 enter tank swamp, bears N 4 S: Quit for night, Over night with Mark Snell. George Snell, Mark Shell, John Glasgow, James Ford assisted Todd in this survey.

March 15, 1912. Continue transit line west from hub 2752.86 with the same variation: At 3600 leave swamp and enter little Jack Pine Island which bears N 4 S: At 3687.20 set hub. At 3720 enter tank swamp covered with windfalls: At 5050 leave swamp which bears N 80° W: At 5105.30 set hub on little raise of ground in swamp: At 5280 set temp. SW corner of sec. 36, 141-28. We look here for bearing trees but find nothing that we can take. There is a corner about 100 feet North of our line with two new bearing trees to it, but as we find no old U. S. bearing trees we do not use it. Quit for night, Over night with Mark Snell. George Snell, Mark Snell, James Ford, Assisted Todd in this survey, Todd using a K. & E Transit, 300 ft Chicago Steel tape and plumb-bob.

March 16, 1912. Mark Snell, George Snell work cutting line, Todd figures notes.

March 17, 1912. Todd at Snell's and figures notes.

March 18, 1912. We find no corners, all bearing trees on North side of sec 1, T. 140, R. 28, and continue transit line W on same variation. At 5145 leave swamp & enter cedar swamp bears N 40° W: At 5520 leave cedar and enter high rolling land: At 6617.65 set hub. At 6300 enter point of cedar swamp bears N 4 S: At 6516 leave same and enter high land: At 6860.50 enter Hill River bears N 4 S: At 6940 leave same and enter high rolling land: At 7301 set hub. At 7847 cross wire fence: At 7858 cross road: At 7920 temp. 1/4 corner on S side of sec 35, T. 141, Rg. 28. We search for bearing trees here but find nothing and continue W: At 8147.40 SE corner of George Englehart's house bears N 20.70 S: At 8173 the SW corner of same house bears N 22.85 S: At 8256 enter Marsh bears N 45° E: 8360 leave same and At 8380 cross

wire fence: At 8483.70 set hub: At 8614.50 cross wire fence: At 8688 enter wire grass Marsh br. N4S: At 8908 leave same and enter high ground. At 9097.90 set hub: At 9521.75 set hub: At 9732 cross road: At 9991 enter Cat-Tail swamp: At 10141 leave same: Quit for night, over night with Mark Snell. George Snell, Mark Snell, James Ford assisted Todd to day. Harry S. Todd Transit and Chain.

March 19, 1912. Mark Snell, Frank Pinckert, James Ford cut brush. Todd on Notes. K. & E. transit, 300 ft. Chicago Steel tape and plumb. bob. No bearing trees could be found to secs. 2 & 3, T. 140, Rg. 28.

March 20, 1912. Continue Transit line west. At 10339 cross Road br. N4S: At 10466 enter windfall swamp br. N4S. At 10786 leave same and enter high ground: At 10836 cross old road: At 11120.15 set hub: At 11200 enter tank and spruce bog br. N 20° E; At 11771 leave same and enter high rolling land: At 12622 set hub: At 12118 cross R. R. Grade: At 12447 set hub: At 12776 cross road br. N4S. At 13366 enter Cranberry bog br. E4W: At 13820 cross Longville and Pine River stage road: At 13855 set hub: At 14502.46 set hub: At 14573 enter over-flow of Girl Lake lying about 400 ft. N of us. Over-flow br. N4S: At 15063 leave same br. N4S: At 15223.80 set hub: At 15410 enter tank bog: At 15763 leave bog bears N45°W: Quit for night. Mark Snell, James Ford, Frank Pinckert assisted. Harry S. Todd transitman. Todd stays with Mark Snell.

March 21, 1912. Continue transit line west. At 15840 set temp. cor. to secs. 33 & 34, T. 141, Rg. 28. I search here but find no bearing trees and continue west. At 16265.50 set hub: At 16520 enter lake br. N 10° W: At 17100 leave lake: At 17402 cross road leading to Craig's house. At 17526.50 set hub: At 17650 enter lake br. N4S: At 18375 leave lake: At 18480 set temp. 1/4 post on S side of sec. 33, T. 141, Rg. 28, on North side of sec. 4, T. 140, Rg. 28. We find no bearing trees and continue west. At 18520 enter tank bog br. N 20° W: At 19432 leave same: At 19740 enter field: At 19862 set hub on hill: At 20660 enter bog br. N4S: At 21060 leave same and enter high land: At 21120 set temp. corner to secs. 32 & 33, T. 141, R. 28, where we find no bearing trees and quit for night. Todd stays over night with Pinckert. Mark Snell, Frank Pinckert, and James Ford assisted Harry S. Todd to day., Todd using a K. & E. transit, 300 foot steel tape and plumb. bob.

March 22, 1912. Continue transit line west bet. Twp. 140 & 141 N, Rg. 28 west. Same variation: At 21369.50 set hub: At 21400 cross road br. N4S: At 22319.30 set hub: At 22452 enter over flow of Thoroughfare bet. Woman and Girl Lake which br. N4S. At 22800 enter channel of same which br. N45°W: At 22950 leave same br. N45°W: At 23545 leave over flow and enter high land covered with birch: At 23760 set temp. 1/4 corner on S side of sec 32, T. 141-28. We search here for bearing trees but find none and continue west: At 23716.35 set hub: We set a hub out on the lake and search for bearing trees to cor. of secs 31 & 32, T. 141-28, but find none and quit for night. Same crew worked. Over night with Pinckert.

March 23, 1912. Mark Snell and Todd go back to the line and put in new bearing trees to the temporary corner on the S side of sec. 32, 141-28. Paper 5, N 52° 15' E, 15.45 ft. Pop. 3 N 66° 33' W, 21.40 ft.

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To the temporary South corner of secs. 32 & 33, T. 141-28, we mark new bearing being:
Birch 5 inch, N 15° 20' W, 44.00 ft.; Poplar 8 inch, N 28° 45' E, 36.30 ft.
We then take the outfit and go to Mark Snell's place, where we stay over night.

April 1, 1912. James Snell and Harry S. Todd carry the survey outfit over from Mark Snell's to Ponquille. I leave the outfit there and walk out to Frank Pinckert's place to get him to work. Pay the hotel bill of \$1.00. Harry S. Todd.

April 2, 1912. Frank Pinckert and Harry S. Todd go to Sub 23716: 3.5 W on random line bet. Twp. 140 & 141, R. 28. Continue west. We run the line across Woman Lake. No chain, and look for bearing trees to the SW corner of sec. 31, T. 141-28, where U. S. Notes call for post as follows:

Y. Pine 20, N 17° W, 54 links. W. Pine 24, N 16° E, 45 links.
There are lots of W. Pine stumps here but they have all been burned so that it is almost impossible to tell whether they have been marked or not.
Quit for night and paid hotel bill, \$1.00 at Ponquille.

April 3, 1912. Frank Pinckert and I begin a stake at 24000 W and chain west on transit line across Woman Lake. At 24250 enter over-flow of Woman Lake: At 24860 leave same and enter lake: At 26400 set temp. SE corner, sec. 31, T. 141, R. 28, where U. S. Notes call for:

Elm 12 inch, N 19° W, 62 links. Ash 4 inch, N 13° E, 44 links.
We find nothing and we continue west. At 31060 leave lake for N. & S. We then cut the line inland about 400 ft. and go look for bearing trees to SW corner of sec. 31, T. 141-28, and find the NE tree which has been blown down leaving a slab sticking up on which we can distinguish the letters "S 31" but the "B. T." marks has been burned off. We set the corner from this tree and then find the other one. It is burned so no marks can be seen plainly. Both trees check out for course and measurements. We put in stake for corner with new bearing trees as follows: Bir. 3 inch, N 25° E, 19.14 ft., Bir. 10 N, 75° W, 3.81 ft., trees marked "NEW" "B. T." quit for night. Paid \$1.00 hotel expense. Harry S. Todd.

April 4, 1912. Frank Pinckert and I go to our line across Woman Lake and cut line from Twp. corner to our random line and then chain up and find that at 31579.70 west the Twp. corner bro. N 63.5.15 ft. We then start checking back East over our random line and get across the lake. I set Meander Cor. No. 21 on the N. side of Girl Lake bet. sec. 33 & 34, T. 141-28.

We find the old Nor. Bearing trees plainly marked from which we set the corner and put in the following new bearings:
Poplar 3 inch, N 15° W, 4.70 ft. Pop. 3, S 45° E, 2 ft. Paid \$1.00 hotel expense. Harry S. Todd.

April 5, 1912. Correcting our random line East, we find that the SE corner of 31 = SW corner of sec. 32, T. 141, R. 28, goes N 53.1.56 ft. and East 83.55 ft., but as this measurement comes out in the over-flow of Woman Lake so that we cannot drive a corner in, or even work around it, we go to the temp. SE corner of sec. 32 = SW corner of sec. 33, T. 141, R. 28. We find this corner goes N 42.72 ft. and East 66.84 ft. where we put in the following new bearing trees:

Pop. 3 inch S, 65° W, 9.50 ft. Pop. 8 inch, S 45° E, 13.50 ft.
We then go to the West 1/6 corner on S side of sec. 33, T. 141, R. 28, and find that it checks North 398.18 ft. and East 62.55 ft. The 1/4 corner comes out in

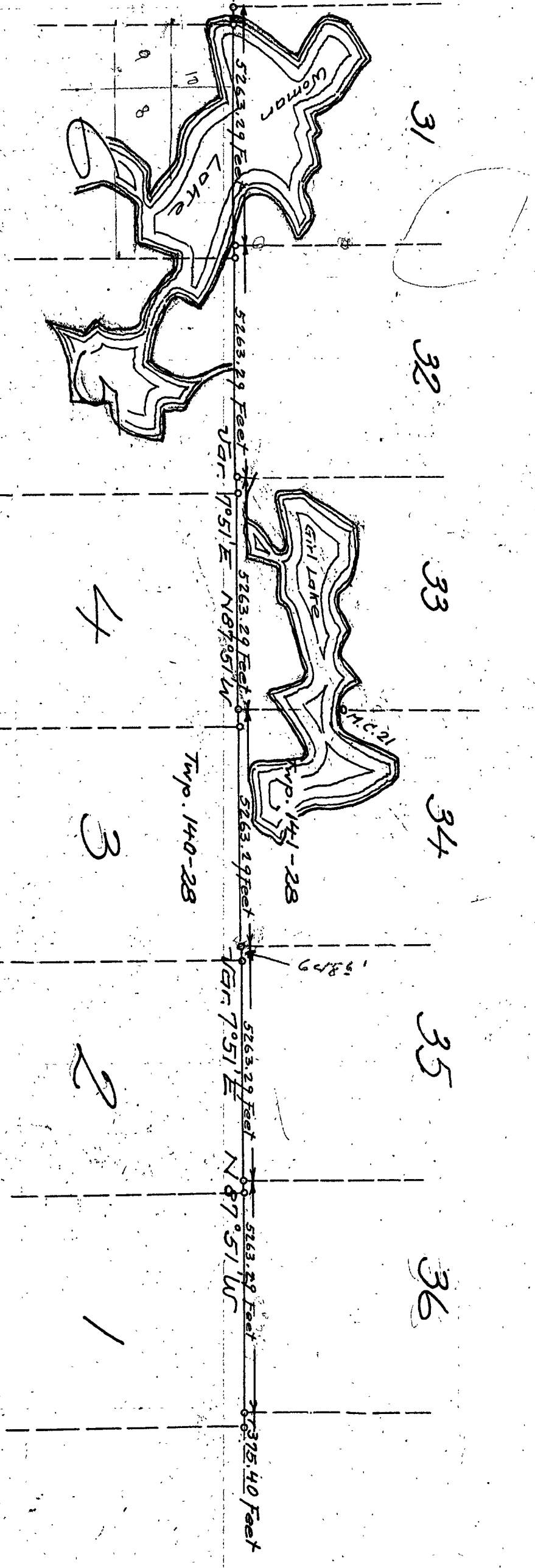
B

SURVEY-RECORD-292

PLAT

TWP. 140-R6-28-SECS. 1-2-3-4-5-6.
TWP. 141-R6-28-SECS. 31-32-33-34-35-36.

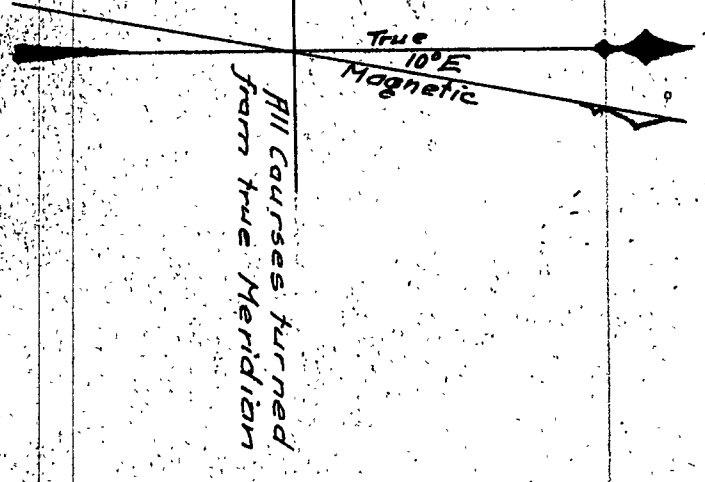
Scale: 1-mile = 2-inches



5263
5263
10582

31579.2

5263.29
2631.64
18421.2
13166.0
37379.2



B

TODD

292-CONT.

the ice and we cannot get at our temp. 1/4 corner on S side of sec. 33, so we do not set it but go to the East 1/4 corner on S side of sec 33, T.141, R.28. We find that this corner goes North 345.18 ft and East 54.21 ft.

The SE corner of sec. 33 = SW corner of sec 34 T.141, R.28 goes N 318.18 ft. and East 50.04 ft. where we put in stake with new bearing trees as follows:

W. Pine stump, S, 10° W, 7.90 ft. N. Stump, N 80° W, 10.25 ft.

Quit for night. Frank Pinckert, Paid \$1.00 Hotel expense. Harry S. Todd.

April 6, 1912. Harry Todd and Frank Pinckert continue correcting line East. The SE corner of sec. 34 = SW cor. of sec. 35, T.141, R.28, goes North 212.35 ft. and East 33.36 ft. we put in following bearing trees:

N. Pine stump 14 inch, S 70° W, 61.30 ft. N. Pine stump 12 in. N 75° W, 35.35 ft.

The SE corner of sec. 35 = SW cor. sec. 36, T.141, R.28, goes North 105.87 ft. and East 16.68 ft. where we put in new bearings as follows:

Cedar 7 inch, N 45° E, 8.70 ft. Cedar 9 inch N 35° W 18.90 ft.

Frank Pinckert helped me to take out-fit across Inquadona Lake.

Paid \$1.00 Hotel Expense. We could find no corners, all bearings on North side of secs 1, 2, 3, 4, 5, 6, T.140, R.28. Harry S. Todd.

Recorded. Nov. 30-16.

TOWNSHIP-138-RG. 31.-SEC. 31.
TOWNSHIP-137-RG. 31.-SEC. 6.

Field Notes of the survey of the line between secs. 6, 137, R. 31, and sec. 31, T. 138, R. 31, as surveyed by A. W. Moulster Deputy County Surveyor.

Monday July 17, 1911. A. W. Moulster transitman, with A. W. Fuller, William Wagner and John Crossman, assisting; Drive to the S boundary of sec. 31, T. 138, R. 31, with livery team.

Tuesday July 18, 1911. Rained part of the day, toward evening stopped raining and we worked until dark, setting on the SW corner of sec. 31, T. 138, R. 31, being the NW corner of sec. 6, 137, R. 31 and the Township corner, previously set by Curo, being an 8x8 inch cement post, 9 run East on $9^{\circ}15'$ Var. bet. secs. 6 & 31. At 280 & 400 & 600 set pins; At 725 foot of raise; At 900 set pin.

Wednesday July 19, 1911. At $\frac{1}{4}$ corner bet. secs 6 & 31, U.S. notes call for W.C. West 657 links from which: Aspen 10 inch br. N $46^{\circ}15'E$, 218 lks. = 143.88 ft. At 874.90 ft. East set hub; At 1000 & 1200 set pin; At 1374.78 set hub on hill at big cut. At 1400 set pin; At 1500 center of meadow; At 1600 set pin; At 1650.40 ft. E. set hub on hill; At 1760 enter dry slough; At 1800 & 2000 & 2200 & 2400 set pin; At 2600 leave dry slough; At 2725 enter dry slough; At 2800 set pin; At 2875 leave slough; At 3000 & 3200 set pin; At 3307.80 ft. E set hub; At 3400 set pin; At 3528.30 ft. E set hub on hill; At 3600 set pin; At 3700 enter meadow; At 3800 set pin; At 3850 leave meadow; At 4000 set pin; At 4074 ft. E. set hub on hill; At 4200 set pin; At 4450.35 E. set hub on hill; At 4600 pin; At 4728.32 ft. E. hub, which is Curo's Treasure

ment for the mile. The hub sets in his line. Found his old hub lying on the ground, which his notes say, he set for the true corner to secs. 5, 6, 31 & 32, between T. 137 & 138 N R. 31 W. At this corner Curo found the old NW, W. Pine

Goit bearing tree and put in new bearings as follows:

Red Oak 8 inch, N $41^{\circ}4'W$, 41.15 ft., Birch 12 inch, $342^{\circ}16'W$, 42.21 ft.

Thursday July 20, 1911. A.M. we packed and in P.M. we returned home.

Surveyed by A. W. Moulster, Deputy County Surveyor,
Cass County, Minnesota, July 17, 1911 to July 20, 1911.

Recorded Dec. 1-16.

County Surveyor,
Cass Co. Minnesota.

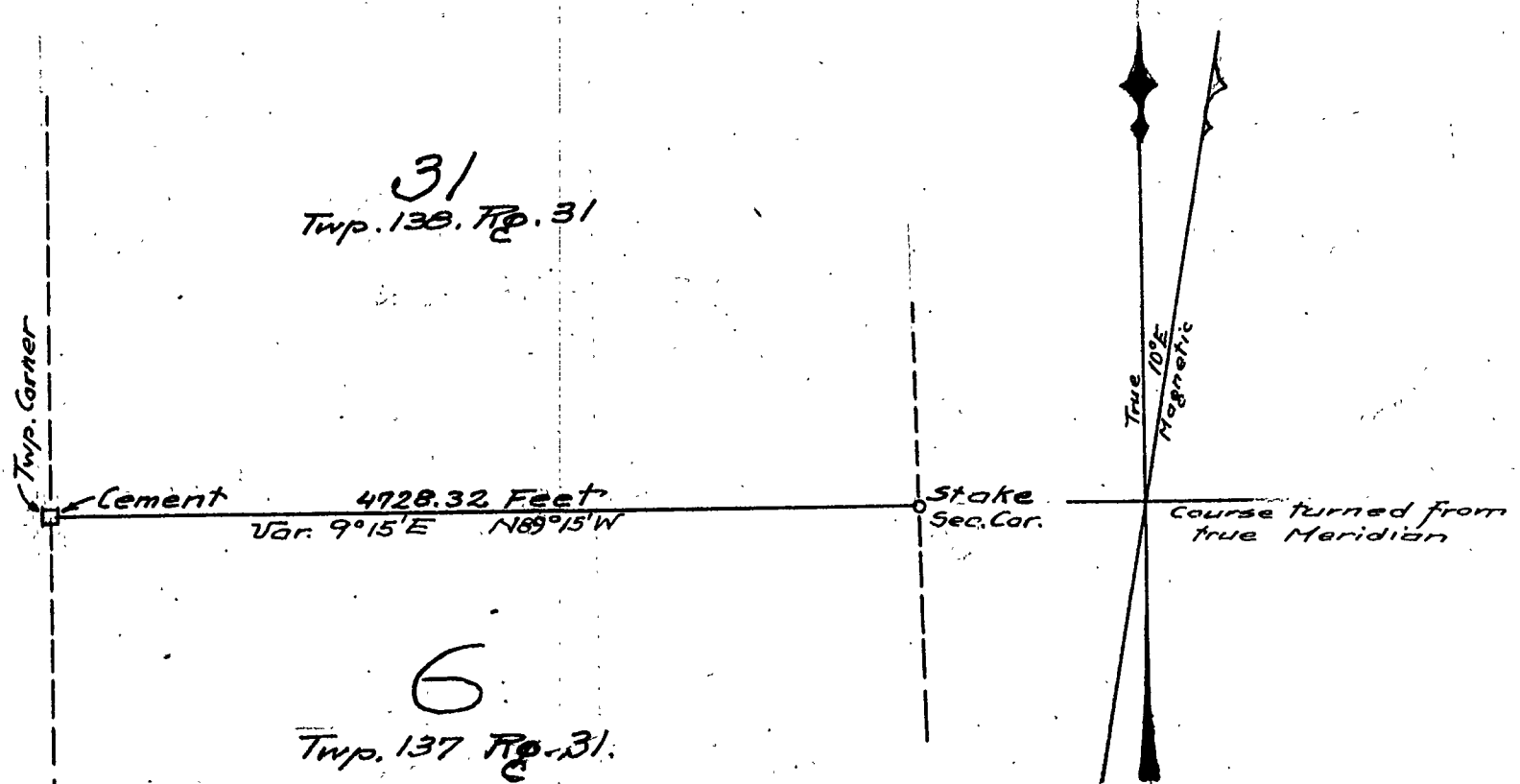
B

SURVEY-RECORD-293-

PLAT.

TWP. 138-RG. 31-SEC. 31-TWP. 137-RG. 31-SEC. 6

Scale: 1000-Feet = 1-inch

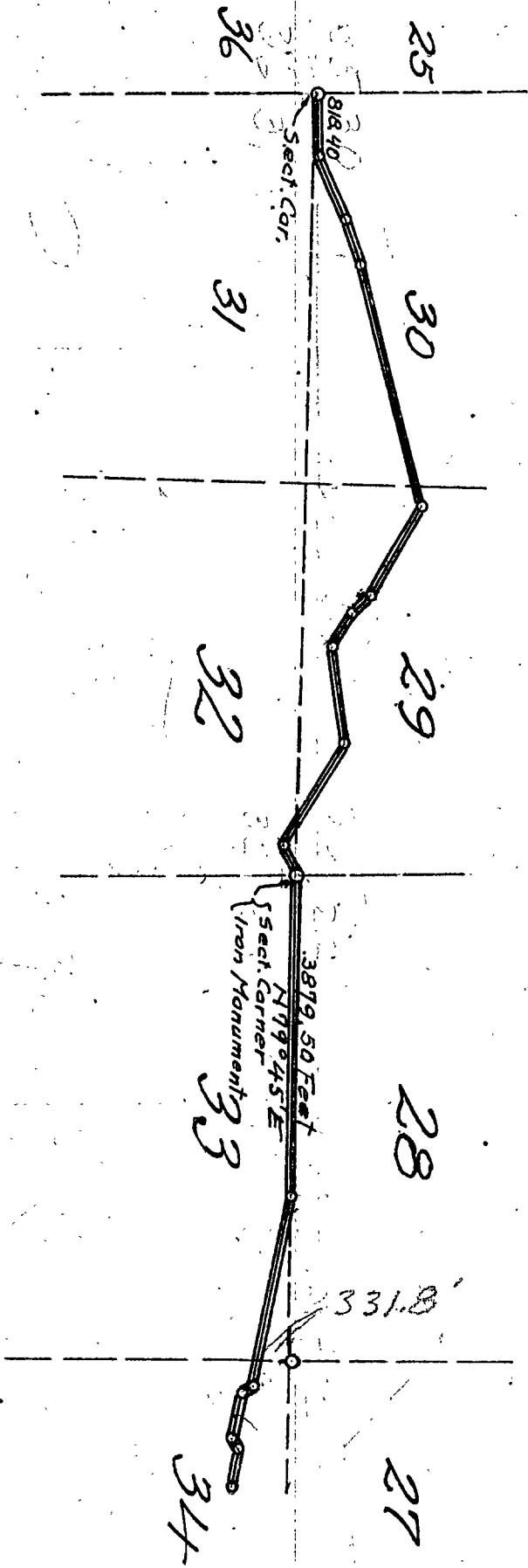


B

SURVEY-RECORD-294

PLAT

TWP. 141N. RANGE 28 - 4W. 5TH P.M.
SECTIONS: 28 - 29 - 30 - 31 - 32 - 33 - 34



TOWNSHIP 141 N - RANGE 28 W. 5TH P. M.
SECTIONS: 28-29-30-31-32-33-34.

Field notes of the survey made in secs. 28, 29, 30, 31, 32, 33, 34, T. 141, R. 28, as surveyed by James D. Middleton, under the direction of Town Board of Kegons Township, for the purposes of establishing a town road. The notes and plat have been handed in to my office by Mr. Middleton, thru his Attorney Mr. Daniel De Sury with a demand from the Town Board of Kegons Township that the same be recorded in the County Record Book of surveys. Mr. Middleton's notes are as follows:

"J. R. Kegon.

Field notes of a survey of the center line for a town road

In the
Town of Kegon, Cass County, Minnesota.
Explanatory.

The instrument used in the survey is a C. S. Berger & Sons No. 1; a transit in perfect adjustment.

The tape measures used are a Roe 300 feet and a Lucas 100 feet steel chain tapes which had previously been compared by measuring each 100 feet of the Roe chain tape with the Lucas chain tape and finding them to correspond.

All measurements are in feet and decimals of a foot except those of the U. S. bearing trees (B. T's) which are according to a copy of the U. S. Field Notes furnished by the County Surveyor.

All bearings are according to the magnetic meridian except those of the U. S. B. T's which are according to the field notes mentioned.

Corners established by the County Surveyor were used. Others that were destroyed were ascertained by proportional measurement.

I go to the corner to secs. 25, 30, 31 and 36, T. 141 N. R's 28 and 29 W, as established by the County Surveyor. A wood hub for the corner and Tamarac trees for the B. T's in a Marsh.

I call this section corner station 000+00.00 and begin the survey at this corner. Thence -

N 82° 45' E, 818.40 feet to an angle point, or station 8+18.40, a wood hub at the angle. No B. T's.

Station.

000+00.00 The corner to secs 25, 30, 31 & 36, T. 141, N., Rgs. 28 & 29 W.

8+18.40 The angle point. - Thence.

Left 22° 00' or N 60° 45' E, 878.00 feet to an angle point or station 16+96.40.

8+18.40 Angle point

16+96.40 The angle point, a wood hub at the point. No B. T's. - Thence.

Right 4° 00' or N 64° 45' E, 435.00 ft. to an angle point or station 21+31.40.

16+96.40 Angle point

21+31.40 The angle point. No B. T's. - Thence.

Right 4° 28' or N 69° 13' E, 2965.00 feet to an angle point, or Sta. 50+96.40.

21+31.40 angle point

24+55.00 Enter small Marsh.

25+05.00 Leave the Marsh.

25+30.00 Enter Marsh.

28+30.00 Leave the Marsh
 44+00.00 Enter Marsh
 45+80.00 Leave the Marsh
 46+30.00 Enter small Marsh.
 46+60.00 Leave the Marsh.
 49+42.00 Enter Marsh
 50+96.40 The angle point, a wood hut at the angle. N.B.T's. Thence.
 Right $45^{\circ}1'$, or $S 65^{\circ}46'E$, 1144.30 ft. to an angle point, or sta. 60+40.70
 50+96.40 Angle point. Leave the Marsh.
 57+71.00 Outlet of Marsh, flows southwestward. Edge of Marsh in right of way.
 60+40.70 The angle point, a wood hut at the angle. No B.T's. Thence..
 Right $9^{\circ}12'$ or $S 56^{\circ}34'E$, 377.40 feet to an angle point, or sta. 66+18.10.
 60+40.70 Angle point
 66+18.10 The angle point, a wood hut at the angle. No B.T's... Thence--
 Left $4^{\circ}14'$ or $S 60^{\circ}48'E$, 476.00 feet to an angle point or sta. 70+94.10.
 66+18.10 Angle point
 67+15.00 Enter Marsh
 68+20.00 Leave the Marsh.
 69+40.00 Enter Marsh.
 69+95.00 Leave the Marsh.
 70+94.10 The angle point, a wood hut at the angle. No B.T's .. Thence--
 Left $48^{\circ}43'$ or $N 70^{\circ}29'E$, 1134.00 ft. to an angle point, or Sta. 82+28.10
 70+94.10 Angle point
 71+95.00 Enter Marsh.
 72+95.00 Leave the Marsh
 74+20.00 Enter Marsh
 74+45.00 Leave the Marsh
 76+35.00 Edge of Gully
 76+65.00 over Gully
 77+45.00 Enter Marsh
 77+75.00 Leave the Marsh
 78+85.00 Enter Marsh
 79+20.00 Leave the Marsh.
 82+28.10 The angle point, a wood hut at the point. No B.T's.
 Right, $39^{\circ}6'$ or $S 70^{\circ}25'E$, 1413 feet to an angle point, or Sta. 96+41.90
 82+28.10 Angle point
 82+50.00 Enter Marsh
 83+50.00 Leave the Marsh
 93+06.00 Left $27^{\circ}34'$, 455.90 ft. to the corner to secs 28, 29, 32 & 33
 96+41.90 The angle point, a wood hut at the angle. No B.T's... Thence--
 Left, $60^{\circ}53'$ or $N 49^{\circ}35'E$, 275.20 ft. to the corner to secs. 28, 29, 32 & 33,
 or station 99+17.10. 99+16.3
 96+41.90 Angle point
 99+16.3 The corner to secs. 28, 29, 32 & 33, a galvanized iron pipe for the corner,
 from which bears the following U.S. B.T's.-
 Norway Pine 17 N, $57^{\circ}00'E$ (remains) -- 37 links
 Norway Pine 7 N $53^{\circ}00'W$ (remains) 74 links.

6240.70
 377.40
 6618.10

82+28.10
 14+13
 96+41.10

99+16.3

White Birch 12, S 30° 00' W. (Not found) 146 links
 and the following additional B.T.s -
 Red Oak 7, N 0° 47' W. 59.91 feet. - - Thence
 Right 30° 10' or N 79° 45' E, 3879.50 feet, on the line bet. secs. 28 & 33 to its intersection
 with the south boundary line Seesh Lake Indian Reservation, or station ^{137+95.80'} 127+96.60.
 99+17.10. The corner to secs. 28, 29, 32 & 33.
 104+40.00 Enter Marsh 99+16.30
 104+90.00 Leave the Marsh. 38+79.50
 108+80.00 Enter Marsh. $\begin{matrix} 137+95.80 \\ 20-28.40 \\ \hline 117+67.40 \end{matrix}$
 111+20.00 Leave the Marsh $\begin{matrix} 117+67.40 \\ 12-11.20 \\ \hline 105+56.20 \end{matrix}$
 115+95.00 Enter Marsh
 117+00.00 Leave the Marsh
 127+15.00 Enter Marsh
 137+95.80 The intersection of the line bet. secs. 28 & 33 with the south boundary line
 of Seesh Lake Indian Reservation, a wood hut at the intersection. Inter-
 section in a Marsh. No B.T.s. - - Thence - -
 Right, 11° 25', or S 88° 50' E, on the south boundary line of Seesh Lake Indian
 Reservation 2028.40 feet to an angle point, or station ^{158+24.2} 148+25.00.
 127+96.00 The intersection of the line between secs. 28 & 33 with the south boundary
 line of Seesh Lake Indian Reservation.
 128+65.00 Leave the marsh
 129+40.00 Enter Marsh.
 145+25.10 Intersection line between secs. 33 & 34, 2574 feet north of the meander
 corner on the north shore of Seil Lake.
 146+25.00 Leave the Marsh.
 148+00.00 Enter Marsh.
 158+24.2 The angle point, a wood hut at the angle. No B.T.s. - - Thence - -
 148+25.00 Right 45° 00' or S 43° 50' E, 46.67 ft. to an angle point, or sta. ^{148+71.67} 148+71.77.
 158+24.2 Angle point
 148+25.00 The angle point, a wood hut at the angle. No B.T.s. - - Thence
 158+70.87 Left, 45° 00', or S 88° 50' E, 584.00 feet to an angle point, or sta. 154+55.77.
 148+71.77 Angle point
 158+70.87 The angle point, a wood hut at the angle. No B.T.s. - - Thence - -
 154+55.77 Left, 45° 00' or N 46° 10' E, 46.67 feet to an angle point, or station 155+02.44,
 to South bdy. line of L.L.I.R.
 154+55.77 Angle point
 165+01.54 The angle point on the south boundary line of Seesh Lake Indian Reservation,
 a wood hut at the angle point. No B.T.s. - - - - Thence - -
 155+02.44 Right 45° 00' or S 88° 50' E, on the south boundary line of Seesh Lake Indian
 Reservation, 493.40 feet to an intersection with an abandoned rail-
 road grade, or station ^{169+94.94} 159-95.40.
 165+01.54 Angle point on the south boundary line of Seesh Lake Indian Reser-
 vation. Leave the Marsh.
 169+94.94 The intersection of the S boundary line of Seesh Lake Indian Reservation
 with the abandoned rail road grade. No B.T.s.

Survey began May 28, 1914.
Survey finished June 9, 1914.

I, Jas. D. Middleton, a surveyor, hereby certify that I surveyed the center line of the road described in the accompanying field notes and that directions and distances returned therein are correct to the best of my knowledge and belief. Also, that the accompanying plat is drawn there from and is a true representation of the said center line.

Jas. D. Middleton
Surveyor

Dated this 25th day of August, 1914.

Recorded Dec. 1-16

John W. Curo, County Surveyor.
Cass County, Minnesota.

TOWNSHIP 141 Rg. 28-SECT. 11-12-13-14-22-23-27-34

TOWNSHIP 141 Rg. 27-SECT. 7-18.

Field notes of the survey made in secs. 7+18, T. 141, R. 27, and secs. 11, 12, 13, 14, 22, 23, 27, 34, T. 141, R. 28, as surveyed by James D. Middleton, under the direction of Town Board of Kegons Township, for the purposes of establishing a Town Road. The notes and plat have been handed in to my office by Mr. Middleton, thru his attorney, Mr. Daniel De Lury with a demand from the Town Board of Kegons Township that the same be recorded in the County Record Book of Surveys. Mr. Middletons Notes are as follows:

"Field Notes of a Survey of the Center line of a County Road in the Town of Kegon, Cass County, Minnesota.

* * * * *

Explanatory.

The instrument used in the survey is a C.S. Berger & Sons No. 1 a transit in perfect adjustment.

The tape measures used are a Roe 300 feet-- and a Lucas 100 feet steel chain tapes which previously had been compared by measuring each 100 feet of the Roe chain tape with the Lucas chain tape and finding them to correspond.

All measurements are in feet and decimals of a foot except those of the U.S. bearing trees (B.T.'s) which are in lks. according to a copy of the U.S. field notes furnished by the County Surveyor.

All bearings are according to the magnetic meridian except those of the U.S. B.T.'s, which are according to the field notes furnished by the County Surveyor.

All corners were established by proportional measurement where the U.S. B.T.'s had been destroyed, are not given, or the measurements to them are not recorded.

* * * * *

I go to the $\frac{1}{4}$ S corner bet. secs. 7+12, T. 141, N. R's 27+28 W., and find the following U.S. B.T., which had been blowed down:-

White Pine, 30 inches in diameter, S 5° 00' E, 80 links,
and establish this $\frac{1}{4}$ S corner according to the U.S. field notes, and drive a 1x1x20 inches drift bolt into the ground at the point for the corner, from which bear the following other B.T.'s:-

Norway Pine, 12 inches in diameter, S 89° 30' E, 162.66 feet
Red Oak, 12 inches in diameter, S 85° 30' W, 64.37 feet
to the heads of 8 d. nails.

I call this $\frac{1}{4}$ S corner station 000+00.00 and begin the survey at this cor. S 8° 57' E, between secs 7+12, T. 141 N, R's. 27+28 W., 2638.80 feet to the corner ^{thence} to secs. 7, 12, 13+18, T. 141 N, R's. 27+28 W., or station 26+38.80.

Station

000+00.00 The $\frac{1}{4}$ S corner between secs. 7+12, T. 141 N, R's. 27+28 W.

13+80.00 Enter Marsh.

14+90.00 Leave the Marsh

21+10.00 Enter Marsh.

25+15.00 Leave the Marsh.

26+38.80. The corner to secs. 7, 12, 13 & 18, T. 141 N., R. 28 & 27 W., a 1x1x20 inches drift bolt driven into the ground at the point for the corner, from which bear the following B.T's:-

White Pine, 28 inches in diameter, S 3° 00' W, 44.10 feet.

Red Oak, 10 inches in diameter, N 14° 55' E 39.90 feet.

The following U.S. B.T's for this corner have been destroyed by fire:-

White Oak, 14 inch in diameter, S 15° 00' E, 30 links.

Birch 6 inches in diameter, North, 18 links

Poplar 6 inches in diameter S 57° 00' E, 33 links.

Br. Oak 5 inches in diameter, N 57° 00' W, 33 links. --- Thence ---

Right 86° 18', or S 77° 21' W, bet. secs. 12 & 13, T. 141 N., R. 28 W., 5295.30

feet to the corner to secs. 11, 12, 13, 14, T. 141 N., R. 28 W., or Sta. 79+34.10

35+40.00 Enter Marsh

38+90.00 Leave the Marsh

44+90.00 Enter Marsh

47+15.00 Leave the Marsh

55+40.00 Enter Marsh

60+00.00 Leave the Marsh

60+90.00 Enter Marsh

62+65.00 Leave the Marsh

65+90.00 Enter Marsh

66+15.00 Leave the Marsh

68+90.00 Enter Marsh

69+40.00 Leave the Marsh

73+40.00 Enter Marsh extending beyond the section corner.

79+34.10 The corner to secs. 11, 12, 13 & 14, a 1x1x20 inches drift bolt driven into the ground at the point for the corner. No U.S. B.T's given. No other B.T's -
Left 55° 42' or S 8° 21' E bet. secs. 13 & 14, 2637.30 feet, to the 1/45 Corner
between secs. 13 & 14, or Station 105+71.40. Thence

81+20.00 Leave the Marsh.

105+71.40 The 1/45 corner between secs. 13 & 14, a 1x1x20 inches drift bolt driven into the ground at the point for the corner, from which bear the following stumps:-

White Pine 32 inches in diameter, S 37° 52' E, 36.35 ft.

White Pine 20 inches in diameter N 66° 9' W, 44.85 ft.

No U.S. B.T's are recorded for this corner altho' one had been marked -

Right, 87° 32' or S 79° 11' W, 2635.30 feet to the center of sec. 14 or Sta. 132+06.70 Thence

121+70.00 Enter Marsh.

122+00.00 Leave the Marsh

125+50.00 Enter Marsh

129+25.00 Leave the Marsh.

132+06.70 The center of the section, a 1x1x20 inches drift bolt driven into the ground at the point for the station, from which bear the following stumps:-

White Pine 29 inches in diameter, N 42° 20' W, 69.70 feet.

White Oak 19 inches in diameter, S 64° 50' E, 60.40 feet. --- Thence ---

Left 84° 3', or S 4° 52' E, 2575.70 feet to an angle point or Sta. 157+82.40

154+15.00 Enter Marsh.

B 295

295-CONT.

154+55.00 Leave the Marsh

157+82.40 The angle point, a 1x1x20 inches drift bolt driven into the ground at the point, from which bears the following B.T.s:-

Red Oak 12 inches in diameter, N 38° 55' W, 79.40 feet,

Popple 10 inches in diameter, S 40° 21' E, 46.75 feet - - - Thence - -

R Right, 45° 53' or S 41° 1' W, 980.40 feet to an angle point or Sta. 167+62.80

167+62.80 The angle point, a wood hub at the point, Thence - -

L Left 27° 31' or S 13° 30' W, 268.80 feet to an angle point, or Sta. 170+31.60,

170+31.60 The angle point, a wood hub at the point - - Thence - -

R Right 7° 46' or S 21° 16' W, 319.70 feet to an angle point or Sta. 173+51.30,

173+51.30 The angle point, a wood hub at the point - - Thence - -

R Right 5° 40' 31", or S 75° 47' W, 313.20 feet, to an angle point or Sta. 176+64.50.

176+64.50 The angle point, a wood hub at the point - - Thence - -

L Left 82° 20' or S 6° 33' E, 132.80 feet, to an angle point or Sta. 177+97.30

177+97.30 The angle point, a wood hub at the point - - Thence - -

R Right 84° 29' or S 77° 56' W, 334.00 feet, to an angle point, or Sta. 181+31.30

181+31.30 The angle point, a wood hub at the point - - Thence - -

L Left 59° 12' or S 18° 44' W, 375.80 feet, to an angle point, or Sta. 185+07.10,

185+07.10 The angle point, a wood hub at the point - - Thence - -

R Right 23° 17', or S 42° 1' W, 1200.00 feet to an angle or Sta. 197.07.10.

197+07.10 The angle point, a wood hub at the point - - Thence - -

R Right 20° 49' or S 62° 50' W, 943.90 feet, to an angle point, or Sta. 206+51.00,

206+51.00 Intersect line between sec. 22 & 23, 158.50 feet North of 1/4 S. (?) Corner,

203+05.00 Enter Marsh

205+05.00 Leave the Marsh.

206+51.00 The angle point, a wood hub at the point, Thence - -

L Left 28° 16' or S 39° 34' W, 1335.00 feet, to an angle point, or Station 219+86.00.

219+86.00 The angle point, a wood hub at the point - - Thence - -

L Left 19° 51' or S 19° 43' W, 446.40 feet, to an angle point, or Sta. 224+32.40.

224+32.40 The angle point, a wood hub at the point - - Thence - -

R Right 21° 46' or S 41° 29' W, 855.00 feet, to an angle point, or Sta. 232+87.40.

232+87.40 The angle point, a wood hub at the point, Thence - -

L Left 34° 29' or S 7° 00' W, 1123.00 feet, to an angle point, or Station 244+10.40.

236+10.00 Enter Marsh

236+60.00 Leave the Marsh

244+10.40 The angle point, a wood hub at the point - - Thence - -

Left 21° 16' or S 14° 16' E, 424.00 feet, to an angle point or Station 248+34.40

44° 28' 248+34.40 The angle point, a wood hub at the point - - Thence - -

525° 44' W
518° 44' E Right 40° 00' or S 25° 44' W, 476.70 feet to an angle point or Sta. 253+11.10.

253+11.10 The angle point, a wood hub at the point - - Thence - -

L Left 44° 28' or S 8° 44' E, 525.00 feet to an angle point or Sta. 258+36.10.

255+55.00 Enter Marsh

256+75.00 Leave the Marsh.

258+36.10 The angle point, a wood hub at the point - - Thence - -

Right 1° 43' or S 17° 01' E, 1037.40 feet, to an angle point, or Sta. 268+73.52

262+00.00 Enter Marsh

262+60.00 Leave the Marsh.

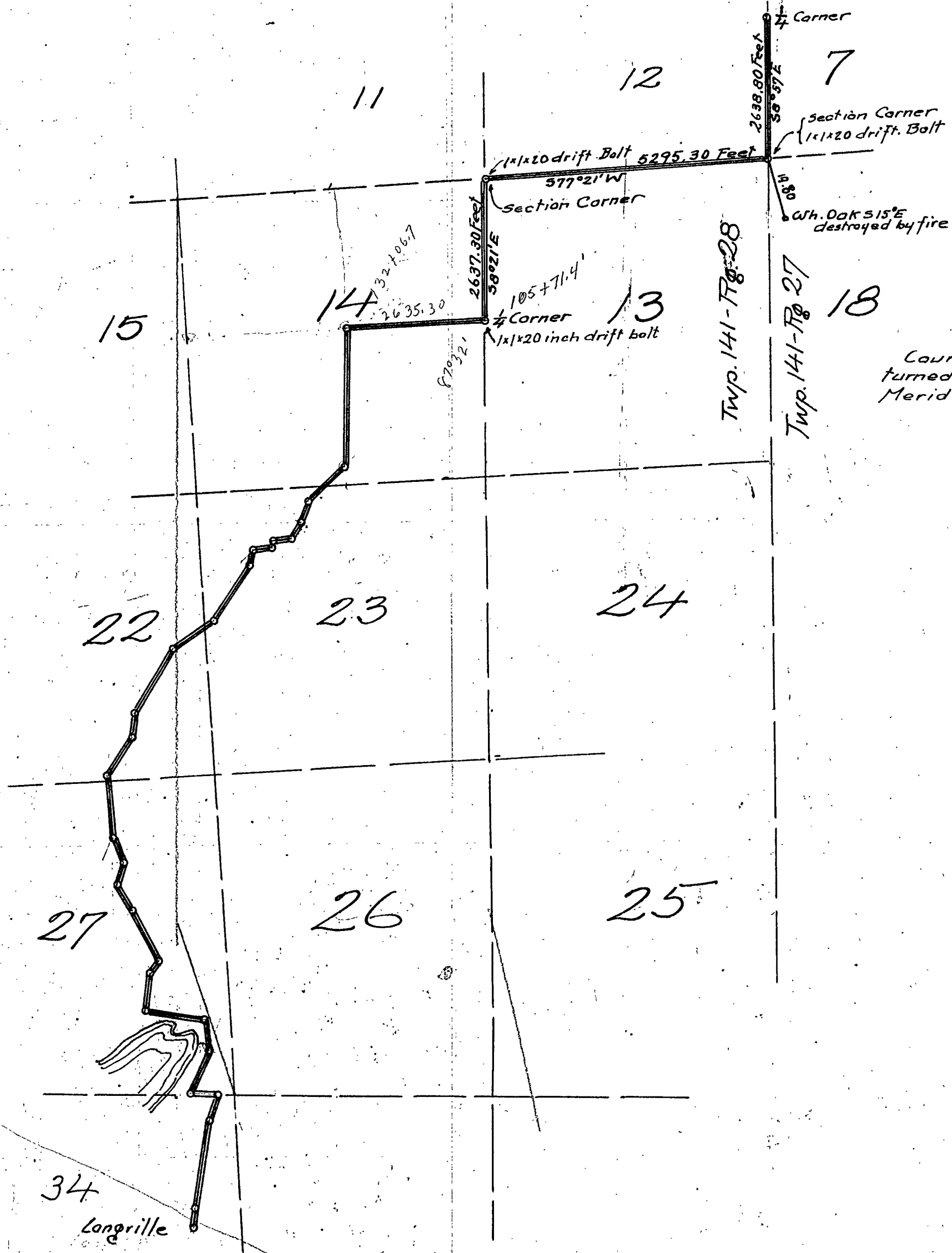
B

SURVEY-RECORD-295

PLAT

TWP. 141 RG. 27-SECTIONS 7 & 18

TWP. 141 RG. 28-SEC'S 11-12-13-14-22-23-27-34



266 + 35.00 Enter Marsh.

267 + 50.00 Leave the Marsh.

268 + 73.50 The angle point, a wood hub at the point. -- Thence. Right ^{S. 43° 56' W.} 60° 57' or S 53° 56' W, 281.00 feet, to an angle point or station 271 + 54.50.

271 + 54.50 The angle point, a wood hub at the point -- Thence -- Left ^{S. 10° 15' E.} 45° 11' or S 80° 45' W, 753.40 feet, to an angle point, or station 279 + 07.90.

279 + 07.90 The angle point, a wood hub at the point -- Thence -- Left ^{N. 89° 39' E.} 89° 6' or S 80° 21' E 1079.50 feet, to an angle point or station 289 + 87.40.

289 + 87.40 The angle point, a wood hub at the point -- Thence -- R. ^{S. 19° 18' E.} 71° 3' or S 9° 18' E, 555.60 ft. to an angle point or Sta. 295 + 43.00.

295 + 43.00 The angle point, a wood hub at the point, Thence -- R. ^{S. 13° 05' W.} 32° 23' or S 23° 5' W, 880.40 ft. to an angle point or station 304 + 23.50, at the intersection with line between secs. 27 + 34.

303 + 40.00 Enter Marsh.

304 + 23.50 The angle point, a wood hub at the point, Thence -- Left ^{N. 86° 03' E.} 107° 2' or S 83° 57' E, between secs 27 + 34, 483.40 feet, to an angle point in the center of an abandoned railroad grade or station 309 + 06.80.

306 + 90.00 LEAVE THE MARSH.

307 + 26.50 The 1/6 sec. corner as established by state Cruisers.

309 + 06.80 The angle point, a wood hub at the point. -- Thence. R. ^{S. 8° 43' W.} 102° 40' or S 18° 43' W, 600.00 feet, to an angle point or Station 315 + 06.80.

315 + 06.80 The angle point, a wood hub at the point -- Thence. Left ^{S. 0° 34' W.} 8° 9' or S 10° 34' W, 1500.00 feet to an angle point, or Station 330 + 06.80.

330 + 06.80 The angle point, a 20d spike at the angle point -- Thence -- Left ^{S. 7° 32' E.} 2° 6' or S 7° 39' W, 253.20 feet, to an angle point or station 332 + 60.00.

332 + 60.00 The angle point, at the intersection with _____ street, Longville, a wood hub on the east edge of an excavation.

"Keo C. R."

Survey begun April 23, 1914.

Survey finished May 26, 1914.

Surveyor's Certificate.

I, Jas. D. Middleton, a surveyor, hereby certify that I surveyed the center line of the road described in the accompanying field notes and that the directions and distances returned therein are correct to the best of my knowledge and belief. Also that the accompanying plat is drawn therefrom and is a true representation of the said center line.

Dated this 1st day of September, 1914.

Recorded sec - 2 - 16

Jas. D. Middleton
Surveyor.

John W. Curra, County Surveyor.
Cass County, Minnesota.

309 + 06.80
307 + 26.50
808
10° 34'
2° 06'
7028
307 + 26.50
304 + 23.50
303 + 40.00

10° 34'
2° 06'
7028

TWP. 137-RG. 30-SEC'S 1-2-4-5-8-9-11 & 12
TWP. 138-RG. 30-SEC'S 32-33

Field notes of the survey and the establishment of corners and the finding of marks to identify, establish and hold U. S. corners to sections 1, 2, 4, 5, 8, 9, 11 & 12, Twp. 137,

Rg. 30, and sec. 32, 33, 35 & 36, Twp. 138, Rg. 30, as surveyed and found and recorded by A. W. Moulster, Deputy County Surveyor, Cass County Minnesota.

Monday August 28, 1911. A. W. Moulster transitman, Frank Green, flag and chain, John Crossman-Aveman, Isaac Norman "going along" Between secs 1 & 2. At SW cor. of sec. 1 being the corner to secs 1, 2, 4 & 12, Twp. 137, Rg. 30,

U. S. notes call for post and the following bearing trees:

Jack Pine 10 inch, S 37° E, 23 links = 15.18 ft.

Jack Pine 14 inch, N 24° W, 29 links = 19.14 ft.

Jack Pine 5 inch, S 62° W, 25 links = 16.50 ft.

Nor. Pine 10 inch, N 38° E, 30 links = 19.80 ft.

set corner from NW and NE B.T. trees by measurement, old B.T. then stand as follows:
N. Pine 14 inch bears N 41° 31' E 19.80 ft.

Stump of old 10 inch J. Pine bears N 38° 30' W, 19.14 ft. Var. 10° 10'. The SE and SW trees are gone. Setting on corner run N 10° 10' Var. Second class chaining: At 100 feet leave highland: At 200 pin: At 300 enter meadow: At 450 leave meadow:

At 1200.00 N. set hub: At 1320 ft. N set temp. 1/4 cor: At 1430.55 ft. N set hub on S bank of river (E & W) General direction NW and SE. At 1450 enter river: At 1515 leave river; enter tag alders: At 1900 enter meadow: At 2500 leave meadow:

At 2578 set hub: At 2640 ft. N. no trace of 1/4 corner bet. secs. 1 & 2, trees in line, all cut close to ground. At 1/4 corner bet. secs. 1 & 2, T. 137, Rg. 30, U. S. notes call for O. to F. at 6. J. Pine 8 inch, N 24° E, 21 links = 13.86 ft. J. Pine 7 inch, S 58° W,

7 links = 4.62 ft. All are gone and we continue North. At 2945.60 set hub: At 3600 N. swp. to the east: At 4096.40 N set hub: At 5200 N set pin: Var. reads 9° 30'.

At 5311 ft. N the NW cor. of sec. 1, being the corner to secs. 1, 2, 35 & 36, on line bet towns 137 and 138, Rg. 30, sets W 15.70 ft. We find an iron in S wheel track of wagon road which was set by Curo from old 10" bearing trees. SE B.T. stump and stub lying near. U. S. notes call for post and: Bl. Pine 8 inch, N 15° E, 10 links.

Bl. Pine 10 inch S 25° W, 10 lks. Bl. Pine 8 inch N 5° W, 18 lks. Bl. Pine 6 inch, S 50° E, 15 lks.

Tuesday August 29, 1911. At SE corner of sec. 5, being corner to secs 4, 5, 8, 9, T. 137-30, 10" notes call for post and following bearing trees.

Wh. Pine 16 inch N, 63° E, 17 links = 11.22 ft. :: Wh. Pine 8 inch N, 57° W, 11 links = 7.26 ft.

Wh. Pine 10 inch S, 15° E, 36 links = 23.76 ft. :: D. Pine 18 inch S, 60° W, 37 links = 24.42 ft.

Same crew, livery team; \$3.00 Drove to Swamp line. Went to this corner and set corner by proportionate measurement from old bearing trees except the SW one which is gone. All B.T.s. down and badly burned. Could not see marks, but trees are all right size, kind and stand about right; blades are plain. Set 3 1/2 x 3 1/2 x 24 inches.

Birch stake, 6 inches above ground for the true corner to secs. 4, 5, 8, 9, T. 137, Rg. 30, with new bearings as follows:

Oak 7 inch, S 27° 7' E, 33.80 ft. Bir. 7 inch, N 33° 34' E, 35.60 ft., to tack heads at 9° var. We find an old stake 10 feet S of mine, this is good evidence that our corner is correct. Run North bet. secs. 4 & 5, 9° var. At 10 ft. enter tag alders:

at 250 ft. leave same: At 600 ft. N set hub: At 1261.70 ft. N set hub:

At 1289.50 ft. N wire fence east and west: At 1700 ft. N enter dry meadow:
 At 2400 ft. N leave same: At $\frac{1}{4}$ corner bet. secs. 4 & 5, T. 137, Rg. 30, Goit notes call
 for R. to C at 6. Post and following bearing trees:
 J.P. 8 inch, N 50° W, 23 links = 15.18 feet; J.P. 6 inch, S 8° E, 35 links = 23.10 ft.

Wednesday August 30, 1911. Same crew and etc.

Find $\frac{1}{4}$ cor. bet. secs. 4 & 5, T. 137-30, NW, a stub 5 ft. high all marked very plain,
 to the SE a tree, all marks plain: From these two we set a stake by measure-
 ment. Old bearing trees then stand:

J.P. stump N 50° W, 15.18 ft. J. Pine 3, S 78° 30' E 28.80 ft. 9° var.

At 2644.50 ft. N this $\frac{1}{4}$ cor. bet. secs. 4 & 5 sets W, 13.55 ft. I set the above $\frac{1}{4}$ cor.
 by measurement and courses from the NW bearing tree, the course from the SE
 bearing tree then checked at 9° var. This shows that the Goit surveyors made a
 mistake measuring from the SE bearing tree. Setting on the $\frac{1}{4}$ cor. bet. 4 & 5, run
 North 9° var. At 600 ft. N set hub: At 1350 ft. N set hub: At 2236 ft. N set hub:
 Var. reads $8^{\circ} 40'$: At 2271 ft. N center of main road bet. NW and SE: At 2380 enter
 low land, NW and SE. At 2400 set pin: At the NE cor. of sec. 5 = NW cor. of sec. 4,
 T. 137, Rg. 30, which is also the S corner to secs. 32 & 33, T. 138-30. U.S. notes call
 for "C" stake and following bearing trees:

Elm 20 inch, S 8° E, 435 links = 287.10 ft.: Wh. Pine 35 inch, S 23° W, 360 lks = 237.60 ft.
 Tamp 10 inch, N 1° E, 542 lks = 357.72 ft.

We find a large burned white pine stump on high ground. Norman says this
 is the old bearing tree. John Long says he saw the marks plain before the
 tree was cut and burned. The inside of the stump is burned out leaving
 a shell on N. side, showing the two old blaze holes plain, no other large
 white pine along the river, near. We set this corner to secs. 4, 5, 32 & 33, T. 137,
 Rg. 30, & 138-30, from Wh. Pine B.T. stump by course and measurement. At 9° var.
 Find old stumps which may have been other Old B.T.s. Doit know viz. Rotten
 Tamp 12 inch, N 2° E, 362.00 ft.

Thursday August 31, 1911. Same crew and etc. At 2685.20 ft. N on N $\frac{1}{2}$ of east
 boundary sec. 5, the NE cor. of sec. 5 sets W 78.93 ft. Cor. 75 ft. N of New River. About
 14 or 15 years ago (Isaac Norman swears to this) a certain Mr. Frey, a logger, cleared
 up the meadow where the NE corner sec. 5, stands, for logging purposes. He put in a
 dam down stream, and changed the channel of the river to its present channel. Old
 channel shows plain. The NE corner of sec. 5, now sets north of the new river, and
 south of the old river. Setting on cor. on 4, 5, 8, 9, run South 9° var. At 400 ft. S set
 hub: At 500 ft. S enter low land: At 555 ft. S creek, NE and W: At 1320 ft. S set
 tamp $\frac{1}{4}$ cor. on dry point 200 ft. wide: At 1440.75 ft. S set hub: At 1600 ft. S enter
 open cut over meadow: At $\frac{1}{4}$ corner bet. secs. 8 & 9, T. 137, R. 30. Goit notes call
 for "R to C at 5" post and following bearing trees.

Wh. Pine 35 inch, S 35° E, 33 lks = 21.78 ft.: Balsam 6 inch, S 84° W, 32 lks = 21.12 feet.

At 2797.80 ft. S set hub by fence. Curo's corner stands from the Wh. Pine stump S
 35° E, 19.71 ft. 9° var. At 2797.30 ft. S the $\frac{1}{4}$ cor. bet. secs. 8 & 9 sets W 16 ft. The
 above $\frac{1}{4}$ corner set by Curo. Mike Thompson swears Curo put it where it is.
 It is a 2x4" post marked $\frac{1}{4}$, stump marked "Old B.T." This corner sets correct
 from the heart of the stump & the old SE bearing tree. Curo.

Friday Sept 1, 1911. Same crew and etc.

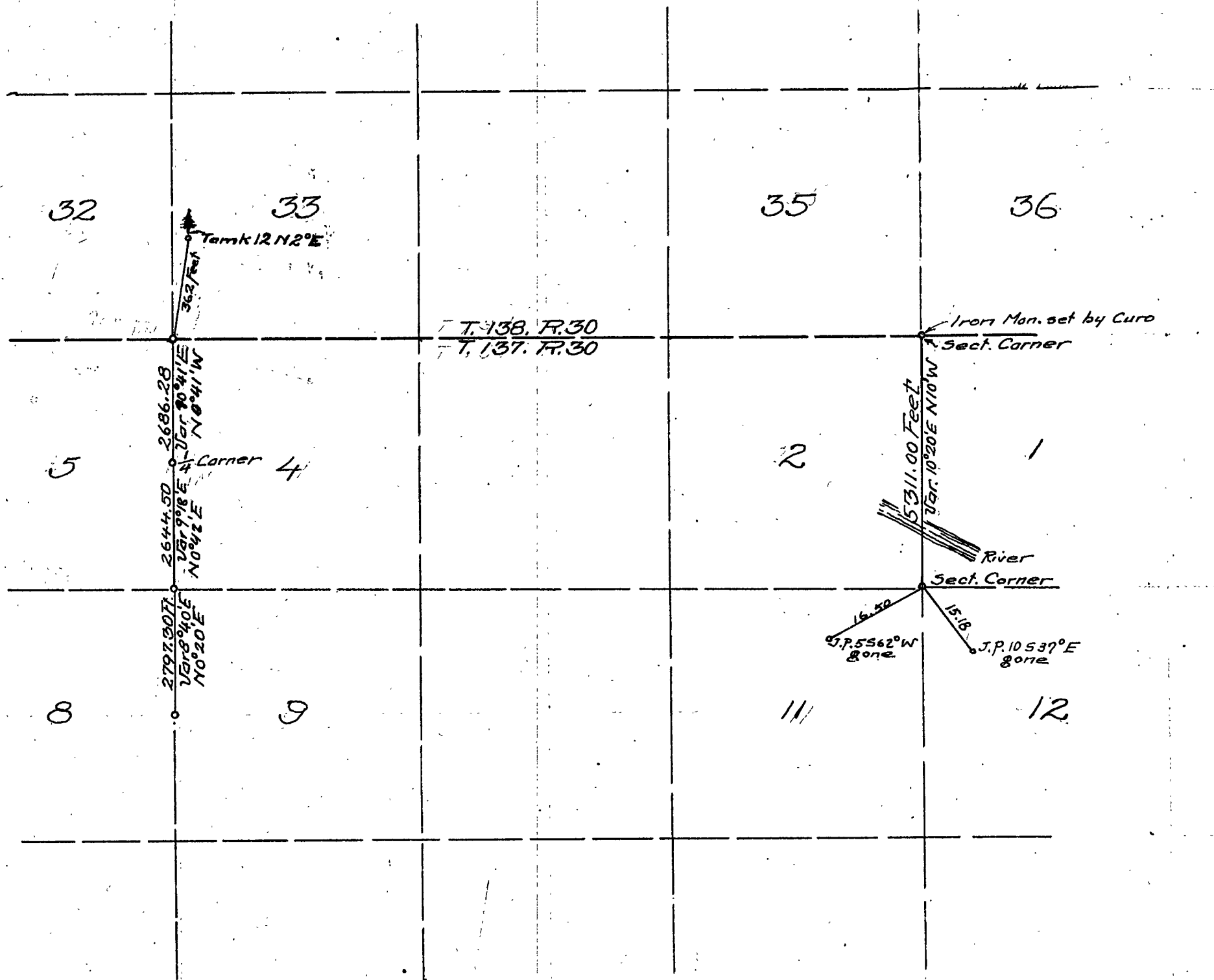
SURVEY-RECORD-№ 296.

PLAT.

TWP. 137-RG. 30-SEC'S 1-2-4-5-8-9-11-12

TWP. 138-RG. 30-SEC'S 32-33.

Scale: 2-inches = 1-mile



All Courses turned from True Meridian

B

296-CONTINUED

Corrections North half of East boundary sec 5, T. 137-30. The $\frac{1}{16}$ corner sets at 1354.30 N and West 39.50 ft. Proportion the 7 measure. 600 sets West 17.6 feet. 2236 sets West 65.8 feet. Goat chain from $\frac{1}{16}$ corner to NE cor. sec. 5 = 19.65 Chains being 1296.90 ft. Goat chain from $\frac{1}{4}$ post to NE cor. of sec. 5 is 2616.90 ft. U.S. Chain, and = 2685.20 ft. My chains. The position of $\frac{1}{16}$ corner --- is --- 26169:2685.20::1320:X. $X=1354.30$.
 South half of east boundary sec. 5, T. 137-30, correction --- 600 sets West 3.06 ft. $\frac{1}{16}$ corner sets at 1322.25 N and West 6.77 ft. Correcting N half of east boundary of sec. 8, T. 137-30, 700 sets West 2.30 ft. The $\frac{1}{16}$ cor. sets 5 at 1398.65 and West 8 ft. Setting on NE cor. of sec. 5, run 5 bet. sec. 4 & 5, $10^{\circ}15'$ Var. To get point of crossing of road which angles around river. At 90 ft. S center of Pine River: At 250 S highland: At 291.60 set hub: We then work at cutting out line around river to straighten road.

Saturday Sept. 2, 1911. Same crew and etc; except that Norman is absent. Crew worked in A. M. Correction for West boundary sec. 1, T. 137-30-Position of $\frac{1}{4}$ corner. Goat chain from SW to NW cor. of sec. 1 is 79.12 Chains = 5221.92 feet U.S. Chain and = 5311 ft. My chain. The goat chain from $\frac{1}{4}$ cor. on W side of sec. 1 to NW cor. is 39.12 Chains being 2581.92 ft. U.S. Chain. In figuring the correction of this proportionally 5221.92 is to 2640 as 5311 is to X. $X=2684.90$. Therefore $\frac{1}{4}$ cor. sets at 2685 North and West --- feet. (Not checked or set).

$\frac{1}{16}$ cor. bet. SW cor. and $\frac{1}{4}$ cor. on west side sec. 1, correction is: 2685 divided by 2 = 1342.50 and sets at 1342.50 N and W 3.90 ft. 4096.40 sets West 12.48. 2945.60 sets West 8.70 ft. 1200 sets W 3.50 ft.

A. W. Howester
 Deputy County Surveyor
 Cass Co. Minnesota.

Survey begun Aug. 28, 1911.

Completed Sept. 2, 1911.

Recorded Dec-8-1-16

County Surveyor.

TWP. 138. RG. 31. SEC'S. 21. 22. 23. 24. 25. 26. 27. 28

Field notes of the survey of a wagon road and the establishment of corners in secs. 21, 22, 23, 24, 25, 26, 27 & 28, T. 138, R. 31, working for Bull Moose Twp. as surveyed by Roy E. Bryant, Deputy County Surveyor.

Friday May 7, 1915. As Curo has telephoned C. W. Hanks, Chairman Town Board, Bull Moose Twp., that I am to run a few road lines for them, we leave camp at 7:30 A.M., with H. W. Hanks and team. Keiffel and Esser transit, and 200 foot Chicago Steel tape belonging to Curo. Arrive at William Kennie's farm in sec. 24, T. 138, R. 31, about 10:50 A.M. The Town Board meet at Kennie's where I get my dinner and am to board. The road to be surveyed runs from the SE cor. sec. 24, T. 138-31 thence 3 miles west along the sec. line bet. sec. 24 & 25, 23 & 26, 22 & 27, cor. of secs. 21, 22, 27 & 28. In P.M. we go to the iron Monument on range line previously established by Curo for the SE cor. sec. 24, the NE cor. of sec. 25, from which we run West $9^{\circ}30'$ Var. E. William Kennie flag and axe. William Walquist axe and chain. Bryant transit and chain. At 1617.60 ft. W set hub on west side of meadow. At 1960.90 ft. W set hub, double centers. Chain to 2400 W, rain begins at about 3 P.M. and we quit for night. Roy E. Bryant.

Saturday May 8, 1915. Continued West. Same crew. At 2640 set hub near $\frac{1}{4}$ corner bet. secs. 24 & 25. Where U.S. notes call for post and: Spruce 8 inch, $N 56^{\circ} W$, 45 links, Wh. Pine 24 inch, $S 32^{\circ} W$, 90 links. All are gone and we continue west. At 3464.00 set hub double centers: At 4574.60 W set hub: At 5280 set hub, true cor. sets $N 75.50$ ft. At this point being the cor. to secs 23, 24, 25 & 26, T. 138, R. 30, U.S. notes call for post and:

Tank 8 inch, $N 54^{\circ} 31' E$ 170 links = 112.20 ft.

Tank 8 inch, $S 85^{\circ} E$, 200 links = 132.00 ft.

we find the 8 inch tank $S 85^{\circ} E$ 132.00 ft. distance, which checks for course and distance with an old post previously set by Curo for the true corner. Quit for dinner and in P.M. correct back as follows:

Hub 5280.00 W goes $N 75.50$ ft. to true sections corner. Hub 4574 W goes $N 65.30$ ft. to true line. Hub 3960 W goes $N 56.60$ ft. to true $\frac{1}{16}$ corner bet. secs. 24 & 25. Hub 3464 W goes $N 49.50$ ft. to true line: 3748.20 W goes $N 53.50$ ft. 2640 W goes $N 37.70$ ft. to $\frac{1}{4}$ cor. bet. secs 24 & 25. Hub 1960.90 W goes $N 28$ ft. Hub 1617.60 W goes $N 23.00$ ft. to true line: Hub 1320 W goes $N 18.80$ ft. to the $E \frac{1}{16}$ cor. bet. sec 24 and 25. From the cor. to secs. 23, 24, 25 & 26, T. 138-30, we run W on 9° Var, about $\frac{3}{4}$ mile out line without chaining. Quit for night. Still staying with Kennie. Roy E. Bryant.

Sunday May 9, 1915. We do not work. Went to Jenkins.

Monday May 10, 1915. Jenkins to Kennie's on P.M. Train.

Tuesday May 11, 1915. Kennie and I hiked about $\frac{3}{4}$ of a mile in A.M. In P.M. Bryant, Kennie, William Walquist, John Walquist and Hans Jensen worked. Beginning at cor. to secs. 23, 24, 25 & 26, T. 138, R. 31, chain west on transit line: At 273 ft. W enter Pine River: At 295 leave same, which runs SW: At 704.50 W set hub: At 1126.50 W set hub: At 1906.10 W set hub: At 2562.20 W set hub: At 3280.20 set hub: At 3886.40 W set hub: At 4333.10 W set hub: At 4766 enter Halverson Creek. At 4775 leave creek: At 4796 enter creek NE: At 4810 leave creek: At 5280 set pin: At 5280, 30 ft. W the Cor.

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to secs. 22, 23, 26 & 27, sets N. 19.40. At this corner U.S. notes call for post and:

N. Pine 14 inch, S 27° E, 83 lks = 54.78 ft. N. Pine 8 inch, N 7° W, 31 links = 20.46 ft.

N. Pine 8 inch, S 15° W, 66 lks = 43.56 ft. N. Pine 20 inch, S 45° E, 150 lks = 99.00 ft.

We find the 20 inch N. Pine from which we set the corner post. Correcting back
hub 704.50 W goes N 2.50 ft. 1126.50 W goes N 4.10 ft. to true line; 1320 W goes N 4.80
to true line; 1906.10 W goes N 7.00 ft. 2562 W goes N 9.40 ft. 2640 W goes N 9.70 ft.
3280.20 W goes N 12.10 ft. 3886.40 W goes N 14.30 ft. 3960 W goes N 14.60 ft. 5280 W
goes N 19.40 ft. 5280.30 W goes N 19.40 ft. to the corner of secs. ²² 22, ²³ 23, 26 & 27.

Wednesday May 12, 1915. Same crew, beginning at the corner to 22, 23, 26 & 27,
T. 138, Rg. 31 run W 10° Var. 715.20 set hub; 1320 set hub; At 1765 set
hub; At 2640 set hub, cut to about 3960 and quit for night. Still staying
with Kennie. Roy E. Bryant.

Thursday May 13, 1915. Same crew continue west. At 3251.10 set hub;
At 4048.40 set hub; At 4551.90 set hub; At 4615.60 set hub "A" on east side of
lake. I cause a hub to be set on the W side of the lake marked hub "B"
and from hub "A" focus telescope on hub "B" the turn telescope 60° to the
left and run 771.70 ft. to hub "C" over which I set transit back sight on "A".
transit telescope, then turn 60° to right and run NW 771.70 ft. intersecting
our random line at a point W of hub "B". We use hub "B" only to find our
point of intersection but measurements not taken to hub "B". 4615.60 added to
777.70 = 5387.30 ft. W to hub "D" over lake. At 5387.30 W the corner to
21, 22, 27 & 28, T. 138-31 sets S 57.00 ft. to correct back; 5387.30 W goes S 57.00 ft.
Hub 4615.60 W goes S 48.90 ft. Hub 4551.90 W goes S 48.20 ft. Hub 4048.40 W
goes S 42.90 ft. Hub 3960 W goes S 41.70 ft. and west to 4040.00 W; Hub
2640 goes S 2790 and W to 2687.10 ft. = 1/4 corner. Hub 3251.10 W goes S 34.00
ft. Hub 1765 W goes S 18.70 ft. Hub 1320 W goes S 13.90 and W to 1346.70 W.
Hub 715.20 W goes S 7.50 ft. At the corner to secs 21, 22, 27 & 28, T. 138-31, U.S. notes
call for post and: Tank 4 inch, N. 47° W, 6 links, Tank 6 inch, N 22° E, 13 lks.
Tank 12 inch, S. 87° W, 35 links, Tank 6 inch, S 52° E 22 links.
Found all trees down and find post which checks. Beginning at the
Cor. to secs. 21, 22, 27 & 28, T. 138, Rg. 31, runs S on 7° 45' Var. same crew. At
140.70 ft. set hub on top of hill; At 955.50 set hub; At 1320 S set hub;
At 2000 S set hub; At 2640 ft. S set hub and quit for night. Still staying
with Kennie. Signed Roy E. Bryant.

Friday May 14, 1915. Rained.

Saturday May 15, 1915. Rained.

Sunday May 16, 1915. Rained.

Monday May 17, 1915. Bryant and Kennie work all day correcting lines as given
above, between secs. 24 & 25, and bet. secs 23 & 26. Roy E. Bryant.

Tuesday May 18, 1915. With Kennie and I correct balance of line as given above. Kennie
uses his team. R. E. Bryant.

Wednesday May 19, 1915. Kennie and team drive me and survey outfit back
to Curro's Camp to Pleggenkuhl's farm on sec. 2, T. 138-Rg. 31. I work in P.M. for Cass
County. Signed Roy E. Bryant.

Surveyed May 7, 1915 to May 19, 1915.

Recorded Dec-9-16.

County Supervisor

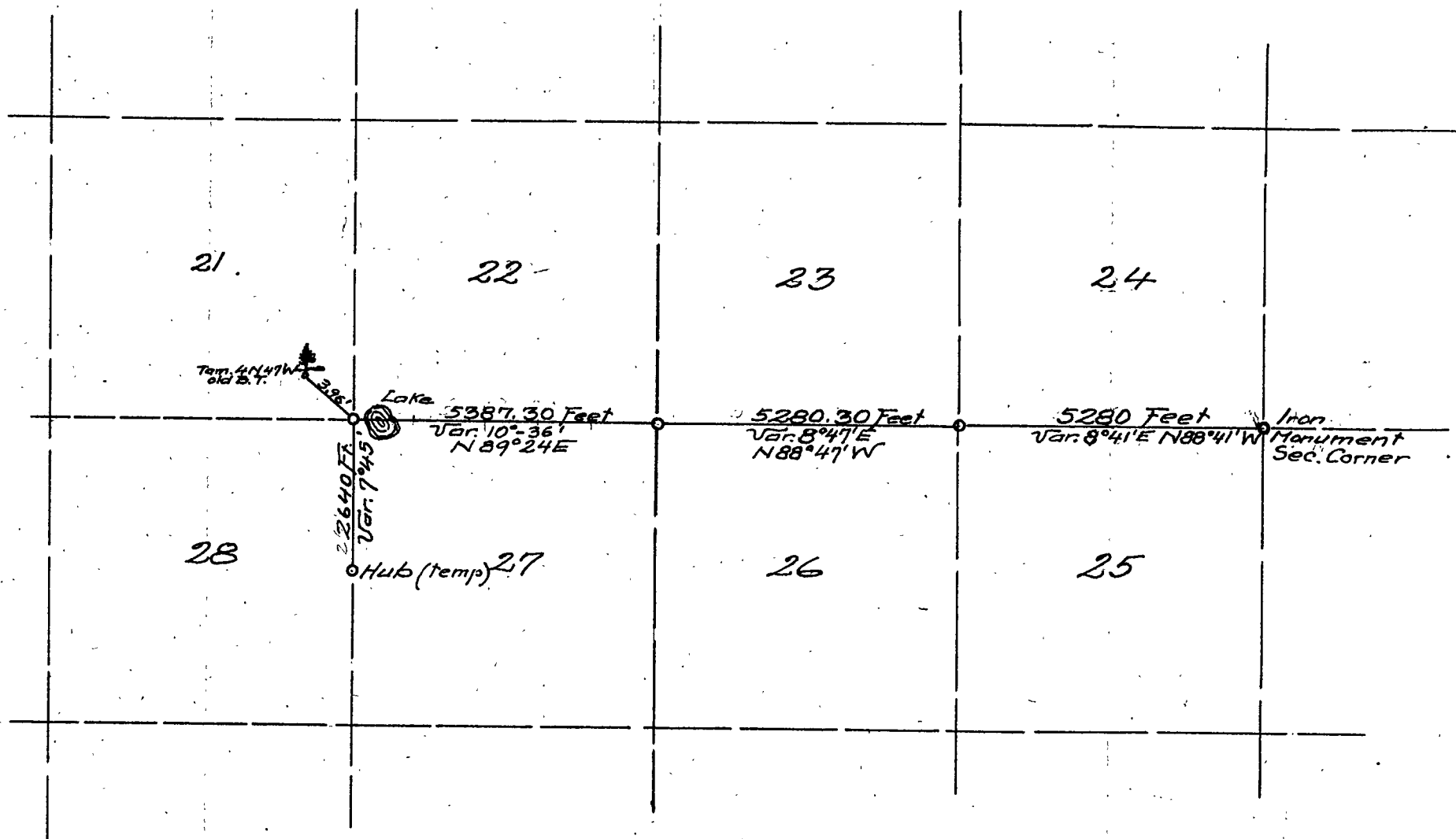
B

SURVEY-RECORD-297

PLAT.

TWP. 138. RG. 31. SEC'S 21. 22. 23. 24. 25. 26. 27. 28.

Scale: 2-inches = 1-mile



TWP. 138 N. RG. 30 W. 5TH P.M.
 SEC'S. 1-5-6-7-8-9-12-13-14-15-16-17-18-22-23
 TWP. 139 N. RG. 30 W. 5TH P.M. SEC'S 32.
 TWP. 138 N. RG. 29 W. 5TH P.M.
 SEC'S. 5-6-7-8-15-16-18-21-22.

Filled notes of the survey of lines and the establishment of wood or iron corners, and the search for old U.S. bearing trees or the establishment of new bearing trees in sections 1, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 17, 18, 22, 23, 26, 27, Township 138 N, Range 30 W, and section 32, Township 139 N, Range 30 W, and sections 5, 6, 7, 8, 15, 16, 18, 21, 22

Township 138, Range 29 all in Cass County Minnesota as surveyed by John W. Curo, County Surveyor and by M.A. Kemp, Deputy.

May 12th, 1913. Monday. I am working for Pine River Township in the survey of new wagon roads and the setting of iron and wood section corners. I leave Walker at 9:36 A.M. R.R. fare to Pine River via, M+T Ry. 61¢: Arrive at Pine River 10:44 A.M. Roy Blackburn wants to meet me with a team, but is not here; I take dinner with Mrs. Ager, prop. of Travelers hotel 25 cents.

In P.M. John P. Seef gets Harry Miller and auto to run me out to Roy Blackburns farm for which Miller will charge to Town \$1.00.

Blackburn goes to Pine River and gets iron monuments, a sack of cement and we drive to corner to sections 14, 15, 22, 23, T. 138 N Range 30 W, where U.S. notes call for a post and the following bearing trees:

- Black Pine 7 inch, N 48° 30' E 19 links = 12.57 ft.
- Black Pine 8 inch, N 57° W 35 links = 23.10 ft.
- Black Pine 6 inch, S 48° W 24 links = 15.84 ft.
- Black Pine 8 inch, S 54° E 33 links = 21.78 ft.

We find the stump of the NW and SE trees plainly marked which check out perfect for course and distance to face B.T. marks at 6° 35' Var. from which we set for the true corner a 2 1/2 inch galvanized iron pipe 4 ft. long and having a 3 inch galvanized iron cap on top and a 12 inch iron 1/4 inch rod run thru a hole in the bottom to act as anchor rod, set in a bed of concrete for the true cor. to secs 14, 15, 22 + 23, T. 138, Rg. 30, top of iron flush with rod. I once set this cor. for Fred Sanborn when all of the old bearing trees were here but now the SW tree is gone and the pulled out stump of the NE tree has been hauled NE of the road. One of my old B.T. stumps is still here, and being a 7 inch Jack Pine stump bears S 63° 28' W, 20.98 ft. to old tack head. we blaze new bearing trees as follows:

- J. Pine tree 10 inch, S 41° 25' W, 47.77 ft. to nail head.
 - J. Pine tree 8 inch, S 56° 28' E, 60.59 ft. to nail head in base of long spot at 6° 35' Var.
- at 1/4 corner bet secs. 14 + 23, T. 138-30 U.S. notes call for: (K. to W at 2) Bl. Pine 9 inch, N 26° 30' W 26 links = 17.16 ft.

298. cont'd

Bl. Pine 4 inch $S 19^{\circ} E$, 52 links = 34.32 ft.
 We find the tall stump of the NW tree standing well marked and the stump of the SE tree plainly marked from which we set a hub and tack in the center of the E+W graded wagon road for the temp $\frac{1}{4}$ cor. by proportionate measurement. Distance being about $\frac{1}{2}$ a foot short, bet. NW and SE old trees, 17.16 and 34.32 ft. is 51.48 ft. total U.S. chain and is 50.94 ft. my chain via courses at 7° var., being 0.54 of a foot short and from a tack in our temp. $\frac{1}{4}$ hub one old B.T. bears $N 26^{\circ} 30' W$, 16.80 ft. and the other old B.T. bears $S 19^{\circ} E$ 34.14 ft. to face of old B.T. marks. At 7° var. showing that our hub is too far N and must go S that old B.T. 9 bears $N 26^{\circ} 30' W$, 17.16 ft. U.S. chain = 16.98 ft. my chain, and old B.T. 4 bears $S 19^{\circ} E$ 34.32 ft. U.S. chain = 33.96 ft. my chain. Young Leonard Emery was with us. H. & B. transit, 100 foot steel tape. The E+W wagon road here runs on about 11° var. Roy Blackburn and team $\frac{1}{2}$ day in P.M. one day for me. Over night with Blackburn. John W. Curo.

May 13, 1913. Tuesday, Pine River Minnesota on range line, Twp. 138-29+30, N bet. secs. 13+18. Beginning at an iron monument at the SE corner of sec 13, T. 138, R. 30, set by Harry S. Todd and being the cor. to secs. 13, 18, 19+24, run N on $7^{\circ} 40'$ var. At 300 ft. set hub: var. changes to $7^{\circ} 50'$: At 600 + 900 + 1200 set hub: At 1320 ft. set hub for temp. $\frac{1}{16}$ cor. S bet. 13+18, var. changes to $7^{\circ} 45'$: At 1500 ft. + 1800 ft. + 2100 ft. N set hub: var. still reads $7^{\circ} 45' E$: At 2400 ft. + 2700 ft. set hub: At 2700 hub in small bog where we look for $\frac{1}{4}$ cor. bet. secs. 13+18, where U.S. notes call for post and:

N. Pine 20 inch, $N 51^{\circ} W$, 240 links (only one).

The $\frac{1}{4}$ cor. is gone and we continue transit line N. At 3000 ft., 3300 ft. N, + At 3400 ft. N set hubs: var. still reads $7^{\circ} 45' E$. At 3600 ft. N, 3900 ft. N, At 4200 ft. N, At 4500 ft. N set hub: var. still reads $7^{\circ} 45' E$.

At 4800, 5100 ft. N set hub: At 5300 set stake: At 5310 ft. N (rough chain) cor. to secs 7, 12, 13+18, bet. Twp. 138-29+30 bears $E 15.50$ ft. At this point U.S. notes call for post and:

Norway Pine 12 inch, $N 70^{\circ} 30' E$, 147 links = 97.02 feet.

Norway Pine 17 inch, $S 19^{\circ} 30' E$, 173 links = 114.18 feet.

(only two)

We find the 3 foot stump of the SE tree and the tall stub of the NE tree plainly marked from which we set the cor. by flat chain from face of the old B.T. marks and set $2\frac{1}{2}$ by 48 inch galvanized iron pipe, capped on top with rod thru bottom for anchor and set its full length in the ground in a bed of concrete after which the old U.S. trees bears SE 114.18 ft. and NE 97.02 ft. Someone had set an oak stake to this corner, but it was 0.40 off a foot S and 0.10 off a foot too far East. This iron is the true cor. to secs 7, 12, 13+18, T. 138, between ranges 29 and 30. Figuring the correction for the mile of line S. Hub 5310 goes $E 15.50$ ft.

Hub 5100 goes $E 14.88$ ft.: Hub 4800 goes $E 14.00$ ft.: 4500 goes $E 13.14$ ft.: 4200 goes $E 12.26$ ft.: Hub 3900 goes $E 11.37$ ft.: 3600 goes $E 10.50$ ft.: 3400 goes $E 9.92$ ft.: 3300 goes $E 9.63$ ft.: 3000 goes $E 8.75$ ft.: 2700 goes $E 7.88$ ft.: 2400 goes $E 7.00$ ft.: 2100 goes $E 6.13$ ft.: 1800 goes $E 5.25$ ft.: 1500 goes $E 4.38$ ft.: 1320 goes $E 3.85$ ft.: 1200 goes $E 3.50$ ft.: 900 goes $E 2.62$ ft.: 600 goes $E 1.75$ ft.: 300 goes $E 0.88$ of a foot.

We drive a mile N to the cor. of secs. 1, 6, 7, + 12, on Rg. line, T. 138, N. bet. Rgs. 29+30 W, where U.S. notes call for a post and:

Bl. Pine 9 inch, $N 33^{\circ} E$, 42 links = 27.72 ft.: Bl. Pine 6 inch, $N 46^{\circ} W$, 12 lks = 7.92 ft.

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Black Pine 6 inch, $S 31^{\circ} 45' W$, 13 links = 8.58 ft.; Bl. P. 7 inch, $S 30^{\circ} 30' E$, 67 lbs. = 44.22 ft. we find all four bearing trees standing plainly marked from which we set the true cor by proportionate chain from face of B.T. figures. We find the distance from NE to SW 27.72 ft. added to 8.58 ft. = 36.30 ft. U.S. Chain and is 36.60 ft. My chain or 0.30 of a foot longer than U.S. Chain. The distance bet. the SE and NW tree is 1.50 ft. short. 44.22 ft. added to 7.92 ft. = 52.14 ft. U.S. Chain and is 50.64 ft. My chain or 1.50 ft. short. By proportionate of the four distances the distance to the old B.T. are as follows:

NE 27.72 U.S. = 27.95 my chain Diff. .23 ft. SW 8.58 U.S. = 8.65 my chain, Diff. .07 ft.

SE 44.22 U.S. = 42.95 my chain Diff. 1.27 ft. NW 7.92 U.S. = 7.69 my chain, diff. .23 ft.

as this corner is in a ravine and is to mark the center of a new proposed Twp. wagon road running two miles S and $\frac{1}{2}$ mile E, and as there is a big hill just S and another big hill just E of this corner, I decide to leave the cor. setting as high as I can so that when the hills are graded down, it will not be covered up in the fill. We dig a trench one foot deep and 4 ft. long by one foot wide into which we set our iron monument, then fill the trenches concrete. The iron monument is galvanized iron pipe $2\frac{1}{2}$ inch thick with 3 inch cap on top and iron anchor rod thru bottom and is 4 ft. long, set in a bed of cement and sand, sets 1 foot in the ground, around which we heap a large mound of dirt 3 ft. high, covering the iron stake clear to the top. This marks the true cor. to secs 1, 6, 7, 7, 12, 7, 138, bet. Rgs. 29 & 30, set from old U.S. B.T.S. Blackburn

and Curo Chain. H. F. B. transit, 100 foot monarack steel tape. Frank Kline, and Ed. Harmon, Axemen. Blackburn's team. Over night with Blackburn. John W. Curo.

Wednesday May 14, 1913. John W. Curo, transit and chain. James Roy Blackburn chain. Elmer N. Hill with horse and rig, Axemen. Arthur Brown Axman.

Heller & Brightly transit, perfect line, double center hubs, 100 ft. Monarack steel tape, chaining the mile roughly (within one or two feet).

Beginning at iron corner to secs, 7, 12, 13 & 18, Twp. 138, Rs. 29 & 30, run N on range line 7° Var. E: At about 1200 ft N former County Surveyor Canfield has marked $\frac{1}{16}$ on a 12 inch Jack Pine which stands E of the line. This shows that if Canfield ever set a $\frac{1}{16}$ cor. at this point he made a mistake in correcting his line and got the $\frac{1}{16}$ about 100 feet to far S. We continue N: At 1300 set hub and tack; At 2650 N a stake set by Canfield for the $\frac{1}{4}$ corner sets W about 2 rods. At this $\frac{1}{4}$ cor. bet. secs 7 and 12, Frank Kline says that he and Canfield could not locate the $\frac{1}{4}$ cor. from the old U.S. bearing trees as they were gone, but that Canfield found an old log with the timber scribe marks on it, and as they could not tell where the log had come from, Canfield had to run the whole mile and establish the $\frac{1}{4}$ cor. $\frac{1}{2}$ way bet. and in line with the sec. cors., So we continue N:

At 3100 set hub and tack: At 3900 set hub and tack: To avoid running into heavy green J. Pine, we offset 50 ft. W and backsight at a flag set 50 feet W of 3100 and continue N on cut-out, right-of-way. At 5000 set stake: At 5040 set hub and tack on top of hill, thence down steep hill: At 5304 ft. N rough chain (probably 2 ft. off) the iron true cor. to secs 1, 6, 7 & 12, sets E 21.35 ft.

Correcting back: Hub 5040 goes E 22.78 ft.: 3900 goes W 21.07: 3100 goes W 16.74: 1300 goes W 7.02 ft.: To mark the true range line and road center we set transit on corrected hubs 1300 and turn telescope on true iron cor. S and drive a row of 3x24 inch Tamarac road center hubs every 200 to 300 ft., then turn

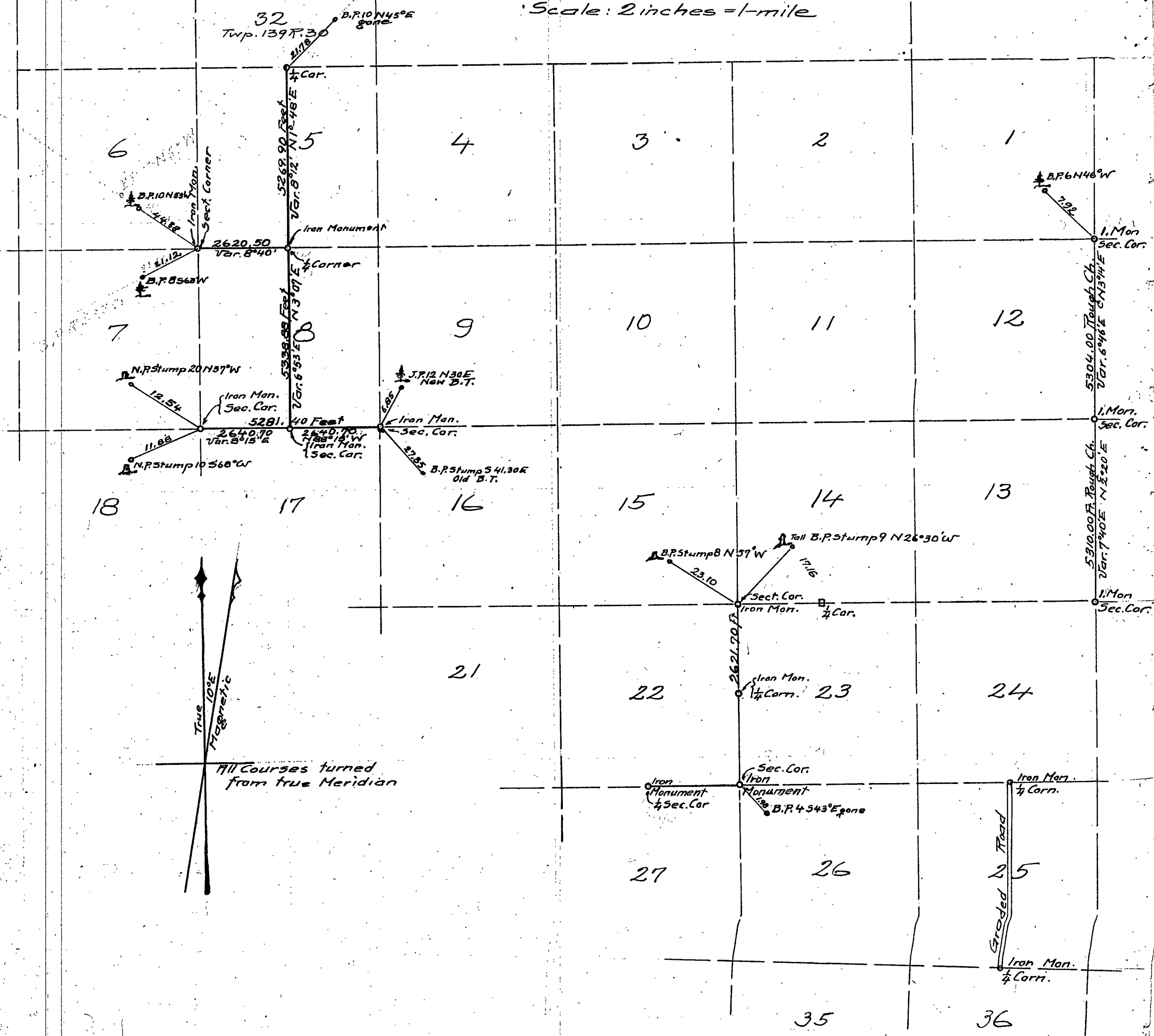
SURVEY-RECORD-298

PLAT

TWP. 138. RG. 30. SEC'S. 1-5-6-7-8-9-12-13-14-15
16-17-18-22-23-26-27

TWP. 139. RG. 30. SEC. 32

Scale: 2 inches = 1-mile



TRUE MERIDIAN
 MAGNETIC
 All Courses turned
 from true Meridian

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telescope on corrected hub on 3100 N. and drive a row of 3x24 inch dry tamarac hubs every 200 to 300 ft. for road centers. Then with transit on corrected hub 5040 turn telescope on corrected hub 3100 N. and from there N. to the cor. of secs. 1, 6, 7 & 12, drive a row of 3x24" dry tamarac hubs every 200 to 300 ft. We do not chain this mile with a plumb-bob nor put in any $\frac{1}{16}$ cor. or $\frac{1}{4}$ cor. At a point about 2650 ft. N. an old stake sets W. This old stake has probably been moved from where it was once set by the surveyor.

Beginning at the iron corner to 1, 6, 7 & 12, on Rg. line run E up big hill, on 8'18" Var, bet secs 6 & 7, T. 138, R. 29. At 237.03 hub on top of hill: Var. Changes to 7'30" (It may be that the iron monument over which the transit set in starting caused the needle to register 8'10" instead of 7'30") Continue E over level ground: At 496.88 set hub and tack; thence down hill: At 700 set stake at foot hill, thence up slope: At 966.80 set hub: At 1000 set stake, thence down slope and up sharp hill and: At 1406.20 drive 2 tacks in green J. Pine stump for double center hub and on account of a rain which starts at 2 P.M. quit about 5 P.M. We use an H. & B. transit and run perfect double center hubs also perfect plumb-bob chaining, by Curo and Blackburn. 100 ft. Monarack steel tape. This road petition calls for a road to the $\frac{1}{4}$ cor. bet. secs 6 & 7, T. 138-29, and as the old B.T.'s at the $\frac{1}{4}$ cor. are lost we will have to run the whole mile E. to establish the $\frac{1}{4}$ cor., so will do it correct. All get in full day. Quit for night. Hill with horse drives Blackburn home. Rains hard. Over night with Blackburn: A. Mr. Kimball owns the SW quarter of SW quarter of sec. 6, and NW $\frac{1}{4}$ of NW $\frac{1}{4}$ sec. 7, T. 138-29. Leave J. Pine timber. Kimball is a lumberman and bought this for the Pine. They say he will not sell. John W. Curo.

Thursday, May 15, 1913. I am working for Pine River trap. It rained all last night and all of this morning, and from 9 to 10 A.M. snowed hard. I figure range line corrections all A.M. Quit raining and snowing about 10:30 A.M. Roy Blackburn drives to Pine River in P.M., and I telephone home to Walker on a reverse charge and find Harry S. Todd is at Walker. Roy Blackburn and team work all P.M. with me setting iron monuments. We drive to the cor. of secs 22, 23, 26 & 27, T. 138, Rg. 30, where U.S. notes call for post and:

Bl. Pine 5 inch, N 31° E, 7 links = 4.62 feet: Bl. Pine 4 inch, N 61° W, 17 lks = 11.22 ft.

Bl. Pine 5 inch, S 64° W, 15 links = 9.90 feet: Bl. Pine 4 inch, S 43° E, 3 links = 1.98 feet. We find the tall well marked stumps of the NE and SW trees standing plainly marked from which we set the true cor. by flat chain to face of the figures and set in a bed of concrete a 2 1/2 x 48 inch galvanized iron pipe with cap on top and anchor rod thru bottom set its full length in the ground for the true cor. to secs. 22, 23, 26 & 27, T. 138, Rg. 30, at which point a newly cleared and plowed trap. road runs $\frac{1}{2}$ mile west and $\frac{1}{2}$ mile E. We drive to the $\frac{1}{4}$ cor. bet. secs 22 & 27, T. 138-30, where U.S. notes call for post and:

Bl. Pine 14 inch, S 72° W, 46 lks = 30.36 ft.: N.P. 14 inch, N 20° W, 57 lks = 37.62 feet.

We find the NW Norway B.T. standing green and plainly marked from which we set the true $\frac{1}{4}$ cor. at 8° Var. from face of old B.T. marks and set a 2 1/2 x 48" galvanized iron monument having a cap on top and iron anchor

rod thru bottom set its full length in the ground in a bed of concrete for the true $\frac{1}{4}$ cor. between secs. 22 & 27, T. 138, R. 30.

I once set a wood stake for this $\frac{1}{4}$ corner from both old B.T.s but to-day my old stake and the SW B.T. is gone. I put my iron monument back in the same place where I once set the wood stake. The old fence running SW which once lined up with my wood stake still lines up with my new iron stake just set. J.S. ("Scudd") Rice and I walk to my old stake at $\frac{1}{4}$ cor. on W. side of sec. 22, 138-30, and to my old hub in center of sec. 22, T. 138, R. 30, where I may set irons. Over night with Blackburn. John W. Curo.

Friday May 16, 1913. Still working for Pine River Swp. Curo transit-man. H. & B. transit. double center hubs. Roy Blackburn and Curo chaining perfect. Plumb. bob line 100 ft. Monarch steel tape: Beginning at 966.80 ft. E of SW corner of sec. 6, T. 138, R. 29, continue E bet. secs. 6 & 7. perfect transit line. Elmer N. Hill and Arthur Brown-Amen: At 1364.50 tack in J. Pine stump; At 1400 E stake; At 1406.20 E tack in W sec. of a double J. Pine stump. Var. reads $70^{\circ}40' E$: At 1500 set hub: At 1661 E center of old road, being sand lake wagon road bears NE & SW: At 1900 set hub, enter plowed field 20 ft. S of NW cor.: At 2200 E set hub: At 2300 E set hub in field: At 2500 E set hub in field 20 ft. S of N boundary: At 2560 leave field: At 2739.66 look for the $\frac{1}{4}$ corner bet. secs. 6 & 7, T. 138-29, where U.S. notes call for post and: Pick 4 inch, S $20^{\circ}30' W$, 113 links = 14.58; Ask 4" N $44^{\circ} E$, 38 links = 25.08 feet. All are gone and we continue East. At 2800 E set hub: At 2843 new wire fence runs N & S: At 2930 set hub, Var. reads $70^{\circ}25' E$: At 3000 set stake: At 3300 set stake: At 3408 tack in N.P. stump: At 3500 set pin: At 3700 set stake: At 3800 set hub: At 4000 set stake: At 4200 set hub: At 4300 set hub in old Lake. Hattie Road, bears N & S. At 4320 E fence bears N & S. At 4400 set stake: At 4500 set hub on side hill: At 4600 set stake: At 4700 set stake, enter meadow: At 4800 stake in edge of bog, thence along edge of marsh and, At 5120.94 set tack in log: At 5200 set hub on solid point of meadow coming up from the South: At 5300 set stake: At 5380 about, an old stake sets N 45 ft: At 5400, and 5500, & 5600 set stake in meadow: At 5628 set hub: At 56.60 enter mud lake which bears NW & SE. The lake is too deep to chain across so I get distance across lake as follows: With transit at hub 5628 which I mark hub "A" I backsight on flag at hub 4200 and cause hub "B" to be set on solid ground on E side of lake, then turn angle to the right and set hub "C". Then with transit set on hub "B" backsight on hub "A", turn 90° angle to the left and run S to an intersection with the line bet. hub "A" and "C" and find the distance of intersection to be 58.01 ft. Distance bet. hub "A" and "B" is 577.78 ft. added to 5628 = 6205.78 to hub "B" over lake. At about 150 feet E of water's edge. Hub "B" is in meadow: At about 6198 ft. E an old stake set by N. H. Hallett sets N about 45 ft. but this stake is wrong. At 5379.66 ft. E U.S. notes call for the corner to secs 5, 6, 7, 8, T. 138, R. 29, with W.C. east 1222 links from which.

Tank 4" bears N $63^{\circ} E$, 80 lks. = 52.80 ft.; Tank 5" bears S $40^{\circ} E$, 162 lks = 106.92 ft. U.S. notes also call for, W.C. 580 links from which. Tank 10" bears S $38^{\circ} W$, 137 links = 90.42 ft.; D. Tank 8" S $29^{\circ} E$, 115 links = 75.90 feet.

B

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We do not find either of the old W.C. or bearing trees and continue E in tank swamp: At 6208.10 hub in meadow: At 6235.07 tack in N root of 10 inch tamarac stump. Continue E, set tack in poplar stump, leave meadow N & S, set hub and quit for night. We waded Norway Brook twice. At 6186.12 E the temp. W.C. is gone. Over night with Blackburn, John W. Curo.

May 17, 1913. I will have M.A. Kemp, Deputy County Surveyor finish balance of the Survey.

May 26, 1913. M.A. Kemp goes from Walker to Mildred to finish the above work, but will first run some levels on road grades for Pine River Twp. Tried to get a man and couldn't until the afternoon when Albert Eastold helped me. We walked N along the Railroad to hill on new road which parallels the M & I track in sec. 21, T. 135, Rq. 30, and run the following levels starting at station 00+00, 83 ft. E from center line of R.R. track and about 900 ft. N of Hollow bet hills to be graded down. Establish a bench mark on a stump on E side of road near station one. B.M. 1, Elev. 100.000, assumed. Run levels and quit for night.

May 27, 1913. M.A. Kemp with E.N. Hill and team drive to the hill on road about 1/4 mile N of 1/4 cor. on west side of sec. 6, T. 138, Rq. 30, we set station 1, S of hill and run levels N. 15 ft. S of 1/4 corner on highest point of large rock we mark bench mark No. 1, Elev. 100.00 assumed. M.A. Kemp.

May 28, 1913. Kemp and Hill set grade stakes on the 2 hills near Mildred and Backus, respectively.

May 29, 1913. Thursday Kemp and Hill drive to the 1/4 corner on the N side of sec. 5, T. 138, Rq. 30, being the 1/4 corner on the S side of sec. 32, T. 139, R. 30, where U.S. notes call for a post and the following bearing trees:

Bl. Pine 10 inch, N 75° E, 33 links = 21.78 ft.

Bl. Pine 7 inch, S 8° E, 22 links = 14.52 ft.

We find a 2x2 hub solidly driven, set by Curo and also the following bearing trees marked by Curo, on which we take bearings at 8° 30' Var, as follows:

Jack Pine 15 inch, bears S 3° 40' E, 31.00 ft. J.P. 12", bears S 63° 50' W, 24.35 feet.

We pull up the hub and put in its place a 2x48" iron pipe with cap on top and set in concrete for the true 1/4 corner to secs. 5 & 32, T. 138 & 139, N, Rq. 30 W. Thomas Francis and Carl Brown Axemen. Kemp transit and chain.

E.N. Hill, Pickett and chain, set over monument just put in and run S thru center of sec 5, 138-30, Var. reads 8° 05' E. At 300 ft. S set hub and tack: At 2132.60 S set hub and tack on hill: At 2613.60 hub and tack in hollow: At 3274.20 hub on hill: At 3603.80 hub and tack: At 4500

hub: At 5000 enter bog: At 5280 hub in swamp; being the temp. 1/4 corner bet secs 5 and 8, T. 138, Rq. 30, where U.S. notes call for post and:

Bl. Pine 7 inch, N 88° E, 1326 links = 875.16 ft. Bl. P. 6", S 88° W, 1333 lbs. = 879.78 ft.

We hunt for the bearing trees way across the swamp and after cutting 6" into 2 trees, find the old marks plainly visible. We set the corner by flat measurement after which the trees stand as follows: 7° Var.

J. Pine, old B.T., N 88° 20' E, 875.16 ft.: J. P., old B.T., S 88° 15' E, 879.78 ft. M.A. Kemp.

Friday May 30, 1913 Same crew. We set a 2x48" iron monument set in a good bed of concrete and the whole well filled with sand, brought in from the edge of the bog, for the true 1/4 cor. bet secs 5 & 8, T. 138-30. Correcting back:

At 5269.90 the 1/4 cor. sets W 11.20 ft.: Hub 4500 S, goes W 9.75 ft.: Hub 3603.80

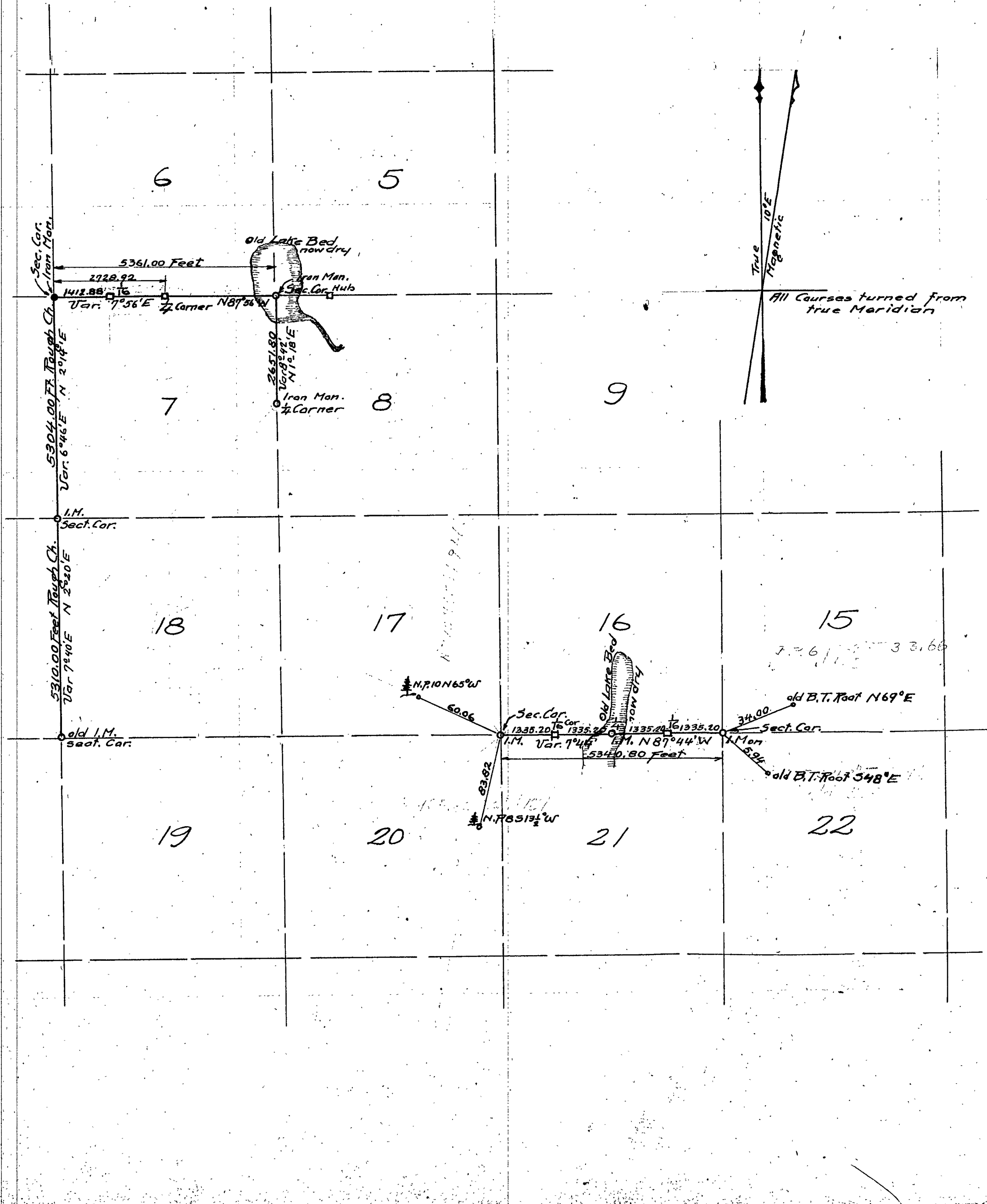
B

SURVEY-RECORD-298

PLAT

TWP. 138-R6.29.- SEC'S 5-6-7-8-15-16-18-21-22

Scale: 2 1/2 inches = 1-mile



S goes W 7.57 ft: Hub 3274.20 S goes W 6.88 ft: Hub 2613.60 S goes W 5.49 ft: Hub 2132.60 S goes W 7.48 ft: Hub 300 S goes W 0.63 of a foot. At these points we set hubs and tall stakes marked "Road center". Set over iron monument at $\frac{1}{4}$ corner bet. secs. 5 & 8 run west on $8^{\circ}40'$ Var. At 350 leave open bog: At 800 cross M+I R.R. At 1282.15 set hub: At 2210.20 set hubs: At 2620.50 the cor. to secs 5, 6, 7, 8, T. 138, Rq. 30, set by Curro, bears N 5.50 ft. We pull up old stake and put in its place a 2x4" iron pipe in bed of cement for the true corner. Correcting back this $\frac{1}{2}$ mile, Hub 2210.20 W goes N 7.67 ft: where we set hub and tall stake marked "Road center". At 1310.25 W run N 2.75 ft., where we set a hub and tack for W $\frac{1}{4}$ corner bet. secs 5 & 8, and also set tall stake marked "Road Center". All this work double centers & plumb. bob. M.A. Kemp.

Saturday May 31, 1913. Fine and hot. Kemp and Christ Arbogast and Barnhardt. Setting over iron monument at $\frac{1}{4}$ corner bet. secs. 5 & 8. I backsight on hub N on true N+S center line of sec. 5, transit the telescope and run S. thru center of sec. 8, double centers and plumb. bob. At 7050 intersect R.R. fence: At 1233, center line M+I R.R.: At 1410 intersect R.R. fence; leave swamp: At 1569 S tack in stump: At 2206 S tack in log: At 2985 S tack in log: At 3719.50 S tack in log: At 4047.80 S set hub and tack: At 4110 S, NW and SE road: At 4496.50 S set hub and tack: At 5280 S set hub and tack for temporary $\frac{1}{4}$ cor. bet. secs 8 & 17, T. 138, Rq. 30, where U.S. notes call for post and:

Bl. Pine 9" N 40° W, 35 lks = 23.10 ft.: N.P. 18", S 19° E, 47 lks. = 31.02 feet.

We hunted thoroughly in all directions but found nothing. Quit for night. M.A. Kemp.

Monday June 2, 1913. Cloudy. Chris. Arbogast and Barnhardt cut brush. I set over temporary $\frac{1}{4}$ cor. bet. secs 8 & 17, T. 138-30, and run west on 9° Var., and set two stakes in line, which the two men follow, cutting west nearly $\frac{1}{2}$ mile. At the cor. to secs 7, 8, 17, 18, T. 138, Rq. 30. U.S. notes call for post and:

N. Pine, 18" N 54° E, 44 links = 29.04 feet: N. Pine 20" S 66° E, 28 links = 18.48 feet.

N. Pine, 20" N 57° W, 19 links = 12.54 feet: N. Pine, 10" S 68° W, 18 links = 11.88 feet.

I find the stumps of all four bearing trees: The NE one being plainly marked, as I could not get a crew to work in the afternoon, after I find the B.T.S., I walk back to Backus, where I have supper. M.A. Kemp.

June 10, 1913. Down to Pine River on the train, reaching there at 2 A.M. Put up at Ager's Hotel. E.N. Hill drives me to the NW cor. of sec. 21, being the cor. to secs. 16, 17, 20 & 21, T. 138, Rq. 29, where Kemp and Hill, J. Grover and Rice work. Kemp transit and chain: Hill chain. Double center hubs and plumb. bob. Set over iron monument at NW corner of sec. 21, I run E. on 7° Var. At 900 set hub and tack: At 1649.80 ft. E set hub and tack on brow of hill: At 2150 E. enter old lake bed, now dry old bottom: At 2400 set hub and tack in old bottom: At 3050 leave old lake bottom: At 3588.80 set hub and tack: At 4413.00 set hub and tack: At 5340.80 the cor. to secs 15, 16, 21 & 22, T. 138, Rq. 29, sets N 70.00 ft. At this point U.S. notes call for post and:

Bl. Pine 6", N 69° E, 51 links = 33.66 ft.: Bl. Pine 4", N 67° W, 106 links = 69.96 feet.

Bl. Pine 5", S 48° E, 9 links = 5.94 feet: Bl. Pine 4", S 25° W, 7 links = 4.62 feet.

We find the stumps of the SW and SE trees plainly marked from which

we set a 3x3x20 inch hub and tack for the true corner by flat measurement after which take following bearings:

Old B.T.S. $25^{\circ}W$, 4.62 ft. Old B.T.S. $548^{\circ}E$, 5.94 ft. Old B.T. Root $N69^{\circ}E$, 34.00 ft. Old B.T. root, $N67^{\circ}W$, 70.20 ft. At 8° Var. Correcting back:

Hub 4413.00 E goes $N57.81$ ft. At 4005.60 E run $N52.50$ ft. and set a 3x3x24" hub and tack for the east $1/16$ corner bet secs. 16 & 21. Hub 3588.80 E goes $N47.01$ ft. At 2670.40 E run $N35$ ft. and set a 3x3x24" hub and tack for the true $1/4$ corner bet secs. 16 and 21, T. 138 Rq. 29, with no bearing trees near. Hub 1649.80 E goes $N21.61$ ft. At 1335.20 E run $N17.50$ ft. and set a 3x3x24" hub and tack for the true $W1/16$ corner bet. secs. 16 & 21, T. 138, Rq. 29. Hub 900 E goes $N11.79$ ft. At these points we set tall stakes marked "Road Centers" "sec line." This line was run for Road Survey. Var. of corrected line reads $7^{\circ}44'E$. M.A. Kemp.

June 11, 1913. Kemp and Roy Blackburn drive to Pine River for cement and iron pipes, then drive to cor. of secs. 15, 16, 21 & 22, T. 138, Rq. 29, where we pull up the wood hub and put in its place a 2x48" galvanized iron pipe with cap and anchor rod set in a bed of concrete, then going to the $1/4$ cor. bet. secs. 16 and 21, T. 138, Rq. 29, we pull up the wood hub and put in its place a 2x48" galvanized iron pipe with cap and anchor rod, set in bed of sand and cement, and at the $1/4$ cor. bet. secs. 7 & 8, where U.S. notes call for a post and:

Bl. Pine 5 inch, $S44^{\circ}E$, 73 lbs = 48.18 ft. Bl. P. 6", $N44^{\circ}W$, 37 lbs = 24.42 ft. we find the SE tree still standing and the stump of the NW tree: The dist. bet. them is 73.70 ft. Goit chain and = 72.60 ft., My chain, being 1.10 ft. long. We set the corner by proportionate measurement, the old B.T.S., then stand as follows:

Jack Pine, $S44^{\circ}E$, 48.91 ft. J.P. $N44^{\circ}W$, 24.79 ft. At this point we set a 2x48" galvanized iron pipe with cap and anchor rod set in a bed of cement. M.A. Kemp.

Thursday June 12, 1913. Fine and hot. M.A. Kemp, E.N. Hill, Arthur Brown, and George Haggard. Kemp transit and chain. Hill chain. K. & E. transit. 300 ft. Chicago steel tape. 2nd class chain. we drive to the $1/4$ cor. bet. secs. 7 & 8, T. 138, Rq. 29, being an iron monument from which we run $N8^{\circ}15'$ Var. very hilly: At 900 ft. N set hub and tack on hill: At 1414.20 set hub and tack: At 1520 ft. of hill: At 1627 set hub and tack: At 2651.80 N, the cor. to secs. 5, 6, 7, 8, T. 138, Rq. 29, sets $W21.00$ ft., At this point Goit notes call for W.C. 80 links S with bearing trees as follows:

Tank 10" $S38^{\circ}W$, 137 links = 90.40 ft. D. Tank 8", $S29^{\circ}E$, 115 lbs. = 75.90 ft. We find the SE tree plainly marked from which we set a small stake for the true W.C. At $8^{\circ}42'$ Var. At 2599.00 N this W.C. sets $W20.60$ ft. Var. of the true line is $8^{\circ}42'$. Set over W.C. 9 run N on $8^{\circ}42'$, 80 links being 52.80 ft. where we set a hub and tack for the true corner to secs. 5, 6, 7, 8, T. 138, Rq. 29, and mark new bearing trees at $8^{\circ}42'$ Var., being tank 12 inch, $S20^{\circ}30'E$ (104.00 feet.) 104.00 feet)

Tank 8 inch, $S41^{\circ}30'W$, 10.700 ft. At 5361.00 ft. E of the NW corner of sec. 7, on Curro's transit line the corner to secs. 5, 6, 7, 8, sets $N41.30$ ft. 5379.66 ft. goit chain = 5361.00 ft. My chain which is 18.66 ft. short. By proportionate measurement we set the $1/4$ corner bet. secs. 4 & 7, as follows: At 2728.92 ft. E run $N21.01$ ft. where we set a hub and tack for the true $1/4$ corner.

M.A. Kemp.

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June 13, 1913. A.M. Kemp, E.N. Hill, Arthur Brown, working. Correcting back S boundary of SW quarter sec. 6, 138, R. 29. Hub 2500 E goes N 19.25 feet; Hub 2300 E goes N 17.71 ft.; Hub 1900 E goes N 14.63 ft.; At 1412.88 E we run N 10.88 ft. and set a hub and tack for the west $\frac{1}{16}$ corner bet. secs 6 & 7, T. 138, Rq. 29. Hub 966.80 E goes N 7.44 ft. Hub 496.88 E goes N 3.83 ft. Hub 237.03 E goes N 1.83 ft. At the SE cor. of sec 6, being the cor. to secs, 5, 6, 7, 8, T. 138, Rq. 29, we pull up the wood hub and put in its place a 2x48" galvanized iron pipe, securely set in cement on piling driven thru 6 ft. of mud to hard bottom. At the $\frac{1}{4}$ corner bet. secs 6 & 7, T. 138, Rq. 29, we pull up the hub and tack and put in its place a 2x48" galvanized iron pipe set in a bed of cement. This completes the road survey.

In the afternoon Hill and Kemp drive to the $\frac{1}{4}$ corner bet. secs 22 & 23, T. 138, Rq. 30, where Gait notes call for post and:

J. Pine 9 inch, S 80° W, 64 links = 42.24 feet.

We find the stump of this tree plainly marked and a tall stake and tack set by Curro, which checks perfectly for course and distance. We pull up the stake and put in its place a 2x48" galvanized iron pipe set in a bed of cement. Setting on hill, I work the transit on line bet. the NW and the NE corner to sec 23, T. 138, Rq. 30, and set hubs on true sec. line for road centers.

M. A. Kemp.

Saturday June 14, 1913. Kemp and E.N. Hill, Chris. Arbogast and Cliff Barnhardt Chain west from temp. $\frac{1}{4}$ corner bet. secs 8 & 17, T. 138, Rq. 30. At 1500 set hub and tack; At 2761.70 W the corner to secs 7, 8, 17 & 18, sets S 23.40 ft. At this point Gait notes call for post and:

N. Pine 18 inch, N 5° E, 44 lks = 29.04 ft. N.P. 20", S 66° E, 28 lks = 18.48 ft.

N. Pine 20 inch, N 57° W, 19 lks = 12.54 ft. N.P. 10" S 68° W, 18 lks = 10.88 feet.

We find all four bearing tree stumps. The NE one being plainly marked. The distance by courses between the NE and SW trees is 2.08 feet long and the distance bet. the SE and NW trees by courses is 1.18 ft long. Proportionating this I set a hub and tack for the sec. cor. after which, At 9° 30' Var. the old trees stand:

N. Pine N 57° E, 30.58 ft.; N. Pine S 60° E, 19.18 ft.

N. Pine N 57° W, 13.02 ft.; N. Pine S 68° W, 11.42 feet.

Going back to station O being 5280 ft. S we chain E bet. secs 8 & 17: At 2519.70 ft. E the cor. to secs 8, 9, 16 & 17, T. 138, Rq. 30. sets S 91.50 ft. At this point Gait notes call for post and:

Bl. Pine 10" N, 63° 30' E, 64 links = 42.24 ft.

Bl. Pine 8" S, 62° W, 43 links = 28.38 feet.

Bl. Pine 10" N 15° 30' W 31 links = 20.46 ft.:

Bl. Pine 10" S 41° 30' E, 39 links = 25.74 ft.

We find the burned stumps of the NW, SW and SE trees. The distance bet. the SE and NW trees being 3.80 ft. to long. via courses. We set the cor. by proportionate measurement after which at 8° var old B.T.S. stands as follows:

Bl. Pine S 62° W, 28.70 ft.; Bl. Pine, S 41° 30' E, 27.85 ft.

298-CONTINUED

Bl. Pine $N 15^{\circ} 30' W$, 22.13 ft. Put tacks in the following new bearings:
 J. Pine stump 6 inch, $N 60^{\circ} W$, 6.55 ft.; J. Pine 12 inch, $N 30^{\circ} E$, 6.85 ft.
 N. Pine stump 20 inch, $S 30^{\circ} W$, 38.75 ft.

June 15, 1913. In the morning Roy Blackburn and Kemp center the 1/4 mile of road bet the 1/4 corner on the N side of sec. 25, and the 1/4 corner on the S side of sec. 25, T. 138, Rg. 30. Set transit on high hill and work it in line bet backsights at both 1/4 corners, then set hubs and tacks on line the entire mile. We then drive to Hill's for dinner. Kemp, Blackburn and Hill, after dinner center the road along the E boundary of the NE quarter of sec. 22, T. 138, Rg. 30, beginning at the NE cor. of sec. 22, we run S along the road: At 861.80 S hub and tack; At 1783.20 set hub and tack; At 2156.70 S set hub and tack; At 2416.20 S set hub and tack; At 2621.70 S the 1/4 corner between secs 22 & 23, T. 138, Rg. 30, sets E 17.00 ft. Correcting back, Hub 2416.20 S goes E 15.70 ft.; Hub 2156.70 S goes E 14.01 ft.; Hub 1783.20 S goes E 11.59 ft.; At 1310.85 S run E 8.51 ft.; Hub 861.80 S goes E 5.60 ft.; Kemp, Blackburn and E.N. Hill drive to the cor. of secs. 8, 9, 16 & 17, T. 138, Rg. 30, where we pull up the wood hub and put in its place a 2x48" galvanized iron pipe set in cement. Pipe filled with cement, with 5 inch nail driven in center of cement at top of pipe. To set the 1/4 corner bet secs 8 & 17 from our hub for temp. 1/4 cor. We chain West to SW cor. of sec. 8, a distance of 2761.76 ft., and chain E to the SE corner of sec. 8, a distance of 2519.70 ft., making the length of S boundary of sec. 8 a total of 5281.46 ft. The length of the SE and SW quarters of sec. 8 is 2640.70 ft.; At 121 ft. West of the temp. 1/4 corner we run S 57.45 ft. and set a 2x48" galvanized iron pipe, with cap and anchor rod, set in cement for the true 1/4 corner bet secs 8 & 17, T. 138, Rg. 30. At the corner to secs 7, 8, 17 & 18, T. 138, Rg. 30, we pull up the hub and tack and put in its place a 2x48" galvanized iron pipe with cap and 19 inch anchor rod set in cement for the true Sec. corner.

June 16, 1913. M.A. Kemp and Chris Arbogast working. I take Blackburn's team and drive to Arbogast's place. Chris helps correct back on line bet 1/4 corner on N and S side of sec. 8, T. 138, Rg. 30; At 5337.50 S the 1/4 corner bet secs 8 & 17, sets W 120.50 ft.; At 1000 S we run W 22.60 ft. and set hub and tack East of Railroad fence for road center. This completes this survey.

Surveyed May 12, 1913 to June 16, 1913.
 Recorded - Dec - 12 to 14, 16.

M.A. Kemp,
 Deputy County Surveyor.

County Surveyor.
 Cass County, Minnesota.

SURVEY-RECORD-299

TWP. 138 - RG. 29 - SEC. 6

TWP. 139 - RG. 29 - SEC. 31

TWP. 138 - RG. 30 - SEC'S 1-2

TWP. 139 - RG. 30 - SEC'S 25-35-36

Field notes of the survey and establishment of corners in secs. 6, T. 138, Rg. 29, and sec. 31, Township 139, Rg. 29, & secs 1 & 2, Township 138, Rg. 30, and secs 25, 35 & 36, Township 139, Range 30, as surveyed and established by M.A. Kemp, Deputy, County Surveyor, Cass County, Minnesota.

Thursday Dec. 11, 1913. M.A. Kemp down to Backus on A.M. train; In afternoon drive out to Todd Issajeff's with Miller and Kinkele. I am going to run the lines of the W $\frac{1}{2}$ of the SW quarter of sec. 36, T. 139, Rg. 30, for Issajeff's and Miller and establish other corners.

Friday Dec. 12, 1913. M.A. Kemp, Theo Issajeff's, and Art Kemworthy. At $\frac{1}{4}$ cor. on W side of sec 36, bet. secs 35 and 36, T. 139, Rg. 30. Todd's stake is gone. At this point Grit notes call for post and:

Bl. Pine 9 inch, S 73° W, 18 links = 11.88 ft.

Bl. Pine 8 inch, S 42° 30' E, 41 links = 27.06 ft.

The SE tree is standing plainly marked from which we set the cor. in graded road. The SW tree is gone. Set over stake for cor and run E thru center of sec. 36, on 8° 15' var. At 408.40 ft. E set hub; At 913.50 E set hub; At 1200 E enter swamp; At 1626.20 ft. E set hub; At 1630 enter creek; At 1690 leave same. At 2441.20 set hub; At 2800 enter creek, flows SE; At 2890 leave same; At 3296.70 set hub; At 3800 enter rice bed; At 4150 center of creek, 40 ft. wide - flows NE; At 4344.70 set hub; At 4360 edge of rice bed - enter swamp; At 5200 leave swamp; At 5343.70 E set hub;

Dec. 13, 1913. Fair and warm. M.A. Kemp, Theo Issajeff's and Frank Butterfield: At the $\frac{1}{4}$ cor. on the E side of sec 36, being the $\frac{1}{4}$ cor. bet. secs 31, T. 139 Rg. 29 and sec 36, T. 139, Rg. 30, Grit notes call for post and: J. Pine 5 inch, N 57° W 13 links = 8.58 ft.; J. P. 5", N 42° E, 47 links = 31.02 ft. We find both trees standing green by cutting in about 6 inches. We find the marks quite plain, from which we set a 3x3x30 inch tank stake, by flat measurement from face of figures for the true $\frac{1}{4}$ corner after which I take the following bearings at 9° var. Old B.T. bears N 38° 35' E, 31.02 ft.; Old B.T. br. N 57° 40' W, 8.58 ft. At 5316.00 ft. E the $\frac{1}{4}$ cor. on E side of sec 36, T. 139, Rg. 30 sets S 48° 00' ft. We then go to the SE cor. of sec 36, being the cor. to secs 6, T. 138, Rg. 29, and sec. 31, T. 139, Rg. 29, and sec 1, T. 138, Rg. 30, and 36, T. 139, Rg. 30, where Grit notes call for post and:

Bl. Pine 8" N 21° E, 54 links = 35.64 ft.; Bl. Pine 8" N 40° 30' W, 35 lbs = 23.10 feet.

Bl. Pine 5" S 47° W, 24 links = 15.84 ft.; Bl. Pine 8" S 48° E, 32 links = 21.12 feet.

We find the SW tree and the NE tree plainly marked from which we set a 2x2x30" oak stake by flat measurement for the true corner. M.A. Kemp.

Dec. 14, 1913. Same crew as yesterday. Fair and cold. set over Todd's stake at SW corner of sec 36, being the cor. to secs. 1, 2, 35 & 36, bet. towns 138, Rg 30,

And T. 139, Rg. 30, where U.S. notes call for post and:
Bl. Pine 8 inch, N 12° E, 21 lks = 13.86 ft. : Bl. Pine 5", N 65° W, 118 links = 77.88 feet.
Bl. Pine 7 inch, S 16° W, 38 lks = 25.08 ft. : Bl. Pine 6", S 31° 30', E 42 links = 27.72 feet.

Find old trees and mark new bearing trees as follows:

J.P. 15", N 45° E, 50.80 ft. J.P. 10" N 15° 20' W, 69.60 feet. At 8° 45' var.

Run East bet secs 36 + 1, Var 8° 15' E: At 745.50 set hub: At 1337.60 set hub: At 1398.80 set hub: At 2657.40 E set hub: At 2659.60 E the 1/4 cor. bet secs 1736, T. 138 and 139, N Rg. 30 W, sets S 10.20 ft. At this point

Goit notes call for post and:

Bl. P. 6" N 22° 30' E, 1 links = 4.62 ft. Bl. Pine 7" S 39° W, 12 links = 7.92 feet.

We find both trees standing green and plainly marked from which we set the 1/4 stake by flat chain from face of B. T. marks after which we take following bearings At 8° 15' var:

Old B. T. 15, S 45° W, 7.92 feet: Old B. T. 15, N 13° 45' E, 4.62 feet.

J. Pine 18", N 19° 51' E 31.75 feet: J. Pine 10" S 31° 30' W, 28.80 feet.

set over 1/4 corner and run North. Var. 8° 50' thru center of sec. 36: At 1098.70 N hub mark in swamp.

Dec. 15, 1913. same crew as yesterday. Continue N. Weather mied.
At 1286.20 set hub: At 1596.10 N set hub: At 2275 enter swamp bears about E + W: At 2664 N set hub: At 2880 center of 40 ft. Creek - flows SW: At 3075 leave swamp: (Creek bed) At 3084.50 N set hub: At 3268.70 N set hub: At 3300 enter tamarac windfall swamp: At 3897.00 set hub: At 4500 enter open meadow: At 5206.50 set hub: At 5277.30 N the 1/4 corner bet. secs 25 + 36, T. 139, Rg. 30, being also U.S. M.C. No. 4, sets E 111.20 ft. At this point U.S. notes call for post and:

Tank 4" S 84° E, 30 lks = 19.80 ft. Tank 5 inch, N 33° E, 40 lks = 26.70 feet.

We find the stump of both trees plainly marked, also the old stakes from which we set a 4x4x60 inch tank stake well driven into the mud and take the following bearings: Var. 8° 15' E.

Old B. T. Stump 6 inch, N 33° 28' E, 19.80 ft. Old B. T. Stump 4" N 46° 37' E, 26.70 ft.

Tank stub 4" N 22° 20' W, 72.65 ft. Tam. stub 6 inch N 73° 30' E, 61.10 feet.

At center of sec. 36, we run the true E + W, and N and S center lines intersection where we set a 5x5x24 inch tank stake. At 2646.00 N center of section sets E 55.75 ft. At 2668.20 E the center of sec. 36, sets S 27.09 feet: We set the 1/16 corner in the center of the North half of said section 36 as follows: At 3961.65 N we run E 83.47 feet and set a 3x3x60 inch tamarac stake in the swamp for the 1/16 corner.

We set the 1/16 corner in the center of the E half of said sec 36, as follows: At 3992.10 E we run S 36.05 ft. and drive a 3x3" pole, 25 feet long down in the rice bed near the creek for the true 1/16 corner. M.A. Kemp.

Tuesday Dec. 16, 1913. we set the 1/16 corner in the center of the W 1/2 of sec. 36, T. 139, Rg. 30, as follows:

At 1334.10 E run S 12.04 ft. where we set a 3x3x30 inch tank stake for the 1/16 corner from which we run S on 7° 45' Var. thru swamp:

At 670 leave swamp: At 813.5 set hub: At 1291.60 ft. S set hub:

At 1369.70 ft. S set hub: At 1872 set hub: At 2289 set hub: At 2647 ft. S the 1/16 corner sets E 28 ft., being the W 1/16 corner bet. secs 1736,

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bet trwp 138 + 139, Rg. 30. We set the $\frac{1}{16}$ corner as follows: At 1329.80 ft. E run 55.10 ft and set a 4x4x24 inch stake for the true $\frac{1}{16}$ corner bet said secs 17 & 36. After dinner we go to the $\frac{1}{16}$ cor being the $\frac{3}{16}$ corner bet secs 35 & 36, T. 139, Rg. 30, and run E on $7^{\circ}50'$ Var. At 199.70 E set hub: At 602 E set hub: At 852.20 E tack in roof of Miller's Camp: At 1280.50 E set hub: At 2030.70 E set hub: At 2664.80 E the $\frac{1}{16}$ corner in the center of the $\frac{3}{2}$ of sec. 36, sets S 13.20 ft. We set this $\frac{1}{16}$ corner as follows: At 1323 ft. N we run E 27.87 ft. and set a 3x3x24 inch Oak stake. At the center of the SW quarter of sec. 36, T. 139, R. 30, we set a 2x2x24 inch stake, at the intersection of the true lines, running East and West and North and South, center lines of this quarter. At 1331.90 East, the center of the SW quarter of sec. 36, sets S 6.59 ft. At 1323.30 ft. S the center of the SW quarter of this section 36, sets E 14.00 feet. This completes the survey.

M. A. Kemp.
Deputy County Surveyor.

Surveyed Dec. 11, 1913 to Dec. 16, 1913.
Recorded Dec-14-16

County Surveyor.
Cass County, Minnesota.

SURVEY-RECORD-299

PLAT

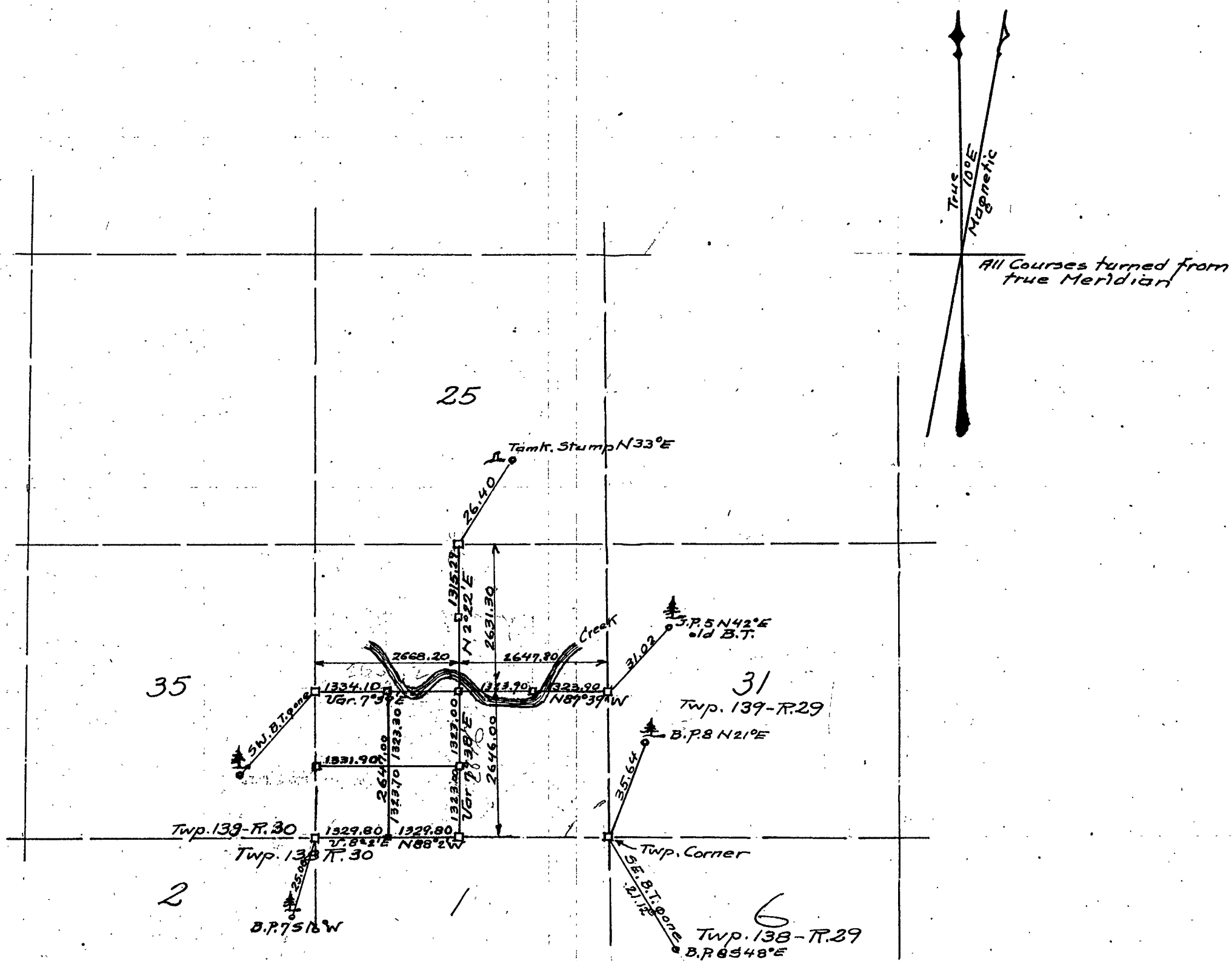
TWP. 138-RG. 29-SEC. 6.

TWP. 139-RG. 29-SEC. 31.

TWP. 138-RG. 30-SEC'S 1-2

TWP. 139-RG. 30-SEC'S 25-35-36

Scale: 2 1/2 inches = 1-mile



SURVEY RECORD - 300

TWP. 136 N. RG. 29 W. 5TH P. M.
SEC'S 5-6-7-8-9-16-17-18-19-20-21-
28-29-30.

Field notes of the survey and establishment of corners in sections 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 28, 29, 30, Township 136 N, Range 29, W, 5th P. M. Cass County Minnesota as surveyed by

Harry S. Todd, Deputy County Surveyor of Cass County, Minnesota.

December 10th, 1913. I am going to work for Spoon Lake Township: We finish up at Cass Lake and go to Bemidji on the 7:00 P.M. train: paid R.R. fare 32 cents and hotel bill 75 cents total \$1.07.

December 11, 1913: We leave Bemidji at 11:30 P.M. last night, arrive at Walker at 1:00 o'clock A.M. and take the morning 9:30 A.M. train to Requist: Arrive Requist 10:57 A.M. and try to get Trade Anderson on telephone but cannot so I get a livery rig and drive my outfit out to his place. Pd. R.R. fare 64 cents and 80 cents hotel, 50 cents and livery \$1.50, total \$3.44 signed.

Harry S. Todd.

December 12, 1913. We go to SE corner of section 20, being the corner to sections 20, 21, 28, 29, Township 136 N, Range 29, W, where U.S. notes call for post and:

Black pine 6" N76°E, 50 lks = 33.00 feet: Black pine 6" N60°W, 81 lks = 53.46 feet.

Norway Pine 14" S27°W, 48 lks = 31.68 feet: Nor. pine 14" S17°E, 65 lks = 42.96 feet.

We find the SE tree standing green plainly marked, and the stub of the NE tree also plainly marked: We find the SW stump marked, and the roots of the NW tree from which we set the cor. by proportionate measurement from the face of the "B.T." marks: The SW tree checks out perfect for measurement, but

there is a difference of 2.30 feet between SE and NW trees: I proportion this distance between the two trees, making the SE tree 43.95 feet from the cor. and the NW tree 54.74 feet from the corner: After which we drive a 3x20 inch stake and tack for the true corner to sections 20, 21, 28, 29, T. 136, Rg. 29, from which we run North between sections 20 and 21, Var. 10° E:

At 1200 enter Corduroy: At 1285 South end of bridge: At 1307, North end of bridge: At 1800 leave Corduroy: At 2640 set hub for temporary 1/4 corner bet. sections 20 and 21, T. 136, Rg. 29, where U.S. notes call for post and:

Black pine 5" S7°E 138 links = 91.08 ft.: Bl. pine 6" S12°W, 128 lks = 84.48 feet

I find two Jack Pine trees that look something like Government markings but the letters and figures have been put on with a Jack knife so I do not use them and continue North: At 5393.45 feet North, intersect true cor.

to sections 16, 17, 20, 21, T. 136, Rg. 29, where U.S. notes call for post and:

Bl. pine 8" N 38°E, 31 lks = 20.40 feet: Bl. pine 9" S 73°E, 10 lks = 6.60 feet.

Bl. pine 8" S 25°W, 18 lks = 11.88 feet: Bl. pine 8" N 79°W, 25 lks = 16.50 feet.

We find the SE tree down, but plainly marked and the NE tree standing dead but plainly marked: The other trees have been grubbed out for road construction: We set the corner by flat measurement from face of

the SE and NE trees: this corner comes about five feet East of the center of the main traveled N & S road. Checking back, hub 2640 goes North 29.73 feet to 2669.73 feet North which is the true 1/4 corner bet. secs. 20 & 21, T. 136, Rg. 29, where we drive a J. Pine stake 3x3x27" with tack for the true 1/4 corner. From the 1/4 cor.

just set bet. secs 20 & 21, T. 136, Rq. 29, run west. Var. $8^{\circ}25'E$, thru sec. 20;
 At 20 ft. cross N+S wagon road: At 35 ft. W cross wire fence 7 ft. from cor.
 of fence: At 300 set hub: At 500 cross wire fence which bears about $S85^{\circ}W$:
 At 600 set hub: At 1196.40 set hub: At 1500 & 1800 & 2100 & 2400 & 2700 & 3000 ft.
 W set hub: Quit for night. Over night with Thads Anderson. Thads Anderson,
 Nels Larson, W.H. Kramp, Meth Anderson & Harry S. Todd worked all day.

Dec. 13, 1913. Loon Lake Twp. 136-29. Beginning at hub 3000 W continue
 transit line W thru center of sec 20. At 3060 cross wagon road which bis
 NW and S: At 3122.85 set hub: At 3483.40 set hub: At 3535 enter swamp.
 At 4025 leave same: At 4198 set hub: At 4703.40 set hub: At 5350
 set hub on Beaver Dam about 20 feet E of E edge of Loon Lake. We
 then go to U.S. Meander Corner No. 30, on S side of Loon Lake, bet secs
 19 & 20, (where U.S. notes call for post and the following bearings,
 N. Pine 16 inch, West 55 links = 36.30 ft. Curv). We look here for bearing
 trees but find nothing and go to the Cor. to secs 17, 18, 19 & 20, T. 136,
 Rq. 29, where U.S. notes call for stake and the following bearing trees:
 Tank 8 inch, $S42^{\circ}W$, 96 lks = 63.36 ft.; Tank 6" N, $66^{\circ}E$, 57 lks. = 37.62 ft.
 N. P. 10" N $26^{\circ}W$, 132 lks. = 87.12 ft.

17-18-19-20

We find the NW Pine standing green and plainly marked and the stump of
 the NE bearing tree marked but we find no trace of the SW tree as it comes
 in a hay meadow and I think it was grubbed out. We set the corner by
 flat measurement from the face of NE and NW trees and from this corner
 run S on 9° Var. E. We run across a big bog and at 2415 ft. S enter lake:
 At 2670 leave same and enter Beaver Dam: At 2700 set pin and quit for
 night. Over night at Pequot. Meth Anderson, Chain. -- W.H. Kramp,
 Nels Larson, Thads Anderson Axemen. Harry S. Todd, Transit & Chain Harry S. Todd

19-20

Dec. 21, 1913. Twp. 136, Rq. 29, Loon Lake Twp. Beginning at pin 2700 S continue
 S bet. secs 19 and 20. At 2720 enter lake: At 4385 leave same: We find
 no trace of M.C. No. 29, (where U.S. notes call for post and: Tank 7" N $87^{\circ}W$, 212
 links = 139.92 ft.; Tank 8 inch, N $12^{\circ}E$ 365 links = 240.90 ft., Curv). We find
 no trace of the Meander, so continue South: At 4410.50 set hub: At 5023.20
 set hub: At 5294.90 ft. S the true corner to secs. 19, 20, 29 & 30 bears $E38.40$ feet.
 Here U.S. notes call for stake and the following bearing trees:

19-20-29-30

Spruce pine 12" N, $36^{\circ}E$, 42 lks = 27.72 feet; Spruce pine 10" S $32^{\circ}30'W$, 35 lks = 23.10 ft.
 spruce pine 8" S $32^{\circ}E$, 38 lks. = 25.08 feet; Spruce pine 14" N $34^{\circ}W$, 76 lks = 50.16 feet.
 We find the stump of the NE bearing tree plainly marked and the stumps of the
 other three trees, no marks. We set the cor. from these by proportionate
 measurement. We then go to stake 26405 which we check 7.45 ft S to 2647.45
 S, then E 19.20 ft, where we place the true $1/4$ corner bet. secs 19 & 20, T. 136, Rq. 29.
 As this $1/4$ corner comes in the lake we cut a hole in the ice and drive a stake
 4x4" x 8 feet long. We then find that at a point in our E+W center line of sec 20,
 At 5325.60 ft. W the true $1/4$ corner bet. secs. 19 & 20 sets North 48.95 feet.

17-19-20

Correcting back on E+W center line of sec 20, Hub 300 W goes N 2.76 ft.; Hub 600
 W goes N 5.51 feet; Hub 900 W goes N 8.25 feet; Hub 1200 W goes N 11.03 feet; Hub
 1500 W goes N 13.79 feet; Hub 1800 W goes N 16.54 feet; Hub 2100 W goes N 19.30
 ft. Hub 2400 W goes N 22.06 feet; Hub 2700 W goes N 24.81 feet: We have dinner
 with Johannes Struve and Meth Anderson and I go to the cor. to secs. 7, 8, 17, & 18.

300 - CONTINUED

T. 136, Rq. 29, where U.S. notes call for post and:

N. Pine 16 inch, N 34° E, 173 links = 94.38 ft. Bl. pine 6", S 38° E, 30 lks = 19.80 ft.

Asp. 6" S 37° 30' W, 51 links = 33.66 feet. Asp. 5 inch, N 76° W, 100 links = 66.00 ft.

We find the stumps of the NE bearing tree not marked but Tobias Bye and Fred Hanson both living close to the corner say they can swear that it was marked with Loik marks and was used by a former County Surveyor, James M. Canfield in setting this corner. They say all the trees were here when Canfield set this corner. We try to find the rock buried where Canfield's stake was but do not succeed. I am going to use this tree to set the corner by.

20-1
28-29 Mads Anderson, W. H. Kramp, and Nels Larson go to the corner of secs. 20, 21, 27 & 29, T. 136, Rq. 29, previously established by me where they put in place of my stake a 2x2x48" galvanized iron pipe set its full length in the ground. They then go to the corner of secs. 19, 20, 29 & 30, T. 136, Rq. 29, previously set by me where they pull up my stake and put in its place a 2x2x48" galvanized iron pipe for the true corner. Quit for night. Over night with Mads Anderson, Nels Larson, W. H. Kramp, Mads Anderson, Keith Anderson and Harry S. Todd work. Harry S. Todd.

Dec 22, 1913. T. 136, Rq. 29, Loon Lake Twp. We go to the cor. of secs. 7, 8, 17 & 18, T. 136, Rq. 29. There is a Norway pine stump stands N 24° E, 94.38 feet distant from a point in the road where two fences line to a point where a stake was set by Mr. Canfield, former County Surveyor, for this corner. He had all four bearing trees when he set the corner and probably the other trees drew his corner out of line for course with this remaining bearing tree, so I used the fences for line as to E & W and set the corner S 24° W, 94.38 feet distant from the remaining Norway Pine stump. Tobias Bye, Fred Hanson, Nels Larson will swear that this Nor. Pine stump was one of the old original U.S. bearing trees and was used by Canfield in locating this corner. We set a 2x2x48" galvanized iron pipe set its full length in the ground for the true cor. to secs. 7, 8, 17 & 18, T. 136, Rq. 29, from which we run - North between sections 7 & 8, Var 9° E:

At 300 & 600 & 900 & 1200 set hubs: At 1350 N. cross wire fence and enter open field: At 1500 & 1800 & 2100 set hubs: At 2120 ft. N. leave field:
78 At 2235 N. enter wet meadow: At 2400 leave same: At 2690 ft. N. set hub for temporary 1/4 corner bet. secs. 7 & 8, where U.S. notes call for post and the following bearing trees:

Spruce 8 inch, N 58° E, 25 links = 16.50 ft. Asp. 12 inch, N 24° W, 100 lks = 66.00 ft.

We find nothing and continue north: At 2694 cross wire fence: At 2860

Cross Creek, NW & SE: At 3000 & 3300 set hubs: At 3400 enter tank swamp:

At 3650 leave same: At 3900 & 4200 & 4500 & 4800 & 5100 set hubs: At 5296.30

79 ft. N. the true cor. to sec. 5, 6, 7, 8, T. 136, Rq. 29, by E 5.56 ft. At this point

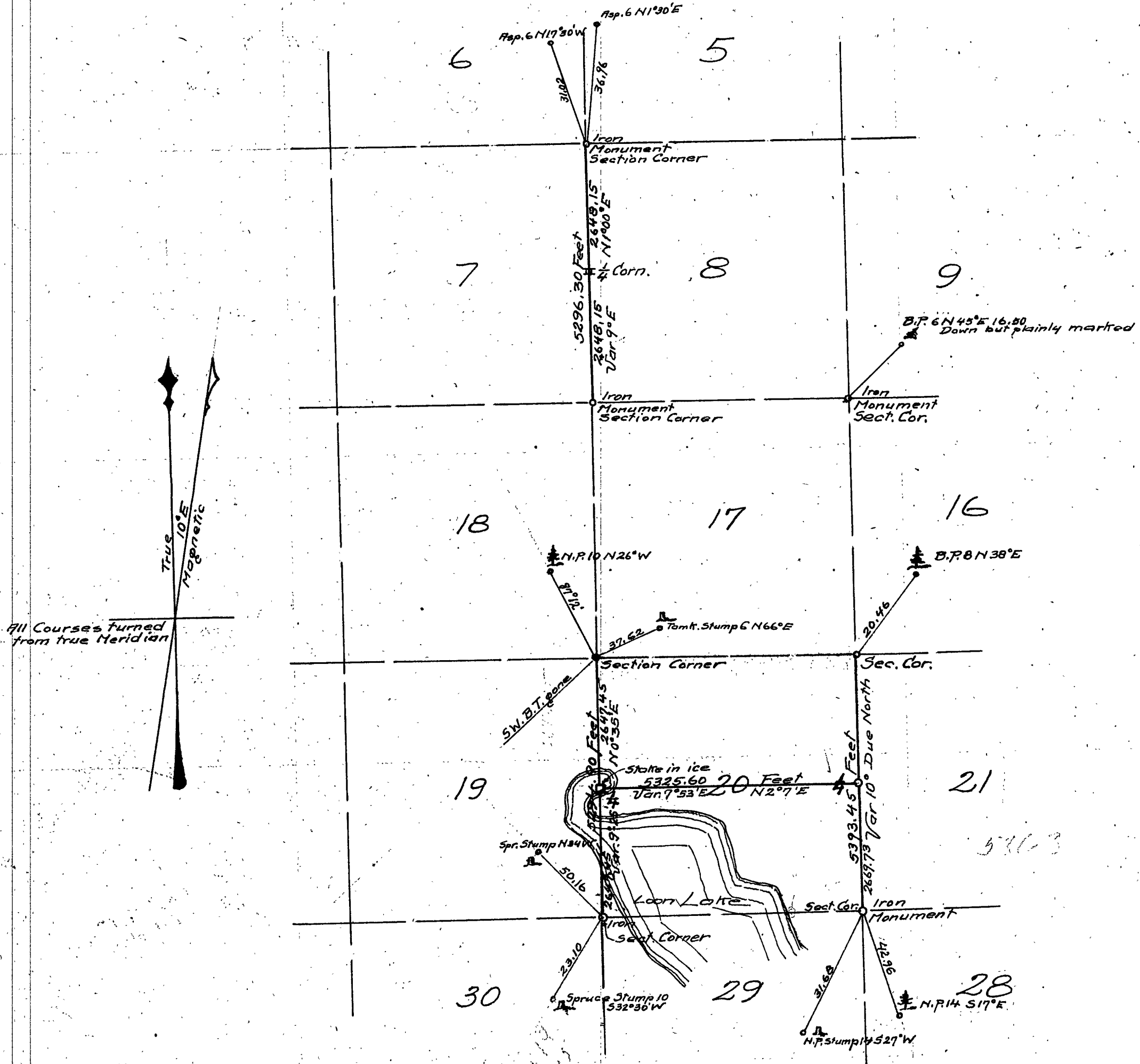
U.S. notes call for post and:

Asp. 6 inch N 17° 30' W, 47 links = 31.02 ft. Asp. 6 inch N 1° 30' E, 56 links = 36.96 feet

Nor Pine 16 inch, S 78° E, 20.5 links = 135.30 feet. I have been here to this corner three years before and I think I found all of the bearing trees here at that time. I find where my old stake stood, and find that it checks with the SE bearing tree, At 7° Var. The SE Norway Pine tree is the only

SURVEY-RECORD-300

PLAT
 TWP 136 N. R. 6. 29. W. 5TH P. M
 SEC'S. 5-6-7-8-9-16-17-18-19-20-21-28-29-30
 Scale: 2 1/2 inches = 1-mile



5336
 123413
 123413

5363

SURVEY-RECORD-300

one that remains and I set the corner from this tree at 7' var: We put in a 2x2x48" galvanized iron pipe for the true cor. to secs 5, 6, 7, 8, T. 136, Rg. 29. Quit for night. Over night with Thads C. Anderson. Harry S. Todd, Thads C. Anderson, Nels Larson, W. H. Kramp & Theth Anderson worked. Harry S. Todd.

Dec. 23, 1913. Twp. 136, Rg. 29, Soon Lake Twp. In correcting the N+5 random line bet. secs 7 & 8, Hub 300 ft. N goes E 0.32 ft. Hub 600 goes E 0.63 ft.; Hub 900 N goes E 0.95 ft.; Hub 1200 N goes E 1.26 ft.; Hub 1500 N goes E 1.58 ft.; Hub 1800 N goes E 1.89 feet; Hub 2100 N goes E 2.21 feet; Hub 2400 N goes E 2.52 ft.; Hub 2700 N goes E 2.84 ft.; Hub 3000 N goes E 3.15 ft.; Hub 3300 N goes E 3.47 feet; Hub 3600 N goes E 3.78 feet; Hub 3900 N goes E 4.10 ft.; Hub 4200 N goes E 4.41 feet; Hub 4500 N goes E 4.73 feet; Hub 4800 N goes E 5.04 feet; Hub 5100 N goes E 5.36 feet; Hub 2640 N goes N 8.15 ft. to 2648.15 N, thence East 2.78 ft. for the 1/4 corner bet. secs 7 & 8, T. 136, Rg. 29, after checking over this line we go to the corner of secs 8, 9, 16 & 17, T. 136, Rg. 29, where U.S. notes call for post and:

B. pine 658 E 14 links = 9.24 ft.; B. pine 6 inch, N 45° E, 25 lbs = 16.50 ft.
B. pine 7 inch N 57° W, 70 links = 40.20 ft.; B. pine 5 1/2" W, 62 links = 40.92 feet.
we find the NE tree down but plainly marked and the stump of the other three trees not marked. We set the corner from these by flat measurement putting in a galvanized iron pipe 2x2x48" in size for the true corner to secs 8, 9, 16 & 17, T. 136, Rg. 29. This iron sets 3 1/2 feet in the ground. Quit for dinner. The Town Board meets at noon and pays me off \$27.35, after which Thads C. Anderson takes me to Requist. Crew gets full day for to-day. I take the P.M. Train, Requist to Walker. Over night at Walker. Harry S. Todd.

Surveyed Dec. 10, 1913 to Dec. 23, 1913.

Recorded Dec-15-16

County Surveyor.
Cass Co. Minnesota

TWP. 145 N. R. 6. 31. W. 5TH P. M.

SEC'S 4-5-8-9

Field notes of the survey and establishment of corners in sections 4, 5, 8, 9, Township, 145 N, Range 31 W, 5th P.M., as surveyed by Harry S. Todd, Deputy County Surveyor, Cass County, Minnesota.

Nov. 20, 1912: Harry S. Todd transitman and chainman, assisted by Bob Jarvis. I leave Bemidji at 6:30 A.M. and arrive Cass Lake 7 A.M., find Bob Jarvis, who drives me out to his place in sec. 4, Twp. 145, Rg. 31. I told Jarvis it would take about four days to do his work of subdividing all correct, so he just wanted rough lines run.

I go to the $\frac{1}{4}$ corner on West side of section 4, being the $\frac{1}{4}$ corner bet. secs 4 and 5, Township 145, N, Rg. 31, W, 5th P.M., where U.S. notes call for a post and the following bearing trees:

Jack Pine 10 inch, N 59° W, 106 lks = 69.96 feet; J. pine 4" S 8° E 264 lks. = 174.24 feet.

There is a corner here, set by Jas. D. Middleton. I set up transit on his corner and find the stump of the NW bearing tree, plainly marked.

There is no trace of the SE tree. We then go to the corner to secs 4, 5, 8 & 9, same township, where U.S. notes call for a post and the following bearing trees:

J. Pine 8 inch, N 67° E, 27 links = 17.82 ft; J. Pine 8 inch, N 70° W 24 lks. = 15.84 feet.

J. Pine 6 inch, S 6° W, 44 links = 29.04 ft; J. Pine 6 inch, S 67° W, 31 lks = 20.46 feet.

We find the corner here set by Jas. D. Middleton, also the stump of all four old bearing trees. - We put in the following new bearings:

Jack Pine stump 12 inch, S 70° E 20.25 feet; Stump 15" S 72° W 34.60 feet.

Fence Post 6 inch, N 68° W 38.02 feet; J. Pine stump 15" N 65° E 50.66 feet.

