

CADASTRAL SURVEYS



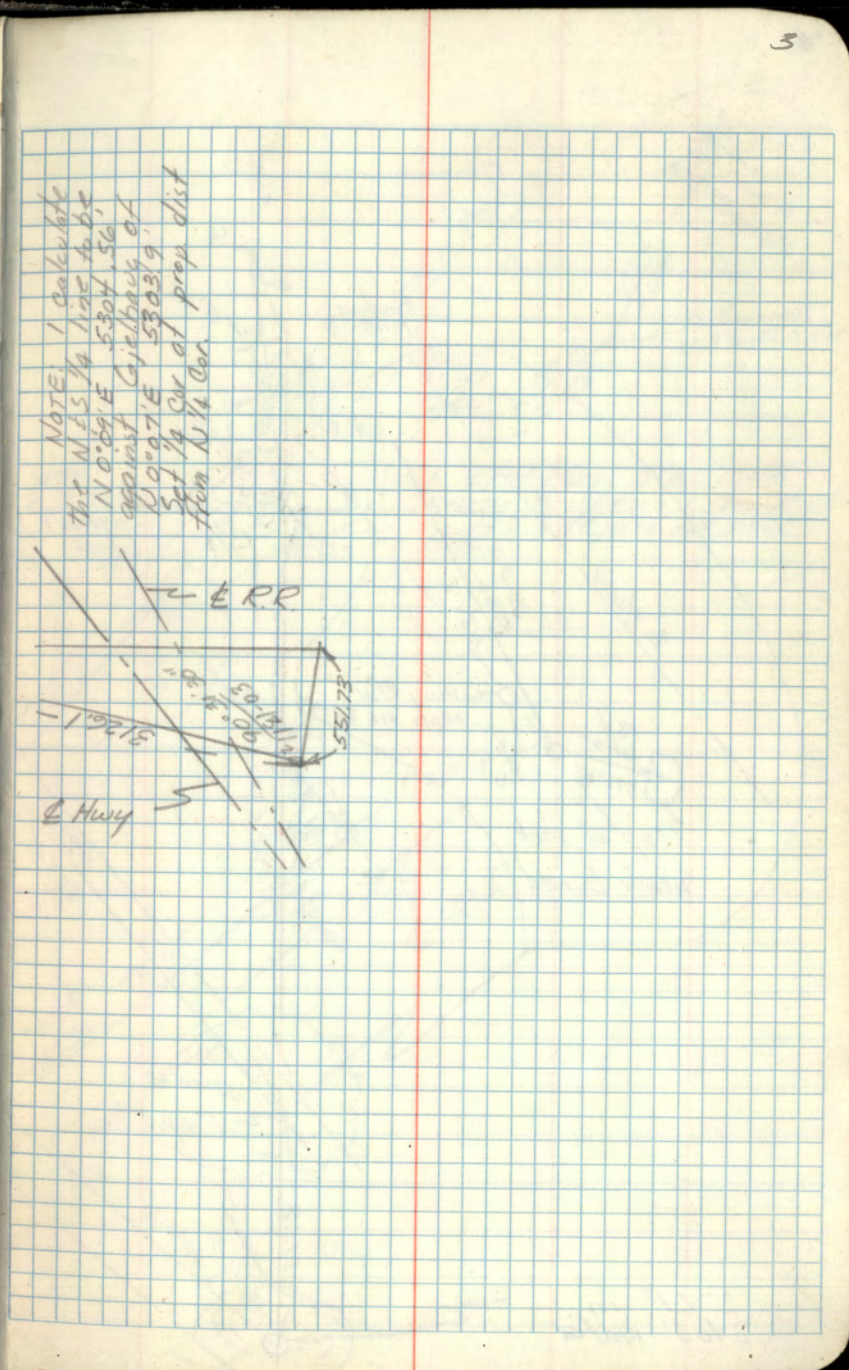
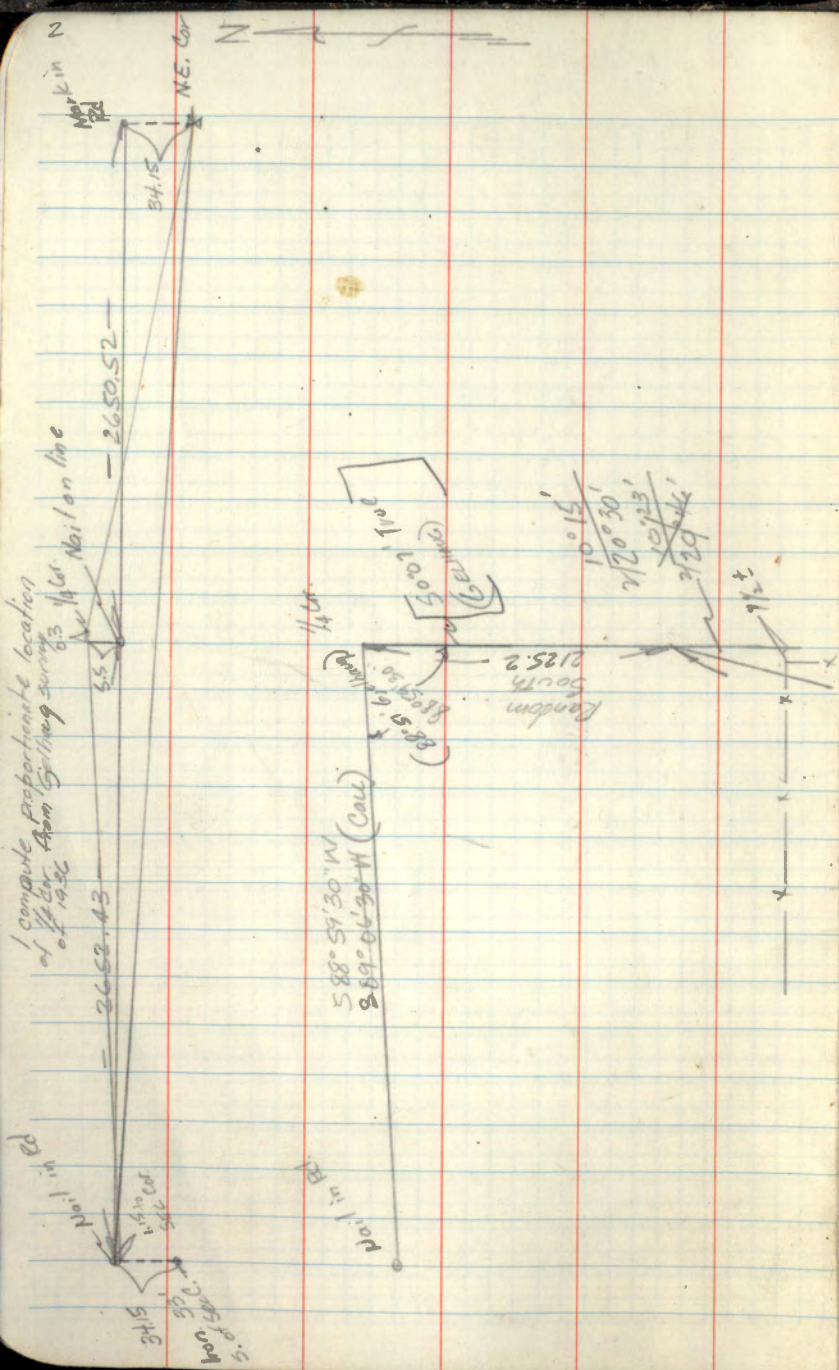
MINING
TRANSFER BOOK
No. 384F

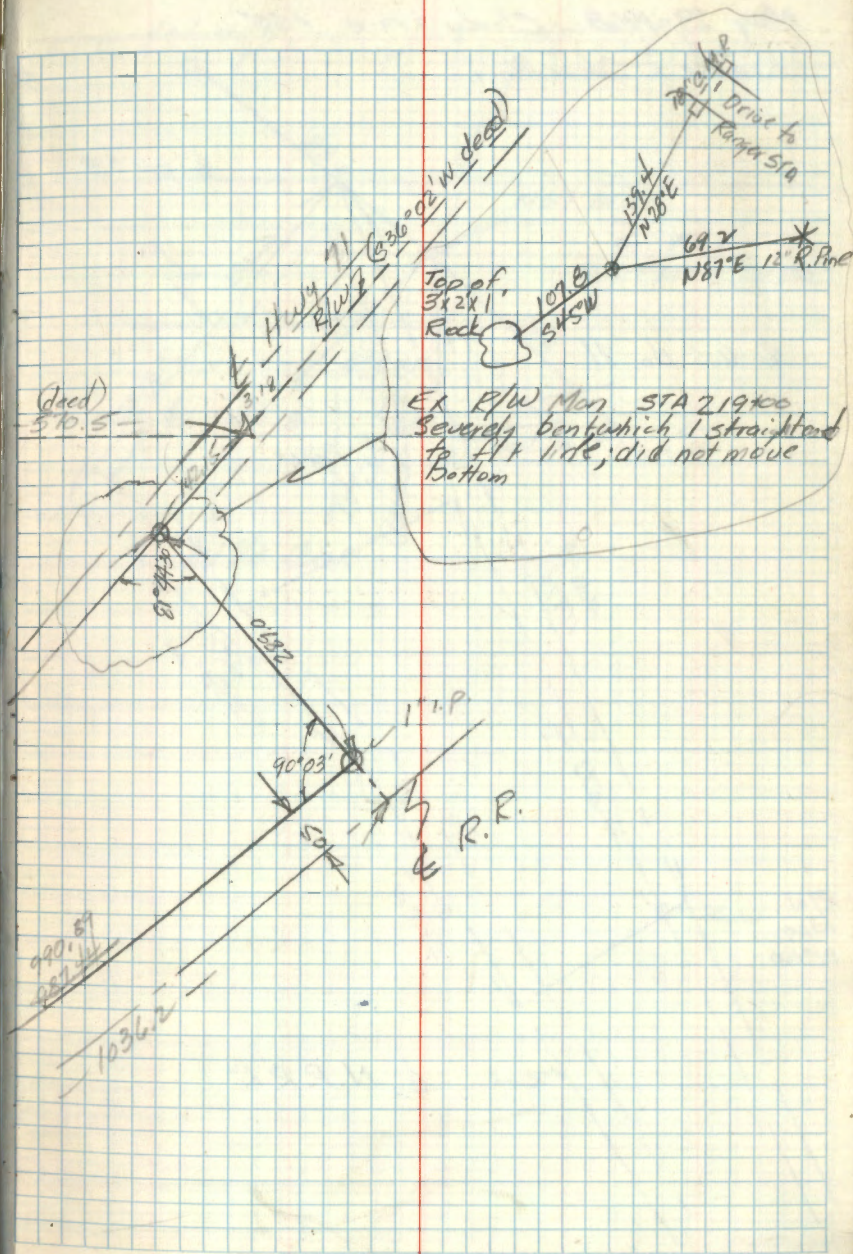
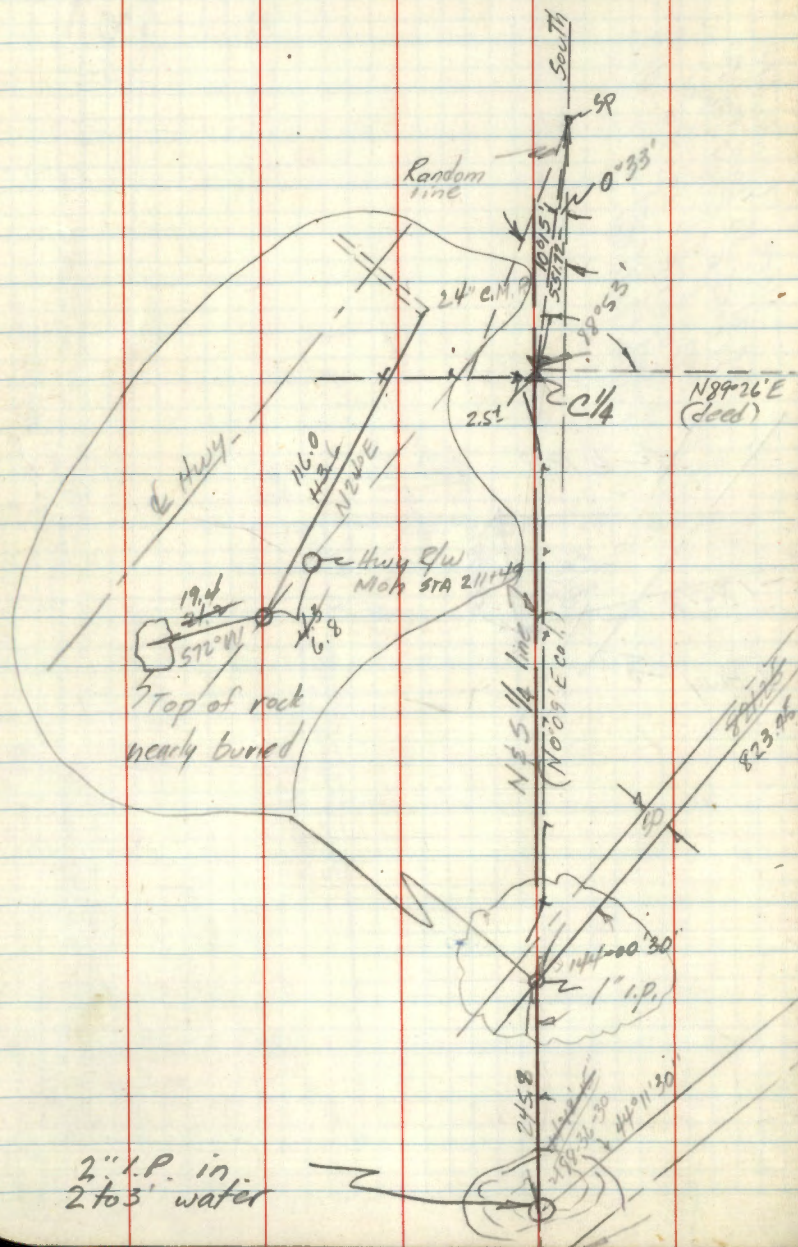
BOOK NO. 3

Cadastral Surveys Book #3

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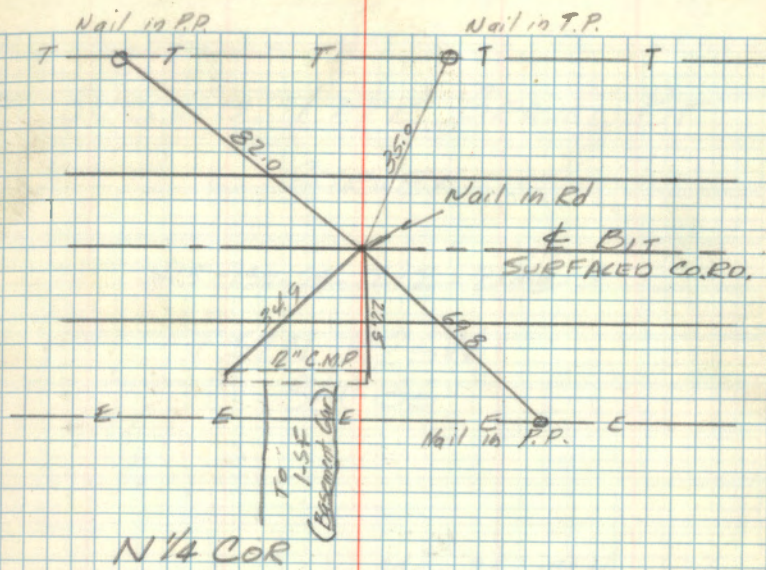
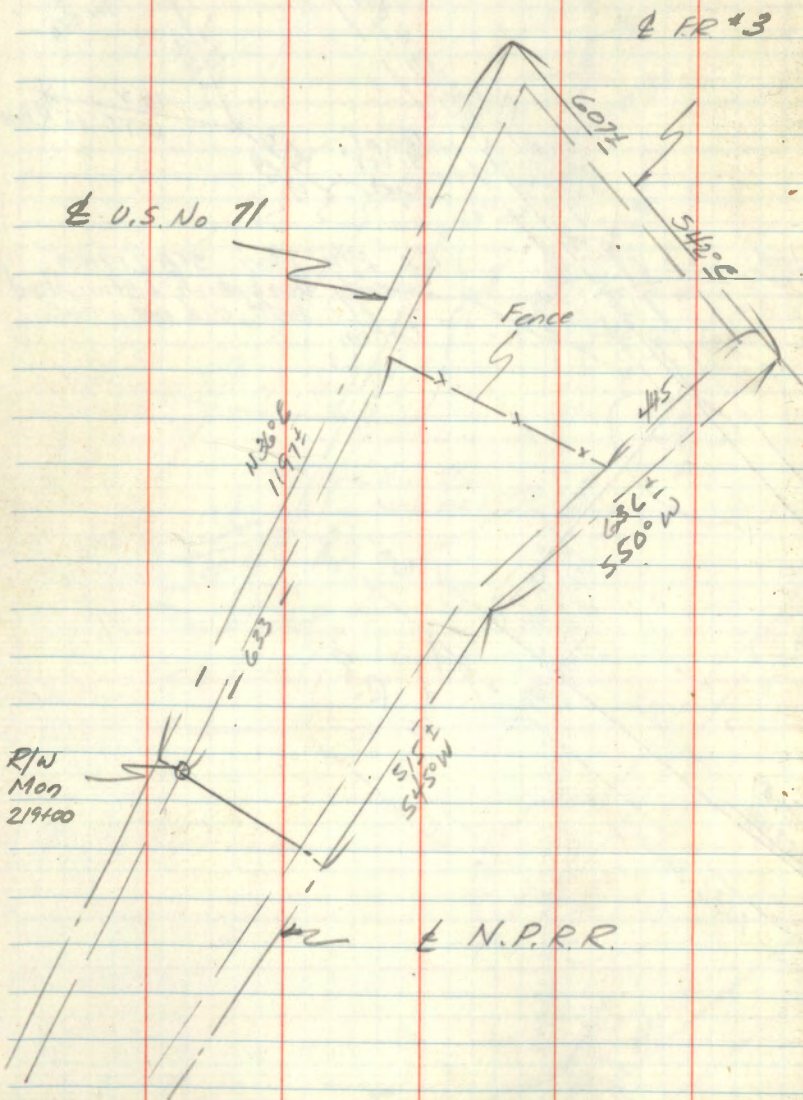
No.	Papers	Project	Location
1	1-7	Blackfoot P.S. site 402-064-01-02	
2	9-16	Burns Lake Canal P.L. Sur. 445-120-29-12-2-2143-1	3E-59-25
3	17-22	5.2 Mile Lake P.L. Sur. Sec. 5, 6 (Ernstson)	8-144-27
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5	77-81 155-160	Cangelhoff ² (cont.)	14-145-31
10	83-93	Leng Lake trespass	7-141-27
	94-141	Howard Lake Survey	19-141-31





