

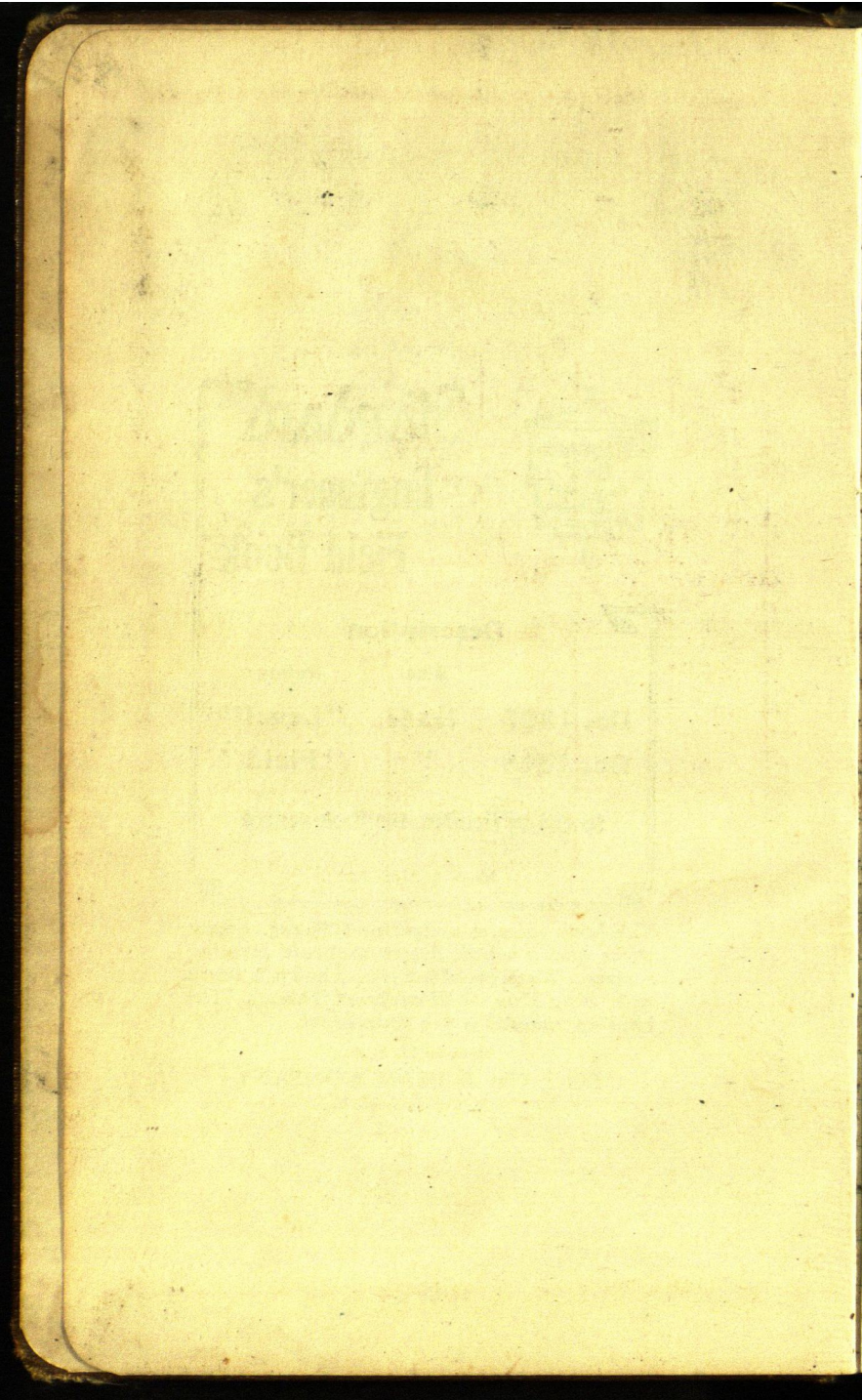
296

FIELD BOOK

1868

This Book belongs to
Harold Curo County Surveyor
of Cass County, Walker Minnesota
If Lost finder Please Notify me
at once. - reward

Harold Curo
Walker Minnesota
Office Phone 207
Res. Phone 74 W



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①

any Trip Plat page 2
Hammergren plat of McLin
in Section 17-137-27 - 3to

OX Lake Resort Lot 8 Sec. 5-137-27
Elmer A D'ziggel 40 to 57

Fisherman Point see also
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books 424-418

Fisherman Point - 58 to
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Any Township

#	B	C	D	E	F	G	
	6	5	4	3	2	1	
Y							H
	7	8	9	10	11	12	
X							I
	18	17	16	15	14	13	
W							K
	19	20	21	22	23	24	
V							L
	30	29	28	27	26	25	
U							M
	31	32	33	34	35	36	
T	S	R	Q	P	O		N

Section 17 137-27

Milton G Hammergren also
 Known as M G Hammergren & wife
 to
 Celia Paster

W.D.

Filed Dec 12 1949
 Book 112 of Deeds pg. 351

This Indenture made this 30 day of
 Nov. 1949 between Milton G Hammergren
 also known as M G Hammergren and
 Linda K. Hammergren husband and wife
 of the County of Crow Wing & State of Minn
 parties of the first part and Celia Paster
 of the Co. of Ramsey & State of Minn party 2nd pt
 Witnesseth that the said parties of the
 1st part, in consideration of the sum of \$81.00
 and other goods & valuable considerations
 dollars to them in hand paid by said
 party of 2nd part the receipt whereof is
 hereby acknowledged do hereby Grant
 Bargain sell and Convey unto the said party
 of the 2nd part her heirs & assigns Forever
 all the tract or parcel of land lying and
 being in the County of Crow Wing & State
 of Minnesota described as follows to wit:
 All of Gov't Lot 4 Section 17-137-27
 Lying South and West of Pine River

4

Ses 17 ④ 137-27

Hammergrens deed to Paster
except that Portion of said Gov't
Lot 4 of which the U.S. of America
is the fee owner, and except that part
of Gov't Lot 4 here to before conveyed
by the U.S. of America to Adolph Juster by
virtue of a quit Claim deed dated Oct 25
1937 which instrument was recorded
on Jan. 29 1938 at 12 M. in the Office
of the Reg. of Deeds in and for said County
of Crow Wing & State of Minn in Book
79 of Deeds on page 452 and
excepting from said Gov't lot 4
that part of said Gov't lot here to before conveyed
to Mary Cooper & Lawrence L Cooper
and described as follows. beg. at the
S.E. corner of said lot 4 and running
thence N. following its E. line 200 ft. thence
Westerly parallel to the S. line of said lot
a distance of 1004.1 feet to an Iron pipe
thence S $32^{\circ}31'E$ 234.72 feet to the S.
boundary of said lot 4 thence Easterly
following the S. boundary of said lot 4
a distance of 863.13 feet to the SE
corn of said lot to the place of beginning
Subject to highway & road easements

Hammergun deed to Paster

and flowage rights of Records + Subject to any mineral reservations of Record.