We then chain between these two corners to find the $\frac{1}{16}$ corner, being the South $\frac{1}{16}$ corner between sections 4 and 5, T. 145, Rg. 31. We find the total distance 2637.30 feet and set the said $\frac{1}{16}$ corner 1318.65 feet from each end, and from this $\frac{1}{16}$ just set, I turn an angle of 90° from the true N & S line and run East 2620.50 feet to another $\frac{1}{16}$ corner which I think was set by Jas. D. Middleton, and thence it 94.35 feet to the South; I check my line over and put in the temporary $\frac{1}{16}$ corner in the center or near the center of the SW quarter of said section 4, T. 145, Rg. 31, and from this stake run North 932.0 feet and quit for night. Bob Jarvis then drives me to Cass Lake, where I take the 7.17 P.M. train to Bemidji.

Signed - Harry S. Todd.

Surveyed - Nov. 20th, 1912.

Recorded Dec. 15-16

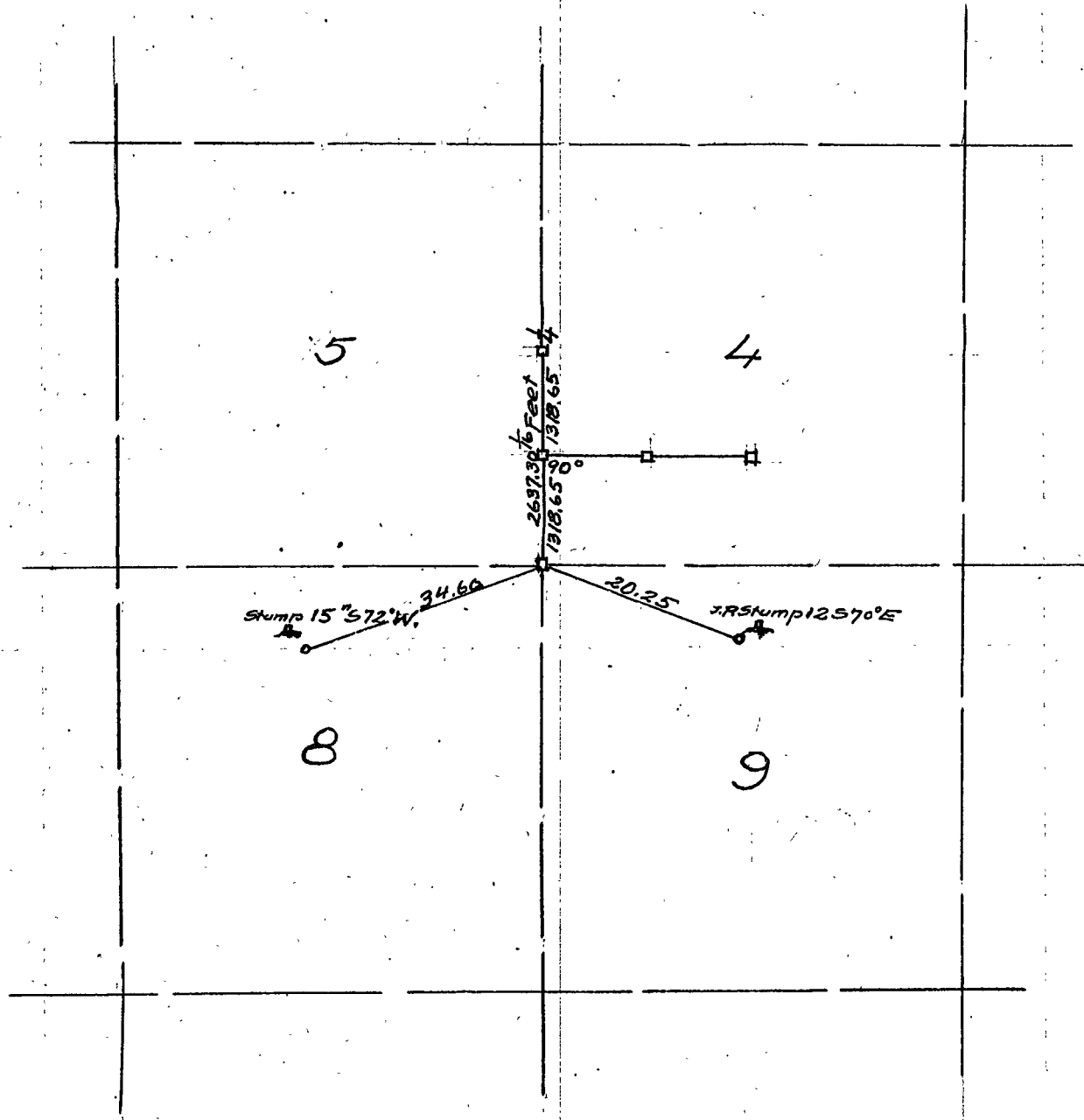
John
County Surveyor, Cass. Co. Minn.

SURVEY-RECORD-301

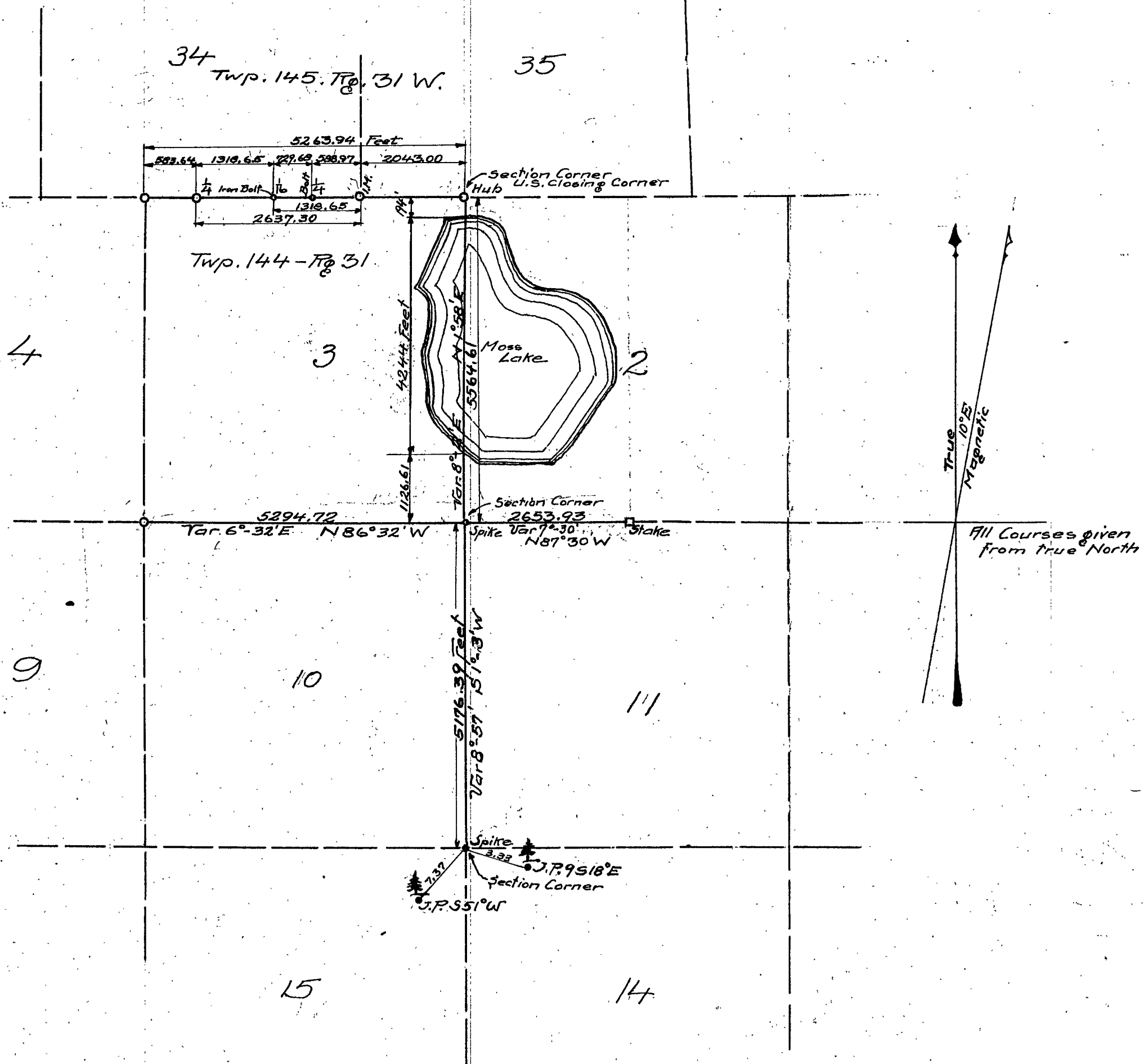
PLAT

TWP. 145 N. RG. 31. W. SEC'S. 4-5-8-9

Scale: 2 1/2 inch = 1-mile



PLAT
 TWP. 145 N. RG. 31 W. SEC'S 35
 TWP. 144 N. RG. 31 W. SEC'S 2-3-4-9-10-11-14-15.
 Scale: 3-inches = 1-mile



SURVEY-RECORD-302.

TWP 145ⁿ Rg 31^w Sec 35TWP 144ⁿ Rg 31^w Sec's 2-3-4-9-10-11-14-15

Field notes of the survey and the establishment of corners in sections, 2, 3, 10, 11, 14, 15, Township 144, N Range 31, W and sections 35, Twp. 145, Range 31, W, 5th P.M. Cass County Minnesota, as surveyed by and under the direction of John W. Curro County Surveyor, assisted by Guy A. Todd, Deputy Co. Surveyor. Feb. 26, 1914 Thursday. We are to work in subdivision of sec. 3, Twp 144, Rg. 31, for Buff Gauvreau, John Chabundy, R. J. Soule and other owners of sec 3, and to establish corners in other sections. Leave Walker 6: P.M. Bus hire 25 cents. Arrive at Cass Lake 7:05 P.M. R.R. 44 cents and 44 cents = 88 cents. Ticket for Curro and Todd. Over night Indian Hotel, Cass Lake.

Friday Feb. 27, 1914. Pay Frank Gorenflow at Indian Hotel \$1.00 and \$1.00 equals \$2.00, Curro and Todd. Leave Cass Lake 7:10 A.M. Livery team and Buff Gauvreau - Poor sleiding: Arrive Buff's farm 8:30 A.M. Buff drives back to Cass Lake. John W. Curro, Guy A. Todd, transit men with Mike Carbury and R. J. Soule go to the iron corner on S corner of secs 34 & 35, T. 145, Rg. 31, previously established by Curro and from which point Carbury cuts line E. Curro, Soule and Todd to the U.S.

"Closing Corner" on the N side of secs 2 & 3, T. 144, Rg. 31, where U.S. notes call for a post and the following bearing trees:

Nor. Pine 18 inch, $S 38^{\circ} W$, 53 links = 34.98 feet.

W. Pine 28 inch, $S 54^{\circ} E$, 71 links = 46.86 feet.

We find both trees standing green and plainly marked, from which we set a hut and tack for the U.S. "Closing Corner" to secs 2 & 3, on the N side of Twp. 144, R. 31, after which the trees stand correct for course at 8° Var, Chain to face of figures. The cor set with Gurley Compass and 100 foot Monarch Steel tape and plumb bob. Dinner with Mr. & Mrs. Dan Gauvreau, who live on Buff's farm on SW quarter of SE quarter, sec. 3, T. 144, Rg. 31. In P.M. Carbury cuts line E. Soule takes his one horse and sled and drives Curro and Todd around to different sec. corners. We drive to the cor. of secs. 2, 3, 10 & 11, T. 144, Rg. 31, where U.S. notes call for a post and:

Birch 4 inch $N 6^{\circ} W$, 103 links = 67.98 feet.

Birch 4 inch, $N 10^{\circ} E$, 132 links = 87.12 feet.

W. Birch 4 inch, $S 36^{\circ} E$, 21 links = 13.86 feet.

W. Birch 4 inch, $S 80^{\circ} W$, 20 links = 13.20 feet.

We find the stump of an up-turned Nor. Pine tree, which was blazed on all four sides before it was blown down and there are 2 square stakes set one on each side of the stump body of the tree. The stakes are approximately about 10 years old, so are not the old Gait stakes and as there is no evidence of any Birch trees or roots near where these stakes stand --- and as the big Nor. trees grow all around and close to this point, it is evident that the cor. was not placed here by the U.S. Surveyors. The timber has been cut all along this line E & W on the S side of this square stump and stake but all N of this point, there is a heavy thick

growth of tall green Norway trees. I believe the true corner was originally placed North of this point, tho' we will see later.

Beginning at the two stakes near the cor to secs 2, 3, 10 & 11, T. 144, Rq. 31, Guy A. Todd and John W. Curo, run a rough compass line and pace S. Var. 8° E: At 1000 paces look for the $\frac{1}{4}$ cor. bet. secs 10 & 11, T. 144, Rq. 31, where U.S. notes call for a post and:

Nor. Pine 28 inch, $N65^{\circ}$ E, 20 links = 13.20 feet.

Nor. Pine 20 inch, $S77^{\circ}$ W, 70 links = 46.20 feet.

We do not find them and pace 950 paces further S, still at 8° Var. E: where we find the cor. to secs 10, 11, 14 & 15, T. 144, Rq. 31, where U.S. notes call for a post and:

J. Pine 9 inch, $S18^{\circ}$ E, 5 links = 3.30 feet.

J. Pine 12 inch, $S51^{\circ}$ W, 11 links = 7.26 feet.

J. Pine 8 inch, $N65^{\circ}$ W, 25 links = 16.50 feet.

Nor. Pine 24 inch, $N30^{\circ}$ E, 25 links = 16.50 feet.

We find the trees of the 3 J. Pines standing and the stump of the NE Nor. pine all plainly marked from which we set the point for the true cor. by a proportionate measurement from the face of the figures: Distance bet. the NE & SW trees is 0.35 of a foot longer than Grit Chain calls for and the distance bet. the NW & SE trees is 0.15 of a foot longer than Grit Chain calls for, so by proportionate measurement the old trees stand as follows:

J. Pine 9 inch, $S18^{\circ}$ E, 3.30 feet + 0.03 feet = 3.33 feet.

J. Pine 12 inch, $S51^{\circ}$ W, 7.26 feet + 0.11 feet = 7.37 feet.

J. Pine 8 inch, $N65^{\circ}$ W, 16.50 feet + 0.12 feet = 16.62 feet.

Nor. Pine 24 in. $N30^{\circ}$ E, 16.50 feet + 0.24 feet = 16.74 feet.

Measurements taken from the face of the old bearing trees to a 20 $\frac{1}{2}$ spike driven in at the point of an old stake for the true corner to secs 10, 11, 14 & 15, T. 144, Rq. 31. We do not take the courses, but the trees appear to stand perfect for course. We set this corner with a Hurley compass, 100 foot Monarch steel tape and plumb-bob. Curo and Todd chaining. Sole Axeman and witness. We look for the $\frac{1}{4}$ corner bet. secs. 2 & 11, T. 144, Rq. 31, where U.S. notes call for post and:

Nor. Pine 12 inch, $S4^{\circ}$ E, 385 links = 254.10 ft.

J. Pine 5 inch, $N30^{\circ}$ E, 171 lks. = 112.86 feet.

We look for the $\frac{1}{4}$ corner on the S side of sec. 35, T. 145, Rq. 31, where U.S. notes call for a post and:

J. Pine 14 inch, $N28^{\circ}$ W, 51 links = 33.66 feet.

J. Pine 12 inch, $N45^{\circ}$ E, 44 links = 29.04 feet.

We do not happen to find it. So put in the $\frac{1}{16}$ cor, $\frac{1}{4}$ mile W of the SE cor. of sec 34, T. 145, Rq. 31, we re-trace old survey made by Curo as follows:

At a point on Curo's old transit line 2637.30 ft. W of the SE cor. of sec. 34, T. 145, Rq. 31, the iron $\frac{1}{4}$ cor. on the S side of sec 34, sets $N14.70^{\circ}$ E. Correcting East:

At 1300 ft. W. we chain W 18.65 ft. to 1318.65 ft. W, then N 7.35 ft. where we drive a $1\frac{1}{4}$ x 10 inch iron bolt for the true $\frac{1}{16}$ cor. on the S side of the SE $\frac{1}{4}$ of sec. 34, T. 145, Rq. 31:

The S side of the SE $\frac{1}{4}$ of sec. 34, T. 145, Rq. 31, chained by Curo in hot weather, July the 18, 1913, does not check out with our chain to-day in the snow as the tape appears to shrink about 1 inch in every 100 ft. We use the same kind of a chain in both measurements, being a 300 ft. Chicago steel tape. Hot, bright sun all day. Heavy wind from the SW. Snow going fast. Curo & Todd over night with

Dan Gaurvreau.

John N. Curo.

Saturday Feb 28, 1914. Curo goes to Cass Lake with Dan Gaurvreau (Buff Gaurvreau's team) where Curo will leave for Federal Dam and Shovel Lake. Guy A. Todd continues the survey with transit and chain. H. & B. transit and adjustment, also 300 ft. Chicago Steel tape, plumb-bob chain, double center hubs. Setting transit on iron SE cor. of sec 34, T. 145, R. 31, back sight on flag 1/4 mile W. at the iron 1/16 cor., transit telescope and run E on 5° Var. At 300 stake & 600 stake & 900 stake, continue line E and quit for dinner. P.M. very cold and windy, blowing a gale. Continue E. At 1062 tack in log. At 1200 stake. At 1208.85 spike in ground where we offset for big tree. At 1500 stake. At 1680.50 spike in ground where we set back to original line from offset. At 1750 enter Tank swamps bears N & S. At 1800 & 2100 set stake. The wind is blowing so hard, I cannot set up more hubs, so we continue to cut brush. R. Soule and M. Carbury axemen. Guy A. Todd, transit and chain. Soule and Todd chain, quit for night. Supper at Dan Gaurvreau's. I cannot get a crew to work to-morrow, so I strike and I hike to Cass Lake after supper. I go to Bemidji on the 7:15 P.M. train to stay over Sunday with Ben. Guy A. Todd.

Sunday March 1, 1914. All day at Bemidji. Guy A. Todd.

Monday, March 2, 1914. Leave Bemidji at 6:30 A.M. via G.N.R.R. Arrive at Cass Lake at 7:00 A.M. Go to Buff's, but Buff and the crew are not ready to go out yet. We start for Buff's farm at 9:30 A.M. with his team. Arrive at the farm at 10:45 A.M., being too late to go on with the work, so we eat an early dinner and work in P.M. We go to the iron corner to secs 34, 9 & 10, T. 144, R. 31, where I set transit on iron cor. and run line E on 8° Var. Soule and Carbury axemen. Guy A. Todd transit. We all cut line and about 3:00 o'clock it begins to snow so hard, I cannot use transit to put in hubs, so we all cut line, all P.M., and quit for night. Dinner, Supper and over night with Dan Gaurvreau. Guy A. Todd.

Tuesday March 3, 1914. Buff, Carbury and Guy Todd start in the morning to look for the 1/4 cor. bet. secs 34 & 10, T. 144, R. 31, but cannot find it so we go back to our line running E from the iron sections cor. of 34, 9 & 10, T. 144, R. 31. Soule and Carbury cut line. Guy Todd transitman. H. & B. transit in adjustment, double center hubs, 300 foot Chicago Steel tape. Soule and Todd chaining perfect. Begin at iron corner to sec 34, 9 & 10, T. 144, R. 31, we chain E. At 300 & 600 stake. At 840.50 ft. E tack in log. At 892 cross old road bet. N & S. At 900 & 1200 stake. At 1320 temp. W 1/16 corner bet. secs 34 & 10. At 1500, 1800 & 2100 set stakes. At 2207.90 tack in log. At 2400 set stake. At 2640 set temp. 1/4 corner bet. secs 34 & 10, T. 144, R. 31, where U.S. notes call for post and:

Birch 6 inch, N 15° W, 89 links = 58.74 feet. Ash 9 inch, S 42° E, 23 lbs = 15.18 ft.

All are gone quit for dinner. P.M. same crew except Ben Klabunde, who comes to work with us. Klabunde and Carbury axemen, Soule and Todd chainmen. Todd transit. Beginning at 2400 we continue E, bet. secs 34 & 10, T. 144, R. 31. At 2700 & 3000 & 3300 set stake. At 3328.33 set snow hub and here the needle is reading 8° 15' Var. At 3550 an old shack sets N 65 feet. At 3600 & 3900 set stakes. At 3960 set temp. E 1/16 corner bet. secs 34 & 10, on W edge of Nor. pine timber. We continue to cut line E the rest of the afternoon. Quit for night. Breakfast, dinner, supper and over night with Dan Gaurvreau. Buff goes home at noon. Guy A. Todd.

Wednesday March 4, 1914. Carbury, Klabunde, Soule, axemen. Todd transit, in perfect adjustment, double center hubs. Soule and Todd chaining perfect.

Begin At 3900 stake and chain E: At 4200 set stake: At 4500 set stake and start down short hill: At 4615 enter Coulee bears NE & SW: At 4640 leave same: At 4699.50 Cross stream about lake road brs NW & SE: At 4800 & 5100 set stakes: At 5249 Cross winter road brs N & S: At 5280 snow hub and temp. corner to secs 2, 3, 10 & 11, T. 144, R. 31, where we offset 2 inches S to miss a Nor Pine tree. Cut line rest of the forenoon. Quit for dinner. Same crew in P.M. Todd transit, Soule and Todd chain. Continue East bet. secs 2 & 11, T. 144, R. 31. At 5400 & 5700 set stake: At 6000 set stake: At 6083.50 set snow hub on short hill, where we back set 2 inches N from hub 5280 and continue E: At 6230 enter small slough brs N & S: At 6300 set stake and leave slough: At 6600 stake set on line with transit for temporary W 1/6 cor. bet. secs 2 & 11. At 6935.10 set snow hub: At 6900 & 7200 set stakes: It begins to snow very hard about 4:30 P.M. At 7500 and 7800 set stakes: At 7920 snow hub set for temp. 1/4 cor. bet. secs 2 & 11, T. 144, R. 31, where U.S. notes call for post and:

Nor. pine 12 inch, S 4° E, 325 links = 254.10 feet.

J. Pine 5 inch, N 30° E, 171 links = 112.86 feet.

Soule and I look for the bearing trees but could not find them. We do not find a stake and bearing trees that some forester has put in but they are wrong. Quit for night. Breakfast, dinner, supper and over night with Dan Lauvreaux. Guy A. Todd.

Thursday March, 5, 1914. Mike Carbury, Ben Klakunde, R. Soule - Axemen: Guy A. Todd transit. H. & B. transit in adjustment, plumb bob chain, 300 foot Chicago steel tape, Soule and Todd chaining. We go to our line running East between Twp. 144 and 145, R. 31, where we began to run E from the SE cor. of Sec. 34, T. 145, R. 31. Beginning at 2100 stake, we chain E: At 2400 stake: At 2640 snow hub for temp. 1/4 corner on S side of sec 35, T. 145, R. 31, where U.S. notes call for post and:

Y. pine 14 inch, N 28° W, 51 links = 33.60 feet

Y. pine 12 inch, N 45° E, 44 links = 29.04 feet

Same crew then goes to the NE cor. of sec. 3, T. 144, R. 31, where I set up transit about 1 foot south of iron corner and run South bet. secs 2 & 3, on 8° 15' var. At 92.50 ft. 3 intersect transit line coming from the W: At 102 cross Bena Coal brs E & W: At 194 enter Moss Lake. At 300 stake on ice: At 600 and 900 and 1200 & 1500 set stakes on ice: At 1716 temp. 1/6 cor. N bet. secs 2 & 3: At 1800 & 2100 & 2400 & 2700 & 3000 & 3300 stake on ice and quit for dinner. Same crew in P.M.

Todd and Soule chaining. At 3600 stake: At 3600.25 hub on ice in Moss Lake: At 3900 & 4200 stake on ice: At 4435 leave Moss Lake: At 4478.75 snow hub on Sea Wall on S side of Moss Lake where we offset 3 inches W: At 4461 leave sea wall and enter Marsh brs NW & SE: At 4634 leave Marsh and enter Norway pine, tall heavy thick timber: At 4800 set stake: At 4890 set hub: At 5100 set stake in center of N & S road: At 5400 set stake: At about 5430 Cross transit line about 53 feet E: At 5676 temp. corner to sections 2, 3, 10 & 11, T. 144, R. 31. We continue to cut line S the rest of the day and quit for night. Breakfast, dinner, supper and over night with Dan Lauvreaux. Crew arrives at 7:10 P.M. from Shovel Lake. Guy A. Todd.

Friday March, 6, 1914. Still snowing. Beginning at hub 5676 ft. 3 of Red flag at N corner bet. secs 2 & 3, T. 144, R. 31. We continue transit line S. At 5940 about, old stake sets W about 50 feet. At wagon road NW & SE: At 6620.40 set hub: enter swamp NW & SE: At about 8000 leave swamp NE and SW: At 8100 set stake:

At 8117.90 set hub: At 8166.80 our line hits N end of log shanty, where we set tall red flag on line: At 8117.90 offset 8 feet E and backsight on a flag set 8 ft. E of snow hut set in swamp at about 7650 ft. S:

Continue S 8 ft. E of original: At 9027.20 set hub and offset 8 feet W and set snow hut, over which we set then backsight on red flag at N end of shanty and continue S on true random line: 10479.60 set hub: At 10500 set stake: At 10741.00 ft. S the corner to secs 10, 11, 14 & 15, Twp. 144, Rq. 31, sets E 42.00 ft., where we set a 20 lb spike for the true corner by proportionate chain from old bearing trees after which they stand as follows:

Old J. pine 9 inch, SE 3.33 ft.: Old J. pine 12 inch SW 7.37 feet.

Old J. pine 8 inch, NW 16.62 ft.: Old N. pine 24 inch, NE 16.74 feet.

To face of spot and figures at base of trees. We take new bearings. as follows:

J. pine 14 inch, S 55° W, 84.57 feet. To nail in spot.

J. pine 13 inch, S 50° E, 64.22 feet. To nail in spot.

J. pine 12 inch, N 58° 30' E, 60.33 feet: To spike in spot.

J. pine 10 inch, N 41° 30' W, 74.74 feet: To spike driven in flat spot.

In base of each tree set Gurley Compass at 5° 30' Var. E: Curo and Todd chain with 100 feet. Monarch Steel tape. Curo and Todd transit and Chain: Soule and Carbury Axemen: George E. Deardurf and Lloyd O. Deardurf work as Axemen in P.M. George E. Deardurf owns 40 acre homestead being SE 1/4 of NE 1/4, sec 10, T. 144, Rq. 31, filed in March 1913.

Paul Hesse owns homestead 160 acres being NW 1/4 sec. 11, T. 144, Rq. 31.

George Deardurf says Bill Gibson knows where the corner is to secs 2, 3, 10 & 11, T. 144, Rq. 31, and surveyed from here 1/2 a mile S finding the line 27 rods short. They are probably mistaken. John W. Curo.

Saturday March 7, 1914. To put in the 1/4 corner on N side of sec. 3, T. 144, Rq. 31, Curo and Todd go to the NE cor. of sec 3 and at a point on the transit line 2044.70 feet E of the iron SW corner of sec 35, T. 145, Rq. 31, the U.S. "Closing Corner" at NE corner of sec. 3, T. 144, Rq. 31, sets North "90° angle" 93 feet: As the W 1/2 of the N side of this sec was chained in hot weather "July 1913" there would be some difference in the shrinkage of our steel tape as we chain it on the snow to-day and figuring 1 inch shrinkage in each 100 ft. of chain, would be 1.70 feet. in 2044.70, so that the true distance from the SW cor. of sec 35, T. 145, Rq. 31, E to the Closing Corner at NE corner of sec 3, T. 144, Rq. 31, would be only 2043 feet, if chained in hot weather, so figuring the shrinkage the true distance across the N side of sec 3, is as follows:

From the iron Closing Corner at the NW corner of sec 3, T. 144, Rq. 31, placed on the true standard parallel line (being 7.50 ft. S of where the U.S. Surveyors put in) the distance E, actual chain is 583.64 feet, to the iron 1/4 corner on S side of sec 34, T. 145, Rq. 31, and from there to the iron SW corner of sec 35, T. 145, Rq. 31, is 2637.30 feet. Added to 583.64 feet = 3220.94 feet, and from the SW corner of said section 35 E to the Closing Corner at NE corner of sec 3, T. 145, Rq. 31, is 2043 feet standard chain added to 3220.94 = 5263.94 ft. standard chain. So to put in the 1/4 corner on the N side of sec. 3, T. 144, Rq. 31, we begin at the iron SE corner of sec. 34, T. 145, Rq. 31, and chain W along the true standard line 589.20 feet, cold chain, which would be

588.70 ft. standard chain, At which point we drive an iron bolt in the frozen ground for the true $\frac{1}{4}$ cor. on the N side of sec 3, T. 144, Rg. 31, and mark new bearings as follows:

J. pine 8 inch, N 53° 45' E, 57.04 feet.

J. pine 5 inch, N 17° 25' W, 38.80 feet. To the head of nails driven in flat spot in base of tree. Corner set with transit and angle turned from the true E and W line at 8° 10' Var. This $\frac{1}{4}$ corner is set $\frac{1}{2}$ way between the NE & NW corner of said sec 3, and the distance to each corner is $2631.97 + 2631.97 = 5263.94$ feet, across N side of sec 3, set by John W. Curo, Guy A. Todd and R. J. Soule. Mike Carbury and George E. Deakung Cut bush South.

From the $\frac{1}{4}$ corner of the N side of sec 3, T. 144, Rg. 31, turn 90° angle from the true E & W line and run S on 8° 10' var. At 395.50 set snow hub: At 1237.25 set hub: At 2083.40 snow hub: At 2789 snow hub: At 3090.50 about an old preliminary stake set by Harry S. Todd bears E about 40 feet: At 3300 set stake: Guy A. Todd, run transit, Soule helped him chain. Quit for night.

Todd and Curo still staying with Gauvreau. Curo goes to $\frac{1}{4}$ corner on S side sec 2 bet. secs. 2 & 11, T. 144, Rg. 31, and find the old SE bearing tree, John W. Curo.

Sunday March 8, 1914. A. M. Curo writes notes. Guy A. Todd and Mike Carbury go to the $\frac{1}{4}$ corner bet. secs. 2 & 11, T. 144, Rg. 31, where U.S. notes call for post and:

N. pine 12 inch S 4° E, 385 links = 254.10 feet.

J. pine 5 inch N 30° E, 171 links = 112.86 feet.

We find the tall stub of the old SE N Pine bearing tree plainly marked from which we set a small hub with nail in top for the temp. $\frac{1}{4}$ corner at 7° var. Chain from face of figures. We mark light bearings as follows:

J. pine 10 inch, N 60° W, 11.10 feet. To small spot.

J. pine stump 12 inch, S 4° E, 32.50 feet. At 7° var.

Beginning at hub 7920 chain E along transit line 27.00 ft. to 7947 E turn 90° angle with transit from cut out line and the $\frac{1}{4}$ corner sets 5185.08 feet. The quit chain bet. secs. 2 & 3 and across Moss Lake are as follows:

From NE corner of sec 3 S to Moss Lake, U.S. notes call for 300 links being 198.00 ft., and the distance across Moss Lake U.S. Chain is 6647 links or 4387.02 ft. Added to 198.00 ft. = 4585.02 feet, and the distance U.S. Chain from Moss Lake S, to the corner of secs. 2, 3, 10 & 11, is 1653 links or 1090.98 ft. Added to 4585.02 = 5676.00 feet U.S. Chain and the distance from NE corner of sec. 10 to SE corner of sec. 10 is 8000 links or 5280 feet added to 5676 = 10956.00 ft. U.S. Chain from the NE corner of sec. 3, T. 144, Rg. 31, two miles S to the corner of secs 10, 11, 14 & 15. 10956.00 ft. U.S. Chain = 10741.00 ft. My chain showing that our chain of this two miles is 215 feet shorter than Quit Chain calls for: Figuring the length of the line

along the S side of secs 2 & 3, T. 144, Rg. 31, we find the measurements as follows: Quit Chain S side of sec 3 is 8060 links or 5319.60 ft. and the distance from the SW cor. of sec. 2 E of the quarter post is 4040 links or 2666.40 ft. Quit Chain added to 5319.60 = 7986.00 ft. U.S. Chain from the SW quarter of sec. 3, $\frac{1}{2}$ miles E to the $\frac{1}{4}$ corner on S side of sec. 2. 7986.00 ft. U.S. Chain = 7947.00 ft. My chain or 39.00 ft. shorter than Quit Chain calls for.

John W. Curo.

Monday March 9, 1914. To put in the point for the corner of secs 2, 3, 10 & 11, T. 144, Rg. 31, we proceed as follows: Point 5319.60 east goes W 25.98 feet to 5293.62 E, so at hub 5280.00 E we chain E 13.62 feet to 5293.62 E, where we drive a spike in the ground for hub "A" which fixes the position of this corner as to East and West. Then 5676.00 S goes N 111.39 ft. to 5564.61 S where we drive a spike for hub "B", which fixes the position of this line as to

North and south. Then at hub "A" we turn a 90° angle from our E and W transit line and run a pickett line S to a point W of hub "B" and at hub "B" we turn a 90° angle to our N & S transit line and run a pickett line W 2080 ft to an intersection with pickett line from hub "A" at a point 135.00 ft S of hub "A" at which point we drive a spike in the ground for the cor to secs 2, 3, 10 & 11, T. 144, Rg. 31, from which we mark bearings as follows. N. pine stump, N 10° 30' E, 17.08 feet to tack,
N. pine stub, S 61° 10' E, 22.41 feet to tack at 8° Var.

NOTE: If we could find the Meander Corner on S side of Moss Lake, this corner would probably be placed about 42 feet further North, but the Meander is gone. At $5676 + 244 = 5920$ ft. S. (about) two old stakes set west about 54 feet from our small iron corner to secs 2, 3, 10 & 11, T. 144, Rg. 31, the two old stakes herein before mentioned sets about 355.00 ft S and 33 feet W. At $5400 + 30 = 5430$ S our transit line intersects the E and W transit line 5313.70 ft E or 3370 ft E of hub 5280 E. Curd, Todd, Carberry place tall red flag at the iron 1/4 corner on the West side of sec 3, T. 144, Rg. 31, and run a transit line E on 6° Var. At about 1/2 a mile E we cross the N & S transit line at a point ft. S of 1/4 corner on N side. About 150 feet E of where we cross the N & S transit line we drive a spike in an old log and 100 feet further E we drive a spike in the frozen ground between two trees and a few 100 feet further East we drive a spike in the center of an 8 inch green Norway Pine stump and still further E we drive a spike in the S 1/2 of a 12 inch green Nov. pine stump and still further E we drive a spike in an old black stump. On top of rise near W side of Moss Lake we drive a spike in old rotten log and on side hill near lake drive spike in the ground. Then continue our transit line E on ice and intersect our N & S random transit line on ice in Moss Lake at a point 95.10 feet S of stake 3000 S. Beginning at the point of intersection of our random transit lines on the ice in Moss Lake 3095.10 feet S of the NE corner of sec 3 or the U.S. Closing Corner, we chain W on ice. At 300 and 600 stake on ice. At 698 leave Moss Lake: At 701 center of sea wall: At 737.60 spike in side hill: At 855 spike in old log on top of hill: From spike in old log on top of hill it is 117.40 ft E to spike in side hill. Quit this survey for the present as the land owners do not care to spend any more money in the work. Guy A. Todd's bill for engineer work and expense is \$56.40. Buff Sauvreau pays Todd \$25.00 on account, leaving \$31.40 still due Todd. Todd makes no charge for one day going home. Curd makes no charge whatever for his time or expense.

John W. Curd.

Surveyed Feb. 26, 1914 to March 9, 1914.

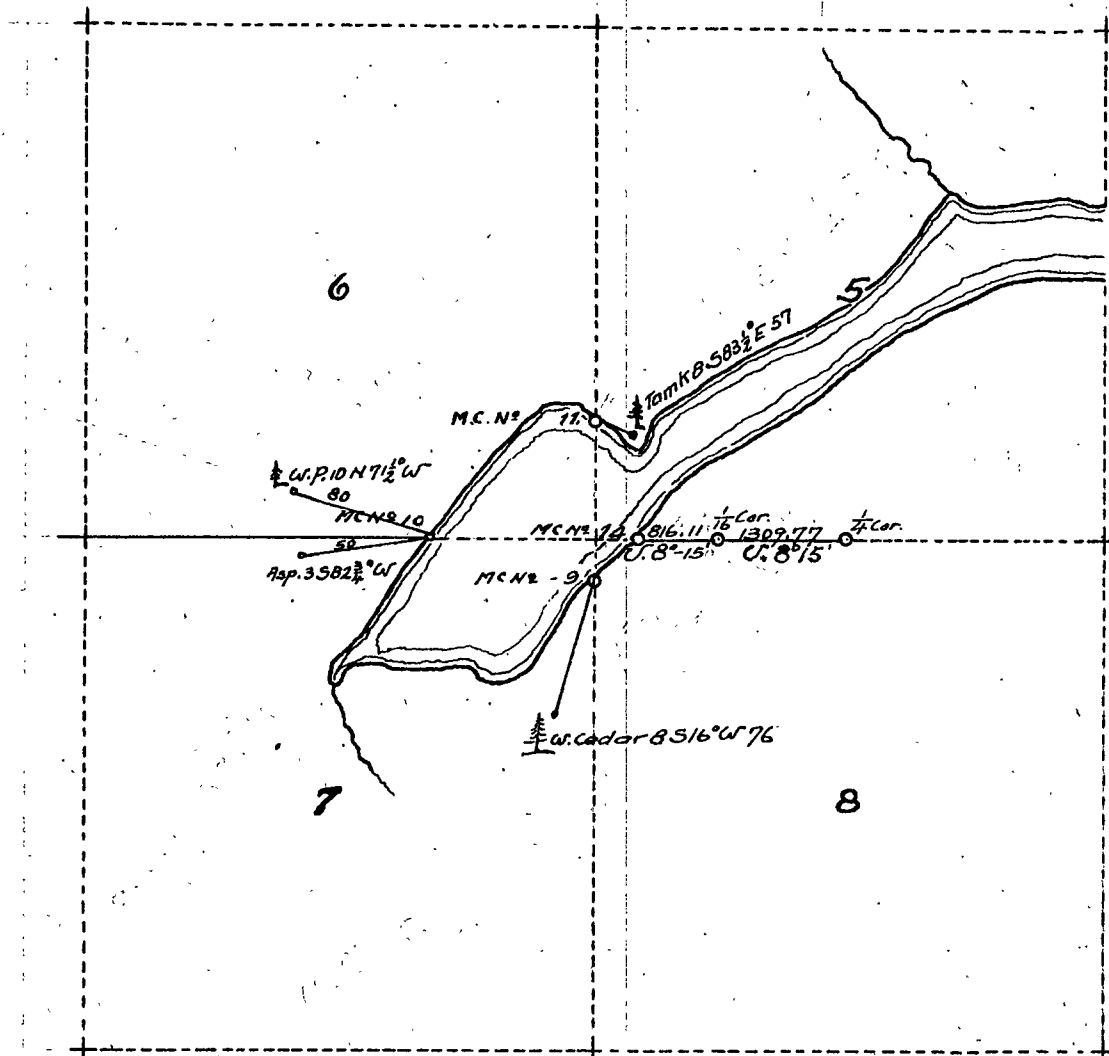
Recorded Dec-26-27-16.

County Surveyor,
Cass County, Minnesota.

SURVEY RECORD 303.

PLAT
Twp 140ⁿ Rg 25^w
SECS 5. 6. 7. 8.

Scale 1 Inch = 2000 Feet



SECS 5-6-7-8. TWP 140ⁿ R₆ 25^w

Field notes of the survey and establishment of corners in secs. 5, 6, 7, 8, Township 140, N. Range 25 W, Cass County Minnesota, as surveyed by John W. Curo, County Surveyor, Cass County Minnesota.

Monday March 2, 1914. I am working for Cass County Minn., in survey of a part of the Con Metzger County Road in sec 8-140-25. Leave Federal Dam at 11:15 A.M. train via Soo Ry. 66 cents. Arrive at Shovel Lake 1:00 P.M. Dinner at Shovel Lake. 35¢. Meet Frank McLaughlin who drives me to his place in N 1/2 SW 1/4, sec 28-140-25, where I stay over night.

Thurs 3, 1914. Mr. & Mrs. McLaughlin take their team and drive me to Con Metzger's place - going up old logging roads by way of Mishew Lake & thru sec 12-140-26, thence down "Little Thunder" Lake to Metzger's where all get dinner. McLaughlin helps men in P.M. and then drives back home. I look up Meanders on Lake in sec. 8-140-25. Over night with Metzger. John W. Curo

Wednesday Mar. 4, 1914. Con Metzger - Walter Metzger and I take compass & run pickett line from the 1/4 corner bet secs 5 & 8, 140-25, west 8°15' to M.C. No 14, where U. S. notes call for:

Wh. Cedar 6 S 85° E 24 links = 15.84 ft.; Wh. Cedar 6 N 78° E 29 links = 19.14 feet. We find both trees standing plainly marked. From which we set a wood cor. by proportionate course and distance. We find distance between center of old B.T.S. to be 5.80 feet from our temp. wood M.C.

Old B.T. bears N 83 1/2° E 29 links = 19.14 feet.

Old B.T. bears S 81 1/2° E 24 1/3 links = 16.06 feet.

we did not set exact corner on account of deep snow and ice, but get the exact distance west so as to fix the exact point for the NE cor. of Lot 1, sec. 8, T. 140, R. 25, as to E and W, in order to start a pickett line South and at a point 2125.50 feet West. M.C. No. 14 sets South 16.70 feet.

At the 1/4 sec cor bet secs 5 & 8, 140-25, U. S. notes call for:

W. Birch N 24° E 3 lks = 1.98 feet; Blk Oak 6 S 35° 30' W 11 lks = 7.26 feet.

We find both old U. S. bearing trees plainly marked and a 1/4 cor stake set Feb. 4, 1912, by Harry S. Todd who marked up new bearing trees as follows:

Bir. 10 S 5° W 22.30 feet; Birch 8 N 2° W 16.10 feet.

Both of Todd's new bearings are still in place, and from this 1/4 cor we run a careful compass pickett line west 8°15' Var. Gurley Compass 100 foot "Monarch" Steel tape chained perfect with plumb. bob by Con Metzger and Curo.

At 700 set stake; At 1100 set stake; At "1983 lks" = 1308.78 ft. W set temp. 1/16 corner.

At 1983 links plus 1235 lks = 1308.78 ft. and 815.10 ft. = 2123.88 ft. U. S. chain. M.C. No. 14, sets 1.62 feet West and 16.70 ft. South so at 2125.50 West M.C. No. 14 sets S 16.70 ft.

Correcting back: At 1308.78 we chain 5.99 of a foot West to 1309.77 at which point we chain South 10.30 feet where we place a small but half a foot North of a 2 inch iron-wood tree, which we square up for the temp. 1/16 cor. at the NE corner of Lot 1, sec. 8, 140-25, which fixes the position of this corner as to the true distance E and W, but on account of only running a pickett line West with no transit, this cor may go North or South a foot when we come to put the transit on the line. About one foot North of our pickett line and exactly 1309.77 ft. West I square up a 2 inch green iron wood stump and drive a nail in the

top, so as to preserve the measurement as to E & W, and from this point I start a compass pickett line South for Metzger to cut line by.

As I want the line cut, I correct our pickett line as follows:

2100 goes S 16.50, 2000 goes S 15.71: 1900 goes S 14.97 feet.

1800 goes S 14.15: 1700 goes S 13.36: 1600 goes S 12.57 feet.

1500 goes S 11.80: 1400 goes S 11.01: 1300 goes S 10.21 feet.

1200 goes S 9.43: 1100 goes S 8.64: 1000 goes S 7.86 feet: 700 goes S 5.50 feet.

I find both bearing trees to M.C. No. 9 and the SE B.T. to M.C. No. 11, and I think I have stump of the pine B.T. to M.C. No. 10, 140-25. From M.C. No. 10, I pace $\frac{3}{4}$ mile West but find no B.T.S.

John W. Curo.

Thursday Mar. 5, 1914. As Martin Denver, Hawk of Lima P.O., camp 3 pine tree, Spur or Shovel Lake P.O., has a contract to cut out a mile of County on N. side of sec. 9, 140-25, he cannot find the line and may want me to survey it. At corner to 4-5-8-9, T. 140, Rq. 25, U.S. notes call for:

B. Oak S N 71° E, 25 lks = 16.50 feet: Aspen 10 S 64° E, 35 lks = 23.10 feet.

Aspen 7 S 23° 30' W, 20 lks = 13.20 ft: W. pine 10 N 47° W, 23 lks = 15.18 feet.

On Feb. 25, 1912, Harry S. Todd found all four lines from which he set a stake but did not think it necessary to put in new bearing trees.

At $\frac{1}{4}$ bet. secs 4 and 9, T. 140, Rq. 25, U.S. notes call for:

W. Birch 6 S 79° 30' W, 34 lks = 22.44 feet: W. pine 4 N 79° 30' E, 6 lks = 3.96 feet.

On Jan. 28, 1912, Harry S. Todd found the stump of the WP marked "B.T." and the brick with the figures grown over. At the cor. to 3-4-9-10, T. 140, Rq. 25, U.S. notes call for:

Tank 8 N 65° E, 25 lks = 16.50 ft: W. pine 8 S 65° 30' E, 57 lks = 37.62 feet.

W. pine 9 S 42° W, 16 lks = 10.56 ft: Tank 8 N 28° 30' W, 33 lks = 21.78 feet.

On Feb. 4, 1912, Metzger, Morrow and Todd found that the SW & SE trees had been grubbed out but found the "B.T." mark on NE tree and roots of the NW tree from which they set a stake with new B.T.S. - viz:

W. pine 8 NE 6.80 feet: W. Birch 7 SE 46.50 ft., to spot on tree.

On account of a big storm I decide to wait awhile before surveying this mile and Con Metzger drives me to Shovel Lake, where I get dinner (35¢) and take train to Cass Lake: Fare \$1.12. I pay Metzger \$2.00 in full for board.

Arrive at Cass Lake and walk out to Buff Gauvreaux's farm and stay over night with Dan Gauvreaux.

John W. Curo.

March 6, 1914. Check notes of the above survey and prepare to return to Walker.

John W. Curo.

Surveyed -- March 2, 1914 - March 6, 1914.

Recorded -- Dec. 27-'16

County Surveyor.
Cass County, Minnesota.

T 145 R₆ 28 SECTIONS 26-27-33-34-35T 144 R₆ 28 SECTIONS 3-4.

Field notes of the survey and establishment of corners to secs 3, 4, Twp. 144, Rg. 28, and secs 26, 27, 33, 34, 35, Twp. 145, Rg. 28, as surveyed by John W. Curo, County Surveyor of Cass County.

May 21, 1907. Leave Cass Lake at 1:25 A.M. Arrive at Bena at 2: A.M. Sleep until 7: A.M. Middleton got Bob Link and Charles Peake as axe and chain men, and we start in at NE cor. of sec 34, T. 145, Rg. 28, being the cor. to secs 26, 27, 34, 35, T. 145, Rg. 28, where U. S. notes call for a post and the following bearing trees: Tank N 20° E links = 8.58 feet: Tank S 4° E, 18 links = 11.88 feet. Tank N 60° W 16 links = 10.56 feet: Cedar S 85° W 19 links = 12.54 feet. We find all the trees standing green and plainly marked and as they are some what out of place we establish the corner by proportionate measurement and courses and set a small iron pin for the true corner to secs 26, 27, 34, 35, T. 145, Rg. 28, from which we run S on 8° Var in swamp. At 334.70 ft S set hub on ridge, Var reads 9° 45' E. At 1320 ft set hub in swamp for temp. 1/16 cor: At 1483.20 tack in 30 inch wh. Pine stump, Var. reads 8° 55' (leave swamp at 1350 ft S) At 2125.70 set hub: At 2420 enter N edge of bog: At 2540 hub in bog, from which the 1/4 corner as we have established it for temp. cor stands N 88° 12' E, 82.40 ft distance making the length of the line 2537.50 feet. This 1/4 corner may, however have to be set further S as the bearing trees do not check for course and distance given in the U. S. notes. John W. Curo.

May 22, 1907. Same crew. At the 1/4 corner bet. secs 34 & 35, T. 145, Rg. 28, U. S. Notes call for a post and the following bearing trees:

J. Pine 7 inch, N 12° W, 200 lks = 132 feet: J. pine 6 inch, N 15° E, 115 lks = 75.90 ft. We find both bearing trees plainly marked but as they are out of place we cannot see the 1/4 cor. according to Govt notes, so I set it by intersecting the line from the two bearing trees as given in the U. S. notes after which the old trees stand as follows:

J. pine 7 inch N 12° W, 70.80 feet: J. pine 6 inch N 15° E, 62.60 feet. I set a large stake for the temp 1/4 corner and search for the remains of the old post set by the U. S. Surveyors as I believe it originally set further south. I tell James D. Middleton about this and he agrees to search further south for this stake as soon as the water goes down and if he finds the old stake will set my post over to where he finds the old corner and will correct up and change my line so as to fit the true corner if the same can be found. From the corner just set we run West thru sec 34 on 9° 10' Var. At 334 set hub on little 20 foot ridge in swamp: At 1220 leave swamp: At 1320 set hub for temp. 1/16 corner in center of E half of sec 34: At 1620 set hub: At 1700 enter swamp: At 2640 set hub for temp. center of sec 34 in swamp: At 2700 leave swamp: At 2756 set hub: At 2848.90 set hub on hill: At 2925 cross main stag road: At 2975 enter swamp: At 3333 leave swamp: At 3376.20 set hub on hill: Var reads 9° 25': At 3465 enter swamp: At 3960 set hub in swamp for temp. 1/16 in center of W half of sec 34. Quit for night.

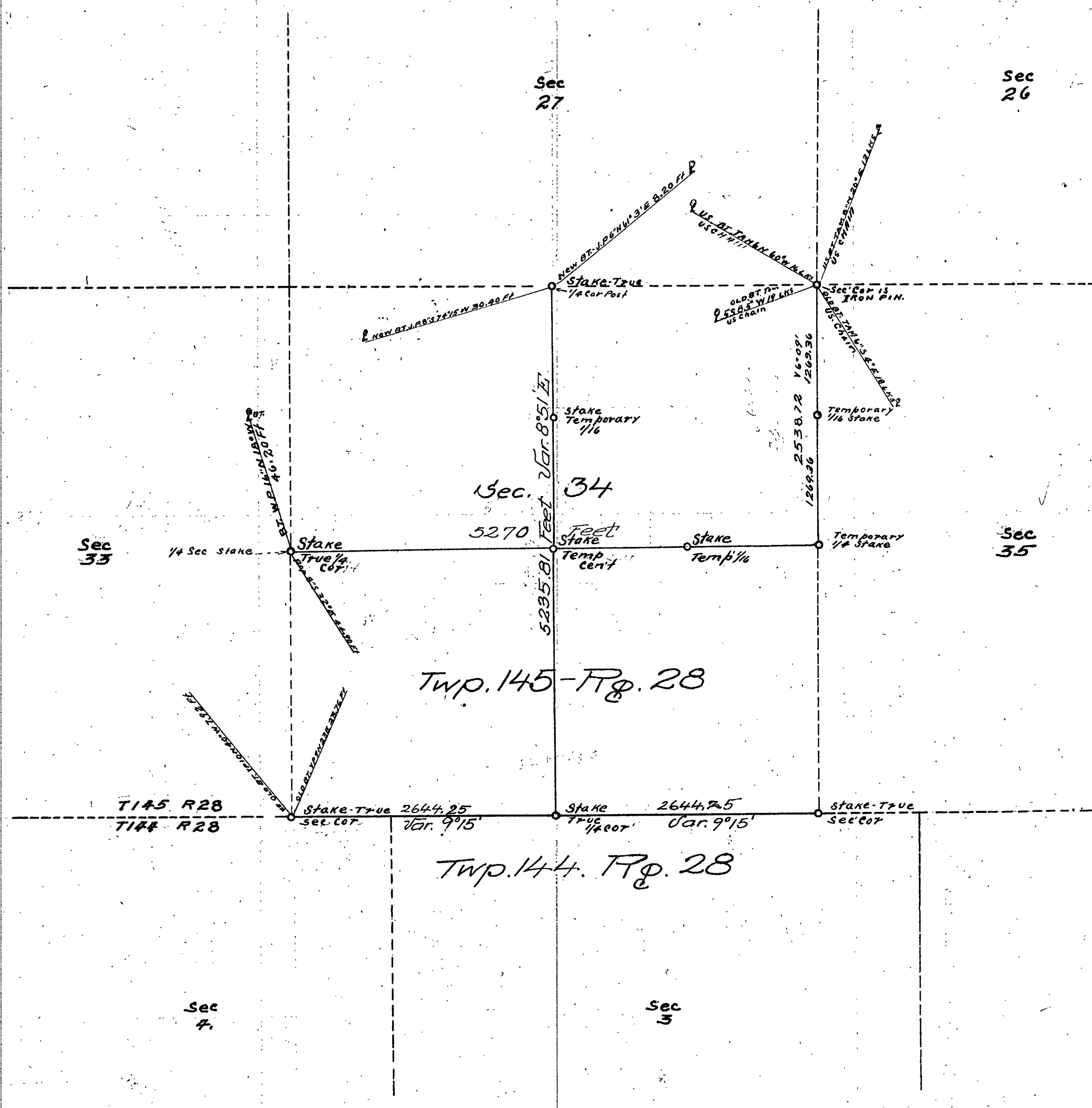
We are using a new Keuffel and Esser engineer's transit belonging to Curo and 100 foot steel tape belonging to James D. Middleton. Curo transit man with Bob Link and Charles Peake (Indians) as assistants. Quit for night.

John W. Curo.

PLAT.

Twp. 144-Rg. 28-SECT. 3-4.

Twp. 145-Rg. 28-SECT. 26-27-33-34-35.



May 23, 1907. Same crew continue West., Var still reads $9^{\circ}25'E$. At 5110 leave swamp: At 5204 W set hub on ridge: At 5280 W set hub: The true $\frac{1}{4}$ corner stands $S 8^{\circ}10'E$ 72 feet distant, making the total length E + W thru sec 34, 5270 feet. At this point being the $\frac{1}{4}$ corner bet secs 33 + 34, T.145, Rq. 28, U.S. notes call for a post and the following bearing trees:

Pop 8 inch, $N 32^{\circ}E$, 40 links = 26.40 feet: N. pine 16 inch, $S 18^{\circ}W$, 70 lks = 46.20 ft. We find both bearing trees standing plainly marked, but in establishing this $\frac{1}{4}$ post the bearing trees do not fit the field notes. The Y. pine called for in the U.S. notes is a 16 inch white pine, $N 18^{\circ}W$, 70 links and Pop. 8 inch, $S 32^{\circ}E$, 44.90 feet, at $8^{\circ}40'$ Var; at which point I set my new $\frac{1}{4}$ stake. In setting this $\frac{1}{4}$ stake I simply reverse the courses and set the stake at the intersection of the lines. Quit for dinner.

P.M. We begin at the $\frac{1}{4}$ post on the N side sec 34, being the $\frac{1}{4}$ cor bet secs 27 and 34, T.145, Rq. 28, where U.S. notes call for a post and the following bearing trees:

P. stub 6 inch, $S 13^{\circ}E$, 48 lks = 31.68 feet: Birch 3 inch, $N 60^{\circ}E$, 18 lks = 11.88 feet.

We find a stake set for the true $\frac{1}{4}$ cor by former County Surveyor, James M. Canfield with new bearing trees and I take courses to the new bearing trees: which were made by Mr. Canfield at 10° Magnetic Variation East as a Meridian:

J. pine 8 inch, $S 74^{\circ}15'W$ 30.40 feet: J. pine 6 inch, $N 61^{\circ}3'E$, 8.20 ft.

And from the $\frac{1}{4}$ cor. I run S on center line thru sec 34, Var $10^{\circ}E$: At 472 set hub: At 510 ft S enter swamp. Var reads $10^{\circ}15'$: At 948.70 ft S set hub on 50 ft poplar ridge: At 1320 ft S set hub for temp $\frac{1}{16}$ in. swamp near center of $N \frac{1}{2}$ of sec 34: 1640 leave swamp and cross stage road, Var. reads 10° : At 1733.20 set hub on poplar ridge: At 1750 enter swamp: At 1970 cross 20 ft poplar ridge: At 2513 cross our E and W preliminary transit line 2621 ft W of the $\frac{1}{4}$ post on E side of sec 34 and quit for night. John W. Curo.

May 24, 1907. Continue South. on random center line of sec 34, T.145, Rq. 28.

Curo transit, Bob Link and Charles Peake. axe and flag: At 2600 leave swamp: At 2640 set hub for temp. center of sec 34 on N + S random: At 2843.70 hub on little hill: At 3342.70 S set hub: At 3606.20 S set hub: Magnetic Variation reads $10^{\circ}E$: At 2650 S enter swamp: At 3960 S set stake in swamp: Quit for dinner. Peake quit at noon and we got a man in his place. P.M. Bob Link and Ka-Ue-Ta-Ue-Ue-Dunk both Indians. Axe and chain. Curo transit, continue S. At 4365 leave swamp. At 4429.80 ft S set hub: At 4113.40 set hub: At 4725 enter swamp: At 5280 ft S set hub in swamp. The $\frac{1}{4}$ post on the S side of sec 34, T.145, Rq. 28, cannot be found. At this point U.S. notes call for post with no bearing trees: we do not find the post and quit for night. John W. Curo.

May 25, 1907. We go to the corner of secs 33 + 34, Twp. 145, Rq. 28, where U.S. notes call for a post and the following bearing trees:

Y. pine 9 inch, $N 23^{\circ}E$, 36 links = 23.76 feet: Y. pine 10 inch, $N 40^{\circ}W$, 12 lks = 7.92 ft:

We find both trees in good condition and by setting the stake by measurement from the center of the trees they check out fine for course at 9° Var. This is the N boundary of sec 4, Twp. 144, Rq. 28, on the 11th standard parallel and from the stake just set we run E, bet secs 4 + 34, on $9^{\circ}15'$ Var. E. At 197

center of stage road: At 700 ft. E enter swamp: At 917.20 ft. E tack in tank root: At 1006.50 ft. E we look for the N. corner to secs 344, T.144, Rg. 28, being the Closing Corner on the 11th Standard Parallel, where U.S. notes call for post and the following bearing trees:

Tank 5 inch, $S 12^{\circ} E$, 17 links = 11.22 ft. J. pine 6 inch, $S 85^{\circ} W$, 206 lks = 135.96 ft. We find nothing and continue East bet. secs 3434. It rained and we quit at noon. Peake, Bob Link and Curo work one half day.

May 26, 1907. Peake, Bob Link and Curo still on the job, continue East bet. secs 3434, on $9^{\circ} 15' Var$: At 1320 set stake in swamp: At 1821.10 set hub in swamp: At 2264.50 set hub: At 2640 set hub in swamp for temp. $\frac{1}{4}$ cor. on S side of sec 34, Twp. 145, Rg. 28: At 3960 set stake in swamp: At 4100 leave swamp: At 4116 set hub: At 4681.10 set hub on hill: At 5051 set hub: At 5280 E set hub in swamp: The true S cor to secs 34 & 35, T.145, Rg. 28, being the N. boundary of sec. 3, T.144, Rg. 28, stands $22^{\circ} 46'$ to the right 8.90 ft. distant, Var reads 9° . Total length is 8.50 ft. too long and the corner stands 3.40 ft. to the right. At this point U.S. notes call for post and the following bearing trees:

Blk. Ash 9 inch, $N 22^{\circ} E$, 28 lks = 18.48 ft.: Blk. Ash 6 in., $N 59^{\circ} W$, 15 lks = 9.90 feet. We find both bearing trees plainly marked from which we set a stake for the true corner by flat chain from the center of the tree after which at 9° Var. the tree stands as follows:

Blk. Ash 9" $N 28^{\circ} 27' E$, 18.48 feet: Blk. Ash 6", $N 58^{\circ} 44' W$, 9.90 feet to center of trees. Curo, Bob Link, Charles Peake work all day. John W. Curo.

May 27, 1907. Peake, Bob Link and Curo correcting up all the lines in sec 34, T.145, Rg. 28: At hub 2640 E on S side of 34 the true $\frac{1}{4}$ corner stands $E 22^{\circ} 46' S$, 4.50 feet distant, where I set a good 4 inch tank post 5 feet long for the true $\frac{1}{4}$ cor. on the S side of sec 34, T.145, Rg. 28, with bearing as follows:

Tank 4" $N 28^{\circ} 15' E$, 53 feet: Dead Tank 3" N , $58^{\circ} 4' W$, 53.50 feet.

This post also marks the true N boundary of sec 3, T.144, Rg. 28: Going S on the center line on our random in sec 34: At 5280 S the newly established $\frac{1}{4}$ post stands $N 67^{\circ} 05' W$, 113.50 feet: Then following the random center line back N, Hub 2640 S goes $N 67^{\circ} 05' W$, 56.75 ft., as true North and South center line. and at hub 2843.70 S we run $N 67^{\circ} 05' W$, 61.13 feet. These two last hubs fix the true N & S center line of sec. 34, Total length N & S thru center of 34 is 5236 feet. The S $\frac{1}{2}$ being 2638.50 ft. and the N $\frac{1}{2}$ being 2547.50 ft., but if Mr. Middleton finds the $\frac{1}{4}$ post bet. secs 34 & 35, T.145, Rg. 28, it may change the length of these lines thru the center of sec 34, as to N & S. Going S on the preliminary line of 34 my random is 105.40 feet. to JAVE. To correct the E & W center line of 34 and to follow my transit line 5280 ft. W the true $\frac{1}{4}$ corner bet. 33 & 34 sets $8^{\circ} 10' E$, 72 feet. Correcting back East at hub 2640 W we run $S 8^{\circ} 10' E$, 36 feet, and at hub 2848.90 W to run $S 8^{\circ} 10' E$ 38.85 feet. The total length of the E & W center line of sec 34 is 5269.70 feet, the East $\frac{1}{2}$ being 2671.40 feet, and the W $\frac{1}{2}$ being 2598.30 feet. My preliminary on E and W center line of sec 34, at W side of section is 71.20 ft. too far North. we set the center of sec 34 at a point where our corrected N, S, E & W corrected lines intersect.

Setting transit on hub 2640 W, the center of 34, as we have established it bears $S 41^{\circ} W$, 48 ft.: Hub 1320 W goes $S 41^{\circ} W$, 24 ft. where we set the $\frac{1}{16}$ cor.

304 - CONT.

in the center of the E 1/2 of sec 34. Setting transit on 2640 S, the center of 34 as we have established it bears N 28° 48' W, 105.70 feet. 1320 S goes N 28° 48' W, 52.80 ft, where we set the 1/4 in the center of the N 1/2 of sec 34. Var. reads 8° 50' E. I set bearing trees for the center of sec 34, T. 145, R. 28, as follows:—
 N. pine 16 inch, N 55° 20' W, 49.20 feet. Pop. 3 inch, S 57° 45' E, 12.40 feet.
 At the 1/16 cor. in center of N half of sec 34, I mark new bearings as follows:—
 Pop. 7 inch, N 68° 50' E, 95.40 ft. Birch 8 inch, S 76° 12' E, 110.10 feet. At 9° Var.
 At the 1/16 in center of E 1/2 of sec 34, I set new bearings as follows:—
 Pop. 8 inch, N 43° 45' E, 5.60 feet. Bir. 4 inch, N 73° 10' W, 8.30 feet. At 9° Var.
 At 1270 feet S of the corner to secs 26, 27, 34 & 35, T. 145, R. 28, I run N 88° 12' E, 41.20 feet, and mark new bearings as follows:—
 Tamk 10 inch, N 14° 41' E, 18.90 feet. Tamk 10 inch, N 53° 40' W, 15.50 feet. At 9° Var.
 for bearings to the N 1/16 corner bet secs 34 & 35, T. 145, R. 28, I instruct James D. Middleton to try to find the 1/4 corner bet secs 34 & 35 which I believe to be further S, and which if found would change these corners somewhat. In changing these corners it would not be necessary to make another survey but they could be set over by calculation according to the distance the 1/4 corner would be off bet secs 34 & 35. Later I receive a letter dated June 18, 1907, from James D. Middleton stating that he was inclined to think that someone had been tampering with the corners as I had placed them and I received another letter from Mr. Middleton, dated July 16, 1908, in which he states that he found the remains of the old U. S. stake 64 feet S of a stake supposed to have been set by me for the 1/4 cor bet secs 34 & 35. There must be some mistake however, as the Government stake could not be 64 feet S of where I originally located this 1/4 corner. I write Middleton to examine my stakes and make any necessary corrections, but have heard nothing further in regard to this survey. I will examine it again at some future date.

John W. Curs.

Surveyed May 21, 1907 to May 27, 1907.

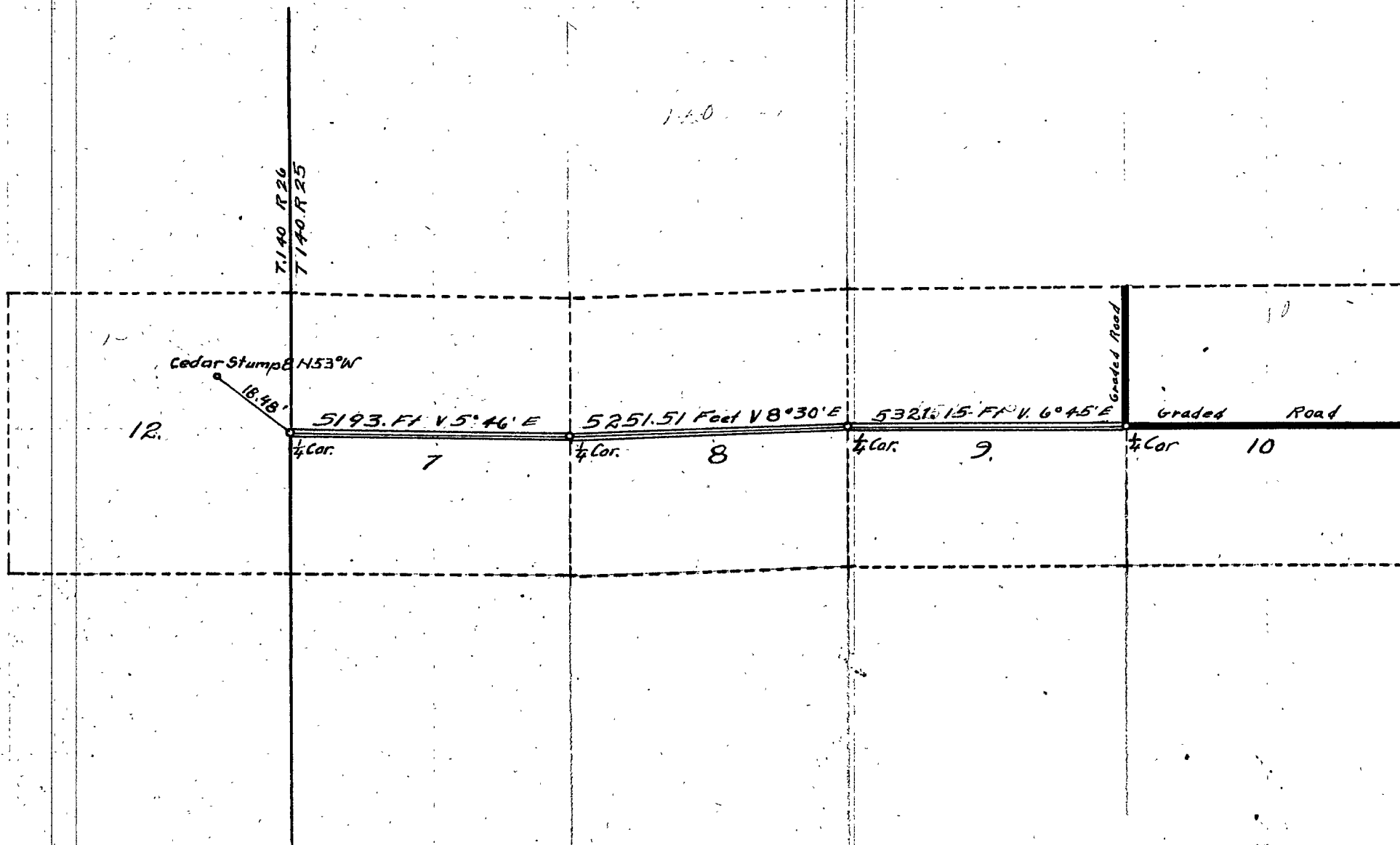
Recorded Dec. 29-16.

County Surveyor.
Cass County, Minnesota.

PLAT.

TWP 140-RG.25-SEC.7-8-9-10

TWP 140-RG.26-SEC.12.



TWP. 140. N. Rg. 25. W. 5TH P. M. SEC'S. 7-8-9-10.
TWP. 140. N. Rg. 26. W. 5TH P. M. SEC. 12.

Field notes of the survey and setting of corners and stakes and search for old Government stakes and bearing trees in secs 7, 8, 9, 10, Township 140, Range 25, and sec 12, Twp. 140, Rg. 26, being the survey of a part of a County road which begins at the 1/4 post bet secs 9 & 10, and runs W on the center line of secs 9, 8, 7, T. 140, Rg. 25, and thru sections 12 & 11, T. 140, Rg. 26, connecting with the State Rural Highway No. 83, at the 1/4 cor. bet secs 10 & 11, T. 140, Rg. 26, as surveyed by Alois Nowak, Civil engineer, under the direction of John W. Curo, County Surveyor, Cass County, Minnesota.

Thursday Dec. 7, 1916. Curo and Alois Nowak work in office in Walker all day on field notes necessary for this survey. Nowak boards at Hotel Chase in Walker.

Friday Dec. 8, 1916. Alois Nowak leaves Walker on M & I train at 3: AM arrives at Bemidji at 7:10 A.M. R.R. fare 69¢, Bed and Breakfast at Hotel Mark-Lam. Hotel bill \$1.50. Leave Bemidji at 9:45 A.M. and arrive at Federal Dam 11: A.M. R.R. fare via Soo line 83¢. Dinner at Standard Hotel. Nowak stops off at Federal Dam to get an Engineer's transit which was left on Sugar Point when he surveyed part of the Sugar Point-Federal Dam Road, and the cost of going after this transit should be charged to said Sugar Point Road. Nowak will make no charge for his time or expense for to-day but will charge the cost of the livery to said Sugar Point Road. In P.M. Mr. Joe Miller and his ford takes Nowak to Judij's place on Sugar Point. Nowak's notes read as follows:

I get survey out-fit and get back to Federal Dam at 7: P.M. Supper and over night at Federal Dam. Signed- A. Nowak.

Saturday Dec. 9, 1916. Breakfast in hotel and leave Federal Dam 11: A.M., via Soo. Dinner at Remer, 50 cents. Arrive at Shovel Lake at 1: P.M. R.R. fare 69¢. Got team from E. J. Ruggie, the hotel man who drives me to Richards farm, for which I pay \$1.50. Mr. Richards is not at home. I work on field notes in afternoon. Richards returns in the evening and will assist in survey and get two or three men. Over night with Richards. A. Nowak.

Dec. 10, 1916. A. Nowak transitman, J. F. Richards chain and flag, Chris Steinhart axeman, Corbin Young-chain. Howard Parker-axeman, Nowak also chaining. We walk to the 1/4 cor bet secs 9 & 10, T. 140, Rg. 25, on W end of graded road, which runs thru the center of sec 10. This laid-out road turns on the 1/4 cor and runs N on the sec line bet 9 & 10. U.S. notes call for post and the following bearing trees:
asp. 6 N 9° E, 29 lbs = (= 15.84 ft. in sec 10) y. Pine 3, 5 20° W, 10 lbs = (6.60 ft. in sec 9)
These bearing trees have disappeared. I set a hub at the point of intersection of the road running N with the road running East. From this hub set for the 1/4 cor. bet 9 & 10, T. 140, Rg. 25, 7 inch. Nor. pine marked "1/4 sec" sets 57.70 ft. I start a random line W thru sec 9 at 7° 45' Var. E. Down hill. @ 100 ft W set pin at foot of hills: At 200 set pin on top of hill, thence down hill: @ 300 & 400 set pin: @ 405 enter open swamp: @ 550 enter thick tank swamp.

@ 807.15 set hub and tack: @ 1285 enter high land; with high poplars and Birch:
 @ 1300 feet W set pin: @ 1320 feet W set hub and tack, lunch in field. In P.M. Con-
 tinue west: @ 1400 ft. W set pin running up hill: @ 1995 drive tack into log:
 @ 2110 down steep hill: @ 2200 foot of hill; thence up hill. @ 228.50 feet W drive
 tack in log: @ 2290 top of hill: @ 2300 down a hill: @ 2500 on level land: @
 2640 set hub and tack near center of sec 9, @ 2800 W set pin: At 2808 ft. W drive
 tack in log: @ 2900 W set pin, running down hill: @ 3000 set pin, enter tank
 swamp: At 3100 set pin, leave tank swamp: @ 3300 set pin, running up hill:
 At 3338 cross logging road bearing SW and NE: @ 3400 set pin: At 3428.55
 drive tack in log: @ 3500 set pin. All pins are wood stakes, numbered
 progressively and set every 100 feet. Quit for night. Mrs. Richards comes
 with team to take us home. All get in full day. Boarding with Richards.

Dec. 11, 1916. J. F. Richards - chain and flag, C. Steinhart, Harold Parker - Menem.
 Corbin Young - chain. A. Nowak, chain and transit. Richards drives us with his
 team to $\frac{1}{4}$ cor bet secs 9 and 10, T. 140, Rg. 25, then we walk along our random line
 to pin 3500 feet W where we finished yesterday, continue west. Needle reads 8° Var. E.
 @ 3600 ft. W set pin: @ 3700 ft. W set hub and tack: @ 3800 set pin, line starting
 down hill: @ 3900 set pin, enter swamp: @ 3960 set hub and tack: @ 3990 ft.
 W leave swamp, enter highland with poplar and birch: @ 4000 set pin, line
 starts up hill: @ 4300 ft. W set pin on edge of gully: @ 4400 W set pin across
 gully: @ 4420.20 drive tack in log on edge of gully: @ 4500 W set pin on bottom
 of gully: @ 4600 ft. W set pin on opposite edge of gully, line running up hill. @
 5066.50 drive tack in log, line running down hill: @ 5200 ft. W set hub and tack:
 At 5300 ft. W drive spike in ground: @ 5321.15 ft. W a post set as the $\frac{1}{4}$ cor bet
 secs 8 & 9, T. 140, Rg. 25, sets N 94.55 feet. This point was set three years ago by some
 cruiser as a pine post four inches in diameter and about 6 ft long stands for the
 $\frac{1}{4}$ corner. The upper three ft. of the post is squared and plainly marked "45".
 The Government notes call for a post and the following bearing trees:

Birch 10 inch, $S 11^{\circ} W$, 10 lks = 6.60 feet: Birch 6 inch, $N 11^{\circ} E$, 38 lks = 25.08 feet
 J. F. Richards who is Chairman of the Town Board has the field notes which he says
 the Town Board ordered from the land office in Washington, said field notes called for:
 Spruce 10 inch, $S 4^{\circ} E$, 54.12 feet: Pine 10 inch, $N 34^{\circ} W$, 34.93 feet. And also the
 Birch bearing trees given in my notes. The spruce and pine are here green and
 plainly marked, tho' to my notion of more recent date than the original U.S. Survey.
 The ten inch birch was cut down, the stump is $3\frac{1}{2}$ ft. tall, plainly blazed. The
 six inch birch seems to have disappeared. The distance in courses of the bearing
 trees to the post check fairly well. Dinner in field. In P.M. we set up on $\frac{1}{4}$ post
 bet secs 8 & 9, T. 140, Rg. 25, and start a random line W thru sec 8, T. 140, Rg. 25. About
 120 ft. W of the post we find an old pickett which sets in the center of an old cut
 out line, so I decide to run along that line. Needle reads $6^{\circ} 15'$ Var. E. Line runs
 up hill. At 100 ft. W set pin on top of hill: @ 107.50 drive tack in log: @ 165
 enter gully: @ 200 set pin on bottom of gully, line runs up hill: @ 584 ft. W
 drive tack in log: @ 800 ft. W set pin: @ 877.60 ft. W drive tack in log: At
 900 ft. W line starts down hill: @ 1189.40 drive tack in log, line going down
 hill, very steep hill side: @ 1300 ft. W set pin on foot of hill, line starts up hill:
 @ 1320 set hub and tack W: @ 1448.25 ft. W drive tack in log: @ 1579.50 drive
 tack in log: @ 1600 ft. W set pin, line starts down hill. @ 1800 ft. W line starts

up hill: @ 1914.75 ft W drive tack in log: @ 2000 ft W set pin: @ 2226.20 ft W drive tack in log, line starts down hill: @ 2600 W set pin on foot of hill, line starts up steep hill. The old transit line I am using makes a sudden crook to the North. We continue our transit line straight ahead. @ 2700 set pin on top of hill: @ 2701.80 drive tack in log, a wire fence bearing E and W is N 20.75 feet. @ 2900 W set pin, the last 300 feet is on level land, line starting down hill. @ 2932.40 drive tack in log, and quit for night, staying with Richards. A. Nowak.

Dec. 12, 1916. C. Young chain, C. Steinhart flag, H. Parker and Melvin O'Brien Axemen: Alois Nowak transit and chain. We correct the $\frac{1}{4}$ line thru sec 9, T. 140, R. 25. @ 5321.13 ft W the $\frac{1}{4}$ cor bet secs 8 & 9 sets N 94.55 ft, being 0.017769 of a foot N for each foot West. We correct the tacks driven into logs and the hubs and set the correct points 3x3" square oak or pine posts marked "Road Center". Hub 807.15 W goes N 14.33 ft. Hub 1320 W goes N 23.46 ft. Jack 1995 W goes N 35.44 ft. Jack 2284.50 W goes N 40.58 feet. Hub 2640 W goes N 46.92 ft. Jack 2808 W goes N 49.89 ft. Jack 3428.55 W goes N 60.92 ft. Hub 3700 W goes N 65.74 ft. Hub 3960 W goes N 70.38 ft. Jack 4420.20 ft W goes N 78.53 ft. Jack 5066.50 W goes N 90.02 ft. Hub 5200 W goes N 92.40 ft. Spike 5321.15 W goes N 94.55 ft. Quit for dinner.

In P.M. we walk to tack in log 2932.40 ft W on our random thru sec 8, and continue West. @ 3000 ft W set pin, line going down hill: @ 3100 set pin at foot of hill, line starts up line: @ 3300 W wire fence bearing E & W is still following our line 20.75 ft N. @ 3400 W set pin on top of hill: @ 3452.95 W drive tack in log, line going down a high hill: @ 3900 ft W set pin at foot of hill: @ 3918 W enter a road road with timber cut down, running on what may be the West $\frac{1}{16}$ line of section 8, T. 140, R. 25, this road runs N, $\frac{1}{2}$ mile to the W $\frac{1}{16}$ corner on the N side of sec 8. @ 3951 intersect center line of road, a stake marked " $\frac{1}{16}$ " sets 589 paces. This stake marks the S end of the road: At 3960 W set hub and tack. Quit for night. Signed A. Nowak.

Dec. 13, 1916. Wednesday. C. Young chain. C. Steinhart flag, Howard Parker and M. O'Neil axemen, A. Nowak transit and chain. We walk to hub 3960 ft W on random thru center of sec 8, and continue West: @ 3984 leave a road road: @ 4000 set pin: @ 4190.65 drive tack in log, line starts down hill: @ 4200 set pin, foot of hill: @ 4300 set pin: line running on level land. @ 4400 set pin: @ 4977.68 drive tack in log: @ 5000 set pin, line still going on level land: @ 5300 set pin and spike: @ 5242.13 ft W the $\frac{1}{4}$ corner bet secs 7 & 8, T. 140, R. 25, sets 5316.10 ft. Quit for dinner.

In P.M. we walk to the $\frac{1}{4}$ cor bet secs 7 & 8, T. 140, R. 25, where U.S. notes call for post and the following bearing trees: Wh. pine 5 inch, N 31° E, 11 lbs = 7.26 feet: Birch 8 inch, S 51° W, 4 lbs = 2.14 feet. The two additional bearing trees Mr. J. F. Richards has in his field notes, are: Tank 8 inch, N 45° E, 33.66 feet: Wh. pine 9 inch, S 50° W, 44.88 feet. We find a 2 1/2 x 2 1/2" pine post 2 feet above ground and marked " $\frac{1}{4}$ Sec"; set by Guy A. Todd, May 16th, 1914." The tank has been blown down, but is plainly blazed on the side which must have faced the post while the tree was standing. The SW Wh. pine has been cut down, the stump is sound and shows plainly the blaze with the tack in it. The 5 inch W. pine being the NE bearing tree, has also been cut down. The stump is sound and shows plainly the blaze and the old B.T. marks. The 8 inch birch has disappeared.

We check the distance in courses to the bearing trees and find them perfect. We then set up on the $\frac{1}{4}$ post bet 7 & 8 and run W, 8° Var. E, on random thru sec 7, T. 140, R. 25, @ 100 ft. W set pin, line going over level land: @ 568.15 drive tack in log: @ 580 line going down hill: @ 700 set pin at foot of hill; line starts up hill: @ 960 top of hill, line going over level land: @ 1014.45 drive back in log: @ 1320 set hub and tack: @ 1682.62 drive tag in log: @ 1730 enter bog with scattered green tank: @ 1800 W set pine. Quit for night. A. Nowak

Dec. 14, 1916. C. Young Chainman, C. Steinhart chain and flag, M. O'Brien & H. Parker axemen; A. Nowak transit and chain. In A.M. we walk to pin 1800 ft. W of the $\frac{1}{4}$ corner bet secs 7 & 8 and continue our line W thru sec 7: @ 1900 W set pin: @ 2200 ft. W set pin: A little lake in about 400 ft. S of our line: @ 2200 leave bog & enter birch and poplar bush: @ 2640 set hub and tack: @ 2785 cross logging road: @ 2800 pin set, enter tall poplar and brush going down hill: @ 3107 enter creek: @ 3122 leave same: @ 3200 set pin, line starts up hill: @ 3900 set pin on top of hill: @ 3937 cross log road bears NW & SE: @ 3960 set hub & tack: @ 4900 set pin, line on level land: @ 4388 set hub and tack: @ 5300 drive spike in ground: We have set stakes numbered progressively every 100 feet along this line. @ 5189.35 ft. W the post set for $\frac{1}{4}$ corner on the W side of sec 7, T. 140, R. 25, being the $\frac{1}{4}$ cor on E side of sec 12, T. 140, R. 26, sets N 204.12 ft, U.S. Govt. notes call for post and the following bearing trees:

Fir 7" N 27° E, 16 lbs = 10.56 ft. in sec 7: Cedar 8" N 53° W, 28 lbs = 18.48 ft. in sec 12. The 7 inch fir has disappeared but the 8 inch Cedar in sec 12, T. 140, R. 26, is a dry stump 10 feet high, showing the original U.S. B.T. marks plainly. This cedar stump is traced up with a pine pole on the side facing the post and seems to have been picked up or straightened up by someone. The post is a half decayed large pine pole from which the course and distance from the Cedar stump check fairly well. I set a new stake being a 3x3" birch post set by course and exact distance from the B.T. I mark the post " $\frac{1}{4}$ S set by A. Nowak, Dec. 14, 1916" and take the new bearings as follows:

Old Cedar stump 8" N 53° W, 18.48 ft: Wh. pine stump 18" N 48° W, 18.70 ft.
Wh. pine stump 20", North 23 feet.

This is the true $\frac{1}{4}$ corner bet secs 7 & 12, T. 140, R. 25 & 26. The hills which we have crossed with the 3 miles of random line just run average in height from 50 to 80 feet. Quit for night. A. Nowak.

Dec. 15, 1916. C. Young Chain, C. Steinhart flag, M. O'Brien and Howard Parker axemen, Nowak transit and chain. We walk to $\frac{1}{4}$ cor on W side of sec 7 and correct our random line. We correct the hubs and the tacks we have driven into logs and at the correct point we set 3x3" Oak or pine post marked "Road Center." At 5189.35 ft. W the $\frac{1}{4}$ cor on W side of 7 sets N 204.12 ft, 4388 goes N 172.49 ft: 3960 W goes N 155.67 ft: 2640 ft. W goes N 103.78 ft: Tack 1682.62 W goes N 66.14 ft: Hub 1320 W goes N 51.89 ft: Tack 1014.45 W goes N 39.88 ft. Tack 568.15 W goes N 22.32 feet.

P.M. Correcting the line thru sec 8, T. 140, R. 25: @ 5242.13 ft. W the $\frac{1}{4}$ cor bet secs 8 & 9 on our random line, the $\frac{1}{4}$ cor bet secs 7 & 8, T. 140, R. 25, sets S 316.10 feet. On account of the correction being rather large I resolve to run a transit line on the true E and W $\frac{1}{4}$ line thru sec 8, T. 140, R. 25. In order to establish this true line we walk to tack 4977.68 ft. W

and correct S, 300.02 ft. The correction being 0.060282 of a foot. 3 for each foot West. We set a hub and tack at this correction, then we place a tall red flag behind the $\frac{1}{4}$ post bet secs 748. I set up on corrected hub 4977.68, back sight on Red flag on $\frac{1}{4}$ post and run a careful transit line E without chaining, using double centers and setting a hub at about every 700 feet. We set a pickett about every 200 feet on W side of instrument, correctly on the line. We run this transit line as far as pin 2900 W on our random line, which is about 66 paces to the North at this point. Quit for night. Mr. Richards comes with team to take survey outfit to his place. In the evening I make out some of the bills for Cass County. A. Nowak

Dec. 16, 1916. In A.M. I work on field notes and walk to Corbin Young's place who is Clerk of Smoky Hollow Township, and have him sign the bills. J.F. Richards takes me and survey outfit with team to Shovel Lake, where I leave at 2:40 P.M., via Soo R.R. Arrive at Bemidji 7:15 P.M. R.R. fare \$1.41. Supper at Hotel Markham, 50 cents. Leave Bemidji at 11:25, via M & I, R.R. Fare 69 cents.

Dec 17, 1916. Sunday. Arrive in Walker at 11 A.M. Bed and board at Hotel Chase.

Monday Dec. 18, 1916. Work all day checking up and writing notes on survey of County Road in secs 7, 8, 9, T. 14 S, R. 25, Smoky Hollow Township.

A. Nowak, Assistant Engineer.
Cass County, Minnesota.

Surveyed, Dec. 7, 1916 to Dec. 18, 1916.
Recorded. Dec 30, '16.

County Surveyor,
Cass County, Minnesota.

TWP. 136 - Rg. 29 - SEC'S 7-9-10-18-19-20-21-22-27-28-29-30-31-32
TWP. 135 - Rg. 29 - SEC'S 5-6
TWP. 136 - Rg. 30 - SEC'S 24-25-36

Field notes of the survey and establishment of iron monuments in secs 5+6, Twp. 135, N. Rg. 29 W, and secs 7, 9, 10, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31 & 32, Twp. 136, N. Rg. 29 W, and secs 24, 25 & 36, T. 136, N. Rg. 30 W, 5th P.M. as surveyed and established by E. B. Horst, Deputy County Surveyor, under the direction of John W. Curo, County Surveyor.

Tuesday, Nov. 14, 1916. I am working for Soon Lake Twp., 136-29. Get notes and plate and survey outfit, leave Walker for Pequot 9:28 A.M. train, via M & I R.R. fare 85 cents. In P.M. Mr. Ray Arderson takes me and outfit and 15 iron monuments to Thads C. Anderson's place in the SW quarter of sec 21, Twp. 136, Rg. 29. I walk to the 1/4 cor. bet secs 21 & 28, T. 136, Rg. 29, where U.S. notes call for: (L to V @ 4).

Blk. pine 10 inch, N45°E, 40 lks = 26.40 ft: Blk. pine 8 inch, S15°W, 36 lks = 23.76 ft: The U.S. bearing trees are gone but I find the manufactured B.T. marked with a large sized scribe. I pass it up as nothing checks. Stay with M.C. Anderson over night. Signed E. B. Horst.

Wednesday, Nov. 15, 1916. Horst with compass chain and field notes, Thads C. Anderson with team, wagon, tools and iron monuments. Tobias Bye (Chairman of the Town Board) and Sam Arkland (also Board member) assisting. We begin setting iron monuments at the cor. to secs 19 & 30, T. 136, Rg. 29, being the cor. to secs 24 & 25, T. 136, Rg. 30, where U.S. notes call for a post and the following bearing trees:

Blk. pine 11 inch, N10°30'E, 25 lks = 16.50 ft: Blk. pine 12", N52°30'W, 20 lks = 13.20 ft: Blk. pine 12 inch, S79°W, 65 lks = 42.60 ft: Blk. pine 10", S47°E, 34 lks = 22.40 ft: I find the SW bearing tree in sec 25 with the marks nearly all cut off, and I also find the stumps and the roots of the other bearing trees, which check with notes. There are also 5 other bearing trees marked at the corner. I find a stake at the point for the cor, where I drive a 2 1/2 x 48 inch capped iron monuments with new bearings as follows:

J. pine stump 7", N36°E, 53.70 ft. in sec. 19. J. pine 9" N30°30'W, 73.50 ft. in sec. 24. J. pine 10" S56°W, 65.30 ft. in sec 25. J. pine 10" S62°E, 37.70 ft. in sec. 30.

This corner is about in the center of a cross road. We drive S on graded road 1/2 mile and find bearing trees to the 1/4 cor. bet secs 25 & 30, T. 136, Rg. 29 & 30, where U.S. notes call for a post and:

Pine 10" S82°30'W, 12 lks = 7.92 ft: pine 10" S44°E, 21 lks = 13.86 feet. We find the SE stump plainly marked "B.T." The marks on the SW stump is burned off, but the blaze shows plainly. Stump check for course and distance.

I set a 2x48" iron monument with new bearings as follows:

J. pine 5" S49°W, 55.40 feet: J. pine 5", East 33.50 feet:

We drive S another 1/2 mile to the cor. of secs 25, 30, 31 & 36, bet twps 136, Rg. 29, and Twp. 136, Rg. 30, where U.S. notes call for a post and:

Blk. pine 13" S19°E, 36 lks = 23.76 ft: Blk. pine 12", S28°W, 22 lks = 14.52 feet: Blk. pine 10", N76°30'W, 13 lks = 8.58 ft: Asp. 10 inch, N29°30'W, 25 lks = 16.50 feet.

I find the SE stump badly burned and find a part of stump broken off bearing

21-136-29
21-28

19-30-136-29
24-25-136-29

25-30
136-29

25-30-31-36
136-29
136-30

some scribe marks and land owners near by identify the position of the other stumps, which have been grubbed out in road building: The points identified, check with the Goit notes for course and distance and from this evidence I establish the cor and set a 2x8" iron monument with following new bearings:

J. pine 10 inch, S 53° E, 98.00 feet: in sec. 31. W. pine stump 18", S 33° W, 52.90 ft. in sec 30.
We drive to the cor to secs 5, 6, 31 & 32, T. 13.5, R. 29, and T. 13.6, R. 29, on Twp. line where County Surveyor, John N. Curo, has established a corner with the following bearings:

J. pine 6", N 26° E, 21.12 ft. in sec 32: J. pine 6", N 36° W, 20.30 ft. in sec 31.
J. pine 7", S 59° 52' W, 36.30 ft. in sec. 6: J. pine 7", S 53° 51' E, 54.00 ft. in sec 5
I find all the bearing trees which check perfectly with Curo's notes, and I also find roots of stump mentioned in his notes and set a 2x8" iron monument at the true corner, driving the iron monument thru the point of the wood post. I re-mark Curo's bearing trees by driving a tack in the lower blaze. We then drive N one mile to the cor of secs 29, 30, 31 & 32, being another cor established by Curo with the following bearings, being old Goit trees being re-marked:

Blk. pine 8 inch, N 59° E, 65.48 feet: Blk. pine 7 inch, N 75° W, 56.76 feet:
Blk. pine 8 inch, S 57° W, 52.80 feet: Blk. pine 8 inch, S 50° E, 44.48 feet:
All check perfectly with Curo's notes, and with the U.S. notes, except the NE and SE trees which we do check for distance with U.S. notes. The distance being proportionated by Curo at the time he established the corner. The NE B.T. has been broken off and I remark the stump. All the trees are standing as called for in Curo's notes. I set a 2x8" iron monument at the cor established by Curo for the true corner to secs 29, 30, 31 & 32, T. 13.6, R. 29. Oakland does not work in P.M. We quit for night and drive to M.C. Anderson's. E. B. Horst.

Thursday Nov. 16, 1916. Horst, compass and chain. M.C. Anderson, Tobias Bye carrying tools and irons. We walk to the cor of secs 28, 29, 32 & 33, T. 13.6, R. 29, where U.S. notes call for post and:

Blk. pine 12 inch, N 5° E, 90 lbs = 59.40 feet: Blk. pine 10", N 65° W, 86 lbs = 56.76 ft.
Spr. 10 inch, S 13° W, 31 lbs = 20.46 feet: Oak 16 inch, S 27° E, 42 lbs = 27.72 ft.
All are gone. Mr. A. M. Kramp tells us where the corner used to set, but no stumps or trees check anywhere with Goit notes, so I pass this corner up and we walk to the corner of secs 21, 22, 27 & 28, T. 13.6, R. 29, where U.S. notes call for a post and the following bearing trees:

Spr. pine 10", N 20° E, 134 lbs = 88.44 ft: N. pine 16", N 73° W, 106 lbs = 69.96 feet.
N. pine 10", S 47° W, 35 lbs = 23.10 ft: N. pine 14", S 65° E, 11 lbs = 7.26 feet.

The spruce is gone, but the stumps of the three other trees still remain. The SE and SW stumps bearing the B.T. marks badly burned. A Nor. pine 18 inch plainly marked and green stands N 30° E, 88.60 ft. from a stake which is at point for corner. I set a 2x8" iron monument with new bearing trees being:

N. pine 18" N 30° E, 88.60 ft. in sec 22. Oak 5", N 36° W, 50.50 ft. in sec. 21.
Oak 4", S 38° 30' W, 27.20 ft. in sec. 23. No bearing trees near in sec 27.

In P.M. Mr. M.C. Anderson takes his team and we drive to M.C. No. 27, on the W. side of Loon Lake bet secs 20 & 29, T. 13.6, R. 29, where U.S. notes call for a post and:
N. pine 14" N, 59° W, 52 lbs = 34.32 feet: N. pine 18", S 6° E, 47 lbs = 31.02 feet.

PLAT

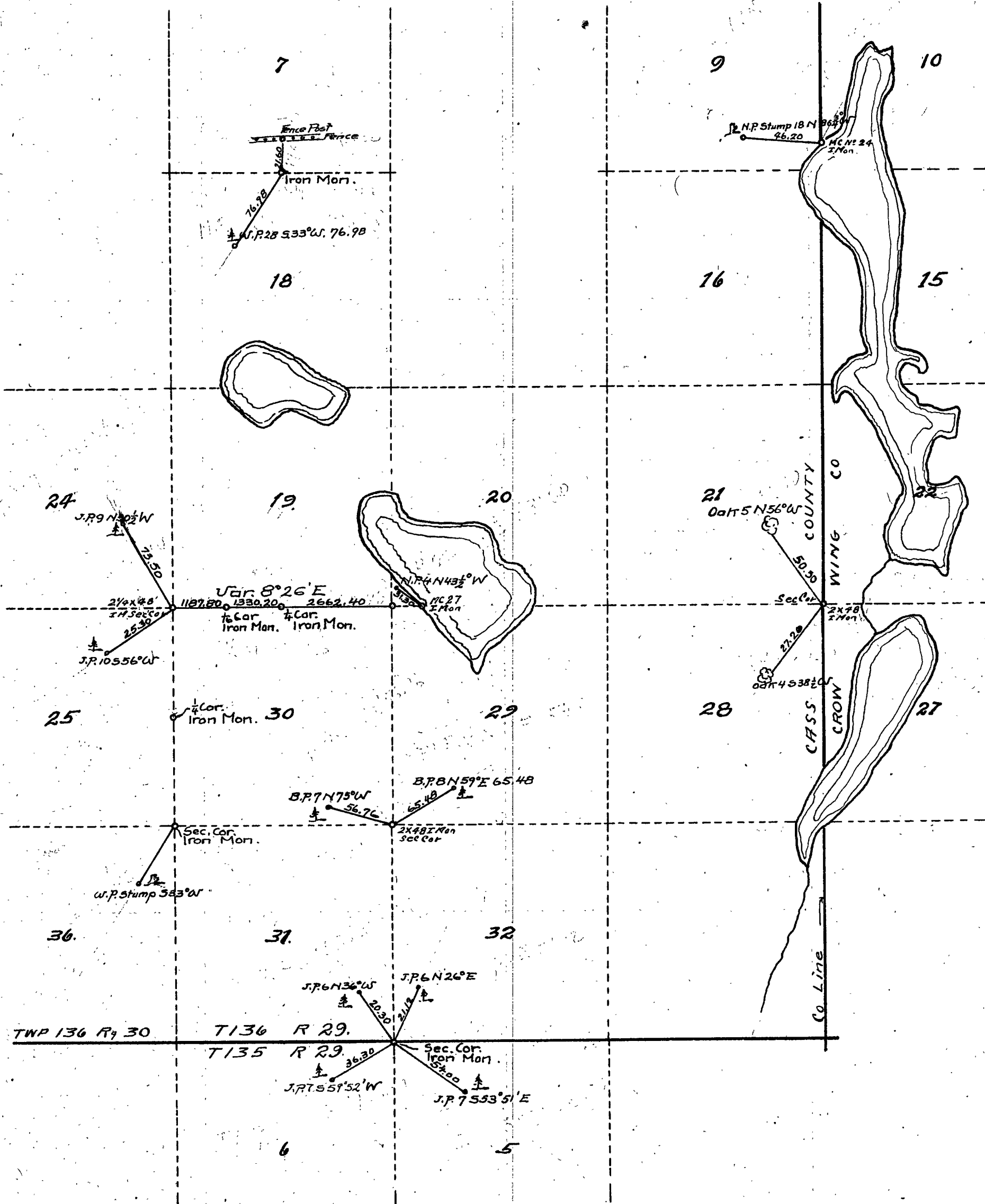
SURVEY RECORD N^o 306

T135 R29 SECS 5-6

T136 R29 SECS 7-9-10-15-16-18-19-20-21-22-27-28-29-30-31-32

T136 R30 SECS 24-25-30

SCALE 1 INCH = 2500 FT



The SE tree stands green and plainly marked; The NW tree is gone and from the SE tree I set the corner at $8^{\circ}46'$ Var. from the center of the blaze. The corner I set is a 2×48 " iron monument — to which I mark new bearings being:
 N. pine 22 inch, $S6^{\circ}E$, 31.02 ft., being the U. S. bearing tree in sec 29;
 N. pine 4 inch, $N43^{\circ}30'W$, 31.30 ft. in sec. 20.

We then drive to M.C. No. 24, on NW side of Sibley Lake bet secs 9 & 10, T. 136, Rg. 29, on County line, bet Cass and Crow Wing Counties, Minnesota, where U.S. notes call for a post and the following bearing trees:

Blk. pine 12 inch, $N35^{\circ}E$, 75 lbs = 49.50 ft; N. pine 18" N, $82^{\circ}W$, 70 lbs = 46.20 ft.

I find the NE tree dead but plainly marked, also the stump of the old NW tree. The B.T. being badly burned. The measurement brings this corner at the water's edge of the lake, but the courses seems to have been turned from 13° Var: At this var. the trees check for course and distance. I set the corner by flat chain from the bearing trees and set a 2×48 " iron monument — and mark new bearing trees. At $8^{\circ}46'$ Var. the old B.T.S. set as follows:

Blk. pine 12" $N30^{\circ}15'E$, 49.50 ft. in sec. 10; N.P. stump 18", $N86^{\circ}45'W$, 46.20 ft. in sec. 9.

We drive to the $\frac{1}{4}$ cor. bet secs 7 & 18, T. 136, Rg. 29, where U.S. notes call for a post and: Blk. pine 7", $N59^{\circ}E$, 110 lbs = 72.60 ft; N. pine 28", $S33^{\circ}W$, 103 lbs = 76.98 ft. The NE tree has been cleared away in sec 7, but the stump of the SW tree in sec. 18, still remains and is about 18" high with part of the B.T. mark still plainly showing, from which I set a 2×48 " iron monument and mark old stump of the SW bearing tree. A fence post stands North 21.60 feet. This $\frac{1}{4}$ corner sets in the center of an E & W graded wagon road. Quit for night. E. B. Horst.

Friday Nov. 17, 1916. Horst transit and chain, Mads Anderson flag man, Tobias Bye eye and chain. Homer Cochran axeman. We walk to the corner of sections 19 & 30, T. 136, Rg. 29, being the corner to secs 24 & 25, T. 136, Rg. 30, on the range line, and begin a survey of a Town Road to run E one mile on section line. We run E on old road. Var. $9^{\circ}50'E$: At 1178.10 set temp. W $\frac{1}{16}$ corner bet. secs 19 & 30.; At 1442.00 E leave road: At 1600.00 feet E set hub: At 2060.70 E set hub: At 2592.50 E set hub and look for $\frac{1}{4}$ cor. bet. secs 19 & 30, where U.S. notes call for a post and:

N. pine 10", $N6^{\circ}E$, 22 lbs = 14.52 ft; Blk. pine 10", $S12^{\circ}E$, 34 lbs = 22.44 ft.

All are gone and we continue East: At 3110.00 E enter swamp: At 3314.00 set hub: At 3564.00 E leave swamp: At 3757.70 E set hub: At 4500.00 feet E set hub: At 5007.10 ft. E the iron corner to secs 19, 20, 29 & 30, T. 136, Rg. 29, just established, sets to the right 26° , 188.30 feet distant. At station 5180.40 E the corner sets $S73.60$ feet. The U.S. Chain for this mile is 5138.10 ft., so that one foot U.S.

Chain = 1.00823 feet My chain. Correcting back on this mile each hub goes .0142 of a foot S for each foot E. Setting road centers, Hub 5007.10 E goes $S71.10$ feet; Hub 4500.00 E goes $S63.90$ feet; Hub 3757.70 E goes $S53.36$ ft; Hub 3314.00 E goes $S47.06$ feet;

The $\frac{1}{4}$ corner at station 2518.66 ft. E goes $S35.76$ ft; where we set a 2×48 " iron monument being a boiler tube with no cap or anchor

306-CONT.

rod set for the ~~True~~^{Si} $\frac{1}{4}$ corner bet. secs 19 & 30, Twp. 136, Rg. 29.
 Hub 2060.70 E goes S 29.25 feet. Hub 1600.00 E goes S 22.72 feet. The W
 $\frac{1}{16}$ cor bet. secs 19 and 30. At 1187.80 E goes S 16.87 ft., where we set
 a 1x26" iron monument for the true W $\frac{1}{16}$ cor.

Sam. Arkland and a man whose name I fail to get work since 11 A.M.
 This concludes the survey and we quit for night. E. B. Horst.

Saturday Nov. 18, 1916. Horst makes plats and writes notes of survey
 for Loon Lake Township. In P.M. Mr. M. C. Anderson with his team takes
 me and survey outfit to Pequot. We also return six iron monuments
 to the Pequot depot. I return to Walker via M & I. R.R. Fare 85 cents.

E. B. Horst.

Survey begun Nov. 14, 1916, finished Nov. 18, 1916

Recorded - Jan. 2, 1917.

County Surveyor.
 Cass County, Minnesota.

TWP. 141 - Rg. 30 - SEC'S 7-18

TWP. 141 - Rg. 31 - SEC'S 12-13-14-15-22-23-24.

12

Field notes of the survey of the Longville Shingobee County Road and the establishment of corners in sections 7 and 18, township 141 Range 30, and sections 12, 13, 14, 15, 22, 23, 24, Township 141, Range 31, Cass County, Minnesota.

October 21, 1907. John W. Cress, transitman, caught 3:36 P.M. train from Pine River to Walker to make survey of Road.

October 22, 1907. I got I.P. Ryhace's transcript field notes of Twp 141, Rg 31 and left Walker on 9:39 A.M. train for Hunter's Riding, R.R. fare 12 cents. Dinner with Pete Albert and after dinner Pete Albert and I put in the afternoon looking for section corners. Found one bearing tree, being the 8 inch poplar N.W. of corner to sections 13, 14, 23, 24, Town 141, Rg. 31, where U.S. notes call for a post and the following bearing trees:

Poplar 12 N 48° E 31 lbs. Poplar 8 N 42° W 34 lbs.

Oak 14 S 58° W 16 lbs. Oak 8 S 48° E 38 lbs.

Pete Albert got in 1/2 day. Quit for night. Over night with Albert. Ed O'Donnell J.B. Spenser, County Commissioner and Spenser's daughter took dinner at Albert's.

October 23, 1907. I was sick and did not get up until noon. Albert and his men did not work on survey in A.M. but fixed road.

P.M. Afternoon I began at the corner to secs 13, 14, 23, 24, T. 141, Rg. 31, and carefully setting this stake with the transit, from the center of the one N.W. poplar bearing tree. Var. 8° 35', we run South on 8° 35' Var and at 165 feet set hub: Then we chain in the rough with compass survey, 2640 feet W and found the 1/4 corner bet sections 14 & 23, where U.S. notes call for a post and the following bearing trees:

WP 8 inch, S 75° W, 29 lbs = 19.14 feet: JP 12 inch, N 3° W, 38 lbs = 25.08 feet.

Then continue to 5280 ft. W, but could find no bearing trees to the corner of secs 14, 15, 22, 23, T. 141, Rg. 31, where U.S. notes call for post and the following bearing trees:

Poplar 8 inch, S 85° W 100 lbs = 66 ft: Poplar 12 inch, N 37° W, 115 lbs = 75.90 feet.

Jack Pine 8 inch, N 3° 30' E, 134 lbs = 88.44 feet.

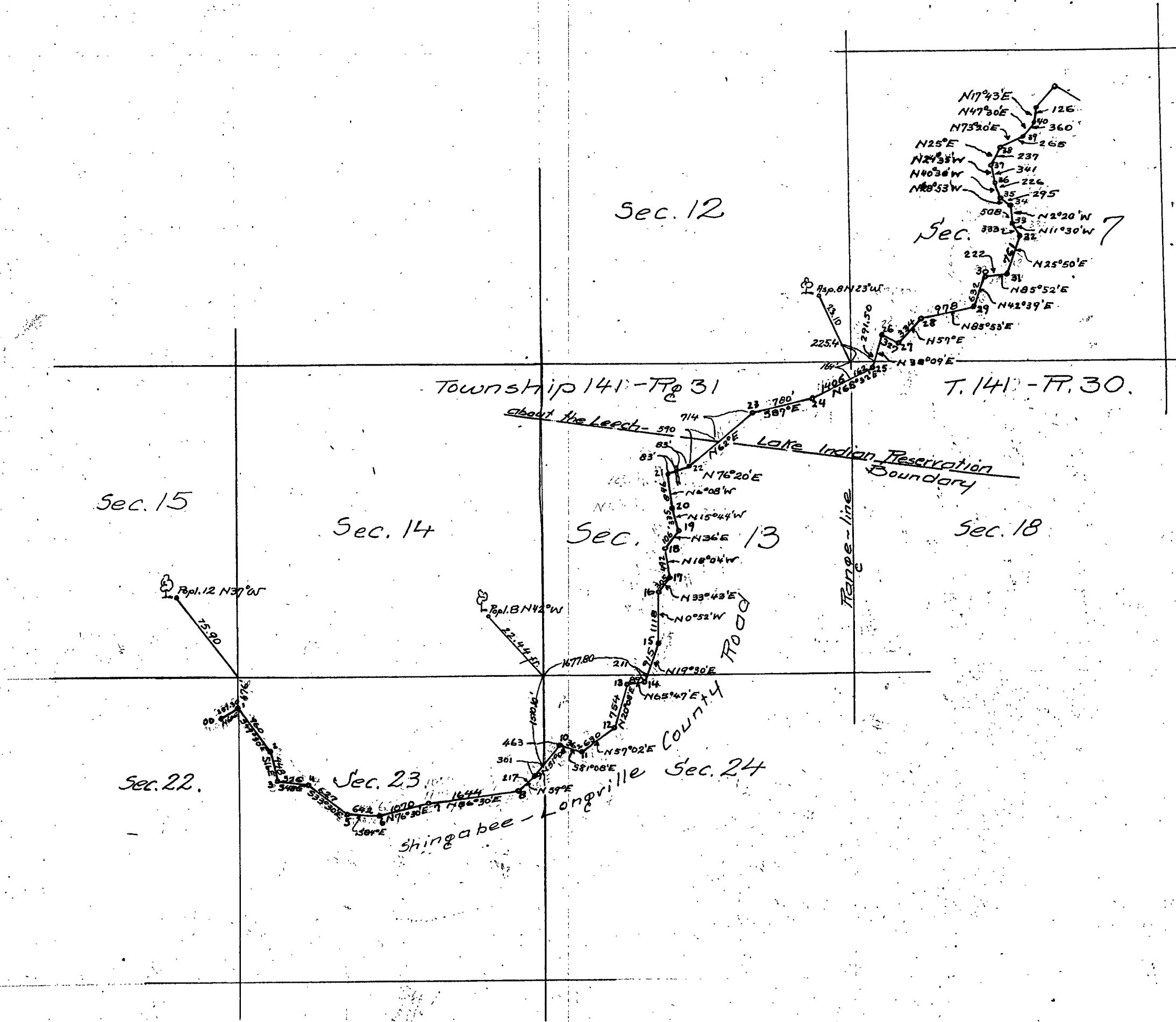
Quit for night, Pete Albert and Louis Peterson (Albert's man) got in 1/2 day in P.M. on survey. Over night at Albert's. This is the last day Albert or his men is to work on survey.

October 24, 1907. Pete Albert and I got up at 5 o'clock A.M. and walked to Walker. Arrive 8:05 A.M. After reporting at the depot, the tare-up, we found on the track, I go to the Court House to look up the records of former County Surveyor, Canfield's survey of the Shingobee Road, but could find no satisfactory notes or plat. Commissioner Spenser got two men to help me on the survey and we caught the morning train back to Hunter's with Robert E. Randall and William Dowling, who get in 1/2 day each. We all get dinner with Pete Albert and in P.M. we go to the NW cor of sec. 24, T. 141, Rg. 31 and cut line South bet secs 23 & 24, at 8° 35' Var. Transit survey. @ 165 feet: @ 303 ft. S set hub: @ 823.90 ft. S set hub: @ 1049.90 ft. S set hub: @ 1344.30 ft. S set hub: Then carry transit back to NW cor of sec. 24 and start E on 8° 35' Var, bet secs 13 & 24, @ 664 ft. E set hub:

PLAT

TWP. 141 - Rg. 30 - SECTIONS 7 AND 18

TWP. 141 - Rg. 31 - SECTIONS 12, 13-14-15-22-23-24



and quit for night. Robert E. Randall, William Dowling, and I got in whole day each for Cass County. Over night with Albert.

October 25, 1907. Randall, Dowling and I go back to hub 664 and continue transit line E on random bet secs 13 & 24, T.141, Rg. 31, Var. $8^{\circ}35'E$. @ 807.10 ft. E set hub: Var changes to $9^{\circ}15'E$, but we continue our transit line straight: @ 1305.30 ft. E set hub: Then we take our compass and dinner pails and walk to Shingobee Dam and after looking over dinner we look for the bearing trees to the cor of secs 14, 15, 22 & 23, but could find none. We then look for the $\frac{1}{4}$ cor bet secs 14 & 15, but found none and quit for night. Dowling, Randall and I, one whole day and over night with Pete Albert.

October 26, 1907. Robert E. Randall, William Dowling and I start out to survey but after getting one half a mile from camp. Dowling and Randall decide to go to Walker to get mittens on account of rain which started in this morning. So I take a run to Pine River on the Morning train. Took dinner at home and caught the 3:36 P.M. train back to Hunter's. Over night with Albert. Albert went to Walker. Randall and Dowling got in no time, but I am going to charge up the day just the same as tho' I worked, as it is not my fault they quit. This was the last time I saw Randall.

October 27, 1907. Sunday. Dowling got back from Walker at noon with George Joseph Bott of 150 miles west of Toronto Canada, and we all got in $\frac{1}{2}$ day in P.M. We looked all afternoon for B.T.S. At NW cor of sec. 23, T.141, Rg. 31, but found none. Over night with Albert. Albert got back from Walker late in the evening.

October 28, 1907. We found two bearing trees at the NW cor of sec. 23, T.141, Rg. 31 one 8 inch Poplar westerly, and one Jack pine, northerly. We set up compass at Poplar bearing tree and run $N 85^{\circ}E$, 66 feet where we set a tall poplar pole in the water for the true section corner to sections 14, 15, 22 & 23, but could not measure North to the J. Pine on account of 75 feet of water. From this corner we run S on $8^{\circ}35'$ Var. Compass Survey: @ 198 ft. S set little stake on side hill: @ 341 ft. S set little stake on top of high hill: @ 476 ft. S intersect center of main wagon road, which bears E & W on section line between 22 & 23 where we set a good 4x4" dry oak plug 2 ft. long, drove well into the ground. This plug we mark "A.P. No. 1." Then beginning at an old rotted stake set by Canfield in the N edge of the road, in the NE quarter of the NE quarter of sec 22, T.141, Rg. 31, we run $S 60^{\circ}E$, 257.30 ft. to A.P. No. 1, on sec line W boundary of sec 23, a distance of 476 ft. S of the NW corner. Compass Survey, Var. turn to $8^{\circ}35'E$. Thence $S 49^{\circ}30'E$ 475 ft. cross old road: @ 960 ft. A.P. No. 2. The old tall J. pine tree marked by Canfield stands E, but in line: We drive good 4x4" oak plug and tack in center for angle point 2: Between A.P. No. 1 and A.P. No. 2 the old main road says N about 75 ft. and bet A.P. No. 1 and 475 ft. E the road says S about 20 feet: Beginning at A.P. No. 2 we run $S 16^{\circ}E$, following old road 448 feet to A.P. No. 3, where we drive a good 4x4" oak plug in the center of the road.

This is where Pete Albert began his road work. Quit for night, Dowling and Bott got in full day each.

October 29, 1907. Dowling came near quitting on account of sleeping too late for his breakfast.

Beginning at Angle point No. 3, Compass survey, Vernier, @ $8^{\circ}35'$ Var: Dowling, Bott and Curo: Run $S 84^{\circ}E$, 326 ft. along new road and set A.P. No. 4, a few feet North of Road Center. Thence $S 33^{\circ}30'E$, 627 feet to A.P. No. 5, where we set a 4×4 " oak plug 6 feet E of road. The new road runs 20 ft. SW between A.P. No. 4 and A.P. No. 5. Thence beginning at A.P. No. 5 run $S 84^{\circ}E$, 642 ft. to A.P. No. 6, where we set dry oak stake $3 \times 3 \times 3$ ft. long in center of new road. New road runs 20 ft. SW bet. A.P. No. 5 & 6. Beginning at A.P. No. 6 run $N 76^{\circ}30'E$, 1070 ft. to A.P. No. 7 set at SW corner of big potato field = Oak stake $2 \frac{1}{2} \times 2 \frac{1}{2}$ " dry 3 feet long. Beginning at A.P. No. 7 run $N 86^{\circ}30'E$, 100 feet to SW cor of Potato field, thence across field: At 900 ft E side of field: At 1350 ft. Cross new road in cut: At 1620 ft (18 chs, 90 ft. Ch) set pin in center of road cut, @ 1644 ft set hub, A.P. No. 8 = Oak stake 2 ft long drove in edge of North side of New cut: Beginning at A.P. No. 8, run $N 59^{\circ}E$, 217 ft. to A.P. No. 9. Then going to hub No. 1345.30, set 1305.30 feet E of NW cor of sec 34, T. 141, R. 31 near sec. line. I set up transit and continue E: At 1416.80 set hub W side of little lake, then I cause a hub to be set on E side of lake, over which I set transit and run a line N (a 90° angle) 202.20 ft. and offset hub, over which I set transit and with vernier at 00, I turn telescope on hub No. 1416.80 on W side of lake and find the same sets $S 52^{\circ}24'W$, making the distance across lake 261 feet added to 1416.80 feet = 1677.80 feet. Hub 1677.80 E sets near new road on E side of little lake near N boundary of sec 24. Quit for night. Over night with Albert. Dowling and Bott each get whole day. Albert over night in Walker.

October 30, 1907. Rained all day. I start out to work with Dowling & Bott but it was too wet and they came to camp. I worked a while setting up road stakes in A.M. Pete Albert got back from Walker on 10^{A.M.} train. Dowling and Bott got their dinner and then walked in Walker, where they stayed over night. Rained all day, over night with Albert. I got in whole day but Dowling & Bott only got $\frac{1}{2}$ day because they would not work.

October 31, 1907. Rained in the morning. Dowling and Bott did not show up from Walker so I took Pete Albert out. Beginning at A.P. No. 9 we run $N 51^{\circ}8'E$, @ 301 ft cross W boundary of sec 24 (about) at a point 1510.10 ft. S of the NW corner and we drive an oak plug 165.80 ft. S of hub No. 1344.30. A little lake lies about 90 ft. S of this point: @ 764 set A.P. No. 10. Beginning at A.P. No. 10 we run $S 81^{\circ}08'E$: @ 150 ft. we are 10 ft. N of N edge of little Marsh: At 364 ft we set A.P. No. 11. Beginning at No. 11 we run $N 57^{\circ}02'E$: @ 100 ft. we are 20 feet S of edge of little Marsh lying NW: @ 450 we follow along the W edge of little lake, clear to 630 ft. where we set A.P. No. 12. A.P. No. 12 sets about 40 ft. N of a little deep lake. From A.P. No. 12 we run $N 20^{\circ}12'E$: @ 150 ft. we are 35 ft. E of S end of little lake. @ 225 ft. we are 10 ft. E of N end of little lake: @ 250 ft. S. side of Marsh (Corduroy) and 10 ft. W of S side of little Marsh lake on the right. @ 300 ft. we are over Marsh (Corduroy) and 10 ft. W of NW corner of a little Marsh lake.

lying E. @ 900 ft. we are 35 ft. E. of a little bog and 20 ft. W. of the SW. cor. of another little bog. @ 754 ft. set A.P. No. 13, which sets 25 ft. West of NW. cor. of marsh lying E. Pete Albert chaining. Curo transit and chain. K. & E. transit 90 ft. steel tape. Beginning at A.P. No. 13, continue, Run $N 65^{\circ} 47' E$: At 40 ft. cross culvert bet two little lakes. The ditch is 30 ft. wide at this point and we are 25 ft. NW. of NW. corner of lake and 50 ft. S. of the other lake: @ 89 ft. set A.P. No. 14 from which we run $N 90^{\circ} 30' E$: At 110 ft. we are 10 ft. E. of a little cor. of a small lake: At 211 cross sec. line (about) being about the N. boundary of sec 24, T. 141, R. 31, and at a point on the transit line 1677.80 ft. E. of the NW. corner of sec 24: This point is 35 ft. E. of a little deep lake: @ 990 ft. enter meadow which bears NW. and SE: @ 345 ft. we are two ft. E. of the center of E. end of 20 ft. bridge: At 380 leave low meadow: @ 946 ft. we drive small stake and quit for night on acct. of rain. It thundered three or four times, heavy, about 4 o'clock P.M. Dowling and Bott got back from Walker about 4 o'clock P.M. wet as rats. Albert and I go in whole day. Dowling and Bott got nothing. We quit about 4 o'clock P.M. Rained all day.

November 1, 1907. Rain stopped. Dowling, Bott and I begun work to continue road survey: Beginning at stake 946 ft. from A.P. No. 14 we continue $N 19^{\circ} 30' E$, 180 ft. and set A.P. No. 15, making total distance 1126 ft. bet A.P. No. 14 & A.P. No. 15, where we set oak stakes. Beginning at A.P. No. 15 we run $N 00^{\circ} 52' W$, 1118 ft. to A.P. No. 16 from which we run $N 33^{\circ} 43' E$, 305 ft. to A.P. No. 17: thence $N 18^{\circ} 04' W$, 492 ft. to A.P. No. 18: thence $N 36^{\circ} E$, 106 ft. to A.P. No. 19: thence $N 15^{\circ} 44' W$, 335 ft. to A.P. No. 20: Beginning at No. 20 we run $N 6^{\circ} 08' W$: At 350 ft. a little log house 12x16 ft sets W 20 ft. to the nearest corner being SE cor. and the SW cor. of Pete Albert's house is 54 ft. E: At 400 ft. the NW. cor. of the Old Thill log carriage is 47 ft. E: At 564.70 set little hub on top of hill: At 846 ft. set A.P. No. 21, which sets 80 ft. from the center line of the R.R. at right angles to the track. Beginning at A.P. No. 21, we run $N 76^{\circ} 20' E$, 166 ft. to A.P. No. 22. The line between A.P. 21 and 22 runs square across the M & I R.R. at right angles to the track. The track is half way bet A.P. No. 21 and 22. With transit set on A.P. No. 21, telescope clapped at 00° on A.P. No. 22: Then swing telescope to the right until it hits A.P. No. 20, and the Vernier reads an angle of $98^{\circ} 07'$: The crossing bet A.P. No. 21 and 22 is 917 ft. N. of mile post No. 55 on M & I R.R. and 2262.50 ft. (via R.R. track) N. of the Head block at the N. end of Hunter's Siding place. Beginning at A.P. No. 22 which 83 ft. E. of the crossing we run $N 62^{\circ} E$: @ 590 ft. old blazed trees indicate that we are on the reservation line but as we do not run the reservation line and have no U.S. field notes of same we are not sure: At 725 ft. intersect old cross lake logging companies' sled road, at W. end of Cat-Tail bog: At 900 ft. center of old log road and edge of Cat-Tail bog: At 1025.10 ft. set little hub in old road and quit for night.

Nov. 2, 1907. Dowling, Bott and Curo continue with K. & E. transit and 90 foot steel tape. Beginning at hub 1025.10, we continue $N 62^{\circ} E$, to a point 1304 ft. from A.P. No. 22, and following an old logging road the entire distance to A.P. No. 23. Beginning at A.P. No. 23, we run $S 87^{\circ} E$, following the old logging road 780 ft. to A.P. No. 24, thence $N 68^{\circ} 32' E$: At 100 ft. leave old log road and follow new road made by Pete Albert and crew: At 550 ft. leave Albert's new road and intersect old cross lake Tote Road, thence following old Tote road: At 825 ft. enter solid marsh 10 ft. E. of SE corner of bridge 30 feet long: @ 925 feet leave solid marsh: @ 1100 ft. cross old Tote

Road at tip end of a marsh that lies E: @ 1200 ft foot of big hill: At 1406 ft. Cross range line, (about) between ranges 30 & 31, T. 141. At a point 164 ft S. of the NE cor. of sec 13, T. 141, Rq. 31. At 1450 ft top of big hill: At 1568 ft set A.P. No. 25, thence run N 38° 09' E: At 130.50 ft cross the N line of sec 18, T. 141, Rq. 30, (about), at a point exactly 225.40 ft E of the NW cor. of said sec. 18: At 325 ft, foot of hill: and enter marsh 8 ft. E of SE cor. of a 60 foot Corderoy. @ 375 ft leave marsh 4 ft. E of bridge Corderoy: At 422 ft. set A.P. No. 26. Then beginning at the NE corner of sec 13, T. 141, Rq. 31, we run transit line S on 8° 35' Var. E: At 164 ft S intersect road survey and set oak post, then quit this line as I have decided to figure the crossing of the road line on the reservation line, from plat book, then going to A.P. No. 26 we continue our road survey and run S 76° 30' E, 328 ft. to A.P. No. 27 and quit for night.

Figuring the distance from A.P. No. 22, and running N 62° E, along the road line I find it approximately 590 ft. to the reservation line. I get this distance by taking the Jewett plat, protractor and triangles and my road survey as a base. Curo, Bott and Dowling got in whole day. Sewie and Albert over night in Walker. The rest of us at Albert's.

Nov. 3, 1907. Sunday. Bott and Dowling assisting. Beginning at Angle point No. 27, we run N 57° E, 334 ft. to A.P. No. 28, thence N 85° 53' E, 978 feet to A.P. No. 29, thence N 42° 39' E, 632 ft to A.P. No. 30, thence N 85° 52' E, 222 feet to A.P. No. 31, at intersection of the old Gait Leech Lake road. Quit for dinner.

In P.M. we begin at A.P. No. 31, and run N 25° 50' E: At 20 ft. enter Corderoy, At 50 ft. leave same: @ 761 ft. set A.P. No. 32, East and West of the old Leech Lake Road bet. A.P. 31 and 32, there are big marshes extending East and West for 1/4 mile on both sides. Beginning at A.P. No. 32 we run N 11° 30' W, 333 ft. and set A.P. No. 33 from which we run N 2° 20' W: At 180 ft center of bog 100 ft across: At 508 ft. set A.P. No. 34: thence N 28° 53' W, 295 ft to A.P. No. 35, thence N 40° 30' W, 226 ft to A.P. No. 36, thence N 24° 35' W, 341 ft. to A.P. No. 37, thence N 25° E 237 ft. to A.P. No. 38, thence N 13° 20' E, 265 ft. to A.P. No. 39, which sets 20 ft. S of a big bog with a little lake in the center. Beginning at angle point No. 39, we run N 47° 30' E, 360 ft. to A.P. No. 40, which sets 100 ft. SW of cor. of long deep lake which bears N. Beginning at A.P. No. 40, we run N 17° 43' E, 126 ft. to A.P. No. 41, which sets 20 ft. from the same lake, thence N 36° 30' W, 563 feet to angle point No. 42, where we drive an oak post and quit this survey for the present. At the corner to sec. 7, 12, 13, 18, T. 141, bet Rqs. 30 & 31, U.S. notes call for post and the following bearing trees:

W. Pine 24 inch, N 36° 30' E 9 lks, Asp. 8 inch, N 23° W, 35 links

Aspen 10 inch, S 17° W 13.5 lks, W. Pine 9 inch, S 1° W 23.5 lks.

We find all the bearing trees from which we set a stake for the true corner.

Nov. 4th, 1907. Quit this survey for the present, Come home from Pine River

Survey made October 21, 1907 to Nov. 4th, 1907.

Recorded. Jan 23-24-17.

B

TWP. 138 - Rg. 30. SEC'S. 14-22-23-24-25-26.

Field notes of the survey in and the establish-

ment of corners and various lines run in sections 14, 22, 23, 24, 25, 26, Twp 138 N, Range 30 W, in connection with the survey made for L. D. Emery, in the subdivision of sec 23, of said township as surveyed by John W. Curo, County Surveyor of Cass Co. Minn.

Nov. 21, 1907. I am working for L. D. Emery and leave Pine River at 7:30 A.M. to walk to Mildred, but meet Mr. L. D. Emery, coming for me with his team and I go back to Pine River with him to get my survey rig. We leave Pine River at about 9 o'clock A.M. and drive to Mr. Emery's mill on section 23, and after putting up the team, we walk back with transit to the 1/4 post on the E side of sec 23, being the 1/4 cor bet secs 23 & 24, T. 138, Rg. 30, where U.S. notes call for a post and the following bearing trees:

Blk Pine 7 inch, N28°E, 11 lbs = 7.26 ft: Blk. Pine 8" S 41° W, 8 lbs = 5.28 feet
We find the old NE bearing tree plainly marked from which we set a stake for the true 1/4 cor @ 8°30' Var and chain from the center of the tree, then from the 1/4 cor just set we run west on 8° Var, chain 540 ft, being 6 chains, and as we are using a 90 foot Chicago steel tape as a chain, 6 chains = 540 ft. We then go to dinner.

P.M. After dinner we get two men to assist us, being Omry Emery and Billie Murphy as axemen with John W. Curo and L. D. Emery, chaining carefully. Curo using a new Kueffel and Esser Engineer's transit. Continue West: @ 777.50 ft. W set hub and tack. @ 1320 ft. W set hub and tack for temp. 1/16 cor: @ 1932.20 ft. W set hub and tack on side hill: @ 2275.50 ft. W set hub and tack on top of hill: @ 2640 ft. W set hub and tack for temp. center of sec 23: @ 3147.30 ft. W tack in stump: At 3379.50 ft. W set tall hub and tack 15 ft. E of wire fence: At 3960 ft. W set hub and tack for temp. 1/16 cor. Quit for night. Over night with L. D. Emery. I get in whole day while Omry Emery & Billie Murphy get in 1/2 day.

Nov. 22, 1907. Omry Emery, L. D. Emery, Billie Murphy and John W. Curo, beginning at hub 3960 W continue transit line W thru center of sec 23, T. 138, Rg. 30, on random line: At 4153.20 ft. W drive tack in bark of stump: At 4633.40 ft. W set hub and tack: At 4750 ft. W enter small lake or marsh: At 5280 ft. W set tall hub thru ice near W bank of lake for temp 1/4 post. The true 1/4 post sets S 29°3' W, 91.90 ft. At this point being the 1/4 cor bet secs 22 & 23, U.S. notes call for a post and the following bearing trees: Blk. Pine 9" S 80° W, 64 lbs = 42.24 ft. - Only one. We found the tall stump of the old original Blk. pine bearing tree standing plainly marked from which we set the true 1/4 cor post at 8°30' Var. with the true courses given in the Govt notes and chain from the center of the old Bearing tree stump. The 1/4 stake set by us is 6 feet long and we drive it thru the ice four feet into the ground, and water. This is the true 1/4 cor. bet. secs 22 & 23, T. 138, Rg. 30,

from which the stump of the old bearing tree @ $8^{\circ}31'$ Magnetic Var. East, bears $580^{\circ}W$, 64 links to the heart of the stump. Then coming back a mile East to the newly set $\frac{1}{4}$ corner bet secs 23 & 24, T. 138, Rg. 30, we run S, Magnetic Var reads $7^{\circ}10' E$. Run S bet secs 23 & 24. @ 822 ft. S set hub and tack: @ 1116.80 ft. S set hub and tack: @ 1320 ft. S set iron pin for temp. $\frac{1}{16}$ cor. and quit for dinner.

In P.M. Continue South. @ 1320 set no. hub: @ 1503.50 ft. S set hub and tack on top of hill: @ 2267.60 ft. S set hub and tack: @ 2640 ft. S set hub and tack for temp cor. from which the true sec cor bears $N74^{\circ}45' E$, 11.10 ft. dist. At this point being the corner to secs 23, 24, 25, 26, T. 138, Rg. 30, U.S. notes call for a post and the following bearing trees:
 Blk. pine 4", $N63^{\circ} E$, 17 lks = 11.22 feet: Blk. pine 4" $N44^{\circ} W$, 27 lks = 15.84 ft.
 Blk. pine 5", $S65^{\circ} W$, 27 lks = 17.82 feet: Blk. pine 4" $S40^{\circ} E$, 7 lks = 4.62 feet.
 We set the cor. post by flat chain from the heart of the bearing tree which check perfect for distance. We did not take the courses to the trees as it was not necessary. Then beginning at the new established corner to secs 23, 24, 25, 26, T. 138, Rg. 30, we run W on random line bet secs 23 & 26, Var $9^{\circ} E$. Billie Murphy and Curro chaining perfect. @ 1320 feet W drive tack in root of stump: @ 2163.70 ft. W set hub and tack: @ 2640 ft. W set hub and tack for temp $\frac{1}{4}$ cor. from which the true $\frac{1}{4}$ corner sets $S54^{\circ}16' W$, 38.50 feet distance. At this point being the $\frac{1}{4}$ cor bet secs 23 & 26, T. 138, Rg. 30, U.S. notes call for a post and the following bearing trees.

Blk. Pine 8" $N10^{\circ} W$ 27 lks = 17.82 ft.: Blk. pine 9" $S37^{\circ} E$, 18 lks = 11.88 feet.
 We find both bearing trees plainly marked from which we set the true $\frac{1}{4}$ corner. The bearing trees here are 1.40 feet to far apart, measured from the center of the tree, so I proportion the measurements as follows: Total distance via courses is 29.70 feet, flat chain and equals 31.10 feet my chain. Difference in chain 1.40 feet.

After setting the true $\frac{1}{4}$ stake the old bearing trees then stand as follows:

Blk. pine 9", bears $S37^{\circ} E$, 11.88 ft + 0.56 ft. = 12.44 feet.
 Blk. pine 8", bears $N10^{\circ} W$, 17.82 ft. + 0.84 ft. = 18.66 feet,
 to center of stump, at $8^{\circ}30'$ Var. Quit for night. Over night with Emery.
 Nov. 23, 1907. L.D. Emery, Omry Emery, Billie Murphy and John W. Curro, Beginning at the new $\frac{1}{4}$ post on the S side of sec 23, T. 138, Rg. 30, we run N on random line thru sec. 23, var. $7^{\circ}45' E$. At 718.30 ft. N set hub and tack: @ 1246 ft. N set hub and tack: At 1320 ft. N set hub and tack, for temp. $\frac{1}{16}$ cor. @ 2130 ft. N set hub and tack: At 2640 ft. N set hub and tack, 6 feet N of wire fence for temp center of sec 23: At 3524.90 ft. N set hub and tack: @ 3960 ft. N set hub and tack for temp. $\frac{1}{16}$ cor. At 4723 ft. N set hub and tack: At 5280 ft. N set hub and tack for temp $\frac{1}{4}$ post between secs 14 & 23, T. 138, R. 30, from which the true corner stands North $72^{\circ}20' E$, 66.50 ft. dist. Quit for dinner.

P.M. We go to the $\frac{1}{4}$ corner bet secs 14 & 23, T. 138, Rg. 30 where U.S.

B

notes call for a post and the following bearing trees ::

Blk Pine 9 inch, N 26° 30' W, 26 lks = 17.16 feet

Blk Pine 11 inch S, 19° E, 52 lks = 34.32 feet

We set the stake by flat chain from the heart of the stumps of each old bearing tree which we find plainly marked then set transit over stake and at 9° Var one old bearing tree stands N 26° 30' W, 17.16 feet dist., and the other old bearing tree stands S 15° 30' E, 34.32 ft. dist., showing that one tree is a little off fore course, but the $\frac{1}{4}$ corner is correct as measurements hold over courses.

Correcting the East and West center line of sec 23, T.138, R.30, Hub 5280 ft. W goes S 29° 3' W, 91.90 ft. Hub 4633.40 ft. W goes S 29° 3' W, 80.65 ft. Hub 4153.20 ft. W goes S 29° 3' W, 72.29 ft. Hub 3960 W goes S 29° 3' W, 68.93 feet. Hub 3379.50 W goes S 29° 3' W, 58.82 ft. Hub 3147.30 W goes S 29° 3' W, 54.78 feet. Hub 2640 W goes S 29° 3' W, 45.95 ft. Then west 8.20 ft. to the true center of sec 23, where the corrected N & S center line intersects the E & W center line: Hub 5275.50 W goes S 29° 3' W, 39.61 feet. Hub 1932.20 W goes S 29° 3' W, 33.63 ft. Hub 1320 W goes S 29° 3' W, 22.98 ft. Then west 4.10 ft. to the true $\frac{1}{16}$ cor in the center of the East half of said sec 23, T.138, Rq.30, from which at 8° 30' Var we mark the following new bearing trees:

Being a, 10 inch, J. pine stump which bears N 30° 9' W, 41.65 feet dist.

and a, 5 inch, J. pine stump which bears N 65° 44' E, 48.85 feet dist. to tacks in the heart of each stump. We drive a stake for this

$\frac{1}{16}$ corner. Then correcting further E hub 777.50 ft. W goes S 29° 3' W, 13.53 feet. Then going to the true center stake of sec 23, T.138, Rq.30, we take new bearings as follows:

Nov. pine stump 12 inch, bears N 63° 10' W 24.20 ft. dist, and a

Nov. pine 11 inch bears S 48° 8' E, 23.35 feet to tack in heart of stump.

Var 8° 30' E. Correcting the East boundary of the SE quarter of

sec 23, T.138, Rq.30, Hub 2640 S goes N 74° 45' E, 11.10 feet. Hub 2267.60 feet S goes N 74° 45' E, 9.53 ft. Hub 1503.50 S goes N 74° 45' E, 6.32 ft.

Hub 116.80 S goes N 74° 45' E, 4.70 ft. Hub 822 S goes N 74° 45' E, 3.46 feet, which fixes the line bet secs 23 & 24.

Correcting the South boundary of the SE quarter of sec 23, T.138, Rq.30, being the line bet secs 23 & 26, Hub 1320 W. goes South, 54° 16' W, 19.25 feet, where we set a stake for the true East $\frac{1}{16}$ corner bet secs 23 & 26, with the following new bearing trees:

11 inch, J. pine stump bears N 78° 20' W, 18.75 feet.

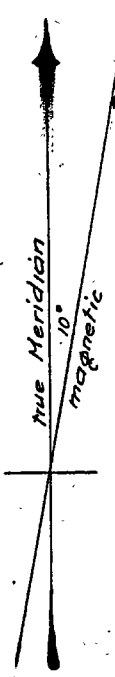
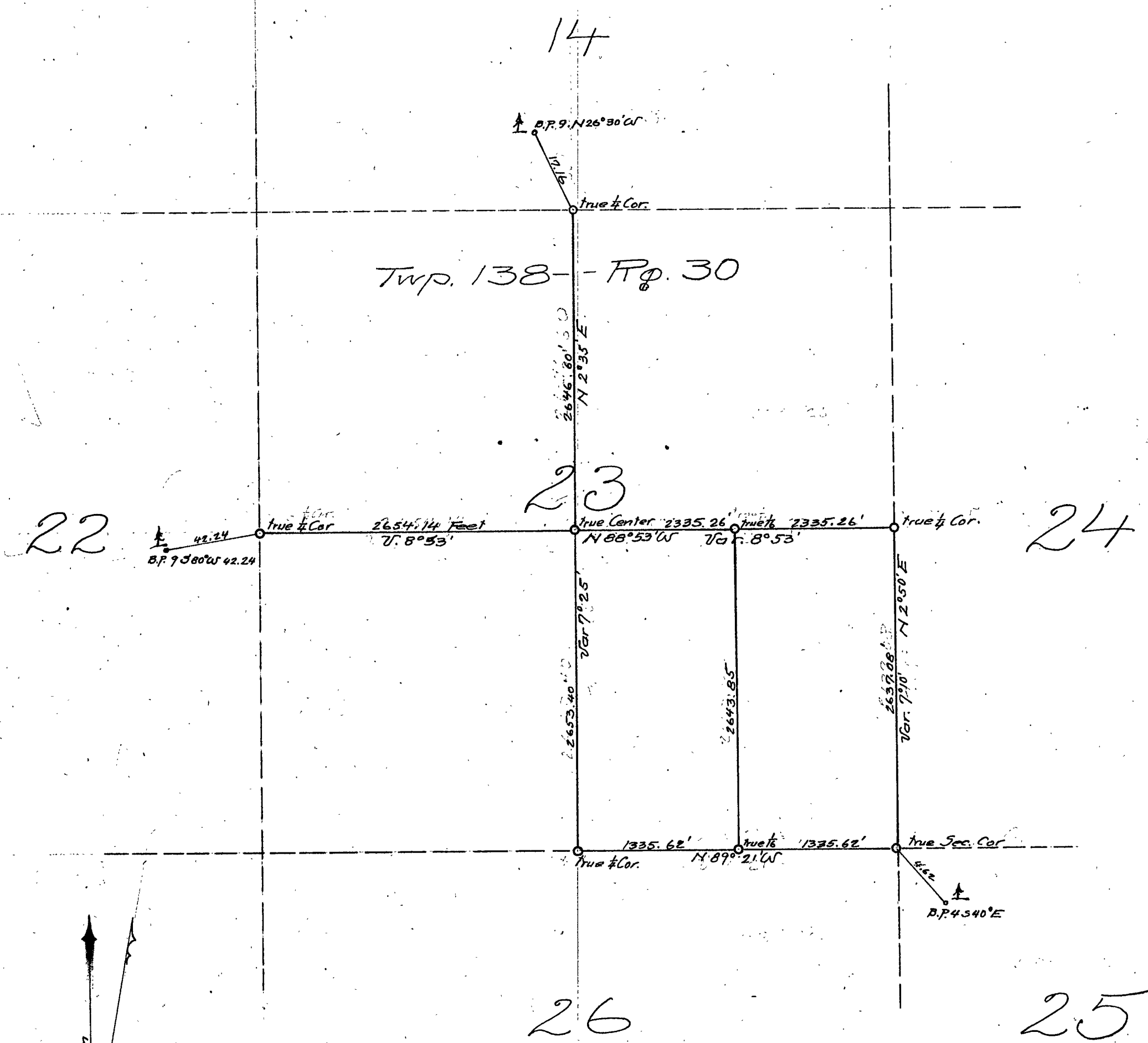
11 inch, J. pine stump bears N 51° 43' E, 20.10 feet.

Measurement taken to tacks driven in the heart in top of sawed off stumps. Var 7° 10' as Meridian.

Beginning at the E $\frac{1}{16}$ cor just set bet 23 & 26, T.138, Rq.30, we run N thru the center of the SE quarter of sec 23, on random line: @ 589.50 ft. N set hub and tack: @ 1130.80 ft. N set hub and tack in field: @ 1320 ft. N set pin: @ 1359.90 ft. N set hub and tack on hill in field: @ 2278.50 ft. N set hub and tack in field:

SURVEY-RECORD-308

PLAT.
TWP. 138 - R. 30.
SEC'S 14-22-23-24-25-26



Note: All courses turned from true meridian.

308-CONT.

@ 2640 ft. N set hub and tack, from which the true $\frac{1}{16}$ in the E center of the E half of sec 23 sets $N 80^{\circ} 13' W$, 23.30 feet.

Correcting South Hub 13 59.90 ft. N goes $N 80^{\circ} 13' W$, 12 feet: Hub 589.50 ft. N goes $N 80^{\circ} 13' W$, 520 ft., which fixes the true N+S center line of the SE quarter of said sec 23. Quit for night.

Sunday Nov. 24, 1907. Correcting the North and South center line of sec 23, T. 138, Rg. 30, Hub 5280 N goes $N 72^{\circ} 20' E$, 66.50 feet. Hub 4723 N goes $N 72^{\circ} 20' E$, 59.48 feet. Hub 3960 N goes $N 72^{\circ} 20' E$, 39.88 feet: Hub 3524.90 ft. N goes $N 72^{\circ} 20' E$, 44.43 feet. Hub 2640 feet N goes $N 72^{\circ} 20' E$, 33.25 feet. Then N 3.40 feet to the true center of sec 23, where the corrected E and W center line crosses the corrected N+S center line.

The above is a copy of my field notes of this survey and it appears from these notes that I did not finish correcting the balance of the N+S center line from the center of sec 23, S to the $\frac{1}{4}$ corner bet secs 23 & 26, T. 138, Rg. 30

Survey Made Nov. 21, 1907 to Nov 24, 1907.
Recorded Jan 25 1917

County Surveyor
Cass Co. Minnesota.

TWP. 138 - R. 30 - SEC'S 25-26-27

SURVEY RECORD 309.

Field notes of the survey and examination of old bearing trees found in and the establishment of new corners to sections 25, 26, 27, Township 138, N. range 30 W, Cass County Minnesota, as surveyed by John W. Curo, County Surveyor.

August 11, 1906. John W. Curo, transitman, K. & E. transit, also chainman 100 foot Chicago, steel tape. Harry E. Stevenson and John F. Vaughn, chainmen swore in at 11 A.M. George Robideau, Senior and Tom Vaughn axemen. We go to the $\frac{1}{4}$ cor bet secs 26 & 27, T. 138, R. 30, where U.S. notes call for a post and the following bearing trees:

Blk. Pine 6 inch N, 68° W, 61 lbs = 40.26 feet.

Blk. pine 7 inch S, 31° E, 20 lbs = 13.20 feet.

We find both old bearing trees plainly marked from which we set the true $\frac{1}{4}$ corner by flat chain from center of trees, after which the old 6 inch Black Pine bears N 68° W, 40.26 ft. in section 27 and the old 7 inch Black pine bears S 31° E, 13.20 ft. in section 26.

We set a stake for the true $\frac{1}{4}$ corner from which we run East on 9° Variation. At 500 ft set hub and tack; at 1320 ft set hub and tack; at about 1360 ft. set hub and tack East of a Notched Norway tree; further East set another hub and tack; at 2031.15 ft. E set hub and tack; at 2320 ft. E intersect center line of R.R.; at 2640 E set hub and tack for temp. center of sec. 26; at 2940 E set hub and tack; at 3740 ft. E set hub and tack; at 3960 E set hub and tack; at 5280 ft. E set hub and tack, from which the true $\frac{1}{4}$ corner bet secs 25 and 26, sets $E 4^{\circ} 45' S$, 49.40 ft. distant or $S 85^{\circ} 15' E$, 49.40 ft. At this point being the $\frac{1}{4}$ corner bet secs 25 and 26, T. 138, R. 30, U.S. notes call for a post & the following bearing trees:

Blk. pine 7" N, 3° W, 20 lbs = 31.20 ft. : Blk. pine 6", S 12° E, 17 lbs = 11.22 feet.

We found both old bearing trees plainly marked from which we set a stake from the true $\frac{1}{4}$ cor. and mark new bearings as follows:

J. pine 8 inch, bears N $16^{\circ} 15' E$, 68.70 feet to heart of tree in sec. 25.

J. pine 10 inch, S $7^{\circ} 40' E$, 64.30 ft. to center of tree in section 25.

Correcting back I set hub Number 3960 E, $E 4^{\circ} 45' S$, 37.05 ft. and drive hub: @ hub 2640 E I run $E 4^{\circ} 45' S$, 24.70 ft. and drive hub: @ hub 1320 E I run $E 4^{\circ} 45' S$, 12.35 ft., which fixes the true course of the E and W center line of sec. 26, all in Twp. 138, R. 30.

Surveyed Aug. 11, 1906
Recorded 25 Jan 1917.

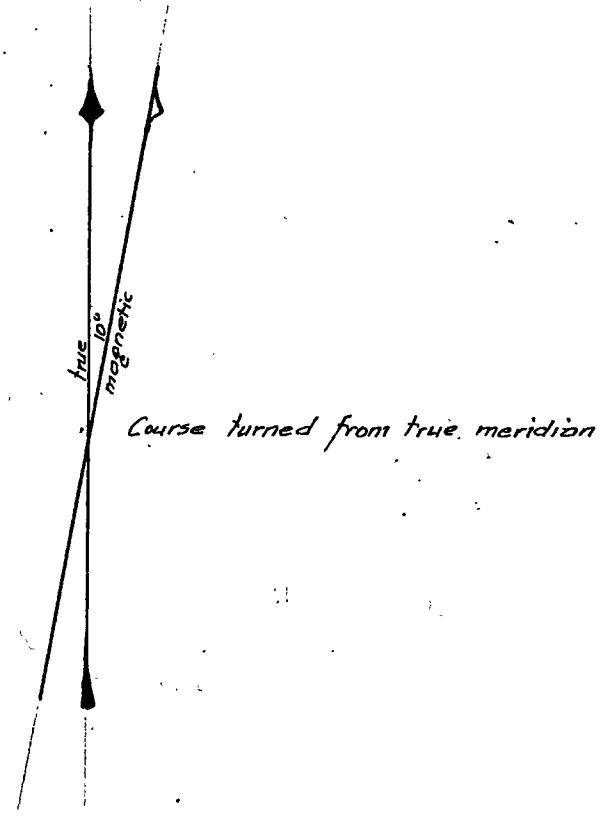
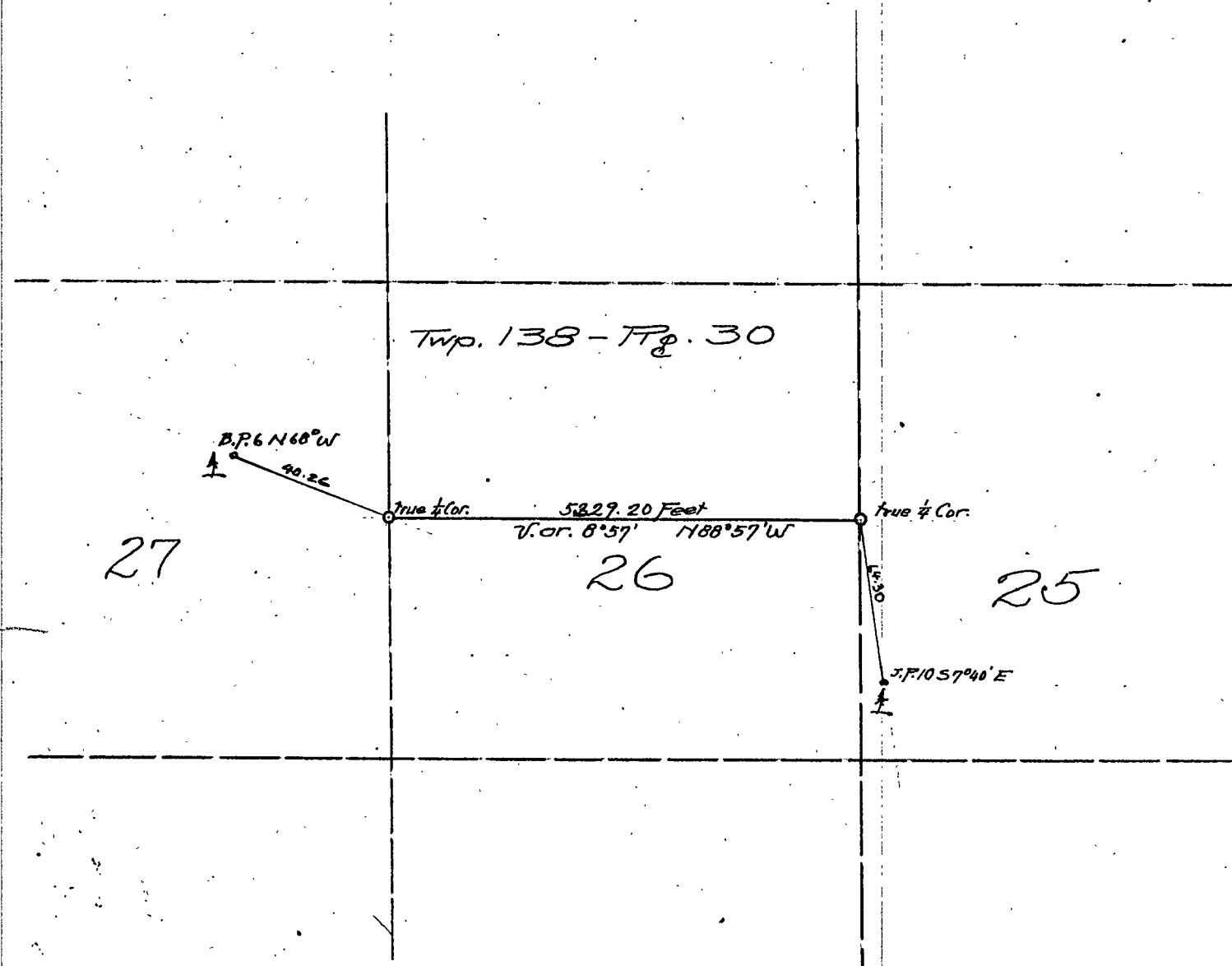
County Surveyor
Cass County, Minnesota.

B

SURVEY-RECORD-309

PLAT.

TWP. 138-RG. 30-SECS. 25-26-27

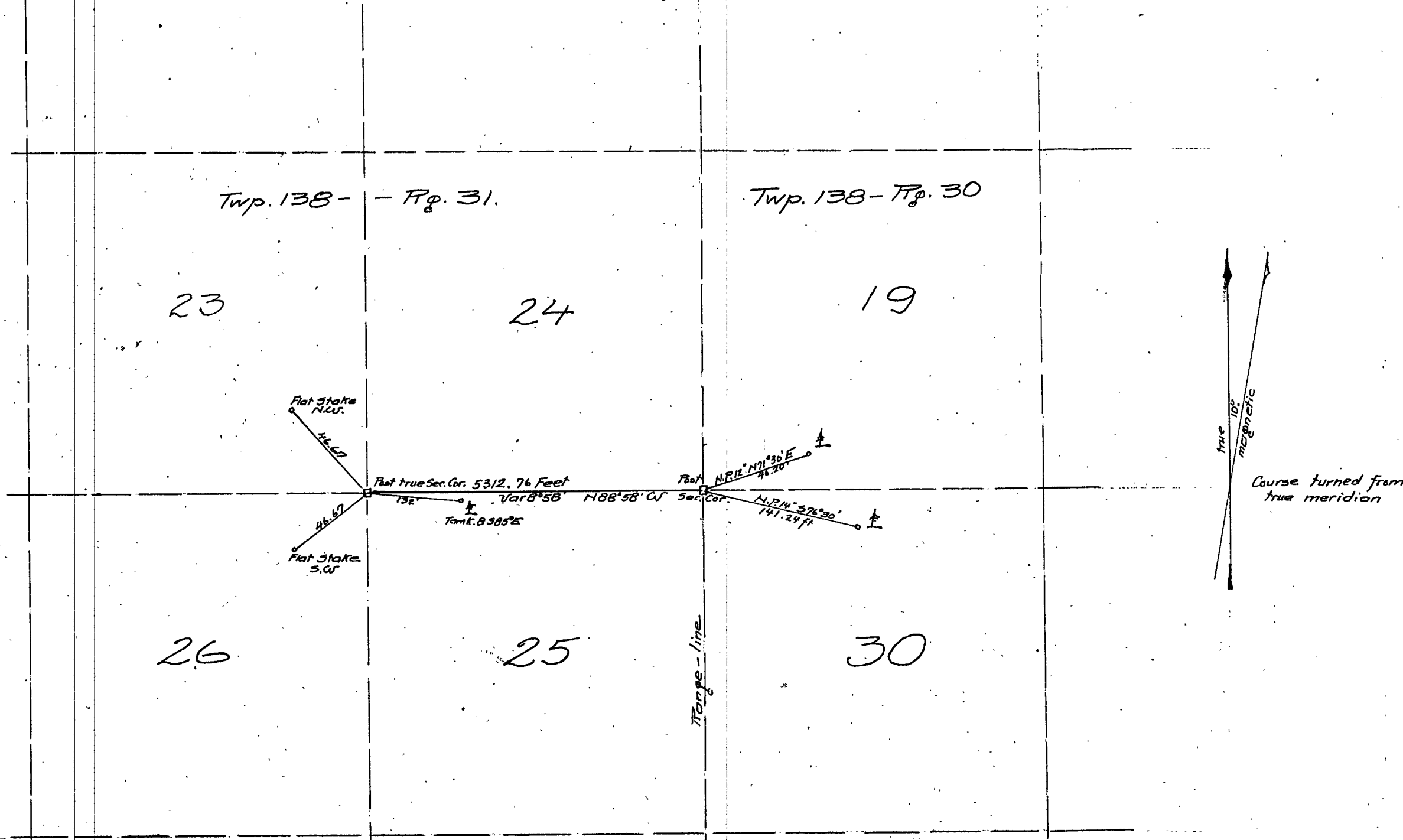


SURVEY-RECORD-310

PLAT

Twp. 138-Rg. 30-SEC'S 19-30

Twp. 138-Rg. 31-SEC'S 23-24-25-26



B

SURVEY-REC. 310

Twp. 138-Rg. 30-SEC'S 19-30

Twp. 138-Rg. 31-SEC'S 23-24-25-26

Field notes of the survey and the finding of old U.S. bearing trees and the establishment of new corners in sections 19 & 30, Township 138, N Rg. 30 W, and sections 23, 24, 25, 26, Township 138, N Rg. 31 W, Cass County, Minnesota as surveyed by John W. Curo, County Surveyor.

Aug. 13, 1906. John W. Curo transit and chain, assisted by Tom Vaughn and Harry E. Stevenson, using a Hurley compass & 100 foot Chicago Steel tape. We go to the corner of secs 19 & 30, Twp. 138, Rg. 30, being the corner to sections 24 & 25, T. 138, Rg. 31, where U.S. notes call for a post and the following bearing trees:

Nor. pine 12 inch, N 71° 30' E, 70 lbs = 46.20 feet.

Nor. pine 14 inch, S 76° 30' E, 214 lbs = 141.24 feet.

Blk. pine 2 1/2 inch, N 27° 30' W, 27 lbs = 17.82 feet

Blk. pine 2 1/2 inch, S 53° 30' W, 18 lbs = 11.88 feet.

We find all of the old bearing trees in each section from which we set a post for the true corner to secs 19, 24, 25 & 30, on range line bet T. 138, Rg. 30, and T. 138, Rg. 31, from which we run W on 9° 30' Var. @ 1320 set stake: @ 2640 ft. set stake for temp 1/4 post bet secs 24 and 25, T. 138, Rg. 31, where U.S. notes call for a post and the following bearing trees:

Apruce 8" N, 56° W, 46 lbs = 29.70 feet: Wh. pine, 2 1/2" S, 32° W, 19 lbs = 12.54 ft.

All appear to be gone and we continue W: @ 5280 ft. W set stake for temp. Cor. to secs 23, 24, 25 & 26, from which the true cor stands N, 33° 30' W, 59. ft. dist. At this point being the cor to sections 23, 24, 25 & 26, T. 138, Rg. 31, U.S. notes call for a post and the following bearing trees:

Tank 8", N 54° 30' E, 130 lbs = 85.80 feet: Tank 8", S 85° E, 200 lbs = 132 ft.

We find the old SE bearing tree from which we set a post for the true section corner being a big squared up post driven well into the meadow, from which we set light bearings as follows: being flat stake NW in sec 23, 46.67 feet. and flat stake SW in sec 26, 46.67 feet.

Surveyed Aug. 13, 1906.
Recorded 24 Jan 1917.

John W. Curo
County Surveyor.
Cass County, Minnesota.