May 29, 1968 Cloudy & rain +50°

Krause & Okerman



BURROWS LAKE GRAVEL PIT
SURVEY

415-130-29-12-2-2143-J

T59N R25W
SEC 35

May 26, 1964

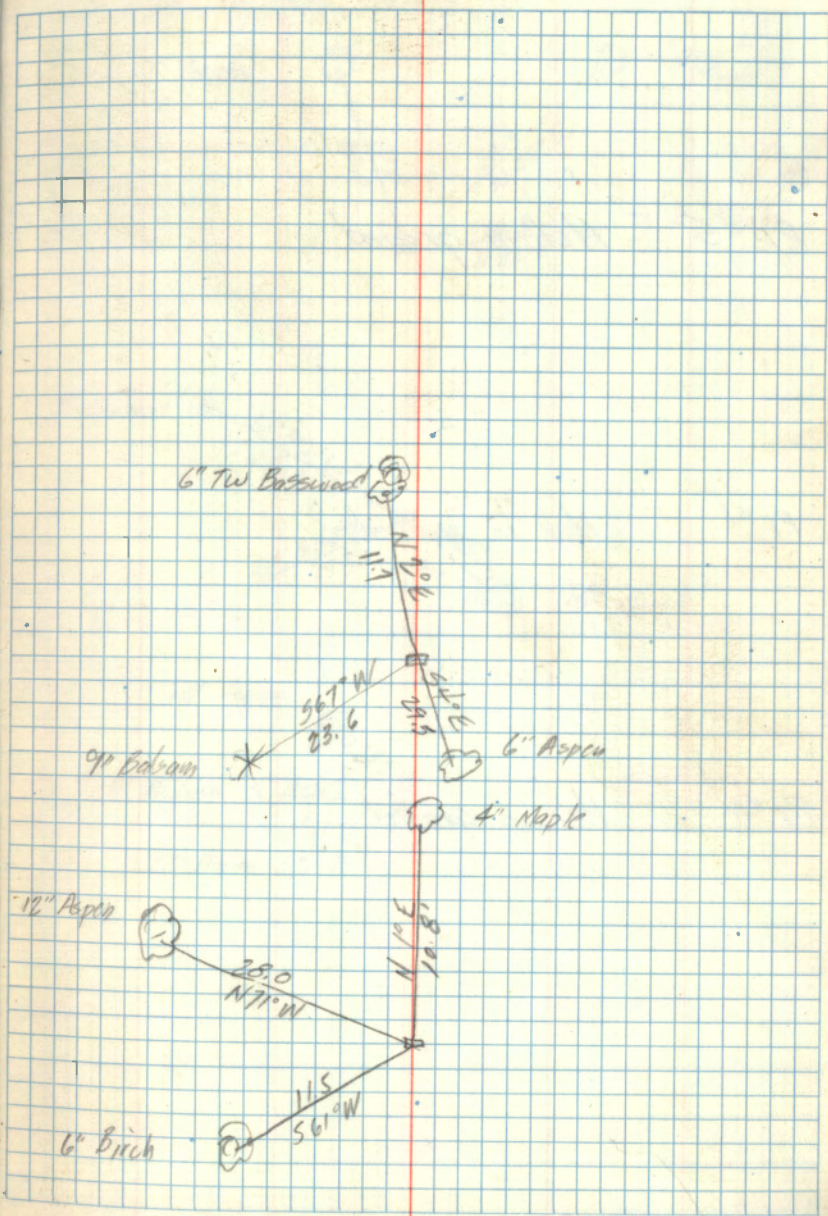
OKERMAN
HANSEY
EKSTROM

STA	BRG	DIST
1		
	N67°W	193.1
2		
	N30°W	120.0
3		
	N23°E	226.8
4		
	S67°E	288.6
5		
	S23°W	300.0

1

PT #3 Hub in ground

PT #4 Hub in ground

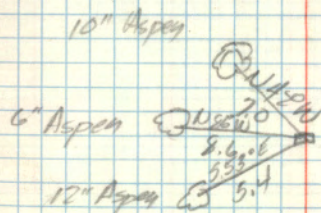
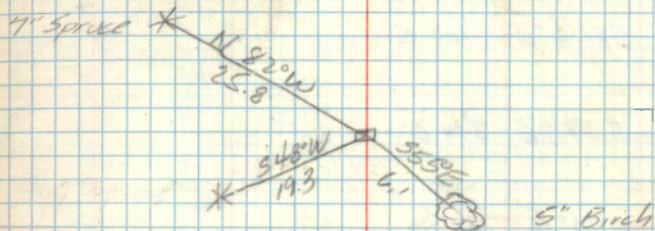
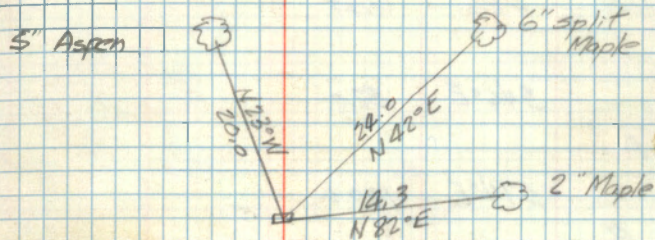


Pt #5 Hub in ground

Pt #1 Hub in ground

Pt #2 Hub in ground

Tics to lody corners



Traverse to $\frac{1}{4}$ Cor

STA	BRG	DIST
I		
	S 46° E	87.0
A		
	S 74° E	100.0
B		
	S 51° E	176.0
C		
	S 81 $\frac{1}{2}$ ° E	100.0
D		
	S 59 $\frac{3}{4}$ ° E	200.0
E		
	S 70° E	225.0
F		
	S 31 $\frac{1}{2}$ ° E	200.0
G		
	S 48° E	145
H		
	N 57° E	24.0
$\frac{1}{4}$ Cor		

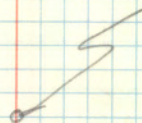
2" Pipe with
Aluminum cap nut

+ 59N

V 3 36

4 512

T 58N



SIX MILE LAKE SURVEY

SUBDIVISION OF

SEC. 8

T144NR 27W

NOTE:

Corner information is filed in the S.O.
corner restoration field books.

W. Okerman

J. Ekstrom

4-20

4-21

4-22

4-23

6-2

1/4 Cor. C.L.O. Mon. in place

-1321.15-
-831.21-

1043'30"
2' 30" 1'

490.4

See next page for detail of Lot

set iron

EXCHANGE PROP

491.4

Ex. i.p. 336.3

ENGSTROM RESORT

500.0 dead

101

Cedar post identified by owner as original corner

Ex hub on line
O.C.
nail at meas dist

SIX MILE LAKE

0°15'
2' 0" 30"

0°55'30"
2' 10" 51"

-588°39' E 2642.3 cab -

-1011.6-

W.C. C.L.O. Mon.

N

set ip

125.0

i.p. by Meyer & others previously

87°29' 00"

1322.7

N 88°32' 30" W

i.p. by Meyer 1956

326.12

108.45

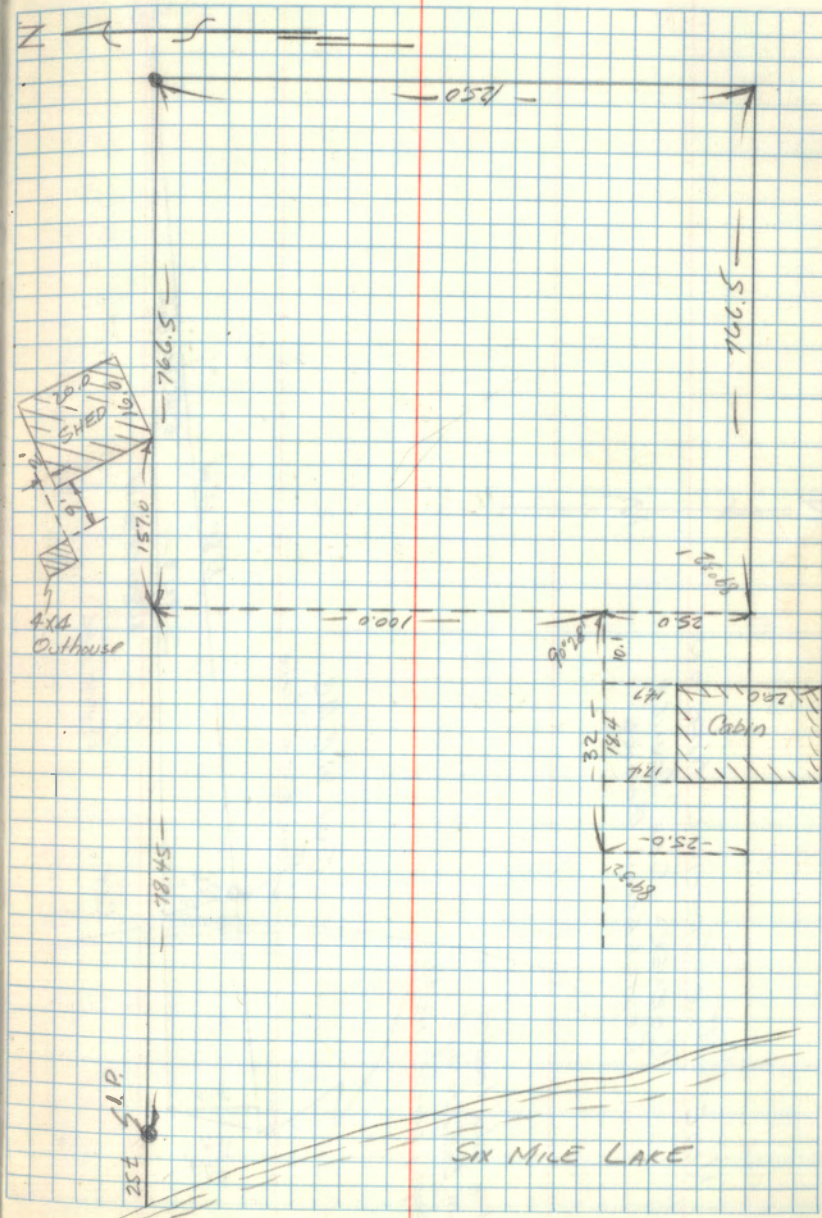
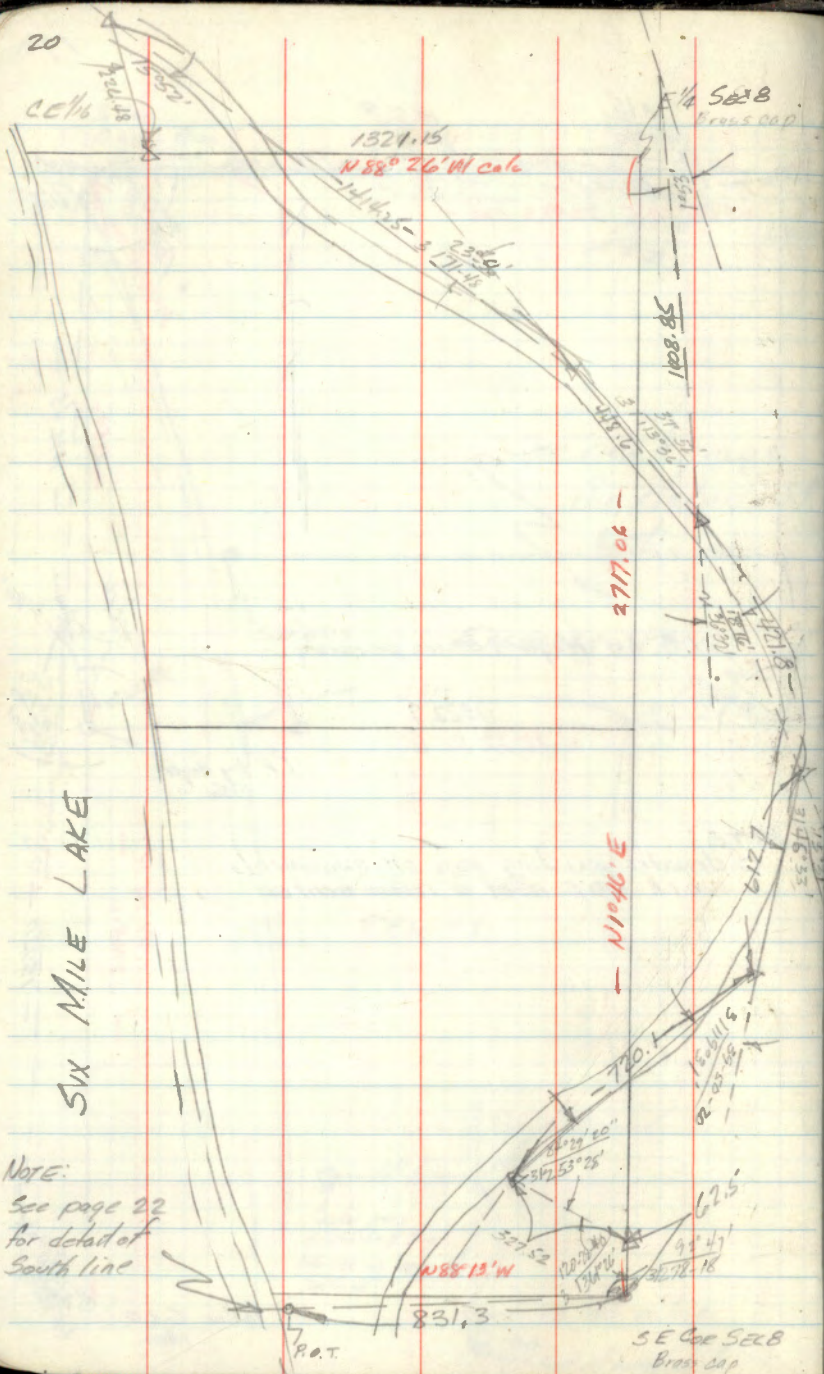
NOTE:
O denotes existing iron or monuments which were reset or re-monumented

51°41' 50" W
2718.1

1522.0

1/4 Cor. C.L.O. Mon.

1992
2' 10" 51"



NOTE: FOR SPECIFIC INFO ON
COENE'S SEE COENE'S
RESTORATION BOOKS

Pt in York located
from badly decayed
stumps, scribe visible

Set N.C. MC.

From old evidence

116
N70W

5"

3 1/2"
N65W

11.5"

N 88° 13' W

— 231.3

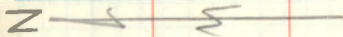
0° 45' 30" Calc

N 88° 58' 30" W

Random loc

P.O.T.

SEC
COR.