➤ That part of Gov't Lot 5 Sec 17-137-27 Lying Easterly of the following described line. Beginning at a point on the S. line of said Lot 5 which is 198.6 feet East of the SW cor. of said lot 5. thence N $37^{\circ}09'$ E 162 ft. thence N $0^{\circ}23'W$ 363.3 ft thence N $22^{\circ}15'E$ 267. ft to the shore of Pine River. Subject to highway + road easements + flowage rights + mineral reservations of Record.

That part of Gov't lot 6-Sec 17 137-27 described as follows: beginning at a point where the N line of said Lot 6 intersects the shore of Cross Lake, thence Westerly along the N. line of said lot 6 to a point in the E of County Road # 8 said point being 198.6 feet East of the NW Cor. of said lot 6. thence S $37^{\circ}09'$ W 222.0 ft thence S $59^{\circ}56'W$. 60 feet to the West line of said Lot 6 thence S along said West line

6. Sec. 17 ④ 137-27

Hammergren deed to Pastor
of Gov't Lot 6 593.2 ft thence
thence S. $70^{\circ}35'E$ 347.9 feet
to the shore of Cross Lake thence
Northeasterly along said shore to the
point of beg. Subj. to highway road
easements & flowage rights & mineral
reservations of Record.

That part of the NW $\frac{1}{4}$ of the
SW $\frac{1}{4}$ of Sec. 17-137-27 described
as follows beg. at a point on the E
of Co. road #8 where it intersects
the E line of said NW $\frac{1}{4}$ of the SW $\frac{1}{4}$
said point being 199.7 feet South
of the NE Cor. of said NW $\frac{1}{4}$ SW $\frac{1}{4}$ thence
South 593.2 feet along the E line
of said NW $\frac{1}{4}$ SW $\frac{1}{4}$, thence N 70°
 $35'W$ 362.8 feet; thence N $30^{\circ}W$
237.6 ft; thence N $59^{\circ}36'E$ 532.6
feet to the point of beg.

Also all that portion of the
NW-SW-Sec 17-137-27 lying North
and West of County road #8 except
that part of said NW $\frac{1}{4}$ SW $\frac{1}{4}$ described
as follows, beg. at NE Cor. of said
NW $\frac{1}{4}$ of SW $\frac{1}{4}$ thence West along

Hammergren to Poster

the N line of said NW $\frac{1}{4}$ of SW $\frac{1}{4}$ a distance 863.13 feet to a point (said point being 425.87 feet East of the NW cor. of said NW $\frac{1}{4}$ SW $\frac{1}{4}$) thence S 32° 31' E 235.38 ft to an Iron pipe; thence S 70° E a distance of 179.7 ft to a 2nd iron pipe thence S 30° E 223.8 feet to a point in the E of Co. Road #8 thence N 59° 56' E following the E of said road 532.6 feet to the E line of said NW $\frac{1}{4}$ of SW $\frac{1}{4}$ thence northerly following the E line of NW $\frac{1}{4}$ of SW $\frac{1}{4}$ a distance of 199.72 feet to the place of beg. & also excepting from said NW $\frac{1}{4}$ SW $\frac{1}{4}$ any portion hereof carried by U.S. Gov't or Subj. highway & road easements, flowage rights & mineral rights of Record.

The E 30 acres of Gov't Lot 1 and E 35 acres of Gov't Lot 2 + SE $\frac{1}{4}$ of the SW $\frac{1}{4}$ all in Sec 9 137-27 Subj. to highway & road easement & flowage rights of record subj. to any mineral reservation of Record.

8

Sec 17-137-27 (8)

March 15th 1952 about

Jim

Caretaker of

Hammergren property at Cross Lake. Call my Office at Walker under orders from M. G. Hammergren. Wants me to be down Wed. March 19th 1952. Hammergren having sold Fisherman Point has moved across the bridge where he has two cabins on Rush Lake.

Jim does not know what Hammergren wants. I tell him I will be there Wed. morning.

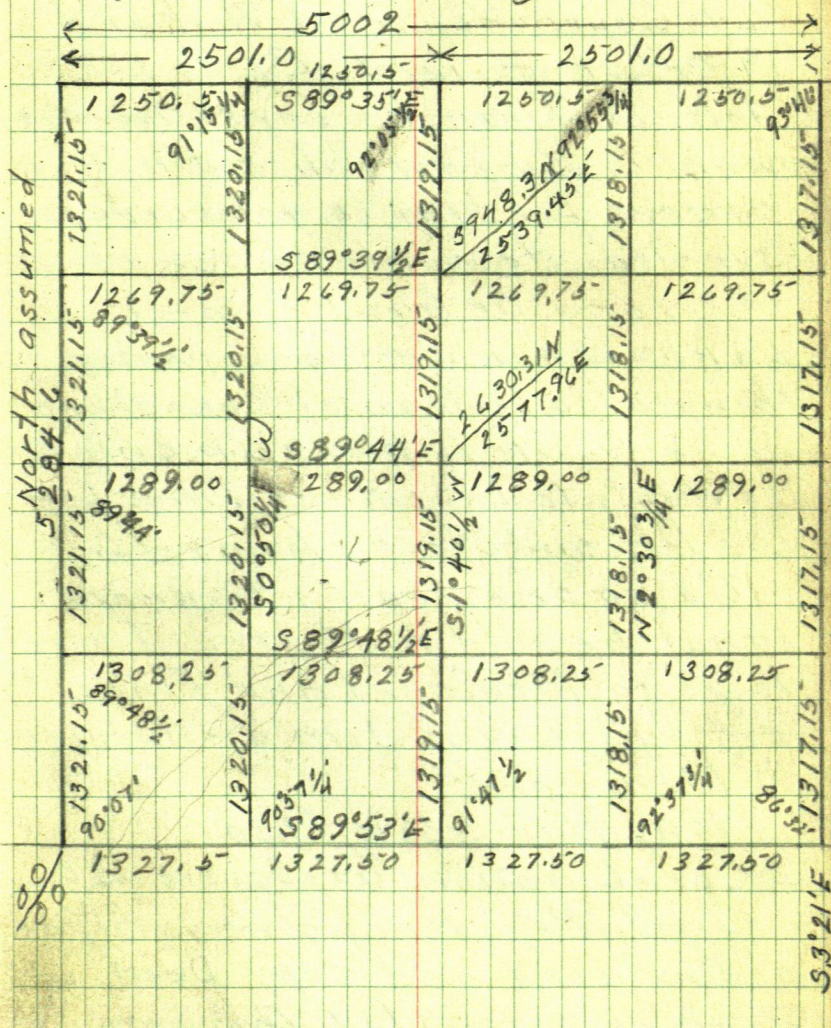
I check over field notes get field Book # 212-223 424-418 and 33 also what plats I can find to take along.