Field notes of the survey and the establishment of iron corners in sec 5 & 6, T. 138, Rg. 29 and secs 31 & 32, T. 139-29, and sec 1, T. 138, Rg. 30 and sec 36, T. 139, R. 30, as surveyed by H. F. Baldwin and the platting of Town right in section 31, T. 139, Rg. 29, as surveyed by H. F. Baldwin. Notes examined and recorded by John W. Curo, County Surveyor of Cass County Minnesota. Monday Nov. 3rd 1915. I am working for Cass County in the establishment of lost and obliterated section corners ordered re-established by the County Surveyor, by order of County Commissioners, Nov. 2, 1915. H. F. Baldwin transitman, Nick Harig flag, chain, axe and general assist. Look up field notes in office, Lv Walker @ 9-20 A.M. via M & I R.R. fare to Pine River 67¢. 67 = \$1.34. Pl. by Baldwin. Arrive Pine River 10:30 A.M. Dinner with A. A. Cater.

P.M. Lv P.R. with auto from Hardy's Auto livery. We go to SE cor sec 31-139-²⁹~~28~~ which Mr. Webber finds for us. She returns to Pine River. With Hurley compass Baldwin and Harig Cruise North pacing 1/2 mile to find B.T.S. for 1/4 cor. We find none and return. From sec cor S.E. 31-139-29 we start random line North on 7°35' Var. At 406.4 N a hub. We cut bush on North and Auto comes for us. 4:40 P.M. Arrive at Barclay Hotel 5:40 P.M. Baldwin and Harig have supper and lodging at Barclay Hotel. H. F. Baldwin.

Thursday Nov. 4, 1915. Clear frost in A.M. Breakfast - Barclay Hotel 6:45 A.M. We leave in Hardy's auto taking lunch at 7:20 A.M. Baldwin - Aloc transit. Harig - Axe and flag. We continue North between secs 31 and 32, 139-29. At 1310.0 N a hub: At 1314 N, E & W. B. Wire fence; At 1900.00 N a hub. A N & S B. Wire fence has continued 2 to 6 ft. East of line. At 2633 N, E & W B. wire fence: At 2700.00 N a hub: At 3472.50 N a hub: We quit for night and walk back where Auto meets us and drives us to Pine River. Arrive 5:30 P.M. Baldwin and Harig at Barclay Hotel for supper & lodging. H. F. Baldwin.

Friday Nov. 5, 1915. Clear day. Frost in A.M. Breakfast at Barclay Hotel 6:45 A.M. We take 3 I.M's 2 1/4" x 4" with cap from Pine River Garage and drive in Hardy's auto to a place near our work. Baldwin - Aloc transit. Harig - Axe and flag. We continue North between 31 & 32. At 4142.7 N a hub: At 4400.0 N a hub. At 4510 N a good old road: At 4696.5 N a hub: At 4765.0 N true Goat M.C. No. 29 sets East 1.30 ft. At 4830 Shore Lake Hattie. Here at M.C. No. 29-139-29, The U.S. Goat notes call for N.P. 9" for corner - B.T.S. N.P. 6 S 25 W 13 = 8.58. N.P. 10' S 80 E 19 = 12.54. We find stumps of B.T.S. which check for course and distance with 9" N.P. stump in which we place tack for true corner. We drive an Iron Monument 10.0 ft. South for witness corner. At M.C. No. 29. U.S. Chain-age calls for 4000 + 3197 = 7197 links or 4750.0 ft. The 1/4 cor between secs 31 & 32-139-29. Corrects from 2640.0 North to 2648.34 thence East 0.71 ft. Where we drive I.M. At sec cor S.E. 31 we pull old oak cor post which sets correct for course & dist. and drive Iron Monument 36" in the ground. Hardy comes with car and we reach Hotel 5:40 P.M. Supper and lodging at Barclay Hotel. Leave call for 1:30 A.M. Try to get Curo by phone but cannot. H. F. Baldwin.

Saturday Nov. 6th, 1915. Clear day. Baldwin & Harig take 1:57 A.M. train for Walker. We go to Chase Hotel, Room 32. We see Curo and take 9:28 A.M. train for Pine River. Upon arrival at Pine River we go to Pine River Garage and they agree to call for us at Barclay Hotel at 12:30 P.M. Auto delayed

at 2:00 P.M. Pine River Garage finds Art Glover & Car to take us to SW cor Twp 139-29. He leaves us at what he says is Twp cor. It is a mile too far South. We cruise for corner. Auto does not come for us as agreed and we walk to Pine River. Arrive Barclay Hotel 6:40 P.M. Supper & lodging at Barclay Hotel. H. F. Baldwin.

Sunday Nov. 7, 1915. Cloudy, Rain. No work. Baldwin & Harig at Barclay Hotel all day. H. F. Baldwin.

Monday Nov. 8, 1915. Clear Day. Car from Pine River Garage calls 7:30 A.M. & drives us to South of Lake Hattie where we walk to SW cor Twp 139-29. A corner post set by M.A. Kemp on Dec. 13, 1913 sets true from U.S. Goit. B.T.S. We leave our lunch & cruise North and find $\frac{1}{4}$ cor. bet secs 31-139-29 and 36-139-30. A wooden cor post sets correct for course & bearing from Goit B.T.S. We walk back to Twp cor & have lunch.

P.M. Baldwin - Aloe transit, Harig - Axe & flag. At $\frac{1}{4}$ cor bet 36-31 we drive I.M. 36" in the ground and start East on 8" 35' Var. We cut line nearly to Lake Hattie & quit for night. Car from Pine River Garage meets us. Baldwin & Harig. Supper & lodging at Barclay Hotel. H. F. Baldwin.

Tuesday Nov. 9th, 1915. Fair day. Breakfast Barclay Hotel. Auto from Pine River Garage takes us to Killelly farm lot 6, sec 31 on East side Lake Hattie. We continue our random line East across Lake Hattie. We have use of boat from Mr. Killelly. We have lunch. We continue East about centre sec 31-139-29. The true $\frac{1}{4}$ cor bet 31 & 32 sets North 60.6 ft. From true line between 31 & 32, Turn S.W. angle $89^{\circ}20'30''$ & start line West. Quit for night. (Harig gets 2 Brush Hooks sent from Walker Express .224.) Pine River Garage takes us in. Baldwin & Harig at Barclay Hotel for supper & lodging. H. F. Baldwin.

Wednesday Nov. 10, 1915. Rain. Breakfast at Barclay Hotel. As it rains we do not out Baldwin writes notes. Curio phones Baldwin he wants I.M.S. (100) Baldwin & Harig take 3:44 P.M. Train for Walker fare 67¢ each. Harig leaves with Molyneux for Cass Lake - Baldwin spends evening with Curio & takes 12:57 Train for Pine River. Baldwin goes to Barclay Hotel at Pine River. H. F. Baldwin.

Thursday Nov. 11, 1915. Clear day. Strong wind. Breakfast at Barclay Hotel. Baldwin sees Fred Maulster who hires Ed. Bowman to assist in survey. Auto takes Baldwin and Bowman to sec 31-139-29. We take lunch. We continue random line West about centre sec 31. We set hubs & cut brush but do not chain. Auto from Pine River Garage brings us back. Baldwin supper & lodging at Barclay Hotel. H. F. Baldwin.

Friday Nov. 12, 1915. Snowing slightly. Strong wind. Breakfast at Barclay Hotel. Baldwin - Bowman taking lunch leave in Auto from Pine River Garage. Beginning at I.M. at $\frac{1}{4}$ cor bet secs 31 & 32 & chaining West. At 497.7 W a hub: Fence nearly E+W: 985 enter Marsh: 1065 enter water. 1100 shore left 25' from true line. 1145 shore and 12.00 leave Marsh: 1437 W a hub: 1641 W a hub: 1779.4 W a hub: 1900 W cut bank: 1990.8 W a hub: 1995 W shore Lake Hattie. We have lunch.

P.M. we run traverse of shore, but do not chain. at West boundary lot 5, sec 31. Angles turned & deflected shown on pages 15 & 16. Auto from Pine River Garage comes for us at 5:00 P.M. Baldwin, supper & lodging at Barclay Hotel. H. F. Baldwin.

Saturday Nov. 13, 1915. Clear day. little wind. At hub at 1990.9 W on shore Lake Hattie. Bowman takes old post belonging to Mr. Gillettey and sets hub on opp. shore on random line produced about center sec 31. A. Baldwin with Aloe transit turns S.W. angle $33^{\circ}34'$. "C" and chains Base line 280 ft for Triangulation, where we set hub & read angle $142^{\circ}51'$. B. The remaining angle is $4^{\circ}01'$. The distance across lake from hub at 1990.8 to hub on West side of lake is 2437.9. Hub at A is West 4428.7. We now row across lake and go to I.M. at $\frac{1}{4}$ cor bet sec 36 & 31. We chain East. At 470.4 E a hub; At 700.8 E a hub; At 885.8 E a tack on 12" N.P. stump; At 1036.6 E a hub; At 1189.3 E a hub; At 1170.5 the hub 4428.7 W sets North 29.4 ft. We go near S.W. Cor twp 139-29 & get transit box & two I.M.s previously left here. We drive an I.M. at Twp. Cor where there is only wooden cor post. sets correct for course & distance. We have lunch 2:00 P.M. We now go to True Goat M.C. No. 29 and chain on Meander line as run by transit yesterday. Angle S.W. from M.C. 29. $44^{\circ}06'$

At 100 Lake shore Right 25 ft. cut bank 20' left

At 200 " " " " " " " " " " " "

At 300 " " " 20 " " " " 25' "

At 400 " " " 25 " cut bank 25' left

At 500 " " " 35 " Marsh 0 ft.

At 600 Marsh L. " 30 " " 20 ft. left

At 700 " " " 15 " " 20 ft. left

At 800 " " " 25 " " 05 ft. left

At 853.3 " " " 15 " " 0 ft. left

At 853.3 meander a hub deflects Right $38^{\circ}17'$. At 900 Marsh shore 0 ft. right, Marsh 0 ft. left. At 1000 Lake shore 0 ft. right. At 1020 Leave lake shore. At 1100 Lake shore 30 ft. right. At 1135.3 a hub; deflect $37^{\circ}00'$ left; At 1135.3 a hub; Lake shore 15' Rt. At 1200 edge Marsh 35' Rt. Lake shore 40' Rt. At 1300 edge Marsh 75' Rt. Lake shore 95' rt. At 1315 cross old shore line. At 1400 Rocky shore Lake on point 150' Rt. At 1431.5 a hub deflects $110^{\circ}30'$ left. At 1431.5 a hub tack tangent produced cut bank 4' Marsh 40' shore 50'.

At 1500 Top Bank 25' Rt. shore 55' Rt. At 1600 Lake shore 35' rt.
 At 1700 Lake shore 20' rt. At 1800 Edge Marsh 20' rt. shore 40' rt. At 1900 Edge Marsh 45' rt. shore 55' rt. At 1906.0 A hub deflect $57^{\circ}00'$ rt. At 2000 Lake shore 15' rt. At 2100 Lake shore Marsh 5' rt. Marsh 5' left. At 2200 Lake shore 5' rt. At 2253.3 a hub deflect rt. $21^{\circ}00'$. At 2253.3 a hub shore 10' rt. At 2300 and 2400 on Lake shore. At 2500 Marsh Lake shore 5' rt. At 2589.0 Marsh lake shore 10' rt. At 2589.0 a hub deflect $18^{\circ}30'$ rt. At 2600 Lake shore 10' rt. At 2700 Lake shore 0' rt. At 2800 Lake shore 20' rt. site of old saw mill. At 2900 Lake shore 10' rt. At 3000 Lake shore 30' rt. At 3081.1 M = 930.0 W on random line. At 3085.3 M = 931.8 W Turn Angle to N.E. $57^{\circ}49'$. Auto from Pine River Garage takes us back to Pine River. Arrive Barclay Hotel Hotel 6:50 P.M. Baldwin at Barclay Hotel for supper and lodging. H. F. Baldwin

Sunday Nov. 14, 1915 Fair Day. No work in field. Baldwin writes notes & makes sketch from notes of Lot 5, sec 31 - Twp. 139 - R. 29. In evening Baldwin goes to see Monester but he has retired. Will be in office in A.M. Baldwin all day at Barclay Hotel. H. F. Baldwin

40287
11705
55992

B

311-CONT.

Monday Nov. 15, 1915. Clear in A.M.-P.M. Snow. Hard to see thru transit. Breakfast at Barclay Hotel-- take lunch. Baldwin submits sketch of lot 5-31-139-29 to Fred Moulster & finds how it is to be divided. Auto from Pine River Garage takes Baldwin & Bowman to sec 31-139-29. Correcting south boundary Lot 5 - sec 31. Hub at 497.7 W goes South 1.88 ft., hub at 1434.7 W goes South 5.42 ft., hub at 1990.8 W goes South 7.53 ft. With Aloc transit at 1/4 I.M. bet 31 & 32. The True line between 31 & 32, and South boundary Lot 5-31-- The S.W. angle $89^{\circ}08'$. We have lunch. P.M. We set hub at 300 ft. West of I.M. on true south boundary Lot 5 from this hub we run line North parallel to true line bet sec 31 & sec 32. We now set hub at North $1/16$ cor bet secs 31 & 32 as follows: Temp $1/16$ cor 3960 goes North 12.51 ft. to 3972.51-- Thence East 0.79 ft. leaving heard stake at hub Turn N.W. angle $90^{\circ}52'$ & run line West 11' to South Boundary. We start to walk home, but Auto from Pine River Garage over takes us. Arrive 7:00 P.M. Baldwin at Barclay Hotel over night. H.F. Baldwin.

Tuesday Nov. 16, 1915. 1" of snow on ground--fine day. Breakfast at Barclay Hotel-- Take lunch. Auto from Pine River Garage takes us to sec 31. leave hotel 7:30 A.M. Baldwin-- Aloc Transit. Bowman-- Axe & flag. We continue line 300' west of sec line bet 31 & 32, and line from North $1/16$ cor bet 31-32 running west 300' parallel to South boundary lot 5 to P.I. & set hub. Going to P.I. south boundary lot 5 and meander line 3085.3 N = 931.8 W true line. With transit at P.I. and backsight on meander line turn $96^{\circ}00'$ left chaining along this line.

At +40 enter Marsh: At +75 Lake shore: At 200 Lake shore. At 300 edge Marsh 95' left Marsh shore 105' rt. At 400 edge Marsh 10' left Marsh shore 100' rt. At 474.9 Marsh 0 left shore 95' rt. parallel to B. tangent. At 474.9 a hub deflect $41^{\circ}00'$ left. At 500 Marsh 0' left shore 25' rt: At 600 Marsh 0' left shore 10' rt. At 640 Lake shore 0: At 700 Lake shore 5' left: At 800 Lake shore 25' left: At 900 Lake shore 25' left: At 1000 Lake shore 05' left: At 1019.0 Lake shore 10' left: At 1019.0 a hub deflect $15^{\circ}38'$ to P.I. Random line hub. At 1050 Lake shore 0': At 1100 Lake shore 5' rt. At 1114.50 Meander = 1990.8 W. Turn N.W. angle $149^{\circ}25'$. Auto from Pine River Garage comes for us. 5:00 P.M. Baldwin-- supper & lodging at Barclay Hotel. Evening Baldwin writes notes & writes cures regarding M.C. at South boundary. Lot 5-31. H.F. Baldwin.

Wednesday Nov. 17, 1915. Fair day. Breakfast Barclay Hotel-- take-- lunch. Auto from Pine River Garage takes us to sec 31. Baldwin-- aloc transit. Bowman-- Axe & flag. Starting from line parallel to sec. line 300' West we run lines to Lake shore dividing track into lots 200' wide North and South. We set 4" spikes with red rag attached for hubs. Turn S.W. angle at each line $89^{\circ}08'$ making each line to lake shore parallel to South boundary of Lot 5. We set hubs but do not chain. Auto from Pine River Garage comes for us. Baldwin at Barclay Hotel for supper & lodging. H.F. Baldwin.

Thursday Nov. 18, 1915. Fair Day. Breakfast Barclay hotel - take lunch - Auto from Pine River Garage takes us to sec 31. Baldwin - Aloc transit. Bowman - axe & flag. We finish North boundary of 7th lot North. We produce East boundary of lots to Lake shore. We have lunch. P.M. After lunch Auto from Pine River Garage brings 25-1 3/4" pipes for I.M.s. We distribute I.M.s and set 7 I.M.s. Quit for night. Auto from Pine River Garage comes for us. Baldwin at Barclay Hotel for supper & lodging.

Friday Nov. 19, 1915. Fair Day. Breakfast Barclay Hotel. Take lunch. Auto from Pine River Garage takes us to sec. 31, calls for us at 8:45 P.M.

Baldwin - Aloc, Bowman - axe & flag. We go to 199.8 W where we correct south 7.53 ft. and drive 2 1/4" x 4' Galvanized I.M. with cap. also hub at 1641.0 W we correct south 6.20 and drive hub with guard stake marked true line. We drive 5 small I.M.s to lot corners. At 1433' North of South boundary lot 5. We place 1 3/4" x 18" black Iron pipe for I.M. 40' East of line of lot corners. Beginning at this I.M. we chain West.

At 200' top cut bank Rt. 80'; At 300' top cut bank Rt. 40'; At 400' top cut bank Rt. 5'; At 400' top cut bank Rt. 20'; At 540' cross top cut bank; At 550' cross bottom cut bank. At 600' drive 1 3/4" x 18" I.M. here we turn N.E. angle 89° 06' run North parallel to sec line bet 31 & 32. At 30' North drive 1 3/4" x 18" I.M. for lot corner. 40' North P.I. Meander line. 1144 Cut bank 30' south of 600. We drive 24 small I.M.s at corners of sub lots. We just finish sub-division of lot 5, sec 31 & take auto from Pine River Garage.

Arrive at Barclay Hotel. 6:45 P.M. Baldwin sees Fred Moulster & he thinks changes in subdividing lots O.K. Baldwin leaves call for 1:30 A.M. & goes to bed. Take train 2:00 A.M. for Walker. Go to Chase Hotel. H.F. Baldwin.

3 galvanized
1. 3/4" x 2'
I.M.s.

{ at each cor. 300' West of sec line bet 31 & 32 and 1324.17 North at 300' west 1/6 cor and at Nor. 1/6 bet 31 & 32, drove a 1 3/4" x 2' galvanized pipe 20" in the ground for Iron Monument.

4 Black Iron
1. 3/4" x 2'
I.M.s.

{ At S.E. cor of first sub lot North. At S.E. cor of N.E. sub lot being 40' North of 1/6 cor. At S.W. cor of N.E. sub lot. At S.W. cor of first lot North near lake shore. This cor is 33' North of hub 931.8 W at P.I. Meander line. Drive 1 3/4" x 2' pipe for I.M. 20" in ground.

17 Black Iron
1. 3/4" x 1/2'
I.M.s

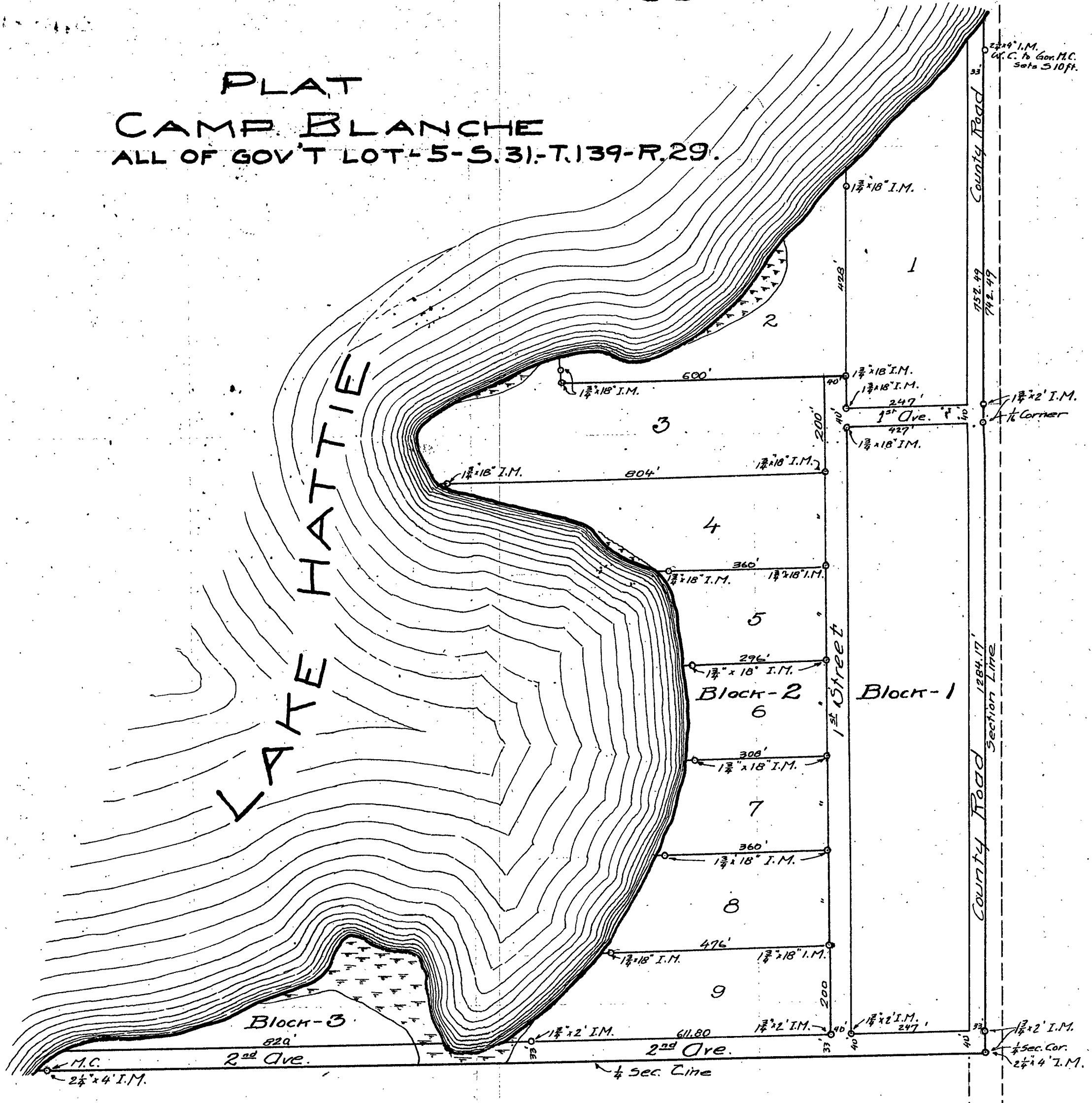
At S.E. cor and S.W. cor on shore of each of 2nd, 3rd, 4th, 5th, 6th and 7th sub lots North and at all four corners of nearly triangular sub lots which is West of N.E. sub lot. also at S.E. cor of large black sub lot this cor being 40' North of 1/4 cor bet 31 & 32. At each of the 17 Cors above described we drive a 1 3/4" x 1/2" black iron pipe for I.M. 15" in the ground, Making total of 24 I.M.s placed at corners of sub lots. H.F. Baldwin.

Recorded Jan. 27, 1917

John W. Curo
County Surveyor
Cass County, Minn.

SURVEY-RECORD-311

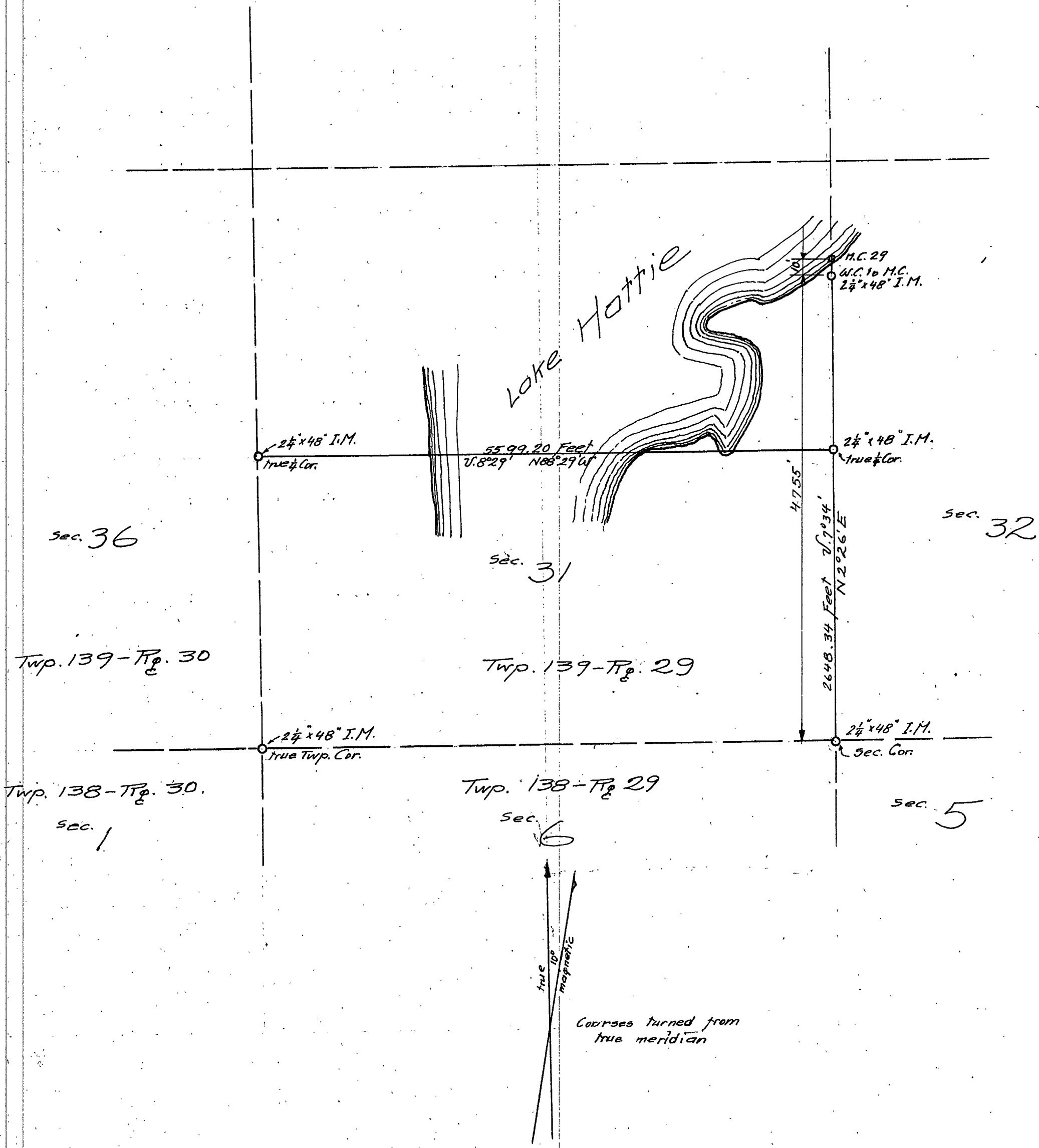
PLAT
CAMP BLANCHE
ALL OF GOV'T LOT-5-S.31-T.139-R.29.



Described as follows: All of Gov't Lot-5 - Sec. 31 - T. 139 N. R. 29 W. 5th P.M.
 Beginning at Lake Shore at the N.E. Cor. of said lot; thence S. along the Sec. Line
 2175 Feet more or less to the iron N.W. Corner betw. Sec's 31 and 32 of said Township;
 thence West along the centerline of Sec. 31, a distance of 2000 Feet more or less to the east-
 shore of Lake Hattie at the S.W. Cor. of said lot-5; thence northerly and easterly following the shore
 of Lake Hattie 4500 Feet more or less to the place of beginning.

PLAT

TWP. 138-RG. 29- SEC'S. 5 & 6
 TWP. 139-RG. 29- SEC'S. 31 & 32
 TWP. 138-RG. 30- SEC'S. 1.
 TWP. 139-RG. 30- SEC. 36.



SURVEY-RECORD-312

TWP. 134-RG. 29-SEC'S 15-16-17-20-21-22

Field notes of the survey to find old Goit bearing trees and establish new corners in sections 15, 16, 17, 20, 21, 22, Township 134, N Range 29 W, 5th Principal Meridian, as surveyed by John W. Curo, County, Surveyor of Cass County, Minnesota.

Sept. 4, 1906. John W. Curo, transit and chainman, Kueffel and Esser transit and 100 foot Chicago Steel tape. Left Pine River on 10:46 A.M. train, copied field notes at Brainerd, then drove to Parker White's place in section 17, T. 134, Rg. 29, with White's team & White's father. Look up sec cors so as to be ready to go to work in the morning. Parker White keeps me and both Parker and his father should be allowed a whole day each for work.

Sept. 5, 1906. Parker White swore in as chainman. Old man White drove us out to take out the tools and help me survey. Guy Smith and A. G. Smith of Homebrook Post office assisted as axemen. Old man White worked. We go to the corner of sections 15, 16, 21 & 22, T. 134, R. 29, where U.S. notes call for a post & the following bearing trees:

Nor. Pine 16", N 9° E, 52 lbs = 34.32 feet: Blk. pine 8" N, 69° 30' W, 19 lbs = 12.54 ft.

Blk. Pine 8" S, 21° 30' W, 39 lbs = 25.74 ft: Blk. Pine, 8" S, 41° 30' E, 28 lbs = 18.48 ft.

We find the NE and the SE bearing trees from which we set the true corner and run W on 10° Var. on random line bet secs 16 & 21,

At 1320 ft. W set hub and tack for temp 1/16 cor: At 1980 ft. W set hub and tack: At 2315 ft. enter E edge of slough: @ 2570 leave W edge of slough: @ 2640 set hub and tack for temp 1/4 corner bet secs 16 & 21, where U.S. notes call for a post and the following bearing trees:

Nor. Pine 12" S, 4° 30' W, 478 lbs = 315.48 ft: Blk. P. 8" N 21° W, 303 lbs = 199.98 ft.

All appear to be gone and we continue W. @ 2960 ft. W enter E edge of second slough or lake: @ 3300 ft. W leave W edge of same set hub: @ 3774 set hub E of lake: @ 3823 set hub in E edge of lake close to water. Then offset at 90° angle, 162 ft. N and continue West: @ 4196.60 W set hub and tack, then offset back at 90° angle and run 5162 feet and set hub and west side of 3rd lake in edge of water and continue West: @ 4200 leave W edge of 3rd lake: @ 4594.40 feet W set hub and tack about 100 ft. E of fourth slough or lake: @ 4700 W enter E edge of fourth lake, then at 4594.40 W offset 90° angle and run N 162 feet, then run West to 5040 ft. and offset back 90° angle and run 5162 feet and set hub 40 ft. W of lake: @ 5000 leave edge of lake: @ 5280 ft. W set hub and tack for temp sec cor from which the true corner bears W 66° 40' N or to the right 92.20 ft. dist. At this point being the cor to secs 16, 17, 20 & 21, U.S. notes call for a post and the following bearing trees:

Blk. pine 5" N, 41° 45' E, 48 lbs = 31.68 feet: Blk. pine 5" N, 81° 30' W, 34 lbs = 22.44 ft.

Blk. pine 10" S 38° W, 32 lbs = 21.12 feet: Blk. pine 8" S, 71° 15' E, 48 lbs = 31.68 feet.

We find the old SW bearing tree plainly marked and standing in sec 21 from which we run $N 38^{\circ} E$ 21.12 ft. and set a stake for the true cor. to secs 15, 16, 21 & 22, T. 134, Rg. 30. From the section corner we run $N 81^{\circ} 30' W$, 22.44 feet in sec. 16, but find the old bearing tree gone. Other bearing trees also gone. Guy Smith chained the last hour and was sworn in and worked late and we quit on account of darkness.

Sept. 6, 1906. John W. Curo transit and chain. Guy Smith Chain Man. Parker Waite and old man Waite work as axemen. We set up transit on hub 5280 W and going W on 10° Var the true corner to sections 16, 17, 20 & 21, T. 134, Rg. 29, stands to the right $66^{\circ} 40'$ a dist of 92.20 feet. Correcting back on the Random line bet secs 16 and 21, Hub + 594.40 W goes $W 66^{\circ} 40' N$, 80.23 feet: Hub 3774 W goes $W 66^{\circ} 40' N$, 65.90 ft: Hub 3300 W goes $W 66^{\circ} 40' N$ 57.62 feet: Hub 2640 W goes $W 66^{\circ} 40' N$, 46.10 feet: to the true $\frac{1}{4}$ corner bet secs 16 & 21: Hub 1980 W goes $W 66^{\circ} 40' N$, 34.60 feet: Hub 3220 W goes $W 66^{\circ} 40' N$ 23.05 ft. at which points we drive stakes to mark the true section line. We get thru at 10: A.M and Old man Waite drives Parker Waite and Curo to Brainerd, where they catch the train North.

Surveyed Sept. 4, 1906 to Sept. 6, 1906.
Recorded 27 Jan. 1917.

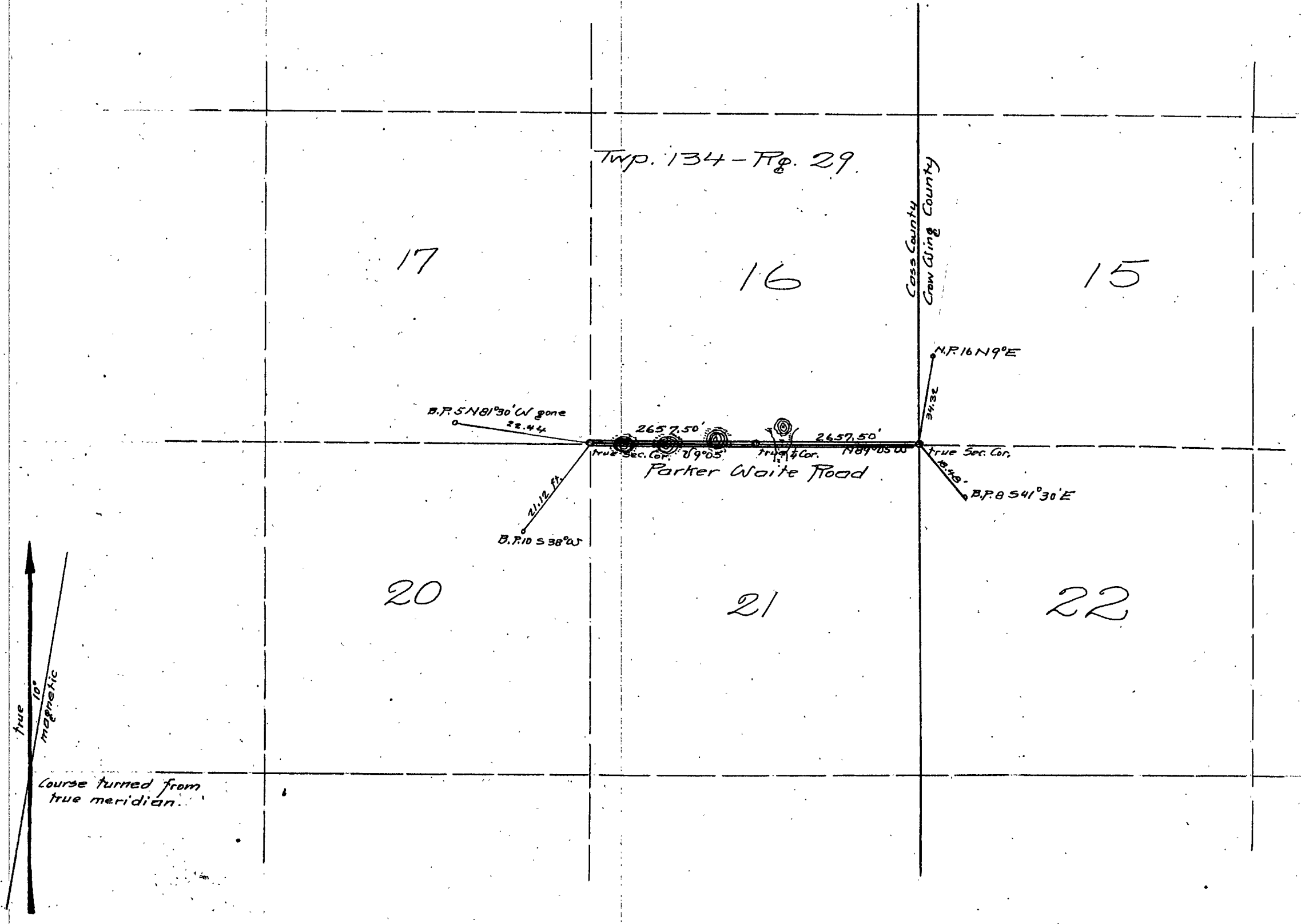
John A Curo
County Surveyor.
Cass County, Minnesota.

B

SURVEY RECORD - 312

PLAT.

TWP. 134 - R. 29 - SEC'S 15-16-17-20-21-22.



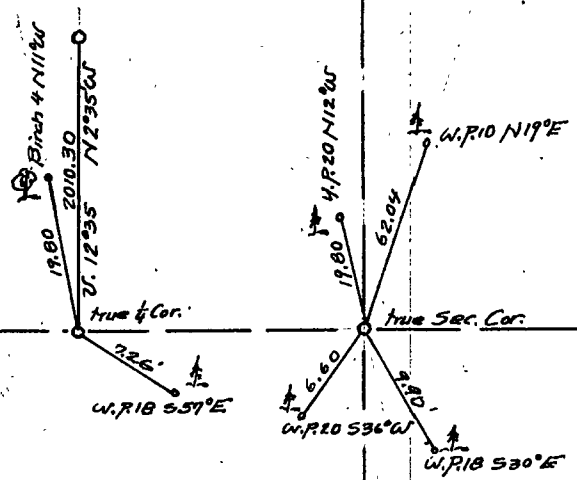
SURVEY-RECORD-313

PLAT
TWP. 142-RG. 31-SEC'S. 22-23-26-27

Twp. 142 Rg. 31

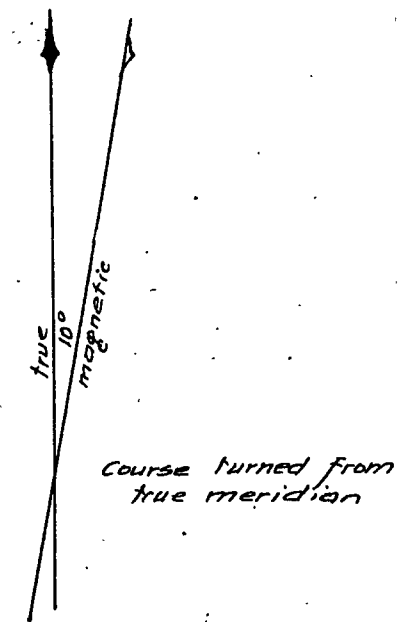
22

23



27

26



TWP. 142-REG. 31-SEC'S. 22-23-26-27

Field notes of the survey and finding of old U.S. bearing trees and the establishment of new corners in sections 22, 23, 26, 27, Township 142 N, Range 31 W, 5th P.M. Cass County Minnesota as surveyed by John W. Curo, County Surveyor.

April 8th 1907. Left Pine River Minnesota at 3:36 o'clock P.M., via train. Arrive at Walker to work for M.J. Quam. Over night at Hotel Chase.

April 9th, 1907. In forenoon Mr. Quam takes me to the $\frac{1}{4}$ corner between sections 22 and 27, Twp. 142, Rg. 31, from which Peter Troseth and I chain East half a mile rough chain to the corner to sections 22, 23, 26, 27, where U.S. notes call for a post and the following bearing trees: Wh. pine $10^{\circ}N, 19^{\circ}E$ 94 lks = 62.04 ft; Y.p. $20^{\circ}N, 12^{\circ}W$ 30 lks = 19.80 ft. Wh. pine $20^{\circ}S, 36^{\circ}W$, 10 lks = 6.60 feet; Wh. p. $18^{\circ}S, 30^{\circ}E$, 5 lks = 9.90 feet. We find all four trees plainly marked from which we set a stake for the true corner. We find the stump of the S.W tree in section 27, standing plainly marked, and we find the S.E. tree in section 26, down and out by the roots but plainly marked; we also find the NE tree in section 23, and the N.W. tree in section 22, both trees down and out by the roots but both plainly marked and from these four trees we establish the true corner to sections 22, 23, 26, 27, Twp. 142, Rg. 31, where we set a stake.

In P.M. I swear in Peter Troseth as chainman and we go to the $\frac{1}{4}$ corner between sections 22 and 27, T. 142, Rg. 31, where U.S. notes call for a post and the following bearing trees:

Birch 4 inch N, $11^{\circ}W$, 30 lks = 19.80 ft; Wh. p. $18^{\circ}S, 57^{\circ}E$, 11 lks = 7.26 ft. We find the stump of the 18 inch white pine standing plainly marked "B.T." from which I set a stake so that the heart of the white pine stump stands $S 57^{\circ}E$ 11 links; the 57 degrees is turned from the true meridian which I assume at 9° Variation Magnetic East.

There is another oak stake which some one has set about 2 feet NW of my stake. The Birch tree called for in the government field notes is apparently gone.

From my stake we run North on a magnetic variation of $12^{\circ}35'E$ following an old line of hubs, and a fence, Jim Middleton probably run this line: At 276.20 feet N set hub and tack; At 721.30 feet North, set hub and tack; At 1306.90 feet N, set hub and tack; At 1665 ft. North cross center of wagon road; At 1953.30 feet North set hub and tack; At 2011.30 ft. N, set hub and tack from which an oak stake previously set by some surveyor for the N.E. corner of Government Lot No. 5, stands 1. foot South.

Quit for night.

April 10th, 1907. Correcting line just run, hub 276.2 E goes South 0.14 of a foot; Hub 721.30 E, goes South 0.36 of a foot;

Hub 1306.90 E, goes South 0.65 of a foot; Hub 1953.30 E, goes South 0.97 of a foot; Hub 2011.30 E, goes South 1.00 foot.

Then beginning at the oak stake above mentioned which we find 2011.30 feet North of the $\frac{1}{4}$ corner on the South side of section 22, we run South and at 150 feet set stake for S.W. corner of village lot no. 1. then continuing South 150 feet (total 300 feet) we set a stake for SW corner of Block 1. Thence continue South 60 feet (total 360 ft) and set stake for N.W. corner of "Block 2" thence continue South 100 feet (total 460) and set stake for N.W. corner of "Lot 2"; thence continue South 100 feet (total 560) and set stake for N.W. corner of "lot 3" thence continue South 100 feet (total 660) and set stake, then continue setting various stakes for proposed townsite plat.

April 11th, 1907. I find the stump of the old Birch bearing tree at the $\frac{1}{4}$ corner between sections 22 and 27, T. 142, R. 31, which checks out for course and distance with the white pine stump of the other bearing tree when chained from the face of the figures on each stump, instead of chaining from the "heart" of the stump, and as the white pine stump is churn butted, and widens out near the base where the figures are, it chains my first $\frac{1}{4}$ stake to a point about 18 inches further North West at which point I set a good stake for the true $\frac{1}{4}$ corner: this would change the proposed lot stakes a few inches, but I am not granted the time to make the change as the land owners do not think it necessary.

Survey made April 8th 1907 to April 11th 1907.
Recorded Jan 27 1917

County Surveyor.
Cass County, Minnesota.

B

Twp. 137 - R. 31 - Sec's. 25 - 26.

Field notes of the survey of a part of sections 25 and 26, Township 137, N, Range 31 W, 5th P.M. Cass County Minnesota as surveyed by John W. Curo, County Surveyor.

June 29th, 1907. John W. Curo transitman, also chaining, K & E. transit and Chicago Steel tape. perfect line and perfect chaining. Ole Sandstrom, Axel Olson, O. G. Boquest & Anton Boquest, surveying for Boquest & Olson.

Beginning at the corner to sections 25, 26, 35, 36, Twp. 137, R. 31, we run North on $9^{\circ}30'$ variation: At 871.40 ft. North set hub and tack: At 1320 ft. N, set hub and tack: At 2392 ft. N, set hub & tack: At 2640 ft. N, set hub for temp. $\frac{1}{4}$ corner between sections 25 & 26, Twp. 137, R. 31: At 3960 ft. N, set hub & tack: At 5280 ft. N set stake: At 5350 ft. North set hub & tack from which the true corner to sections 23, 24, 25, 26, stands $N 84^{\circ}15'E$, 36.00 feet distant. 5353.6 feet is the true length of the line.

Correcting back, hub 2640 N, goes North 35.00 feet to 2675 feet N, thence $N 84^{\circ}15'E$ 18.00 feet where we set a sharp stone for the true $\frac{1}{4}$ corner between sections 25 & 26, T. 137, R. 31. Quit for night.

June 30th 1907. same crew, begin at new stone $\frac{1}{4}$ corner bet. sections 25 & 26, T. 137 - R. 31 from which we run West thru section 26, on 9° variation: At 1080 feet West set hub and tack: At 1320 W, set stick: At 1899 ft. West set hub & tack: At 2640 ft. West set hub and tack from which the true center of section 26, previously set by me, being an oak stake, sets West, $16^{\circ}12'$ North 25.90 feet distant.

Correcting back, hub No 1899 West, goes West $16^{\circ}12'$ North 18.60 ft: Hub 1320 feet West, goes $W 16^{\circ}12' N$ 12.95 feet where we set a stake for the true $\frac{1}{16}$ post in center of East half of section 26. At hub 919 feet West, we run $W 16^{\circ}12' N$ 9.02 feet where we set a stake for the true E & W center line of sec 26, from which the cement foundation of Boquest's house stands North 4.40 feet.

Correcting the random line between sections 25 and 26, T. 137, R. 31, hub 3960 feet North goes North 52.50 feet then $N 84^{\circ}15'E$ 27.00 feet to the North $\frac{1}{16}$ corner between sections 25 and 26. Hub 1320 ft. N, goes North 17.50 feet to 1337.50 North, then $N 84^{\circ}15'E$ 9.00 feet to the North $\frac{1}{16}$ corner between sections 25 & 26. Hub 871.40 North, goes North 11.55 feet to 882.95 ft. North then $N 84^{\circ}15'E$ 5.94 feet to true section line.

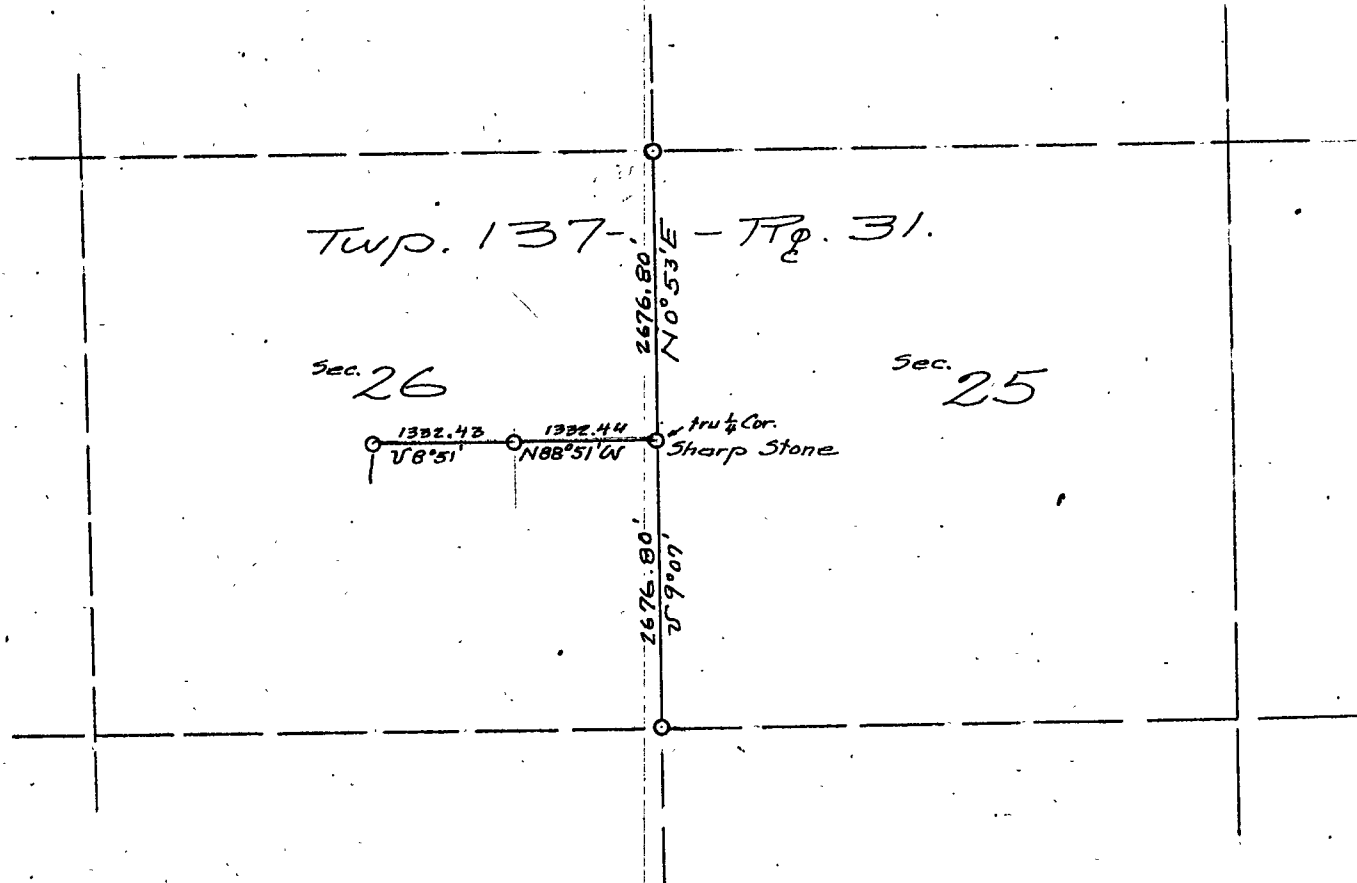
Surveyed June 29 & 30th, 1907

Recorded Jan. 27 1917.

County Surveyor
Cass County, Minnesota.

PLAT

TWP. 137-RG. 31-SEC'S. 25 & 26.



SURVEY-RECORD-315

TWP. 135-RG. 29-SEC. 5-6-7-8-18
 TWP. 136-RG. 29-SEC. 31
 TWP. 135-RG. 30-SEC. 1-2-11-12-13-14
 TWP. 136-RG. 30-SEC. 36

Field notes of the survey and establishment of iron corners in sections 5, 6, 7, 8 and 18, Township 135, N, Range 29 W, and section 31, Township 136 N range 29 W and sections 1, 2, 11, 12, 13 and 14, Township 135 N, Range 30 W, and section 36, Township 136 N, Range 30 W, all in Cass County Minnesota as surveyed by John W. Curro, County Surveyor of Cass County Minnesota, Assisted by E. B. Horst, Deputy County Surveyor.

Tuesday October 31st, 1916. Mr. E. B. Horst, working for Home Brook Township, T. 135, Rg. 30, prepares field notes and plots and with survey outfit leaves Walker at 9:28 AM. via N & I R.R. for Pequot. R.R. fare Walker to Pequot .85 cents.

Telephone call to Frank Mixell before leaving Walker 40 cents. Arrive at Pequot at 11:20 A.M. Dinner at Anderson's hotel 35¢. In afternoon Roy Anderson with his ford takes Horst and survey outfit to William Guida farm in the SE quarter of SE quarter, of sec. 1, T. 135, Rg. 30, where I board while surveying road bet secs 1 & 12, T. 135, Rg. 30. The purpose of which is to straighten out an old road upon a petition for same. Guida and Horst take chain and notes and go to cor of secs 1 & 12, T. 135, Rg. 30, being also the cor to secs 6 & 7, T. 135, Rg. 29, where U.S. notes call for a post and the following bearing trees:

Asp. 10 inch, S 78° W, 27 lbs = 17.82 feet: Asp. 10" N 36° 30' W, 31 lbs = 20.46 ft
 Asp. 9" N 11° 30' E, 37 lbs = 24.42 ft.

All appear to be gone as the road has been graded wide enough to take in all of the stumps or trees and we find no stumps, but we find a stone in the center of the road set by William H. Hallett a surveyor, stone set years ago. We walk N 1/2 a mile where everything has been cleared away at the 1/4 cor bet secs 1 & 6 where U.S. notes call for post and the following bearing trees:

Bur Oak 12 inch, S 31° W, 19 lbs -- Bur Oak 10 inch, S 86° E, 28 lbs.

And we go 1/2 a mile further N to the Township corner being the corner to sections 6, T. 135, Rg. 29, sec 31, T. 136, Rg. 29, sec. 1, T. 135, Rg. 30, and sec 36, T. 136, Rg. 30, where U.S. notes call for a post and the following bearing trees:

Asp. 14 inch, N 39° W, 38 lbs = 25.08 ft: Asp. 12", N 40° E, 38 lbs = 25.08 feet.
 Asp. 12 inch S, 40° E, 38 lbs = 25.08 ft: Asp. 10" S, 75° W, 30 lbs = 19.80 feet.

We find all the timber gone, we also find 2x4" stake in the center of the road and from this stake we chain the required course and distance in all directions called for in the notes and find the roots of all the old bearing trees except the NE tree, which point falls in the center of the road. This with the evidence of the settlers who claim this is the true corner I consider sufficient evidence to make this stake the true top. Corner. Quit for night.
 E. B. Horst.

Nov. 1, 1916. Wednesday. E. B. Horst transit and chain. Murley transit and 300 foot Chicago Steel tape. Will Guida and J. F. Meixell Chainmen: J. E. Goble and O. L. Thaine Oxemen. Walk to the corner of Secs 1, 2, 11 & 12, T. 135 - Rg. 30, where U. S. Notes call for a post and the following bearing trees:

B. Oak 14 inch, N 27° W, 44 lbs = 29.04 ft. B. Oak 12" N, 21° E, 29 lbs = 15.18 feet.

B. Oak 8 inch, S 38° W, 48 lbs = 31.68 ft. Wh. Bir. 18" S, 71° E, 37 lbs = 24.42 ft.

Rasmus Johnson shows us a stone he has buried to preserve the point where he knows the old U. S. section corner stood. I set transit over the stone from which I find the roots and the stumps of the old bearing trees called for in the notes. All check out perfect for course and distance with the stone, which I consider the true corner and from which I mark up new bearings as follows:

Pop. 5 inch, N 33° 50' E, 55.20 ft. in sec 1: Wh. pine stump N, 55° 05' W, 74.10 ft. in sec 2

Pop. 6 inch, S 51° 10' W, 51.70 ft. in sec 11: Birch 4 inch S 38° 50' E, 45.10 ft. in sec 12.

For the true corner to sections 1, 2, 11 & 12, T. 135, Rg. 30, from which we run E on Random bet secs 1 & 12, Magnetic Variation reads 8° 15' E: At 413.60 ft. E set hub: At 568.00 E enter swamp: At 710.00 E leave swamp: At 1312.10 set hub: At 1334.00 E wire fence: At 2328.80 E set hub: At 2574.00 E enter swamp: At 2634.00 E leave swamp: At 2700.00 E set hub and look for 1/4 corner bet secs 1 & 12, where U. S. notes call for a post and the following bearing trees:

Asp 3 inch N, 17° W, 28 lbs = 18.48 feet: Spruce 6 inch S, 28° E, 53 lbs = 34.98 feet

All are gone and we continue E: At 3098.60 E set hub, cross E and W wire fence, which bears SE and NW: At 4812.20 E set hub in South wheel track of old logging road grade. The SW angle of this old grade to our line is 18° 15'.

At 5293.30 ft. E set hub West of N & S road: At 5384.70 ft. E set hub E of N & S road which is on range line: At a point on our transit line 5294.00 feet East an old stone corner sets S 48.40 feet: The settlers here claim they have known this old stone to be the true corner for the last 22 years and that the old Govt. bearing trees were here 10 years ago. As a

check I decide to run N & S on the range line before using this corner. We walk a mile S to the corner of secs 7, 12, 13, 18, on the range line bet Townships 135 N. Rgs 29 & 30, W. where U. S. notes call for a post and the following bearing trees:

Bir 8 inch N 59° 30' E, 26 lbs = 17.16 ft.: Bir 10 inch, N 35° W, 6 lbs = 3.96 feet.

Bir 8 inch S, 33° W, 12 lbs = 7.92 ft.: Asp 10 inch, S 54° 30' E, 56 lbs = 36.96 feet.

I find the stumps of all four bearing trees, also an old square stake which checks fine for course and distance with the stumps and I drive an iron monument for the true sec cor being galvanized iron 2 1/2" x 4 ft. long capped on top and as all timber is dead small I bury four stones for bearings as follows: Stone NE 46.70 ft. in sec 7: Stone NW 46.70 ft. in sec 12.

Stone SW 46.70 feet in sec 13: Stone SE 46.70 feet in sec 18.

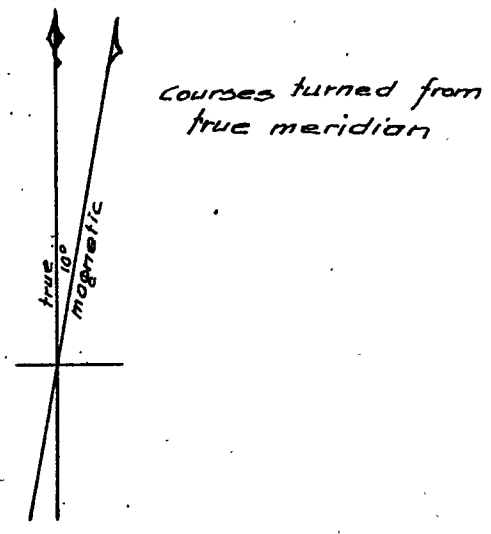
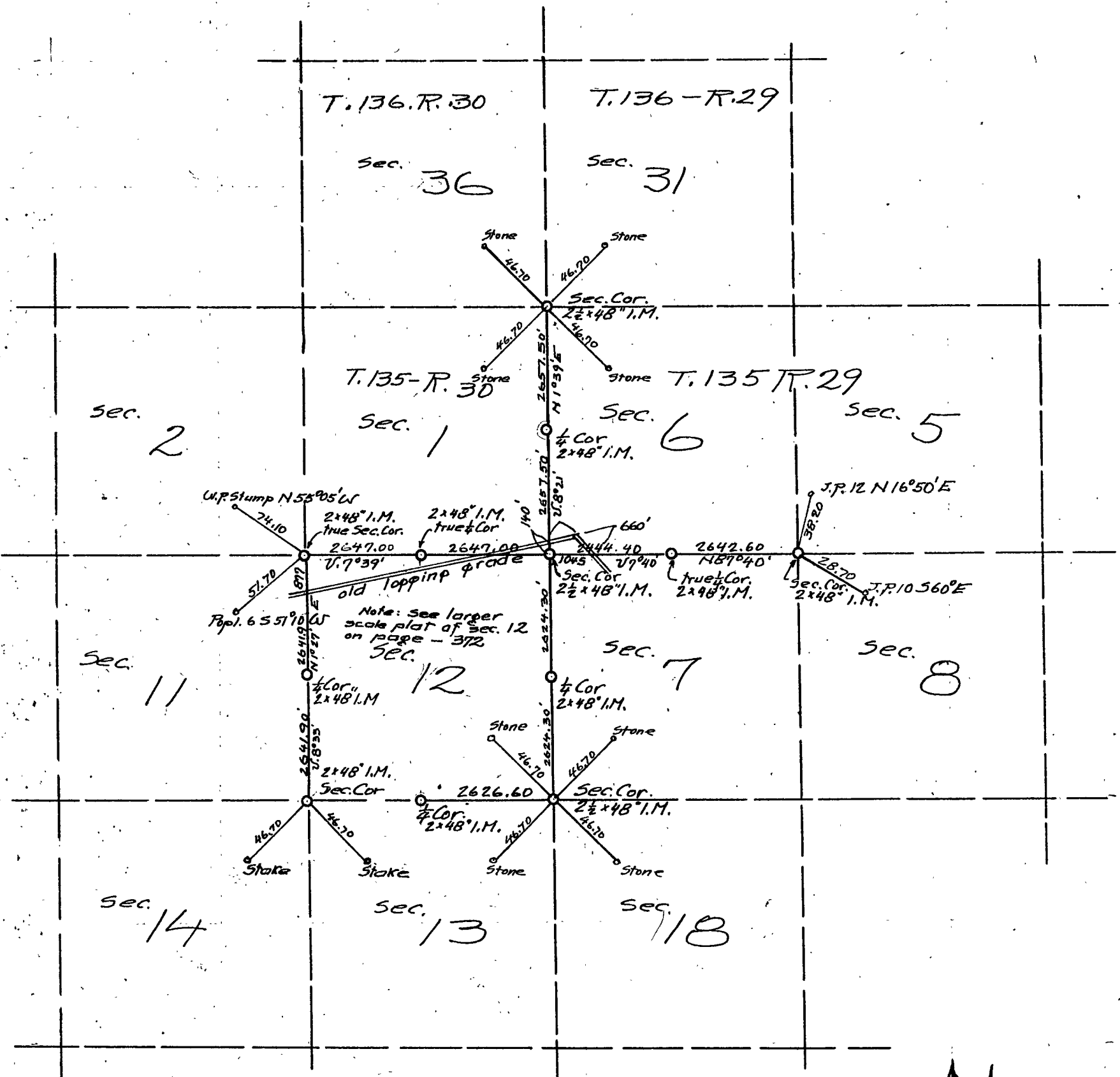
And from this true iron cor. we run N bet secs 7 & 12, Magnetic Var. reads 8° 10' E: At 994.40 ft. N set hub in bushed out road. Quit for night. E. B. Horst.

Nov. 2, 1916. Thursday. E. B. Horst transit and chain. Goble and Guida Chaining. O. L. Thaine Axe and flag. Continue N on range line bet secs 7 & 12: At 2649.60 ft. N set hub, from which a stone set by W. H. Hallett for the 1/4 cor sets

SURVEY-RECORD-315

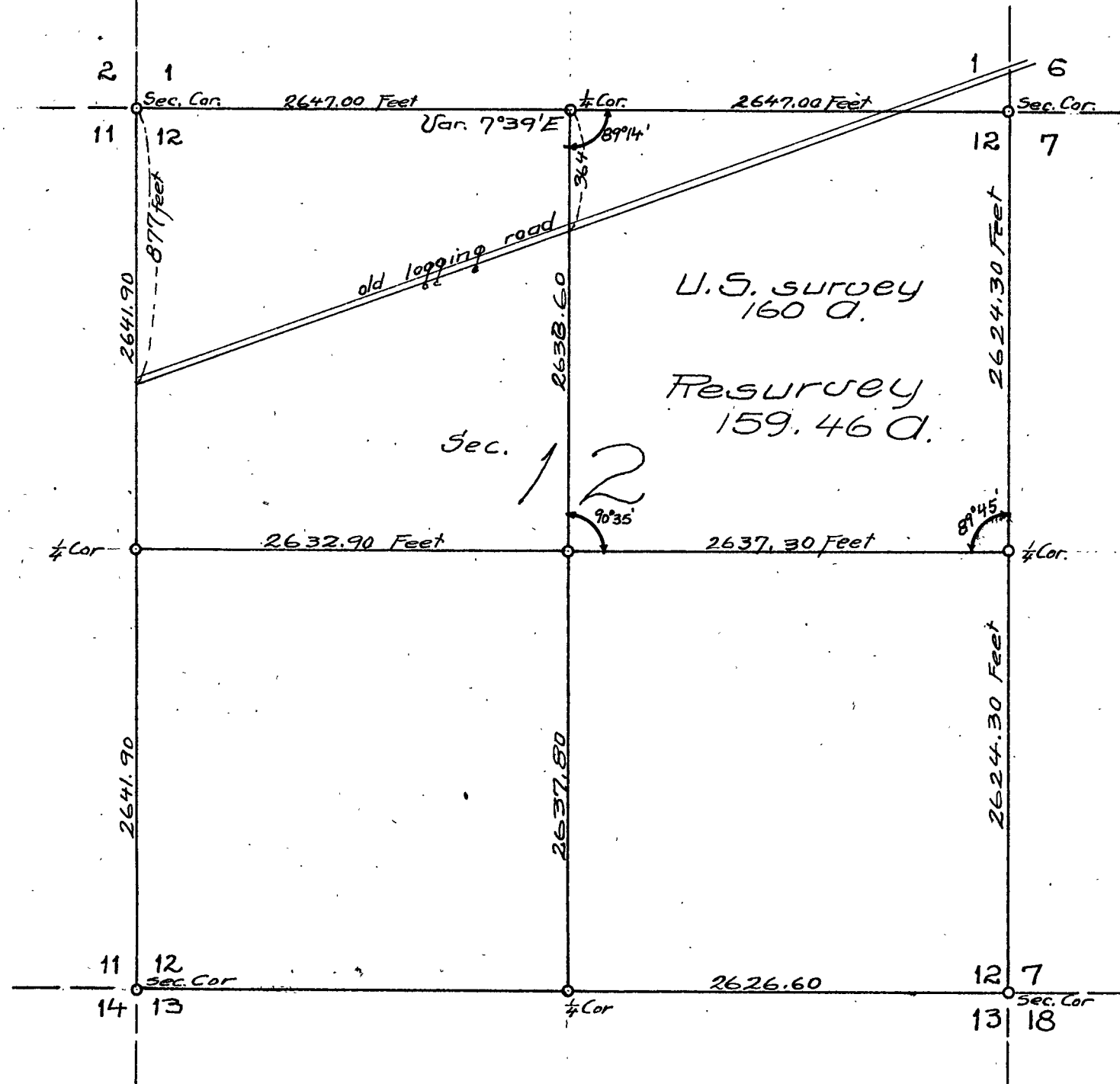
PLAT

TWP. 135 - RG. 29 - SEC. 5-6-7-8-18.
 TWP. 136 - RG. 29 - SEC. 31
 TWP. 135 - RG. 30 - SEC. 1-2-11-12-13-14
 TWP. 136 - RG. 30 - SEC. 36



SURVEY-RECORD-315

PLAT
TWP. 135-RG. 30-SEC. 12-



E 3.60 ft. At 3923.80 ft. N set hub; At 5297.00 ft. N set hub on random line E+W bet secs 1+12. The SW angle of my two random lines is $90^{\circ}00'$; At station 5248.60 ft. N a stone set by Hallett sets E 6.60 ft. This stone being the cor. recognized by the old settlers for the past 22 years as being the true cor to secs 1, 6, 7+12, T. 135, Rgs. 29+30. I accept this as the true corner from settlers evidence as it is in the center of a N+S graded wagon road established 18 years ago. This corner sets S of a logging road grade running E+W and is 140 ft. S of said grade. From this stone corner we run East on random bet secs 6+7, T. 135, Rg. 29, Magnetic Var reads $7^{\circ}45'E$, running thru a field. At 942 ft. E leave field; At 1045.20 ft. E set hub in center of graded E+W road. The NW angle to grade is 21° ; At 2230.70 ft. E set hub. At 2951.00 ft. E set hub; At 5089.00 ft. E set hub on S side of E+W road and in the center of a road running S to Port View School-house. At this point I find two standing J. Pine bearing trees and a stump of a 10 inch tree all marked with a timber scribe. But as I have no notes for secs 5, 6, 7, 8, T. 135, Rg. 29, I do not know if they are the U.S. bearing trees or not. I take courses of the trees from hub 5089 ft. E. Then we return to hub 1045.20 ft. E of range line and run the course of the old logging road grade: Righting W on random line I turn telescope 21° to the right and run NW 660 ft. to the point of curve; thence to the left 30° and run SW 915 ft. rough chain to where random line bet secs 1+12, crosses the logging road grade at station 4812.20 E. We then begin at the stone cor to secs 1, 6, 7+12. Goble and Guida chaining. I set large flag at this corner, then take transit N on high point and set it on line bet the SE and the NE cor of sec 1, T. 135, Rg. 30, and chain N. At 140 ft. N center of logging road grade. Quit for night. Nov. 3rd, 1916. Friday. Horst transit and chain (E. B. Horst).

and with the same crew continue N bet secs 1+6. Having set large sights at the SE and NE cor of sec 1, I set transit at station 2700 N, where I can see both sec cors, and work transit on line and chain N the balance of the mile along the true line, 5315 feet: At station 2657.50 ft. N we set a 2x48 inch iron monument being a boiler-tube for the true $\frac{1}{4}$ cor bet secs 1+6, T. 135, N Rgs. 29+30 W set in the graded road running N+S on the range line. We walk North along the road to the Top Corner where we pull up the 2x4" stake and put in its place 2 $\frac{1}{2}$ x48" iron monument, capped on top, from galvanized iron and set four stone bearings as follows:

Stone NE. 46.70 feet in sec 31; Stone NW 46.70 ft. in sec 36.

Stone SW 46.70 feet in sec 1; Stone SE 46.70 ft. in sec 6

For true Top Corner, T. 135+136, N Rgs 29+30 W. I receive U.S. notes from County Surveyor Curo and we go to the corner of secs, 5, 6, 7, 8, T. 135, Rg. 29, where U.S. notes call for a post and the following bearing trees.

Black pine 8 inch, $N 61^{\circ} W$, 359 lbs = 236.94 feet

Aspen 6 inch S, $45^{\circ}30' W$, 289 lbs = 190.74 feet.

We find the NW bearing tree broken off at the stump lying on the ground and bearing all the scribe marks plainly. We also find the stump of the poplar but burned off at the ground, but checks for course and

distance with the NW tree and from these two I set a 2x48" iron Monument being a boiler-tube at point for the true cor to secs 5, 6, 7, 8, T. 135, Rg. 29, with bearings as follows:

J. pine 12 inch N, 165° E, 38.20 ft. in sec 5: J. pine 12" N, 48° W, 07.10 ft. in sec 6.

J. pine stump S 27° 05' W, 33.20 ft in sec 7: J. pine 10" S, 60° E, 28.70 ft. in sec 8

At station 5087 ft. E on random line run yesterday bet secs 6 & 7, this cor sets S 0.05 of a foot. No correction of random line necessary. The U.S. Chain of this mile calls for 5082.00 ft. and is 5087.00 ft. my chain. The correction E = 0.0098 of a foot in each ft. east. At station 2444.40 ft. E we set a 2x48" iron Monument being a boiler-tube for the true 1/4 corner bet secs 6 & 7, T. 135, Rg. 29, then walk west to the stone corner bet secs 6, 7 & 12, T. 135, Rgs. 29 & 30, where in place of the stone we set a 2 1/2 x 48" galvanized capped iron Monument for the true section corner with bearings as follows:

Stone NE 46.70 ft. in sec 6 (buried): Stone NW 46.70 ft. in sec 1. (buried)

The correction for the mile of random bet secs 1 & 12 = 5294 divided by 48.40 = .00914 of a foot South for each foot East. Hub 4812.20 ft E goes S 44.00 ft:

Hub 3098.60 ft. E goes S 28.33 ft: The 1/4 corner at hub 2647.92 E goes S 24.20 ft.

where we set a 2x48" iron Monument being a boiler tube for the true 1/4 cor. bet secs 1 & 12, T. 135, Rg. 30, and continue West: At 2328.80 ft. E run S 21.29

feet to true line: At the request of Rastus Johnson I set a 1 1/4 x 36" gas pipe at station 1323.50 ft. E and 12.10 ft. S for the W 1/6 cor bet secs 1 & 12,

T. 135, Rg. 30. Hub 413.60 E goes S 3.78 ft: At the corner to sections 1, 2, 11 & 12, T. 135,

Rg. 30, I dig up the stone set by Mr. Johnson and put in its place a 2x48" iron Monument. We walk to the stone 1/4 corner set by Hallett bet secs 7 & 12, and

set in its place a 2x48" iron Monument for temp. 1/4 cor, which may not be correct.

Nov. 4, 1916. Saturday. E. B. Horst working for E. J. Wheeler, begins E. B. Horst.

the survey in sec 12, T. 135, Rg. 30, to locate the center of the section and the boundary lines of the NE quarter. Horst transit and chain. Hurley transit

and 300 foot steel tape. William Guida chain and axe: Clarence Wheeler

axe and flag; Ernest Tuttle shows about where the 1/4 post bet secs 12 & 13, T. 135, Rg. 30, used to stand and where U.S. notes call for a post and the following

bearing trees:

Oak 8 inch, N 22° E, 27 lbs = 17.82 feet: Oak 16 inch, S 50° E, 3 lbs = 1.98 feet.

I find an oak, scarred on SW side and after cutting to the bottom of the scar, I find old timber scribe marks, this being the old NE bearing tree.

I also find a large oak stump burned off at the ground which checks with the NE bearing tree but is 8.60 feet away instead of 1.98 feet called for in the

notes: I set a 2x48" iron Monument from the NE bearing tree for the true 1/4 corner bet secs 12 & 13, T. 135, Rg. 30, after chaining W from the SE cor of sec 12

to this point to make sure that this is the correct place and find the distance 2626.60 feet. I start a line N thru the center of sec 12 on 8° 18' Var:

At 419.80 ft N set hub: At 1038.50 ft. N set hub: At 2646.00 ft N cross wire fence: At 2650.00 N set hub: At 3143.50 ft. N set hub: At 4369.40 ft. N

set hub: At 4915.00 ft. N set hub in center of logging road being old R.R. grade: At 5271.40 ft N the 1/4 corner bet secs 1 & 12, T. 135, R. 30 sets W 44.40

ft. At 5296.00 ft. N intersect E & W random line, I read the angle of the N & S 1/4 random line and the random line on N side of section 12 and find

B

315-CONT.

the SW angle to read $89^{\circ}46'$ Quit for night. Horst at E. J. Wheeler for dinner and over night
E. B. Horst.

Nov. 5, 1916. Sunday. E. B. Horst transit, chain and axe. Clarence Wheeler axe, flag and chain. Hens Dibdahl, Axeman. We erect a pole at the temp. $\frac{1}{4}$ corner on E side of sec 12 and walk W along the wire fence about $\frac{1}{4}$ mile and set up transit on S side of fence, then backsight E to temp. $\frac{1}{4}$ corner. Transit telescope and set point of intersection hub E & W on the N & S random $\frac{1}{4}$ line, then Horst and Wheeler go back and chain W on the $\frac{1}{4}$ line. Dibdahl cut $\frac{1}{4}$ line W. At 1235.00 ft W enter drained tamarack swamp: At 1541 W leave tank swamp: At 1630.00 W set hub: At 2615.00 ft W set P.I. hub on N & S random line at a point 2643.70 ft. N. The NE angle of the random line is $89^{\circ}40'$. Continue West

At 3270.90 ft. W set hub: At 5280.00 ft. W set hub and look for the $\frac{1}{4}$ cor. bet secs 11 & 12, T. 135, Rg. 30, where U.S. notes call for a post and the following bearing trees:

Pop. 4 inch, S 51° W, 67 lbs = 44.22 ft; Alder 2 inch, S 4° E, 48 lbs = 31.68 ft. All appear to be gone and proceed to establish the $\frac{1}{4}$ corner by running the W boundary of sec 12. E. B. Horst

Nov. 6, 1916. Monday. Horst and same crew. Begin at the corner to sections 1, 2, 11 & 12, Twp. 135, Rg. 30, just set, over which I set the transit and sight E on random line, then turn SE angle $89^{\circ}33'$ and run random line S: At 801.40 ft. S set hub: At 877.00 S cross old grade: At 897 S enter field: At 1304.70 ft. S set hub and leave field: At 2388 ft. S enter open hay meadow: At 2656.00 ft. S intersect E & W random $\frac{1}{4}$ line at a point 5263.60 ft. W where the NE angle reads $90^{\circ}34'$. We look again for the $\frac{1}{4}$ corner (0 to 7 at 5) but find nothing and continue S: At 2850 ft. S leave hay meadow: At 3502.40 ft. S set hub: At 4200 S enter large swamp: At 4400 ft. S offset W 125 ft so as to chain around log. At 5274.70 ft. S set hub and offset back 125 ft. on true random line. We look for the bearing trees at the cor to secs 11, 12, 13 & 14, T. 135, Rg. 30, where U.S. notes call for a post and the following bearing trees:

- Blk. pine 14 inch, N 2° E, 700 lbs = 462.00 ft.
- Blk. pine 12 inch, N $0^{\circ}45'$ W, 685 lbs = 452.10 ft.
- Blk. pine 16 inch, S $1^{\circ}30'$ W, 725 lbs = 478.50 ft.
- Aspen 11 inch, S 1° E, 850 lbs = 561.00 ft.

We find the SW tree in sec 14, lying on the ground with blaze turned up and grown over with moss. We scrape off the moss and find old scribe marks and from this tree I set iron monument for true section cor, being a 2x48" boiler-flue set in W central part of a large log. At station 5283.80 ft. S the corner to secs 11, 12, 13 & 14, T. 135, Rg. 30, sets W 13.20 ft. I set two oak posts for bearings to this corner being

Post S 45° E, 46.70 ft. in sec 13. Post S 45° W, 46.70 ft. in sec 14.

Both being oak post 4x48". We then return $\frac{1}{2}$ mile N and set the $\frac{1}{4}$ cor bet secs 11 & 12, as follows:

At station 2641.70 ft. S we run W 6.60 ft and set the $\frac{1}{4}$ cor bet secs 11 & 12;

315-CONT.

Twp. 135, Rq. 30. We then walk to hub 4915 ft. N on N & S 1/4 random line from which the correction back equals 5271.40 divided by 44.70 and equals $.00842$ of a foot W for each foot N, so that hub 4915 ft. N goes W 41.40 ft.; Hub 4369.40 N goes W 36.80 feet. Hub 3143.50 N goes W 26.48 ft.; Hub 2650.00 ft. N goes W 22.32 ft. Quit for night. E. B. Horst.

Nov. 7, 1916. Tuesday. E. B. Horst transit and chain. Clarence Wheeler are flag and chain. After running E & W 1/4 line thru sec. 12, I find an old fence about 20 ft. S of the new fence, which was built from the present 1/4 corner on East side of sec. 12, and as I believe the 1/4 stone on the E. side of sec. 12, has been moved, I have Ole Sunde, E. Tuttle and E. J. Wheeler, come to the 1/4 cor. and from their evidence I find that the 1/4 corner stone has been moved N 25.30 feet from where Hallett first placed it, so I pull up the iron monument which I had placed at a point where I found the marked stone and set this same iron monument 25.30 ft. S and 0.30 of a foot West which makes it equi-distant from the NE and SE corners of sec. 12, and on a straight line bet said corners. I figure correction for the E and W random line thru center of sec. 12, as follows:

14.10 feet plus 25.30 ft into 5270.20 ft. equals $.007476$ feet S for each foot E thrus 14.10 feet at each hub. Hub 1630.00 ft. W goes S 13.11 ft.; Hub 2615.00 W goes S 5.75 feet over which I set transit on corrected hub 2615 W and sight W on true line and set a hub West of the true N & S 1/4 line. I then set transit on corrected hub at 2650.00 N and intersect the true E & W center line with the true N & S center line where I set a $2 \times 48''$ iron monument being a boiler-tube for the true center of sec. 12, T. 135, Rq. 30, which I mound up with dirt and set a 6 foot guard stake which concludes this survey. In afternoon Clarence Wheeler takes me and outfit to Pequot where I take train for Walker. R.R. fare 854
E. B. Horst.

Surveyed October 31, 1916 to Nov. 7, 1916.

Recorded 30 Jan 1917.

County Surveyor
Cass County, Minnesota

B

SURVEY-RECORD 316

TWP. 140-RG. 26-SEC. 10-11-12
TWP. 140-RG. 25-SEC. 8-12-13

Field notes of the survey of roads and the establishment of true corners and temporary corners, also old and new bearing trees in secs 8, 12 & 13, Township 140, Range 25 and secs 10, 11 & 12, Township 140, Range 26 as surveyed by John W. Curo, County Surveyor of Cass County Minnesota, assisted by Alois Nowak, whose field notes read as follows:

field notes of the continuation of the County Road survey as begun on Dec. 10, 1916, running on E & W 1/4 line thru sections 9, 8, 7, T. 140, Rg. 25, and continuing on E & W 1/4 line thru secs 12 & 11, T. 140, R. 26.

Jan. 17, 1917. Wednesday. A. Nowak with Hurley transit in perfect adjustment and 100 foot Chicago Steel tape leaves Walker at 6:15 P.M. via St. Northern R.R. Arrive in Cass Lake at about 7 o'clock P.M. supper and bed in Hotel Endion. Bus fare at Walker being auto with survey tools to St. Nor depot, 50 cents. R.R. fare Walker to Cass Lake 49 cents.

Jan 18, 1917. Thursday 1917. Breakfast at Hotel Endion. Pay \$1.50 Hotel & leave Cass Lake at 10:45 A.M. via Soo R.R. Dinner at Remer 35 cents. Arrive at Rhoul Lake at 12:40 P.M. R.R. fare \$1.11. I am told that J. F. Richards is out of town but is to arrive with the 2:45 train from Pasadena. I wait for him. We take team and drive to his place. Richards tells me about a mile of road they want me to run for them. It is along the 5th Principal Meridian. From the NW corner of Twp. 50 N, Rg. 27 W to NW cor sec 33, T. 51, Rg. 27, suppose to be on the E boundary of secs 12 & 13, T. 140, Rg. 25. As I have only two men to help me I decide to run this mile first before continuing the County Road. Board with Richards. A. Nowak.

Jan. 19, 1917. Friday. Abe Master chain and flag. Howard Parker axeman, Alois Nowak transit and chain. We walk to the NW cor of sec 4, T. 50, Rg. 27, suppose to be the E line of sec 13, T. 140, Rg. 25 W, 5th P.M. On line bet Cass and Aitkin County. We find a 4 ft post squared, set as I am told by Martin Watson. There is a 4 rod road cut out running S from this post. I set over post, backsight S on center of road. Magnetic Var reads 10°30' E. My Jewett plat shows the range line to run on 8° E. There is a distinct crook noticeable in the road run by Watson. I set the instrument on 8° Var and run a random line N up hill using double centers. At 197.67 ft. N drive tack in log; At 220 down hill; At 300 enter swamp; At 420 ft N leave swamp; enter high ridge; At 1003.80 tack in log; At 1702 tack in log; At 2067 tack in log; At 2552.50 tack in log; At 2600 down steep hill side; @ 2620 foot of hill; At 2896.70 tack in log; @ 3000 ft. N enter thick spruce and lamp; At 3199.70 tack in log; At 3602.20 tack in log; At 4099.40 tack in log. Quit for Night. A. Nowak.

Jan 20, 1917. Saturday. Same crew continue random line North;

316-CONT.

At 4365 ft. N center of graded road, coming from the west, which extends 10 paces E and then turns N: At 4384 tack in log: At 5067 tack in log: At 5560 ft. N the cor bet secs 33 & 28, T. 54, Range 27 on Range line sets E 18 feet. We determined this cor by intersecting the center line of the road running E into Shovel Lake, and the center of the road running S to $\frac{1}{4}$ line of sec 12, T. 140, Rq. 25. To make sure that my measurements of the mile 5560 ft. is correct I re-chain the whole distance and find the same all right. By re-chaining I start first from NW corner of sec 33, the point 5280 corresponding to 280 ft. N of my first chaining falls on a ridge where I find many blazed trees without timber scribble marks. In P.M. we correct random line and set road centers. We chain E 0.003237 of a foot for every foot North: Tack 197.67 N goes E 0.64 ft: Tack 1003.80 N goes E 3.25 feet: Tack 1702.00 ft. N goes E 5.51 feet: Tack 2007.00 N goes E 6.69 ft: Tack 2552.00 N goes E 8.26 feet: Tack 2896.70 N goes E 9.38 ft: Tack 3199.70 N goes E 10.36 ft: Tack 3602.20 N goes E 11.66 ft: Tack 4099.20 N goes E 13.27 feet: Tack 4384.00 N goes E 14.19 feet: Tack 5067.00 N goes E 16.40 ft: Tack 5560.00 N goes E 18.00 ft. Quit for night. A. Nowak
Jan 21, 1917. Sunday. It is storming to-day, making work impossible. I stay at Richards. A. Nowak.

Jan 22, 1917. Monday. Abe Master has promised to come with team and take me and Howard Parker to sec 8, T. 140, Rq. 25, where I intend to finish the correction of the $\frac{1}{4}$ line, begun on Dec. 15, 1916. Abe did not show up. Howard Parker had come to Richards place and waited until 10: A.M. He gets $\frac{1}{2}$ day. I am trying to get a crew all day but am unable to do so, on account of all the men working in the woods, and making better wages than I can offer them. Corbin Young promises to help. A. Nowak.

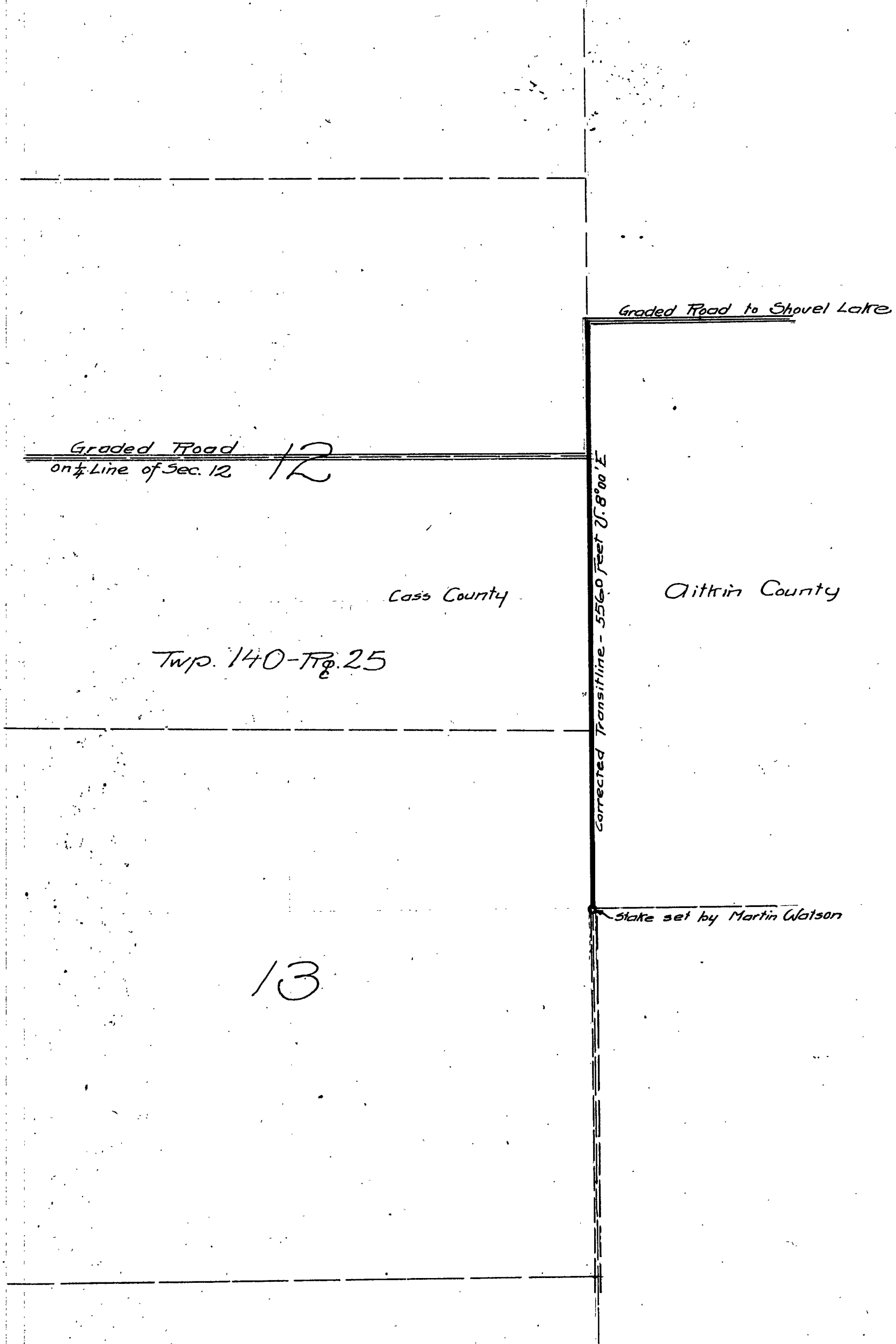
Jan. 23, 1917. Tuesday. Abe Master axeman. Howard Parker axeman. Corbin Youngs chain and flag. Alois Nowak transit and chain. We meet at Richards place at 7:30 A.M., where Abe Master with his team takes us and the survey rig to the abandoned homestead of Mr. Dooley on the $\frac{5}{2}$ of sec 12, T. 140, Rq. 26, as the snow is from 16 to 20 inches high and he had to break the road, we did not arrive there until after 11 o'clock A.M. Have dinner in field, then we walk to the $\frac{1}{4}$ corner bet secs 7, T. 140, Rq. 25, and sec 12, T. 140, Rq. 26, begin work at 12 noon. We start a random line W thru sec 12, T. 140, Rq. 26, on a Var. of $7^{\circ}30'$ E, Magnetic: Land is level brush. At 516.38 ft. W drive tack in log: At 992.85 ft. W drive tack in log: At 1504.00 ft. W drive tack in log: At 1750 ft. W enter swamp: At 1900 ft. W leave swamp: At 1998.25 ft. W drive tack in log: At 2362.60 W tack in log: At 2580 W cross wagon road: At 2850 W enter swamp, tank and spruce: At 2876.60 ft W drive tack in log: At 3500 W leave swamp: At 3611.60 ft W drive tack in log: We set a wood stake every 100 ft marked with the number of feet West. Transit line is run by double center hub: Quit at 4 P.M. Arrive at Richards at 7 P.M. A. Nowak.

Jan 24, 1917. Wednesday. Same crew. Abe Master with team drives us to Meeshaw's place, in the NW quarter of the SW quarter of sec 12, T. 140, Rq. 26, begin at 11: A.M. Continue random line West. At 3999.80 ft. W set hub with tack in hay meadow: At 4594.60 ft. W tack in log: At 5008 ft. W cross wood fence: At 5300 ft. W set hub and tack. From hub

SURVEY-RECORD-316

B

PLAT
TWP. 140-RG. 25-SEC. 12-13.



Graded Road
on 1/4 Line of Sec. 12

Graded Road to Shovel Lake

Cass County

Aitkin County

Twp. 140-Rg. 25

Corrected Transitline - 5560 feet 21.8'00 E

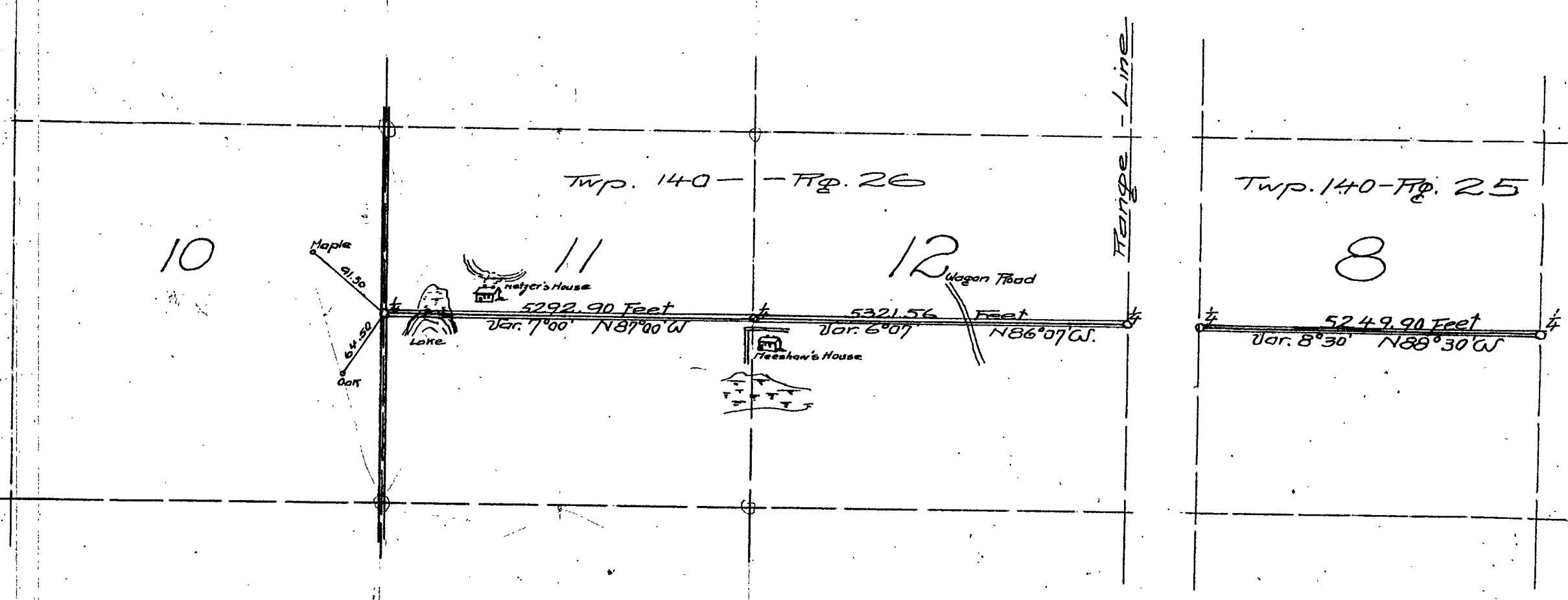
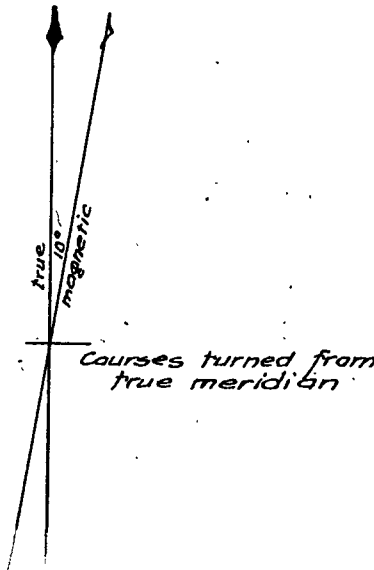
Stake set by Martin Watson

13

SURVEY-RECORD-316

PLAT

TWP. 140-RG. 25-SEC. 8.
TWP. 140-RG. 26-SEC. 10-11-12.



5300 ft W the $\frac{1}{4}$ post bet secs 12 & 11, T. 140, Rg. 26, sets $N 8^{\circ} 48' W$, 130.35 feet. This post is a 4" squared up pine post set as I am told by Surveyor John Green of Remed. The Govt notes at this $\frac{1}{4}$ cor bet secs 11 & 12, T. 140, Rg. 26, call for:

Asp. 4 inch, $N 86^{\circ} E$, 118 lbs = 77.88 ft.; Bir. 3 inch, $S 10^{\circ} W$, 142 lbs = 93.72 ft. The Aspen is gone. I find an old decayed stump which checks exactly for course and fairly well for measurement for the Birch bearing tree. The new bearing trees marked by green are as follows:

Nor. pine 12 inch $N, 29^{\circ} 30' W$, 30.90 feet; Pop. 12 inch $N, 11^{\circ} E$, 14.18 feet.

W. pine 14 inch, $N 74^{\circ} 30' E$, 29.22 ft. Courses turn from $8^{\circ} 00' E$.

Beginning at the $\frac{1}{4}$ post bet secs 11 & 12, T. 140, Rg. 26, I run a random line West thru sec 11, on $7^{\circ} 00' Var. E$. Land is level: At 222.20 ft. W drive tack in log; At 602.12 ft. W tack in log; At 1113.10 ft. W tack in log; At 1900 ft. W cross wagon road; At 1997.90 ft. W tack in log in clearing. Quit for night. A. Nowak.

Jan. 25, 1917. Thursday. Same crew. Abe Master drives to Metzger's place in N half of sec 11, T. 140, Rg. 26, begin work at 11 A.M., and continue random line West: At 2701 ft. W drive tack in log; a wire fence is S 13 paces and bears E & W; At 3597.90 ft. W tack in log; At 3822 ft. W tack in log; At 3900 ft. W set pin on high bank of small lake. At 3920 enter lake; At 4400 leave lake; At 4505.30 tack in log; At 4950 tack in log; At 5292.50 ft. W intersect center of State Highway No. 83. George A. Ralph's field notes on $\frac{1}{4}$ corner bet secs 10 & 11, 140-26, calls for new B.T.S. as follows:

Oak NE 64.50 ft;

Maple SE 91.50 ft;

There must be a mistake in them for on the E side of the road no trees whatever. The land is swampy. However on the W side of the road in sec 10, I find both bearing trees, from which I establish the $\frac{1}{4}$ corner by flat measurement. As evidence that I have the exact corner I find that the point I establish is in the center of an old cut out line which Metzger cut. Beginning as he says at a stake set by the State Engineer. At 5292.90 ft. W on my random line the $\frac{1}{4}$ corner bet secs 10 & 11, T. 140, Rg. 26 sets $N 49.80$ feet. The bearing trees to the $\frac{1}{4}$ corner stand as follows:

Oak SW 64.50 feet in sec 10; Maple NW 91.50 feet in sec 10.

Had dinner at Metzger's. Quit for night. A. Nowak.

Jan. 26, 1917. Friday. Same crew. Abe Master drives us to Metzger's place. We correct the random line thru sec 11, T. 140, Rg. 26, and set road centers. At 5292.90 W the $\frac{1}{4}$ corner bet secs 10 & 11 sets $N 49.80$ feet: We set North 0.009408 of a foot for each foot West: 4950 ft. W goes $N 46.53$ feet where we set road center stake and take bearings as follows:

Nor. pine 12 inch, NW 52.15 feet; Nor. pine 14 inch S, 47.60 feet.

4505.30 ft. W goes $N 42.35$ feet, where we set stake with bearing as follows:

Tampk 5 inch SW 60.83 feet; Tampk 7 inch NW, 71.10 feet.

3822 W goes $N 35.93$ feet with bearings as follows;

SW cor of Metzger's house bears 85.15 ft. distant: The SE cor hrs. due N, 71.65 feet distant.

Hub 3597.90 ft. W goes N 33.82 feet with bearings being:
 Oak 18 inch, North 85.50 feet: Oak 12 inch SE 56.90 feet.
 Hub 2701 ft. W goes N 24.49 feet with bearings being:
 W. pine 12 inch SW 56.40 feet: J. Pine 9 inch NW 30.80 feet.
 Hub 1997.90 ft. W goes N 18.78 feet. Hub 1113.10 ft. W goes N 10.46 feet. Hub.
 602.12 ft W goes N 5.66 feet: Hub 222.20 ft. W goes N 2.09 feet: While
 correcting this line we chopped a hole in the ice of the lake just W. of
 Metzger's house and find the water to be 4 ft deep and Mud bottom.
 Lake could easily be drained into big Rice Lake. We then correct
 the random line thru sec 12, T.140, Rq. 26. At 5319.93 ft. W the $\frac{1}{4}$ cor bet
 secs 11 & 12, T.140, Rq. 26, sets N 128.80 ft. We set N 0.0242 ft. for each
 foot West. 4594.60 ft. W goes N 101.20 feet: 3999.80 W goes N 96.80 feet.
 3611.60 W goes N 87.41 feet: 2876.60 W goes N 69.92 feet: 2362.60 W goes N
 57.18 feet: 1998.25 W goes N 48.35 ft.: Hub 1504 ft. W goes N 36.40 ft. 99285
 W goes N 24.03 feet: 516.38 W goes N 12.49 feet. Quit for night. A. Nowak

Jan 27, 1917. Saturday. Same crew. Abe Master drives us to Master's
 old homestead on the N half of sec 8, T.140, Rq. 25, where we continue
 our old transit line E on random thru center of sec 8, setting
 double centers without chaining. Hubs and pickets. This line
 was begun Dec. 15, 1916, we miss the $\frac{1}{4}$ cor bet secs 8 & 9, T.140, Rq. 25,
 N 16.15 ft. distant. This $\frac{1}{4}$ cor sets S 16.15 ft. Quit for night. A. Nowak.

Jan. 28, 1917. Sunday. Howard Parker and A. Nowak working. We walk
 to the $\frac{1}{4}$ cor bet secs 8 & 9, T.140, Rq. 25, chain W and correct the hubs and
 pickets, setting road centers. Figuring from the random line thru
 sec 8, run on Dec. 13, 1916, the distance bet the $\frac{1}{4}$ cor on W side of sec 8,
 to the $\frac{1}{4}$ cor on E side of sec. 8 equals 5251.51 ft. Then at 5251.51 ft. E the
 $\frac{1}{4}$ corner bet secs 8 & 9, sets S 16.50 ft. The correction = 0.003075 of a foot S for
 every foot east. As I am chaining West I multiply the correction for 1 foot
 with the number of feet chained West and deduct the product from 16.15.
 Hub 103.40 W goes S 15.83 feet. Hub 545.35 W goes S 14.48 ft. Hub 834.90 W goes S
 13.58 feet: Hub 1247 W goes S 12.32 ft.: Hub 1556.50 W goes S 11.37 ft.: Hub 1792.50
 W goes S 10.64 ft.: Hub 2051.50 W goes S 9.84 ft.: Hub 2222.90 W goes S 9.31 ft.:
 Hub 2561.40 W goes S 8.28 feet: Hub 2922.35 W goes S 7.16 ft.: Hub 3197 W goes S
 6.32 ft. Hub 3577.50 W goes S 5.15 ft. Hub 3936.40 W goes S 4.05 ft.: Hub 4352
 W goes S 2.77 ft.: Hub 4549.55 W goes S 2.15 ft.: Hub 4982 W goes S 0.84 ft.: At
 5249.90 we strike the center of the $\frac{1}{4}$ corner post bet secs 7 & 8, T.140, Rq. 25.
 Quit for night. A. Nowak.

NOTE: In making the survey of proposed road along the easterly side
 of secs 12 & 13, T.140, Rq. 25, I simply run a transit line from an old
 stake set by Martin Watson, as the NW corner of T. 50 N, Rq. 27 W, N to
 a point in the graded road running East. I do not consider this line
 as the true East line of secs 12 & 13, T.140, Rq. 25, and as stated to
 Mr. Richards who employed me for this survey. A. Nowak.

Jan. 29, 1917. Monday. In A.M. I work on field notes and in P.M.
 Mr. Richards drives me to depot in Shovel Lake where I take the
 Soo train for Bemidji at 2:40 P.M. R.R. fare \$1.41. Supper at

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Hotel Markham. Leave Bemidji at 11:25 P.M. R.R. fare 69 cents. A. Nowak.
Jan 30, 1917. Tuesday. Arrive in Walker at 1 A.M. Stay at Hotel Chase.
Work all day on field notes concerning the finishing of this survey.
A. Nowak.

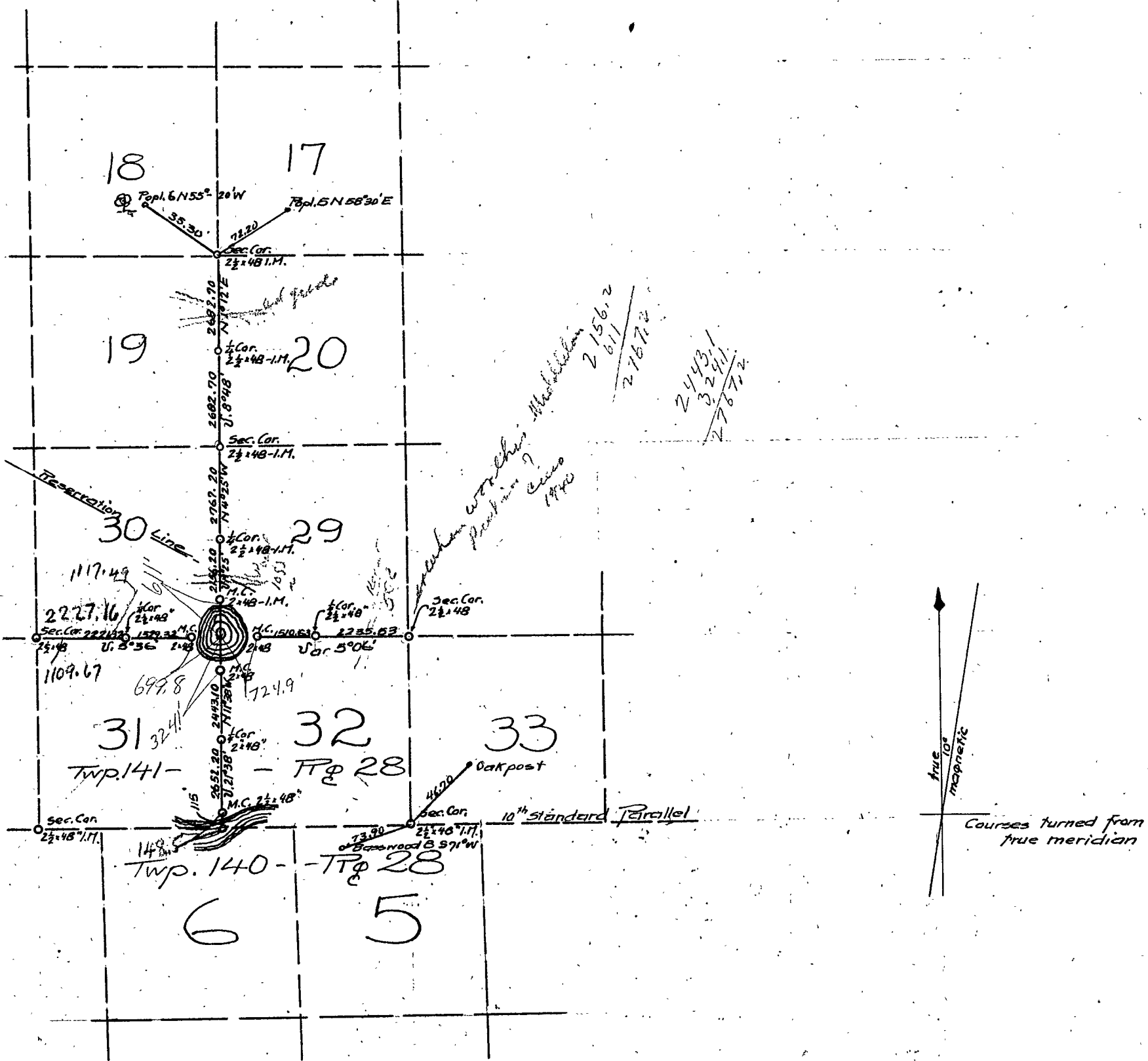
Surveyed Jan. 17 to 30, 1917.

Recorded Jan 31 1917.

County Surveyor
Cass County, Minnesota.

SURVEY-RECORD-317

PLAT
TWP. 140-RG. 28-SEC. 5-6
TWP. 141-RG. 28-SEC. 17-18-19-20-29-30-31-32-33



2443.14
3241
277.2
279.4
2.44

2632.0
1.5
2767.2

4227
1.72
537
8423
21.11

11026
5026
8049
81011

14025
5006
2014
98072

1425
5036
8111
11038
421
172013
7047

25036
16321
7328

14025

10004
73036
17790

4025
18537
89031
98003

2156.2
611
2767.2
2143.1
3241
2767.2

14025
4225
70

21038

SURVEY-RECORD-317

TOWNSHIP-140-RG.28-SEC.5-6
TWP.141-RG.28-SEC.17-18-19-20-29-30-31
32-33

Field notes of the survey of a County Road running North and South between sections 19 & 20 and bet secs 29 & 30, T.141, N Range 28 W, and the finding of old Goit bearing trees and establishment of new corners of sections 5 & 6, Township 140, Rg. 28, and sections 17, 18, 19, 20, 29, 30, 31, 32 & 33, Twp 141, Rg. 28, as surveyed by E. B. Horst, Deputy County Surveyor.

Nov. 24, 1916. E. B. Horst with field notes, plats and survey outfit leaves Walker for Hackensack at 9:28 A.M. via M & I. R.R. fare 33 cents. Arrive at Hackensack and as I am unable to get out of town before noon, I get dinner at Garrity's hotel - 35 cents. I have Chet Fleischer. Make a new flag pole \$1.25. In P.M. Charles Wood with Ford car takes Horst and survey outfit and six iron monuments from Hackensack to George C. Williams farm, in sec 30, T.141, Rg. 28, where I make arrangements to board while in survey of County Road. The County Road is to begin at the Old Rail Road grade between secs 19 & 20, T.141, Rg. 28 and run S on sec line to the cor of secs, 29, 30, 31 & 32, T.141, Rg. 28, connecting with the E & W Longville-Hackensack County Road. We arrive at George C. Williams at 3:30 P.M. I take U.S. notes and compass and walk to the cor of secs 28, 29, 32 & 33, T.141, Rg. 28, where I find an iron monument previously established for the true sec cor. I return to George Williams for supper and over night. E. B. Horst.

28-29-32-33
141-28

Nov. 25, 1916. Horst transit and chain. Harry Williams flag-man. Frank Williams and Jonas Buchhite as axemen, walk to the iron monument at the cor of secs 28, 29, 32 & 33, T.141, Rg. 28, and start a line W from this cor which was established by Surveyor James D. Middleton. Var 8°45'E. In P.M., Horst, Frank Williams and Jonas Buchhite continue W on line. We cut about 3000 feet but do not chain any to-day. Land very rolling. E. Horst.

28-29-32-33

v 8°45'

Nov. 26, 1916. Sunday. Horst at George Williams all day.

Nov. 27, 1916. Monday. E. B. Horst transit and chain. Frank Williams flag and ax. Jonas Buchhite axeman. Continue transit line W on random bet secs 29 & 32, and, secs 30 & 31, T.141, Rg. 28. Horst and Williams chain W from iron monument being 2 1/2 x 48" capped galvanized iron set by James D. Middleton, for the corner to sections 28, 29, 32 & 33, T.141, Rg. 28, chain west: At 102.50 ft. W set hub: At 502 ft. W cross new Township Road, being the Hackensack-Longville County Road. At 1342 enter swamp: At 1518 ft. W leave swamp: At 1589.20 ft W set hub and tack: At 2047.59 ft. W we look for the 44 cor bet secs 29 & 32, T.141, Rg. 28, where U.S. notes call for post and the following bearing trees:

v 8°45'
West Bet
29-32

502W
new Road

1/4

N. pine 10"N, 37°E, 36 lbs = 23.76 ft: Bir 7"S 10°W, 51 lbs = 33.66 feet
We find nothing but I think we are too far South. All timber

badly burnt, Continue West: At 3638.70 ft. W set hub: Var changes to 9°30'E: At 4396.80 ft. W set hub: West of lake. Var. Now reads 10°E. At 4441 ft W enter lake: At 5222 set spike in ice: At 5400 leave lake and enter tank swamp: At 5509 ft. W leave swamp: At 5670.40 ft. W set hub: Var. reads 10°E: At 6069 ft. W enter swamp: At 6600 ft. W, quit chaining for to-day and cut line about 800 ft. further W. As the U.S. notes do not call for a post or bearing tree to the cor of secs 29, 30, 31 + 32, T. 141, Rq. 28, which falls in the lake, and as we find nothing but a blazed line tree S of the lake we proceed to establish this corner by proportionate measurement in four directions. Quit for night. E.B. Horst.

Nov. 28, 1916. Tuesday. E.B. Horst transit and chain. George C. Williams chain and flag. Jonas Buchhite axeman. Continue W bet secs 30 + 31: At 6886 ft. W leave swamp: At 7100 ft. W set hub: At 7747.40 ft. W set hub: Var. reads 9°E. At 7835 W enter swamp: At 7935 enter lake: At 8785 leave lake enter swamp: At 8860 leave swamp: At 8882.80 ft. W set hub on range line. I set transit over last hub and backsight E on random line and turn NE angle 93°25'; to George W Miller's survey hub on true range line and run North to the NW corner of sec 31, a distance of 649 feet. At Station 8921.50 ft. W the West corner of secs 30 + 31, sets North 647.84 ft. In P.M. we all look for the 1/4 corner bet secs 30 + 31, where U.S. notes call for a post and the following bearing trees:

W. pine 17 inch S, 40°E, 47 lbs = 31.02 ft.

N. pine 14 inch N, 12°E, 40 lbs = 26.40 ft.

We are unable to find any evidence of this 1/4 corner and give it up. To obtain a starting point for a North and South line bet secs 29 + 30, I figure a correction for a straight line bet the NE cor of sec 32, and NW cor of sec 31, the U.S. chain for this two miles is 10565.94 feet, while my chain = only 8921.50 feet. OK. One foot U.S. Chain = .844364 of a foot my chain. The correction is 8921.50 feet divided by 647.84 ft. = .072616 of a foot N for each foot West: At Station 4471.06 ft. W I set a spike 324.67 ft. N on ice in lake being on a straight line bet the NE cor of sec 32 and the NW cor of sec 31, T. 141, Rq. 28. Quit for night. E.B. Horst.

Nov. 29, 1916. Wednesday. E.B. Horst transit and chain. George Williams flagman. Frank Williams and Jonas Buchhite axemen: We begin at hub on ice at station 4471.06 feet W and 324.67 feet N of random line. I turn SW angle being 106°17' and run line S toward SE cor of sec 31, Var. about 20°53'E. We cut about 3/4 of a mile and quit for night. E.B. Horst.

Nov. 30, 1916. Thursday. Thanksgiving Day. Nobody works. E.B. Horst.

Dec. 1, 1916. Friday. E.B. Horst transit and chain. George Williams chain and axe. Jonas Buchhite flag and axe. Frank Williams axe. From Hub set on straight line by proportionate chain, being the temporary corner to secs 29, 30, 31 + 32 set in ice, we run South: At 300 ft. S leave lake. At 409 set hub: At 1681.90 ft. S set hub: At 2553.90 ft. S set hub: At 2979.80 ft. S set hub: At 3237.40 ft. S set hub: At 3668.50 ft. S set hub: At 3818 enter Woman lake. At 4713 ft. S leave Woman Lake: At 4850 S set hub in timber. At 5367.40 ft. S

19-30-31-32
141-28

West Bet
30-31

8882.80

v 649

1/4 Post
30-31
141-28

Correction
0726156

4471.06

324.67

B

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set hub N of lake from which I take bearings:

Pop. 5 inch SE, 1.60 feet; Pop. 8 inch N, 8.10 feet.

I take the field notes of Deputy County Surveyor Harry S. Todd who established the $\frac{1}{4}$ corner on the S side of sec 32, T. 141, Rg. 28, being the N boundary of sec 5, T. 140, Rg. 28.

At station 23760.00 ft. W on Todd's random line bet T. 140, and T. 141, Rg. 28, from which I chain West to station 26316.45 W on Todd's random line and from this point I chain N at a 90° angle 531.56 ft., where I cut a hole in the ice and set a stake, being a Cedar post for the S corner of sections 31 & 32, T. 141, Rg. 28, being the N boundary of sec 6, T. 140, Rg. 28. I then set transit on N & S random line bet secs 31 & 32 and

5515 Continue the line S. At 5395 enter swamp: At 5492 ft. S enter Woman Lake: At 5515.00 ft. S the SE corner to sec 31, just established sets W 0.30 of a foot. We then take the tools back to station 00 being the temporary corner to secs 29, 30, 31 & 32, T. 141, Rg. 28, set on ice.

E. B. Horst.

Dec. 2, 1916. Saturday. E. B. Horst and same crew begin at 7:00 begin temporary sec cor on ice and run N bet secs 29 & 30, T. 141, Rg. 28: At 601 ft. N leave lake enter swamp: At 887 ft. N leave swamp: enter high land: At 966.50 ft. N set hub: At 1053 ft. N cross Hackensack Longville County Road. At 1898 enter field: At 2050 N leave field: At 2106.90 ft. N set hub on high hill: At 2700 ft. N set hub and look for the $\frac{1}{4}$ cor bet secs 29 & 30, where U. S. notes call for a post and:

Wh. pine 18 inch N, 80° E, 27 lbs = 17.82 feet:

We find nothing and continue N: At 3089.00 set hub: At 3660 enter swamp: At 3862 leave same: At 4374.10 ft. N set hub: At 4977.50 N set hub and look for the cor to secs 19, 20, 29 & 30, T. 141, Rg. 28, where U. S. notes call for post and the following bearing trees:

W. pine 20 inch S, 18° W, 24 lbs = 15.84 feet.

W. pine 30 inch N, 44° W, 28 lbs = 18.48 feet.

W. pine 28 inch, N 46° E, 72 lbs = 47.52 feet.

W. pine 20 inch, S 42° E, 33 lbs = 21.78 feet.

We find the NW, the SW and the SE stumps of the old bearing trees. The SW and SE stumps are plainly marked. We cannot find the NE bearing tree stump. One stump is 10 feet too far away and one is 7 feet too close to check, as the NE bearing tree and neither check for course.

5416 So I set the corner from the other three stumps by measurement. We return to hub 4977.50 N and continue our line N to station 5448.50 N and set hub over which I set transit and right S on random line then turn from S to W an angle of $101^\circ 12'$. Distance to corner is 504.00 feet. By latitude and departure at station 5553.80 ft. N the cor to secs 19, 20, 29 & 30 sets W 531.68 feet. Quit for night. E. B. Horst.

Dec. 3, 1916. Sunday. Horst at George Williams all day. Fine day, no snow on ground, up to this date. very mild weather. (reference). E. B. Horst.

Dec. 4, 1916. Monday. I hire George C. Williams to take me to Walker with his car to see J. W. Curo in regard to establishing the corner

to secs. 29, 30, 31 & 32, T. 141, R. 28, also to get Todd's notes of his survey of Town line bet T. 140 & 141 N. R. 28 W. We return at 6:30 P.M.

Dec. 5, 1916. Tuesday. E. B. Horst transit and chain, George C. Williams axe, flag and chain, F. Williams and J. Buchheit axemen. At the corner to secs 19, 20, 29 & 30, T. 141, R. 28, established by me I set random line North bet secs 19 & 20, var. $10^{\circ}30' E$: At 747.50 ft. N set hub: At 1098 N set hub: At 1623.50 N set hub: At 1780 ft. N enter swamp: At 2020 N leave swamp: At 2249.50 ft. N set hub: At 2534 enter swamp: At 2733 N leave swamp and look for $\frac{1}{4}$ cor. bet secs 19 & 20, which U.S. notes call for post and the following bearing trees:

W. pine 18 inch, $N 28^{\circ} E$, 118 lbs = 77.88 feet

I am unable to find any sign of corner or bearings and we continue our line about 600 feet N and quit for night. E. B. Horst

North Dec. 6, 1916. Wednesday. Horst and same crew, continue N bet 19 & 20 At 3586 ft. N enter swamp: At 3977 leave same: At 3992 ft. N center of old R. R. grade. The SE angle is $112^{\circ}55'$: At 4108 ft. N set hub: At 5358.10 feet N set hub and look for cor. to secs 17, 18, 19 & 20, T. 141, R. 28, where U.S. notes call for post and:

Pop. 4 inch, $N 10^{\circ} E$, 39 lbs = 25.74 feet: pop. 4 inch $N 38^{\circ} W$, 15 lbs = 9.90 feet

W. line 30 inch $S 25^{\circ} W$, 10.2 lbs = 67.32 feet: pop. 4 inch, $S 25^{\circ} E$, 40 lbs = 26.40 feet.

A Mr. Toland shows us where an old stake stood several years ago, it is gone now and this information served as a delusion more than a help.

After running to an intersection a couple of blazed tree lines, we find a piece of the stump of the old NE bearing tree being a part of the old scribe marks and we also find a part of the SE poplar bearing tree bearing some marks.

The old W. pine bearing tree lying on the ground bears no marks and we find it has decayed to a depth of 8 inches. These three trees check good with the field notes and from them I set a $2\frac{1}{2} \times 48$ " galvanized iron

monument, having a cap on top for the true corner to secs 17, 18, 19, 20, T. 141, R. 28, from which I mark new bearings as follows:

pop. 5 inch, $N 58^{\circ}30' E$, 72.20 feet in sec 17.

pop. 6 inch, $N 55^{\circ}20' W$, 35.30 feet in sec 18.

pop. 4 inch $S 27^{\circ}00' W$, 94.70 feet in sec 19.

Pop. 8 inch $S 36^{\circ}00' E$ 80.50 feet in sec 20.

Returning to hub 5358.10 ft N I turn SE angle from our random line to the sic cor just set. The angle reads $92^{\circ}35'$ and dist is 160.50 ft. At station 5365.40 ft N the cor to secs 17, 18, 19, 20 sets E 160.34 ft. 5365.40 divided by 160.34 equals .029887 of a foot E for each foot N. Quit for night.

Dec. 7, 1916. Thursday. In A.M. It rains and Horst writes, E. B. Horst notes and figures corrections. In P.M. Mr. E. B. Horst, George C. Williams

and Frank Williams correct the line bet secs 19 & 20. At 5365.40 N the corner sets E 160.50 ft. Hub 4147 N goes E 120.94 ft. to center of

old R. R. Grade. Hub 3300 N goes E 98.62 feet: The $\frac{1}{4}$ corner at 2682.70

ft N goes E 80.17 feet where we set a $2\frac{1}{2} \times 48$ " capped iron monument for the true $\frac{1}{4}$ corner bet secs 19 & 20, T. 141, R. 28. This is one of the

iron monuments I had brot from the range line. At hub 2249.50

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N run E 67.22 feet to true line: Hub 1623.50 N goes E 48.52 ft. Hub 1098 N goes E 32.83 feet. Hub 747.50 N goes E 22.37 feet: At the corner of secs 19, 20, 29 & 30, T. 141, Rq. 28, I pull up a wood post and set in its place a 2 1/2 x 48" capped iron monument with the following new bearing trees.

W. pine stump 20 inch, N 39° 30' E, 40.30 feet in sec 20

W. pine stump 24 inch, S 42° E, 68.40 feet. in sec 29.

N. pine 5 inch, S 28° W, 31.70 feet in sec 30.

Variation 8° 47' E. No other trees near. Quit for night. E. B. Horst

Dec. 8, 1916. Friday. E. B. Horst transit and chain, with George C. Williams, F. Williams and J. Buchhite cut true sec. line bet secs 29 & 30, T. 141, Rq. 28, figured from true corner on ice in lake. We set hub 966.50 ft. N on random line, West 89.98 ft. to true line. Hub 2106.90 N, we set West 199.80 ft. to true line. We produce this line N to the section corner and S to the lake. At 611.00 ft. N of true corner I set a 2 x 48" iron monument being boiler-flue, in South side of swamp and 20 feet N of lake. At 2767.20 ft. from sec corners I set 1/4 cor bet secs 29 & 30, on the true line. This is a 2 1/2 x 48" iron monument in E side of small tank swamp. The iron is a galvanized pipe having cap on top.

At 1752.33 ft. N of the SE cor of sec 30, I set a 2 1/2 x 48" capped galvanized iron monument being the point of intersection of the sec. line and the S boundary line of the Beech Lake Indian Reservation. The NW angle of the Reservation line should be about 71°. Quit for night. E. B. Horst.

Dec. 9, 1916. Saturday. E. B. Horst transit with same crew. I send Jonas Buchhite to bring iron corners from range line to George C. Williams place. We go to spike on ice near corner to secs 29, 30, 31 & 32, T. 141, Rq. 28, and at station 4471.06 ft. W on random line and 324.67 ft. N of the E & W random line I turn a 90° angle from a straight line E & W, bet the SW corner sec 30, and the SE cor of sec 29, and chain N 19.40 ft. and set a spike in the ice for the true cor to secs 29, 30, 31 & 32, T. 141, Rq. 28, over which I set the transit and set the under corners on true lines North, West, South & East as follows: And set iron monuments being 2 x 48" boiler-tubes. At 699.80 ft. W of the true corner I set a 2 x 48" iron monument on true sec line bet secs 30 & 31, and at a point 324.10 ft. S of the corner I set a 2 x 48" iron monument on the true sec line bet secs 31 & 32, and at a point 724.90 ft. E of the true corner I set a 2 x 48" iron monument on the true sec line bet secs 29 & 32. All in Twp. 141 N range 28 W. We then go West to station 6700.⁰⁵ ft. W on random line and chain N 496.00 ft. where we set a 2 1/2 x 48" capped galvanized iron monument for the 1/4 cor bet secs 30 & 31, T. 141, Rq. 28, with the following new bearings:

N. Pine 4 inch, N 14° W, 6.40 feet; N. pine 6 inch, S 65° W, 11.20 feet.

At station 2235.⁰³ W on random line we chain N 172.04 feet

and set a $2\frac{1}{2} \times 48$ " galvanized capped iron monument for the $\frac{1}{4}$ corner bet secs 29 + 32, T. 141, Rg. 28. No bearing trees near.

Taking iron monuments we go South bet secs 31 and 32, and at Sta. 2747.80 ft. S, we chain E. 2.70 ft. from the random line where we set a 2×48 " iron monument being boiler-flue for the true $\frac{1}{4}$ cor bet secs 31 + 32, T. 141, Rg. 28. At Station 5367.40 ft. S on random we chain W 0.20 of a foot where we set a $2\frac{1}{2} \times 48$ " galvanized capped iron monument on the true N + S sec line bet secs 31 + 32. At a point on said sec line 115 ft. N of the true SE cor of sec 31, being the SW cor of sec 32, T. 141, Rg. 28 for a Witness Corner to said sections. This corner is also 115 ft. N of the N. boundary of section 6, T. 140, Rg. 28, and is set as a Wit. Corner with following bearings:

pop. 5 inch, SE 1.70 feet; pop 8 inch, N 8.10 feet.

This is a Witness Corner 115 ft. N of the true cor which falls in Woman Lake Over flow. We then walk a mile E to the SE cor of sec 32, being the SW corner of sec 33 on the S boundary of Twp. 14.1, Rg. 28, and the North boundary line of sec 5, T. 140, Rg. 28, where we pull up the wood post previously set by Harry S. Todd, Deputy County Surveyor and put in its place a $2\frac{1}{2} \times 48$ " capped galvanized iron monument for the true corner with the following bearings:

Basswood 8 inch, S 71° W, 73.90 feet; Oak Post NE 46.70 feet.

We mark this post "W.P." and another oak post marked "W.P." we set NW 46.70 feet. The bearing trees set by former Deputy County Surveyor Todd at this point have been grubbed out in the construction of a road. Quit for night E. B. Horst.

Dec. 10, 1916. Sunday. I get survey outfit packed and after dinner, George C. Williams with his car takes me to Hackensack. Supper at Hackensack 35 cents. Williams charge for car \$4.00. I take mid-night train to Walker. E. B. Horst.

Dec. 11, 1916. Monday. I take early morning train from Hackensack to Walker. R.R. fare 33 cents. Train 1 hour and 20 minutes late. Arrive at Walker at 5 A.M. Work all day checking notes and calculations of survey. E. B. Horst.

Surveyed Nov. 24 to Dec 11, 1916.

Recorded Jan 1917.

County Surveyor
Cass County, Minnesota

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SURVEY-RECORD-318

T. 141 - R. 28 - SEC'S. 4-5-6

T. 142 - R. 28 - SEC'S. 29-30-31-32-33

T. 142 - R. 29 - SEC'S. 25-30

Field notes of the survey of a County Road known as the Brevik County Road Extension, which begins at SE cor of sec 25, T. 142, Rg. 29, thence E $\frac{3}{4}$ mile, thence S $\frac{1}{2}$ mile, thence E $\frac{1}{4}$ mile, thence S $\frac{1}{2}$ mile, thence E 1 mile to the SW cor of sec 33, T. 142, Rg. 28, thence S 1 mile to the NW cor of sec 9, T. 141, Rg. 28, and the establishment of iron corners in secs 4, 5, 6, T. 141, Rg. 28, and secs 29, 30, 31, 32 & 33, T. 142, Rg. 28 and secs 25 & 30, T. 142, Rg. 29, as surveyed by and under the direction of John W. Cyrus, County Surveyor of Cass County, Minn. Assisted by E. B. Horst, Deputy. Sept. 8, 1916. Friday. E. B. Horst working for Cass County Minnesota. Copy field notes and get survey outfit together and leave Walker at 5: P.M. with Walter Haberman and his launch. Cross Seech Lake, arriving at Brevik's landing at 7:30 P.M. Boat hire \$1.25. Horst for supper and over night with Ole Brevik. E. B. Horst.

Sept. 9, 1916. Saturday. E. B. Horst transit and chain. Leo Brevik, axe flag and chain. Alfred Roe and John K. Berger axemen. Begin at a wood post set by E. B. Horst from U. S. bearing trees for the cor to secs 30 & 31, T. 142, Rg. 28, being the E cor to secs 25 & 30, T. 142, Rg. 29, and run random line E on 90° var: Horst and Leo Brevik with 300 foot Chicago Steel tape. Horst transitman: At 274.10 ft E set hub: At 615 E enter pot hole: At 686 E leave same: At 377.40 ft E set hub: At 890 E enter tank swamp: At 1132 leave swamp: At 1303.00 E set hub: At 1630 E cross Crooked wagon road: At 1948.50 ft E set hub: At 2792 E set hub from which an old post sets S 58 feet: At 2663.10 ft E look for the $\frac{1}{4}$ corner bet secs 30 & 31, T. 142, Rg. 28, where U. S. notes call for a post and the following bearing trees: pop 5 inch N, 25° W, 8 lks = 5.28 feet: pop 6 inch, S 70° W, 10 lks = 6.60 feet. All are gone, I find an old stake but not U. S. post and we continue E. Begins to rain at 4:30 P.M. and we quit for night. E. B. Horst.

Sept. 10, 1916. Sunday. No work, rained all day. Still at Brevik's. E. B. Horst
Sept. 11, Monday. E. B. Horst transit and chain. Leo Brevik axe, flag and chain: Alfred Roe and John Berger axemen: We continue East bet 30 & 31, T. 142, Rg. 28, from Hub 2792.00 feet East: At 2817.00 feet E wire fence, enter field: At 3374 E cross old road N & S: At 3561.00 E set hub: At 3781 E leave field, enter brush: At 3971.20 E set hub: At 4195.50 E set hub: At 4528.40 E set hub: At 5100 E set hub: At 5280.00 feet E set large stake: At 5556.00 E set hub: And look for the bearings for cor to secs 29, 30, 31 & 32, T. 142, Rg. 28, where U. S. notes call for a post and the following bearing trees: Cedar 20 inch, N 61° W, 13 lks = 8.58 feet: Cedar 12 inch, S 32° W, 12 lks = 7.92 feet: Cedar 20 inch, S 55° E, 23 lks = 15.18 ft: Cedar 8 inch, N 19° E, 35 lks = 23.10 feet. I find the four U. S. bearing trees all dead and down except the 20 inch cedar still standing N 61° W, 13 links.

From the original position of the old bearing trees I chain out the required courses and distances and find an old stake standing at the

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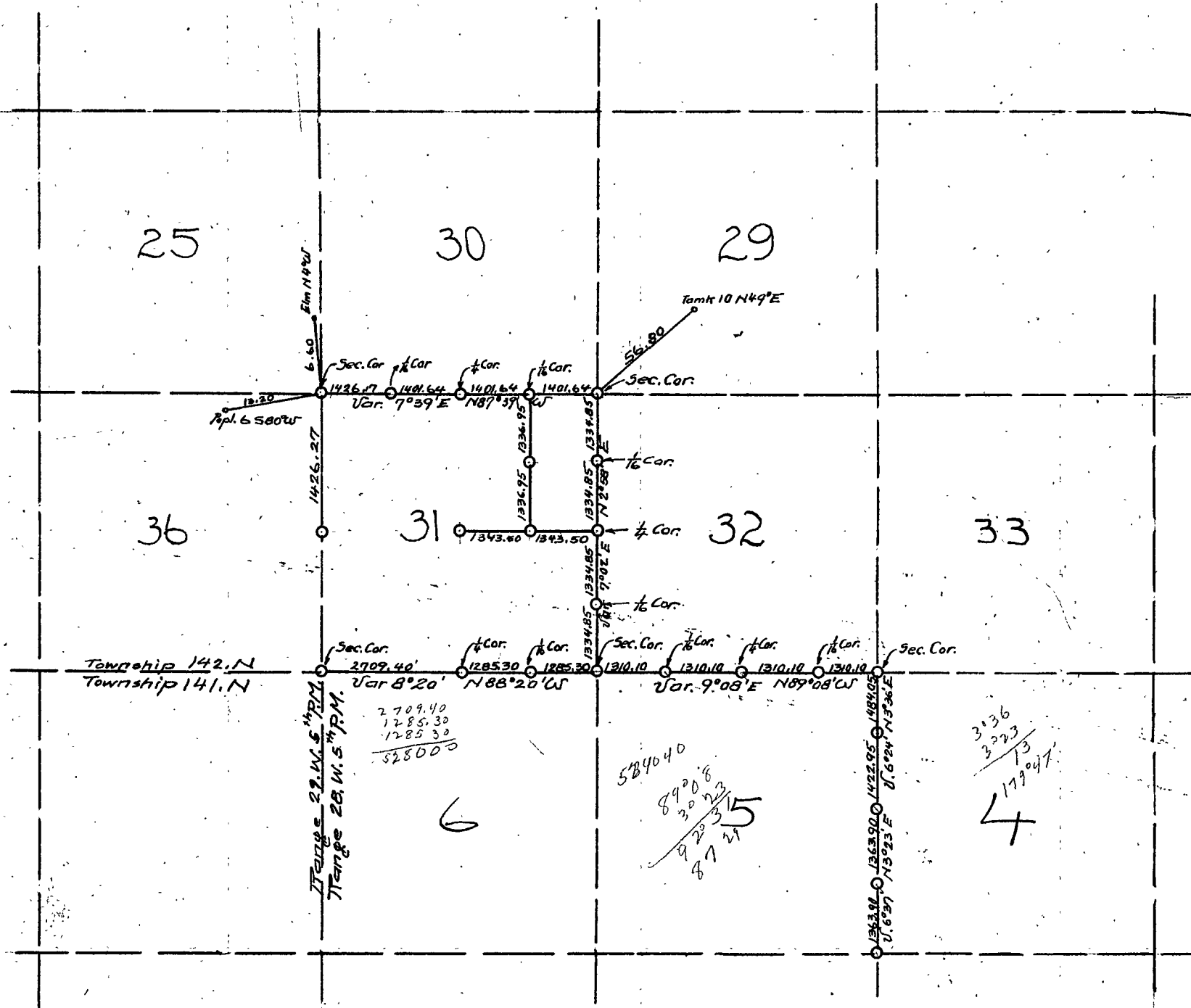
SURVEY-RECORD-318

PLAT

TWP. 141, RG. 28- SEC'S 4-5-6

TWP. 142, RG. 28- SEC'S 29-30-31-32-33

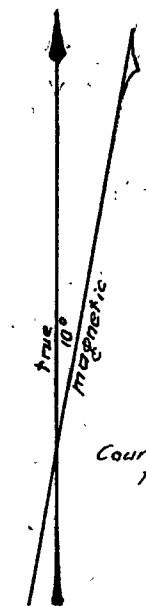
TWP. 142, RG. 29- SEC'S 25-36.



2709.40
 1285.30
 1285.30
 5240.4

10320.40

2709.40
 2570.6
 5280.00



2727.8
 2907
 5634.8

3136
 3223
 177047

524040
 89206
 20223
 92231
 47215

proper place for the true corner, I pull up the old stake and drive in
in the place a 4x4x48" cedar post for the true section corner from which new
bearings are as follows:

Tank 10 inch, N 49° E, 56.80 feet to tack at base

Cedar 20 inch, N 63° W, 8.50 feet to tack at base

Cedar 10 inch, S 49° 45' W, 49.50 ft. to tack at base

Cedar 10 inch, S 39° 30' E, 80.80 feet; to tack at base

All at 90° Var.

We return to hub 5556.00 feet E on random line and cut line from
hub to corner. Corner sets to the right 60° 34' a distance of 152.80
feet from hub 5556 E. The sine of 60° 34' x 152.80 feet = 133.10 feet.

Cosine of same = 75.10 feet. 5556.00 E added to 75.10 feet =

5631.10 feet E from which point the corner to sections 29, 30, 31 +

32, T. 142, Rq. 28 sets S 133.10 feet. The correction of the random line

South = 133.10 feet S in 5631.10 ft. East or .023636 of a foot S for

each foot E. One foot U.S. Chain = 1.06185 ft. My chain. I set transit

over corner to sections 29, 30, 31 + 32, T. 142, Rq. 28, and start random

line S bet secs 31 + 32, Var reads 8° 30' E. The angle of random lines

reads 88° 50'. We cut line S to a fake 1/4 post and quit for night.

This line not chained. A Cruiser's scribed post sets W of line 52 feet

intended for a 1/4 corner on E side of sec 31. E. B. Horst.

Sept. 12, 1916. Tuesday. E. B. Horst transit and chain, with same crew being

Brevik, Boe and Berger. Continue sec. line S bet secs 31 + 32 on random

without chaining. At 10:30 A.M. rained. It rained all afternoon and

2. worked on notes. Line cut S to cor of secs 31 + 32, T. 142, Rq. 28, and

secs 5 + 6, T. 141, Rq. 28. E. B. Horst.

Sept. 13, 1916. Wednesday. E. B. Horst transit and chain, with same crew

except Steffen Boe instead of Alfred Boe. At an old stake set by some

one for a sec corner on Town line to sections 5, 6, 31 + 32, bet Twp. 141 +

142 N Rq 28 W, where U.S. notes call for a post & the following bearing trees:

W. pine 18 inch, N 80° E, 20 lbs = 13.20 ft. W. pine 16 inch, N 5° W, 12 lbs = 7.92 ft.

W. pine 25 inch, S 25° W, 25 lbs = 16.50 ft. W. Oak 10 inch, S 53° E, 34 lbs = 22.44 ft

We find W. Oak 10 inch, bearing tree lying on the ground and bearing scribe

marks plainly. Also find stump of W. pine 18 inch, N 80° E and W. pine 16

inch, N 5° W, the last tree of which only the large roots remain. The

Courses are all larger than called for in the U.S. notes, but as the

trees are the old U.S. bearing trees without a doubt, from them I

set a new post for the true corner. Each foot in each course getting

0.30 of a foot. 13.20 feet = 17.16 feet to corner. 7.92 feet = 10.30 feet to

corner. 22.44 feet = 29.17 feet to corner. I mark new bearings as follows:

W. pine stump 26" S 40° W, 51.00 feet: W. pine stump 30", S 64° 45' E, 67.30 feet.

No other trees near. From this corner we run W 8° 30' Var on random

line bet secs 6 + 31, while Berger and Boe continue cutting line West.

Horst and Brevik begin at the NE corner of sec. 31, and chain S on

random line: At 156 ft. S leave cedar swamp: At 243.20 S a tack

in poplar stump: At 388 S enter soft swamp: At 558 S leave same.

At 741.50 S hub: At 1238.00 S hub: At 1704 S cross old log road: At

1718 S enter small swamp: At 1820 leave same: At 2186.30 ft. S hub.

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At 2417.30 S hub: At 3300.5 Carlson's tar paper house sets E 15 feet enter field: At 3773 S cross old Longville Road: At 3958.10 S hub: At 4446 enter E side of shallow pond: At 5038 S enter meadow: At 5196 leave same: At 5331.10 ft. S hub: At station 5339.40 ft. S the cor to sec 5, 6, 31 & 32, just established on Twp. line sets W 137.20 feet. The correction for the random line bet secs 31 & 32, T. 142, R. 28 = .02566 of a foot W for each foot South. Beginning at the cor to secs 5, 6, 31 & 32, we chain W. At 231.00 ft. W set hub: At 395 W enter meadow: At 544 W leave same: At 940.90 ft. W set hub: At 1050 W enter meadow: At 1247 W leave same: At 1686.20 ft. W set hub: At 1899.00 W set hub: At 1904.40 ft. W set triangulation hub: 76.00 E of small lake, from which I turn a 90° angle and cut a base line S 143.60 feet. I then cause a hub to be set on W side of lake on true random line. From hub 143.60 ft. S sight on hub over lake, inside angle reads 75°10'. I then go to a hub on W side of lake over which I set transit, backsight E on random line, turn telescope to the right on hub 143.60. Angle reads 14°50'. Tangent of 75°10' = 3.77595. Base line = 143.60 ft. Tangent times the base line = 542.20 ft. being distance across lake bet hubs; added to 1904.40 = 2446.60 ft. W to hub over lake. At station 2640.00 W. U.S. notes call for 1/4 cor bet secs 6 & 31, being post and the following bearing trees:

Elm 16 inch, N 20° W, 18 lbs = 6.60 ft: pop. 4" S 5° E, 15 lbs = 9.90 feet.

We look for bearing trees until 5:30 P.M. but find nothing, & quit for night. E. B. Horst.
Sept. 14, 1916. Thursday. E. B. Horst transit and chain, Leo Brevik Ave, chain and flag. Steffen Boe and John Berger axemen. Continue West bet secs 6 & 31, T. 141, & 142 N R. 28 W: At 2476.60 ft. W hub: At 3219.30 ft. W tack in pine log on hill. At 3318.20 W set hub: At 3865 enter swamp. At 4014 Lv same: At 4911.20 W set hub: At 5024 enter swamp: At 5270 Lv same: At 5280 W the Twp. Corner to Twp. 141 & 142 N, R. 28 & 29 W, marked by an iron monument previously established sets South 30.60 feet. The NE angle of random with range line is 91°02'. The correction S of the random line = .005795 per foot. We walk N along range line 1 mile to the NW cor of sec 31, where I read the angle of the random N boundary of sec 31, to the true range line South. The SE angle reads 88°33'. Quit for night. E. B. Horst.

Sept. 15, 1916. Friday. E. B. Horst transit and chain with same crew go to the NE cor of sec 31, T. 142, R. 28, where I get angle of random sec lines which reads 88°50'. We then go S to hub 1238.00 South, from which we set a hub at station 1334.85 feet S from which we turn a 90° angle from random line, then chain West 34.25 ft. and drive a square stake for the true North 1/16 cor. bet secs 31 & 32, T. 142, R. 28. We then walk S on random line to hub 2417.30 feet S, from which we set a hub at station 2669.70 feet S from which we turn 90° angle from random line and run W 68.50 feet to a point for the true 1/4 cor bet secs 31 & 32, T. 141, R. 28, where we set a square wood post for the true 1/4 cor. and mark new bearings as follows:

W. oak 7 inch N 7° W, 51.80 feet: Elm 6 inch S, 37° E, 44.90 feet.

Walking S to hub 3958.10 ft. S we set a hub on random line at Sta.

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4004.55 ft. S from which we chain N at 90° to random line, 102.75 feet to point for the true S 1/16 cor bet secs 31 & 32, T. 142, Rq. 28, where we drive a post for the true 1/16 cor in marsh - Beginning at the true SE cor of sec 31, T. 142, Rq. 28, I backsight West on random line, then reverse telescope, turn 00° 20' N and start random line E bet secs 5 & 32. We cut line about 1/2 mile E without chaining. Brush heavy in spots. E.B. HORST

Sept. 16, 1916. Saturday. Rained and cold all forenoon. I check calculations and figure corrections for N & S boundaries of sec. 31, also calculate the position of the 1/16 cor in center of E 1/2 of sec 31. No rain after 11:30 A.M. Horst and crew continue random Township line East along S side of sec 32. Berger & Boe cut line: Horst and Brevik begin at SW cor of sec 32 and chain E on line cut yesterday: At 756.00 ft. E hub: At 1913.50 E hub: At 2060 E enter swamp: At 2373 N end of pond: At 2446 E leave pond. At 2579.40 ft. E set hub 4 feet E of N & S Road: At 2640 ft. E we look for the 1/4 cor bet secs 5 & 32, T. 141, & 142 N.R. 28 W, where U.S. notes call for a post and the following bearing trees:
 Pop 3 inch, N 25° E, 25 lbs = 16.50 feet.

All are gone and we continue E: At 2750 E enter field, 35 ft. S. of fence: At 2871.60 ft. E hub in hog lot: At 3036 leave field cross Erickson's drive: At 3160 E enter Millet field 40 ft S of North end of field: At 3562.40 ft. E set hub: At 3622 E leave Millet field: At 3970 set stake At 4270 E cross Longville Road. At 4419 E enter swamp: At 4524 leave same: At 4620 E the W side of school lot. At 4767.10 ft. E hub: At 4785 E side of school lot: At 5094.20 ft. E set hub, and quit for night. E.B. Horst.

Sept. 17, 1916. Sunday. No work. Horst all day with Ole Brevik.

Sept. 18, 1916. Monday. E. B. Horst transit and chain. See Brevik, axe, flag and chain. Steffen Boe and John Berger axemen. We look for the cor to secs 4, 5, 32 & 33, bet Twp. 141, Rq. 28, and T. 142, Rq. 28, where U.S. notes call for post and the following bearing trees:

N pine 12" S 35° E, 100 lbs = 66.00 feet: pop 4" N 45° W, 80 lbs = 52.80 feet.

We cannot find any trees or stumps to check with notes, but find a post and a 14 inch pine, S 24° 10' W, 74.60 feet, from post and a 14 inch Norway S 35° 50' E, 69.60 feet from post. The pine is scribed with sec cor, Twp. and range numbers. The Norway bears no scribe marks. There are also two, 5 inch Red Oak trees, blazed and scribed, which to my judgement were blazed 30 or 40 years ago, according to the age of marks and the growth over the marks. Settlers identify this as being the original Goit corner, also the spot where the old U.S. Norway tree stood, which point checks with post for course and distance, at which point I drive a new post for the true cor at the same point the old post stands, and we use the above Jack and Norway Pines for our new bearings. No other trees near. I set transit over hub 5094.20 ft. E and continue E, the corner sets N and to the left 26° 44', 163.70 ft. distance, 163.70 times sine of 26° 44' = 73.60 ft. N: 163.70 times cosine of 26° 44' = 146.20 feet E: At station 5240.40 ft. E the cor to sec 4, 5, 32 & 33, T. 141 & 142, Rq. 28 sets N 73.60 feet. The correction of the random line = .014045 of a foot N for each foot E: From the section cor I sight to hub 5094.20 and turn

SW angle $63^{\circ}04'$ and run random line S on 8° Var. bet Secs 4 & 5, T. 141, Rq. 28. At 495.40 ft. S set hub; At 842.00 ft. S set hub; At 1517.7 ft. S set hub; At 2419.70 ft. S set hub; At 2800.00 ft. S enter Otwood's field. At 2837.48 ft. S, N.S. notes call for a $\frac{1}{4}$ post and following bearing trees:

Nor. pine 10 inch, $S74^{\circ}E$, 44 lbs = 29.04 feet; N. pine 14" $S73^{\circ}W$, 71 lbs = 46.86 feet. I find the Norway pine 14" stump bearing the B.T.S. plainly but my notes are not correct so I decide to return to Walker for true notes before establishing this corner. We continue random line South.

At 3023.80 ft. S set hub; 28 feet E of Mr. Otwood's House. At 3453.60 ft. S set hub; At 3504.00 ft. S leave field; At 3670.00 ft. S enter small lake E end. At 3852.00 ft. S leave small lake E end; At 4163.00 ft. S enter W end of Marsh; At 4318.00 ft. S leave W end of Marsh. At 4344.00 ft. S cross wagon road E & W; At 4380.50 ft. S set hub, and quit for night. E. B. Horst.

Sept. 19, 1916. Tuesday. Horst and same crew continue line S bet Secs 4 & 5, Twp. 141, Range 28. At 4443 ft. S enter marshy lake shore; At 4526 enter lake at West end; At 4896 enter bog, S side of lake; At 4966 ft. S leave bog. At 5410.50 ft. S set hub; At 5624.80 ft. S set hub; from which the cor to Secs 4, 5, 8, 9, T. 141, Rq. 28, marked by an iron monument and established by H. F. Baldwin sets N 16.40 feet. The NW angle reads $87^{\circ}25'$. One post N. S. Chain = 1.0558 ft. My chain. We return to hub 4195.50 ft. E on N line of sec. 31. And set a wood post at the point for the true East $\frac{1}{16}$ corner bet sections 30 & 31, T. 142, Rq. 28, being 4229.45 ft. E and 99.97 ft. S of random line. Over this $\frac{1}{16}$ corner I set transit, backsight on hub on random line, reverse telescope, turn to the left $1^{\circ}17'$ and run S on the E $\frac{1}{16}$ line of sec. 31, At 205 ft. S set hub; quit for night. After supper I hire Haberman's row-boat and evinrude motor-boat and go across Seech Lake for special field notes. The night gets too dark to go on, so I camp on point E of narrows until day light. Leo Brevik accompanies me. E. B. Horst.

Sept. 20, 1916. Wednesday. Horst and Leo Brevik arrive at Walker, where I get notes and necessary information and I start back across Seech Lake for Brevik's landing. Lake becomes very rough, but we continue and arrive safe. Settlers claim we rode highest waves of any row-boat they ever saw in Seech Lake. We arrive at 2: P.M., then take iron monuments and walk to the corner of sections 25, 30, 31 & 36, on range line bet Twp. 142 N ranges 28 & 29 W, where we pull up the wood hub and put in its place a 2x48" iron monument being a boiler-plate for the true sec corner. The wood hub just pulled up was the true sec cor previously established by E. B. Horst. We then walk $S\frac{1}{2}$ mile to the $\frac{1}{4}$ cor bet Secs 31 & 36, where we pull up wood post previously established by E. B. Horst for the true $\frac{1}{4}$ cor and put in its place a 2x48" iron monument being a boiler-plate for the true $\frac{1}{4}$ corner. quit for night. E. B. Horst.

Sept. 21, 1916. Thursday. E. B. Horst transit and chain. Leo Brevik, axe, flag and chain. John Berger and Steffen Bol axemen. Bol and Berger continuing cutting South on E $\frac{1}{16}$ line thru sec. 31. Horst and Brevik chaining the same. At 205 ft. S set hub; At 987.10 hub; At 1064 S enter swamp; At 1232 leave same. At 1425 S set hub; At 1950 S set hub; At 2673.90 S set square post for the $\frac{1}{16}$ cor. in the center of E half of sec. 31, T. 142,

Rg. 28, which I turn the NE angle and start E on $\frac{1}{4}$ line.

P.M. rained, no work in field, I work on field notes figuring corrections for road centers. E. B. Horst.

Sept. 22, 1916. Friday. E. B. Horst transit and chain. Same crew continue East on center line to the $\frac{1}{4}$ cor bet secs 31 and 32, T. 142, Rg. 28. We intersect the $\frac{1}{4}$ cor at 1343.50 ft. E. We then turn to the $\frac{1}{16}$ corner in center of E. half of sec 31, from which we backsight E on the true $\frac{1}{4}$ corner, reverse telescope and run W to the $\frac{1}{4}$ cor on W side of sec 31, no corrections necessary. We chain W along this line 1343.50 ft. W, where we set a 2x48" boiler-flue iron monument for the true center of sec 31. We then set 2x48" boiler-flues being iron monuments at the following corners previously established in this survey and marked by wood posts. At the North $\frac{1}{16}$ cor. bet secs 31+32 and at the $\frac{1}{4}$ corner bet secs 31+32, and at the S $\frac{1}{16}$ cor bet secs 31+32, all in Twp. 142, Rg. 28. At Sta. 4200 S on E boundary of sec 31, we run 107.77 feet W of random line being on N side of shallow pond and 42 feet N of water and set stake on true sec line. At Sta. 4800 ft. S I set road center stake 123.17 ft W of random line. Correcting the line bet secs 5+32 on Twp. line the correction is .014045 ft. of a foot N for each foot E. Setting road centers and corners: At 756 ft. E goes N 10.62 feet. Hub 1310.10 ft. E goes N 18.40 feet to the true W $\frac{1}{16}$ cor bet secs 5+32. Hub 1913.50 E goes N 26.86 ft. Hub 2620.20 ft. E goes N 36.80 ft. to the true $\frac{1}{4}$ corner bet secs 5+32. Hub 3562.40 E goes N 50.03 feet; Hub 3930.30 E goes N 55.20 feet to the true E $\frac{1}{16}$ cor bet secs 5+32; Hub 4767.10 ft. E goes N 66.95 ft. In correcting this line we set square wood post to mark corner until we can set iron monument. Quit for night. E. B. Horst.

Sept. 23, 1916. Saturday. E. B. Horst transit and chain with same crew setting road centers and section corners. We go to the $\frac{1}{4}$ corner bet secs 4+5, T. 141, Rg. 28, where U.S. notes call for post and: Nor. pine 14" S 73° W, 71 lbs = 46.86 ft. Nor. pine 10" S 74° E, 44 lbs = 29.04 ft. I set transit over stump of Norway 14" S 73° W, previously located from which I run North 73° E, 46.86 feet and set hub, over which I set transit and chain S 74° E, 29.04 feet, ^{from} which point the stump of the 10 inch Norway sets S 4 feet. The stumps check perfect for measurement but not for course, taking courses in consideration I set the cor post where I drive a boiler tube being a 2x48" iron monument for the true $\frac{1}{4}$ cor bet secs 4+5, from the old bearing stand as follows:

Nor. pine stump 14 inch, S 65° E, 28.20 ft. N pine stump 18" S 77° 30' W, 45.40 feet. We then return to random line and at Station 2897.00 ft. S this $\frac{1}{4}$ corner just established sets W 82.00 feet. I set the transit over this $\frac{1}{4}$ corner and sight S to the iron corner to secs 4, 5, 8+9, T. 141, Rg. 28 and set a row of road centers S along true sec. line. To get around a small lake at station 3619.70 feet S, figured from random line, turn to left 68° 49' and run 117.30 feet, thence to the right 81° 28'

and run 215.20 feet, thence to the right $40^{\circ}42'$ and run 78.90 feet to the sec. line, intersecting the same at Sta 3920.30 S, thence to the left $53^{\circ}10'$ being the angle of the sec line to last course. At Sta. 4586 true line intersects marshy shore of shallow lake on W end. At 4764 ft. S the true line leaves marshy shore of lake. We return to hub 4380.50 ft. S on random line from which I set a hub on random line at Sta. 4260.90 S and from this hub we chain W on 90° angle 49.20 feet and set a 2x48" boiler-flue iron monument for the true $S\frac{1}{16}$ cor. bet secs 4 & 5, T. 141, Rg. 28. We return N and set road centers N of the $\frac{1}{4}$ cor bet secs 4 & 5. One foot U.S. chain = 1.0779 ft. My chain. Correction = .028 ft. W per foot S. Hub 1517.70 S goes W 42.50 feet. At 1474.05 ft. S runs West 41.27 feet and set a 2x48" boiler-tube iron monument for the $N\frac{1}{16}$ cor bet secs 4 & 5. Hub 495.40 S goes W 13.87 feet. We use Leo Brevik's horse and wagon. All day hauling iron corners and tools along lines. Returning home we go to Twp. line and set 2x48" boiler-tube iron monuments at the following corners.

At the cor of 32 & 33, 4 & 5, bet T. 141, & 142 N Rg. 28 W and at the $E\frac{1}{16}$ cor bet secs 5 & 32, and at the $\frac{1}{4}$ cor bet secs 5 & 32, and at the $W\frac{1}{16}$ cor bet secs 5 & 32. Also at the cor to secs 5, 6, 31 & 32, T. 141 & 142, Rg. 28. The correction for the S boundary of sec 31 is .005795 of a foot S. At 1285.30 ft. W on random line and 7.45 ft. S we set a 2x48" boiler-tube iron monument for the $E\frac{1}{16}$ corner bet secs 6 & 31. At Sta. 2570.60 ft. W we run S 14.90 ft and set a 2x48" boiler tube iron monument for the true $\frac{1}{4}$ cor bet secs 6 & 31 on Twp. line bet 141 & 142, Rg. 28. Quit for night. E. B. Horst.

Sept. 24, 1916. Sunday. E. B. Horst transit and chain. L. Brevik axe and chain. Begin at the NW cor of sec 31, we set road centers and irons bet secs 30 & 31: At hub 274.10 ft. E road center goes S 6.48 feet. At 733.40 E, S 17.33 ft; At 1426.17 ft. E run S 33.71 feet and set 2x48" boiler-tube iron monument for the $W\frac{1}{16}$ cor bet secs 30 & 31; Hub 1948.50 E goes S 46.05 ft. At 2827.81 E run S 66.84 feet and set the $\frac{1}{4}$ cor bet secs 30 & 31. Hub 3561 E goes S 84.17 feet. At 4229.45 E run S 99.97 feet and set the $E\frac{1}{16}$ corner bet secs 30 & 31. We pull up the wood post previously set and set 2x48" boiler-flue iron monuments, at all $\frac{1}{16}$ and $\frac{1}{4}$ corners bet secs 30 & 31, T. 142 Rg. 28. I walk S on $E\frac{1}{16}$ line to station 1336.95 ft. S and set a 2x48" boiler tube iron monument for the $\frac{1}{16}$ cor in the center of the NE quarter of sec 31. Then return to Brevik and take my outfit to Habermans store. E. B. Horst.

Sept. 25, 1916. Monday. I, with outfit leave Brevik at 7: A.M., with Haberman and launch. Arrive at Walker at 9:20 A.M. Boat hire \$1.25. My boat hire on Sept. 20, 1916, was \$2.00. Haberman hauling 25 irons from Walker to Brevik, charge 50¢ I work on notes of survey in office balance of day. E. B. Horst.

Surveyed Sept. 8, 1916 to Sept. 25, 1916.
Recorded Jan. 1917.

County Surveyor.
Cass County, Minnesota.

SURVEY-RECORD-319

TWP. 139 - Rg. 30 - SEC'S 5-6

TWP. 140 - Rg. 30 - SEC'S 29-30-31-32

Field notes of the survey of a County Road and the establishment of iron monuments and the finding of old U.S. bearing trees in secs 5+6, T. 139, Rg. 30 and secs 29, 30, 31+32, T. 140, Rg. 30, as surveyed by John W. Curro, County Surveyor, Cass County Minnesota, assisted by M. A. Kemp, deputy County Surveyor.