T145N

R/L

R29W

R28W

W. Okerman

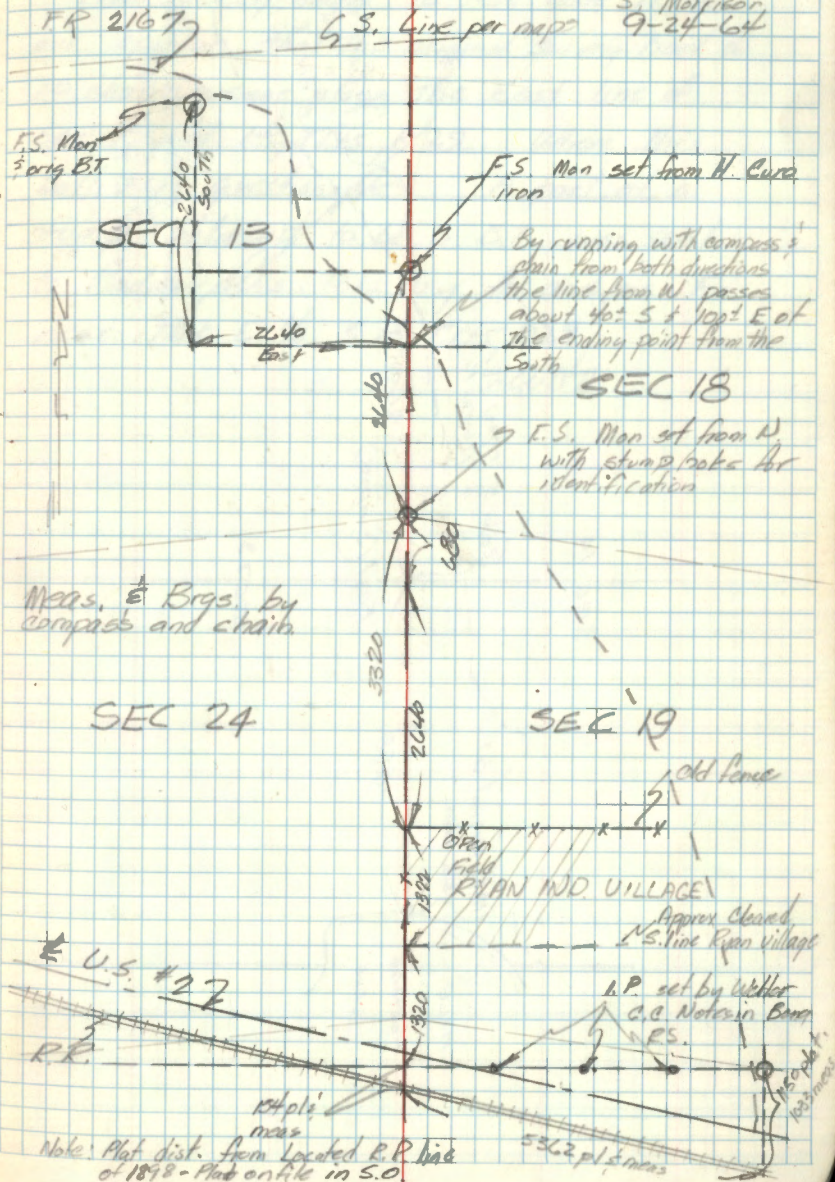
J. Ekstrom

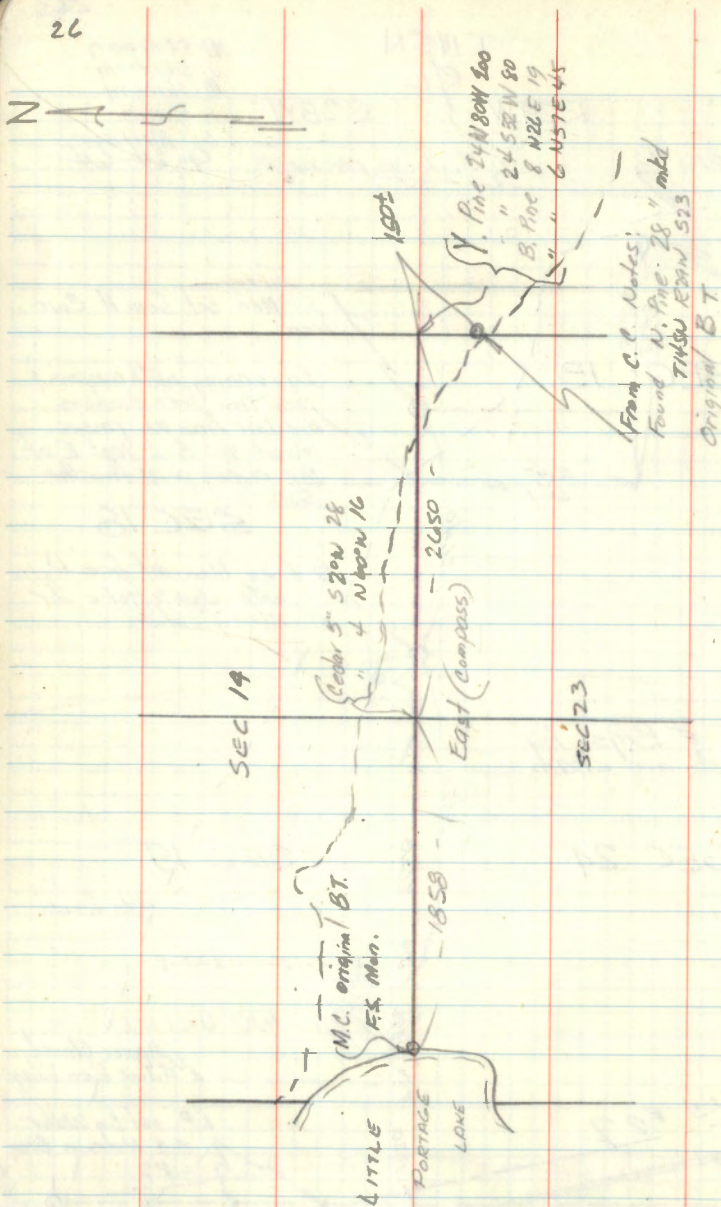
M. Hanson

J. Eahn

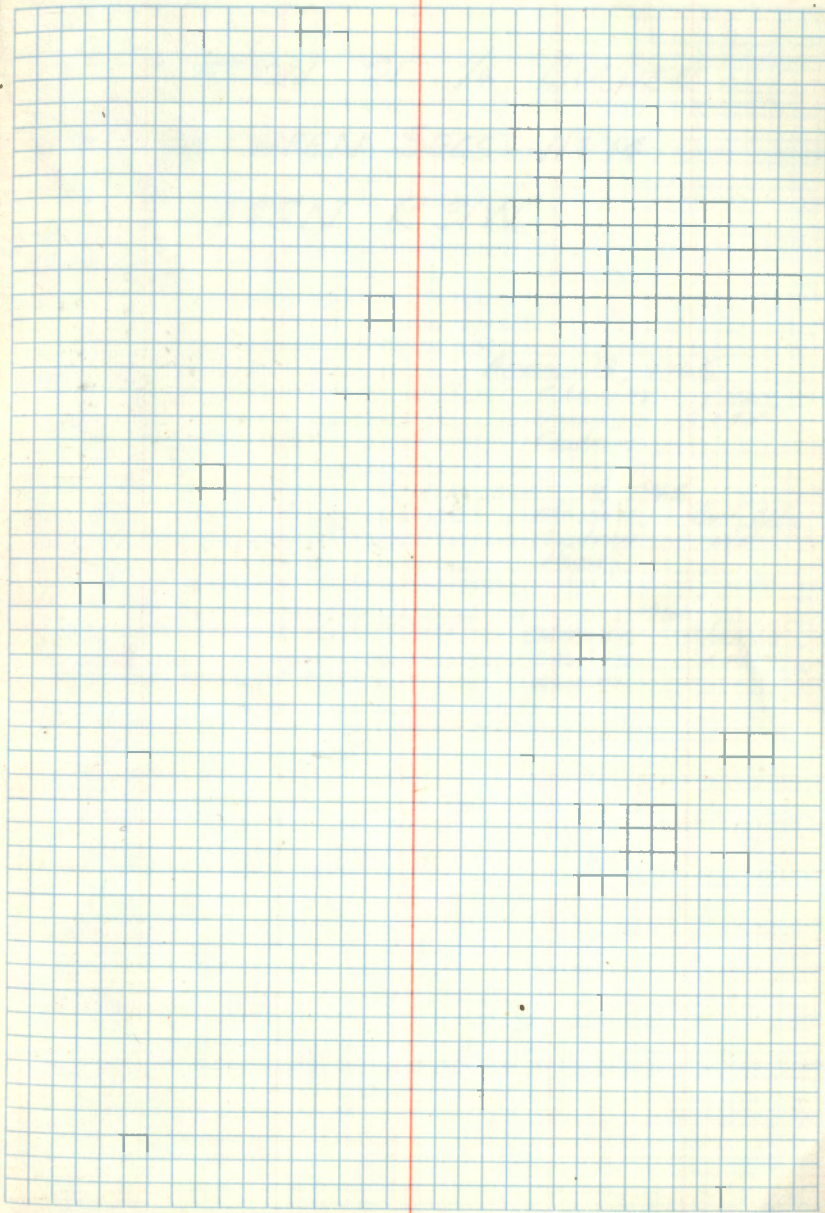
S. Melanson

9-24-64





Note: ^{1/20/65}
 From info gathered to this date it is our opinion that the original survey had a 10 chain overage along the East line of Sec 13 and 14, T14S, R29. Where this falls is questionable. A part of a stump believed to be a B.T. was sent to Madison, Wis. This day for analysis. Ed near the E 1/4 S 13, T14S, R29
 WND



LOCATION OF $\frac{1}{4}$ CORNER
 BETWEEN SECS. 11 & 14
 T145N R31W

APRIL 13, 1965

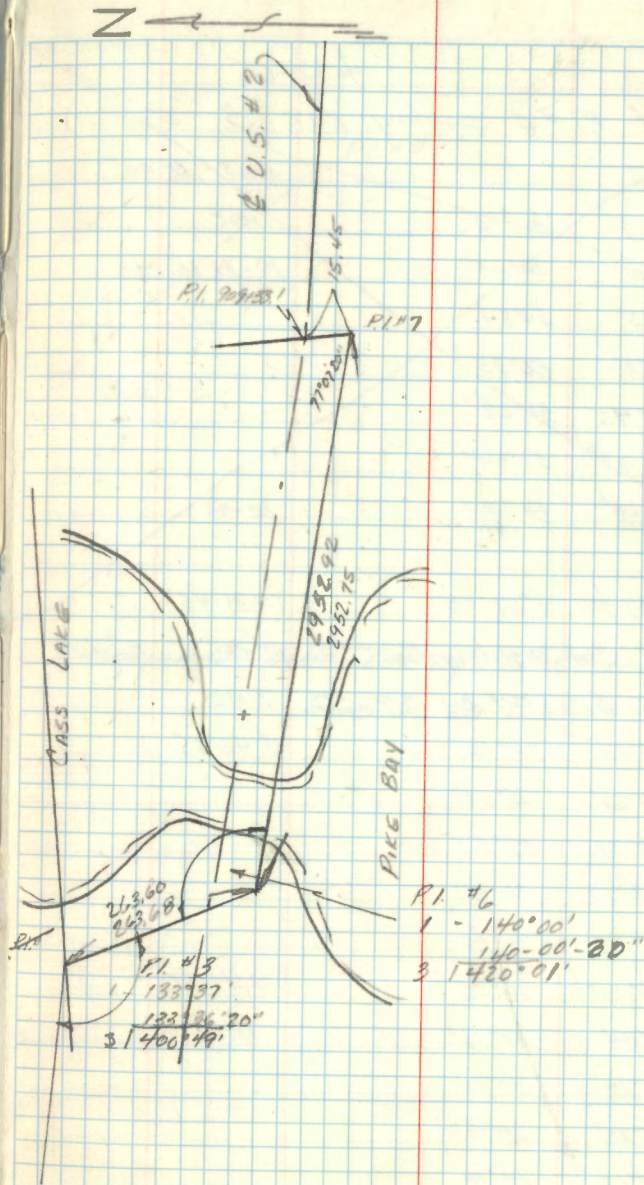
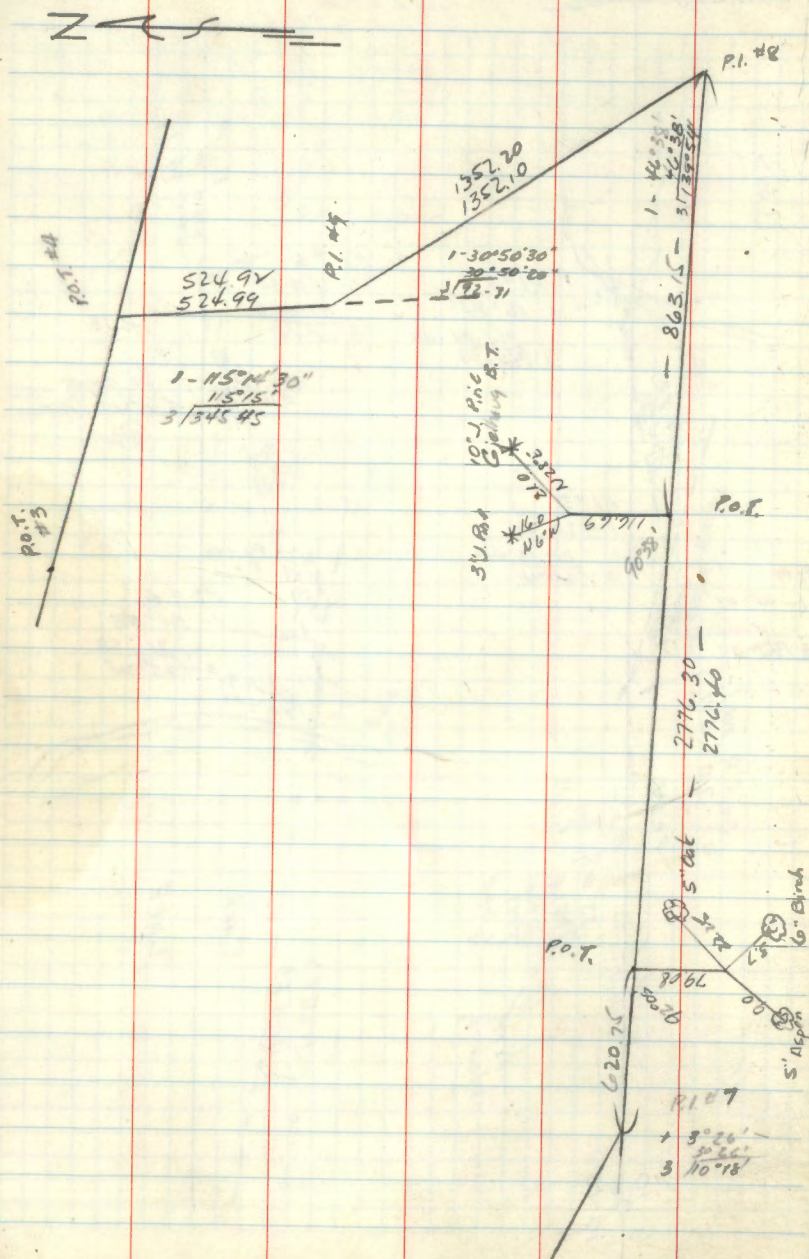
Okerman Clear
 Hansey +50°
 Ekstrom

14, 1965

Okerman Cool, Cldy
 Ekstrom +40°
 Hansey

16, 1965

Okerman Cloudy
 Ekstrom +45°
 Hansey

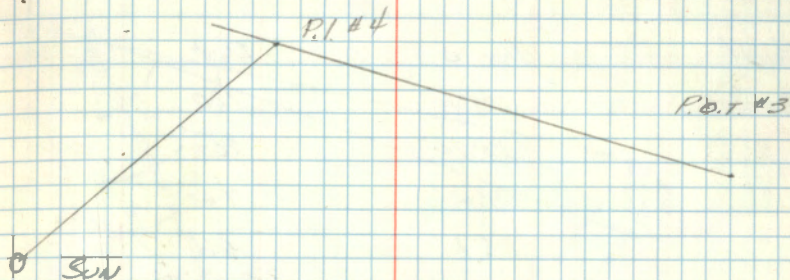


4-28-65

Transit at P.I. #4 sighting P.O.T. #3 0°00'

End 0°00'

	Horiz Δ	Vert Δ	Time
Direct	27°01'	50°09'	10-33-36
	27°45'	50°24'	
	28°21'	50°35'	
Reversed	29°46'	51°28'	
	29°33'	51°44'	
	30°20'	51°57'	10-46
	28°37'40"	51°02'50"	10-39:46"
Transit at P.I. #4 sighting P.O.T. #3 0°00'	5/6/65		
	Horiz Δ	Vert Δ	TIME
Direct	153°14'	28°15'	4:42:35
	153°22'	28°07'	
	153°39'	27°52'	
Reversed	153°27'	26°57'	
	153°39'	26°46'	
	153°51'	26°36'	4:49:50
Direct	151°04'	30°12'	4:31
	151°14'	30°04'	
	151°25'	29°53'	
Reversed	151°12'	29°00'	
	151°26'	28°48'	
	151°40'	28°37'	4:36:55

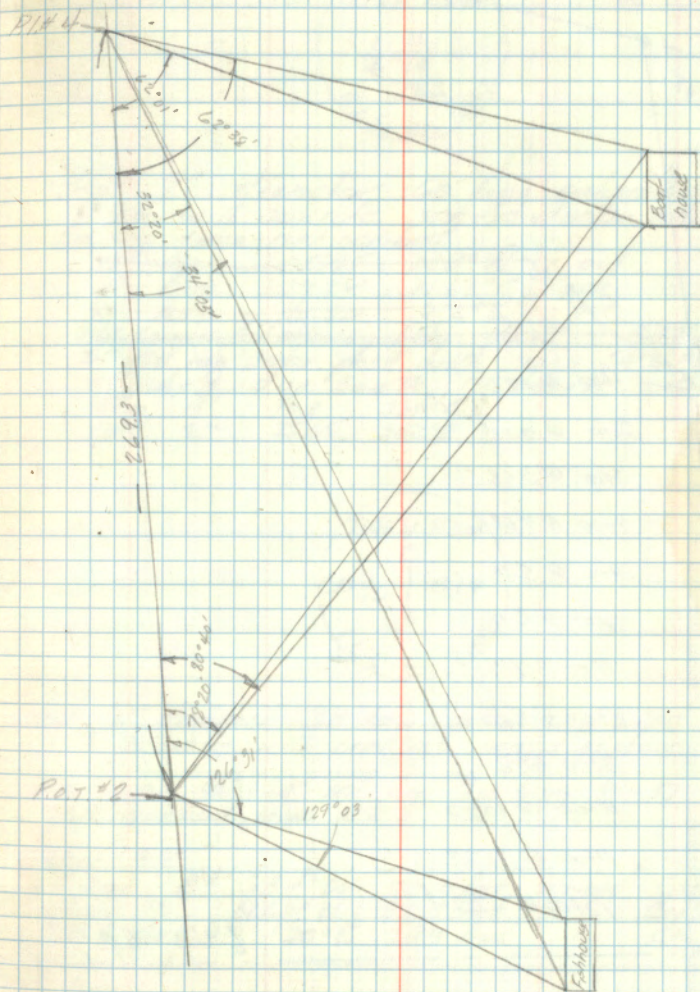


Computed solar bearing P.I. #4 to P.O.T. #3
 S68°30'20" E

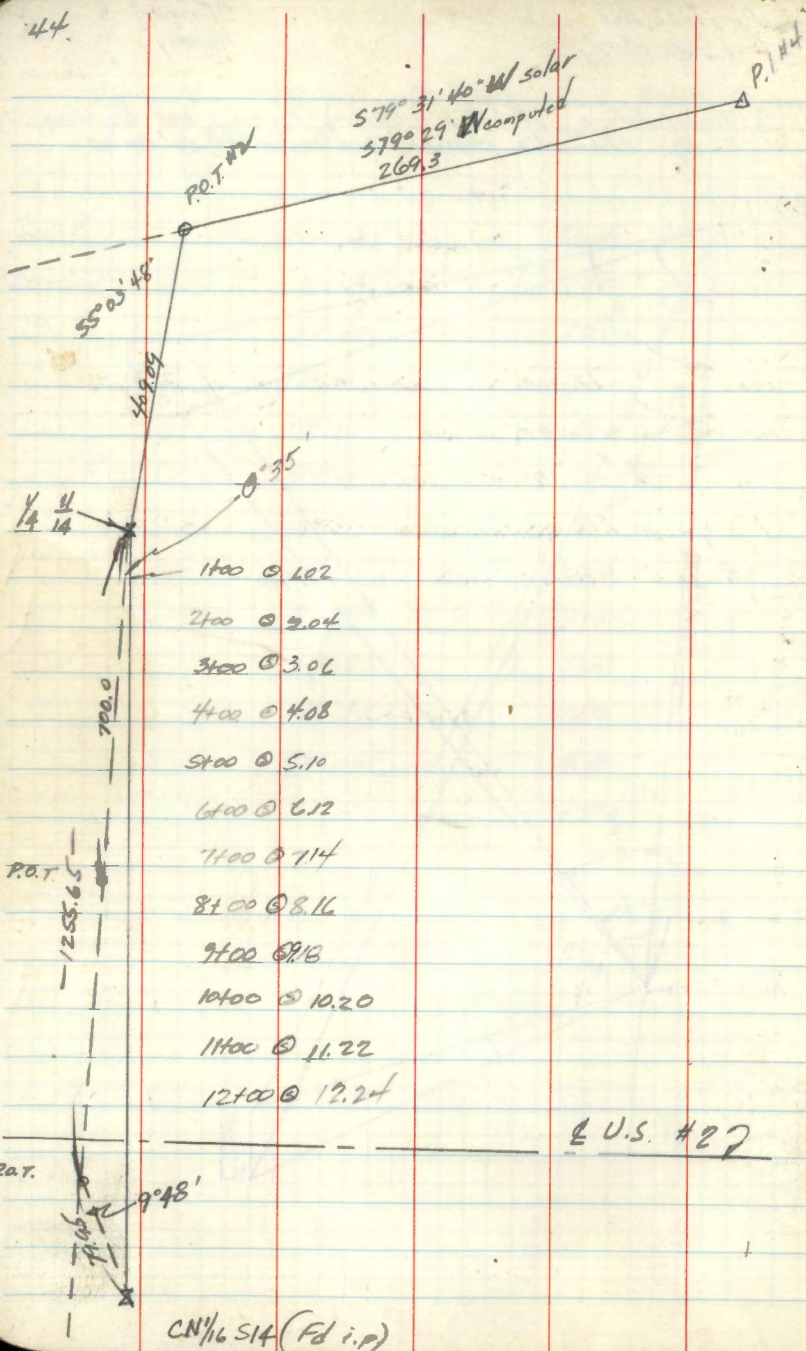
Tape of shoreline Northward from traverse

T @ P.O.T # 2 Backsight P.I. # 3

Point	Horiz d	Dist
Shoreline	109°30'	120 ✓
"	118°20'	260 ✓
"	121°10'	460 ✓
"	118°30'	660
"	114°20'	900
"	108°42'	980
"	103°10'	1090
"	93°55'	1200
"	88°10'	1300
"	82°30'	1430
"	81°05'	1630
"	77°30'	1930

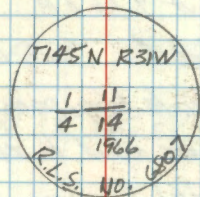
April 22, 1965
Cool +40° cloudyOkerman
HanleyTriangulation of fish cleaning house and building
along Channel - possibly boat house or oil house

44.