Harold Curo

9

Section 17 Trip 137^N Rge 27^W

Page 63. Hume-Hardy Low-suit



10 Sec. 17

(10) 137-27

Wed Mar. 19-1952

Up early getting ready to go to
Cross Lake Gas & Oil \$3.00

Lv Court House at Walker @
9 O'clock drive to Cross Lake
talk to Jim he says Hammgren
went to Buffalo N.Y. but left
orders for Jim to get survey
started. He wants plat of all
the land he has left on Cross
Lake - show footage of every
thing also footage of Lake shore
as he wants to plat it up only
He wants to Lay out the lines for
the lots and Streets himself.

As no one seems to know
what he sold to Paster I have
to go to Brainerd and find out
eat lunch with Jim and drive
to Brainerd:

Buy this book \$1.30
2-Combination Tri-Square .30

I go to Register of deeds office
at Brainerd and copy Deed
shown on pages 3 to 7 this book

March 19th 1952

drive back to Cross Lake, as Jim told me he had plenty room

Back to Cross Lake Jim says his wife told him Hammergren's Brother and friend will be in sometime to night so he has no place for me there. He goes across the road and gets a cabin for me to stay in.

Jim has gotten a man, so I will have two men in the morning to help me on survey.

I write up notes and try to figure what land Hammergren has left.

Harold Curo,

12 Sec. 17 (12) 137-27

March 19-1952

checking old notes

Book 223 page 22

$\frac{1}{4}$ bet Sec. 17-18-137-27 in Spring
Lake we set wit cor to this $\frac{1}{4}$

one 50 ft N. we set a $2 \times 2 \times 24$ stake
Ties pin + stub 12 N $24^{\circ} 42' W$ 23.00 ft

Pop. 5N $86^{\circ} 30' E$ 53.60

also one 50 ft East Ties

Oak 4 S $80^{\circ} 21' E$ 32.80

" 3 N $27^{\circ} 33' E$ 35.80

Pine Stub 10 N $18^{\circ} 30' W$ 13.50

$S \frac{1}{4}$ bet 17-18-137-27 book 33 pg. 40

1925 says @ 1320.66 set 1X1X6 oak hub
Ties

J.P. 4 N $47^{\circ} 45' E$ 17.85

Oak 3 S $52^{\circ} 10' W$ 60.30

" 4 S $50^{\circ} 10' E$ 71.40

Tw in 3' oak stump S $50^{\circ} E$ 2.45

West line book 418 pg 28 1942

North bet 17-18- Tru line 2-44 + 92.45

692.45 hub @ 800 pin 10-12 + 120.75

1320.75 RR spike - $S \frac{1}{4}$ cor

Time Sheet

Working for M.G. Hamnergren

19 20 21 22 23 24 25 26 27 28 29 30 31

March

1952

Harold Curo 1 1

Car Gas 3.00 1 1

Exp. book 1.30
T.M. Square 304 1.60

Jim Maloney 1

Don Baph 1

14 Section 14 17-137-27

Continue copy old Notes book 418
 pg. 29 - @ 1400 pin + 45.7 = 1445.7 R.R.
 spike hut 1600 pin 1689 hut & road
 $1600 + 135 = 1735$ hut 1800 pin + 239.6
 2030.60 hut Trees

Red Oak 12 N 25° 40' E 26.00

Burr Oak 5 N 68° 35' W 25.00

+ 163 = 1867 old road NE SW 2030.6 +
 63.4 = 2094 birch stake at water edge
 S. side of Slough - set pt. over lake
 dhl center hut R.R. spike 50 ft N of Water
 10 S of foot of hill Trees

W.O. 12 N about 35° E 34.55

R.O. 30 N " 45 W 27.95

to bark

W birch 4 East 9.80 no spot

1/4 ch. N 50 ft stake gone + 20 = 70 pin
 for W. & Cor. 70 ft N of 1/4 in water
 $50 + 119.6 = 169.6$ hut under T
 @ 976.9 N hut @ 1043.2 hut
 Trees

Red Oak 5 N 30° 05' E 7.90

W Birch 6 N 15° 20' W 18.45

@ 1100 hut 15 ft N of old
 cent out line - 1248 hut
 Red Oak 5 S 34° 34' W 19.95
 J.R. 12 S 74° 20' E 32.62

(15)

15

Hammergren

page 56 book 418 dated July 23-1942
says Old Pump point wit $\frac{1}{4}$ 13 North
84.3 ft from $\frac{1}{4}$ Cor Now take up E & W

Pg. 62 book 418 says
from hub marked 1100 N ch S. 14.31 to
true 1100 N Turn 1100 run E 200
ft hub. 05° S & 0.3 E of old 1 inch oak stake

Turn 200 run S 45° E 105' hub
@ 136 hub @ 200 RR spike @ 166 cross road
@ 221.3 hub RR spike no head & old road
@ 337.8 hub @ 430 hub Turn 430
True RO 14 S 77 $\frac{1}{4}$ ' W 25.45°

NP 15° S 3° E 2475'

Run South 212.7 hub 290 stake
295' water 395' Lr water 469.2 hub
600 So. turn 90 L run East 105' enter
water @ 612.2 hub on top on point

True PO N 1° 50' W 22.40

WP 14 N 85° W 23.50

@ 645' enter lake @ 612.2 set 2x19" pipe

@ 1100 N set pipe B.T.s

RO 8 Nabout 30° W 20.55'

" " 6 S " 45° W 32.10

2x24 galv. pipe

16 Sec. 17 (16) 137-27

Copy Old Notes Book 418 page 74
East

Set Well point wit $\frac{1}{4}$ 50 ft E

From IM chain E 100 + 96 =
196 big RR spike 200 pin 233 E
old road 270 Low flat 300 pin
352 water overflow

Write notes until 11-30 PM

Hammergren

March 20th 1952

up at 6-30 drive to Balls
near Manhattan Beach for
Breakfast nobody up so I drive
to Pat. DeZellar for a cup of Coffee
back to Hammergren's about
8-30 where I find Jim.

