

71.

MINING  
TRANSIT BOOK

363



Note: In all sketches in this book,  
top of page is North.

lpwm.



Geo W Miller  
Index.

1

Survey of Lot 8, Sec. 34-144-28  
and Lot 6, Sec. 35-144-28

Record 1432.

3-74

{ 135-32  
143-26

RE. BRYANT

PM SCOTT

77-89

91-117

{ 135-32

Correcting twp Road

118 to 139

→ Recorded.

EB HORT



34-35-144-28. Federal Dam.

Tuesday April 27<sup>th</sup> 1915.

Rainy.

Starting the survey of Lot #8,  
Sec. 34-144-28 and Lot #6, Sec. 35-  
144-28, for G. G. Harthy of Duluth.

Leave Walker, Minn., at 2:52 A.M.  
on M&I Rly. Arrive Bemidji, Minn.,  
at 3:20 A.M. Rly Fare = 84¢

Bed and breakfast at Markham  
Hotel, Bemidji = \$1.50

Leave Bemidji at 9:35 A.M. on Soo  
Rly. Arrive Federal Dam at 10:50  
A.M. Rly. Fare = 80¢

Register at Hotel Stanton.

P. M.

E. L. Warren and I go out and  
look up corners on work. After  
we return I engage men to  
assist me in this survey.

Growmiller.



4.

(2)

34-35-144-28 - Federal Dam.

Wednesday April 28th 1915.

Fair to warm.

Gronmiller Transit & chain.

Fred Beaulieu. Axe & chain.

Ed Newman. Axe.

300' steel tape. New "Gurley" Transit.

Left hotel Stanton at 7 A.M.  
and walked to cor to Secs.

34-35-2-3-144-143-28, where we  
find a  $2\frac{1}{4}$ " x 4' iron pipe set  
its full length in the ground  
as recorded in Book Page  
County Record Book of Surveys.

Set up over this iron corner  
and run East.  $V 7^{\circ} 52'$

@ 2666.90 we intersect the  $\frac{1}{4}$   
Cor. between Sec. 35-144-28 and  
Sec. 2-143-28, the same being a  
 $2\frac{1}{4}$ " x 4' iron pipe, capped on top, set  
its full length in the ground as  
recorded in Book Page of  
County Record Book of Surveys.

We now come back, and @ 1333.45  
we set hub<sup>2nd</sup> tack for the true  
W $\frac{1}{16}$  cor. between Sec. 35-144-28

Gronmiller.



Survey of Lot #8, Sec. 34, and Lot #6, Sec. 35 - 144-28.  
 April, 1915.  
 May, 1915.

	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12
	Sun.				Sun.				Sun.				Sun.			
Geo. W. Miller.	1	1	1	1	1	1	1	1	1	1	$\frac{1}{2}$	$\frac{1}{2}$	1	0	1	1
Fred Beaulieu.	0	1	1	1	1	0	0	$\frac{1}{2}$	1	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1	0	1	1
Ed. Newman.	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
John W. Curo.																
Barney McKeig.	0	0	0	0	0	0	0	0	1	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1	0	1	1
Edgar Billington.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$\frac{1}{2}$

(3)

See P. 43 for cont. May time.

Note: Make Ed Newman's time payable to  
 R. F. LeMire, Federal Dam.

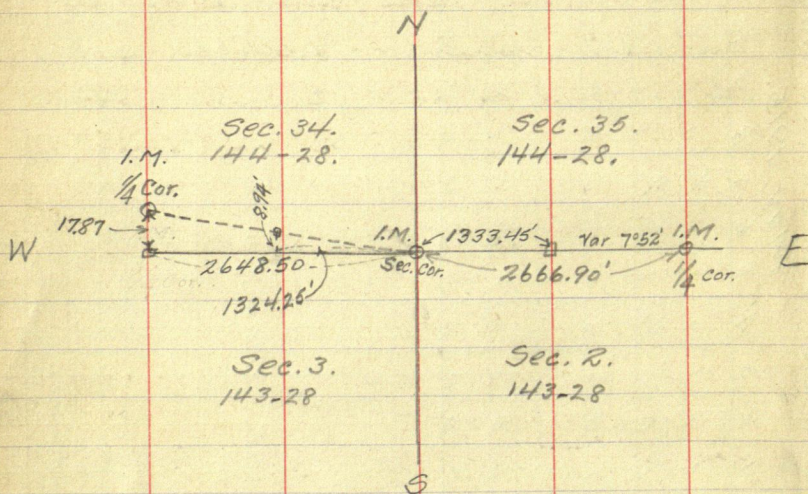
Grouniller.



6

(4)

34-35-144-28-Federal Dam  
and Sec. 2-144-28, the same being  
the true S.E. Cor. of Lot #6, Sec. 35.



With transit remaining set up  
over Cor. to Secs. 34-35-2-3-144-  
143-28, I backsight East on 1/4 cor.  
between Secs. 35-144-28 and 2-143-28,  
transit telescope and run West on  
random between Secs. 34-3-144-  
143-28.

@ 1106.70 -  $\frac{1}{4}$  Soo Rly. Main Line.

@ 1124.00 - Hub.

@ 2016.10 - "

Growmiller.



34-35-144-28. Federal Dam.

@ 2648.50 - true  $\frac{1}{4}$  Cor. betw. Sec. 34-144-28 and Sec. 3-143-28, being a  $2\frac{1}{4}" \times 4'$  iron pipe, capped on top, and set nearly its full length in the ground, as recorded in Book Page of County Record Book of Surveys, sets North 17.87 feet. ( $90^\circ$  from random line.)

Correcting Back.

All points on Random go .00675 ft North for each foot West of Cor. to Secs. 34-35-2-3-144-143-28.

2016.10 goes 13.61 feet North.

1124.00 " 7.59 " "

We now set a hub at 1324.25 on Random line, over which we set the transit, backsight on random, turn  $90^\circ$  and chain North 8.94 feet where we set hub for the true  $E\frac{1}{16}$  cor. betw. Secs. 34-3, being the true SW cor. of Lot # 8, Sec. 34.

I now determine the point at which the main line of the Soo Growmiller.

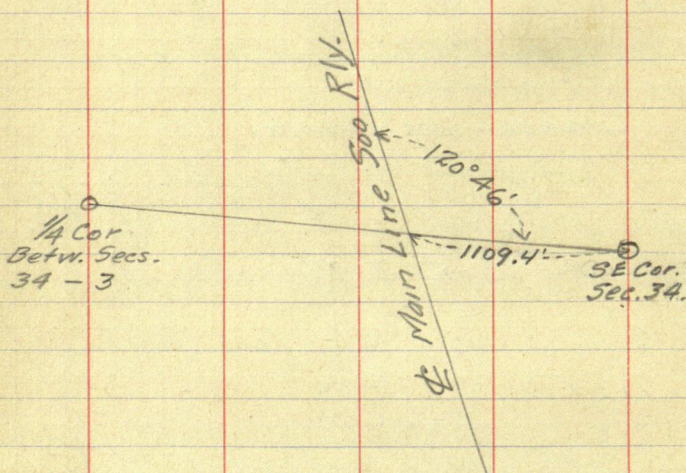


8

⑥

34-35-144-28-Federal Dam.

Railway intersects the south  
boundary of Lot #8, Sec. 34 and  
measure the angle which  
said South Boundary makes  
with said  $\frac{1}{2}$  of Railway. I find  
it to be  $120^{\circ}46'$



Quit for night.  
Still at Hotel Stanton.

Growmiller -



⑦

9

34-35-144-28 - Federal Dam.

Thursday April 29th 1915-

Fair & warm.

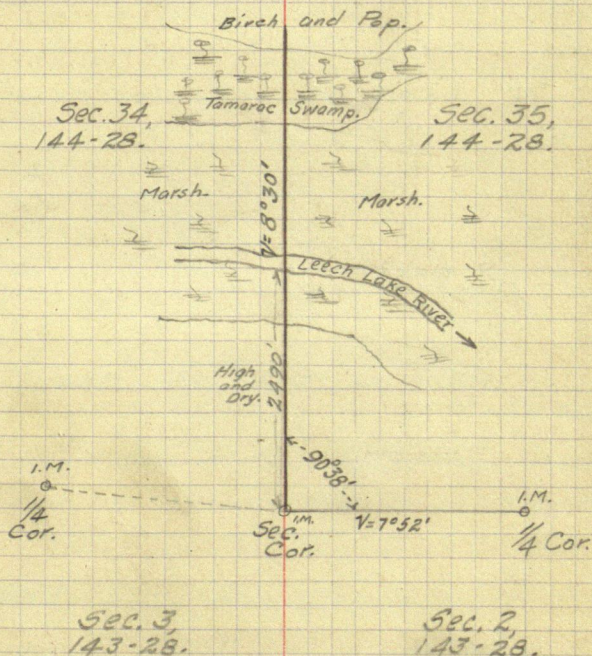
Grownmiller. Transit & chain.

Fred Beaulieu. Axe & chain.

Ed. Newman. Axe.

300' steel tape. New "Hurley" transit.

Leave hotel at 7 a.m. Set up transit over cor. to secs. 34-35-2-3 and run North on  $8^{\circ}30'$  Var.



@ 563.90 - Hub.

Grownmiller.



34-35-144-28 - Federal Dam.

@ 1261.60 - Hub.

@ 1320. Set hub and tack for temp. S $\frac{1}{16}$  cor. betw. Sees. 34-35.

@ 1844.10 - Hub.

@ 2050. Enter very low wet marsh.

@ 2475.60 - Hub.

@ 2490. - South Bk. Leech Lake River. Well defined.

@ 2660. - North Bk. Leech Lake River. well defined.

We break the tape accidentally at this point and cont. running our line but not chaining.

Run about  $\frac{1}{4}$  mile further and quit for night.

Still at Hotel Stanton.

Crowmiller.



(9)

11

34-35-144-28 - Federal Dam.  
Friday April 30th 1915.

Fair & warm.

Growmiller. Transit & chain.

Fred Beaulieu. Axe & chain.

Ed. Newman. Axe.

300' steel tape. New "Gurley" transit

I get the tape mended and we start work about 8 a.m. We cont. north on random between Secs. 34 and 35, picking up our chainage at the point where tape broke last night.

@ 3113.90 - Hub.

@ 4140.00 - "

@ 4200. - Enter tamarac bush. Still very low and wet.

@ 4826.50 - Hub.

@ 5242.80 - " Enter high ground.

At this point we stop and look for the cor. to Secs. 26-27-34-35-144-28 where U.S. notes call for a post and the following bearing trees:

Tam	4	S 31° E	19	lks. dist.
"	3	S 40° 30' W	27	" "
"	3	N 70° W	18	" "
"	3	N 20° 30' W	36	" "

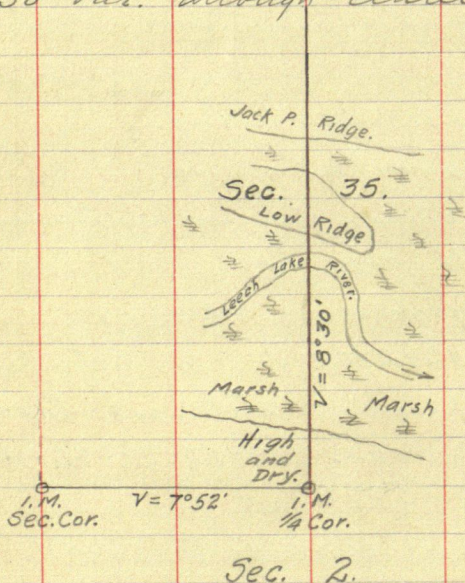
Growmiller.



34-35-144-28 - Federal Dam.

We make a thorough search within radius of perhaps 500' but we find no bearing trees nor anything which would aid us in locating the corner.

We now walk back to the  $\frac{1}{4}$  cor. between Secs. 35-144-28 and 2-143-28. Set the transit over this corner and run North on  $8^{\circ}30'$  Var. through center Sec. 35.



@ 563.40 - Hub.  
Gronmiller.



34-35-144-28 - Federal Dam -

@ 670. Enter low marsh.

@ 1483.00 - Hub.

quit for night.

Still at Hotel Stanton.

Grow Miller -



14

(12)

34-35-144-28 - Federal Dam.

Saturday May 1st 1915.

Cloudy &amp; cold.

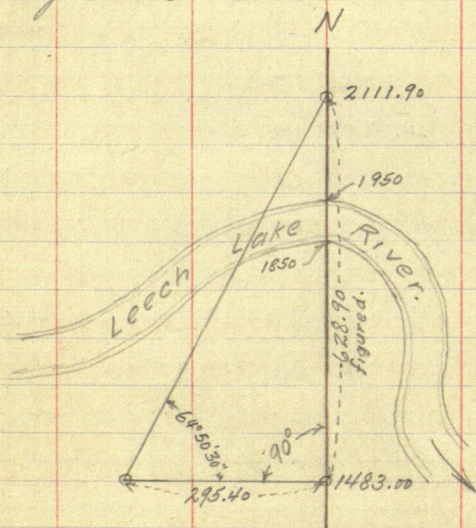
Gronmiller. Transit &amp; chain.

Fred Beaulieu. Axe &amp; chain.

Ed. Newman. Axe.

300' steel Tape. "Hurley" Transit.

Cont. N. on random through  
about center of Sec. 35-144-28. At the  
point where this line crosses the river,  
the shore line is marshy and very  
treacherous, so I decide to triangle  
it, which I do as per following  
diagram.



From which:  $295.40 \times \tan 64^{\circ} 50' 30'' = 628.90$

Gronmiller.



34-35-144-28 - Federal Dam -

@ 1850. South Bk. Leech Lake River. Marshy and not well defined.

@ 1950. North Bk. Leech Lake River. Well defined.

@ 2085. Low ridge.

@ 2111.90 Hub.

Here we break the doggone chain again. We decide to shoot our line through without chaining.

We run line about  $\frac{1}{2}$  mile further and then stop to look for the  $\frac{1}{4}$  Cor. between Secs. 35-26-144-28, where U.S. notes call for a post and the following bearing trees:

Jack Pine 6 - N 15° - No dist. given.

" " 4 - S 37° - " " "

We spend the remainder of the afternoon looking for this corner but find nothing. BT's are evidently all gone. We do, however, find a spruce post blazed on two sides and marked " $\frac{1}{4}$ " and a blazed line running in a northerly direction from it. Both post and line are freshly blazed.

Growmiller.



16

(14)

34-35-144-28 - Federal Dam,  
and evidently run within the  
last year. I hesitate to use this  
post as the true  $\frac{1}{4}$  cor. as I do  
~~not~~ know who set it and I  
have no assurance that it is  
correct.

Quit for night.

Still at Hotel Stanton.

I question Mr. E. L. Warren in the  
evening in regard to the line and  
post mentioned above and he in-  
forms me that they are the work  
of one H. J. Botting, who surveyed  
timber allotments there last  
summer. That being the case,  
I do not consider that they are  
correct and will not use them  
in this survey.

Growmiller.



34-35-144-28. Federal Dam.

Sunday May 2nd 1915.

Cold &amp; windy.

I procure the U. S. A. Engineer's map of the Leech Lake Reservoir survey through Twp. 144, Range 28. This map is much more accurate and drawn to larger scale than the Jewett plat. I go out alone and with the aid of this map make a thorough search for the cor. to Secs. 26-27-34-35-144-28.

~~I do not find either the old post or its witness trees, but I do find the old blazed lines which I have every reason to suppose are the lines of the original Government survey. From this data I feel assured that I can set the corner with positive correctness and will do so tomorrow.~~

I decide to see Curo about this, so I go from Federal Dam

U. Brown Miller



18

(No)

34-35-144-28 - Federal Dams  
to Bena (Machine fare \$1.00) in  
order to catch the 1:25 a.m.  
Great Northern for Cass Lake.

Supper @ Lumberman's Hotel,  
Bena = 35¢

Grover Miller.



(17)

19

34-35-144-28 - Federal Dam.

Monday May 3rd 1915.

Leave Bena at 1:25 A.M. on Gt. Nor  
(Bena to Walker - 84¢) ArriveCass Lake 1:55 A.M. Bed and  
breakfast at Endion hotel = \$1.<sup>00</sup>

Leave Cass Lake at 7:05 A.M.