Aug. 12, 1913. I go to Hackensack on night train, bed and breakfast at Wood's. Varn Blaricom called for me and we carry the outfit out to the work in sec. 32, being a County Road. Melville A. Kemp transit and chain. Abe L. Varn Blaricom Axe; W. Palston chain men; Noah Sawyer axe and Vanie Winn Axe. We go to the NW Cor. of sec. 32, being the Cor. to secs 29, 30, 31+32, T. 140, Rg. 30, where U.S. notes call for stake and:

Nor. pine 15 inch, $N 68^{\circ} 30' E$, 346 lbs = 228.36 feet (in sec 29)

Nor. pine 18 inch, $S 77^{\circ} E$, 294 lbs = 194.04 feet (in sec 32)

We find the stumps of both trees plainly marked and an old stake at E end of small lake which checks perfect for course and distance at 9° Var. We set a hub and tack in place of the old stake for the true corner to secs 29, 30, 31+32, T. 140, Rg. 30. The old stumps are still solid and no other trees near so we make no new bearings. Set over hub for section corner which is in bog on lake shore and run S on 9° Var. At 300 E leave bog, bears SW; At 613 hub and tack; At 1134.80 E set hub and tack on roof of Varn Blaricom's hen house; At 1500 E stake; At 1841.50 ft. E set hub and tack on hill; At 2572.30 ft. E set hub and tack on hill; At 2640 ft. E the $\frac{1}{4}$ cor. bet secs 31+32, sets W 58.80 ft. At this point Gait notes call for stake and:

Nor. pine 20", $N 80^{\circ} E$, 29 lbs = 19.14 ft.; Nor. pine 12", $S 70^{\circ} W$, 52 lbs = 34.32 ft.

We find the stump of both trees plainly marked, the SW tree being rotted but the "B.T." is still plain on it. We set a hub and tack for the true $\frac{1}{4}$ corner bet secs 31+32, T. 140, Rg. 30, by flat chain and take the following bearings at 9° Var.

Old B.T. $N 80^{\circ} E$, 19.14 ft. (in sec 32). Old B.T. $S 70^{\circ} 55' W$, 34.32 ft. (in sec 31)

New B.T.s Nor. Pine Stump 20 inch, $S 72^{\circ} 08' W$, 39.15 ft. setting over the hub $\frac{1}{4}$ cor we run S on $8^{\circ} 30' Var$; At 150 ft. enter heavy growth of mixed Jack Pine and poplar and Birch with heavy under brush. Melville A. Kemp.

Aug. 13, 1913. Kemp, Varn Blaricom and Sawyer continue South, Kemp and Varn B. chain. At 600 S set stake; At 838.20 ft. S set hub; At 1200 stake; At 1800 stake enter tank swamp; At 2100 stake; At 2640 ft set hub; At 2637.30 the cor. to secs 31, 32, 5+6, bet Twp. 139 and 140 N Rg 30 W sets W 34.30 ft. At this point Gait notes call for stake and:

Tank 7" $N 14^{\circ} E$, 18 lbs = 11.88 ft. (in sec 32); Tank 12" $N 33^{\circ} W$, 21 lbs = 13.68 ft. sec 31

Tank 12" $S 57^{\circ} 30' W$, 35 lbs = 23.10 ft. in sec 31; Tank 5" $S 23^{\circ} E$, 26 lbs = 17.16 ft. in sec 5.

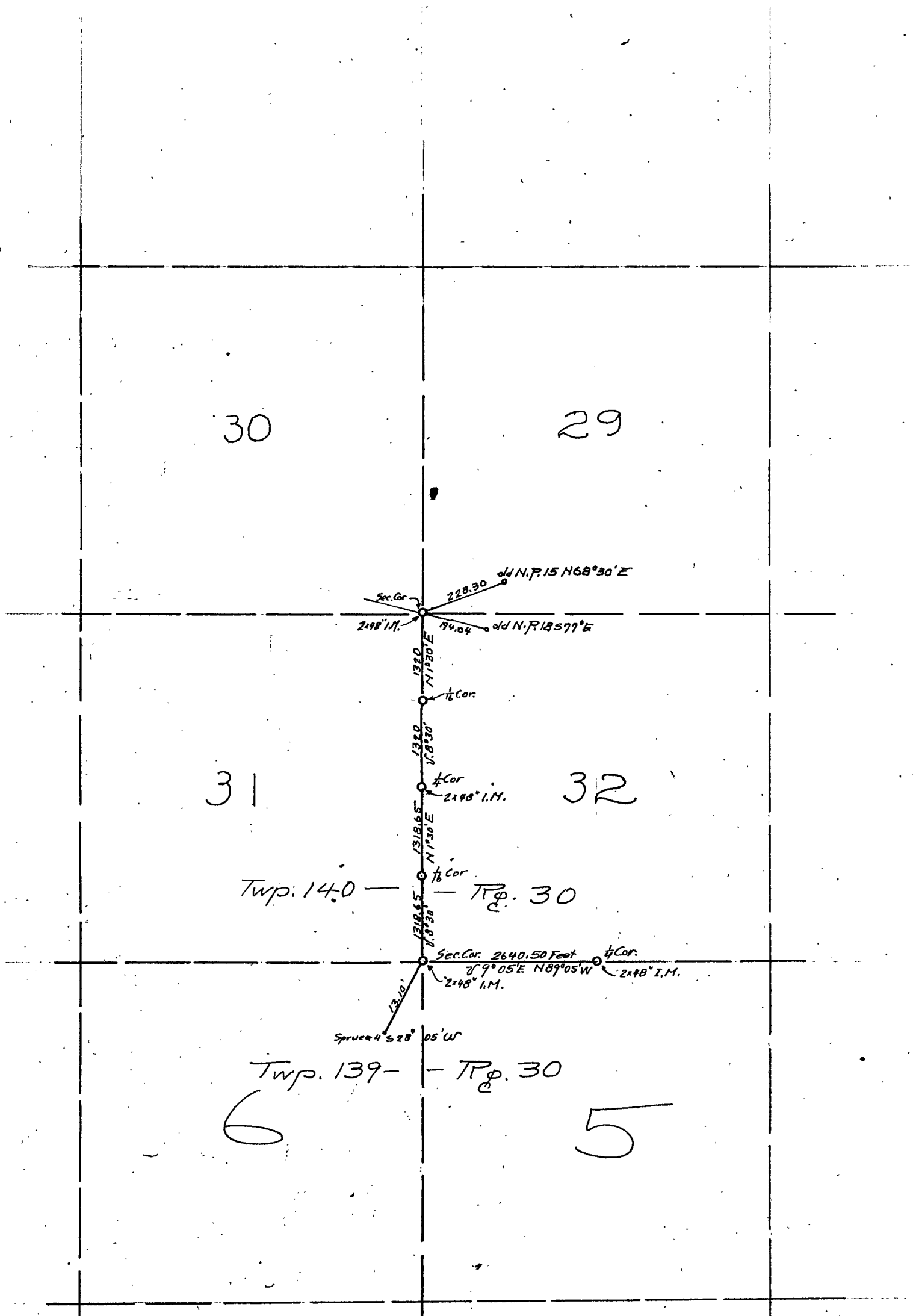
We find all 4 trees plainly marked. The NE and SW trees are dead but still standing while the other two trees are down. We find the distance

SURVEY-RECORD-319

PLAT

TWP. 139 - RG. 30 - SEC'S 5-6

TWP. 140 - RG. 30 - SEC'S 29-30-31-32



30

29

31

32

Twp. 140

Rg. 30

Twp. 139

Rg. 30

6

5

Sec. Cor. 228.30 d/d N.P. 15 N68°30'E
 2+98' I.M. 174.04 d/d N.P. 18 577'E
 1/8 Cor. 17.11 N1°30'E
 1/4 Cor. 13.30 N1°30'E
 1/8 Cor. 16.83 N1°30'E
 1/4 Cor. 2+98' I.M. N1°30'E
 1/8 Cor. 13.18 N1°30'E
 1/4 Cor. 5.98 N1°30'E
 Sec. Cor. 2640.50 Feet 7'9"05'E N89°05'W
 2+98' I.M. 2+98' I.M.
 Spruce 4'528'05'W

by courses taken to the NE and SW trees to be 0.50 of a foot too long, and let the NW & SE trees to be 0.58 of a foot too short. We proportionate the measurements and set a hub and tack for the true cor. after which we take bearings as follows; At 7° Var.

Old B.T.S. Tank N 14° E, 11.64 ft. in sec 32; Tank S 52° 30' W, 22.76 ft. in sec 6
Tank S 23° E, 17.43 feet in sec 5.

We mark the following new bearing trees at 9° Var to tack leads in blaze. Spruce 5 inch N 38° 39' W, 14.45 feet in sec 31.

Spr. 6" N 60° 20' E, 21.00 ft. in sec 32; Tank 8 inch S 65° E, 17.03 ft. in sec 5.

Spruce 4 inch S 28° 05' W, 13.10 feet in sec 6.

From this corner we run E on 9° 30' Var; Winn and Ralston worked in the afternoon. Thelville A. Kemp.

Aug. 14, 1913. M.A. Kemp. A. Van Blaricom and Noah Sawyer; W. Ralston, V. Winn continue E and chain up; At 660 leave swamp; At 783.10 ft E set hub on hill; At 1110.10 E set hub and tack; At 1250 enter tank swamp; At 2065.40 ft. E set hub in swamp; At 2040.45 E stake set by curs sets S 46.00 feet; As this stake does not appear to have been moved we take it as the true 1/4 cor on the S side of sec 32, T. 140, Rg. 30, being the 1/4 corner on the N side of sec 5, T. 139, Rg. 30, from which we mark the following new bearing trees: Spr. 4" SW 63.35 ft in sec 5
Tank stump 15", NW 35.80 feet in sec 32, to tack heads.
Let Ralston and Winn go at noon. In place of wood stakes we set 2x48" iron pipe and cap for the 1/4 cor bet secs 5 & 32, T. 139 & 140 N Rg. 30 W.
Correcting tack on S boundary of SW 1/4 of sec 32, Hub 2065.40 E goes S 35.98 feet; Hub 1110.10 E goes S 19.34 ft; Hub 783.10 E goes S 13.67 ft.
At the SW cor of sec 32, being the cor to secs 5, 6, 31 & 32, bet T. 139 and 140 N we pull up the wood hub and put in its place a 2x48" iron pipe and cap. Correcting tack on W boundary of SW quarter of sec 32: Hub 2100 S goes W 27.31 feet; Hub 1800 S goes W 23.41 ft; At 1318.65 S run W 17.15 feet and set a hub for 1/16 cor. being the S 1/16 cor. bet secs 31 & 32. Hub 1200 S goes W 15.61 feet; Hub 838.20 S goes W 10.90 feet; Hub 600 S goes W 7.80 feet.
At the 1/4 cor bet secs 31 & 32, T. 140, Rg. 30, we pull up the wood hub and put in its place a 2x48" iron pipe and cap for the true 1/4 cor. Correcting tack on W boundary of NW quarter of sec 32: Hub 1841.50 S goes W 41.01 feet; Hub 1500 S goes W 33.41 ft; Hub 1320 ft. S run W 29.40 ft. and set a hub and tack for the true N 1/16 cor bet secs 31 & 32; Hub 1134.80 S goes W 25.27 feet; Hub 613 S goes W 13.15 ft. At all these correction points we set hubs and tall stakes marked "Road Center Section Line". At the NW cor of sec 32, being the cor to secs 29, 30, 31 & 32, T. 140, Rg. 30, we pull up the hub & tack and put in its place a 2x48" iron pipe & cap driven down on a tank piling 10 feet long for the true sec cor. This completes this survey, which is for a County Road. Fairfully hot yesterday & to-day. M.A. Kemp
Surveyed Aug 12 to 14th 1913.

Recorded Jan. 1917.

SURVEY-RECORD-320

TWP. 137 - RG. 30 - SEC'S 7-8-17-18-19-20-29-30-31-32
TWP. 137 - RG. 31 - SEC'S 24-25

Field notes of the survey and the establishment of cement and iron corners in secs 7, 8, 17, 18, 19, 20, 29, 30, 31 & 32, T. 137, Rg. 30, and secs 24 & 25, T. 137, Rg. 31, as surveyed and established by John W Curo, County Surveyor, Cass County, Minn. assisted by E. B. Horst, Deputy.

May 7, 1916. Sunday. All day at P. O. M. Anderson's.

May 8, 1916. Monday. E. B. Horst transit and chain with P. O. M. Anderson go to the corner of secs 17, 18, 19 & 20, T. 137, Rg. 30, where we meet Ole Hoplin and Verner Lindfors axemen. I set transit over old post for corner, where U. S. notes call for:

Wh. Bir. 16 inch, N 11° W, 57 lbs = 37.62 ft; Wh. Bir. 8" N 59° E, 14 lbs = 9.24 feet
Wh. Bir. 7 inch, S 73° E, 11 lbs = 7.26 ft; Lind 7" S 80° W, 54 lbs = 35.64 feet.

The land owners tell me that this is the point where the old cor was, so I take the course and distance of the SW Lind tree and find the stump at the exact point where it should be also the stump of the NW Birch at the exact spot called for in the U. S. notes and consider this sufficient evidence. The other trees are gone, run N on 8° 30' var. Run thru open field in edge of bush on E side of field: At 330.50 ft N set hub: At 999 ft N set hub: At 2201 N set hub: At 2614.60 N set hub: from which the 1/4 cor bet secs 17 & 18 sets W 33.60 feet. I take transit to the bearing trees and set post from old U. S. bearing trees both plainly marked, one lying flat on the ground, the other a snag remains. U. S. notes call for:

Wh. pine 7" S 62° W, 8 lbs = 5.28 ft; Wh. pine 12" S 61° 30' E, 7 lbs = 4.62 feet. With transit on hub 2614.60 N which is 33.60 feet E of the 1/4 cor bet secs 17 & 18, we continue our transit line N calling this sta. 00: At 466.30 ft. N set hub: At 684 N enter slough: At 820 N leave same: At 974.40 ft. N set hub: At 1065 N enter creek bottom: At 1115 N small creek: At 1175 leave bottom: At 1380 cross old wagon road: At 1651.70 ft. N set hub: At 2141.10 N set hub: At 2647 ft. N the cor to secs 7, 8, 17 & 18, T. 137, Rg. 30 sets W 43 feet. At this point we find a stake set by Curo for the true corner where U. S. notes call for a post and the following bearing trees:

Nor. pine 20" N 41° 30' W, 22 lbs = 14.52 ft. in sec. 7.

Nor. pine 10" N 15° E, 26 lbs = 17.16 feet in sec 8

Nor. pine 6" S 66° W, 50 lbs = 33.00 feet in sec 18

Nor. pine 14" S 49° 30' E, 40 lbs = 26.40 feet in sec 17.

The old B. Ts still there and I drive a post for the true corner.

Correcting the line bet secs 17 & 18, the sine of the N half of the line equals .0035512 of a foot W for each foot N, thence W 33.60 feet to the true line. Hub 2141.10 N goes W 41.20 ft; Hub 1651.70 N goes W 39.46 feet; At 974.40 N goes W 37.06 feet; Hub 466.30 N goes W 35.25 ft. Correcting the S half mile bet secs 17 & 18. The correction equals .012851 of a foot W for each foot N; Hub 2201 N goes W 28.29 ft; Hub 999 N goes W 12.84 ft; Hub 330.50 ft. N goes W 4.25 ft.

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We start for Anderson's place and leave outfit at the SE cor sec 20, where we will begin survey in the morning. Quit for night. E. B. Horst

May 9, 1916. Tuesday. E. B. Horst transit and chain. Pete Anderson chain. Ole Hoplin and John Johnson Axemen. Beginning at the cor to secs 20, 21, 28 & 29, T. 137, Rg. 30, being an iron monument previously established for said corner, we begin random line on road route, road to run W to Twp. line, a distance of two miles from above corner. Run W at $9^{\circ}30'$ Var. At 500 ft W set hub; At 650 W enter tank swamp; At 1000 W set hub; At 1425 leave swamp; At 1500 set hub; At 1697 set hub; At 2400 set hub; At 2734.70 ft. W set hub; At 3714.50 ft. set hub; At 4000 W set stake marked "40"; At 4450 W set hub; At 4870 cross small creek; At 5252.40 ft. W set hub; We look for the cor to secs 19, 20, 29 & 30, T. 137, Rg. 30, where notes call for post and:

Nov. pine 17" N 50° E, 26 lbs. ; W.P. 8 inch N 42° W, 120 lbs.

Nov. pine 18" S 76° W, 190 lbs. ; Nov. pine 20 inch, S $31^{\circ}30'$ E 70 lbs.

We look for bearing trees in this vicinity but everything is burnt out and we continue random line west bet secs 19 & 30; At 5439.50 ft. W set hub; At 5850.40 W set hub; At 5950 enter field; At 7000 set hub, leave field; At 7275 enter swamp; At 7325 leave same; At 7500 enter swamp; At 7565 leave same; Strong wind with a little rain. Quit for night. E. B. Horst.

May 10, 1916. Wednesday. E. B. Horst and same crew continue random line W from hub 7000; At 7871 ft. W set hub; At 7920 cross wire fence; At 9240 enter field; At 9800 set hub, leave field; At 9900 enter field; At 10360 ft. W leave field; At 10606 ft. W set hub from which the sec cor sets N 112 feet; At this point being the cor to secs 19 & 30, T. 137, Rg. 30, which is also the cor to secs 24 & 25, T. 137, Rg. 31. We find a stake used by A. W. Moulster set from settlers evidence for the true corner, where U. S. notes call for:

Blk pine 12" N 16° W, 282 lbs in sec 24; Asp 12" S 23° W, 155 lbs in sec 25

Aspen 10 inch, S 69° E, 57 lbs in sec 30. All are gone, except the old cor post.

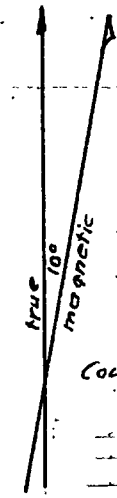
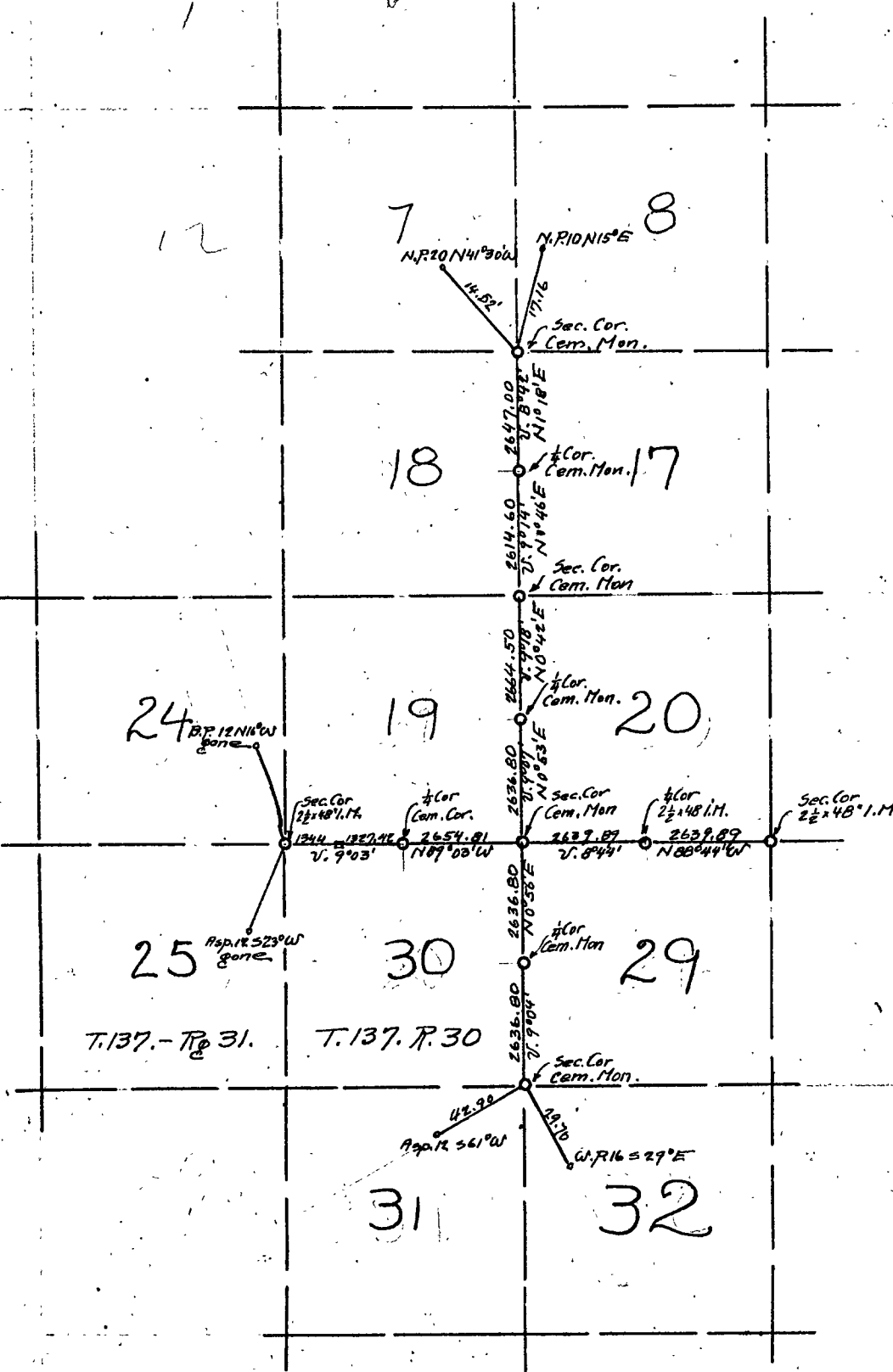
To locate the corner of secs 19, 20, 29 & 30, we go to the cor to secs 29, 30, 31 & 32, T. 137, Rg. 30, set from old Golt bearing trees in each section and run N on $8^{\circ}30'$ Var. E. In P. M. Mr. A. J. Bark joins crew.

At 158.60 ft. N set hub; At 500 N enter swamp; At 650 leave same; At 934 N set hub; At 1422.40 N set hub; At 2524.50 ft. set hub; At 3106 set hub; At 3262.50 ft. N set hub, from station 38 to 39 small ravine E & W; At 4000 N set hub; At 4223 N cross creek 5 ft. wide; At 5152 ft. N set hub; At 5203 ft. N intersect E and W random line at station 5228 ft. west. The SE angle of the random lines reads $90^{\circ}30'$. Continue line N bet secs 19 & 20, about $\frac{1}{2}$ mile and quit for night. High winds and clouds of dust with a little rain and hail. E. B. Horst.

May 11, 1916. Thursday. E. B. Horst and same crew continue N bet secs 19 & 20, T. 137, Rg. 30, from station 5203 N; At 5731.80 ft. N set hub; At 6000 N center of road NE and SW; At 6022.60 ft. N set hub; At 6492.80 N set hub; At 6605 N cross creek 3 ft. wide.

PLAT

TWP. 137-RG. 30-SEC'S. 7-8-17-18-19-20-29-30-31-32
TWP. 137-RG. 31-SEC'S. 24-25



Courses turned from true meridian

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B

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At 7166 N set hub: At 7428.50 ft. N set hub: At 8300 N set hub: House on line, offset E 15 feet: At 8492.80 ft. N set hub; At 8992.30 ft. N set hub: At 9958. set. Hub: 5 offset W and continue N. At 10574.50 ft. N set hub; from which the cor. to secs 17, 18, 19 & 20, set W 117.50 ft. Quit for dinner. Ole Hoplin leaves crew. In P.M. I find a stone mound and stumps of the U.S. bearing trees at the $\frac{1}{4}$ cor bet secs 19 & 20, T. 137, Rg. 30, where U.S. notes call for a post and: Nor. pine 8" N 74° E, 35 lbs. Nor. pine 12" N $52^{\circ}30'$ W 44 lbs. I set $\frac{1}{4}$ corner from the above trees which checks for course and distance with the stone mound. This $\frac{1}{4}$ cor sets W of random line at station 7910 N. The North half mile bet 19 & 20 is 2664.50 feet and the South half mile bet secs 19 & 20 is 2636.80 feet. The North half is bushed out and used for a road. I figure correction which equals .010706 of a foot West for the South half and set road centers. .010706 equals tangent of $00^{\circ}37'$. Hub 7428.50 ft. N goes W 74.84 ft. The South $\frac{1}{16}$ cor bet secs 19 & 20, at 6592 ft. N goes W 65.88 ft. Hub 5731.80 ft. N goes W 65.67 feet. The cor. to secs 19, 20, 29 & 30, station 5273.60 N and 5279.77 feet W sets W of P.I. hub, 51.77 ft. and N of P.I. hub 70.60 ft. I drive a new post a above point for the true section corner. The take crew W on random bet 19 & 30, and begin at W end of line and set road centers on true sec line. The correction equals .00777 = tangent of $00^{\circ}27'$. Hub 9800 ft. W goes N 105.72 ft. Hub 9262 W goes N 101.54 ft. to the W $\frac{1}{16}$ corner bet secs 19 & 30. One foot U.S. Chain = 1.005613 ft. My chain. At Sta. 7934.58 ft. W goes N 91.23 ft. for the true $\frac{1}{4}$ corner bet secs 19 & 30. Hub 7000 W goes N 83.96 ft. Hub 5850.40 W goes N 75.03 ft. High winds all day. Quit for night. E. B. Horst.

May 12, 1916. Friday. Cool and windy. E. B. Horst transit and chain. Pete Anderson flag and chain. John Bark and John Johnson axemen. We begin at the cor. to secs 19, 20, 29 & 30, T. 137, Rg. 30 and correct random line back bet secs 20 & 29, correction equals .0133717 and one foot U.S. Chain = 1.005613 ft. My chain. Hub 4450 W goes N 59.50 feet. Hub 2734.70 W goes N 36.57 feet: At 2639.885 W goes N 35.30 ft. to the $\frac{1}{4}$ corner bet secs 20 & 29. Hub 2400 W goes N 32.09 feet: Stake 1500 W goes N 20.06 feet: Hub 1319.94 W goes N 17.65 feet to the E $\frac{1}{16}$ cor bet secs 20 & 29. Hub 500 W goes N 6.68 feet.

We return to hub 4000 ft. N on N & S random line bet secs 29 & 30 and set road centers on true line. Correction = .0098168, tangent = $00^{\circ}34'$. Hub 4000 ft. N goes W 39.27 ft: Hub 3262.50 N goes W 32.03 feet: Hub 2636.80 ft. N goes W 25.885 ft. to the true $\frac{1}{4}$ cor bet secs 29 & 30: Hub 1422.40 ft. N goes W 13.96 ft. Quit for dinner. In P.M. Mr. John Bark brings team and wagon with tools, cement and sand to make permanent sec cors. We make them eight inches in diameter by 3 ft. long putting a four inch spike in the center of the top. Beginning at the cor. to secs 29, 30, 31 & 32, T. 137, R. 30, we set a cement corner and we also set cement corners at the following places:

the 1/4 cor bet secs 29 & 30, and we set a cement cor at the cor to secs 19, 20, 29 & 30, and a cement cor. at the 1/4 cor bet secs 19 & 20, and a cement post at the cor to secs 17, 18, 19 & 20, and a cement cor. at the 1/4 cor bet secs 17 & 18, and we set a cement post at the cor to secs 7, 8, 17 & 18, all in T. 137, Rg. 30. Returning 5 we set a cement 1/4 cor bet secs 19 & 30, and we set an iron corner at the cor to secs 19, 24, 25 & 30, on the range line bet Twp 137 N bet Rgs 30 & 31 W, being a 2x48" iron monument for the true sec. cor. We also set an iron monument at the 1/4 cor bet secs 20 & 29, T. 137, Rg. 30, being a 2x48" iron. It is impossible to drive to this place with team. This concludes the survey for Walden Township, all corners being in Twp. 137, N Rg. 30 & 31 W.

E. B. Horst

May 13, 1916. Saturday; Peter O. M. Anderson with team takes me and survey instruments to Pine River. Begins to rain at 10:30 A. M. Take dinner at Travers Hotel, 25 cents. Take 3:44 P. M. Train to Walker. Supper and over night with J. W. Curo.

E. B. Horst.

Surveyed May 7 to May 13, 1916.
Recorded Jan. 1917.

County Surveyor
Cass County, Minnesota.

137-30
NOTES

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B

SURVEY RECORD NO 321

\$7.05

Field notes of the survey of wagon roads and the finding of old York corners and bearing trees and the establishment of new posts and new bearing trees in sections 3, 4, 5, 7, 8, 9, 10 & 17, Township 140, Range 25, as surveyed by Guy A. Todd.

Wednesday May 13, 1914. I leave Walker for Bemidji at 3 o'clock A.M. Arrive at Bemidji at 4:30 A.M. R.R. fare 65 cents. Breakfast in Bemidji 25 cents. Leave Bemidji for Shovel Lake at 10 o'clock A.M. Get off Pine Tree Spurr. R.R. fare \$1.36. Dinner at Remer 15 cents. Walk out to Con Metzger's place with the outfit. Arrive at 4 o'clock and take a walk up the road which is being cut out by Metzger and Hawk. Supper and over night at Metzger.

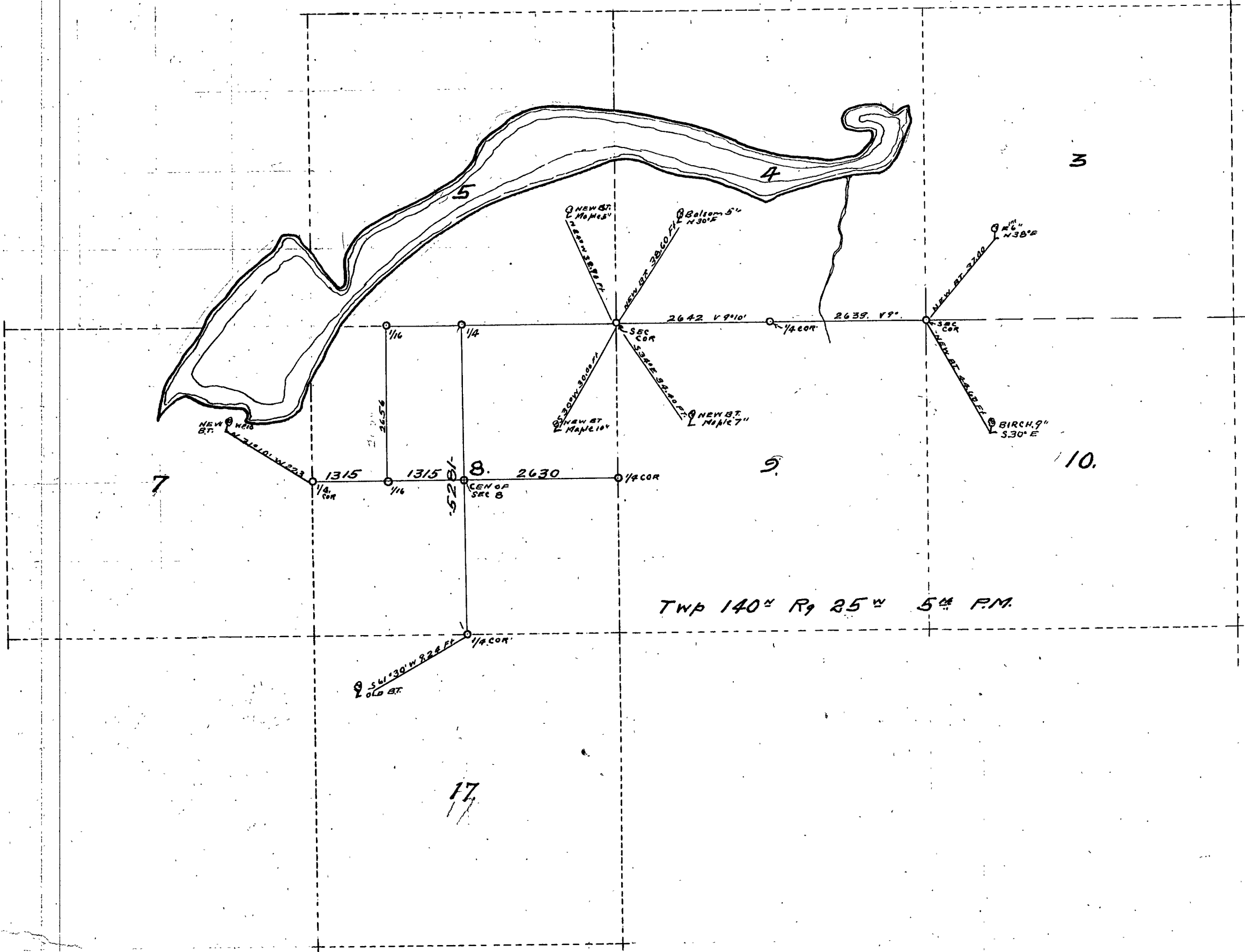
Thursday May 14, 1914. I go to the $\frac{1}{4}$ cor on the N side of sec 8, bet secs 5 & 8, T. 140, Rg. 25, set by Harry S. Todd in 1912 and check up corner on Todd's new bearing trees as Metzger says the stake had fell down a couple of times and Metzger had set it up again. I set corner again after which it stands perfect for course and distance, then start a com-line South on 8° Variation thru the center of sec 8: I offset East 8 feet to get around Metzger's farm; James O. Hawk and Adolph Metzger Axemen. Metzger and I chaining rough with a 100 foot Monarch steel tape and put in a stake every 100 feet. At 578.20 ft S set hub and back set 8 feet W to true random line. At 1320 temporary $\frac{1}{16}$ corner. A squared up Jack Pine tree for the $\frac{1}{16}$ cor set by some Cruiser sets E about 8 feet and S about 10 feet. Continue South, setting stakes about every 100 ft: At 2450 cross wire fence E & W: At 2620 ft S we are on old E & W blazed line and I am following a N & S blazed line, S on my compass line: At 2640 S temp. $\frac{1}{4}$ cor. in center of sec 8, T. 140, Rg. 25. At 2950 enter small plough bears E & NW: At 3025 leave same: At 3100 set stake and quit for night. James Hawk, Adolph Metzger and I got in one day for Cass County. Breakfast, dinner and supper and over night with Con Metzger. Guy A. Todd.

Friday May 15, 1914. Beginning at stake 3100 S I continue compass line S thru sec 8, T. 140, Rg. 25, Hawk and Metzger Axemen. Metzger and I chain, 100 foot Monarch steel tape and Hurley Compass: At 3960 S temp. $\frac{1}{16}$ cor: At 5200 set stake, we are at the $\frac{1}{4}$ cor on S side of sec 8, bet secs 8 & 17, T. 140, Rg. 25, where U.S. notes call for a stake and the following B.T.s.
W. Pine 5 inch, N $39^{\circ}30'$ W, 7 links = 4.62 feet.
W. pine 8 inch S $61^{\circ}30'$ W, 14 links = 9.24 feet.

We find both trees standing and plainly marked, the NW. wh. pine is standing green and the S.W. tree is a dead stub in sec 17. We set the $\frac{1}{4}$ cor bet secs 8 & 17, T. 140, Rg. 25 from the face of the old B.T. marks and drive a 4x4x36 inch Elin stake after which the trees stand perfect for course and measurement. I find at 5281 ft. S the $\frac{1}{4}$ cor sets E 3 feet.

Correcting back: 3960 goes S 9 inches and E 27 inches. 2640 goes S 6 inches and E 18 inches. 1320 goes S 3 inches and E 9 inches. At 3960 S

14



TWP 140^N R₂₅ W 5th P.M.

17

we check over and drive a 2x2x36" poplar stake for the temp. $\frac{1}{16}$ cor and put in the following bearing trees:
 W. pine 10 inch N $36^{\circ}45'W$, 13.55 ft.: W.P. 8 inch, S $76^{\circ}W$, 13.50 feet.
 We go to 2640 S and correct over and drive a stake for the temp. $\frac{1}{4}$ cor in the center of sec 8, T.140, Rg. 25: as I would have to run E + W center line of sec 8 to get the true center, I set this cor. temporarily. We go to the 1320 S and correct over and drive a 2x2x36" poplar stake for the temp. $\frac{1}{16}$ cor. in center of N half of sec 8 and put in the following B.T.s:

W. Pine 8 inch, N $62^{\circ}15'E$, 22.85 feet: W. pine 7 inch, S $54^{\circ}E$, 13.75 feet.
 Quit for night. Breakfast, dinner, supper and over night with Con Metzger. Corner set a 8° Var. E.

Saturday May 16, 1914. James Hawk and Adolph Metzger and Guy A. Todd go to the temp. $\frac{1}{4}$ cor. in the center of sec 8, T.140, Rg. 25, and run a compass line W on 8° Var. E. I run compass, Hawk and Metzger chain rough with 100 foot Monarch steel tape. Chain 2700 ft. W and look for the $\frac{1}{4}$ cor W side of sec 8, bet secs 7+8, T.140, Rg. 25, where U.S. notes call for a stake and the following B.T.s:
 W. pine 5 inch N $31^{\circ}E$, 11 links = 7.26 feet: Birch 8 inch, S 51° or $57^{\circ}W$, 9 lks = 5.90 feet.
 We find the NE, W.P. standing green and plainly marked and the rotted stump of the SW Birch lying on the ground in sec 7. We set the corner by flat measurement from old B.T.s. and drive a 4x4x48" dry W. Pine stake solid in the ground after which the old trees stand perfect for course and measurement.

We put in new bearings as follows:

W.P. 10" N $31^{\circ}E$, 7.26 ft. in sec 8. (old U.S. tree): W.P. 10" N $31^{\circ}10'W$, 22.30 ft. in sec 7, to flat spot at base of trees. Corner set at 8° Var. E. I then start a compass line E thru center of sec 8, T.140, Rg. 25 on 8° Var. E. Metzger and Hawk Axemen. Metzger and Todd chaining, setting stakes every 100 feet, using 100 foot Monarch steel tape: At 1320 feet E set temp. $\frac{1}{16}$ cor in center of W half of sec 8. Hubs are as follows: 201.10 E hub: 380.60 E hub: 658.70 E hub: 806.80 hub: 1077.20 E hub: 1215.50 feet E set hub: Quit for night. Breakfast, dinner, supper and over night with Con Metzger. Guy A. Todd.

May 17, 1914. A Metzger, J. Hawk and I go to hub 1320 E on compass line running E from $\frac{1}{4}$ cor on W side of sec 8, T.140, Rg. 25 and continue line E on 8° Var. Hawk and I chain, 100 foot Monarch steel tape and Hurley compass. Metzger and Hawk Axemen: At 1400 feet E set stake: At 1464 E set hub: At 1652.45 E set hub: At 1810 E set hub: At 2059.10 E set hub: At 2216.20 ft. E set hub: At 2410.70 E set hub: At 2532.40 E set hub: At 2639.40 ft. E set hub, in center of my old N+S compass line running S thru center of sec 8, and quit for dinner. Adolph Metzger does not work in P.M. James Hawk and I continue to cut compass line East all P.M. We do not chain. Adolph Metzger gets in $\frac{1}{2}$ day. Hawk and Todd full day for Cass County. Quit for night. Breakfast, dinner, supper and over night with Con Metzger. Big fires going thru the woods all day. Guy A. Todd.

May 18, 1914. Adolph Metzger and J. Hawk and I go to hub 2639.40 E on my compass line running E thru center of sec 8, T.140, Rg. 25, and chain E, 100 foot Monarch steel tape: At 2772.70 E set hub: At 2887. E set hub: At 3019.30 E set hub: At 3158.70 E set hub: At 3267.30 E set hub: At 3435.70 E hub: At 3528.20 E set hub: @ 3600 set stake and enter small

open bog, NE + SW: At 365.0 leave same: At 3798 set hub: At 3960 set temp.
 1/6 cor near center of E half of sec 8: At 4196 E set hub: At 4374 E set hub:
 At 5260 E the 1/4 corner on E side of sec 8 bet sec 8+9, T.140, Rg. 25 set N 30.5 feet.
 This 1/4 corner has been set by a Mr. Watson, County Surveyor of Aitkin
 County and new bearings put in by him. I can find no trace of the old U.S.
 Bearing trees that Goit notes say are:

Birch 10" S 11° W, 10 links: Birch 6" N 11° E, 38 links.

So I use this corner and check over my line with it. Correcting back: Hub
 2640 E goes N 152.50 feet and W 10 feet. We check this over and at the inter-
 section of the E+W corrected line and the N+S corrected line, I drive a
 4x4x48" dry W Pine stake for the true 1/4 cor in the center of sec 8, T.140, Rg
 25, with new bearings as follows:

W.P. 6 inch, N 13° W, 19.40 feet to flat spot at base of tree.

Birch 6 inch S 61° W, 6.90 ft. to flat spot at base of tree.

Hub 1320 E goes N 76.25 feet and W 5 feet, where I drive a 3x3x24" Ironwood
 stake for the true 1/16 corner in the center of the W half of sec 8, with new
 bearings as follows:

W. Pine 6 inch, N 69° 30' E, 33.80 feet:

Spruce 10" S 41° E, 40.10 ft. to flat spot at base of trees.

I then start a compass line N on 9° Var. thru the center of the NW quarter of sec 8
 and continue N the rest of P.M. quit for night. Breakfast, dinner, supper and
 over night with Con Metzger. Guy A. Todd.

Tuesday May 19, 1914. James Hawk and Adolph Metzger and I working.
 Beginning at 1/16 cor established by me yesterday in the center of the W half of
 sec 8, T.140, Rg. 25, we chain N: At 120.30 N set hub: At 270.60 N set hub: At
 465.60 N set hub: At 589.60 ft. N set hub: At 752. N set hub: At 910.80 N set
 hub: At 1043.80 N set hub: At 1188 N set hub: At 1282.30 N set hub: At 1407.35
 N set hub: At 1585.50 N set hub: At 1736.85 N set hub: At 1796.35 N set hub:
 At 1915 N set hub: At 2032.70 ft. N set hub: At 2182.40 N set hub: At 2317 N set
 hub: At 2506.50 N set hub: At 2656 N the true 1/16 cor being the W 1/16 cor bet
 secs 5+8, sets E 122 feet. Correcting back: Hub 120.30 N goes E 5.52 feet: Hub
 270.60 N goes E 12.92 feet: Hub 465.60 N goes E 21.37 ft. Hub 589.60 N goes E 27.06 ft:
 Hub 752 N goes E 34.50 ft: Hub 910.80 N goes E 41.80 ft: Hub 1043.80 N goes E 47.91
 ft: Hub 1188 N goes E 54.53 ft: Hub 1282.30 N goes E 58.86 ft: Hub 1407.35 N goes
 E 64.60 ft: Hub 1585.50 N goes E 72.77 feet: Hub 1736.85 N goes E 79.12 ft: Hub
 1796.35 N goes E 82.40 feet: Hub 1915 N goes E 87.90 ft: Hub 2032.70 N goes E 94.22
 ft: Hub 2182.40 N goes E 100.27 feet: Hub 2317 N goes E 106.35 ft: Hub 2506.50
 ft. N goes E 115.04 ft: Hub 2656 N goes E 122 ft: Where we check over all
 hubs to correct line and drive hubs and put in 5 foot stakes at each hub
 marked "Road Center". Set each corrected hub to cut-out line by. Adolph
 Metzger, James Hawk and I working. Quit for night. Breakfast, dinner, supper
 and over night with Con Metzger. Guy A. Todd.

May 20, 1914. Wednesday. Adolph Metzger, Lawrence Hawk and I go to the
 cor of secs 4, 5, 8+9, T.140, Rg. 25, where U.S. notes call for a post and:

B. Oak 5 inch, N 71° E 25 links: Asp. 10 inch, S 64° E, 35 links.

Asp. 7 inch, S 23° 30' W 20 lks: W.P. 10 inch N 47° W, 23 links.

We find Harry Todd's old stake down, and I re-set the cor. from face of

SURVEY RECORD No 321 (CONTD)

old bearing trees by flat measurement. The NW Wh. pine is standing green and plainly marked. I find the other two Aspens and B. Oak lying on the ground but the B.T.s are still visible. I set the corner on $8^{\circ}30'$ Var. and drive a $3 \times 3 \times 36''$ Maple stake and put in new B.T.s as follows on $8^{\circ}30'$ Var.

Balsam 5" N 30° E, 38.60 feet, in sec 4: Maple 7" S 34° E, 34.40 ft., in sec 9.

Maple 10", S 30° W, 30.00 feet, in sec 8: Maple 5" N 24° W, 32.90 ft., in sec 5,

To nail heads driven in flat spot in base of trees. We then go to the $\frac{1}{4}$ corner on N side of sec 9 bet secs 4 & 9, T. 140, Rg. 25, where U.S. notes say:

W. pine 4 inch, N $79^{\circ}30'$ E, 5 links: W. Birch 6 inch, S $79^{\circ}30'$ W, 34 links.

I find the old 4 inch stub of the NE, Wh. pine plainly marked but the Birch is completely gone, no trace. I set the corner from the NE, Wh. pine by flat measurement from the face of the old B.T. marks and drive a W. pine stake $3 \times 3 \times 36''$ after which the old B.T. stands perfect for course and measurement and I put in new bearings as follows:

W. pine 8 inch, N 38° W, 56.30 ft. distant in sec 4

Birch 8 inch, S 34° W, 38.60 ft. distant in sec 9 to nail heads in flat spot at base of trees. We then go to the cor. of secs 3, 4, 9 & 10, T. 140, Rg. 25,

where U.S. Notes call for stake and:

Tank 8 inch, N 65° E, 25 links: Wh. pine 8 inch, S $65^{\circ}30'$ E, 37 links.

W. pine 9 inch, S 42° W, 16 links: Tank 8 inch, N $28^{\circ}30'$ W, 33 links.

I find the stump of the SE W. pine in sec 10 plainly marked and the stumps with the stubs blown over all with the marks still visible except the SW, Wh. pine. I re-set the cor. as the stake put in by Harry S. Todd has fallen down. I set the cor. by flat measurement from the face of the old B.T.s and put in new bearings as follows:

Elm 6 inch, N 38° E, 37 feet in sec 3: Birch 9 inch, S 30° E 44.60 ft. in sec 10.

I then run a compass line W on $9^{\circ}30'$ E: Adolph Metzger and Lawrence Hawk Axemen. Guy A. Todd Compassman. Metzger and I chaining perfect.

At 200 set stake: At 355.50 W set hub: At 400 stake: At 559.80 set hub:

At 600 & 800 set stake: At 849.30 W set hub: At 1274 set hub: At 1635.80

set hub: At 1800 W cross creek which bears NW & SE. At 2165.70 set hub:

At 2639 ft W the true $\frac{1}{4}$ corner on the N side of sec 9, bet secs 4 & 9, T. 140,

Rg. 25 set by me, sets N 10 feet. Correcting back: Hub 355.50 W goes N

1.33 feet. Hub 559.80 W goes N 2.10 feet: Hub 849.30 W goes N 3.19 feet. Hub

1274 W goes N 4.78 feet. Hub 1635.80 W goes N 6.14 feet. Hub 2165.70 goes N

8.12 feet. Hub 2639.00 W goes N 10.00 feet. I correct all hubs over and drive

a new hub on corrected line and set up 6 foot stake, marked "Road Center"

at corrected hubs. I then begin a new line W bet sec 4 & 9 from the $\frac{1}{4}$ cor

bet secs 4 & 9, T. 140, Rg. 25. I back sight E on my corrected hub and the

Variation reads $9^{\circ}30'$ E. Metzger and I chain W. At 200 and 400 W set stakes:

At 470 W set hub: At 600 & 800 W set stakes: At 893.70 W set hub: At 1341.60

W set hub: At 1400 W set stake and quit for night. Breakfast, dinner,

supper and over night with Con Metzger. Guy A. Todd.

Thursday May 21, 1914. Adolph Metzger, Lawrence Hawk and Guy A. Todd.

We go to hub 1341.60 W of the $\frac{1}{4}$ cor bet secs 4 & 9, T. 140, Rg. 25 on $9^{\circ}30'$ Var. E

Metzger and I chaining perfect: At 1534 set hub: At 1794 ft W set hub:

At 2052 W set hub: At 2213.30 W set hub: At 2397 W set hub: At 2642

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ft. W the true corner to secs 4, 5, 8 & 9, T. 140, Rg. 25, sets S 9 feet. Correcting back:
 Correction equals .003407; Hub 470 W goes S 1.60 feet; Hub 600 W goes S
 2.05. Hub 893.70 W goes S 3.05 ft; Hub 1341.60 W goes S 4.57 ft; Hub
 1534 W goes S 5.23 feet; Hub 1794 W goes S 6.11 ft; Hub 2052 W goes S 6.99
 Hub 2213.30 W goes S 7.54 ft; Hub 2397 W goes S 8.17 feet; Hub 2642 W
 goes S 9.00 feet. We correct hubs over and drive in hubs marked
 "True Road Center" on corrected line. Over night with C. Metzger, Guy A. Todd
 Friday, May 22, 1914. Leave C. R. Metzgers at 10 o'clock A.M. and walk to
 Pine Tree Spurr, where I catch the Soo to Bemidji. R. R. fare \$1.36.
 Dinner 25 cents at camp.

NOTE: Con Metzger says to tell Commissioner Perry that he can not get
 his Road Contract done by the 1st of June. Guy A. Todd.

Surveyed May 13, 1914 to May 22, 1914.
 Recorded 20 Feb, 1917.

County Surveyor.
 Cass County, Minnesota.

Field notes of the survey and the establishment of Road Centers and sections corner posts and the finding of old U.S. B.T.S in Section 6, Township 143, Range 25 & secs 7, 18, 19, 30 & 31, T. 144, Rg. 25 & Sec 1, Twp. 143, Rg. 26, & secs 12, 13, 24, 25 & 36, T. 144, Rg. 26, as surveyed by John W. Curo, County Surveyor of Cass County Minnesota, assisted by Roy E. Bryant, Deputy.

Dec. 24, 1913. John W. Curo working for Cass County on State Road No. 6. All day in office at Walker, writing up field notes, preparing to go to Ball Club, to survey Road and set corners in above townships. Sat up all night to catch early morning train to Bemidji.

Dec. 25, 1913. Thursday. Christmas Day. Leave Walker in company with Frank Paine of Walker at 2:50 A.M. arrive at Bemidji about 4:30 A.M. R.R. fare via M & I 60 cents. Breakfast in Bemidji 50 cents. Leave Bemidji 6:30 A.M. via St. Nor. R.R. arrive at Cass Lake 7:05 A.M. R.R. fare 32 cents. Breakfast and dinner at Cass Lake \$1.00. Leave Cass Lake 12:45 P.M. via St. Nor. R.R. Arrive at Ball Club about 1:45 P.M. R.R. fare Cass Lake to Ball Club 66 cents. I meet Tom Collins and go home with him to SE quarter of SE quarter, sec 25, T. 144, Rg. 26, where we look up sec lines. Over night with Collins. John W. Curo.

Dec. 26, 1913. Friday. Collins and Curo look for hair bearing trees along Todd's cut out line bet Twp. 144, Rg. 25 & 26. We correct up half a mile of line and set red flags on true line along E side of NE quarter of sec 24, T. 144, Rg. 26, being the W side of NW quarter of sec 19, T. 144, Rg. 25. We set good plain stakes with red flags to mark the true range line. Corrected as per Schedule as follows:

At a point on the old transit line 5292.50 ft. south of the cor to secs 13, 18, 19 & 24, the cor to secs 19, 24, 25 & 30, sets W 33.70 feet. The correction equals .0063675 of a foot W for each foot South. At 1308.25 S run W 8.30 feet and set red flag on true range line. At 1599 feet S run W 10.19 feet and set red flag on range line bet secs 19 & 24. At 1848 S run W 11.78 feet and set red flag on true range line. At 2116 S run W 13.47 feet and set red flag. At 2640 S run W 16.81 and set red flag on true range line bet secs 19 & 24, T. 144, Rg. 25 & 26. The red flags mark the center line of the New State Road No. 6. Quit for night. Over night with Tom Collins. John W. Curo.

Dec. 27, 1913. Saturday. Aloy Perrison, August Bowman, Tom Collins and John W. Curo go over line along E side of sec 24, T. 144, Rg. 26, Curo and Collins go N. to 1/4 cor. on E side of sec 12, T. 144, Rg. 26, being the 1/4 corner on W side of sec 7, T. 144, Rg. 25, where U.S. notes call for post and:

Blk Ash 8" N 16° E, 40 lbs = 26.40 feet: Blk. Ash 10" N, 9° W, 41 lbs = 27.06 feet
We find both old bearing trees standing plainly marked. Dinner at Ball Club 35 cents. I pay Collins \$1.75 full for board and take

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1:30 P.M. train, west. Arrive at Bemidji at 3:00 o'clock P.M. R.R. fare 98 cents. Lunch at Bemidji 50 cents. Dinner at 11:30 P.M. 50 cents. Leave Bemidji for Walker via M & I. R.R. 11:40 P.M. R.R. fare 60 cents.

Dec. 28, 1913. Arrive at Walker at 2: A.M. Sleep until noon and in P.M. work on notes to see that my corrections are correct. All day in office at Walker.

Jan 28, 1914. Wednesday. It has been a month since I left Ball Club and I am still working on State Road No. 6 on range line bet T. 144, Rps 25 & 26, working for Cass County. I copy some notes I must have as the U.S. notes do not check and take train to Cass Lake via St. Nor. R.R. Bus at Walker 25 cents. R.R. fare to Cass Lake 44 cents.

Supper at home. Lunch in Cass Lake 40¢. Over night at Endion Hotel.

Thursday Jan. 29, 1914. Blizzard. N.W. wind. 10° below zero. Breakfast and dinner at Cass Lake. Waiting for St. Nor train to Ball Club. P.M. I pay Endion Hotel \$1.50 in full and take 12:30 P.M. train to Ball Club. R.R. fare 66 cents. Leave suit case with Frank Paine, Merchant and walk out part way with George Godfrey & John Bertils. We examine a new corner set at the corner to secs 7, 12, 13 & 18, T. 144, Rps 25 & 26. The corner is dated Jan. 5, 1914 and we find it marked wrong.

Supper and over night with Aloy Perrson and August Bowman.

Road Contractors in camp on SE quarter of SE quarter sec 24, T. 144, Rq. 26.

Robert Karkemo, a young fellow, is also with Bowman & Perrson.

Jan 30, 1914. Wind has gone down, cold 10° below. John W. Curo Hurley Compass and 100 foot chain. Bowman, Perrson and Karkemo working. Karkemo goes to Ball Club for mail and a letter to Commissioner Swanberg, as Perrson has written to Swanberg to send up a Surveyor to finish the survey. We send him a letter announcing, Curo is here. We finish correcting the line bet secs 19 & 24, T. 144, Rps 25 & 26. Random Hub 3126.00 S goes W 19.90 feet. Hub 3707.605 goes W 23.61 feet. Hub 4200.5 goes W 26.74 ft. Hub 4432.5 goes W 28.22 feet. Hub 5003.30 S goes W 31.85 feet. At 5292.50 S the cor to secs 19, 24, 25 & 30 sets W 33.70 ft. Red flag set at all corrected stations and nailed up with braces set by Curo Perrson and Bowman and Karkemo. New bearing trees at the cor of 19, 24, 25 & 30, are: Balsom 9" S 30° W, 44.90 ft. Cedar 9" S 60° E, 34.80 feet.

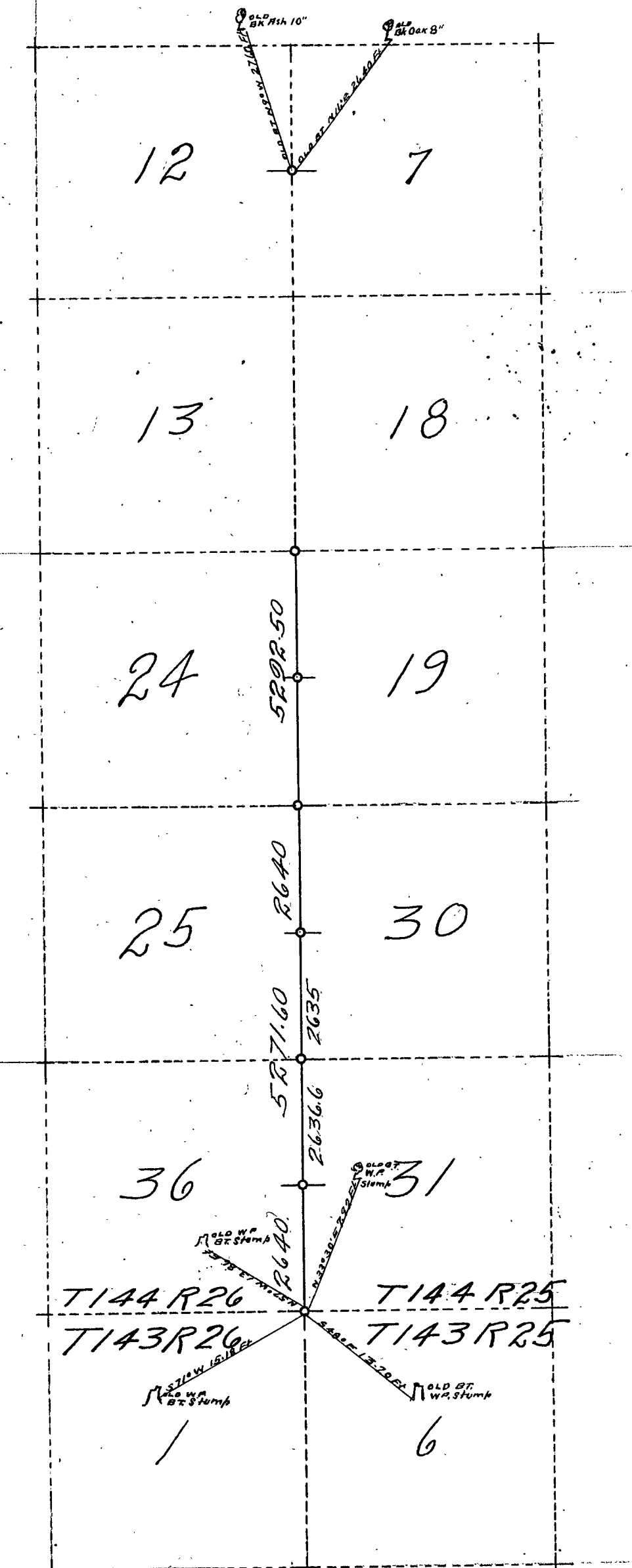
In P.M. we correct the E side of the NE quarter of sec 25, being the W. side of the NW quarter of sec 30, T. 144, Rq. 25 & 26. At 2640 ft. S the 1/4 cor bet 25 & 30 sets E 130.50 ft. The correction equals .04944 of a foot E for each foot S. At station 00 red flag set at the cor to secs 19, 24, 25 & 30. At 100 feet S chain E 5 ft and set stake. At 200 ft. S chain E 10 ft. and set stake. At 300 ft. S chain E 15 ft. and set stake. At 400 ft. S chain E 20 ft. and set stake. At 500 ft. S chain E 25 ft. and set stake. At 900 ft. S chain E 44.50 ft. and set red flag. At 1389.50 ft. S chain E 68.72 ft. and set red flag. At 1835.30 ft. S chain E 90.74 ft. and set red flag. At 2640 ft. S chain E 130.50 ft. and nail red flag to the old 1/4 sec cor post bet secs 19 & 30, New bearing trees set by Todd called for:

Cedar 12" N 52° 30' E, 42.25 ft. Ash 12", S 70° 26' E, 54.20 feet

We set red flag on line at the places marked and as the ground is frozen we brace them up with 3 braces nailed to flag staff.

B

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We chain $\frac{1}{2}$ a mile further S and find old hubs and tacks set by Todd. Quit for night. Curo, Perrson, Karkens, Bowman get in full day. Over night with Perrson and Bowman. John W. Curo.

Jan. 31, 1914. Saturday. As the true range line is straight from the $\frac{1}{4}$ cor bet secs 25 & 30, to the $\frac{1}{4}$ cor bet secs 31 & 36, T. 144, Rgs 25 & 26, we correct Todd's old transit line as follows: At a point on Todd's old transit line 5271.60 ft. S the $\frac{1}{4}$ cor bet secs 36 & 31 sets W 72.30 ft. The correction equals .01372 of a foot W for each foot S. Station 00 = red flag at $\frac{1}{4}$ cor bet secs 25 & 30. At 100 feet S chain W 1.37 feet and set stake. At 200 S chain W 2.74 ft. and set stake. At 300 ft S chain W 4.11 ft. and set stake. At 400 S chain W 5.50 ft. and set stake. At 500 ft. S chain W 6.85 ft. and set stake. At 900 ft. S chain W 12.35 ft. and set red flag. At 1596.60 S chain W 21.95 ft. and set red flag. At 2237.00 S chain W 30.70 ft. and set red flag. At 2635.00 S chain W 36.15 ft. and set red flag at Todd's old section corner post being the cor to secs 25, 30, 31 & 36, T. 144, Rg. 25 & 26 with new bearing trees as follows:

Cedar 12 inch, N60°W, 18.65 feet:

Cedar 8 inch, N85°E, 22.50 feet.

These bearing trees were set by Todd: At 3897 ft. S we chain W 53.50 ft. and set red flag. At 4273.90 ft. S chain W 58.63 feet set red flag. At 4570.60 ft. S chain W 62.70 ft. and set red flag. At 5271.60 ft. S chain W 72.30 ft. and set red flag and Todd's old $\frac{1}{4}$ corner post bet secs 36 & 31, T. 144, Rg. 25 & 26. As the ground is frozen we set red flag and trace them up with three braces nailed to the flag. Chain S 2640 ft. and look for the Twp. cor to secs 1, 6, 31 & 36, T. 143 & 144, Rgs 25 & 26, but as the snow is deep we can not find anything. Get thru checking at 10 A.M. and walk to camp. Arrive 10:30 A.M. Get early dinner and I pay Olaf Perrson \$2.00 for my two days board in full and take receipt for same. Leave Perrson and Bowman's camp on SE cor sec. 24, T. 144, Rg. 26. At 11:32 A.M. and walk to Ball Club where I arrive at 12:52: P.M. being one hour and 20 minutes. I run half of the time in loose snow, heavy walking. Leave Ball Club at 1:30 P.M. R.R. fare 97 cents. Arrive at Bemidji at 2:45 P.M. Supper at Markham Hotel 50 cents. Leave Bemidji at 11:40 P.M. R.R. fare 62 cents.

Feb. 1, 1914. Arrive home in Walker at 1 A.M. Sleep until noon and then check up my notes to see that they are correct. John W. Curo.

Nov. 24, 1914. Curo and Bryant leave Hackensack on freight train, 7:00 P.M. Arrive at Walker 10:25 P.M. We go to Court-house and get field notes of T. 143 and 144 N. Rgs 25 & 26 West in order to put in the Township corner, and we get Harry Todd's note book. Caught freight train from Walker at 11:00 P.M. and arrive at Bemidji at 12:10 A.M. Train had gone East.

Nov. 25, 1914. Caught train at 12:08 P.M. Arrive Ball Club at 1:38 P.M. Get dinner and walk South to cor of secs 1, 6, 31 & 36, T. 143 & 144 N. Rg. 25 & 26 W being Twp. corner where U.S. notes call for post and the following bearing trees:

W. pine 8" N 33°30'E, 12 lbs = 7.92 ft.; W. pine 10" S 48°E, 20 lbs = 13.20 feet.

W. pine 10" N 57°W, 21 lbs = 13.86 ft.; W. pine 8" S 71°W, 23 lbs = 15.18 feet.

We find a big 6 inch Twp. corner post down but plainly marked and we find the stumps of all four bearing trees from which we

B

SURVEY RECORD No 322 CONT'D

re-set the stakes after which old stumps stand as follows:

Old W. Pine stump $N 33^{\circ} 30' E$ 7.92 ft. in sec 31

Old W. Pine stump $S 48^{\circ} E$, 13.20 ft. in sec 6.

Old W. Pine stump $N 57^{\circ} W$, 13.86 ft. in sec 1

Old W. pine stump $S 71^{\circ} W$, 15.18 ft. in sec 36

At 2640 ft. S rough chain on Todd's old transit line, the Township corner sets W 13.20 ft. The correction back equals .005 of a foot W for each foot S. We correct the $\frac{1}{2}$ mile of line bet the SW quarter of sec 31, and the SE quarter of sec 36, as follows:

Hub 2201 goes W 12.00 ft. Hub 1636.50 S goes W 8.18 ft. Hub 927.20 S goes W 4.64 feet to true line.

Nov. 26, 1914. Finish correcting line and go to Ball Club.

John W. Curo.

Surveyed Dec 24, 1913 to Nov. 26, 1914.

Recorded 21 Feb, 1917.

County Surveyor.
Cass County, Minnesota.

Field notes of the survey of sections 25 and 26, Township 141, N Range 31 W, 5th P.M. as made by John W. Curo, County Surveyor, Cass County Minn., assisted by Harry S. Todd, Deputy.

July 6th 1912. Curo, Todd and Red Mitchell working. At Meander Corner No. 15 on south side of Portage Lake and bet. secs 25 and 26, T. 141, R. 31, U.S. notes call for a post and the following bearing trees:

Jack pine 4 inch, $S 42^{\circ} W$, 15 links = 9.90 feet

Wh. pine 4 inch, $S 20^{\circ} E$, 12 links = 7.92 feet.

We find both old bearing trees plainly marked and we also find a 2x48 inch capped galvanized iron pipe set previously by me in a bed of cement and concrete for the true Meander Corner this pipe sets its full length in a mound of dirt and is the true corner.

At Meander Corner No. 7 on the North side of Ten Mile Lake and between secs 25 & 26, T. 141, R. 31, U.S. notes call for a post and the following bearing trees:

Yellow pine 24 inch, $N 70^{\circ} E$ 61 links = 40.26 feet.

Yellow pine 24 inch, $N 71^{\circ} W$ 9 links = 5.94 feet.

We find the stumps of both old U.S. bearing trees and we also find a 2x48 inch galvanized iron pipe, capped on top and set its full length in a bed of concrete and sand, previously established by me, by flat chain from face of the figures on the old bearing tree stumps.

A tack in one old B.T. stump bears $N 55^{\circ} W$ 5.40 feet. Tack in old B.T. stump bears $N 72^{\circ} 20' E$ 40.26 feet. A new B.T. bears $N 85^{\circ} 20' W$ 39.40 feet distant and a 3 inch oak bears $S 25^{\circ} E$ 6.15 feet distant @ $8^{\circ} 10'$ Var. E.

Todd and Mitchell begin at M.C. No. 15 and run South on $8^{\circ} 10'$ Var. E:

At 88.25 ft. S set hub and tack: At 93 ft S, center of main traveled wagon road, bears E & W: At 206.50 ft. S set hub and tack: At 286 feet

S, set hub & tack: At 300 ft S set pin: At 423.30 ft. S set hub and tack: At 528.90 ft. S set hub and tack: At 592.10 ft. S set hub & tack:

At 600 S set stake in center of main traveled E & W wagon road:

At 637.10 feet South, the iron Meander corner No. 7, sets East 11.75 feet.

July 7th 1912. John W. Curo and Robert E. DeSury go over the same survey with a view of platting it into lots and drive some lot stakes as a preliminary. Beginning at M.C. No. 15, run South 637.35 feet from which point M.C. No. 7 sets East 11.70 feet.

We walk back North to a point on the hill and drive a hub & tack half way between M.C. No. 15 and 7, and on the true line bet same: this hub is 318.65 feet from each Meander post as sets in the center of the proposed street where a 66 foot street is to run East and another 66 foot street is to run N & S. From this hub 318.65 we turn 90° angle to the true N & S section line and run East cutting line and driving hubs: we run 900 feet east and set hubs.

Then to stake out the proposed lots we walk back to hub 318.65 from which we run South along section line, 33 feet and set hub

B

SURVEY RECORD No 323

4 tack, over which we set the K & E transit, turn 90° to the section line and run East: At 33 feet E, set hub & tack for NW Corner of block, 1 + Lot 1. thence East 50 feet to 83 ft. East where we set hub and tack for NW Cor of Lot 2, Blk 1: thence East 50 ft. to 133 ft. E and set hub and tack for NW Cor of Lot 3, Blk 1: thence East 50 feet to 183 ft. East and set hub & tack for NW Cor of Lot 4 Blk 1: thence East 50 feet to 233 ft. East and set hub & tack for NW Cor of Lot 5, Blk 1: thence East 75 feet to 308 ft. East and set hub and tack for NW Cor of Lot 6, Blk 1: thence East 75 feet to 383 feet East and set hub & tack for NE Cor of Lot 6, Blk 1.

Then taking transit to iron M.C. No. 7, I backsight North on true section line, turn 90° angle and run East setting small stakes at the point for each lot line and as the lake shore is a beautiful broad sandy beach, I take measurements from the random right line stakes to the nearest edge of the sand beach but not to the water:

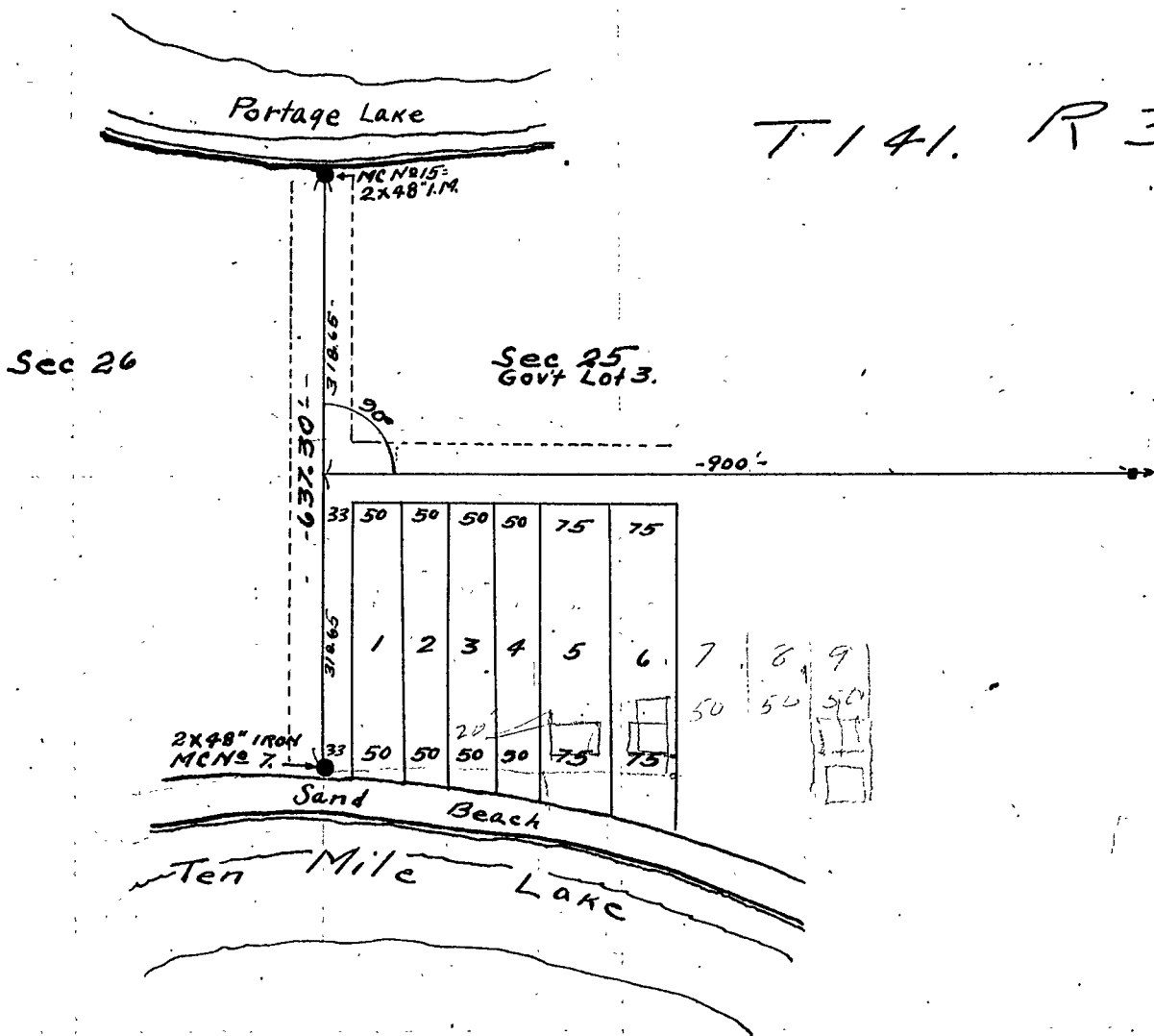
M.C. No. 7 is Sta. 00 and is 12 feet North of edge of sand beach: At 33 ft. East of M.C. No. 7 set stake: thence 50 ft E set stake: thence 50 ft E, set stake: thence 50 ft E set stake: thence 50 ft. E set stake 38 feet North of edge of sand beach: thence 75 ft. E stake: thence 75 ft. E, set stake and quit for night.

Surveyed July 6th & 7th 1912.

Recorded Feb. 28, 1917.

County Surveyor.
Cass County, Minnesota.

T 141. R 31



Field notes of the survey and search for old U.S. bearing trees and establishment of iron monuments in sections 20, 21, 28, 29, Twp 140 N, Range 30 W, 5th P.M. as surveyed by John W. Cervo County Surveyor of Cass County Minnesota, assisted by Harry S. Todd, Deputy.

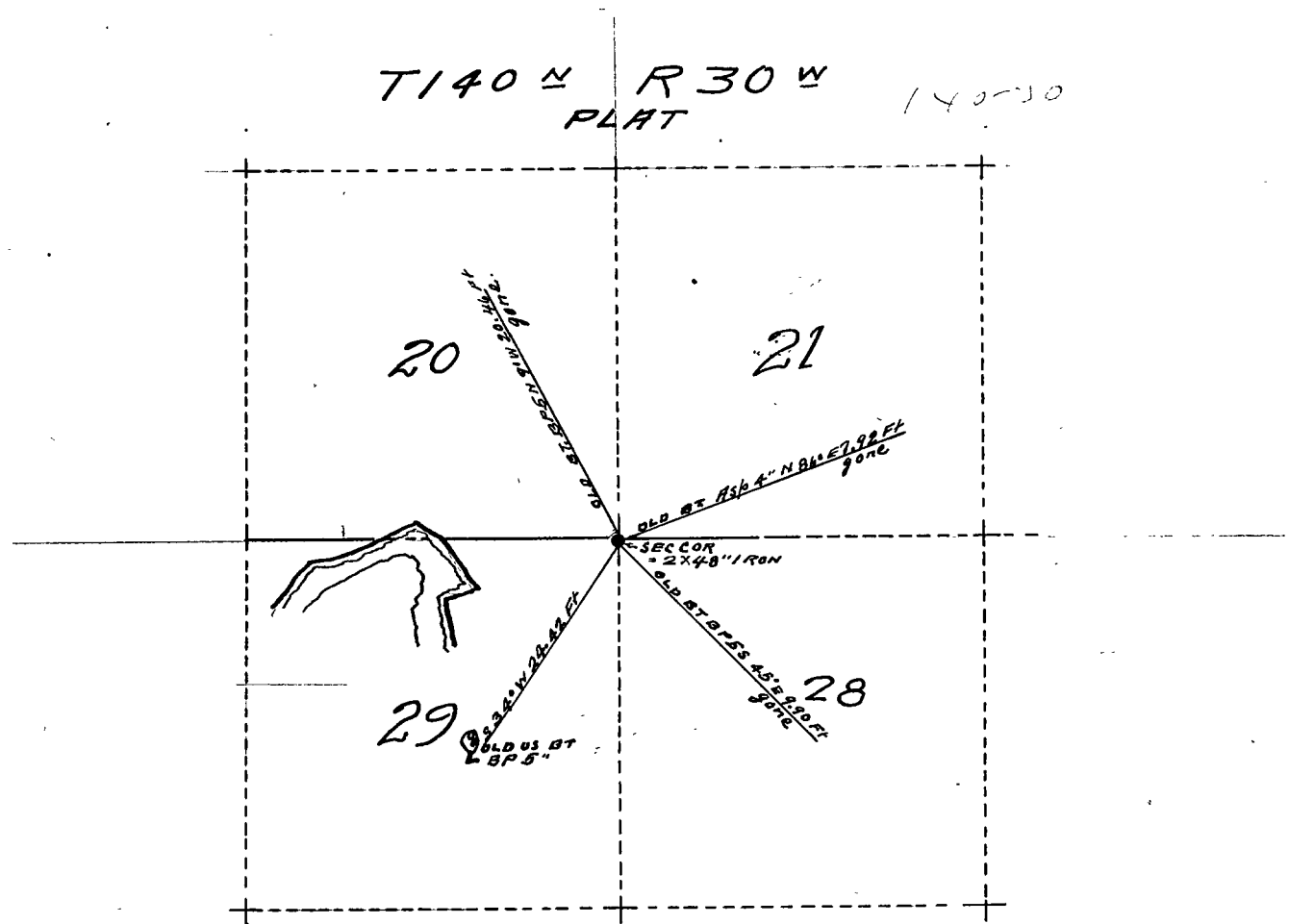
November 2nd, 1911. Harry S. Todd & crew goes to the corner of sections 20, 21, 28, 29, Township 140, Range 30 where U.S. notes call for a post and the following bearing trees:

- Aspen 4 inch, N86°E 12 links = 7.92 feet in sec 21
- Black pine 5 inch, S34°W 37 links = 24.42 feet in sec 29
- Black pine 5 inch, N9°W 31 links = 20.46 feet in sec 20
- Black pine 5 inch, S45°E, 15 links = 9.90 feet in sec 28.

We run the required course and distance in each of the sections and find all U.S. bearing trees gone except the SW tree which is standing plainly marked in section 29, and from this tree I set a 2x48 inch galvanized iron monument capped on top and set nearly its full length in the ground for the true corner to sections 20, 21, 28, 29, Township 140 N, Range 30 W, Cass County, Minnesota, then quit work and take P.M. train to Walker. No cement at corner.

Surveyed Nov. 2, 1911.
Recorded Feb. 28, 1917.

County Surveyor.
Cass County, Minnesota.



Field notes of the survey of several township roads, the establishment of new corners and the search for old U.S. corners and bearing trees and line run in sections 3, 4, 5, 7, 8, 9, 10, 16, 17, 18, 19 & 20, Township 133 N, Rg. 29. W, 5th P.M. and sections 12, 13, 14 & 24, Township 133 N, Range 30. W, 5th P.M. as surveyed by John W. Curo, County Surveyor of Cass County, Minnesota, assisted by Paul R. Boese, Deputy, whose field notes read as follows:

April 9th, 1915. Left Walker for Sylvan Minnesota at 12:20. Slept at Hackensack at Spain's hotel and had breakfast. Left for Sylvan at 10.55 A.M. Arrive at Sylvan at 12:25 P.M. R.R. fare from Walker to Sylvan \$1.46. Received \$5 for expense from J. Curo. Reported to P. Yde who is Chairman of the Town Board. Staid with G. Ramsey, had dinner at Ramsey's heavy rain, no work done to-day.

April 10th 1915. Started work at 7 A.M. assisted by P. Yde and P. Staut, Chairmen and J. Kemp aseman. To run center line of road in Sec 7, Twp 133, Rg. 29. We leave Sylvan at 7 A.M. and go about $\frac{3}{4}$ of a mile East and $\frac{1}{2}$ mile North and find an iron post driven into the ground, which is at the S.W. corner of Sec. 7, T. 133, Rg. 29. From this point I set up with transit and foresight on an iron pipe N of this point. Both of these iron pipes have been set by J. Curo, one at SW corner of sec 7, and one at Meander to the lake at section line North from SW corner of Section, which is a Meander post on Section line between sections 7 & 12, I then chain North from SW corner as above, 1610 feet and put in hub on section line:

Thence we run random line N $29^{\circ}20'E$ and put in hub at Station 4+00, 8+00, 12+00. At 12+60 we run to edge of lake: At 12+00 I produce the line over lake and triangulate: I then go to 30+66.56 and put a hub in 27+92.5 which is a point on the Northerly East and West $\frac{1}{16}$ line in section 7. At the intersection of the random line, said point being 1515.5 feet West of center of North half of section 7. I then make corrections from the random line to the true line; said true line being a point which is 1160 feet West of the center of North half of section 7, T. 133, Rg. 29, on the Northerly $\frac{1}{16}$ E & W line.

Corrections Made as follows: 27+92.5 goes 355.5 ft. East to true line: 12+00 goes 152.82 ft. East to true line: 8+00 goes 101.88 ft. East to true line: 4+00 goes 50.94 ft. East to true line:

NOTE: Center of North half of section 7 and the $\frac{1}{16}$ North on West line of sec 7, T. 133, Rg. 29, have been established with Iron pipe corners, by J. Curo. We then call on Mr. Anderson who is the owner of the property thru which the road runs, to view the road that we have run, but he is not satisfied with it and wishes us to change it. (The road would run thru one end of the lake in the present location.) We then, at his suggestion, run a traverse of the existing road to see if it is

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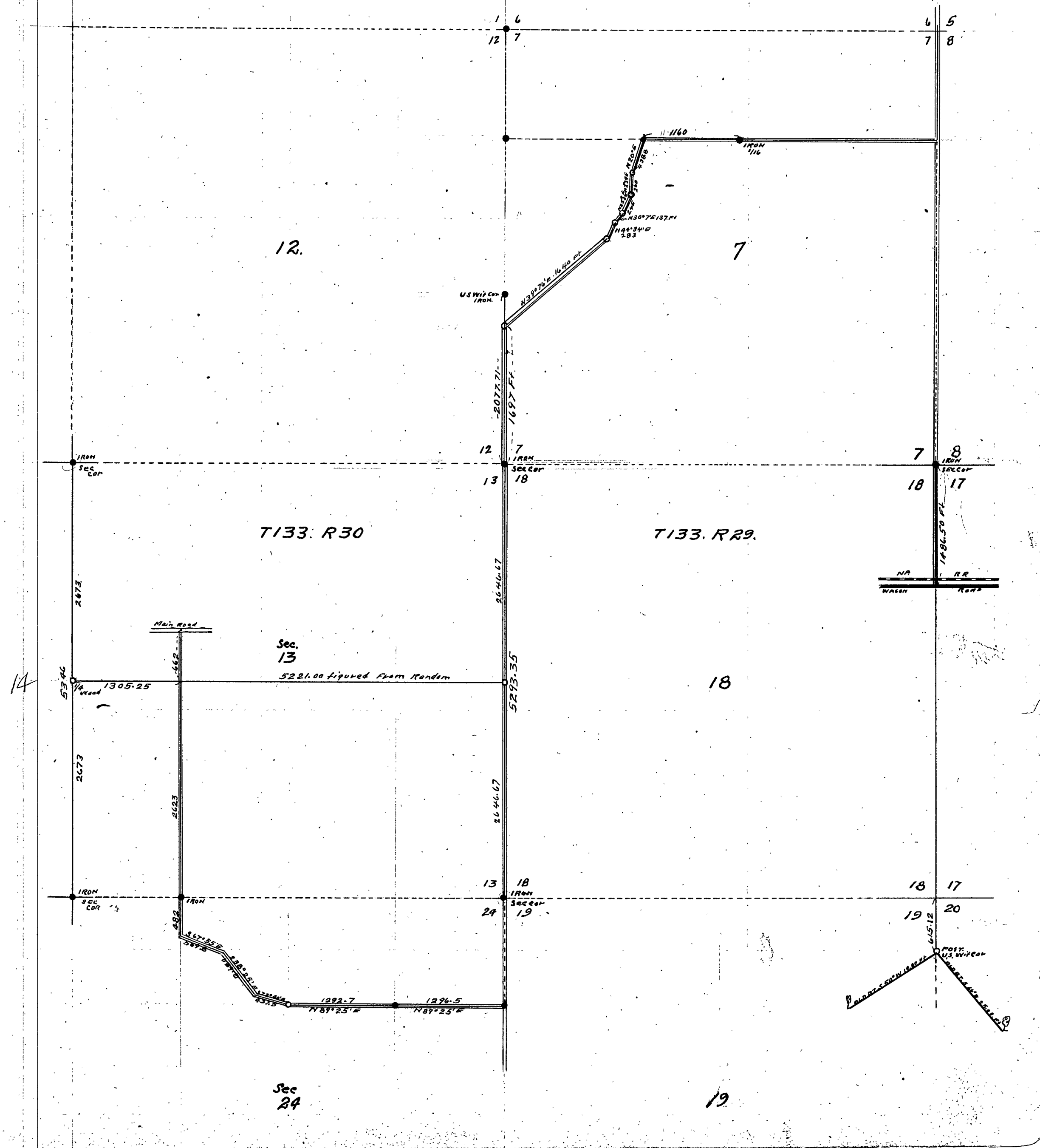
PLAT
325

423

SURVEY RECORD No 325

826.18

PLAT.
T133^N R29-30^W



PLAT
T133ⁿ R29^w

5

4

3

392.3

N0°00'E

N46°20'E
46.20

5303.20

4342.50 FT
4342.50 FT

N50°25'W
465

N87°00'E
200.5

N49°5'E
200.6

S87°48'40"
805.30

2680.54 FT

8

9

10

8

9

9

10

17

16

15

possible to use the same (have dinner at Anderson's house) Notes for traverse are as follows:

Beginning at a point on existing road, 32 feet East of a hub on the original survey, said hub is at the South end of the line which runs North $38^{\circ}07'E$, distance 137 feet: Call this point 0+00: Traverse of existing road in sec (7) T. 133, Rq. 29: 0+00 S $30^{\circ}15'W$ 375.5: From Sta. 375.5 turn $8^{\circ}13'L$ and run S $22^{\circ}02'W$ 658 feet to Sta 10+33.5: thence $7^{\circ}37'L$ being S $14^{\circ}25'W$ run 366.5 ft. to Sta. 14+00: thence $0^{\circ}46'L$ and run S $13^{\circ}39'W$ 200 feet to Sta 16+00: thence $6^{\circ}R$ and run S $19^{\circ}39'W$ 300 ft. to Sta. 19+00: thence $20^{\circ}17'R$ or S $39^{\circ}56'W$ and run 92 feet to Station 19+92 which equals hub on North & South Section line between sections (7) and (12), T. 133, Ranges 29 and 30, being 1610 ft. N of SW Cor. of sec. (7).

Station 0+00 equals random point on existing road, 33 feet East of hub on original survey of proposed road: Hub is at South end of line which runs North $38^{\circ}07'E$ 137 feet. We then go back to Sylvan at 6:15 P.M.: In the evening I make a plan of the existing road, with a projection for a new road as near the existing road as possible.

Signed Paul R. Boese.

Sunday April 11th 1915. No work.

April 12, 1915. Start at 7 A.M. We then show Anderson the plan of projected road: to this projection he is quite agreeable and we run the same for him to see: Herein are the notes for same: Beginning at a point on the Town line bet. T. 133, Rq. 29, Rec (7), and T. 133, Rq. 30, Rec. (12), a distance of 1697 feet North of SW Corner of sec (7): thence N $39^{\circ}26'E$ 1640 feet: thence N $44^{\circ}34'E$ 283 feet to a point, said point is a hub on the original survey as described in the petition for the road, at the South end of line, which is described as being N $38^{\circ}07'E$ 137 feet. From this point we follow the original line of Curo's survey and tie onto hub on East & West $1/16$ line North of section (7) a distance of 1160 feet West of center of N half of said Rec (7) thence follow the original survey as described in petition (old County) Dinner at Anderson's: P. Yde, P. Staub and J. Kemp assist. Finish this work at 12:45 P.M. then went to SE corner of Rec. (7) T. 133, Rq. 29, to run a center line of a road going South from said corner: Arrived there at 2:35 P.M. We find an iron pipe driven into the ground, same was set by J. Curo at previous time for the true Cor. to Recs 7, 8, 17, 18, T. 133, Rq. 29, accompanied by P. Yde, P. Staub & J. Kemp we go S of this point to locate the $1/4$ sec cor on the West side of Rec 17, (between Recs 17 & 18) in the same town and range. We find an iron pipe driven into the ground, but all bearing trees are gone. There are also two wood posts on the fence line which is 22 feet W of above iron pipe: There are no marks on these wood posts of any kind to describe them: One resident named "Phillips" claims that one of them is a post set for the $1/4$ sec. by a Surveyor named "Hallett". We then go South to the section cor of Recs 17, 18, 19 & 20, in same Township. We find that the water has been backed up several feet at this point, forming a large lake: We find two bearing trees described in the U.S. field

Notes E of the Section Corner from which we established a point described as being East of sec cor 17, 18, 19, 20, a distance of 280.5 ft. in U.S. field notes.

We then go South from this point and find one bearing tree which is standing and in good condition. We also find a tree lying on the ground which would answer the description in the U.S. field notes for the second one. Original position would have been checked for course and distance, but all marks have been destroyed by fire and decay. We also find an old post which was set from the bearing trees which is O.K. for bearing and direction and is described in the U.S. field notes as being South of sec cor to 17, 18, 19 & 20, a distance of 615.12 feet. We quit work at 6 P.M. and return to Sylvania. Signed P. R. Boese.

April 13th, 1915. We leave Sylvania at 7:15 A.M. and arrive at Sec Cor of 17, 18, 19, 20, T. 133, R. 29. I set up on post South of 17, 18, 19 & 20 and run a triangulation line over lake in a Northerly direction and put in a hub (the direction of this line is $4^{\circ}55'$ W of North) I then set transit on hub, foresight on point I have left and turn 90° L and put in hub at 200 ft. distant. I then set on this hub, foresight on hub that I left, turn $81^{\circ}10'$ R. and sight post 615.12 S of section corner of 17, 18, 19, 20.

By calculation I find that I am 1286.96 feet from said post South of sec. cor. of secs 17, 18, 19 & 20, at the first hub set from said post. I then set on first hub at 1286.96, backsight on said post South of sec corner and produce line in same direction to station 32+99.1 at this point I turn 90° R. and put in hub which I find to be on the line bet. sec cor of 7, 8, 17, 18, and iron post pipe before described South of 7, 8, 17, 18, which is pointed out to me as being an established $\frac{1}{4}$ sec cor. by local knowledge and is generally accepted as such. There is however, one person here who claims this is not so, he states that a surveyor named "Bob" has disproved this. My informant is named "Phillips" (the surveyor "Bob" is his son). Distance from 32+99.1 to this hub is 213.5 ft. which I calculated should be true line. I then set up on hub 213.5 East from 32+99.1, foresight on 32+99.1 and turn $94^{\circ}55'$ R. and by production of this line I am sighting on sec. cor. 7, 8, 17, 18, but I find there will be many objects in the way of chaining this line, to or from corner of 7, 8, 17, 18, so I set on hub on true line which is 213.5 feet East of 32+99.1 on random line, and sight on the true line. I then turn 90° L and put in hub at 27 feet distant over which I set transit and foresight on sec cor 7, 8, 17, 18, and run to same and chain distance which is 2686.5 feet. I then make corrections to true line at the rate of .01004 of a foot East of random line and I establish the center of the road from section corner 7, 8, 17, 18, South on section line between sections 17 and 18, for a distance of 1486.5 feet to a point in road South of N.P. R.R. track. We finish this at 5 P.M. and return to Sylvania. J. Kemp Axeman. P. Yde and P. Staub
Chaining: Signed P. R. Boese.

April 14th, 1915. Started to run center line of road in sections 13 and 24, T. 133, R. 30, West. P. Yde and P. Staub chaining J. Kemp Axeman: We go to the $\frac{1}{16}$ cor. on the South side of Sec. 13, said corner is the SE cor. of the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of sec 13, (being the West $\frac{1}{16}$ cor. bet. secs 13 & 24,

T. 133, Rg. 30) and we find an iron pipe driven into the ground to mark this $\frac{1}{16}$ cor, said pipe was set at a previous date by J. W. Curo. I set the transit on this $\frac{1}{16}$ and we run North from here on a random line until we intersect the center line of existing road which runs East and West and parallel with the Northern Pacific Railway, a distance of 3285 ft. from the said $\frac{1}{16}$ corner. We then go to the $\frac{1}{4}$ post on the West side of sec. 13, and find it gone, together with its bearing trees which have been cut down and the stumps are gone: there is no $\frac{1}{4}$ post here. We then go to the S. W. corner of sec 13, (being the cor to secs 13, 14, 23, 24, T. 133, Rg. 30) and find an iron pipe which has been set at a previous date by J. W. Curo from which we run random line North (between sections 13 and 14) to the NW corner of sec 13, (being the corner to sections 11, 12, 13, 14, T. 133, Rg. 30) distance on random line is 5346 feet and my random line is 2.8 feet E of the NW cor of sec 13, at which point I find an iron pipe which was set by J. W. Curo at a previous date (for the true sec. corner) I then make a correction to the true line at the $\frac{1}{4}$ post on the West side of sec 13, (being the $\frac{1}{4}$ corner between secs 13+14) moving my random line 1.4 feet west and put in hub to mark $\frac{1}{4}$ section 2673 feet North of SW corner of sec 13, and quit work for the night. Signed Paul R. Boese.

April 15th, 1915. I then run random line from West $\frac{1}{4}$ post to East $\frac{1}{4}$ post of sec 13, and find my random line upon reaching the East line, to be 600.6 feet South of the $\frac{1}{4}$ post and are right angles to my random line. I then check the $\frac{1}{4}$ post, which is a 2 inch hub in the ground but going to the South of section 13, at corner to sections 13, 18, 19 and 24, on range line between Twp. 133, N, Range 29 and 30, W at which point I find an iron pipe driven in the ground by J. W. Curo at a previous date (to mark the true section corner) over which I set the transit and foresight N on iron pipe at N of sec 13, said pipe was set by J. Curo at previous date (to mark the true corner of sections 7, 12, 13+18, T. 133, Rgs 29+30) I then chain the distance between the SE corner of 13, and the NE cor of 13 and find same to be 5293.35 feet. There are no bearing trees to mark the $\frac{1}{4}$ sec on this line, so I take $\frac{1}{2}$ of this distance and check unto the hub at $\frac{1}{4}$ section a distance of 2646.42 ft. from South corner of sec 13, and on the section line. Length of random line 5179.43 feet: I take $\frac{1}{4}$ of this distance which equals 1296.6 feet and correct at this point unto true E & W center line of sec 13, a distance of 150.15 feet North which equals $\frac{1}{16}$ corner in center of West half of section 13, T. 133, Rg. 30. I then find that the random line that I ran from West $\frac{1}{16}$ corner bet. secs 13+24, is East of this point on the $\frac{1}{4}$ line, 2623 South from said $\frac{1}{16}$ corner, 20.62 feet. I make the following corrections: From random North & South from West $\frac{1}{16}$, at station 3+00 = 2.35: At Sta. 6+00 = 4.70: At Sta. 9+00 = 7.05: At 12+00 = 9.40:

At 15+00 = 11.75; At 18+00 = 14.10; At 21+00 = 16.45; At 24+00 = 18.80:
 And produce this true line North, brought to the center of the
 road which runs E & W with the N.P. Ry a distance of 662 feet:
 Total length of road North of $\frac{1}{16}$ corner to point intersecting
 road at N.P. Ry, 5285 feet. We then go South to west $\frac{1}{16}$
 between sections 13 and 24, and produce with transit the road
 which we have run North & South on the same true line for
 a distance of 482 feet, thence S $67^{\circ}55'E$ 569.8 feet; thence S $38^{\circ}25'$
 E 639.8 feet; thence S $72^{\circ}40'E$ 437.5 feet to a two inch hub placed
 near to the center of the North half of section 24, Twp 133, Rq. 30;
 thence we run N $89^{\circ}25'E$ 1292.7 feet and intersect an iron pipe
 driven into the ground that marks position of the center of the
 NE $\frac{1}{4}$ of sec. 24, placed by J.W. Curo at previous date: on the same
 line we run 1296.5 feet and intersect an iron pipe which marks
 the North $\frac{1}{16}$ corner on section line on East side of 24 T. 133, Rq. 30 and
 quit for night. Signed P.R. Baese.

April 16th, 1915. We go to section corner of 8, 9, 16 & 17, T. 133, Rq. 29,
 where we find an old post in the ground: The following U.S. bearing
 trees are called for in the notes:

Red oak 5 inch S $52^{\circ}W$, 17 links:

Black pine 9 inch, S $68^{\circ}30'E$ 50 links.

Black pine 8 inch, N $18^{\circ}30'E$ — no distance given.

Black pine 10 inch, N $48^{\circ}30'W$ — no distance given.

We find the following trees: a red oak stump burned off level
 with the ground, S $52^{\circ}W$ 13.2 feet, all marks are obliterated,

Black pine 9 inch S $68^{\circ}30'E$ 42.7 feet with U.S. marks on same.

Black pine N $18^{\circ}30'E$ with ~~U.S.~~ marks. O.K. We accept the old
post as being O.K. as all three bearings check and distances are close.

This post has been accepted as the original for 25 years, where
I drive a 2 inch iron pipe for the sec cor from which I run N
on a random line, 2651.4 feet. At this point I find an old $\frac{1}{4}$ post
 bet secs 8 & 9, T. 133, Rq. 29, U.S. notes call for a post and the following
 bearing trees: Black pine 14" West 12 links = 7.92 feet.

Black pine 5 inch N $15^{\circ}E$ 44 links: = 29.04 feet.

I find stump 14 inch, 7.9 feet West: stump is burned but there
 are still marks for old U.S. scribes. The "black pine 5" $15^{\circ}E$ 44
 links" is destroyed: there is however an old tree that checks for
 course and distance, but it is blown down and decayed. I re-establish
 the old post and drive an iron spike 3 feet long, for $\frac{1}{4}$ corner bet.
 sections 8 & 9, T. 133, Rq. 29. My random line at 2651.4 N is 4.5 feet
 East of this $\frac{1}{4}$ corner. I then correct to true line from cor of 8, 9, 17 to
 $\frac{1}{4}$ cor bet 8 & 9, as follows: Sta 3+00 = 0.5; Sta 6+00 = 1.0 ft; Sta 9+00
 = 1.5 ft; 12+00 = 2.0 ft; 15+00 = 2.50 ft; 18+00 = 3.0 ft; 21+00 = 3.5;
 24+00 = 4.0 ft; 26+51.4 = 4.5 ft. I then set on $\frac{1}{4}$ corner and run in sec 8 as
 follows: S $87^{\circ}48'W$, 805.3 feet; thence N $50^{\circ}29'W$, 465 feet; thence N 0°
 $25'E$, 392.5 feet; thence N $37^{\circ}36'E$ 208.5 feet; thence N $49^{\circ}58'E$, 260.6 feet;
 thence N $38^{\circ}26'E$, 256.4 feet; thence N $39^{\circ}44'E$, 451.8 feet; thence N

69°03'E, 660.7 feet; thence N 52°49'E 609 feet; thence N 37°43'E 193.5 feet;
thence N 29°43'E, 221.5 feet; (this hub is a point on section line between
sections 4 and 9 at a point 4342.5 feet west of section cor to Secs 3, 4, 9 & 10
T. 133, Rq. 29). We then quit for night. Total chain 71+75.9 ft from start.

April 17th 1915. We go to section cor 3, 4, 9 & 10, T. 133, Rq. 29 and find a
4x4 post placed in the ground to mark position of sec corner. The
U.S. notes call for a stake and the following bearing trees:

Black pine 6 inch N 25° W, 120 links; (= 79.20 ft. in sec 4)

Black pine 6 inch S 60° W, 54 links; (= 35.64 ft. in sec 9)

Black pine 6 inch S 8° E 75 links; (= 49.50 ft. in sec 10)

Black pine 12 inch N 68° E, 70 links; (= 46.20 ft. in sec 3).

The bearing trees are all gone, save one 17 inch Norway pine
which is scribed with the U.S. marks, and has been generally ac-
cepted as a bearing tree to locate position of the corner from, for
the last 17 years, for this checks for direction and distance and
is 68° E 46.20 feet. There is an old burned stump, S 60° W, 35.64 feet
and from these we locate the corner for sections 3, 4, 9 & 10, T. 133,
Rq. 29, and find it to be in the present position. We then set up
transit at this point and run west on random line to the W
corner, being corner of sections 4, 5, 8 & 9, T. 133, Rq. 29. We find a
post in the river, but the water and ice prevent us from going
there with the transit. However we find out from the farmers
that this post was located as the original sec. cor. and has been
preserved at all times as such, and has been used by surveyors
in all surveys in this vicinity. We find an oak 24 inch, S 31° E,
530 links which checks for direction but owing to ice and water which
has been raised by a dam on the river, we are not able to chain it
out. We accept this as the original corner. We then find that the
random line for the section line is 10 feet North of this point a dist-
ance of 53403.2 feet from the East corner of sections 4 & 8. I have
to triangulate for the distance from 4342.5 to sec cor of 4, 5, 8 & 9 as
follows: At 4342.5 on random line that runs west, I turn 90°
left, distance of 221.5 feet and put in point at this distance, over
which I set, foresight on the point 4342.5 and turn 77°01' left and
sight on a point 10 feet North of sec corner of 4, 5, 8 & 9, and calculate the
distance from 4342.5 to sec cor and find it to be 960.6 feet. 4342.5
plus 960.6 equals 5303.2 feet. I then correct from my random
line South, E & W as follows: Station 3+00 goes S 0.56 ft; 6+00 goes S 1.13
ft; 9+00 goes S 1.69 ft; 12+00 goes S 2.26 ft; 15+00 goes S 2.82 ft; 18+00
goes S 3.37 ft; 21+00 goes S 3.95 ft; 24+00 goes S 4.52 ft; 27+00 goes S
5.09 ft; 30+00 goes S 5.65 ft; 33+00 goes S 6.21 ft; 36+00 goes S 6.78 ft;
39+00 goes S 7.34 ft; 42+00 goes S 7.91 ft; 4342.5 goes S 8.16 ft; and
station 4342.5 from sec cor 3, 4, 9 & 10, equals 71.75 on line which
starts sec cor of secs 8, 9, 16 & 17, T. 133, Rq. 29, therefore the total length
of the road measured from sec cor of 8, 9, 16 & 17, to sec cor of 3, 4, 9 & 10 is
115718.7 feet. Bearing of sec line is S 88°40'E. Quit for night and return
to Sylvan.

April 18th, 1915. Sunday, No work.

April 19th, 1915. I work on making records of all work done since April 9th to present date for the Town of Sylvania, and take train on N.P. Ry. at 2 P.M. for Walker. Arrive at Walker at 4:20 P.M. R.R. fare Sylvania to Walker \$1.48. Stay at Chase Hotel, quit work at 6:30.

Signed Paul R. Boese.

Surveyed April 9th, 1915 to April 19th, 1915

Recorded Feb. 28, 1917.

County Surveyor
Cass County Minn.

Field notes of the survey of the Hackensack-Woman Lake County road and the finding of old U.S. bearing trees and establishment of new corners in sections 18, 19, 20, 21, 28, 29, 30, Township 140 N, Range 29 W and sections 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, — Township 140, Rq. 30, as surveyed by John W. Curo, County Surveyor of Cass County Minnesota.

July 5th, 1907. Left Pine River at 3:36 P.M. train and came to Hackensack.

July 6th, 1907. Walker to Ed O'Donnell's and got dinner, then back to Hackensack after which Charles Larson took me to his place on section 30, T. 140, Rq. 29, where we arrive at dark. Over night at Larsons.

Sunday July 7th, 1907. Ed. O'Donnell, Billy Donaldson and Victor Holmberg and Curo, begun survey of Hackensack-Woman Lake County road. We begin at 1/4 post on South side of Sec. 19, being the 1/4 corner between sections 19 and 30, T. 140, Rq. 29, where U.S. notes call for a post and the following bearing trees:

Norway pine 9 inch, S 50° E 50 links = 33.00 feet (in sec 30)

Birch 6 inch, N 22° W, 11 links = 7.26 feet (in sec 19)

We find the old 9 inch Norway pine bearing tree, down but plainly marked from which we set the true 1/4 corner and drive a post, at 8° 45' Variation East, as the true meridian, no other bearing tree can be found. A post set by John Usher, stands Northeast about 4 feet. We run West at 8° 45' Var: Run about

half a mile and found old corner post marked up by former County Surveyor who claims to have set it from old bearing trees, but by taking the same trees I move the stake S.W. about 10 ft.

This is the corner to secs 19 + 30, T. 140, Rq. 29 and secs 24 and 25, T. 140, Rq. 30, where U.S. notes call for a post and the following bearing trees.

Birch 7" N 68° E, 34 lks = 22.44 ft in sec 19. Bir 8" N 52° W 60 lks = 39.60 ft in sec 24.

Bir 6" N 60° 30' W 80 lks = 52.80 ft in sec 25: Spr 10" S 14° 30' E 21 lks = 13.86 ft. in sec 30

From my new true sec cor post the old bearing trees stand as follows:

Bir. 7 inch, N 68° E 34 lks. Birch 8 inch N 52° W 60 links.

Bir. 6 inch S 60° 30' W 30, (not 80) links: Spr. 10" E 14° 30' S about 11 links.

There is evidence of another 10 inch Spruce which stood S 17° 30' E, 21 links. Taking all in all I consider the corner correct as per above bearing trees and set stake accordingly. Taking the new bearing trees which seem to have been set by former County Surveyor, they are as follows:

Norway Pine 10" N 46° W, 47.4 feet.

Oak 8 inch S 37° 50' E 34.60 feet all above courses at 9° Var. From this corner we run North on 9° Variation, between sections 19 + 24, : At 628. ft. N set hub & tack; At 1225 feet cross old main

traveled road: At 1320 ft. N set hub and tack; At 2640 ft N, set hub and tack. The true $\frac{1}{4}$ corner bet. secs 19 & 24, bears $N 67^{\circ} E$, 19.50 feet set from one bearing tree. At the $\frac{1}{4}$ cor bet secs 19 & 24, U.S. notes call for a post and the following bearing trees:

Aspen 16 inch, $S 56^{\circ} E$, 12 links = 7.92 feet in sec 19

Aspen 14 inch, $N 85^{\circ} W$, 15 links = 9.90 feet in sec 24.

We find the 16 inch Aspen standing plainly marked, standing $S 56^{\circ} E$ 7.92 feet from which we set a stake for the true $\frac{1}{4}$ corner. All others are gone. Correcting back 1320 N, goes $N 67^{\circ} E$ 9.70 feet for point for true South $\frac{1}{16}$ corner bet secs 19 & 24. Holmberg and Donaldson each get in full day. O'Donnell in A.M. $\frac{1}{2}$ day. Charles Larson worked in P.M. $\frac{1}{2}$ day. Quit for night.

July 8th, 1907. Could get no crew so go to Walker with Ed O'Donnell. Dinner at Hackensack. Supper and over night at Walker.

July 9th, 1907. Tuesday: Commissioners meet. I leave Walker on morning train, dinner at Hackensack: Leave Hackensack at 4 P.M. and ride out with Frank Doner: Arrive at Larson's about dark.

July 10, 1907, Wednesday: Rained in A.M. but I send George Larson to Jusler's to tell them to come to work, for which I allow Larson's father $\frac{1}{2}$ day on survey work, so Chas. Larson gets in $\frac{1}{2}$ day. A.A. Jusler and A.H. Jusler, his son, arrive at Larson's at 12:30 or 1 P.M. and we drive out and begin work finishing up West boundary of sec 19, T.140, Rq. 29. At 2640 ft. N of SW cor. set hub: Total distance 2647.70 feet. Correcting back at stake 1320 N, we run $N 67^{\circ} E$ 9.70 feet where we set a square stake for the true South $\frac{1}{16}$ corner between sections 19 & 24, T.140, Rq. 29 & 30.

July 11th 1907. Jusler and Ron and I work all day cutting line west on a Var. $\frac{1}{4}$ of a mile North of the South boundary of sec 24, T.140, R.30.

July 12th 1907. Crew, Jusler & Ron work all day: Billy Donaldson showed up all the U.S. bearing tree stumps at the cor. to secs 14, 15, 22 & 23, T.140, Rq. 30, at which point U.S. notes call for a post & the following B.T.s.

Norway pine 24 inch, $N 9^{\circ} E$ 26 lbs = 17.16 feet in sec 14.

Norway pine 12 inch, $S 15^{\circ} W$ 70 lbs = 46.20 feet in sec 22

Norway pine 30 inch, $N 62^{\circ} 30' W$ 222 lbs = 146.52 feet in sec 23

We find all the stumps plainly marked from which we set a stake for the true corner to secs 14, 15, 22, 23, Twp. 140, Rq. 30, and run East at $9^{\circ} 10'$ Variation: Bet 14 & 23: At 2640 ft. East set hub and look for the $\frac{1}{4}$ corner between secs 14 and 23, where U.S. notes call for a post and the following bearing trees:

White Birch 5 inch, $S 28^{\circ} 30' W$, 32 lbs = 21.12 ft. in sec 23.

White pine 5 inch, $N 39^{\circ} E$, 18 lbs = 11.88 feet in sec 14.

All are gone and we continue East: At 2700 enter slough; At 3250 leave same; At 3700 ft. E set hub & tack; At 3720 E cross old road: At 3810 ft. E enter slough: At 3960 E, set hub in slough: At 4060 Lv slough: At 4170 ft. E set hub and tack: At 4375 enter slough: At 4475 Lv same: At 4700 enter slough: At 4900 leave same: At 5280 feet E set hub and tack: At 5310.36 ft. E, set hub, Rec cor, quit for night.

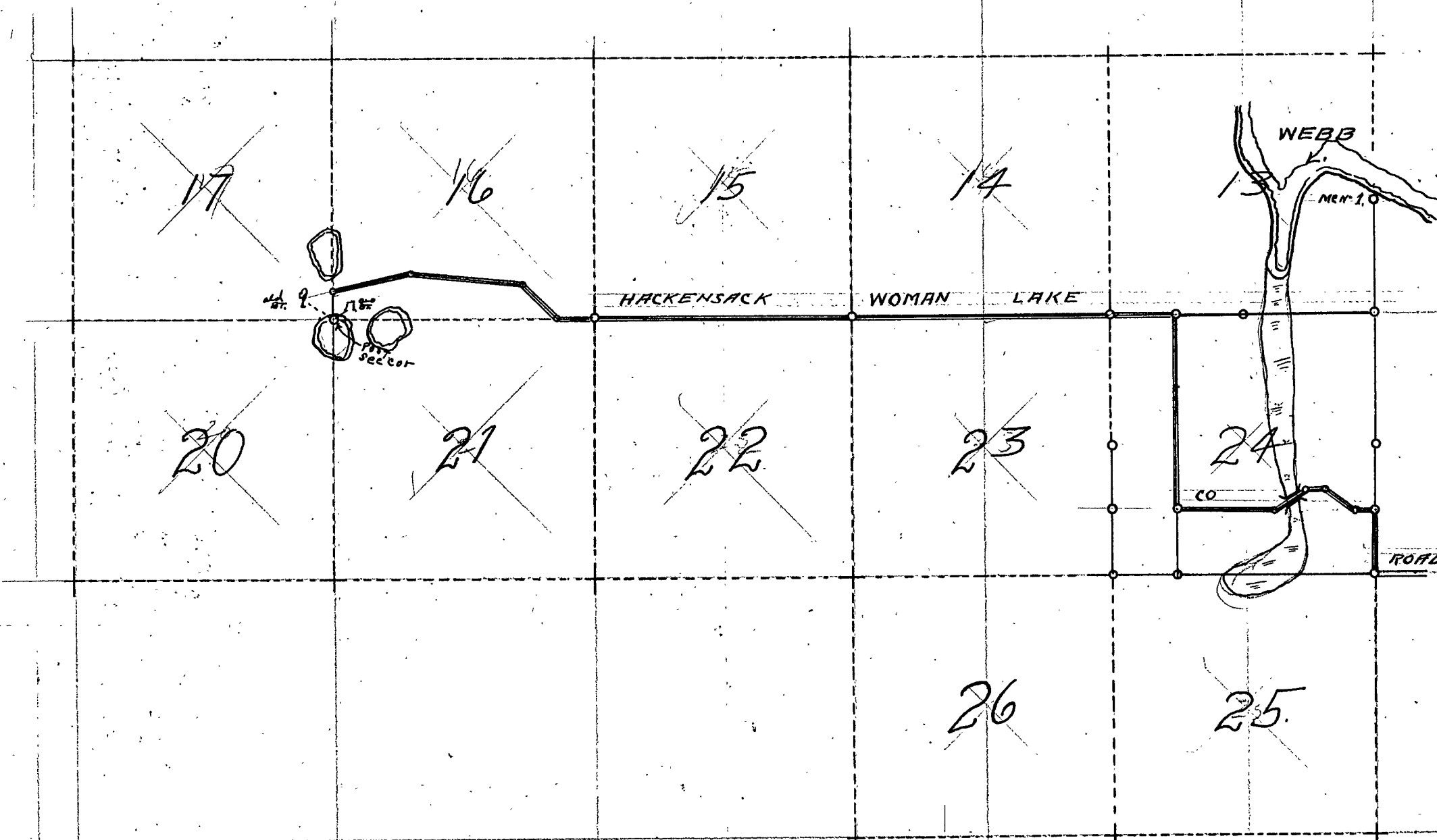
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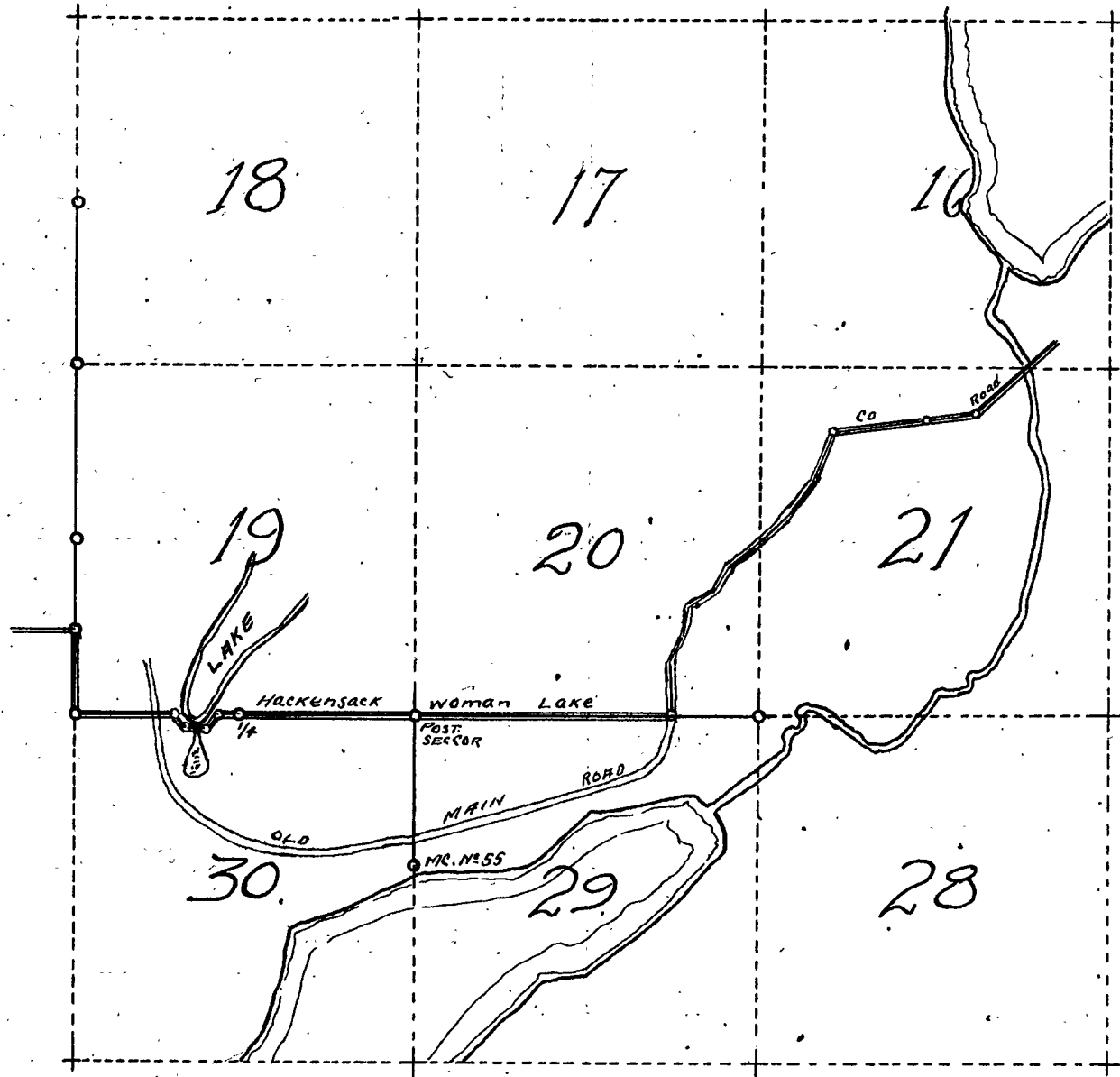
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PLAT.
T140 R30



PLAT.
T140ⁿ R29^w



July 13th, 1907. Holmberg, Jusler & Son and Curo look for bearing trees at corner to secs 13, 14, 23 & 24, Twp 140, Rq. 30, where u. s. notes call for a post and the following bearing trees:

Norway pine 12 inch, $N 48^{\circ} 30' E$ 46 lks = 30.36 ft. in sec 13.

Norway pine 8 inch, $N 5^{\circ} W$ 34 lks = 23.54 ft. in sec 23.

Norway pine 8 inch, $S 68^{\circ} W$, 35 lks = 24.20 ft. in sec 23.

Norway pine 9 inch, $S 10^{\circ} E$ 34 lks = 23.54 ft. in sec 24.

We looked for the bearing trees at this cor. but could find none. Billy Donaldson shows us the stake which he claims to be the true corner, buried in the ground in the center of the E+W wagon road, and says former County Surveyor Canfield used this stake as the true section corner. We continue East on same transit line on $9^{\circ} 10'$ Variation: At 5850 ft. E, enter slough: At 6000 leave same: At 6275 center of 50 foot dry slough: At 6480 enter wet tamarac swamp: At 6500 ft. East leave slough: At 6600 set hub for temporary $1/16$. At 7920 set hub and continue E: At 8460 enter lower arm of Webb lake: Holmberg swims lake and measures across, for two days extra pay: Holmberg sets stakes and chains to station No. 13 and set stake about 20 feet from East edge of lake, then put a hub on side hill to mark the transit line and quit for night.

July 14th 1907. Sunday. laid up.

July 15th, 1907. Larson, Jusler & Son and Curo begin at $1/4$ cor. on W side of sec. 19, T. 140, Rq. 29, on hub No. 2640 feet North and continue cutting our preliminary transit line North along range line so as to locate the NE cor of sec. 24, T. 140, Rq. 30. Cut North to S side of Webb Lake. Then going to station No. 13, set by Holmberg in East edge of Webb Lake slough, in south side of sec. 13, T. 140, Rq. 30, we continue E on same transit line. Variation reads $8^{\circ} E$: At 10560 feet E set pin: At about 10563 E set two hubs, then take up preliminary and run North on 9° Variation, and quit for night.

July 16th, 1907. Chas Larson, Martin Hanson, Fritz Hanson, his son, and A. H. Jusler with Curo transitmen, continue preliminary line North on 9° Variation between secs 13 & 18, T. 140, Rq. 29 & 30: At Webb Lake look for Meander Cor. No. 1, of T. 140, Rq. 30 and find one old Birch B.T. from which we set the point for M.C. but did not make any new B.T.s, or set a big stake. Going back to our preliminary we take the course and distance to the M.C., then walk South and put in the cor to secs 18 & 19, of T. 140, Rq. 29, being the cor. to secs 13 & 24, of T. 140, Rq. 30, where we set a $4 \times 4 \times 36$ inch stake for the true corner. At this point U. S. notes call for a post and the following bearing trees:
 Birch 8 inch, $N 42^{\circ} E$, 64 lks = 42.24 ft. in sec 18
 Maple 10 inch, $N 44^{\circ} W$, 40 lks = 26.40 ft. in sec 13.
 Birch 8 inch, $S 72^{\circ} W$, 37 lks = 24.42 ft. in sec 24.
 Asp. 20 inch, $S 55^{\circ} E$ 25 lks = 16.50 ft. in sec 19. All are gone.
 Total distance running East to range line, is 10605.30 feet. We eat our lunch in O'Connell's house. Then coming West to Hub No. 6600 feet East, we set a hub at 6624.09 ft. East, considering the

whole 10565.28 feet to be 10605.30 feet actual length or 40.02 ft. too long. Hub No. 6624.09 goes East 25.08 ft. + N 7 ft. + Mark State "Road Center." At the $\frac{1}{4}$ Cor. bet. secs 13 + 24, T. 140, Rg. 30, U.S. notes call for a post and the following bearing trees:

Iron wood 5 inch S 21° E, 6 lbs = 3.96 feet in sec 24.

Sugar 6 inch, N 55° E 18 lbs = 11.88 feet in sec 13.

I find the point of the old stake and a part of the old Sugar Maple bearing tree, also the root of the Ironwood which check out with the old stake. I set a new stake, then take measurement to my transit line, and walk West $\frac{1}{4}$ mile and at a point half way between the SW Cor of sec 13, and the $\frac{1}{4}$ on south side of sec 13, I establish the true West $\frac{1}{16}$ Cor. bet. secs 13 and 24, T. 140, Rg. 30, from which we run South on 8° 45' Var. on the West $\frac{1}{16}$ line of section 24. At 660 ft. S set stake: At 760 top of 30 foot hill: At 761 set hub + tack: At 960 foot of hill, enter slough: At 1320 ft. S, set stake in slough: Quit for night.

July 17th, 1907. Hanson + Ron: Albert Fusler + Chas. Larson, Curo, transit man, Continue South: At 1350 leave slough - foot of hill: At 1606 set hub + tack on hill: At 1650 ft. S, enter slough: At 1860 Lv. same: At 1910 enter slough: At 1980 set stake in slough: At 2008 ft. S, leave slough: At 2323 ft. S set hub + tack: At 2375 enter slough: 2640 set stake in slough: At 2700 Lv Slough: At 2904 set hub: At 3300 set stake: At 3547 ft. S, set hub and tack: At 3900 set hub + tack: At 3960 ft. S set hub + tack: 4620 set stake: At 5280 ft. S set hub + tack: At 5346 S, O'Donnell's $\frac{1}{16}$ stake set on South side of sec. 24, sets East 3 feet. Quit for night.

July 18th, 1907. Hanson + Ron: Chas. Larson, Albert Fusler + Curo, begin at $\frac{1}{4}$ Cor. bet. secs 23 and 24, T. 140, Rg. 30, where U.S. notes call for a post and the following bearing trees:

White pine 4 inch, S 79° W, 19 lbs = 12.54 feet in sec 23.

Norway pine 9 inch, S 87° 30' E 19 lbs = 12.54 feet in sec 24.

We find both trees plainly marked from which we set a post for the true $\frac{1}{4}$ corner and run South on 8° 45' Var: At 1320 ft. S, set hub + tack: At 1500 set hub in meadow, then offset East 180 feet East at 90° angle to get around small lake and run South to 2295.50 ft. S then offset back west at 90° angle and set hub South side of lake At 2295.50 S: At 2640 ft. S set hub and tack from which the Cor. to Secs 23, 24, 25 + 26, T. 140, Rg. 30, sets S 64° E, 25.30 feet. At this point U.S. notes call for a post and the following bearing trees:

Norway pine 10 inch, N 63° E 19 lbs = 12.54 ft. in sec 24.

Norway pine 10 inch, N 75° W, 17 lbs = 11.22 ft. in sec 23.

Norway pine 12 inch, S 72° 30' W, 39 lbs = 25.74 ft. in sec 26.

We find the stumps of each of the bearing trees from which we set a 4x4x24 inch stake for the true Cor. to secs, 23, 24, 25 + 26, T. 140, Rg. 30, and mark a new bearing tree, being 6 inch stump S 42° 37' E, 101.10 feet in sec 25. Correcting back, we set hub 1320, S 64° E, 12.60 ft. where we set a 4x4x36 inch stake for the true S $\frac{1}{16}$ Cor bet secs 23 + 24, this corner sets just over the fence, in Ed. O'Donnelli's Clover field.

Bringing up the South $\frac{1}{16}$ line from the East, previously run by me, this $\frac{1}{16}$ cor just set, stands North 6.30 feet. Correcting the two transit lines just run in the center of the S.W. quarter of sec 24, we set one line 2.10 feet East and one line 4.70 feet N where we set a stake for the center of the S.W. quarter of sec 24, T. 140, R. 30, from which we begin and chain along preliminary East: At 180 ft. enter slough: At 360 lv same: At 630 center of 30 foot slough: At 2124 hub for Angle Pt. No. 1, on corrected E & W $\frac{1}{16}$ line being road center: Thence run Left 16° or $E 16^\circ N$, and at 400 feet center of 30 foot slough: At 600 ft. center of 50 foot slough: At 740 ft. enter West end of slough: At 806 ft. center of bridge being angle point No. 2, Thence East, $28^\circ N 39.5$ feet to angle point 3, set hub: thence East $15^\circ 16' S 232$ ft: thence $E 60^\circ 10' S 39.5$ feet to point on the $\frac{1}{16}$ line: thence east on the $\frac{1}{16}$ line 352. feet to the $\frac{1}{16}$ on Range line being the South $\frac{1}{16}$ bet secs 19 and 24, previously established: Thence 1323 feet South along the Range line to the cor. of secs 19, 24, 25 & 30. To correct the line bet secs 19 and 30 in the W $\frac{1}{2}$ mile, we figure as follows: I run $\frac{1}{2}$ mile West from $\frac{1}{4}$ post, the corner to sections 19, 24, 25 & 30, set stake South 58 feet Correcting East, at 540 E, center of 100 foot slough: at 660 E, set stake South 43.50 feet for road center on true section line: at 1320 ft East set post 29. feet South for road center on the center of a 125 foot slough: at 1680 ft. E, center of 75 foot slough: at 1980 E, set stake 14.50 feet South for center of road on section line and quit for night.

July 19th, 1907. Hanson and Son, Larson, Albert Jusler & Curo continue correcting: at 2012 E, set stake for road center being an angle point from which we run $S 41^\circ E 270$. feet th angle point: thence East parallel to section line 270 feet to a P. thence $N 41^\circ E 270$ feet to section line this post stand in center of 75 foot slough on neck of lake that will have to be bridged or culverted. thence East following section line 410 feet to the $\frac{1}{4}$ corner between sections 19 & 30, T. 140, R. 29. Beginning at the $\frac{1}{4}$ corner between sections 19 & 30, T. 140, R. 29, run East on $8^\circ 30' E$, variation: at 660 ft E, set stake, enter slough: at 2180 leave slough: at 2400 enter slough: at 2650 feet East the section corner post stands South 28 feet in big meadow. Beginning at corner to sections 19, 20, 29, 30, T. 140, R. 29, set by County Surveyor Canfield we run East on $9^\circ 45'$ var: at 810 ft E, leave big bog: at 1290 enter meadow: at 1320 stake in meadow: at 1980 stake in meadow: at 2050 leave meadow: at 2330 enter meadow: 2520 leave meadow: at 2640 set stake: N. B. J. B. continue transit line East on $9^\circ 45'$ var: at 2790 center of 50 foot slough on top of high hill: at 3120 enter swamp foot of hill: at 3300 E, stake in slough: at 3960 ft E, set stake in center of old main road: at 4620 E, set stake: at 5280 feet East the true corner stands South 60 feet: at this point being the corner to sections 20, 21, 28, 29, T. 140 R. 29 a. S. notes call for a post and the following bearings:
 Basswood 1 1/4 inch, $S 31^\circ W 32$ lbs, = 21.12 ft. in sec 29.
 Basswood 1 1/8 inch, $N 30^\circ W 41$ lbs, = 27.06 ft. in sec 20.
 Fir 5 inch, $S 24^\circ E 38$ lbs, = 25.08 ft. in sec. 28.
 Ironwood 4 inch, $N 32^\circ E 62$ lbs, = 40.92 ft. in sec. 21.
 We run a line in each section and look for the bearing trees: find three old U.S. bearing trees from which we set a stake 4x4x36 inch for the true corner to sections 20, 21, 28 & 29, T. 140, R. 29. we correct back and set the true East $\frac{1}{16}$ corner between sections 20 & 29, T. 140 R. 29, where

we drive a stake, and quit for night.

July 20th 1907. Martin and Fritz Hanson, Albert Jusler and Chas. Larson and Curo, begin at East $\frac{1}{16}$ between sections ~~20 & 29~~ T. 140 R. 29, in the center of the main traveled road, and run a traverse line of the old road and follow same as follows: With vernier set at 8° var as a meridian we run: N 14° W 540 feet: thence N 18° E 650 feet: thence N 40° E 1225 feet: thence N 88° E 220 feet: thence N 41° E 200 feet: thence N 20° E 100 feet: thence N 32° E 100 feet: thence N 40° E 155 feet: thence N 50° E 385 feet: thence N 60° E 180 feet: thence N 50° E 500 feet: thence N 49° E 200 feet: thence N 40° E 110 feet: thence N 7° E 300 feet: then leave old road and take Eber Smith's trail N 7° E still following old road 90 feet: thence N 28° E following old road 190 feet: thence N 74° E on new line, 1545 feet: thence north $55^\circ 30'$ E 838 feet: thence N 38° E 580 feet to river: thence N 38° E 275 feet to north bank of river: there is 75 feet of bog on north side of river, 100 feet of water and 75 feet of bog south of river: quit for night.

July 21st 1907. Hanson & Son with Curo, begin at meander corner no. 55 between sections ~~29 & 30~~ T. 140 R. 29, on north bank of Deep Lake and run north on 8° var: at 2277 feet north true corner to sections ~~19 & 20~~ 29 & 30 stands west 32 feet. Correcting the random line between sections 19 and 30 stake 1980 goes south 21 feet: this will throw the road almost south of the bog - little slough East of us: hub 1320 E, goes S, 14 feet: hub 660 E, goes S, 7 feet. Jusler & Son arrive: Correcting the line between sections ~~29 & 30~~ hub 917.40 N, goes West 6 feet: hub 1577 N goes West 20 feet: hub 1737 N, goes West 25 feet: we run this line between sections ~~29 & 30~~ to see what chance there would be for the proposed County road to run south to connect with the present traveled road along the north side of Deep Lake, and thence easterly, and as the north end of this line is in a marsh we begin at corrected hub 1737 feet north of M.C. no. 55, between sections ~~29 & 30~~ T. 140 R. 29, from which we run in order to get around a bog and to follow the now traveled road we run N 74° W 84 feet: thence N $28^\circ 30'$ W 588 feet intersecting the south boundary of section 19, at a point 338 feet west of the corner to sections ~~19, 20, 29, 30~~. Then we run a traverse of the present traveled road along the north side of Deep Lake we begin on the section line north of M.C. 55, between sections ~~29 & 30~~ and run N 80° E 540 feet: thence S 80° E still following the main road 360 feet: thence East 180 feet: thence N 75° E 180 feet to bridge: thence N 71° E 450 feet: thence N 53° E 450 feet: thence N 51° E still on main road 360 feet: thence N 15° E 140 feet: thence N 40° E 100 feet: thence N 25° E 180 feet: thence N 7° E 90 feet: thence still on main road, N 41° E 450 feet: thence N 82° E 810 feet: thence N 65° E 270 feet: thence N 75° E 190 feet: thence at 11 on main road N 45° E 80 feet: thence N 30° W 325 feet; intersecting the East $\frac{1}{16}$ corner between sections ~~20 & 29~~ T. 140 R. 29. Correcting the random line between sections ~~20 & 29~~ T. 140 R. 29, hub 3300 E, goes S, 37.50 feet: Hub 2640 E, goes S, 30 feet: hub 1980 E, goes S, 22.50 feet: Hub 1320 E, goes S, 15.00 feet.

July 22nd, 1907. Going to the corner of sections 16, 17, 20, 21 T. 140 R. 30, we look for corner where U. S. notes call for post for Witness Corner 30 links north with bearing trees as follows:

Norway pine 20 inch, N 55° W 103 lks = 67.98 feet in sec. 17.

Norway pine 20 inch, N 34° E 94 lks = 62.04 feet in sec. 16.

We find the stump of the N6 tree in section 16, plainly marked and we find the NW tree in sec. 17, standing green and plainly marked, and from these we set a stake for the true witness corner from which we run south 19.80 feet (30 links) and set a 4x4x60 inch pine post for the true

corner to sections ~~16, 17, 20, & 21, T. 140, Range 30, which we drive~~
 well down into the mud and water and from this corner we
 run north between sections 16 and 17, a distance of 320 feet to
 the center of the main traveled road: thence $N 60^{\circ} 30' E$ 1815.
 feet (110 rods) thence $S 85^{\circ} 05' E$ 2145 feet (= 130 rods) thence S
 $51^{\circ} 30' E$ 1501.50 feet (= 91 rods) thence East 429. feet (= 26 rods) on
 section line to the corner of sections ~~15, 16, 21 & 22, Twp 140, Rg.~~
~~30~~ This line was run with a compass with the vernier turned
 at 9° variation East: at this point U.S. notes call for a post
 and the following bearing trees:

White pine, 10 inch, $N 75^{\circ} E$ 20 lks., = 13.20 feet in sec. 15.

White pine, 20 inch, $S. 70^{\circ} E$ 17 lks., = 11.22 feet in sec. 22.

" " 15 " $S 75^{\circ} W$ 32 lks., = 21.12 feet in sec. 21.

" " 20 " $N 45^{\circ} W$ 46 lks., = 20.36 feet in sec. 16.

We find the stumps of each of the bearing trees standing
 in each section, plainly marked and from these stumps we
 set a 4x4x24 inch pine post for the true corner to sections
15, 16, 21, 22, Township 140 N, Rg 30 W. B. B. Bartlett worked one
 day at this work and I will O.K. this bill. Zusler and Son
 get in one day. Hanson and Son get in $\frac{1}{2}$ day. B. B. Bartlett
 has previously run the lines in sections 15, 16, 17, 20, 21,
 22, and I retrace his line along a present traveled road.
 Surveyed July 1907 to July 22, 1907.

Recorded February 28th, 1917. John W. Curo;

County Surveyor, Cass County, Minn.

1200°

T. 142, R. 31. Secs. 17, 18, 19, 20, 21, 28, 29, 30.

Field notes of the survey and subdivision of section 20, and the establishment of lines and new iron section corners and monuments, all the finding of old and new bearing trees in sections 17, 18, 19, 20, 21, 28, 29, & 30, Township 142 N, Range 31, W, 5th P.M. Cass County, Minnesota, as surveyed by and under the direction of John W. Curo, County Surveyor, Cass County, Minnesota.

March 22nd, 1915 - We start the survey of section 20 T. 142, R. 31 with field notes previously procured. N. D. Gorman Engineer in one crew looking up corners and Geo. W. Miller Engineer in another crew running transit. John Goebel and Mike Bucick ax and chainmen go to the 1/4 corner between sections 20 and 29, T. 142, R. 31 where U. S. notes call for a post and the following bearing trees:

White pine 28 inch, N 40 lks. = 26.40 ft (in sec. 20)

White pine 30 inch, S 19° E

White pine 48 inch, N 40 lks. (= 26.40 ft in sec. 20)

White pine 30 inch, S 19° E 13 lks. (= 8.58 ft in sec. 29)

We find the stumps of both old trees plainly marked and a R. R. spike, set by Curo for the 1/4 corner, from which we run West on Var. 9° E: at 233.10 ft. W, set hub: at 769. ft West pass two feet north of what appears to be line tree being 14 inch oak, blazed on E. & W. sides: at 825 ft. W, a N & S wagon road: at 1281.25 W, set hub: at 1531.50 W, set hub: at 1778.40 W, set hub: at 2115.00 W, set hub: Gorman and Goebel leave for town about 2 P.M. while Bucick and Miller remain in the field till 5 P.M. Chaining done by Gorman and Miller till 2 P.M. after which Bucick and Miller chain. Used a 100 foot steel tape and plumb-bob: also transit used, and all hubs double centered and tacked. Quit for night, Gorman and I staying at Hotel Chase, signed Geo. W. Miller.

Tuesday, March 23rd, 1915. Gorman goes to Hackensack on 9:35 A.M. train to survey sec. 36 T. 141, R. 31. Geo. W. Miller transit and chain:

Mike Bucick ch & ax, Chas. Warren ax: Aug. Fix axman: Begin at hub

2115.00 W, and continue West between sections 20 and 29: at 2376.30 W, set

hub: at 2616.00 the corner to sections 19, 20, 29, 30, T. 142, R. 31, set South

16 feet: at this point U. S. notes call for a post and the following bearing trees: Poplar 4 inch, N 85° E 12 lks. (= 7.92 feet in sec. 20)

Poplar 3 inch N, 33° W 28 lks. (= 18.48 feet in sec. 19)

Black Oak 3 inch, S 47° W 10 lks. (= 6.60 ft. in sec. 30)

Poplar, 6 inch, S 17° E 23 lks. (= 16.18 feet in sec. 29)

We find the stake previously established by John W. Curo set from the old bearing tree stumps, and new bearing trees: Walking back to the 1/4 corner between sections 20 and 29, we back sight on random West, and run East: at 106.70 E, set hub: at 856.80 E, set hub: at 1134.60 E, set hub: at 1344.20 E, set hub: at 1691.20 E, set tack in oak stump: at 2000 set hub: at 2566.00 E, the corner to sections 20, 21, 28, 29, T. 142, R. 31,

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T 142nd R 31st S 5th EM.

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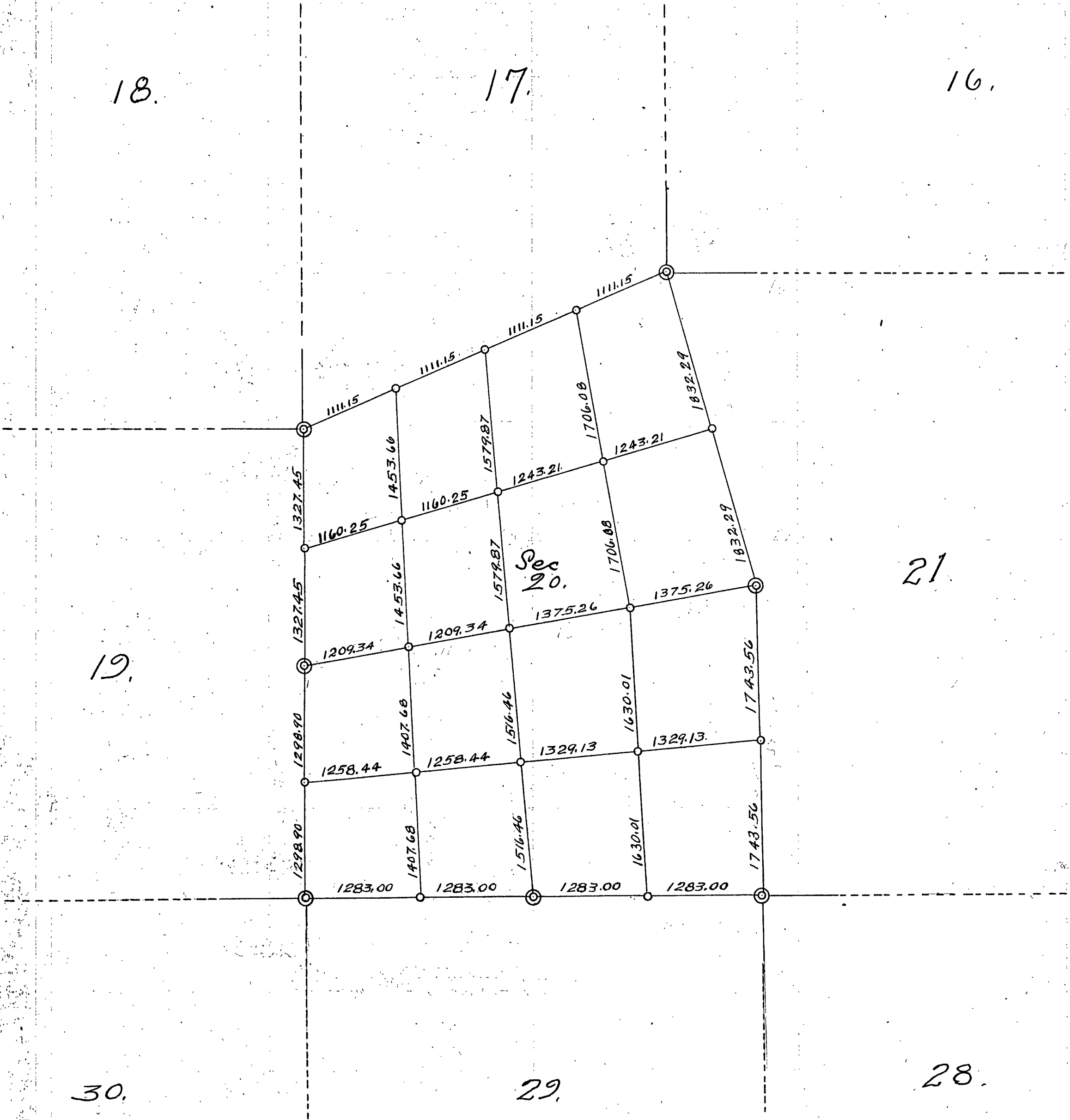
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sets south 3.20 feet. at this point U.S. notes call for a post and the following bearing trees:

Poplar, 5 inch, N 77° E 12 lks, (= 7.92 ft. in sec. 21)

Poplar, 3 inch, N 27° W 12 lks, (= 7.92 ft. in sec. 20)

Black oak, 5 inch, S 80° W 7 lks, (= 4.42 ft. in sec. 29)

Birch, 4 inch, S 54° E 23 lks, (= 16.18 ft. in sec. 28)

We find an old stake set by Curo for the true corner set from the stumps of the old bearing trees, with new bearings: Coming back to the 1/4 corner between sections 20 & 29 - 142, R 31 - turns 90° from random and run north: at 156.40 ft N, set hub: at 574.80 N, set hub: at 904.40 N, set hub: at 1245.00 N, set tack in poplar stump. We use 100 ft steel tape and also transit. Geo. W. Miller field Engineer.

Wednesday March 24th, 1915. Curo and Miller go to M & J depot and get also transit tripod which has been lost in transit from Walker to Staples: Geo. W. Miller transit and chain. Mike Bucic ax and chain: Chas. Warren, axman: Aug. Fiv. axe: go with Albert Erickson who guides us the corner of sections 16, 17, 20, 21, T 142, R 31, where U.S. notes call for a post and the following bearing trees:

Birch 3 inch, N 60° E 6 lks, (= 3.96 ft. in sec. 16)

Poplar 3 inch, N 30° W 10 lks, (= 6.60 ft. in sec. 17)

Poplar 3 inch, S 40° W 4 lks, (= 2.64 ft. in sec. 20)

Poplar 3 inch, S 38° E 3 lks, (= 1.98 ft. in sec. 21)

We find a large galvanized iron corner (being 2 1/4 x 4 1/8 inch, capped iron pipe with anchor rod thru bottom) previously established by Curo, set from the old U.S. bearing trees, with new bearing trees as follows:

Norway pine 6 inch, N 15° 30' W 54.96 feet (in sec. 17)

Norway pine 14 inch, S 63° W 43.18 feet (in sec. 20) to head of nails driven in flat spot at base of trees: Var 9° E. I go a mile southwest where I find the crew

and we come back to the corner of sections 16, 17, 20, 21 T 142, R 31 and run South, Var. 18° E: at 268.70 ft S, set hub: at 406.50 S, set hub: at 646.30 S, set hub: at 766.30 S,

set hub: at 1180.75 ft S, set hub: at 1460.55 ft S, set hub: at 1470, passed 4 feet East of what appears to be a line tree, being 1 1/2 inch Jack pine blazed. on N & S sides:

at 1721.40 S, set hub: at 2022.60 ft S, set hub: at 2334. S, an old road bears NW & SE: at 2462, set hub: at 2615.40 S, set hub on highest hill: at 2775.50 S, set

hub: we use a 200 foot steel tape and also Transit. Quit for night still at hotel Chase. Geo. W. Miller, field Engineer.

March 25th, 1915, Thursday: Fair and cold, Geo. W. Miller transit & chain:

Mike Bucic ax & chain: Chas. Warren axman: Sam Wells axman (Wells is working for John Goebel) we use a 200 foot steel tape and also transit:

From hub 2770.70 S, we continue South on random between sections 20 & 21: at 2484.00 S, set hub: at 3493. S, East & West State road: at 3744.30 S,

set hub: at 4055.80 S, set hub: at 4307.50 S, set hub: at 4557.00 S, set hub: at 4931.50 S, set hub: at 5142.70 S, set hub: at 5443.00 S, set hub: at 5522.80

S, set hub: at 5889.30 S, set hub: at 5953. S, cross old line fence which bears N & S: at 6393.70 S, set hub: at 6760.20 S, set hub: at 7115.80 South, the corner of sections 20, 21, 28, 29 sets West at 90° angle, 142.70 feet. at 7136.00 S,

we intersect random line from the West, 3.20 ft. North and 144 feet East of corner. Took angle of lines NW angle reads 80° Quit for night

Still staying at hotel Chase. Geo. W. Miller, Field Engineer.

March 26th, 1915, Friday. Geo. W. Miller transit and chain: Mike Bucic ax and chain: Chas. Warren ax: Sam Wells ax: 200 ft steel tape and aloe transit. (Sam Wells is working for and is furnished by John Goebel) Begin at corner to sections 16, 17, 20, 21, T. 142, Rg 31 and back sight South on random line, then turn $76^{\circ} 30'$ to the Right and run West on Var. $31^{\circ} E$: on random line between sections 17 & 20. at 185.50 W, set hub: at 407.70 tack in fallen poplar: at 805.30 W, tack in fallen poplar tree: at 1067.50 W, set hub: at 1410.50 W, set hub: at 1577.00 W, set hub: at 2003.20 W, set hub: Here I discover that chainman was holding tape wrong, making measurement at end, instead of the 200 foot mark, thus adding .50 of a foot to each chain length: Proportion, 200.50 over 200.00 and 2003.20 = 1998.20 set hub: at 2477.70 W, set hub: at 2665.50 W, set hub: at 3304.80 W, set hub: 3602.60 W, set hub: at 3721.30 tack in burned stump: at 4246.00 Hub: at 4435.00 W, intersect near corner to sections 17, 18, 19, 20, T. 142, Rg 31, (Note this measurement was wrong and was re-chainman later, Curo) quit for night, still at hotel Chase, laid off crew to figure necessary notes. Geo. W. Miller - field Eng.

March 27th, 1915, Saturday: Work all day in office on notes assisted by Curo, still at hotel Chase, Geo. W. Miller, field Engineer.

March 28th, 1915, Curo and Miller work all day on plat of Sec. 20, T. 142, Rg. 31. Look up old field notes of previous surveys and copy old U. S. notes, check Government plats, etc. Still at hotel Chase, Geo. W. Miller, field Engineer.

March 29th, 1915 - We are unable to get a crew, as the saw mill starts up today and my old crew are employed therein. Following Curo's instructions, I ride out with Frank Breece to the Chase farm near the $\frac{1}{4}$ corner between sections 19 and 20, T. 142, Rg 31, arrive 9:20 a.m. and Mitchell Ellis and I walk to $\frac{1}{4}$ corner between 20 & 29 and check chain the whole mile East and West, along South line of section 20, between sections 20 & 29, T. 142, Rg 31. P.M. Set transit on $\frac{1}{4}$ corner between sections 20 & 29, backsight West on random line, turn telescope $84^{\circ} 30'$ to the Right and run a new line North, var. $14^{\circ} 30' E$: at 164.10 set hub: Curo and Honner walk out in the morning and run a compass line North & South between sections 20 & 21, T. 142, R. 31, and search for old $\frac{1}{4}$ corner between sections 20 & 21, where U. S. notes call for a post and the following bearing trees: Poplar 3 inch, N $19^{\circ} W$ 17 lks, (= 11.22 ft. in sec 20) Poplar 3 inch, N $89^{\circ} E$ 3 lks, (= 1.98 ft. in sec. 21) At at point on my transit line 3653.70 feet South of the iron NE corner of sec 20, and at 90° angle to the transit line an old fence corner sets East 283.10 feet. From this fence corner an old line of fence posts runs Easterly and an old wire fence runs South on about 7° var to the SE corner of sec. 20. To preserve this point (which is the $\frac{1}{4}$ corner) Curo and Honner cut off the corner post of fence, drove a nail

in part of post left in the ground and in order to preserve this as a reference point, mark the following bearings:

white pine stump 36 inch, $S 18^{\circ} 09' E$ 43.85 feet (in sec. 21)

white pine stump 42 inch, $S 69^{\circ} 47' W$ 24.30 feet (in sec. 20)

to the head of 60 $\#$ spikes driven in flat spot at base of stumps -

var. $17^{\circ} E$. In P. m. Curo and Donner walk to the Chase farm where they get Frank Breece and walk to the NW corner of sec. 20 being the corner to sections 17, 18, 19, 20 T. 142, R. 31, where U. S. notes call for a post and the following bearing trees:

Poplar 3 inch, $N 55^{\circ} E$ 7 lks, (= 4.62 ft. in sec. 17)

Poplar 3 inch, $N 43^{\circ} W$ 26 lks, (= 17.16 ft. in sec. 18)

Poplar 3 inch, $S 25^{\circ} W$ 5 lks, (= 3.30 ft. in sec. 19)

Poplar 3 inch, $S 30^{\circ} E$ 10 lks, (= 6.60 ft. in sec. 20)

On account of wood chopping and logging operations the bearing trees at this point have been chopped down and the stake knocked down, but on account of the old blazed section lines running to an intersection at this point, Curo and Breece are able to re-establish the true corner at the point where they remember its once having stood, at which point they drive a 60 $\#$ spike in the ground, from which the stumps which appear to have been the old B. T. s check out for course and measurement. Gilt for night Donner and I still at hotel Chase. Curo boarding with Erickson. Donner & Curo used a 75 foot metallic tape and Gurley compass. I use a 300 foot steel tape and also transit. Geo. W. Miller. Field Engineer.

March 30th, 1915: In order to rush this work to completion we work two crews again today. Frank Donner and Frank Breece in one crew, with $\# 4$ B transit and 200 foot steel tape. Geo. W. Miller and Mitchel Ellis make up the other crew. I use also transit and 300 foot steel tape. Leave hotel at 7:30 a. m. and walk to $\frac{1}{4}$ corner between sec. 20 & 29, T. 143 R. 31: set transit over spike at true $\frac{1}{4}$ corner, back right West on random line, turn $84^{\circ} 30' R$ and run new line North thru center of sec. 20:

at 164.10 N, set hub: at 649.80 N, set hub: 949.00 N, set hub: at 1174.10 N, set hub:

at 1426.40 N, set hub: at 1747.60 N, set hub: at 1973.00 N, set hub: at 2245.20

N, set hub: at 2510.80 N, set hub. Donner and Breece go to the $\frac{1}{4}$ corner between sections 19 & 20, T. 142, R. 31, where U. S. notes call for a post and the following B. T. s.

Jack pine 12 inch, $N 50^{\circ} E$ 15 lks, (= 9.90 ft. in sec. 20)

Poplar 5 inch, $N 38^{\circ} W$ 10 lks, (= 6.60 ft. in sec. 19)

at this point County Surveyor Curo and Frank Breece have established the $\frac{1}{4}$ corner from the old B. T. s. In establishing this corner, Breece and Curo found an iron pin, previously set by County Surveyor Canfield which checks out with the stump of the old Jack pine B. T. and from the corner Curo and Breece set new bearings: From this point Breece and Donner chain north along the true line, following a line fence: at 1320 set spike in true line over which they set transit, back right South on $\frac{1}{4}$ corner and run North intersecting the spike at NW corner of sec. 20, and find the total length of line 2654.90 feet: Donner sets transit over spike at true corner to sections 17, 18, 19, 20, T. 142, R. 31, and marks new bearings as follows:

Aspen stump 10 inch, S 47° 58' E 9.50 feet in sec 20

Aspen stump 12 inch, S 64° 07' W 13.30 ft. in sec. 19.

to nail head in flat spot at base of stump, Var 8° E. This half mile of line just run, runs on 8° E var. Donner and Breece then walk to a point on my transit line 1827.80 feet south of the NW corner of sec. 20, where they set a small hub turned 90° from the transit line and chain East 139.25 feet where they set a stake which they consider maybe the 1/16 corner, but they are wrong, as the 1/16 corner would not come at this point. Quit for night, Donner and I still at hotel Chase. Geo. W. Miller, field engineer.

March 31st, 1915, Wednesday: In order to rush the work still more, we work 3 crews: John W. Curo and Albert Erickson - Gurley compass and 200 foot steel tape work in one crew. Frank A. Donner, Fred Bettcher and John Moskow work in another crew, H + B transit, 70 chain. Geo. W. Miller, Mitchell Ellis and John De Florin make up the third crew, using alce transit and 300 foot steel tape. (all the transits and chains belong to John W. Curo.) Double center all hubs, use plumb-bob in chainage as we have since the beginning of survey. Geo. W. Miller and crew begin at hub 2510.80 N, and continue North thro center of section 20, T142, R31: at 2675.80 N, set hub: at 3030.40 N, set hub: at 3445 State road bears NE & SW: at 3610.60 N, set hub: at 3911.50 N set hub: at 4342.60 N, set hub: regular jungle: at 4884.00 N set hub: at 5913.50 N, set hub - Frank A. Donner and crew, go to the 1/4 corner on West side of sec. 20, T142, R31, where on account of the fence he was unable to set transit over the true corner and he set up an true section line, about 8 feet south of the 1/4 corner: back right North on true line, and turn telescope 80° to the R. and runs East thro about center of section 20. He runs a mile East without chaining, intersection 14.73 feet south of the old fence corner at the 1/4 corner between sections 20 & 21. Donner's crew did not get started till about 9 o'clock as John Goebel furnished the crew and was unable to find axle. Curo and Erickson begin at the NE corner of sec. 20, T142, R31, and check chain my transit line south which runs on variation of 18° E: at 1827.80 S, they find small hub set on true random line by Donner from which a temporary 1/16 corner set by Donner, bears East, 90° to transit line, 139.25 ft. This is not the true 1/16 corner. at 3653.70 S, they find hub set by Donner on true random line, from which nail in point of old corner post of fence (being 1/4 corner) bears East 90° to transit line, 283.10 feet: at 7115.80 S, the corner to sections 20, 21, 28, 29, T142, R31, sets West 90° angle to transit line, 142.70 feet. Curo and Erickson then go to the 1/4 corner on the West side of section 20, where they check chain the half mile of line Nord and find it correct as previously chained by Donner and Breece. Curo and Erickson use 200 foot steel tape and two heavy plumb-bobs, chaining perfectly. Quit for night, Curo still boarding with Erickson, I still remain at hotel Chase. Donner quits and takes midnight train to Glencoe, Minnesota, where he is to be gone a week. Geo. W. Miller, field engineer.

April 1st, 1915, Thursday: Cloudy. Seeing that it is impossible to finish the survey of sec 20, T142, R31 before the commissioners meeting which is to take place April 6th, we only work one crew.

also transit. 300 ft steel tape. Geo. W. Miller transit and chain. Mitchel Ellis ax and chain: John Moskow ax: Walter Fee ax: Fred Bettcher axman: John Mc Florin ax: set over hub 5913.50 N, and continue North thro center of sec 20. at 6157.40 N, the true $\frac{1}{4}$ corner between sections 17 and 20, sets East 23.40 feet, 90° angle to transit line. Following Curo's instructions I now proceed to corner of sections 17, 18, 19, 20, T142, R. 31, and measure a right angle offset between corner post and random line, finding same to be 14.38 feet. We then follow the West boundary of sec 20 a quarter mile South to a spike on true line, 1320 feet North of the $\frac{1}{4}$ corner between sections 19 & 20, set up on spike, back sight a quarter mile South and chain N 7.45 feet to a point 1327.45 feet North at which point I drive a spike for the true North $\frac{1}{6}$ cor, bet. secs 19 & 20 T. 142, R. 31, over which I set transit and again back sight S on $\frac{1}{4}$ cor, turn 100° to Left and run E, on random thro cen' of N half of sec. 20, not chaining. Run about $\frac{7}{8}$ of a mile and quit for night. Supper at hotel Chase. Curo and I work nearly all night on notes and calculations of this survey. These notes have been submitted daily to John W. Curo and checked over by him. Geo. W. Miller

April 2nd, 1915, Friday. Fair & warm, Geo. W. Miller transit, M. Ellis ax: F. Bettcher ax: J. Moskow and W. Fee axmen: Use also transit in perfect adjustment. Begin at S $\frac{1}{6}$ cor bet. secs 19 & 20 T142, R. 31, back sight N, on corrected hub No. 1593.7, previously established by Curo on the true line. Turn $85^\circ 25'$ to the Right and run East not chaining; air very heat wavy - taking fairly long sights: Timber heavy and thick & progress slow. John Sobel appears about 2.30 P.M. and asks a few questions which I answer. I run very nearly to the E. line of sec 20 & quit for supper. Still at hotel Chase: Note: at about 3 o'clock P.M. I noticed a small bush fire burning about $\frac{1}{4}$ mile NW of line we were surveying: I called Mitchel Ellis back to the transit and pointed it out to him: It was in a part of the section which none of my party have traversed today. After supper Curo & I work in the office on notes and calculations of this survey. Curo went to Ten Mile Lake and back today, to assist N.D. Gorman in calculations of subdivision of sec 36 T141, R. 31, signed Geo. W. Miller.

April 3rd, 1915, Saturday: Fair and windy, Geo. W. Miller transit: M. Ellis, W. Fee & F. Bettcher axmen: Also transit: Continue E, on random thro cen' of S half of sec. 20 and intersect E. side of sec 20 at about 10-30 a.m., then walk to N, $\frac{1}{6}$ cor, betw. sec. 19 & 20 where we set transit - back sight S, on $\frac{1}{4}$ cor' and turn to Left 106.20° & run E, cutting new random thro cen' of N half of sec 20 - not chaining. Run a few hundred feet E. of N & S cen line of sec. In establishing S $\frac{1}{6}$ cor. bet secs 19 & 20, T142, R. 31, we re-trace old line run by Curo, whose notes read as follows: "Beg. @ cor. to 19, 20, 29, 30, T142, R. 31, run N, Var. $7^\circ 05' E$: at 300, stake: at 470.20 hub: at 600 stake: at 839. cross old log road NW & SE: at 900 stake: at 1113. hub: at 1200 stake: at 1290 cross old road grade NW & SE: at 1320 hub, temp $\frac{1}{6}$: at 1500 stake: at 1593.00 hub: at 1800 stake: at 2100 stake: at 2377.00 hub: at 2400. stake: at 2597.80 N, the true $\frac{1}{4}$ cor. bet. secs 19 & 20, sets East 4.50 feet. Correcting: 1 ft. goes East .0017 of a foot for each foot N. 2597.80 N, goes East 4.50 ft: 1320. N, goes South 2.10 to 1298.90 N, then East 2.25 feet where we drive a spike for the true South $\frac{1}{6}$ corner bet. secs. 19 & 20, T142, R. 31, signed John W. Curo." Geo. W. Miller, field eng'r

April 4th, 1915, Easter Sunday. Bales arrives on 3. o'clock morning train from Mpls & Gorman from Hackensack, Both all day in office on notes of 36 - T141, R. 31.