Don. Raph waiting Hammergren's
brother who drove in last night
comes along We drive south-
west to where W. line of Sec 17
crosses Co. Road No 8 Walk South
along old cut out section line
as old notes see page 12 this book
says @ 1320.46 N = S $\frac{1}{4}$ line Ties
see page 12. Book 418 calls this
1320.75 Plat made by J.W. Curo
calls it 1321.15 as Notes in
book 418 says 1689 hub in E road
we start looking for the S $\frac{1}{4}$ Cor
or for a pine tree about 360 ft S of
tar road We find the three trees
called for on page 12 - the S.P. is now
12' the SW Oak is 12" and SE Oak 10"
from these trees we find the RR spike

18 Sec 17

(18)

137-27

Mar. 20th 1952

set by John W. Curo for True
S $\frac{1}{16}$ Cor between Sec. 17-18
137-27 in 1942. Don takes
flag and goes S to SW Cor Sec 17 -
14x14 Conant monument set by US
engineers called and used for
True Cor to Sections 17-18-19-20
137-27.

From RR spike S $\frac{1}{16}$ Cor. look south
can not see flag at Section Cor.
as old notes page 14 - this book
copied from page 29 book 418 says
 $1320.75 - N. = S \frac{1}{16} \text{ cor} @ 1400 \text{ pin} + 45.7 =$
 $1445.70 \text{ N RR spike hub.}$

From RR spike S $\frac{1}{16}$ Cor. Jim + I
chain N. rough 125 ft and find the
RR spike 1445.70 N of SW Cor Sec 17

From old RR spike 1445.7 N site
S on S $\frac{1}{16}$ Corner run North @
 $245.5 = 1691.2 \text{ hub} = 60^{\circ} \text{ spike in}$
tar road.

We then go NE to Justers
road by the tar road and look for
spike set in road by NTC in.

19
Hammergren

19

Mar. 20' 1952

Cooper's survey 1949 Hook 418 gone we go Northerly on Luster road and look for I.M. set in Cooper's survey. Can not locate it go NW and look for I.M. set in Cooper's Survey as sta ② from ② we go to sta ① where we find the I.M.

Over Sta ② B.S. N $32^{\circ}31'W$ + run S $70^{\circ}E$ 179.70 we find this I.M. pushed over so set a 60^d spike for true point sta ③

Over Sta ③ B.S. N $70^{\circ}W$ and run S $30^{\circ}E$ 223.8 and set a 60^d spike in E tar road Sta 4

Over Sta 4 B.S. N $30^{\circ}W$ and run S $60^{\circ}28'W$ 900 + 70.15 to 60^d spike in E Tar road on the West Line of Section 17.

At still @ Sta 4 run S $30^{\circ}04'E$ to 237.5 to I.M.

Note: This should be S $30^{\circ}E$ as called for in deed

Over I.M. 237.5 B.S. N $30^{\circ}04'W$ on Sta 4. I.M. on lake reads S $70^{\circ}27'E$. deed calls this N $70^{\circ}35'W$

20 Sec. 17 ²⁰ 137-27
Mar. 20 1952

We drive W to S and walk
to cement Mon. at SW Cor
Sec. 17-137-27 rough ch
N 692 feet and look for
hub. Old notes see pg. 12
this book says From Cement Mon
chain N bet 17-18-137-27
 $2-4-6 + 92.43' = 692.43'$
wood hub $\frac{3}{4} \times 6"$ Oak limb pg. 28
book 418.

We find this hub -
We wanted this hub to Turn
angle to run True South line
Sec. 17-137-27 to W side
Cross Lake

quit a little after 5⁰
Has been snowing + raining
all day

Dinner @ Balls \$1.00
Over night in cabin.

We have the S line lot 7
and the Shore line to run
yet.

Harold Carr

March 21 1952

up at 7 Coffee & toast at Ball's
204 Don in his car Jim & I in
my Ford drive then walk to
Commons cor to 17-18-19-20

Turn Commons S. 1/4 - North
692.45 N set by J W Curo in 1942
for true line between 17-18

Turn R 90° 07' run. Snow crusted
hard going. @ 300 IN @ 600 run +
40.45 = 640.45 IN in mound + 24.5
- 665 brick cutbank + 50 water edge
bank 30 ft high

Turn 640.45 run. Stake line P
N 41° 20' E @ 230 brick @ 280 brick
@ 295 brick 1 ft L @ 300 brick
1 ft R water 40 R

390 brick 15 R W 30 R

470 ~ 20 R W 40 R

@ 508 spike A.P. bank 15 R W 30 R

T @ 508 BS on I.M. run N 14° 39' E
big rock on pt. N 8330 E 63 ft edge W
@ 18 brick

From 508 run N 14° 39' E @ 100 ft
on top + 112.1 sta (2) A.P. bank 12 R W 50

22 Sec. 17 (22)
137-27

Sta 2 run N $24^{\circ}29'E$ 189.58
to Sta ③ brink 20 R W 40 R
From 3 run N $40^{\circ}52'E$ 326.55
to Sta ④ A.P. brink 20 RW 50
Then 4 run N $36^{\circ}56'E$ 364.75
to Sta 5; brink 12 R W 50
N $36^{\circ}56'E$ 100 point brink N $36^{\circ}56'$
80. along brink
Run N $9^{\circ}23'E$ 356 to T.M.
@ 250 about pt N/R

Then I M check line NW
to I Mon E line but 6 reads
N $70^{\circ}25'W$

Small pond

From Sta 2 run N $36^{\circ}47'W$ 291.9 to
pt on ice near center of pond
Then 291.9 to the Stada of Pond
N $78^{\circ}30'W$ 90 ft N $42^{\circ}45'W$ 100 ft
N $16^{\circ}30'W$ 140 " N $7^{\circ}30'W$ 160 "
N $33^{\circ}E$ 150 N $56^{\circ}30'E$ 130
N $83^{\circ}30'E$ 115
S $66^{\circ}15'E$ 110 S $32^{\circ}30'E$ 110
S $9^{\circ}30'W$ 95 S $54^{\circ}W$ 80

drive to Walker

(23)

23

Hammergren Cross Lake

March 22 1952

Work on Hammergren's plot
all day

March 23 1952 Sunday
on Hammergren's Plot

March 24 1952

Work on Hammergren's Plot
can not make it check out
P.M.