Arrive Walker 7:50 A.M. and go to  
the office.Put in the entire day at the  
office on notes and calculations  
and receive instructions from  
Curo regarding corners previously  
mentioned in these notes.Dinner, supper and bed @  
Hotel Chase.

Gronmiller.



20

(18)

34-35-144-28 - Federal Dam.

Tuesday May 4th 1915.

Cloudy.

Leave Walker 2:52 A.M. for Bemidji; Rly. fare - 84¢.

Bed and breakfast @ Markham Hotel, Bemidji - \$1.50

Leave Bemidji 9:35 A.M. for Federal Dam. Rly. fare - 80¢

Arrive Federal Dam 10:50 A.M.

Register at Hotel Stanton.

P.M.

Growmiller. Transit, chain & axe.

Fred Beaulieu. chain & axe.

300' steel tape, New "Gurley" transit.

Set up over hub # 5242.80 on N 85  
random between Sec. 34-144-28 and  
Sec. 35-144-28 and cont. North on  
8°30' Var.

@ 5418.40 Hub.

@ 5800. Enter marsh.

@ 6040. Leave same.

@ 6263.00 Hub.

@ 6325. Enter marsh.

Growmiller.



(19)

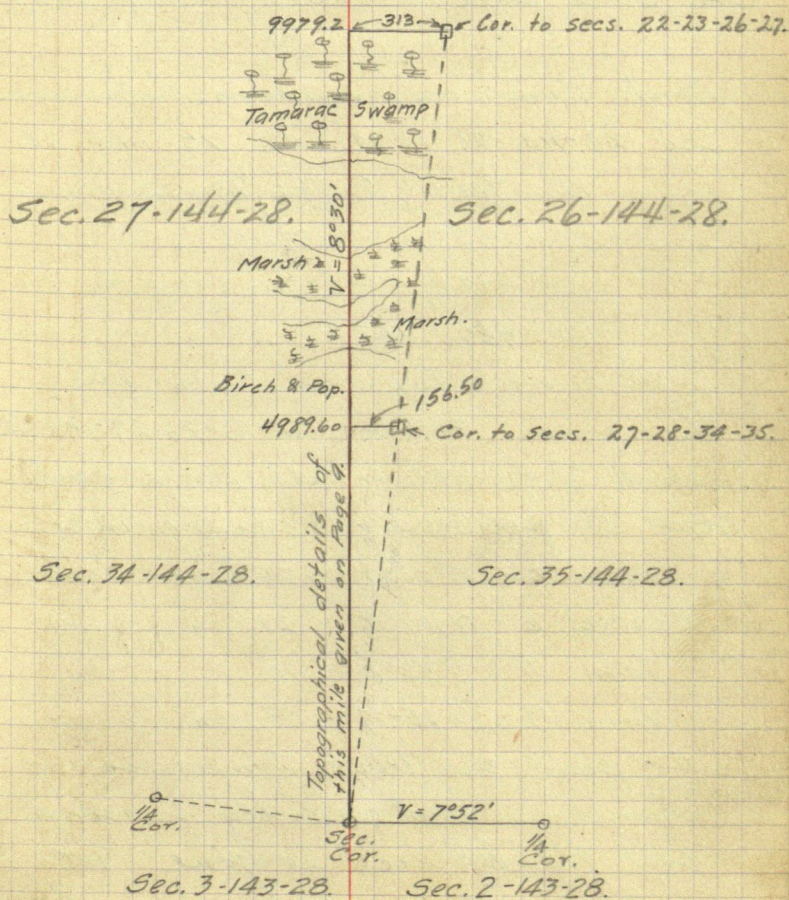
21

34-35-144-28 - Federal Dam.

@ 6825. leave same.

@ 6969.50 Hub.

quit for night.



Grown Miller.



34-35-144-28 - Federal Dam.

Wednesday May 5th, 1915.

Fair & warm.

Growmiller. Transit & chain.

Fred Beaulieu. Axe & chain.

Barney McKeig. Axe.

300' steel tape. New "Gurley" transit.

Cont. north on random between  
Sec. 26-144-28 and Sec. 27-144-28.

@ 7000. - Enter Tam. swamp.

@ 7943.00 - Hub.

@ 8921.70 - ..

@ 9898.60 - ..

Here we stop and look for  
the corner to Secs. 22-23-26-27-144-28,  
where U.S. notes call for a post  
and the following bearing trees:

Tam 10 - N 26° W - 20 links dist.

Spruce 6 - N 65° E - 23 " "

Tam 14 - S 52° E - 30 " "

Tam 13 - S 35° W - 28 " "

We find the three Tamaracs,  
standing and plainly marked,  
but the Spruce is gone. We  
establish the corner from these

Growmiller.



(21)

23

34-35-144-28 - Federal Dam.  
trees, and, at  $90^\circ$  from random

@ 9979.20 the cor. to Secs.

22-23-26-27-144-28 sets East 313.00 ft.

Correcting back,

All points on random go .03137 ft.  
East for each foot North of cor. to  
Secs. 34-35-2-3-144-143-28.

Quit for night.

Still at Hotel Stanton.

Growmiller.



24

(22)

34-35-144-28 - Federal Dam.

Thursday May 6th 1915-

Raining.

Rain all morning and I stay at hotel and work on notes and calculations.

P.M.

Gronmiller. Transit &amp; chain.

Fred Beaulieu. Axe &amp; chain.

Barney McKeig. Axe.

300' steel tape. New "Gurley" Transit.

We set hub @ 4989.60 on our N+S random line between Secs. 34-35-144-28. Set up over this hub, backsight on random and turn  $90^\circ$  and chain East 156.50 feet ( $4989.60 \times .03137$ ) and set hub for the true cor. to Secs. 26-27-34-35-144-28.

I mark new bearing trees for this corner as follows: (Var  $8^\circ 30'$ )

Tam 10 -  $559^\circ 30' E$  - 64.20 ft. dist.

" 10 -  $N47^\circ 30' E$  - 32.80 " "

" 5 -  $S37^\circ 45' W$  - 35.00 " "

" 6 -  $N41^\circ 30' W$  - 57.70 " "

Distances taken to head of 20 d

Gronmiller.



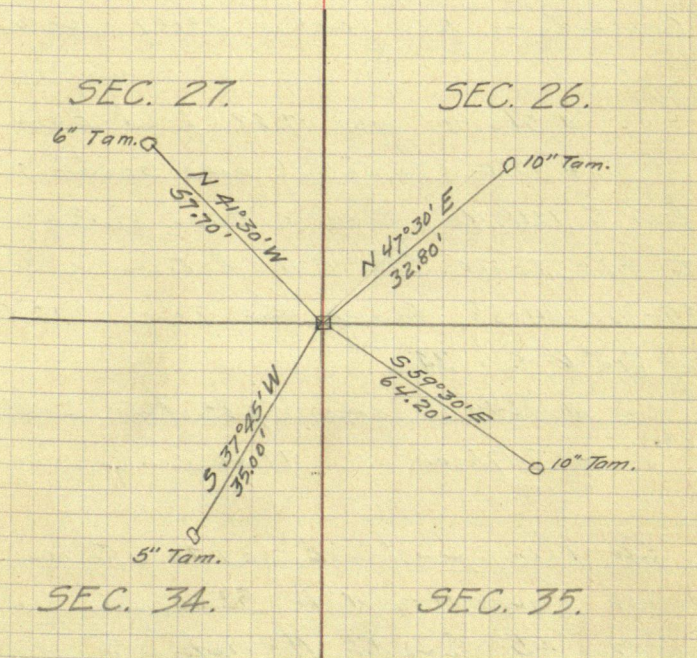
(23)

25

34-35-144-28 - Federal Dam.  
spike driven in flat place  
at base of tree.

Rain starts in again and we  
go back to town and quit for  
night.

Still at Hotel Stanton.



Kowmiller.



34-35-144-28 - Federal Dam.  
Friday May 7th 1915.

Rainy.

Rain all morning and we do not go out.

P. M.

We go to the N & S random line between secs. 34-35-144-28 and connect over hubs and set corners as follows:

Correction per foot = .03137 See P. 23.

# 563.90 goes 17.69 feet East.

# 1320. (Temp  $\frac{1}{16}$ ) goes South 72.60 feet to 1247.40, thence East 39.13 feet to the True  $3\frac{1}{16}$  Cor. between Secs. 34-35-144-28, being the True N.E. Cor. of Lot 8, Sec. 34.

# 1844.10 goes 57.85 feet East.

# 2475.60 " 77.66 " "

At the point where the true west boundary of Sec. 35 intersects the South bank of Leech Lake River, I now set a hub for the true NW Cor. of Lot 6

Gronmiller.

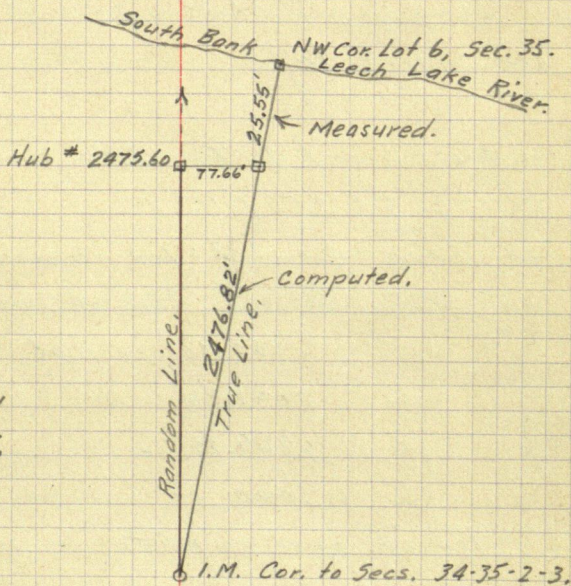


(25)

27

34-35-144-28- Federal Dam.  
in Section 35.

I ascertain the true length of  
the West boundary of Lot 6, Sec 35,  
as follows:



Which gives  
2502.37' for  
true length  
of W Boundary  
of Lot 6, Sec. 35.

Rain starts again about 4:30  
and we go in.

Growmiller. Transit & chain.

Fred Beaulieu. Axe & chain.

Barney McKeig. Axe.

300' steel tape. New "Gurley" Transit.

Still at Hotel Stanton.

Growmiller.



34-35-144-28- Federal Dam.

Saturday May 8th 1915.

Rainy.

Grownmiller. Transit & chain.

Fred Beaulieu. Axe & chain.

Barney McKeig. Axe.

300' steel tape. New "Gurley" transit.

We walk to the cor. to sec.

26-27-34-35-144-28. Starting  
at this point we run a  
random line west on  $8^{\circ}30'$  Var.

@ 953.70 - Hub.

@ 2053.30 - "

@ 2945.50 - "

@ 3000. Lv. Turn. surp. Ent marsh.

Quit for night.

This  
random  
cont. p. 36

Still at Hotel Stanton.

Grownmiller.



(27)

34-35-144-28- Federal Dam. <sup>29</sup>  
Sunday May 9th 1915.

All day at Hotel Stanton.

Growmiller.



34-35-144-28 - Federal Dam.

Monday May 10th 1915.

Fair & Windy.

We look for the cor. to sec.  
27-28-33-34 (No Bearing Trees given)  
but cannot find it. So we are  
compelled to abandon our  
random line west from the  
cor. to sec. 26-27-34-35, having  
nothing to tie to.

We now proceed to the cor. to  
secs. 33-34-3-4-144-143-28, where  
U.S. notes call for a post and  
the following Bearing Trees:

S. Maple 8 - S21E - 20 lks. dist.

Basswood 10 - S28W - 34 " "

S. Maple 20 - N24W - 10 " "

Hind 24 - N3W - 20 " "

all are gone, but we find an  
iron rod driven into the ground  
and claimed by old residents  
to mark the position of the original  
cor.

(A) Starting at this point we run  
north on a course of  $N 2^{\circ} 33' E.$   $V = 8^{\circ} 30'$

Gronmiller.



(29)

31

34-35-144-28 - Federal Camp.

- |     |   |         |      |      |                     |     |
|-----|---|---------|------|------|---------------------|-----|
| (B) | @ | 2274.50 | Hub. | Turn | $40^{\circ}58'30''$ | Rt. |
| (C) | @ | 2618.10 | "    | "    | $39^{\circ}56'00''$ | Lt. |
| (D) | @ | 7212.00 | "    | "    | $30^{\circ}00'00''$ | Lt. |

Quit for night.

Still at Hotel Stanton.

Crew & Tools.

Georniller. Transit & chain.  
Fred Beaulieu. Axe & chain.  
Barney McKing. Axe.

300' steel tape. New "Ginley" transit.

Georniller.



34-35-144-28. Federal Dam.  
Tuesday May 11th 1915.

Fair weather.

Growmiller. Transit & chain.

Fred Beaulieu. Axe & chain.

Barney McKie. Axe.

300' steel tape. New "Gusley" transit.

Cont. n. on Traverse begun  
yesterday.

(E) @ 7436.30 Hub. Turn  $62^{\circ}55'30''$  Lt.

(F) @ 7614.50 Intersect  $\frac{1}{4}$  Cor.

Betw. Secs. 27-28-144-28, being iron  
monument set by U.S. Govt. Engis.

We now set up over the  $\frac{1}{4}$  cor. betw.  
Secs. 27-28-144-28 and run a  
random north on  $N 2^{\circ}44' E$ .  $V = 8^{\circ}30'$

@ 77.60 Hub. Jack in Oak Stump.

@ 632.50 "

@ 1061.80 "

@ 1260.70 "

@ 1689.30 "

@ 2214.00 "

@ 2615.00 The Cor. to Secs.

Growmiller.



Lat. and Dep. for Traverse Run May 10th and 11th.

Point.	N.	S.	E.	W.	Length.	Bearing.	Sine.	Cosine.	Total N. or S.	Total E. or W.
A									0.0	0.0
B	✓ 2272.25		✓ 101.19		✓ 2274.50	✓ N 2°33' E	✓ .04449	✓ .99901	N ✓ 2272.25	E ✓ 101.19
C	✓ 249.13		✓ 236.63		✓ 343.60	✓ N 45°31'30" E	✓ .68868	✓ .72507	N ✓ 2521.38	E ✓ 337.82
D	✓ 4584.85		✓ 287.81		✓ 4593.90	✓ N 3°35'30" E	✓ .06265	✓ .99803	N ✓ 7106.23	E ✓ 625.63
E	✓ 200.89			✓ 99.76	✓ 224.30	✓ N 26°24'30" W	✓ .44477	✓ .89564	N ✓ 7307.12	E ✓ 525.87
F	✓ 2.07			✓ 178.19	✓ 178.20	✓ N 89°20' W	✓ .99993	✓ .01164	N ✓ 7309.19	E ✓ 347.68

Which gives length of true line between cor. to Secs.  
33-34-3-4 and 1/4 cor. between Secs. 27-28 as 7317.40 ft.  
and Bearing as N 20°43' E.

Grownville.

34-35-144-28- Federal Road. 33

(31)



34-35-144-28 - Federal Dam.  
 21-22-27-28, where U.S. notes call for  
 a post and the following Bearing  
 trees:

Sam 12 - N  $78^{\circ}$  W - 74 lks. dist.

" 8 - N  $65^{\circ}$  E - 120 " "

" 8 - S  $50^{\circ}$  E - 70 " "

" 4 - S  $60^{\circ}$  W - 21 " "

sets 132.40 feet West.

From which,  $2618.40' =$  true dist.  
 between  $\frac{1}{4}$  Cor. betw. Secs. 27-28 and  
 Cor. to Secs. 21-22-27-28. True Bearing  
 of line = N  $0^{\circ}10'$  W.

Note: Only 3 of the Bearing Trees  
 to the above cor. remain - the NE  
 tree being gone. We find the  
 base of the original post and  
 drive in its place a  $6" \times 6" \times 3'$   
 squared cedar post for the cor.

Quit for night.

Still at Hotel Stanton.

Geownille?



34-35-144-28- Federal Dam.

Wednesday May 12th 1915.

Fair & warm.

Grown Miller. Transit & chain.

Fred Beaulieu. Axe & chain.

Barney McKieig. Axe.