April 5th, 1915, Monday, fair & warmer, Geo. W. Miller transit: F. Bettcher,

J. Moscow, W. Fee axmen: 300 ft. steel tape and alve transit: John Goebel sent 5 men to hotel Chase this morning, but following Curo's instructions I took only the three men about mentioned and told the others to return as we did not need them. Curo telephoned Goebel regarding the men. Continue random East thro N half of sec 20 - not chaining: intersect East side of sec 20 about noon. Set hub on hill top about 100 ft. E. of East boundary of sec 20. ate lunch here. In P.M. walk to East $\frac{1}{6}$ cor. bet. secs 20 & 29, where we establish the true $\frac{1}{6}$ corner as follows: Set spike on random line, turn 90° and run South 1.60 ft where we set the true $\frac{1}{6}$ corner and drive 40d spike, and with transit still setting on random spike, back sight west on random line and turn $84^\circ 25'$ to the Right, then transit the telescope, and my line of sight intersects 0.15 of a foot East of true $\frac{1}{6}$ corner just set. Again transit telescope and run north - not chaining: set spike on hill top about 200 ft from transit north and from the spike on hill top we measure West 0.15 of a foot and set spike on true random line over which we set transit - back sight South on true $\frac{1}{6}$ corner - transit telescope and run north thro E. half of sec. 20. Run about $\frac{1}{4}$ mile and quit for supper. Curo and I spent part of night in the office making calculations of survey. Still at hotel Chase, signed Geo. W. Miller.

April 6th, 1915 - Geo. W. Miller transit: F. Bettcker, J. Moscow & W. Fee axmen: alve transit Lv at 7:30 A.M. - meet crew on works and continue N. on random: run nearly to N. side of sec. 20 & quit for night. Still at Chase. Geo. W. Miller - Engr.

April 7th, 1917 - Same crew: Lv at 7:15 A.M., meet crew on works & continue N. on random: Intersect N. side of sec 20 about 10-30 am. My hub sets on N & S random on hill top about 250 ft S. of N side of 20. Walk to S. side of sec 20 and establish the true West $\frac{1}{6}$ cor. bet. secs 20 & 29 as follows: Measured 1307.50 ft W, from $\frac{1}{4}$ cor., and set hub on random over which we set transit - back sight E, on $\frac{1}{4}$ corner and turn 90° to Right and run S. 8.00 ft and set spike for true West $\frac{1}{6}$ cor. Again back sight on $\frac{1}{4}$ corner - transit telescope and turn $86^\circ 45'$ to the Right - then again transit telescope and find the line of sight cuts 0.48 of a foot East of the true $\frac{1}{6}$ just set: Again transit telescope and run N, set pt. on hill top about 200 ft N, from which I chain West 0.48 of a foot and set spike on true random line over which I set transit - back sight on true $\frac{1}{6}$ corner, then transit telescope and run N, thro cen of West half of sec. 20: Run about $\frac{1}{2}$ mile and quit for night. Curo & I make calculations of this survey at the office in the evening. Still at hotel Chase, signed Geo. W. Miller.

April 8th, 1915. Same crew: Lv at 7:15 A.M., meet crew on the work & continue North and intersect N. side of sec. 20 at about 4 P.M. Hub on N & S random sets about 40 ft. South of N. side of sec. 20. I discharge two of the crew being Fred Bettcker & Walter Fee, told John Moscow to leave at 7 A.M tomorrow for the work where I will meet him and chain all unchained lines. Still at hotel Chase, Curo & I

make calculations at the office after supper, signed Geo W. Miller.

April 9th, 1915 - Geo W. Miller transit and chain: John Moskow ax and chain: 300 ft steel tape & aloe transit. Lv hotel at 7 am & walk to corner of sec 16, 17, 20, 21, T142, R31 & check chain West on random line bet. secs 17 & 20, rains and we come in and I spend PM at the office on plots and calculations. Baldwin arrived from Mpls on this morning's 3 o'clock train. Geo W. Miller, field eng'r.

April 10th, 1915 - Same crew: Lv at 7 am. check chain W, on random bet. 17 & 20: at 185.90 W, we find hub which has fallen down: at 409.20 W, tack in fallen poplar: at 808.35 tack in fallen poplar: at 1070.30 hub: at 1414.30 hub: at 1581. hub which has fallen: at 2486.80 hub: 2674.30 hub: 3079 State road N & S: 3307.40 hub: 3605. hub: 4249.20 hub which has fallen: 4444.60 cor to secs 17, 18, 19, 20 set S, 14.38 feet. Walk back over line and set corners as follows: Set hub on random 3333.45 W, where we set transit, and turn 90° and chain S, 10.79 ft and set hub for true West $\frac{1}{16}$ corner bet. sec 17 & 20, T142, R31. Set hub on random at 2222.30 W, where we set transit and turn 90° and run S, 2.19 ft and set hub for true $\frac{1}{4}$ cor bet sec 17 & 20, T142, R31. Set hub on random at 1111.15 W, where we set transit, turn 90° and run S, 3.60 ft & set hub for true East $\frac{1}{16}$ bet. sec 17 & 20. The correction for this line is .0032353 of a foot south for each foot West. I correct each hub as follows: 3605 W, set S 11.66 ft: 2674.30 W, goes S 8.65 ft: 2486.80 W, goes S 8.05 ft: 1414.30 W, goes S 4.58 ft: 808.35 W, goes S 2.63: 409.20 W, goes S 1.32 ft. Over each of these corrected hubs I set a large guard stake marked "True line". Snow walk S on E. side of sec. 20, but do not find Donner's hub & quit for night - still at Chase. Geo. W. Miller - Eng'r.

April 11th, 1915 - Geo W. Miller transit & chain: F.W. Prettyman ax & ch. 300 ft tape & aloe transit Lv at 8:15 am. and chain E, on N $\frac{1}{16}$ line of sec 20. At 597.60 E, hub: 896.60 hub: at about 1100 cross N & S random line: at 1611 State Road N & S: 1841.50 hub: at about 2255 cross N & S random: 2390.50 hub: 2803.30 hub: about 3583 cross N & S random: 3761.50 hub: 4281 old road S & NW: 4500 stake: eat lunch: In P.M. we set the N $\frac{1}{16}$ cor bet sec. 20 & 21 as follows: we chain 1826.85 ft S and set hub and run E. 141.55 ft & set hub for true $\frac{1}{16}$. Walk back to hub 4500 E, and chain East and at 4721.00 E, the N $\frac{1}{16}$ bet. 20 & 21, sets South, 24.35 feet. Still at Chase. Geo W. Miller, Eng'r.

April 12th, 1915 - Geo W. Miller & F.W. Prettyman: Lv at 7 am. we set true South $\frac{1}{16}$ corner bet sec 20 & 21 as follows: at 5384.75 ft S on random, we run East 90° to line 70.20 ft & set hub for true $\frac{1}{16}$. we chain East on South $\frac{1}{16}$ line of sec. 20 as follows: at 133 E, wagon road N & S: at 225. W side of bog: at 400 E. side of bog: at 474. tack in log: 716.40 hub: about 1223 cross N & S random: at 1423.70 hub: about 2469 cross N & S random: 2545.60 hub: 3222.60 hub: about 3753 cross N & S random: 3760.30 hub: 4800.50 hub: 4981.50 hub: 5096.50 the true South $\frac{1}{16}$ corner between sec 20 & 21 set a N 75.05 feet at 90° to transit line: Beginning at spike 7.10 ft south of the $\frac{1}{4}$ corner bet. sec 19 & 20, we chain East: at 175 W side of bog: at 455 E. side: about 1150 cross N & S random: 1807.40 hub: 2335.50 hub: about 2343. cross N & S random: 2400 set stake & quit for night. Still at hotel Chase. Geo W. Miller, Eng'r.

April 13th, 1915. Same crew: Lv at 7 am and chain N on W. $\frac{1}{16}$ line of sec 20:

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at 207.60 hub: 726.80 N, hub: 945 wagon road SE & NW: about 1383 cross E & W random: 1508.20 hub: 1874 hub: 2360 S side of bog: 2470 N side: 2591.20 hub: about 2790 cross E & W random: 2981 hub: 3352 hub: 3439 wagon road E & W: 3717.30 hub: 4022.30 hub: about 4242 cross E & W random: 4651.30 hub: 4886.30 hub: 5626.20 hub: at 5698.20 ft N of the true West $\frac{1}{6}$ corner between sections 17 & 20, sets East 46.10 feet at 90° from random. Beg. at stake 2400 we chain East on center line of sec 20: at 2664 State Road, SE & NW: at 2979 hub: 3138.70 hub: 3566.70 hub: about 3643 cross N & S random line: 4342 State Road NE & SW: 4490 hub: 4936 hub: at 5059.00 ft East the true $\frac{1}{4}$ corner bet. secs 20 & 21, sets North 17.73 feet at 90° to random: Quit for night and work at the office in evening with Curo. Still at hotel Chase. Geo W. Miller, Engr.

April 14th, 1915: Miller & Prettyman Lv at 7 am and chain North on East $\frac{1}{6}$ of sec 20: at 221.80 hub: 965.30 hub: about 1568 N, cross E & W random: 2064. hub: 2259.30 hub: 2927 state Road E & W: 2938.30 hub: about 3226 cross E & W random: 3268.40 hub: 3633.80 hub: 4278.60 hub: 4562 hub: about 4964 cross E & W random: 5133.40 hub: 5783 hub: 6303.60 hub: 6429.50 hub: at 6627.00 ft North the true East $\frac{1}{6}$ corner bet. secs 17 & 20, sets West 226.20 ft at 90° to random. Quit for night. Still at Chase. After supper Curo & I work in office on calculations. Geo W. Miller, Engr.

April 15th, 1915 Rain. Geo W. Miller transit & chain. Fred Bettker ax and chain: 300 ft steel tape and also transit. Lv at 7.15 we set the center of the NE $\frac{1}{4}$ of sec 20, T142, R31 as follows: at 4951 N, run W on 90° 168.98 ft & set hub, and at 4927.20 N, run W 168.17 ft & set hub: Then at hub 3408.30 E, we run South 17.59 ft & set hub: at 3414.40 E, run S 17.62 ft & set hub and from the four points just set we get the intersection on the straight lines and set hub for temporary $\frac{1}{6}$ and set guard stake. Quit for night: Still at Chase. Curo, Gorman & Miller work in office after supper on calculations. Geo W. Miller, Engr.

April 16th 1915 - Same crew: To establish the center of East half of sec 20 we proceed as follows: at 3268.40 N, we run West 111.55 ft West and set hub: and at 3224.00 N, we run West 110.04 ft and set hub: Then at 3529.30 E, we chain North 14.41 ft and set hub and at 3532.30 E, we run North 14.42 ft and set hub: From the four points just set I obtain intersection of straight lines and set hub for temporary $\frac{1}{6}$ in center of East half of sec 20, and set guard stake. To set the $\frac{1}{6}$ in center of SE $\frac{1}{4}$ of sec 20, we proceed as follows: at 1603.80 N, we run West 54.74 ft and set hub: and at 1613.80 N, we run West 55.08 ft and set hub: Then at 3709.20 E, we run North 54.64 ft and set hub and at 3689.90 E, we run N 54.35 ft and set hub and from the four points just set we obtain the intersection of the straight lines and set hub for temporary $\frac{1}{6}$ and set guard stake. To set the $\frac{1}{6}$ corner in the center of the South half of sec 20, we proceed as follows: at 2474.80 E, we run North 36.45 ft and set hub and at 2482.50 E, we run North 36.57 ft and set hub: Then at 1505.20 N, we run East 5.72 ft and set hub and at 1511.70 North run East 5.74 ft and set hub and from the four points just set I obtain the intersection of the straight lines and set hub for temporary $\frac{1}{6}$ and set guard stake. Quit for night - Still at hotel Chase. Geo W. Miller Engr.

April 17th, 1917. Same crews and tools To set the center of section 20, T. 142, R. 31, we proceed as follows: at 3010.10 N, we chain East 11.44 ft and set hub, and at 3005.00 N, we run East 11.42 ft and set hub. Then at 2335.50 E, we run North 11.90 ft and set hub and at 2330.20 E, we run N 11.89 ft and set hub and from the four points thus obtain the true intersection of the straight lines, N, S, E & W, thro the center of the section, where we set a hub for the true $\frac{1}{4}$ corner in the center of section 20, and set a guard stake. To set the $\frac{1}{16}$ in North half of sec 20 we begin at 4569.20 N and chain East 17.36 ft and set stake, and at 4563.20 N, chain East 17.34 ft and set hub. Then at 2241.60 E, chain South 11.57 ft and set hub and at 2239.00 E, chain South 11.55 ft and set hub and from the four points thus set I obtain the intersection of the straight lines where I set a hub for true $\frac{1}{16}$ in center of North half of sec. 20, and set guard stake. To set the $\frac{1}{16}$ in center of the NW $\frac{1}{4}$ of sec 20, we begin at 4232.60 N, and chain East 34.24 ft and set hub and at 4241.80 N, chain East 34.32 ft and set hub: Then at 1133.00 East chain South 5.84 ft and set hub. and at 1136.40 E, chain South 5.86 ft and set hub and from the four points thus set I obtain the intersection of the straight lines and set a hub for the temporary $\frac{1}{16}$ and set guard stake. Quit for night. Still at hotel Chase. Geo W. Miller, Engineer.

April 18th, 1915 - same crew and tools: to set the $\frac{1}{16}$ in center of West half of sec 20, we begin at 2790.10 N, and chain East 22.57 feet and set hub, and at 2803.30 N, chain East 22.68 ft and set hub. Then at 1169.60 E, chain North 9.46 ft and set hub and at 1173.20 E, chain North 9.46 ft and set hub and from the four points thus set we obtain the intersection of the straight lines where we set a hub for the temporary $\frac{1}{16}$ and set guard stake. To set the $\frac{1}{16}$ in the center of the SW quarter of sec 20, we begin at 1392.60 N, and chain East 11.27 feet and set hub: at 1401.10 N, chain E 11.33 ft and set hub: Then at 1232.30 E, chain North 18.15 ft and set hub and at 1235.60 E, chain N 18.20 ft and set hub and from the four points thus set we obtain the intersection of the straight lines where we set a hub for the temporary $\frac{1}{16}$ and set guard stake and quit for night. Still at hotel Chase - Geo W. Miller, Engineer.

April 19th, 1915 - same crew and tools: To at 7 am. From temporary $\frac{1}{16}$ hub in cen. of SE quarter of sec 20, we run East on true line 89.09 ft thence North 2.39 ft where we set stake for the true center of the SE quarter. From temporary $\frac{1}{16}$ hub in center of East half of sec 20 we run East 178.18 ft, and set stake for the True Center of the East half of sec. 20. From temporary $\frac{1}{16}$ hub in cen. of NE quarter of sec. 20, chain East on true line 89.09 ft and set stake for the True Center of the NE quarter. From temporary $\frac{1}{16}$ hub in cen. of South half of sec 20, we run North on true line, 4.77 ft and set stake for the True center of the South half of sec 20. From temporary $\frac{1}{16}$ hub in center of SW quarter of sec 20, we run North 2.39 ft and set stake for the True center of the SW quarter of sec 20. Quit for night, still at Chase. Geo W. Miller, Engr.

April 20th, 1915 - Geo W. Miller, Fred Bettcher, John Goebel and team with 24 iron monuments which Goebel distributes Miller & Bettcher then at each established corner we set a 2 $\frac{1}{4}$ by 48 inch galvanized iron pipe capped on top, and with $\frac{3}{8}$ by 12 iron anchor rod run thro bottom, nearly their full

length in the ground in a two foot mound. along with us, and witnessing each corner as set was Mr. John Soebel, Mr. Frank Breece and Mr. Mitchell Ellis, all residents of Walker, Minnesota. We set 16 corners and quit for night, still at Chase, Geo W. Miller, Engr.

April 21st 1915, Geo W. Miller and Fred Bettcher with same witnesses continue setting iron corners in section 20, T142, R31. Each corner we set in the same manner as described yesterday. We finish at about 2.30 P.M. at each of the following points we pulled up the wood stakes and hubs set at points for true corner and set in their places a 2. 1/4 by 48 inch galvanized iron pipe as before described.

1st: at the SW corner of section 20, being the corner to secs. 19, 20, 29, 30, T142, R31.

2nd: the West 1/6 corner between sections 20 + 29.

3rd: the 1/4 corner between sections 20 + 29.

4th: the East 1/6 corner between sections 20 + 29.

5th: the S.E. corner of sec. 20, being the corner to secs. 20, 21, 28, 29, T142, Rg 31.

6th: the South 1/6 corner between secs 20 + 21.

7th: the 1/6 corner in center of SE quarter of sec. 20.

8th: the 1/6 corner in center of South half of sec 20.

9th: the 1/6 corner in center of SW quarter of sec. 20.

10th: the South 1/6 corner between sections 19 + 20.

11th: the 1/4 corner between sections 19 + 20.

12th: the 1/6 corner in center of West half of sec. 20.

13th: the center of sec. 20.

14th: the 1/6 in center of East half of sec. 20.

15th: the 1/4 corner between 20 + 21.

16th: the North 1/6 corner between sections 20 + 21.

17th: the 1/6 in center of NE quarter of sec. 20.

18th: the 1/6 in center of North half of sec. 20.

19th: the 1/6 in center of NW quarter of sec. 20.

20th: the North 1/6 corner between secs 19 + 20.

21st: the NW cor to secs 17, 18, 19, 20, T142, R31.

22nd: the West 1/6 between secs 17 + 20.

23rd: the 1/4 corner between sections 17 + 20.

24th: the East 1/6 between sections 17 + 20.

25th: we find already established a 2. 1/4 by 48 inch galvanized iron pipe, capped on top and set nearly its full length in the ground in a 2 ft mound as recorded in survey record No 249 of Page 56 of Book "B" County record book of surveys. Geo W. Miller, Still at Chase.

April 22nd 1915, I spend entire day and part of night at the office working on plat of sec 20, on which work I was assisted by John W. Curo + others. Still at hotel Chase. Geo W. Miller, Engr.

April 23rd, 1915, Geo W. Miller spends entire day and part of night at the office on plat of sec 20, on which work I was assisted by John W. Curo + others. Geo W. Miller Engr.

April 24th, 1915. Geo W. Miller works all day on plat and report of sec 20, T142, Range 31, on which work I was assisted by Curo and others.

John Goebel goes out to Sec 20, T 142, R 31, and heaps more earth on mounds at corner.

Still at hotel Chase.

Geo W. Miller, Asst Engineer.

Surveyed March 22nd 1915 to April 24th, 1915.

Recorded February 28th, 1917.

John W. Curo, County Surveyor,
Cass County, Minnesota.

B

SURVEY RECORD No 328

-PLAT-

T.142-143 N R 27 W 5th PM

STATE

ROAD

13

23

24

28

27

26

25

Graded Road

1324

1324

1339.95

1339.95

1339.95

1339.95

1338.15

1338.15

1338.15

1338.15

1372.55

1342.55

5359.80

5352.60

2785.10

5128.20

1357.4

1357.4

1225

1225

1344.67

1340.67

1332.18

1322.18

1312.18

1302.18

33

34

35

36

T 143 R 27

T 142 R 27

2

1

T142, Rq 27. Sections 142.

T143, Rq 27. Sections 13, 23, 24, 25, 26, 27, 28, 33, 34, 35, 36.

Field notes of the survey of a wagon road to begin at the corner to sections 28, 29, 32, 33, T143, Rq 27 and run East $3\frac{1}{2}$ miles; thence north thro the center of secs 25 & 24, 2 miles intersecting the new state road at the $\frac{1}{4}$ corner between sections 13 & 24 of said Twp, also a mile of road N & S between secs 35 & 36 and the establishment of new corner posts and the finding of old U.S. bearing trees and posts in sections 13, 23, 24, 25, 26, 27, 28, 33, 34, 35, 36 Twp 143N, Range 27W, and sections 142. Township 142N, Range 27W, 5th P.M. Cass County, Minn., is surveyed by John W. Curo, County Surveyor, of Cass Co Minn, assisted by Frank A. Donner, deputy. Mr. J. J. Opsahl of Bemidji is paying for this survey and as his company own the most of the land thro which the proposed road is to pass, he may donate some money toward the building of the road. He also wants all corners properly located and recorded.

Feb 22nd, 1915 - F. A. Donner, Asst Engr. leaves Hackensack for Boy River by way of Bemidji: RR fare Hackensack to Bemidji 90¢ Breakfast at Bemidji 40¢ RR fare Bemidji to Boy River 90¢ Arrive at Boy River station via Soo Ry about 11 o'clock a.m. I find Elmer Madson the Clerk at Opsahl's camp and we walk out to camp for dinner. In P.M. it being Washington's birthday I work in the camp office and Madson & I take a load of logs to Boy River & bring out my outfit. Supper and over night at camp.

F. A. Donner, Asst. Engineer

Feb 23rd, 1915 - Continue for Opsahl: A.M. starting from the corner of secs 28, 29, 32, 33, T143, Rq 27, U.S. notes call for a post and B.T.s. viz:

Spruce 8 inch S 54° E 11 links, (= 7.26 ft. in sec. 33)

Willow 7 inch, N 45° W 16 " (= 10.56 ft. in sec. 29)

Spruce, 10 inch, S 71° W 18 " (= 11.88 ft. in sec. 32)

Spruce, 10 inch, N 47° E 17 " (= 11.22 ft. in sec. 28)

I find a 4 inch post, set by Curo for the true section corner, from which I run East with small compass and look for the corner of sections 27, 28, 33, 34, T143, R. 27 where U.S. notes call for post and:

Jamarac 6 inch S 46° W 32 lks (= 21.12 ft in sec. 33)

Cedar 7 inch, S 35° E 9 lks (= 5.94 ft in sec. 34)

Cedar 6 inch N 68° E 13 lks, (= 8.58 ft in sec. 27)

Norway pine 12 inch, N 79° W 12 lks, (= 7.92 ft in sec. 28)

I find the N.E. tree down but plainly marked. In P.M. I run a compass line between secs 27 & 34 also between secs 26 & 35; also betw. secs 25 & 36:

T143, R 27 and look for the section corners but am unable to find same. F. A. Donner, Asst Engineer

Feb 24th, 1915 - Continue for Opsahl: In a.m. Frank Prusnik, Alfred Johnson and F. A. Donner walk out to the corner of sections 27, 28, 33, 34, T143, R 27, where I set a 60 d spike from the NE bearing tree for the true section corner, with new bearing trees as follows:

Dry stub or snag, 8 inch, N $4^\circ 49'$ W 52.20 feet in sec. 28.

" " " " 14 inch, N $39^\circ 15'$ E 73.40 feet in sec. 27.

" " " " 8 inch, S $37^\circ 26'$ W 6.90 feet in sec. 33.

Var. reads $8^\circ 45'$ E. Run East on $8^\circ 45'$ variation (N $89^\circ 55'$ E) between secs

27+34, T143, R27: at 4+50 enter marsh: at 600 ft leave marsh: at 9+96.8 East, set hub: dinner at camp. In P.M. we continue East: at 1200 ft E, enter swamp: at 16+5.9 East, set hub: at 18+25 lv swamp: at 22+49.7 set hub: at 2700 feet East enter meadow: at 27+80.8 set hub: at 34+75 E, leave meadow: quit for supper and over night at camp. F.A. Monner-Ass't Engr.

Feb. 25th, 1915 - Continue for Opsahl. In a.m. we continue East and at 41+36.15 E, set hub: at 47+61 E, set hub: quit for noon and get dinner at Green's camp. In P.M. we continue East: at 5300 ft East we look for the corner of sections 26, 27, 34, 35, T143, R27, where U.S. note call for post and:

- Jamarac 12 inch, S 40° W 14 lks, (= 9.24 ft in sec 34)
- Jamarac 6 inch, S 13° E 13 lks, (= 8.58 ft in sec 35)
- Jamarac 6 inch, N 11° W 15 lks, (= 9.90 ft. in sec. 27)
- Jamarac 6 inch, N 69° E 11 lks, (= 7.25 ft. in sec. 26)

I find the SE, and NW and NE old bearing trees from which I set a 4x4x24 inch cedar hub, 12 inches in the ground for the true section corner. at 53+59.80 East, the true corner to secs 26, 27, 34, 35, sets South 75.10 feet, over which I set transit and run East on 10° 30' variation East (N 89° 58' E) between sections 26+35; we run about 600 ft East and quit for night - over night at Madson's camp. F.A. Monner, Ass't. Engr.

Feb. 26th, 1915 - Continue for Opsahl: continue East and at 13+27 set hub: at 23+56.8 set hub: at 31+41.7 set hub: at 38+35.1 set hub: we run to about 5000 feet East and quit for night. Still at camp. F.A. Monner-Engr.

Feb. 27th, 1915 - Continue for Opsahl: we continue East and at 5300 ft. East look for the corner to sections 25, 26, 35, 36, T143, R27, where U.S. notes call for post and:

- Spruce 10 inch, S 55° W 50 lks, (= 33.00 ft in sec. 35)
- Fir 6 inch, N 6° W 10 lks, (= 6.60 ft. in sec. 26)
- Fir 6 inch, S 84° E 9 lks, (= 5.94 ft. in sec. 36)
- Fir 5 inch, N 38° E 14 lks, (= 9.24 ft in sec. 25)

As we find nothing we continue East: at 55+6.2 set hub: at 67+17.6 E, set hub: at 73+73.6 set hub and eat dinner in woods: at 80+44.2 we look for the 1/4 corner between sections 25+36, where U.S. notes call for post and:

- Elm 10 inch, N 6° W 14 lks, (= 9.24 ft in sec 25)
- Birch 6 inch, S 66° W 13 lks, (= 8.58 ft in sec. 36)

I find the SW tree, down but plainly marked from which I set a 60d spike for the true 1/4 corner between sections 25+36, T143, R27, with new bearings as follows:

- Birch 8 inch, N 69° 35' W 15.80 ft in sec 25.
- Birch 16 inch, S 50° 15' E 55.05 ft. in sec. 36.
- White pine stump 10 inch, N 51° E 52.35 ft. in sec. 25.

Var reads 9° 54' E. at 8137.70 ft East the 1/4 cor between secs 25+36 sets - north 132.60 ft. Beginning at 1/4 between 25+36, run East on 10° 45' (N 89° 58' E) at 9+78.70 set hub and quit for night. Over night at camp. F.A. Monner, transitman.

Feb. 28th, 1915 - Continue for Opsahl. Warm and clear, we...

continue East between sections 25 & 36: at 13+13 set hub: at 26+46.8 set hub:
We look for the S.E. corner of sec. 25, T143, R. 27, where U.S. notes call for
post and: Fir 10 inch, S 38° E 21 links, (= 13.86 ft)

Fir 8 inch, N 40° E 33 links, (= 21.78 ft.)

Birch 8 inch, S 78° W 9 links, (= 5.94 ft)

Birch 10 inch, N 59° W 13 lks. (= 8.58 ft)

We are unable to find anything and quit for dinner in the woods. Beginning at the $\frac{1}{4}$ corner between secs 25 & 36, T143, R 27, we run North on 9° var E: at 7+85.2 set hub: at 16+47.6 N, set hub: at 27+78.2 N, set hub: quit for night Over night at camp. F.A. Donner-Engineer.

March 1st, 1915 - Continue for Opsahl: Continue north thro sec 25: at 41+30.7 N, set hub: at 5300 ft north we look for the $\frac{1}{4}$ corner between secs 24 & 25, T143, R 27, where U.S. notes call for a post and bearing trees as follows: Fir 16 inch, S 55° W, 16 lks, (= 10.56 ft in sec 25)

Maple 15 inch, N 28° W 37 lks, (= 24.42 ft in sec. 24)

We are unable to find anything and continue transit line North: at 56+3.1 set hub: at 58+26.5 set hub: dinner in woods: at 63+26.4 set hub: at 68+41.2 set hub: at 71+11.4 set hub at 78+19.5 set hub: and quit for night. Over night at camp. F.A. Donner, Engineer.

March 2nd, 1915 - Continue for Opsahl: Continue North thro sec. 24: at 87+24.7 set hub: 89+93.2 set hub: dinner in woods: at 93+78.9 set hub: at 99+7.3 set hub: at 10691.40 feet north the $\frac{1}{4}$ corner between sections 13 & 24, T143, Rg 27, sets West 43.00 feet. At this point U.S. notes call for a post and the following bearing trees.

Balm Gilead 7 inch, S 35° E, 8 lks, (= 5.28 ft in sec 24)

Fir 5 inch, N 4° E 7 links, (= 4.62 ft in sec 13)

This corner has been set by State Engineer and to it I find a 16 inch aspen bearing tree, with nail in, which bears North 3° 5' W, 39.60 feet in section 13. Var 9° 30' E. quit for night: still staying at camp.

F.A. Donner, Engineer.

March 3rd, 1915. Cloudy: Continue for Opsahl. Correcting back on random line between sections 25 & 36: and between sections 26 & 35, T143, Rg 27. Hub at 5376.6 E, goes North 87.58 feet, where I set a 4X4X36 inch oak post, one foot in the ground for a temporary corner to secs 25, 26, 35, 36 T143, R 27, with new bearings as follows: Balm Gilead 3 inch, S 62° 28' E, Var 9° 30'. Starting from this corner I run South Var 9° 20' E: at 2+90.8 set hub: dinner in woods: at 18+63.3 S, set hub: at 25+25: enter cedar swamp: at 25+44.9 S, set hub and quit for night. Over night at swamp.

F.A. Donner, Engineer

March 4th, 1915, Clear day: Continue for Opsahl: Continue South on random transit line between secs 35 & 36, T143, R 27: at 26+40 we look for the $\frac{1}{4}$ corner between sections 35 & 36, where U.S. notes call for post and bearing trees as follows:

Cedar 6 inch, East 10 links, (= 6.60 ft in sec 36)

Cedar 6 inch, S 66° W, 12 lks, (= 7.92 ft in sec 35)

I find the East tree, standing, and plainly marked from which I set a 4X4X36 inch cedar post for the true $\frac{1}{4}$ corner between secs 35 & 36, T143, R 27, at 2751.80 feet South, the $\frac{1}{4}$ corner sets West 35.70 ft. We

continue south with random line: at 3100 leave cedar swamp: at 33+64.2 S, set hub: at 39+13.6 set hub - dinner in woods. at 45+90.2 S, set hub: at 5200 we look for the corner to secs 1+2, T142, Rg 27, being the corner to sections 35+36, T143, Rg 27, where U.S. notes call for a post and the following bearing trees:

Birch 8 inch, S 51° W 39 links, (= 25.74 ft. in sec 2)

Fir 8 inch, N 13° W 23 links, (= 15.18 ft. in sec 35)

Fir 6 inch, N 32° E 24 links, (= 15.84 ft. in sec. 36)

Maple 6 inch, S 52° E 18 links, (= 11.88 ft. in sec 1)

We find the NE and SW bearing trees standing and plainly marked from which I set a 4x4x48 inch cedar post 12 inches in the ground for the true corner to sections 1, 2, 35 and 36 between Twp. 142, and 143 N, Range 27 W. at 5177.60 feet south, this corner sets West 87.60 ft. Going to a point in the County road (East end of graded road) near the 1/4 corner between sections 28+33, T143, Rg 27, run transit line East and quit for night. Over night at Opsahl's Red River Lumber Co. Camp No. 1. near center of section 22, T143, Rg 27. F. A. Monner, Engineer.

March 5th, 1915. Continue for Opsahl, cloudy and snowy. Continue East on transit line between 28+33, to the corner of sections 27, 28, 33, 34, T143, Rg 27, then walk to Bay River to meet Curro who arrives from Bemidji - and Curro & I walk out to Camp for dinner. In P.M. we begin at my temporary corner to sections 25, 26, 35, 36, where we start Puronik and Johnson No. 2, cutting picket line North between sections 25 and 26, while Curro and I walk to the 1/4 corner between sections 24 and 25. Quit for night. Still at Opsahl's camp. F. A. Monner, Engineer.

March 6th 1915 Clear day: Continue for Opsahl. In a.m. the crew continue line north between sections 25 and 26 while Curro and I walk to the 1/4 corner between sections 24 and 25, T143, Rg 27, where U.S. notes call for a post and the following bearing trees:

Maple 15 inch, N 28° W 37 links, (= 24.42 feet in sec. 24)

Fir 16 inch, S 55° W 16 links, (= 10.56 feet in sec. 25)

We find the Maple standing green and plainly marked and the rotten stump of the Fir from which we set the true 1/4 corner by flat chain from face of old bearing trees where we set a 4x4x36 inch stake for the true 1/4 corner after which the old bearing trees stand as follows: Maple 15, N 18° W 24.42 ft. Fir 16 inch, S 85° W 10.56 ft. we mark the following new bearing trees:

White pine, 12 inch, S 38° W 54.10 feet.

Birch 14 inch, S 59° E 34.30 ft. Var. 9° E. At a point in our transit line 5362.70 ft North of 1/4 between secs 25+36, the 1/4 between secs 24 and 25, sets East 88.80 feet. Correcting the N+S random line thro center of sec. 24, at 6694.88 N, (= 1332.18 feet in sec 24) we chain East 55.85 feet and set tall stake braced, and marked, "true N. and S. center line --- Road center" "temporary 1/6" at 8027.06 North (= 2664.36 ft

N in sec 24) we chain East 22.90 feet where we set tall stake marked "true N & S center line" "Road center" "temporary center":

at 9359.34 N, (= 3996.54 ft north in sec 24) we chain West 10.05 feet where we set tall stake, braced and marked: "True N & S center line" "Road Center" "temporary 1/6": at 10691.40 N, (= 5328.70 ft N, in sec 24)

the $\frac{1}{4}$ corner between secs 13 and 24, sets West 43 feet, dinner at camp No 3. In P.M. Honner and Pursnik correct the N & S center line of sec 25, as follows: at 5362.70 N, the $\frac{1}{4}$ corner sets East 88.80 feet. at 4022.01, we chain East 66.60 ft and set tall stake marked "Temp. $\frac{1}{16}$ - true N & S center line - Road Center". At 2681.24 N, we chain East 44.40 feet and set tall stake marked "Temp Center of sec 25 - Road center - true N & S center line". at 1340.67 N, we chain East 22.20 feet and set tall stake marked "Temp $\frac{1}{16}$ - True N & S cen line - Road Center". Curo and the two Johnsons begin at the corner of an old camp, being the assumed corner to secs 23, 24, 25, 26, T 143, R 27, and chain South over cut out picket line: at 2640 S, we look for the $\frac{1}{4}$ corner between secs. 25 and 26, where U. S. notes call for a post and the following bearing trees:

Aspen 6 inch, N 55° W 8 lks, (= 5.28 ft in sec 26)

Birch 10 inch, S 40° E 5 lks, (= 3.30 ft in sec 25)

all are gone and we continue South: at 5091.20 S, intersect stake O.O. being the temporary corner to sections 25, 26, 35, 36, previously set by Honner. The true corner sets South 37 feet and West 24.40 feet. at this point U. S. notes call for post and following bearing trees:

Spruce 10 inch, S 55° W 50 links, (= 33.00 ft in sec 35)

Fir 6 inch, N 6° W, 10 lks, (= 6.60 ft in sec 26)

Fir 6 inch, S 34° E 9 lks, (= 5.94 ft in sec 36)

Fir 5 inch, N 38° E 14 lks, (= 9.24 ft in sec 25)

We find an old 5X5 inch dead spruce tree squared up on four sides, very old and broken over, also the remains of the old stake and also the SE bearing tree down and out by the roots, faintly marked and also roots which we believe to be the remains of the old bearing trees and from these we set a 3X3X48 inch post for the true corner at a point where we find the point of the old stake, which is against the SE side of the old squared up tree and checks up with the remains of the old bearing trees as above mentioned and mark new trees, being

White pine stump 40 inch, S $24^{\circ}30'$ E 30.90 feet in sec 36.

White pine stump 40 inch, S 49° W 56.00 feet in sec 35

to nails driven in flat spots, Var 9° E. Correcting the west half mile between secs 25 and 36, T 143, R 27. At a point on our random line 6745.15 East we chain North 91.65 feet where we set a 4X4X48 inch stake for the true West $\frac{1}{16}$ corner between sections 25 and 36 with new bearing trees, being:

White pine stump 14 inch S $31^{\circ}30'$ E 43.10 feet:

Aspen 5 inch, N 56° E 29 feet, at 9° Var.

To correct the mile between secs 26 and 35: at 5352.60 East, the true corner to sec 25, 26, 35, 36, sets North 50.70 feet: at 4014.45 E, we chain North 38.02 feet and set a 4X4X48 inch post for the true East $\frac{1}{16}$ corner between sections 26 and 35, with new bearing trees, being:

Root of burned white pine stump 30 inch, bears S $37^{\circ}30'$ E 42. ft:

white pine stub 20 inch, N 49° E 31.80 feet:

Quit for night and stay at Opsahl's camp - John W. Lives and F. A. Honner. Engineers. March 7th 1915 - Curo and Honner still correcting line: at 1338.15 East we chain North 12.76 feet where we set 4X4X48 inch aspen post for the true West $\frac{1}{16}$ corner between sections 26 and 35 T 143, R 27, nailed to a 3 inch

aspens which stands a foot N.E.: at 2676.30 ft East, run north 25.35 feet and set true $\frac{1}{4}$ corner between sections 26 & 35, T143, R27, with new bearing trees as follows:

white pine stump 40 inch, S 41° E 85.08 feet.

white pine stump 40 inch, S 60° W 42.20 feet. Var 9° E.

Correcting line between sections 35 & 36, Twp 143, R27: At a point on our random line at 1394.40 South, we chain West 30.05 feet where we set the true north $\frac{1}{6}$ corner between sections 35 & 36. Braces nail to post: at 3976.80 S, we chain West 59.60 feet where we set the true South $\frac{1}{6}$ corner between sections 35 & 36, with new bearing trees, being: Cedar 7 inch, S 56° W 5.90 feet:

Cedar 14 inch, S 88° E 4.10 feet, Var 9° E.

at 5201.80 S, the true corner to sections 35, 36, 1 and 2 between townships 142 and 143, Range 27, sets West 83.50 feet at this point. We find the NE and SW old U.S. bearing trees, standing plainly marked from which we set the true corner by proportionate measurement Var 8° E. The distance between these trees by way of courses, is 39.40 U.S. chain, and equals 42.00 feet my chain. We mark new bearing trees as follows:

Spruce 7 inch, S 27° W, 17.50 feet in sec. 2.

Birch 15 inch, S 76° E 15.30 feet in sec 1. Var 9° - dinner in woods.

Frank Pursnik works in P.M. Correcting line between 27 and 34, at 5359.80 East, the corner to secs 26, 27, 34, 35, sets South 75.10 feet. at 4019.85 E, we chain 56.32 feet South and set East $\frac{1}{6}$ corner between sections 27 and 34. At 2679.90 E, chain South 37.55 feet and set $\frac{1}{4}$ corner between secs 27 & 34, with new bearings as follows:

Jamarac stump 10 inch, S 56° E 61.80 feet.

Dead white pine snag, 12 inch, N 38° E 97.30 feet: Var 9° E.

at 1339.75 ft East, we chain South 18.77 feet and set West $\frac{1}{6}$ corner between sections 27 and 34. all are 3X3X50 inch cedar posts, braced. Beginning at a point 76.90 ft South of corner to sections 27, 28, 33, 34 T143, R27, chain West 2648. feet to the $\frac{1}{4}$ corner between sections 28 & 33. Then work transit on line and set stake at 1324.00 West where we set compass and run North 38.50 feet and set a 3X3X48 inch cedar post for the East $\frac{1}{6}$ corner between sections 28 & 33, T143, R27. Nail braces to post. Note: this post is 0.30 of a foot too far North, as we have re-chained and find that we really started 76.30 ft South of the corner of sections 27, 28, 33, 34. instead of 76.90, as given above. at the $\frac{1}{4}$ corner between sections 28 & 33, the $\frac{1}{4}$ post established by H.S. Todd, call for new bearing trees as follows:

Jamarac stub, 10 inch, N $61^{\circ} 45'$ W, 45.60 feet.

Jamarac stub, 10 inch, N $6^{\circ} 26'$ W, 52.90 feet.

We find that the furthest West stub has been grubbed out, but the Easterly one stands plainly marked and as a corduroy road has been built and the stake covered up in the ice and snow, and as Todd's notes do not say at what

variation he assumed as a meridian, we set the stake at $8^{\circ} 30'$ variation, but only set a temporary cedar post in the snow, in the center of the East & West corduroy road. We will dig up Dodd's true $\frac{1}{4}$ post and set iron, next spring. Quit for night. Over night at camp.
F. A. Alouner, Engineer.

March 8th 1915 - Continue for J. J. Opsahl. In a.m. we carry survey tools to Bay River and work all a.m. on writing field notes. Dinner at Geo. Glandon. 70¢ paid by Curro. Catch 3.23 P.M. train to Bemidji RR fare 90¢ + 90¢ paid by Curro. Supper at Markham hotel \$1.00 paid by Curro. Curro and I take 11.05 train to Walker.

F. A. Alouner - Engineer.

Survey made February 22nd 1915 to March 8th 1915.

Recorded February 28th 1917.

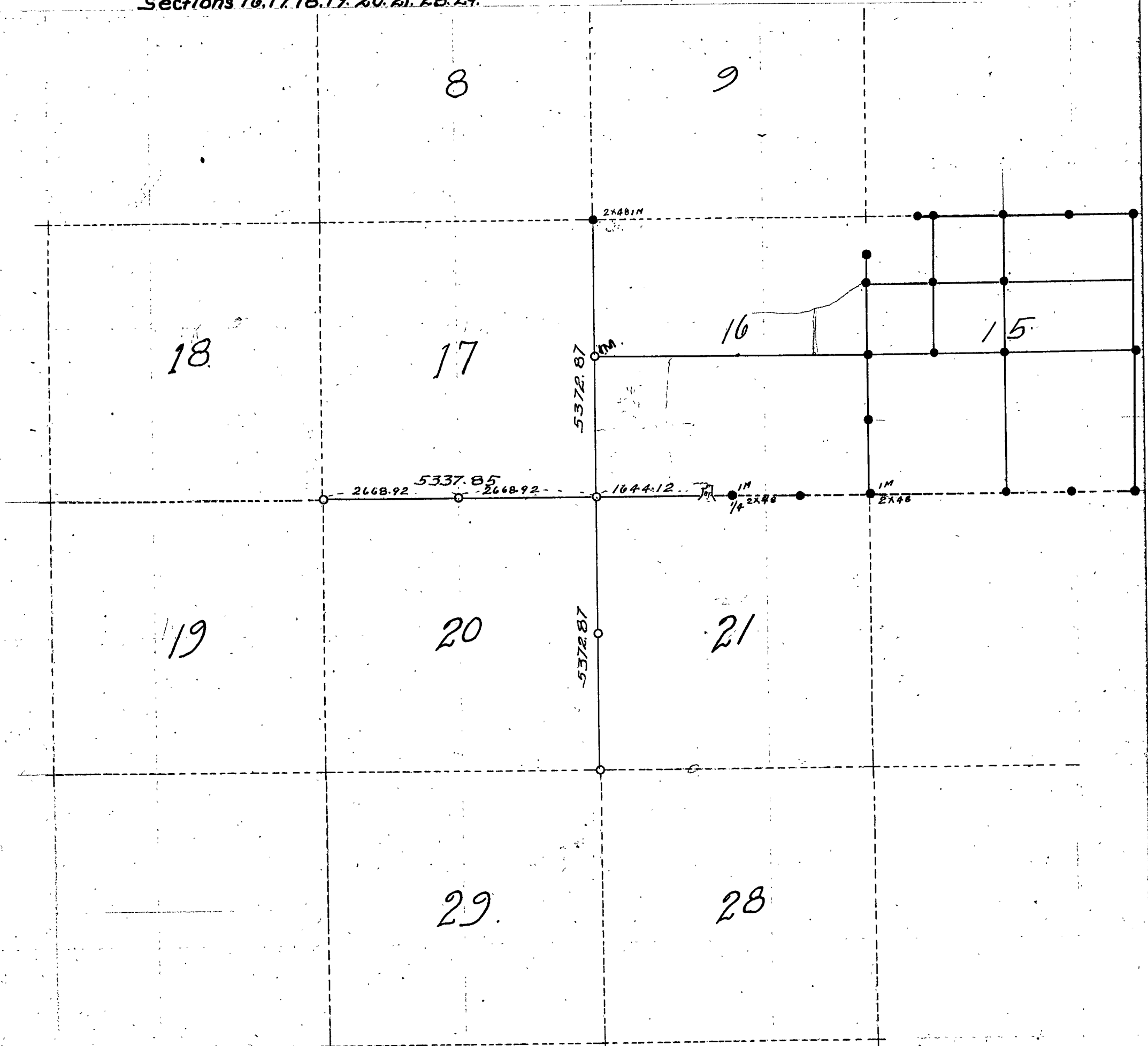
County Surveyor.
Cass County, Minnesota.

B

SURVEY RECORD No. 329

T. 140 N., R. 31 W.

Sections 16, 17, 18, 19, 20, 21, 28, 29.



T140, Rg 31

Sections 16, 17, 18, 19, 20, 21, 28, 29.

Field notes of the survey and establishment of new corners and the search for old U.S. bearing trees and the establishment of new corners and bearing trees in sections in Sections 16, 17, 18, 19, 20, 21, 28 & 29, Township 140 N., Range 31 W., 5th P.M., Cass County, Minnesota as surveyed by N.D. Gorman, Deputy Co. Surveyor, Cass Co., Minn.

Feb 2nd, 1915 - Norbert D. Gorman, Engineer, using transit and steel tape and survey tools belonging to John W. Curo, and working for Hiram Township, Curo paid my bill at Chase Hotel. Lv Walker for Hackensack via M & D Ry: RR fare 28¢. Ar, Hackensack 10.01 a.m. Dinner at Spain's hotel. Walk across Birch Lake to Victor Martin's place in Sec. 14, T140, Rg 31. Meet Victor on ice with load of ties I work in P.M. checking up field notes and stay over night with Martin. N.D. Gorman, Engineer.

Feb 3rd, 1915 - Wednesday - To establish the $\frac{1}{4}$ corner between sections 16 and 17, T140 R 31, Victor Martin and I walk to Elmer Blanchard's place (Town Clerk) then to $\frac{1}{4}$ corner on West side of sec. 16, T140, Rg 31, near which point U.S. notes call for Meander Corner No 26 being a post 50 links (= 33.00) South with the following bearing trees:

Spruce pine birch, N 20° E 10 links (= 6.60 ft in sec 16)

Spruce pine birch, S 38° 30' E 8 links (= 5.25 ft in sec 16)

all appear to be gone and we walk back to Blanchard's for dinner where we eat lunch brought by Martin. Victor Martin, Elmer Blanchard and N.D. Gorman go to the iron corner to sections 8, 9, 16, 17, T140, R 31 previously established by John W. Curo, Co. Surveyor, where we place a flag, then with transit $\frac{1}{2}$ mile South near an old stub which appears to be a meander corner, I back-sight on flag at corner to sections 8, 9, 16 & 17, from which we chain South on ice over Ten Mile Lake and set stakes every 300 feet (using 300 ft steel tape) at 2700 ft South set "snow hub" in ice: at 2850 South intersect transit: at 3000 ft S. leave lake and quit for night. Supper with Victor Martin and walk to Hackensack, lodging with Spain. Jam using 300 ft steel tape and new Gurley transit in good adjustment. N.D. Gorman, Engineer.

Feb 4th, 1915 - I leave Spain's before breakfast. Curo and I walk across Birch Lake to Martin's where I get breakfast. Curo went to Anton Dinniberg's to correct lines previously run on Sec. 12. Victor Martin and I go to the $\frac{1}{4}$ corner between sections 16 & 21, T140, R 31, where U.S. notes call for post and bearing trees as follows:

White pine birch, West 1550 links (= 1023.00 feet)

we find the stump of the old bearing tree, also the iron $\frac{1}{4}$ corner previously established by County Surveyor Curo set by proportionate measurement East & West for the true $\frac{1}{4}$ corner between sections 16 and 21, we place transit over the center of the old U.S. bearing tree stump, back-sight East on iron $\frac{1}{4}$ corner and run West, chaining from heart of stump: Var 10° 30' E: Blanchard asman, Martin & Gorman chaining Gorman transitman: setting stakes every 300 feet: at 1389.85 set hub: at 1950.00 W, set hub: at 1617. feet West, set hub for temporary corner to sections 16, 17, 20 & 21 where U.S. notes call for a post and the following bearing trees:

B

329 ^{note} CONT'D

white pine 14 inch, S 68° E 100 lks (= 66.00 ft in sec 21)

white pine 18 inch, N 41° W 112 lks (= 73.92 ft in sec 17)

Norway pine 16 inch, N 76° E 142 lks (= 93.72 ft in sec 16)

We find nothing and continue West; at 4:30 P.M. snow blowing makes transit work uncertain and we quit for night.

Byron Treefettern works 1/2 day in P.M. N.D. Gorman - Engineer.

Feb 5th 1915 - Blanchard and Treefettern did not show up. Martin and Gorman continue West in heavy brush - slow progress: at 1800 stake: at 2100 W, set stake: at 2400 set stake: at 2700 stake: at 3000 stake: at 3012.90 feet West set hub: at 3300 set stake: at 3600 + 4200 feet West set stakes: at 4241.82 feet West look for the 1/4 corner between sections 17 + 20, T 140, R 31, where U.S. notes call for a post and the following bearing trees:

Aspen 8 inch, North, 10 links (= 6.60 ft. in sec 17)

Spruce pine 6 inch, South 4 lks, (= 2.64 ft. in sec 20)

We find an old stake⁺ by someone, near the point, but as there are no B.T.'s to check with stake we believe it is wrong and continue west:

at 4257.00 ft West set hub: at 4500 set stake: Cut brush west till 4:30 P.M., then go to Blanchard's to get brush cutters and quit for night. N.D. Gorman, Engineer.

Feb 6th, 1915. B. Treefettern, E. Blanchard as men: V. Martin and N.D. Gorman chaining. Gorman transit: continue West: at 4800, set stake: 5100 set stake: 5400 set stake: at 5573.40 ft West, set hub: at 6000 set stake: at 6300 set stake: at 6900 set stake: at 6998.50 ft. W, set hub: From hub 6998.50 I run a picket line of small stakes East 161.00 feet: at 1617.00 feet added to 5249.64 feet equals 6866.64 feet West, set temporary corner to sections 17, 18, 19, 20, T 140, R 31. The true corner sets 115.26 feet West and 23 feet South, or at 6981.90 ft West, the corner sets South 23.00 feet. At this point U.S. notes call for a post and the following bearing trees:

Lead Pine 12 inch, N 51° E 85 lks, (= 56.10 ft in sec 17)

Lead Pine 12 inch, S 7° W 47 lks, (= 31.02 ft in sec 19)

Pine 3 inch, N 14° W 32 lks, (= 21.12 ft. in sec 18)

Aspen 3 inch, S 42° E 65 lks, (= 42.90 ft. in sec 20)

We find a stake set for corner to sections 17, 18, 19, 20, T 140, R 31, from which a cut out road leads West and another South.

We also find an old stump which may have been one of the bearing trees and which checks out fairly well for course and distance with the stake. We accept this stake as the true section corner and mark new bearing trees as follows: Var 10° 30' E.

Jack pine 12 inch N 53° 43' W 37.20 feet in sec 18.

Jack pine 6 inch S 31° 18' W 38.80 feet in sec 19.

Jack pine 10 inch S 52° 19' E 68.80 feet in sec 20.

to spike in flat spot in base of trees. We walk to a point near 1/4 corner between sections 16 & 17, and continue our transit line South: var reads 9° 15' E: at 3000 ft South leave Ten Mile Lake and quit for night. Supper with Martin and over night in Hackensack with Spain. N.D. Gorman - Engineer.

Feb. 7th, 1915 - Sunday - Curo and I write field notes till 1-30 P.M. - I am staying with Spain, supper with Spain. I get some 80d spikes from Curo and walk back to Martins: N.D. Gorman, Engineer.

Feb. 8th, 1915, Martin and I go to West side of 16, T140, R31, and continue chaining South with Blanchard and Treefetter cutting. We set stakes every 300 feet and leave swamp at 3900 ft South: at 4371.70 S, we set hub and at this point the variation changes to $9^{\circ}E$: at 4960.35 S set hub: At 5303.57 S, intersect random E+W line 124.35 feet to the East of temporary hub: We are unable to locate any of the old BT's so continue South and quit for night. N.D. Gorman, Engineer

Feb 9th, 1915, same crew continue South at 5400 set stake: at 5489.30 ft S, set hub: at 5700 stake: at 6000 stake: at 6300 stake: at 6437.30 S, set hub: at 6600 set hub: at 6900 stake: at 7200 stake: at 7500 stake: at 7800 stake: at 7887.00 feet South we blaze side of old pine wind fall and mark it 7887.00. We look for the $\frac{1}{4}$ corner between sections 20 & 21, where U.S. notes call for a post with bearing trees as follows:

White pine 20 inch, East 40 lks (= 26.40 ft. in sec 21)

Oak 6 inch, S $41^{\circ}W$ 19 lks, (= 12.54 ft. in sec. 20)

We find an old oak stump torn loose from its roots and lying on the ground, this appears to have been blazed, but all evidence of the pine tree is gone, and we continue South, setting stakes every 300 feet: we strike heavy pine timber and I send three men cutting. Quit for night, N.D. Gorman, Engineer.

Feb. 10th, 1915, I start D. Blanchard and Treefetter cutting on line South, and I go to see Geo. Robinson about corner posts to sections 20, 21, 28, 29, T140, R30. Robinson goes with us and we locate post in tamarac swamps, set by surveyor Hallett:

Victor Martin and I then go back and continue our line South setting stakes every 300 feet and hub at 8398.00 We enter swamp at 10200: at 10750 set hub from which I run a line of pickets along random line North from hub 10750. At this point being the corner to sections 20, 21, 28, 29, T140, R31, U.S. notes call for a post and bearing trees as follows:

Black pine 12 inch, S $26^{\circ}E$ 26 lks, (= 17.16 ft in sec 28)

Black pine 12 inch, N $24^{\circ}E$ 33 lks, (= 21.78 ft. in sec 21)

Black pine 8 inch, N $4^{\circ}W$ 21 lks, (= 13.86 ft in sec 20)

Black pine 4 inch, S $81^{\circ}W$ 46 lks, (= 30.36 ft. in sec 29)

We find the stake and some new bearing trees which stand as follows:

Tamarac 20 inch, S $3^{\circ}21'E$ 16.60 feet in sec 28.

Tamarac 16 inch, N $13^{\circ}20'E$ 21.90 feet in sec 21.

Dead spruce 10 inch, N $46^{\circ}27'W$ 12.85 feet in sec 20. I blaze the above trees and use the new bearings. The old U.S. tree in sec. 29 is gone.

At a point on our transit line 10745.75 feet South, the corner just established sets West 90.35 feet. Quit for night, N.D. Gorman, Engineer.

Feb. 11th, 1915, Victor Martin, does Blanchard and Gorman work:

Correcting back: at corner to secs 16, 17, 20, 21, at a point 5303.57 South, where N, S, E+W random lines intersect, I chain South 69.30 feet to a point 5372.87 feet South, and correcting back of East and West

B

329 CONT'D

random line 6866.64 ft west of BJ stump, the corner to sections 17, 18, 19, 20 sets west 115.15 ft to 6981.79 west. Going a mile East to hub 1617 west of BJ stump, the corner to sections 16, 17, 20, 21, sets west 27.12 feet to 1644.12 ft west or 168.35 feet west of N+S random line at 69.30 ft south of E+W random line. I set the true corner to sections 16, 17, 20, 21 T140, R. 31, where I drive 80 d spike and make the following B. J.'s.

$\backslash 9^{\circ} 15' E$ Pine stump 25 inch, $N 41^{\circ} 02' W 65.6$ ft in sec 17.

Pine stump 36 inch, $S 74^{\circ} 36' W 89.00$ ft in sec 20

Starting at the $\frac{1}{4}$ corner between sections 15 and 16, set by Todd, I run a random line west thro sec 16, and chain over cut out line, setting stakes every 300 feet and hubs as follows: at 751 W, set hub: at 1622 ft W, set hub: at 2640 ft W set hub: at 3765.90 ft west set hub: at 4150.90 set hub: at 5051.10 feet west, intersect N+S random line, and at 5113.27 set hub and leave lake: quit for night and walk across Birch Lake to see Curo about field notes and return the same night.

N. W. Gorman, Engineer.

Feb. 12th, 1915, Victor Martin E. Blanchard and N. W. Gorman working: we go to temporary $\frac{1}{4}$ post bet. secs 20 & 21 and correct back. From a hub at 7887.00 ft south we chain south 172.30 feet on random line to 8059.30 ft south and set hub over which I place transit, turn 90° and run west 129.35 feet where I set the true $\frac{1}{4}$ corner between secs 20 & 21, T140, R. 31, with new bearing trees as follows:

Norway pine 12 inch, $N 3^{\circ} 42' W 54.80$ feet.

Jack pine 6 inch, $S 22^{\circ} 03' W 29.40$ feet, at $9^{\circ} 15'$ var.

I drove 80 d spike in the ground for this $\frac{1}{4}$ corner. Correcting back on south line of sec 17 to set the $\frac{1}{4}$ corner between 17 & 20, from hub at 4257 feet west of old BJ stump I chain west 55.90 feet and set hub over which I set transit and run south 46.15 feet where I set an 80 d spike for the true $\frac{1}{4}$ corner between secs 17 & 20, with new bearings as follows:

White pine 12 inch, $S 3^{\circ} 6' E 15.40$ feet:

Oak stump 14 inch, $S 82^{\circ} 43' W 27.60$ feet. N. W. Gorman, Engineer.

Feb. 13th, 1915- W. Blanchard and N. W. Gorman go to $\frac{1}{4}$ corner between sections 16 & 17 T140, R. 31 and correct back: From a hub 2700 ft south, we chain 13.51 feet north to sta 2686.43 ft south, then run west 84.17 feet at 90° angle and set 80 d spike for the true $\frac{1}{4}$ corner between secs 16 & 17, with new bearings at $9^{\circ} 15'$ variation E. Birch 12 inch, $N 48^{\circ} 30' W 28.90$ feet.

Balsam 10 inch, $S 9^{\circ} 49' W 24.30$ feet.

Spruce 8 inch, $S 43^{\circ} 55' E 37.00$ feet. This $\frac{1}{4}$ corner sets 22 feet west of the marshy shore of Ten Mile Lake. Correcting on E+W center line of sec 16, I set transit on hub 4150.90 W, and find that at 5135.27 feet west, the $\frac{1}{4}$ corner between secs 16 & 17, sets north 5.00 feet.

Correcting back, hub 751 W goes north 0.73 of a foot Hub 1622 W, goes north 1.58 feet: Hub 2640 W, goes north 2.57 where I drive a half inch ball in the ground to which I take the following B. J.'s.

Jack pine S 29° 45' E 52.70 feet, at Var 7° 15' E.

Hub at 3765.90 W, goes north 3.67 ft. Hub 4150.90 W, goes north 4.05 feet, where I drive 80 d spike in the ground at East edge of Ten Mile Lake and take bearings as follows:

Poplar 10 inch, N 37° 23' W 9.90 feet @ 9° 15' var. N. D. Gorman - Engr.

Feb 14th, 1915 - Sunday - all day at Spain's hotel in Hackensack checked up notes with Curo, over night at Spain's.

Feb 15th 1915 - Make out bill against Hiram Swp. and take 10 a. m. train to Mildred. N. D. Gorman, Engineer

Surveyed Feb 2nd, 1915 to Feb 15th, 1915

Recorded Feb 28th, 1917.

County Surveyor, Cass Co. Minnesota

Field notes of the survey of sections 13, 14, 15, Twp 140, R. 31, 5th P.M. Cass Co. Minn. as surveyed by Frank A. Donner and Norbert D. Gorman, Deputy Co. Surveyors of Cass County, Minnesota.

March 21st 1915. F.A. Donner, transitman & chainman. I walk over to Victor Martin's and we chain the N+S center line through sec 14, T140, Rg 31, on transit line run by Bryant. Starting from the iron $\frac{1}{4}$ corner on the south side of sec 14, we run North, var $9^{\circ}30'E$; at 5+51.8 hub: at 11+41.50 N, hub: at 16+59.5 hub: at 17+75 enter swamp: at 21+00 lv swamp: at 24+41.6 N, hub: at about 2690 feet North, intersect E+W random line -- at 26+50 enter swamp: at 35+00 lv swamp: at 37+75 enter Birch Lake: at 52+45.30 feet North the true $\frac{1}{4}$ corner on the North side of sec 14, sets West 53.30 feet. at this $\frac{1}{4}$ corner comes in the North side of Birch Lake, there is a witness corner set on the sea wall, 60 feet North, this witness corner is a 2 $\frac{1}{4}$ by 48 inch galvanized iron pipe set by Curo. Over night at Lake View hotel in Hackensack. F.A. Donner, Engineer.

March 22nd, 1915 - Continue for Martin, F.A. Donner, Eng'r: Breakfast at Lake View hotel and then I take transit and walk across lake to Martin's where I set over iron $\frac{1}{4}$ on South side of sec 14, T140, R 31, back right West at the iron $\frac{1}{4}$ corner a quarter mile West and run true line East into Birch Lake: at 65 feet enter lake: set row of stakes on ice half a mile East, then go a mile North where I set transit over a hub on the North shore of Birch Lake, previously set by Co. Surveyor Curo, for the true section line between sections 13+14, T140, R 31, I back right North on another hub set by Curo on the true section line and run South on true line. Beginning at 2 $\frac{1}{4}$ by 48 inch galvanized iron monument set by Curo for the corner to sections 11, 12, 13, 14, we chain South on true line between sections 13+14: at 4+31.8 S, hub: at 10+75.5 S, hub: at 13+15 hub: at 13+60 set 100 d spike on the North bank of Birch Lake for meander corner: at 13+70 S, enter Birch Lake: We chain onto the ice to about 3500 ft South and quit for dinner: In P.M. continue South and at 52+1. intersect the true line coming from the West, at a point 24+23.8 East of the iron $\frac{1}{4}$ on South side of sec 14. Going to the iron $\frac{1}{4}$ corner on the West side of sec 14, T140 Rg 31, previously established from old U.S. bearing trees by County Surveyor Curo, we chain East along a cut out transit run by Bryant: at 300 ft E, enter swamp: at 500 lv same: at 11+91.8 hub: at 15+00 enter swamp: at 18+25 lv same: at 19+92.3 hub: at 25+79.4 hub: at about 27+57 E, intersect N+S line at about 2690 ft North: at 28+93.7 hub: at 34+90.1 hub: at 39+25 enter lake: at 40+75 E, lv lake and quit for night: Supper & over night with Victor Martin. F.A. Donner, Engineer.

March 23rd 1915, Continue F.A. Donner Eng'r, we continue chaining East on center line of sec 14: at 44+53.00 hub: where I set transit and continue random line East, var ready $9^{\circ}30'E$: at 46+25.9 set 100 d spike for temporary meander corner on West shore of Birch Lake: at 46+70.5 enter Birch Lake: at 52+51.5 intersect N+S true line on East side of sec 14, at a point 26+43.10 ft South. I take outfit and walk across Birch Lake to Hackensack. Call up Curo and he tells me to take 10.03 train to Backus to start survey. F.A. Donner, Eng'r.

April 12th 1915, N.D. Gorman transitman: Victor Martin ch: Nelson, Axman: Start at iron corner to sections 14, 15, 22, 23, T140, Rg 31, previously established by County Surveyor Curo and run North between sections 14 and 15, T140, R 31. Var $10^{\circ}E$: This iron sets in a swamp: at 700 N, lv swamp: at 1020.25 ft N, set hub: at 1259.60 ft N, set hub: at 1850.50 ft N set hub: at 2282.50 N, set hub: at 2656.75 ft North, the iron $\frac{1}{4}$ corner previously established by County Surveyor Curo for the $\frac{1}{4}$ corner between secs 14+15, sets West 91.00 feet. Correcting back, the correction = .34285 of a foot: Hub 1020.25 N, goes West 34.97 feet: Hub 1328.37 N goes West 45.50 feet to true South $\frac{1}{4}$ corner between sections 14+15, T140, R 31, where I drive a 3x3 inch pine stake for the true corner: Hub at 1850.50 N, goes West 63.44 feet. Correcting the East line of sec 14, T140, Rg 31 on ice, the correction = .01589 of a foot. Chaining the East side of sec 14, at 2637.40 S, set temporary $\frac{1}{4}$ corner

on ice: at 5210 S, temporary S.E. corner, on ice. Correcting the East line in proportion to West line hub at 2637.40 South, goes North 41.90 feet to 2595.50 South where we place the true East $\frac{1}{4}$ corner on ice. At 5210 S, = true sec corner on ice. Total length of the West line of sec 14, is 5294.15 feet length of West side of NW $\frac{1}{4}$ as previously chained and established by County Surveyor Curo is 2637.40 feet: To establish the $\frac{1}{4}$ corner in the center of sec 14, T140, Rq 31, at 2507.35 hub goes E 25.48 to 2741.52 thence N 24.74 to 2531.83 true $\frac{1}{4}$ corner in section 14. Set $1\frac{1}{2}$ inch iron pipe. Corner sets 9.00 ft East of large gray boulder. Hub at 2579.40 goes N, 23.54; hub at 1992.30 goes N, 17.05; at 1137.26 set East $\frac{1}{16}$ corner on E & W centerline, 12.24 ft N -- drive 1 inch iron bolt.

Bearing tree. Var $9^{\circ}30'$ Pine stump 18 N $45^{\circ}E$ 31.50.

Correcting back on N & S centerline: Hub at 2294 goes W, 23.30; Hub at 1615.95 goes W, 16.30; at 1265.91 set true S $\frac{1}{16}$ on N & S center line 12.85 ft W, -- drive 1 inch iron bolt: BT: Pine Stump 24, N $50^{\circ}E$ 23.50. Hub at 551.75 goes W 5.60 quit for night. N. D. Gorman, Engineer.

April 13th 1915, Continue correction on N & S center line: at 3725.25 set m.c. on South bank of NW Bay of Birch Lake, 37.85 ft W BT's at Var $9^{\circ}30'$

Norway pine 10 S $7^{\circ}30'E$ 7.75 feet:

Norway pine 8 S $76^{\circ}30'W$ 35.40 feet:

N. D. Gorman, Engineer.

Note: This survey is not correct, but I am recording it here because it is necessary to do so in order that some surveyor may be able to properly correct same. I intend to look it over and correct it myself at the earliest possible date.

John W. Curo.

Surveyed March 21st 1915 to April 13th 1915.

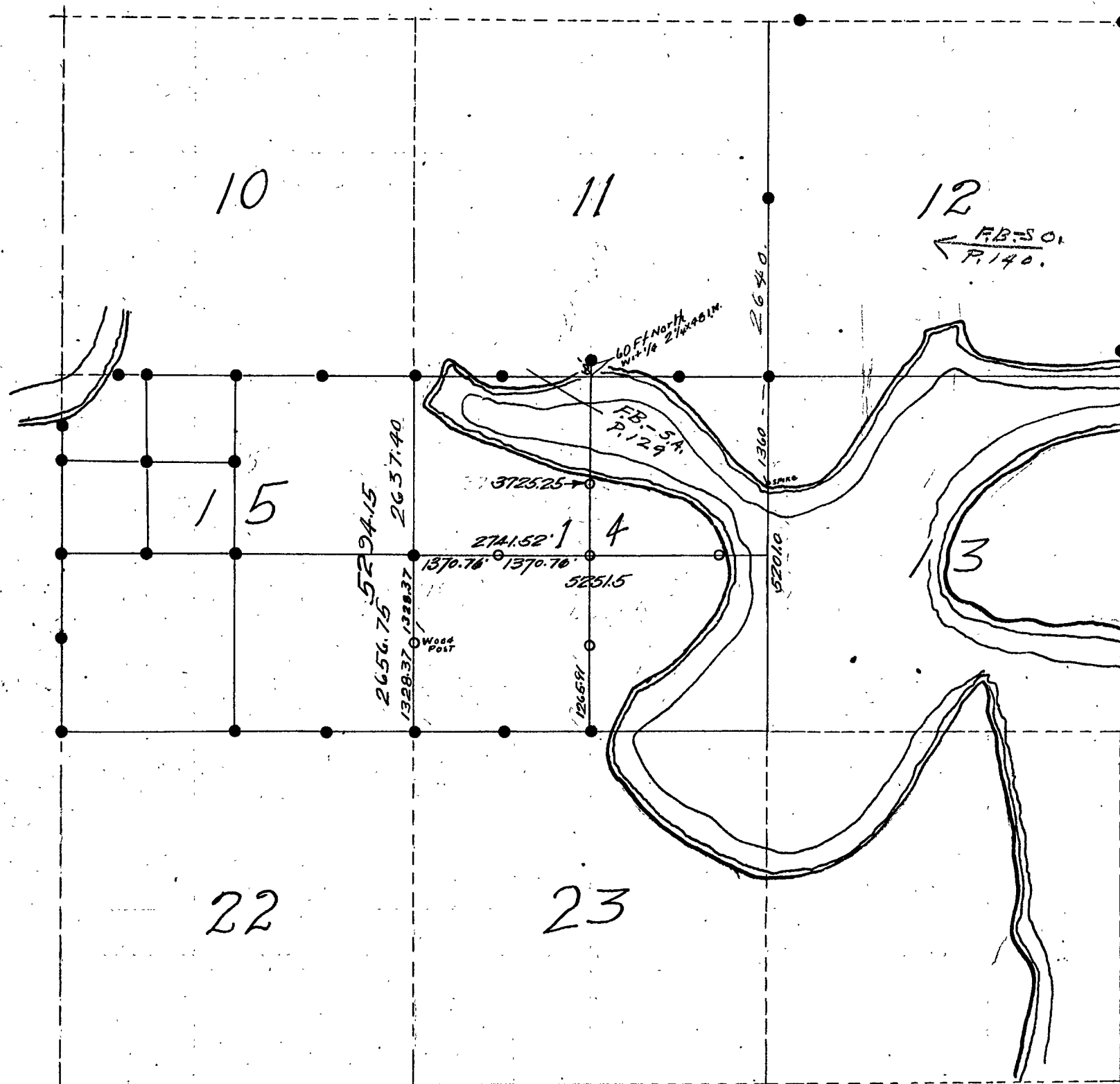
Recorded February 28th, 1917.

County Surveyor,

B

PLAT.
T140^N R31^W 5th PM

Sections - 13-14-15

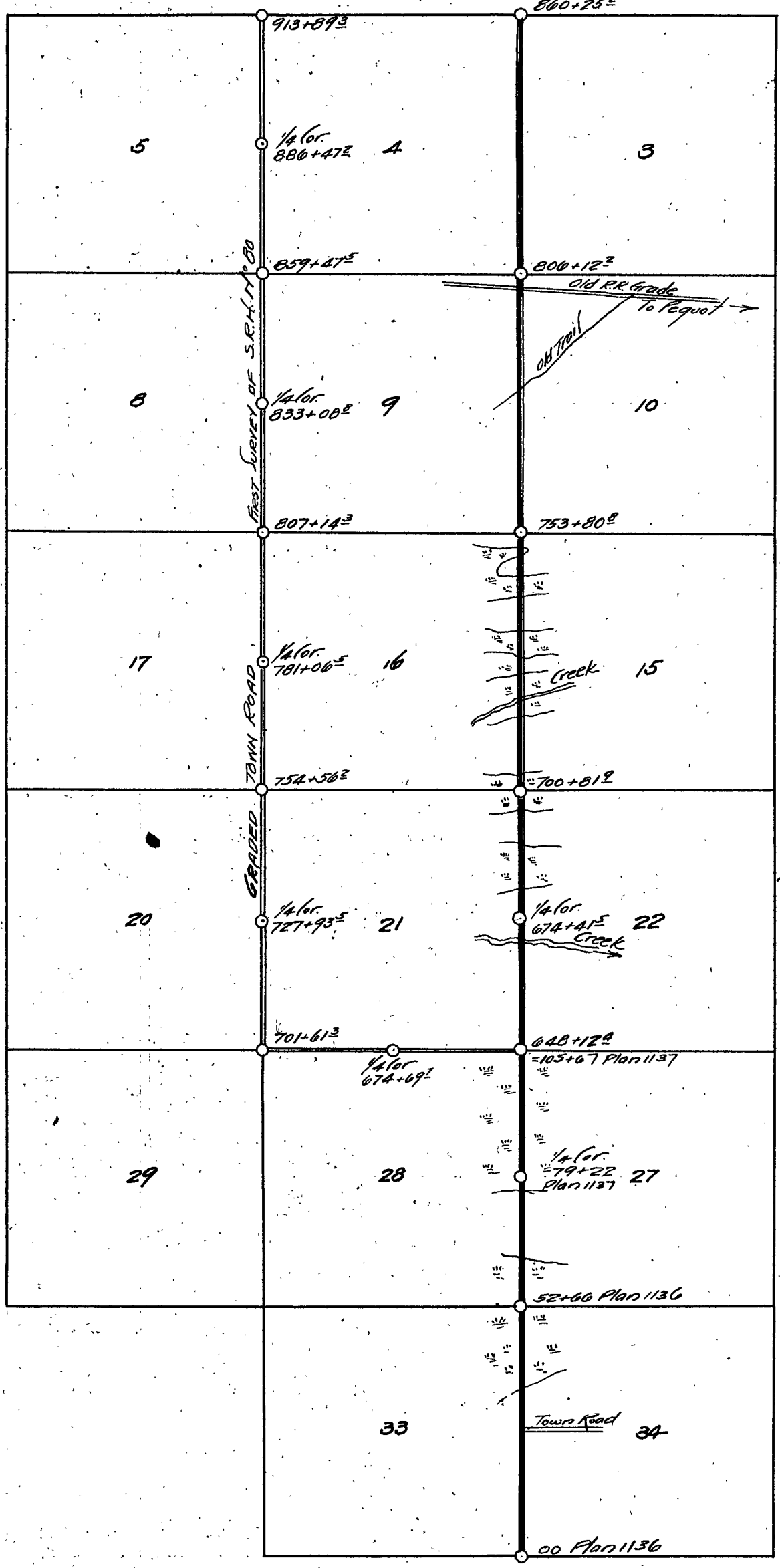


PLAT OF STATE RURAL HIGHWAY N° 80

CASS CO.

AS SURVEYED IN SECS 3, 4, 5, 8, 9, 10, 15, 16, 17, 20, 21, 22, 27, 28, 29, 33 & 34
T. 135, R. 30.

RECORD N° 331



B

Nols 331

473

24.30

SURVEY RECORD N° 331

TOWN 135, RANGE 30 SECS 3-4-5-8-9-10-15-16-17-20-21-22-27-28-33-34

FIELD NOTES OF SURVEY
STATE RURAL HIGHWAY N° 80 -
From Field Books

Tack in Poplar Tree
Sta. 860+25² Sec. for Secs 3-4, T. 135-30
Secs. 33-34, 136-30
(Stake buried.)
Tack in Poplar Tree

Sta. 806+12² Sec. for Secs 3, 4, 9 + 10, T. 135, R. 30 (Stake)

Sta. 753+80² (or Secs. 9-10-15-16, T. 135, R. 30 (Stake)

32² Fence (or
Sta. 700+81² (or Secs. 15-16-21-22, T. 135, R. 30
in line with north line of fence

Sta. 674+41²
1/4 (or Secs. 21-22

Sta. 648+12² (or Secs 21-22-27-28, T. 135, R. 30
= Sta 105+67 Plan 1137 S.R. No 1

Sta. 79+22 1/4 (or Secs 27-28 (Stake)
Plan 1137
S.R. No 1

Sta. 52+66 (or Secs 27-28-33-34, T. 135, R. 30 (Stake)
Plan 1136
S.R. No 1

Sta. 00 (or Secs 33-34, T. 135, R. 30
Plan 1136 " 3-4, T. 134, R. 30
S.R. No 1

T. 136, R. 30. SECS 2-3-10-11-14-15-21-22-23-27-28-29-32-33-34
TOWNSHIP OF MAPLE

P.L. of S.P. + M+S. line =
True Cor. S. 2-3

FIELD NOTES OF SURVEY
STATE RURAL HIGHWAY No 80

Sta. 1357+16² 2" Iron Pipe
N.W. Cor. Sec 3-136-30 }
N.E. " " 2-136-30 }
on Twp. Line = Correction Line

Correction cor. parallel
Not on stan.

Sta. 1353+79² Concrete
Mon. S.E. for Sec. 35
SW " " 36
T. 137, R. 30
on Twp. Line.

Sta. 1308+32² 2" Iron Pipe
1/4 Cor. Secs 2-3

Sta. 1406+11² Concrete Mon.
SE for Sec 30, 137-30
SW " " 31, 137-29
on Twp. Line =
Correction Line

Sta. 1282+01.0 2" Iron Pipe
Cor. Secs. 2-3-10-11
136-30

Sta. 1255+44² Iron Pipe
1/4 Cor. Secs 10-11

Sta. 1228+86² (Spike)
Cor. Secs. 10-11-14-15

Sta. 1202+70² 2" Iron Pipe
1/4 Cor. Secs 14-15

Sta. 1176+58 2" Iron Pipe
Cor. Secs 14-15-22-23

Sta. 965+76² = 1070+62 (Stone)
on first Survey.
Cor. Secs. 21-22-27-28
T. 136, R. 30.

Sta. 1123+59² (Stone) Cor. Secs 22-23-26-27

Sta. 912+12² (or. Secs. 27-28-33-34 (Stake)
Set from Evidence

Sta. 860+25² (or. Secs. 33-34, 136-30 (Stake)

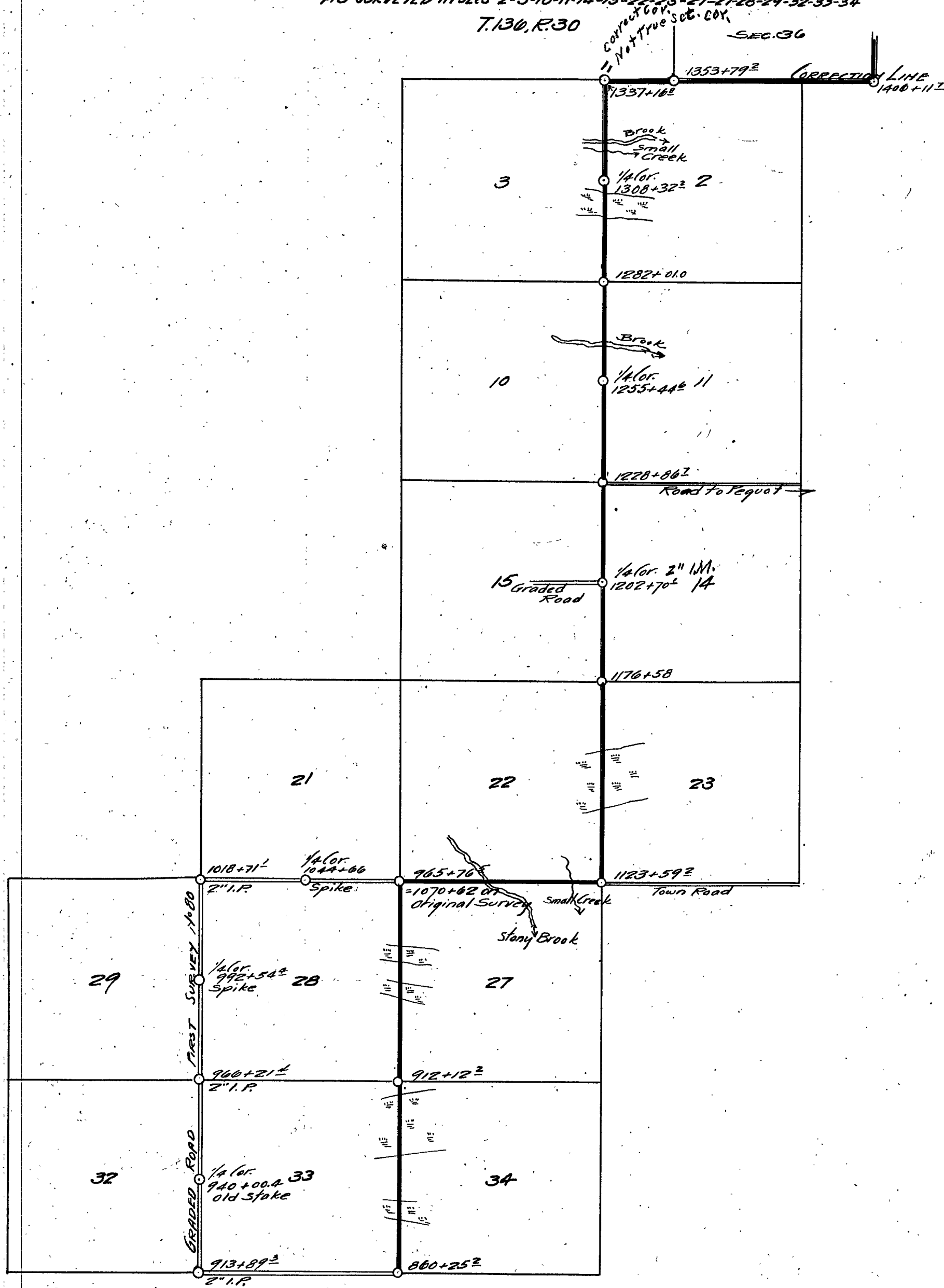
PLAT OF **B**
STATE RURAL HIGHWAY N° 80
CASS CO.

AS SURVEYED IN SECS 2-3-10-11-14-15-22-23-27-28-29-32-33-34
T.130, R.30

122.80

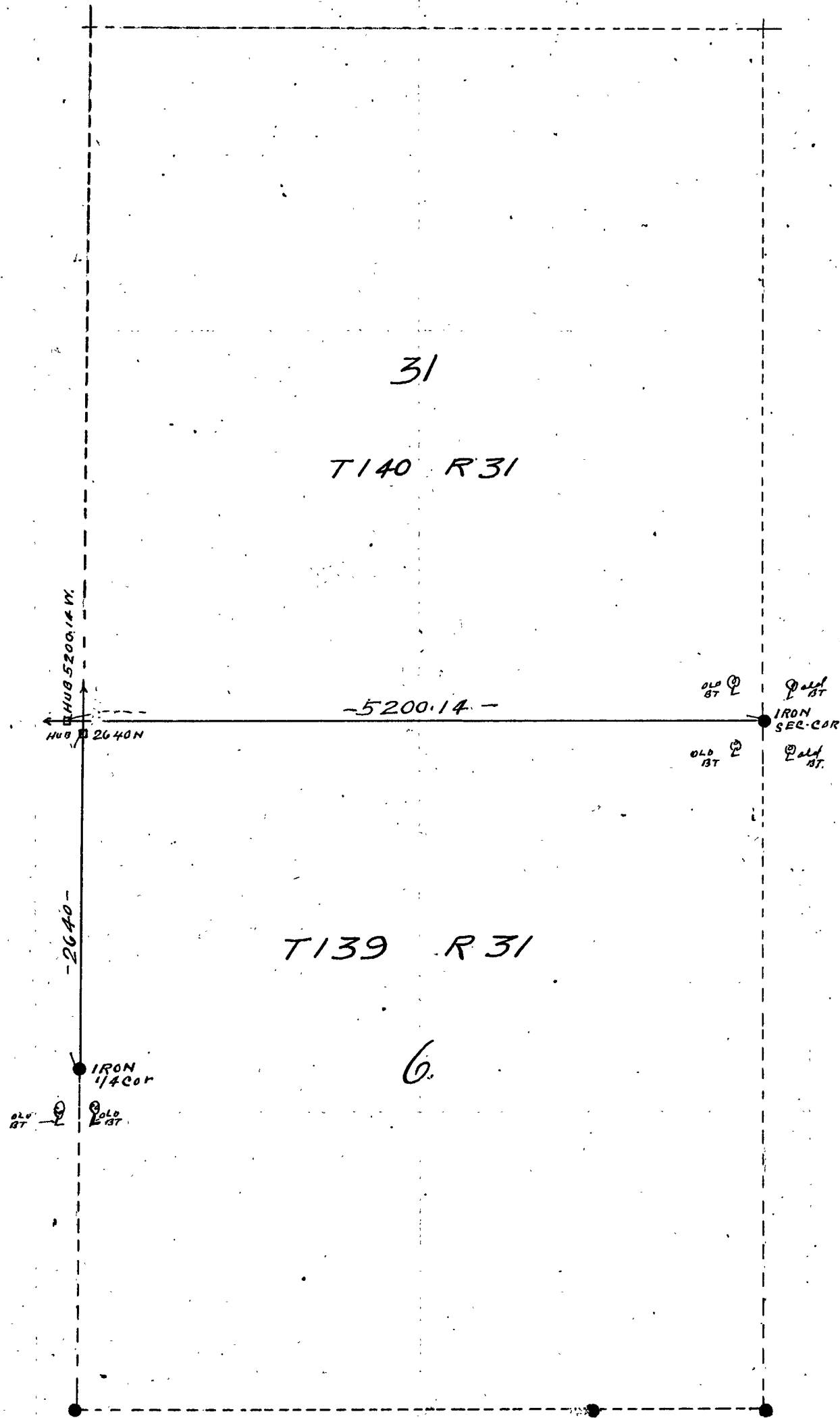
332

RECORD N° 332



B

\$4.54



Field notes of the survey in sec 6, Twp 139, Rg 31 and sec 31, Twp 140, Rg 31, in the attempt to locate the west corner of said secs being the Twp corner on the county line between Cass and Hubbard Counties.

June 12th 1913 - John W. Curo, transitman, I am working for Deerfield Twp in establishment of lost NW corner of T139, Rg 31, so as to run a wagon road along the West line of sec 6. Lv Walker at 9:37 AM. RR fare to Backus 63¢. We buy lunch to take with us and lv Backus at 11:30 AM. Frank Thompson, driver. Arr John Luiten's place at 1:30 PM. Dinner with Luiten & pay Thompson \$3. for team and take receipt. I and John Luiten walk to NW corner of T. 139, R 31, but find no corner or bearing trees. Over night with Luiten. My wife accompanies me on this trip. John W. Curo.

June 13th, 1913 - Friday - (Note the date, and it is also page 313 of my field book) begin at the iron monument at the NE corner of sec 6, T139, R 31, previously established by me: we check up iron with old bearing trees and find the same to be correct from which corner we run West on $10^{\circ}35'$ var E: at 429 ft West, cross old road N+S: at 600 W, set stake; at 837 ft W set hub: at about 860 ft W, cross dim road br NW & SE: at 1320 set hub, temporary $\frac{1}{16}$: at 1500 stake: at 1800 set hub: at 2500 stake: at 2640 ft. W, set hub for temporary $\frac{1}{4}$ corner between sections 6 and 31, where U.S. notes call for a post and the following bearing trees:

Dead pine 10 inch: N 48° W, 31 links, (in sec 31)

Dead pine 10 inch: S 39° (or 37°) W 13 lks (in sec 6)

All are gone and we continue West: at 3316 ~~old~~ road N+S: at 3500 set hub: at 3960 set hub for temporary West $\frac{1}{16}$ corner, enter field: at 4217 road NW+S: at 4240. 20 W set hub: at 4400 set pin: at 5200. 14 ft West set hub for temporary NW cor of sec 6, T139, R 31, being SW cor of sec 31, T140, R 31. hub has new bearings as follows:

Burned pine stump 6 inch, S $28^{\circ}56'$ E 39.18 feet.

Burned pine stump 6 inch, N $25^{\circ}51'$ E 21.93 feet.

Burned pine stump 6 inch, N $64^{\circ}03'$ W 24.81 feet. to tack heads in flat spot. A tack in corner of shanty, bears S $36^{\circ}38'$ W. 43.40 feet courses turned from random at $10^{\circ}35'$ var. Geo Thompson: Art Holden and I chained perfect plumb-bob line: double center hubs and tacks. H & T transit 100 ft Monarch steel tape. John Luiten and Ralph Holden ar new. Lunch out, over night with Luiten. John W. Curo, Engr.

June 14th 1913. John and Hank Luiten, ar new: Art Holden and Geo Thompson assist me in chaining: Ralph Holden ar: Curo, transit: Tom McVey goes with us to the $\frac{1}{4}$ corner on the west side of sec 6, T139, R 31 on County line where U.S. Notes call for a post and the following bearing trees. Pine 12 inch, S 5° W 355 lks. (= 234.30 feet) Pine 12 inch, S 5° E 355 links, (= 221.10 feet) we find and iron monument being a 2 inch galvanized iron pipe 4 feet long, set in a bed of concrete for the true $\frac{1}{4}$ corner on the W side of sec 6. Over this iron corner we set the transit and run S 5° W and at 234.30 feet intersect the face of the "B.T." marks on the old SWW.S bearing tree. This tree has been burned down since I was here last on Aug 3rd, 1908 at which time this tree stood dead but plainly marked "T139 N, R 32 W, S1 B.T." and the witnesses who saw these marks on that day are John Luiten, 49

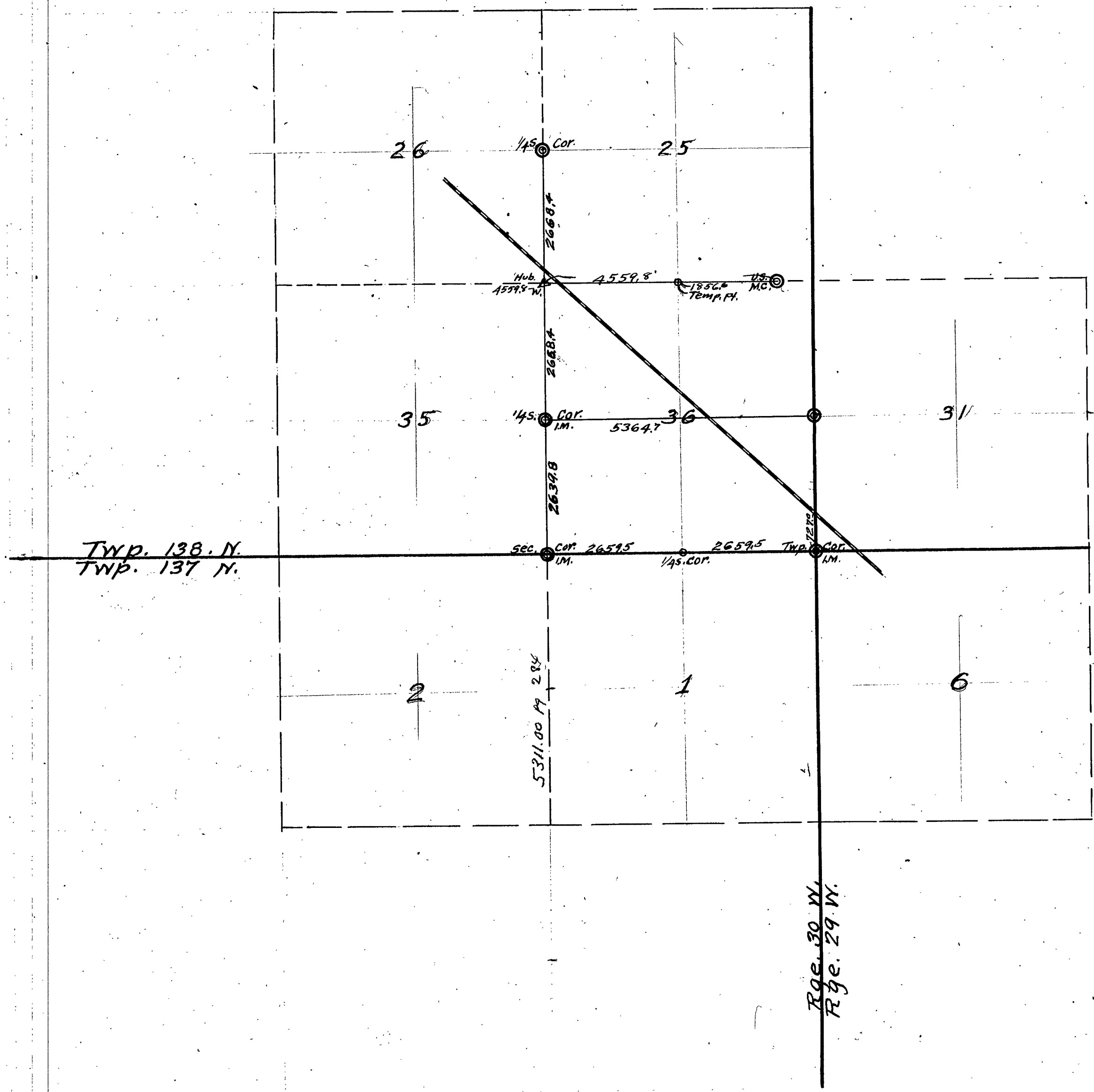
Trusty: Art Halden; Frank Rice; Gerr Luiten and John W. Curo. and on that day we also found the stump of the S.E. bearing tree. At about 20 feet S.W. of the SW bearing tree to this $\frac{1}{4}$ corner there is the stump of another 24-inch Norway tree which at one time had some iron marks which gave it the appearance of being one of the old U.S. bearing trees but it was marked by a Cruiser. Mc Vey thinks this was one of the U.S. bearing trees but he is mistaken.

We find that the iron $\frac{1}{4}$ corner here is correctly placed from the old U.S. bearing trees and from this corner we run Northerly on 9° var:
 at 981.40 ft N, tack in Jack Pine stump: at 1650.00 set hub: at 2437.40 tack in Jack pine stump, this stump not marked: at 2640. ft N set hub for temporary Twp cor. No. 2. from which Temp. Cor hub No. 1. bears N $41^\circ 30' W$ 15.74 feet: tack in corner of shanty bears S $55^\circ 56' W$ 42.55 ft, Burned pine stump 6 inch, S $23^\circ 32' E$ 23.91 ft. - Burned pine stump 6 inch, N $56^\circ 25' W$ 39.68 ft to tack heads. courses turned from our random line just run.
 An account of the expense, the Town Board decide to not finish this survey until some future date when Hubbard County may help stand the expenses. Quit at 11-30 and get dinner with John Luiten and catch the train at Hackensack, back to Walker. John W. Curo, Transitman.
 Surveyed June 12th 1913 to June 14th 1913 -
 Recorded Feb 28th, 1917.

John W Curo
 Co Surveyor, Cass Co. Minnesota

B

plat
SURVEY RECORD No 334



Field notes of the survey and establishment of corners and the search for the old bearing trees and the setting of new bearing trees on survey made in Sec 6, Township 137 N, Range 29 W, and section 31, Twp 138 N, Range 29 W, and secs 1 & 2, Twp 137 N, Rg 30 West, and secs 25, 26, 35, 36, Twp 138 N, R 30 W, 5th P.M. Cass County, Minnesota as surveyed by John W. Curo, Co Surveyor.

Jan 8th, 1909. John W. Curo, transitman, also chaining working in P.M. for Webber & Hill: Curo & Webber chaining: Irwin White ax: We go to the corner to secs 1, 2, 35 & 36, between Twp. 137 & 138 N, Rg 30 W, where U.S. notes call for a post and the following bearing trees: Black pine 8 inch, N 15° E 10 links (= 6.60 ft in sec 36) - Black pine 8 inch, N 5° W 18 lks (= 11.88 ft in sec 35) Black pine 10 inch, S 25° W 10 links (= 6.60 ft in sec 2) Black pine 6 inch, S 50° E 15 lks (= 9.90 ft in sec 1) all these bearing trees were green and standing three years ago when David John P. Leef and others were here and we found the trees to check out perfect with the bearing for course and measurement, so we set a hard wood hub 1 1/2 inch by 7 inch well into the ground for the true corner and covered it up. It was set from face of the "B.J." figures @ 8° 46' Var. Two years ago I saw our same hub, and again one year ago all the bearing trees are cut down and gone except a short stump of the NE one, so I now set the transit on this stump and run N 50° W 9.90 feet and dig: we find our old hub and drive an iron pin 7/8 by 20 inches, well into the ground driven thro my old hub for the true corner. Billy Ritter now witnesses our setting this stake and says W.H. Elwood has buried 4 bricks either two or three rods East or West from my iron cor., which he (Elwood) thinks is the true corner, set by measurement two miles East and West. Elwood's brick are wrong and ought to be dug up, from this true corner we run North, 9° var, between sections 35 & 36: at 1320 N set hub: at 2640 N set hub: from which the true 1/4 corner between sections 35 & 36 bears S 89° 20' W 18.00 feet, at which point we drive a flat piece of iron 1 foot long, 1 inch wide and 1/4 inch thick with a curl in the top at this point being the 1/4 cor between secs 35 & 36, T 138 N 30, U.S. notes call for a post and the following bearing trees: Norway pine 12 inch, S 80° W 28 lks. (= 18.48 ft) Black pine 8 inch, N 54° E 100 links (= 66.00 ft) We find the sawed off stump of the SW B.J. plainly marked "B.J." and re-marked by W.H. Elwood. From this stump I set the true 1/4 iron, Var 8° 46' measured from face of B.J. marks. We set one new bearing, being an 8 inch Jack pine, S 62° 43' E, 79.15 feet to tack head in tree. We did not find the old NE U.S. tree but the SW Norway pine I have saw lots of times in the past 15 years as it is the only tree near. Correcting back, hub 1320 N, is to go S 89° 20' W 9.00 ft. to the true South 1/6 between secs 35 & 36, Twp 138, R 30. quit for night. Over night at home in Pine River. John W. Curo, Co. Surveyor.

Jan 9th, 1909. Saturday at home in Pine River.

Jan 10th, 1909. Sunday, at home.

Jan 11th, 1909 - Saw working for Webber & Hill: John P. Leef brought J.W. Grover, Chf. of Pine River Twp. and they decide to survey the N & S center line of Sec 36, T 138, Rg 30, a.D. Fuller, Joe Dailey & Curo, beginning at a point 38.80 feet East and 7.80 feet North of the true 1/4 corner between secs 35 & 36, T 138 R 30 and run North on 7° 30' Var: at 1320 ft North, = 1327.80 feet North of the true 1/4 corner, set hub at 2640 ft North, = 2647.80 feet North of the true 1/4 corner, set hub: at the corner to secs 25, 26, 35, 36, T 138, R 30, U.S. notes call for a post and the following bearing trees: Black pine 12 inch, N 35° E, 127 links: Black pine 12 inch, N 31° 30' W 54 lks: dead pine 13 inch, S 63° W 84 lks: all appear to be gone: and we quit for night - Fuller & Curo get in full day for Webber & Hill: Dailey got in full day for Wm Stewart. Over night at home in Pine River. John W. Curo, Co Surveyor.

Jan 12th, 1909 - Tuesday: John W. Curo, John P. Leef and Ace Grover got in full day for Pine River Twp and about all we done was to dig up the old hub we once set for the true Twp. corner, being the corner to sections 31, 36, 1 & 6, between Twps. 137 & 138 N, Rgs. 29 & 30 W. We built a dig fire to thaw the dirt, and dug and finally found the old hub being wood stake in place of.

which we drive an iron 1 inch gas pipe with steam cock on top end for the true Twp corner, from which we set the following bearing trees: Norway pine stump, N, about 2° W 46.40 ft no tack: Burr oak tree 2 inch, about 2° E, 26.30 ft no tack: 2nd sec, 6. stump 6 inch, SW 54.75 ft to tack head in stump: in sec 1. At this Twp. Cor: old U. S. notes call for a post and the following bearing trees: N.P. 16 inch, N 56° E 57 lks. (= 37.62 ft.) N.P. 18 inch, N 71° W 67 lks. (= 44.22 ft.) N.P. 16 inch, S 42° 30' W 56 lks. (= 36.96 ft.) N.P. 16 inch, S 69° 30' E 61 lks. (= 40.26 ft.)

Jan. 13th 1909: J.P. Leef and John W. Curo work all day for Pine River Twp. Beginning at true SW Cor of sec 36 with chain carefully East, between sections 1 & 36, T137, R138 N, Rq 30 W. At 1320 ft E set hub: at 2640 ft E set hub, on ice in small lake; at 3960 ft East set hub: at 5280. ft East set hub, from which the true Twp. Cor sets East 39.00 feet. Correcting back hub 3960 East, goes East 29.25 feet to 3989.25 East, where we drive a little $\frac{3}{8}$ inch iron bolt 3 inches long in the ground for the true East $\frac{1}{4}$ corner between secs 1 and 36, set in the frozen ground with new bearings as follows: 6 inch fence post, Northerly 38.12 feet: 6 inch fence post S & E 29.97 ft. 2 inch jack pine tree S 34.52 feet to head of tacks driven in bearings. Hub 2640 ft East goes East 19.50 ft. the 2659.50 E, where we cut a hole in the ice in small lake and drive in a 30 foot Jack pine pole small end down for the true $\frac{1}{4}$ corner between secs 1 & 36. At 1320 E, 9.75 ft to 1329.75 E where we set a little wood plug in the snow for the true West $\frac{1}{4}$ corner between secs 1 & 36: T137, R138 N, Rq 30 W. with new bearings as follows: 6 inch fence post Northerly 26.75 ft. 5 inch jack pine SW 54.87 feet: 6 inch Jack pine SE 42.98 ft. to tack heads, we had nothing to drive for corner. Temperature deductions of this mile as per previous chainage is 0.69 of a ft in each forty, or 1329.06 feet total. Going to the $\frac{1}{4}$ post on the West side of sec 36 T138, R30 I took a few courses and measurements so as to be sure of the true location of the $\frac{1}{4}$ corner and quit for night: we re-chained the entire south side of sec 36 and are sure it is just 39 feet too long. The witness corner on West side of little lake is gone. Leef and I got in full day for Pine River Twp. #4. John W. Curo.

Jan 14th 1909: John P. Leef and Curo work all day for Pine River Twp. Chas Kline worked $\frac{1}{2}$ day in P.M. Leef and Curo went to the $\frac{1}{4}$ corner on North side of 36, being the $\frac{1}{4}$ corner between secs 25 & 36, T138, Rq 30 where U. S. notes call for post and: Black pine 1 inch, N 3° E 55 lks. - Black pine 11 inch, S 2° 45' W 60 lks we did not find any bearing trees as they have been cut out for a road and the stumps are either grubbed out or covered up in the light 1. foot road grade running north and south. We pass this up for the present and walk to M.C. No. 6. on the West side of Norway Lake and between secs 25 & 36, T138 R 30 where U. S. notes call for post and: Tamarac 4 inch, S 42° W 15 lks. (= 9.90 ft.) Tamarac 6 inch N 70° W 30 lks. (= 19.80 ft.) Tamarac 6 inch, N 70° W 30 lks. (= 19.80 ft.) We found the NW bearing tree, dead but plainly marked from which we set the true M.C. post @ 8° 46' Var from face of BT: We found roots of SE BT dimly marked which check out for measure and course.

We drive a dry pole 20 feet into the mud from true M.C. with new BTs as follows:

Tamarac stub 12 inch N 74° 20' W 42.85 ft.

Tamarac stub 6 inch, S 33° 35' W 39.70 ft to nail heads. Quit for dinner.

P.M.: John Leef walked to Grover's and Chas Kline helped Curo in P.M.

Beginning at M.C. No 6. just set we run West on $8^{\circ} 30'$ var in swamp: at 250 W center of solid ridge 4 rods wide N&S in swamp. Quit for night. Kline got $\frac{1}{2}$ day for Pine River Twp.

Jan. 15th, 1909 - Friday: Ace Grover, Chas. Kline, John P. Leef and John W. Curo worked all day for Pine River Twp. Beginning at stake on ridge 250 feet West of M.C. No 6, we continue West between secs 25 & 36, T138, R30; at 529.98 set hub in swamp for temporary $\frac{1}{16}$: John P. Leef and I chaining plumb-bob line: at 529.89 + 586.14 = 1116.12 hub on hill: at 1849.98 set hub East of road: at 1856.58 West, set pin in road center for temporary $\frac{1}{4}$ corner between secs 25 & 36: at 3183.18 W set hub on side hill for temporary $\frac{1}{16}$ post: at 4509.78 set flag in center of M & D RR track being temporary hub "B" at NW corner of sec 36: at 4509.78 plus 50 feet West = 4559.78 $\frac{1}{2}$ set hub 50.00 feet West of RR center and quit for night, all got in full day for Pine River Twp. John W. Curo, Co Surveyor.

Jan 16th 1909. Kline and Curo worked all day for Pine River Twp. Leef worked in P.M. Begin at hub 38.80 feet East and 7.80 plus 2640. = 3647.80 feet North of $\frac{1}{4}$ post between secs 35 & 36, we continue transit line North: at 1320. set hub No. 3967.80 N. at 2640. set hub 5287.80 N from which the true $\frac{1}{4}$ corner between sections 25 & 26, T138, R30, sets north 49.00 feet and West 10.60 feet. Total distance is between the $\frac{1}{4}$ corner between secs 35 & 36, to the $\frac{1}{4}$ corner between secs 25 & 26, is one mile, plus 56.80 feet or 5336.80 feet total. John W. Curo, Co Surveyor.

January 17th 1909, Sunday, laid up.

January 18th 1909. Monday, Leef and I worked all day and Kline worked $\frac{1}{2}$ day in P.M. for Pine River Twp. Begin at true $\frac{1}{4}$ corner post in lake on South side of sec 36 T138, R30, and run North on 8° var: at about 600 ft N leave lake: at about 900 N leave swamp: at 1320 set hub north of road for temporary $\frac{1}{16}$ corner: at 1988 ft N. set hub: at 2640 ft N, set hub for temporary center of sec 36: at 2803.70 N, set hub: at 3043 about center of RR track bears N & S: at 3960 N set hub for temp $\frac{1}{16}$: Then chained North 12 chains, each chain 90 ft long, = 1080 feet and set marking pin, driven well into the ground to hold measurement till some future time: Then chained rough to about the North side of sec 36: at about 5280 N set pin: from which the true $\frac{1}{4}$ corner sets about 32 feet North and 32 feet East. Quit for night. This is the last day we will work for Pine River Twp, as Webber & Hill will finish the subdivision of sec 36. I and Leef have got in 7 days each for Pine River Twp. I worked for Webber & Hill 2 $\frac{1}{4}$ days. John W. Curo, Co. Surveyor.

January 19th, 1909 - Tuesday - I am working for Webber & Hill. Art Shill, Tom Stewart and others with A.D. Fuller, axmen: and John P. Leef and I chaining perfect: Keuffel & Esser, transit. plumb-bob line, 90 foot Chicago steel tape: Begin at true $\frac{1}{4}$ post on West side of sec 36, T138, R30 and run East on 8° var: at 660 ft. E, set hub: at 1320. set hub: at 1770 set hub on hill: at 2640 E, set hub: at 2740 set hub: at 3170 center of RR. at 3960 set hub: at 5280 feet East set pin from which the true $\frac{1}{4}$ corner between secs 31 & 36, T138, R30. 29 & 30, set 84.70 feet East and 3.10 feet South. The true depth of sec. 36 East and West, is 5364.70 feet, or 5293.20 ft Gov't chain, being 71.50 feet over length. A.D. Fuller and I got in full day for Webber & Hill. John P. Leef got in full day for Art Shill:

Rough chain: we begin in center of RR track and chain South between sections 31 & 36, to the Twp. corner. Distance is 727 feet.

at the $\frac{1}{4}$ post between sections 31 + 36, T138, Rg 29 + 30, U.S. notes call for post and the following bearing trees: Norway pine 15 inch, S $83^{\circ}30'92$ links (= 60.72 feet)

Black pine 4 inch, N $86^{\circ}45'E$ 74 links, (= 48.84 feet)

Former Co Surveyor Mr. James E. Canfield, found both of these old trees from which he set the $\frac{1}{4}$ corner, 6 or 8 years ago, when he surveyed a road running N + S.

Mr. L. F. Johnson also found both trees and set a stake for Peter Holmquist who built a fence, setting a corner post 33 feet north of the true $\frac{1}{4}$ stake, then run his fence north to Norway Lake. Holmquist shows me the point of the old stake and Mr. James R. Kintler took a shovel and dug up the stake point for me.

I found that it set just 33 feet south, and in line N + S with the fence. The old bearing trees have been dug out, but the fence corner is here from which I drive a 12 d nail in the frozen ground for the true $\frac{1}{4}$ corner and mark new bearings as follows:

Stump 10 inch, S $51^{\circ}45'E$ 64.53 feet, to the head of harness bolt driven in stump.

Stump 5 inch, bears S $50^{\circ}41'W$, 60.68 feet.

Fence post, 6 inch, north $0^{\circ}45'W$ 32.85 feet to nail head. Var $8^{\circ}46'E$.

Jan 20th, 1909 - Wednesday - Made plat of Twp. road in sec 36, T138,

Range 30

John W. Curo, Co. Surveyor

Surveyed Jan 8th 1909 to Jan 20th 1909.

Recorded Feb 28th 1917.

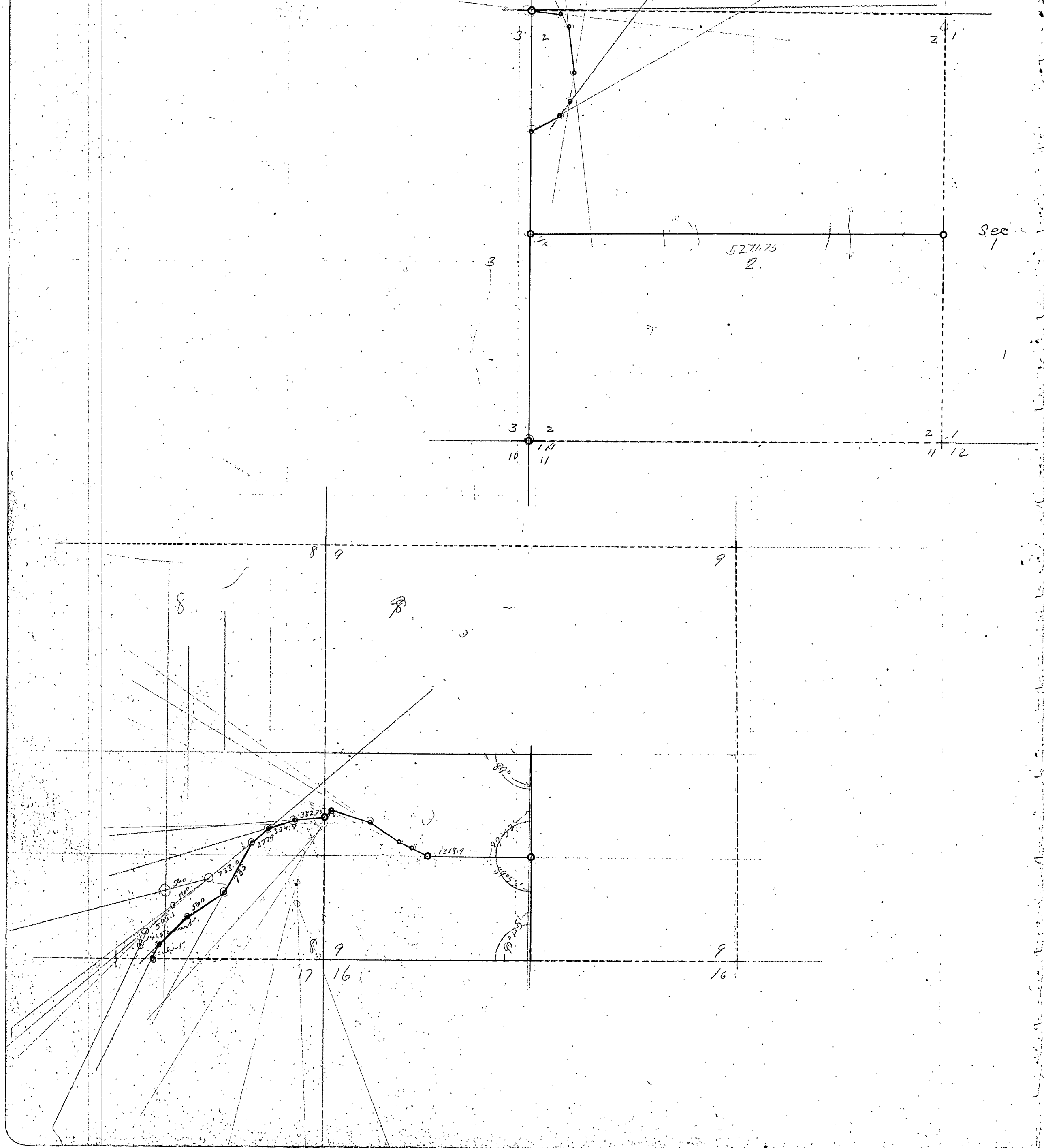
John W. Curo
County Surveyor, Cass Co. Minn.

B

335 plat

SURVEY RECORD No 335

N 59° 44' E



1, 2, 3, 8, 9 - T 134 R 31

Field notes of the survey and establishment of corners in sections 1-2-3-8-9 - Twp. 134 N, Range 30 W, and sections 4, 5, 6, 7, 8, 9, 17, 18, 20 Twp. 133 N, Rg 31 W. and secs 1, 2, 4, 5, 8, 9, 16, 17, 19, 20, 21, 27, 28, 29, 30, 32, 33, Twp 134 N, Range 31 W, as surveyed by N. D. Gorman, Deputy County Surveyor, Cass Co. Minnesota

June 7th, 1915, Monday, Lv Backus for Pillager R. R. fare 4.22 Via Brainerd. Meet W. B. Jones who takes me to G. Smith's farm. Go to $\frac{1}{4}$ corner between sections 2 and 3, Twp 134, Range 30. where U. S. notes call for post and: White pine 20 inch, N 50° West 123 links: I find W. P. stump standing from which set D. M. for $\frac{1}{4}$ corner.

June 8th, 1915, N. D. Gorman, transit: G. W. Smith, ch: H. Collins and J. Bluffy, as: Start survey for road: Begin at $\frac{1}{4}$ between sec 2 + 3 run north on true line. Run 415.0 hub. road center 712.1 hub - road center 1322.1 hub - road center From this point course of road is as follows - North 59° 44' East 433.65: North 23° West 226.4 feet: North 27° West 363.4 feet: North 16° 05' West 599.1 feet: North 20° West 176.85 feet: From this point true corner to sections 2 + 3, Town 134, Rg 30 and sec 33 and 34 - Town 135 Rg 30 lies North 58° West 433.0 feet: Beginning at the $\frac{1}{4}$ corner between secs 2 and 3, T. 134 R 30 run East Var 9° 15': at 1202.15 hub: 1405.5 hub: 1892 hub: 1700 enter marsh: 2150 leave same: 2412.6 hub: 3326.75 hub: 3709.75 hub: 3820 cross creek: N. D. Gorman, Eng.

June 9th, 1915: Continue East: at 3982.5 hub: 4095 cross creek: 4909.5 hub: at 5271.75 feet East the $\frac{1}{4}$ corner between secs 1 and 2 lies North 3 feet: Correcting back (.000569) 4909.5 goes North 2.79: 3982.5 goes North 2.25: 3709.75 goes North 2.11: 3326.75 goes North 1.89: 2412.6 goes North 1.37: 1892 goes North 1.07: 1405.5 goes North .80: 1202.15 goes North .68: From $\frac{1}{4}$ corner between sections 2 + 3, T 134 R 30 set on D. M. right south on true corner to sections 2-3-10-11 and set road centers every 400 feet - chain south at 450 enter swamp: at 1700 cross creek: at 1850 Lv swamp: 2500 enter swamp: at 2645.3 feet south intersect corner to sections 2, 3, 10, 11: Stayed two days with George Smith. W. B. Jones takes me to E. A. Cole's farm.

June 10th, 1915: Rain all day I work on field notes.

June 11th, 1915: A. Cole, chain: E. Cole, ch: N. D. Gorman, transit: H. Collins, as: Begin at South $\frac{1}{6}$ corner in center of south half of section 9 to run $\frac{1}{6}$ line to Stony Lake: L at center of section 9 = 89°, L at $\frac{1}{4}$ corner south section 9 = 90° 45': L at $\frac{1}{6}$ corner = 89° 52': run west: at 832.3 hub in road center: at 1318.9 hub in road center on East bank of Stony Lake - run road around lake as follows: R 30° 36' 225.5 feet: L 6° 32' 185.25 feet: R 10° 44' = North 59° West 439.0 feet L 36° 18' - South 85° West 595.25 feet: L 47° 14' - South 27° West 49.1 = M. C. No. 18: L 10° 20' - South 74° 30' West 382.75 feet: L 17° 22' - South 63° West, the distance is 354.15 feet L 16° 46' - South 29° 50' West 277.9 feet: L 19° = South 18° 30' West 733.0: R 25° = South 46° West 560.0: L 10° 51' South 35° West 505.1: R 19° 33' - South 16° West 141.5 feet = culvert: R 19° 33' - South 16° West 164 feet: U. S. notes call for M. C. at this point there are no bearing trees to be found and as the petition states that road shall follow

section line between sections 8 and 17, T. 134 R. 30, I will have to establish meander corner. The last survey was made by Todd and I will have to go to Pillager to telephone the office for field notes. N. D. Gorman, Eng'g.

June 12th, 1915, Go to Pillager with Farmer's Cream Wagon and put in call for Curo: Not able to get Curo's send letter.

June 13th, 1915, Sunday - W. B. Jones drives N. D. Gorman to E. A. Cole's for my instruments, thence to Geo. Horn's where I will start survey of roads in T. 134 R. 31.

June 14th, 1915, Monday: N. D. Gorman, transit; Mr. A. Eckland, chain: Begin at corner to secs 1, 2, 11 + 12, T. 134, R. 31 from which I run North Var $9^{\circ}31'$: at 200.1 hub: 455.6 hub: 700 enter slough: 890 lv same: 906.4 hub: 1253.1 hub: 1310 enter slough: 1400 lv same: 1939.4 hub: 2545.5 hub: 3320 hub: 3811.1 set hub: 4594.5 set hub: at 5220.5 set hub: the corner to sections 1, 2, 35 + 36, lies East 75.75 feet. Correcting back, the correction = .014511 of a foot E, for each foot N. 200.1 N. goes East 2.90: hub 455.6 N, goes E, 6.61 ft: 906.4 N, goes E, 13.15 ft: 1253.1 N, goes E 18.14: 1939.4 N, goes E, 28.13 ft: 2545.5 N, goes E, 36.94 ft: 2610.0 N goes East 37.87 feet to true $\frac{1}{4}$ corner between secs 1 + 2 T. 134, R. 31. Set iron monument for $\frac{1}{4}$ corner: 3320.0 N, goes E, 48.18 ft: 3811.1 N, goes E, 55.39 ft: 4594.5 N, goes E, 66.66 ft: 5220.5 N, goes E, 75.75 ft to true section corner of 1, 2, 35, 36.

June 15th, 1915 - N. D. Gorman, transitman: Geo Horn, chain: R. Horn & Eckland, ax: To establish the corner to secs 8, 9, 16, 17, we begin at corner to secs 7, 8, 17, 18: T. 134, R. 31, and run East on $8^{\circ}30'$ Var: at 1784.5 E, set hub: at 3101.15 E, set hub: at 5284.40 E, set hub: at 6598.50 E, set hub: at 8399.1 E, set hub: at 9484.60 E, set hub:

June 16th, 1915 - Same crew continue East: at 10624.5 E, the corner to secs 9, 10, 15 + 16, sets 56.5 feet South.

June 25th 1915 - Geo Cole, chain: O. Klingbile, axman: O. Beckner & C. Haney, axman. Begin at corner to secs 32 + 33 on South Town line T. 134, R. 31, Run North: at 237.0 set hub: at 1146.9 N, set hub: at 1564.1 N, set hub: at 1963.0 hub: at 2649.2 hub: 2881.3 N set hub: at 3189.0 set hub: at 3564.1 N, set hub: at 5260.7 N, set hub near temporary corner to secs 28, 29, 32, 33, T. 134, R. 31: Thence continue North between secs 28 + 29. at 6199.25 set hub: at 6997.5 N, set hub: at 7980.0 N, set hub near temporary $\frac{1}{4}$ corner between sections 28 + 29.

June 26th, 1915: Continue North: Var $8^{\circ}30'$, Same crew: at 8898.5 set hub: at 10200 enter slough: at 10619.1 set hub near temporary corner to secs 20, 21, 28, 29: continue North between secs 20 + 21 on random: at 11560.9 set hub - leave slough: at 12610.5 set hub: at 14157.5 set hub: at 14700.0 set hub: at 15600 enter slough: 15889.1 set hub near temporary corner to secs 16, 17, 20, 21: at 16364.05 set hub - leave slough:

June 27th, 1915: Sunday, all day at Klingbile's.

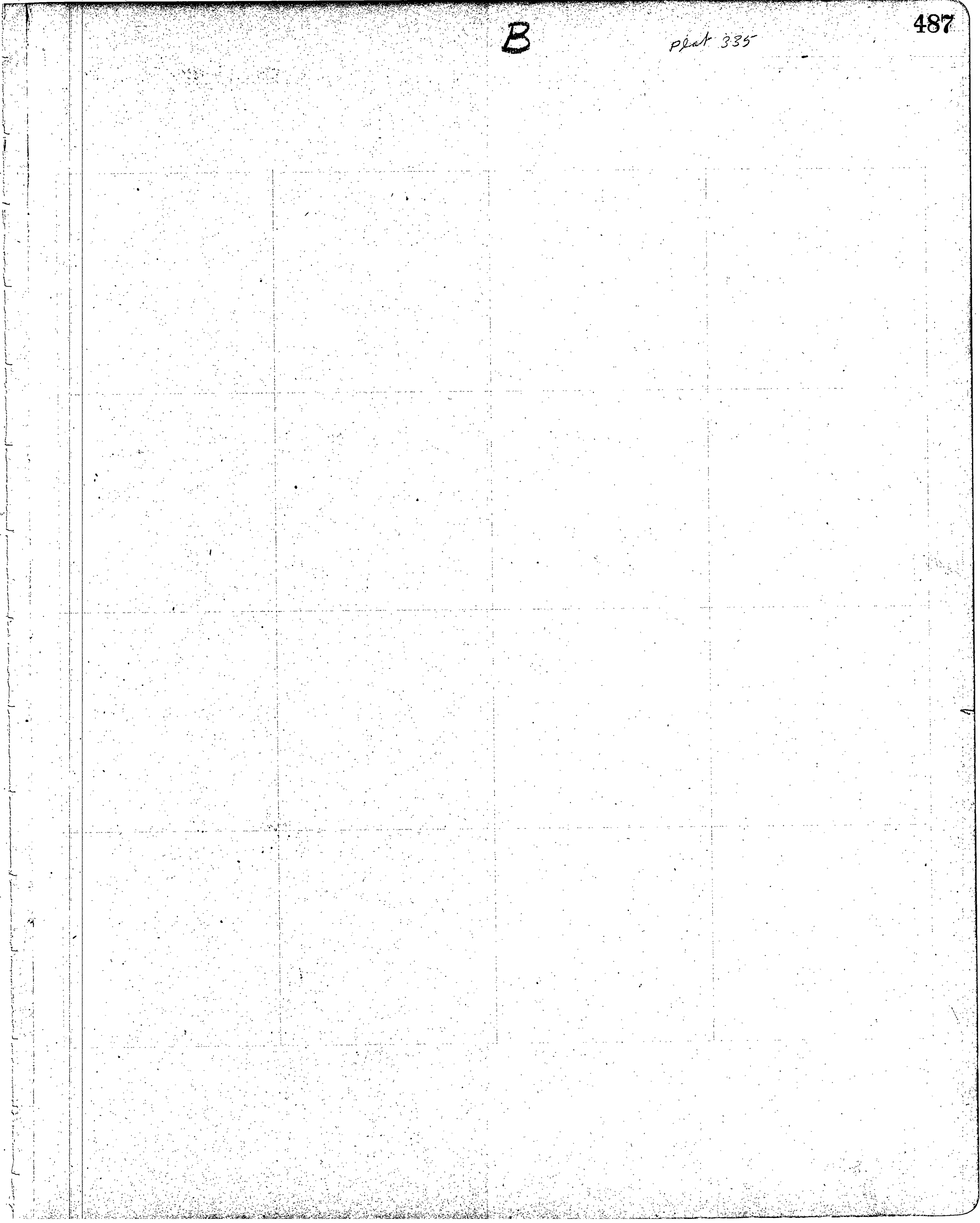
June 28th, 1915: O. Klingbile's chain: C. Haney, ax: Beginning at hub 16364.05 continue North between secs 16 + 17, T. 134, R. 31: at 17907.0 set hub: at 18677.25 N, set hub: at 20492.50 set hub: at 21265.5 N, Todd's temporary corner to secs 8, 9, 16, 17, lies West 253.75 feet. Decide to run trial line one mile north.

June 29th, 1915: Tuesday: Gorman, transit: Cole chain: O. Klingbile: a. Klingbile & Haney, ax: Beginning at hub 210270.1 continue North: at 23939.80 hub: at 24000. enter slough: at 24135 lv same: at 24268.5 set hub: at 25171.9 N, set hub: at 25878.0 set hub: at 26595.75 set hub: at 26612.35 set hub: the corner to secs 4, 5, 8 + 9, T. 134, R. 31, lies West 371.75 feet: This corner was

B

Plot 335

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B

SURVEY RECORD No 335 (CONT'D)

set by Whitely. Begin at corner to secs 4, 5, 8, 9, T134, R31, run North, Var 9° , between secs 4 and 5: Cut out to Creek which is too high to ford and decide to work in South part of Town till low water:

June 30th, 1915, Wednesday: Gorman, transit: Haney, chain: Klinghile and Cole, chain: Begin at cor to secs 29, 30, 31 + 32, T134, R31, and run East between secs 29 + 32 - Var 9° : at 2640 E, set hub: temporary $\frac{1}{4}$ corner between secs 29 + 32: at 3191.1 E, set hub: at 4633 E, set hub: at 5234.75 E, set hub, near temporary corner to secs 28, 29, 32, 33, T134, R31. Look for B.T.'s where U.S. notes call for Norway pine 6 inch, S 46° E 40 lks: Norway pine 14 inch, S 78° W 83 lks: Poplar 13 inch, N 21° W 52 lks: Continue East between secs 28 + 33, T134, R31, at 6350 enter slough: at 6965.5 E set hub, leave slough at 7920.2 E, set hub: near temporary $\frac{1}{4}$ corner between secs 28 + 33, T134, R31. at 8955.9 E set hub: at 9794.8 set hub: at 10577.9 corner to sections 27, 28, 33, 34, T134, R31, lies South 11.95 feet. I go to $\frac{1}{4}$ corner between secs 32 + 33, T134, R31, where U.S. notes call for post and: Norway pine 20 inch, N 67° E 27 lks: Norway pine 22 inch, S 37° W 43 lks: We find the N.E. stump standing and plainly marked from which I set $\frac{1}{4}$ corner. At 2651.9 N, on N + S. random line, corner line West 9.5 ft.

July 1st 1915, Gorman, transit: Cole, av: Klinghile, av, and Haney, chain. Establish corner to secs 28, 29, 32, 33, T134, R31. From sec corner to secs 32, 33, on Townline, to corner to secs 4, 5, 8, 9 = 26612.35 feet: at 2651.9 N, the $\frac{1}{4}$ corner lies West 9.5 feet, set to B.T. at 5314.1 corner to secs 28, 29, 32, 33, lies East 71.10 feet. distance from corner to 29, 30, 31, 32, to corner of 27, 28, 33, 34, = 10577.9 feet. By proportionate measurement 10578.2 = U.S. measurement. 4.7 feet (.000444 = correction) 5269.13 = distance between secs 28 + 33, 5309.76 = distance between secs 29 + 32: at 5308.75 corner to secs 28, 29, 32, 33, lies South 34 feet. To establish $\frac{1}{4}$ corner between secs 28 + 33, at 7943.62 E, the $\frac{1}{4}$ corner sets South 23 feet. To establish $\frac{1}{4}$ corner between secs 29 + 32, at 2654.35 the $\frac{1}{4}$ corner goes South 17 feet.

July 2nd, 1915, Friday: Begin at $\frac{1}{4}$ corner between sections 21 + 28, T134, R31, and run West, Var $8^{\circ}30'$ between secs 21 + 28: at 650 W, enter slough, at 800 lv same: at 1062.6 W set hub: at 1500 enter marsh: at 2645.8 set hub near temporary corner to sec 20, 21, 28, 29, T134, R31: Continue West between secs 20 + 29: at 2700.25 set hub: at 3757.25 W, set hub: at 5307.72 W, set hub near $\frac{1}{4}$ corner between secs 20 and 29: at 7024.4 W, set hub: at 7711.25 W, set hub: at 7949.75 West, the corner to secs 19, 20, 29, 30, T134, R31, lies South 27.25 feet. set corner to B.T.s. U.S. notes call for post and: Aspen 24 inch, S 55° E 18 lks: Aspen 8 inch, S 33° W 60 lks: Aspen 2 inch, N 52° E 48 lks: Elm 14 inch, N 31° W 32 lks: I find the Elm stump, still standing: Klinghile and Cole will swear to this

to this bearing tree - Correcting back: 7949.75 feet = my chain and 7924.62 feet = U. S. chain. 25.15 = difference. 003173 = correction. 2641.98 plus 8.38 = 2650.36 and 7949.75 minus 2650.36 = 5299.39 being length of South line of sec 20, T134, R31. To establish corner to secs 20, 21, 28, 29, T134, R31, at 10638.77 N, corner sets West to 2650.36 on E & W random: At 10638.77 on N & S random, corner to secs 20, 21, 28, 29, lies West 5.5 feet: at 2650.62 on E & W random, corner lies North 10.25 feet. To establish $\frac{1}{4}$ corner between secs 29 & 28, T134, R31, at 7976.45 corner lies 32.8 feet East. To establish $\frac{1}{4}$ corner between secs 20 & 29, at 5300.31 corner lies South 8.50 feet.

July 6th 1915 - Gorman, transit: Cole, ax: Klinghile ax: Haney, ch: Begin at corner to secs 17, 18, 19, 20, T134, R31, run East Var $8^{\circ}30'$: between secs 17 & 20, setting road centers: at 78 ft. E, set hub: at 199.60 enter west bank of creek: at 215 W East bank of Creek: at 461.75 E, set hub: at 823.25 E, set hub: at 840 . center branch of Creek: at 1424.1 set hub: at 1873.2 ft. E, set hub: at 2157.6 E, set hub: at 2804.4 set hub: at 3571.75 E, set hub: at 4134.7 ft. E, set hub: at 5301.1 ft. E, set hub: at 5309.75 feet East, the corner to sections 16, 17, 20 & 21, T134, R31, line North 13.00 ft: At 15963.25 N, the corner to secs 16, 17, 20, 21, T134, R31, lies West 140.0 feet: Correcting back: $(.002487)78.0$ goes N. $.19$ ft: 199.6 goes N. $.50$ ft: hub 461.75 goes N, 1.04 ft: hub 823.25 goes N 2.04 ft: 1424.1 goes N 3.93 ft: 1873.2 goes N 4.64 ft: 2157.6 goes N 5.36 ft: hub 2654.97 East, goes N, 6.5 feet to the true $\frac{1}{4}$ corner between secs 17 & 20, T134, R31. 2804.4 goes N, 6.97 ft: 3571.75 goes N. 8.88 ft: 4134.7 goes N, 10.28 ft: 5309.75 goes N 13.00 ft, to corner of secs 16, 17, 20 & 21, T134, R31. From corner to secs 16, 17, 20, 21, T134, R31, we run East between secs 16 & 21; start line across slough East, Var $8^{\circ}30'$: send flag man around and set flag on line; then turn 90° left and run 1051 feet North and set hub from which I turn $66^{\circ}50'$ left (St angle) to flag across slough: distance to hub E, across slough is 2456.02 feet.

July 7th, 1915 - Wednesday: Currie arrives from Minneapolis - Currie, transit: Gorman, chain: Cole, Klinghile and Haney, ax: Beginning at hub 2456.02 E, we continue East chaining from same as point "O.O." at 394.90 set hub: at 759.4 set hub: at 955.0 set hub: at 1658.0 set hub: at 2847.0 E = corner to sections 15, 16, 21, 22, T134, R31. 2847.0 added to 2456.02 = 5303.02 feet being length of line between sections 16 & 21. at 2651.51 set $\frac{1}{4}$ corner on line between 16 & 21. $180^{\circ} - (66^{\circ}50' + 90^{\circ}) = 23^{\circ}10'$ Beginning at cor to secs 4, 5, 8, 9, T134, R31, we run North between secs 4 & 5, Var $8^{\circ}30'$: at 755.5 N set hub: at 824.5 N, cross creek: at 1306.2 hub: at 1913.7 set hub: at 2529.4 N, set hub: at 2652.2 the $\frac{1}{4}$ corner between sections 4 & 5, lies East 27.10 ft: Correcting back, correction = $.01021$ 755.5 goes East 7.71 ft: hub 824.5 N, goes E, 8.42 : hub 1306.2 N, goes E, 13.34 ft: 1913.7 N, goes E, 19.53 ft: 2529.4 N, goes E, 25.82 ft: Beginning at the $\frac{1}{4}$ corner between secs 4 & 5, T134, R31, run North, Var 7° between sections 4 & 5: at 339.6 set hub: at 719.0 N, set hub: at 1216.7 set hub: 1622.0 N, set hub: at 2492 . cross road: at 2499.2 set hub: There is no corner on town line, and cannot be established without first establishing corner to N. W. corner of Town 134, R31. The Town Board decides to take the matter under consideration.

July 8th, 1915 - Thursday - Gorman, transit: Cole, chain: establish the $\frac{1}{4}$ corner between secs 20 & 21. at 15963.25 ft North on N & S random line. the corner to secs 16, 17, 20, 21, lies 140 . feet West: at 10638.77 ft North on N & S random line the corner to secs 20, 21, 28, 29, lies West 5.5 feet.

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At 13300.89 ft N, the 1/4 corner between secs 20+21, lies West 72.75 feet. To establish corner to sections 8, 9, 16, 17, T 134, R 31. At 21287.79 ft N, corner lies West 222.25 feet and at 5308.26 E, on E+W random line. To establish the 1/4 corner between secs 16+17, at 18625.52 N, the 1/4 corner lies West 181.12 ft. At 14632.11 N, the the North 1/6 between secs 20+21, lies West 118.13 ft. To establish the 1/4 corner between secs 9+16. At 7974.36 E, on E+W random line, the 1/4 corner goes South 24.5 feet. To establish 1/4 corner between secs 8+17. at 2654.13 E, on E+W random line, the 1/4 corner lies South, 3.75 feet. Currie, transit. Klingbile, chain: J. C. Martin and Haney, as: Begin at corner to secs 4, 5, 8, 9, T 134, R 31, and run South on random between secs 8+9, Var 8°50': at 605.0 set hub: at 901.5 S set hub: at 1323.9 S, set hub: at 1683.8 S, set hub: at 2280.0 S, set hub: at 2686.0 Martin takes us to NW cor of Supp. 134, R 31, where he claims to know of bearing trees, but all trace of same were gone.

July 9th, 1915: Friday: Currie, transit: A. Klingbile, ch: A. Klingbile, as: Begin at hub 2686.0 S, and continue South between 8+9: at 3258.4 S, set hub: at 5329.0 S, the corner to secs 8, 9, 16, 17, lies East 128. feet. Correcting back, (02402) hub 605.0 goes E, 14.5 ft. hub 901.5 S, goes East 21.65 ft. hub 1323.9 S, goes E, 31.78 ft. Hub 1683.8 S, goes E, 40.44 ft. hub 2280.0 S, goes E, 54.76 ft. hub 2664.0 S, goes E, 64.0 ft to the 1/4 corner between secs 8 and 9, T 134, R 31. hub 2686.0 S, goes East 64.51 ft. hub 3258.4 goes E 78.26 ft. Gorman, Transit and Cole, chain - rain in a.m. afternoon set 1/4 corner between secs 16+17, T 134, R 31.

July 10th, 1915, Saturday: Gorman, transit, Currie rod and chain: Cole, chain: take levels for road drainage between secs 27+28, T 134, R 31.

Sta	R. R.	H. I.	E. L.
0	7.57	2757	2000
1	7.05		2052
2	7.07		2050
3	6.64		2093
4	5.65		2192
4	8.60	3052	---
5	7.64		2288
6	6.50		2402
7	5.70		2482
8	5.05		2447
9	4.05		2647.
10	3.41		2711
--	6.02	3313	---
11	5.70		2743
12	7.17		2596
13	6.95		2618
14	5.60		2753
15	4.97		2816
16	5.00		2815
17	4.85		2828
18	4.95		2818
--	5.51	3333	---
19	4.50		2883
20	4.61		2872
21	4.82		2851
22	5.30		2803

Sta.	R. R.	H. J.	E. L.
23	5.74		2759
24	6.12		2721
25	7.49		2584
26	7.90		2543
27	9.00		2433
28	9.50		2383
29	10.05		2328
30	10.04		2339
31	10.90		2243
--	6.80	2823	---
--	5.70		2253 Water level.
--	6.40		2183 Bottom of ditch
32	7.35		2098

July 12th, 1915: Currie transit: Begin at corner to secs 8, 9, 16 & 17, T 133 N, Range 31 West. Run North Var $10^{\circ}10'$: between secs 8 & 9: at 600.0 N, set hub: at 911.7 N, set hub: at 1546.7 N, set hub: at 2142 set hub: at 2660.0 ft North, set hub: at 2660.4 N, the $\frac{1}{4}$ corner between secs 8 & 9, T 133, R 31: lies E, 9.4 feet. Correcting back, (= .00357) at 1330.2 N the south $\frac{1}{6}$ corner between secs 8 & 9, T 133, R 31, goes E, 4.75 feet.

Gorman, transit: H. Lawhead, ch: B. Adams, ax: S. Wait, ax: Begin at Cor to secs 7, 12, 13 & 18. On West side of Sup 133, R 31, and T 133, R 32, Morrison and Todd Counties, run East between secs 7 & 18, Cass Co. on 9° var: at 720.5 E, set hub: at 1387.25 E, set hub: at 1776.5 set hub: at 2400 E, cross state road: at 1776.5 E, we affect 10. feet to get around house: at 4003.5 E set hub: at 4069.0 E, set hub: set back on random and continue East: at 4265.7 E, set hub, on west bank of Crow Wing River - then send man around on East bank & set hub: at hub 4265.7 E, we turn right angle and run South 534.65 feet and set hub from which we sight on flag on hub across River, turn angle (NE) $37^{\circ}15'$: at 4667.23 hub on East bank of river: at 4999.23 hub: at 5096.48 E, set hub: at 5123.88 E, set hub: at 6014.83 E, set hub.

July 13th, 1915 - Tuesday: Begin at hub 6014.83 E and continue East, Gorman, transit: and Wait, chain: Adams, ax: at 6756.5 E, set hub, near temporary section corner to secs 7, 8, 17, 18, T 133, R 31: at 9051.12, thence continue East between secs 8 & 17, T 133, R 31, on random line: at 9561.1 set hub: at 10500.0 set hub near temporary $\frac{1}{4}$ corner bet 8 & 17: at 11166.4 E, set hub: at 11964.3 E, set hub: at 12144.75 E, set hub: at 12969.1 E, set hub: at 13227.4 East, the corner to secs 8, 9, 16 & 17, T 133, R 31, lies South 50.6 feet. Correcting back, U. S. chain is 13219.14 feet and my chain is 13227.4 feet, difference 8.26 feet. Correction = .000625 of a foot. At 2640 E, corner goes 1.65 feet to 2641.65 feet East: at 4257.00 E, M. C. No 24 goes East 2.66 feet to 4259.66 feet East: at 5083.32 East, M. C. No 23, goes East 3.15 to 5086.47 feet East: at 5280.0 E, the $\frac{1}{4}$ corner between secs 7 & 18, T 133, R 31, goes East 3.28 ft. to 5283.28 East: at 7920, corner to secs 7, 8, 17 & 18, T 133, R 31, goes East 4.94 to 7924.94 ft East: at 10560 E, the $\frac{1}{4}$ corner betw secs 8 & 17, T 133, R 31, goes East 6.60 feet to 10566.6 ft East. At 13219.14 E, corner goes East 8.26 to 13227.4

July 14th, 1915 - Wednesday - Gorman, transit; Lawhead, chain: Adams, ax: Wait, ax: Begin at temporary corner to secs 7, 8, 17, 18, T 133, R 31 run South between secs 17 & 18, Var $10^{\circ}25'E$: at 543.15 ft S, set hub: at 560.5 S, cross N. 79 RR: at 1586.75 hub: at 2567.7 S set hub: at 2640 look for $\frac{1}{4}$ corner to B. J. where U. S. notes call for: Pine 5 inch, $S57^{\circ}15'W$ 32 lbs:

Aspen 8 inch, $N89^{\circ}45'E$ 17 lbs, all are gone and we continue South:

at 3334.75 S, set hub: at 4408.5 set hub: at 4550 S, enter swamps: at 4910.0 ft S, leave swamp: at 4955.0 set hub: The B. J. to M. C. No. 22 are gone.

July 15th, 1915 - Thursday: Gorman, transit: Currie, chain: Lawhead, Adams, Rosewald and Felton, axmen: Begin at 4955.0 S, hub and continue South: at 4995.74 enter North bank

of Crow Wing River, which is shallow and we chain across; at 5300.0 on river: at 5334.9 set hub: M.C. No. 20 where U.S. notice call for post and: Ash 10 inch, $S 34^{\circ} 5' E 29$ lbs. (=19.14 ft.) Elm 1 3/4 inch, $S 20^{\circ} 30' W 30$ lbs. (=19.89 ft.) We find Elm stumps plainly marked from which I set Mander corner: at 5353.1 South, the M.C. No. 20, lies West 144.75 ft.: We go to temporary corner to secs 7, 8, 17, 18, T133, R31, and continue Currie's line North:

Friday July 16th, 1915 - Gorman, transit: Sawhead, chain: Wait, ax: Establishing corners: at 7920 on E & W random, corner to secs 7, 8, 17, 18, goes East 4.95 to 7924.95 E, and at 5353.50 on N & S random, corner goes South 3.21 ft. to 5350.29: at 10576.18 the $\frac{1}{4}$ corner between secs 8 & 17, goes South 27.67 ft.: at 54.78 on N & S random line, cor. to secs 17, 18, 19, 20, T133, R31, goes North .03 of a foot to 54.81, Corner to River: at 2647.75 the $\frac{1}{4}$ corner bet. secs 17 & 18, goes West 72.62 feet.

July 17th, 1915 - Saturday: Begin at corner to secs 7 & 18, on West Swamp line of T133, R31, run North $9^{\circ} 30'$ Var: Gorman, transit: Sawhead, ch: Adams and Wait, ax: at 1329.3 N, set hub: at 2139.25 N, set hub: at 2816.2 set hub: at 2855.0 N, enter South bank of Crow Wing river: send flagman to opposite bank and set flag on line, then turn right angle and run 500 feet West, angle at that point equals (NE angle) $48^{\circ} 10'$: Cross river by bridge and start new chaining: 1094.75 N, set hub: at 1722.45 set hub: at 1945.35 set hub. Corner to secs 6 & 7, West side, lies East 79.9 ft.: Total length of line is 5280.87 ft.

July 19th, 1915, Monday: Gorman, transit: Adams, Ch: Wait, ax: check chaining Currie's random line: Begin at cor. to secs 4, 5, 8, 9, T133, R31, running West: 1560.0 hub: 2175.0 hub: 2659.9 hub: 3350.0 hub: 3823.5 hub: 4885.0 hub: 5104.45 hub: 5223.25 hub: 5511.8 hub: 6835.15 hub: 7719.50 hub: 7900.0 cross Mosquito Creek: 7939.6 hub: 8501.8 hub: 9199.7 hub: 10633.1 hub: 11690.2 hub: 12214.6 hub: 13175.55 cor. to secs 6 & 7, on West town line lies North 259.2 feet. Correcting back on E & W random line, U.S. chain 13085.82 feet = 13175.55 ft. my chain. Difference 89.73 feet: Correction = .006811 of a foot. 5280.0 cor. to secs. 5, 6, 7, 8, goes West 35.96 ft. to 5315.96. at 10614.78 on N & S random line, corner goes North 30.94 to 10645.64. Length of sec line between secs 17 & 18 is 5295.51 feet. Length of line between secs 7 & 8, is 5295.51. Length of sec line bet. secs 5 & 6, is 5179.2 ft. Establish $\frac{1}{4}$ corner bet. secs 5 & 8, T133, R31. at 2657.98 corner goes North 60.75 ft. Cor. to secs 5, 6, 7, 8, lies 18 ft. west of N and S random: Cor. to secs 5, 6, 7, 8, T133, R31, lies 121.4 feet North of E & W random line:

July 20th 1915, Tuesday - Gorman, transit: Sawhead, ch: Wait, Adams, Rosewald and H. Adams, ax: Begin at East $\frac{1}{4}$ corner bet. secs 7 & 18, T133, R31 run North Var $9^{\circ} 30'$: at 332.8 set hub: at 919.7 hub: 1490.0 hub: 2010.0 hub: at 2140.1 set hub: at 2294.75 hub: 3053.8 hub: at 3871.4 N set hub: at 4184.0 N set hub: at 4500.0 N, bend of Mosquito Creek -- cross line. at 5020 cross creek: at 5110 cross creek. 5284.0 hub on bridge. To establish $\frac{1}{4}$ corner bet. secs 6 & 7, T133, R31, on E & W random: at 7973.44 the $\frac{1}{4}$ corner goes N 168.77 feet: at 5297.10 on N & S random: the $\frac{1}{4}$ cor. bet. secs 6 & 7, lies West 118.5 ft. from $\frac{1}{4}$ corner bet. secs 5 & 8, T133, R31, run S. Var $9^{\circ} 30'$ at 450.0 enter swamp: at 1362.5 S set hub - lv swamp: at 1506.1 hub: 2172.25 hub:

July 21st 1915 - Wednesday: same crew continue line South: at 2348.75 hub: 3101.7 hub: 3981.8 S hub: 4370.3 hub: 5308.2 South the $\frac{1}{4}$ corner bet. secs 8 & 17, lies West, 70.0 feet. Correcting back, = .001319.

Begin at $\frac{1}{4}$ cor bet secs 8+9, T 133, R 31, run west var $9^{\circ} 30'$: 1014.2 hub: 1603.7 hub: 2197.9 hub: 2527.5 hub: 3327.0 hub: 3477.0 hub: 4017.7 hub: 4829.3 hub: 5296.4 hub: 5312.4 W, the $\frac{1}{4}$ corner bet secs 7+8, lies 21.5 North. To establish $\frac{1}{4}$ corner bet secs 7+8, Turn 133, R 31. at 2647.75 on E+W random line bet secs 7+8, corner goes West 28.0 feet: at 1323.87 the South $\frac{1}{16}$ bet secs 7+8, goes West 34.0 feet. Correcting back, = .004047. Begin at South $\frac{1}{16}$ bet secs 7+8, T 133, R 31, run East var $9^{\circ} 30'$: at 558.1 hub: at 919.9 hub: at 1765.9 hub: 2283.0 hub: 2725.6 hub, on N+S center random line.

July 22nd, 1915, Thursday: at 2670.35 the South $\frac{1}{16}$ on N+S center line lies 51.2 ft South: Correcting back, = .01917. Hub 558.1 goes S 10.69 ft: 919.9 goes S 17.63 ft: 1763.9 goes S 33.81 ft: 2283.0 goes S 43.86 ft: 2648.35 goes S 51.2 ft: Gorman, transit: Adams, ax: Wait, ch: establish $\frac{1}{4}$ corner in center of sec 8, T 133, R 31. at 2618.25 where E+W center random intersects N+S random line, temporary $\frac{1}{4}$ corner goes N 10.59 ft to 2649.21 ft: on N+S cen Random line: at 2649.21 on N+S cen random, true $\frac{1}{4}$ cor in cen of sec 8, goes West 34.94 ft to 2653.19 on E+W random line. at 3978.27 on N+S random line, South $\frac{1}{16}$ goes West 52.94 ft to 2670.35. To establish West $\frac{1}{4}$ bet secs 7+18: at 2640 on random line, between 7+18, the $\frac{1}{4}$ corner goes East 1.65 to 2641.65. Correction for E+W .000625. at 2641.65 the $\frac{1}{4}$ cor bet 7+18, goes S, 1.75 ft: Beginning at W $\frac{1}{4}$ cor to secs 7+18, T 133, R 31, run N var $9^{\circ} 30'$: at 131.6 set hub: send man across river and set hub on line. turn 90° angle and run West 290. ft w hub from which I turn (NE) $52^{\circ} 20'$.

July 23rd, 1915, Friday: Gorman, transit: Sawhead, ch: Adams and Wait, ax: Begin at S. $\frac{1}{16}$ on N+S cen line in sec 8, T 133, R 31, run E, var $9^{\circ} 30'$: at 449.5 hub: at 834.4 hub: 1992.8 hub: 2646.55 the South $\frac{1}{16}$ on East line of sec 8, lies N 16.8 ft. Correcting back, = .006348. 449.5 goes N, 2.85 ft: 834.4 goes N 5.29 ft: 1992.8 goes N 12.65: 2646.55 goes N 16.8 to S. $\frac{1}{16}$ on E line of sec 8. Begin at S. $\frac{1}{16}$ bet secs 7+8 run west var $9^{\circ} 30'$: at 1298.25 hub: 2469.5 hub: 3666.5 hub: 3900 enter Mosquito Creek: 3995.0 hub: 4175.2 enter Mosquito Creek: 4210.2 hub, lv creek: 4260.9 hub: 4481.1 hub: 5328.9 hub: at 5312.7 the South $\frac{1}{16}$ on West center line lies 78.5 ft North.

July 24th, 1915, Saturday: Begin at hub on N. bank of Crow Wing river on West $\frac{1}{4}$ line running N+S in sec 7, T 133, R 31. 517.23 N, hub: 992.34 hub: 1818.2 hub: 2640.0 hub: 3913.5 hub: 5313.4 hub: 5317.4 N, the West $\frac{1}{4}$ bet secs 6+7, lies W 18.2 plus 15.0 off set = 33.2 feet. To establish West $\frac{1}{4}$ cor bet secs 6+7, T 133, R 31, at 10560, cor goes W 71.92 ft, to 10631.92. Whole line is 13175.55 my chain. 13085.82 U.S. chain. Klipp. is 89.73 ft: Correction is .006811. at 10631.92 the W $\frac{1}{4}$ cor goes North. at 13175.55, cor in Town line lies N, 259.2 ft. at 5315.96 cor to 5, 6, 7, 8, lies North 121.4 ft. 259.2 minus 121.4 = 137.8 ft. $93.18 + 121.4 = 214.58 =$ distance W $\frac{1}{4}$ cor bet 6-7, goes N, from 10631.92 on random line.

July 26th, 1915. Monday - Gorman, transit: Sawhead, ch: Adams, Wait and Peterson, ax: at 2658.7 the $\frac{1}{4}$ cor on W cen line goes W, 16.7 ft or 6.7 ft from off set on random: From $\frac{1}{4}$ cor run E, var $9^{\circ} 30'$: 450.8 hub: 681.0 hub: 1238.5 hub: 2018.2 hub: 2336.3 hub: 2510.0 enter Mosquito Creek: 2535.0 lv same: 2502.1 hub: 2680.8 hub: 3188.25 hub: 5019.5 hub: 5313.2 hub: $\frac{1}{4}$ cor bet 7+8 lies 111.5 to the North. To establish the East $\frac{1}{4}$ in cen of sec 7, T 133, R 31: at 2649.2 on E+W cen line, true W $\frac{1}{4}$ in cen of sec 7, goes

SURVEY RECORD No 335 CONTD

N. 5.75 ft to 2644.65 ft on N+S, E center line. To set S $\frac{1}{16}$ on E, cen line, at 1322.87 on N+S, E, cen line. The S $\frac{1}{16}$ goes W 15.3 ft; at 2593.6 on E+W random S $\frac{1}{16}$ line lies N 40. ft.

July 27th, 1915, Tuesday: To set S $\frac{1}{16}$ on W, cen line of sec 7, T133, R 31. at 1328.3 S $\frac{1}{16}$ goes W, 8.25 ft; at 5313.5 on E+W, S $\frac{1}{16}$ line, the corner just established lies 78.5 ft N.

Set iron monument.

July 28th, 1915, Wednesday: Gorman, Sawhead and Adams: set iron monuments: Established corner. at 3986.97, the W $\frac{1}{16}$ bet secs 5+8, T133, R 31 goes N, 91.96 ft; at 1328.9 the E, $\frac{1}{16}$ bet secs 5+8, goes N, 30.43 ft; at 1326.5 the E, $\frac{1}{16}$ on E+W cen line of sec 8, goes N 5.29 ft; at 3979.6 the W $\frac{1}{16}$ on E+W cen line of sec 8, goes N, 16.0 ft.

July 29th, 1915 - Thursday - all day at Motley, work on notes and time of ax-men.

July 30th, 1915 - Friday - Lv for Walker - RR fare \$1.86.

July 31st, 1915 - Saturday - all day in office on plats and notes.

Aug 17th, 1915 - Tuesday - Lv Walker for Motley - RR fare \$1.78 to set iron monuments) corners in Twp 134, Rq 31 - Ar Motley - telephone line out of order and cannot get Cole - stay over night at Motley.

Aug 18th, 1915 - Wednesday - Sawhead gets machine to take me to Cole's - Klingbille's for dinner - begin setting iron corners.

Aug 19th, 1915 - Thursday - Gorman, with C. Haney and son assisting, I continue to set S. M's. am boarding with Otto Klingbille, a Klingbille takes me to Motley - over night at City Hotel.

Aug 20th, 1915 - Friday - Hotel bill \$1.55 - Lv for Walker on 2:00 P.M. train RR fare \$1.78.

N. H. Gorman, Engineer

Survey made June 7th, 1915 to August 20th, 1915.

Note:

I record this survey as taken from the above field notes of N. H. Gorman, because the law requires me to record same and the land owners demand that I make such record but I cannot guarantee the work to be correct until I have examined it, which I trust they will permit me to do in the near future.

Recorded February 28th, 1917.

John W. Curo
County Surveyor, Cass Co. Minnesota

PLAT.
T.137^N R.32^W

3
2
11
Sec. cor. cor. correct.
.10.

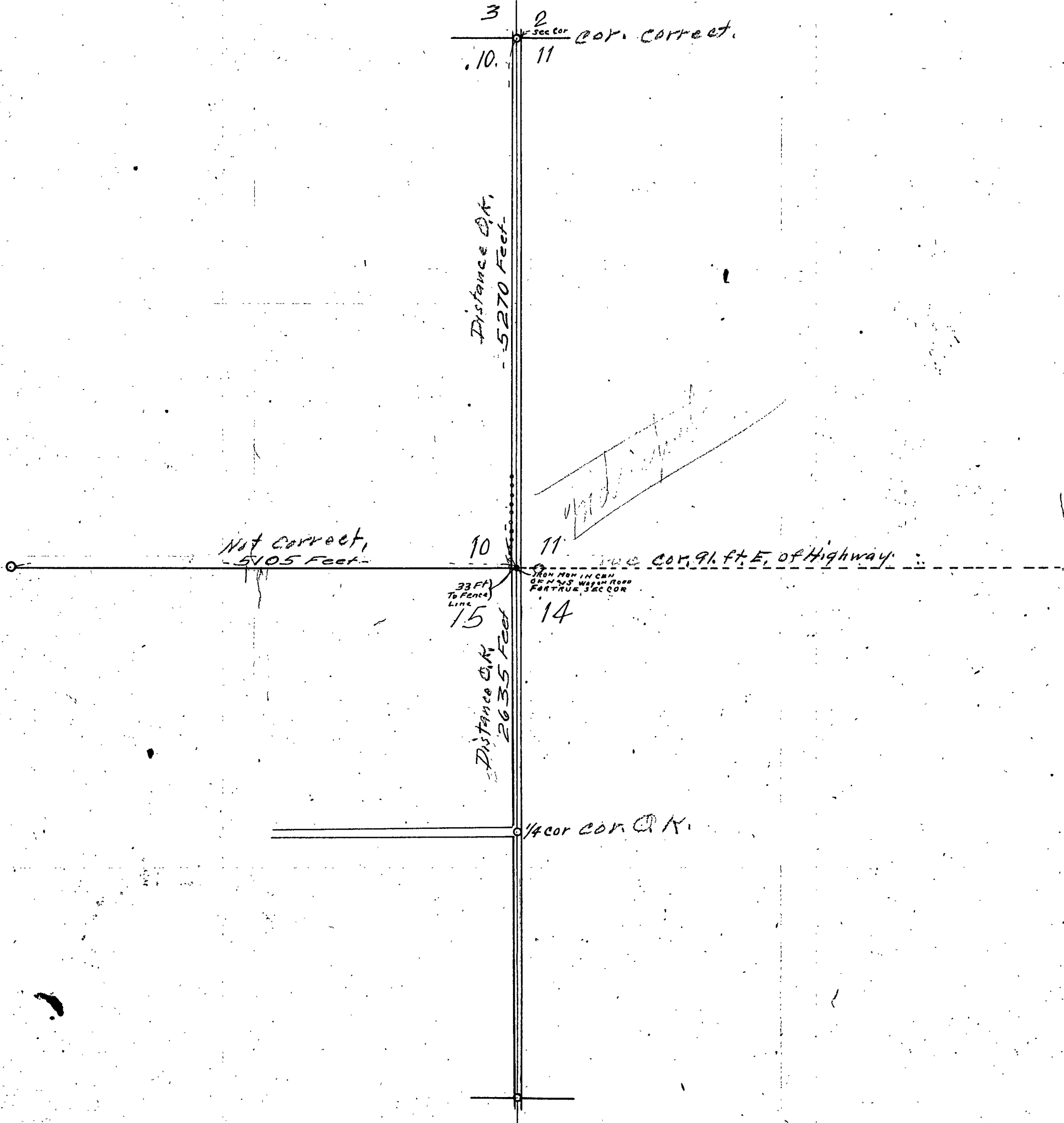
Distance OK,
5270 Feet.