Get Gas and Oil at Deep Rock
Take Donald Curo Lu Walker
12-35 drive to Cross Lake
Jim not home.

Don & I take outfit walk to
M.C. on S side Sec 17. bet Ac. 17
and 20 - 137-27

Over I.M. 640.45 ft E of SW cor
site N $89^{\circ}53'W$ and re-run stake
line viz.

N $41^{\circ}15'E$ 508 to Sta ① run
N $14^{\circ}33'E$ 212.1 to " ② "
N $24^{\circ}23'E$ 189.58 to Sta ③ "
N $40^{\circ}48'E$ 426.50 " " ④

24 Sec 17 (24) 137-27

March 24 Continued

run $N 36^{\circ} 53' E$ 364.6 to sta (5)
from (5) run $N 4^{\circ} 19' E$ 356 ft
to I.M.

Tower I.M. run $N 70^{\circ} 31' W$
710.70 ft to I.M. drive
home. arrive @ 6:30

March 26 - 1952

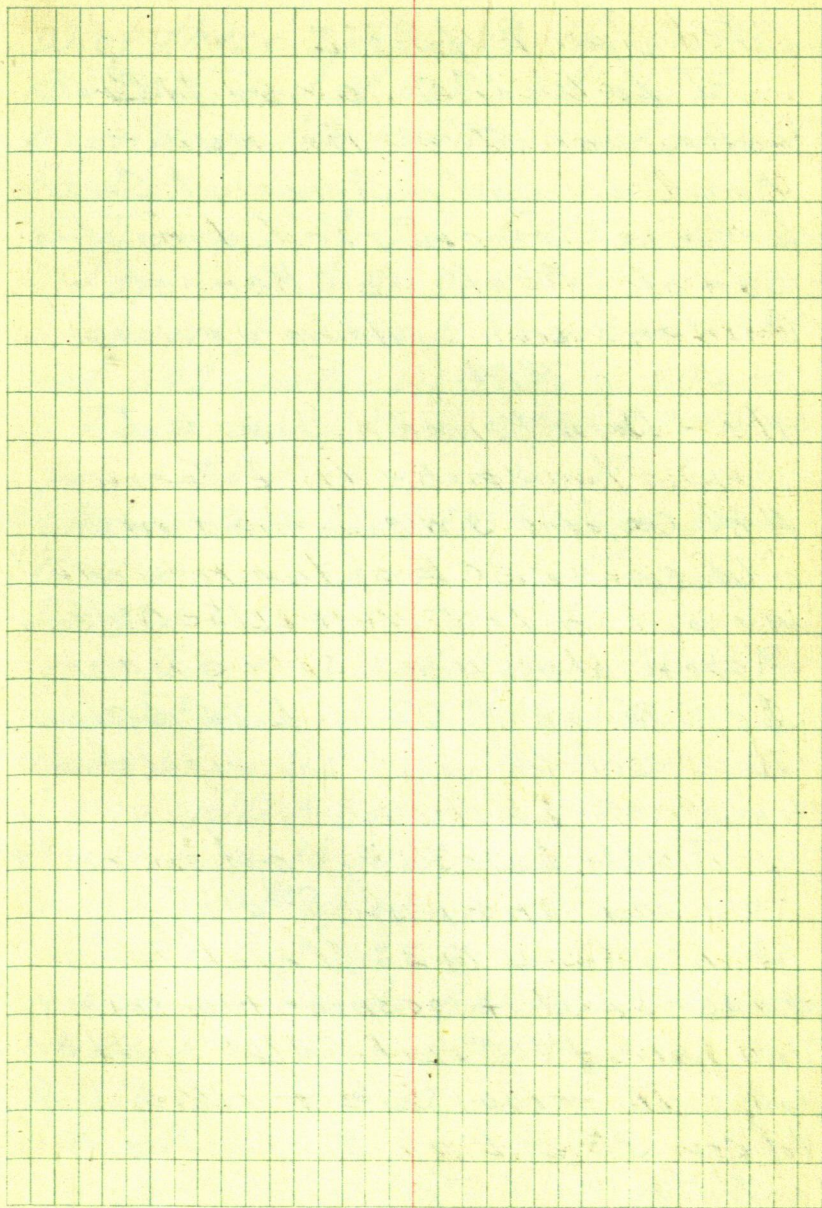
up early go to Office check
figures the come awful close

Make plat for Hammergren
who Jim. says will be here at
Walker Wed. Mor. 26th to get
the plat.

March 26, 1952. at office
early at 2:30 Hammergren
has not showed up yet.

Write W.C. Lebra St Paul who
has work I am to do on Bay lake
write also to Pearl M. Mulheran
in Minneapolis about their
Plat on Hay lake.

Hammergren ⁽²⁵⁾ Crosslake 25



26 Sec. 17

26

137-27

Wed Apr. 2 1932

I & Walker drive to Cross Lake get stuck in mud - Road all bad. Drive at Cross Lake at noon find Jim with Donald Raph and Kenneth Golden stem piling up wood. P.M.

We - Don, Kenneth, Jim & I drive to spike in E Torroad #8. Coopers & W cor. find my old spike. 30 E of the new one. We put in last week Use Old one. Over old spike site SW along E of Tor road Turn L 90° & chain 33 ft set 60' spike for right of way line.

Over spike 33 ft out on right-of-way line run SW along said right-of-way @ 33 ft a spike ^{NE} lot cor #100 - spike + 100 spike + 100 spike + 100 spike + 100 spike + 100 spike + 100 spike + 100 spike + 118.5 spike lot cor 33 ft E of E line Sec 17
Note: all I.M. corners go. 30

(27)

Hammergren CrossLok 27

W of these spikes @ the first spike is .30 E out of line of the E boundary line of the land owned by Hammergren.