31
 January 29, 1966
 0° - clear

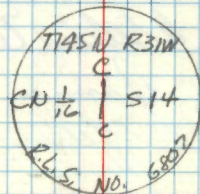
Olanon T
 Hansey - ch
 Ekstrom - ch
 Seward - observer



Set 2" diameter 60" long galvanized pipe
 filled with concrete set from solar calculation
 Bearing trees not scribed

~~7" Ash 65.95 N 8° W out~~
~~8" Elm 29.72 N 62° E ok~~
~~9" Ash 12.32 S 72° E oct.~~

NE corner Ashkerman bldg 46.45 S 37° W
 6" Red top cedar post with signs 54-2 S 54-A
 attached due south 10.9 feet out
 Elm 13" 70.2 S 34° E
 Oak 2" 25.65 S 62° E



Set 2" diameter 60" long galvanized pipe filled
 with concrete with brass cap marked as above

Fd. i.p. 3/4" x 20" set by Gjelhuug 89-37 by
 measurement from N 5 E.

New B.T.'s
 R. Oak 8" S 34° W 50.0 feet scribed CN 1/16 BT
 Ash 7" N 63° W 37.3 feet " CN 1/16 S14 BT
 Tw R. Oak 6" S 36° E 28.9 feet " CN 1/16 B.T.

February 2, 1966
JC

Clear 15°
Okanan
Hausey
Ekstrom

We arrived at job about 9:00 A.M. and proceeded to mark the E. line of Gov't Lot # with 1/4 stakes of Gov't. land, and by placing appropriate bdy. signs at intervisible locations. About 11:30 A.M. as we were about to set a post 700' South of the 1/4 corner of Sec 11, 314 a woman came out and told us we were trespassing and to leave. I told her we were nearly finished and were on our way out. She said we would need a court order to survey and that Mr. Westberg & Seward were told this by Ron (this was apparently Ron Gangelhoff's wife). I then tried to explain our right to survey and she turned her back without answering and left. We finished setting the post and left this line.

William D. Okerman

Witness — James Ekstrom
Jefferson E. Harsney

Note: see last page in F.B. for additional info

47

PIMUSHE LAKE SURVEY

T147N R30W

CASS LAKE RANGER STATION

SITE SURVEY

Part of Lot 10 Aud. Sub. No. 3

Beginning at a stake 80 rods
west and 40 rods north of SE
corner of Sec 9. thence run W.
40 rods; thence N 40 rods;
thence E 40 rods; thence S
40 rods to starting point.
Said tract to contain 10 Ac.
Situate on SW 1/4 of SE 1/4 Sec 9
T 145, R 31

April 8, 1966

Okelman
Ekstrom P.H. Chy.
Brener 140

April 11, 1966

Okelman Clear
Ekstrom 450
Brener

May 19, 1968

Okelman 240
Ekstrom
Brener

	HORIZ	VERT L	ELEV	DIST	CORR
T @ B.S. A			H.I. = 497 + 98.85 = 103.82		
Top	67°50'	0°	3.2	45	
"	3°45'	0°	5.1	200	
Side	12°35'	-1°	4.0	190	-3.4
Side	62°30'	0°	4.8	70	

T @ C B.S. STA B H.I. = 39 + 100.09 = 103.99

Line B-C 157.8 $\angle BCD = 135^\circ 24'$

Toe Swale	1°15'	0°	7.2	50	
"	9°00'	-2°	5.7	60	-2.1
"	60°15'	-4°26'	1.5	100	-7.5
Top sl	87°40'	-1°45'	3.3	130	-4.0
	150°40'	+2°50'	9.4	75	+3.7
Toe of Drive	263°30'	0°	3.2	70	
Slope of Drive	194°40'	+1°55'	4.5	100	+3.3
Top Walk Drive	280°35'	+2°00'	2.5	55	+1.9
NW Cor. Mark					
Top Fd.	280°28'	+2°00'	2.0	69	+2.4
S.W. Cor. Mark	293°11'	+2°00'	2.2	75	+2.6
Toe Pll	303°00'	0°	3.4	50	

T @ STA D B.S. STA C H.I. = 403 + 101.60 = 105.63

Line C-D = 187.6 $\angle CDE = 253^\circ 34'$

Slope	118°00'	0°	8.5	90	
"	189°15'	0°	5.0	50	
" Top	308°05'	0°	3.5	100	

Corr Red ELEV

$\angle ABC = 96^\circ 35'$

3.2	100.6
5.1	98.7
7.4	96.4
4.8	99.0

7.4	96.8
7.8	96.2
9.0	95.0
7.0	97.0
3.7	100.3
3.2	100.8
1.2	102.8
0.6	103.4
+0.4	104.4
+0.4	104.4
3.4	100.6

8.5	97.1
5.0	100.6
3.5	102.1

	HORIZ	VERT	ELEV	DIST	CORR
	T @ D			H.I. = 105.6	
E Drive	308°10'	0°	2.1	150	
	T @ E B.S. STAD		H.I. = 4.15 + 100.87 = 105.02		
	LINE D-E = 110.4		∠DEF = 93°05'		
Top of Drive	218°35'	0°	6.2	100.0	
TOP of Ridge	180°40'	0°20'	3.8	160	-.9
	47°	0°	4.3	80	
fence line	146°21'	0°	6.5	150	
	141°45'	0°	9.8	70	

	HORIZ	VERT	ELEV	DIST	CORR
	T @ F B.S. STA E		H.I. = 4.05 + 101.40 = 105.45		
	LINE E-F = 187.5		∠EFG = 89°47'		
Swale	64°25'	-3°30'	4.4	90	-5.5
Top St-Dr	301°30'	0°	8.9	90	
St - Fence	130°00'	0°	6.6	110	
NW-Cor.	155°40'	-0°45'	1.6	115	-1.5
Br. Fence	175°15'	-1°10'	1.2	51	-1.0

	HORIZ	VERT	ELEV	DIST	CORR
	T @ G B.S. STA F		H.I. = 4.21 + 97.89 = 102.10		
	LINE F-G = 68.6		∠FGH = 127°35'		
Top	182°00'	0°	9.0	60	
S	124°50'	0°	6.6	65	

CORR ROD

	2.7	102.9
	6.2	98.8
	4.7	100.3
	4.3	100.7
	6.5	98.5
	9.8	95.2
	105.45	
	9.9	95.6
	8.9	96.6
	6.6	98.9
	3.1	102.4
	2.1	103.3
	102.09	
	9.0	93.1
	6.6	95.5

Hori L	vert L	Elev.	Dist	Corr
T @ H	B.S.	Sta G	HI. 4.2 + 97.25 =	
Line	G-H	108.1	Δ GHI = 226° 08'	
146° 05'	2° 30' -	1.3	72	-3.1
Toe of Slope 278° 0'	2° 35' -	5.4	73	-3.3

T @ I	B.S.	Sta H	HI. 4.0 + 95.93 =	
Line	H-I	66.0	Δ HIT = 166° 16'	
261° 0'	0° 15' -	6.1	230	-1.0
278° 40'	3° 30' -	3.9	180	-10.9
137° 40'	0° 45' -	1.2	75	-1.0
205° 30'	0° 40' -	6.3	70	-0.8

T @ J	B.S.	Sta I	HI 4.06 + 98.29	
Line	I-J	98.8'	Δ IJK = 143° 20'	
218° 20'	0°	7.5	135	
217° 50'	5° 05' -	3.1	230	-20.3
117° 35'	3° 35' -	5.6	78	-4.9

T @ K	B.S.	Sta J	HI 4.25 + 94.62 =	
Line	J-K	90.0'	Δ JKL = 138° 37'	
142° 40'	0°	4.8	44	
228° 45'	0°	5.3	56	
274° 13'	1° -	5.3	60	-1.0

CORR. ROD

101.95	
44	97.6
87	93.3
99.93	
71	92.8
148	85.1
24	97.7
72	92.7
102.45	
75	95.0
23.4	79.1
10.3	92.0
98.87	
48	94.1
53	93.6
63	92.6

Hori L	Vert L	Elev	DIST	Core
T @ L	B.S.	STA. K	H.I.	4.05 + 96.35
LINE	K-L	86.7	ΔKLM	223°43'
303°40'	5°45'	- 2.4	80	- 7.7
119°40'	6°10'	+ 9.3	55	+ 5.9
63°05'	1°20'	- 4.4	90	- 2.1

T @ M	B.S.	Sta L	H.I.	4.07 + 101.08
LINE	L-M	64.7	ΔLMA	280°16'
no shots needed				

T @ A	B.S.	Sta M	H.I.	5.21 + 97.11 =
LINE	M-A	161.6	ΔMAB =	5°40'

VOID	256°40'	8° -	3.5	95	
	249°05'	1°25' -	8.3	253	
	235°12'	2°05' -	4.5	310	
	185°40'	2°05' -	5.8	150	

248°40'	- 2°22'	6.3	160	10.0
234°20'	0°	8.0	410	0
221°06'	- 0°06'	7.6	315	.6
205°	- 0°13'	7.3	270	1.0
187°30'	- 3°06'	6.2	255	13.8
233°40'	- 3°20'	7.5	105	6.1
269°30'	- 3°03'	6.5	98	5.3

Core Rod

100.40

101

90.3

~~15.2~~ 3.4~~25.2~~ 93.0

6.5

93.9

105.15

102.31

106.3

96.0

8.0

94.3

8.2

94.1

8.3

94.0

20.0

82.3

12.6

89.7

11.8

90.5

Elevations of hubs

Sta BS HI. FS. ELV.

BM[#] 2.00 102.00 100.00

B 3.15 98.85

C 1.91 100.09

6.09 106.18

D 4.58 101.60

E 5.31 100.87

2.42 103.29

F 1.89 101.40

G 5.40 97.89

3.39 101.28

H 3.53 97.75

2.05 99.80

I 3.87 95.93

J 1.41 98.39

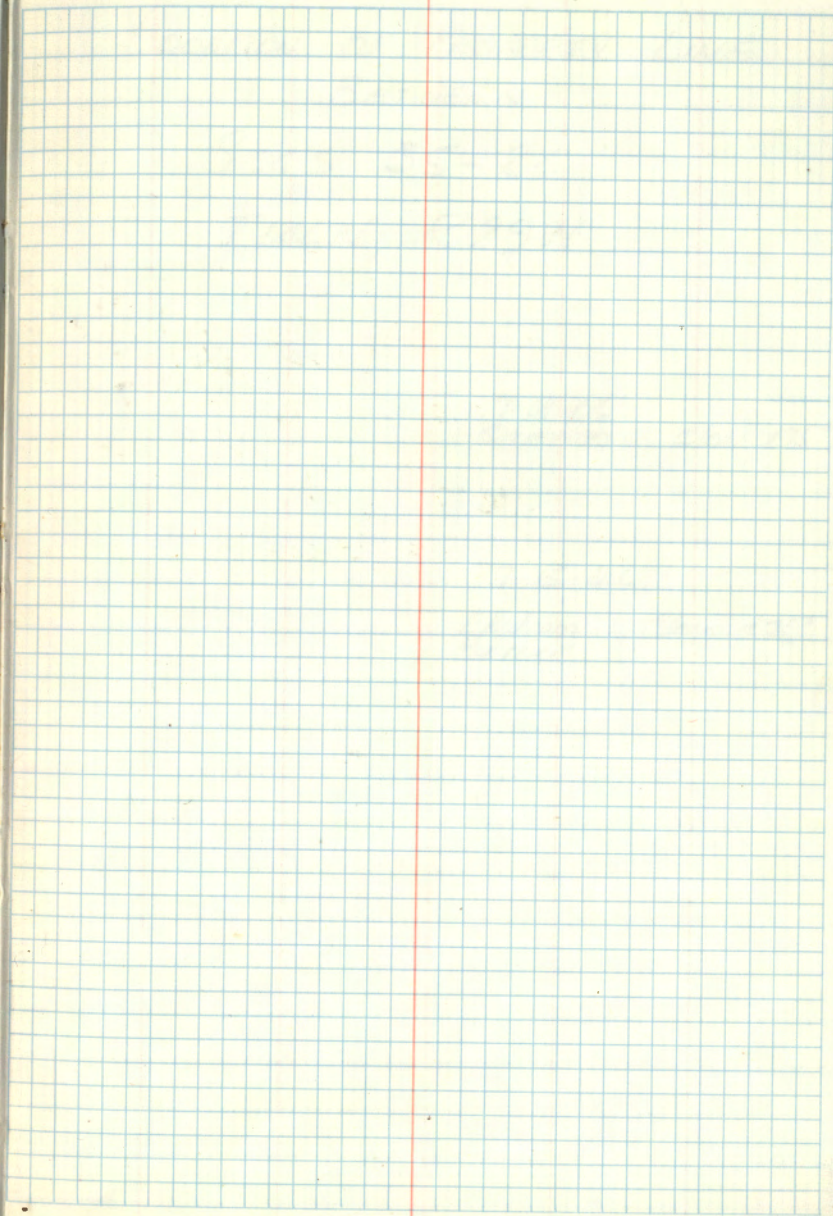
1.35 99.74

Spike in 5" J. Pine 55' N of Sta B

STA	B.S.	H.I.	F.S.	ELEV
		99.74		
K			5.12	94.62
	7.88	102.50		
L			6.15	96.35
M			1.42	101.08
	3.18	104.26		
A			7.15	97.11
B.M. #1			4.24	100.02

	HORI L	VERT L	ROD	DIST	COFF
T @	STAA	B.S.	STA M	H.I. = 5.1 + 97.1 = 102.2	
Top SW-Fc	279°55'	0°	9.1	100	
Top-Fc	277°20'	0°	4.9	170	
Top SW	318°30'	-3°05'	2.0	110	5.9
" "	338°20'	-3°30'	2.0	90	5.5

COCK ROD	ELEV
9.1	93.1
4.9	97.3
7.9	94.3
7.5	94.7



LOCATION OF PROPERTY LINE
BETWEEN

SEC'S 35-26

T146N, R29W

7-13-66
Okerman Clear 175°

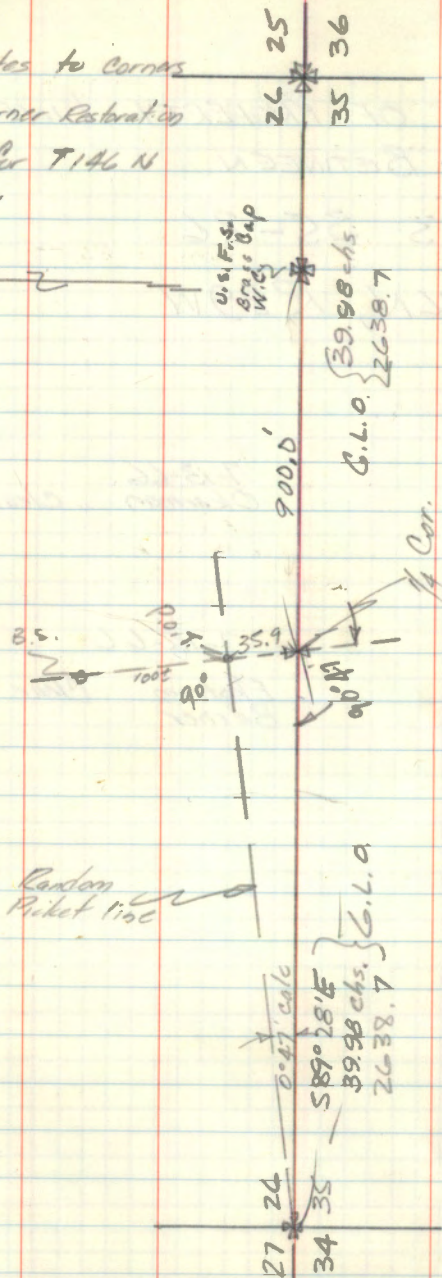
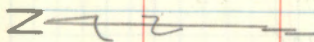
7-15-66
Ekstrom Clear 175°
Berner