300' steel tape. New "Gurley" transit.

In order to set the cor. to secs.  
27-28-33-34-144-28 legally, I must  
set it halfway between the cor.  
to Secs. 33-34-3-4-144-143-28 and  
the cor. to Secs. 21-22-27-28-144-28,  
and on a true line between  
said corners.

As the  $\frac{1}{4}$  cor. between Secs.  
27-28-144-28 is established from  
the original survey, and must  
accordingly be recognized, I  
decide to set the cor. to Secs.  
27-28-33-34-144-28 equidistant  
between the cor. to Secs. 33-34-3-  
4-144-143-28 and the cor. to Secs.  
21-22-27-28-144-28, and on a true  
line between the cor. to Secs.  
33-34-3-4-144-143-28 and the

Grown Miller.



34-35-144-28- Federal Dam.  
1/4 Cor. between Secs. 27-28-144-28,  
as this appears to me to be the  
only legal way of doing so.

Accordingly, I find the  
true distance between the  
cor. to Secs. 33-34-3-4-144-143-28  
and the cor. to Secs. 21-22-27-28-  
144-28, along the true lines,  
to be 7317.4 feet + 2618.4 feet  
= 9935.8 feet, half of which,  
or 4967.9 feet, = the distance  
north of the cor. to Secs. 33-34-  
3-4-144-143-28, along the true,  
line, at which the cor. to Secs.  
27-28-33-34-144-28 must be set.  
Said 4967.9 feet along the true  
line (Bearing  $N 2^{\circ}43'E$ ) gives a  
corresponding distance of  
4962.34 feet on a true north  
and south line, and a  
 $90^{\circ}$  offset of 236.04 feet therefrom.

I find by calculation  
that a point @ 5063.90 on  
my traverse line gives a  
total northing of 4962.34 feet  
Groomer.



34-35-144-28 - Federal Dam.  
and a total Easting of 491.05 ft.  
Accordingly, I set a hub  
@ 5063.90 on my traverse  
line, set up over this hub,  
backsight South on point C  
of said Traverse line, and  
turn  $86^{\circ}24'30''$  to the Right  
( $90^{\circ} - 3^{\circ}35'30''$ , bearing of line C-D)  
and chain west a distance  
of 255.01 feet. (491.05 - 236.04)  
at which point I set the  
cor. to secs. 27-28-33-34-144-28,  
the same being a 6" x 6" x 12'  
squared cedar post. 8' into the  
lake bottom and sticking 3' out  
of the water.

To make this corner easy to  
replace in case it should rot out,  
I have driven a 1" x 16" iron bolt  
its full length in the ground  
@ 5063.90 on my traverse line (This  
point is on the dike of Leech Lake  
River dam, 1928' North of the North End  
of said dam, and 5' west of the wire  
fence along the East edge of said  
Gronmiller.



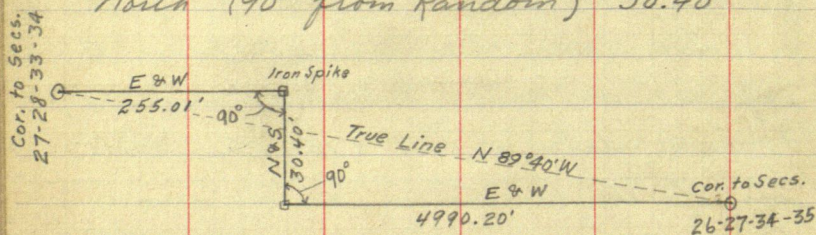
34-35-144-28- Federal Dam-  
dike.) To replace the cor. to  
seers. 27-28-33-34-144-28, should  
it ever be necessary, set up  
the transit over said iron  
bolt and chain due west ( $T=8^{\circ}30'$ )  
a distance of 255.01'

WE now cont. our random  
line west from the cor. to secs.  
26-27-34-35-144-28. (See P. 28.)

@ 3820.00 - Hub.

@ 4109.20 - £ Soo Rly.

@ 4990.20 The iron spike mentioned in above notes of the cor. to secs. 27-28-33-34-144-28 sets North ( $90^\circ$  from Random) 30.40'



we now set a hub @ 1311.30 on  
the E & W random; set the transit  
over this hub, backsight on random  
and turn  $90^\circ$  and chain north 7.60  
Gronmiller.



(37)

39

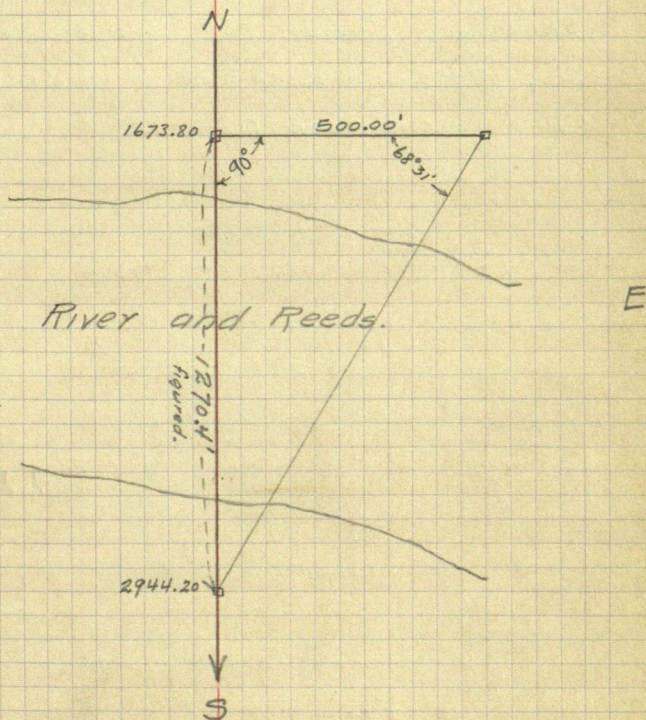
34-35-144-28 - Federal Dam.  
 feet, at which point we drive  
 a hub for the true E 1/16 cor. betw.  
 Secs. 27-34-144-28.

Starting at this point we  
 run a random South on Var.  $8^{\circ}30'$

@ 150. Leave Tam. Swamp. Enter Marsh.

@ 1673.80 - Hub.

I triangle the river here as per  
 diagram.



Grover Miller



34-35-144-28 - Federal Dam.

@ 2944.20 - Hub. leave marsh.

quit for night.

Still at Hotel Stanton.

Edgar Billington, with Team, hauls the 7 iron corners shipped by Hartley, from the Soo depot to the various places where they are required.

Crowmiller.



(39)

41

34-35-144-28- Federal Dam.

Thursday May 13th 1915.

Growmiller. Transit &amp; chain.

Fred Beaulieu. Axe &amp; chain.

Barney McKeig. Axe.

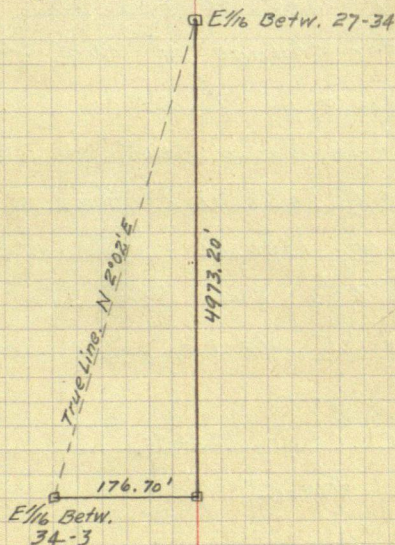
300' steel tape. New "Gurley" transit.

Cont. South on random from  
the E  $\frac{1}{16}$  Cor. betw. Secs. 27-34-144-28.

@ 3532.00 - Hub.

@ 4244.70 - "

@ 4539.70 - "

@ 4973.20 the true E  $\frac{1}{16}$  cor.  
between Secs. 34-3. sets 176.70' West.  
(90° from random.)

Growmiller.



34-35-144-28 - Federal Dam -  
Connecting Back.

All points on random go  
.03553 feet west for each foot  
South of the  $E\frac{1}{16}$  Cor. Betw. 27-34.

# 4539.70 goes 161.30' West.

# 4244.70 " 150.81' "

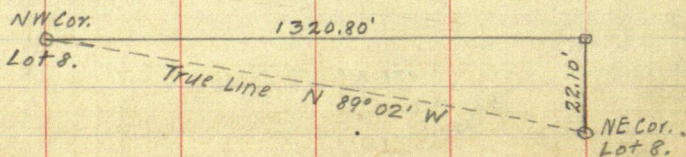
We now set a hub @ 3729.90  
on the random, set up over  
this hub, backsight on random,  
turn  $90^\circ$  and chain west 132.52  
feet, where we set a hub for the  
true center of the  $SE\frac{1}{4}$  Sec. 34,  
The same being the true NW Cor.  
of Lot #8, Sec. 34-144-28. Note: See  
Page 58 for change of this corner.

Starting at the NW Cor. Lot #8, we  
run a random East on  $8^\circ 30'$  Var.

@ 632.70 - Hub.

@ 1320.80 - The NE Cor. Lot  
#8, being the true  $S\frac{1}{16}$  Cor. betw.

Secs. 34-35-144-28, sets South 22.10'





Survey of Lot # 8, Sec 34 and Lot # 6, Sec. 35 - 144-28.

	May 1915.														Sun	Cont from P. 5.		
	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27			
Geo. W. Miller.	1	1	1	0	1	1	1	1	1	1	1	0	1	0	0			
Fred Beaulieu.	1	1	0	0	$\frac{1}{2}$	1	1	1	1	1	1	0	$\frac{1}{2}$	0	0			
Ed. Newman.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
John W. Curo.																		
Barney McKeig.	1	1	0	0	$\frac{1}{2}$	1	1	1	1	1	1	0	0	0	0			
Edgar Billington.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

Geo. W. Miller.	28	29	30	31	29 $\frac{1}{2}$ days total.
Fred Beaulieu.	1	1	1	1	19 $\frac{1}{2}$ "
Ed. Newman.	0	0	0	0	4 "
John W. Curo.	0	0	0	0	14 $\frac{1}{2}$ "
Barney McKeig.	0	0	0	0	$\frac{1}{2}$ day Total.
Edgar Billington.	0	0	0	0	



44

(42)

34-35-144-28 - Federal Dam.

Connecting back.

all points on random go  
.01673 feet South for each foot  
East of the NW Cor. Lot 8.

# 632.70 goes 10.89' South.

Quit for night.

Still at Hotel Stanton.

Groomer.



(43)

45

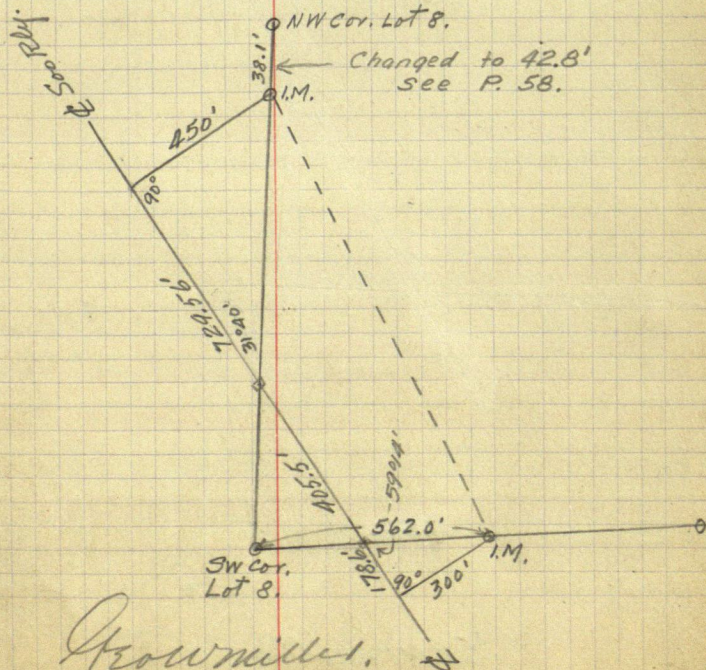
34-35-144-78 - Federal Dam -  
Friday May 14th 1915.

Rainy.

Growmiller. Transit & chain.  
Fred Beaulieu Axe & chain.  
Barney McKee. Axe.

300' steel tape. New "Gurley" transit.

We establish the points at which  
the Soc. Rly. Right of way inter-  
sects the South and West  
boundaries of Lot #8, and take  
measurements as shown:





34-35-144-28 - Federal Dam.

I take the 3:35 Soo train from  
Federal Dam to Bemidji -

Rly. Fare - 80 ¢.

Supper & bed at Markham

Hotel, Bemidji - \$1<sup>50</sup>

leave Bemidji at 11:35 for Walker.

Rly. Fare - 84 ¢.

Arrive 12:37 and Register at  
Hotel Chase.

Gronmill?



(45)

47

34-35-144-28 - Federal Dam.

Saturday May 15th 1915.  
Rainy.

Put in entire day at office  
on notes and calculations  
of this survey.

Still at Hotel Chase.

Gronmillen.



48

(46)

34-35-144-28- Federal Dam.

Sunday May 16th 1915.

All day at Hotel Chase,  
Walker, Minn.

Grovermill?



49

(47)

34-35-144-28 - Federal Dam.  
Monday May 17th 1915.

Take 2:52 A.M. train for Bemidji  
Rly. Fare = 84¢.

Bed and breakfast at Markham  
Hotel, Bemidji - \$1<sup>50</sup>

Take 9:35 Soo train from  
Bemidji to Federal Dam - 80¢.

Arrive Federal Dam. 10:50 A.M.

Register at Hotel Stanton.

It snows and hails all  
afternoon and we do not  
go out.

Fred Beaulieu and Barney  
McKeig were out all morning  
looking up corners.

Brown Miller.



34-35-144-28 - Federal Dam.

Tuesday May 18th 1915.

Fair & warm.

Growmiller. Transit & chain.

Fred Beaulieu. Ape & chain.

Barney McKeig. Ape.

300' steel tape. New "Gurley" Transit.

Starting at the cor. to Secs.

26-27-34-35-144-28, we run  
a random East on  $8^{\circ}30'$  Var.

@	456.60	Hub.
@	1110.50	"
@	1867.00	"
@	2488.70	"
@	2652.30	"
@	3017.30	"
@	3558.30	"
@	4336.90	"
@	4799.20	"

quit for night.

Still at Hotel Stanton.

Growmiller.



51

(49)

34-35-144-28 - Federal Dam.  
Wednesday May 19th 1915.  
Fair & warm.

We hunt for the  $\frac{1}{4}$  Cor. betw.  
Secs. 26-35-144-28, where U. S.  
notes call for a post and the  
following Bearing Trees:

Jack Pine 6 - N  $15^{\circ}$  - No Dist.

" " 4 - S  $37^{\circ}$  - " "

We find nothing.

We hunt for The  $\frac{1}{4}$  Cor. betw.  
Secs. 35-36-144-28, where U. S.  
notes call for a post and the  
following Bearing Tree:

Nor. Pine 24 - N  $66^{\circ}$  W - 258 lks. dist.

No other tree given.

We find some more nothing.

We hunt for the  $\frac{1}{4}$  Cor. betw.  
Secs. 25-26-144-28, where U. S.  
notes call for a post and  
the following Bearing Trees:

Tam. 6 - S  $23^{\circ}$  E - 25 lks. dist.

" 5 - N  $41^{\circ}$  W - 7 " "

Grown Miller.



34-35-144-28 - Federal Dam.  
And again we find nothing.

We hunt for the  $\frac{1}{4}$  cor. betw.  
Secs. 23-26-144-28, where U. S.  
notes call for a post and  
the following Bearing Trees:

Tam 8 - S  $15^{\circ}$  W - 19 lks dist.

Cedar 6 - N  $75^{\circ}$  W - 18 " "

We find both trees dead  $\frac{3}{4}$  down  
and plainly marked and  
they check for course and  
distance with an old  
post, which is evidently  
the original Govt. cor.

We now cont. north with  
the random Through center  
of Sec. 35-144-28, which we  
began on Friday, April 30th, 1915.  
(See pp. 10 to 16 incl., this book.)

@ 3238.50 Hub.

@ 3645.60 "

@ 4223.40 "

@ 4818.50 "

quit for night.