Then I M. S 30° E 237.6 ft from Old spike in E Co. Road #8, site on spike in E Turn L 90° chain 33 ft set 60% spike W side of street

Then said spike site N 30° W on point .30 E of spike on R-of-way line chain 200 ft S 30° E from said R-of-W. spike and set 60% spike for SE Cor of Lot

Then SE Lot Cor Turn 90° L and run S $60^{\circ}28'$ W @ 100 - spike @ 200 spike @ 300 spike @ 400 spike @ 500 spike @ 600 spike @ 700 spike @ 800 spike @ 1032.7 spike SW Cor of Lot 33 ft E of W line Sec. 17

Then SW cor of said lot the NE angle reads $60^{\circ}34'$ to NW cor said lot distance 238.2 ft,

$60^{\circ}34'$

$$\text{Sine } 491411 \times 238.2 = 117.05$$

$$\text{Cosine } 870928 \times 238.2 = 207.45$$

(something wrong) should be 200 ft

28 Sec 17

(28)

137-27

April 3 1952

We all go to IM @ $S 30^{\circ} E 237.6$
T over IM site NE on old spike
in Star Turn $69^{\circ} 43' R$ Transit
tbl. run SW 35.18 set $60'$ spike on R.R.
road.

Walk $S 70^{\circ} 35' E 710.1$ ft to IM
on bank at take T over IM
site $N 70^{\circ} 35' W$ on IM chain
200 ft set $60'$ spike

T still over IM Turn $L 90^{\circ}$ @
33 ft spike move to $N 70^{\circ} 35' W$
200 ft site $N 70^{\circ} 35' W$ Turn $L 90^{\circ}$
@ 33 ft set spike street line W side.

T still @ 200 run $S 29^{\circ} 11' E$ @
set spike for intersection of lot

Cor & St - Turn 90° @ 33 ft
set spike for NW side of street

T over 33 ft spike W side st site
 $S 70^{\circ} 35' E$ on spike on bank
and run $N 70^{\circ} 35'$ and set spike
at intersection for NE Cor lot
Show lots from East Cor run $S 29^{\circ} 11' W$
100 ft set spike for lot cor NW cor lot 1
from SW Cor. lot 1 chain $S 4^{\circ} 19' W$

Hammugen Cross Lake 29

140 ft set spike for SW cor lot 1

From NW cor lot 1 site on SW Lot 1 & run N @ 33.02° to N side of St SW cor Lot () + 200 = NW cor lot () ang from S. side of St. lot NW cor Lot NE angle 92° 01'

From NW cor lot () to NE cor 15 68.10 ft from NE cor lot to SE cor. is 203.15 ft

From NW cor Lot 1 we continue S line of Street S 29° 11' E and set spikes every 100 ft

@ 2-3-4-5-6-7-800 up to 9 ft for night

Sec #7-137-27 (31)

(31)

Hammegren Cross Lake

Apr. 4/1952

Same Crew.

@ 900 spikes @ 950, spike on bank
of pond @ 960 enter pond @ 1200
pin on ice edge of pond @ 1300 spikes
14-15-16-17-18 spikes + 189.7

SW cor lot 1 - 33 ft N of Sec. line
S. line - Sec. 17.

as we do not know for sure
if the Crav't has any land
or are fee owners of any land
in lot 6 or 7 Sec. 17-137-27

I will go to Brainerd in
Am to morrow + find out

32 (32) Sec 17-137-27 Hammequon
Crooks Lake

Sat. Apr. 5 - 1952

Dick takes me to Brainerd where we check titles at Register of Deed office and find that the United States has flowage rights over part of Gov't lot 7 and 6 but do not have fee title to any of the land back at 10 - Kenneth not home so have to wait until PM for him. Jim moves things out of moonlite Bay, Dance to night will try and work to morrow & finish setting points.

P.M.

As Don had to go to school today Jim got Kenneth's brother to help this P.M. Lo and gets work about 1 o'clock Don comes around 2-30 to find out from Jim if we will want him Mon. Jim gets Don to take his place and goes home Kenneth his brother Don & I work until 4-30. Town NE Cor Lot 17 to N side of pond N 2° E 140 - N 37° 45' W 115 - N 69° 45' W 110 S 6° 45' E 60 N 12 E 40

Tins Sheet

April

2 3 4 5 6 7 8

1962

Harold Caro

1 1 1 1

Exp.

Car.

1 1 1 $\frac{1}{2}$

Jim Maloney

 $\frac{1}{2}$ 1 1

Darn Raph

 $\frac{1}{2}$ 1 1 $\frac{1}{2}$

Kenneth Goldenstem

 $\frac{1}{2}$ 1 1 $\frac{1}{2}$

Goldenstem

 $\frac{1}{2}$

34

Section 17 ⁽³⁴⁾ 137-27

Sunday April 6 1952

The boys were to be here at 8 o'clock It is now 20 to 9 and they have not showed up yet.

Last night Vogel Albinson who just bought Lot 6 - Sec 5 - 137-27 came to see me he might want his lines. Dad & I ran them in 1925 For Reinhard bro's see book 158 pg 51 Vogel Albinson address is Albinson incorporated 124 S. 4th St Minneapolis 1 Minn. call - Atlantic 8207

He wants my Blue Printing work
Wants to sell me a Bruning K

(35) Hammergren 35

April 28th 1952

Dick Eaton calls from Cross Lake around 7 o'clock I tell him I will be down in the morning and finish the work.

Tue April 29 1952

I Lv Walker drive to Hammergrens wait for Dick Eaton who has come to Cross Lake store

Dick & I in my car drive to Ox Lake Resort to talk about surveying the Ox Lake Resort land

Dick & I drive to Balls for dinner Dick pays
P.M.

Jim Meloney & I start putting in the Iron Mon. at the lot corners work until 4:45 quit for night Dick gives me \$5⁰⁰ expence money. Supper at Balls 1.00 Lv me \$4⁰⁰

part of spike set for lot corners have been grubbed out by Bulldozer

Harold Caro

36 Sec. 17

36

137-27

April 30, 1952

Ties to NW cor Lot 7 = $5\frac{1}{16}$ Cor

bet Sec. 17-18 - 137-27

N.P. 9 N $33^{\circ}18'$ E 56.55

Red Oak 14 S $51^{\circ}13'$ W 59.9

R. Oak 8 S $50^{\circ}15'$ E 71.3

Chain South along Sec line 500 feet set 60' pin A.P. on Sec line bet. outlots B & C.

from $\frac{1}{16}$ run East bet outlots

A & B N line Gov't Lot 7 S $89^{\circ}48\frac{1}{2}'$ E

@ 33 set 2x30' I.M. Lot corner to

outlot A & B from I.M. chain East

@ 300 pin - 333 from $\frac{1}{16}$ cor - $52.7 = 280.3$

but 60' pin 333 + 100 = 433 pin + 200 =

633 pin + 10.25 = 643.25 E hub.