For notes to corners

see Corner Restoration

Book for T146 N

R29W

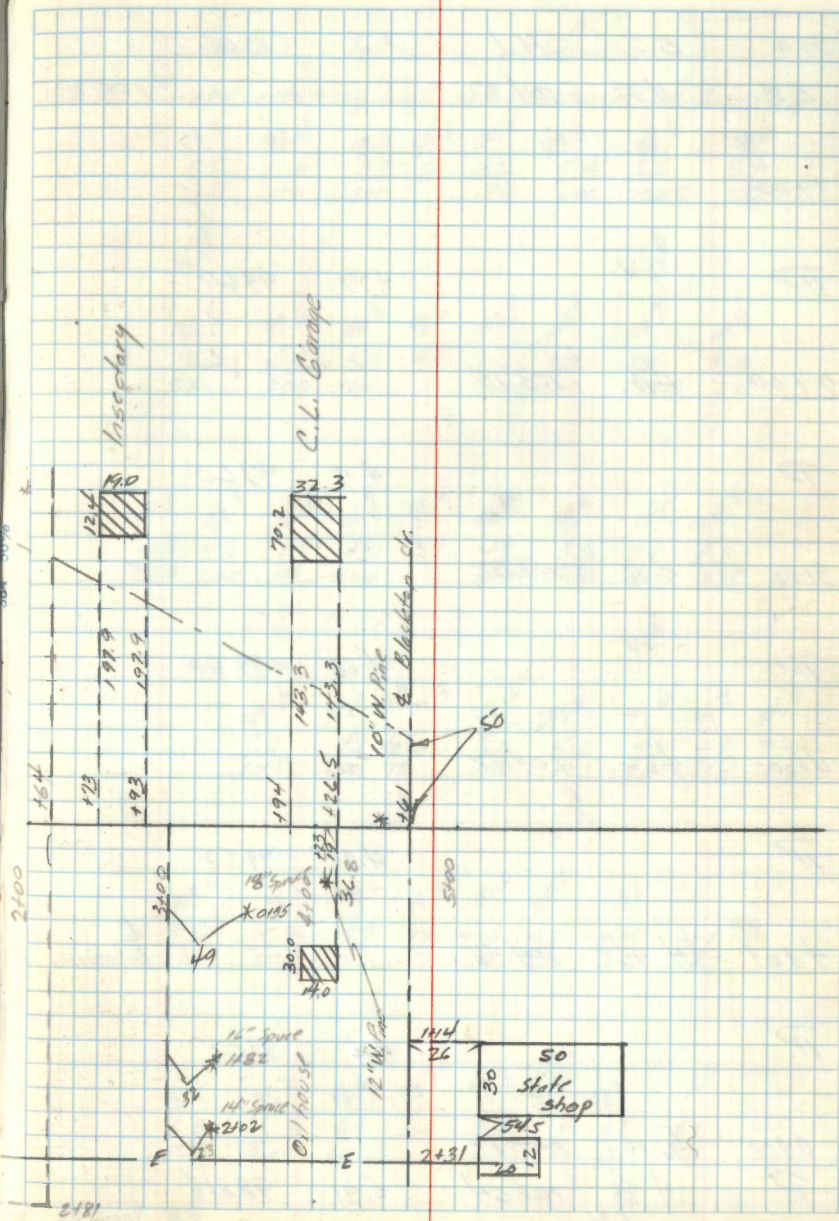
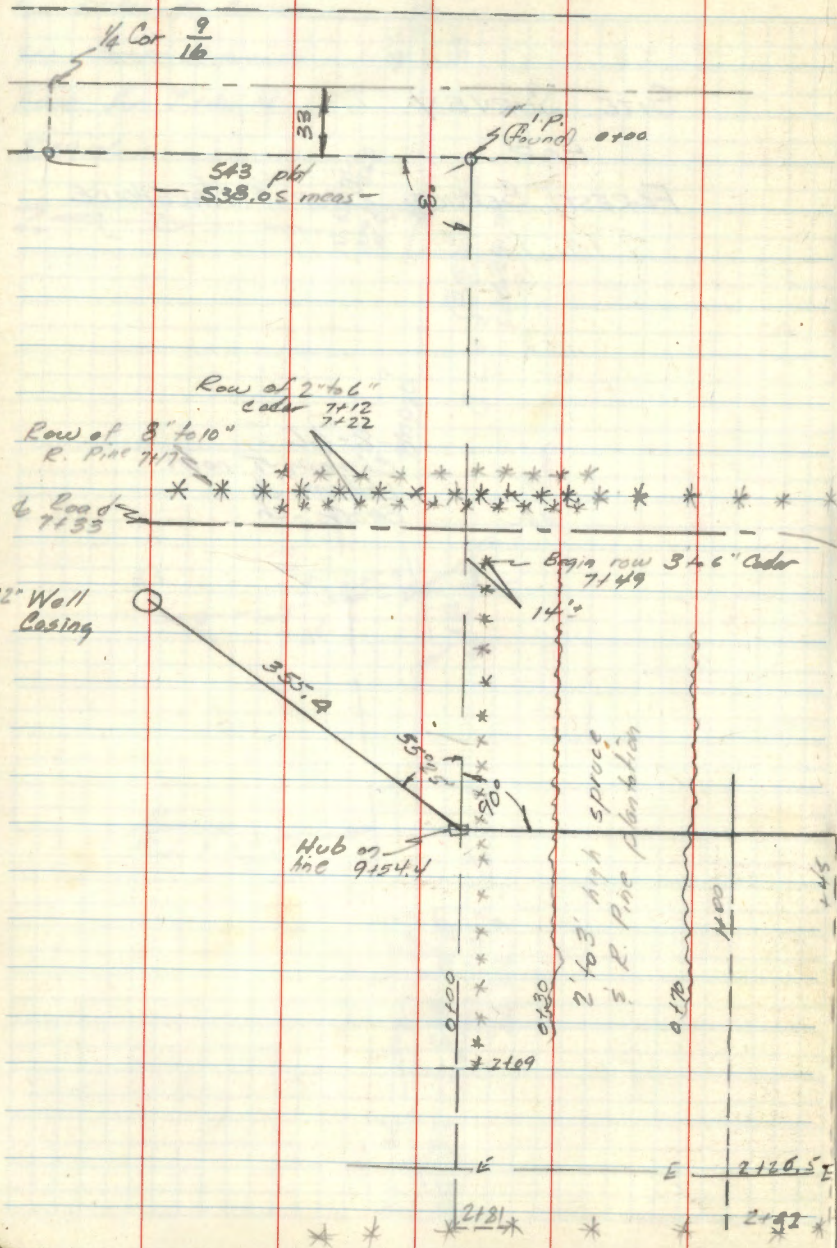


SITE SURVEY

FOR

FOREST SERVICE SHOP & WAREHOUSE

8-8-66
 Cleiman - notes
 Ekstrom - ch
 Bantley - ch



STA	B.S.	I.I.	F.S.	ELEV.
B.M.	4.37	104.37		100.00

1+00

IP			4.77	99.60
----	--	--	------	-------

2+00	4.13	103.73		
------	------	--------	--	--

IP			4.13	99.60
----	--	--	------	-------

3+00	4.06	103.66		
------	------	--------	--	--

IP			4.06	99.60
----	--	--	------	-------

4+00	4.82	104.42		
------	------	--------	--	--

IP			4.90	99.52
----	--	--	------	-------

4+61	4.96	104.42		
------	------	--------	--	--

↓
B. Terminal Dr.

IP			4.86	99.62
----	--	--	------	-------

0+00	5.10	104.72		
------	------	--------	--	--

IP	4.83	103.64	5.91	98.81
----	------	--------	------	-------

B.M.	3.67	100.02		Same As Above
------	------	--------	--	---------------

LT.
(North)

RT.
(South)

S.W. Corner retaining wall into basement of Insectory

98.9	98.4	98.7	99.4	100.2	99.0	98.8	99.0
5.5	6.0	5.7	5.0	4.2	5.4	5.5	5.4
221	200	100	100	200	200	220.5	287

98.5	97.6	98.6	98.5	100.1	100.8	100.7	99.9
5.7	6.1	5.1	5.2	3.6	2.9	3.0	3.8
221	200	100	100	200	200	220.5	281

99.3	98.5	98.8	98.9	98.6	98.9	97.9	100.6	100.7
4.4	4.9	4.9	4.8	5.1	4.8	3.8	3.1	3.0
250	200	137	100	100	200	219	275	

99.4	99.6	99.6	99.3	99.4	99.2	99.6	99.7	104.6
5.0	4.9	4.5	4.5	5.0	5.2	4.8	4.7	2.8
143	100	79	100	176	200	230	300	

100.0	99.6	99.6	99.7	100.0	100.0	99.6	
4.5	4.9	4.9	4.8	4.5	4.5	4.9	
270	200	100	100	200	2.31		

98.7	98.2	98.6	99.7	99.3	98.6	99.6	100.0
6.0	6.5	6.1	5.0	5.4	6.1	6.1	4.7
241	200	100	100	200	200	281	

April 18, 1967, elev + 40°

Oleman T & Wates
Hansen Ch
Eklstrom Ch.

Observers
J. Seward }
T. E. Roberts } U.S.F.S.

W. Howard Lead } B.I.A.
Howard Latrine }

Louis Welch Cass Co. Deputy
Chapich Sheriff

Donald Hanson Deputy U.S.
Marshall

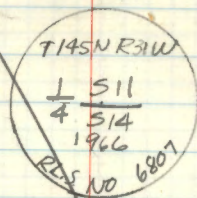
GANGELHOFF SURVEY
14-145-31

We reset the $\frac{1}{4}$ corner between Sec 11 & 14
T145N R31W with the field crew as
noted on the preceding page.

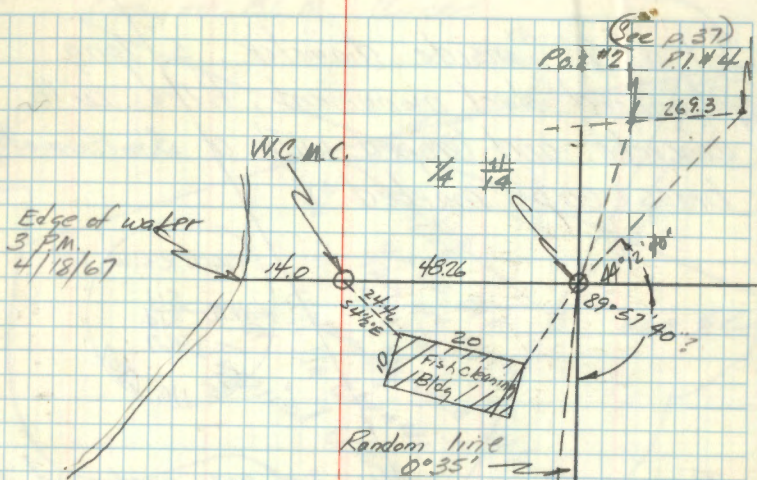
The following ties to the corner as previously
reestablished (1-31-66 page 45 this book) were
recovered

NE corner of fish cleaning bldg	46.45	S37°W
9" Ash	43.32	S12°E (Nail flush in surface)
8" Elm	29.72	N62°E " " " SE "

Corner was marked with 2" inside diameter
5' long galvanized monument, filled with
concrete and capped with a 3" diameter
brass cap marked -

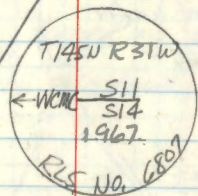


Note: this is a duplicate of the corner previously
removed which was of public record in the office
of the Cass Co. Reg of Deeds



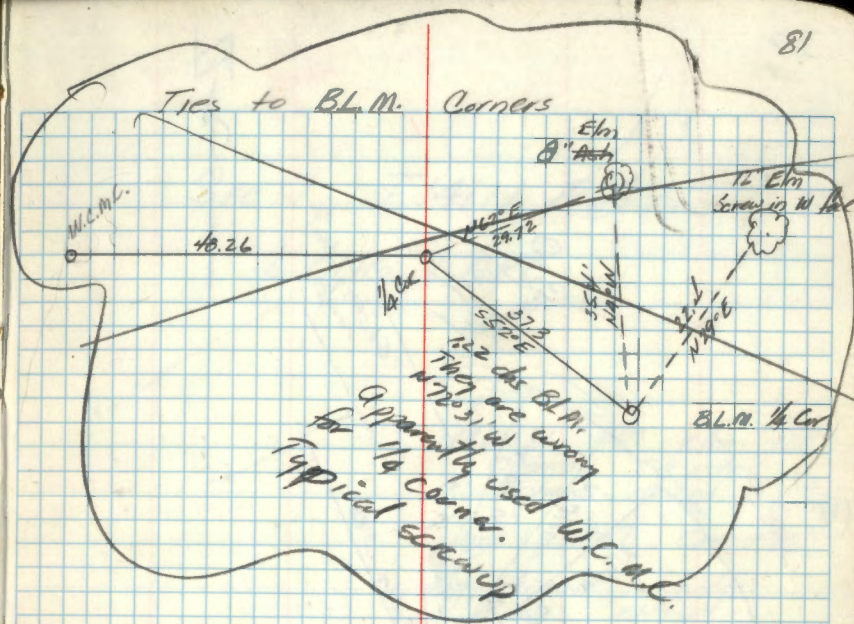
Removed August 11, 1969
who

Set a 2" inside diameter, 5' long galvanized steel monument, filled with concrete and capped with a 3" diameter brass cap marked



Those remaining after 3:00 PM continued to survey. Okerman, Hansey, Seward - the rest had gone with the Deputy sheriff to a municipal court hearing at 3:30 PM. We proceeded until about 4:00 P.M. when the Deputy Marshall returned and instructed us to stop the survey and leave the property which we did. We were just about to reestablish our previous random line.

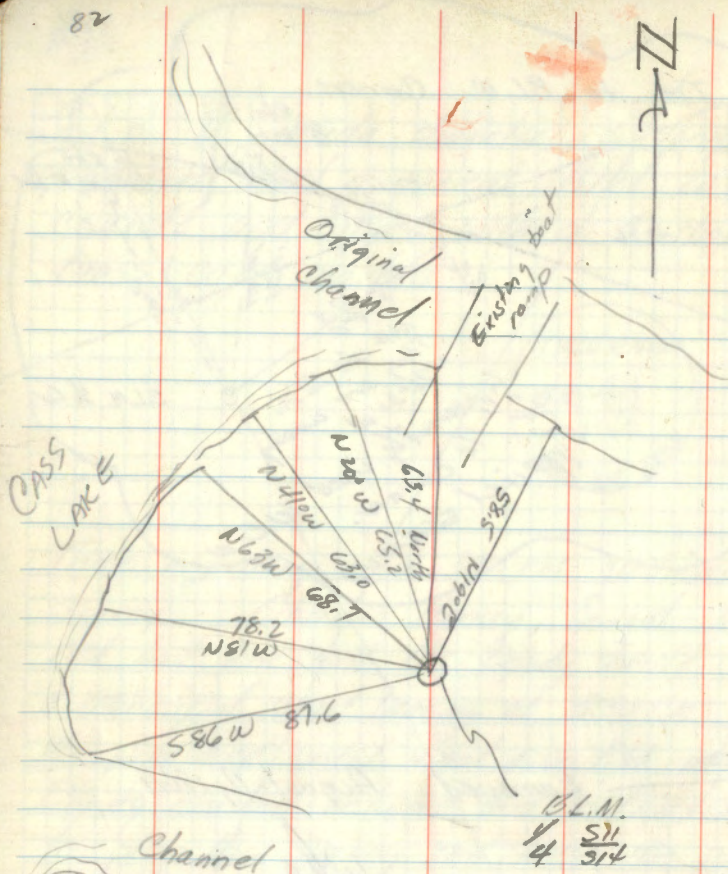
Note: See last page for additional rfb



Removed August 11, 1969

who

Monument reset on E-W 1/4 line
67.85 feet east of B.L.M. 1/4 Cor.



SEC 7, T14N, R21W
LONG LAKE

May 31, 1967 clear +65°
Okerman T's notes
Ekstrom ch 5 rd

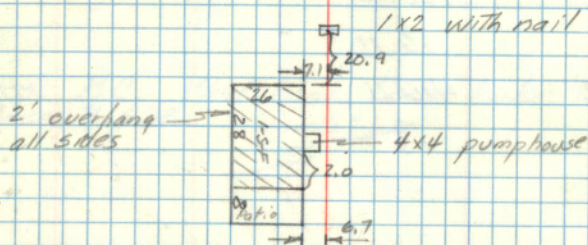
June 1, 1967 clear +75°
Okerman T's notes
Allen ch 5 rd

June 2, 1967 clear +75°
Okerman T's notes
Ekstrom T's ch
Allen ch 5 rd

June 5, 1967 clear +70°
Okerman T's notes
Allen ch 5 rd

STA	Hor Dist		
Sec. Cor.			
	100.00		
	100.00		
	57.41		
P.O.T #1			257.41
	100.00		
	100.00		
	100.00		
	38.33		
M.C.			595.74
	4.33		
	100.00		
	39.07		
P.O.T #2			739.07
	60.93		
	100.00		
	100.00		
	100.00		
	11.12		
P.O.T #3		372.05	1111.12
	88.88		
	100.00		1249.1
	62.41		
	62.33		
P.O.T #4		251.29	1362.85

G.L.O. B.C. SW Cor sec 7



M.C. on intersection of original meander line
B.C. set by G.L.O. in 1919. Cap removed, but
corner recovered from 2' overhang S.T.'s

1x2 with nail

red head

Barb wire fence N-5

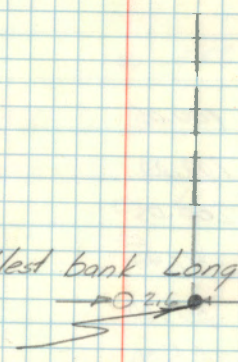
5" basswood stump with nail
red head

2.2 offset south

STA	Hor Dist
P.O.T. #4	100.00
	100.00
	100.00
	100.00
	16.11
M.C.	416.11

1778.52

G.L.O. B.C. West bank Long Lake between
 Secs. 7 & 18



STA	Hor Dist	
Pot # 4		1061.40
	100.05	
	100.00	
pot # 3	200.05	861.35
	200.05	200.05
	47.90 ⁶²	
	50.00	
	65.00	
	85.00	
	55.00	
	100.00	
pot # 2	402.00 ⁶²	458.73
	482	
	100.00	
	100.00	
	35.00	
	45.00	
pot # 1	284.82	173.91
	73.91	
	74.02	
	100.00	
	173.91	

S.M.C.