Gravmiller.



(51)

53

34-35-144-28 - Federal Dam.

Crew and Tools.

Grown Miller. Transit & chain.

Fred Beaulieu. Axe & chain.

Barney McKie. Axe.

300' steel tape. New "Guley" Transit.

Grown Miller.



54

(52)

34-35-144-28 - Federal Dam.

Thursday May 20th 1915.

Fair &amp; warm.

Growmiller. Transit &amp; chain.

Fred Beaulieu. Axe &amp; chain.

Barney McKeig. Axe.

300' steel tape. New "Gulley" transit.

We cont. North on random  
through center of Sec. 35-144-28

@ 5105.70 - Hub.

@ 5659.10 - "

@ 5977.40 - "

@ 7631.60 - "

@ 8184.00 - "

@ 8746.90 - "

@ 9322.30 - "

@ 9694.70 - "

@ 9989.80 the  $\frac{1}{4}$  cor. Betw. Secs.

23-26-144-28 sets 294.40' East, at 90°  
from random line.

Note: As the old Govt. post  
and Bearing trees at this cor.  
are dead and rapidly decaying  
beyond recognition, I set a

Growmiller.



34-35-144-28 - Federal Dam.

new post (5" x 5" x 5' cedar) on the site of the old one, and marked new Bearing Trees as follows:

Cedar 10 - N 35° W - 27.00' dist.

Lam 5 - S 12° 20' E - 22.00' ..

Dist. taken to head of tack driven in flat place at base of tree.

Quit for night.

Still at Hotel Stanton.

Proctorville.



34-35-144-28 - Federal Dam.

Friday May 21st 1915.

Rainy.

Kronmiller. Transit &amp; chain.

Fred Beaulieu. Axe &amp; chain.

Barney McKie. Axe.

300' steel tape. New "Gaulay" Transit.

We set a hub @ 4994.90 on our random line north from the  $\frac{1}{4}$  cor. betw. Secs. 35-2-144-143-28, set up over this hub, backsight on random, turn  $90^\circ$  and chain East 147.20 feet, at which point we set a post for the true  $\frac{1}{4}$  cor. betw. Secs. 35-26-144-28. We mark bearing trees for this cor. as follows:

Spruce 12. S  $31^\circ 30'$  W - 27.60' dist.Jack P. 14. N  $24^\circ 40'$  E - 45.20' ..

Dist. taken to head of Tack driven in flat spot at base of tree.

At a point @ 2665.50 on our random East from the cor. to

Kronmiller.



(55)

57

34-35-144-28 - Federal Dam.  
Secs. 26-27-34-35-144-28, the  $\frac{1}{4}$  cor.  
betw. 35-26 sets South 27.20 feet  
at  $90^\circ$  from random.

We now set a hub @ 1332.75 on  
our random East from the  
cor. to Secs. 26-27-34-35-144-28,  
set the transit over this hub,  
backsight on random, Turn  $90^\circ$   
and chain South 13.60 feet, at  
which point we set a post  
for the true W $\frac{1}{4}$  cor. betw. Secs.  
26-35-144-28.

Starting at this point we run  
a random line South on var.  
 $8^\circ 30'$

@ 512.00 - Hub.

@ 3740. N. Bank Leech Lake Riv.

@ 3835. S. " " " "

@ 3905.80 - Hub.

@ 4055.40 - "

Quit for night.

Stice at Hotel Stanton.

Growmiller.



34-35-144-28 - Federal Dam.  
Saturday May 22nd 1915.

Fair & warm.

Grownmiller. Transit & chain.

Fred Beaulieu. Axe & chain.

Barney McKing. Axe.

300' steel tape. New "Gurley" Transit. &

We cont. South on random  
through center of E. half Sec. 35-  
144-28.

@ 4993.00 the true W  $\frac{1}{16}$  cor.  
betw. Secs. 35-2-144-143-28 sets West  
159.90 feet, at  $90^\circ$  from random.  
Connecting back.

All points on random go  
.03202 feet west for each foot  
South of the true W  $\frac{1}{16}$  cor. betw.  
Secs. 26-35-144-28.

# 4055.40 goes 129.85' west.

# 3905.80 " 125.06' "

At the point where the true  
west  $\frac{1}{16}$  line of Sec. 35 intersects  
the South Bank of Leech Lake River,  
I now set a hub for the true.

Grownmiller.



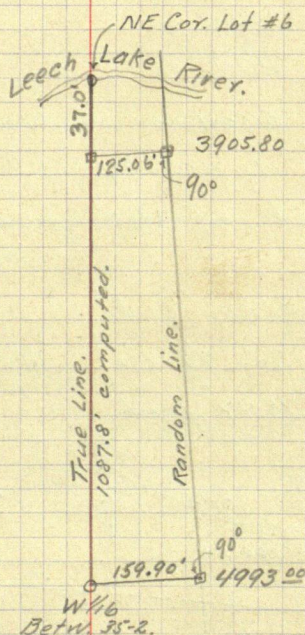
(57)

59

34-35-144-28 - Federal Dam.

NE Cor. Lot # 6, Sec. 35-144-28

I ascertain the true length  
of the East boundary of Lot # 6,  
Sec. 35, as follows:



which makes the true length  
of the East boundary of Lot # 6,  
Sec. 35 as 1124.8'

Growmiller.



34-35-144-28. Federal Dam.

We now cont. West on random west from the cor. to secs. 34-35-2-3-144-28 (See PP. 6 and 7, This book)

@ 3276.70 - Hub.

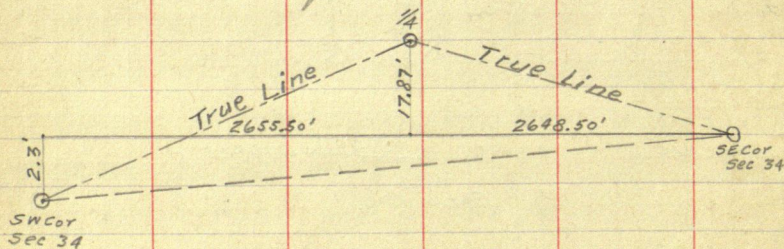
@ 3846.90 - "

@ 4440.80 - Nail in Maple stump.

@ 5304.00 - The cor. to Secs.

33-34-3-4-144-143-28 sets South 2.30 feet, at  $90^\circ$  from random.

By which I figure the crook in the South Boundary of Sec. 34 to be 18.97 feet.



Accordingly, the NW Cor. of lot #8, Sec. 34, goes North one quarter of 18.97', or 4.74' to its correct position.

Gronmiller.



34-35-144-28 Federal Dam.

Sunday May 23rd 1915.

Fair & warm.

Gronmiller, Transit and chain.

Fred Beaulieu, Axe and chain.

Barney McKeig, Axe.

300' steel tape. New "Gurley" Transit.

WE meander the South Bank of  
Keech Lake River between the NW  
and NE Cors. of Lot #6, Sec. 35-  
144-28 as follows:

Set up over NW Cor. Lot #6, (A)  
Backsight South on True W boundary  
of Lot #6, turn  $77^{\circ}29'$  Right and chain  
335.7' to B. All angles are DEFLECTION

BS	Angle.	Dist.	To.
A	$32^{\circ}20'$ R	282.6	C
B	$41^{\circ}24'$ R	305.9	D
C	$18^{\circ}41'$ R	416.6	E
D	$22^{\circ}28'$ R	265.7	F
E	$64^{\circ}47'$ L	233.3	G
F	$16^{\circ}19'$ L	272.2	H
G	$25^{\circ}04'$ R	203.0	I

Being the True NE Cor. Lot 6, Sec.  
35. Thence  $43^{\circ}34'$  R. to True E

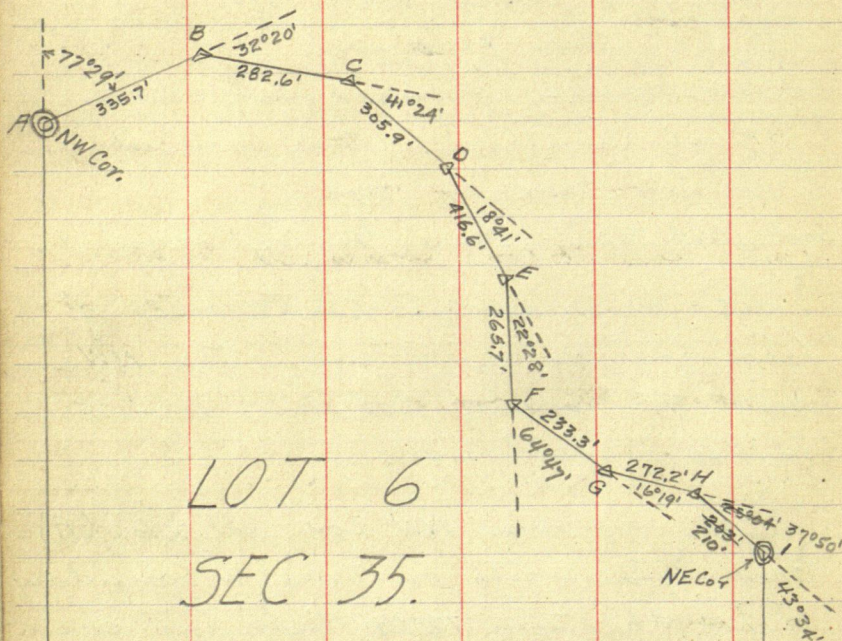
Gronmiller -



62

(60)

34-35-144-28 - Federal Dam.  
Boundary Lot 6, Sec. 35.



WE now set  $2\frac{1}{4}" \times 4'$  brass capped  
iron pipes nearly their full length  
in the ground at the following  
Growmiller.



34-35-144-28 - Federal Dam.

points:

- 1st. The SW cor. Lot # 8, Sec. 34-144-28, being the true E $\frac{1}{6}$  Cor. betw. Sec. 34-144-28 and Sec. 3-143-28. Brass cap marked " $\frac{1}{6}$  Corner."
  - 2nd. The SE Cor. Lot # 6, Sec. 35-144-28, being the true W $\frac{1}{6}$  Cor. betw. Sec. 35-144-28 and Sec. 2-143-28. Brass cap marked " $\frac{1}{6}$  Corner."
  - 3rd. The NW Cor. Lot # 8, Sec. 34-144-28, being the true center of the SE $\frac{1}{4}$  of Sec. 34-144-28. Brass cap marked " $\frac{1}{6}$  Corner."
  - 4th. The NE Cor. Lot # 8, Sec. 34-144-28, being the true S $\frac{1}{6}$  Cor. betw. Secs. 34-35-144-28. Brass cap marked " $\frac{1}{6}$  Corner."
  - 5th. The NW Cor. Lot # 6, Sec. 35-144-28. Brass cap marked "Meander Corner."
  - 6th. The NE Cor. Lot # 6, Sec. 35-144-28. Brass cap marked "Meander Corner."
- Growmiller.



34-35-144-28 - Federal Dam.

We set  $2\frac{1}{4}$ " x 4' galvanized iron pipes, capped on top, at the following points:

1st. At the point where the Soo Ry. R of W intersects the True South Boundary Lot # 8, Sec. 34-144-28.

2nd. At the point where the Soo Ry. R of W intersects the True West Boundary of Lot # 8, Sec. 34-144-28.

3rd. At the cor. to Secs. 33-34-3-4-144-143-28.

4th. At the cor. to Secs. 26-27-34-35-144-28.

Quit for night.

Still at Hotel Stanton.

Prosser.



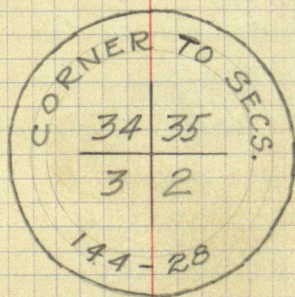
(63)

65.

34-35-144-28 - Federal Dam.  
Tuesday May 25th 1915.

I spend the morning at Stanton Hotel, Federal Dam, on notes and calculations of this survey.

Fred Beaulieu removes the brass cap from one of the iron corners shipped by Hartley (we had one too many) and remarked it thus:



He then unscrews the cap from the galvanized iron corner set by Curo, and in place of it he screws on the brass cap marked as above.

Geo. Miller.



34-35-144-28 - Federal Dam.

All the iron corners set by me on this survey were witnessed by Mr. E. L. Warren, Mr. Fred Beaulieu and Mr. Barney McKeig, all residents of Federal Dam, Minn.

I take 3:35 Soo train from Federal Dam to Bemidji.

Fare = 80¢.

Hotel Markham \$1<sup>50</sup>

Bemidji to Walker = 84¢

Registers at Hotel Chas.

Grover Miller.



(65)

67.

34-35-144-28 - Federal Dam.  
Wednesday May 26th 1915.

I take the 9:28 A.M. train  
from Walker to Duluth on  
urgent business of a personal  
nature.

Thursday May 27th 1915.

Am in Duluth on personal  
business.

Grover Miller.



68.

(66)

34-35-144-28 - Federal Dam.

Friday May 28 th, 1915.

Arrive in waiker at 3 a.m.  
and Register at Hotel  
Chase.

Spend the day at the office  
on plat of lot # 8, Sec. 34  
and lot # 6, Sec. 35-144-28.

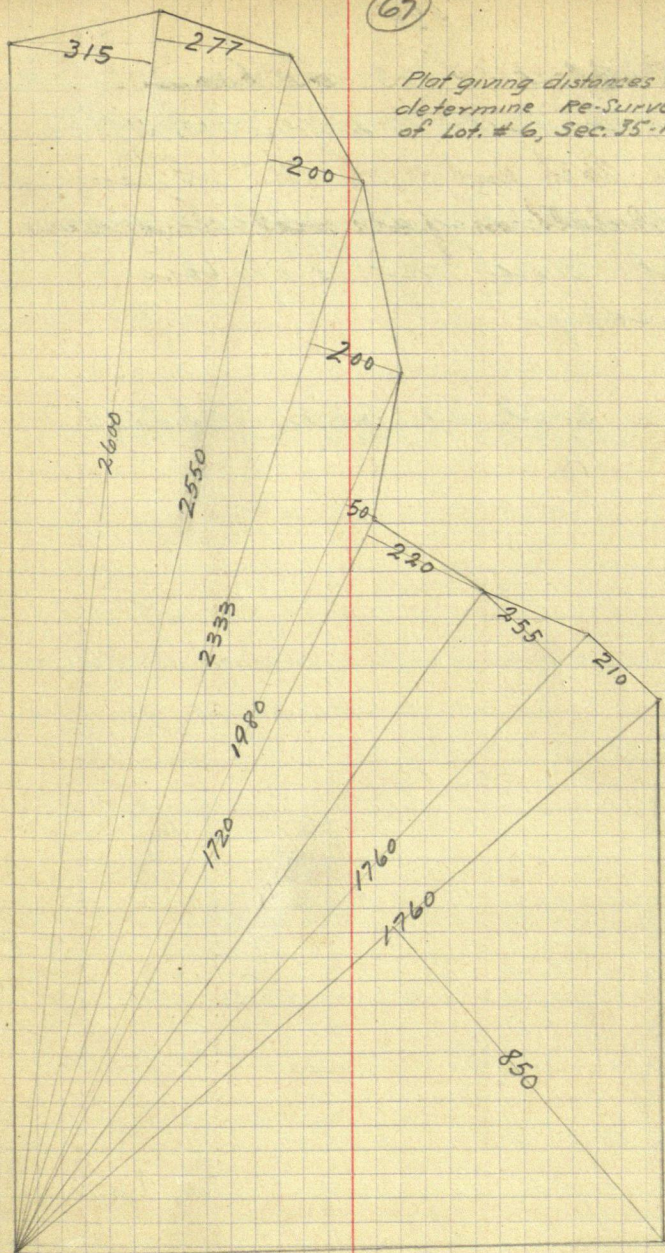
(Gronmiller).



(67)

69.

Plot giving distances used to  
determine Re-Survey Acreage  
of Lot # 6, Sec. 35-144-28.





70.

(68)

34-35-144-28 - Federal Dam  
Saturday May 29th 1915.

Spend day at office on  
plat and notes of this  
survey.

still at Hotel Cham.

Growmiller.



(69)

71.