Take stake of pond from hub

RS. S $89^{\circ}48\frac{1}{2}'$ E + run

225 S $4^{\circ}18'$ E

170 S $15^{\circ}37'$ E

80 S 45° E

160 N $78^{\circ}45'$ E

180 S $89^{\circ}48'$ E

215 S $15^{\circ}45'$ E

37
Hammergren Plot of McLin 37

April 30th 1952

Lower 60^d up to 93 ft SE of cor.
to lot 25-26 take slacks of end of
pond, run S

75 S 3°30' W - 110 S 16° W

100 S 35°30' W - 90 N 33° W

100 N 19°20' W - 140 N 14° E

200 N 1° E

Dick gives me a check for
\$20⁰⁰ making \$25⁰⁰ in all
for expenses.

Copy of check

Cedar Rapids Iowa Apr. 30 1952

First Trust and Savings Bank
pay to Harold Curo \$20⁰⁰

R. P. Eaton

I finish plat will take it to
Brainard in the morning

May 1st 1952

I take Hammergren Plat to
Brainerd. Earl Jenkins & I
check said plat. I Lv the plat
with Earl who will give it to the
Comm. Monday if the taxes
are paid by that time

I check description of
land sold & re-sold in Court
Lot 8 Sec. 5-137-27

drive back to Hammergrens
tell Dick that the taxes are not
paid. to be sure and pay them
before Monday if they want the
Plat signed this month.

I get my things out of the
cabin and drive to Ox Lake
Resort

40 Lot 8 ① Sec 5-137-27

May 1st 52

Ox Lake Resort part of Govt

Lot 8 - Sec. 5 - 137 - 27

May 1st 1952

② Transfer No 61

Joseph H Goodman (single man) and
Harold N. Everhart & Wife
to

Otto Seckel and Pearl Seckel, his wife as
joint tenants and not as tenants in common
Warranty deed

Dated August 2nd 1939

Consideration \$1.00 + c.

Filed August 5th 1939 at 9 o'clock AM

Record in Book 98 of Deeds, page 475

Conveying: Lot 8, Sec. 5, Twp 137, Rge 21

Subject to the right of the United

States for flowage purposes in 19.3
acres thereof and also subject to the
right of way of the Northern Mississippi
Railroad Company in a strip 100 ft wide
where the railroad is located across said
lot 8

Excepting and reserving any reservations
that may appear of record as

②

Lot 8 Sec 5 - 137-27 Ox Lake Resort 41
Elmer A D'Zigge

to mineral and mineral rights

Being the same premises contracted to be sold to the said second parties by written contract dated May 18, 1939 in pursuance and fulfillment of which contract this deed is made

\$1.50 Revenue Stamp affixed & cancelled

Transfer N° 64

Otto Seekel and Pearl Seekel his wife
to

D. E. Nichols

Warranty Deed

Dated, November 20th 1940

Consideration, \$300.00

Filed, November 22nd 1940 at 12 o'clock M

Recorded in Book 103 of Deeds, page 266

Conveying: that part of Government Lot 8 Section 5 Township 137 N of Range 27 was beginning at a point where the east line of said lot 8 intersects the South shore of Ox Lake, thence South along said East line 8 20 feet more or less to the southeast corner of said lot 8; thence Westerly along the South line of said lot 8 a distance of 585 feet more

42 Lot 8 Sec 5 ③ 137-27

Transfer № 64. Continued

or less to the center line of the County road which used to be known as the old railroad grade of the Northern Mississippi railroad, thence East 70 feet, thence Northerly 315 feet more or less to a point on the South shore of said Ox Lake, 540 feet west from the East line of said lot, thence easterly along said shore 540 feet, more or less to the point of beginning.

Subject to the right of way of said Co. road. Subject also to flowage rights of the United States Gov't. and subject further to the right of way of the Northern Mississippi Rail Road Company in a strip 100 ft wide where the railroad was located across said lot 8 also subject to any reservations that may appear of record as to mineral and mineral rights.

Excepting a contract for deed dated May 1st 1940, under which Otto Seckel and Pearl Seckel sold to C. M. Weber the land herein above described for the consideration of \$600.00, 300.00 of the purchase price having been paid and the remainder is payable 100.00 May 1st 1941 - 100 May 1st 1942 - 100. May 1st 1943 & bearing interest at the rate of six percent

Ox Lake Resort⁽⁴⁾ Elmer A O'Zigge 43

Transfer No 65

Otto Seekel and Pearl Seekel his wife
to

C. M. Weber

Warranty Deed

Dated, August 21st 1941

Consideration, \$500.00

Filed, August 21st 1941 @ 11 o'clock AM

Recorded in Book 103 of Deeds, page 516

Conveying: that part of Govt Lot 8
Sec. 5 Twp 137 Rge 27 described as
follows: Beginning at the Southwest
corner of said lot 8, thence East on the
South line of said lot 8 - 718.3 feet to the
center line of State Aid Road No 6, thence
in a Northwesterly direction on the E
of said S. A. R. No 6 a distance of 870 feet
more or less to a trap road laid out and
in use from said S. A. R. westerly known
as Seekel Point road thence along the
E of said trap road to the West line of said
lot 8 thence Southerly along the West line
of said lot 8 to the SW cor Lot 8 pt of beg.

Subj. to the right of way of said S. A. R. &
Twp Road above mentioned, and also Subj.
to the right to overflow by the United States
55¢ Stamp Cancelled,

44 Lot 8 Sec 5 (S) 137-27
Transfer No 71

Otto Seekel and Pearl Seekel his wife
to

Leo W Chapman + Edna Chapman ^{husb & wife}
as joint tenants + not astenants in Common
Warranty Deed

Dated August 2nd 1944

Consideration 1.00 + c.

filed October 10th 1944 at 12 o'clock M

Recorded in Book 113 of Deeds, page 541

Conveying: Lot 8 Sec. 5 Twp 137 Rge 27
excepting that part thereof heretofore
conveyed to D. E. Nichols by Deed
recorded in the Office of the Register
of Deeds, Crow Wing County Minnesota
in Book 103 of Deeds, on Page 266; and
also excepting that part heretofore
deeded to C. M. Weber by deed recorded
in said Register of Deeds Office in Book
103 of Deeds on page 516.