☐ 1x2 hub with nail

☐ 1x2 hub with nail

☐ 1x2 hub with nail

● Red head

Special M.C. on WX the
Sea 7

STA

HOR DIST

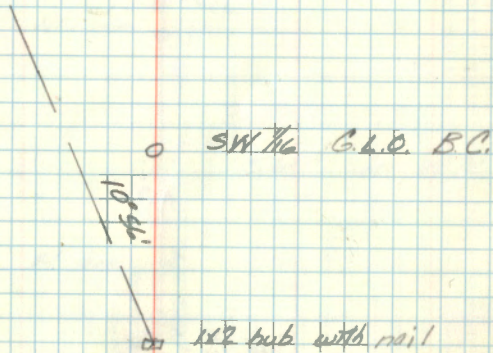
B.C.

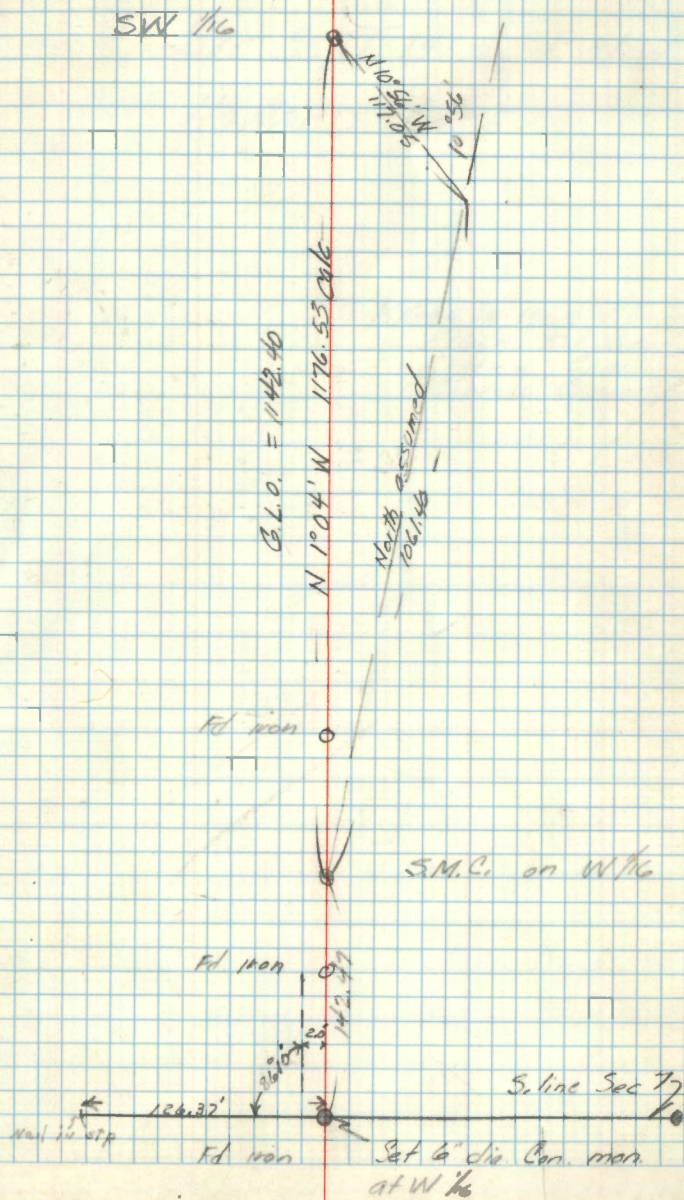
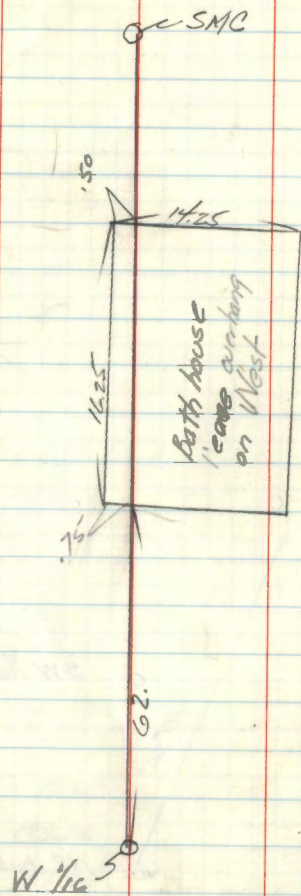
117.05

17.05

100.00

P.O.T. #4

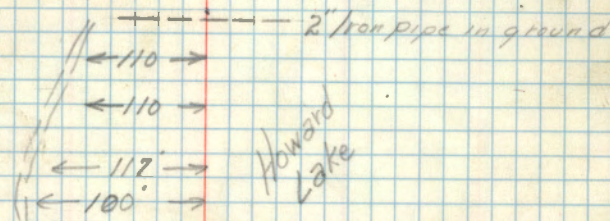
117.05



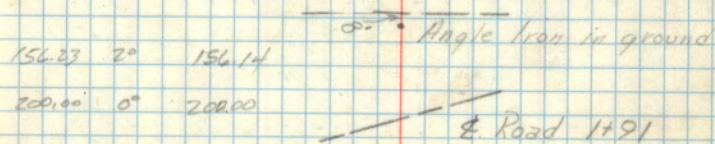
SEC. 30, T 14 N, R 31 W
HOWARD LAKE

MARCH 13, 1968 Cloudy + 40°
Elliott T. Note
Ekstrom Chain
Monson Chain.

Sta. at	Sta. to	Dist	Vert &	CORR. DIST
		104.15		
		200.00		
		200.00		
M.C.	M.C.	504.15		504.15
		189.25		
		200.00		
Pot # 1	M.C.	389.25		389.25
		66.83		
M.C.	Pot # 1	66.83		66.83
		456.08		
		169.85		
		200.00		
		200.00		
		200.00		
M.C.	M.C.	769.85		769.85
		121.53		
B.C. $\frac{519}{530}$ $\frac{1}{4}$	M.C. East	121.53		121.53



Set. 01



100.00 3°30' 99.81
156.95

Nail in Stump

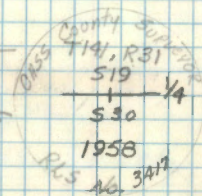
Pipe in ground M.C.

Howard Lake

769.86

Pipe in ground M.C.

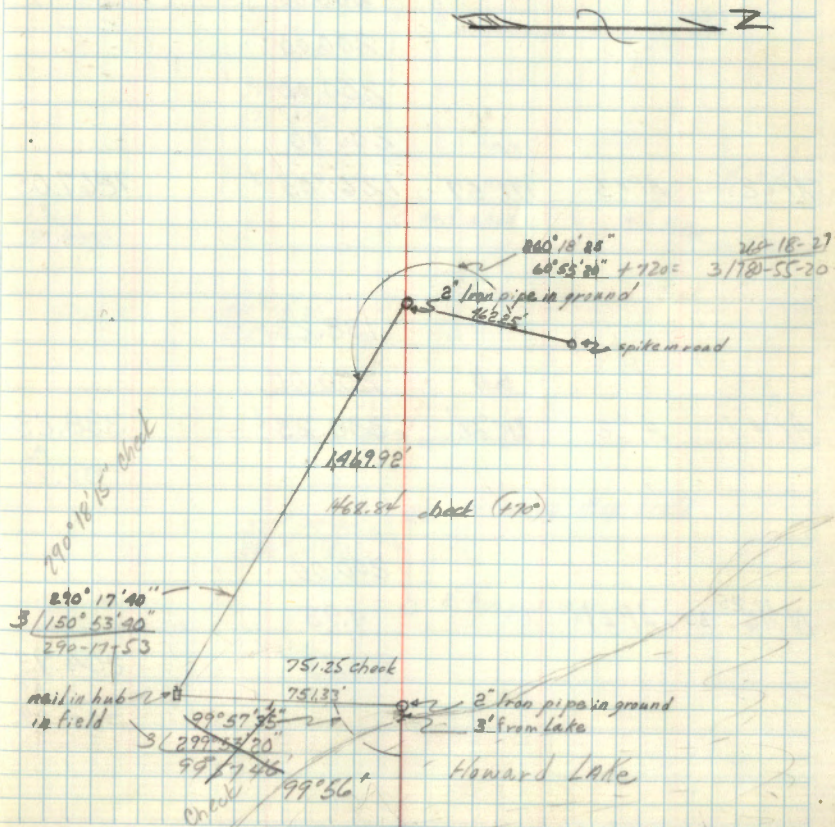
121.67



check
260° 18' 20"

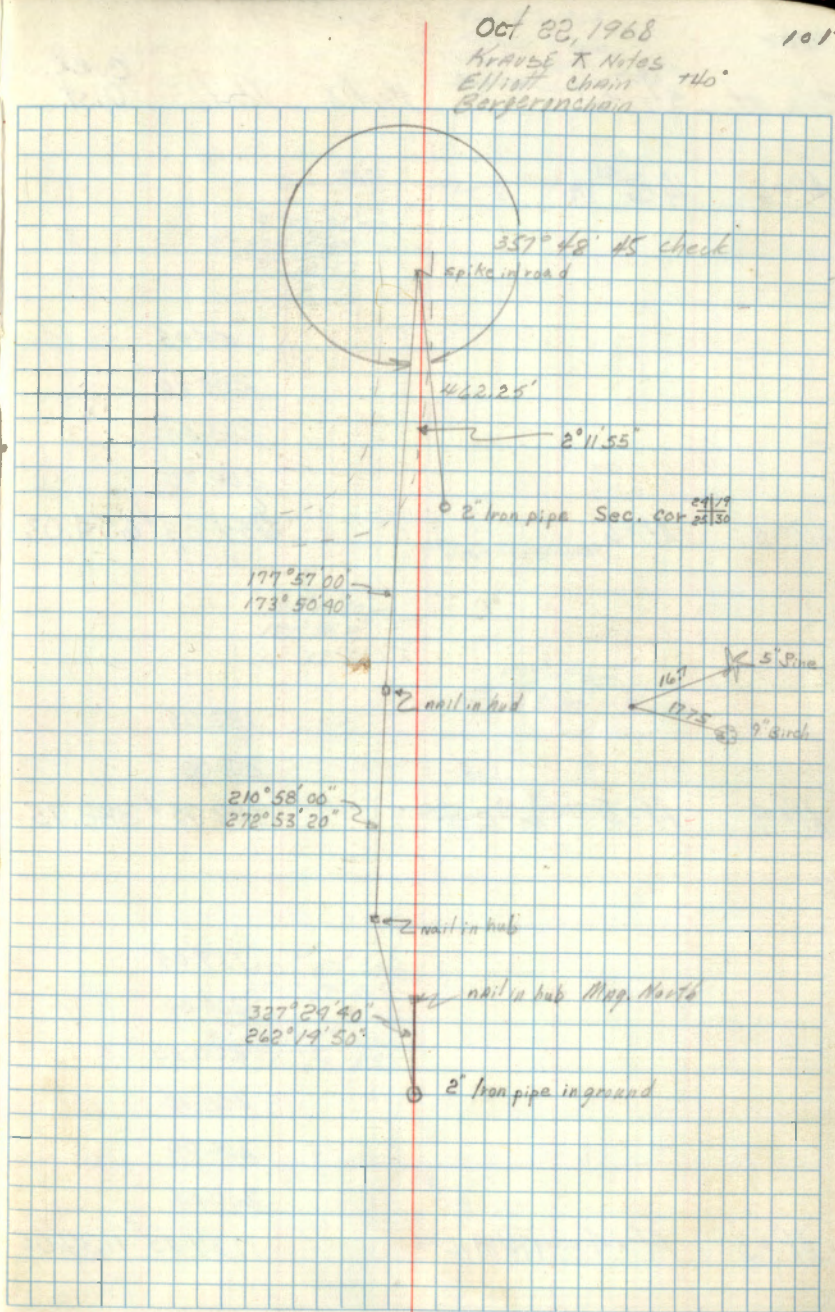
Appx. 24/19
See Cor. 25/20

MC.



100

Sta. #	Sta. to	Dist.	Vert. X	Corr. Dist.
AP#3	AP#4	357' 18" JS		
		6705		
		200.00		
		200.00		
		200.00		
		200.00		
		200.00		
		200.00		
		200.00		
		check 200.00		
AP#2	AP#3	177° 57'	1267.05 ✓	1267.05
				<u> .25</u>
				1266.80
			138.23	
		check 200.00		
AP#1	A#2	210° 58'	338.23 ✓	338.23
				<u> .06</u>
				338.17
			200.00	
			4.93	
N 1/4 25/30	AP#1		204.93 ✓	204.93
				<u> .04</u>
				204.89

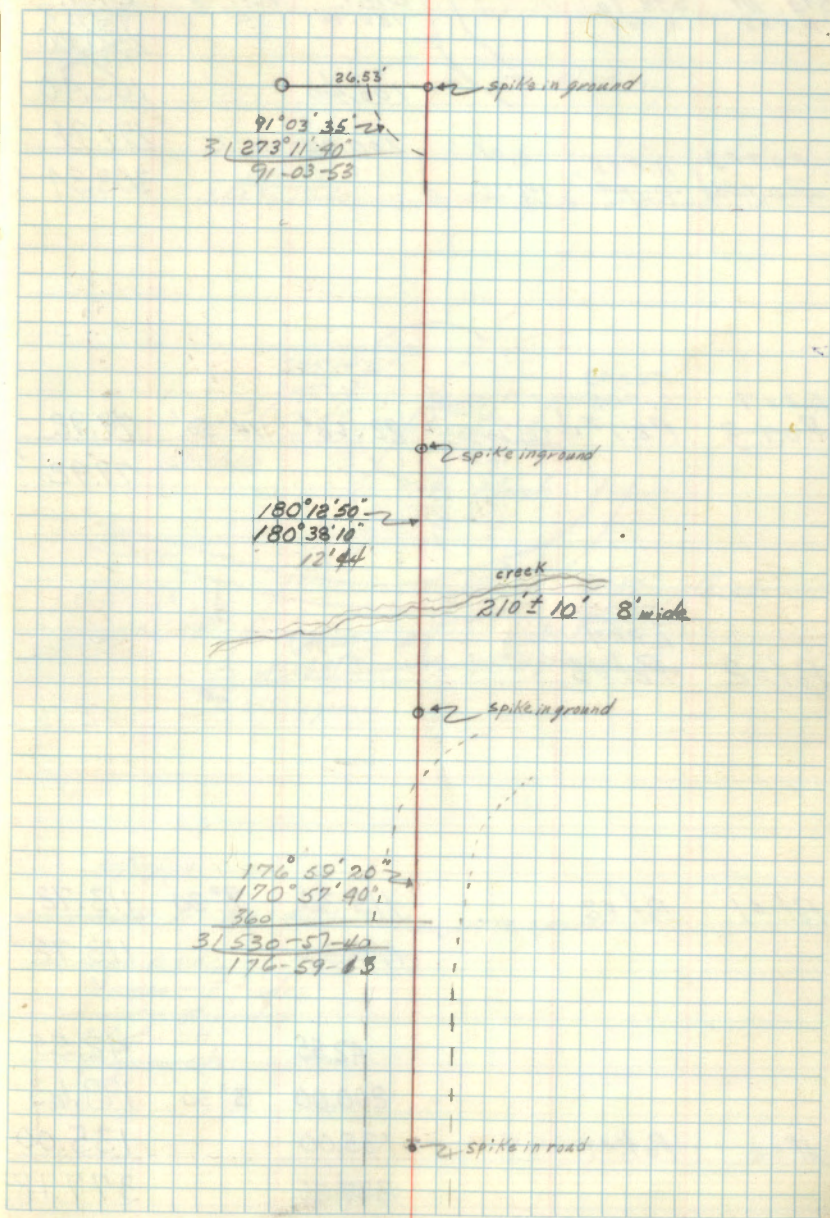


102

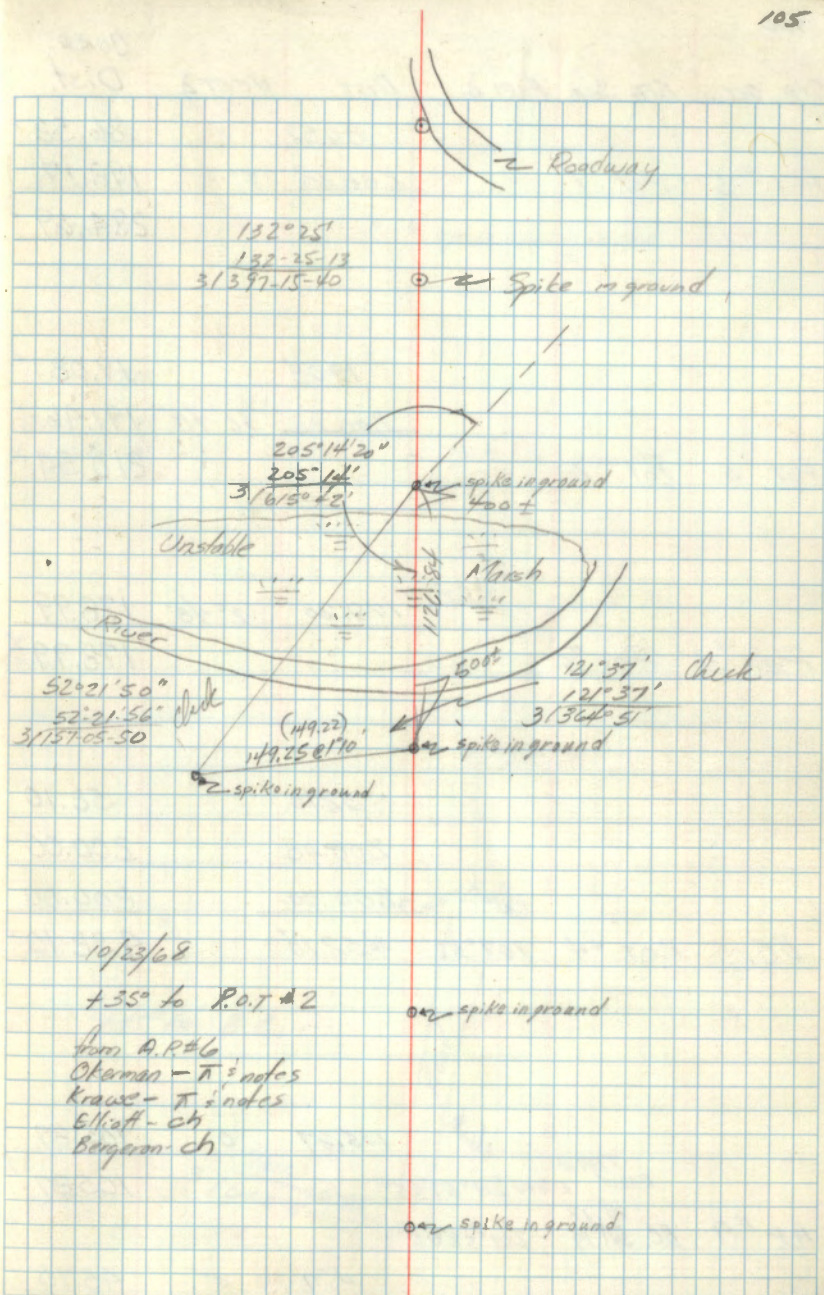
Sta. at.	Sta. to	Vert. X	Dist.	CORR. Dist.
AP#6	1/4 Cor. 24/19			
			54.03	
			200.00	
			200.00	
			200.00	
AP#5	AP#6		<u>654.03</u>	654.03
			182.75	
			200.00	
AP#4	AP#5	check 180°12'30"	382.75	382.75
			137.05	
			200.00	
			200.00	
			200.00	
			200.00	
AP#3	AP#4	check 176°59'15"	1137.05	1137.05