34-35-144-28 - Federal Dam.  
Sunday May 30th 1915.

Spend day at office on  
plat and notes of this  
survey.

Still at Hunt Chase.

Grow Miller.



72

(70)

34-35-144-28 - Federal Dam  
Monday May 31st, 1915.

Spend day at the office  
where I finish up all  
work connected with the  
survey of lot # 8, Sec. 34  
and lot # 6, Sec. 35-144-28.

Still at Hotel Chase.

NOTE. - NW COR. LOT 8  
GOES SOUTH 12.32' ALONG  
TRUE LINE.

Run

Post  
@ NW cor Sec. 34 goes South  
89.64' along true line ( $A 2045^{\circ} E$ )  
( $S 2043^{\circ} W$ )  
Var  $8^{\circ} 30'$

Crowmiller.



Byron Twp 135 T<sup>r</sup> N<sup>o</sup>. 32.

Wednesday 7-1915 July.

commencing Survey of Byron Twp.  
135 - T<sup>r</sup> N<sup>o</sup>. 32.

Curt & I work all day in office  
preparing Messary field notes &  
plat of 135 - 32.

at Chas Hotel.

Record  
490 of No

Thursday 8-1915.

I take 9:45 Am & I. train to Brainerd  
where I change Cars for Staples arr.  
at Brd 12:10 Car fare \$1.40

Mallin leaves on same train  
for Motley. Mallin stays with  
outfit I go and buy lunch for  
us 20¢ Now Brd. on M.P. 10:5 for  
Staples arr 1:30 P.R. fare 42¢

Dinner at Hotel 50¢. 2:00

take Poplar Stage to Elk's Over.  
Car fare 75¢ 16 miles.

arrived 3:30 Staying at Hanley's  
Friday 9-1915. 135 T<sup>r</sup> N<sup>o</sup>. 32.

rain in AM until 9:30 Chas & Hanley  
& son prepare teams & baggage & we  
go to Coe between Sec 14-15-22-23-135-32  
where we establish a temporary Coe

A. E. Bryant



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Byren TWP. @ 135 - T<sup>N</sup> 32.

from supposed bearing.  
 old notes call for post & bearing  
 as follows. Black pins 14 S 26  $\frac{1}{2}$  W 113 L  
 spruce 8 W 62 E 87 L Ks. P. Pin. 22  
 S 8 E 139  $\leftarrow$  we find one  
 tree or stump which perhaps is  
 one of the old B.T. not certain.  
 no mark can be found today  
 there. then we go to Cor between  
 sec 15-16-21-22 - Twp. 135 R 32.

where we find one  
 B.T. plainly marked on stump  
 from which we establish the  
 Cor from. Old notes call for post &  
 bearings as follows, Black pins. 8 N 39 E  
 136 L Ks B. Pin 8 N 4 W 149 Lks.  
 B. Pin 6 S 29  $\frac{1}{2}$  W 195 Lks. we find B. Pin  
 8 N 4 W 195 Lks. P.M.

Chas. S. Hanley & I go to Cor between  
 sec 2-3-10-11 Twp. 135 - 32

where we look for bearing old  
 notes call for B. pins 6 N 11  $\frac{1}{2}$  W 256 Lks.  
 Jamrack 6 S 57  $\frac{1}{2}$  W 265 We do not find  
 any of them so we go to Cor bet.  
 sec 2-3-34-35 - W 35 - 32.

we look for B.T. but do not find  
 them. Old notes call for Cont on pg 6



SURVAY OF BYREN TWP 135 TR No 32.

JULY 1915 TIME SHEET

	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
JOHN W. Curo	0	0	0	0	0	0	0	0	0							
J. E. Bryant	1	1	1	0	1	1	1	1	1	1						
Charles Hanley	0	0	1	1	0	1	1	1	1							
Charles Hanley	0	0	1	0	0	0	0	0	0							
Edgar Allen	0	0	0	1	0	1	1	1	1							
Henry Valkenburg	0	0	0	0	0	1	1	1	1							
HANLEY TEAM	0	0	1	1	0	1	1	1	1							
Bryant's Board	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1



BYRON Twp 135-32.

post and bearing as follows.

yellow pine 8 N 12 2 E 15 2 LKs

" " 9 N 53 W 27 LKs

" " 7 S 57 E 22 "

" " 6 S 59 W 14 LKs.

we do not find any of them so  
we go to the Cor between Sec 12-35-36  
and look for B.T. but do not find  
any old notes call for post and  
B.T. as follows

Jam 5 N 15 8 25 LKs.

" 5 N 14 4 56 "

" 8 1 55 W 83 "

" 7 S 51 1/2 E 32 " → do not find them.

we go to Cor bet 1-6-31-36.

135-32 on Twp Line and look for  
B.T. but do not find them  
old notes call for

Oak 9 N 81 3/4 W 60 LKs.

" 12 N 57 3/4 W 23 "

" 13 S 51 3/4 E 33 "

Aspen 11 S 84 3/4 W 59 "

we do not find any thing  
only old stone set by Thallet  
but would not use it wasn't



sure of it being right. There was  
no point from which we could check  
on so we did not use it.

we then go to Cor between Sec.

25-30-31-36 in twp E of Byron N.

but find no marks of B.T. So  
we come in of night.

at Hanley.

Saturday. 10-1915.

Chas J. Hanley + Edger Allen +

I go to Cor between Sec 15-16-21-22

which was previously set by  
me from old B.T. and run transit  
line South at  $9^{\circ}15'V$  over mile

and do not find anything too  
brush cutting on Gravelled road.

Chaining & hubbing as we go.

at 300 C.P. 507.10 hub. 600 C.P.

739.50 Hub. 900 C.P. 1200-1500-1800

2100 <sup>cut marsh</sup> 2400-2640 Temp  $\frac{1}{4}$  ev. 2700 C.P.

3000 C.P. 3300-36-39-42-45-48.

50 42.85 Hub on rails in Swamp.

5100 C.P. 5280 Temporary Sec Cor of

21-22-27-28-135-32.

we search for old B.T. but do  
not find them or post at there



continue our line south from this point Edgar & Allen are men

Bryant Ch + Transit man Chas S. Hanley.  
as + flag + Ch man.

Girley Transit. 300 ft steel tape.  
we cut and hub + Ch as follows.

5400 Ch pin 5700 Ch pin. 5857.15' hub.

6000 Ch pin 6300 - 6550.60 hub.

6600 Ch pin 6900 Ch pin 7030.50 hub.

we cut about 600 feet farther  
and search for  $\frac{1}{4}$  cor but find  
nothing we quit for night.

at Chas S. Hanley's.

Sunday . 11 all day at

Chas S. Hanley's.

Monday 12 - 1915 Byren Twp 135-32.

Ok go to hub 7030.50 and continue line  
south Bryant Transit + Chain Chas S. Hanley  
Chain + As man Edgar & Allen are men  
Henry Valkenberg are man we cut hub +  
Ch. Girley Transit 300 foot tape we  
hub as follows. 7200 Ch Pin 7500 -  
7800 Ch pin. 7885.50 we use this for  
 $\frac{1}{4}$  cor. empirically nearest point we could  
get. 8100 C.P. 8400 C.P. 8700 C.P.

8075.00  
hub.

L. O. Bryant <sup>✓</sup> cont. on Pg. 10







90

9000 Chpin 9300-9600-9900 C.P. 9904.10  
 Sub. 10200 C.P. - 10335.15 Sub. from which we  
 turn 90° to true Cor 27-28-33-34-135-32.  
 Found old prof badly burnt + 1 BT.

Checked to hair for measurement but  
 not very good for course. true Cor sets  
 West of Random line 72 ft from Sub.  
 plainly marked 10335.15 ft.

Correcting back they do not want  
 true road center of  $\frac{1}{4}$  Cor. so Correcting  
 back: (.0069 North) (.0149 West.)

10560 goes North 154.85 and West 27 ft true Cor.  
 $\frac{1}{4}$  7920 " " 118.106 7801.90 and " 5460 true  $\frac{1}{4}$  Cor.  
 Sub. 5280 " " 7920 to 5200.80 " " 3640 " true Cor.  
 21-22-27-28-135-32.

$\frac{1}{4}$  Cor. 2640 goes North. 39.60 to 2600.40 West 18.20  $\frac{1}{4}$  Cor.  
 But 21-22-135-32.

Dinner 2:00 O'clock in woods. Mosquitoes  
 bad. - in trees

P.M.

We then set Greely Transit over  
 true Sec Cor of 15-16-21-22-135-32  
 and run line East 91° 5' 4" down  
 graded road set hub at 2680.  
 turn  $\frac{1}{4}$  Cor. at 5351.80 where

L. B. Bryant



we intersect with true Sec cor of 14-15-22-23  
Twp. 135-32 See Pg ⑨

at this point we were 14 inches to four  
south with random line. quit for  
night real hot all day.  
(at Ch S Hanley's)  
(nearly got sun stroke)

Tuesday 13. TWP 135-TP 32.

Commencing at temp. Sec Corb. hub of 14-15-  
21-22-TWP. 135-TP 32 we continue our  
line East.

Chas S Hanley, Flag man & ax man.

Ed Allen Chain & ax man.

Hewy Valkenberg ax man. Bryant  
transit man. Herley transit 300 steel  
tape not hurt and Chain as follows.

5400 C.P. 5700 - 5765.15 Hub. 6000 C.P.

6300 - 6600 - 6900 - 7030.85 Hub.

7200 C.P. 7500 - 7800 7980.15 hub for  
temp  $\frac{1}{4}$  cor bet Sec 14-23-135-TP 32.

search for B.T. but find nothing  
we can use. So continue line East.

8100 C.P. 8400 C.P. 8700 - 9000 C.P.

9300 - 9600 9685.15 Hub. at this  
point we quit for dinner  
at Hanley's

D E Bryant.



Twp 135 TR N<sup>o</sup> 32. BYRON.

P.M.

Commencing at point 9685.15 wt  
continue our line East to Sec Cor  
of 13-14-23-24-135-TR N<sup>o</sup> 32.  
where it intersect with our  
line a large rock sunk & marked  
wt find no bearings but Stanley  
says Cor is o.k. So wt used it.

Correcting back 10579.15 goes North  
28.40 ft to true Sec Cor bet Sec  
13-14-23-24-135-TR 32

7920 goes North 20.50 + West 12.67  $\frac{1}{4}$  Cor  
bet Sec 14-23-

5280 goes North 14.20 + West 8.44 to Sec Cor  
bet Sec 14-15-22-23-135-TR N<sup>o</sup> 32

26.40 goes North 7 ft + West 4 ft to  
 $\frac{1}{4}$  Cor bet Sec 15-22-135-32.

and quit for night  
at Stanley's.

Wednesday 14.

Commencing at true Cor bet  
Sec 14-15-22-23-135-TR N<sup>o</sup> 32  
wt run line North 9'15" N

Chas S Hanley apt & Camp man  
Edger Allen Flag and Chair man  
H P Bryant.



Henry Valkenburg are near.  
Girley Transit 300 ft top of  
we then line Hub Ch + cut line as  
follows.

300 Ch P 600 C 900 C 1200

Ch P 1500 C 1800 C 2100 C 2400 C

2640 C pin for temp  $\frac{1}{4}$  Cor.

2700 C 3000 Ch P 3300 C 3600

3900-4200 C-4500 C-4800 C

5100 C 5280 temp Sec Cor bet 10-11

14-15 135-32 (5297-15 Ch to Hallett's Cor)

at this point we find old Iron Cor  
set by Hallett, not certain it  
is right. Could not find any Bear-  
ings so continued line North

5400 C P-5700-6000 C-6600-6900

7200-7500-7800 C 7920 Hub at  $\frac{1}{4}$  Cor.

8100 C 8400 C 8700 C 9000 C 9300

9900 Ch. 10200 C 10500-10560 Hub.

Temporary sec Cor bet Sec 2-3-10-11-135-32.

we search for bearings at this point  
but find nothing so continue  
our line through to Temp line.

10800 C 11100 Ch P 11400 C-11700 C-

12100 C 12400 C 12700 C-13000 ..

C.P. 13200 temp  $\frac{1}{4}$  Cor bet Sec 34-

L. E. Bryant.



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(14)

Byren Twp. 135-TN<sup>32</sup>  
 we search for bearings at this  
 point but do not find them.  
 so continue line north to Twp.  
 line at 13300 C.P. - 13600 C.P. -

13900 C.P. - 14200 C.P. - 14500 C.  
 14800 C.P. - 15100 - 15300 - 15500  
 C.P. - 15800 C.P. - 15865.15 line  
 See Cor bet 34-35-3-4.

we find our Bl. Cor is O.K.  
 Cor sets to West 6.15 ft. of transit  
 line.

Correcting back (.00038) West.  
 15865.15 goes West 6.15 ft to line see Cor.  
 132000  $\frac{1}{4}$  Cor goes West 5.01 ft line  $\frac{1}{4}$  Cor.  
 10560 goes West 4.01 ft line see Cor.  
 1920  $\frac{1}{4}$  Cor goes West 3.10 ft line  $\frac{1}{4}$  Cor.  
 5280 goes West 2.00 to line see Cor.  
 2640  $\frac{1}{4}$  Cor goes West 1.00 ft  $\frac{1}{4}$  Cor.

we work until 8 o'clock. Finishing  
 up. at Hardy's

Thursday 15.

do not work waiting for  
 the Town Board to meet.

Friday 16.

R. C. Bryant



Go to Staples with Poplar stage  
 Car fare 75¢ Dinner at Hotel  
 35¢ was to late for South train  
 to Brod so stay all night at Hotel.  
 50¢ Bed & break

Saturday 17 Breakfast at Hotel 35¢  
 Take 12:30 train to Brod 2:45 late  
 so could not make connections  
 Dinner at Hotel 35¢

R.P. fare to Jenkins \$1.28.

I take night train from Brod  
 for Jenkins arr 1:55 A.M. Bed  
 at Antlers Hotel 50¢.

Record No 490

L. B. Bryant



143-26

①

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91.

+

142-26

Saturday Oct. 9 - 1915

In office all day Looking up notes  
for Survey of Roads in S.C.S.  
143-26 - 31, 30 + 19. 142-26 Sec 6  
with J. W. Coras

P.M. Scott.



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-2-

142-26

143-26

Sunday Oct. 10, 1915

We are in office  
reading Todds notes  
on survey of Slater's  
road, 142-26 and  
checking up same

254

P.M. Scott.



142-26

143-26

Monday Oct 11, 1915

Leave Walker at 2.52 A.M.  
for Berneji arriving there  
at about 4 A.M. R.R. fare \$.67.

Bed + Breakfast at Markham \$.50

Leave Berneji 9.38 for Rodgers  
spur arrive there at 11.30

R.R. fare \$.10

Dinner at Osborn Bros Camp. \$.25

After dinner I walk out to  
Slater's Meet Mr. Slater.

He takes his team after  
parentalia. \$1.50 (chg to county)

All night at Slater's.

J.M. Smith.



143-26

Tuesday, Oct. 12-1915

Breakfast 7 A.M.

Clear + Cool.

P. Scott. H + B Transit.

D. Slater. Flag + Chain

H. Slater. Axe 1/2 day A.M.

C. Holt. Axe

We start at S.E. Cor. of Sec

31. 143-26 established by John W.

Curo. in Jan 12-1911 and start

North-random Sec 31-143-26.

Chaining with 100' chain.

1436.3 Hub.

2116.7 Hub.

at 2630.8 True  $\frac{1}{4}$  Cor sets  
west  $17.2 \frac{1}{2}$  ftWe establish true quarter  
cor. finding stumps + B.T. on  
stubs belonging to said stumps.Find that distances do not  
check with government Ch.  
the notes of which are asfollows <sup>W.P.</sup> 5.6" S 44 E 15 = 9.9

W.P. 5" S 82 W 15 = 3.3

We set as follows.

W.P. 6 S 44 E 11.4 feet.

v 5 S 82 W 4.1 feet. - P. Scott



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143-26

We find that in every 100' we  
are east true line .00653 +  
So at 21.16.7 we are 13.8 to far East  
of true line we set Hub. here  
and with this as B.S. &  $\frac{1}{4}$  post  
as Transit pt. we continue running  
north. along the East Boundary  
of Sec 31-143-31

3051.7 Hub.

3654.0 Hub.

4234.4 Hub.

We cut about a mile and  
quit for night

J. M. Scott.



143-26

Wednesday Oct. 13, 1915

Breakfast. 7 A.M.