Not correct,
5105 Feet.

10
11
15
14
33 FT
To Fence
Line
FROM NON IN CASE
OF HAZARD MEASURE FROM
FURTHER SEC COR

Distance OK,
2635 Feet.

1/4 cor. cor. OK.



Field notes of the survey and establishment of the obliterated corner to sections 14, 11, 14, 15, Township 137, N, Range 32 W, Cass County Minnesota as established by John W. Curo, County Surveyor.

June 20th 1916. I go to the corner of sections 10, 11, 14, 15, Twp. 137 N, R. 32 W, where I drive a small iron monument in the center of the main graded North & South wagon road being State Rural Highway No. 81.

State Rural Highway No. 81 has been built North and South, directly over the center of a main traveled wagon road which has been here, I am told for over 22 years. My iron monument sets North of, and directly in line with an old corduroy road leading South which marked the true position of the old main road which was built on what was generally considered the true sec. line running N & South.

The iron monument here referred to, sets 2635 feet North of the $\frac{1}{4}$ corner between sections 14 and 15, and 5270 feet South of the corner to sections 2, 3, 10, 11, and directly in line, or on a straight line between the two points. ~~I drive this iron monument~~ ^{False he never was there}

at the point where the Highway Engineers found it, and where I am told an old stake has stood for more than 20 years. Another evidence I have that the corner is correct, where I have just set it, is because an old line of fence runs N from a point 33 feet West of the iron monument I have just set. This fence, I am told, has been built for the past 19 years and was built by one Mr. Odegard to mark the West boundary of the road limits. ^{Taken from my field notes. E. B. Horst} The iron monument above referred to, sets 5105 feet East of the corner 9, 10, 15 and 16, as chained by one of my assistants.

Recorded March 5th, 1917.

John W. Curo.
County Surveyor
Cass County, Minnesota

SURVEY RECORD No. 337 Plat - Page 504

SEC. 12, T. 136 N. R. 30 W.

Field notes of the survey of a part of Township 136, Range 30, to subdivide Sec. 12, as surveyed by E. B. Horst, Deputy Surveyor, Cass County, Minnesota.

Monday, March 26th, 1917, E. B. Horst with survey outfit and necessary field notes, leaves Walker for Pequot on the 9:28 train. A. R. fare equals 80¢. Met at Pequot by Fred Hansen, with team, dinner at Fred Hansen's.

P. M. E. B. Horst, transit and chain, using Girley transit and 100 foot chain, Chicago steel tape, assisted by Fred Hansen, flag and axe, Theodore Alson, chain and axe.

To subdivide Section 12, 136-30 - we begin at corner to section 7, 12, 13, 18, Twp. 136, Ranges 29 and 30, (marked by an I. M. $2\frac{1}{4} \times 48$ in. and cap) and sets S.W. of intersection of N and S and E and W, graded and traveled roads, and used by me in former surveys, and run North at 9 degrees 25' variation. at 38.6 ft. N. center of E. and W. road, continue N. on graded road: at 1089.1 ft. N. set 5 inch spike: at 2305.2 ft. N. set spike: at 2670.6 ft. North set spike near pt. for $\frac{1}{4}$ section corner, between sections 7 and 12, Twp. 136, Ranges 29 and 30, which was obliterated and reestablished by County Surveyor J. W. Curo, and washed out in a 1916 freshet. a fence runs East and one West from this point. Continue North, (begin at each side of road) at 4214.0 feet North set spike, on hill: at 5340.0 ft. North set spike, and uncover corners to sections 1, 6, 7, 12, Twp. 136, Rg. 29 and 30, marked by a $2\frac{1}{4} \times 48$ inch I. M. with following bearings: a $4 \times 4 \times 48$ in wood post S. E. 86.5 feet: a 3 in \times 40 in round post N. E. in section 6, - 61.6 feet all O. K. I set transit over corner and right 1 and 12, Twp. 136 - Rg. 30, and set a 5 inch spike on random line. Just run intersecting same at Stat. 5938.6 feet North and 8.7 feet W of section corner, (1, 6, 7, 12) S. W. angle of true N boundary of Section 12 to random E boundary equals 89 degrees 26'. Returning I to S. E. corner of Section 12, (point of beginning) I set transit over section corner, sight N on random line and turn N. W. angle of 90 degrees 15' and run random line W between sections 12 and 13, Twp. 136, Rg. 30. (This random discontinued.)

Quit for night. E. B. Horst, Deputy Surveyor.

Tuesday, March 27th, 1917. E. B. Horst, transitman, Tho. Alson and Math Anderson, chainmen, Fred Hansen, flag and ax. O. J. Alson, Charles Steffen and Albert Shultz, ax. We begin at corner to secs. 11 and 12, 13 and 14, 136-30, marked by a $2\frac{1}{2} \times 48$ in. I. M. which sets in center of E and W. graded road, I check this I. M. with stumps of U. S. bearing tree:

Jack pine 8 N 70 degrees East 95 = 62.70 feet and find it O. K.

Jack pine 7 N 66 degrees West 200 is gone. I set transit over this corner, sight East over graded road to S. E. corner of Section 12, 136-30 and turn N. E. angle 88 degrees 40' and run random line N. between sections 11, 12, 136-30.

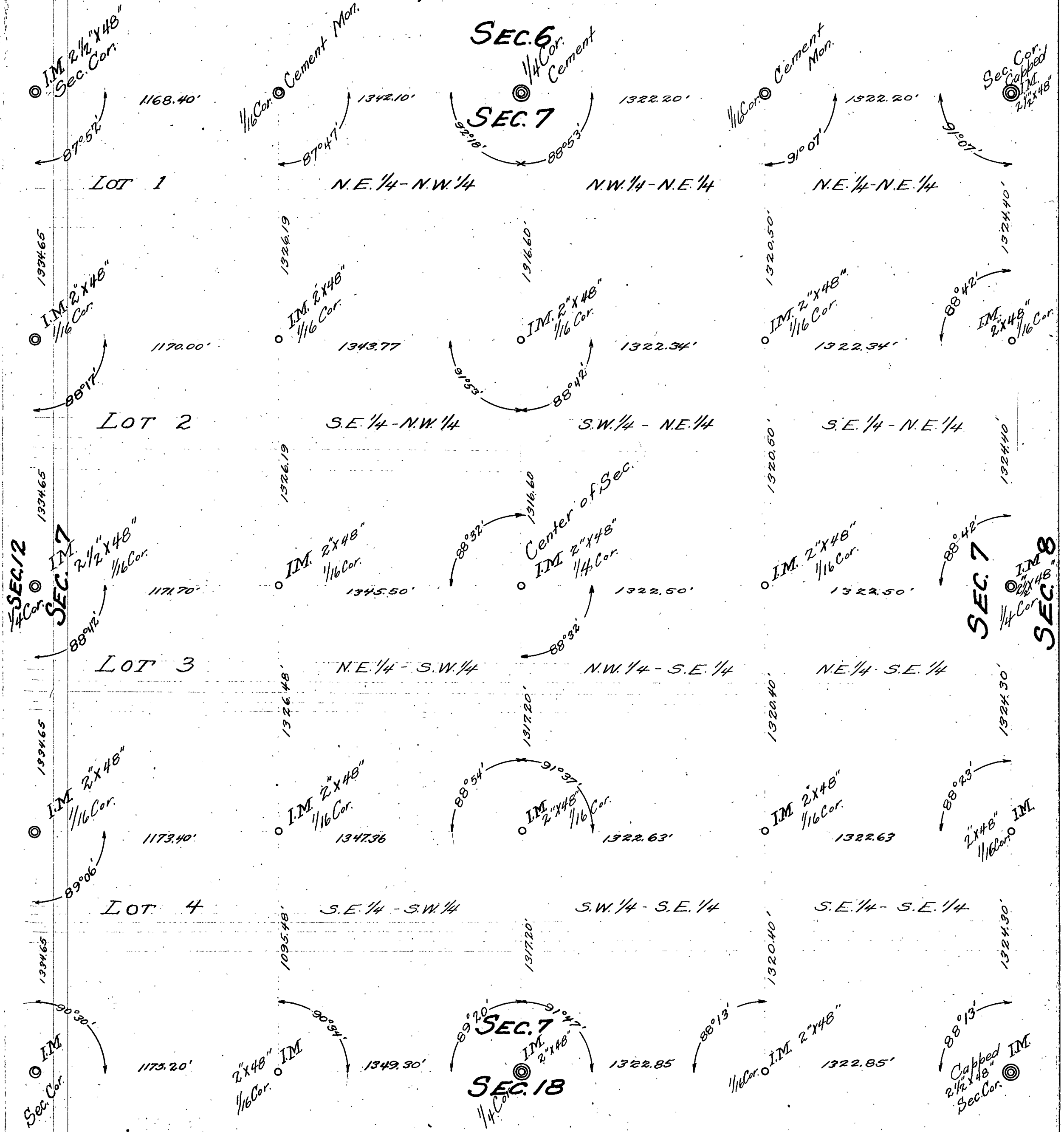
Alson and Anderson, chainmen, begin at S. E. corner of Section 12, 136-30 and chain West as follows: at 270.0 ft. W. center of North and South creek. at 273.0 ft. W. 32 ft. North to center of road bridge: at 320.0 ft. W center of creek. at 428.0 ft. W. center of creek: at 600.0 ft. W. on center of E. and W. graded road. at 1320.0 ft. W. stake temp. $\frac{1}{16}$ corner: at 2640.0 ft. W. stake temp. $\frac{1}{4}$ corner: at 3960.0 ft. W. stake temp. $\frac{1}{6}$ corner: at 5346.0 ft. W. intersect I. M. at corner

First Survey Recorded by J. M. Greene
County Surveyor

16
18
13
16

PLAT OF

SEC. 7, T. 136 N. R. 29 W. OF 5TH P.M.



⊙ = Corners set from U.S. Bearing Trees
 ⊙ = " " " in previous surveys
 ○ = " " " this survey.

to sections 11, 12, 13, 14, Twp 136, Range 30, with new bearings as follows:

Jack pine 10 N 30 degrees 30' West 49.3 feet, sec. 11: Telephone post 78 57 degrees 25' W 46.2 ft. Sec. 14.
 Jack pine 12 S 23 degrees 45' East 70.1 feet, sec. 13: No objects N.E. Chaining from corner to
 11, 12, 13, 14. North between sections 11, 12 - 136 - 30: at 22.0 leave road. cross fence: at 729.6
 feet North spike: at 1320.0 feet North stake temp $\frac{1}{16}$ cor: at 1449.0 feet North center of E and W.
 log road: at 2139.6 feet North spike: at 2636.7 feet North intersect old post, set $\frac{1}{4}$ cor. betw. sec.
 11 and 12, Twp. 136 - 30, from which old U.S. B. T. Jack pine 8 sets S 25 degrees W 9 links = 5.99
 feet, plainly marked being a snag 5 ft. high. Jack pine 7 N 39 degrees East 18 links = 11.88
 ft. is gone: Continue transit line North between 11 and 12: at 3050.0 ft. N set spike:
 at 3200.0 ft. N enter creek bottoms: at 3840.0 feet N cross creek - flows S E: at 3960.0 ft. N.
 Temp. $\frac{1}{16}$ cor. at 4480.0 feet North leave creek bottoms: at 4548.0 ft. North set spike: at
 4625.0 feet N. cross log road: at 5291.6 feet North intersect I. M. (2 x 48 in) at cor. to secs. 1, 2,
 11, 12, Twp. 136, Rg. 30, set by Horst in previous survey from U.S. B. T. stumps. at a hub
 656.6 feet East of this cor. on a random line previously run by me. I set a Hub 3.57 ft.
 N. on true sec. line between sections 1 and 12. I return and set transit over
 corner to 1, 2, 11 and 12, and read S.E. angle of true section lines = $92^{\circ}10'$. We walk
 East to I. M. at $\frac{1}{4}$ cor. between sections 1 and 12, Twp. 136, Range 30, over which I set
 transit and backsight W. to W $\frac{1}{16}$ cor. I. M. between sections 1 and 12, reverse
 telescope and sight East to true sec. line East of $\frac{1}{4}$ corner, line deflects S 0 degrees
 37 minutes. Quit for night. Over night at Hansen's. E 73 Horst.

Wednesday, March 28th, 1917: Horst transit, with same crew.

Beginning at corner to sections 1, 6, 7 and 12, Twp. 136 North Ranges 29 and 30
 West. I correct back over random line previously run. Correction
 equals .0016 3 of a foot East for each foot North. Hub 4214.0 feet North goes East
 6.87 feet. I set transit over this corrected hub, backsight North on section corner,
 and set a 2 x 2 x 12 inch wood stake for North $\frac{1}{16}$ corner, between sections 12 and 7,
 Twp. 136, Range 29-30; at Station 4003.95 feet North. At Station 2669.3 ft. North
 I set a 5 inch spike on true $\frac{1}{4}$ cor. between secs. 7 and 12, Twp 136, North Ranges
 29 and 30 W, with fence post West 24.5 feet and fence post East 22 ft. to
 blades on post: Hub 1089.1 feet North goes East 1.87 feet to true line, I set
 transit over this corrected Hub and backsight South on I. M. at corner to
 sections 7, 12, 13, 18, Twp. 136, North Range 29 and 30 West, foresight North and set
 a 3 x 24 in. stake for South $\frac{1}{16}$ corner between sections 7 and 12.

I set transit over I. M. to sections 7, 12, 13, 18, eight North on true line and read
 N.W. angle $90^{\circ}30'$ to true south line of section 12, 136-30. Sighting West on section
 line between sections 12, 13, Twp. 136, 30, I set 5 inch spikes at pts. for $\frac{1}{4}$ and $\frac{1}{16}$
 corners at Station 1336.5 W. spike for East $\frac{1}{16}$. At Station 2673.0 West spike for $\frac{1}{4}$ cor.
 at Station 4009.5 West spike for West $\frac{1}{16}$ cor. From spike at $\frac{1}{4}$ cor. between sections
 12 and 13, I sight East to section corner and turn N.E. angle of — degree —
 and run random $\frac{1}{4}$ line North through section 12.

at 300.0 feet North enter meadow: at 1109.0 feet North center of creek.

at 1400.0 feet North leave meadow: at 1417.7 feet North set spike.

at 2013.4 feet North set spike on hill: at 2689.6 feet North set spike

at 3137.3 feet North set spike: at 3200.0 ft. North enter swamp.

at 3640.0 feet center of creek (4 feet wide): at 3997.0 ft. North set spike.

at 4373.0 feet North leave swamp: at 4526.1 ft. North set spike.

at 5327.0 feet North set spike $\frac{1}{4}$ corner between sections 1 and 12. Sets East 28.4 ft.

We walk to $\frac{1}{4}$ cor. between sections 7 and 12 on Range line Twp. 136, Rgs. 29-30.

I set transit over $\frac{1}{4}$ cor. and sight North on true Range line, turn N.W. angle 90 degrees 50' and run random $\frac{1}{4}$ line West through Section 12.
 at 33 ft. West enter meadow: at 400 ft. West leave same:
 at 590.0 ft. West set spike: at 1184.4 feet West, set spike:
 at 1310.0 feet West center of creek:
 at 2699.0 feet West intersect North and South $\frac{1}{4}$ line at Station 2654.7 ft. N.
 at 3021.9 feet West set spike:
 at 3520.0 feet West set spike:
 at 3879.4 feet West set spike:
 at 4400.0 feet West enter meadow:
 at 4583.0 feet West set spike:
 at 4700.0 feet West center of creek (twelve feet)
 at 5130.0 feet West leave swamp:
 at 5308.0 feet West $\frac{1}{4}$ corner between sections 11 and 12 sets South 3.8 feet. We walk north $\frac{1}{4}$ mile and set a 3X3X30 in. post for North $\frac{1}{16}$ corner at Station 3964.15 ft. North on true line. We walk South one half mile and set a 3X3X30 post for South $\frac{1}{16}$ cor. at Station 1318.35 feet, North on true line.

Dinner at Math Anderson's, supper and over night with Fred Hansen. quit for night. E. B. Horst, Deputy Surveyor.

Thursday, March 29th, 1917:

E. B. Horst, transit with Theodore Olson and Carl Steffen, assisting. Walk to the intersection of North and South and East and West random $\frac{1}{4}$ lines of Section 12, Twp. 136, Range 30, where I set true center of Section from P. I. of randoms, by setting hubs on both the lines and intersecting same, P. I. of true lines at Station 2652.8 feet North and 2684.9 West, we then set 3X30 inch post at center of East half. at center of North half - at center of West half - at center of South half of Section 12, until we can obtain Iron Monuments.

P. M. Horst, transit, Hansen and Anderson, chain, Steffen, flag, O. J. Olson, axe.

I set transit over North $\frac{1}{16}$, on Range line between sections 7 and 12, Township one hundred thirty six, range 29 and 30, sight North on true line and turn northwest angle 90 degrees 47' and run West on North $\frac{1}{16}$ line.

at 1413 West cross old log road.

at 1920 West enter meadow.

at 2691.2 ft. West, intersect post set for center of North $\frac{1}{2}$ - I turn South 0 degrees 26' and continue North $\frac{1}{16}$ line West at 600 cross creek.

at 1170 leave meadow

at 2240 enter meadow at 2597.6 ft. West North $\frac{1}{16}$ corner sets North 6.8 feet: We return and set the center of the N.W. quarter of Section 12. at Station 1298.8 ft. West of $\frac{1}{16}$ corner on quarter line, and 3.4 ft North of random line. We set the center of the Northeast quarter of Section 12 at Station 1345.6 feet West of $\frac{1}{16}$

on range line.

Dinner at Steffen's. Supper and over night at Hansen's.
Quit for night. E. B. Horst.

Friday, March 30th, 1917: Horst, transit, Theodore Olson and Math Anderson, chain, Hansen, flag, Steffen and Olson, axmen.
I set transit over South $\frac{1}{16}$ cor. on Range line between Sections 7 and 12, Township 136, Ranges 29 and 30. Sight north on true line and turn N.W. angle 90 degrees 41' and run west on South $\frac{1}{16}$ line of Section 12. at 280.0 enter meadow.

at 548.0 feet west center of creek: at 553.0 feet West leave meadow + creek.

at 1850.0 feet West enter swamp: at 1790.0 feet West leave swamp:

at 2530.0 feet West center of South $\frac{1}{2}$ sets north 0.9 feet.

Continue same line west: at 3056. feet West leave bottoms.

at 3264. feet West enter bottoms: at 3380. feet West cross creek.

at 3644. feet West leave bottoms: at 5324.9 feet West - South $\frac{1}{16}$ cor.

between Sections 11 and 12, Twp. 136, Range 30, sets north 1.6 feet.

Correcting back: at Station 4000.9 ft. West we set center of SW $\frac{1}{4}$ of Section 12, 1.2 feet North of random line. At Station 1338.45 ft. W.

I set center of S.E. $\frac{1}{4}$ Section 12, 0.4 feet North of random line.

To complete the survey of this Section the East $\frac{1}{16}$ and West $\frac{1}{16}$ lines should be run, but as the land owners of Section 12, do not care to stand the expense of more work, we discontinue the survey for the present.

I spend the afternoon in checking calculations.

Dinner at Carl Steffen's. Supper and over night with Fred Hansen.
Quit for night. E. B. Horst.

SEC 7, T. 136 N. R. 29 W. 5TH P.M.

Plat Pje 499.

Field notes of the survey of a part of Township 136, Range 29, to subdivide Section 7, Twp. 136, Range 29, into $\frac{1}{16}$ ths or 40's, as surveyed by E. B. Horst, Deputy County Surveyor of Cass Lake, Minnesota.

Saturday March 31st, 1917. Horst, transit, Math Anderson and Tobias Bye, chainmen, Fred Hansen, flagmen. Mads Anderson and Thos. Dixon and Lens Sevang, axmen.

We begin at corner to sections 7, 12, 13, 18, Township One hundred thirty six, North of ranges 29 and 30, West, with transit setting over I. M. I sight North on true range line and turn 90 degrees 30' N. E. angle to hub on true section line (on top of hill) between sections 7 and 18, Twp. 136, Range 29. We walk North one mile to I. M. at N. W. cor. of section 7. S. E. angle from range line to $\frac{1}{4}$ cor. between secs. 6 and 7 equals 87 degrees 52', setting transit over $\frac{1}{4}$ cor. between sections 6 and 7, (cement monument) I backsight West on sec. corner, reverse telescope and sight East to cor. of sections 5, 6, 7, 8, line deflects North 1 degree 10'. I set transit over section corner 5, 6, 7, 8, Backsight West on $\frac{1}{4}$ corner and turn S. W. angle to $\frac{1}{4}$ cor. (I. M.) between secs. 7 and 8 equals 91 degrees and 07'. I set transit over $\frac{1}{4}$ corner between secs. 7 and 8 and backsight North on true section line and continue this line South, intersecting center of I. M. at cor. to sections 7, 8, 17, 18. Set transit over this corner, backsight North on true line and turn N. W. angle 88 degrees 13' to $\frac{1}{4}$ corner. I. M. between sections 7 and 18. Set transit over $\frac{1}{4}$ corner, backsight East on section corner, reverse telescope and turn 1 degree 07' deflection angle south to hub on true section line between sections 7 and 18 about 1500 feet West of $\frac{1}{4}$ corner.

Graded roads on West, North and South sides of section 7, and partly graded on East side. Anderson and Bye, chaining West side of sec. 7, previously chained. Chain East from N. W. corner to sec. 7, Township 136, Range 29, at 300 feet East swamp South of road.

at 1168.4 ft East West $\frac{1}{16}$ corner. (cement monument) at 2150 feet East Anderson drive: at 2510.5 ft East $\frac{1}{4}$ cor. between secs. 6, 7. $\frac{1}{4}$ corner equals Station 0.00 chain East: at 520 East leave swamp: at 1322.2 East $\frac{1}{16}$ corner: at 2644.4 Corner to sections 5, 6, 7, 8, with following bearing trees: 3X30 Poplar stake N. E. 46.7 feet: 3X30 Poplar stake N. W. 46.7 feet: Fence post S 44 degrees 15' W 33.5 ft: old T. S. stump sets Southeast. From N. E. corner of section 7, chain South between sections 7 and 8: at 1630 S meadow: at 2648.8 I. M. at $\frac{1}{4}$ corner leave meadow: Continue South: at 4089.8 S spike on road grade: at 5297.6 South I. M. at corner to sections 7, 8, 17, 18. From this corner, we chain West between secs. 7 and 18: at 1322.85 set hub in road on true sec. line for East $\frac{1}{16}$ corner: at 2645.7 quarter corner between sections 7 and 18: Chain west $\frac{1}{4}$ corner equals 0.00 West: at 1349.30 set wood post on true line for west $\frac{1}{16}$ corner: at 2524.5 West equals I. M. at S. W. cor. of sec. 7, Twp. 136-29. Quit for night. E. B. Horst.

April 1st, 1917: Sunday, No work.

April 2nd, 1917: Monday, Horst and same crew. Begin at $\frac{1}{4}$ corner on range line between sections 7 and 12, Twp. 136, Ranges 29 and 30. Sight North to N $\frac{1}{16}$ corner and turn N. E. angle 91 degrees 18' run East thru center of section 7: at 5162.2 feet East $\frac{1}{4}$ cor. I. M. between sections 7 and 8.

sets north 1.8 feet: Begin at $\frac{1}{4}$ corner between Secs. 7 and 18 (marked by an I. M.) sight west to hub on true section line and turn N.W. angle 89 degrees 20' and run North through section 7: at 2633.7 feet North intersect random East and West $\frac{1}{4}$ line: at 3300.0 enter swamp: at 3580.0 leave swamp: at 4915.0 feet North enter Tam. swamp: at 5257.0 feet north edge of road bed: at 5267.6 North $\frac{1}{4}$ cor: between sections 6 and 7, Twp. 136, Range 29, (marked by cement monument) sets East 1.4 feet - in center of graded road. Beginning at West one sixteenth corner between sections 7 and 18, Twp. 136, Range 29, sight East to $\frac{1}{4}$ corner and turn N.E. angle 90 degrees 40' and run West one sixteenth line north through section 7, without chaining. at about 4300 ft. north enter swamp: at center of graded road West $\frac{1}{6}$ corner between sections 6 and 7, sets East 11.9 ft. Marked by cement monument. quit for night. E. B. Horst.

Tuesday, April 3rd, 1917: Horst and same crew, begin at point for East $\frac{1}{6}$ corner between sections 7 and 18, Township 136, Range 29, I sight $\frac{1}{4}$ mile west to $\frac{1}{4}$ corner and turn N.W. angle 88 degrees 47' and run East $\frac{1}{6}$ line north through section 7. Set hub on East and West $\frac{1}{4}$ line. Continue north: at section line between sections 6 and 7 East $\frac{1}{6}$ corner, sets west 50.0 feet. East $\frac{1}{6}$ corner marked by a cement monument. Upon investigating, I find I have made a 3 foot mistake by backsighting on the wrong backsight from east and west $\frac{1}{4}$ line. The northwest angle at East $\frac{1}{6}$ corner should have been 88 degrees 13' instead of 88 degrees 47' as turned.

We go to the center of north half of Section 7 equidistant from $\frac{1}{4}$ between sections 6 and 7 and center of 7 and set post and erect a 30 foot flag. I set a transit near intersection of north and west $\frac{1}{6}$ lines and intersect true lines where we set wood post for center of N.W. $\frac{1}{2}$ of section 7. I set transit over south $\frac{1}{6}$ corner between sections 7 and 18, on Range line, sight north to North $\frac{1}{6}$ corner and turn N.E. angle 90 degrees 54' and run South $\frac{1}{6}$ line East to $\frac{1}{4}$ line, where we set center of South $\frac{1}{2}$ Section 7, corner sets South 1.8 feet: I backsight West on true South $\frac{1}{6}$ line, foresight East and turn South 0 degrees 31' and run East on South $\frac{1}{6}$ line. I intersect East line of section 7, at true South $\frac{1}{6}$ corner, where we set post on true section line 1324.4 ft. N. of Section corner. at P.D. of East and West $\frac{1}{4}$ line and East $\frac{1}{6}$ line, I set hub on true $\frac{1}{6}$ line and sight South to East $\frac{1}{6}$ corner between sections 7 and 18. Having set hubs on South $\frac{1}{6}$ line, I now intersect same with East $\frac{1}{6}$ line and set post for center of S.E. $\frac{1}{4}$ Section 7, at P.D. of $\frac{1}{4}$ line and true East $\frac{1}{6}$ line, I set post for center of East half-section 7. we walk to section line between sections 7 and 8 and set N $\frac{1}{6}$ corner. I set transit over this corner and sight to flag at center of N $\frac{1}{2}$ section 7, and run west on North $\frac{1}{6}$ line at random East $\frac{1}{6}$ line, I intersect true north $\frac{1}{6}$ and true East $\frac{1}{6}$ lines and set post for center of NE $\frac{1}{4}$ of section 7. At P.D. of $\frac{1}{4}$ lines make intersection and set center

of section seven. at P.D. of East and West $\frac{1}{4}$ line and West $\frac{1}{6}$ line, I make an intersection of true lines and set center of West $\frac{1}{2}$ of section 7, at random West $\frac{1}{6}$ and random South $\frac{1}{6}$ lines I make an intersection of true lines and set center of S.W. $\frac{1}{4}$ of sec. 7. Quit for night. E. B. Horst.

Wed. April 4th, 1917. Horst, Council, Tobias Bye and Fred Hansen, Chairman, Thos. Dixon and Nels Sevang, assnms: By agreement, before me, of all parties concerned, I am instructed to survey 1 acre from the S.W. $\frac{1}{4}$ of sec. 7, Twp. 136, range 29, and 1 acre from the S.E. $\frac{1}{4}$ of the S.W. $\frac{1}{4}$ of section 7, Twp. 136-29, for church purposes. Commencing at the West $\frac{1}{6}$ cor. between secs. 7 and 18, Twp. 136-rq. 29, thence North along West $\frac{1}{6}$ line 33 feet to place of beginning, thence west 220 ft. parallel to section line, thence North parallel to West $\frac{1}{6}$ line, 198 feet, thence West parallel to section line 220 feet, to West $\frac{1}{6}$ line, thence S on W $\frac{1}{6}$ line 198 feet, to place of beginning, containing 1 acre. Balance of day, on calculation. E. B. Horst.

Thurs. April 5th, 1917; Waiting on Iron monuments to arrive from Walker. E. B. Horst.

Friday Apr. 6th, 1917: Horst, Math and Made Anderson, Fred Hansen, Thos. Dixon and Nels Sevang, all residents and tax payers of Cass Co., begin at setting I. M's. in section 7, Twp. 136, Rq. 29, and set a 2 x 48 inch I. M. (Boiler 5) at each of the following corners: W $\frac{1}{6}$ between secs. 7-18: E $\frac{1}{6}$ between secs. 7-18: S $\frac{1}{6}$ between secs. 7-8: N $\frac{1}{6}$ between secs. 7-8: Center of N.E. $\frac{1}{4}$ sec. 7: Center of E $\frac{1}{2}$ Sec. 7: Center of S.E. $\frac{1}{4}$ Sec. 7: Center of S $\frac{1}{2}$ Sec. 7: Center of - Sec. 7: Center of N $\frac{1}{2}$ Sec. 7: Center of N.W. $\frac{1}{4}$ Sec. 7: Center of W $\frac{1}{2}$ Sec. 7: Center of S.W. $\frac{1}{4}$ Sec. 7: N of $\frac{1}{6}$ on Range line between secs. 7 & 12: $\frac{1}{4}$ on range line between secs. 7 and 12: S $\frac{1}{6}$ on Rq line between secs. 7 & 12: all other corners were previously established and marked by permanent monuments.

P.M. Setting I. M's. in sec. 12, Twp. 136, Range 30, E. B. Horst, Fred Hansen, Math Anderson, O. J. Olson and Theodore Olson, all residents and tax payers of Cass Co., begin at East $\frac{1}{6}$ cor. between secs. 12 and 13 and set 2 x 48 inch I. M. at following corners: E $\frac{1}{6}$ between sections 12 and 13: $\frac{1}{4}$ between secs. 12 & 13: W $\frac{1}{6}$ between secs. 12 and 13: S $\frac{1}{6}$ between secs. 11 and 12: $\frac{1}{4}$ between secs. 11 and 12: N $\frac{1}{6}$ between secs. 11 and 13: Center of N.W. $\frac{1}{4}$ section 12: Center of W $\frac{1}{2}$ section 12: center of S.W. $\frac{1}{4}$ section 12: Center of S $\frac{1}{2}$ sec. 12: Center of - sec. 12: Center of N $\frac{1}{2}$ sec 12: Center of N.E. $\frac{1}{4}$ sec. 12: Center of E $\frac{1}{2}$ sec. 12: Center of S.E. $\frac{1}{4}$ sec. 12:

all other corners in this section marked by I. M's. previously set. We drive 2 x 48 inch I. M's. at all the corners of the Norwegian Church. Lots as shown by the accompanying sketch.

This concludes survey of section 7, Twp. 136, Range 29.

Theodore Olson drives me and outfit to Regnot. I take 1:29 A.M. train to Walker. Fare 80 cents. E. B. Horst.

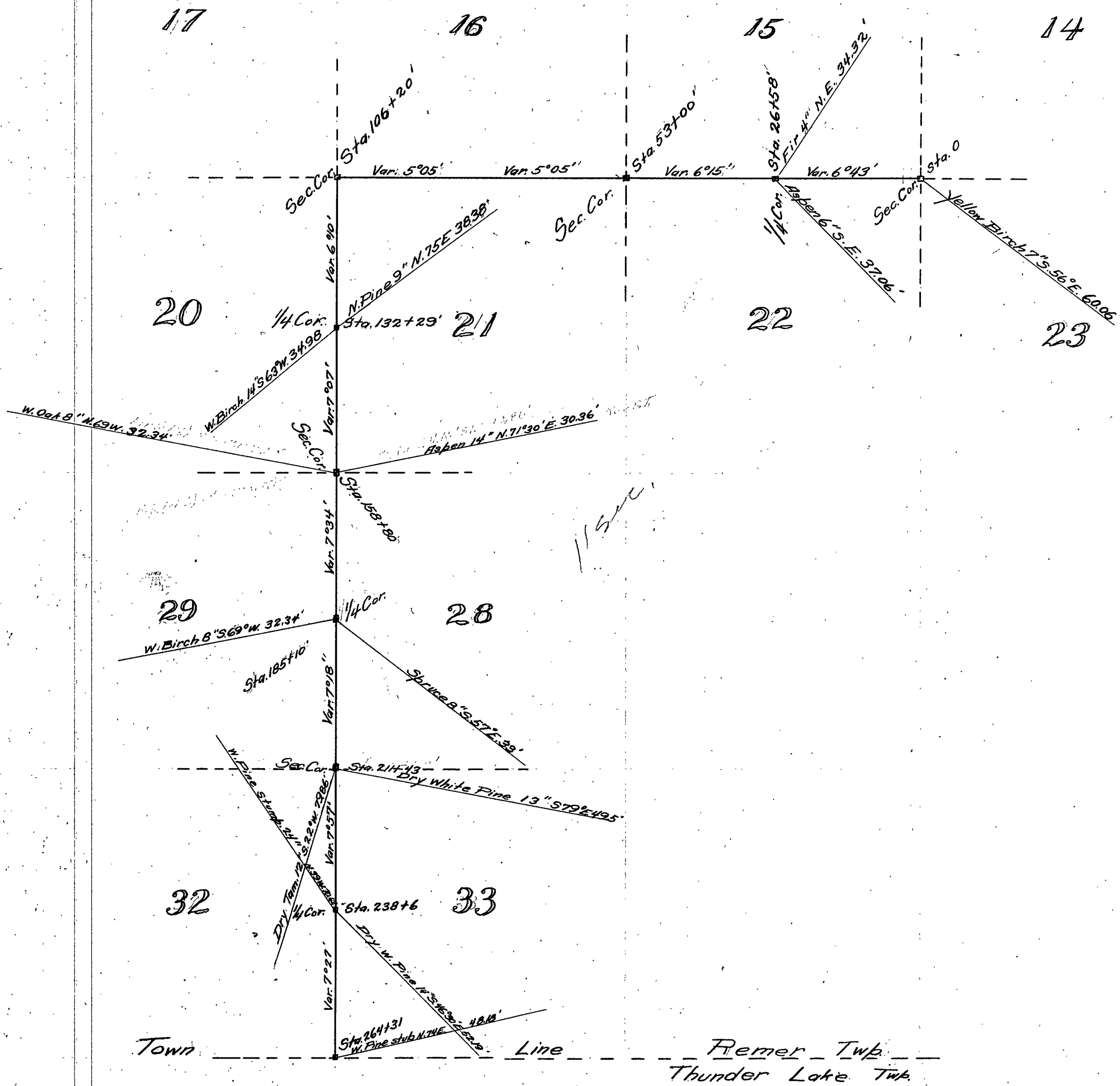
SURVEY RECORD No. 339

Report of survey of "Forskeland Road, Twp. 141, Range 26, (Remer) Cass County, Minnesota. Beginning at N.E. $\frac{3}{4}$ corner of Section 22, said town, which was Cdr. 6 N. 48 W. 20. Cdr. 6 N. 16 E. 17. Cdr. 8 S. 40 W. 14. Cdr. 4 S. 69 E. 9. now is Cdr. 6 N. 16 E. 17 from whence set post and new bearing tree, to-wit: Yellow birch 7 S. 56 E. 91 links, which is station 0 then W on section line, var. 6'43" Sta 0 to 150. Cdr. swamp Sta. 150 to Sta. 1150 level dry land, brushy, some stone, Sta. 150 to 175 lower land and swampy, some dry Cdr. brush. Sta. 175 to 230 culvert. Sta. 230 to 250 brushy, stony, 15 to 17 light timber and brushy. 17 to 20 heavy timber. 20 to 2250 brushy. Sta. 2250 culvert. 2250 to 26 timber. Sta. 2458 $\frac{1}{4}$ S. between 15-22 which was Cdr. 8 East 10. Cdr. 6 West 6. now is the same. Set post and new bearing trees to-wit: Fir 4 N. E. 52. Aspen 6 S. E. 41, then continue west on line var. 6'15" Sta. 26 to 2775 swampy, 2775 culvert. Sta. 2780 wagon road, N.W. 28 to 30 brush and down timber, 30 to 34 thick growth of blm., pop. and Cdr. Sta. 34 enter Jam and Cdr. swamp N. & S. timber cut and burned over to Sta. 37. 37 to 51 Cdr. and tam. slashing heavy. 5150 culvert. 51 to 53 black ash, culvert. Sta. 53 NW. cor. Sec. 22, which was, Ash 8 N. 17 E. 27. Ash 8 S. 51 E. 26. Ash 8 N. 42 W. 35. Cdr. 10 S. 16 W. 30. Now is the same. Set post but no new bearings, continued west on line, var. 5'05" Sta. 53 to 5450, black ash, culvert. 5450 to 58 high timbered land. 58 to 69 spruce swamp about 6 ft. higher than swamp east. 69 to 74 7 degree slope. E. heavy timber. 74 to 77 3 degree slope, E. heavy timber. 77 to 80 level heavy timber. Sta. 7940 looked over made thorough examination for $\frac{1}{4}$ S. 16-21, which was, Maple 8 N. 44 W. 45. Birch 8 S. 80 W. 52. now is obliterated by time. Then continued west on line var. 5'05" 7940 to 83 heavy timber, rolling surface 83 to 85-5 degree slope west- 85 to 86-4 degree slope East- 86 to 89 level, timber. 89 to 90-10 degree hill west. 90 to 93 timber dry, brush. 93 to 100 level, brush, 100 to 106/20 light timber and brush. level. 106/20 NW. cor. Sec. 21 which was - spruce 14 N. 39 E. 26. Spruce 8 S. 54 E. 22. Spruce 6 S. 59 W. 19. Asp. 4 N. —. Now is spruce (stump) N. 39 E. 26. spruce (stump) S. 54 E. 22. spruce (down) S. 59 W. 19. Set post but no new bearings. Then went S. on line var. 6'10" - 106/20 to 108 level, brush. 108 to 110 timber, low ridge - 112.65 culvert. 110 to 111 swamp, E & W. 111 to 113 timber. 113 to 115 passing thru a fenced field or clearing. 115 to 118 brushy level. 118 to 125 light timber level. 125 to 132+29 heavy timber. Sta. 132 to 29 W $\frac{1}{4}$ S. 21, which was spruce 6 S. 79 W. 16. W. 4 S. 60 E. 13. Now is spruce (down partly obliterated) 6 S. 79 W. 16. spruce (down partly obliterated) 4 S. 60 E. 13 - set post and new bearings, to-wit: White birch 14 S. 63 W. 53 = N. Pine 9 N. 75 E. 58. then continued South on line, var. 7'07" Sta. 132 to 140 level, heavy timber. 140 to 140/60 level, down timber and brush. 140/60 enter spruce swamp E & W. 148 leave spruce swamp S. E. 148 to 158+80 timber brush, level, Sta. 158+80 S.W. Cor. Sec. 21, which was - asp. 4 N. 68 E. 21. Fir 8 N. 67 W. 11. Asp. 10 S. 69 W. 26. Fir 6 S. 22 E. 25. now is Asp. (stump) 4 N. 68 E. 21. Fir (stump) 8 N. 67 W. 11. Asp. (stump) 10 S. 69 W. 26. Fir (stump) 6 S. 22 E. 25. Set post and new bearings, to-wit: Asp. 14 N. 71'30" E. 46. White oak 8 N. 69 W. 49.

Then continued South on line var. 7'34" Sta. 158+80 level, timber. Sloping South Sta. 163+25 to 181 spruce swamp, small timber. Culvert 164, Culvert 180/50 - 181 to to 185/10 not much timber or brush, level. Sta. 185/10 West $\frac{1}{4}$ S. 28 which was, spruce 8 West 14. spruce 10 S. 80 West 19 -

No. 339 (cont'd)

PLAT OF
SECTIONS 14-15-16-17-20-21-22-23-28-29-32-33
T. 141 N. R. 26 W.



now is: spruce 8 W 14: Spruce (down) S. 80 E 19: set post and new bearings
 to-wit: Spruce 8 S. 57 E. 50 - White birch 8 S 69 W 49: Then continued south
 on line, var. 7'18": 185+10 to 192 level land, light scattering timber. 192
 to 198 heavy timber. 198 to 211+43 level, light scattering timber. Sta. 211+43
 S.W. Cor. 28, which was: Spruce 6 S 46 E 22: Spruce 6 N 64 W 17: Spruce
 4 S 21 W 43: Spruce 4 N 62 E 48 - now is spruce 4 N 62 E 48 (down),
 remaining bearings obliterated by fires. Set post and new bearings,
 to-wit: Dry white Pine 13 S 79 E 75: Dry tamarack 12 S 22 W 121: Then
 continued south on line, var. 7'57": 211+43 to 238 level brush, scattering
 dry timber. 238+6 1/4 S. 32-33, which was, N. Pine 18 N 40 W 18: Fir 6 N 10 E 10.
 Now is - N. Pine stump 20 N 40 W 18: Set post and new bearings, to-wit:
 Dry white pine 14 S 46'30" E 79: White pine stump 24 N 39 W 107. Then
 continued south on line, var. 7'27": Sta. 238+6 to 264+31 level sandy soil.
 Brush scattering dry timber. Sta. 264+31 is S.E. Cor. ^{32 (SW 33)} end of this
 survey, which was: Asp. 5 N 55 E 30: Asp. 8 N 2 W 30.

Now is: Asp 6 N 55 E 30. Nearly obliterated. Set post and new
 bearings, to-wit:

White Pine stub N 74 E 73:

Amount labor on survey, to-wit:

Thirty-eight and one half days at \$2.12 per day
 Surveyor 10 1/2 days at \$4.24 per day.

\$81.62
 44.52
 \$126.14

Total.

June 10th, 1912.

(signed) J. H. Flynn, Surveyor.

SURVY RECORD No. 340

Report on Survey of Stanton Road.

Running from S.E. corner of section 20, T. 141, R. 26, thence west on section line to S.W. corner, section 19, T. 141, R. 26, to wit: Beginning at aforesaid S.E. corner section 20, which was: Aspen 47N 68E 21: Fir 87N 61W 11: Asp. 10S 69W 26:

Fir 6S 22 E 25: now is - asp. (stub) 47N 68 # E: Fir (stub) 87N 61 # W: Asp. (stub) 10S 69W
 Fir (stub) 6S 22 E: Post being set made new bearings, to-wit: Aspen 147N 71'30" E 46: white oak 87N 69W 49.

Then west on section line, var. 6'13' Sta) to 2 level, brushy, down timber; Sta 1+50. culvert. Sta. 2 to 5, 5 degree slope east. Sta. 3+35 enter clearing N. Sta. 7 leave clearing N.W. 9+50 to 11+50, 5 degree slope W. 17 enter swamp N + S. 17+50 culvert, Sta. 7 to 17 reasonable heavy hardwood timber. 18+20 leave swamp N + S. 18+20 to 24+0 timber, Sta. 24+20 enter ash, alder, and dry tamarack swamp. Sta. 31+90 culvert. Sta 26+59 S 1/4 20, which was Tam. 14S 73 W 12: Tam. 12 N 4W 23, now is the same. Set post and new bearings to wit: Black ash N 63'30" W 53: Fir S 23'15" E 42. Then west on sec. line var. 6'35' Sta. 32+30 leave alder, ash and dry tam. swamps. N.E. 32+30 to 38+50 leave brushy, timberland. 38+50 enter ash and alder swale. S.W. 39+60 leave ash and alder swale and enter cdr. and tam. Sta 42 leave cdr. and tam. and alder grass land. Sta. 42+77 creek 10 feet wide and 2 feet deep. Sta 43. enter cdr. Sta. 49 leave cdr. enter scattering birch, balsam, etc. 53 enter black ash swale. Sta. 53+24 Cor. 19-20-20-30, which was Fir. N 49 W 14: cdr. N 17 E 16: Asp. S 75 E 16: Ash S 3 W 43: now is the same except, fir N 49 W 14, which is obliterated by time: set post and new bearings, to-wit: White birch 10N 25W 61: Black ash 7S 8 E 44: Continued west on line var. 6'40' 53+50 culvert. 55+45 leave ash swale S.E. and enter brush land with scattering timber to 68+20. 60+50 to 61+50 - 10° hill sloping east, 68+20 worth edge ash and tam. swale. 69 culvert. 70+30 leave ash and tam. swale S.W. 70+30 to 86 brush land and very scattering dry timber. 80+04 S 1/4 S. 19, which was spruce 87N 57W 18: Fir 6S 30 E 7: now is spruce 87N 56 W 18: fir obliterated by fire. set post and new bearings, to-wit: white pine stump 12 S 12 E 50: white pine stump 16 N 28 W 111: Then continued west on line var. 8'38'. Sta 85. culvert. 86. to 98 long pop. brush, 98 to 104 Jack pine, 100+30 cross wagon road. N.E. 104 to 105+65 swampy, 105+65 end of this survey which is cor. of 19-30-141-26, and 24-25-141-27, which was spruce 12N 46 E 10: spruce 14S 1W 84: Birch 4S 58 E 28: Birch stub 4S 58 E 28: now is: spruce 12N 46 E 10: spruce 14S 1W 84: Birch 4S 58 E 28: set post and new bearings to-wit: Tam. 7N 17 W 25 1/2 feet: Tam. 8S 37 E 36 feet:

Being two @ miles and five feet in length and 3 rods wide, amount of days work on said survey is as follows:

Sixteen 1/2 days at \$2.12 per day.

\$ 34.98

Four days at \$4.24 per day, Surveyor.

16.96

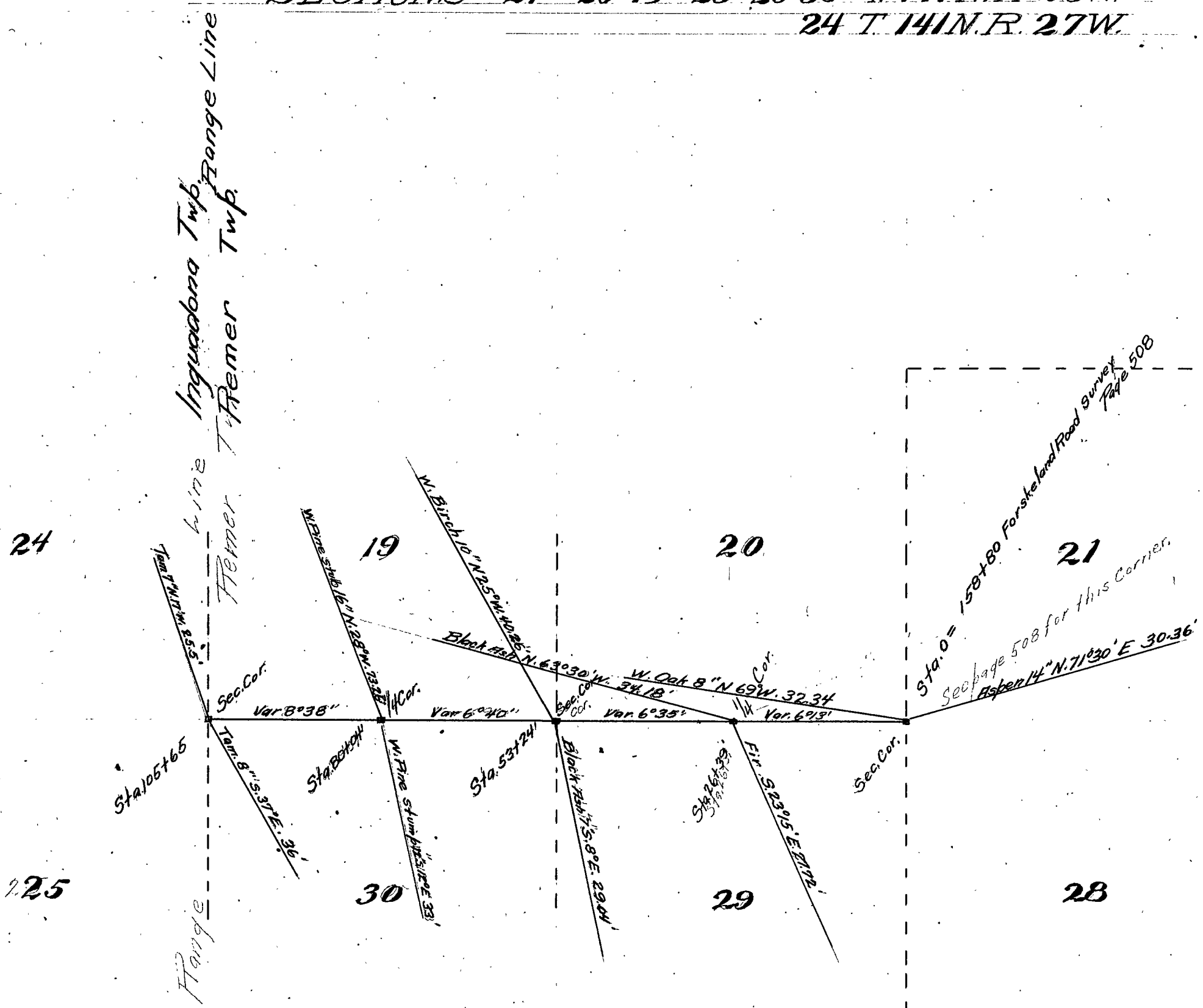
Total.

\$ 51.94

June 14, 1912.

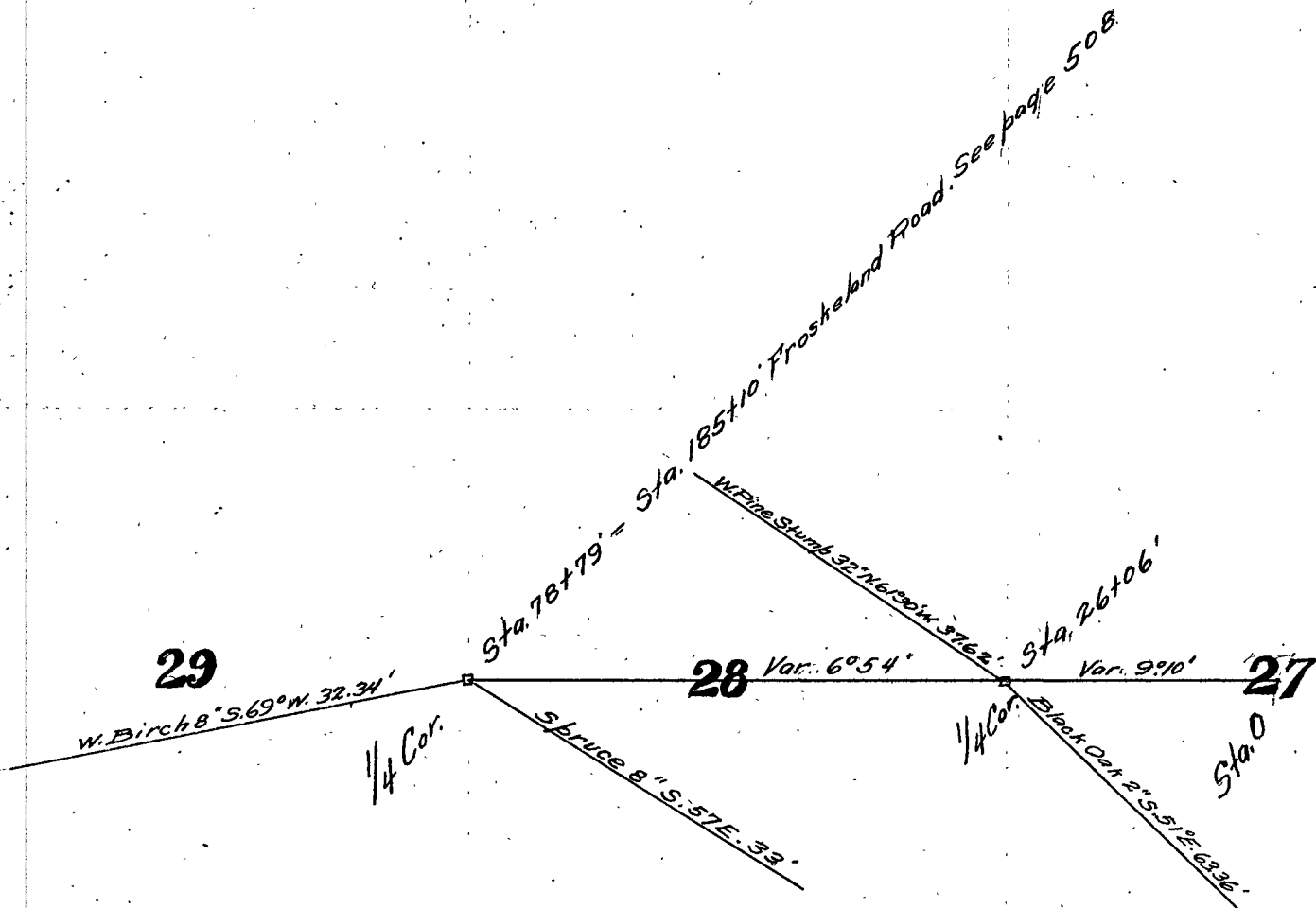
(Signed) J. H. Flynn, Surveyor.

PLAT OF SECTIONS 21-20-19-28-29-30 T. 14 N. R. 26 W. 24 T. 14 N. R. 27 W.



No. 341

PLAT OF
SECTIONS 27-28-29 T.14N.R.26W.



Report of Survey of Watson Road.

Beginning at the center of the Rice Lake Road at a point near the center of Sec. 27, Twp. of Remer (141-26): then west on S. E. and W 1/4 line, var. 9' 10" Sta. 0 to 8 - 3 degree slope E not much brush and about 16 small hardwood trees 8 to 10. Slight slope east about 25 trees Sta. 26 to 06 West 1/4 S. said Sec. 27, which was Aspen 10 N 43 E 15: Aspen 18 S 4 W 10: Now is obliterated by fires. Set post and new bearings, to-wit - Black oak 2 S 51 E 96: White pine stump 32 N 61' 30" W 57. Then continued west on E & W 1/4 line Sec. 28 aforesaid town of Remer (141-26) Var. 6' 54" Sta. 26 to 20 wagon road, 29 to 06 culvert 31 culvert, 32 leave wagon road, S. W. Sta. 10 to 34 low brush, about 20 smallish trees green and dry. Sta. 34 to 45 scattering hardwood, timber, low brush. Sta. 8 to 45 rolling and stony, 43 to 20 top of 15° hill, 44 to 60 bottom of hill - 45 to 59 heavy timber. 46 wagon N & S. Sta. 54 school house about 175 ft. south, Sta. 54 to 50 culvert, S. 59 wagon road N & S. 59 to 66 scattering standing timber, brush and down timber. 66 to 40 tam. swamp, 67 culvert. 67 to 50 leave tam. swamp 66 to 72 low brush no timber of any consequence. 72 to 76 scattering small timber, 76 to 78 & 79 spruce swamp, not wet. Sta. 45 to 89 & 79 practically level. Sta. 78 & 79 west 1/4 S. aforesaid, sec. 28, which was: Spruce 8 west 14: spruce 10 S. 80 E. 19: Now is spruce (stub) 8 west 14: spruce (down) 10 S. 80 E. 19.

Set post and new bearings (See report on survey of Frootland road) Survey entire distance from Sta. 0. to Sta. 78 & 79 is one mile 2,599 feet and 3 rods wide, amount days work and said survey is as follows, to-wit:

Sixteen and 1/10 days at \$2.12 per day.	\$35.62.
Five days at \$4.24 per day (surveyor)	21.20
Total.	\$56.82

June 20th, 1912.

(Signed) J. H. Flynn, Surveyor.

SURVEY RECORD No. 342

Report on Survey of Town Road, beginning at the Southeast corner Section 35, Township of Slater, (142-26) Cass County, Minnesota, which was:

Norway pine 12 N 21 W 98 links: Aspen 8 N 46 East 96 links: Aspen 7 S 44 1/2 E 35 lks: Aspen 10 S 68 W 118 links: Now is: Norway pine (stump) 13 N. 21 W 98 links: Aspen (stub) 9 N 46 East 96 links: Thence N on section line between sections 35 and 36, said Town Stations 11 to 7, inclusive, no timber, light soil, bushy; Sta. 7 to 18, medium growth of W. Pine, balsam and poplar: Sta. 13-14, 1/6 corner - Bearings, aspen 12 S 73 E 47 links: Jam. 5 S 82 W 50 links: Sta. 22-95 cross old logging road East and West: Sta. 23-80 wagon road N. W. & S. E: Sta. 25 in wagon road: Sta. 25-60 leave wagon road N. W: Sta. 26-29 1/4 s, between said secs. 35-36, which was: Aspen 6 S 50 W 6 links: Aspen 6 S 52 E 79 links: Now is: Aspen 10 (larger acc. growth) S 52 E 79 links: Thence N 0. degrees and 54' W. along the sec. line between said sections 35-36: Station 22-37 level, friable, soil not stony or bushy, medium growth of pine, balsam and poplar: Station 37-40 scattering small Norway pine: Station 46-50 crossed wagon road East: Station 47 root cellar West: Station 43 to 52-48 no timber: Station 44-60 to 51-10 cultivated field: Station 52-48 Cor. sections 25, 26, 35, 36, which was: White pine 24 S. 84 E. 54 links: White pine 24 N. 45 E. 51 links: White pine 20 S. 7 W 21 links: Sta. White pine 24 N. 30 W 88 links: Now is: White pine (stump) S 44 E 54 links: White pine N 45 E 51 links: White pine S 7 W 21 links: White pine N 30 W 88 links: Then continued N 2° 18' W along section line between secs. 25-26. Sta. 78-56 1/4 between said secs. 25-26, which was: Birch 6 S. 42 E 42 links: Birch 12 N 6 W 37 links: Now is Birch (down) 12 N. 6 W 37 links: Put in posts, no trees, for new bearings: then turned N 54° 05' W. Sta. 87-70 culvert: Sta. 93-36 culvert: from Sta. 93-47 to Sta. 99-65 the Town Board short circuited the survey and constructed the road over a hill between those Stations: Station 99-65 enter alder swamp E & W: Sta. 100-50 large culvert (on 1/6 line, east sec. 26) Sta. 100-78 leave said E 1/6 line sec. 26 N. 28° W. Sta. 101-20 leave swamp: Sta. 101-20 to 106-26, 12 degree hill sloping south: Sta. 106-26 N 21° 30' W, 25° hill sloping N to Sta. 106-86 culvert. Sta. 107 to 107-50 - 15° hill sloping south: Sta. 110-58 is 5280 feet N of section line, sec. 26: Sta. 109-21 culvert: Sta. 111-70 N, 11° W to Sta. 113-40: Sta. 113-40 N to Sta. 114-52: Sta. 114 cross old wagon road E & W: Sta. 51-10 to 114-52 no timber worth mentioning, some stone and brush: Sta. 114-52 N 24 E to 120-28 intersect E 1/6 line sec. 26, 160 ft. N. to S. line of said sec. 26: Sta. 117-35 ft. of 12° hill sloping N: Sta. 118-40 culvert: Sta. 120-28 to 133-53 along E 1/6 line sec. 23. Var. 8° 20': Sta. 133-53 N. 32 E to 134: Sta. 134 N. 26 E to 135: Sta. 135 N. 8 E to 136: Sta. 136 N. 11° 15' W to 137: Sta. 137 N. 15° 30' W to 138: Sta. 138 N. 22 W 139: Sta. 139 N. 31 W to 140: Sta. 140 N. 26 W to 140-79 and intersect E 1/6 line 23 499 ft. N across bog of Sta. 133-53: Sta. 143-34 enter open swamp E & W: Sta. 144-50 culvert: Sta. 145-75 leave swamp E & W: Sta. 148-87 tie mark to wit. W. pine stump 24. 90° E 67.3' ft. E: Sta. 152-25 18° hill sloping N: Sta. 154-27 culvert: Sta. 159-46 enter alder and dry cedar sup. E & W: Sta. 161-10 large culvert drain W: Sta. 163-14 leave swamp E & W: 18° hill sloping south: Sta. 164 top of hill: Sta. 165-49 intersects section line 14-23, 1.321 feet W of the N. E. corner sec. 23. Thence continued on N. on E. 1/6th line said sec. 14. Var. 8°. Sta. 169 top of 5° hill: Sta 172.

Note: from ab, or near, this point the County has layed and constructed a road varying from the route layed out that seems unnecessary at this time to report on the remaining portion of this survey. Suffice to say this survey continued to Station 318-15.

This survey was began January 5th, 1912, and completed March 14th, 1912.
 J. H. Flynn - Surveyor
 Remer, Minnesota.
 March 16th, 1912.

SEC. 35-36-25-26-23-14 T. 142 N. R. 26 W.

14

13

23

24

26

25

35

36

Point where Road meanders through hills
1/16 Cor. = I. Mon.
1321

Var. 8° 20'
N. 31° W. 100'
N. 22° W. 100'
N. 15° W. 100'
N. 11° W. 100'
N. 8° E. 100'
N. 26° E. 100'
N. 38° E. 47'
1031
Var. 8° 29'
N. 24° E. 576'
N. 11° W. 112'
N. 40° W. 170'

N. 21° W. 534'
N. 28° W. 548'
N. 8° W. 311'
N. 40° W. 167'
N. 70° W. 100'
N. 54° W. 88'
N. 19° W. 90'
N. 41° W. 120'

N. 54° W. 1371'
1/4 Cor. I. Mon.

2608
1/16
Sec. Cor. I. Mon.
Var. 10° 26'

2619
1/4
1/4 Cor. = Sta. 2079
Var. 8° 08'

2629
1/4
Sec. Cor. = I. Mon.
Var. 7° 14'

Surveyed by J. Flynn in March 1912
Recorded by J. M. Greene in April 1917.

Town of Slater
" " Remer

2

1

B

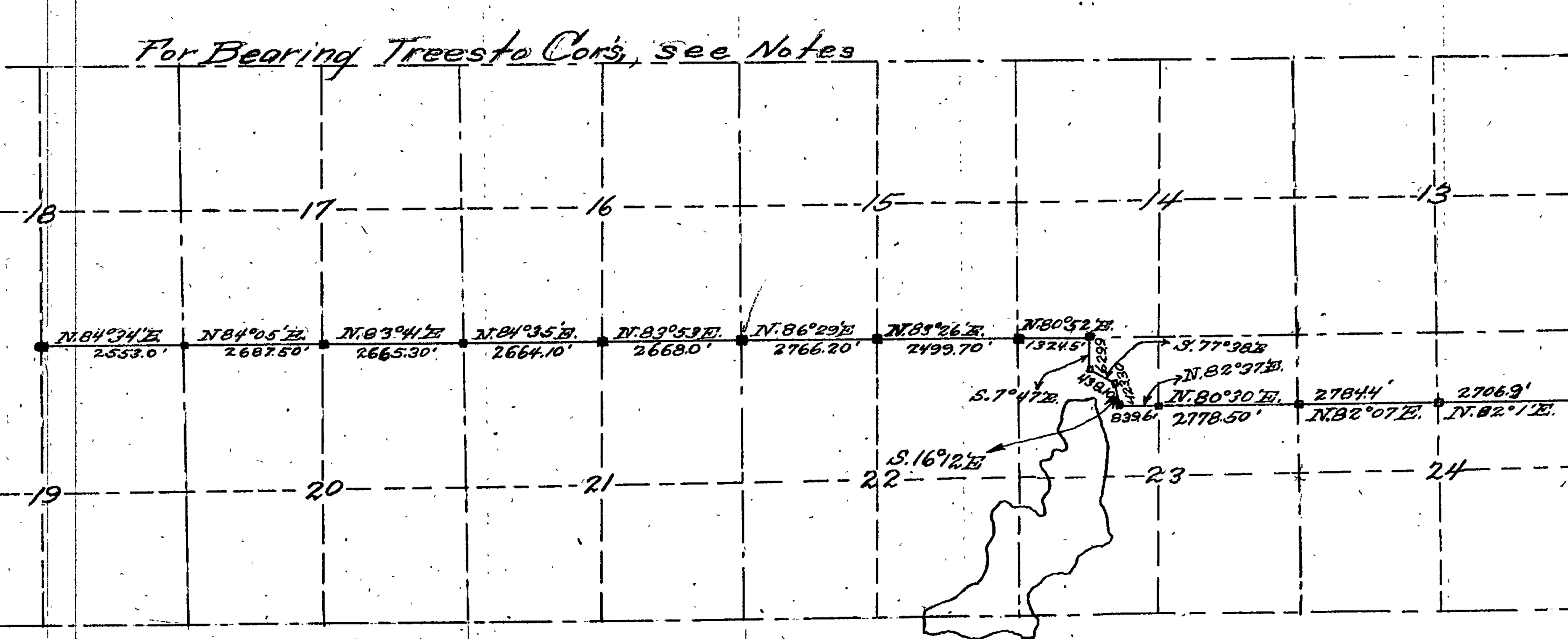
No. 343 PLAT

SEC'S 18-19-17-20-16-21-15-22-14-23-24

T-141-N-R-30-W

■ = Wooden Stake set for Corners

For Bearing Trees to Cors., see Notes



Surveyed July 3, 1914 to July 18, 1914 by James Middleton
Recorded April 28, 1917
by John M. Greene, Co. Surveyor, Cass Co.

86027
83026
3001

B

SURVEY RECORD No. 343.

Field notes of a survey of the center line for a County Road in the Town of Turtle Lake, Cass County, Minnesota. Explanatory.

The instrument used in the survey is a C. L. Berger & Sons, No. 1. a transit in perfect adjustment. The tape measures used are a Lucas 100 feet - and a Roe 300 feet steel chain tapes which previously had been compared by measuring each 100 feet of the Roe chain tape with the Lucas chain tape and finding them to correspond.

All measurements are in feet and decimals of a foot except those of the U. S. bearing trees (B. T's) which are in links and according to a copy of the U. S. field notes in the office of the County Auditor.

All bearings are according to the magnetic meridian except those given the U. S. B. T's which are according to the field notes.

All section subdivisional corners were ascertained according to the rules prescribed for the subdivision of sections.

I go to the $\frac{1}{4}$ S corner between sections 18 and 19, T. 141 N., R. 30 W., and find a stake for the corner that previously had been set by a deputy county surveyor from the following U. S. B. T's: -
 Tamarac 6 inches in diameter, N. 3° E., 92 links,
 Tamarac 3 inches in diameter, S 19° W., 38 links, and call this $\frac{1}{4}$ S. corner station 000+00.00 and begin the survey at this $\frac{1}{4}$ S. corner. Thence N. $84^{\circ} 34'$ E., between sections 18 and 19, 2553.40 feet to the corner to sections 17, 18, 19 & 20, or station 25-53.40.

Station 000+00.00 The $\frac{1}{4}$ S corner between secs. 18 & 19, in a tall swamp.
 2+70.00 Leave the Tamarac swamp: 4+70.00 Brainerd and Leech Lake road
 17+00.00 Brook 10 links wide. Flows N.E.: 18+50.00 Enter round marsh
 19+75.00 Leave the marsh: 25+53.40 The corner to secs. 17, 18, 19 & 20, a wood stake for the corner, from which bear the following U. S. B. T's:
 White pine, 24 in. in diam. (stump of) N. 26° East, 227 links
 White pine, 24 in. in diam. " " S. $57\frac{1}{2}^{\circ}$ East, 37 links.
 Poplar, 7 in. in diam (remains) N. $42\frac{1}{2}^{\circ}$ West, 107 links
 Poplar, 12 in. in diam (burnt up) S. 55° West, 77 links.
 Thence: Left, $0^{\circ} 29'$, or N. $84^{\circ} 5'$ E., between secs. 17 & 20, 2687.50 feet to the $\frac{1}{4}$ S. corner between sections 17 & 20, or station 52-40.90.

25+53.40 The corner to secs. 17, 18, 19 & 20: 36+90.00 enter marsh:
 37+40.00 Leave the marsh: 52+40.90 The $\frac{1}{4}$ S. corner between secs. 17 & 20, a wood stake for the corner, from which bear the following U. S. B. T's:
 Yellow Pine 14 in. in diam. (stump of) S. 49° E., 18 links
 Popple, 10 in. in diam (stump of) N. 47° W., 32 links. Thence,
 Left, $0^{\circ} 36'$, or N. $83^{\circ} 41'$ E., between secs. 17 & 20, 2666.30 feet to the corner to secs. 16, 17, 20 & 21, or station 79-06.20.

52+40.90 The $\frac{1}{4}$ S. corner between secs. 17 & 20: 70+40.00 enter marsh.
 71+45.00 Leave the marsh: 73+45.00 Enter marsh: 74+45.00 leave marsh:
 75+70.00 enter cedar swamp: 79+06.20 The corner to sections 16, 17, 20 & 21, a wood stake for the corner, from which bear the following U. S. B. T's: cedar 10 in. in diam., N. 52° East 24 links,
 Birch 9 in. in diam., N. 58° W., 37 links,
 Birch 6 in. in diam., S. $5\frac{1}{2}^{\circ}$ W., 31 links,
 Spruce 8 in. in diam., S 22° E., 30 links, Thence,

Right, $0^{\circ}54'$ or $N. 84^{\circ}35'E.$, between sections 16 & 21, 2664.10 feet to the $\frac{1}{4}$ S. corner between sections 16 & 21, or station 105-70.30.

79+06.20 The corner to secs. 16, 17, 20 & 21: 85+00.00 leave the cedar swamp.

96+55.00 Enter marsh: 101+30.00 Leave the marsh: 105+70.30 The $\frac{1}{4}$ S. corner between sections 16 & 21, a wood hub for the corner, from which bear the following U. S. T. Is.: White pine, 30 in. in diam. (stump of windfall) $N. 14\frac{1}{2}^{\circ}$ East, 123 links: W. pine 30 in. in diam. (stub of) $S. 76^{\circ}E.$, 56 links: Thence: Left $0^{\circ}42'$ or $N. 83^{\circ}53'E.$, between secs. 16 & 21, 2668.30 feet to the corner to sections 15, 16, 21 & 22, or station 132-38.30: 105+70.30 The $\frac{1}{4}$ S. corner between secs. 16 & 21: 107+80.00 Enter large round marsh: 109+00.00 Leave the marsh: 117+80.00 Enter large round marsh: 121+00.00 Leave the marsh: 132+38.30 The corner to secs. 15, 16, 21 & 22, a wood stake for the corner, from which bear the following U. S. T. Is.: - Yellow Pine, 20 in. in diam. (stump of) $N. 26^{\circ}E.$, 33 links: White pine 12 in. in diam. (stump of) $N. 64^{\circ}W.$, 45 links: Yellow pine, 16 in. in diam. (stump of) $S. 18^{\circ}W.$, 49 links: Yellow pine 18 in. in diam. (stump of) $S. 47\frac{1}{2}^{\circ}E.$, 104 links: Thence Right, $0^{\circ}36'$ or $N. 86^{\circ}29'E.$, between sections 15 & 22, 2766.20 feet to the $\frac{1}{4}$ S. corner between sections 15 & 22, or station 160-04.50: - 132+38.30 The corner to sections 15, 16, 21 & 22: 160+04.50 The $\frac{1}{4}$ S. corner between sections 15 & 22, a wood hub for the corner, from which bear the following U. S. T. Is.: Yellow pine 18 in. in diam. (remains) $S. 48^{\circ}E.$, 19 links: Yellow pine 13 in. in diam. (stub of) $N. 23^{\circ}E.$, 55 links: Thence Left $3^{\circ}3'$ or $N. 83^{\circ}26'E.$, between secs. 15 & 22, 2499.70 feet to the corner to secs. 14, 15, 22 & 23, or station 185-04.20: 160+04.50 The $\frac{1}{4}$ S. corner between secs. 15 & 22: 185+04.20 The corner to secs. 14, 15, 22 & 23, a wood stake for the corner, from which bear the following U. S. T. Is.: - Yellow pine, 12 in. in diam. (burnt up) $S. 10\frac{1}{2}^{\circ}E.$, 71 links: B. Oak 9 in. in diam. $S. 4\frac{1}{2}^{\circ}W.$, 51 links: W. Pine 12 in. in diam. (stump of) $N. 41^{\circ}E.$, 64 links: Yellow pine 18 in. in diam. (stump of) $N. 41^{\circ}W.$, 174 links: Thence, Left, $2^{\circ}34'$ or $N. 80^{\circ}52'E.$, between sections 14 & 23, 1324.50 feet to the $\frac{1}{6}$ S. corner between the SW $\frac{1}{4}$ of sec. 14 and the NW $\frac{1}{4}$ of sec. 23, or station 198-28.70: 185+04.20 The corner to secs. 14, 15, 22 & 23: 198+28.70 The $\frac{1}{6}$ S. corner between the SW $\frac{1}{4}$ of sec. 14 and the NW $\frac{1}{4}$ of sec. 23, a wood hub for the corner. No T. Is. Thence, Right, $91^{\circ}21'$ or $S. 7^{\circ}47'E.$, between the NE $\frac{1}{4}$ and NW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of sec. 23, 629.90 feet to an angle point, or station 204-58.40.

198+28.70 The $\frac{1}{6}$ S. corner between the SW $\frac{1}{4}$ of sec. 14 and the NW $\frac{1}{4}$ of sec. 23: 204+58.40 The angle point, a wood hub at the angle. No T. Is. Thence Left, $69^{\circ}51'$ or $S. 77^{\circ}38'E.$, 438.10 feet to an angle point, or station 208-96.50

204+58.40 Angle point: 208+96.50 The angle point, a wood hub at the angle: No T. Is. Thence, Right, $61^{\circ}26'$ or $S. 16^{\circ}13'E.$, 423.30 feet to a point on the line between the N $\frac{1}{2}$ and the S $\frac{1}{2}$ of the NW $\frac{1}{4}$ of sec. 23, or station 213-19.80: 208+96.50 Angle point: 213+19.80 The point on the line between the N $\frac{1}{2}$ and the S $\frac{1}{2}$ of the NW $\frac{1}{4}$ of sec. 23, a wood hub at the point. No T. Is. Thence, Left, $81^{\circ}11'$ or $N. 82^{\circ}37'E.$, on the line between the N $\frac{1}{2}$ and the S $\frac{1}{2}$ of the NW $\frac{1}{4}$ of sec. 23, 839.60 ft. to the $\frac{1}{6}$ S. corner between the N $\frac{1}{2}$ and the SW $\frac{1}{4}$ of sec. 23, or station 221-59.40

213+19.80 The point on the line between the N $\frac{1}{2}$ and the S $\frac{1}{2}$ of the NW $\frac{1}{4}$ of sec. 23: 213+80.00 Enter marsh: 214+30.00 Leave the marsh: 221+59.40 The $\frac{1}{6}$ S. corner between the NE $\frac{1}{4}$ and the NW $\frac{1}{4}$ of sec. 23, a wood hub for the corner. No T. Is. Thence, Left, $2^{\circ}7'$ or $N. 80^{\circ}30'E.$, between the N $\frac{1}{2}$ and the S $\frac{1}{2}$ of the NE $\frac{1}{4}$ of sec. 23, 2678.50 feet to the $\frac{1}{6}$ S. corner between the NE $\frac{1}{4}$ of sec. 23 and the NW $\frac{1}{4}$ of sec. 24, or station 248-37.90. The corner in a marsh. 221+59.40 The

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$\frac{1}{16}$ S. corner between the NE $\frac{1}{4}$ and the NW $\frac{1}{4}$ of sec. 23; 224+60.00 Enter marsh: 224+95.00 leave marsh: 235+70.00 Enter marsh: 236+25.00 leave marsh: 238+10.00 Enter marsh: 238+65.00 Leave marsh: 242+65.00 Enter marsh: 248+37.90 The $\frac{1}{16}$ S. corner between the NE $\frac{1}{4}$ of sec. 23 and the NW $\frac{1}{4}$ of sec. 24, a wood hub for the corner: No. B. Is. Thence, Right, $1^{\circ}37'$ or N. $82^{\circ}7'$ E., between the N $\frac{1}{2}$ and the S $\frac{1}{2}$ of the NW $\frac{1}{4}$ of sec. 24, 2784.40 feet to the $\frac{1}{16}$ S. corner between the NE $\frac{1}{4}$ and the NW $\frac{1}{4}$ of sec. 24, or station 276-22.30: 248+37.90 The $\frac{1}{16}$ S. corner between the NE $\frac{1}{4}$ of sec. 23 and the NW $\frac{1}{4}$ of sec. 24: 249+35.00 Leave the marsh: 252+00.00 Enter marsh: 253+00.00 Leave the marsh: 254+20.00 Enter Marsh: 254+70.00 Leave the marsh: 262+30.00 Enter Marsh: 263+70.00 Leave the marsh: 272+20.00 Enter Marsh: 272+90.00 Leave the marsh: 276+22.30 The $\frac{1}{16}$ S. corner between the NE $\frac{1}{4}$ and the NW $\frac{1}{4}$ of sec. 24, a wood hub for the corner. No. B. Is. Thence, Right $0^{\circ}5'$ or N. $82^{\circ}1'E.$, between the N $\frac{1}{2}$ of the S $\frac{1}{2}$ of the NE $\frac{1}{4}$ of sec. 24, 2702.90 feet to the $\frac{1}{16}$ S. corner between the NW $\frac{1}{4}$ of sec. 19, T. 141 N. R. 29 W. and the NE $\frac{1}{4}$ of sec. 24, T. 141 N. R. 30 W., or station 303-25.20. 276+22.30 The $\frac{1}{16}$ S. corner between the NE $\frac{1}{4}$ and the NW $\frac{1}{4}$ of sec. 24: 283+80.00 Enter marsh: 285+25.00 Leave marsh: 290+75.00 enter marsh: 292+60.00 Leave the Marsh: 294+55.00 Enter marsh: 295+30.00 Leave marsh: 303+29.20 The $\frac{1}{16}$ S. corner between the NW $\frac{1}{4}$ of sec. 19, T. 141 N., R. 29 W., and the NE $\frac{1}{4}$ of sec. 24, T. 141 N., R. 30 W. as established by the deputy county surveyor, a wood stake for the corner.

Survey began July 3, 1914.

Survey finished July 18, 1914.

Surveyor's Certificate.

I, Jas. D. Middleton, a surveyor, hereby certify that I surveyed the center line of the road described in the above field notes and that the distances and directions returned therein are correct to the best of my knowledge and belief. Also, that the accompanying plat is drawn therefrom and is a true representation of the said center line.

Jas. D. Middleton

Surveyor

(Stamp)

Dated this 10th day of March, 1915.

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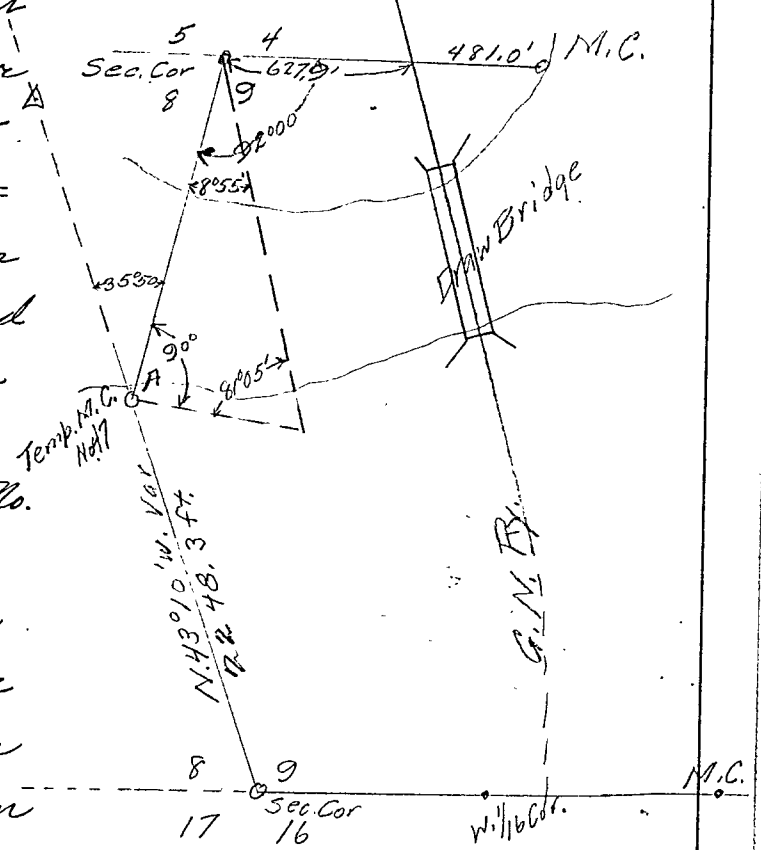
SURVEY RECORD No. 344.

E. B. Horst, working in County Surveyor's office, copying U. S. notes and notes of the previous surveys in the vicinity of and adjoining section 9, 142-31. Monday April 9th, 1917. Horst in the office working on plate and notes of section 9, 142-31. P.M. Fred Grindall with car takes me and outfit to M. & S. track about one mile N.W. of Morris Point where the road becomes impassible. Grindall returns to Walker and I carry a part of the outfit to Steve O'Connell's and return for the remainder. At Steve O'Connell's for supper and overnight. Livery charges — E. B. Horst.

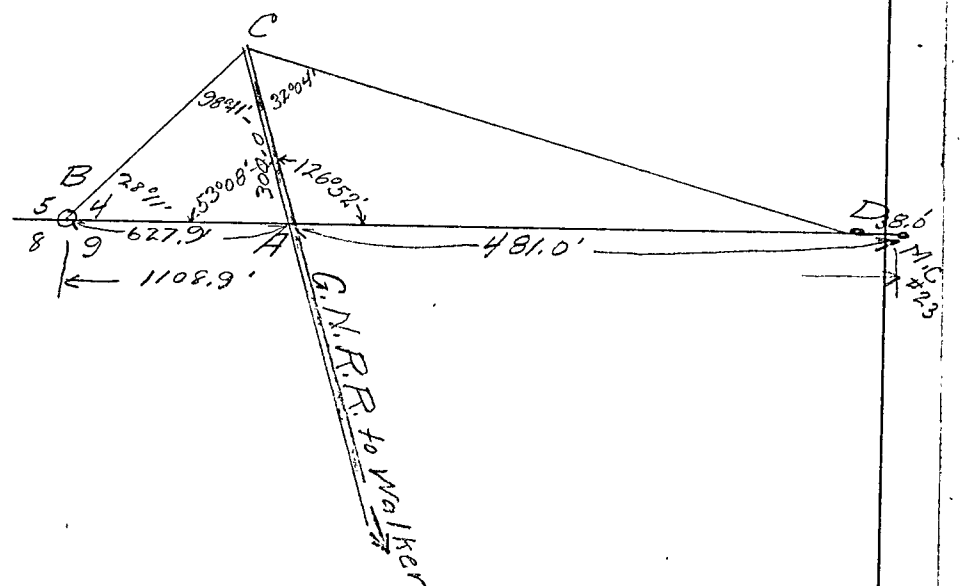
Tuesday April 10th, 1917. Horst, transit, Steve O'Connell, chain and ax. With transit over I.M. at West $\frac{1}{16}$ corner between sections 9-16, 142-31, I back sight West to I.M. at corners of sections 8, 9, 16, 17, foresight East and cut true section line to I.M. at M. C. No. 46, on shore of Leech Lake. With transit over I.M. at corner to sections 8, 9, 16, 17, I sight East and West $\frac{1}{16}$ corner between sections 9-16 and turn Southeast angle 126 degrees 35' and run North 43 degrees 10' var. over an outline probably run by Jas. Middleton. 9.0 center of M. & S. R.R. track. 245.0 set hub and tack 488.3 an old hub on line. 981.5 set wood hub and tack an old hub sets 0.2 feet. 1085.0 center of East and West road (total road) 1388.6 set wood hub and tack and old hub sets East 0.3 feet. 1582.0 an old hub East of line 0.3 ft. 1800.0 enter small field. 1972.5 set wood hub (leave field) The U. S. notes call for a $\frac{1}{4}$ corner at 2640 ft. North of section corner to following bearing trees. Jack Pine 8 N 79° W 14 links = 9.24 feet. Jack Pine 8 N 7° E 17 links = 11.22 feet. We have not been near any Jack pine timber. all timber along our line being popple, and birch except beyond hub 1582.0 North a few Norway Pine trees and stump about 400 feet South of hub 1582. there is a heavy growth of Jack Pine. Hub 1972.5 North is about 80 feet South of Lake shore of Leech Lake, so we look for bearing trees to U. S. M. C. No. 47, where U. S. notes call for a post and following bearing trees. Y. pine 6 S 10° W 200 links = 132.0 feet. Y. pine 8 S 3° East 244 links = 161.04 feet. We find the stump of the S. E. B. T. bearing the marks B. T. plainly, also the stump of the S. W. B. T. but marks are washed away. Both stumps are at water's edge of overflowed land and check fairly well with U. S. notes at about 9° 30' var. but setting the corner at this var. the line would pass East of both stumps. I set a point from these stumps by courses from our line after which the stumps stand as follows. (using the line as due North) S. E. stump S 1° 20' E 171.5 feet. S. W. stump S 8° 30' W 132. feet. This point is directly over an old seawall which is now under water. We chain North to this point. 2090.0 enter water of Leech Lake. 2248.3 point on ice for temporary M. C. No. 47. With transit over this point I backsight South on line and reverse telescope and turn telescope on I.M. at corner to sections 4, 5, 8, 9, 142-31. (established by J. W. Curo, County Surveyor) line deflects East 35 degrees 50 minutes. As the ice is full of holes I triangulate the lake and sweep to get the distance to the section corner of 4, 5, 8, 9, by sighting on section corner. Backsight, turn 90 degrees to the left and set a point on ice (Hub C.) a distance equals 262.9 feet equals base line. set transit on Pt. C. and sight to temp. M. C. (pt. A.) and turn angle to section

corner. (pt. B.) Angle $81^{\circ} 05'$. Tan equals 6.37374. Tan X Base Line equals 1675.6 feet, equals a distance from Temp. M. C. to corner of sections 4, 5, 8, 9.

Wednesday April 11th, 1917: Horst with same outfit and crew. We look for M. C. No. 23 where U. S. notes call for post and following Bearing trees. Black Oak 10 S $27^{\circ} W$ 57 links equals 37.62 ft. Black Oak 7 S $48^{\circ} W$ 20 links = 13.20 feet. I find Oak 10 S $27^{\circ} W$ blown down bearing an old blaze, but marks are all decayed and worn off, and there is a 7 inch Oak about South 48 degrees West but is about 50 feet away, so I do not use it. I set a post about 15 feet in lake from the 10 inch Oak for M. C. No. 23. I also set a hub 38 feet West of this corner on line with corner of sections 4, 5, 8, 9, so I can see it from G. N. R. R. track. I set transit on G. N. Ry. track on line between corner of sections 4, 5, 8, 9 and M. C. No. 23, from this point on track, I triangulate the swamp from the track by two triangles to obtain the distance between section corner and M. C. No. 23. Chain Northerly on track 300 feet to pt. C., transit on Pt. A. Sight West to section corner pt. B. and turn N. W. angle $53^{\circ} 08'$ to pt. C. Set transit over Pt. C. and sight on Pt. A. turn angle to Pt. B. angle equals $98^{\circ} 41'$ (second triangle) with transit at Pt. C. sight to Pt. A. and turn angle to stake on line near M. C. 23, being Pt. D. Angle at C equals $32^{\circ} 04'$ Angle at A equals $126^{\circ} 52'$.



I now take transit to corner of sections 4, 5, 8, 9, in swamp and sight South to M. C. No. 47 on ice and turn S. W. angle to hub on section line on G. N. track, angle equals $92^{\circ} 00'$ from this corner we chain South to the approximate shore line at lake distance equals 567 feet. I now go to Walker with this information to get Greene's opinion on the section line before running any interior lines. Horst and Greene in office until 10 P. M. E. B. Horst.



Thursday April 12th 1917: I work in office on calculations until 6. M. J. M. Greene instructs me to take another hunt for the $1/4$ corner between sections 8 and 9, and return to the office with the information before doing any more work. I walk to O'Connell's for dinner. P. M. Horst and Steve O'Connell look all afternoon for the $1/4$ corner between sec. 8 and 9, but find nothing. I return to Walker and find Greene is not in town. Overnight in Walker. E. B. Horst.

Monday April 16th, 1917: I walk to S. J. O'Connell's place to finish survey of Morris Point. P. M. Beginning at the West $1/4$ corner between sections 9 and 16, I sight to corner of sections 8, 9, 16, 17, and turn N. W. angle $53^{\circ} 25'$ and run line N. W. parallel to section line at 58.0 center of M. + I. R. R. E. + W. at 337.4 set hub and tack: at 599.1 set hub and tack: at 806.6 set stake for center of SW $1/4$: at 935.7 set wood hub and tack: at 1198.1 set wood hub and tack: at 1613.3 set wood hub and tack for center of West $1/2$ section, 9, - 142 = 31... E. B. Horst, Steve O'Connell and son accepting. E. B. Horst.

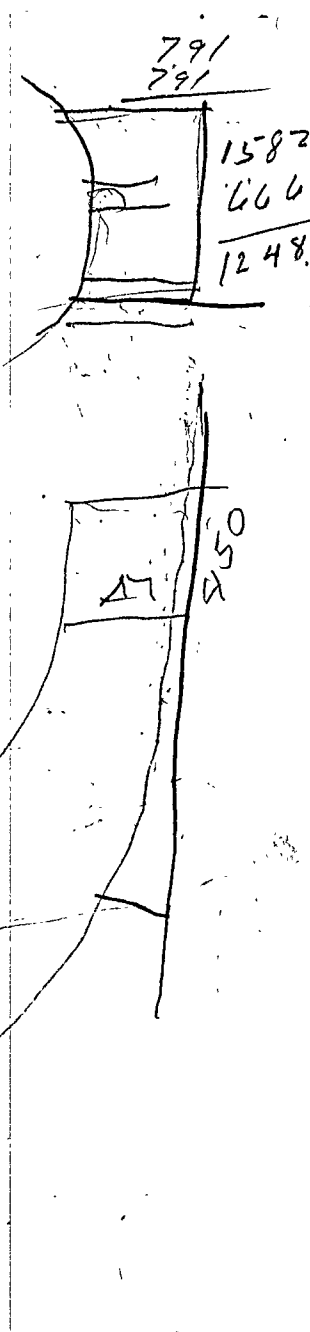
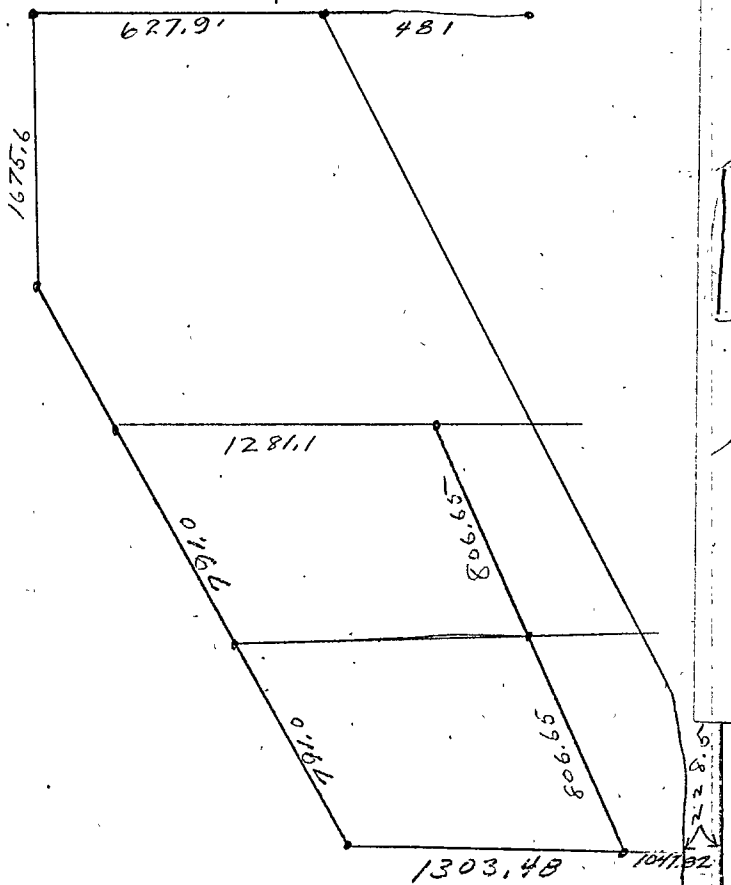
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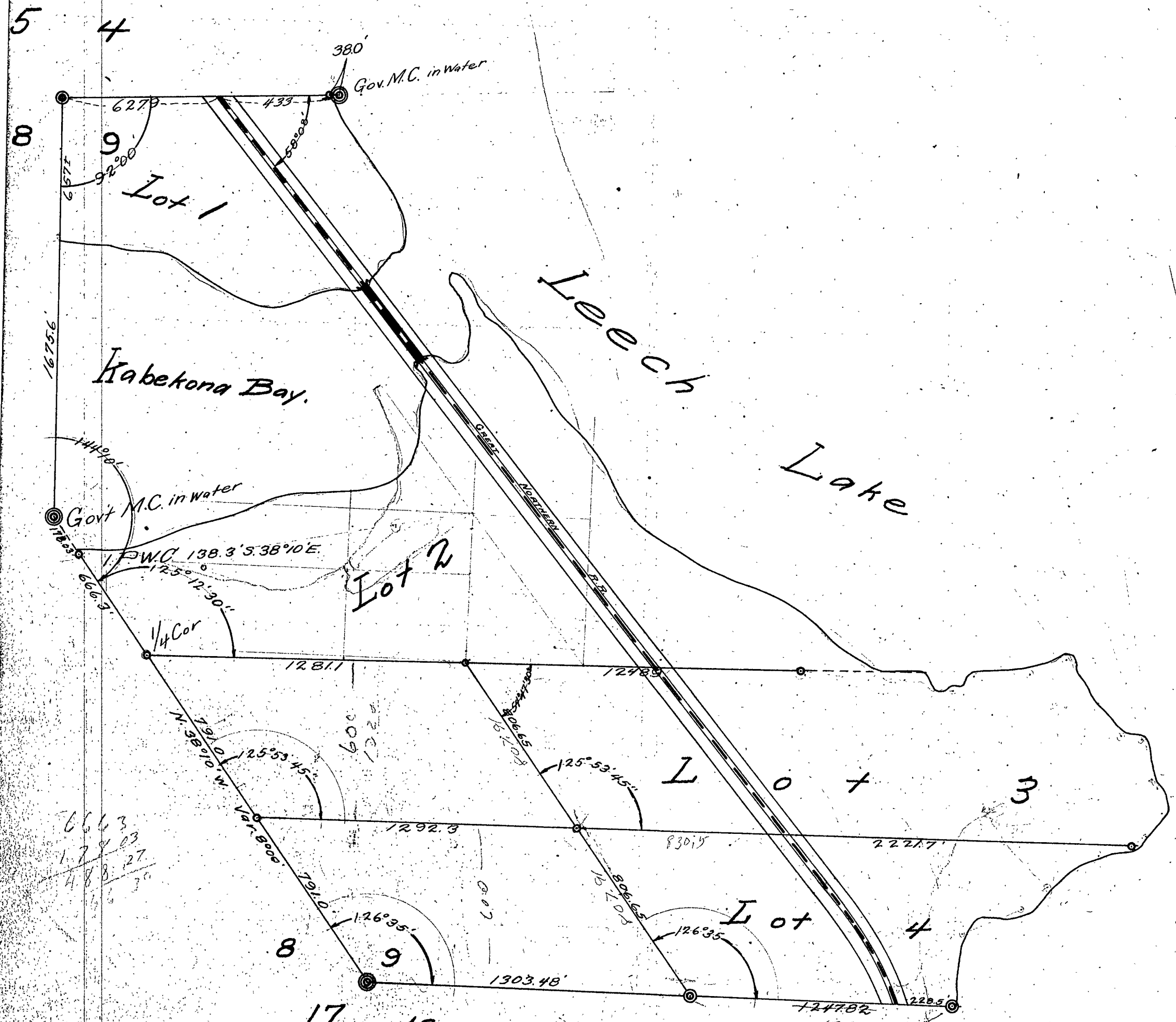
Tuesday April 17th, 1917: Rain in the morning. Horst and Steve O'Connell walk to Sta. 1582 ft. North on section line between sections 8 and 9, being temp. $\frac{1}{4}$ corner. I set transit over $\frac{1}{4}$ corner and sight North on line and turn N.E. angle 125 degrees 12' and run $\frac{1}{4}$ line East. 254.2 ft. East set wood hub and tack. Set transit North 1.4 ft. backsight on $\frac{1}{4}$ corner to miss a small building. 482.4 set wood hub and tack. 607.3 set wood hub and tack and set South 3.34 ft. on line and set a hub 2.65 ft. South at hub 482.4 backsight on same and continue East. 700.0 center of road: 868.4 set wood hub and tack: 1019.7 set wood hub and tack: 1250.0 enter swamp: 1283.8 set wood hub and tack at intersection of West $\frac{1}{6}$ line. At Sta. 1599.2 ft. North on West $\frac{1}{6}$ line I send flagman across swamp to set hub on R.R. track. Quit for night. E. B. Horst.

Wednesday April 18th, 1917: Horst, transit, Steve O'Connell Sr. and Jr. both assisting. We continue E. and W $\frac{1}{4}$ line East thru section 9. 2048.8 set wood hub and tack in center of G.N. Ry. N.W. angle 51 degrees 35' - leave swamp at 2010.0. 2300.0 enter Tulare swamp. 2662.9 set wood hub and tack on seawall 10 feet wide. 2960 Leech Lake. We chain West $\frac{1}{6}$ line, and E. & W $\frac{1}{4}$ line to Sta. 1613.3 and find I made a mistake in turning the angles for the E. & W $\frac{1}{4}$ line. At Sta. 806.65 ft. North on W $\frac{1}{6}$ line I set a hub, on true line for the true $\frac{1}{6}$ corner (center of SW $\frac{1}{4}$). Turn northeast angle 125 degrees 54' and run East to G.N. Ry. track. Quit for night. E. B. Horst.

Thursday April 19th, 1917: Rain all day - no work. at O'Connell's all day. E. B. Horst.

Friday April 20th, 1917: Horst, transit, S. J. O'Connell and son, are and chain. Continue South $\frac{1}{6}$ line of section 9, East to lake. 630.0 E. enter swamp: 830.0 ft. East center of G.N. Ry. track: 1420.0 ft. E. leave swamp: ft. East set wood hub and tack. On north Bank of Leech Lake: we walk to wit. corner to M. C. No. 46, where S. line of section 9, intersects Leech Lake, and run a meander line northwesterly along shore of lake with transit over wit. corner. I sight W. on line and turn N.W. angle 95° 20' run North 29° 290.6 ft. Thence Right 60° 03' - 256.0 ft. Thence Left 12° 08' - 377.2 ft. Thence Right 12° 37' - 96.7 ft. and intersect hub on South $\frac{1}{6}$ line. S.W. angle equals 23° 45'. Continue meander line 105.5 ft. set hub: Thence Left 30° 46' - 112.8 ft. Thence Left 44° 50' - 98.4 ft. Thence Left 8° 55' - 204.0 ft. Thence Left 62° 13' - 83.5 ft. Thence Right 43° 38' - 375.4 ft. Thence Left 75° 57' - 158.4 ft. Right 20° 06' - 225.1 ft. Left 33° 18' - 104.9 ft. Right 40° 37' - 596.6 to hub on E. & W $\frac{1}{4}$ line. Thence Left 5° 59' to random $\frac{1}{4}$ line: Right 42° 33' or 630.0 ft. Thence Left 7 degrees 55' to true $\frac{1}{4}$ line. We walk to a point where the South section line of Sec. 9, intersects the G.N. Ry. and chain North on track. (Curve at P. 2.) At 558.6 ft. end of curve: At 798.6 ft. South $\frac{1}{6}$ line intersects R.R. At 1648.6 ft. $\frac{1}{4}$ line intersects G.N. Ry. At 3202.6 South end of Bridge. At 3579.6 North end of Bridge (Ry.) At 4533.6 intersects north line of section 9. E. B. Horst.





6663
17403
48827

17 16
 ● = Corners established from orig. B.T.'s in this survey.
 ○ = " " " " previously in this survey.

Meander - Latitudes and Departures, assuming South section line as East and West.

Stations Swsec. cor of 9 to Sta. A.	Dist.	Course	Cosine	Sine	N.	S.	E.	W.
	2351.3	East	.00000	.00000	0.00	0.00	2351.3	0.00
Sta. A. to B.	290.6	N5°20' East	.99567	.09295	289.34		27.01	
B. to C.	256.0	N65°23' East	.41655	.90911	106.64		232.72	
C. to D.	377.2	N53°15' East	.59832	.80125	225.68		302.23	
D. to E.	202.2	N65°52' East	.40886	.91260	82.67		184.52	
E. to F.	112.8	N35°06' East	.81815	.57501	92.29		64.86	
F. to G.	98.4	N9°44' West	.99500	.09990	97.91			9.83
G. to H.	204.0	N18°39' West	.94749	.31979	193.28			65.24
H. to I.	83.5	N80°52' West	.15873	.98732	13.25			82.44
I. to J.	375.4	N37°14' West	.79618	.60506	298.88			227.14
J. to K.	158.4	S66°49' West	.39367	.91925		62.36		145.61
K. to L.	225.1	S86°55' West	.05378	.99855		12.11		224.77
L. to M.	104.9	S53°37' West	.58849	.80850		61.73		84.81
M. to N.	630.0	N83°50' West	.10742	.99421	67.67			626.35
N. to O.	2630.0	S88°15' West	.03054	.99953		80.32		2628.76
O. to SW. sec. cor.	1582.	S36°58' East	.79899	.60135		1264.00		987.33

April 20th, 1917: Horst and O'Connell walk to Walker and get 8
I. M. and return to O'Connell's at 5 o'clock P. M. by train.
Fare for both 284. E. B. Horst.

Saturday April 21st, 1917: Horst, with S. J. O'Connell and Steve O'Connell,
Jr., assisting set I. M. being 2x48 inch. Boiler flues, set 36 inches in
ground with a marked guard stake at each I. M. at the South $\frac{1}{4}$ cor.
between sec. 8 & 9. at the $\frac{1}{4}$ corner between sections 8 & 9. To N. S. M. C.
No. 47, which falls in water I set a Wit. corner at Sta. 2070 ft. North or
178.3 feet South of Pt. for M. C. at center of W $\frac{1}{2}$ sec. 9. set I. M. at center
of SW $\frac{1}{4}$ section 9, set I. M. at N. S. M. C. No. 23, I set a Wit. corner, 38
feet West of M. C. at Station 2630 feet East on random E. & W. $\frac{1}{4}$ line
I set an I. M. 23.45 ft. North on true $\frac{1}{4}$ line for M. C. (300 ft. of swamp
from this corner to lake.) On the S $\frac{1}{16}$ line of Sec. 9, Twp. 142, - 31,
at Station 2179.7 ft. East of the West $\frac{1}{16}$ line. I offset 15.1 ft. N. 300 ft.
W. I also set a hub North on true line. Setting transit over
corrected hub 2179.7 ft. East. backsight West to Hub on true line
and run East 42 ft. and set an I. M. for M. C. about 12 ft. W. of
water edge.

This completes survey for A. W. Morris, National Stock
Yards, Ill.

P. M. Steve O'Connell and I carry outfit to Walker. E. B. Horst.

SURVEY RECORD ^B No. 345

Secs 1-2-11-12-13-14, T. 140N. R. 26W.

April 19-1915 to April 21, 1915

J. M. Greene, Transit

Harve Winger }
Mat Moser } chain

George Bluhm }
Fred Hoas } axe

Sta. 0 = Corner 1-2-11-12, T. 140N. R. 26W. State set by J. H. Flynn from old B.T's, which are still plain. I checked this state and found it correct and set new B.T's as follows:-

W. Pine 7" S. 40°W. 50.3'

" " 4" N. 30°W. 70.5'

Twin Birch 6" N. 40°E. 60.4' -

From this corner I ran S. 8°E. by the needle on a random line to

Sta. 5323.5 = Random Cor. 11-12-13-14. Hunted a long time for original B.T's which called for,

Old B.T's Sp. Pine 10" N. 3°E. 164.1k's, of which we finally found the stump plainly marked, and

Poplar 6" S. 34°E. 48 " , which was very rotten and fell to pieces with handling. I set

New B.T's Oak 8" S. 54°W. 145.3

N. Pine 15" N. 73°W. 211.6'

N. " 10" S. 30°E. 181.7'

Sec. Cor. 61.5' Set up over Random Corner and turned angle of 90° off of Random line to True Corner of 11-12-13-14

= Offset distance. L between Random Line and True Line = 0°40' Tan 0°40' = .00115 ±

Sta. 2661.7 = Random 1/4 Cor. Turned off L 90° and offset

1/4 Cor. 30.7' to true 1/4 Cor. 11-12 to which I set B.T's as follows -

N. Pine 10" N. 72°W. 30.5'

Twin W. Pine 10" N. 69°E. 29.2'

As we were short of time, we did not brush out true line but offset as follows; to Sta. 32. As the town board expected to build only to there, we stopped at that point.

Sta. 0 = 0.00
" 1 = 1.15 feet Sta. 19 = 21.85 feet

" 2 = 2.3 " " 20 = 23.00 "

" 3 = 3.45 " " 21 = 24.15 "

" 4 = 4.60 " " 22 = 25.30 "

" 5 = 5.75 " " 23 = 26.45 "

" 6 = 6.90 " " 24 = 27.60 "

" 7 = 8.05 " " 25 = 28.75 "

" 8 = 9.20 " " 26 = 29.90 "

" 9 = 10.35 " 1/4 Cor. 2661.7 30.70 "

" 10 = 11.50 " " 27 = 31.05 "

" 11 = 12.65 " " 28 = 32.20 "

" 12 = 13.80 " " 29 = 33.45 "

" 13 = 14.95 " " 30 = 34.60 "

" 14 = 16.10 " " 31 = 35.75 "

" 15 = 17.25 " " 32 = 36.90 "

" 16 = 18.40 "

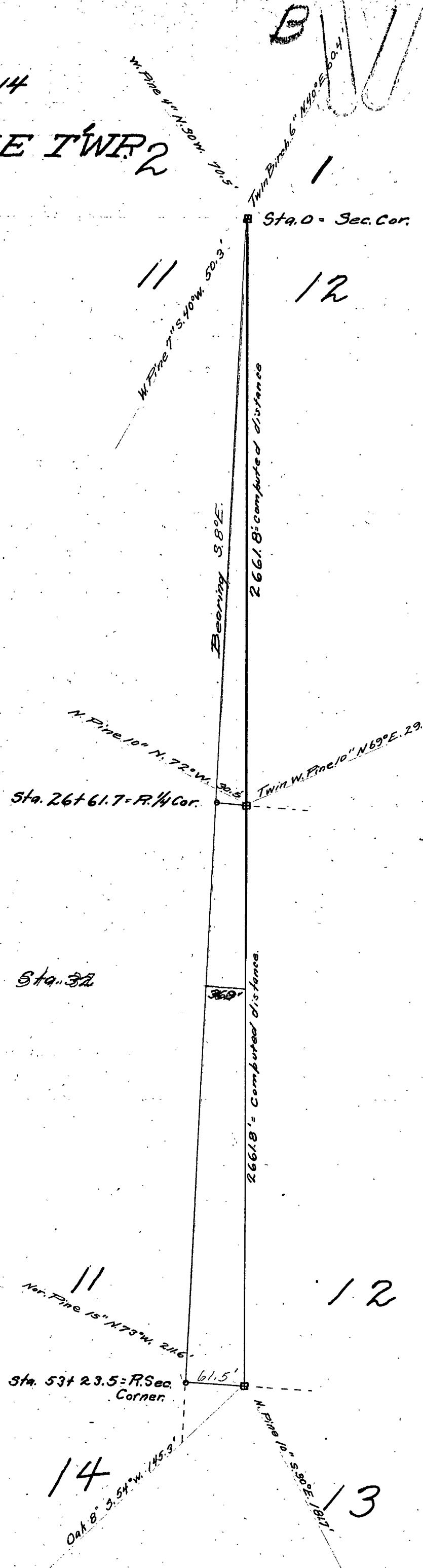
" 17 = 19.55 " Sec. Cor 11-12-13-14 53123.5 61.5

" 18 = 20.70 "

Surveyed by John M. Greene April 19-20, 1915
Recorded in Town Road Book Nov. 4, 1915
" " This Book May 19, 1917
by John M. Greene
County Surveyor
Cass Co. Minn.

108
116
114
109
104
110
94

PLAT OF
Sec. 8 1-2-11-12-13-14
T. 140 N. R. 26 W.
THUNDER LAKE TWP. 2



40.20

B

SURVEY RECORD No. 346

Sec's 22-23-26-27-34-35 T. 140N. R. 26W.

Apr. 17, 1915, I started in to survey $\frac{1}{2}$ mile of line for a town road from State Highway #83, Cor. 22-23-26-27 to $\frac{1}{4}$ Cor. 23-26. Found State Highway #83 staked out every 100 ft. but could find no trace of any Corners from Sec. Cor. 22-23-14-15 which had been previously set by J. H. Flynn from orig. B.T.s., to Cor. 26-27-34-35 where I located the stumps of the old B.T.s as follows:-

Cor.
26-27-34-35

W. Pine 18" S. 9° E. 142.14s

" " 18" S. 7° W. 137.11s, from these

by measurement, disregarding the bearings, which did not check, I set a corner by sticking in the ground a piece of broken rate tooth, and then driving a stake. From this corner, I set the following new B.T.s. N. Pine 5" S. 5° E. 128.8'

W. Pine stump 28" S. 60° W. 121.4'.

True Cor. came 59.4' E. of random line of S.H. #83 and opposite Sta. 629+40 according to the numbering on the road stakes. Mr. Fred Haas was with me, and assisted in this work.

April 18, 1915 John M. Greene, assisted by Fred Haas, Ben Draper, Harve Winger, Jim Boyd, Mat Mosher, and George Blum, brushed out a random line from $\frac{1}{4}$ Cor. 23-26 to $\frac{1}{4}$ Cor. 22-27 distance computed = 5334.4 feet = 80.27 chains, government measure. Proportional distance = 2662.65' and 2671.75'. From these proportional distances, I set Cor. to 22-23-26-27 and B.T.s as follows:-

Twin W. Pine 12" N. 40° W. 56.8'

" " 10" N. 55° E. 70.2'

Surveyed in April, 1915
Recorded .. May, 1917
John M. Greene.

SURVEY RECORD No. 347

443

Sec's 36 T. 140 N. R. 25 W

Sec's 1-2-11-12 T. 139 N. R. 25 W

Sept. 20-21, 1916.

John M. Greene - Transit

W. Stratton, L. Jenkins and C. Goldsberry - Assistants.

Survey of road between Secs 1-2 and 11-12 T. 139 N. R. 25 W.

Sta. 0

Cor. 1-2 T. 139 N. R. 25 W. and 35-36 T. 140 N. R. 25 W. B.T.s standing and in good state of preservation. Set new B.T.s as follows:-

Spruce 6" S. 58° E. 81'

Cor. 1-2-35-36 Tam. 6" S. 88° W. 122.6'

N. Pine 9" N. 67° E. 161'

Ran south on Fandom Line to

Sta. 52+66

= Fandom Cor. 1-2-11-12. Checked old Cor. from B.T.s of which we found only one and set new B.T.s as follows:-

Cor. 12-11-12 Tam. 8" S. 35° E. 47.5'

$\frac{28.25}{5266.0} = .536 = \tan 0^{\circ} 18'$

Spruce 6" S. 50° W. 64.2'

28.25'

True Cor. sets 28.25' west of Fandom Line. \angle between Fandom Line and True line between Secs 1 & 2 = $0^{\circ} 18'$

Continued Fandom line a distance of 2640' and searched for 1/4 Cor. Country burned and could find no trace. Continued Fandom line to Sta. 91+94 = 6' West of a 1/16 Cor. stake set by Cruiser.

Sta. 104+95

= Fandom Cor. 11-12-13-14 = 0' 17.5' ft. west of stake set in State Highway No. 83

17.5'

True Cor. sets 17.5' E. of Fandom Cor.

$17.5 + 28.25 = 45.75$
 $\frac{5229.0}{45.75} = 114 = \cotan 0^{\circ} 30'$ \angle between Fandom Line and True line = $0^{\circ} 30'$

Surveyed Sept. 21-22, 1916

Recorded May 21, 1916, 1917

by John M. Greene

County Surveyor.

126

131

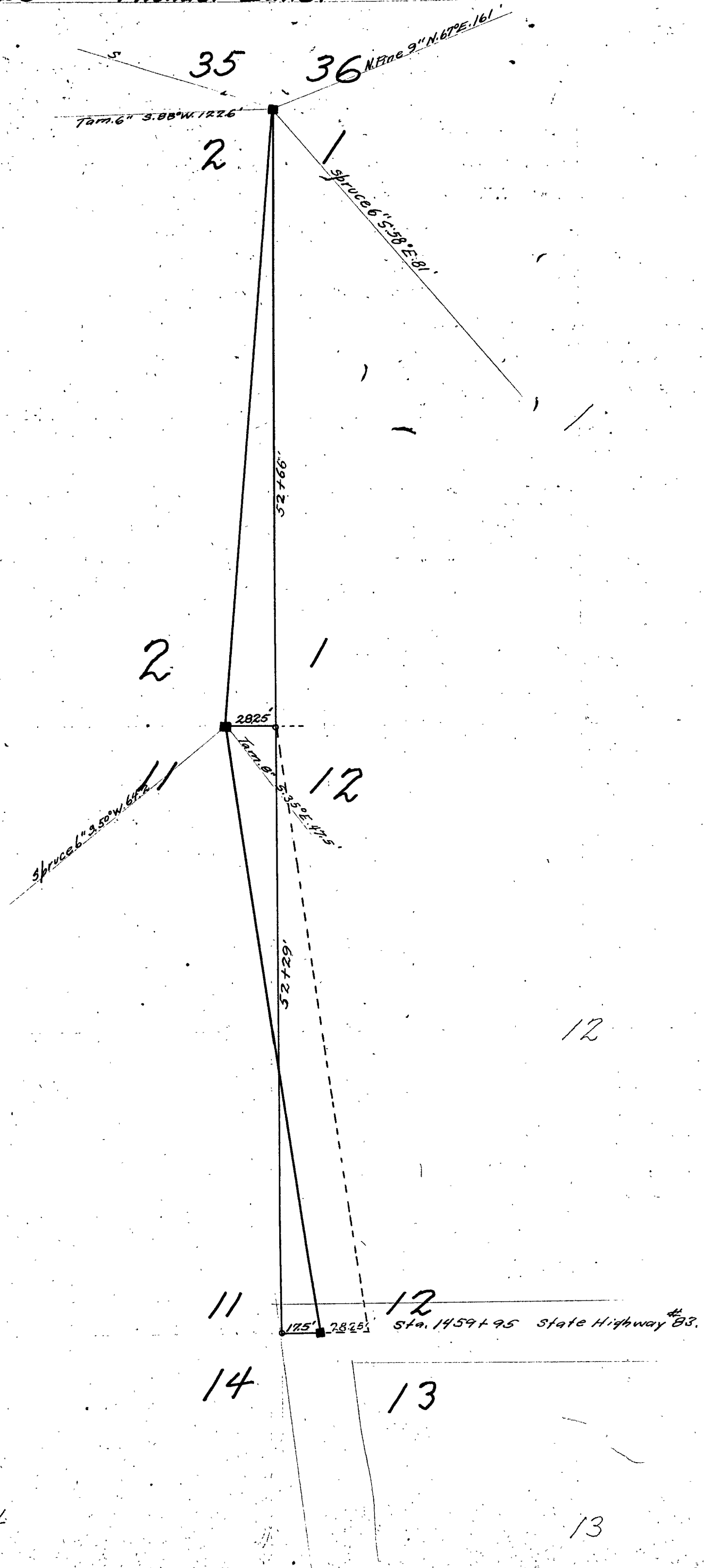
109

112

PLAT OF

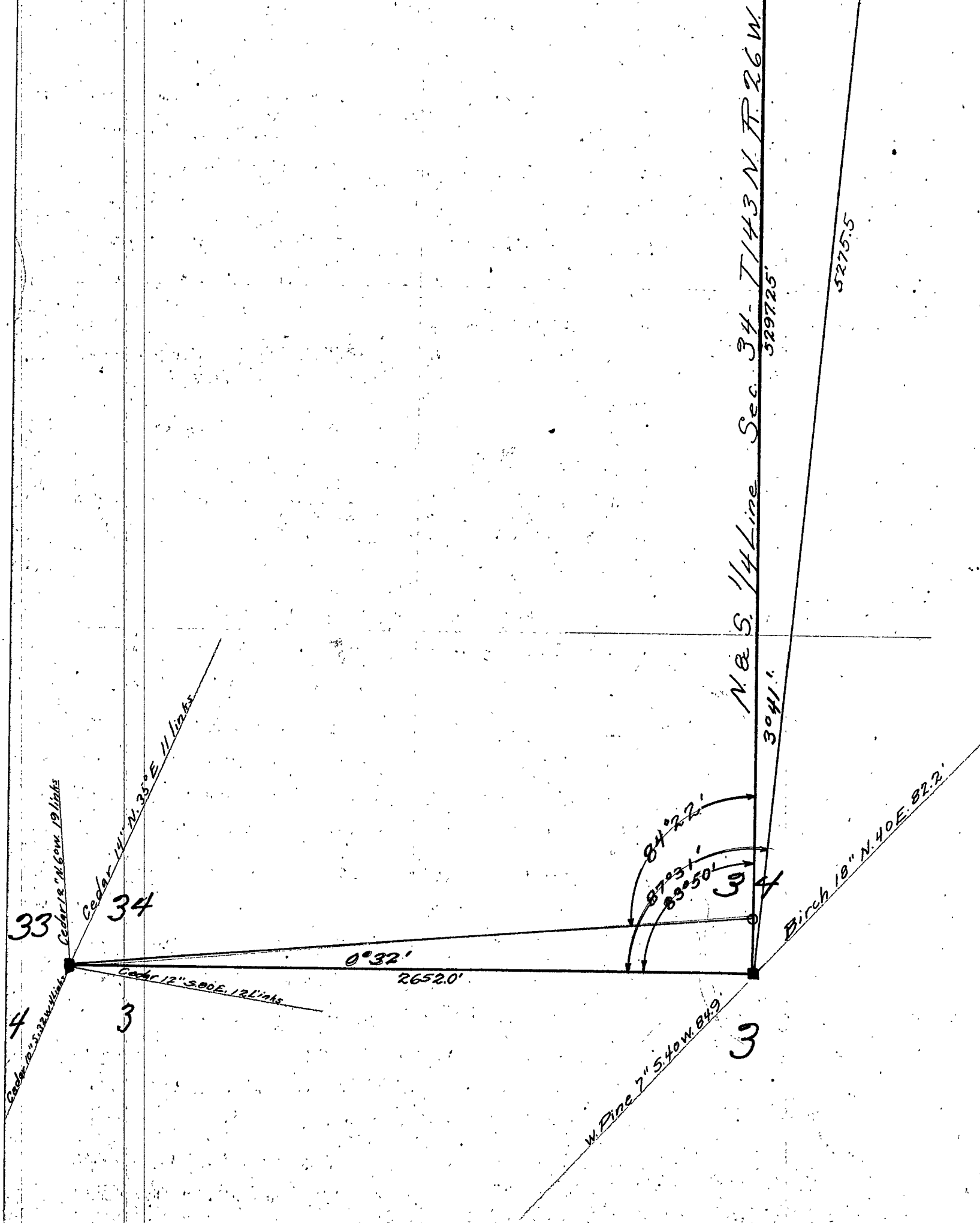
Sec's 1-2-11-12-139-25 Beulah Twp.

36 140-25 Thunder Lake.



Plat of
Sec's 27-34-33-143-26
Sec's 3-4 142-26

B



SURVEY RECORD NO. 348 B

Dec. 9-10-11, 1915

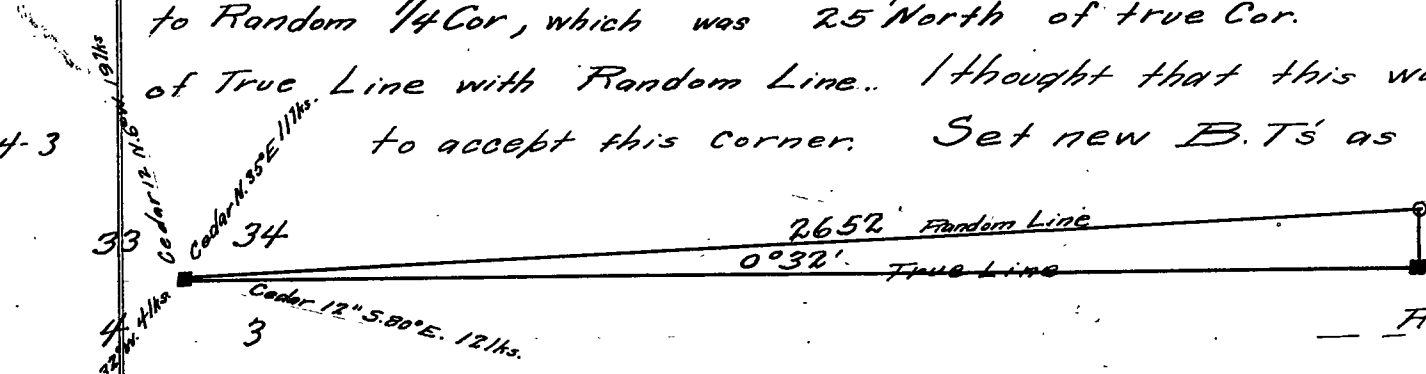
Sec's 27-34-33 143-26 Transit - J. M. Greene
 Sec's 3-4 142-26 Axe & Chain - Bill Utley, Ben LaFale.
 assisted by Al. Minton.

1/4 Cor. Sec. 34, 143-26 - Sec. 3-142-26.

Old B.T.'s call for N. Pine 4" S. 5° W. 5 links

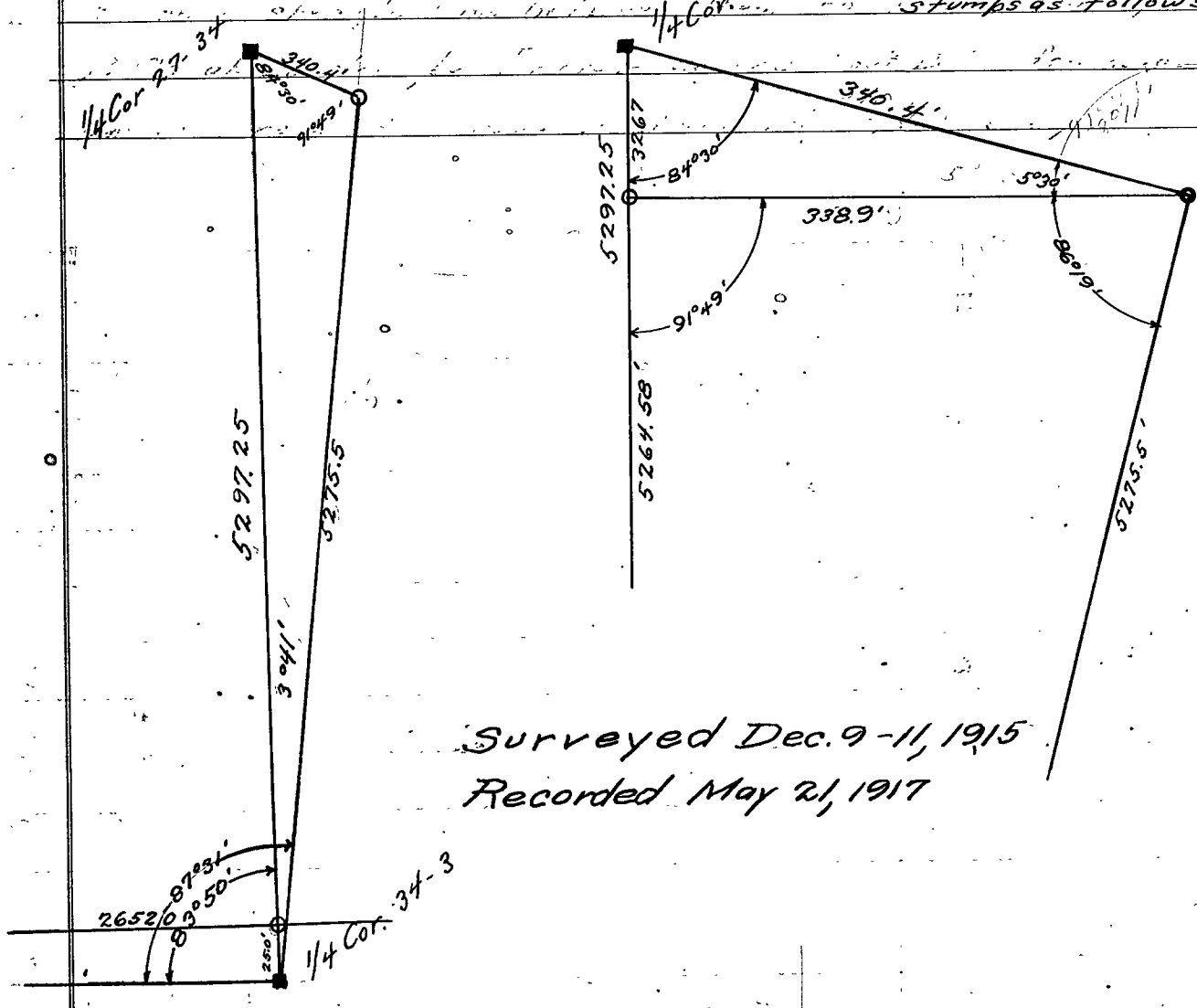
Fir 6" N. 18° W. 4" Started to hunt for this

corner as shown on the Jewett Plat, but was unable to locate it. We return to Al. Minton's and ask his help. Mr. Minton said that he knew about where the corner used to stand, and had seen the stump of the N. Pine B.T., but had never looked for the Fir, that he thought the scribe marks had been destroyed in the fire a couple of years before. We all go to point where Mr. Minton thought the corner had stood, and found that his location did not agree with the Jewett Plat. We found a picket set by some surveyor, who, we did not know, but started to look for evidence of the corner in that vicinity, and found the stump of a fir and from that a N. Pine stump which checked with bearings and distance. This was the only fir stump of that size in the vicinity. From these we set a stake, ^{which came about 8' from the picket.} as corroborative evidence we found old blazes running each way E. & W., as well as a 1/4 Line North, which we were informed were made when the old Cor. was plain. However, I was still doubtful as it differed considerably from the plat, and as a further check, I started at the S.W. Cor. of Sec. 34 which was very plain, all B.T.'s being in, and ran East on Random Line a distance of 2652' 0 to Random 1/4 Cor, which was 25' North of true Cor. $\frac{2652}{25} = 106.1 = \cotan 0^{\circ}32' = L$ of True Line with Random Line. I thought that this was a fairly close check, and decided to accept this corner. Set new B.T.'s as follows: - Birch 18" N. 40° E. 82.2"



Recorded May 21, 1917 by John M. Greene.

Setup at 1/4 Cor 34-33 and turned off L 87°31' N. W. by angle. Ran North 5275.5' to 1/4 Random Cor. 34-37. L to True 1/4 Cor. = 88°11' N. W. by , a distance of 340.4 or $L \sin 30' \text{ from } 5297.25 =$ computed distance on true line. From the recognized 1/4 stake as standing, we checked old B.T. stumps as follows: Birch 8" N. 10° E. 10 Links - Birch 7" S. 52° W. 8" which were practically



Surveyed Dec. 9-11, 1915
 Recorded May 21, 1917

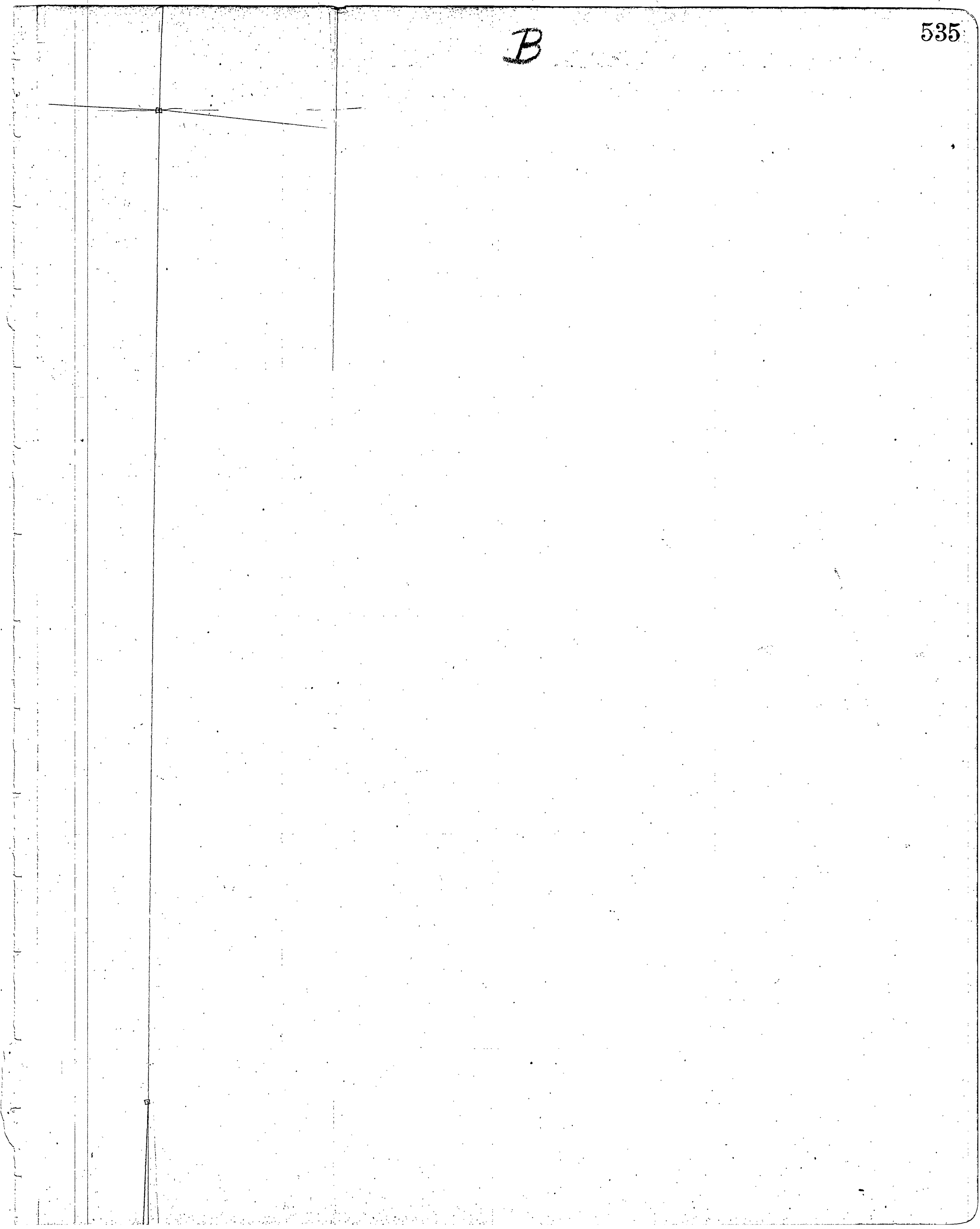
1/4 Cor. 27-34. Explanation - Note: - In September, 1915, Mr. Fred Sanborn, Mr. H. D. Boyer, and myself cruised this line, and met Mr. John Bebo near this corner and were told by him that he had known this corner for 18 years and that everybody recognized it as the true corner. About 5 years ago, about 1912, Mr. Tony Johnson and myself found this corner and used it for our work, and I had never heard anybody dispute it. All scribe marks were gone except a Jack pine B.T. which Mr. Al Minton said he thought was made by O.C. Gilbert in order to tie the stake in when the old B.T.'s were destroyed. destroyed, but with our other evidence to back them up, we decided to accept the stake and set new B.T.'s as follows: -

Birch 14" N. 55° E. 37.9'
 " 16" N. 59° W. 42.8" - 90

1/4 Cor. 34-27

REMER - BEAR RIVER ROAD

B



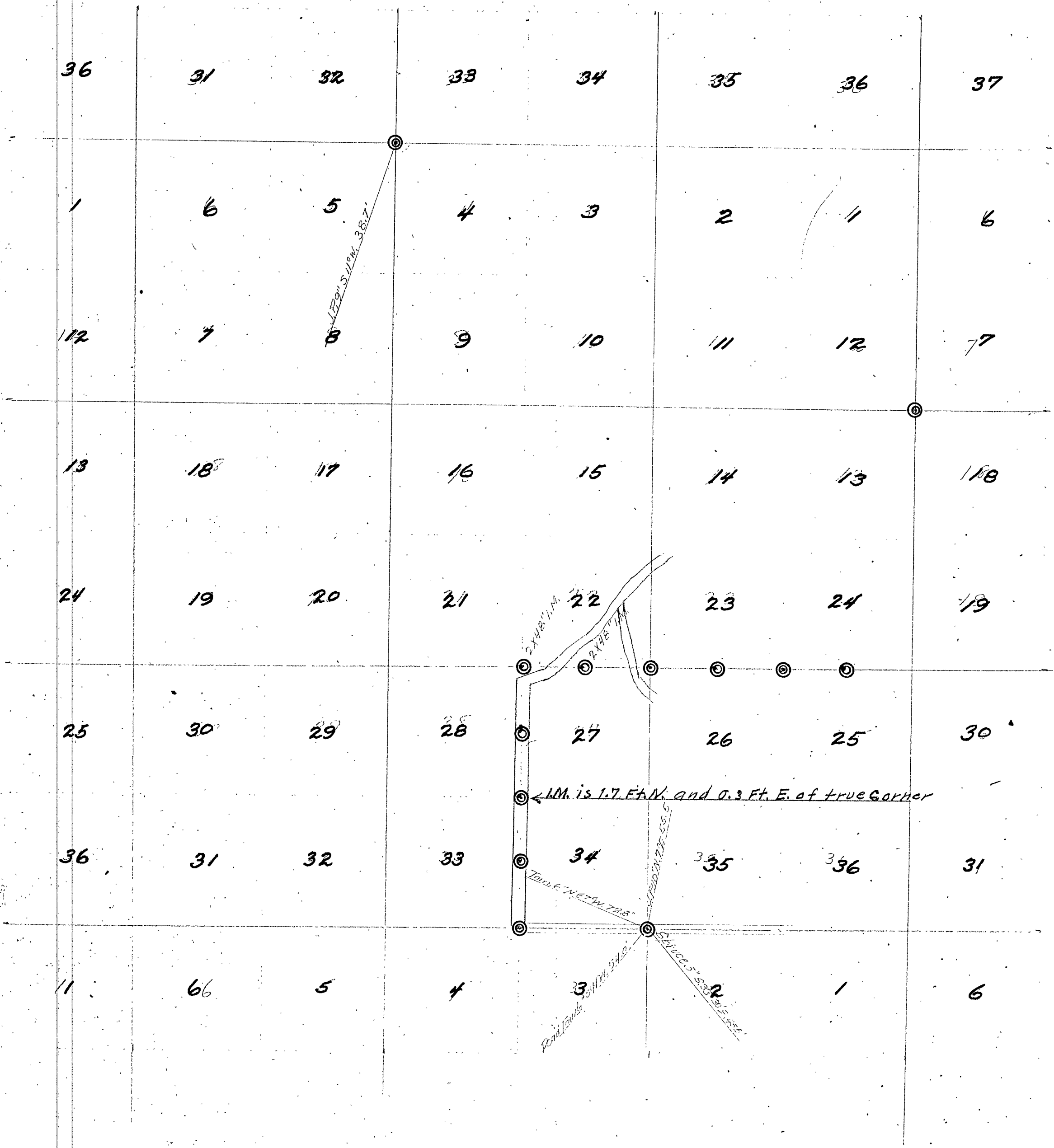
B

Plot of

Secs 4-5-138-31; 32-33-139-31 12-13-138-31 - 6-7-138-30
" 2-3-4-137-31; 33-34-27-28-21-22-26-27-23-24-25-138-31

SURVEY RECORD No. 350.

21 secs



36 31 32 33 34 35 36 37

1 6 5 4 3 2 11 6

112 7 8 9 10 11 12 17

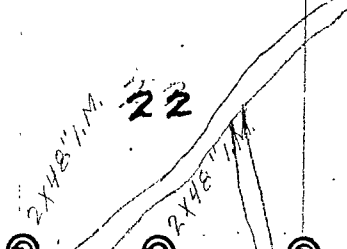
13 18 17 16 15 14 13 118

24 19 20 21 22 23 24 119

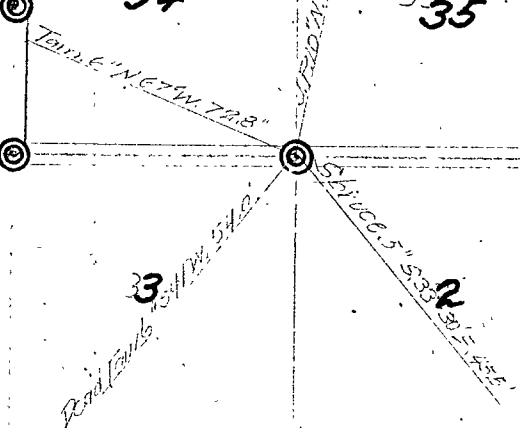
25 30 29 28 27 26 25 30

36 31 32 33 34 35 36 31

11 66 5 4 3 1 6



L.M. is 1.7 Ft. N. and 0.3 Ft. E. of true corner



Setting I.M.s 2"x48" in Bull Moose Twp.

Thursday Nov. 9-1916 - E. B. Horst working for Bull Moose Twp. Go to Backus. Go to cor. of sec. 4+5, 138-31 and sec. 33-34-139-31 on Twp. line where I set a 2x48 in. I.M. and mound same with stone and ground in place of wood. new B.I. as follows: J. Pine 9 S 11 W 38.70 feet. (Curo). B.I. marked - J. Pine 4 S 58 E 38.70 ft. - 4x4x36 in. stake N 45° E 100 ft. 4x4x36 in. stake N 45° W 100 ft. Board at W.M. Kinney's. Kinney and I take compass, chain and 2 M. walk to 1/4 cor. bet. sec. 24-25, 138-31, pull up wood stakes and set 2x48 in. I.M. Go W 1/2 mile, pull up wood post set by Curo, for cor. to sec. 23, 24, 25, 26, and set 2x48 in. I.M. at 1/4 cor. bet. sec. 23 and 26 set I.M. at sec. cor. to 22, 23, 26, 27, pull up Bryant's stake, set I.M. with 4 bearings, 3x36 inch Jam. posts. Post N 45° E 46.7 ft. - Post N 45° W 46.7 ft. Post S 45° W 46.7 ft. - Post S 45° E 46.7 ft. - R.R. fare Walker to Backus 49¢. Livery \$5.00.

Friday Nov. 10-1916 - Horst and Kinney continue to set I.M.s at following pts. Mounding same where there are not laid out roads. I.M. being 2x48 in. at 1/4 cor. bet. sec. 22-27. Set I.M. at sec. cor. to sec. 21-22-27-28. Set I.M. new B.I. Spruce 3 N 45° E 46.7 ft. Jam. stake 4x48 in. N 45° W 46.7 ft. Jam. stake 4x48 in. S 45° W 46.7 ft. Head Jam. 6 S 45° E 42.7 ft. Go South 1/2 mile at 1/4 bet. sec. 27-28, set I.M. Set road petitions from M. Wahlquist Clerk.

No. 1.

Petition for a Twp. road to be known as the Mons Jensen road, dated July 31, 1912, beginning at the NW cor. of sec. 27, 138-31, run E one mile bet. sec. 6 and 7, all in Cass Co. Names of signers: Mons Jensen, James W. Mathers, G. F. Faragher, C. W. Hanks, John Howe, Thos. Coon, A. Hamilton, E. C. Rice, A. Hanforth, A. Wahlquist.

No. 2.

Petition for a Twp. road, dated Mar. 5th 1913, to be known as Trunk road, beginning at the State Road, SW cor. Sec. 34, run N on sec. lines bet. sec. 33-34, sec. 27-28, sec. 21-22, sec. 15-16, sec. 9-10, sec. 3-4, all in Twp. 138-31, in all 6 miles to N. Twp. line. Signers: A. Wahlquist, M. Wahlquist, W. M. Kinney, A. Hanforth, Thos. Coon, Mons Jensen, W. A. Wahlquist - Milton Coon. Only 2 miles are allowed by Town Board.

No. 3.

Petition for a Twp. road, dated May 1st, 1916, beginning at the SE cor. of sec. 14, 138-31, West on sec. line bet. sec. 14-23, a distance of 8 rods. Signers: H. Bellessell, A. Hamilton, H. Brossel, Peter Brossel, C. W. Elyea, W. P. Stoker, A. J. Cassidy, Fred Thomas. Allowed by Town Board.

No. 4.

A petition for a Twp. road, dated April 8, 1916, to begin at the SE cor. of sec. 6-138-31, thence N on sec. line bet. sec. 5 and 6, one mile to S. R. H. to be known as Brady road. Signers: G. W. Brady, J. A. McFarling, Milton McFarling, John Howe, Mons Jensen, Hans Erav, Henry Luiten, Fred and John Luiten, Fred Thomas, A. J. Cassidy, Milton Coon, C. W. Elyea, A. Hamilton, M. Wahlquist, C. W. Hanks. Allowed.

No. 5.

Pet. for Twp. road known as Kinney road, dated Mar. 13, 1915, to begin at SE cor. sec. 24, 138-31 run W on sec. lines bet. sec. 24-25, sec. 23-26, 22-27, distance of 3 miles to the SE cor. of sec. 21 in said Twp. Signers: W. M. Kinney, Aaron Zappke, Mons Jensen, M. Wahlquist, Hans Jensen, C. W. Hanks. Petition Granted.

These petitions, 5 in number, are all petitioned in this Town to date, Nov. 10, 1916. Horst and Kinney continue to set I.M.s. At cor. to sec. 27, 28, 33, 34 set I.M. at 1/4 cor. bet. sec. 33 and 34, set I.M.

Cor. 2-3
137-31

Sat. Nov. 11-1916: Horst and Kinney with compass and chain take I.M. walk to cor. of sec. 2 and 3, 137-31 where I set an I.M. in center of E+W graded road. The green W. pine B.I. marked by Curo was totally destroyed, in building road, except roots. Jam. B.I. also gone. new B.I. as follows:

J. Pine 10 N 7° E 55.5 ft. - Jam. 6 N 67° W 72.8 ft. - Head Jam. 6 S 44° W 54.0 ft. Spruce 5 S 33° 30' E 45.5 ft. At cor. to sec. 33, 34, 138-31, and sec. 3, 4, 137-31, set I.M. in center of E+W and in center of road running N

from this corner. new B.I. as follows: Norway 10 B.M. North 29° E 45.0 ft. - J. Pine 10 N 56° W 62.4 ft. J. Pine 10 S 45° W 44.2 ft. - 4x4 pine stake S 45° E 46.7 ft. 8° bar. Go to Backus

Set I.M. at cor. to sec. 12-13, 138-31, and sec. 7-18, 138-30. No trees near. Fence cor. sets SE. 45.8 ft. I've look for cor. to sec. 1, 12, 6, 7, 138-30 and 31, all B.I.s have been grubbed out, are lying beside road. I leave an I.M. beside B.I. stump, which I will set later, take train to Walker. Fare 49¢. E. B. Horst.

Recorded May 29, 1917
John M. Greene
County Surveyor.

135-29

Monday July 31st, 1916. Take 9-28 train for Regent.

Aug 1-1916

Tuesday Aug. 1st, 1916: At M.C. No. 51 I find an S.M. and stumps of U.S.B. To. At cor. to sec. 16, 17, 20, 21, find an S.M. set by Donner.

16-17-20-21
14-15-16
MC 43

Walk north on route for new road to 1/4 cor. on E side of sec. 16, also set by Donner. Return, walk S. thru brush, but get off line.

MC 45

line was never relocated. Look for M.C. No. 43 find nothing. Wednesday - John Carson and Horst go to Wisma. Go to road line in sec. 17 and E thru sec. 16 (run by Donner) as dam to connect new road to this. Go to W. shore of Gull Lake where I meet C.E. Anderson, take me to M.C. 45 where U.S. notes call for W. Pine 7 N 6 7 3/4 W 28 - N. Pine 16 S 10 W 18. Find W. Pine snag 6 ft. high washed out of place, now on shore loose, plainly marked. The N. Pine is standing green, plainly marked, set a 3" x 3" x 3 ft. J. Pine post 2 ft. in ground at water's edge. N 10 E 11.88 ft. from N. Pine B.J. walk W. from this cor. to cor. sec. 29, 30, 31, 32 where notes call for Jam. 7 N 55 E 12 = 7.92 ft. Jam. 5 N 47 W 11 = 7.26 ft. Jam. 9 S 60 W 21 = 13.86 ft. Jam. 6 S 52 E 27 = 17.82 ft.

29-30-31-32

In Jam. swp. I find old U.S. post standing in moss - all U.S. B. To. dead, plainly marked. Thursday, walk to cor. of sec. 29, 30, 31, 32. We set 4" x 4" x 4 ft. Jam. post for a temp. cor. from the 4 U.S. B. To. all dead, plainly marked, and standing. All in Jam. swp. Pull up old stake, set new post at same point. From tack in new post, start random S. boundary line of sec. 29 at 8° 30' var. Cut line E. 1/2 mile - do not chain.

29-30-31-32

Friday, Horst, Carson, Herbert Anderson. Continue random sec. line E. Go W. to cor. of 29, 30, 31, 32 - chain line cut on Thursday - at 70.0 ft. E leave Jam. swp. - at 109.8 ft. E set hub - at 142.0 ft. E enter Jam. swp. at 465.7 ft. E leave Jam. swp. at 479.5 ft. E set hub. at 582.2 ft. E set hub. at 1142.7 ft. E set hub. at 1215.0 ft. E enter pond. at 1422.7 ft. E leave pond. at 1796.7 ft. E set hub. at 1983.7 ft. E center of old N. & S. road. at 2089.2 ft. E set hub. at 2246.9 ft. E set hub. at 2378.7 ft. E set hub on SW shore of Gull Lake. U.S. M.C. 45 at S. of random line 1621' distance = 104 ft. Sine = .28150 Cos. = .95956

29-30-31-32

at Sta. 2477.8 ft. E. M.C. 45 at S. of random line 29.3 ft. U.S. chain for this line = 2461.8 ft. One ft. U.S. chain = 1.0065 ft. my chain. Distance from M.C. 45 to 1/4 cor. = 178.2 ft. U.S. chain. Distance from M.C. 45 to 1/4 cor. = 179.36 ft. my chain.

Pond

Correction for boundary of sec. 29 = .011825 ft. S. for each ft. E. At hub 2378.7 ft. E set hub S. of random line 28.12 ft. on true sec. line. Set transit on M.C. 45 backsight to Hub 2378.7 ft. on true line. at pt. for 1/4 cor. chain E 179.36 from M.C. and set an 8 ft. N. Pine post in lake on true line, with nail in top, drive into ground and mound with stone under water, being true point for 1/4 cor. Take transit on hill S. of lake and S. of 1/4 cor. in lake, start random N. & S. 1/4 line S. across sec. 32. Var. 6° 30' backsight on 1/4 cor. in lake. Chain from 1/4 cor. at 83 ft. South leave lake. at 137.9 ft. S. set hub in path. Saturday: Continue S. and N. 1/4 line South: at 301.3 ft. S. set hub on a line cut out by land owners. Var. 9° 15' set transit over this hub, backsight N. on random, reverse telescope, turn 2° 06' angle E into cut out line. Sine = .03664 X 301.1 ft = 11 ft. Cos. = .99933 X 301.3 = 301.1 ft. 2° 06' Making Hub 301.1 ft. S. of 1/4 cor. and 11.0 ft. W. Cut small brush and hub South on cut out line at about 1/2 mile S. enter heavy brush. Cut about 500 ft. S. Monday - L. K. Sholto, axeman. Continue cutting N. & S. 1/4 line thru sec. 32. Chain. Beginning at Hub 301.1 ft. S. at 685.6 ft. S. a hub. at 1393.7 ft. S. a hub. at 1952.5 ft. S. a hub. at 2357.4 ft. S. a hub. at 3139.8 ft. S. a hub. at 3382.9 ft. S. a hub. at 3667.7 ft. S. a hub. at 3899.5 ft. S. a hub. at 4324.6 ft. S. a hub. at 5280.9 ft. S. set a hub - look for B. To. to 1/4 cor. on S. side of sec. 32, where U.S. notes call for post and W. Pine 35 N 2° W 48 = 31.68 ft. N. Pine 12 S. 10° E 89 = 58.74 ft. I find W. Pine B. To. uprooted - dead, bearing the U.S. scribe marks, nearly all chopped off. Set transit at pt. where the B. To. stood and turn required course, chain out 31.68 ft. and set Hub at pt. for 1/4 cor. Set transit over this Hub and turn course for Norway Pine B. To. chain out 58.74 ft. and find old N. Pine stump and tree rotted flat. Check for course and distance. Pull up hub, set 3" x 3" x 4 ft. Burr Oak in its place for true 1/4 cor. from which: W. Birch 57 N 9° 30' W 42.7 ft. Poplar 7 S 19° 30' E 60.3 ft. set transit over Hub 5280.9 on random line and sight N. to Hub on random. Reverse telescope, turn same to 1/4 corner. SW angle = 61° 25' distance = 172.5 ft. Sine = .89951 X 172.5 = 151.7 ft. Cos. = .47588 X 172.5 = 82.1 ft. 61° 25'. 1/4 cor. on S. side of sec. 32, at station 5363 ft. S. sets 151.7 ft. W. of random line. 1/4 corner on N. side sets 11 ft. E. of random 151.7 + 11 ft. = 162.7 ft. ÷ 3562.0 = .030337 ft. W. for each ft. South (minus 11 ft. at each hub). At hub 685.6 ft. (Tuesday) South on N. & S. 1/4 line I set a correction hub 9.8 ft. West on true N. & S. 1/4 line. Also at Sta. 500 ft. South a hub 4.17 ft. West of random line and cut true 1/4 line north to Gull Lake.

MC 45

1/4 in Lake

MC 45

1/4 in Lake

Stones @ 1/4

N-S 1/4

sec 32

South

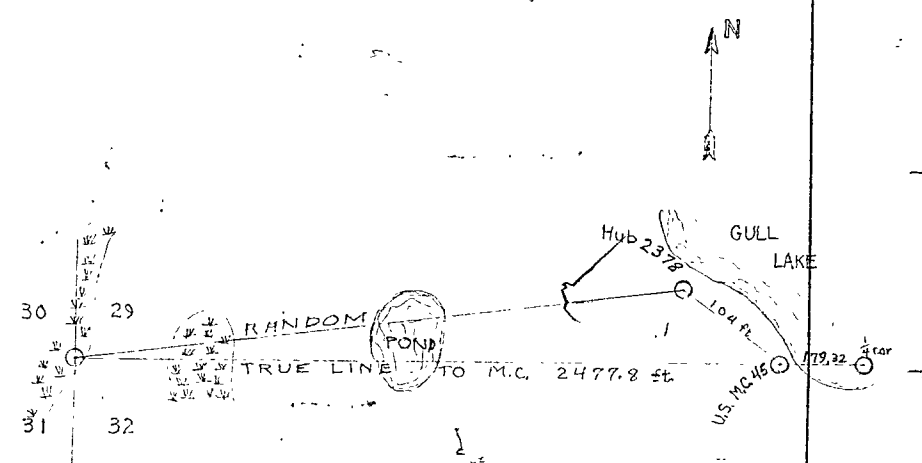
Thru 32

1/4 So Side

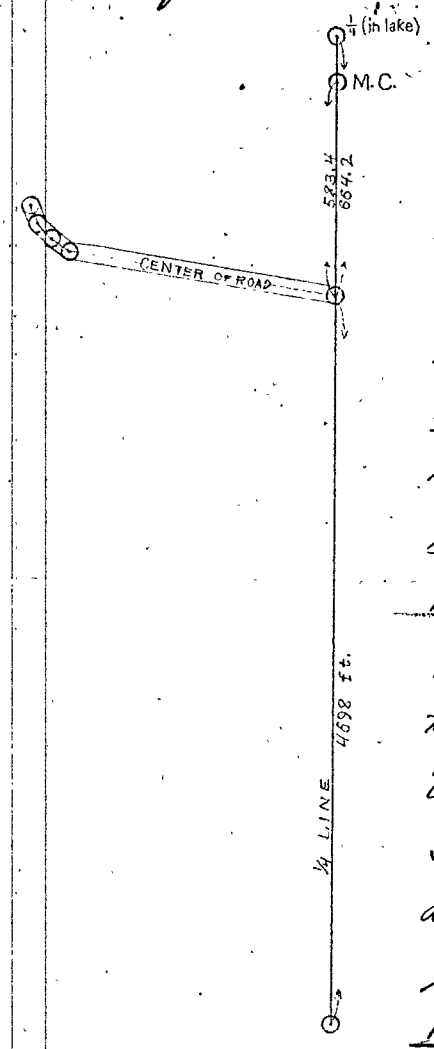
32 BTS

1/4 S 32

BTS



at 80.8 ft. S. of 1/4 cor. in lake, we set a 4" X 4" X 3 ft. Norway pine post for M.C. on true north and S. 1/4 line (being 17 ft. from water's edge) from which W. Birch 5 S. 82° E. 5.7 ft. to tack. W. Pine 7 S. 74° 10' W. 15.8 ft. to tack. Return to station 664.2 ft. So on true N. 1/4 S. line and set a 4" X 4" X 3 ft. Oak post 2 ft. in ground for beginning pt. and East end of sup. road, and mark following bearings: W. Birch 6 W. 59° 10' E. 27.0 ft. Poplar 470.22° 15' W. 53.5 ft. from this pt. I sight N. on true 1/4 line and turn W 51° 53' and run center line of road West. Beginning point = Sta. 0.00 being 583.4 ft. So. of post set for M.C. Sta. 0.00 to Sta. ① = 750 ft. ① thence Right 5° 100 ft. ② thence Right 5° 100 ft. ③ thence R. 20° 100 ft. ④



Wednesday - Continue road line around W. side of Bull Lake. Thence Right 15° 100 ft. ⑤ Thence Right 10° 242.5 ft. ⑥ thence Left 22° 53' at 100 ft. follow near edge of sup. at 404.9 ft. set hub. At 978.00 ft. set hub ⑦ Thence R. 6° 260.6 ft. ⑧ thru lowland, heavy timber and brush; undergrowth. Telephone to Euro 36'

Thursday - Continue road line on W. side of Bull Lake. Thence Right 54° 30' 251.4 ft. ⑨ wet, soggy. thence Left 40° 10' 261.5 ft. ⑩ on highland. Thence Right 15° 00' 69.3 feet ⑪ enter lowland. Thence Left 22° 48' at 146 ft. enter sup. pretty wet, about 24 in. deep: at 455 leave sup. at 552.4 feet set hub station ⑫ thence R. 25° 583. ft. set hub in field about due W. of W. H. Cobban's house, 150 ft. distant

Friday - Thence R. 10° (in field) ⑬ at 278.0 leave field: at 436.1 set hub: at 1056.2 set hub: at 1388.6 set hub: at 2116.6 set hub: at 2715.1 set hub: thru heavy, hardwood timber, plenty small brush

Saturday - From hub 2715.1 to 3264.8 ⑭ set hub to which I take following B. Tr. Maple 10 S. 76 E. ft. Maple 12 S. 68° 15' W. ft. at this hub I turn left 32°. Monday: Continue road from Sta. ⑮ at 749.0 feet set hub: at 1094.1 ft. set hub: at 1305. ft. set hub. ⑯ thence Right 10° 997.4 ft. ⑰ thence Right 10° 293.7 feet. ⑱ thence Right 40° 18' to conform with an angular bay in lake ⑲. We cut about 200 feet.

Tuesday - Horet and same crew. Continue road line. at 687.6 ft. a hub: at 971.7 ft. hub. at 1384.3 ft. a hub: at 1653.3 ft. a hub: at 2149.5 ft. a hub to true section line = 2152.2 ft. set an what was evidently an old compass. ⑲ line run south from cor. to sec. 16, 17, 20, 21 to M.C. no. 43 on Bull Lake.

16-17-20-21 South to ME 43

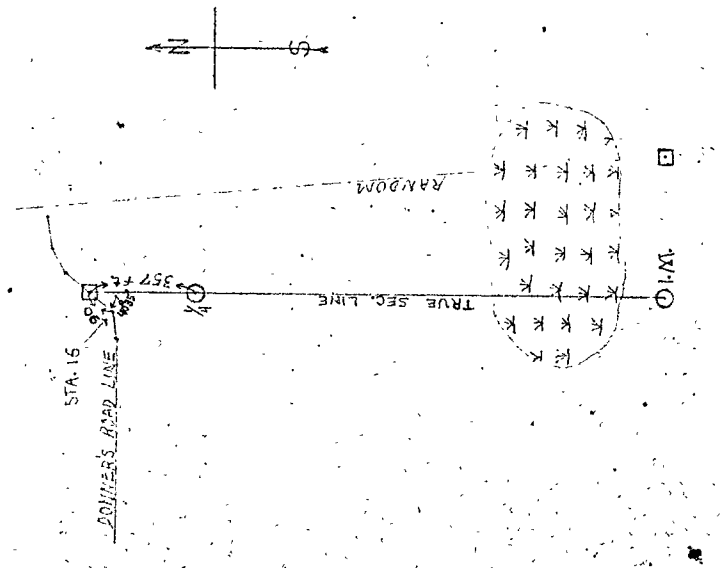
Road thence left 55° 54' and run north at 7° 30' var. an old line. I have Carson cut the brush out of the old line So. to Bull Lake. I backsight south and set a hub (Oak) on high bank at lake. We run W. on old line at 475.00 feet North set hub: at 785.6 ft. North set hub: at 946.9 ft. North an I.M. at cor. to sec. 16, 17, 20, 21, sets on line.