Oct. 23. 1968
Krause & mlas
Elliott chain
Borgeron chain +35°

103

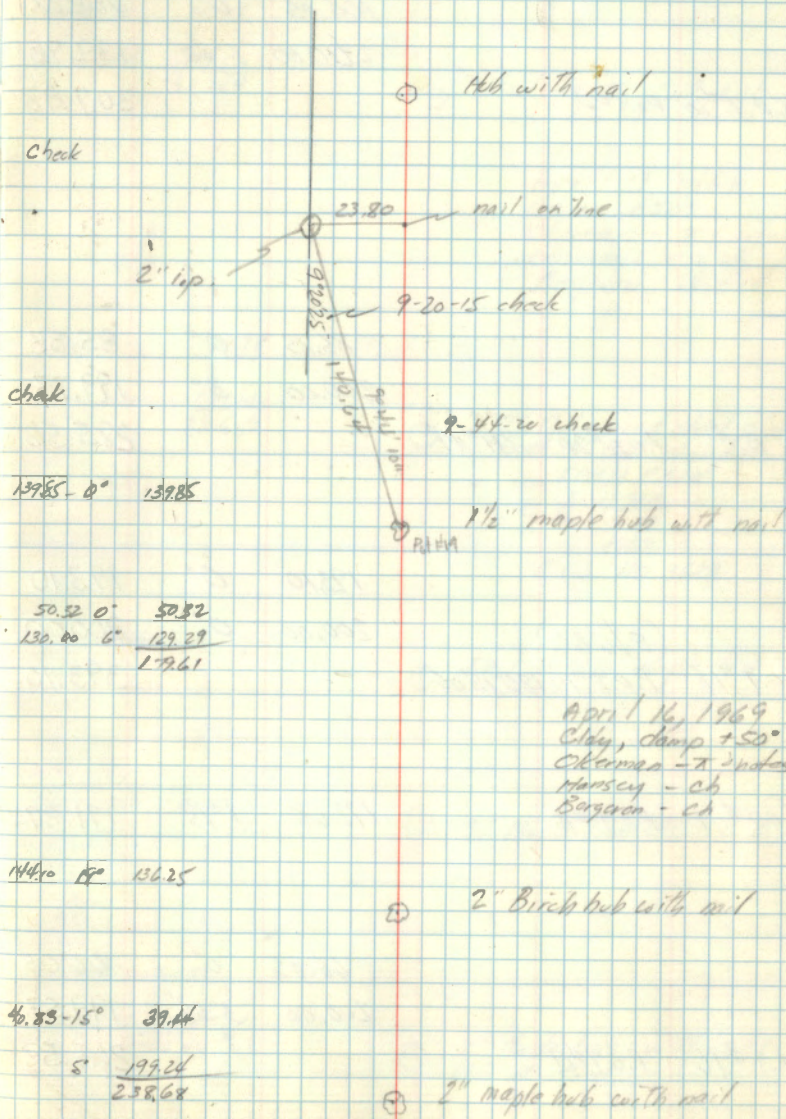


Sta. At A.P.#8	Sta. to A.P.#9	Dist.	Vert. Δ	Corr. Dist.
		150.00	0"	150.00 375.20 745.20
		103.40		103.40
P.O.T.#3 P.O.T.#4	A.P.#8 P.O.T.#4	check 130.25	1°25'	199.94 ✓ 303.34 ✓
A.P.#7 P.O.T.#3	P.O.T.#3 P.O.T.#4	check 105.25 15.20	82.28° 14°50'	79.92 79.92 ✓
Pot.#2	A.P.#7 Pot.#3			
Pot.#1	Pot.#2	115.30 115.30	9°30'	113.72 113.72 ✓
		42.55		42.55
		200.00	3°30'	199.63 ✓
AP#6	Pot.#1	135.00 377.56		135.00 377.18 ✓



CORR.
Dist

		14.07	0°	14.07
P.O.T.#15	P.O.T.#16	200.00	0°	200.00
				214.07 ✓
		49.16	0°	49.16
		200.00	0°	200.00
1/4 Cor	P.O.T.#15	9°25' 25" RT	200.00	0°
				200.00
	DEFL			499.16 ✓
		9-44-10 LT		
		140.64	0°	140.64 ✓
P.O.T.#14	1/4 Cor.			
		180.34	4°16'	179.84 ×
P.O.T.#13	P.O.T.#14			
		143.31	18°13'	136.13 ×
P.O.T.#12	P.O.T.#13			
		42.13	20°32'	39.45 ✓
		200.00	4°11'	199.47 ✓
P.O.T.#11	P.O.T.#12			238.92 ✓



STA. OCC.	STA. SOUTH	HAZEL	DIST	VECT	CORR. DIST.
			108.05	0°	108.05
			240.00	2°40'	199.78
P.O.T. #20	P.O.T. #21				307.83

			85.83	0°	85.83
			200.00	3°	199.73
1/16 B.C.	P.O.T. #20	179°41'			285.56

			193.10	0°	193.10
			200.00	0°	200.00
P.O.T. #18	(E 1/16 B.C.) P.O.T. #19	180°18'05"			393.10

P.O.T. #17	P.O.T. #16		172.65	7°15'	171.27
------------	------------	--	--------	-------	--------

			66.05	0°	66.05
			200.00	5°55'	199.53
P.O.T. #16	P.O.T. #17				245.58

108.05	0°	108.18
200.00	4°	199.51
		307.69

⊙ Nail in 2" oak hub

April 17, 1969
Clear 150'
Okerman - T & notes
Hansen - T & ed
Bergeron - ed & rd.

85.78	0°	85.78
200.00	2°30'	199.51
		285.59

⊙ 2" Galvanized steel pipe
with 3" B.C. stamped
T14 N E 31 W
E 1/16 318
1962
R.L.S. No 3628

193.10	0°	193.10
200.00	check	

⊙ Nail in 1 1/2" maple hub

172.75	8°30'	170.85
--------	-------	--------

⊙ 2" Maple hub 75° E of road

66.83	0°	66.83
-------	----	-------

550'	199.63	
	266.46	

⊙ 2" Maple hub with nail
175 E road
W

CORR.
Dist.

			82.05	17°56'	78.06 ✓
			200.00	3°45'	199.57 ✓
1			198.00	5° ^{44'}	197.17 ✓
P.O.T.#24	P.O.T.#25				474.80 ✓
			49.51	6°08'	49.23 ✓
			200.00	13°04'	194.82 ✓
			83.0	5°	82.68 ✓
B.C. Sec. Cor.	P.O.T.#24	288°22' 188°22'			326.73 ✓
			180.20	0°	180.20 ✓
			200.00	26°00'	179.76 ✓
P.O.T.#23	Sec. Cor.	181°12'40"			359.96 ✓
			111.61	8°42'	110.33 ✓
P.O.T.#22	P.O.T.#23				
			13.24	0°	13.24
			200.00	5°20'	199.13 ✓
			200.00	6°45'	198.61 ✓
P.O.T.#21	P.O.T.#22				410.98 ✓

143.37	18°15'	155.15
120.00	2°30'	119.88
200.00	6°	198.90
		473.93

⊙ Nail in 2" oak hub

⊙ 2" galvanized steel pipe
with 3" brass cap
stamped T1411 R31W

check

⊙ Nail in 2" basswood hub

12.96

520'

6'15"

⊙ Nail in 1 1/2" J. Pine hub

CORR.
Dist.

131.00	5°	130.50
200.00	5°	199.24
		329.74

P.O.T. #28 P.O.T. #29

51.56	0°	51.56
200.00	4°10'	199.47
		251.03

P.O.T. #27 P.O.T. #28

77.52	0°	77.52
200.00	0°	200.00
200.00	4°39'	199.34
		476.86

P.O.T. #26 P.O.T. #27

173.04	0	173.04
200.00	1°00'	199.97
		373.01

P.O.T. #25 P.O.T. #26

117

⊙ Nail in 2" Maple
hub.

⊙ Nail in 2" maple
hub.

⊙ Nail in 8" Aspen stump

⊙ Nail in 2" Aspen hub

CORR.
Dist.

160.22	4°30'	159.73'
200.00	1°30'	199.93'
200.00	1°25'	199.94'
		<hr/>
		559.60'

(A.P.)
P.O.T. #30 P.O.T. #31 ^{51'}
189° ~~185~~ 10'

	115.00	5°	114.56'
	200.00	0	200.00
			<hr/>
			314.56'

P.O.T. #29 P.O.T. #30

April 21, 1969
Partly cloudy + 55°
Okuma: K's notes
Hansen T & ch.
Bergman ch & rd.

⊙ Nail in 1 1/2" maple hub

SOLAR OBSERVATION

April 21, 1969

C.S.T.

Direct Horiz. α	Vert δ	Time
129° 47' 50"	44° 57' 50"	10:05.10
130° 00' 25"	44° 52' 20"	10:05.55
130° 17' 55"	44° 44' 45"	10:06.50
<i>Inverted</i>		
131° 19' 00"	43° 30' 20"	10:12.28
131° 25' 10"	43° 25' 50"	10:13.06
131° 40' 00"	43° 19' 50"	10:13.53

⊙ Nail in 2" maple hub

CORR.
Dist.

71.91 0° 71.91 ✓
200.00 2° 199.88 ✓
200.00 3°15' 199.68 ✓

P.O.T. #34 P.O.T. #35 471.47 ✓

199.00 0° 199.00
200.00 0° 200.00
70.00 5° 69.73 ✓
200.00 1°50' 199.90 ✓

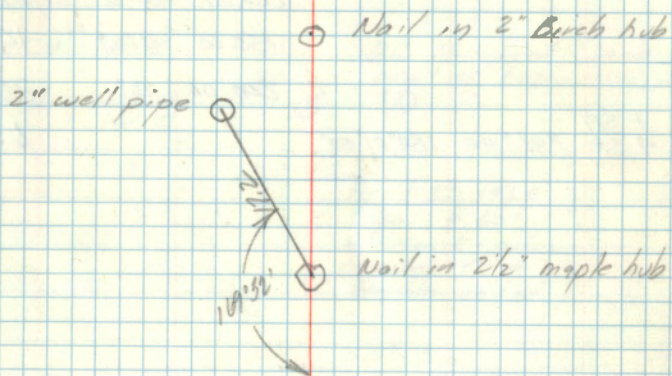
P.O.T. #33 P.O.T. #34 668.63 ✓

186.96 0° 186.96 ✓
200.00 3°03' 199.72 ✓

P.O.T. #32 P.O.T. #3 386.68 ✓

98.68 0° 98.68 ✓
200.00 0° 200.00 ✓
100.00 1°15' 99.98 ✓

P.O.T. #31 P.O.T. #32 170°03'05" 398.66 ✓



⊙ Nail in 2" Birch hub

Nail in 2 1/2" maple hub

⊙ Nail in 2" Elm stp.

⊙ Nail in 2" dead aspen hub

Sta OCC.	Sta SIGHT.	Horiz \angle	DIST.	VERT \angle	CORR. Dist.
			186.57	1°	186.54 ✓
			200.00	2°40'	199.78 ✓
P.O.T. #40	P.O.T. #41				386.32
			107.66	7°46'	106.70 ✓
			200.00	12°20'	195.38 ✓
			150.00	9°08'	148.10 ✓
			200.00	0°	200.00 ✓
B.C. $\frac{1}{4}$ $\frac{59}{530}$	P.O.T. #40	180°01'50"			650.18 ✓

Sec Cor.

			26.90	0°	26.90
P.O.T. #35	Sec Cor	210°57'30"	200.00	6°32'	198.70 ✓
					225.60 ✓

200.00 2'00" - 199.88
 186.53 2'30" - 186.36
 386.24

⊙ Nail in dry 2" Aspen hub

200.00 11°10' 196.21

145.00 10°24' 140.65

109.67 8°53' 108.35

205.08 0° 205.08
 650.29 ✓

⊙ B.C. Monument (same as point of beginning, page 97)

April 22, 1969
 Clear \pm 60"
 Ekerman - π nodes
 Hanson - π ch
 Bergan - ch rd

⊙ 2" galvanized steel monument with 3" brass cap stamped

CASS COUNTY SURVEYOR
 T141X R31
 519520
 5301529

1958

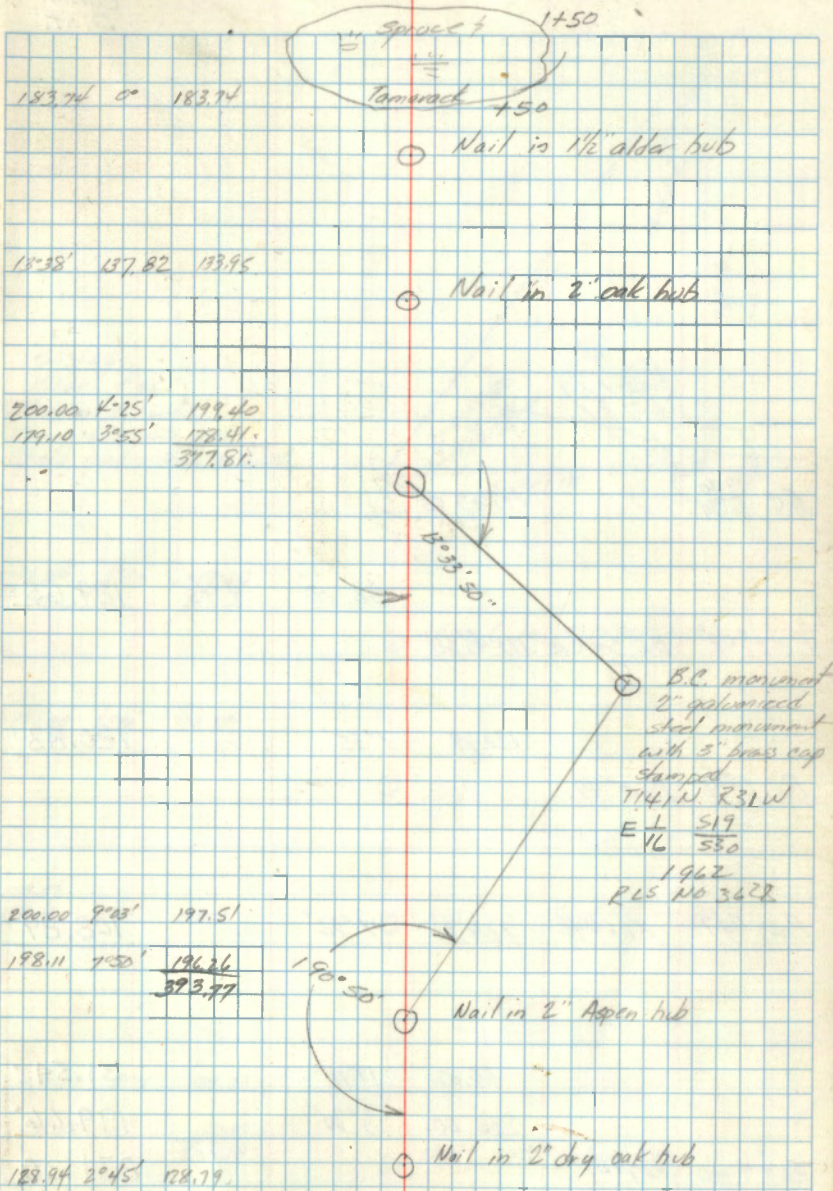
R.L.S. No. 3417

186.77 6°32' 185.85

40.00 0° 40.00
 225.55

⊙ Nail in 2" Oak hub

STA OCCUPIED	STA SIGHTED	HEAVEN	DIST	VEER \angle	CORR DIST.
			183.80	0°	183.80 ✓
P.O.T. #45	P.O.T. #46				
			137.58	13°13'	133.94 ✓
P.O.T. #44	P.O.T. #45				
			179.34	5°30'	178.52 ✓
			200.00	4°	199.51 ✓
P.O.T. #43	P.O.T. #44				378.03 ✓
			198.48	9°20'	195.85 ✓
			200.00	8°00'	195.65 ✓
P.O.T. #42	P.O.T. #43				390.90
					393.90
P.O.T. #41	P.O.T. #42		179.20	3°50'	128.91 ✓

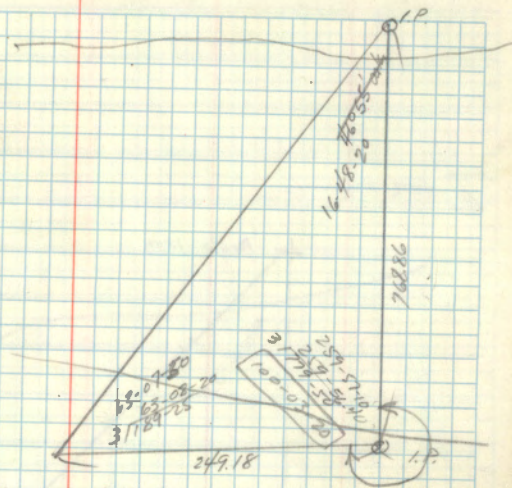


CORR.
Dist.