Clear + warm

P.M. Scott. H + B Transit.

Charles Holt. Axe.

Dewey Slater Axe.

We continue running north on  
East random of Sec 31-143-26

Taking Sec. cor set by H. Slater.  
Where the old gov. sec. cor. stake  
used to set. I find from gov. notes  
which are as follows. old B.T.s.

Aspen 5555. W 6.

W. P. 5. N 22 E. 15

W. P. 6 N. 26 W. 20

N. P. 14328 E 45.

{ lost

{ Butt.

{ decayed. Butt.

{ Stump.

Condition of old  
B.T.s. found.

From Stumps found 1 set

Sec. Cor. 29-30-31-32.

at 90° from random 5258.8 N.E.

Cor. 31-143-26 Set E. 62.15'

Starting from Sec cor. just  
set we run north on 8° variation  
on E side of Sec. 30-143-26

100 to 200. 8 + 07.9

Marsh. 1734<sup>p</sup>

2285.2

Hub.

Hub.

Tack in Stump.

P.M. Dark



143-26

Thursday Oct. 14<sup>th</sup> 1915

Breakfast 6.30 A.M.

Clear + warm.

Scott. H. + B. Transit.

Holt. Axe.

Slater Axe, Flag + Chain.

We continue running N. on E random

Sec 30. 143-26

3330.9 Hub.

4246.0 Hub.

4916.4 Hub.

We cut about mile quit for night

J. M. Scott.



148-26.

Friday Oct 15 - 1915

Rain A.M. P.M. Threaten rain.

We do not go out in field in A.M.

I work on notes + field book.

P.M.

Scott H. + B. Transit.

Slater Axe, chain + Flag.

254' Holt Axe.

At  $112^{\circ}46'$  to the right from  
E random of Sec. 30, 143-36, at  
5850.9 we find cor Secs. 19-20  
29-30 Sets NW  $290.5'$

At cor 19-20-29-30 Cox. Notes  
call for following B.T.s

Fir 5 S $22^{\circ} E$ 15 = 9.9	} Missing B.T. plain. found stump Missing
Maple 6 N $45^{\circ} E$ 30 = 19.8	
Spr. 10 S $22^{\circ} W$ 21 = 13.9	
N.B. 26 N $48^{\circ} W$ 56 = <del>36</del> <sup>36.9</sup>	

Using Maple + Spruce B.T.s we  
set Sec Cor 19-20-29-30  
from this cor we start North  
along E random of Sec 19.  
143.26. at  $9^{\circ}$  Var.

P.M. Scott



Time Sheet for Survey of Roads in 142-26-sec 6  
And 143-26-East Boundaries B130 and 19 Purpose roads.

	Sun.		9	10	11	12	13	14	15	16	Sun.		17	18	19	20	21	22	23	24
October.	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
P.M. Scott.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H. Slater.	0	0	0	1/2	0	3/4	0	0	0	1	0	1/2	0	1	3/4	0				
D. Slater.	0	0	0	1	1	1	1/2	1	0	1	1	1	1	1	1	0	0			
C. Holt	0	0	0	1	1	1	1/2	1	0	1	1	1	1	1	1	0	0			
I. Nelson																				
H. Slater Board.	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2				
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				

Note The 3/4 day for 14th is for use of team to get Transit from Rodgers Spur. H. Slater's Team.  
Note 1/2 day for 20th for H. Slater is for time rendered by O'Connell who will be paid by Slater.

Note I. Nelson's time will go to H. Slater as per agreement between the parties concerned.

R.M. Scott.

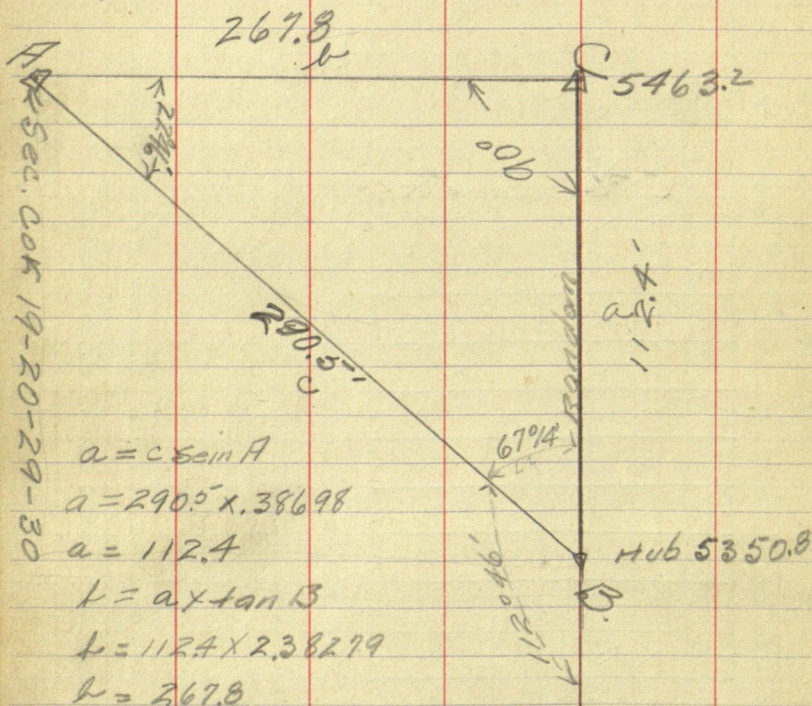
254



254 143-2.6

Friday Oct. 15 1915 Cont.

1 figure how far west true  
Section Corner. 19-20-29-30 sets  
by following method as shown.



$$a = c \sin A$$

$$a = 290.5 \times .38698$$

$$a = 112.4$$

$$k = a \times \tan B$$

$$k = 112.4 \times 2.38299$$

$$k = 267.8$$

$\therefore$  90' from E random Sec 30  
True cor sets w/ 267.8 at  
Sta. 5463.2 on E random.

P.M. Scott.



143-26

Saturday Oct. 16 1915.

Clear. + warm.

Breakfast 7 A.M.

1 Scott, H+B Transit + Chain.

Holt Axe

Slater Axe flag + Chain

We continue running North on 9°  
var. along East random Sec 19.

500 Enter bog

639.3 Hub.

1250 to 1350 Ridge.

1293.0 Hub.

1469.0 Leave Swamp.

1500.0  $\frac{1}{2}$  4' creek. Course NW by SE.

1852.0 Hub.

We Brush about  $\frac{1}{2}$  mile quit  
for night.

P.M. Scott.



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143-26.

Sunday Oct 17, 1915.

Rainy day.

All day at Slaters.

254

Ben. Scott,



143-26 N

Monday Oct. 18, 1915  
Threatening rain.

Breakfast 7 A.M.

254

P. M. Scott.	Transit.
H. Slater.	Flag & Chain
D. Slater.	Exc.
C. Holt.	Exc.

We continue running north  
on E random Sec 19. 143-34.

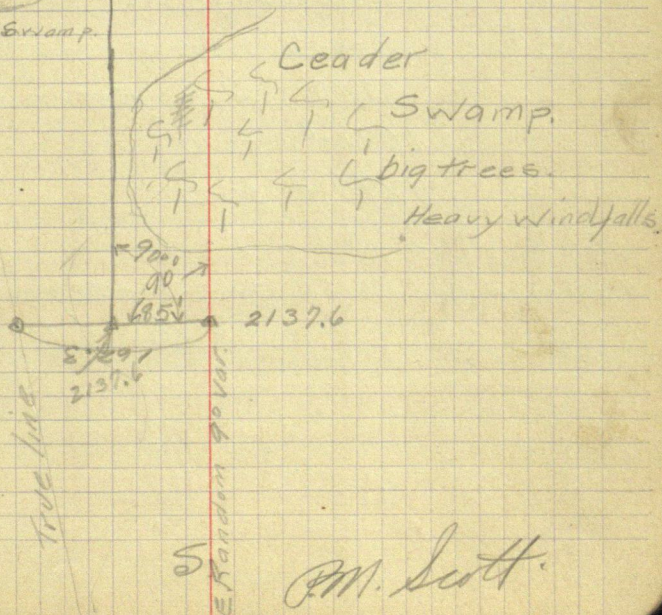
At 2137.6  $90^\circ$  to west from E  
random line we go W  $85^\circ$  and then  
from this Hub we turn  $90^\circ$  North  
and continue running No.  
at 2753.8  $\frac{1}{4}$  Cor. sets W 209.1

209.1

W 124.1' 85' 2753.8

E

W 124.1'  
2 Cor.  
Enter 2600 Swamp.



P. M. Scott.



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14

143-26.

Continued

Monday Oct. 18, 1915 -  
for  $\frac{1}{4}$  post between Secs. 20-19  
Gov notes calls for following B.T.S.  
Cedar 14-541-E  $7 = 462$

6-N 40 W,  $8 = 528$

Find these blown down with B.T.  
plainly showing. also  $\frac{1}{4}$  post  
 $\frac{1}{4}$  post check out ok. so take  
it as correct.

at 2753.8 true  $\frac{1}{4}$  cor set.  
west 209.1 from E random sec 19,  
from  $\frac{1}{4}$  cor. we start running  
North on  $9^{\circ}30'$  variation.

200 Ridge

300 Leave Swamp.

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612.9 Hub. Enter Heavy

1072.2 Hub. timber

1695.2 Hub.

The variation shown on plots  
in this locality are rotten.

P.M. Smith.



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143-26

Tuesday Oct. 19-1915

Breakfast 7 A.M.

Clear + Cool

Scott H. &amp; B. Transit.

Slater Flag, Chain, + Axe

Holt. Axe

Nelson Axe

We continue running North,  
on E. random, 19.

1984.7 Hub.

2650.3 Hub.

I send D. Slater to Const Camp  
to see if he can get new bearings  
for 17-18-19-20

J.M. Scott.



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16

143-26

Tuesday Oct 19, 1915 Cont.  
Scott. Holt + Nelson got 0.2137.6  
on  $50\frac{1}{2}$  of E. random Sec 19  
and set Hub. at  $90^\circ$  West of  
random. 162.3' with this as  
transit pt. and  $\frac{1}{4}$  Cor. as B.S.  
Start running corrected line  
running so. See fig. page 103.

Slater returning says they  
have no notes but Engineers  
will be in camp tomorrow. will  
try again.

254

P.M. Scott.



143-26<sup>17</sup>

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Oct

Aug 19, 1915

Scott & Slater Set New  
B.T. for  $\frac{1}{4}$  Cor E. Line Sec 19  
on  $12^{\circ}30'$  Var S-B-3

{ 8" Balsam  $S37^{\circ}44'W$  114.1 feet.  
5" Ash  $N66^{\circ}00'W$  108.1 feet.

Aug 20-1915

{  $20\frac{1}{16}$  Cor E. Line 19-143-31  $12^{\circ}30'$  var  
9" Ash  $N33^{\circ}55'W$  - 105.7 feet  
9" Ash  $N62^{\circ}30'E$  - 99.0 feet

Aug 20-1915

{ Sec. Cor 19-20-29-30 Var  $12^{\circ}30'$   
12" cedar  $N61^{\circ}18'E$  66.6 feet.  
18" W. Oak.  $S32^{\circ}E$  41.7 feet.  
6" Iron Wood  $S72^{\circ}30'W$  47.3 feet ✓  
12" Bass.  $N59^{\circ}43'W$ . 36.2 feet.

{ Sec Cor. 17-18-19-20.

{ Cedar. 10"  $N.60^{\circ}15'W$ . 69.8'  
Spruce 8"  $S10^{\circ}53'W$ . 37.9'  
W. Pine 10"  $S.23^{\circ}07'E$  35.0' ✓  
Spruce 8"  $N.65^{\circ}03'E$ . 19.2'

{ North  $\frac{1}{16}$  Cor on East Line Sec 19

{ 8" Birch  $N31^{\circ}43'W$  54.4'  
7" Spruce  $S87^{\circ}11'E$  40.5'

P.M. Scott



143-26

Wednesday Oct. 20-1915

Clear &amp; Cool

Scott. H. &amp; B. Transit

Slater. Flag &amp; Chain &amp; axe

Nelson Axe

Holt Axe.

We continue running So on So

 $\frac{1}{2}$  of E. line of Sec 19-143-31

Hubbing &amp; cutting brush.

At 1376.9 set  $\frac{1}{2}$  E. random at  $90^\circ$  West104.6' we set  $S\frac{1}{16}$  cor. and tie in

same see page 107

we cut so. until we intersect Sec. Cor.

P. find cor. sets w 1.3 feet. Put in new

B.T.s as follows. on page 107

P.M. we go to Sec. Cor. 17-18-19-20

Tie it in from stakes set by Engr.

Holl. Engr. in charge of State. H.W. No 45.

Mr. Olsen assisting us in finding stakes

The stakes being on true Lines of.

Secs (East line) 18 &amp; 19

find corner sets West. 148.5'

at 2679.3 of  $N\frac{1}{2}$  East random Sec  
19-143-26.We set New B.T.s for 18-19-20-17  
as shown on page 107.

P.M. Sett.



143-26 - 19 -

254

109

Wednesday Oct. 21-1915 Cont.

We correct Hubs over on true  
N  $\frac{1}{2}$  of East Line sec 19.

This goes ✓  
 in every direction  
 1984.7 goes west. 109.9'  
 1695.2 ✓ ✓ 93.9'  
 1/16 1339.7 ✓ ✓ 74.8' 1/16 cor.  
 1072.2 ✓ ✓ 59.4  
 612.9 ✓ ✓ 34.0

We set New B.T.S. for N  $\frac{1}{16}$  Cor 07  
N  $\frac{1}{2}$  of East line sec 19

See page 107

When these are corrected we  
go to Sloters for night.

P.M. Scott,



143-26

Thursday Oct. 21 - 1915

Clear &amp; Cool

254' We go to N.E. Cor. of Sec. 31,  
and start true line (East) of  
Sec. 30

At Sta. 807.9 on E. random  
of 19 we set hub 39.6 West  $90^\circ$   
with this as transit P.T. is.  
True cor. 29-30-31-32, as B.S.  
were a true line.

Set New B.T.s for 29-30-31-32  
as shown on page III.

at Sta 1365.8 on E random Sec  
30. we set  $\frac{1}{16}$  cor.  $67.0^\circ$  West.  $90^\circ$   
from random line.

B.T.s for cor at  $S\frac{1}{16}$  E. Line Sec. 30.  
Page III.

at Sta 2781.6 on E random Sec. 30,  
 $90^\circ$  West 1339' set  $\frac{1}{4}$  cor. tie in  
with B.T.s as shown on page III

At Sta. 4097.4 on E Random Sec. 30  
90° West 200.05' set  $N\frac{1}{16}$  cor  
on E Line Sec 30. Tie in same  
as shown on page III.

P.M. L. H.



193-26

Thursday Oct 21, 1915

B.T.s. 29-30-31-32. 10° 30' Var.

3" Popal S. 44° 20' W. 61.8'

4" ✓ N 56° 55' E 39.6'

4" ✓ N 50° 21' W. 84.9'

5" W.P. Stub. S. 46° 25' E. 27.0'

B.T.s. S 1/4 E Line Sec 30. Var 10° 30'

7" Norway Stub. S 76° 42' W. 49.0'

8" v.l. Pine Stub. N 82° 23' E 44.4' ✓

B.T.s. 1/4 Cor. S.B. 2 E Line Sec. 30. 10° 30' ✓

7" W.P. N 85° 06' E. 130.8'

4" Tamrack. N 74° 13' W. 150.7' in meadow.

B.T.s. N 1/16 Cor E Line Sec 30. Var 10° 30'

3" Popal S 72° 51' E 58.8'

4" Popal N. 33° 46' W. 49.0' ✓

B.T. N 1/16 on E. Line Sec 31 Var 9° 00'

7" N. Pine S 39° 06' W 45.95'

Friday Oct. 22.

SB-1/4 Cor E Line Sec 31 Var 8.