Wednesday - Horet, transit, chain - C.C. Marsh, A.V. flag, chain - Herbert Anderson and L.K. Sholta - J.C. Carson, axemen. Carson takes 6 P.M. in boat and takes us to M.C. No. 51 then he takes the boat around into Bull Lake on E. side of section 20. We walk East from M.C. 51 to corner of sec. 16, 17, 20, 21 and set road center from this corner North on true section line between 16 and 17, setting correction hubs from Slanner's random section line.

Random being run from the North and corner of South and sets 112.0 feet West of random. Distance across section equals 5272.2 feet. 112 feet ÷ 5272.2 ft. = .0212245 ft. West for each foot South.

Hub 4244.2 feet South goes West 90.1 feet on true line - Hub 4021.4 ft. South goes West 85.4 ft. on true line
Hub 3807.9 feet South goes West 80.8 feet on true line - Hub 3424.0 feet South goes West 72.6 ft. on true line
Hub 2945.3 feet South goes West 62.5 feet on true line - at 2636.1 ft. South 1/4 corner sets W 56 ft. at 2275.1 feet South 1/4 corner 48.3 feet on true line (I.M. at 1/4 corner set by F.W. Donner)

Correction hub at 2275.1 feet South sets at P.D. of East and West road line and section line between 16 and 17, being 357 feet North of 1/4 corner between 16 and 17 and 90.0 ft. East of Station 16 on road line. Southwest angle equals 40 degrees 35'. I drive a 4" X 4" X 3 ft. Poplar post 3 feet in ground at this point. We walk 3/4 of a mile South to Bull Lake.



P.M. I look for B.T. to M.C. No. 43, where U.S. notes call for Post and the following bearings:

Norway Pine 20 North 17 East 35 equals 23.10 feet
White Oak 6 South 76 West 50 equals 33.00 feet.

I find W. Oak snag lying down with B.T. plain, the other marks scarcely visible. I also find a Norway stump with an axe blaze but no scribe marks left. I set the corner from the W. Oak B.T. alone setting a W. Oak post 4" X 4" X 3 ft. long 3 feet in ground on slope of high bank 12 feet North of water and mark new bearings as follows:

Red Oak 11 North 67° 30' West 60 feet. Var. 7° 30'

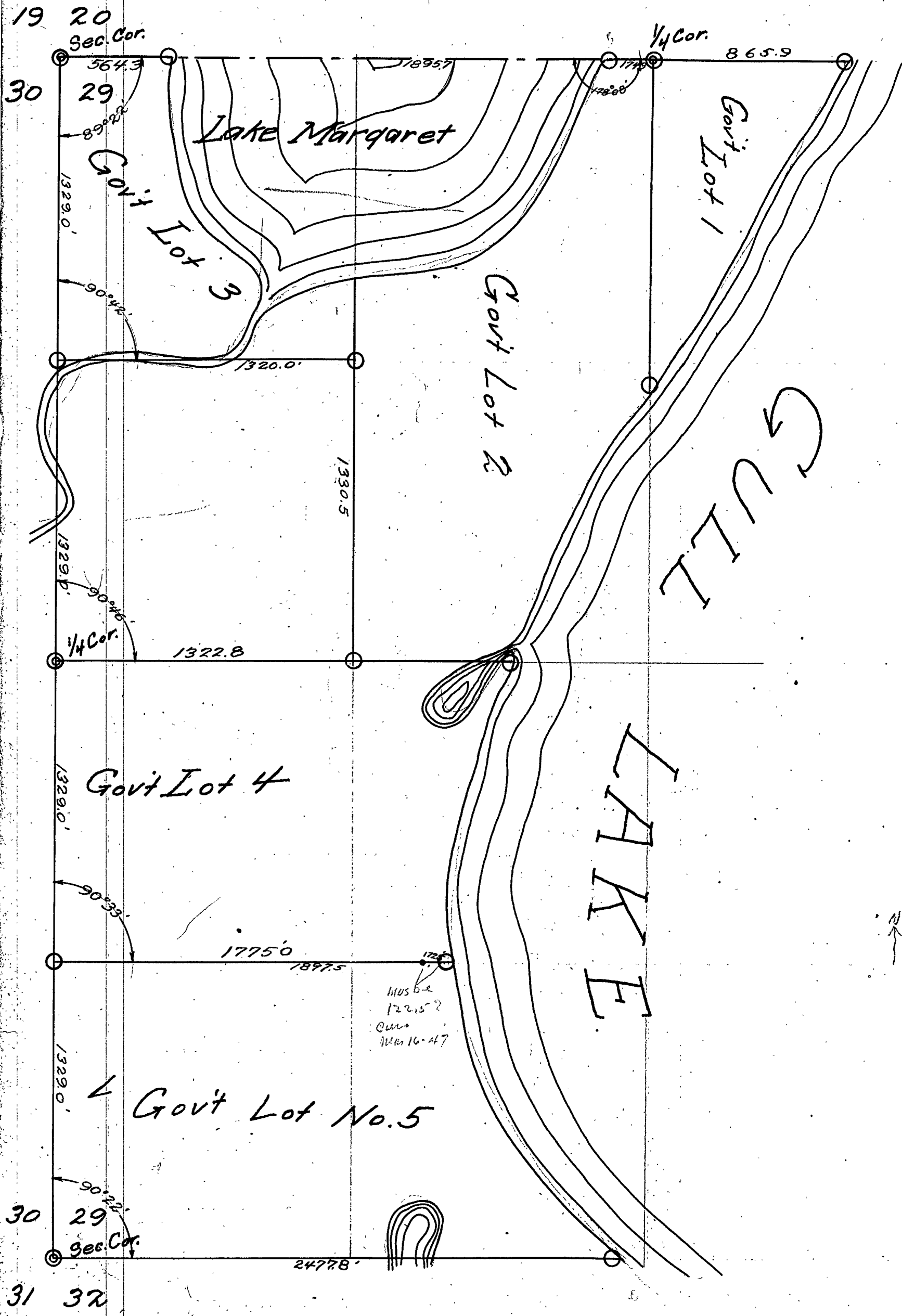
Plat of Survey Record 351

Secs 19-20-29-30-31-32

T.135N.R.29W.

B

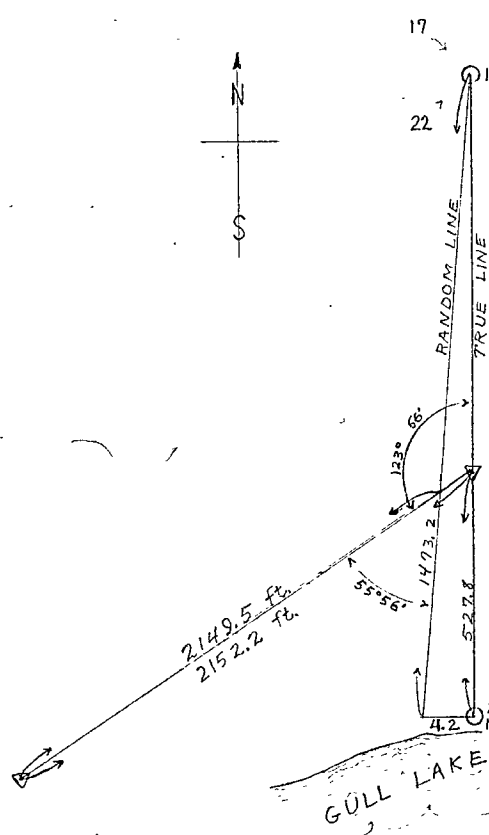
PLAINTIFF'S EX. 3
W. B. HIGHMAN, REPORTER



B

MC 43
16-17-20-21
MC 43

Double Red Oak 12 North 16 degree East 64.9 feet. I set transit over hub on random line and right South to M.C. just set, missing corner 4.20 feet on West side. I begin chaining at M.C. 43 and chain North on random line at 60.5 feet north, a hub. at 526.3 feet North a hub, where road line run by me intersects random section line between Corner of 16 17, 20 21 and M.C. No. 43. From this Hub North to section corner equals 946.9 feet. 946.9 plus 526. South = 1473.2 feet my chain. C.W.S. chain equals 1471.80 feet. 4.20 ft. ÷ 1473.2 ft. = .00285 correction P.D. hub of road line and random section line goes E 2.70 ft. on true Section line and North 15 feet in line with road center, making distance South to M.C. 43. 527.8 feet and distance North to section corner equals 945.4 ft. Last Station of road equals 2152.2 ft.



Thursday, Horst, transit and chain with same crew go to SW cor. of sec. 20 and find a wood post set by J. W. Carr for true section corner from pop. stump 21470 22° E 93 = 61.38 the roots still remain in edge of stump. I set a 2 inch x 4 ft. R.R. flue for corner from which: N. Pine 97 19° 40' E 87.8 ft. N. Pine 107 14° 30' W 168.7 ft. at 8° 30' var. Sam. post 45° W 46.6 ft. Sam. post 45° E 46.6 ft. from this cor. I run a line E. Var. 8° 30' to locate M.C. No. 52 on E side of Lake Margaret, where U.S. notes call for N. Pine 28 S 21° E 12 = 7.92. N. Pine 12 N 20° E 22 = 14.52 ft. We cross lake to where Handerson set a hub on line and immediately find about B.S. stump's marks all gone on Norway St, but No. 12. Br. B.S. plainly from which I set a 2 1/2 in x 4 ft. I.M. 3 ft. in ground for true cor. and mark new bearings as follows: N. Pine 12 S 25° 30' E 57.9 ft. N. Pine 47 W 76° 22' E 20.3 ft. 8° 30' var. I start line E from this cor. at 8° 30' var. and run line across peninsula at 60.4 ft. Ea hub: at 377.7 ft. Ea hub: I look for B.S. to 4 cor. bet. sec. 20-29, where notes call for: Ironwd. 8 S 45° E 16 = 10.56 ft - Ironwd. 5 N 35° E 27 =

IM TICS

MC 44

17.82 ft. I find nothing but young Ironwd. trees and old ones rotted to a pulp. Can find none that check with U.S. notes - continue random line East: at 521.0 ft E.C.P. hub on N.S. road line: at 783.5 ft. East set hub: at 991.2 ft. E. set hub and look for B.S. to M.C. 44 where U.S. notes call for sugar 87 18 W 57 = 37.62 ft. Butternut 5 S 37 W 77 = 50.82 ft. I find one of sugar B.S. broken off at ground but still bearing scribe marks - nothing left of Butternut B.S. except rotten pulp and a little mound where stump was torn up by roots. I set a 2 1/2 in x 4 ft. capped I.M. at pt. for cor. with following B.S. Basswood 5 S 23° 50' W 4 ft. W. Birch 47 W 43° E 12.5 ft. I set transit over Hub 991.2 ft. E and

MC 44

continue random line E to M.C. 44, at Sta. 1040.2 ft. East hub. M.C. sets S. 35.6 ft. 35.6 ft ÷ 1040.2 ft = .03384 correction. at Hub 521 ft. E I set a hub 17.6 ft. S. on true sec. line, righting to hub on random. I turn 88° 04' W and set a hub at intersection of road line on true E + W. sec. line bet. 20-29. P.D. sets

MC 52

511.6 ft. E of M.C. 52 and Sta. 13 + 2349.3 ft. on road line. Setting transit over P.D. hub I read SW angle = 63° 53'. I pull up P.D. Hub and set a 1 1/4 inch galvanized gas pipe 26 in. long drove 20 in. in ground, to mark intersection (furnished by W.H. Cobban) we walk S. where road line

6 in PIPE

SEC 32

crosses N. sec. line of sec. 32, at Sta. 1900 ft. E on random on random line I set a hub 22.47 ft. S. on true Sec. line, setting transit over this Hub I right to hub on random, turn 90° 41' E and set a 2 inch x 4 ft. boiler flue 3 1/2 ft. in ground at intersection of road line and turn sec. line and 1909.7 ft. E on sec. line.

IP of Road
Borden July

29-30 31 32

32

1/4 50 Side

5 1/2 Road

We also set an I.M. 2 in. boiler flue at N.W. cor. sec. 32, in place of Sam. post at 4 cor. on S. side of sec. 32, pull up oak post and set a 2 in x 4 ft. boiler flue 3 ft. in ground + mound same with large dirt mound. at beginning of road on N + S line I pull up Oak hub and set in its place a 1 inch gas pipe 4 ft. long 3 1/2 ft. in ground at M.C. 45 a 2 inch x 4 ft. boiler flue 3 ft. in ground and mounded with stone mound 6 ft. in diameter on the way back to Carson's

MC 43 IM

I go to M.C. 43 and drive a 2 1/2 x 4 ft. capped I.M. and mound same. Capped I.M. furnished by Home Brook Zerp. E. B. Horst. Aug. 19th, 1916. I return to Walker, R.R. fare 79¢.

SURVEY RECORD No. 352
SEC'S 32-33-34 in 137-32

B

and SEC'S 3-4-5-6-7-8-9-10-17-18-19-20 in 136-32

3-4-3-10

Saturday April 22nd, 1916: I begin working for Poplar Sup. to establish sec. and 4 cor. req'd. by Eng. Willard, on a proposed ditch. So to Backus, fare 49¢. Sunday: Hotel bill at Backus \$1.20 Monday: So to corner of sec. 34, 9, 10, where I met John Dague, Will. E. Goodall and J. Earl Dague, I find U.S. B.T.s. at 3, 4, 9, 10, where U.S. notes call for:
 1/4 Pine 22 N 58 E 23; 1/4 Pine 6 W 41 W 140; 1/4 Pine 8 S 27 1/2 W 20; 1/4 Pine 10 S 35 E 24 - New B.T.s. on. I find stump of 1/4 Pine 22 N 58 E 23 and stake which checks with notes Stake compass and John Dague and Will. Goodall chain, Earl Dague, bringing a new, we chain North and find a stake at station 2652.9 and stump of 1/4 Pine 13 N 5 E 115 - and stump of 1/4 Pine 14 N 2 W 387. I drive past and take new B.T.s. being 1/4 cor. bet. sec. 34, 136, 32, Jack Pine 5 N 62 E 32. 4 ft. 1/4 Pine 6 S 49 E 142.0 ft. New B.T.s. to 3, 4, 9, 10. 1/4 Pine 12 N 17 W 137 ft.; 1/4 Pine 8 N 43 E 60 ft.; 1/4 Pine 4 S 41 W 61.2 ft. No other trees near. Return to cor. of sec. 34, 9, 10, and run transit line west 9° var. at 535 ft. West set hub: at 2332 ft. West set hub: at 2350 ft. W. enter large swp: at 2640 ft. W. set hub - 1/4 corner gone: at 5000 ft. W. pt. of highland: at 5353 ft. W. sec. cor. to 4, 5, 8, 9, established by Curo, with new B.T.s. B. S. Slead 10 S 35 1/4 E 166 ft. Poplar 8 N. 44 E 164.5 ft. Cor. set. of random line 6 ft. We continue line west: at 5378 ft. West enter swp: at 7953 ft. W. set hub: at 9353 ft. W. leave swp: at 9892 ft. West set hub: at 10692 ft. W. set hub: a post set 1 foot. Tuesday: Continue line West bet. sec. 6 and 7. at 11792 ft. W. enter swp: at 12492 ft. W. leave swp: at 13312 ft. W. set hub: at 14295.5 ft. W. set hub: at 14395 ft. W. enter swp: at 14670 ft. W. leave swp: at 14970.6 ft. W. tack in 10 in stump. at 15662 ft. W. SW. cor. to sec. 6 on Swp. line set South 10 ft. Established by Boore under Curo with following B.T.s: Jam. 5 N 75 45' W 31.5 ft. Jam. 6 N. 58 E 31.7 ft. - Jam. 5 S 70 30 E 34.8 ft. - Jam. 6 S 51 30 W 35.9 ft. Distance bet. corners of 4, 5, 8, 9 and SW. corner section 6, U.S. chain = 10319.1 ft. our chain = 10309.8 ft = 000388 ft. line of 0° 1' 30". Wednesday: Correcting back: 1/4 cor. bet. sec. 6-7, at Sta. 13278.269 on S 9.08 ft. Cor. to sec. 5, 6, 7, 8 at Sta. 10640.64 ft. West set S 8.05 ft. 1/4 cor. betw. sec. 5-8, at Sta. 7996.42 ft. West set South 7.03 ft. at Sta. 5353 ft. West corner to 4, 5, 8, 9, set S. of random 1/4 cor. betw. 4-9, at Sta. 2676.5 ft. West set South 3 feet. John Dague and Goodall to 1/4 cor. bet. Secs. 4-5, we find U.S. B.T.s. W. Pine 36 N 63 1/2 E 13.2 ft. A new B.T. set 4 N. 41 1/2 W 63 ft. Corner established by Surveyor Boore, I check measurements to B.T.s. and find same all right so drive new post at corner. Thursday: Horst, Dague, Johnson, J. Earl Dague, drive to N. side of sec. 4 on Swp. line and we look for B.T.s. to S.E. corner of sec. 33-137-32, from which to locate a starting point, to establish 1/4 corner on north side section 4-136-32. We find no evidence from which to establish a corner at this point so we follow Swp. line west, looking for bearings and corners, at every place called for by U.S. notes, at NW. corner to Swp. 136-32, we stop, not being able to locate this corner we return to 1/4 cor. on South side of sec. 32, 137-32, where we find an old Jam. stake in tall grass, find an Elm stump bearing the B.T. we measure from this stump the required distance and set transit over pt. for cor. on land. I look for spruce stumps, which we find at required distance, it being rotten to the ground. I consider this as sufficient evidence for the corner and drive a 4" X 4" X 4" post to mark same. U.S. notes at this corner call for Elm 7 N 43 W 18. Spruce 16 N 47 E 46. I remark Elm stump, as there are no other trees near or stumps near. Run random line E on Swp. line. Var. 8° 30'. at 1440.5 ft. E set hub: at 2167.2 ft. E set hub: at 2551.8 ft. E set hub: at 2912.8 ft. E set hub: at 3762.0 ft. E set hub: at 3974.7 ft. E set hub. Friday: at Hub 3974. E on line run yesterday is near pt. called for by U.S. notes as NW. cor. to sec. 4, 136-32. We look for old B.T. post and find the pt. of an old oak post in the ground. There is an old fence running S. and one E. the fence was evidently run from this post, having left 1 1/2 rods for a road on the N. and W. side of sec. 4. I accept this as the U.S. cor. Distance = 3950.5 ft. E of 1/4 corner on South side of sec. 32, Swp. 137-32, no trees within 40 rods, so I drive post and put up a stone mound. From NW. cor. of sec. 4, 136-32, I run random line East at 9° var. at 538.7 ft. E set hub: at 1584.5 ft. E set hub and enter brush: at 1926.7 ft. E set hub: at 2632.8 ft. E set hub: at 2670.7 ft. E enter large open swamp. at 3322.0 ft. tack in Jam. swp. at 4476.7 ft. E set hub: at 5300.0 ft. E set hub: at 6657.0 ft. E set hub: at Hub 6657.0 ft. E 1/4 corner on S. side of section 34, 137-32. marked by 2 m. set North 14 ft. Correcting back - U.S. chain from NW. corner section 4, East to 1/4 corner South, side sec. 34 137-32 - 6607.96 ft

Void

My chain equals 665.7 feet. 1 foot my chain = 1.00742 feet U.S. chain. 14 feet = 665.7 = .002103. Sine of 0° 07'

NW corner to section 3, 136-32, at station 5333.85 ft. East sets N. of random line 11.22 ft. No trees near so I set 2 witness posts. One S.E. 50 ft. and one S.W. 50 ft. from corner. 1/4 corner at North side of section 4, at station 2666.93 sets North of random line 5.6 ft. As there are no trees or land marks near I mound post with stone. Quit for night. E. B. Horst.

Saturday April 29th 1916: Horst, compass and chain, John Dague, chain James Johnson, axe. John Dague's team. We go to 1/4 cor. of W. side of sec. 18, 136-32, and find an old stake, which a Mr. Smith says was set from U.S. B.T.s. I find one B.T. plainly marked, rolled up to a fence. I mark new B.T. W. Pine 14 S. 54 E 21.1 ft. Nothing else near. We chain N. to find N.W. cor. of sec. 18. At 2636.5 ft N. I find a wood post and the point of a 2 old wood posts burned off at water's edge, in small swamp, a fence 32.4 ft. runs South and one runs East. There are no trees near, but I find 2 stumps that check with U.S. notes. The old settlers have recognized this as the cor. for 20 years, so I mark new B.T.s. Fence post E 32.4 ft. W. Pine 14 N. 81° 30' W 304.0 ft. W. Pine 12 S. 61° 30' West 170.6 ft. No other land marks near. We go to a stake set for S.E. cor. of sec. 18, and chain N. thru swamp, at 2657 ft. North I find a stake and points of 2 that were burned off. Notes call for Tam. 5 N 10 W 203. I find this stump and cor. checks for course and distance. It appears to be the only Tam. around. We chain N. to find N.E. cor. of sec. 18 and find old U.S. B.T.s. also old Oak stake, we drive new Post new B.T.s are Oak 10 N. 24° E 84 ft. Oak 6 N. 45° W 77.5 ft. Oak 6 S. 70° E 45.2 ft. Balsam 10 S. 71° W 46.9 ft.

Sunday April 30th, 1916. I stay at John Dague's place all day. Monday May 1st, 1916: I give my bill to Jwp Board, allowed, John Dague takes me and outfit to Backus, take 4 o'clock train for Walker. Fare 49¢.

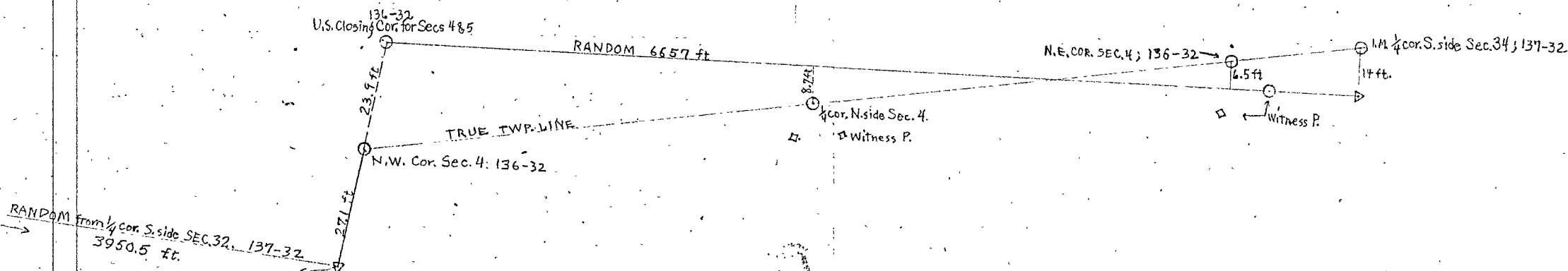
Thursday June 29th, 1916: Horst, transit, James Johnson, and John Dague, and team, set 2 m. 2 1/2 in. x 4 ft. at corners established by me in April, notes of survey as before. We begin by setting 2 m. at cor. to sec. 3, 4, 9, 10. At 1/4 cor. bet. sec. 3 & 4, set 2 m. at 1/4 cor. bet. sec. 4 & 7, set 2 m. at cor. to sec. 4, 5, 8, 9 set 2 m. at 1/4 cor. to sec. 5 & 8, set 2 m. at 1/4 cor. bet. sec. 4 & 5, set 2 m. at NW. cor. of sec. 4, closing cor. sets 239 feet N. of true Jwp. line. We set an 2 m. at closing corner. Also an 2 m. 239 ft. S. at true NW. cor. of sec. 4, 136-32. Correction for Jwp. line East from above corner to 1/4 cor. on South side of sec. 3, 4, 137-32 = .0056933. We go East on random Jwp. line and set 1/4 cor. 2 m. at Sta. 2666.93 ft. East and 8.7 ft. S. of random line to which we set.

Witness Post S 45° East 46.67 ft. Witness Post S 45° W 46.67 ft. We go East to NE. corner section 4, where we set an 2 m. for section cor. We set: Witness post S 45° E 46.67 ft. Witness Post S 45° W 46.67 ft. This cor. sets at Sta. 5333.85 ft. E. and 6.5 ft. N. of random line. Quit for night.

Friday June 30th, 1916: Horst, transit, James Johnson and John Dague with team. We set 2 m. at following corners in Jwp. 136-32. 1/4 cor. on West side of section 18 - NW. corner of sec. 18 - NE. cor. of sec. 18 - 1/4 cor. bet. sec. 17 & 18, to which we set Witness Post N 45° E 46.67 ft. - Witness Post N 45° W 46.67 ft. at NW. corner of sec. 7 on Jwp. line also (County line bet. Wadena and Cass Counties) we set an 2 m. at 1/4 cor. bet. sections 6 and 7, set 2 m. - at cor. to sec. 5, 6, 7, 8, we set an 2 m.

John Dague with team takes me and outfit to Chas. Hanley's place, where I set 2 m. for Byron Jwp. (135-32) E. B. Horst.

DIAGRAM of TWP. LINE between 136 & 137-32.



\$1.35-80

B

SURVEY RECORD No 353

T. 137N.R.32W. Secs 1-2-3-9-10-11-12-13-14-15-16-20-21-22-23-24

25-26-27-28-29-30-31-32-33-34

137-32

Thursday June 8, 1916: I begin working for Ansel Jupp. (137-32) I get notes, plats and instruments and leave Walker on 9-30 train for Backus. R.R. fare 49¢. To establish sec. corners and 1/4 sec. cor. for Judicial Ditches 3 and 4. Horton's Livery. Cartakes me to L.R. Farnum's in NE. cor. Sec. 27, 137-32, along S.R.H., where I board for several days. I get dinner at Farnum's. P.M. Take Gurley transit and 300 ft. steel tape and go to 1/4 cor. between secs. 22 and 27. I set transit over S.M. set by Curd, and locate a land mark to the West we take chain and chain roughly thru brush 1/2 mile and look for B. Is. to corner of 21, 22, 27, 28, where U.S. notes call for: Jam 9 706 7 E 64. Jam. 8 706 9 W 75: Jam. 6 S 62 W 62: Jam. 7 S 25 E 46, but find none, return to transit. quit for night

14-22-27

21-22-27-28

22-27

21-22-27-28

Friday June 9th, 1916: Horst, transit, Lew Farnum and Bert Burton, chain, Walter Farnum, flag, Nels Jensen and J.B. Chick, axmen. We begin at 1/4 S.M. between 22-27, and run line West at 9° Var. to locate corner to secs. 21, 22, 27, 28. at 1078.6 ft. West set hub. at 2100.0 ft. West enter swamp. at 2640.0 ft. West enter Jam. swamp and look for B. Is. again, we find Pt. of an old stake in swamp and I set transit over this stake and turn bearings and chain distance required by U.S. notes, we find Jam. 7 S 25 E 46 lying face down in the water plainly marked and all the other stumps, but marks are burned off. I set corner from the one B. Is. being a 4" x 48" Jam. post and take following B. Is. I set 4-6 in. Jam. post 6 feet long in the swp. 4 ft. deep and mark them Wit. post each being 46.67 ft. from corner and NE-SW-SW-SE- all at 9° Var. quit for dinner. P.M. Walter Farnum stays at home and I take balance of crew and outfit and walk to vicinity of cor. to secs. 15, 16, 21, 22, where Jensen and Burton saw the B. Is. several years ago. We look for them, but cannot find the place any more, so we go to 1/4 cor. bet. 15 and 16, run a compass line S. and chain roughly to find corner U.S. notes call for W. Pine 16 70 53 E 71. W. Pine 16 70 9 West 54 - W. Pine 18 S 20 W 11 - W. Pine 16 S 72 1/2 E 27. We find all four stumps badly burned, but marks are still plain, and check for course and distance. I set corner from B. Is. and mark old B. Is. again, as there are notes near. quit for night. E. B. Horst.

Saturday June 10th, 1916: Horst, transit, L.R. Farnum and Bert Burton, chain, Nels Jensen and Oscar Jorgerson, ax. We take outfit and go to corner of secs. 2, 3, 10, 11, where we find there are no B. Is. left and no new ones, after digging up 25 ft. of the S.R.H. we find S.M. from which a W. Pine 14 (used as a B. M.) bears N. 39° 26' E 117.8 ft. to a set used for B. M. I also set a blue stone nearly 4 in. square - 20 in. long (natural shape) S 45° E 46.67 ft.

From this corner we run line East 9° Var. to locate 1/4 cor. between 2 and 11. at 687.5 ft. East set hub: at 800.0 ft. East enter swp.: at 2333.0 ft. East set hub-leave swamp: at 3110.0 ft. East at hub: at 3300.0 ft. East enter swp.: at 3624.0 ft. East leave swp.: at 4240.0 ft. East set hub: at 5281.2 ft. East set hub: at 2640.0 ft. East bet. secs. 2-11, we cross cut out line running South cut out for preliminary ditch survey.

We look for U.S. B. Is. Balsam 9 70 18 3/4 West 18: Balsam 6 S 40 1/2 East 11: we find several balsam stumps but none that check with notes. quit for night. E. B. Horst.

Sunday - warm and windy - no work. at L.R. Farnum's all day. E. B. Horst.

Monday - June 12th, 1916: Horst, transit, Burton and Farnum, chain, Nels Jensen and Ole Odgaard, axmen, Oscar Jorgerson, flag. We return to Hub 5281.2 ft. East between 2 and 11 and look for B. Is. to cor. of secs. 1, 2, 11, 12. J. Pine 9 70 57 E 26: Popl. 10 70 30 W 28: Poplar 11 S 28 1/2 W 16: Poplar 1.6 S 45 E .01. Nothing left of Poplar but stumps and we cannot find any J. Pine, so we continue line E between 1 and 12.

at 6004.3 ft. East hub: at 7168.8 feet East hub: at 7920.0 ft. East hub: We look for B. Is. to 1/4 between secs. 1 and 12, where notes call for N.P. 20 S 41 E 7. W. Birch 5 70 20 W 19: we find a part of an old stake and the Norway P. from which I set a 4" x 4" sq. post for cor. I set transit over Hub 7920 East, backsight W. on random line and turn 86° 30' South to 1/4 cor. distance = 91.6 ft. at Station 7914.4 ft. E 1/4 cor. set S. 91.4 ft. We return

West on random line to set corners by measurements at corners 1, 2, 11, 12. We look again for B. Ia. and find the J. Pine face down in water. We set up the snag. I locate the point for corner and find the 3 poplar stumps. We set posts and take new bearings: Bur Oak 11 S 40 W 45.1 ft. Am 10 N 61 W 54.7 ft. Poplar 5 N 26 30 E 82.2 ft. Poplar 9 S 38 East 77.3 ft. I set transit over Hub 5281.2 ft. East sight W. on random and turn S 103° 55' on section cor. Corner sets South 13° 55' East 110.2 ft. from 5281.2 ft. At Station 5307.7 ft. East corner sets South 106.96 ft. We go West 1/2 mile and set 1/4 between 2 and 11. At Station 2653.85 ft. West and 59.48 ft. S. of random line. New B. Ia. as follows: Poplar 5 N 50 1/2 E 61.6 ft. Poplar 5 S. 40 20 E 46.4 ft. New bearings to 1/4 cor. between secs. 12 and 1 are (J. Pine corner) J. Pine 6 N 50° W 56.7 ft. (Sec. 1) J. Pine 6 S 39 1/2° West 41.1 (Sec. 12) From 1/4 corner between secs. 2-11 just set, we chain S on cutline thru Sec. 11 to Station 5280 and look for 1/4 on S. side of Sec. 11, where notes call for: D. Jam. 8 S 29 W 30: D. Jam. 7 N 3 W 27: all timber burned. E. B. Horst.

Tuesday June 13th, 1916: Horst, transit, Farnum and Burtson, chain, Jorgerson, flag, Nils Jensen and Ole Odegard, axemen. We set a hub near 1/4 cor. on S. side of Sec. 11 and cut line East. Var. 9° and chain roughly to keep track of distance at 1/2 mile East. We look for B. Ia. to corner of secs. 11, 12, 13, 14, where U. S. notes call for: Maple 6 N 67 E 17: Birch 8 N 55 1/2 W 21: Poplar 14 S 83 East 24: Poplar 16 S. 82 1/2 W 34: We look several hours and look at every tree and stump with 300 feet of which corner should be, but find nothing. Continue line East and begin to chain carefully. At 100 ft. East set hub: at 300 ft. East enter swamp: at 4640 ft. East leave swp.: at 1352.4 ft. East set hub: at 2640.0 ft. East set hub and look for B. Ia. to 1/4 corner between secs. 12 and 13, where U. S. notes call for: 7 Pine 11 North 73 W 54: J. Pine 5 S 18 1/2 E 35: We look several hours for B. Ia. to 1/4 cor. but find nothing but an 8 in J. Pine squared up for a corner, we continue line East. At 3030.6 ft. East set hub: at 3885.4 ft. East set hub on hill. Quit for night. E. B. Horst.

Wednesday June 14th, 1916: Horst and same crew. We continue line East between Secs. 13 and 19 to Swp. line. At 4791.2 ft. East set hub and go East to swamp and look for S. E. corner of section 12, 137-32, on Swp. line, where notes call for: Poplar 10 North 60 East 83: Poplar 8 N 50 W 121: W. Pine 12 S. 80 W 178: Poplar 5 S 80 East 53: I find the stump of a poplar with a blaze facing the pt. where corner is shown on map. I return to get transit, coming back with transit I step on top of stake. I pull stake out of water and find it to be old U. S. corner. I set transit over the stake and find all the stumps call for in notes, we drive new post from which: Poplar 10 N 75 30 East 67.1 ft. (Sec. 7) Bur Oak 5 N 65 15 W 21.4 ft. (Sec. 12) Red Oak 10 S 69° 30' W 265 ft. (Sec. 13) Red Oak 10 S 80° 15' E 120.6 ft. (Sec. 18) We return to Hub 4791.2 on random line where I set up and backsight on random line, I reverse telescope and turn angle North to Sec. cor. Corner sets North 77° 42' E 322 ft. At Sta. 5105.8 ft. E cor. sets North 68.6 ft. We return W. to a hub 5354.4 ft. W. of above corner and on same E & W line. Set transit up and turn 90° NE angle and run random line N. between Secs. 11 and 12. At 697.3 ft. North set hub: at 1090.2 ft. N. set hub: at 1150.0 ft. N. enter swp.: at 1910.0 ft. N. set hub: at 1800.0 ft. N. leave swp.: at 2608.8 ft. North set hub and enter Jam. swp. Quit for night. E. B. Horst.

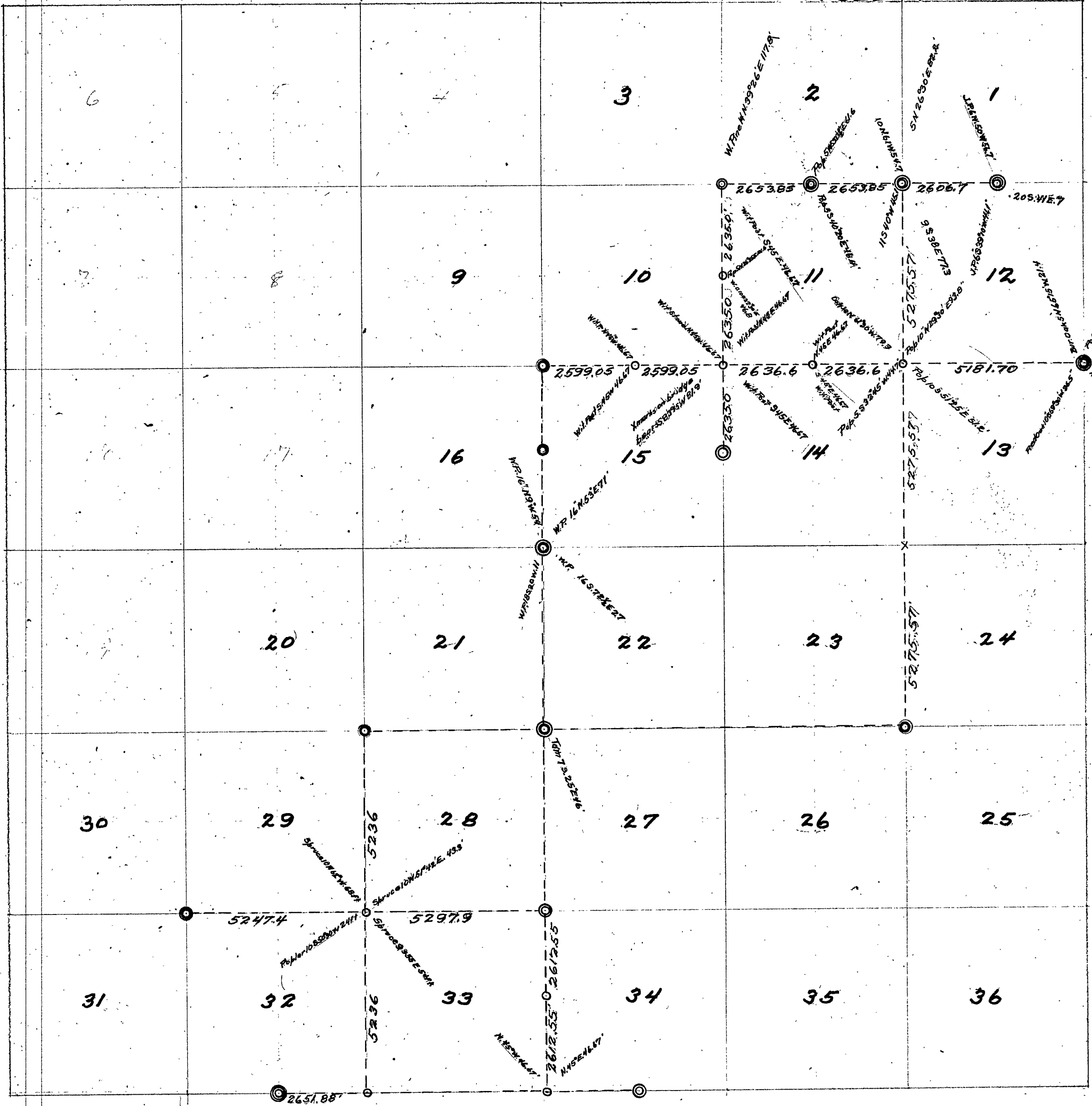
Thursday June 15th, 1916: Rain in A.M. P.M. Horst, Lew Farnum, Walter Farnum and Ole Odegard go to hub 2608.8 set yesterday, and cut line North between Secs. 11 and 12 to cor. 1, 2, 11, 12 at last Hub on random line corner sets North 58° 32' East. From Sta. 2700 North on above line was chained. Friday June 16th, as follows: at 4000.0 ft. N. leave Jam. swp. at 4027.5 ft. North Hub: at 4181.8 ft. N. Hub: at 5269.5 ft. N. Hub corner to sec. 1, 2, 11, 12, sets N. 58° 32' East 180.4 ft. At Sta. 5363.7 ft. N. cor. sets E 153.9 ft. E. B. Horst.

Friday June 16th, 1916: Horst, transit, Farnum and Burtson, chain, Walter Farnum, flag, Nils Jensen and Ole Odegard, axe. We go to Hub near corner of 11, 12, 13, 14 and start line South from Hub 5354.4 ft. West of Swp. line on a straight line with the one running North. Farnum and Burtson finish chaining the line, running North and follow our chain as follows: at 100.0 ft. S. small pond - at 190.0 ft. S. leave pond.

B

Plat of
SURVEY RECORD No. 353

ANSEL TWP.



at 400.0 ft. South enter sloughs. at 750.0 ft. S. leave slough. at 1242.7 ft. S. set hub. at 1874.3 ft. at 2301.8 ft. S. set hub. at 2640.0 ft. S. we look for U.S.P.S. Jam. 6 S 47 1/2 E 35. Jam. 8 S 20 1/2 W 52. all burned up. We continue line S. at 3369.8 ft. S. set hub, enter swp. at 3667.0 ft. S. cross small creek N.E. SW. at 4015.0 ft. S. leave swp. at 4732.9 ft. S. set hub. at 5280.0 ft. S. set hub and look for B.S. to corner of 13, 14, 23, 24, all gone, we continue South. at 5400.0 enter Jam. swp. at 6270.0 ft. leave swp. at 6358.0 ft. S. set hub. at 7548.5 ft. S. set hub. quit for night. E. B. Horst.

Saturday June 17th, Horst, and same crew. Continue S. between 23 and 24. at 7920.0 ft. S. set hub and look for B.S. to 1/4 cor. bet. 23 and 24, all gone, we continue S. at 9347.5 ft. S. set hub. at 10481.6 ft. S. set hub. I turn NE angle 90 and cut line E. once set by J.W. Cur. at 206.6 ft. East I.M. to cor. of 23, 24, 25, 26, sets North 17.6 ft. 10464.0 ft. S. I.M. sets East 206.6 ft. Our chain for W. side of Sec. 12, 13, and 24 = 15827.7 ft. U.S. chain = 15840.0. As all are = each section = 5275.57 ft. long. We return to pt. of beginning at 5354.4 W. hub on East + West random and chain random line West to I.M. at cor. to 9, 10, 15, 16. Chaining West on S. side of Sec. 11 and 10, beginning at a hub. 5354.4 ft. West of S.E. cor. of Sec. 12 on swp. line. at 5558.0 ft. West hub. at 5969.8 ft. West hub. at 6768.8 ft. West hub. at 7700.0 ft. West hub. at 7720.0 ft. West enter a 1/2 mile open swp. at 10500.0 leave swp. at 10548.0 ft. West we set Hub in center of S.R.H. Center located from a small concrete bridge 15.3 ft. N. of Hub. I set transit over this hub and continue West, at 10950 ft. West enter Jam. swamp. at 13050 ft. W. look for B.S. to 1/4 cor. bet. 10 and 15. Note call for Jam. 12 N. 52 E 22. Jam. 10 S. 13 1/2 E 61. all gone, continue West. at 13450.0 leave swp. enter field. at 15011.3 ft. West set hub in field. at 15653.0 ft. West set hub in N. + S. road. I.M. at corner to 9, 10, 15, 16, sets South 70.8 ft. quit for night. E. B. Horst.

Monday June 19th 1916: We begin at 1/4 corner between sections 14 and 15, and chain North on S.R.H. at 2604.5 ft. North intersect East and West random line at station 10548.0 feet West. at 5200.0 set hub in center of road. at 7905.0 ft. North I.M. to corner of 2, 3, 10, 11. In the afternoon. I run transit line North on S.R.H. and set Hubs on line from which to set corners. Cor. to sections 10, 11, 14, 15, sets North of P.D. of East and West random line 30.5 ft. and East of P.D. on North and South random line 98.1 ft. being 93.1 feet East of center of S.R.H. We set a 4" x 4" x 4" wood post for corner, with bearings as follows: Witness Post North 45° East 46.67 ft. Witness Stone ^{North} 45° West 46.67 ft.

X-mark on East end of bridge bears South 83° 15' West 81.9 ft. Witness Post South 45° E 46.67 ft. all 9° var.

Tuesday, June 20th 1916: We go to corner to sections 11, 12, 13, 14, and set wood post (Oak) for corner at station 5781.70 ft. West of S.E. corner to section 12. at 5275.57 ft. S. of NW. corner to section 12 from Hubs on random lines, and take new bearings as follows:

Poplar 10 North 29° 30' East 93.8 ft. Oak 10 N. 61° 30' West 79.3 ft. Poplar 5 S 32° 45' West 44.7 ft.
 Poplar 10 South 51° 25' East 51.2 ft. We walk West on random line 1/2 mile and set 4x4 post for 1/4 corner between sections 11 and 14. at station 7818.3 West and 58.82 ft. North of random line to which we set Witness Posts. One North 45° E. 46.67 ft. and one South 45° E. 46.67 ft. We go West to corner of 10, 11, 14, 15, and eat dinner. J. W. Cur. stops to see how we are getting along and checks some of my calculations on work, and leaves again. I take crew and set 1/4 corner between sections 10 and 11, at station 5270 North of 1/4 between 14 and 15 and 46.55 ft. E. of North and South random in center of S.R.H. from which: Poplar 5 N. 26° 35' E 101.6 ft. W. Oak 10 S. 27° 30' E 46.8 ft. I walk North 1/2 mile with transit and read angle of S.R.H. at corner to secs. 2, 3, 10, 11. North of corner same North at 9° 45' var. road South of corner deflects West 1° 32'. I take transit South to East and West random line between Secs. 10 and 15, and set over P.D. Hub in center of S.R.H. I send crew West on line to set Hub in swamp at station 13059.95 ft. West. I take transit to this Hub. Sight East to P.D. Hub and turn 90° South we chain South 20.15 ft. to true sec. line and set 1/4 corner to 10 and 15, being 4x4 Jam. from which Wit. Post bears North 45° West 46.67 ft. Wit. post bears South 45° West 46.67 ft. I stay at N.P. Jensen's over night. E. B. Horst.

Wednesday June 21st, 1916: We begin at I.M. at S.E. corner section 20, and run line South at 9° var. to establish corner at S.E. of section 29: at 25 ft. South enter swp. at 2769.6 ft. S. set hub, leave swamp: We look for B.S. to 1/4 corner where U.S. notes call for Jam. 9 N. 27 East 10: Jam. 8 North 17 West 14. Timber is rotten and burned. We find no B.S. and continue South: at 3505.1 ft. South set hub. at 4099.0 ft. set hub. at 4528.0 feet South tack in poplar stump: at 5400.6 ft. South set hub enter swamp. at 5280 we look for U.S. B.S. Poplar 13 North 60 E 23: Poplar 12 N 12 W 32

Coplar 8 S. 33 W 73; Poplar 14 S. 32 East 26: I have witnessed that this country was burned bare at Pt. corner is called for 18 years ago we find no evidence of corner continue South at 7925.0 ft. South set Hub and look for B. T. to 1/4 cor. U.S. notes call for D. Jam. 6850 W 6: D. Jam. 7857 E 19. B. T. gone, we continue South: at 9200.0 ft. South leave swamp: at 9462.4 ft. set hub: at 10491.2 ft. set hub on East and West random Twp. line run for Poplar Twp. at Sta. 2808.1 ft East

Thursday, June 22nd, 1916: Stake an old post set for corner to Secs. 29, 30, 31, 32 by Bartlett and identified by Bert Burton and L. B. Young and drive new wood post in same pt. set tack at true point. I start line East at 9° var. at 25 ft East enter swp. at 1446.7 ft. E. set hub on pt. of highland: at 1500.0 ft. E. leave Highland: at 2962.4 ft. E. set hub, leave swp.

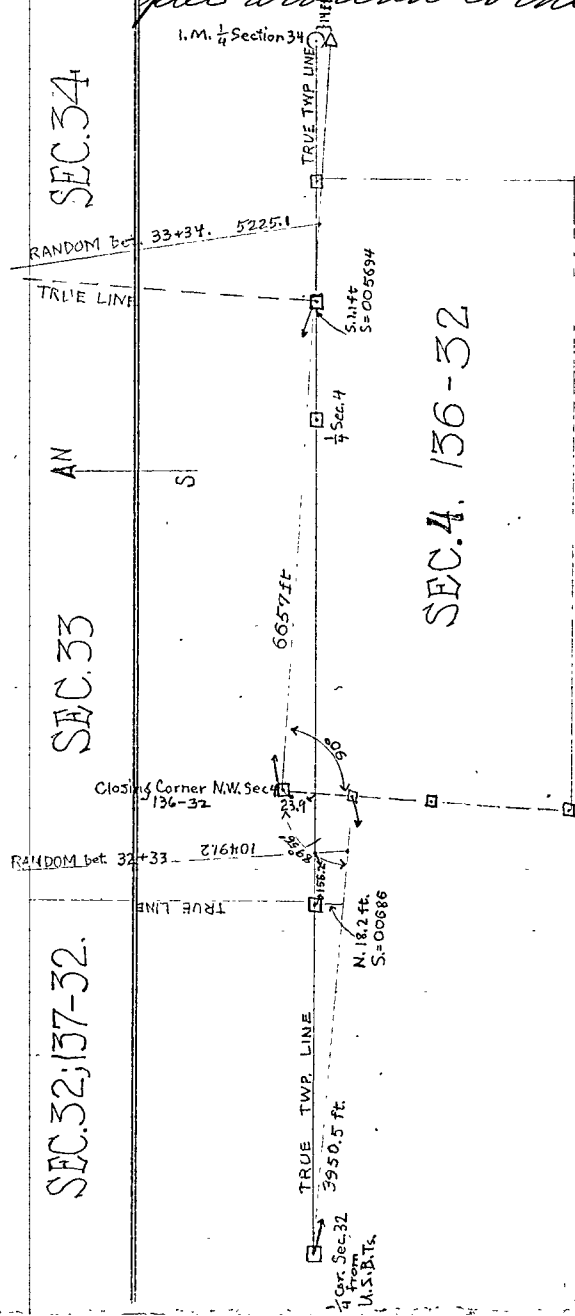
Friday June 23rd, 1916: Horst, transit, and same crew, beginning at Hub 2962.4 ft. E. continue random line E. begun yesterday: at Hub 3690.2 ft. E. set hub: at 4074.5 ft. E. set hub: at 4140.0 ft. E. enter swp: at 5175.0 ft. E. leave swp: at 5290.2 ft. E. P. D. Hub on N. & S. random sec. line at 5178.2 ft. South: at 6052.5 ft. E. set hub: at 6656.6 ft. E. set hub: at 7112.0 ft. E. set hub: at 7200.0 ft. E. enter swp: at 9115.8 ft. E. enter swp. leave swp: at 10285.9 ft. E. enter swamp: at 10560.0 ft. E. enter swp. I. M. to cor. of sec. 27, 28, 33, 34, sets So. 6° 08' West 135.9 ft. at Station 10545.3 ft. E. corner sets So. 135.2: at I. M. to cor. of 27, 28, 33, 34, I start random line So. at 8° 30' var. at 612.4 ft. S. set hub: at 2640.0 ft. S. set hub: B. T. all gone: at 2968.7 ft. S.

set Hub and quit for night. Saturday, June 24th, 1916: Horst, transit, same crew. we continue line So. bet. 33 and 34, at 3365.8 ft. S. set hub: at 2778.8 ft. S. set hub: at 3875 ft. S. set hub, enter Jam. swp. at 5224.0 ft. So. set hub set P. D. Hub on E & W. random Twp. line. at Sta. 4086.3 ft. E. of closing cor. at NW. cor. sec. 4, 136-32, we go West on Twp. line to P. D. of line run So. between 32-33. I calculate point for cor. from the random lines as per diagram. I set S.E. cor. of Sec. 32 at Sta. 2651.875 E. of 1/4 corner on So. side of Sec. 32, and 18.2 ft. North of random line on a straight line between 1/2 cor. on So. side of Sec. 32 and 1/4 cor. on So. side of Sec. 24, both in 137-32. we drive 4x4 wood post for cor. and as there are no permanent objects for bearings, we pile a large stone pile around corner and quit for night. E. B. Horst.

Sunday June 25th 1916: Horst, transit and same crew. we walk to St. cor. of Sec. 33, and set a 4x4x6 tam. post for cor. 81.2 ft. West of P. D. of random and 11 ft. So. of East and West random Twp. line to which we set 2 Witness Posts. One N. 45° E 46.67 ft. Witness Post North 45° West 46.67 ft. we walk North 1/2 to 1/4 bet. 33-34 and set post for 1/4 corner. at Sta. 2612.55 ft. So. equidistant to sec. corners and 40.6 ft. West of random line. We mark corner with stone mound. we go to point for corner to sections 28, 29, 32, 33, and set post for corner from P. D. Hub 42.8 ft. West and 57.8 ft. So. to which we take the following bearings:

- Spruce 10 North 51° 42' East 43.9 ft.
- Spruce 10 North 62° West 68.0 ft.
- Coplar 10 South 50° 30' West 24.0 ft.
- Spruce 9 South 55° East 54.0 ft.

E. B. Horst.



Friday, Dec. 22nd, 1916: E. B. Horst working W. H. Cobban. Leave Walker at 12-30 P.M. on M. & D. freight train for Reguot. R.R. fare 85¢, arrive at Reguot 6-30. I go to Will Anderson's Hotel for supper and over night. E. B. Horst.

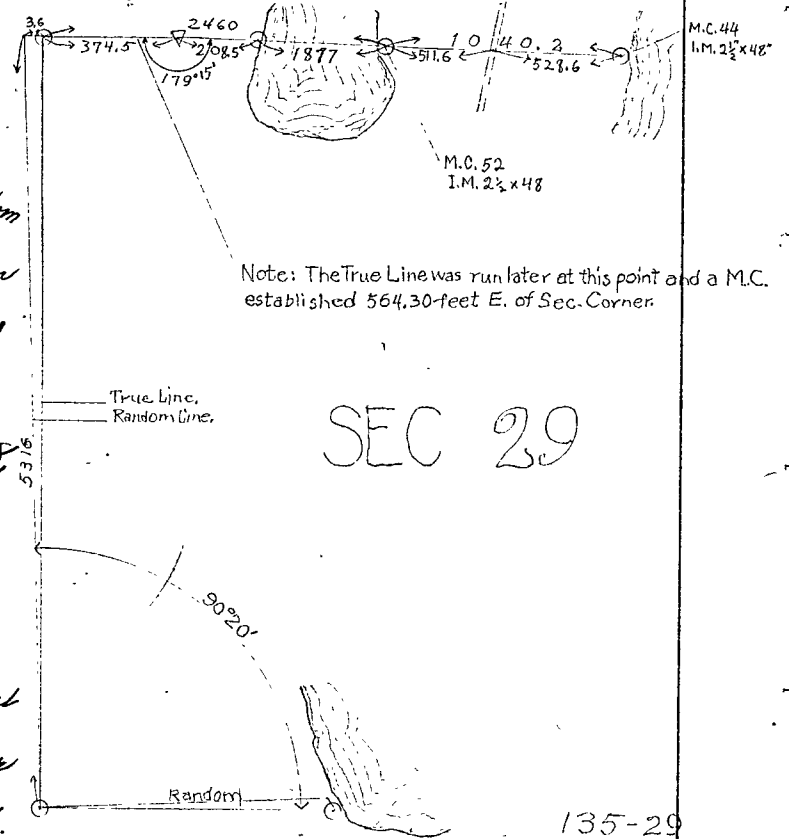
Saturday Dec. 23rd, 1916: I pay Hotel bill at Reguot 1.00 and hire Ray Anderson with auto to take me and outfit to Rocky Point Resort, where I board while working for W. H. Cobban. P.M. I take transit and 100 ft. steel tape and Chas Anderson and correct hubs from South boundary of section 29, 135-29 South to true line as follows: Hub at 109.8 ft. E goes So. 1.30 ft. I set transit over S. M. at corner to Sec. 29-30-31-32. Quit for night.

Sunday, Dec. 24th, 1916: Horst, transit, Chas Anderson, flag and ax, Fred Reynolds, ax. We begin at Cor. to Sec. 29-30-31-32. I sight East on true So. line of Sec. 29 and turn W. angle of 90° 22' and run line North. Needle shows 8° var. We cut line N. to S. M. at cor. to Sec. 19, 20, 29, 30. corner sets East of random line 3.6 ft. From pt. 3.6 ft. West of S. M. I turn S.E. angle 90° and cut line E. to lake. (Lake Margaret) No chaining today. Quit for night.

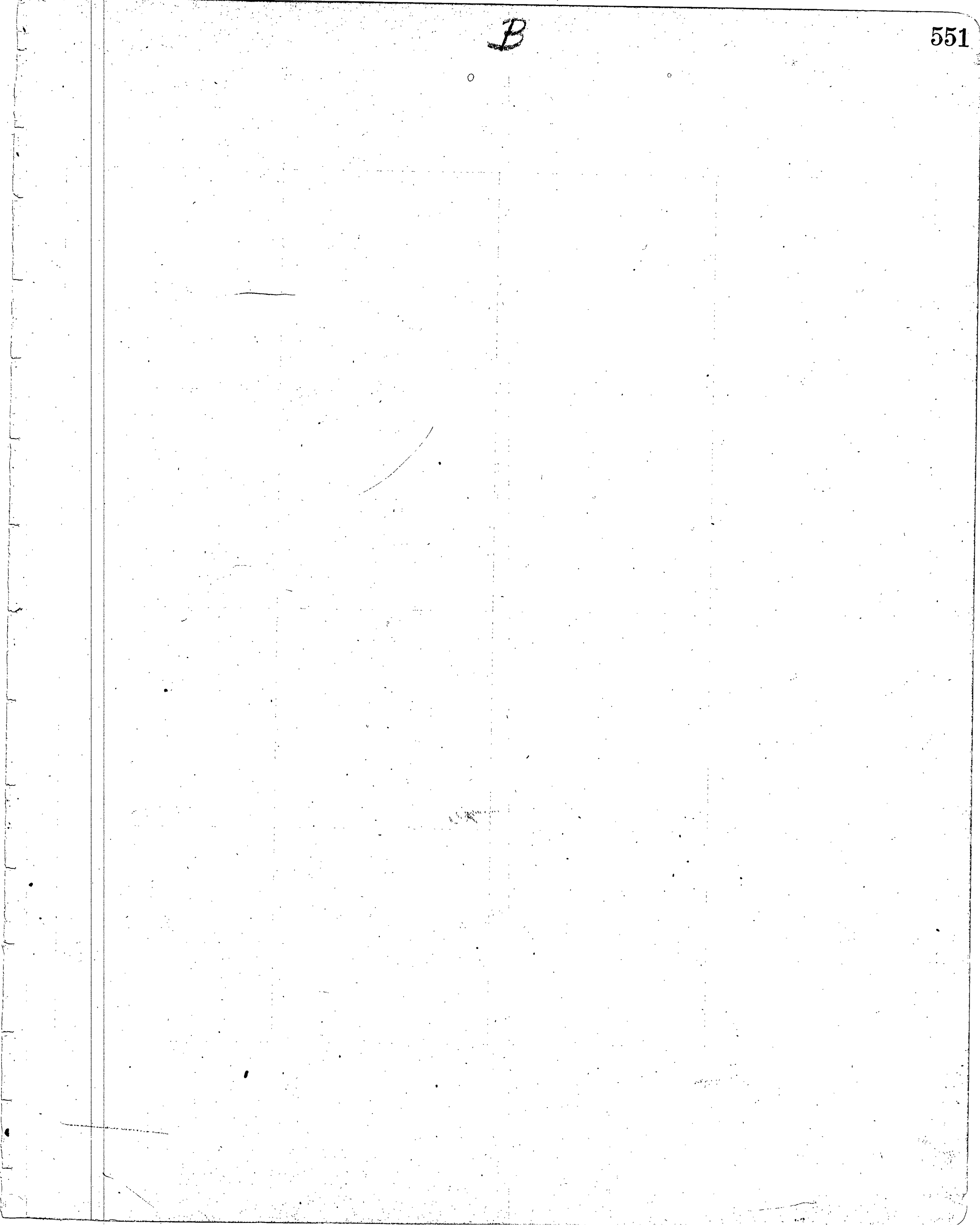
Monday Dec. 25th 1916: Horst and Reynolds, chain. Anderson, axman. We begin chaining at S.W. cor. of Sec. 29 and chain West Sdry. at 670.5 ft. N. nail in Jam. log. at 1116.0 ft. North nail in Jam. log. at 1320.0 ft. No. set temp 1/4 cor. at 2068.8 ft. No. nail in Jam. log. at 2400.0 ft. No. enter open swp. at 2640.0 ft. No. set temp 1/4 cor. at 3442.0 ft. No. channel of Gull River: at 3533.0 ft. No. channel of Gull River: at 3748.0 ft. No. wet swp. at 3760.0 ft. No. set temp 7/16 cor. at 4431.0 ft. North leave swp. at 4652.0 ft. North enter meadow. at 5304.0 ft. North So. edge of road (west) at 5316.0 ft. No. S. M. at Cor. to Sec. 19-20-29-30 set W. E. 3.6 ft. At S. M. we chain E. on cut outline at 6.0 ft. E. leave No. road and enter swp. at 300 ft. E. leave swp. at 374.5 ft. E nail on top of hill. at 583 ft. E. enter W. branch lake. at 2457 ft. E. leave west Branch Lake: at 2460 ft. E. S. M. at M. C. No. 52. E. B. Horst.

Tuesday: Dec. 26th 1916: We are unable to work on account of terrific wind and snow storm slightly wet. E. B. Horst.

Wed. Dec. 27th 1916: Horst, Reynolds and Anderson go to Hub 1320 No. on random West Sdry. line in swp. and chain N. to Sta. 1329, where I set Hub on random and turn NE angle 90° 35' and run So. 1/16 line E. at 538.0 ft. E. leave swp. at 634.1 ft. E. winter hub: at 1081.3 ft. E. set winter hub: and turn 0° 26' Right to miss some large Oak trees. at 1506.0 ft. E. center line of new swp. road 9.8 ft. N. of Sta. 8, at 1775.0 ft. E. set temp. M. C. 10 ft. West of high water mark (Bull Lake) we go west to Sec. line and No. to Sta. 2658, where we set Hub on random line and turn W. angle of 90° 30' and 1/4 line E. at 1320 set temp 1/4 cor. at 1378 ft. E. leave swp. at 1524.7 ft. E. set winter hub. Quit for night. Thursday Dec. 28th 1916: Horst and same crew. Continue 1/4 line E. to Gull Lake. at 1663.0 ft. E. about center line of new swp. Road So. of Sta 13. at 1762.0 ft. E. enter pond: at 1983.0 ft. E. leave pond: at 2005.0 ft. E. set temp. M. C. 18 ft. West of High Water mark on shore of Gull Lake. We walk E. on Gull Lake, where I set transit on line bet. M. C. No. 44 and 1/4 cor. set in lake last summer, being 1/4 bet. Sec. 29-32. We go to M. C. 44 and chain So. to 1/4 cor. distance = 5327 ft. I do this to check E. & W. lines, find the So. 1/16 line 0.76 but the 1/4 line is 14 ft. No. due to a mistake of calculating angle, which should have been 90° 46'. I set temp. M. C. South 7.3 ft. 2 X 38 S. M. Temp. M. C. on S. 1/16 line goes North 2.0 ft. being correction for 26' angle. set 2 X 4 S. M. M. C. quit for night. Friday, Dec. 29th 1916: Horst and same crew. Begin at a pt. on Lake Margaret. Lake shore 10 ft. So. of a frame building, where we set a 3/4 X 3/16 in. I. pipe (also one at place of beginning) thence Spt 17° 30', this course bears So. 85° 20' E at 8° var. at 332.2 ft. E. set hub. at 418.2 E. center of new swp. road, true line 26' NW. angle = 98° 08'. at 576.5 ft. E. set hub: at 758.3 ft. E. set hub. Hub designated point we run for sets South 8.8 ft. Correction = .0116 of a ft. So. for each ft. E. I set hub 576.5 ft. E. South 6.7 ft. and set transit over an designated point. Backsight on hub at 576.5 on true line and run line E. 35.0 ft. or Sta. 793.9 ft. E. and set a 3/4 X 3/16 in. Iron Pipe 18 ft. West of water's edge of Gull Lake (steep bank) I set transit on true line at edge of lake and turn W. angle of 109°, run N. 625 ft. set hub on lake shore. We return to Hub 332.2 on random line and set a hub 3.85 ft. So. on true line. angle at 280.1 ft. from pt. of beginning now = 16° 50' Left. at pt. of begin. I sight E. to S. M. 280.1 ft. E. and turn W. angle 57° 15' and run along lake shore 174.5 ft. set nail on ice, thence Spt 3° 05' 500 ft. and set nail on Lake shore. Required on E. & W.



B



line parallel to longest part of line run E+W from pt. of beg. and far enough north to include between said lines 10 acres. I now calculate req'd width of tract. Quit for night Saturday Dec. 30th, 1916. Horst and same crew begin at Gull Lake on meander course run last night. 530 ft. from E+W line I turn 109° S. to E. set a nail in ice on Gull Lake 175 ft. E. of transit. I move transit to this point, and run line west parallel to the one 500 ft. So edge of high bank set a 7/4 X 3/8 inch Iron Pipe 12 ft. W. of lake shore, at 43.6 ft. W. set nail at 280.8 ft. W. set hub at 473.0 ft. W. cross centerline of road. at 656.4 ft. W. set hub at 913.0 ft. W. set a 7/4 X 3/8 in. 2 7/8 ft. E. of lake Margaret. From this point turn E. to N. 78° 07' - 279 ft. thence left 22° 06' - 430 ft. to M.C. 52. Backsight to last point and turn SE angle to true Sec. line = 105° 54' we walk E. and chain from M.C. 44 S. along lake shore to line just run. Distance = 1014 ft.

Sunday, December 31st, 1916: No field work. I can't get anyone to help me, I work on calculations in A.M. at Rocky Point all day. E. B. Horst.

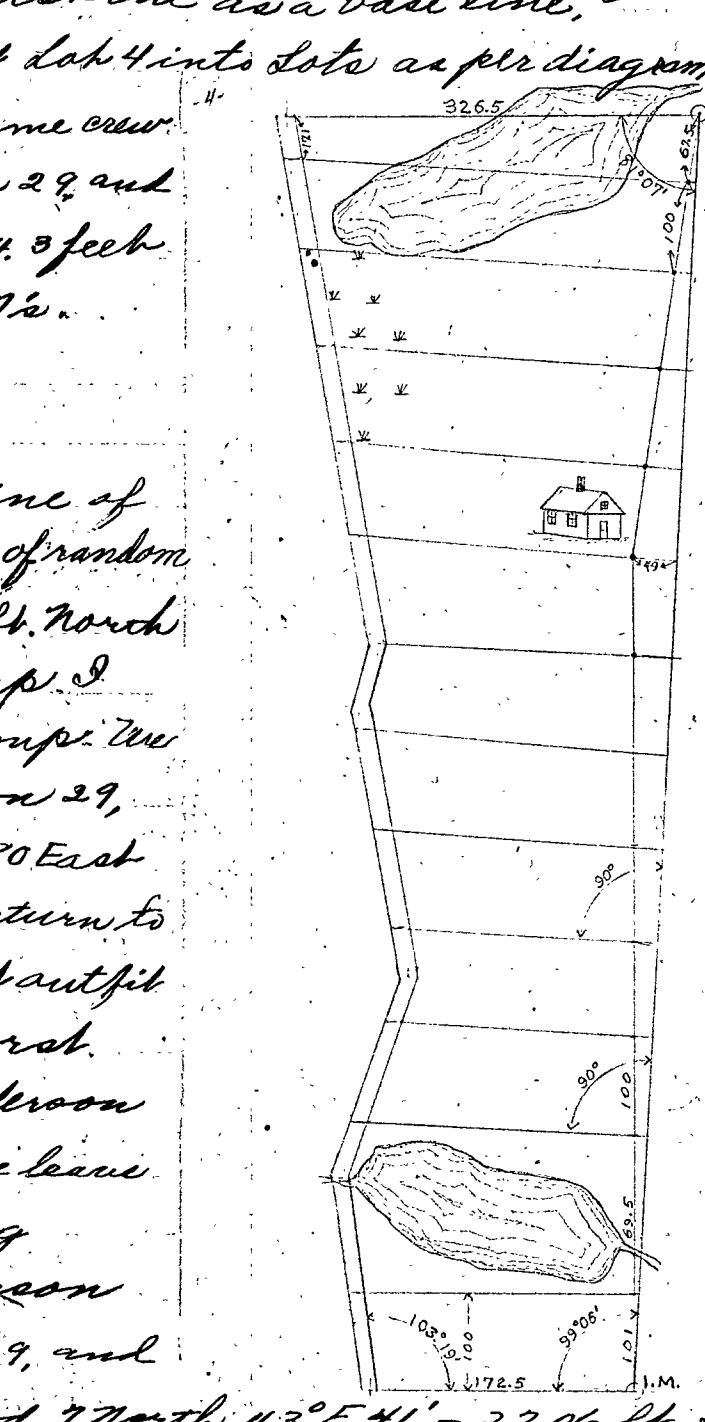
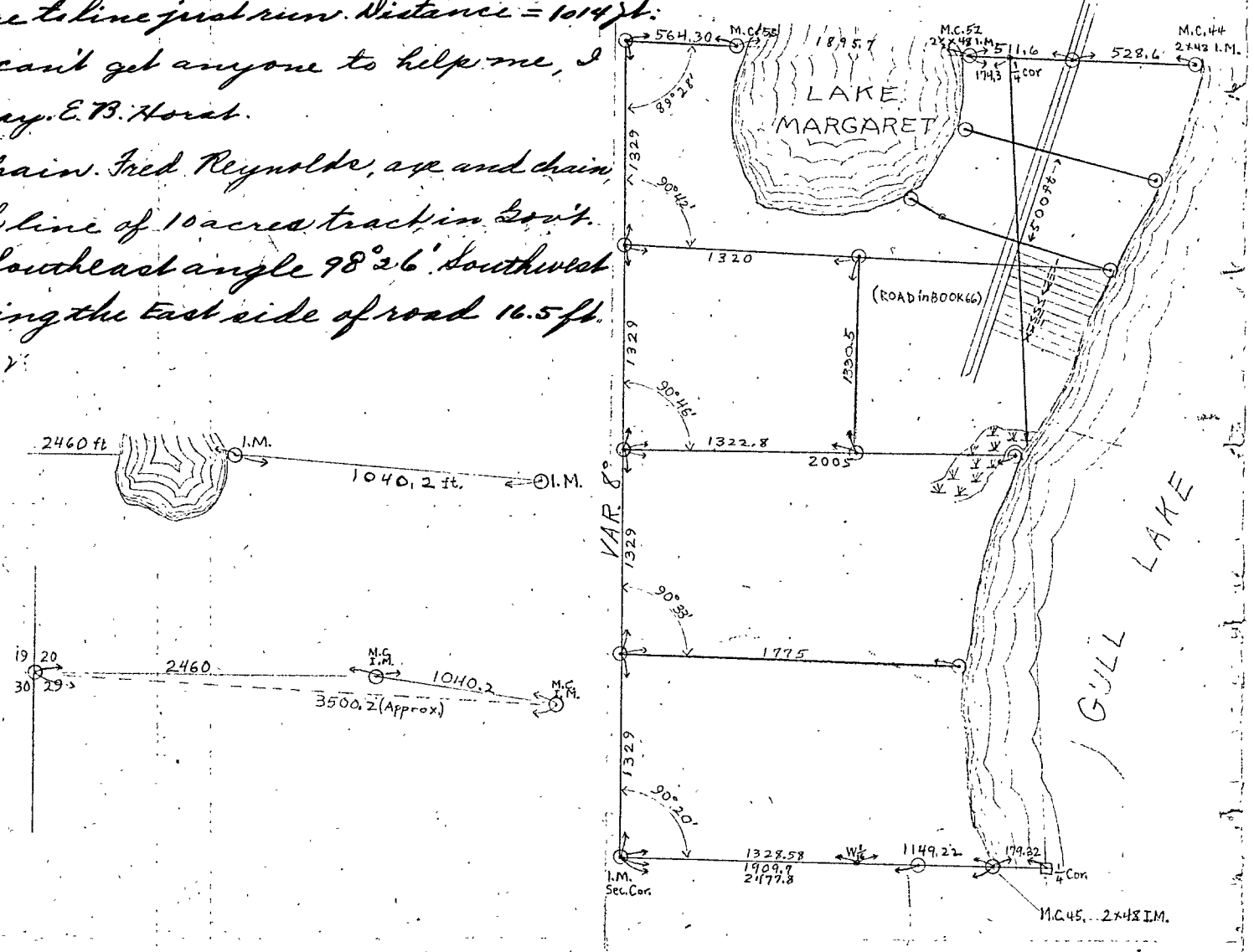
Monday, January 1st, 1917: Horst, transit and chain. Fred Reynolds, axe and chain, Herbert Anderson, axe and flag. We begin at P.S. of south line of 10 acre tract in Lot 1 and 2, and centerline of new Sup. Road. Southeast angle 98° 26'. Southwest angle of south line to shore line = 75° 30'. Using the east side of road 16.5 ft. from center as a base line we set a 2 X 48 inch I.M. for Northwest corner of Block. We chain south 84.9 ft. for rear of lot 1, all succeeding lots are 100.5 ft. at rear. We chain out 10 lots and set 2 X 48 ft. I.M. going to lake shore at NE corner of Block and chain 3 lots each 103.3 ft. then I turn 6° 10' left and chain 101.0 ft. each for the remaining 7 lots at southeast corner of Lot 10. I take P.S. and set I.M. Elm SW 14.4 ft. Oak 57.8 ft.

Tuesday, January 2nd, 1917: Horst and same crew. Begin at M.C. (P.M.) an East and West 1/4 line and right south along lake shore to M.C. (P.M.) at South 1/4 line, using this line as a base line, I subdivide the shore line of Government Lot 4 into lots as per diagram.

Thursday, January 4th, 1917: Horst and same crew go to point for 1/4 corner on North side of Section 29 and set a 2 X 48 inch I.M. on true section line 174.3 feet East of M.C. No. 52, with the following B.S.'s. Basswood 5 North 12° West 23.7 feet, Iron wood 9 South 71° West 9.4 feet. We walk to Station 3989 North on West line of Section 29 and set a 2 X 48 I.M. 3.7 ft. East of random line for North 1/4 corner. Corner sets 8 ft. North of an old channel of Horne Brook in swamp. I turn 90° 33' Northeast 1/4 at 985 ft. E. leave swamp. We walk to point for center of West 1/2 of Section 29, and set a 2 X 48 inch I.M. at Station 1322.80 East on true 1/4 line. This concludes this survey. I return to Chas. E. Anderson's (Rocky Point Resort) and get outfit ready to go to Walker from Nisewa. E. B. Horst.

Friday, January 5th, 1917: Herbert Anderson me to Nisewa where I take train for Walker. We leave charges 5.00 (not paid) I work in A.M. checking Anderson walk to Sandy Point, where Anderson left to corner of sections 32 and 33, 135.29, and where N.S. notes call for following: Ironwood 7 North 43° E. 41' = 27.06 ft. Ironwood 6 N. 50° W 46' = 30.36 ft. Lind 8 S 10° W 7' = 4.62 ft. Lind 8 S 80° E 33' = 21.78 ft.

The southeast stub still remains, showing a few scribe marks. The rotted stumps check for course and distance. I set a 2 X 48 I.M. with new bearing trees



1	358.6	100.5
2	346	100
3	335.6	100
4	325.2	100
5	325.4	100
6	325.7	100
7	323.0	100
8	323.3	100
9	326.6	100
10	326.9	100
	327.2	100

with horse and sleigh takes Anderson's at 12:30 P.M. Livery calculations and I and Chas. say there is just one old B.S. sections 4 and 5, Sup. 134-27, with horse and sleigh takes Anderson's at 12:30 P.M. Livery calculations and I and Chas. say there is just one old B.S. sections 4 and 5, Sup. 134-27,

B

Maple 87° 88' E. 26.7 ft. - Elm 97° 49' W. 11.5 ft. - Maple 12 S. 46° W. 48.5 ft. - Elm 11 S. 47° E. 30.3 ft. Stake train at Nisewa for Walker. R.R. fare 97¢. Arrive at Walker 3-30 P.M. Stay at J.W. Curro's over night. E.B. Horst

Wednesday Feb. 14-17: Horst with survey outfit leaves Walker for Reguat to get some angles and measurements, needed for platting Cobban's lots. R.R. fare 85¢. Meet J.C. Carson at depot and drive out there for dinner. Horst and J.C. Carson walk to NW corner of Sec. 29, we chain E 564.3 ft. and set stake mark for I.M.C. No. 53, at proper distance. Walk E. to new Imp. road and S. to N. line of 10 acre tract, previously surveyed. The P.D. of road is 976.0 ft. W. of S.M. set on lake shore, being NE angle of 10 acre tract, and at Sta. 13 and 1498.1 ft. N. on road. We walk S. to S. line of 10 acre tract, P.D. is at Sta. 13 + 993.0 ft. N. on road and 375.1 ft. W. of S.M. at SE. cor. of 10 acre tract. at M.C. on E+W 1/4 line, we chain NE. along lake shore to SE. corner (S.M.) of Shore Acres. Distance = 46.90 ft. NW angle of lake shore to true E+W 1/4 line = 108° 30' Quit for night. E.B.H.

Thursday Feb. 15-17: Horst, transit, J.C. Carson, axe and flag. We go to bet. Sec. 20-29 and run random line (4) thru Sec. 29 at 8° 15' Dev. At 472.5 ft. S. set bin. spike and offset 2 ft. W. to miss large tree. at 654 center of N. + S. Imp. road. NE angle = 27° 45'. At Sta. 13 + ft. N. on road. at 789.4 ft. S. cross N. boundary of Ten acre tract. NW angle = 70° 25' - 413.7 ft. W. of S.M. at Bull Lake. At 1015.0 ft. S. set spike. at 1294.5 ft. S. set spike. at 1365.0 ft. S. set spike. 1/4 cor. on S. side of Sec. 29, set S. 3915 ft. and E. 93.1 ft. - 2 ft. offset = .01722 E for each ft. S. Hub 1294.5 go SW E. 22.3 + 2 ft offset = 243 ft. I set transit over this hub and run true 1/4 line S. to Bull Lake. At Sta. 1328.6 S. cross S. bdy of 10 acre tract 34.5 ft. W. of SE. cor. SE. angle = 69° 24'. at 1388.1 ft. S. on true N. + S. 1/4 line I set a 2x48 in. S.M. for M.C. 17 ft. from lake shore (side hill) and on lat line parallel to lake shore being 56.2 ft. from 34x36 in. S.M. at NE. cor. Lot 1 in Block to be known as Shore Acres.

Friday Feb. 16th 1917: Horst and Carson go to M.C. on Bull Lake on E+W 1/4 line, where I sight W. on true 1/4 line, turn SW angle to N.E. on S. 1/4 line. angle = 81° 07'. at S.M. at SE. cor. of Gov't Lot 4. NW angle = 99° 06' - angle of S. 1/4 line to Imp. Road. NE angle = 103° 19'. at NW angle to Sec. 29 SE. angle = 89° 22' (true line). Quit for night.

Saturday, Feb. 17th, 1917: Horst hires J.C. Carson with team to take him and outfit to Reguat. I pay J.C. Carson \$12.00 for board, labor and livery. I take 3-00 P.M. train to Walker, arrive at 5-30 P.M. at Curro's over night. R.R. fare 80¢. E.B. Horst.

P.M.

1/4 Cor.

Correction

1328.6

1388.1

For Course of Road, See Book 66.



Saturday, March 11th, 1916: I get notes and instruments ready to go to Hackensack to finish Abb Lake road on Town line, taking train at midnight.

Sunday, March 12th, 1916: At 12-47 a.m. I take train at Walker for Hackensack, reach there at 1-22 a.m. as there is a team at Walker to meet some passengers I have a chance to ride out. I leave my survey tools at Chas. Bergrens place and go to G. A. Jusler's for breakfast and dinner, arriving at 5-30 a.m. In the P.M. Ernest Jusler and I go to Bergrens to look for a place to board. He directs us to Richard Rossberg's, where we make arrangements to board. At Rossberg's for supper, and over night.

Monday, March 13th, 1916: Horst, transit, Ernest L. Jusler, flag and axe. We go to southeast corner of Sec. 24, Twp. 140, North Range 30, locate pt. for corner from which B. T. taken by law and start line So. at 9° var. at 1746.0 ft. S. set spike: at 2265.2 ft. S. set spike: B. T. at SE. corner Sec. 24, 140-30 are Norway pine 10 North West 46.9 ft. Norway pine 10 South West 105.0 ft.

Tuesday, March 14th, 1916: Same crew, we continue Town line So. chaining & setting hubs at 2829.4 ft. South hub: at 3250.1 ft. S. spike: at 3519.7 ft. S. spike: at 4241.0 ft. S. spike: at 5100.0 enter small Jam. swamp. Weather pretty cool with an occasional snow flurry.

Wednesday, March 15th, 1916: Horst and Jusler. We continue Twp. line S. to 5044.6 ft. So where we set spike here. I leave transit and take Survey Compass and look for B. T. We find B. T. to SE. corner of Sec. 25, without any trouble only one left being. Jam 47.56 1/2 W. 28. from this I establish pt. and drive stake for corner, I go North to Hub 5044.6 set up transit and sight W. to corner deflection angle = 5° 30' to the W. distance being 293.6 ft. by lat. and dep. at station 5336.8 ft. Corner set W. 28.1 ft. I set transit over section corner and sight North and East to hub 5044.6 - turn angle 5° 30' to left reverse telescope and start line So. being parallel to random, just finished, we cut line South but do not chain. E. B. Horst.

Thursday, March 16th, 1916: Horst, transit, Jusler, flag and chain. We chain So. from SE. cor. of Sec. 25, 140-30, on Twp. line: at 25.0 ft. So. leave small Jam. swamp. at 353.2 ft. So. set spike (20d): at 1057.0 ft. S. set spike: at 1450.0 enter sewer: at 1800.0 leave sewer: at 1849.5 ft. So. set spike: at 2045.0 ft. So. old log road: at 2236.0 ft. S. old log road: at 2500.0 ft. So. enter Jam. swamp. at 2640.0 ft. So. set large stake: Here we look for 1/4 cor. N. S. notes call for one 12" and one 14" Jam. B. T. but we cannot locate them. They are evidently down and snow 3 ft. deep making it next to impossible to find them. E. B. Horst.

Friday, March 17th, 1916: Same crew. To determine pt. for 1/4 corner on E. side of Sec. 36, 140-30. I decide to continue Range line South to SE. corner of Twp. 140-30. We run line So. but do not chain, cross creek and come to small lake; where N. S. notes call for M.C. with one 7 inch Jam. B. T. we find a few small trees but no B. T. We also look on West, South and E. side of lake for M.C. but find none, so we bring transit and tools back to Hub 2236 ft. South to old log road, and return to Rossberg's for night. E. B. Horst.

Saturday, March 18th, 1916: Horst, transit, Jusler, flag and axe. We go to P.M. at 1/4 cor. on West side of Sec. 36, 140-30, and start random line E. thru section. Setting spike for hubs, we cut line but do not chain. Cut line about half way across section and quit for night. E. B. Horst.

Sunday, March 19th, 1916: At Richard Rossberg's. No work.

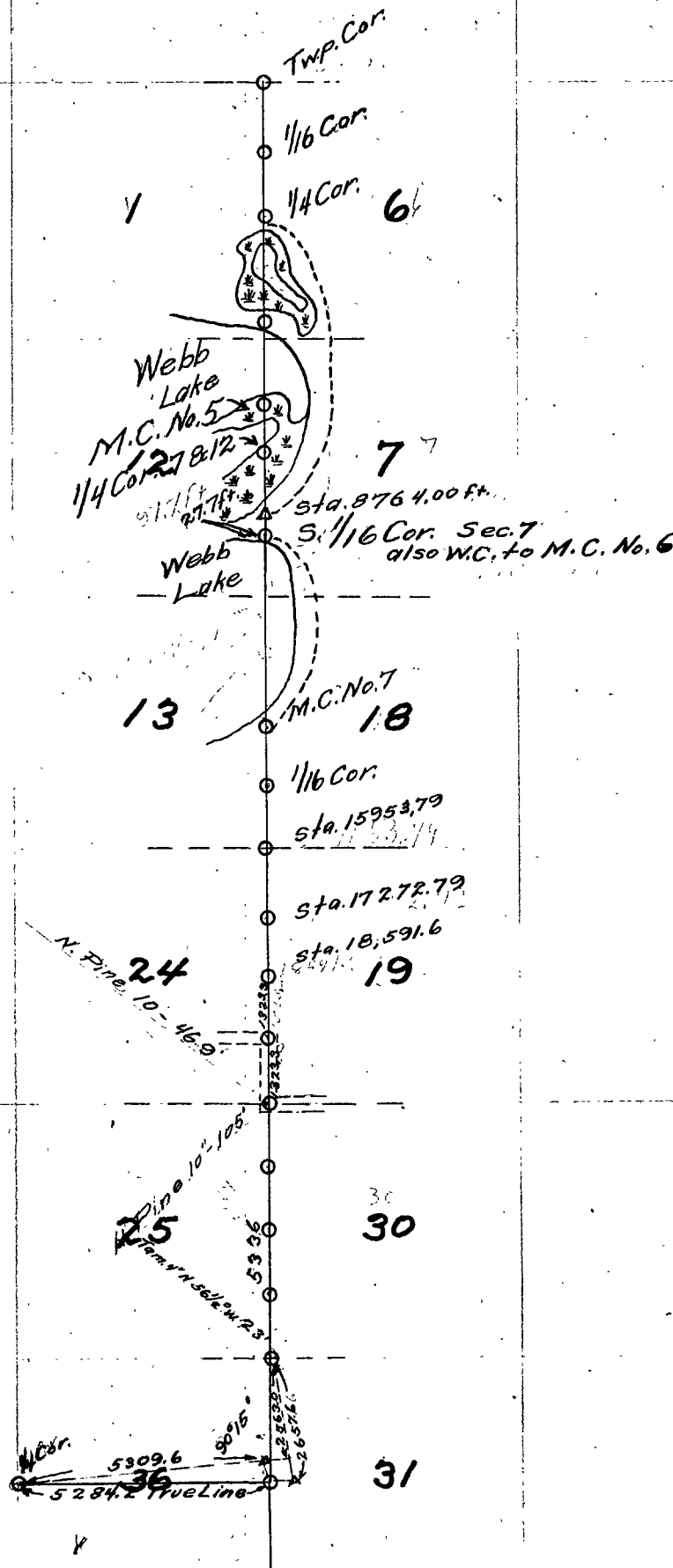
Monday, March 20th, 1916: Horst & Jusler: Continue line East thru section 36, 140-30, we intersect our N. & S. random line at E. side of 36, set P.D. hub. I read NW. angle of random lines = 90° 15' We look for B. T. at 1/4 cor. until 5-15 and go home. E. B. Horst.

Tuesday, March 21st, 1916: Horst and Jusler, chaining: We begin at P.M. at 1/4 cor. on West side of section 36-140-30 and chain random line previously run E. thru center of Sec. at 105.0 enter marsh: at 135.0 ft. E. W. bank of creek: at 150.0 ft. E. leave creek N. & S.: at 400.0 ft. E. leave marsh: at 764.0 ft. E. spike: at 1488.4 ft. E. spike: at 1875.0 ft. E. enter small marsh: at 2100.0 ft. E. leave same: at 2195.7 ft. E. spike: at 2599.3 ft. E. spike in small pine snag. at 2800.0 ft.

B

140-29-30

Plat of Survey Record No. 355



18591.4
15953.79
2437.81
591.60

E. enter large meadow: at 3800.0 ft. E. leave same: at 4036.0 ft. E. small hub: at 4819.8 ft. E. spike: at 5106.5 ft. E. spike in pine root stump: at 5275.0 ft. E. enter Jam. swp: at 5309.6 ft. P.D. hub on E. Dry. random line intersect at 2563.0 ft. So. of N.E. corner of 36-140-30, NW angle $90^{\circ}15'$ P.M. we chain So. from sta. 2700 S. on random line E. side of 36-140-30. At 3800.0 ft. S. leave Jam. swp: at 3178.7 ft. S. spike on poplar ridge: at 3655.8 ft. S. spike near J. Pine tree: at 4336.0 ft. S. north bank of large creek bet. E & W. at 4410.0 ft. S. leave same: at 4566.6 ft. S. large Hub near pine tree: at 4750.0 ft. So. enter Jam. swamp: at 5025.0 ft. S. water's edge small lake: Creek at 4336 ft. So. open we walk to lake & source to get on opposite side returning same. We arrive home at 7-00 o'clock P.M. E. B. Horst

Wed. Mar. 23rd, 1916: Horst, transit, Tuler, flag and chain. We set road center on E. Dry. of Sec. 25, 140-30, beginning at S.E. cor. and going north. Correction equals .005284. Hub at 5044.6 goes West 26.6 ft. Hub 4241.0 goes W. 22.4 ft. Hub at 3519.7 goes W. 18.6 ft. Hub at 3250.1 goes W. 17.2 ft. Hub at 2829.4 goes W. 14.9 ft. $\frac{1}{2}$ Cur. 2666.4 goes W. 14.1 ft. Hub at 2265.2 goes W. 12.0 ft. Hub at 1746.0 goes W. 9.2 ft. Hub at 900.0 goes W. 4.7 ft. I call Curo by telephone in regards to setting road centers on E. side of Webb Lake and get orders to come to Walker. I hire Richard Rosberg to take me and outfit to Hackensack. I go to bed at Garrity's Hotel 254 R.R. fare to Walker 334 Richard Rosberg Livery - E. B. Horst.

Note by Curo: Saturday 19th 1916: J. B. Spencer, A. McBride and John W. Curo leave Walker at 9-30 A.M. arrive at Backwa, and telephone to Comm. Krake, who meets Curo and takes a load of irons for section corners. Bailey, Spencer, McBride and driver go with car to Webb Lake. Curo and Krake get dinner at Krake's farm and follow in P.M. Curo, Bailey and Spencer stake out County road on E. side of Webb Lake south of Bailey cottage. All stay over night.

Sunday, August 20th 1916: Spencer, Bailey and Curo hunt all day for old U.S. corners and Meanders along Range line on E. side of Webb Lake. They put in some stakes and find hubs and stakes previously set by J. W. Johnston. Stay over night at Spencer's cottage. John W. Curo.

Monday Aug. 21st, 1916: Rains nearly all day. Curo figures corrections and works on notes figuring corrections for Johnston's random line previously run. Curo walks around West side of Webb Lake to Morris farm, thence to Tom Donaldson's and telephones Chas. Wood to meet him with auto. Curo goes to Walker to get axes, files and wet stones, as we have no axes or tools fit for use and the farmers who we depended upon to work refuse to work as they are busy haying. Curo takes P.M. freight to Walker.

Tuesday Aug. 22nd, 1916: Curo and Horst to Walker at 9-30 A.M. arrive at Hackensack 10-30. Chas. Wood takes Horst and Curo to Webb Lake, where Curo, Horst, Spencer and Bailey lay out line for road along E. shore and at 3-30 P.M. Spencer takes Curo by boat to Morris farm where Chas. Wood meets him with Ford and Curo goes back to Walker. Horst and John Bailey work all day, correcting line. Spencer and Curo one crew. Bailey and Horst in another. Curo uses Alor Transit and 100 foot chain. Horst uses Gurley Transit and 100 ft. chain. John W. Curo.

Horst with Gurley transit and outfit leave Walker on 9-30 A.M. train with Curo for Hackensack, thence by Chas. Wood's auto to John Bailey's to finish correcting up Webb Lake road on range line between Swp. 140-ranges 29-30. Horst and John Bailey begin where Range line intersects Webb Lake, near pt. for S. N.E. cor. on West side of Sec. 7-140-29 and set road centers around E. side of Webb Lake, as near as practicable 33 ft. from High Water mark. As we are unable to get axemen, we do not take cardinal course of road, which we will take after road way is cleared of trees and brush. We reach pt. near M.C. No. 1, 140-30, after supper, J. B. Spencer rows me across Webb Lake to get some axemen, but find none. Over night with Spencer. E. B. Horst.

August 23rd, 1916: Horst rows across Webb Lake before breakfast to get help at Matson's, but all are haying. I return to Spencer's cottage for breakfast. After breakfast, Bailey and Spencer return home and as I can get no one to help me, I go and distribute Iron monuments along range line from Webb to Swp. corner, also get the members of Mick Harig's hubs that were set in running a random range line South from the N.E. corner of Top. 140-range 30- at N.E. corner to Swp. 140-30 where Curo and Harig established Swp. corner. I pull up their wood post and set 2 1/2 inch x 4 ft. capped I.M. and mound same with ground, digging 3 wht. pits, one E., one W. and one South of corner. At S.E. corner of Swp. 141-30. I also set an I.M. with wht. pits N.E. and S. of Cor., also established by Curo and marked with a wood post. Hub at 770.0 ft. South I set a road center 4.65 ft. West of random line; Correction for

range line = 1 ft. U.S. chain = .99919 of a foot our chain correction $W. = .00604$ ft. for each foot So. Return to Bailey's cottage and get my supper. Bailey has left provisions for several days and gave orders to use them. After supper I row across Webb Lake to get someone to help me on a survey and after several places I succeed in getting Will Berggreen. Return to Bailey's at 11-15 P.M.

Thursday Aug. 24th 1916: Breakfast at 6-00 A.M. Warm and cloudy. Horst with transit and chain. Will Berggreen, axe, flag and chain, we continue setting I.M. and road centers going S. on Rg. line. at Sta. 1445.54 ft. S. North $\frac{1}{4}$ cor. goes W. 8.73 ft. We set a 2 in. X 4 ft. Iron Boiler flue for corner. at Hub 2231.50 ft. S. road center goes W. 13.48 ft. at hub 2551.80 ft. S. road center goes W. 15.41 ft. at Sta. 2764.48 ft. S. $\frac{1}{4}$ cor. goes W. 16.70 ft. being a 2 in. X 4 ft. boiler flue. at 2800 ft. So. I set road centers around E. side of a swp. containing a lake, road centers being 33 ft. from edge of a swp. wherever possible. at Sta. 5158.34 ft. S. I set a 2 $\frac{1}{2}$ in. X 4 ft. capped I.M. for M.C. 4-140-30. 31.16 ft. from sea wall on E. side of Webb Lake. at Sta. 7246.21 ft. So. end 43.77 ft. W. of random line, I set a 2 $\frac{1}{2}$ X 4 ft. capped I.M. mounded for M.C. No. 5. - 140-30. Over night at Bailey's cottage. E.B. Horst

Friday, August 25th 1916: Horst and Berggreen continue setting road centers and I.M. at Hub 7468.8 ft. So. I set a hub 45.10 ft. W. on true line, backsight N. across Webb Lake to M.C. No. 4, I reverse telescope sight So. and cut true range line S. to Sta. 8040.20 ft. So. and set a 2 in. X 4 ft. flue for $\frac{1}{4}$ corner between sec. 7 and 12 corner being in N. edge of swp. mounded. We return to E. side of swp. and lake and continue setting road centers 33 ft. from edge of swp. until we intersect true range line at Sta. 8764.00 ft. So. on So. side of swp. and 52.93 ft. W. of random line. at hub 9057.40 ft. So. road center goes W. 54.71 ft. at hub 9215.50 ft. So. road center goes W. 55.66 ft. We cut true range line So. to Sta. 9359.13 S. and set S. $\frac{1}{4}$ corner 56.53 ft. W. of random line, being a 2 $\frac{1}{2}$ X 4 ft. capped I.M. and mounded, being also a witness cor. to M.C. No. 6, 140-30, pt. for M.C. being So. 27.70 ft. Quit for night. I take my outfit across Webb Lake to Wm. Morris's place, also the I.M. I have left, and go to Chas. Berggreen's place for supper and overnight. After supper I hire Berggreen's team and go to Morris's after my outfit and I.M.s. which we take to Berggreen's. Sivery charges \$2.00. E.B. Horst.

Saturday, Aug. 26th 1916: Breakfast at Chas. Berggreen's. Warm and cloudy. Horst and Berggreen continue setting road centers and I.M.s. on So. side of Webb Lake at Sta. 13393.88 ft. So. and 80.89 ft. W. of random line, we set (and mound with stone) a 2 $\frac{1}{2}$ in. X 4 ft. capped I.M. for M.C. No. 1-140-30. Hub at 13673.0 ft. S. goes W. 82.58 ft. we cut true line N. to M.C. No. 1 and set road center at Sta. — ft. So. where road line intersects true range line. at Sta. 14634.86 ft. S. and 88.39 ft. W. we set I.M. 2 in. by 4 ft. for So. $\frac{1}{4}$ cor. of sec. 18-140-29. Hub 15679.6 ft. S. goes W. 94.70 ft. Cor. to sec. 18, 19, 140-29 and sections 13, 24, 140-30. at Sta. 15953.79 ft. So. goes W. 96.36 ft. at this point we set an I.M. 2 in. X 4 ft. Boiler flue. at Hub 16494.2 ft. S. road center goes West 99.62 ft. at 17272.72 ft. S. north $\frac{1}{4}$ between sec. 19-24. goes W. 104.33 ft. we set an I.M. 2 in. X 4 ft. Boiler flue. at hub 17823.7 road center goes W. 107.66 ft. Sta. 18591.1 $\frac{1}{4}$ cor. sets W. 112.3 ft. end of J.A. Johnston's random line.

Monday August 28th, 1916: Horst, transit and chain. Will Berggreen, axe & chain. I set transit on a hub near pt. for So. $\frac{1}{4}$ corner on W. side of sec. 19-140-29 and sight down graded road to SW. corner, same section, reverse telescope and cut a random line N. to $\frac{1}{4}$ corner, marked by an I.M. We begin at SW. sec. cor. and chain N. to $\frac{1}{4}$ cor. at 1324.7 ft. a hub, leave graded road. Road turns West. at 2646.6 ft. N. I.M. at $\frac{1}{4}$ corner sets E. of random line 3.00 ft. We return to Hub 1324.0 ft. N. and set a 2 $\frac{1}{2}$ in. X 3 ft. I.M. for So. $\frac{1}{4}$ cor. equidistant from section and $\frac{1}{4}$ cor. at Sta. 1323.3 ft. and 1.5 ft. E. of random line. at SW. corner of sec. 19, also set a 2 $\frac{1}{2}$ X 4 ft. capped I.M. driven 46 in. in ground. E.B. Horst

Tuesday Aug. 29th 1916: Horst and Berggreen with outfit and I.M.s. goes to S. pt. sec. 25+30, on range line between Surps. 140, ranges 29-30, on random line run by Horst and Insler. setting 2 in. X 4 ft. I.M. at following corners: (Boiler flues)

N. $\frac{1}{16}$ at 1334.2 SW. of random 7.05 ft. $\frac{1}{4}$ cor. at 2668.4 ft. SW. of random 14.10 ft. S. $\frac{1}{16}$ 4002.6 ft. SW. of random 21.15 ft. Sec. cor. 5336.8 ft. SW. of random 28.20 ft. We then go so. $\frac{1}{2}$ mile and look for $\frac{1}{4}$ corner and B. T. which we could not find in March, 1916, on account of deep snow. U. S. notes call for post and following B. T.

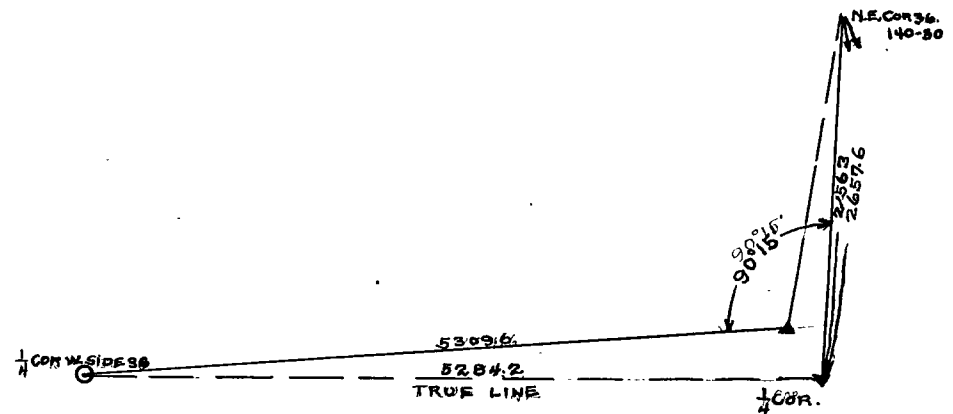
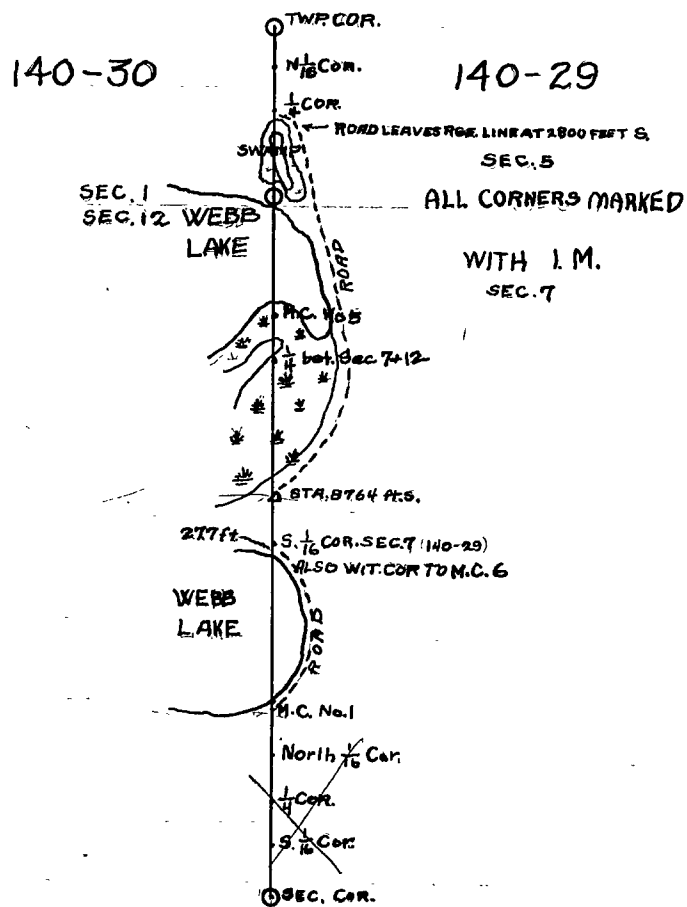
Jan 14 North 65° E. 4 equals 2.647 ft.

Jan. 12 North 41° W. 36 equals 23.76 ft.

I find N.E. Sam. B. T. uprooted and lying on ground with scribe marks turned up very plain. The other stump is still there but all marks burned off. We set corner from B. T. windfall, as near as we can determine original position from parts of stump. Setting Cor. So. 65° W. 2.647 ft. and So. 41° ft. from burned stump, which checks with notes. We mark corner with a $2\frac{1}{2}$ in. X 4 ft. 2 m. 3 ft. in good Sta. 2657.6 ft. So. of NW. cor. of Sec. 31, 140-29. $\frac{1}{4}$ cor. sets W. 25.47 ft (being in Sam. sup.) Correction equals ft. W. for each ft. So. at Sta. 5284.2 ft. E. on E & W $\frac{1}{4}$ line (running thru center of sec. 36, 140-30) $\frac{1}{4}$ cor. out side of 36 sets so. 94.6 ft. Correction equals .01797 ft. So. for each ft. E. Correcting back:

- Hub 4819.8 E goes South 86.27 ft.
- Hub 4036.0 E. goes South 72.24 ft.
- Hub 2599.3 E. goes South 46.54 ft.
- Hub 2195.7 E goes South 39.30 ft.
- Hub 1488.4 E goes South 26.64 ft.
- Hub 764.0 E goes South 13.68 ft.

Returning to range line between Sec. 31 and 36, we correct line N. from $\frac{1}{4}$ cor. Hub 2236.0 So. goes W. 21.27 ft. Hub 1849.5 ft. S. goes W. 17.68 ft. at 1328.8 South. N. $\frac{1}{16}$ goes W. 12.70 ft. set 2 m. 2 in. X 4 ft. boiler flue. Hub 1057.0 ft. S. goes W. 10.10 ft. Hub 353.2 ft. So. goes W. 3.38 ft. Survey being complete we return without fit to Chas. Berggreen's for supper. After supper I call Chas. Wood to come and get myself and outfit with his car. Wood is out of town. George Garrity with team takes me to Hackensack. Charges \$2.50. Go to Chester Garrity's Hotel. E. B. Horob.



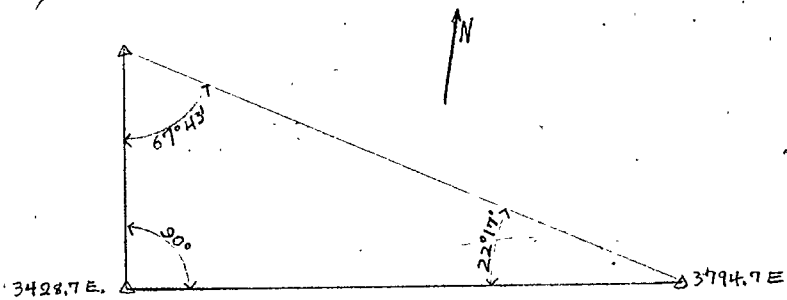
SURVEY RECORD No. 356 T. 140 N R. 30 W

Secs 7-8-9-16-17-18-20

Wed. Aug. 30, 1916: Curio instructs Horst to finish survey of G. road begun by F. A. Nonner, beginning at W 1/6 cor. on S. side Sec. 17, 140-30, and running N. one mile to W 1/6 on N. side to locate W 1/6 on N. side. I begin at NW cor. of Sec. 17, I.M. set by F. N. Molyneux and run line E. at 8° 30'. Jas. Meill and Mike Killeaney, assisting. Jas. Meill, flag and ch. at 770.3 ft. E. a hub: at 1118.0 ft. E. enter meadow: at 1850.0 ft. E. leave meadow: at 2401.6 ft. E. a hub: at 2637.6 ft. E. an old post: at 2791.8 ft. E. a hub: at 3322.3 ft. E. a hub: at 3428.7 ft. E. a hub, triangle hub at water's edge on W. bank of small lake. I send a man around to E. side of lake and set a hub at water's edge from 3428.7 hub. I turn 90° angle N. and cut 150 ft. base line - set hub 150 ft. N. angle at this hub = 67° 43'. 150 ft. X tangent of 67° 43' = 366 ft. across lake. At 5267.8 corner to sec. 8, 9, 16, 17, 140-30, set N. 43 ft. quit for night. E. B. Horst.

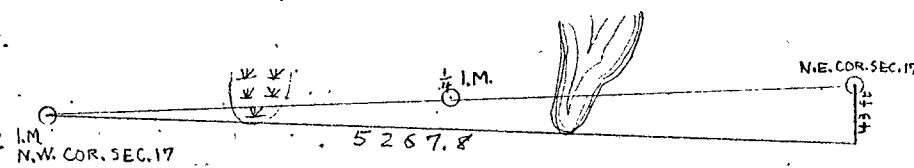
Thurs. Aug. 31, 1916: Horst with transit and chain. Jas. Meill, flag and chain, Mike Killeaney, axeman. On N. bdry. line of sec. 17, at Sta. 2637.9 ft. E, I set an I.M. 1/4 cor. (2 in. X 4 ft. boiler flue) 21.5 ft. N. of random line with following B. Is.: Norway Pine 4 N. 20° W. 28.2 ft. Poplar 6 S. 35° 25' W. 21.4 ft.

We go W. 1/4 mile at Sta. 1316.95 ft. E. and set an I.M. West 1/6 cor. (2 in. X 4 ft.) We set a long pole at this cor. and go to 1/6 cor. on S. side of sec. 17 - set high pole. I set transit on hill bet. corners and set a line of hubs on true W. 1/6 line. We go to W. 1/6 cor. on N. side of 17 and chain S. 1170 ft. to Hub N. of small lake (40 ft. to water) St. angle at W. 1/6 corner on N. side = 88° 58', runs S. on true W. 1/6 cor. on N. bdry. line. Run S. on true W. 1/6 line 1170 ft. thence Left 36° 11' - 153.7 ft. thence Right 28° 12' - 115.4 ft. thence Right 12° 01' - 71.9 ft. thence Right 13° 01' - 176.0 ft. thence Right 3° 02' - 141.3 ft. thence Left 20° 07' - 1433.4 ft. on true W. 1/6 line. Thence Left 33° 00' - 583.3 ft. over road thru swamp: thence Right 6° 15' - 86.1 ft. thence Right 22° 52' - 267.1 ft. Thence Right 14° 42' - 168.6 ft. Thence Right 18° 33' - 452.4 ft. Thence Right 10° 54' - 187.5 ft. West to line: Thence Left 40° 15' - 544.2 ft. So. on W. 1/6 line to I.M. on Hackensack - Women Lake road, marking W. 1/6 cor. on South bdy. line of sec. 17, 140-30. Measurements to the above courses were not taken today. E. B. Horst.



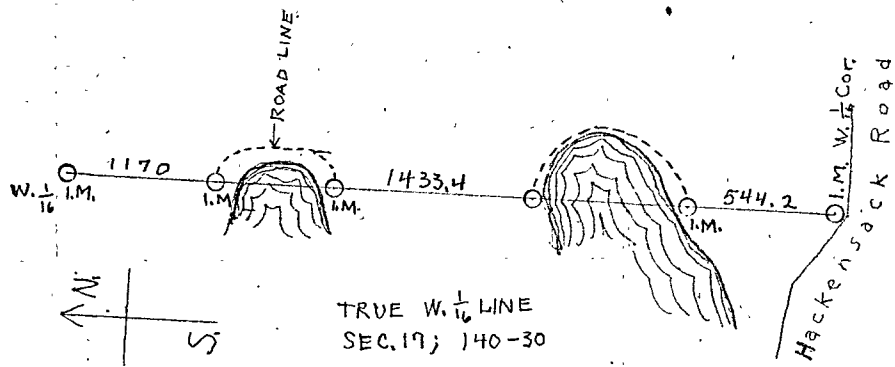
Sept. 1 - Friday, 1916: Horst and Jas. Meill begin at 1170.0 ft. So.

on W. 1/6 cor. and chain courses of road as run yesterday, with transit and which are recorded in their proper places in diagram in ft. column. Set I.M. on road line at following pts. being 2 in. X 4 ft. boiler flues, driven in ground 4 1/2 inches. one at Sta. 1170.0 ft. So. on true W. 1/6 where road leaves line, one at pt. where road intersects true W. 1/6 line S. of small lake, road then follows 1/6 line 1433.4 ft. So. near N. side of lake where we set an I.M. road leaves line run around E. side of lake and again intersects 1/6 line 544.2 ft. North of West 1/6 corner on So. side of section 17, where we set an I.M. also one at NE. corner of Section 17)



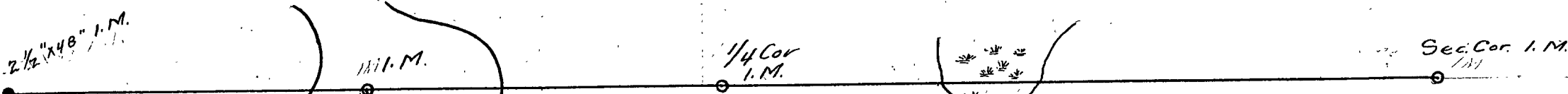
P.M. Return to Walker, fare 33¢

E. B. Horst.



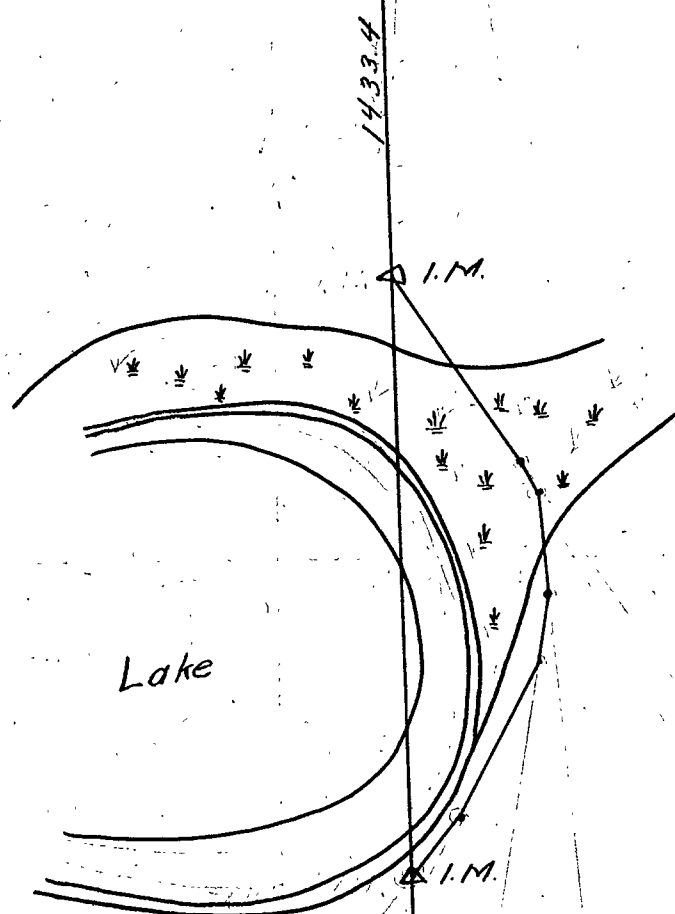
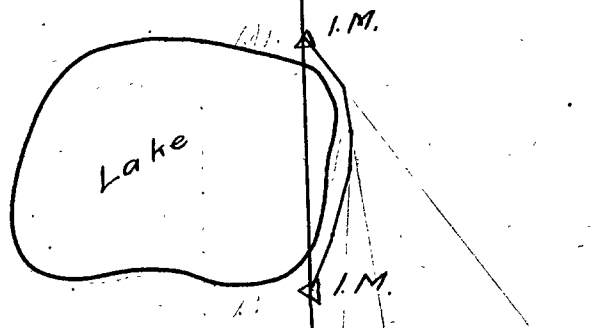
Plat of Survey Record No. 356

7 8 8 9



17 17 17 16

18 17



$2\frac{1}{2} \times 48''$ Sec. Line
W. 1/6 I.M.

17
20

Saturday March 25th, 1916: I get notes and plots and survey instruments and leave Wakefield Backus. R.R. fare 49¢. I visit in Backus for Hans Grove, who is in town and is going to take me out to Chas. Hanks place, where Curro has made arrangements for board while on the survey of Sec. 6, 138-31. We arrive at Hans Grove's farm at 9 o'clock P.M. Supper and over night with Grove.

Sunday March 26th, 1916: Breakfast with Hans Grove. I take my outfit and walk to Chas. Hanks where I board the remainder of the time on survey, make arrangements for help tomorrow. E.B. Horst.

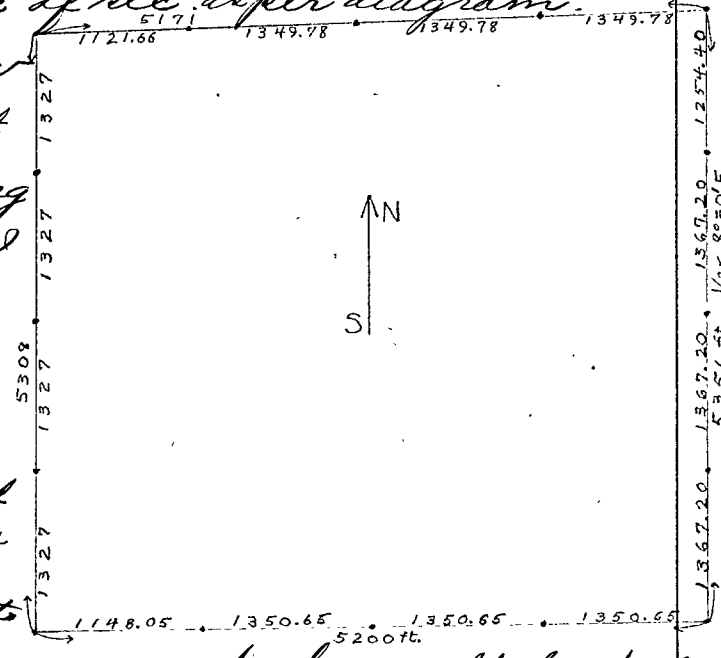
Monday March 27th, 1916: I begin field work with crew as follows: Horst, transit, Clarence Hanks and John Grove, chain, Charles Hanks, flag and axe. Beginning at the N.W. corner of Sup. 138-range 31, being also the N.W. cor. of Sec. 6, we dig thru 2 ft. of ice and snow and locate 8X8X26 cement monument set by J.W. Curro, from this pt. we run line So. on State Highway, driving 60'd spikes as follows: at 1300 ft. So. set spike: at 2600 ft. So. set spike: at 3900 ft. So. set spike: at 5308 ft. So. SW. cor. of Sec. 6, (8X8X36 cement monument) set w. 3.2 ft. established by Curro.

Returning to the NW corner, we run line East on State Highway, setting spikes at 1078.2 ft. set spike at 1300.0 ft. E. set spike: at 2600.0 ft. E. set spike: at 4000.0 ft. E. set spike: at 5171.0 ft. E. set spike. We return to SW corner of Sec. 6, and run line E. along S. side of Sec. 6, on Sup. road. at 1300 ft. E. set spike: at 2000 ft. E. set spike on hill: at 2600 ft. E. set spike: at 4000 ft. E. set spike, at 5200 ft. E. set spike at true SE. corner of Sec. 6, established by M.A. Kemp (under Curro) by measurement. E.B. Horst.

Tuesday March 28th, 1916: Horst, transit, Clarence Hanks, flag and chain, John Grove and John McFarling, axe: I turn angle 90° 36' from So. section line to N. and run line N. at 8° 30' Var. At 1097.5 ft. N. set spike: at 1300. ft. N. enter small slough: at 1400.0 ft. N. leave same: at 1892.0 ft. N. set spike: at 2726.0 ft. N. set spike: At 2900.0 ft. N. enter slough: at 3300.0 leave same: at 3321.7 ft. N. set spike: at 3767.4 ft. N. set spike: at 5172.6 ft. N. set spike: at 5365.0 ft. N. set spike and intersect N. sec. line (random): at 5165 ft. E. of NW. Sec. corner. NE. cor. sets E. 67 ft. and 97 ft. S. of Point of intersection. E.B. Horst.

Wednesday, March 29th, 1916: Horst and same crew set a large stone for NE. cor. of Sec. 6, 138-31, where Curro formerly had a stake - take following reference points. St. cor. of Klierfield store N. 52° W. Spruce S.S. 33 W. Guide post S 23° 30' E. Telephone pole N. 29° E. No trees near. Take crew and set corners around outside of sec. refer diagram.

Thursday, Mar. 30th, 1916: Horst and same crew. I take crew to N. 1/6 cor. on W. side of Sec. 6, and set transit over corner, sight to NW. Sec. corner. Turn NE. angle 90° 08' and run N. 1/6 line E, missing N. 1/6 on E. side 210 ft. due to turning adjacent angle to the one I figured. P.M. Raine all afternoon. No work for crew. I write notes and figure angles for 1/6 lines. E.B. Horst.



Friday, March 31st, 1916: Horst, Hanks, Grove, McFarling. We go to 1/4 corner on N. side of Sec. 6, where set large spikes and take the following bearings: fence post NE 38 ft. Telephone post SE. 31 ft. I sight transit on true N. 1/6 corner and 87° 57' from N. to E. and run E. and W. 1/4 lines, intersecting E. sec. line at 2758.3 ft. N. corner sets So. 23.9 ft. to which I take the following bearings: J. Pine 6 S. 8.4 ft. Poplar 4 N.W. 25.3 ft. E.B. Horst.

Saturday April 1st, 1916: Horst and same crew. I set transit over spike set for So. 1/6 cor. on W. sec. line, and sight W. to SW. Sec. cor. and turn angle 91° 30' to the E and cut line and set spikes across section, intersecting E. section line at 1380.4 ft. North So. 1/6 corner on East side sets South 13.2 ft. P.M. I send Hanks to North 1/6 corner on E. side of section to erect a large pole for a sight. I set transit over N. 1/6 corner on W. side and sight to Hub on random north 1/6 line. Turn 2° 19' north and cut true North 1/6 line. quit for night. E.B. Horst.

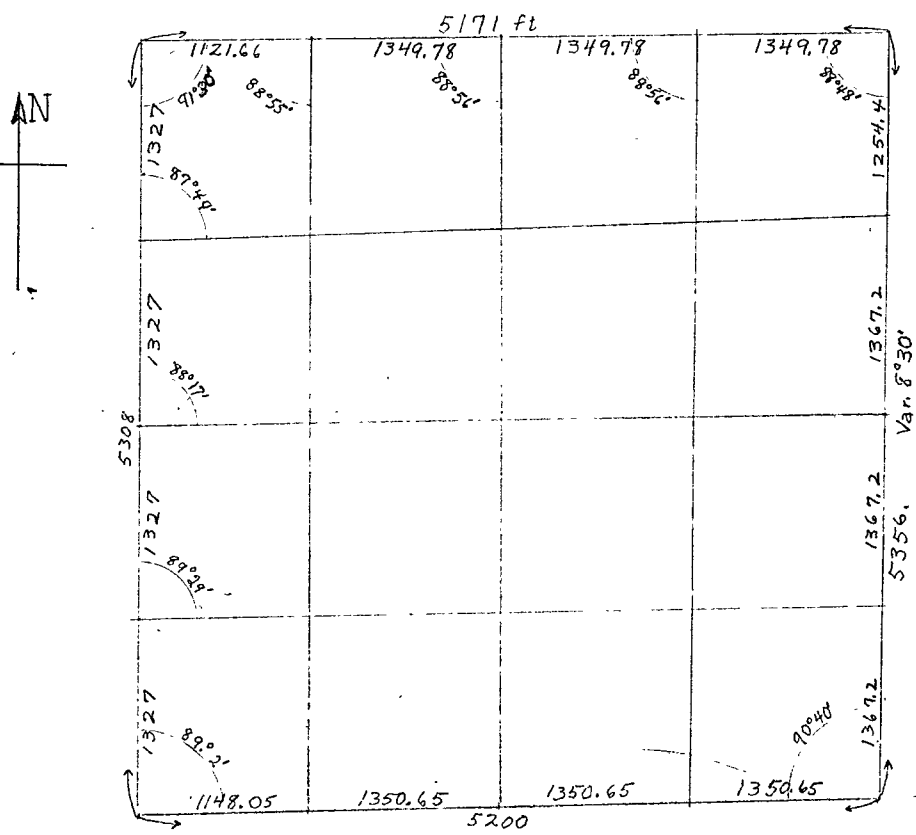
Sunday, April 2nd, 1916: No work. Horet at C. W. Hanks all day. Day warm and bright, snow melting fast and all low places full of water. E. B. Horet.

Monday, April 3rd, 1916: Horet, transit, Clarence Hanks, flag and axe, John Grove and John McFalling, etc. At 1/4 corner on N. side of section, I set transit and sight to northeast section corner and turn SE angle 91°05' cutting brush and setting P. I. Hubs. at intersection on East and West interior lines. We intersect So. section line at 2514.3 ft. E. 1/4 corner sets West 15.6 ft. I leave transit at this pt. and get dinner. P.M. We go to East 1/6 corner on S. section line at Sta. 3849.35 ft. E, I set transit over corner and sight West to true 1/4 corner and turn W angle 90°43' and run East 1/6 line North setting hubs at intersection of all E. and W. interior lines, we intersect North section line at 3829.2 ft. E. true E 1/6 corner sets West 8 ft. Quit for night. E. B. Horet.

Tuesday April 4th, 1916: Horet and same crew. I set transit over West 1/6 corner on N. sec. line (also Sup. line) and sight to NW section corner and turn SW angle 88°55' and run West 1/6 line South thru section, setting hubs at intersection of East and West lines. We intersect S. section line at true West 1/6 corner (no correction) making a true line. P.M. Call Curo by telephone in regards to I. M's for sec. corners, but can't get them right away, so we set 3" x 3" x 3" wood posts at all interior corners, until we can get Iron Monuments. Beginning at intersection of North 1/6 true line and East and West 1/4 line, we set true corner 3.77 ft. West of P. I. hub. at intersection of East 1/6 random line and South 1/6 random line true corner goes South 9.76 ft and West 2.03 ft. at intersection of North and South 1/4 random line and South 1/6 random line true corner goes 11.66 ft. West and 6.33 ft. South. at intersection of East and West and North and South 1/4 random lines true corner goes South 11.43 ft and West 7.72 ft. Quit work at 5-30 for supper. E. B. Horet.

Wednesday April 5th, 1916: Horet, transit, Clarence Hanks and John Grove, axe and picks. We set the remaining interior corners. at intersection of South 1/6 random line and true West 1/6 line true corner goes South 2.9 ft. from P. I. Hub. at intersection of true West 1/6 and random East and West 1/4 line true corner goes South 5.2 feet from P. I. hub. at intersection of true North 1/6 and true West 1/6 lines we drive corner at P. I. Hub and I prepare to return to Walker. Chas. W. Hanks drives me to Backus and I return to Walker. R.R. fare 49¢, supper at John Curo's and over night at Carleon Hotel.

Thursday April 6th, 1916: Horet all day at Curo's office writing notes and figuring acreage of section 6-138-31.
Dinner at Carleon Hotel 35¢
Bed at Carleon Hotel 50¢



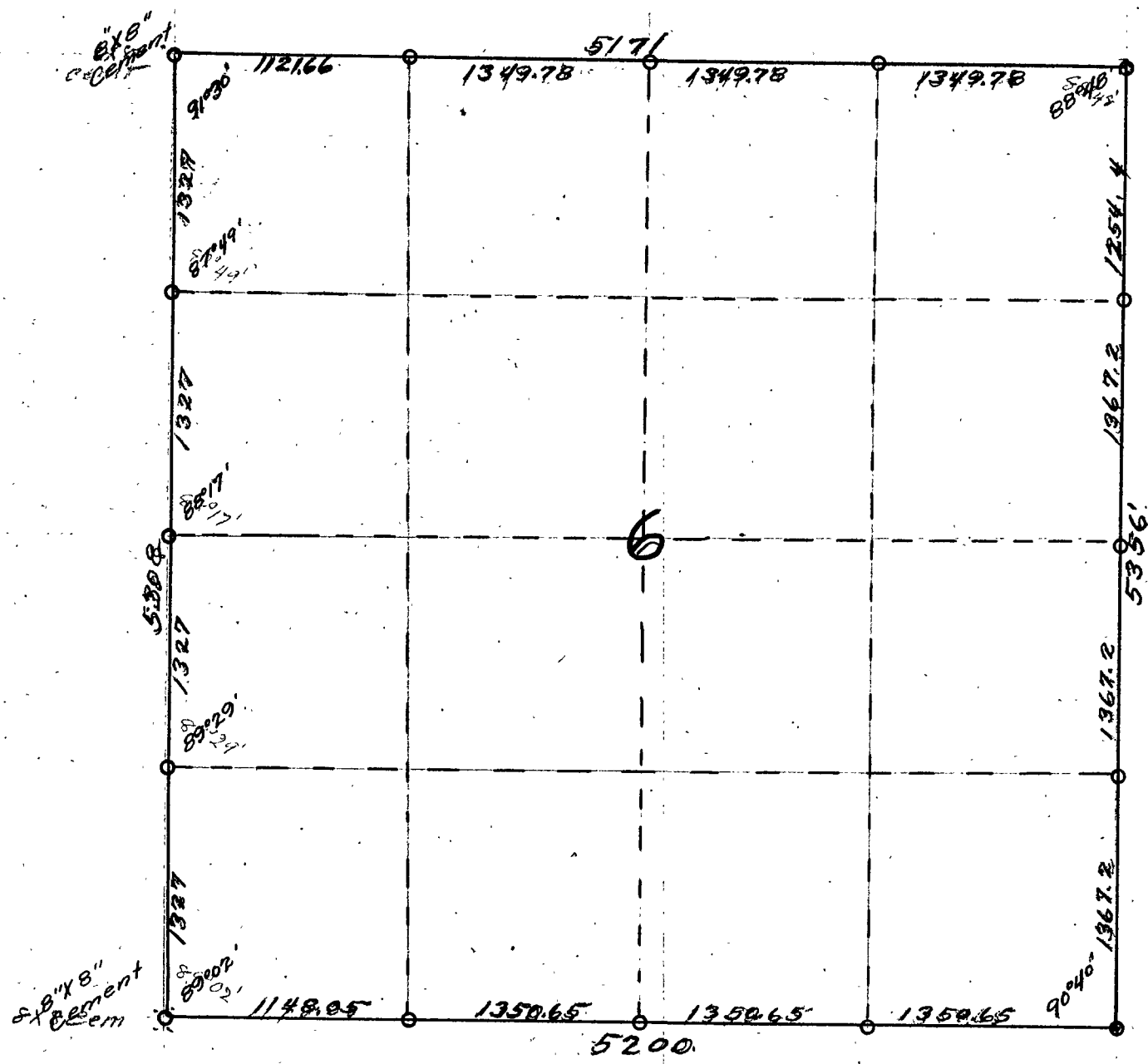
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Plat of Survey Record 32
No. 357

138-31



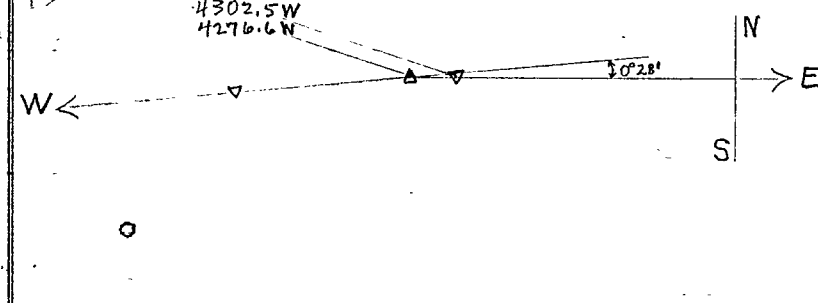
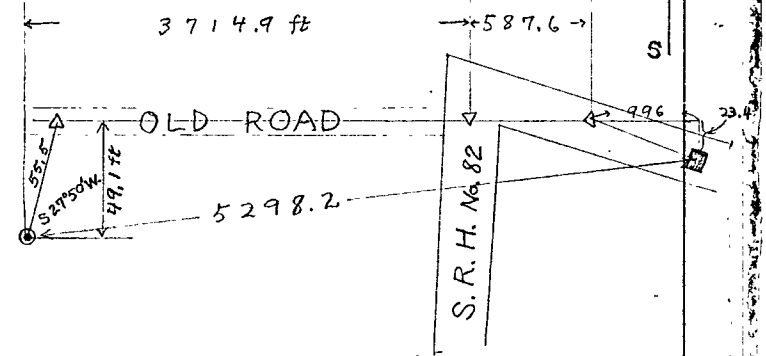
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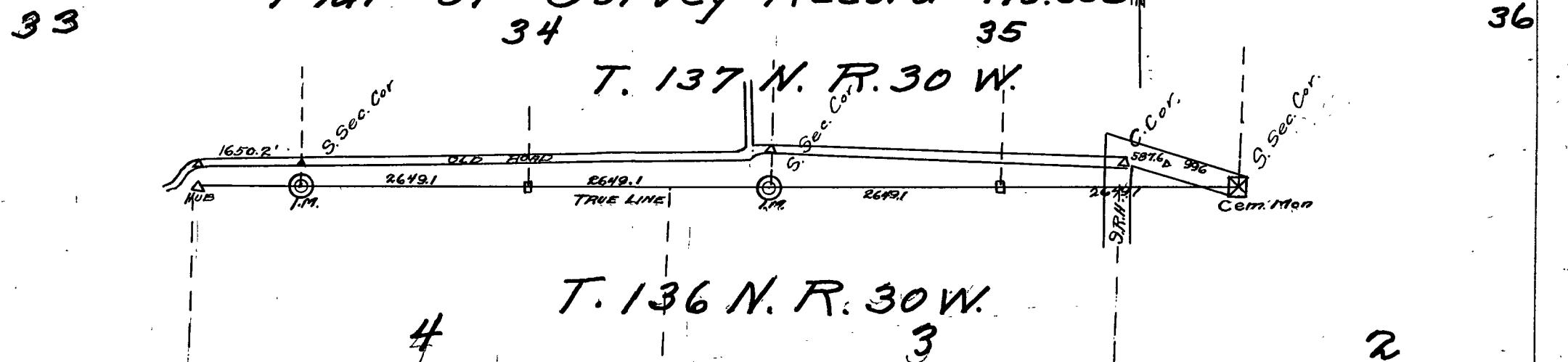
Friday, May 18th, 1917. E. B. Horst, walker to Jenkins on 7-28 train. N. R. fare 74 & dinner at Jenkins Hotel. Hardy's car to John Myers. Work at 1-30. Horst, transit, John Myers, chain, Louis Holten, chain, Clarence Holten, flag. Begin at corner to sections 35-36, on 9th standard parallel between Twp. 136-137, range 30, being an 8" x 8" cement monument previously established by County survey or John W. Curo. From this corner, sight E. on S. R. H. reverse telescope, turn N. 1° 50' and run West on center of S. R. H. 796 ft. Turn S 1° 21' to line up with an old road. at pt. 587.6 ft. S. R. H. turns south. We continue West now an old road. at 1621.0 set hub in road. at 4276.6 set hub in road. a 2 1/2" x 4" I. M. set by A. W. Moulster marking the S.W. Corner at Sec. 35, Twp. 137, range 30, site to 27° 50' W 55.5 ft. No old B. 2's to be found. New B. 2's to corners to secs. 34-35 are as follows:
 J. Pine stump 1270. 44° W. 39.9 ft. Norway stump 2070 58° 55' E. 65. ft. With transit on point 4276.6 West I set a hub on same line at Sta. 4302.5 West and 49.1 ft. N. of Cor. I set transit over this hub and backsight East, Reverse, turn 0° 28' South and run West. at 50 ft. West, cross road running North 15 ft. South a road runs West 350.5 - set hub and tack.



Saturday May 19th, 1917. Horst, transit and chain, Mr. Holten, Sr., chain, Louis Holten, flag, Oscar Pederson, a. v. Continue West on S. side of Sec. 34, 725 West intersect center of road running West, continue West on center 1694.9 ft. West set Hub. Correction corner site South 3.9 ft. from random line. 2188.5 ft. West set hub - 2640.0 ft. West set stake - 4152.0 ft. West hub - 5298.3 ft. West set hub. 2 1/2" x 4" I. M. set by A. W. Moulster by proportionate measurements for corner to secs. 33 and 34, site S. 32.1 ft. I continue West to Sta. 6948.5 to E. end of graded road. at 6948.5 West, I chain South 26.8 ft. and set a large stake for road center at East end of graded road: at 2649.1 ft. West I chain South 40.6 ft. and set a 3" x 30" Poplar post for 1/4 corner S. side section 34, in swamp. New B. 2's to corner of Secs. 33 and 34 on Standard Parallel as follows: W. Oak 1070. 76° 38' West 123.6 ft. W. Oak 8 S 64° 30' West 77.0 ft. For the 1/4 cor. on S. side of Sec. 35, 137-30, at Sta. 2649.1 ft. West, I chain South from random line 36.25 ft. and set a 4" x 24" stake in pasture field.

Finish at 1-30 Mr. Kludgon with his car takes me to Jenkins for a smoke. I buy the smoke and take 3-30 P. M. train North.

Plat of Survey Record No. 358



B

359 SURVEY RECORD No. 359
Sec's 1-2-11-12 T. 134 N. R. 32 W.

Thursday July 6th, 1916: John Clark takes Horst and survey outfit to state road 2 miles East of Ellis P.O. where I take motley-Leader stage to L. J. Major's place, in NE. of St. Section 1, 134-32, livery 50¢, where a. w. Moulster wants some sec. corners established for ditch purposes.

P. M. I walk to 1/4 corner between Secs. 1 and 12 and look for B. I. where U. S. notes call for:
Spruce 8 North 4 East 14 N. Pine 8 South 16 East 16. all are gone, timber and stumps are all burned to cones.
E. B. Horst.

Friday July 7th, 1916: I take instruments and walk to SW. corner, Section 1, where U. S. notes call for:

Tam. 4 North 74 West 17. Tam. 4 South 35 West 12.
Tam. 5 North 78 East 5. Tam. 5 South 69 East 14.

I find NE, NW, and SW. B. I. stumps still standing, but the course and distance was improperly recorded by U. S. Engineers on account of trees being too close to instruments to determine exact courses. The distance was evidently estimated, but the old U. S. Post is at the original place. I pull up old Post and set new Tam. post in its place. New B. I. as follows:

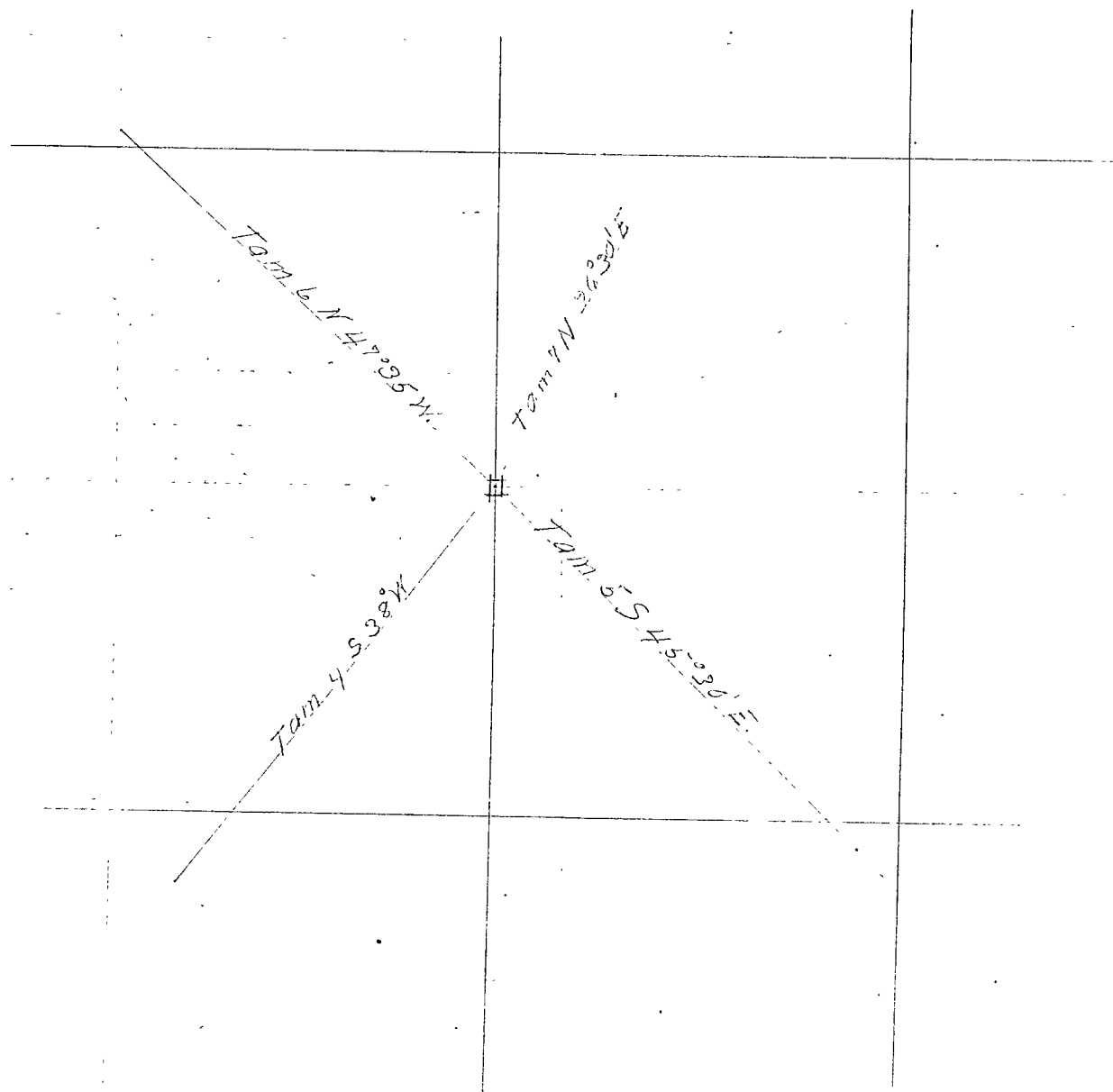
Tam. 7 North 26° 30' East. Tam. 6 North 47° 35' West.
Tam. 4 South 38° West. Tam. 5 South 45° 30' East.

P. M. I walk to corner of Twp. 134-135, ranges 31-32, and look for B. I. U. S. notes call for:

Tam. 8 North 30 East 26 Tam. 6 North 70 West 13
Tam. 6 South 9 1/2 West 18 Tam. 8 South 18 3/4 East 48.

These all fell inside the road limits of the State Rural Highway and were destroyed, if any remained. E. B. Horst.

Saturday July 8th, 1916: I get notice from J. W. Curo to return to Walker. I take Leader-motley stage to Motley, fare 50¢. R.R. fare Motley to Walker 1.82. Supper and dinner 50¢. I stop at Chase Hotel.
E. B. Horst.



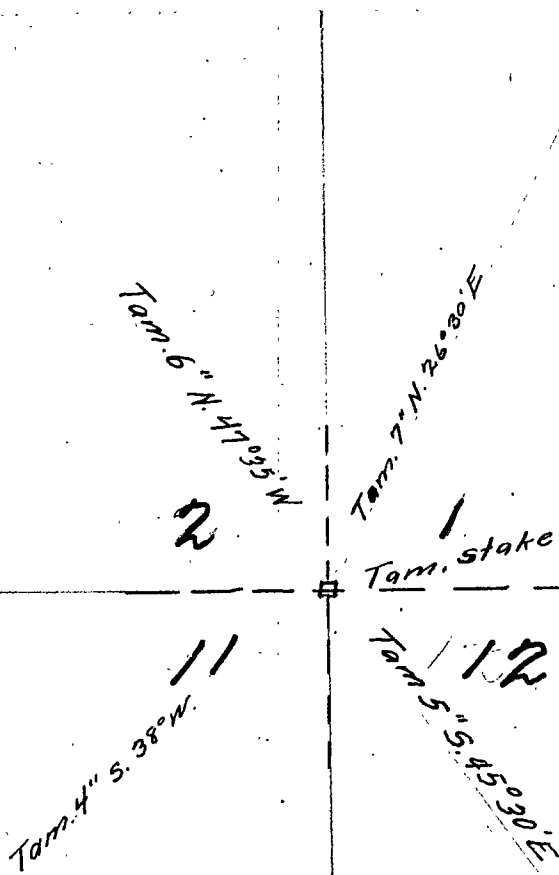
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134-32

Plat of Survey Record
No. 359



SURVEY RECORD No. 360
Sec. 1-141-31 & Sec. 6-141-30

Saturday April 28th, 1917: E. B. Horst, transitman, with outfit and A. J. Erickson with Ford car drive to the corner of secs. 7 and 18, Twp. 140-30, and secs. 12 and 13, Twp. 141-31, where Herman Houlihan, Albert Hansen and Clarence Buisradofor join us. We walk N. over brushed road to corner to secs. 6 and 7, Twp. 141-30, and sections 1 and 12, Twp. 141-31, where we find a wood post marked and driven into the ground for the Sec. corner. I check this up with the remains of the U. S. bearings at this point and find the corner to be A. K. U. S. notes call for:

- W. Pine 30 North 12° 30' East 71 links = 46.86 ft.
- W. Pine 30 North 1° 00' West 32 links = 21.12 ft.
- Y. Pine 24 South 29° 30' West 166 links = 109.56 ft.
- Y. Pine 20 South 14° East 82 links = 54.12 ft.

Snag of the N.E. tree still remains and stumps of the N.W. and S.W. trees still remain. I send a man north to 1/4 corner, between secs. 1 and 6, to erect a flag.

I set transit on line between above corners and set a hub on section line 592.0 ft. North of section corner, also a hub north of a small lake, lying on Sec. line setting transit on hub 592.0 ft. North. Backsight South, reverse telescope and turn left 54° 37' - 113.1 ft. Thence left 16° 57' - 96.8 ft. - thence left 12° 50' - 114.2 ft. - thence left 62° 05' - 329.2 ft. to Sec. line. Angle equals 37° 15' to section line.

Finish at 4 P.M. and return to Walker. E. B. Horst.

Latitudes and Departures.

Course	Distance	Cor.	Sine.	North	South	East	West.
N. 54 d. 37' E.	113.1	.57904	.81530	65.50		92.21	
N. 37 d. 40' E.	96.8	.79158	.61107	96.62		59.15	
N. 24 d. 50' E.	114.2	.90753	.41998	103.64		47.96	
N. 37 d. 15' W.	329.2	.60529	.79600	262.04			199.26
South	0.00		0.00	0.00	507.88		
Totals				507.80	507.80	199.32	199.26

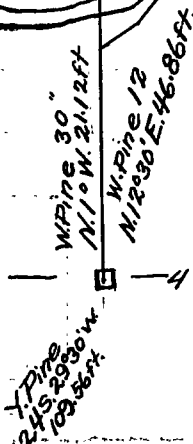
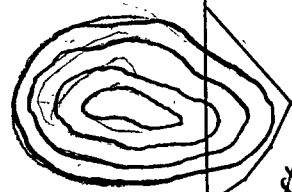
Sec. 1-141-31

Sec. 6-141-30

Plat of
Survey Record
No. 360

1

6



Sec. 12

Sec. 7

SURVEY RECORD No. 361
T. 141 N. R. 27 W. SEC'S 6-7-18-19-30-31

T. 141 N. R. 28 W SEC'S 1-12-13-24-25-36

Field Book No. 90
Page 26-48

Township 141, Range 27, West 5th P.M.

Thursday March 4th, 1915: Leave Hackensack for Ben Clark's place via Longville. Krake drove me.

Friday March 5th, 1915: I go to Roy Elevore's farm to employ him to work and survey of Range line between ranges 27-28. Elevore and I go to Andy Ford's and find him not at home. We go to the cor. to secs. 19-30, Twp. 141-27, and 24-25, Twp. 142-28. I find post set by Surveyor and iron marked. Secs. 24-25, Twp. 142-28, sec. 19-30, Twp. 141-27. U.S. note call for B. T. as follows:

W.P. 30 S 30 W 47: 70.20 S 10 E 46: I find two B. T.'s which check out as follows: W.P. 30 S 17° 32' E 31.92: W.P. 30 S 26° 5' W 30.36: The B. T.'s show iron marks which appear to be those of a Govt. Surveyor, also iron marked by later surveyor. We go to 1/4 cor. between secs. 19-141-27 and 24-142-28, and find small stake set by Surveyor Clark. U.S. notes call for:

Dronwood 4 S 45° W 13: Sugar maple 12 N 45° E 11. I find sugar maple plainly marked but no trace of Dronwood. Maple checks out correctly. Elevore goes to town, can get no men until tomorrow. I copy notes from transcript for field use. W.D. Gorman.

Saturday March 6th 1915: Gorman, transitman, Elevore, chainman, Mander, axeman. Commencing at the cor. to secs. 19-30, 141-27 and 24-25, 142-28, run transit line and chain N. on range line between Ranges 27-28. Var. 4°. 260.75 set hub. 1424. enter arm of small lake - 1545. leave same - 1720 enter arm of 2nd small lake - 1780. leave same - 2087.75 set hub - 2270. enter bog - 2518. leave bog - 4321.50 1/4 cor. bet. 19-141-27 and 24-142-28 lies E. 9.90 ft. Correction 00229. - 260.75 goes W. 60 - 2087.75 goes W. 5.88 - 4321.50 goes W. 9.90. Commencing at cor. to secs. 19-30, 141-27 and 24-25, 142-28, run transit line and chain S. between ranges 27-28. Var. 5°. 300 enter marsh - 380 leave same - 633 set hub - 840 enter marsh - 1124 leave same - 1178.25 set hub. W.D. Gorman.

Sunday March 7th, 1915: Met Andy Ford who claimed he knew another corner for sections 19-30, 141-27 and 24-25, 142-28: I go to said corner and find W. Pine marked dimly "141" and Norway Pine blazed but a post of the blazed (where iron marks should be) burned off.

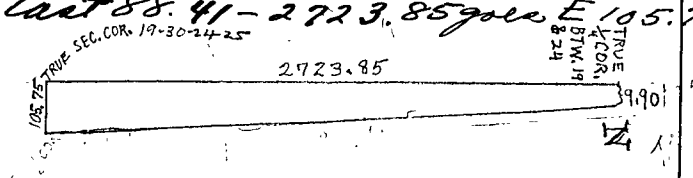
Monday March 8th, 1915: Gorman, transitman, Elevore, chainman, Mander, axeman, Ford, axeman. I start hub at 1178.25 and continue setting stakes every 300 ft. at 1850 leave marsh. at 1983 Hub. at 2700 Hub - at 3606.10 hub - at 4111. Hub - at 4118.75 miss stake thought to be corner to sec. 30-31, 141-27, and 25-36, 142-28, 206.50 ft. to the West or at 4118.75 stake lies East 206.50 ft. U.S. notes call for: Poplar 4 South 87° E. 7. 4.62 ft. W. Pine 8 South 47° E 17, 11.22 ft. Poplar 10 S. 8° W 25, 16.50 ft. S. Maple 10 N. 80° W. 25, 16.50 ft. I find a S. maple blazed but rotted so that no iron marks are visible. There is absolutely no trace of any other B. T. or stump of one. I continue S. to stake previously used as corner to sec. 30-31 and 25-36. The stake is set in a spruce swamp, and find no B. T. whatever. Quit for night. Am using Burley transit in good adjustment and 300 ft. steel chain.

Tuesday March 9th, 1915: Election day. all the crew went to the polls. I go to town to send letter Curo in a.m. P.M. Try to locate corner to sec. 30, 31, 141-27 and 25-36, 142-28 and find no B. T. that will check out.

Wednesday March 10th, 1915: Gorman, transitman, Elevore, chainman, Mander and Ford, axemen. Starting at true cor. to secs. 19-30, 141-27 and 24-25, 142-28 at spike set by Curo. Correcting for true line. Distance between said corner stake and 1/4 corner on West line of sec. 19 = 2723.85 ft. (.03518) Hub at 425.60 goes East - Hub at 2237.67 goes East 88.41 - 2723.85 goes E 105.75 from 1/4 cor. between Secs. 19, 141-27 and 24, 142-28 I chain and run random line north. 1104.25 Hub. 1330. enter round pond - 1699 leave same: 2095.35 hub: 2663.35 hub: 3148.35 hub: 3400 enter long lake: 6543.10 hub: 6600 leave long lake: W.D. Gorman.

Thursday Mar. 11th, 1915: Gorman, transitman, Elevore, chainman, Mander and S. Elevore, axemen. Starting at Hub 6543.10 set hub at 6813. At 7031.50 true corner to secs. 7, 18, 141-27 and 12, 13, 142-28 lies East 85 ft. From M.C. corner on N.B. T. of long lake I start a random line

19-30-24-25
N. Var. 4°
4321.5 = 1/4 Cor.
E. 9.90



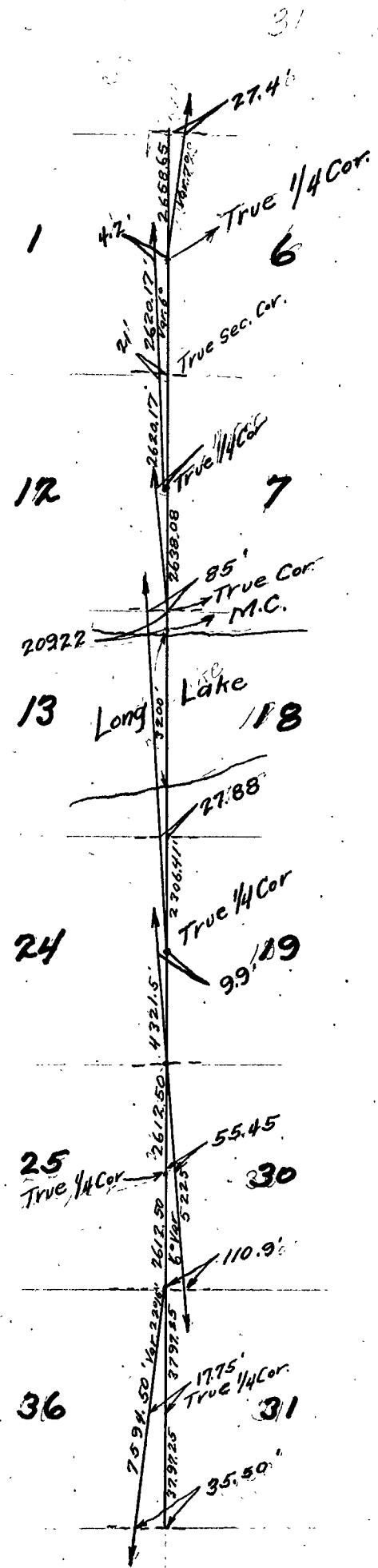
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141.28 - 27

571

361

Plat of Survey
Record
No. 361



March (var. 6°) over Middleton's cut out line.

Set hub at 300 ft. Set hub at 1201 ft. Set hub at 1323 ft. Set hub at 1801 ft. Set hub at 2701 ft. At 2850.15 I find 1/4 cor. between sections 7, 12, set by Middleton, which does not check out with B.J. where U.S. notes call for: W. Pine 30 N. 5° E. 80 = 52.80 ft. At 2847.30 I establish 1/4 cor. between section 7-12. At 2847.30 random line is 4.90 West at 2847.30 on random line true corner lies 4.90 ft. Correcting back: (0017209)

At 209.22 true corner to sec. 7, 18, and 12-13 goes E. 36. I find this corner established by Middleton correct. Hub at 300.00 goes East .52 - Hub at 1201.00 goes East 2.07 - Hub at 1801.00 goes East 3.10 - Hub at 2701.00 goes East 4.65 - Hub at 2847.30 goes East 4.90.

Friday Mar. 12th, 1915: Same crew. I continue north line (var. 6°) between sections 7-12, ranges 27 and 28, setting stakes every 300 ft. and hubs as follows: 94.75 hub: 362.35 Hub: 998.75 hub: 1779.50 hub: 2535.50 hub: 2947.75 hub: 4329.25 Hub: at 5240.35 missed 1/4 corner 42 ft. to the West or at 5240.35 true 1/4 corner between sec. 1, 141-28 and 1, 141-27, lies East 42 ft. at this corner U.S. notes call for: W. Pine 30 South 10 West 22.2. I find old B.J. plainly marked and iron post set for original corner which checks as follows: South 21° West 146.10 ft. From true 1/4 corner between secs. 6, 141-27 and 1, 141-28, I run random line North: var. 7° and chain, setting stakes every 300 feet. at 566.50 Hub: at 900. Hub: at 2387. Hub: at 2685.65 miss section corner on North Swp. line to sections 1-6-31-36, 27.40 ft. to the East or at 2685.65 true corner to secs. 1-6-31-36 lies West 27.40 ft. Quit for night.

Saturday March 13th, 1915: Correcting back, from 1/4 corner to Swp. line between secs. 6 and 1. (010307) Hub at 566.50 goes West 5.84: Hub at 900.0 goes West 9.27. Hub at 2387. goes West 24.50. Hub at 2685.65 goes West 27.40. Gorman, transitman. Devore, chainman. Correcting back from 1/4 corner stake on West line section 7, to 1/4 corner stake on West line sec. 6, 141-27. (0080147) Hub at 94.75 goes East .75 - Hub at 362.35 goes East 2.90 - Hub at 998.75 goes East 8.00 - Hub at 1779.50 goes East 17.26 - Hub at 2535.50 goes East 20.35. at 2620.17 set true corner to sections 6, 7, 12, 13, from Hub at 2535.50, chain North 84.67 and East 21, where I drive 80 d. spike for true corner to secs. 6, 7, 12, 13, from which: var. 6°.

W. Pine stump 30 South 70° 21' West 30.75 - W. Pine stump 30 N. 63° 15' West 33.50.

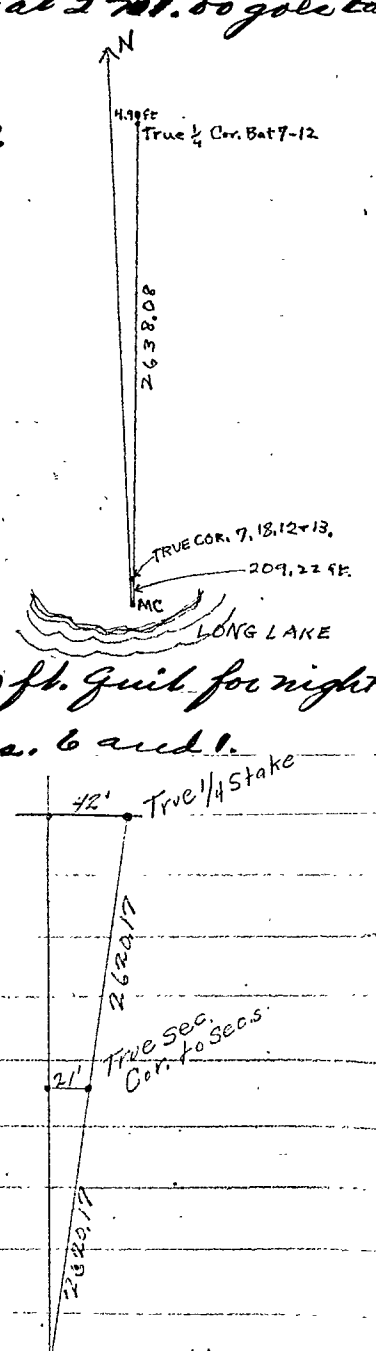
Sunday, March 14th, 1915: All day at Clark's.

Monday, March 15th, 1915: Gorman, transitman, Devore, chainman, Andy Ford and R. Manders, axemen. Starting from true corner to secs. 19-30-24-25 and run South on true line. var. 7° at 557.0 hub - at 1093.0 hub - at 1834.75 hub - at 2359. hub - at 2400.0 enter swamp - at 3800 leave same - at 3877.25 hub - at 3880. intersect road - at 4062.2 hub - at 5713. hub - at this pt. I search for B.J. to corner to secs. 30-31-25-36, where U.S. notes call for:

W. Pine 8 S. 47° E 17 - Poplar 10 S. 8° W 25 - Poplar 4 S. 87° E 7 - S. 7 maple 10 N. 80° E 25 - I find W. Pine stump plainly marked and two poplar stumps which check out as to measurements. From B.J.'s established true corner to secs. 30-31-25-36, drive 80 d. spike from which: New B.J. var. 6° true line. Poplar 16 N. 52° 20' W. 79.25 - Birch 6 S. 70° 50' E. 62.10 - at 5225.00 true corner to secs. 30-31-25-36 lies West 110.90 ft. or at 5225.00 on random line missed true corner 110.90 to the East. am using Curley transit in good adjustment and 300 ft. Chicago steel tape. Quit for night.