B.C.	$\frac{12.80}{30.39}$				147.55 55'
			130.10	4'45'	129.65
P.O.T #49	B.C. Sec. Cor.	173°45'50"			
			120.88	1°35'	120.83
P.O.T #48	P.O.T #49				
P.O.T #47	P.O.T #48	109.23	7°32'		108.29
			33.02	17°12'	31.54
			200.00	3°20'	199.66
P.O.T #46	P.O.T #47				231.20

127

6/3/69
Clear + 65°
Clerman II Notes
Klaus & Bergant - Ch
Check made from E to W



~~129.84~~ 3°20' 109.66

121.00 2°30' 120.89

~~109.09~~
106.09 7°20' 108.20

200.00 6°15' 198.81

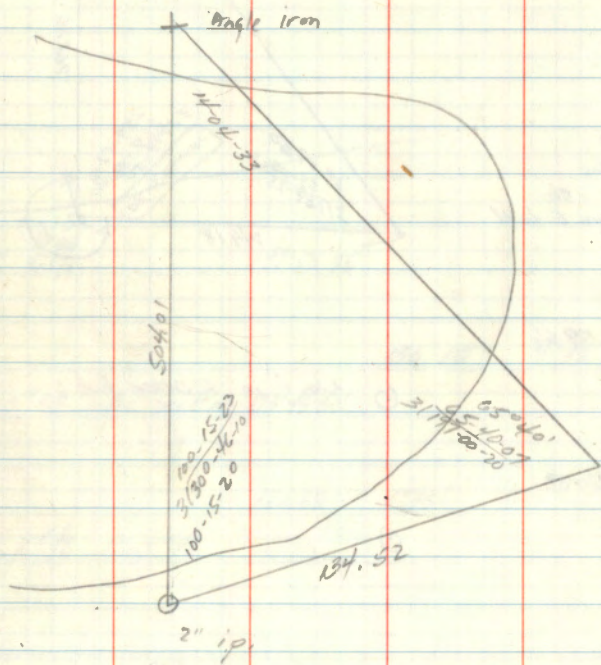
230.7 0°
32.07
230.88

⊙ Nail in 1" after hub

⊙ Nail in 1 1/2" J. Pine hub

⊙ Nail in 1 1/2" balsam stp

7 ←



Howard Lake Survey

Sta occ.	Sta. Sight	Hori. Δ	Dist	Temp. Vert. Δ	Corr. Dist.
			63.95	0° ^{HA}	63.95
			200.00	3°30'	199.63
			200.00	2°35'	199.80
			200.00	0°	200.00
			200.00	2°30'	199.81
			200.00	0° ^{HA}	200.00
Pot #4	Pot #5				1063.19
			165.33	7°33' ^{HA}	163.90
			200.00	0°	200.00
			200.00	2°25' ^{HA}	199.82
Pot #3	Pot #4				563.72
			129.13	8°35' ^{HA}	127.68
Pot #2	Pot #3				127.68
			179.05	6°40' ^{HA}	177.84
			200.00	10°40' ^{HA}	196.54
Pot #1	Pot #2				274.38
			126.31	0° ^{HA}	
			200.00	0° ^{HA}	
			200.00	0° ^{HA}	
1/4 Pot #1A	Pot #1				526.31

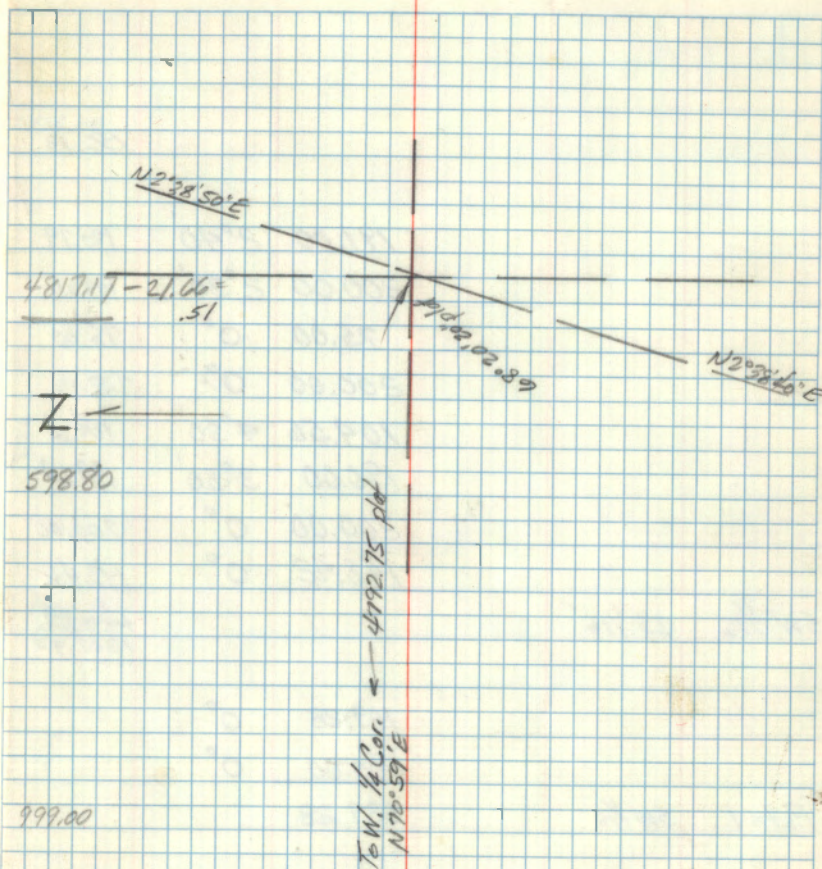
131

Temp Corr.

11-20-69
Partly cloudy & Cool +14°
T: C Krause
ch. Bergeron

			95.64	0°	at spike set for SW 1/16 corner
			200.00	0°	on spike in ground
			1062.83		
			165.36	7°30'	
			200.00	0°	
			200.00	2°30'	
			563.52		on spike in ground
			129.14	8°30'	
			127.64		on P.K. nail in road
			178.85	6°45'	
			200.00	10°45'	
			374.25		on spike in ground
			126.35	0°	22° temp 13-4-69
			200.00	0°	
			200.00	0°	
			526.13		on 1/4 Cor.
			2654.37		

STN. OCC.	STA. NUMBER	HEAV. \downarrow	DIST	HEAV. \downarrow	CORR. DIST.
			200.00	2°	
CE #16			200.00	0°	
			200.00	5°30'	199.08
			200.00	0°	200.00
			200.00	8°2'	199.88
			100.00		
			200.00		598.96
			200.00	1°30'	199.93
			200.00	2°	199.84
			200.00	3°	199.73
			200.00	6°	200.00
			200.00	3°	199.73
P.O.T #16	CE #16				999.27
			166.39	0° +18°	166.39
			200.00	3°	199.73
P.O.T #5	P.O.T #6		200.00	5°30' +18°	199.08
					565.20



Nov. 28, 1969
 Clear 4 27'
 Okuma - 7' index
 Kase - ch 3 notes
 Bergam - ch.

565.00

or spike in ground

136.13

191.00	2°40'	190.79
200.00	2°30'	199.81
75.00	0°	75.00
200.00	0°	200.00
104.56	4°30'	104.24
190.00	3°30'	189.64
200.00	0°	200.00
143.42	0°	143.42

SW 1/16 CS 1/16

~~149.59~~
1302.90

189.28	0°
200.00	0°
389.28	

Pof #1 SW 1/16

126.96	0°
200.00	0°
200.00	0°
200.00	0°
200.00	0°
926.96	0° x46

CW 1/16 at road Pof #1

136.09

Temp. Corr.
1302.51

		66.76
200.00	5°	199.24
200.00	0°	200.00
200.00	3°30'	199.63
46.53	0°	46.53
200.00	2°30'	199.81
200.00	0°	200.00
200.00	200.00	199.51

SE 1/6 CE 1/6 11206'35"

1244.72
1311.17

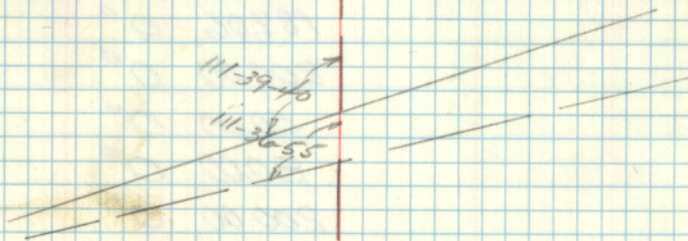
98.78

200.00	0°	200.00
50.00	0°	50.00
200.00	7°45'	198.17
200.00	0°	200.00
125.00	2°45'	124.86
200.00	0°	200.00
200.00	3°20'	199.66
166.00	2°45' 24"	165.81

OS 1/6 SE 1/6

1338.50

Temp Corr.

2875.46 (includes 1.71
corr added at
SW. 1/6)
98.75

1338.11

Sta. Occ.	Sta. Section	Horiz. Δ	DIST.	VERT Δ	CORR. DIST.
			189.06	0°	
			200.00	0°	
			50.00	0°	
			80.00	0°	
			200.00	0°	
			200.00	0°	
			200.00	0°	
			200.00	0°	
			140.00	0°	

NE $\frac{1}{16}$ N $\frac{1}{16}$

92.78

200.00Pot NE $\frac{1}{16}$

292.78

16.33 0° 16.33

200.00 0° 200.00

200.00 0° 200.00

200.00 3° 199.23

200.00 0° 200.00

200.00 0° 200.00CE $\frac{1}{16}$ P.O.T

1016.06

clear

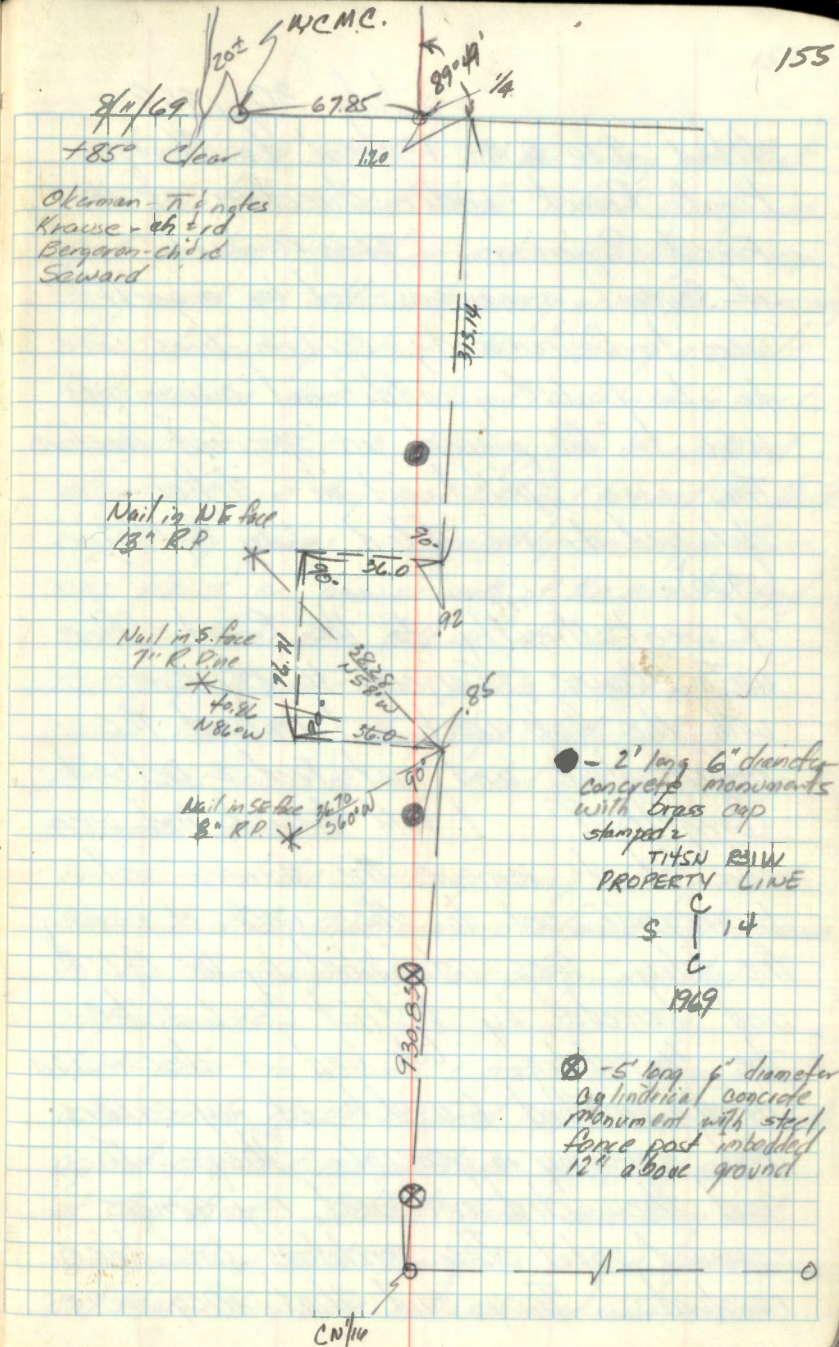
Krause
Bergeron
725° Temp. 3-4-71

1308.50 Plot

N2°38'50"W

1015.82

SKIPPED BLANK
PAGES



July 30, 1969

About 9:30 A.M. I went to Stoney Point Resort under directions of the Forest Supervisor. The removal of several monuments set by myself were to be removed; certain lines were to be posted; additional monuments were to be placed in specified locations. This was spelled out in a letter delivered to me dated July 28, 1969 (2720).

I went directly to the Resort office with Krause & Bergeron to assist me with the field work. I entered the office alone and met Fred & Delbert Gangelhoff. I told them I had been directed to remove the corners set by myself and do other work of posting the bdry. lines established by the B.L.M. and decreed by District Court to be the true bdry. We had a discussion of the method I used to set my corners and surveying in general. They both said they did not want my corners removed until other conditions had been resolved. They said that they were

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not satisfied with the B.L.M. survey and that the courts could not decide which survey was good or bad based on one conflicting survey. They said an additional survey would be necessary to definitely prove this ^{B.L.M.} survey accurate. Fred explained that Si. Howard had tried to erect a fence on the B.L.M. boundary, ^{but} he would not allow this, and they were told not to erect the fence beyond my corners. Apparently some type fence was placed on line or north of the corners I had set. Fred also told me "off the record" that my 1/4 corner was within 2 feet of the corner the Minn. Hwy Dept had tied into. This was news to me, I had never heard this comment before.

We discussed the Gjelhaug survey briefly and the condition of the shore and area adjacent to it previous to the time Gangelhoff's allegedly initiated improvements.

Just prior to leaving I asked if they would allow us to do the required work and they both agreed they did not want me to do any work at that time. Delbert then said they had correspondence with Langan's office yesterday and that they were not satisfied with results.

and were instigating additional investigation
at the W. O. level of the whole matter.

W. J. Okuma

IMPROVED TABLES AND INFORMATION

HORIZONTAL STADIA CORRECTIONS

2°-00' — 0.1	21°-00' — 12.8	33°-00' — 29.7
3°-00' — 0.3	21°-30' — 13.4	33°-15' — 30.1
4°-00' — 0.5	22°-00' — 14.0	33°-30' — 30.5
5°-00' — 0.8	22°-30' — 14.7	33°-45' — 30.9
6°-00' — 1.1	23°-00' — 15.3	34°-00' — 31.3
7°-00' — 1.5	23°-30' — 15.9	34°-15' — 31.7
8°-00' — 1.9	24°-00' — 16.5	34°-30' — 32.1
9°-00' — 2.5	24°-30' — 17.2	34°-45' — 32.5
10°-00' — 3.0	25°-00' — 17.9	35°-00' — 32.9
10°-30' — 3.3	25°-30' — 18.6	35°-15' — 33.3
11°-00' — 3.6	26°-00' — 19.2	35°-30' — 33.7
11°-30' — 4.0	26°-30' — 19.9	35°-45' — 34.1
12°-00' — 4.3	27°-00' — 20.6	36°-00' — 34.6
12°-30' — 4.7	27°-30' — 21.3	36°-15' — 35.0
13°-00' — 5.1	28°-00' — 22.0	36°-30' — 35.4
13°-30' — 5.5	28°-30' — 22.8	36°-45' — 35.8
14°-00' — 5.9	29°-00' — 23.5	37°-00' — 36.2
14°-30' — 6.3	29°-30' — 24.3	37°-15' — 36.6
15°-00' — 6.7	30°-00' — 25.0	37°-30' — 37.1
15°-30' — 7.2	30°-15' — 25.4	37°-45' — 37.5
16°-00' — 7.6	30°-30' — 25.8	38°-00' — 37.9
16°-30' — 8.1	30°-45' — 26.2	38°-15' — 38.3
17°-00' — 8.5	31°-00' — 26.5	38°-30' — 38.7
17°-30' — 9.0	31°-15' — 26.9	38°-45' — 39.1
18°-00' — 9.5	31°-30' — 27.3	39°-00' — 39.6
18°-30' — 10.1	31°-45' — 27.7	39°-15' — 40.0
19°-00' — 10.6	32°-00' — 28.1	39°-30' — 40.5
19°-30' — 11.2	32°-15' — 28.5	
20°-00' — 11.7	32°-30' — 28.9	
20°-30' — 12.3	32°-45' — 29.3	

Chains to Feet

1	66
2	132
3	198
4	264
5	330
6	396
7	462
8	528
9	594
10	660

Feet to Chains

100	1.515
200	3.030
300	4.545
400	6.060
500	7.575
600	9.090
700	10.606
800	12.121
900	13.636
1,000	15.151