4" popal N 83° 51' W 51.4'

3" popal N 40° 19' E 59.8'

S 1/16 Cor E Line S 1/2 Sec 31 Var 8°

6" Tam. Stub N 85° 05' E 79.6'

8" r r N 41° 43' W. 93.5'

P.M. Smith.



112

21

143-36

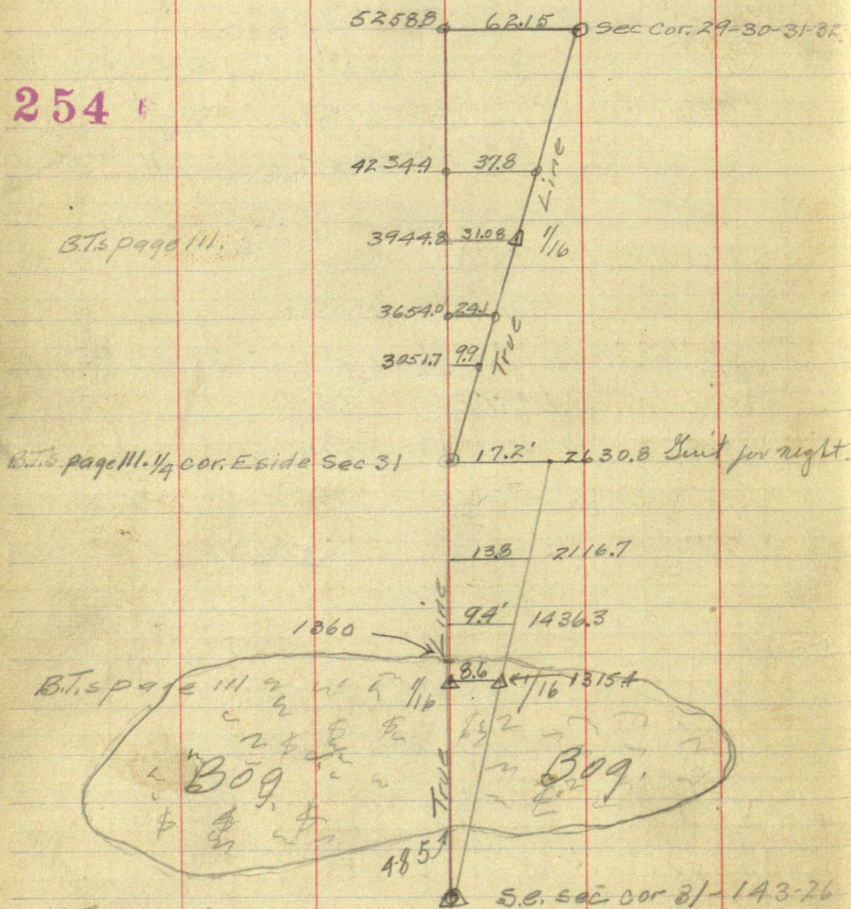
Thurs

Oct 21-1915 Wednesday

wlegoto N $\frac{1}{2}$  of E random Sec 31  
and correct line as show in fol-  
lowing Diagram. Place New B.T.s  
for N $\frac{1}{16}$  of Eastline Sec 31. Page 111

254

B.T.s page 111.



B.T. Page 115 This Book.

P.M. Smith



143-26

Friday Oct. 22 - 1915

Clear + Cool

Scott H + B Transit.

Slater Jr Flag + Chain.

Slater Sr. axe.

Holt. axe.

We correct  $5\frac{1}{2}$  E random line  
Sec 31. See fig on page 112

B.T.  $\frac{1}{4}$  cor E line Sec 31 var  $8^\circ$   
Page 111

B.T.  $\frac{1}{16}$  &  $\frac{1}{2}$  E line 31 Page 111

We then go to N.E. Sec Cor 6 - 142-26.

Tie in same as shown on page 115.

From N.E. Cor of Sec. 6 we start running  
So on  $3^\circ$  Var. chaining with 100' steel Tape

401.3

Hub.

550.0

Enter Marsh.

700.0

Leave "

1045.2

Hub.

1273.7

Hub.

1450

Enter Bog.

At 1516.3  $\frac{1}{16}$  cor N  $\frac{1}{2}$  E Line Sec 6

Sets w- 13.0 This stake set by Todd.

1912.

Set B.T. for N  $\frac{1}{16}$  cor Page 115

J.M. Scott



114

23.

142-26

254

Friday Oct. 22 - 1915

P.M. Somecreek.

We go to Sta 1100 on

True E. line Sec 6 - 142-26 and  
 turn S  $40^{\circ}14'W$  start diag.  
 accrost  $E\frac{1}{2}$  of the N.E.  $\frac{1}{4}$   
 142-26.

325 enter swamp

510 Leave ✓

560 enter swamp

700 Leave swamp

780.6 Hub.

930 enter Bog.

1150 Leave Bog.

1259.0 Hub.

1620.4 Hub.

Diag. intersects N+S.  $E\frac{1}{16}$  Line  
 at 2030.2

At 1221' North at  $9^{\circ}45'$  var. from N.W.  
 cor of N.E. 40 of S.E.  $\frac{1}{4}$  Sec 6 the  
 diag accrost  $E\frac{1}{2}$  of N.E.  $\frac{1}{4}$  is North  
 $41^{\circ}25'$  East

P.M. Scott.



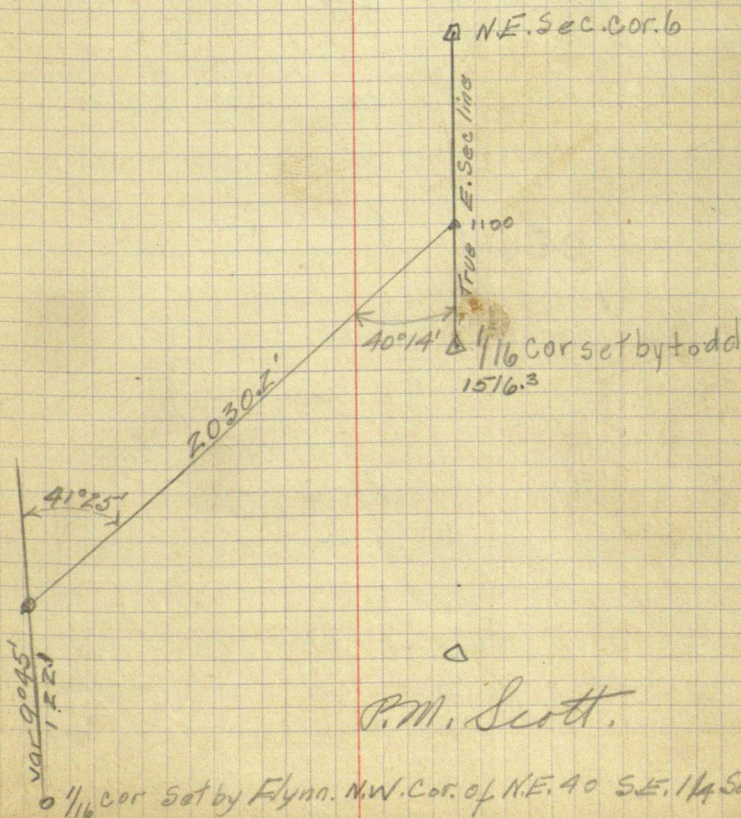
142-26

October 22-1915 Thursday.

B.T.s. for N.E. Cor Sec 6-142-26 Var 90

4" Ironwood  $538^{\circ}26'W$  75.210" Maple  $537^{\circ}28'E$  78'N  $\frac{1}{16}$  E line Sec 6-142-26 var 90N. Pine 7" N  $79^{\circ}04'E$  102.4

Diag of diag accrost N.E.  $\frac{1}{2}$   
of B.E.  $\frac{1}{4}$





116

Z 5-

143-26 - 142-26.

Saturday Oct 23-1915

In a.m. I make out time warrants  
and check up notes.

P.M. H. Slater takes me to  
Rodgers Spur. \$1.50

Take train on Soo to Bemidji  
R.R. fare \$1.10.

Supper at Dalton's Restaurant  
\$.50.

R.R. fare to Wal Kar. \$.67

254

B.M. Scott



143-26 - 26. 142-26

117

Sunday Oct-24, 1915

In. Office in Walker, working  
on notes. & plats.

254

Pm. Scott.



118

135-32.

Dec. 16. 1915. THURS

I leave Walker for Ellis Minn  
via Staples to correct survey of  
twp road made by Roy Beasant  
July 1915-

Walker to Staples RR fare \$1.92

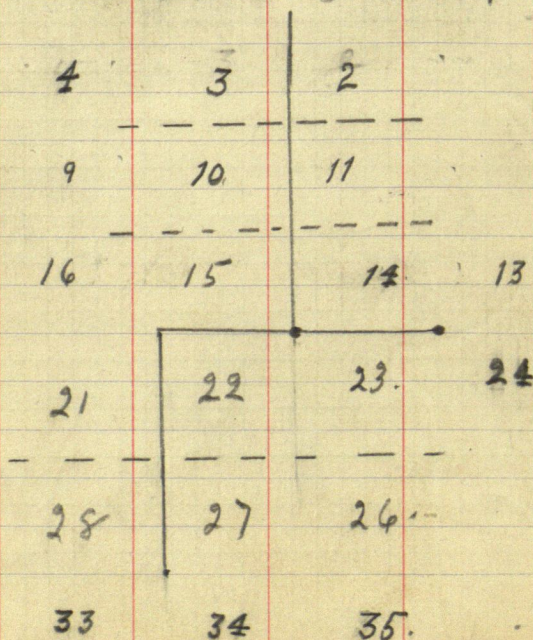
Staples to Ellis Stage 1.00

arrive at Staples 1.20

leave for Ellis by stage at 2 P.M.

arrive at Chas Hanley's place  
3-30 where I make arrangements  
to board.

Elmer B Horst.



Recorded in Book C.  
Page 47.



Friday. Dec. 17. 1915.

I take transit. and Chas S Hanley  
as flag & axman we go to cor of  
Sections 15-16-21-22. we find cor  
established by Bryant, from a stump  
which, Edgar Allen says he cut the  
tree for wood and found he had cut  
a B.T. other B.T.s all burned & decayed.  
I run over Bryants random and find  
corner set correct for 1 mi. E from  
above cor

we then go to cor of sec 13-14-23-24  
I run random line over Bryants old  
line one mile W and miss cor estab-  
by Bryant 3.5 ft N - cor sets S-3.5 ft

Elmer B Horst



Saturday Dec 18, 1915.

I go to Ellis store mail letter to  
 Alro & get some 60d spikes for  
 hubs.

Horst. Transit. Allee axe & flag  
 We return to cor of 14-15-22-23  
 and erect a 10ft sight at cor  
 we go East about 1800 ft to  
 summit of a hill where we can  
 see a sight 1mi East at cor of  
 13-14-23-24 I set & reset transit  
 until it is on true line true

line passes through window of  
 Mr Huffs house. We set 50d nail  
 under window also one at true  
 $\frac{1}{4}$  cor between SEC. 14 & 23.

I rechain line one mile N from cor of  
 14-15-22-23 distance to Iron pin  
 set by a former surveyor being  
 5275.4 ft N of cor established by  
 Bryant  $\frac{1}{4}$  cor at 2637.7

I set Transit over cor of 10-11-14-15 as set  
 by Hallet or Whitely and find roots  
 of Nor Pine where Gout Notes call  
 for a Y. Pine No N. 33E-67 checking for  
 course & distance with Hallets cor



121

135-82

Sat Dec 18 1915

but cannot find anything to check  
with cor established by Bryant  
Saturday Night.

E. B. Horst.

Sunday Dec 19-1915

at Chas Hanley's over  
Sunday.

day is clear & cold  
snow 4 in deep.

E. B. Horst.



Monday Dec-20-1915

Horst transit-Allee flag-  
We go to cor of 10-11-14-15-  
Run a transit line N 1 mile  
I look for B.T. and find B. Pine  
tree on the ground with very light  
scribe marks on it Mr Bacon  
comes down and says he can  
swear to it as a B.T.-Govt.  
We establish cor from this tree  
which Bacon says is within a  
foot of where the old cor is we  
run course for B.T. to S.W. where  
U.S. Notes call for Tam 6 S 57° W 265  
we find a tam stump decayed  
checking for course & distance  
We start from this cor and run  
line 1 mi N to to WP line  
We look for B.T. but find none  
but find old Govt Post. discovered  
by Elwell Rd. Engineers and Wit trees  
trees blazed by them to relocate cor.  
We return home 2 miles

Colmer B Horst



123 Tuesday Dec. 21 - 1915.

We go to sec cor of 2-3-10-11 and  
Chain N one mile between 2+3  
on transit line at sta 5399.2 ft  
N true cor set W 43.5 ft

Coming back we set  $\frac{1}{4}$  cor at  
2647.96 ft N + 21.33 ft W

We chain S between sec 10+11  
to cor of 14-15-10-11 = 5290.8 ft

We set  $\frac{1}{4}$  cor between 10+11 at  
Sta 2645.4 from both cor

B.T.s + Bearing posts set at cor as  
follows not being able to drive  
Hubs or I.M.s we set 50D-spikes  
where cor or Hubs should be and  
took Bearings

at cor of 2-3-34-35 on N side of 135-32  
Small Norway 3 in SW of cor 41.2 ft

" " 4 " N.W. of cor 52.0 ft  
taken by State highway Engineers

$\frac{1}{4}$  cor between 2+3 - 3 in ~~sq~~ Pine Post  
Sec cor 2-3-10-11 - 50d spike + Hub

bearings as follows: 3 blazed fence posts

H.P. N 84°30' E 20.5 ft

" " N 40° W 24.7 "

" " S 42° W 45.9 "

Elmer B Horst.



Wednesday Dec-22-1915.

Horst. transit.

Edgar Allee flag & chain

We go to cor of sec 15-16-21-22

to correct line run by R.E. Bryant

I set transit over sec cor and sight

S to Bryants Hub on top of hill about

950 ft S going to hub I set up and

back sight on sec cor then sight S and

find he has turned 15' more Variation

in order to run line down graded road

but he failed to set on line with cor

or to back sight and find distance & offset

making a kink in the line

we find all corners with a kink

We then chain from above sec cor S

2 Miles and find the register slipped

to the extent of 1-300 ft tape for Bryant

We find corners set as follows

beginning at cor of 15-16-21-22 going S

at Sta 2891.1 ft S  $\frac{3}{4}$  cor no B.T. S

" " 5482.4 " S sec cor 21-22-27-28.

at Sta 8089.6 " S  $\frac{1}{4}$  cor sec 27+28

at Sta 10631.2 " S Sec cor 27-28-34-35.

land owners have two Wit Posts to Govt cor

& one B.T. true cor set W 72. ft

Edmer B Horst.