Tuesday March 16th, 1915: Gorman, transit, Devore, chainman, Ford and Manders, axemen. Starting from true corner to secs. 30-31-36-25 run South on 6° var. to locate 1/4 cor. between sec. 31-36 - at 569.25 hub - at 675. enter Sam. swp. - at 800. leave same - at 1018 hub - at 1320. enter spruce swp. - at 1802.90 hub - at 2700. leave spruce swp. - at 2803. hub - at 4817. hub - at 6027.50 Hub - at 7385.90 intersect South Swp. line 1979.75 ft. West of true corner to secs. 1-6-31-36. at 7385.90 true corner lies East 1979.75 ft. at 2640 I make a thorough search for B.J. to 1/4 post but can find nothing. Quit for night. N.D. Gorman.

Wednesday, March 17th, 1915: Gorman, transit, Devore, chain, Ford and Manders, ax. - Correcting back. (26804) Hub at 569.25 goes E. 152.25 ft - Hub at 1018. goes E. 272.86 ft - Hub at 1802.90 goes E. 584.27 ft. Hub at 2803 goes E. 761.31 ft. - Hub at 4817 goes E. 1291.04 ft. Hub at 6027.50 goes E. 1671.95 ft. Hub at 7385.90



goes E. 1979.75 ft. Starting at corner to sec. 30-31-25-36, I run true line south thru true line stake East from Hub at 569.25. Var. at true line 22°15' East. At 316.25 hub - at 450.0 enter Jam. sup. At 724.00 leave same - at 987.50 hub - at 1350.0 enter spruce sup. - at 1500 - leave spruce sup. at 2094.35 hub -

E. 35.50
5299.25
17.75
316.25

Thursday Mar. 18th 1915 - same crew. Starting at hub 2094.35 continue line and chain south. at 3841.75 hub - at 5299.25 hub - at 6808.50 hub - at 7594.50 cor. post to sec. 31-36-1-6. Rq. 141-28 lies Correcting back - Hub at 7594.50 goes E. 35.50 to cor. post. Hub at 6808.50 goes E. 31.82 - Hub at goes E. 24.76 - Hub at 3841.75 goes E. 18.95 - at 3777.25 I establish 1/4 sec. cor. between sec. 31-36 ft. E. of line. Drive 80d spike from which the following B. Si. 22°15' Var. At 5350 intersect Leech Lake Reservation. Hub at 2094.35 goes E. 9.79 - Hub at 987.50 goes E. 4.62 - Hub at goes E. 1.48 - N. W. Gorman.

Friday, Mar. 19th 1915 - Correcting back (021225) Gorman, transitman, leveler, chain, From corner of 19-30-24-25 to corner of 31-30-25-36. Hub at 557.00 goes West 11.82: Hub at 1093. goes W. 22.10: Hub at 1824.75 goes W. 38.90: Hub at 2395. goes W. 49.95: at 2612.50 I establish true 1/4 corner to sections 25-30. at 2612.50 true 1/4 cor. goes 55.45 ft. Drive 80d spike from which I put the following B. Si. Var. 7°.

O. Jam. 476 11°55' E 26.45: Balsam 108 18°35' W. 149.20: Hub at 3877.25 goes W. 72.28: Hub at 4062.20 goes W. 98.11: Hub at 5225. goes W. 110.90 to cor. post to sec. 30-31-36-25. Correcting back. (012088) from 1/4 corner between sec. 19-24 to sec. cor. to sec. 7, 18, 12, 13.

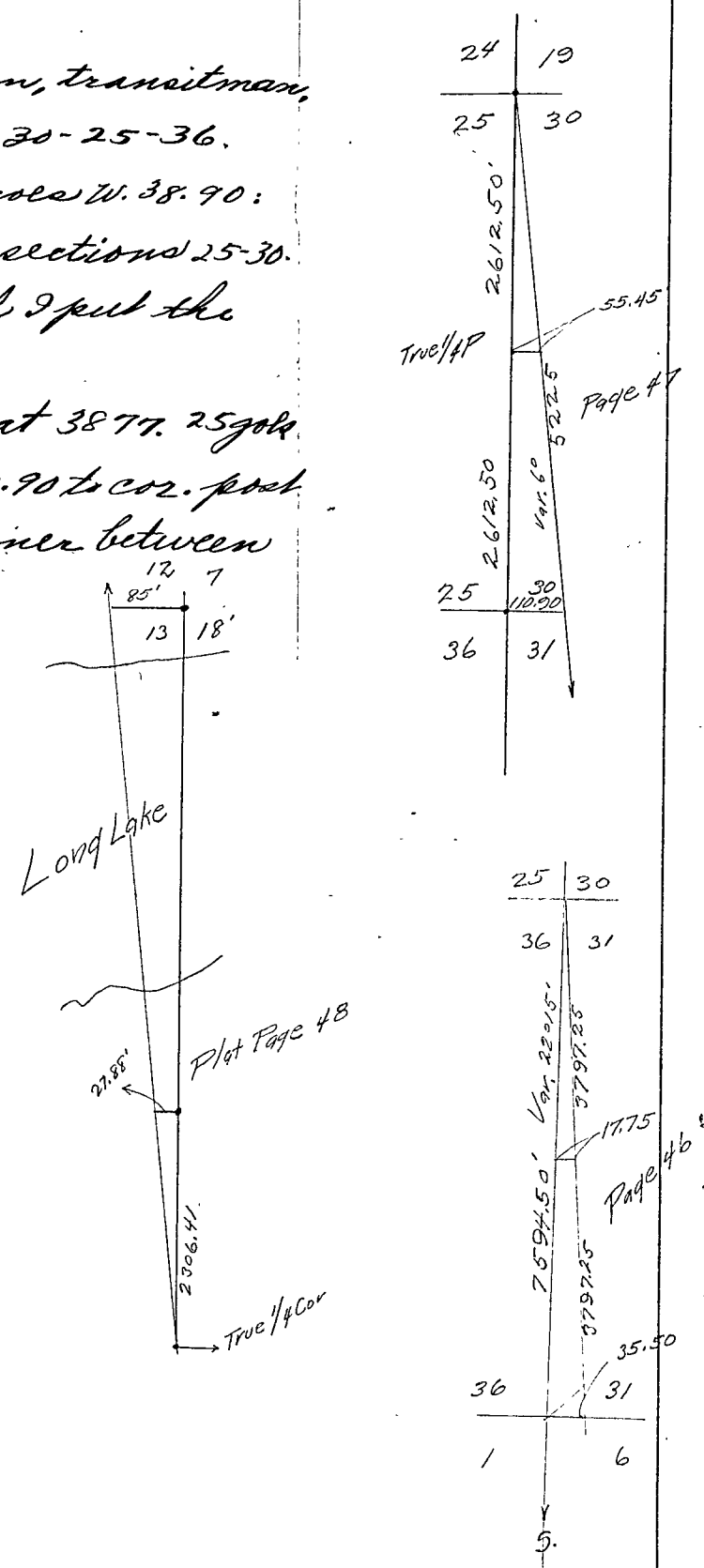
Hub at 104.25 goes E. 13.34: Hub at 2095.90 goes E. 25.34. Hub at 2663.35 goes E. 30.10: Hub at 3148.35 goes E. 38.05. Hub at 7031.50 goes E. 85.00: at 2306.41 I set sec. cor. to sec. 13, 24, 18, 19, 27, 88 ft. East.

Drive 80d spike from which I put the following B. Si. 7° Var.

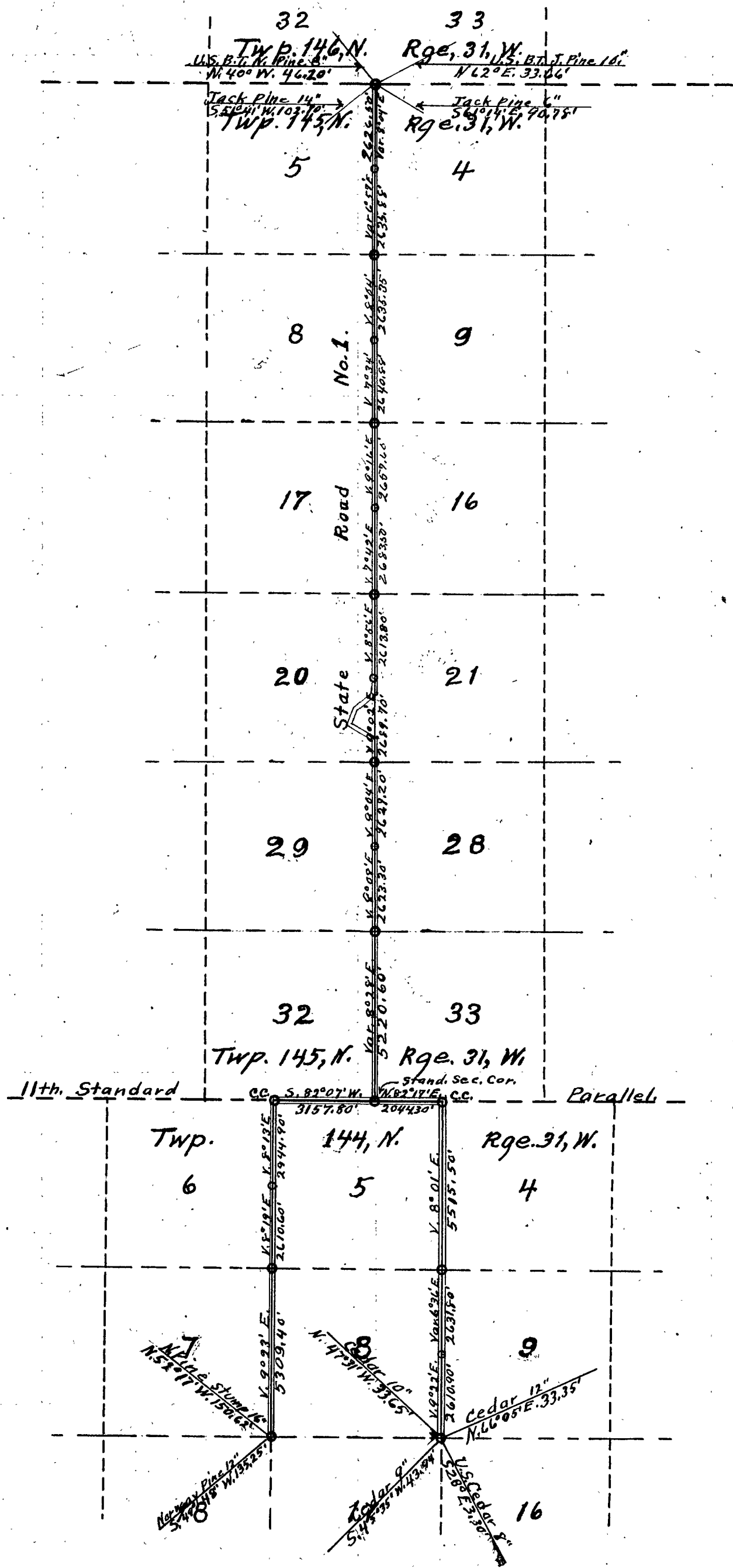
W. Oak 108 10°15' West 15.35. W. Pine 87 59°41' East 29.85. No tack head in tree. Leave Clark's for Longville where I stay all night.

Saturday, Mar. 20th, 1915: Take stage for Pine River from where I take train to Hackensack.

N. W. Gorman.



Plat of Survey Record No. 362.



corner, set by the County Surveyor, witnessed by the following U. S. B. T's:

Jack Pine 9, N., 44 W., 214 links; Jack Pine 9, S., 62½ E. (dup up) 36 links; Jack Pine 9, S., 75 W. 236 links; Jack Pine 12, N., 2 E. (dup up) 335 links, and from which bear the following C. R. & B. T's: Jack Pine 15, S., 58°24' E. 64.55 ft.; Jack Pine 14, S., 22°10' W. 117.80 ft.; Jack Pine 9, N., 59°19' W. 119.63 ft. to a X on top of railroad spikes. Rolling Norway and Black Jack Pine land. Sandy soil. Road cleared.

Thence Left 1°41' or S., 9°16' E. between Secs. 16 & 17, 2657.50 ft. to the ¼ S. corner. 104+00.00 Leave marsh and enter standing Norway and large Black Jack Pine. A corduroy 20 ft. wide and covered with earth, is built across the marsh east and west along the section lines. 119+17.50 Intersect the center line of the G. N. Ry. Angle at intersection, Left 89°. Right of way 100 ft. wide. 131+95.10. The ¼ S. corner. A Jack Pine nub 4 inches in diameter, was set for the corner, according to the following U. S. B. T's: Norway Pine 14, S., 56 E. (stump of) 22 links; Jack Pine 9, N., 42 W. (stump of) 24 links; and from which bear the following C. R. & B. T's: Jack Pine 12, S., 61°18' W. 48.77 ft.; Jack Pine 10, N., 64°15' E., 43.16 ft. to a X on top of railroad spikes. Rolling Norway and Black Jack Pine land. Sandy soil.

Thence Right 1°34' or S., 7°42' E. 2683.50 ft. to the section corner. 135+60.00 Edge of ravine bears N.W. & S.E. 136+70.00 Bottom of ravine; enter small spruce swamp. 138+90.00 North shore of small pond. 140+00.00 South shore of small pond; enter narrow spruce swamp. 140+30.00 Leave the spruce swamp. 143+60.00 South edge of ravine; enter cut-over land and stumps. 158+78.60. The corner to Secs. 16, 17, 20 & 21. A Norway Pine nub, 5 inches in diameter, was set for the section corner, according to the following U. S. B. T's: Norway Pine 20, S., 80 E. (stump of) 38 links. Norway Pine 20, N., 53 E. (stump of) 77 links. Norway Pine 16, S., 37 W. 46 links. Norway Pine 20, N., 12 W. (stump of) 40 links, and from which bear the following C. R. & B. T's: Norway Pine 15, N., 31°45' E. (stump) 61.70 ft. Norway Pine ^(stump) 14, S., 48°45' E. 75.64 ft. Norway Pine 18, N., 86°51' W. (stump) 68.28 ft. Jack Pine 9, S., 38°36' W., 95.60 ft. to a X on top of railroad spikes. Rolling Norway and Jack Pine land. Sandy soil.

Thence Left 1°15' or S., 8°56' E, between Secs. 20 & 21, 2613.80 ft. to the Witness Corner for the ¼ S. corner. 184+92.40. The Witness corner. A 3 in. Jack Pine nub was set for the corner, according to the following U. S. B. T's: Jack Pine 6, N., 14 W. 96 links. Jack Pine 4, S., 81 E. 65 links. No C. R. & B. T's.

Thence Left 0°5' or S., 9°2' E. 2689.70 ft. to the section corner. 185+28.40. Point for ¼ S. in marsh ("grassy lake" in U. S. field notes). 187+60.00 Leave the marsh. 192+93.10. A turning point on the section line on the North side of a marsh ("pond" in U. S. field notes) from which bear the following C. R. & B. T's: Jack Pine 8, N., 74°14' W. 50.60 ft.; Jack Pine 8, S., 62°50' E. 34.40 ft. to the heads of 10 d nails.

Thence Right 48°39' or S., 39°37' E. 685.70 ft. to a turning point. 199+78.80 The turning point, an Oak nub, 4 inches in diameter. No C. R. & B. T's.

Thence Left 28°39' or S., 10°58' W. 300 ft. to a turning point. 202+78.80. The turning point, a Norway Pine nub 4 inches in diameter from which bear the following C. R. & B. T's: Jack Pine 10, S., 3°45' E., 39.30 ft. Jack Pine 10, S., 77°13' W. 56.83 ft. to a X on top of railroad spikes.

Thence Left 79°20' or S., 68°22' E. 717.80 ft. to a turning point on the section line. 209+96.60. The turning point on the section line, a Birch nub 4 inches in diameter from which bear the following C. R. & B. T's: Jack Pine 10, S., 40°11' W. 52.72 ft. Jack Pine 10, S., 77°14' E. 60.11 ft. to a X on top of railroad spikes.

Thence Right, 59°19' or S., 9°2' E., along the section line, 788 ft. to the section corner. 217+84.60 The corner to Secs. 20, 21, 28 & 29. A 5 inch Jack Pine tree for the section corner (original) with the field records for the sections scried thereon, and from which bear

Survey Record No. 362.

the following U. S. B. Ts: Jack Pine 6, S., 54 W. 10 links. Jack Pine 6, S., 58 E. 21 links. Jack Pine 8, N., 24 E. 18 links. Jack Pine 4, N., 32 W. 20 links, and from which bear the following C. R. S. B. Ts: Jack Pine 12, N., 22° 24' E. 58.65 ft. Jack Pine 15, N., 62° 40' W. 79.10 ft. Jack Pine 12, S., 42° 20' W. 56.39 ft. Jack Pine 10, S., 68° 54' E. 58.36 ft. to a X on top of railroad spikes. From 192 + 93.10 to 202 + 78.80 the road is carried along a ridge between the pond and a small marsh. Sandy soil.

Hence, Right 0° 58' or S., 8° 4' E., between Secs. 28 + 29; 2627.20 ft. to the ¼ S. corner 230 + 15.00 Enter small marsh. 232 + 60.00 Leave the marsh. 235 + 50.00 Leave Norway and Jack Pine land and enter scattering hardwoods, White Pine stumps and windfalls, thick brush and boulders. 244 + 11.80 The ¼ S. corner. An oak nub 4 inches in diameter, was set for the corner according to the following U. S. B. Ts: Red Oak 6, N., 56 W. (fallen) 11 links. Ironwood 3, S., 88 E. 10 links, and from which bear the following C. R. S. B. Ts: Elm 14, N., 49° 50' W. 38.13 ft. Maple 7, S., 34° 36' E. 49.28 ft. to a X on top of railroad spikes. Rolling White Pine and hardwood land, large White Pine stumps, windfalls, thick brush and boulders. Sand and clay soil.

Hence Left, 0° 4' or S., 8° 8' E. 2623.30 ft. to the section corner. 270 + 35.10 The corner to Secs. 28, 29, 32 + 33. An Oak nub 4 inches in diameter was set for the corner according to the following U. S. B. Ts: Sugar 8, N., 63 E. (no remains) 12 links. Sugar 6, S., 48 W. (stump of) 9 links. Lind 6, N., 81 W. (no remains) 14 links. Elm 6, S., 21 E. 37 links, and from which bear the following C. R. S. B. Ts: Maple 8, N. W. 73.70 ft. Black Oak 6, S. W., White Pine stump 30, S. E. 4845 ft. to a notch on the upper side of a 60 d spike in the Maple, and a X on top of a railroad spike in the Black Oak and White Pine stump. Rolling White Pine and hardwood land, large White Pine stumps, windfalls, thick brush and boulders. Sand and clay soil.

Hence Left, 0° 20' or S., 8° 28' E. between Secs. 32 + 33, 5220.60 ft. to the Section corner. 322 + 55.70 The corner to Secs. 32 + 33, on the 11th Standard Parallel. An Elm nub 4 inches in diameter, was set for the corner, according to the following U. S. B. Ts: White Pine 30, N., 48 W. (stump of) 5 links. Sugar 8, N., 39 E. (remains of) 23 links, and from which bear the following C. R. S. B. Ts: Black Oak 10 N., 49° 52' E. 75.31 ft. Birch 8, N., 40° 25' W. 52.55 ft. to the angle in a 60 d spike in the Black Oak, and a notch on the upper side of a 60 d spike in the Birch. Rolling White Pine and hardwood land, large White Pine stumps, windfalls, thick brush, and boulders.

Hence Right 90° 35' or S., 82° 7' W. between sections 5 and 32, 3157.80 ft. to the closing corner. 323 + 00.00 Enter round marsh. 324 + 00.00 Leave the marsh. 336 + 90.00 Enter marsh. 354 + 13.50 The closing corner for sections 5 + 6, T. 144 N. R. 31 W., in a marsh, the original closing corner post, with the field record cut thereon, was found in place, having been set according to the following U. S. B. Ts: Br. Oak 8, S., 40 E. 84 links. Elm 8, S., 11 W. 109 links, and from which bear the following C. R. S. B. Ts: Oak nub 5, S., 49° 47' E. 66.97 ft. Oak nub 5, S., 20° W. 78.15 ft. to a X on top of 60 d spikes. Rolling White and Norway Pine and hardwood land, large stumps, windfalls, thick brush, and boulders.

Hence, Left, 90° 10' or S., 8° 13' E. between Secs. 5 + 6, 2944.90 ft. to the ¼ S. corner 362 + 00.00 Leave marsh. 383 + 58.40 The ¼ S. corner. The post for the corner set by me (in '03) according to the following U. S. B. Ts, was found in place: White Pine 8, N., 31 E. (stump of) 22 links. White Pine 8, S., 54 W. (stump of) 13 links. A nub was set in the place of the post for the ¼ S. corner from which bear the following C. R. S. B. Ts: White Pine 9, N., 21° 12' E. 93.10 ft. Oak 9, N., 67° 26' W. 46.90 ft. to a X on top of railroad spikes. White Pine and hardwood land, large stumps, windfalls, thick

brush, and boulders, clay and sand soil. 370+10 to 370+90.00 Marsh E. & W.

Thence Left, $0^{\circ}6'$ or S. $8^{\circ}19'E$. 2610.60 feet to the section corner, 409+69.00 The corner to Secs. 5, 6, 7 & 8. The post for the corner set by me (in 1903) according to the following U. S. B. Ts. was found in place: White Pine 28 N., $45^{\circ}E$. (stump of) 6 links. White Pine 26, N., $45^{\circ}W$. (stump of) 10 links. White Pine 26, S., $28^{\circ}W$. (stump of) 61 links. White Pine 26, S., $32^{\circ}E$. 50 links. An oak hub, 4 in. in diameter was put in the place of the post for the corner, from which bear the following C. R. & B. Ts: Basswood 12, N., $80^{\circ}5'W$. 49.22 ft. Oak hub 6, S., $52^{\circ}12'E$. 62.00 ft. Oak hub 6, S., $24^{\circ}47'W$. 66.51 ft. to a X on top of spikes. Rolling White Pine and hard wood land, large stumps, windfalls, brush and boulders, sand and clay soil.

Thence Left, $1^{\circ}4'$ or S., $9^{\circ}23'E$. between Secs. 7 & 8, 5309.40 ft. to the section corner. 417+40.00 Enter small marsh. Bears E. & W. 418+00.00 Leave the marsh. 422+15.00 Enter marsh. Bears E. & W. 424+00.00 Leave the marsh. 462+78.40 The corner to Secs. 7, 8, 17 & 18. An Elm hub, 4 inches in diameter, was set for the corner, according to the following U. S. B. Ts: Norway Pine 8, N., $30^{\circ}W$. (burnt out) 95 links. Norway Pine 8, N., $38^{\circ}E$. (stump) 156 links. Norway Pine 6, S., $10^{\circ}W$. (fallen) 170 links. Norway Pine 6, S., $5^{\circ}E$. 178 links. and from which bear the following C. R. & B. Ts: Norway Pine 14 (U. S. B. T.) stump, N., $33^{\circ}30'E$. 103.30 ft. Norway Pine stump 16, N., $52^{\circ}17'W$. 150.62 ft. Norway Pine 12, S., $49^{\circ}48'W$. 135.25 ft. to a X on top of railroad spikes. Rolling White Pine and hard wood land, large stumps, windfalls, thick brush and boulders. Sand and clay soil.

Returning to the corner of Secs. 32 and 33, T. 145 N. R. 31 W. on the 11th Standard Parallel or to Station 322+55.70, and calling the said station O. Thence Left, from the line (produced southward) between the said sections 32 and 33, $89^{\circ}15'$ or N., $82^{\circ}17'E$. 2044.30 ft. to the Closing Corner for Secs. 4 and 5, T. 144 N. R. 31 W. 12+00.00 Enter marsh. Bears N. & S. 16+07.60 Intersect the center line of the Park Rapids and Leech Lake branch of the B. N. Ry. Angle at the intersection, Right $90^{\circ}51'$. Right of Way, 100 ft. wide. 16+50.00 Leave the marsh. 20+44.30 The Closing Corner for Secs. 4 & 5. An Oak hub, 4 inches in diameter, was set for the corner according to the following U. S. B. Ts: White Pine 24, S., $5^{\circ}E$. (stub of) 30 links; Br. Oak 6, S., $5^{\circ}W$. 92 links; and from which bear the following C. R. & B. Ts: Red Oak 8, S., $28^{\circ}22'E$. 86.99 ft. Br. Oak 6, S., $9^{\circ}15'W$. 116.77 ft. to a X on top of railroad spikes.

Thence Right $89^{\circ}42'$ or S., $8^{\circ}1'E$. between Secs. 4 & 5, 5515.50 ft. to the section corner. 24+90.00 Enter meadow. Bears E. & W. 26+90.00 Leave the meadow. 28+90.00 Enter marsh. Bears E. & W. 31+40.00 Enter marsh. 33+90.00 Leave the marsh. 46+50.00 Enter large, dead, standing, and windfall Cedar, Tamarac and Spruce swamp, thick brush and boulders. 71+00.00 Leave the swamp. 75+59.80 The corner to Secs. 4, 5, 8 & 9. The Spruce post for the corner, set by me (in 1903) according to the following U. S. B. Ts, was found in place; an Oak hub, 4 inches in diameter, was put in its place. Oak 4, S., $11^{\circ}E$. (now fallen) 122 links; White Pine 7, S., $17^{\circ}W$. (cut off) 226 links; White Birch 6, N., $32^{\circ}W$. (stump of) 187 links; White Pine 6, N., $52^{\circ}E$. (no remains) 17 links, and from which bear the following C. R. & B. Ts: Spruce 8, S., $82^{\circ}30'E$. 95.40 ft. Spruce 8, N., $45^{\circ}22'E$. 144.28 ft. to a X on top of railroad spikes. The dry lands along the line are the same White Pine and hard wood land with large stumps, windfalls, brush and boulders, as before noted.

Thence Right, $1^{\circ}25'$ or S., $6^{\circ}36'E$ between Secs. 8 & 9, 2631.80 ft. to the $\frac{1}{4}$ S. corner. 80+60.00 Enter Tamarac and Cedar swamp. Timber standing. 101+91.60 The $\frac{1}{4}$ S. corner. The Cedar post for the $\frac{1}{4}$ S. corner, set by me (in 1903) according to the following U. S. B. Ts., was found in place. Balsam 6, N., $31^{\circ}E$. 11 links; Cedar 8, N., $23^{\circ}W$. 24 links; A cedar hub, 4 inches in diameter, was put in place of the post, and from which bear the following C. R. & B. Ts: Cedar 9, N., $57^{\circ}16'E$. 67.47 ft. Cedar 15, N., $49^{\circ}42'W$. 60.25 ft. to a X on top

B

Survey Record No. 362.

of railroad spikes.

Hence left, $2^{\circ}46'$ or S., $9^{\circ}22'$ E. 2610.90 ft. to the section corner. 128 + 02.50 The corner to sections 8, 9, 16 & 17. A cedar hub, 4 inches in diameter was set for the section corner according to the following U.S.D.T's: Cedar 6, N., 8 W. (cut out) 6 links; Cedar 6, S., 45 W. (cut out) 33 links; Cedar 8, S., 28 E. 5 links; Cedar 6, N., 28 E. 14 links, and from which bear the following C.R.S.T's. Cedar 12, N., $66^{\circ}5'$ E. 33.35 ft. Cedar 10, N., $47^{\circ}31'$ W. 33.65 ft. Cedar 9, S., $45^{\circ}35'$ W. 43.94 ft. to a X on top of railroad spikes. Cedar, spruce and Tamarac swamp, the length of the line. Large windfalls, thick brush and boulders.

Survey begun, March 29, 1910.

Survey finished May 6, 1910.

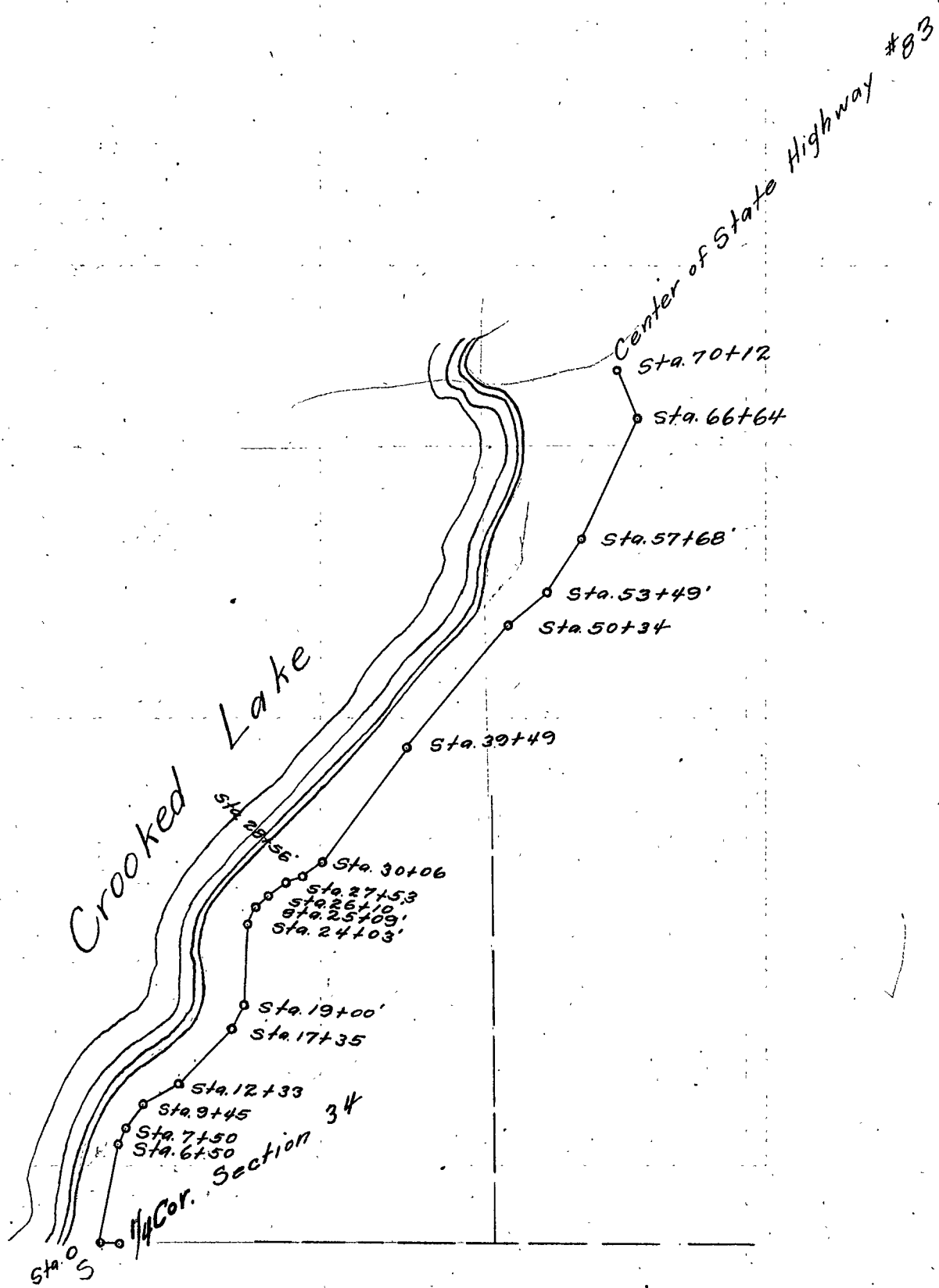
Note: According to an observation on Polaris, made by M. D. Stoner, C.E., Bemidji, Minn., in the S.E. $\frac{1}{4}$ of N.E. $\frac{1}{4}$ of Sec. 28, T. 145 N. R. 31 W. of the 5th P.M., the variation of the compass needle from the true meridian was, in the latter part of July 1904, $9^{\circ}3'$ E. According to information furnished Jas. Canfield, a surveyor employed by the U.S. Forest Service in 1903, the variation was $8^{\circ}35'$ E. The information was furnished him from the U. S. C. & G. Survey.

Jas. D. Middleton,

Surveyor.

Note: Since these notes were written, the Board of County Commissioners has called this road State Road, No. 1.

Plat of Survey Record No. 363



Report on Survey and Location of Road in Portions of Sections 34, 35 & 26 Township of Crooked Lake (139-26) Cass County, Minn.

Beginning at a point 124.5 ft. West along County line of the South Quarter Post of said Section 34 which was: Spruce 10 N., 11 E. 33 links. W. B. 85., 21½ E 17 links. Now is: Spruce stump (nearly obliterated) 12 N., 11 E. 33 links. New bearings: Aspen 55., 32°30' E. 37.4 ft. White Birch 6 N., 53½ E. 55.8 ft.

Road Bearings:

Station	0 N., 10 E.	650 ft.
"	650 N., 28 E.	100 ft.
"	750 N., 37 E.	195 ft.
"	945 N., 64 E.	288 ft.
"	1233 N., 45 E.	502 ft.
"	1735 N., 28 E.	165 ft.
"	1900 N., 4½ E.	503 ft.
"	2403 N., 27 E.	106 ft.
"	2509 N., 46 E.	101 ft.
"	2610 N., 54 E.	143 ft.
"	2753 N., 70 E.	103 ft.
"	2856 N., 53 E.	150 ft.
"	3006 N., 37 E.	943 ft.
"	3949 N., 40 E.	1085 ft.
"	5034 N., 50 E.	315 ft.
"	5349 N., 34 E.	419 ft.
"	5768 N., 25 E.	896 ft.
"	6664 N., 22 W.	348 ft.

7012 Center of Highway (State) and Terminus of this Road Survey. This road is 7012 ft. in length and 66 ft. wide, which is 20 acres and six-tenths. Estimated cost of construction

Do-Wit: Clearing 10 ⁶ / ₁₀ acres at \$12.00 per acre	-----	\$127.00.	Grading (cuts,
fills, placing culverts &c. according to specifications	-----	\$675.00	
Estimated cost	-----	\$802.00	

July 3rd 1917.

J. H. Flynn, Remer, Minn.

New bearings for meander corner where County line intersects Crooked Lake on South line of Sec. 34 Do-Wit: 5 ton boulder (estimated) West 9.8 ft.
 Aspen 6 N., 10 E. 4.6 ft.

Book 89, pages 1 to 30.

Working for Mr. Kinley Township, Jan. 27th 1915: A.M. Curo and I come from Wilkinson on 7:25 train to Walker. Breakfast at Wilkinson 25¢. We go to office at Walker and get notes for work on 138-32 and some work at Pine River. I pay Hotel bill at the Chase Hotel \$7.00. Curo and I take 9:30 train. Curo gets off at Mackensack and I come thru to Backus. R.R. fare 65¢. Dinner at Backus 50¢. P.M. I call up Larson and he comes to Backus and takes me out to his place. Telephone 30¢. Supper and over night with Haus Larson. J. A. Donner.

Jan. 28th. 1915: A.M. Larson takes me and out fit over to Christ Wachs where I am to board. Dinner with Wachs. P.M. Chas. Sheppard, Harvie King, Charles Mitchell and I, walk to the section corner of sections 20, 21, 28 + 29, 138-32, where we find a concrete post 6" x 6" set by Curo for the true section corner. Starting at this point we run north 88°56' West. Var. 8°30'. At 34 + 73.7 set hub; at 44 + 56.8 set hub; At 49 enter swamp; At 52 set hub; At 55 set hub; At 65 leave swamp; At 65 + 54.05 set hub; At 76 + 93 set hub; Quit for night. J. A. Donner.

Jan. 29th 1915: A.M. We continue West. At 79 + 87.7 the true 1/4 corner between sections 19-30, 138-32, sets south 19.70 ft. (A 6" x 6" C.P. set by Curo for the true corner) Correcting back; Hub at 55 goes south 13.53 ft; Hub at 52 goes south 12.79 ft. Quit for dinner; dinner with Wachs. P.M. Charles Wachs and Richard Aldridge joins us. We walk to the section corner of sections 17, 18, 19, 20, 138-32, where we find a 6" x 6" C.P. for the true corner set by J. T. G. Starting at this true corner I run south. Var. 9°30'. At 23 ft. we cross a 5 foot ditch. At 2 + 25 enter swamp; at 22 + 65.7 set hub; at 39 + 72.80 set hub; At 52 + 98.00 intersect E. + W. line. At 53 + 7.40 set hub; Quit for night. Over night with Wachs. J. A. Donner.

Jan. 30th, 1915: Edwin Wachs joins us. We continue south: At 68 + 99 set hub; At 85 + 17.5 set hub; At 88 + 80.40 set hub. Quit for dinner with Wachs. P.M. Continue south: At 104 + 38.6 set hub. We look for the section corner of sections 29, 30, 31 + 32, 138-32, where U. S. notes call for Vig; Jan. 10 South, 69 W. 11; Jan. 18 N. 41 1/2 W. 21; Jan. 12 N. 60 1/2 E. 29; Jan. 12 S. 17 1/2 E. 34. We are unable to find anything of the old B.Ts. here, so continue south; At 118 leave swamp; at 119 + 94.00 set hub; At 129 + 51.10 set hub. At 132 we look for the 1/4 corner between Secs. 31 + 32, 138-32 where U. S. notes call for Vig; Jan. 10 N., 77 1/2 W. 45; Jan. 14 N., 65 East 24. We are unable to find anything, so continue S. At 144 + 25.8 set Hub. Quit for night with Wachs. J. A. Donner.

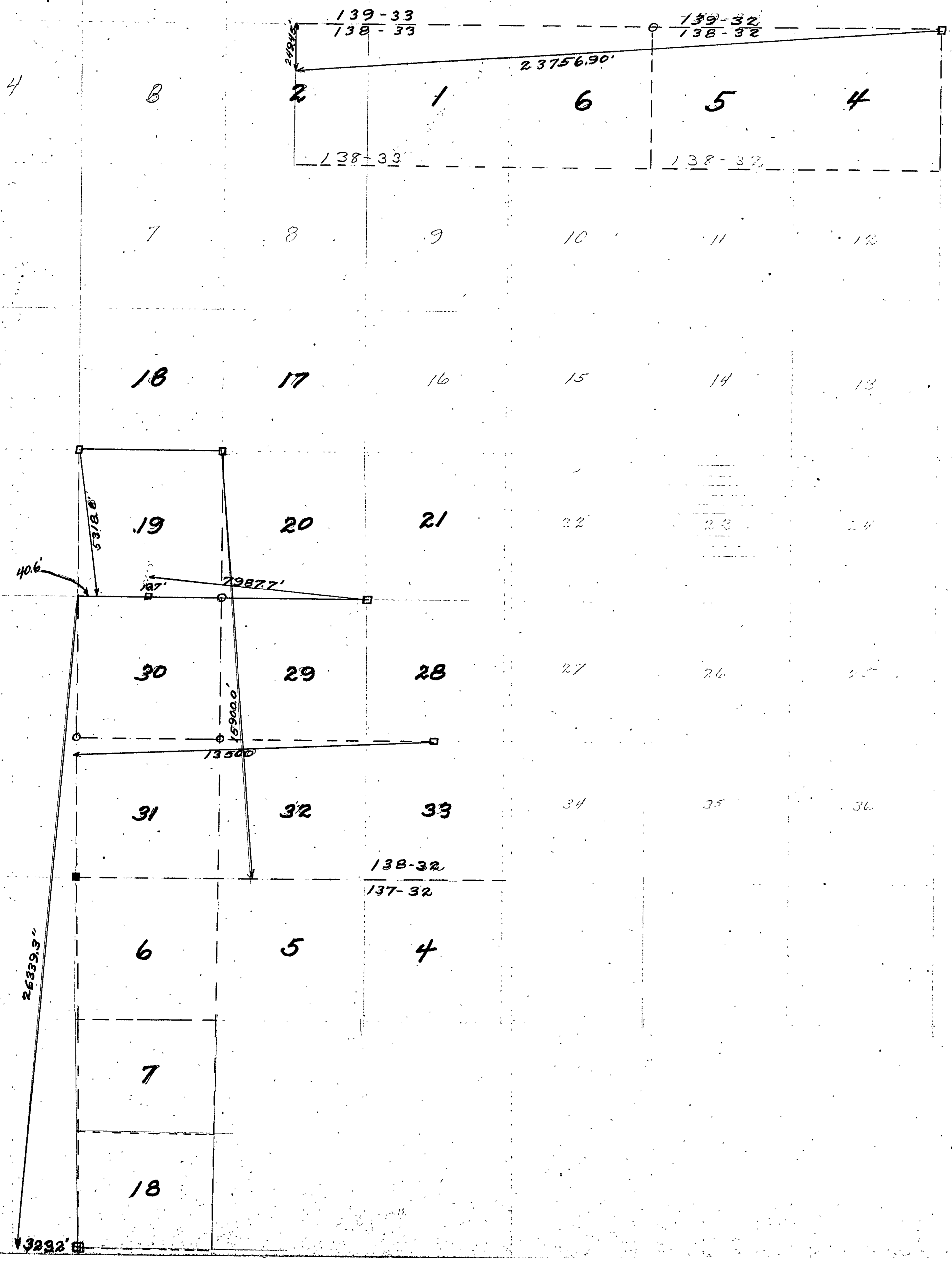
Jan. 31st, 1915: Sunday all day, and nobody works. J. A. Donner.

February 1st 1915: We continue south: At 154 + 58.90 set hub; At 159 set hub. We look for the southeast corner of Sec. 31, 138-32, where U. S. Notes call for: Aspen 14 N., 56 E. 25 = 16.50 ft; Fir 12 N., 40 W. 36 = 23.76 ft; Birch 10 S., 35°30' E. 18 = 11.88 ft; W. Pine 18 S., 23 W. 60 = 39.60 ft. We are unable to find anything of the old B.Ts., so we quit for dinner. Dinner in the woods. P.M. Starting at the 1/4 corner between sections, 28, 33, 138-32, I run North 89°56' W. Var. 9°15'. From a 6" x 6" Con. P. set by J. T. G. At 10 + 57.00 set hub; at 12 + 50.00 enter swamp; at 25 + 99.60 set hub; quit for the night. Overnight with Wachs.

February 2nd 1915: We continue West. At 39 leave swamp; At 39 + 82.00 set hub. Quit for dinner in Woods, after; At 55 + 36.0 set hub. P.M. Continue W. At 57 enter swamp. At 70 + 49.55 set hub; At 77 + 57.00 intersect N. + S. random line. At 84 + 78.60 set hub; At 111 leave swamp; At 112 + 17.40 set hub. Quit for night. J. A. Donner.

February 3rd, 1915: Continue West. At 118 + 40.30 set hub; At 126 + 56.10 set hub; At 131 + 50 enter swamp. We run to about 136 and look for the S.W. corner of section 30, 138-32, where U. S. Notes call for, viz: Jan. 14 N. 57 W. 35; Jan. 10 South 32 W. 31; Jan. 18 N. 21°30' E. 14; Birch 9 S. 78 E. 6; We find nothing here so we quit for dinner in woods. P.M. We drive up to Gail's place, and Mr. Gail tells us he does not know of any corners on the Township line. We drive North and look for the 1/4 corner West of

Plat of Survey Record No. 364



Section 30, 138-32 where U. S. Notes call for, viz: Jam. 7 South 63 East 10; Birch 5 N. 79 West 20. We cannot find anything here so we drive to the S. W. corner of Sec. 18, 138-32 where we find a Corner Post 6" x 6" set by Guro for the true Section corner. Starting at the true Section corner of the S. W. corner of Sec. 18 we run South. Var. 9°. At 5, leave swamp; At 8 + 62.9 set hub. Quit for night. Over night at Wachs.

F. A. Donner.

February 4th, 1915: Lewis joins us. Continue South. At 18 + 15.50 set hub; At 31 + 88.10 set hub; At 36 enter swamp; At 44 + 75.40 set hub. Quit for dinner in woods. P.M. The rain turns into snow and we do not work as it is too wet. R. & S.

February 5th 1915: It is raining and we do not go out. Dinner in woods. I call up Sheppard, and he says it would not pay for him to come over to work in the P.M., so Charles Wachs, Ed. Wachs and I drive to work. We continue South. At 52 + 80 we look for the S. W. section corner of Sec. 19, 138-32 where U. S. notes call for: Jam. 6 South 79 East 198 = 130.68 ft; Jam. 4 South 3 W. 242 = 159.72. We find the S. W. bearing tree blown down, but plainly marked. We raise the old B.T. up to its original position from which I set a hub with tack for the true section corner of the S. W. corner of Section 19, 138-32. Quit for night, for it is snowing too hard to see any distance. At 5318.8 the true section corner sets West 40.60 feet.

F. A. Donner.

February 6th 1915: We drive to the S. W. section corner of Section 19, 138-32, (established by Donner) and run South. Var. 9°. At 11 + 81 set hub; At 12 enter meadow; At 14 + 35 cross 10 ft. creek; At 26 + 82.9 set hub; At 27 leave meadow; At 31 + 14.8 set hub; At 32 + 12 cross road. Quit for dinner in camp. P.M. At 42 + 15.7 set hub; At 44 enter swamp; At 54 + 8.30 set hub; At 54 + 70.5 we intersect E. + W. random line. At 132 + 45.2 West. Quit for night with Wachs. F. A. D.

February 7th 1915: Sunday all day.

February 8th 1915: We continue South. At 59 leave swamp. At 75 + 39.7 set hub; At 88 + 8.40 set hub; Quit for dinner in woods. P.M. Continue South. At 91 enter swamp, At 105 + set hub. We look for the S. W. section corner of Section 31, 138-32, where U. S. Notes call for: W. P. 30 South 71 1/2 East 892 = 588.7 ft; W. P. 24 S. 44 1/4 W. 1310 = 864.6 ft; N. P. 13 N. 3 E. 2615 = 1725.9 ft. We are unable to find any of these B.Ts. so we quit for the night. F. A. Donner.

February 9th 1915: We continue S. At 115 + 50 leave swamp; At 125 + 58.1 set hub; At 127 + 82.8 set hub; At 137 enter swamp. Dinner in woods, P.M. Continue S. At 140 + 87.8 set hub; At 142 enter tan. thicket; At 157 + 77.00 set hub. We look for the S. W. corner of Sec. 6, 137-32, where U. S. notes call for: W. Pine 10 S. 20 W. 11; Jam 12 South 75°30' E. 15; W. P. 8 N. 50 W. 34; Fir 10 N. 17 E. 46; We are unable to find any of the old B.Ts. so we continue S. At 170 + 77.60 set hub. Over night with Wachs.

F. A. Donner.

February 10th, 1915: We continue S. At 173 enter Jam. swamp; At 188 + 44.1 set hub. Quit for dinner in woods. P.M. Continue S. At 199 + 30.70 set hub; At 201 leave Jam. swamp; At 211 + 9.8 set hub. We look for the southwest corner of Sec. 7, 137-32 where U. S. notes call for: N. P. 12 South 45 N. 40 = 26.40 ft; N. P. 23 S. 17°30' E. 58 = 38.28 ft; N. P. 20 N. 62 E. 30 = 19.96 ft; N. P. 18 N. 38 W. 38 = 25.08 ft. We are unable to find anything here, so we continue S. At 213 + 22.2 set hub; At 227 + 22.3 set hub. Quit for night. Over night with Sheppard. F. A. Donner.

February 11th 1915: We continue S. At 234 enter swamp; At 249 enter Jam. thicket; At 250 + 52.1 set hub; At 257 + 50 leave swamp; At 260 + 78.9 set hub. Quit for dinner. P.M. I walk over to Wm. Weith's place and he shows me the N. E. B.T. plainly marked, of the S. W. corner of Section 18, 137-32, from which I set a 4" x 4" x 36" post 6" in ground for the true Southwest corner of Section 18, 137-32. At 263 + 39.3 the true S. W. corner of Sec. 18, 137-32 sets East 323.2 ft. Quit for night. Over night with Sheppard. F. A. Donner.

February 12th, 1915: Starting at the Southeast corner of Sec. 33, 138-32 (from a 6" x 6" Cor. post set by J. W. G.) I run North 89°58' W. Var. 9°15'. At 19 + 38.00 set hub; At 22 + 89.40 set hub; At 36 + 30.70 set hub; At 50 + 44.8 set hub. Dinner at Sheppard's.

P.M. We look for the S. E. corner of Sec. 32, 138-32, but are unable to find anything, so we continue W. At 53+50 enter swamp; At 62+85 set hub; At 71+75 leave swamp; At 82+50 set hub; At 92+77.8 set hub. Quit for night with Sheppard. F. A. Donner.

February 13th 1915: We drive to work, but it is drizzling and raining, so we decide to go back home. Dinner with Sheppard. No one works.

February 14th 1915: I call up County Surveyor of Wadena and the Register of Deeds for the Field Notes for the S. W. corner of Sec. 36, 138-33. The Register of Deeds tells me he sent the notes to Walker. I call up Owis at Hackensack, and he dictates the notes to me over the telephone. Over night with Sheppard. F. A. Donner.

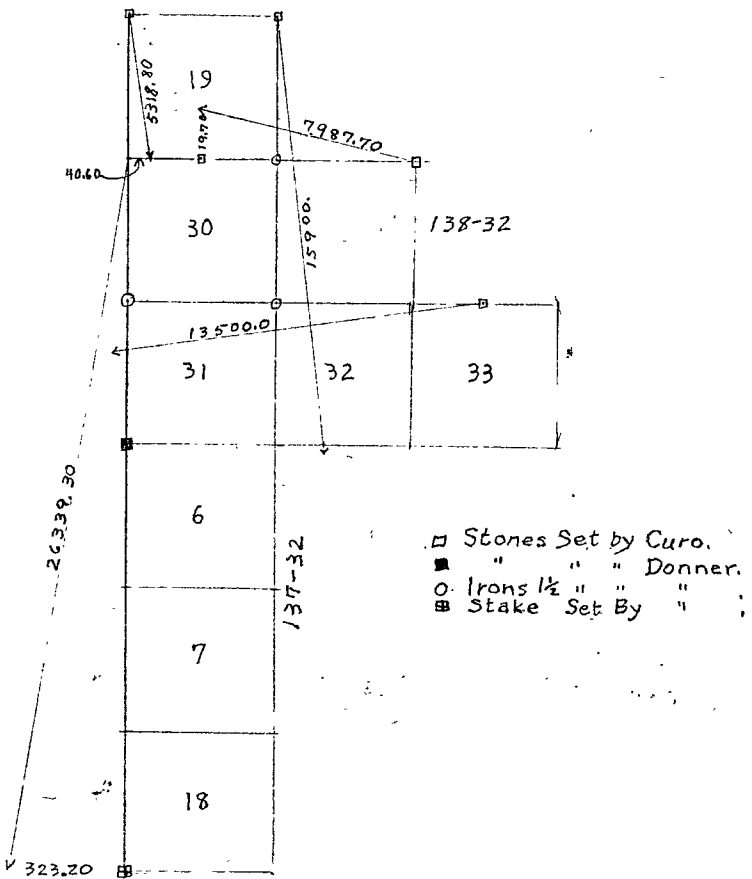
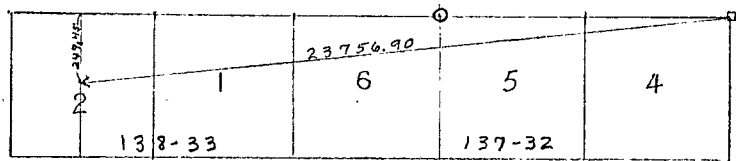
February 15th 1915: We continue West. At 113+245.0 set hub; At 114 enter Balsam swamp; At 122+24.7 set hub; Quit for dinner. P.M. At 136 leave swamp; At 142+26.7 set hub; At 148+5.7 set hub; At 154 enter Jam. swamp; At 160+55.2 intersect N. + S. random line; At 165+32.2 set hub; At 172 leave swamp; At 174+71.00 set hub. Quit for night. Over night with Sheppard. F. A. Donner.

February 16th 1915: We continue West. At 184+75.50 set hub; At 192+64.60 set hub; At 203+8.90 set hub; At 203+50 enter meadow; At 205+55 cross 10 ft. creek; At 206+68.00 cross 10 ft. creek; At 210+72.00 set hub; Dinner in the woods. P.M. Continue West. At 223+42.95 set hub; At 223+21.20 set hub; We look for this $\frac{1}{4}$ corner on the North (South) side of Sec. 35, 138-33, where U. S. Notes call for: N.P. 10 North 5 East 675 = 445.5 ft. Pine 7 South 73 East 190 = 125.4 ft. We find the N. E. B. T. from which I set the true $\frac{1}{4}$ corner on the South side of Sec. 35, 138-33, with new B.T.s. as follows: J. Pine 10 S. $5^{\circ}59'E$. equals 17.90 ft; J. Pine 10 N. $5^{\circ}31'W$. 8.15 ft. Var. $9^{\circ}15'$. At 237+56.90 the true $\frac{1}{4}$ corner on the South side of Sec. 35, 138-33 sets North 249.45 ft. Quit for the night. Over night with Sheppard. F. A. Donner.

February 17th 1915: We drive to the S. W. corner of Sec. 31, 138-32 and set a $6" \times 6" \times 36"$ Cor. post 18" in the ground for the true S. W. corner of Sec. 31, 138-32. I set this corner from the random line running N. + S., hub at 10535.60 sets 129.27 ft. West of true S. W. corner. On E. + W. random line hub 15924.40 ft. sets S. 199.95 ft. of the true S. W. corner of Sec. 31, 138-32. Quit for dinner. P.M. Correcting back on E. + W. random line hub at 10649.10 goes N. 133.64 ft. where I set a $1\frac{1}{2}" \times 36"$ galv. Iron Pipe with cap, 18" in ground for the true S. W. corner of Sec. 32, 138-32 with new B.T.s. viz: J. Pine 6 S. $35^{\circ}5'E$. 29.6 ft; J. Pine 5 N. $39^{\circ}51'E$. 29.8 ft. (with tacks) Var. $9^{\circ}15'$. At 15876.40 on the random line running N. + S. between Secs. 31 + 32, 138-32, the true Sec. corner sets West 211.70 ft. Correcting back on N. + S. random line on the W. side of Sec. 31, 138-32. Hub goes (5267.8) East 64.63 ft. where I set a $1\frac{1}{2}" \times 36"$ galv. iron pipe with cap, full length in ground. On E. + W. random line between Secs. 30 + 31, 138-32, at 13180.57 the true S. W. corner of Sec. 30, 138-32 sets N. 202.7 ft. Quit for night; over night with Wachs. F. A. Donner.

February 18th 1915: We drive to the Sec. Corner of Secs. 29, 30, 31 + 32, 138-32, and set a $1\frac{1}{2}" \times 36"$ galv. Iron pipe with cap, 18" in ground for the true Sec. corner. This corner was set by measure. On E. + W. random line from hub at 10614.80. On N. + S. random line from hub 10684.17 ft. At 10684.17 the true corner sets West 216.90 ft. We drive to the Sec. corner of Sections 19, 20, 29, 30, 138-32, where we set a $1\frac{1}{2}" \times 36"$ galv. Iron pipe with cap, 18" in ground for the true Sec. corner. On E. + W. random line at 5325.2 the true Sec. corner sets South 48.5. On North and South random line at 5342.10 the true corner sets West 106.70 feet. This corner was set by measurement. Quit for dinner with Wachs. I make out time and we go to S. C. B. race and have a town meeting. I receive check for \$105.73 from the Town Clerk of Mc. Kenley Township 138-32. Over night with Sheppard. F. A. Donner.

February 19th, 1915: G. Sheppard takes me and outfit to Pine River. I take train to Hackensack. R. R. fare 36¢
J. A. Donner.



Book 89, Pages 32-39

September 30th 1915: Left Walker on M. & I. train to Pine River. After having dinner at Traveller's Hotel, engaged Mr. Moulster to take me by auto to home of Mr. M. Wahlquist, which we reached at 3:30 P.M. Arranged with Mr. Wahlquist to board with him while running section lines for the Township. Supper and lodging for the night with Mr. Wahlquist. J.A. Johnston.

October 1st, 1915: Engaged Mr. M. Wahlquist, J.P. Wahlquist and W.M. Kinney to help me in survey. Rained till 8:00 A.M. At 8:10 A.M. we walked to corner 21, 22, 27 + 28 where U. S. survey notes call for: Jam. 4 N. 47 W. 6 = 3.96 ft; Jam. 6 N. 22 E. 13 = 8.58 ft; Jam. 12 S. 87 W. 35 = 23.1 ft; Jam. 6 S. 52 E. 22 = 14.52 ft. The lower parts of the first still stand and are plainly marked. Only stump of the third remains, while trunk of the fourth lies on the ground and is plainly marked. The stump is still quite sound. The upper part of original section corner post was found standing in moss. Position of corner was located by chain measurements and we drove J. Pine corner post 4" square and 4 ft. long in place to mark section corner. From section corner 21, 22, 27 + 28 we run random line South. Var. 7° 45'. Johnston, transit and chain; M. Wahlquist, flag and axe; Wm. Kinney, chain and axe; J.P. Wahlquist, axe and scythe. At 186.8 hub; At 686.6 hub; 1277.05 hub; 2292.3 hub; 3267. North bank of creek bearing E. W. flowing E; 80 South bank of creek; 3316.4 hub; 4111.9 hub; 5300 hub; 6207.4 hub; 7209.6 hub; 7957.5 hub; At 5280 we searched for corner 28, 27, 33, 34 where U. S. survey notes call for: Cedar 8 N. 60 E. 10; Cedar 8 S. 51 E. 11; Cedar 6 S. 41 W. 8; Cedar 10 N. 74 W. 12. Returned to M. Wahlquist home at 6 P.M. Supper and lodging with Mr. M. Wahlquist. J.A. Johnston.

October 2nd 1915: Continued S. on random line. Same men as yesterday. 9237.7 hub; 10404.5 hub; 10617.1 hub; Corner sections 33 and 34 on south boundary of Township lies 10.15 ft. West. Place hub at 5308.55 and offset hub 5.075 ft. West on true N. & S. line as temporary corner of Secs. 27, 28, 33 + 34. Stop work at noon and after dinner with Mr. M. Wahlquist I walk out to Backus and take train to Walker. Spend night at camp of Mr. J.W. Curo.

Sunday, Oct. 3rd 1915: Rain all day, remain at camp of John. W. Curo. J.A. J.

Monday, Oct. 4th, 1915: Take train at 9:28 A.M. for Backus after visiting office of County Surveyor. Walked from Backus to home of M. Wahlquist. After dinner, begin work again. Johnston, transit and chain; M. Wahlquist flag and chain; W.D. Wahlquist, axe; J.P. Wahlquist axe. Setting up at temporary corner established on Saturday, we run West. Var. 10°. 507.8 hub; 1007.4 hub; 1705.6 hub; 2210.4 hub. Stop work at 5:40 P.M. and return to home of M. Wahlquist. Over night with M. Wahlquist. J.A. Johnston.

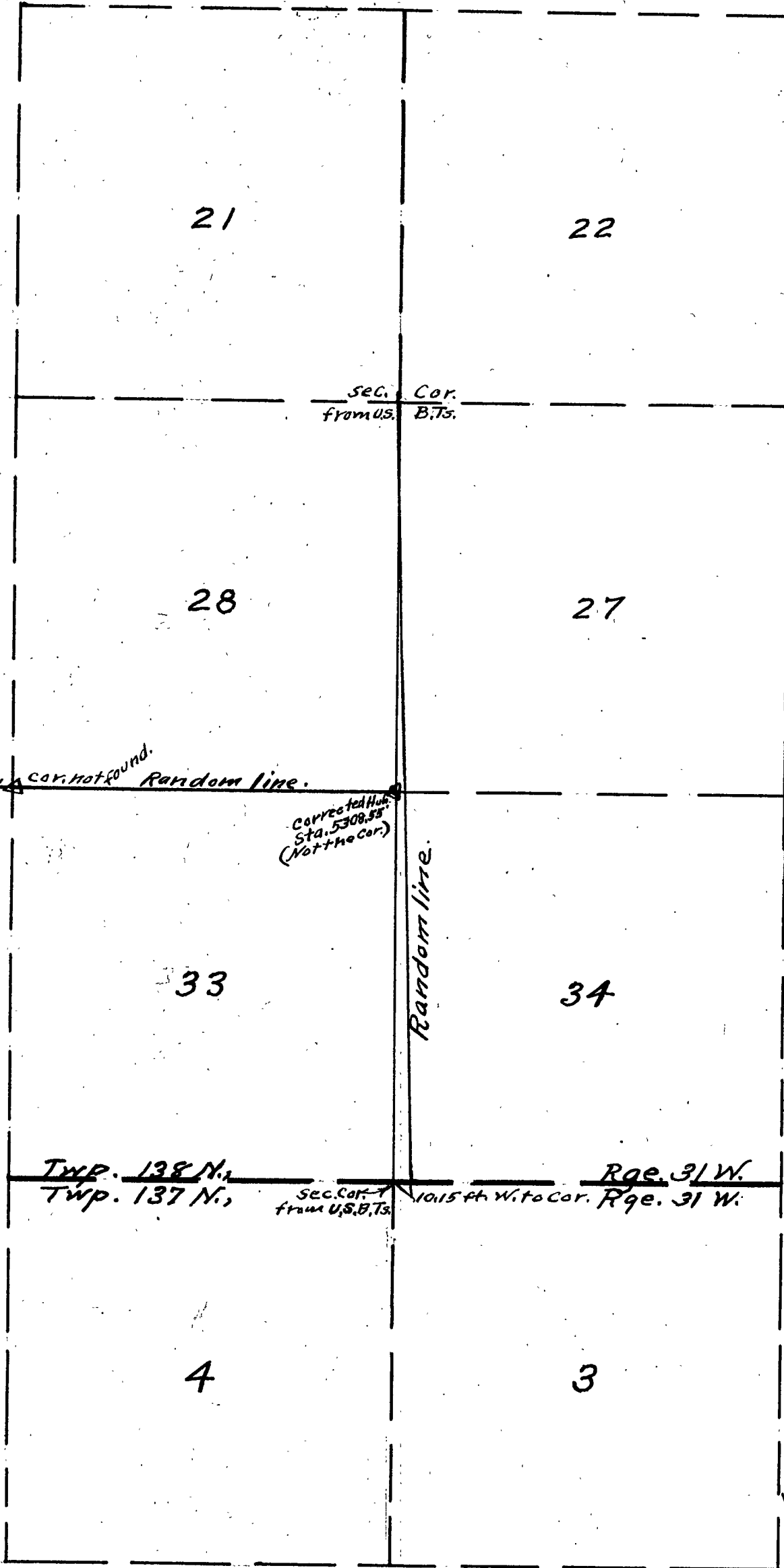
October 5th, 1915: Continue West on random line. Johnston, transit, chain and axe; J.P. Wahlquist, chain, flag and axe. At chainage 2640 searched carefully for 1/4 corner where U. S. survey calls for: Jam 6" N. 55 W. 6; Jam 6" N. 39 E. 11; country badly burned and no sign of bearing trees could be found. About 100' S. a number of dry tam. stand in a wet meadow but none bore marks that would identify them as bearing trees. Continued West, 2801 hub; 3604 hub. In P.M. W.M. Kinney works on line: 4071.8 hub; 5400 hub. At chainage 5280 we look carefully for section corner, but no sign of bearing trees could be found. Country high and badly burned. Small pine here were cut for timber about seven years ago. (according to information received from Kinney and M. Wahlquist) U. S. notes call for as bearing trees: R. Oak 4 S. 79 E. 4; W. Pine 4 N. 23 1/2 E. 18; W. Pine 4 S. 59 W. 10; Birch 6 N. 46 1/2 W. 20. Stop working at 5:15 and return to home of M. Wahlquist where I spend the night. Oct. 6th 1915: Spent forenoon setting over hubs from random line so as to give straight line from N.E. corner Sec. 28, to S.E. corner Sec. 33 assisted by M. Wahlquist. Dinner with M. Wahlquist. Was driven by W.M. Kinney to Backus and then by train to Walker. J.A. Johnston.

October 7th 1915: Worked with Scott at Walker.

J.A. Johnston.

B

Survey Record No. 365.



21

22

Sec. Cor.
from U.S. B.T.s.

28

27

Sta. 5700 Sec. 1 Hub. Cor. not found. Random line.

Corrected Hub. Sta. 5308.55 (Not the Cor.)

Random line.

33

34

Twp. 138 N.,
Twp. 137 N.

Sec. Cor. from U.S. B.T.s.

Rge. 31 W.
Rge. 31 W.

4

3

• Report of work performed in Township of Negro (141-28) Cass County, Minnesota.

July 7th, 1917 - Left Remer with "Ford" automobile 8-30a.m. arrived Longville 11 a.m. Took John Murphy of Remer with me as assistant. Automobile mileage 27 miles. In the afternoon went to sections 12, 13 & 14 and return 9 miles.

July 8, 1917, with automobile, transit, 200 foot steel tape, etc, and John Murphy, C.A. McMillan, C.F. Neary and Eugene Shell, as assistants. Began at the intersection of the E. & W. road with the N. & S. road on the East side of Sec. 14 in above Township, cut and brushed out a line South, a distance of 2937 ft. to a point 4'3" ft. west of S.W. Sec. 13, said Twp. which was:
Poplar 5 N. 25 E. 37 - Ironwood 6 S. 70 E. 7 - Ash 10 N. 41 W. 45 - W. Pine 30 S. 4 W. 36 - now is:
W. Pine stump 34 S. 4 W. 36 - Pop. stub 8 N. 25 E. 37.

Then returned to place of beginning and continued the line north along a partly constructed road for a distance of 2242 ft. at this point the road turns N. 48° 30' E, but we continued on straight line on north at 2452 ft. enter marsh: at 2743 ft. stake for N.W. cor. Sec. 13 - said Town, making a distance of 5680 ft. from S.W. cor. said Sec. 13, to N.W. cor. of same. As the records do not show any witness trees or other evidence of the 1/4 S. between said Sec. 13-14, other than "Post," it is obvious, from above measurements that the road leading west into Sec. 14 is 97 ft. too far north at its intersection with N. & S. road. From stake at N.W. cor. Sec. 13, we continued the line N. 2040 ft. this we are doing for the purpose of determining the correctness of the cor. to secs. 11, 12, 13, 14, said Town as the notes gives "Post" for this corner. Shell & Neary, chairman, McMillan flag, Murphy, picket-man, Flynn, transit and all hands with the ax & brush hooks.

July 10, 1917 - Beginning (random line) at the S.E. cor. of Sec. 12, 141-28 which was:
W. Oak 14 S. 15 E. 30 lks. Birch 6 N. 18 lks. - Poplar 6 S. 57 E. 33 lks. - Burr Oak 5 West 33 lks. now is:
W. Oak (stump) 16 S. 15 E. 30 lks. New bearings, to wit: W. Pine 9 N. 40.15' E. 68 ft. Aspen 7 N. 47.50' W. 82'4" ft. Then brushed out random line 2640 ft. N. to a pt. 31'7" ft. West of 1/4 S. said Sec. 12, which was: W. Pine 30 S. 5 E. 80 lks. now is: W. Pine (stump) 8 ft. 30 S. 5 E. 80 lks. new bearings
Bl. Oak 13 N. 75 W. 67 ft. W. Pine 16 N. 76.30' E. 114'3" ft. went back to above said corner Sec. 12, and located road survey as follows: Sta. 0 Sec. cor. 93.30' angle with road leading West. N. 8° 30'
Sta. 1/4 N. 22.20' E (around swp.) 106 ft. Sta. 2 N. 11 E. 100 ft. Sta. 3 N. 1.15' E. 100 ft. Sta. 4 N. 33.30' W. 100 ft.
Sta. 4/50 culvert - Sta. 5 N. 74.10' W. 100 ft. Sta. 6 N. 34.30' W (return to range line) 100 ft. Sta. 7 on range line: Sta. 8 old road E. & W. and Path N. & S. Sta. 13/20 cul. Sta. 21/30 old road E. & W.
Sta. 26/43 1/4 S. 12 & 7, as described above. Var. 8° 14' Sta. 28/37 top of ridge 15 ft. high. Sta. 28/70 Bot. of ridge 15 ft. high: Sta. 38/90 wagon road E. & W. Sta. 48/34 wagon road N. & S.
Sta. 52/60 lve. wagon road NE. Sta. 53/63.

July 11 (at Sta. 26/43, I overlooked to state that on that date we started random line at that pt. and at 2640 ft. made thorough examination for the NE. cor. said Sec. 12, not finding same, continued random line on north. That evening, at Longville, I questioned Ben Clark, a surveyor and cruiser of some 15 yrs. standing, in such capacity, in that vicinity, and he claims that this corner was never found.

July 12, 1917. Finished random line 5238 ft. North of said East 1/4 S. said Section 12 to a pt. 25'6" ft. west of the 1/4 S. section line in said Town, which was: W. Pine S. 10 W. 222 lks. now is: Norway Pine stump 10 ft. high 14' S 10 W. 222 lks. Then began road location up to Station 53/63 as stated above (N.E. cor. sec. 12) marked post oak and placed it equi-distant and on straight line between the quarter posts, and for this, the NE cor. of Sec. 12, Twp. 141 Range 28 (Negro) I marked bearings to wit: W. Pine stump 30 S 81 W 34' 9" ft. W. Pine stump 28 N. 66 W 69' 9" ft. Then continued north along section line, beginning at said Sta. 53/63. Sta. 57 wagon road SW. & NE. Sta. 65/40 wagon road NW. & SE. Sta. 67/25 culvert

Sta. 6775 road E+W. foot of 10° sand hill. Sta. 7971 on top of 10° hill - Sta. 792 tie mark. Nor. Pine 8, 90° E 68 ft.
 Sta. 7975 culvert. Sta. 7984 wagon road E+W. Sta. 7988 1/4 S. 1+6 as described above: new bearings: Nor. Pine stump
 21 865 W. 164 ft. W. Oak stump 97 N. 46 20 E 200 ft. Then started an random line (Var. 9.39) N.

July 13-1917 - Finished this line on N. a distance 2654 ft. to a pt. 3'7" ft. W. of NE. cor. of Sec. 1 - said Surp. which was W. Pine 36 N. 55 E 12. W. P. 30 S. 70 E. 33. W. P. 40 S. 7 E. 30 - Bl. Oak. 12 N. 61 W. 105. Now is: stumps of same - new bearings: Bl. Oak stump (original) B. 9. N. 61. 30 W. 66'5" ft. W. Pine stump 29 S 33. 15' W. 99'55" ft. Aspen 68 42. 45' East 74 ft. Aspen 7 N. 82 E. 52'5" ft. do not put in state. on this 2654 ft. of said Rg. line. Then went to the SE. cor. of afore said Sec. 12-141-28 and measured W. along a road, which has the appearance of being estab. a dist. of 2640 ft. then N. 9°45' West 481 ft. is the 1/4 post for Sec. 12+13 - said 141-28 - this post, I + Fred Sanborn of Remer, Cass Co. Minn. saw at the time we examined the "Remer + Longville" road route in the autumn of 1912. While doing above work. I stayed in Longville nights + took dinner along on this work. assistants were John Murphy - Remer, Minn. picket man - Eugene Shell + C. F. Neary, chain - + C. A. McMillan, flagman, and all handsaxe + brushhooks used a transit, a 200 ft. tape for measurements on random lines and 100 ft. tape to put in state's. I used my auto from Longville - 10th of July - to the SE. cor. 12 J. 141-28 and return 12 miles the 11, 12 + 13, C. A. McMillan took it with gasoline boat from lower end of Long Lake to upper end - 36 miles.

July 13-1917 - Finished this line on N. a distance 2654 ft. to a pt. 3'7" ft. W. of NE. cor. of Sec. 1 - said Surp. which was W. Pine 36 N. 55 E 12. W. P. 30 S. 70 E. 33. W. P. 40 S. 7 E. 30 - Bl. Oak. 12 N. 61 W. 105. Now is: stumps of same - new bearings: Bl. Oak stump (original) B. 9. N. 61. 30 W. 66'5" ft. W. Pine stump 29 S 33. 15' W. 99'55" ft. Aspen 68 42. 45' East 74 ft. Aspen 7 N. 82 E. 52'5" ft. do not put in state. on this 2654 ft. of said Rg. line. Then went to the SE. cor. of afore said Sec. 12-141-28 and measured W. along a road, which has the appearance of being estab. a dist. of 2640 ft. then N. 9°45' West 481 ft. is the 1/4 post for Sec. 12+13 - said 141-28 - this post, I + Fred Sanborn of Remer, Cass Co. Minn. saw at the time we examined the "Remer + Longville" road route in the autumn of 1912. While doing above work. I stayed in Longville nights + took dinner along on this work. assistants were John Murphy - Remer, Minn. picket man - Eugene Shell + C. F. Neary, chain - + C. A. McMillan, flagman, and all handsaxe + brushhooks used a transit, a 200 ft. tape for measurements on random lines and 100 ft. tape to put in state's. I used my auto from Longville - 10th of July - to the SE. cor. 12 J. 141-28 and return 12 miles the 11, 12 + 13, C. A. McMillan took it with gasoline boat from lower end of Long Lake to upper end - 36 miles.

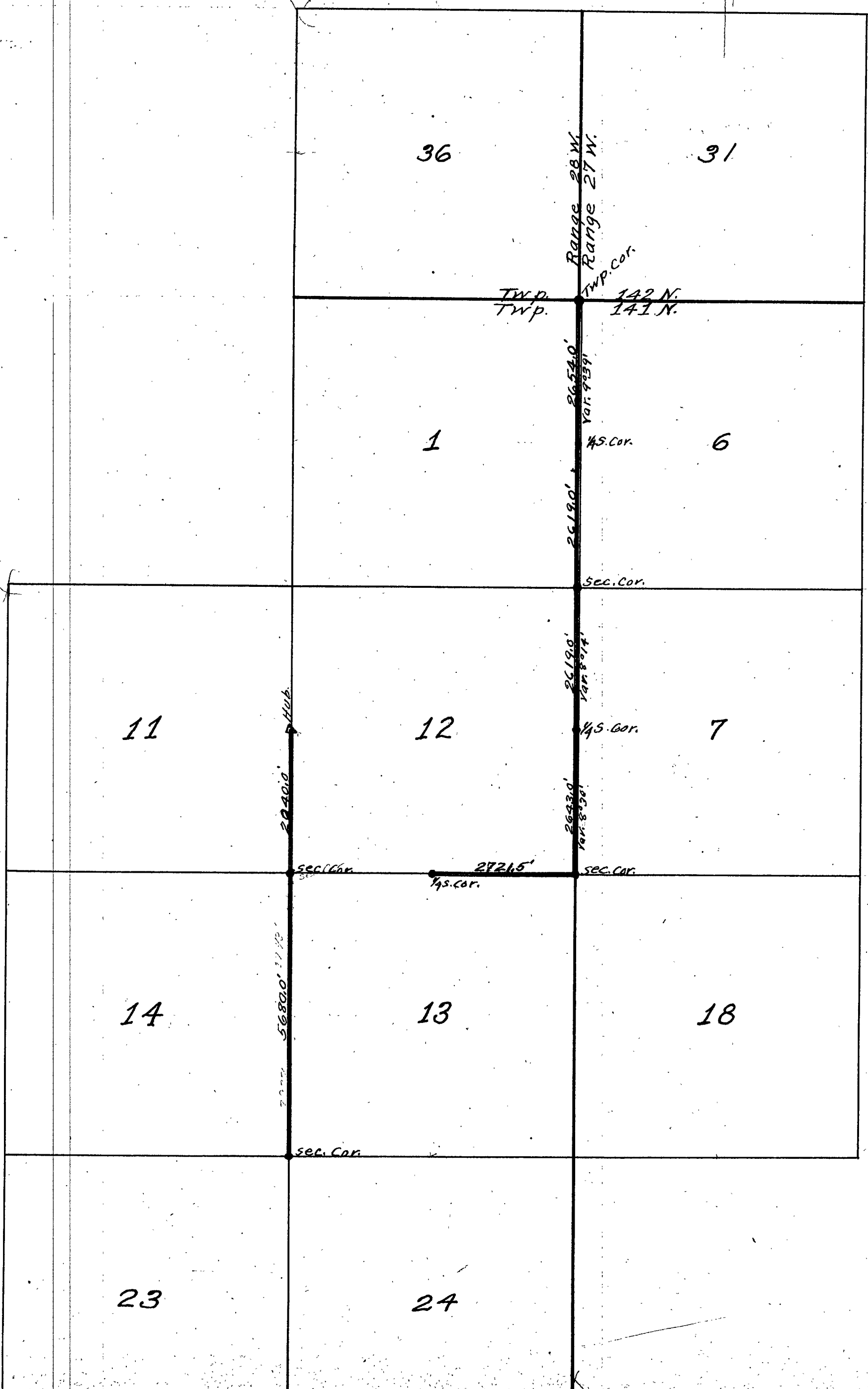
Surveyed July 7, to July 14, 1917,
 by James H. Flynn,
 Dep. Co. Surveyor.

Notes Recorded by, John M. Greene A.D. 1917
 County Surveyor, Cass County.

Plat of Survey, made November 24, 1919,
 by Elmer B. Horst,
 Deputy County Surveyor,
 under Jas. H. Flynn, County Surveyor.

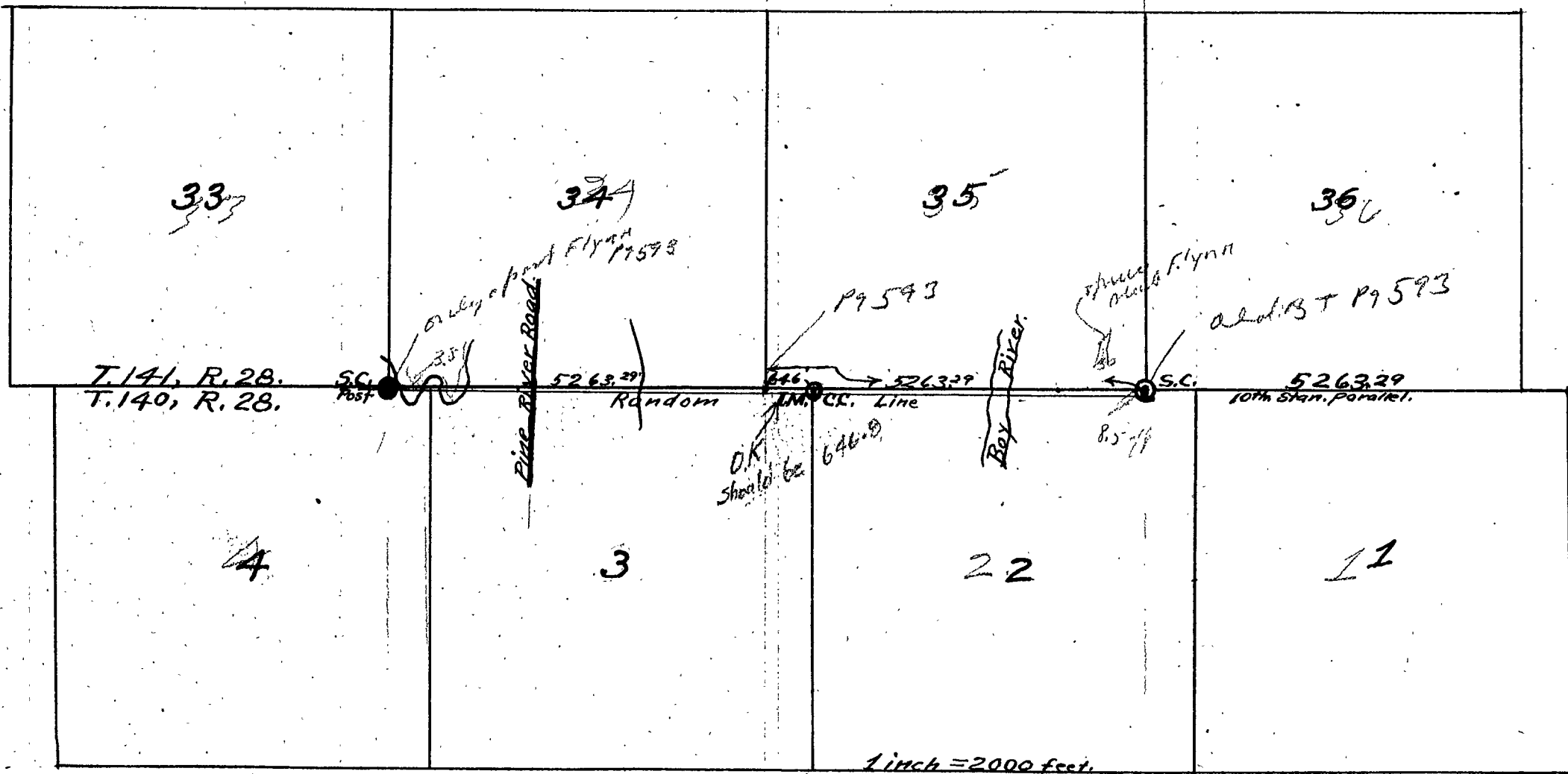
141-142-27-28 B

Survey Record No. 366.



For New Bearings to Corners See preceding 2 pages of this survey. (No. 366.)

Survey Record No. 367.



Report on work done on portion of the South Town line of the Swp. of Rego, Cass Co. Minn.

July 14-1917- Began at a hub and measured 1080 ft. E. to N.E. cor. sec. 3-140-28, then measured W. from this pt. on same line, 646 ft. made thorough search for the SW. cor. of Sec. 35-141-28, not finding same, returned N.E. cor. said sec. 3 and cut out and measured a line (var. 6.45') the required distance to S. 1/4 S. sec. 35-141-28 - made diligent search for same and not finding it proceeded on E. at 2351 ft. hub 40 ft. W. of bank of Boy River, then hub 40 ft. E. of E. bank of Boy River - then flag 90° 35' 6" ft. angle 84° 17' is 356 ft. from hub to hub minus 80 ft. means 276 ft. from bank to bank at this pt. then proceeded on E. to 3407 ft. Kept on E. to S.E. cor. 35-141-28, which was: Spruce 770 41 West 14 lks. Spruce 670. 35 E 14 lks. Now is spruce stub (nearly obliterated) 870. 4 W. 14 lks. Made New B. J. Dry Jam. 1370. 35. 30' E. 37. 6" ft. Cedar 970. 31. 15' W. 34. 7" ft. The line we came down on was 85' ft. South of this pt. and 5356 ft. from hub assumed to be the SW. cor. of 35. Then went back to place of beginning (5356) ft. and continued line W. to 1750 ft. crossed abandoned R. R. grade, used now for wagon road, at 3240 ft. crossed road to Pine River at 4177 ft. E. side of flowage from Girl Lake.

July 17-1917. Set hub across (west) this flowage - moved flag 90° N. angle 84.17 - distance across this flowage at this pt. is 373 ft. making this hub 4550 ft. from starting pt. then continued line on W. across flowage, island 239 ft. intersect another flowage - arm of Girl Lake - set hub 4789 then hub across arm, or flowage, then moved flag and took angle making the distance across this flowage 384 ft. - a distance of 5173 ft. from place of beginning, at 5279 ft. was 3' 8" ft. S. of post set for SW. cor. Sec. 34-141-28. after making a thorough examination for the original bearings for this cor. and not finding same made new bearings for post - I found there to wit: W. Pine 470. 14. 20' W. 29' 5" ft. Boulder 200° N. 13 E. 49' 7" ft. Then continued line on W. about 400 ft. and came into a road running W. on same direction, where we stopped. We spent considerable time along this line looking for original survey bearings of either town - found none.

Following is the names and times put in on these surveys. J. H. Flynn, Surveyor, July 7 to 17 - surveying 9 days at \$5.00 per day and expenses. \$45.00. July 27 - making reports 1 day - \$5.00 - automobile Remer to Longville and return 49 miles \$2.45. Total \$52.45.

John Murphy, assistant on these surveys 9 days at \$2.00 per day and board \$18.00. C. A. McMillan 8 days \$3.00 per day and board \$16.00. C. A. McMillan 3 days gasoline boat - 36 miles \$1.80. C. F. Neary 8 days \$2.50 boarded self \$3.00. Eugene Shell 5 days at \$2.50 boarded self \$12.50. Eugene Shell 3 days \$3.50 boarded at hotel \$6.00. Total labor \$126.75. Board bill of Mrs. Fred Jordan. J. H. Flynn 11 days at \$1.75 per day \$19.25. John Murphy 11 days at \$1.75 per day \$19.25. C. A. McMillan 7 days @ \$1.75 per day \$12.25. Eugene Shell 6 meals at 35¢ per meal \$2.10. 1 lodging 50¢. 50¢. Total Board \$53.35. J. H. Flynn deputy Co. Surveyor - Remer, Cass Co. Minn. 7/27/17.

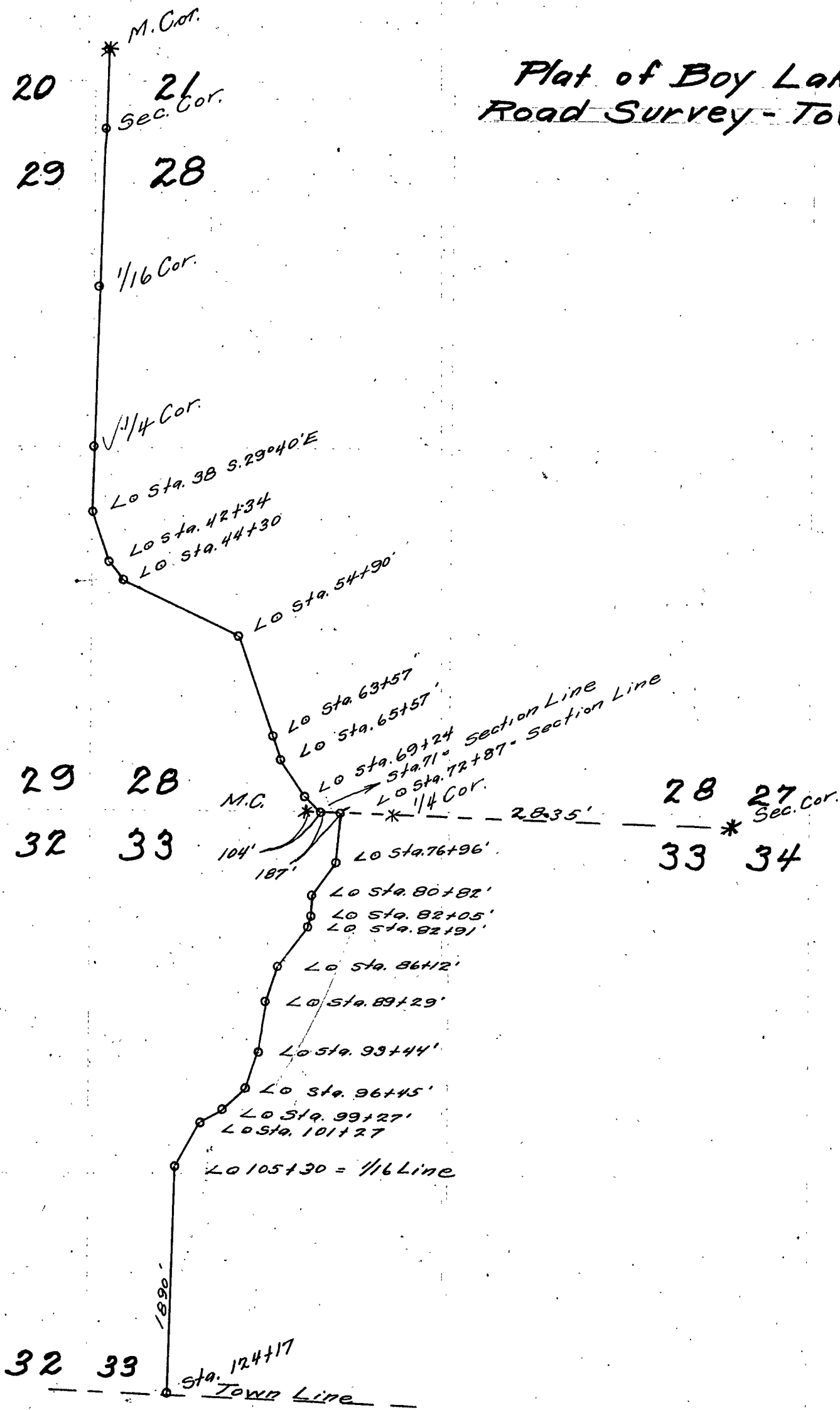
Note: It will be observed that measurements given, e. g. 2640 as true distance is frequently returned a greater distance by station measurement: this is due to the use of the 200 ft. tape on the former, and the use of the 100 ft. tape on the later.

July 14-1917 - the 200 ft. ^{tape} was broke early in the game so that the 100 ft. tape was used, mostly, on the town line operations. J. H. F. 7/27/17.

Report on Boy Lake and Town Line Road Survey Town of Rogers. Beginning at the Meander corner where the line between Secs. 20+21-142-27 (Rogers) intersects the South shore of Boy Lake, which was: Elm 7 S. 33 E. 12 - Willow 5 S. 25 W. 6. Now is: Elm (stamp) 12 S. 33 E. 12. New bearings: Bl. Oak 10 S. 78.45 E. 29 ft. Bl. Oak 9 S. 52.30 W. 34 ft. Then S. along section line between said secs. 20+21 (Cor. S. 50') Sta. 2 foot of 12° hill Sta. 7/30 culvert: Sta. 458 Cor. to Secs. 20, 21, 28+29, said swp. which was: Black Oak 5 S. 41 E. 63 lbs. Bl. Oak 5 N. 62 W. 53 lbs. - Bl. Oak 6 S. 75 W. 56 lbs. Now is: Bl. Oak 10 N. 62 W. 67. Made new bearings to wit: Aspen 6 N. 46 E. 37 ft. Bl. Oak 5 S. 53 E. 37 5" ft. Aspen 9 S. 51 W. 52 ft. Bl. Oak 15 N. 61 W. 67 lbs. Then continued south along section 28-29 aforesaid, Sta. 7/25 Cul. - Sta. 17/20 Cul. - Sta. 17/20 Cul. - Sta. 17/18 1/16 S. Bearings: Bl. Oak 6 S. 46.30 E. 45' 9" ft. Aspen 9 S. 73 W. 36' 6" ft. Then continued S. along said section line: Sta. 2 1/26 cul. - Sta. 29 enter grass - Sta. 29/70 cul. - Sta. 30/50 leave grass. Sta. 37/98 1/4 S. said Secs. 28-29 which was - Birch 5 S. 80 W. 23 lbs. Poplar 4 S. 83 E. 33 lbs. Now is obliterated by time and fire, therefore I put in new bearings, to wit: Aspen 9 S. 62.30 W. 42 ft. Aspen 10 S. 87.20 E. 36' 4" ft. Then continued S. along section line between said sections 28+29. Sta. 38 left said section line S. 29.40 E. From Sta. 0 to 39 small Bl. Oak, poplar and birch. Rolling surface and stony. Sta. 41/25 cul. Sta. 42/34 S. 48 E. (Lake 40 ft. to Right. Sta. 44/30 S. 74.40 E. and cul. Sta. 46 School House at 90° S. 60 ft. Sta. 48/15 ent. Spruce swp. Sta. 49 cul. Sta. 50 leave spruce swp. Sta. 51/50 N. edge of swp. + culvert: Sta. 54/40 culvert: Sta. 54/40 S. 31 E. swp. 30 ft. W. Sta. 57/97 South swp. 30 ft. W. Sta. 60 to 63/57 high land west about 800 ft. Sta. 63/57 S. 29 E. swp. 35 ft. W. Sta. 65/57 S. 44 E. swp. 35 ft. W. Sta. 67/24 S. 56.30 E. Sta. 64 to 70 Lake 40 ft. west. Sta. 71 intersect section line between Secs. 28-33 in said swp. of Rogers, 104 ft. E. of the M.C. corner thence East along said section line 187 ft. Then: - Sta. 72/87 S. 5 E. Sta. 74 cul. Sta. 75 brush fence: Sta. 76/96 S. 27.30 W. Sta. 77/50 cul. swp. 30 ft. W. - Sta. 89/22 cul. lake 35 ft. W. - Sta. 89/22 S. 8 E. Sta. 82/45 S. 2 W. Sta. 82/41 S. 26.30 W. lake 30 ft. West - Sta. 83/15 cul. Sta. 96/12 S. 8 W. lake 25 ft. W. along old trail - 89/29 S. 3 E. - 99/50 culvert - 97/44 S. 10 W. swamp 50 ft. West - 96/45 S. 38 West - 97/40 cul. + east end of swp. - 99/27 S. 47 W. swp. 40 ft. North - 104/27 S. 20 W. swp. 30 ft. North - 105/30 intersect West 1/16 line Sec. 33, 1890 ft. North of Town line, swp. 30 ft. North - 114 culvert - 114/30 enter Nor. Pine - 120 wagon road NW. + South: 124/17 Town Line - Length of this road is 12,417 ft. This survey thereof, began July 18, 1917 and ended July 25, 1917. J. H. Flynn, surveyor used "Aloe Transit" 200 ft. steel tape for line measurements and 100 ft. steel tape for stations. Assistants in this work were John Murphy of Remer, Minn. and Joseph Jellen, Roy Stenstrom and J. W. Wollman of said Rogers Township.

J. H. Flynn - Surveyor, Remer, Minnesota,
July 26 - 1917.

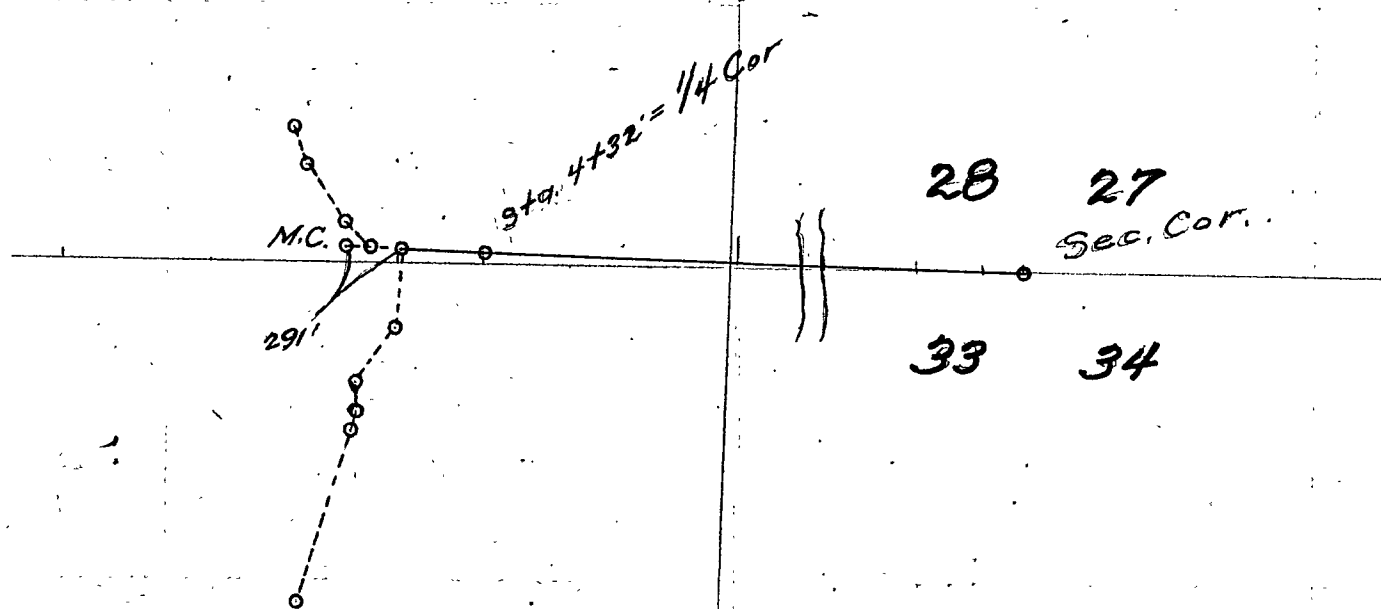
Plat of Boy Lake and Town Line
Road Survey - Town of Rogers.



142-27 B

Plat 369

Plat 369



T. 142 N. R. 27 W. Sec's 27-28-33-34

Report on the survey of the Phillips Road on part of the section line between sections 28-33-Township of Rogers (142-27) Cass Co. Minnesota.

Beginning at a pt. 291 ft. East of the N.E. cor. on lake which was:

Jan. 7 N. 10 W. 32 lks - Jan. 7 S. 64 E. 23 lks. Now is: The same -

Then East along said section line (var. 9) Sta. 4/32 1/4 S. 28-33 which was:

Poplar 4 S. 33 W. 28 lks. Poplar 4 N. 75 E. 10 lks. Now is: Pop. 10 S. 33 W. 28. New B. J. to wit:

Jack Pine 10 N. 0° 30' E. 44' 5" ft. Aspen 6 S. 7° 35' W. 35 ft.

Then continued east along said sec. line (var. 6.40)

Sta. 8/50 culvert.

" 4/32 to 900 wire fence north.

" 1/56 wagon road NW. + SE.

" 12/50 culvert.

" 1/35 wagon road N. + S.

" 15/75 culvert.

" 14/70 top of 11° hill

18/30 bottom of 11° hill.

" 21 west bank of Boy River.

" 27/03 East bank of Boy River.

" 24/25 grass

" 27 culvert.

" 27/75 leave grass.

" 30/50 cul.

" 32/67 sec. cor. to Secs. 27, 28, 33 + 34. said Town -

Length of this road is 3.267 ft. Survey began July 18, 1917 and finished July 25-1917.

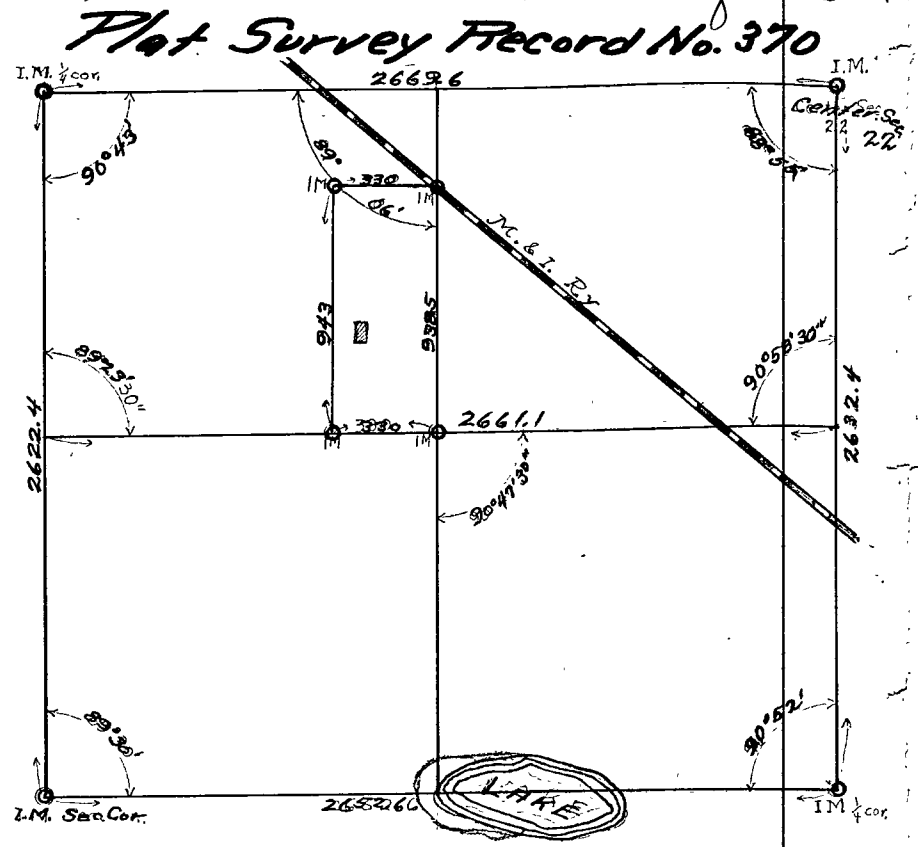
J. H. Flynn, surveyor; Joe Jellen, Roy Stenstrom and J. W. Wellman of Rogers and John Murphy of Remer, Minn. assistants.

J. H. Flynn - Surveyor - Remer, Minnesota.
July 26-1917.

Mildred School Site. 138-30. Sec 22

Monday, July 16th, 1917: E.B. Horst working for School Dist. No 14. Beginning at a 1/4" I.M. which the school board (Roy Blackburn, Frank Rhodes, Mr. Emery, Mr. Welliver, & Mr. Kelly) and a few other residents of Mildred assure me has been set by a surveyor, and is the true center of Sec. 22, and being used for many years as such, I run S. to 1/4 cor. on S. side of Sec. 22. Distance = 2632.4 ft. From center of Sec. 22, I turn S.W. < to 1/4 cor. on W. side of Sec. 22. Angle = 88°55'. Distance = 2669.6 ft. Set transit on I.M. 1/4 cor. between Secs. 21 & 22; sight E. to center, turn S.E. < to S.W. corner of Sec. 22. 2 1/2" x 48" I.M. < = 90°43'. Distance S. = 2622.4 ft. N.E. < at S.W. corner of Sec. 22 = 89°30'. N.W. < at S.E. cor. of S.W. 1/4 Sec. 22 = 90°52'. Computed distance between S.W. cor. and 1/4 cor. on S. side = 2652.6 ft.

Tuesday, July 17th 1917, Horst, transit and chain. Blackburn, Rhodes, Emery and Kelly assisting. I set S 1/16 cor. on W. side of Sec. 22, sight N. to 1/4 cor. and turn 89°23'30" and run E. on true S 1/16 line; at 2661.1 intersect pt. for center of South 1/2 of Sec. 22. Returning to station 1330.55 I set center of S.W. 1/4 Sec. 22. Sight W. to S. 1/16 cor. and turn N.W. < 90°47'30" and run N. on true W. 1/16 line. At 938.5 N. intersect W. edge of M. & I. Right of Way. At 1003.9 M. & I. track. N.W. < 49°52'. At 1313.7 center of W. 1/2 Sec. 22. Returning to station 938.5, I turn 90° and run W. 330. ft. = N. boundary of school site. At pt. Intersection of S. & W. 1/16 lines, I chain W. on S. 1/16 line 330.02 ft. = S. boundary. W. 1/16 line = E. boundary. Run parallel line 330 ft. W. = W. boundary. I set level stakes for school house as per orders of School Board. School Board sets 1/4" x 30" I.M.s. at four corners of school lot. E.B. Horst.



Recorded Fri, Aug 3, 1917.

John C. ...

B

Plat 370

599

The image shows a large grid table with approximately 10 columns and 10 rows. The grid is formed by thin, light-colored lines. The table is mostly empty, with only a few faint, illegible markings scattered across the cells. The overall appearance is that of a blank ledger or record book page.

Wight's County Road. T 141 N. R 28 W.

Wed., July 18th, 1917. E. B. Horst, working for Cass County, transit and chain; Ohas. R. Wight, flag and chain. Walk to corner of Secs. 1, 2, 11, 12, 141-28, where Notes call for: W. Pine 18 N. 81° E. 130 = 85.80 ft.; W. Pine 15 S. 75° E. 70 = 46.20 ft. I find both stumps, one being cut 5 ft. above ground to preserve marks, but they are burned off. Ohas. Wight identifies the stumps, and also shows the original post. I set a new post and take new bearings: N. Pine 12 N., 7° 20' W.; Poplar 10 S., 31° W. 129 ft.; N. Pine 12 S. 55° E. 94.5 ft. Cor. sets in S. E. part of small marsh. We run line W. over cut out road at 8° 15' Var. Offset N. 18.3 ft. 230.0 ft. W. Leave swamp. Dry. 312.0 ft. W. Wight's private drive N. E.; 449.4 ft. W. set hub; 1201.6 ft. W. set hub; 2814.5 ft. W. set hub. E. B. Horst.
2996.7 ft. W. set hub; 4222.2 ft. W. set hub; (Road turns N. to get around dry marsh; should be built across on sec. line). 4920. Enter dry swamp; 5350. Leave same; 5540. Road crosses sec. line; 5609.0 ft. W. I. M. at cor. to Secs. 2, 3, 10, 11 set by N. J. Baldwin; sets N. 14.0 ft. I set transit over cor. to Secs. 2, 3, 10, 11 and start line S. E. B. Horst.

Thur. July 19, 1917. Horst and Wight continue so. between Secs. 10 & 11 at 9° variation. 340.0 ft S. enter swamp. Dry; easy to build road over. 715.0 ft. S. leave same. 1000.0 ft. S. road comes back on sec. line; 1740.8 ft. S. set hub; 2703.0 ft. S. set hub; 4096.0 ft. S. set hub; 5435.4 ft. S. set hub. Cor. to Secs. 10, 11, 14, 15 sets W. 10.6 ft. U. S. notes call for: Post and - Poplar 6 N. 39° W. 18 links; Poplar 5 N. 48° E. 88 links. Ohas. Wight identifies a post as the original corner. I set transit over this corner and find evidence of poplar stumps that check with Notes. I drive large hub in center of road for corner, and set four Oak stakes: N. E., N. W., S. E., & S. W. each 46.7 ft. distant. I set hub 4096.0 eight feet West to true line; set transit over corner of 10, 11, 14, 15, and [E. B. Horst. turn Right 0° 20', run S. on center of graded road 1831.3 ft. Thence Left 12° 12', 181.4 ft. Left 41° 09', 239.6 ft. Thence Right 22° 35', 296 ft. Thence Left 1° 28', 157 ft. to E. & W. 1/4 line Left 58° 12', 2357 ft. on Jas. Middleton's E. & W. 1/4 line to connect with road running E. and one running S. E. B. Horst.

Friday July 20th 1917. Horst and Wight, correcting back 1/4 cor. between Secs. 10 & 11. At Sta. 2787.7 goes W. 5.3 ft. Correcting back between Secs. 2, 11. Offset N. 18.3 ft. + 14.0 ft. Offset S: $32.3 \div 5609 = .00575$. Hub 4222.2 W. goes N. 6 ft.; Hub 2996.7 W. goes S. 1.1 ft.; Hub 2814.5 W. goes 0.0 ft.; 1/4 cor. at 2804.5 W. goes S. 2.15 ft. 1/4 cor. at 1201.6 W. goes S. 11.4 ft.; 1/4 cor. at 449.4 W. goes S. 15.7 ft. S. E. < of true lines at cor. to Secs. 2, 3, 10, 11 = 89° 26'. S. W. < to true line running W. = 90° 20'. Sight taken to N. J. Baldwin's hub. Marked [true line] W. of E. 1/16 cor. E. B. Horst. Set transit over cor. of 1, 2, 11, 12. Run random line N. between [and 2. Var. 8° 30'. 215 ft. N. leave swamp; 250 ft. N. Wight's private drive S. W.; 259.7 set hub; 500 ft. N. Marsh; 600 ft. N. leave same; 930 ft. N. enter marsh; 1140 ft. N. leave same E. B. Horst. 1199 ft. N. set hub, turn Right 1° 08'.

Monday July 23rd 1917: Horst transit and chain. E. R. Wight, chain, flag & axe. Continue N. between Secs. 1 & 2. We walk to cor. of Secs. 1, 2, 35, 36. U. S. Notes call for N. Pine 12 N. 65° W. 87 lks. I find same plainly marked from which I set a post for true corner, and erect a tall flag at cor. We return to hub 1199 N., backsight S. on random; foresight N. and turn right 1° 08' on corner of 1, 2, 35 & 36 and cut line thru to corner to which I take following new B. T's: N. Pine 10 N. 18° 35' E. 35.7 ft. Poplar, 8 N. 25° 40' W. 50.4 ft. N. Pine 10 S. 49° 55' W. 69.9 ft. 1936.3 ft. N. set hub; 2600.0 ft. N. enter dry marsh; 2900.0 ft. N. leave dry marsh; 3101.8 ft. N. set hub; (about 3120, an E. & W. wire fence). 3366.5 ft. N. set hub; 3573.0 ft. N. enter small dry marsh; 3710.0 ft. N. leave same; 3892.0 set hub; 4151.2 set hub; 4333.5 set hub; 4425 center of graded road. 4575.0 Enter large marsh; 4460 Offset E. 100 ft. to pass bog; 5082.5 Offset back 100 ft. on line. 5280.0 leave large marsh; 5303 set hub; 5714 cross graded road; 5744 cor. of Secs. 1, 2, 35, 36; I set transit about 200 ft. N. of cor. to Secs. 1, 2, 35, 36, on true line and erect a tall flag

at $\frac{1}{4}$ cor. between Secs. 35+36, and set a transit on line between corners. Set hub under transit. I return to corner of 1, 2, 35, 36 and read angle of lines between Secs. 1+2+35+36, sight S. on Sec. line; reverse telescope and turn W. $1^{\circ}05'$ and sight N. on true Sec. line. At $\frac{1}{4}$ cor. U.S. notes call for: Poplar 7 S. $37^{\circ}E$. 30 lks; Old B.T. still standing plainly marked. I drive a new stake in place of old one. Distance from cor. of Secs. 1, 2, 35, 36, N. to $\frac{1}{4}$ cor. between Secs. 35+36 = 2648.2 ft. E.B. Horst.

Tuesday, July 24th, 1917. Horst and Wight continue N. on graded road from $\frac{1}{4}$ cor. between Secs. 35+36, T142 R. 28. I send Wight to erect a flag at stake near corner to Secs. 25, 26, 35, 36, being in S.E. part of Muskeg Bog, in center of road. With transit on $\frac{1}{4}$ cor. I sight S. on true line; sight N. and turn W. $0^{\circ}10'$ and sight on stake. Set transit on stake and set two Cedar Wit. Posts $6" \times 6"$; S.W. & S.E. 46.7 ft. Sight S. line thence N., turn $0^{\circ}34'E$ on graded road. About $\frac{1}{2}$ mile N. offset E. 8 ft. to center of road. Look $\frac{1}{4}$ cor. B.T.s. all gone. Settlers never saw original $\frac{1}{4}$ cor. Continue N. to a stake set by Ben Clark for N. $\frac{1}{4}$ cor. between Secs. 25+26. We walk N. and look for cor. to Secs. 23, 24, 25, 26. U.S. Notes call for: Dry Cedar 8 N. $50^{\circ}E$. 27; Dry Cedar 6 N. $89^{\circ}W$. 30. We find a stake set by Clark but it must be off as there is no cedar near. We look all P.M. for corner. John Hoffman assists us in P.M. After supper I drive to Haskewack to telephone to Greene. (Central is closed) so I drive to Walker. Greene is out. I get transcript notes and return to Wight's Wed. morning. E.B. Horst.

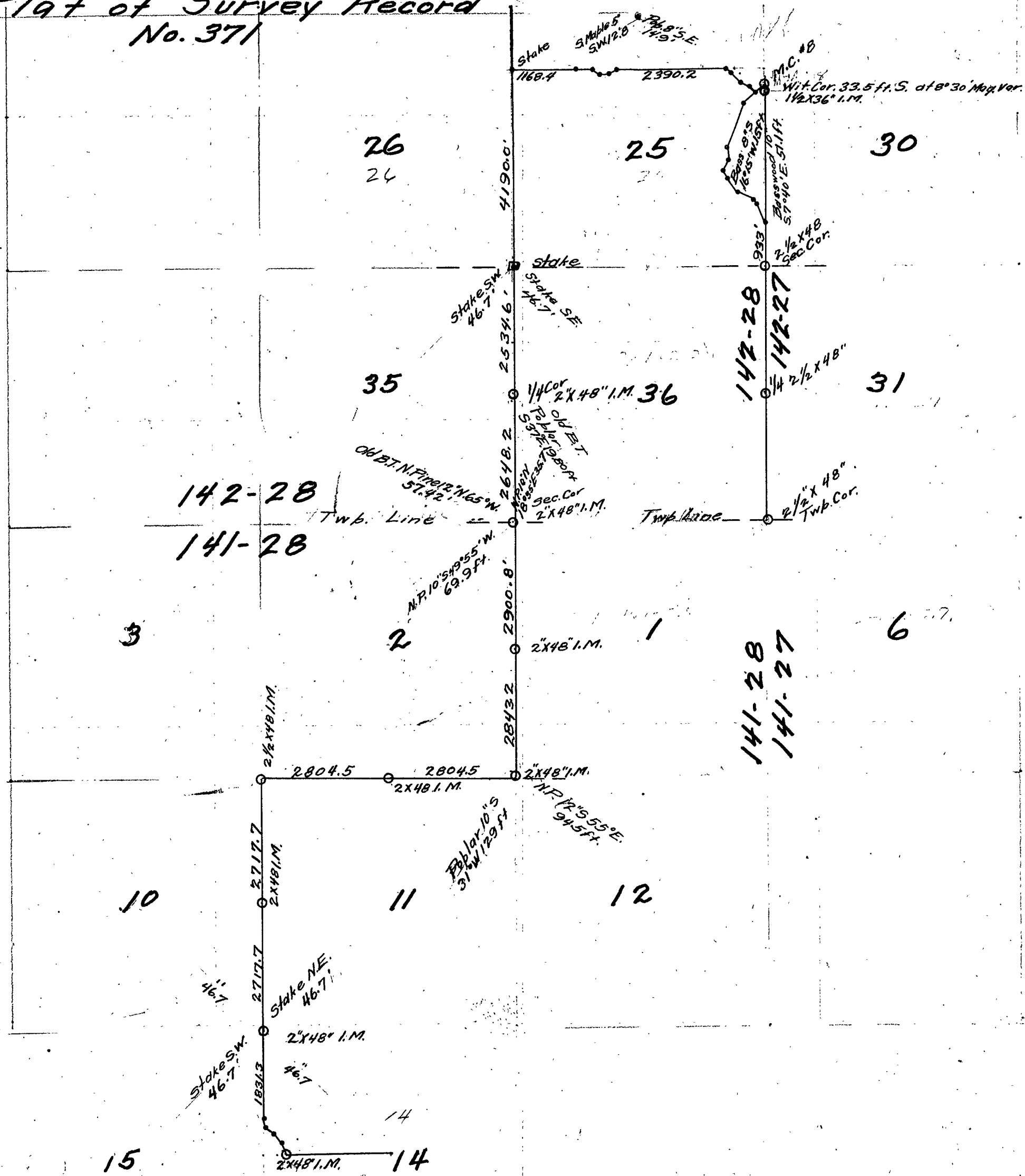
Wednesday July 25, 1917. Horst and Wight chain up. Begin at Dup. line at cor. to Secs. 1, 2, 35, 36 and chain N. on true line run yesterday, on partly graded road. At 510.0 ft N. road leaves line easterly to pass sharp hill; at 700 ft. N. road is E. 100 ft; at 860 ft. N. road is on line; at 2648.2 ft. N. intersect $\frac{1}{4}$ cor. between Secs. 35+36. Continue N. $\frac{1}{4}$ cor. = Sta. 0.00. At 2340.0 N. enter dry bog road graded over bog; at 2534.6 stake: chain N. on random line between Secs. 25+26. At 456.0 N. leave swamp; 900 N. road bears N.E.; (to get around bog); 1100 N. enter bog; 1200 N. road 193 ft. E. of line; 1600 N. leave bog; 1778.0 N. road on line; 2642.6 N. hub offset E. 8 ft. 2785.8 N. hub; 3247.6 N. hub; 3988.0 N. hub; 4193.0 N. hub: A N. $\frac{1}{4}$ stake E. 3 ft. set by Ben Clark. We look balance of day for B.T. to cor. of Secs. 23, 24, 25, 26 but find nothing. We walk to a post set by Ben Clark for a $\frac{1}{4}$ cor. bet. Secs. 24, 25, which we find was not set from original B.T.s. U.S. Notes call for: W. Pine 24 N. $10^{\circ}E$. 12 lks; we look for this and find snag of same, 7 ft. high and plainly marked. As I have no compass with which to set corner, I take chained bearings to old B.T. as follows: Poplar 8 S.E. 14.9 ft; S. Maple 5 S.W. 12.8 ft. Clark's post sets N. 28 paces and E. 30 paces from old B.T. This puts Clark's interior corners of Sec. 25 all off. E.B. Horst.

Thursday July 26, 1917: Horst, Wight, and John Hoffman begin at Sta. 4190.0 N. on random line between Secs. 25+26, turn S.E. $< 93^{\circ}05'$ and run traverse E. 1168.4 ft. on cut out road line. Thence Right $1^{\circ}30'$ - 411.2; Thence Right $32^{\circ}08'$ - 100.5; Thence Left $36^{\circ}30'$ - 168.4; " Left $15^{\circ}20'$ - 158.9; " " $19^{\circ}16'$ - 2390.2; " Right $44^{\circ}05'$ - 126.2; " Right $6^{\circ}14'$ - 341.7; " Left $9^{\circ}14'$ - 222.5; " " $3^{\circ}00'$ - 193.5; and set hub at P.I. on Co. Road. We walk to M.C. #8 on Rge. line on S. side of Boy Lake. C. R. Wight and John Hoffman identify old elm B.T. from which I set stake for M.C. 10 ft. in lake at $8^{\circ}30'V$. I set a $1\frac{1}{2}" \times 36"$ iron pipe Wit. corner, 33.5 ft. S. of M.C. from which Basswood 10 S. $7^{\circ}40'E$. 51.1 ft; Basswood 8 S. $16^{\circ}15'W$. 15 ft. set transit on last Traverse hub; backsight on traverse line; turn N.E. $<$ to M.C. #8. ($< = 105^{\circ}30'$). Distance = 244 ft. Reverse telescope and continue traverse of old traveled road (Nebe wani bi Co. Road), 222.4 ft. Thence Left $31^{\circ}03'$ - 1037 ft. Thence Left $38^{\circ}44'$ - 300.2 ft. Thence Right $38^{\circ}28'$ - 250.5 ft. E.B. Horst.

Friday July 27-1917. Thence Left $56^{\circ}15'$ - 161 ft; Thence Left $4^{\circ}46'$ - 279.6 ft; Thence Left 37° - 406.3 ft; Thence Right 13° - 193.6 ft; Thence Right $38^{\circ}25'$ - 450.2 ft; Thence Right $21^{\circ}08'$ - 933 ft. to Sec. cor. of Secs. 30, 31, 25, 36, 142-27 and 142-28 on Range line. Being a $2\frac{1}{2}" \times 48"$ I.M. from old B.T.s. Thence $1^{\circ}50'E$. and drive hubs on center line of road to $\frac{1}{4}$ cor. between Secs. 31+36 where I find a $2\frac{1}{2}" \times 48"$ I.M. badly misplaced by a settler. I reset

same from old B.T.s and set the F.M. at proper point. With transit on $\frac{1}{4}$ cor. and sighting N. on Dec. line transit telescope turn W. $1^{\circ}16'$ and sight to corner of Twp. 141, 142 Rgs 27, 28. This line is not chained. I simply established the road center for the present. With transit on Twp. Corner and sighting N. on true line transit telescope and sight S. and turn E. $1^{\circ}14'$ to a hub corrected from Flynn's caudom. After supper Wight and I walk to point for $\frac{1}{4}$ cor. between Decs. 1 and 2 Twp 141 Rg 28, and set a 3" X 3" X 30" Poplar post 2900.8 ft. S. of N.W. cor Dec 1 and 2843.2 ft N. of S.W. cor. Dec 1. 9.5 ft. E. of random line.
 Saturday July 28-1917. I return to Walker. E.B. Horst

Plot of Survey Record
 No. 371



Road thru Sec. 30-139-29

Sec. 25

1/4 Cor.

Sec. 30



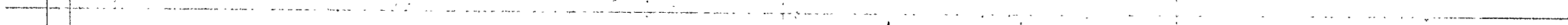
LAKE HATTIE

Sec. 29

1/4 Cor.



LAKE HATTIE



Book 54-A. Road on E. & W. $\frac{1}{4}$ Line Sec. 30-139-29

p. 18 Field notes of the survey of 3 pieces of road in township 139 Range 29 W. 5th P.M. as directed and surveyed by John W. Curo, County Surveyor, Cass County, Minn. and Alois Nowak, surveyor.

Nov. 4-1916

Alois Nowak leaves Walker at 9:40 A.M. with Gurley transit in good adjustment and a 100 ft. Chicago steel tape and equipped with the field notes concerning the survey. Arrive at Backus at about 10:40. Fare \$1.49. Take auto delivery car and drive to Swan Johnsons place, town clerk of twp. 139, range 29 where I receive petitions of roads to be surveyed. I drive to M. Gartens place, where I stay and board. Mr. M. Garten is member of the town board.

p. 19 Autofare is \$2.25. Dinner at Gartens. Garten cannot hunt up a crew but will have one tomorrow-morning. I am preparing my notes. Road petition reads: Lay out, survey and open up a four (4) rods road as follows: Beginning at the Southeast (S.E.) corner of the Northeast (N.E.) quarter, section 30, twp. 139 range 29 thence running west on quarter line until it strikes Lake Hattie thence in a westerly by north direction following the lake as close as practical until it strikes the quarter line thence west on $\frac{1}{4}$ quarter line until it strikes lake Hattie, thence in a westerly by north direction following the lake as close as practical until it strikes the quarter line thence west on quarter line to the South west corner of the North west quarter, section 30 twp 139 Rp. 29 and there terminate.

p. 20 Mr. Garten owns the South west quarter of Sec. 18, and the Southwest Cor. of Sec. 18 is only 20 rods west of Mr. Gartens house. It is an $1\frac{1}{2}$ iron pipe with cap. Not having a compass with me I determine south by a cut-out in wood and pace south. At 11 paces = 33 ft. leave road enter cornfield at 211 paces leave corn field enter Jack Pine wood. At 440 I look for Iron pipe that is $\frac{1}{4}$ Cor. of West line of 19. Fail to find it. Continue pacing south. At 1100 leave Wood enter hardwood brush. At 2300 paces enter open bog. At p. 21 2640 paces equals 7920 feet I am on West side of Lost Lake. I look for Iron Pipe set by Curo set as $\frac{1}{4}$ Cor. on west side of 30. Fail to find it. Walk east to look over ground where proposed road is to go as I cannot be very much off the East-West $\frac{1}{4}$ line of Sec. 30-139-29. I strike Lake Hattie about 700 ft south of the northermost point. I meet Mr. Albert Hall who tells me about Mr. Upton and Young who live on Gov't lot 7 Sect. 30-139-29 who are very interested in the petitioned for road and promised to help during the survey. I sent word for them to be up at Gartens as early as possible to-morrow morning. Quit for night. Supper and lodging at Gartens

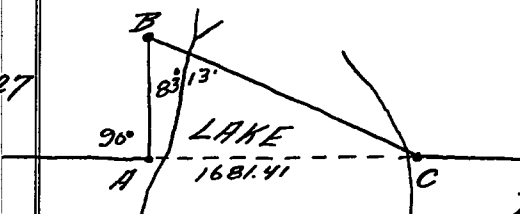
p. 22 Sunday, Nov. 5-1916. Breakfast at Gartens

Bob Mountains who is to help me comes early. We wait till 9 o'clock for Upton and Young As they fail to come I decide to establish the $\frac{1}{4}$ corner on the ^{East} West side of 30 and walk east toward east corner 18 & 19. Half way we meet Upton with a team, and drives to East corner 18-19 twp. 139-29. We chain south 2641.3 ft. and set 2 $\frac{1}{2}$ " hub with tack. I find Curo's bearing trees but as I haven't his notes with me I can not check their courses, the Gov't notes call for B.P. 4 "N. 56 W. 20, B.P. 45. 52 $\frac{1}{2}$ E. 17 but as the road was cut 33 ft. on each side of this corner the B.T's were cut and I fail to find any information of them. Drive to Upton's. P.M. Upton, Young, Mountains and I walk west to Lost Lake where the $\frac{1}{4}$ W. cor. of Sec. 30-139-29 is Young and Mountains stay at the lake, make stakes and look for the corner

while Upton & I walk North to get instrument and Mr. Garten to show us the corner. Must wait for Garten who has not had dinner yet. I meet Mr. Johnson the town clerk who came to tell me that the board changed the petition so as to have the road on the East end running along the shore of Lake Haddy instead of on the 1/4 line.

p.24 The petition should read, — until it strikes Lake Hattie, thence in an easterly by south direction to a point 304 ft. south of East 1/4 Cor. of Sec. 30-139-29. Upton, Garten, Kay, Circebride and I walk to 1/4 Cor. west of Sect. 30-139-29. Garten after searching quite a while finds it. It is a 2" Iron Pipe set in a 2 ft. mound of dirt. Garten walks back. I run east on $8^{\circ}45'$ Var. J. Nowack, transitman, Upton and Nowack, chainmen, Young and Bob Axemen and Kay Circebride flagman. At 200 hub on steep hill, at 500 hub, at 1100 hub, at 1320 hub, Quit for night as it is rapidly getting dark and we have 3 miles to walk to Garten. Supper and lodging at Garten's

p.25 Monday, Nov. 6-1916 Breakfast at Garten's. Kay, Bob & I drive with Tom Lee to Uptons. We walk to hub 1320. Nowack, transit, Upton and Nowack, chain, Young and Bob axemen, Kay, flagman. We chain up a high hill. At 1580 set hub "A". At 1715 ^{triangulate} enter lake. I sight back on hub 1320, turn 90° to right and set hub "B" 200 north. Set Hub "C" across lake. Set up on hub "B" sight back on A and turn $83^{\circ}13'$ to hub "C"

p.27  hub "A" to "B" is $200 \tan 83^{\circ}13' = \frac{8.40705}{1681.41} \cdot 200$
Hub "C" is 3261.41. Continue East. At 3320 hub at 3420 enter open bog. At 3860 leave bog. At 3960 hub. At 4220 hub. Dinner at Uptons.
P.M. Continue east along north bank of lake. At 4720 hub. We have to run through very thick ^{under} brush. At 5220 hub. At 5663 the 1/4 Cor. East of Section 30, sets South 79.85. To correct our line, we shall have to set south 0.0141 per foot. Bob and I rechain 1/2 mile. Find it 2' short and when I afterward heard that Upton had made a remark as of setting a tack into a hub half an inch out of line being good enough, I'll change the men. Quit for night. Supper and lodging at Garten's.

Tuesday Nov. 7-1916 Election day.

Bob, Kay and I drive with Tom Lee in Auto to Upton and Young's. Nowak transit Nowak and Bob Mountain, chain, Upton and Young axeman, Kay, flagman. I correct the line. Hub 5663 goes south 79.85, hub 5220 goes South 73.60, hub 4720 goes south 66.55, 4220 " " 59.50, " 3960 " " 55.84, " 3320 " " 46.71, 1580 " " 22.28, " 1320 " " 18.61, " 1100 " " 15.51, 500 " " 7.05, " 200 " " 2.82, Rest of P.M. we set road centers on corrected 1/4 Line from 1/4 Cor on west side section 30-139-29 far as hub 1580 on west shore of Lake Hattie.

p.28 Dinner at Upton's. Bob Mountains goes to Backus to the election. Kay stays in the field making hubs. Upton, Young and I drive with Albert Hall in Auto to the school house where the former vote, while I talk with Mr. Johnson about a man to help me as Upton, Young and Bob wont be able to work Thursday. Albert Hall drives us back. Beginning 1580 on west side of Lake Hattie. Hub 1580 is station 1, I run a line $N.43^{\circ}1'E.$ Var. $7^{\circ}30'$ down the thickly wooded hillside at 316 ft. set hub being station 2. Thence $N.24^{\circ}28'E.$ 300' thru thick brush to station No. 3. Quit for night. Kay has supper and lodging with Garten's. I have supper with Upton and lodgings with Young

Allowak

B

Wed., Nov. 8-1916

p.30 Nowak, transit, Nowak and Upton, chain, Kay and Frank Gillety, axemen. Beginning at station No. 3
 Iron N. 37°47'E. var. 7°30' 300' to station #4, thence N. 26°55'E. 105 Ft. to station No. 5 on top of
 old Beaver dam, thence N. 72°13'E. 180 Ft. to station No. 6, Thence N. 82°20'E. 355 Ft. to station No. 7,
 Thence S. 71°09'E. 266 Ft. to Station No. 8. Thence S. 46°43'E. 217 Ft. to sta. No. 9, Thence
 S. 53°25'E. 325' to Station No. 10, Thence S. 0°25'W. 522.2 Ft. to station No. 11 being hub
 3320 on our true 1/4 Line E. & W. in Sec. 30-139-29 ^{Dinner at} Upton.

p.31 P.M. Beginning at hub 3320 we set roadcenters as far as hub 4220 on true
 E & W 1/4 Line in Sect. 30-139-29. From hub 4220 being station No. 12 run
 N. 85°16'E. var. 7°30' 580 Ft. to station No. 13 on Northside of Lake Hattie. Thence
 N. 87°35'E. 312 ft. to station No. 13 on high bank north of Lake. Thence S. 56°8'E. 678 Ft.
 to a point 304.00 south of 1/4 Cor. on Eastside Section 30-139-29. This finishes the
 survey of the road described in the Road Petition. Land Kay have supper
 and lodging at Garters.

C. Nowak

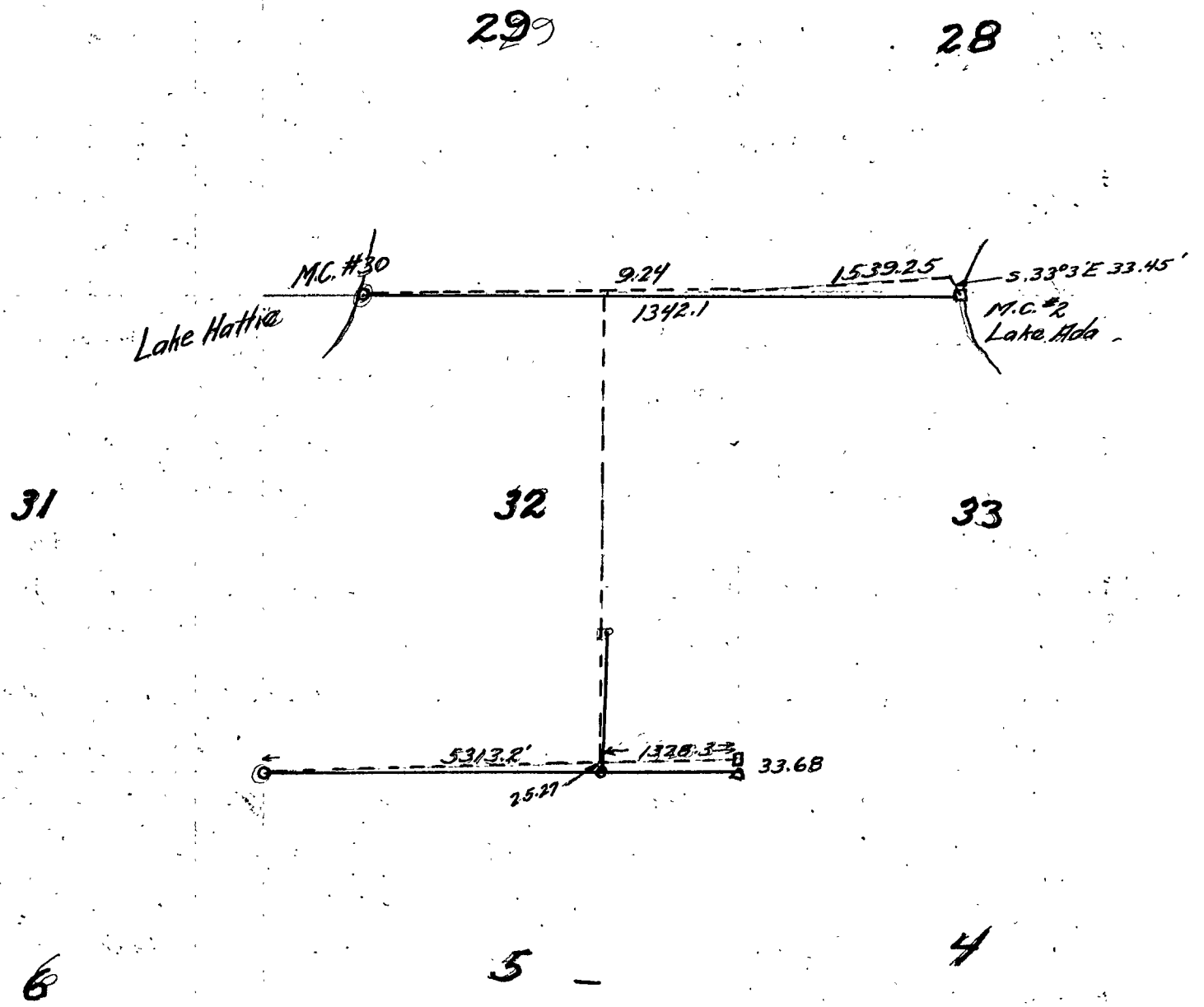
15 folios 2.25

1 sec 1.50

3.75

Plat 373

T. 139 N. R. 29 W.



B

SURVEY RECORD No. 373

Book 54A. - Nowack. Field notes of survey of 2 rod road between sections 28 and 33 east of Section Cor. 28-29-32-33 as surveyed under the direction of John W. Curo, County Surveyor of Cass Co., by Alois Nowak, surveyor.

p.34 Thursday, Nov. 9-1916. Breakfast at Gartens. Nowak and Kay Cirbride walk to M.C. No. 30 on east side of Lake Hattie on Section Line on Sect. 29-32-139-29 where we meet Frank Gillity. We walk to Sect. Cor. 28-29-32-33, a 1 1/2" capped galv. iron pipe. The road petition reads as follows: Lay out and open up a public cartway 2 rods wide as follows: Beginning at the Pontoria Pine River Road where the section line E. and W. betw. sections 29 and 32 intersects said road, thence running east on sect-line between 29 and 32 and 28 and 33 to a point p.35 13 rods from Meander stake of Lake Ada and there terminate.

I set up transit on Sect. Cor. 28-29-32-33 and run East on 8°20' Var. at 200 hub on top of hill then level to lake. At 600 hub. I offset the random line on account of fence. At 1539.25 set hub on bank of Lake Ada. The govt calls for 2388 lks = 1576.08 ft. as distance from Sect. Cor. 28-29-32-33 - 139-29 to M.C. No. 2 on west side of Lake Ada. I look for M.C. No. 2 where Govt calls for N.P. 20 N. 30 W. 129 N.P. 15 S. 11 W. 243, I find several p.36 stumps all of them badly burnt. A large N.P. stump in front of Loomis's Cottage shows dim marks. I don't want to set the (corner) M.C. without evidence whether said stump is the B.T. and as there is nobody present in the neighborhood who could testify, I shall ask Mr. Hahn after his return from work at 6 o'clock. Mr. Hahn is said to know where the M.C. is. We take dinner outside having taken some lunch along. I set a high flag on Sect. Cor. 28-29-32-33 - 139-29; take instrument to Eastside of Lake Hattie on high bank near M.C. No. 30 and work my instrument in line and set a high flag in line. We walk to Mr. Hahn's farm east of Section Cor. 28-29-32-33. Mr. Hahn tells me that the p.37 stump in front of Loomis's house is the Old Bearing tree and that he surely saw the marks on it before it burnt down and was chopped afterward. I leave instrument with Mr. Hahn. Supper and lodging with Garten

p.38 Friday, Nov. 10-1916. Breakfast with Garten. Kay Cirbride and I walk to west side of Lake Ada meet Frank Gillety. Nowack transit; Nowack and Gillety, chain; Kay, axeman. I set the M.C. by measurement and courses. Then I set up on found corner, turn my instrument S. 11° W. and find another stump with very dim marks but as course and measurement check with Govt notes I don't doubt that the last stump is the other B.T. I then set the M.C. No. 2 by flat measurements and drive a 2 1/2" x 36" oak stake into ground 1 1/2 ft. away from the water. The old B.T.s stand as follows: N.P. stump N. 28° 44' W. 85.14 ft. N.P. stump S. 9° 11' W. 160.38 ft. I make two new Bearing trees as follows: N.P. 15 S. 51° 25' W. 21.18 ft. N.P. 12 N. 23° 24' W. 46.62 ft. From hub 1539.25 M.C. No. 2 sets S. 33° 3' E. 33.45'. I correct my random my p.39 random line. Hub 600 goes S. 33° 3' E. 13.04 ft. I then set up on corrected hub 600, sight back on Sect. Cor. 28-29-32-33 - 139-29 and set road centres with 3" x 36" Oak stakes. Stake 1361.58 marks termination of Road on the west end. I then set up transit on 74' west of Section Corner 28-29-32-33, 139-29 and work my instrument into line between flag on Section Corner 28-29-32-33, 139-29 and on M.C. No. 30 on west side of Lake Hattie. Then I set road centres with 3" x 36" Oak stakes. Then I run a line east on 7° 45' Variation. At 1500 cross centre of Pine River (Longville) p.40 Pontoria road. At 1600 hub. At 2460 hub. We chain in the centre of 2 rod road. At 3960 hub. At 490 hub. As the boys are hungry it being 2 o'clock P.M. I postpone correcting of this line. We walk to Mr. Olson who owns a farm in the S.W. 1/4 of Section 32-139-29 Dinner at Olsons. After dinner Olson and we walk to Section Corner 31-32 on the south side of Twp. 139 Rge 29

p.40 Nowack, transit; Nowack and Gillety, chain; Olson and Kay, axemen. Section Cor. 31-32 on the south side of 139-29 is a 2" galvanized iron pipe with cap. On the side of it stands a
 p.41 3x3 Oak Post marked on the 4 sides 32-31-5-6. I start a random line 7°45' Var. At 300 hub. At 900 hub. At 1320 hub. Quit for night. Kay goes to Gartens. I have supper and lodgings with Olson's.

p.42 Saturday, Nov. 11-1916. Breakfast with Olson's. I am surveying now a road running from Center of South east quarter of Section 32 south to west 1/6 Corner on Southside of Sec. 32. Kay coming from Gartens brings mail from Mr. Curo along, with all kinds of good dope in it. To establish the true 1/6 Corner west on the south side of 32, I am running a random line on 7°45' Var. from Southeast corner of Sect. 32 139-29 east. At 2640 set hub. At 3960 set hub. At 5311.7 set spike in center of Pine River - Longville Road. We look for the 3 cornered rock. I walk to Mr. Westphal's
 p.43 farm where I borrow a pique and shovel. Mr. Westphal comes out with me. There is an old stump in the road cut pretty near level with the ground. The Govt notes call for:-
 B.P. 9 N. 54° E. 17.82 ft. B.P. 7 N. 62° W. 12.54 ft. B.P. 5 S. 60° W. 15.84 ft. B.P. 6 S. 47° E. 5.28 ft.
 As aforesaid stump sets East of road it can be only the N.E. or S.E. B.T.
 There are no other stumps around. First I assumed the stump as being N.E. of the corner and had my men digging a hole about S. 54° W. 17.82 ft. from the stump without result. The digging is very hard as the ground is frozen and hard as rock.

p.44 Then taking the stump as being S.E. of the corner I start digging a hole N. 47° W. 5.28 ft. away from stump and strike the 3 cornered rock set as Section Cor. 32-33 on Southside of 139-29 by A.W. Moulster in 1910. At 5313.2 ft. East the Sec. Cor. 32-33 sets south 33.68 ft. Dinner at Olson's. P.M. (Dinner at Olson's P.M.)
 Nowack, transit; Nowack and Gillety, chain. Olson and Kay, axeman. I correct the corners on the south side of Sec. 32. 1/6 Cor. W. sets E. 24.9' and south 25.27 ft. 1/4 Cor. sets E. 16.6 ft. and south 16.85 ft. 1/6 Cor. East sets E. 8.3 ft. and south 8.42 ft. I set a 3x24 Oak stake as true 1/6 Corner on south side of 32. I set up on this last found
 p.45 Corner and run a random line North on 7°45' Var. At 10.7 ft North sets a 3" stake set by some one. Enter swamp. At 400 leave swamp, enter hardwood brush. At 1300 cross stake fence enter corn field. At 1320 ft. North set hub. Quit for night. Kay goes to Gartens. I stay with Olson's.

p.46 Sunday, Nov. 12-1916
 Breakfast with the Olson's. Nowack, transit; Nowack and Gillety chain. Kay and Olson Axemen. We continue our random line North. At 1420 leave corn field, enter hardwood brush. At 1700 open meadow. 1952 cross wire fence, enter brush. At 2319 enter wet meadow. Cross log bridge 2440 enter pine timber. At 2460 North set hub. At 2990 fack in log. at 3180 open meadow. at 3295 enter plowed field, at 3696 enter thick under-brush. Dinner at Olson's. P.M. As the brushing goes very slowly I help as axeman, too. At 3960 N. hub. At 5000 hub. The line goes through very thick brush. At 5280 N. we are in center of Road. Quit for
 p.47 night. Kay and I have supper and lodging with Olson's.

p.48 Mon. Nov. 13-1916. Kay and I have breakfast with Olson's. Nowack and Gillety, chainmen. Kay, Axeman. From hub 4190 west of Section Cor. 28-29-32-33-139-29 to M.C. No 30, I chain 72.85 ft. Curo's notes call for 4261.50, that is 1.35 ft. less. I rechain the whole line. At 2683.39 W. of Section Corner 28-29-32-33-139-29 set spike in road. At 4024.98 ft. W. spike. M.C. No 30 is 4262.80 ft. proving that my chainage was correct. I then divide the overplus of 1.35 ft. proportionally and correct hub 4024.98 ft. W. by setting it 1.27 ft. West being 4026.25 ft. West of Section Corner 28-29-32-33-139-29. This is the true W. 1/6 Corner on North side of Section 32-139-29. I place a 2x24 hub and take bearing
 p.49 trees as follows. Note 40.8' East of I.M. and 0.5' N.
 J.P. 10 N. 60° W. 24.85 ft. } to locks in blazes. Courses are approximately as I have no compass with me.
 J.P. 7 S. 10° W. 30 ft.

Distances were measured with tape. From hub 5280 ft. west North, true 1/6 W. Corner on South side of Sec. 32-139-29 sets the true 1/6 W. Corner on the North side of Sect. 32-139-29 sets East 9.24 ft. Correcting back. hub 3960 goes East 6.93 ft. Hub 2640 - 4.62 ft. Hub 1320 goes East 2.31 ft. As corrected hub I set heavy 3"x36" Oak stakes with wings pointing north and marked true 1/6 line. I then set road centers between true 1/6 Cor. west on South side of Sec. 32-139-29 and hub 1320 north of 1/6 Corner. Having obtained a 1"x24" pin (iron) of Mr. Olson, I set same at the true 1/6 Corner on the southside of 32. This finishes the entire survey for Pointe Lake Townstrip. Mr. Westphal drives me in his Ford to Mr. Garten where I deliver the time sheet and thence to Backus. Auto fare \$2.22. Railroad fare -49 cs. Arrive in Walker at 5 P.M.

Allowak
 Recorded by John M. Greene, County Surveyor.

18 folios
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		9	PLAT 4 NOTES 5 7 11			9				9				9	
		10	PLAT 4 NOTES 5 7 11			10				10				10	
		11	PLAT 4 NOTES 5 7 11			11				11				11	
		12	PLAT 4 NOTES 5 7 11			12				12				12	
		13	PLAT 4 NOTES 5 7 11			13				13				13	
		14	PLAT 4 NOTES 5 7 11			14				14				14	
		15	PLAT 4 NOTES 5 7 11			15				15				15	
		16	PLAT 4 NOTES 5 7 11			16				16				16	
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		22	PLAT 4 NOTES 5 7 11			22				22				22	
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		27				27				27				27	
		28	PLAT 4 NOTES 5 7 11			28				28				28	
		29	PLAT 4 NOTES 5 7 11			29				29				29	
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		5				5				5	PLAT. 40 NOTES 41 TO 45			5	
		6				6				6	PLAT. 40 NOTES 41 TO 45			6	
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		8				8				8	PLAT. 40 NOTES 41 TO 45			8	
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		16				16				16	PLAT. 40 NOTES 41 TO 45			16	
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		31	263			31				31				31	PLAT. 40 NOTES 41 TO 45
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		29	208			29				29				29	
		30	208			30				30				30	
		31	208 PLAT NOTES TO 204			31				31				31	
		32	208 PLAT NOTES TO 135			32				32				32	
		33	135 PLAT NOTES TO 135			33				33				33	
		34	135			34				34				34	
		35				35				35				35	
		36				36				36				36	

TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE
143	29	1		144	29	1		145	29	1		146	29	1	
		2				2				2				2	
		3				3				3				3	
		4				4				4				4	
		5				5				5				5	
		6				6				6				6	
		7				7				7				7	
		8				8				8				8	
		9				9				9				9	
		10				10				10				10	
		11	PLAT 40 NOTES 41 70			11				11				11	
		12	PLAT 40 NOTES 41 70			12				12				12	
		13	PLAT 40 NOTES 41 70			13				13				13	
		14	PLAT 40 NOTES 41 70			14				14				14	
		15				15				15				15	
		16				16				16				16	
		17				17				17				17	
		18				18				18				18	
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		31				31				31				31	
		32				32				32				32	
		33				33				33				33	
		34				34				34				34	
		35				35				35				35	
		36				36				36				36	

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TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE
133	30	1		134	30	1	PLAT 32 NOTES 33 To 34	135	30	1		136	30	1	
		2				2	PLAT 32 NOTES 33 To 34			2	PLAT 48 NOTES 46 To 47			2	
		3				3	PLAT 32 NOTES 33 To 34			3	PLAT 48 NOTES 46 To 47			3	
		4				4	PLAT 32 NOTES 33 To 34			4	PLAT 48 NOTES 46 To 47			4	
		5				5	PLAT 32 NOTES 33 To 34			5				5	
		6				6	PLAT NOTES 1			6				6	
		7				7	PLAT NOTES			7				7	
		8				8	PLAT 32 NOTES 33 To 34			8				8	
		9				9	PLAT 32 NOTES 33 To 34			9				9	
		10				10	PLAT 32 NOTES 33 To 34			10				10	
		11				11	PLAT 32 NOTES 33 To 34			11				11	
		12				12	PLAT 32 NOTES 33 To 34			12				12	
		13				13	PLAT NOTES			13				13	
		14				14	PLAT NOTES			14				14	
		15				15	PLAT 32 NOTES 33 To 34			15				15	
		16				16	PLAT 32 NOTES 33 To 34			16				16	
		17				17	PLAT NOTES			17				17	
		18	PLAT NOTES To			18				18				18	PLAT 12 NOTES 13 To 28
		19	PLAT NOTES To			19				19				19	PLAT 12 NOTES 13 To 28
		20				20				20				20	
		21				21				21				21	
		22				22				22				22	
		23				23				23				23	
		24				24				24				24	
		25				25				25				25	
		26				26				26				26	PLAT 48 NOTES 46 To 47
		27				27				27				27	PLAT 48 NOTES 46 To 47
		28				28				28				28	
		29				29				29				29	
		30				30				30				30	
		31				31				31				31	
		32				32				32				32	
		33				33	PLAT 32 NOTES 33 To 34			33	PLAT 48 NOTES 46 To 47			33	PLAT 48 NOTES 46 To 47
		34				34	PLAT 32 NOTES 33 To 34			34	PLAT 48 NOTES 46 To 47			34	PLAT 48 NOTES 46 To 47
		35				35				35				35	PLAT 48 NOTES 46 To 47
		36				36				36				36	

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TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE
137	30	1		138	30	1		139	30	1		140	30	1	Plat Notes 70
		2				2				2				2	Plat Notes 70
		3				3				3				3	
		4				4				4				4	
		5				5				5				5	
		6	Plat 52 Notes 49 To 53			6				6				6	
		7				7	Plat 52 Notes 49 To 53			7				7	
		8				8				8				8	
		9				9				9				9	
		10				10				10				10	
		11				11				11				11	
		12				12				12				12	
		13				13				13				13	
		14				14				14				14	
		15				15				15				15	
		16				16				16				16	
		17				17				17				17	Plat 560 Notes 552
		18				18	Plat 52 Notes 49 To 53			18				18	
		19				19	PLAT 31 NOTES 30			19				19	Plat 29 Notes 29
		20				20	PLAT 31 NOTES 30			20				20	
		21				21	PLAT 31 NOTES 30			21				21	
		22				22				22				22	
		23				23				23				23	
		24				24				24				24	
		25				25				25				25	
		26				26				26				26	
		27				27				27				27	
		28				28	PLAT 31 NOTES 30			28				28	
		29				29	PLAT 31 NOTES 30			29				29	
		30				30	PLAT 31 NOTES 30			30				30	PLAT 29 NOTES 29
		31				31	PLAT 52 Notes 49 To 53			31				31	
		32				32				32				32	
		33				33				33				33	
		34				34				34				34	
		35				35				35				35	
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TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE
141	30	1		142	30	1		143	30	1		144	30	1	
		2				2				2				2	
		3				3				3				3	
		4				4				4				4	
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		10				10				10				10	
		11				11				11				11	
		12				12				12				12	
		13				13				13				13	
		14	Notes 517 Plot 516			14				14				14	
		15				15				15				15	
		16				16				16				16	
		17				17				17				17	
		18				18				18				18	
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47209 - Louis P. Dow Co., Bank Mfg. Stationers, St. Paul, Minn.

TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE
135	32	1		136	32	1	PLAT. 12 NOTES 13 28	137	32	1		138	32	1	
		2				2				2				2	
		3				3				3				3	
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		10				10				10				10	
		11				11				11				11	
		12				12	PLAT. 12 NOTES 13 28			12				12	
		13				13				13				13	
		14				14				14				14	
		15				15				15				15	
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		30				30				30				30	
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		32				32				32				32	
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		34				34				34				34	
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		36				36				36				36	

47239—Louis P. Dow Co., Bank Mfg. Stationers, St. Paul, Minn.

TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE
145	30	1		133	31	1		134	31	1		135	31	1	
		2				2				2				2	
		3				3				3				3	
		4				4				4				4	
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		33				33				33				33	
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PLAT. 12
NOTES 13
% 28

PLAT. 12
NOTES 13
% 28

PLAT. 12
NOTES 13
% 28

PLAT. 12
NOTES 13
% 28

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TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE
136	31	1		137	31	1	PLAT 52 NOTES 49 % 53	138	31	1		139	31	1	
		2				2				2				2	
		3	PLAT 12 NOTES 13 % 28			3				3				3	
		4	PLAT 12 NOTES 13 % 28			4				4				4	
		5	PLAT 12 NOTES 13 % 28			5				5				5	
		6	PLAT 12 NOTES 13 % 28			6				6				6	
		7	PLAT 12 NOTES 13 % 28			7				7				7	
		8	PLAT 12 NOTES 13 % 28			8				8				8	
		9	PLAT 12 NOTES 13 % 28			9				9				9	
		10	PLAT 12 NOTES 13 % 28			10				10				10	
		11	PLAT 12 NOTES 13 % 28			11				11				11	
		12				12				12				12	
		13	PLAT 12 NOTES 13 % 28			13				13				13	
		14	PLAT 12 NOTES 13 % 28			14				14				14	
		15	PLAT 12 NOTES 13 % 28			15				15				15	
		16	PLAT 12 NOTES 13 % 28			16				16				16	
		17				17				17				17	
		18				18				18				18	
		19				19				19				19	
		20				20				20				20	
		21	PLAT 12 NOTES 13 % 28			21				21				21	
		22	PLAT 12 NOTES 13 % 28			22				22				22	
		23	PLAT 12 NOTES 13 % 28			23				23				23	
		24	PLAT 12 NOTES 13 % 28			24				24				24	
		25				25				25				25	
		26				26				26				26	
		27				27				27				27	
		28				28				28				28	
		29				29				29				29	
		30				30				30				30	
		31				31				31				31	
		32	PLAT 12 NOTES 13 % 28			32				32				32	
		33	PLAT 12 NOTES 13 % 28			33				33				33	
		34	PLAT 12 NOTES 13 % 28			34				34				34	
		35	PLAT 12 NOTES 13 % 28			35				35				35	
		36				36				36				36	

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TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE
140	31	1		141	31	1		142	31	1		143	31	1	
		2				2				2				2	
		3				3				3				3	
		4				4				4				4	
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		9				9				9				9	524
		10				10				10				10	
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		23				23				23				23	
		24	PLAT 29 NOTES 29			24	PLAT NOTES			24				24	
		25	PLAT 29 NOTES 29			25	PLAT 420 NOTES 121			25				25	
		26				26				26				26	
		27				27				27				27	
		28				28				28				28	
		29				29				29				29	
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		36	64			36				36				36	

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TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE	TWP.	RANGE	SEC.	PAGE
144	31	1		145	31	1		133	32	1		134	32	1	
		2				2				2				2	
		3				3				3				3	
		4				4				4				4	
		5	PLAT 36 NOTES 37 76 39			5				5				5	
		6	PLAT 36 NOTES 37 76 39			6				6				6	
		7	PLAT 36 NOTES 37 76 39			7				7				7	
		8	PLAT 36 NOTES 37 76 39			8				8				8	
		9				9				9				9	
		10				10				10				10	
		11				11				11				11	
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		17				17				17				17	
		18	PLAT 36 NOTES 37 76 39			18				18				18	
		19	PLAT 36 NOTES 37 76 39			19				19				19	
		20				20				20				20	
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		30				30				30				30	
		31				31	PLAT 36 NOTES 37 76 39			31				31	
		32				32	PLAT 36 NOTES 37 76 39			32				32	
		33				33	PLAT 36 NOTES 37 76 39			33				33	
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SURVEY NUMBERED

4728—Louis F. Dow Co., Bank Mfg. Stationers, St. Paul, Minn.

SURVEY NO.	PAGE	TWP.	RANGE	SECTIONS	SURVEY NO.	PAGE	TWP.	RANGE	SECTIONS
238	3 PLAT NOTES TO 2	138	29	4-5-6	272	136 Plat Notes TO 139	135	29	8,9,16,17,20,21
239	4 PLAT NOTES TO 11	143	25	9,10,11,12,13,14,15,16,17 20,21,22,28,29	273	143 Plat Notes TO 158	136 137	30 30	5,6,7-8 20,21,22,23,24,25,26 27,28,29,30,31,32,33 1,2,12 25,35,36
240	12-13 Plat Notes TO 28	136	30	18-19	274	159 Plat Notes TO 159	139	29	10,11,14,15
		135	31	2-3-4-5	275	160 Plat Notes TO 161	138 139	29 30	31 36
		136	31	3,4,5,6,7,8,9,10,11,13,14,15,16,21 22,23,24,25,26,27,28	276	164 Plat Notes TO 165	137 137	30 31	31 33,34,35,36
241	29 PLAT NOTES TO 29	140	30	19-30	277	168 Plat Notes TO 167	136	30	6,19,30
242	31 PLAT NOTES TO 30	138	30	19-20-21-28-29-30	278	172 Plat Notes TO 177	141 141	29 28	11,12,13,24,25,36 2,3,4,5,6,7,8,9,10,11, 18,19,30,31
243	32 PLAT NOTES TO 33	134	30	6-7	279	179 Plat Notes TO 178	143	31	13,14,23,24
244	35 PLAT NOTES TO 34	135	30	33-34	280	180 Plat Notes TO 182	139	25	10,11,14,15,18,19,22,23
245	36 Plat Notes TO 37	144	31	5,6,7,8,18,19	281	183 Plat Notes TO 185	139	26	13-14-23-24
246	40 Plat Notes TO 43	143	28	31,32,33	282	188 Plat Notes TO 196	139	26	27,28,29,30,31,32 33-34
247	48 Plat Notes TO 49	135	30	21,3,4	283	192 Plat Notes TO 194	139	26	13,14,23,24,25,26 35,36
248	52 PLAT NOTES TO 53	136	30	26,27,33,34,35	284	196 Plat Notes TO 197	139	26	27
249	56 Plat Notes TO 55	142	31	31-32	285	208 Plat Notes TO 210	139	29	2,3,4,7,8,10,11,17, 18,19,20,27,30,31,32
250	60 PLAT NOTES TO 61	135 134 136 135 136	29 30 30 30 31	19-30 2-3 5,6,7,8,9,16,17,18,21,22,23 24,25,26,27,28,34,35 31-32 1 36	286	212 Plat Notes TO 213	140	29	33-34
251	63 Plat Notes TO 62	142	31	36	287	215 Plat Notes TO 219	142	28	1,2,11,12,13,14
252	64 Plat Notes TO 74	141 140 140	31 31 30	7,18,19,30-31 12,13,24,25,36	288	220 Plat Notes TO 242	143 142 143	27 28 28	30-31 12,13,14,11,14,15,16 2,3,10,11,12,13,14,15,23,24 25,26,34,35,36
253	75 Plat Notes TO 80	140	30	19,20,21,29-30	289	243 Plat Notes TO 244	143	30	14,15,22,23
254	83 Plat Notes TO 85	142 143	26 26	5,6 17,18,19,20,29,30,31,32	290	247 Plat Notes TO 257	135 136 135 136	31 31 32 32	5,6 7,18,19,20,20,21,28,29 30,31,32 1 12,13,24,25,36
255	87 Plat Notes TO 86	141	26	1-2,11,12,13,14,15,22 23-27,34	291	260 Plat Notes TO 264	136 137	30 30	2-3,4-5,6 14,15,22,23,26,27,28 29,32,33,34,35
256	88 Plat Notes TO 89	140	26	10,11,14,15,22,23,26,27 34,35	292	268 Plat Notes TO 269	140 141	28 28	1-2,3,4-5,6 31,32,33,34,35,36
257	91 Plat Notes TO 90	139	26	2,3,10,11,14,15,22,23 25,26,27	293	271 Plat Notes TO 271	138 137	31 31	31 6
258	92 Plat Notes TO 93	139	25	11,12,13,14,15,19,20,21,22 23,24,27,28,29,30	294	272 Plat Notes TO 276	141	28	26,27,30,31,32,33,34
259	95 Plat Notes TO 94	143 143 144	27 28 28	6,7,18,19 12,3,11,12,13,24 33,34	295	280 Plat Notes TO 281	141 141	28 27	11,12,13,14,22,23,27,34 7,18
260	96 Plat Notes TO 97	143	27	6,7,13,14,15,16,17,18,19,20 21,22,23,24	296	284 Plat Notes TO 285	137 138	30 30	12,45,8,9,11,12 32,33
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