125

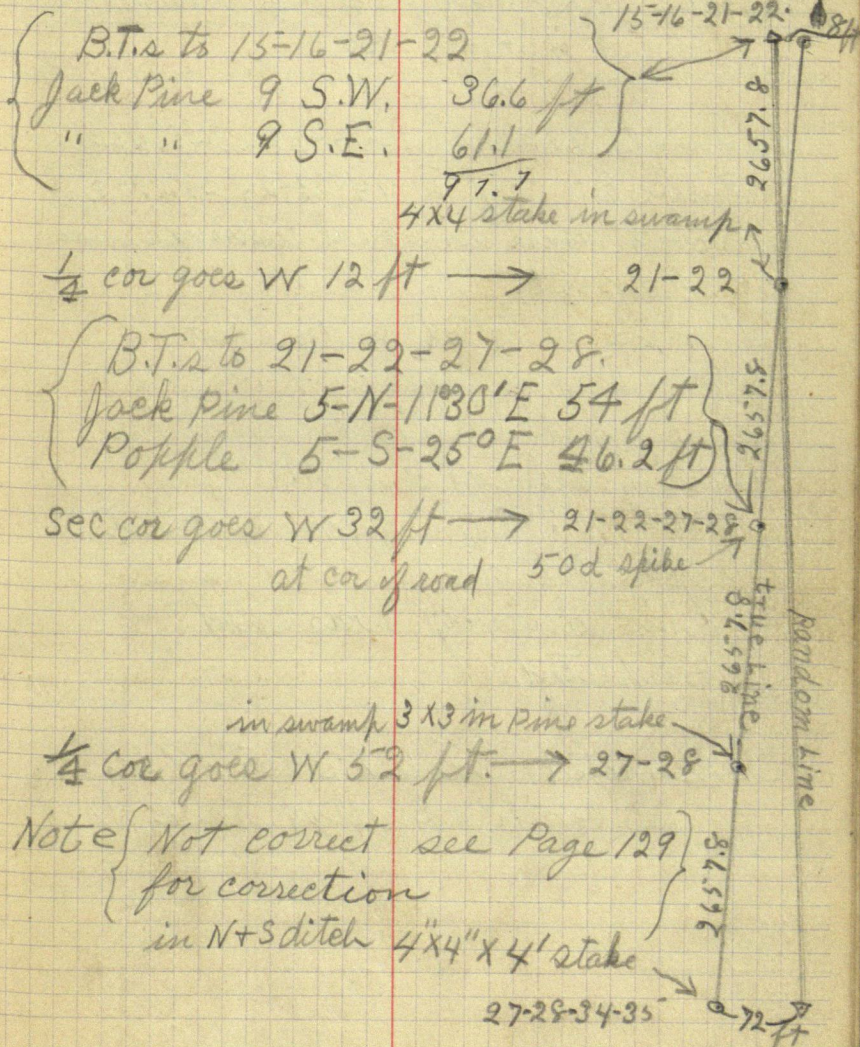
135-32

Thursday, Dec. 23, 1915.

Horst transit Allie flag &amp; chain

We set hubs at temp corners as follows

Correcting W correction = 007525

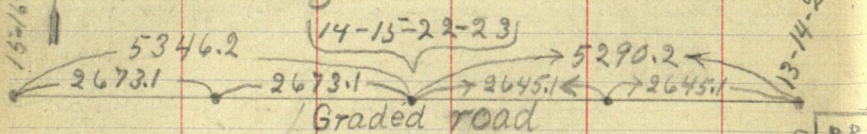




126

135-32

Thursday-Dec-23-1916-Continued

N Horst and Edgar Allee connecting 2 mi.  
E from cor of 15-16-21-22.

Chaining E to cor of 14-15-22-23 = 5346.2 ft  
 continue E to cor of 13-14-23-24 = 5290.2 ft  
 Setting  $\frac{1}{4}$  corners at equal distances from  
 sec-corners

I receive a letter from Euro  
 to come to Walker

Will start in the morning stage  
 leaving Ellis at 9. A.M.

E. B. Horst.

This survey was not  
 completed

Completed July 1-3-5-1916  
 Notes begin on next page (127)



127

135-32.

Saturday July 1st 1916.

Horst. transit, Clarence Hanley with horse & buggy begin setting Iron monuments on road lines ordered surveyed by the Byron Twp board the iron monuments are  $1\frac{1}{2}$  in iron pipes 4 ft long we set one at each of the following corners

at 13-14-23-24 an I.M.

"  $\frac{1}{4}$  between 14 & 23 an I.M.

" Cor to 14-15-22-23 an I.M. and New B.T.s

J. Pine 8 N  $21^{\circ}$  E 85.6 ft

" " 8 S  $82^{\circ}$  W 116.0 ft.

" " 10 S  $65^{\circ}$  E 67.6 ft.

between Secs 15-4-22 at  $\frac{1}{4}$  cor set I.M.

at Secs 15-16-21-22 set I.M. and New B.T.s

J. Pine. 8 N  ~~$31^{\circ}$~~   $10^{\circ}$  E 97 ft J. Pine. 9 N  $39^{\circ}$  W 82.8 ft

" " 9 S  <sup>$46^{\circ} 30''$</sup>  N  $36.6''$  " " 9 S E 61.1 "

we go S 2 miles and set I.M. for Wit Cor to Cor of Secs 27-28-33-34 8 ft E of true sec cor which is in a 3 ft ditch we return and set an I.M. at  $\frac{1}{4}$  between sections 14 & 15

one at Cor to 10-11-14-15 and take new Bearings  
Over

C.B. Horst.



128

135-32

July 1st 1916

New Bearings to 10-11-14-15

S.W. cor. of School House porch bears

N  $32^{\circ} 43' W$  183.3 ft

N.E. cor. of ELLIS store bears

S  $54^{\circ} 28' W$  52.7 ft

N.W. cor. of Church bears

S.  $53^{\circ} E$  72.9 ft.at  $\frac{1}{4}$  cor between sections 10 & 11 set I.M.

at Cor to 2-3-10-11 set I.M. and new bearings

Fence Post N  $84^{\circ} 30' E$  20.6 ft" " N  $40^{\circ} W$  24.7 ft" " S  $42^{\circ} W$  45.9 ftat  $\frac{1}{4}$  cor between 2 & 3 set I.M.

at cor to sec 2 &amp; 3 on Twp line set

I.M. in cent of S.R. Highway New B.T. &amp;

Norway Pine 4 in N.W. 52.0 ft

" " 3 in S.W. 41.2 ft

we return to Hanleys for night

E.B. Horst.

July 2nd Sunday 1916

at Hanleys no work

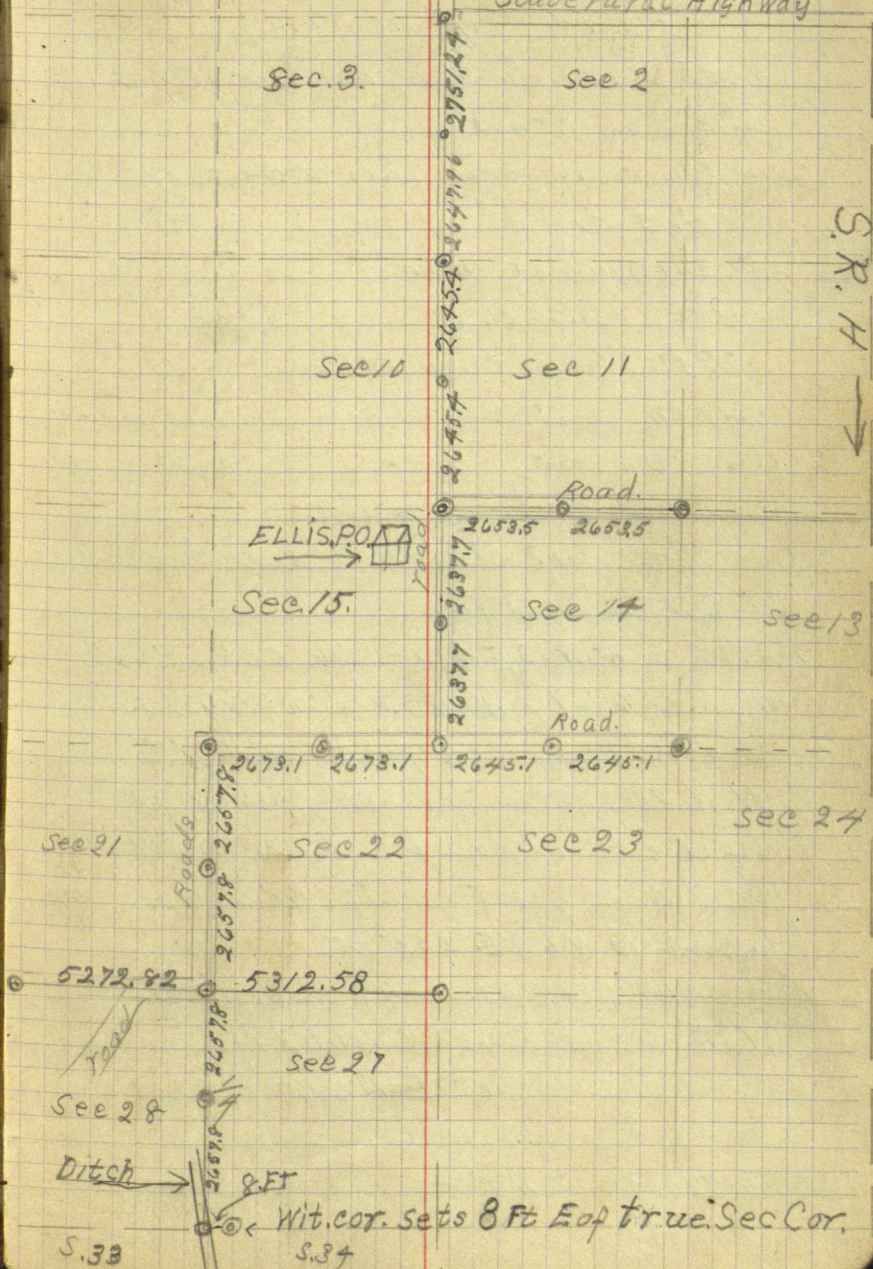
E.B. Horst.



129 Twp 135-Rge. 32  
Diagram of road survey

July 1916 by E.B. Horst

State rural Highway





130

135-32.

Monday July 3rd 1916

Horst and Clarence Hanley with rig.  
 I drive a Hub near center of road  
 and near corner to secs 21-22-27-28  
 we chain W from this Hub on partly  
 graded road  
 at 2450 leave road

" 3800 cross creek 10 ft wide

" 3900 leave creek bottom

" 4100 cut swamp

" 4500 lv " "

" 5000 cut swamp

" 5200 set stake and look for Bts

Z.C.S. Notes call for

B. Pine. 5° N 12° E 46. B. Pine. 5° S 80° E 138.

" " 6° S 74° W 182. " " 6° N 84° W 242.

I find an old post and N.E. and  
 N.W. Z.C.S. Bts the old post is at  
 true cor check for course and distance  
 I set New post with New bearings

J. Pine. 12° N 53° E 35.5 ft

" " old Z.C.S. Bt. N 84° W 160. ft

Wit Post S 45° W 46.67 ft

" " S 45° E 46.67 ft.

we return to Hanleys for dinner  
 (at Sta 5266 cor sets N 38 ft) C.B. Horst.



July, 3-1914.

P.M. we begin at same Hub near  
Cord of 21-22-27-28 and chain E  
at 20 ft E cut swamp

" 1900 E leave " "

" 2300 E cut swamp look for  $\frac{1}{4}$  B.T. (gang)

" 2900 leave swamp

" 5330 ft E intersect N+S road

we look for cord to 22-23-26-27

Notes call for 4 N.P. we find the stumps  
badly burned we also find a post in  
center of road which is at true pt for cor  
& remark old U.S. stumps and set an  
iron monument in place of wood post

at sta 5319.4 ft E Cor sets N 336 ft

U.S. Chain for S side of sec 21 & 22

= 10544.16 ft. My chain

= 10585.4 ft.

S side of sec 21 = 5272.82 ft.

S side of " 22 = 5312.58 ft.

Cor to secs 21-22-27-28 goes E of  
starting pt at Hub. 6.8 ft and equidist  
ant from sec corners 1 mile N and  
one mile S and falls 42 ft E of  
a straight line between N+S sec corner



132

135-32

July 3rd 1916

we set Van I.M. at this pt  
and go  $\frac{1}{2}$  mile S and set I.M. 21.1  
ft E of post set for  $\frac{1}{4}$  cor between  
secs. 27 + 28 which was on a  
straight line. 2 miles long

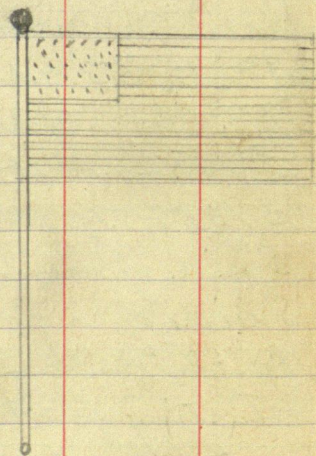
at  $\frac{1}{4}$  cor between 21 + 22 we set  
I.M. 21.1 ft E of Post which was  
on same line

quit for Night  
at Hanleys

E.B. Horst

July 4th 1916

No Work.





Wednesday, July 5th, 1916.

Horst transit & Chain Delbert Manchester  
Nels Hansen and John Clark helpers  
begin at cor to 10-11-14-15 and run  
line E at 90° Var on graded road  
at 3310 ft E set Hub on Hill

" 4370. " " Cent of small bridge

" at 5311 set Hub in cent of N + S road  
and look for B.T. Notes call for

W. Oak. 10 N 32 E 58. Maple 10 N 1/2 E 3

" " 14 N 21 W 65

the settlers show me the stump of  
W. Oak. 14 N 21 W 65 and I identify the spot  
where it stood by the hole it left when  
dug out. I set post for cor from this  
evidence, and hole in the ground and  
find roots of the maple stump where  
we drive post.

at 5307 ft E cor sets N of random line  
36.4 ft.

P.M. we set I.M. at this cor and return  
to 4 cor where we set an I.M. at  
Sta 2653.5 ft E and 18.2 ft N of

random line. New B.T. to cor 11-12-13-14

Popple 5 N 48°30' E 90.6 ft Popple 6 S 53°30' E 99.6 ft

No other trees Near C.B. Horst.

Recorded



134-32

135-

Thursday July 6th 1916

John Clark takes Horst and  
survey outfit to State road 2 miles  
E of Ellis P.O. where I take Motley  
Leader Stage to L.J. Major's place  
in N.E. of S.E. Sec 1-134-32 (Siveny & S. 50)  
where A.W. Moulster wants some Sec  
corners established for ditch purposes

P.M. I walk to  $\frac{1}{4}$  cor. between sec  
1 and 12 and look for B.T. where  
U.S. Notes call for  
Spruce & N4E 14. N.Pine & S16E16  
all are gone, timber and stumps are  
all burned to coals

E.B. Horst

359'



136

134-32.

Friday July 7th 1916

Stake instruments and walk  
to S.W. cor sec 1 where U.S.

Notes Call for

Tamek 4 N 74 W 17- Tam. 4 S 35 W 12.

" " 5 N 78 E 5, " 5 S 69 E 14.

I find N.E. N.W. and S.W. BT stumps  
still standing but the course and  
distance was improperly recorded  
by U.S. engineers on acct of trees  
being too close to instrument to  
determine exact course

the distance was evidently **359'**  
estimated. but the old U.S. Post  
is at the original place I shall  
up old post and set New  
Tamek post in its place

with New Bearings as follows

Tamek 7 N 26° 30' E

" " 6 N 47° 35' W.

" " 4 S 38° W.

" " 5 S 45° 30' E.

E. B. Horst.



134-32.

139

July 7, 1916. continued

P.M. I walk to end of Turps 134 & 135  
Rgs 31 & 32 and look for B.T.s

U.S. Notes call for  
Tamek 8 N 30 E 26.

" " 6 N 70 W 13.

" " 6 S 75 W 18.

" " 8 S 18 1/2 E 48.

these all fell inside the road limits  
of the S.R. Highway and were  
destroyed if any remained.

E.B. 40 st.

859



138

134-32.

Saturday July 8th 1916

I get notice from J.W. Curo  
to return to Walker

I take Leader Motley stage  
to Motley Fare .50 cts

R.R. Fare Motley to Walker \$1.82.  
supper and dinner \$0.50 cts.

I stop at Chase Hotel. 359 W  
E.B. Horst.

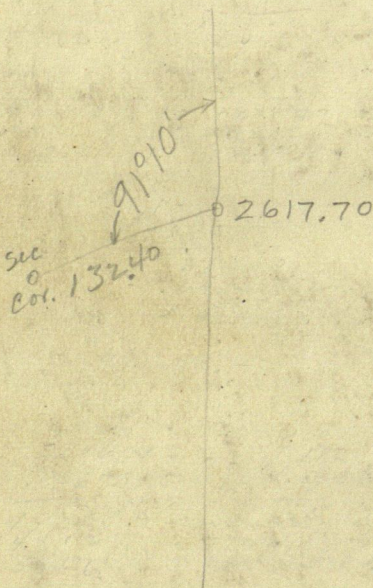


5380  
2678  
7920

5280  
510

2091  
1046

2953.8  
1376.9



Today Morning Train from STAPLES 3:10 A.M.  
Conductor LEAR JENKINS.



2679.3  
1339.7

162.3

88-

77.3

# DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES 1½ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.

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