The above conveyed land is subject
to mineral reservations and rights by
United States Government to overflow and
also subject to any existing easements

Except a mortgage in the sum of \$500.00
dated the 16th day of October 1943

OX Lake Resort ⑥ Elmer A D'Aggell A5

together with interest at the rate of
7 per cent per annum from said date
which the parties of the second part
hereby assume and agree to pay
\$1.66 Revenue Stamp affixed & cancelled

Transfer No 82

Leo W. Chapman and Edna Chapman his wife
to

Arnold G. Wicklund + Bertha Wicklund ^{husband & wife}
as joint tenants and not as tenants in common
Warranty Deed

Dated July 31st 1951

Consideration \$1,000 + C.

Filed, August 28th 1951 at 9 o'clock AM

Recorded in Book 138 of Deeds, page 464

Conveying: That part of Government
lot 8 Sec 5 Twp 137 Rge 27 described
as follows. (1) that part of Government
lot 8 lying Westerly of the center
line of what is known as State Aid
Road No 6 and Northerly of the center
line of what is known as Seekel or
Township road as laid out and in use
in an east and west direction over

46 Lot 8 Sec 5 ⁽⁷⁾ 137-27

said Government lot 8 subject to such reservations and restrictions heretofore made and of record, also subject to restrictions as to Boat Livery Tavern and bait Sales:

(2) also that part commencing at a point on the North line of said lot Government lot 8 where said line intersects the shoreline of Ox Lake thence in a Southeasterly (SE) direction along said shoreline to an iron stake which is also located approximately 80 feet from said point of beginning, and which is also located 300 feet (NW) Northwesterly of an iron stake on said shoreline which is 389 feet Southeast (SE) from the North line of said Lot 8 thence in a Southwesterly (SW) direction to a point on the centerline of State Aid Road No 6 which is 132.5 feet measured along the centerline of said State Aid Road from the intersection of the North line of said Government lot and the centerline of said State Aid Road. thence

Ox Lake Resort (8) Elmer A D' 3199 et A 7

in a Northwesterly (NW) direction along the centerline of State Aid Road a distance of 132.5 feet to the North line of said lot; thence East along the North line of said lot to the place of beginning. Subject to Road easement mineral reservations and restrictions of record, and flowage rights

\$2.20 Revenue Stamp affixed & cancelled

May 1st 1952

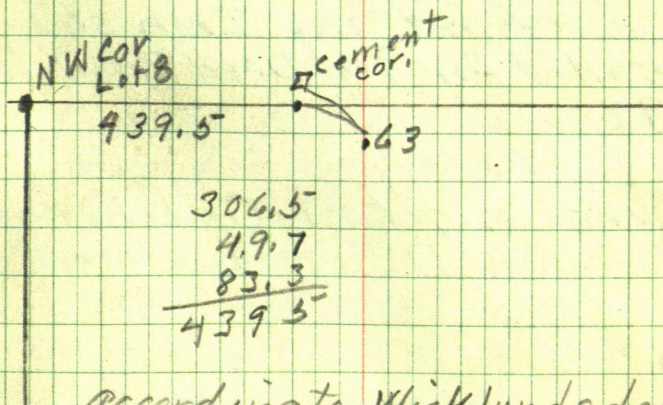
I get back from Brainerd around noon get my things drive to Ox Lake Resort Elmer A. D'Zigge & I go to NW cor lot 8 - find I.M. set by John W. Carro in for true NW cor Lot 8 we cut out old survey line East along the North line of Lot 8 Sec. 5-137-27 at point 2312.25 W of True S $\frac{1}{16}$ cor bet Sec. 4-5-137-27 old notes page 33 Book 235 says at hub 2312.25 W we find the old B.T. and set a 2X18" I.M. 4 ft W of Brink cut bank of old grade from 2312.25 W chain W. 306.50 to 2618.75 set pt for True $\frac{1}{16}$ cor center S $\frac{1}{2}$ sec 5

Elmer & I find the B.T. to hub 2312.25 and chain in and set 60# spike on side of bank in cut of S.A.R. No 6 there is a 1" pipe at edge of brink about 2312.25 W from Sec line is 306.5 E from NW cor Lot 8

0.50 N of True line π over our
 60 $\frac{1}{2}$ spike 2312.25 $\frac{1}{2}$ site W on IM
 $\frac{1}{4}$ cor NW cor lot 8 & run E 49.7
 ft to 2262.35 $\frac{1}{2}$ W on E edge of Tal
 on S.A.R. N 26. We also set a 60 $\frac{1}{2}$
 spike in the tar road

π over 2262.55 $\frac{1}{2}$ W B.S. W on $\frac{1}{4}$ IM
 a iron set in a 3X3 Cement cor
 bears L or E 0 $^{\circ}$ 26' N 83.3 $\frac{1}{2}$ ft

sine	cosine	2262.55 $\frac{1}{2}$ - 83.3
.007563	999971	2179.25 $\frac{1}{2}$
<u>83.3</u>	<u>83.3</u>	
.6299979	83,2975843	



according to Wicklunds deed
 Transfer N $^{\circ}$ 82 there should be a Iron
 Stake approx 80 ft SE from cement

We find a $\frac{1}{2} \times 1$ " wood stake but
no I.M. said wood stake is
about 90 ft rough chain from
cement cor.

From spike in center line
SAR. N^o 6 we chain S along E
of road 132.5' from this pt
in E the stakes shown by
Wicklund to Elmer D'Zigge
as his south line. Will line
up with pt on E road 132.5'
SW of N line Lot 8. we can not
find any iron stakes we ch.
S along lake shore 300 ft and
can not find any Iron stake
as called for in Deed Transfer
No 82.

over night at Ox Lake Resort
Elmer A D'Zigge owner

May 2nd 1952

Cloudy + cooler. Elmer + I go to West line Lot 8 and follow it south to I.M. @ SW Cor of Lot 8 - Sec 5-137-27. We then walk West to S.A.R. No 6. We go to Ox Lake Resort where I get my car and drive S. to Rebers road where we Lu the car and walk E and S to SE corner of said lot 8 where we find the I.M. set by John W. Curo for true SE cor lot 8. We check this I.M. with old B.T.s. called for in old Notes. B.T.s called for in old Notes

Oak 5-NE 43 ft Now 12" oak

N.P. 12 NW 30.5 " 30" NP

J.P. 11 SE 41 ft " 28" JP about 80E

From I.M. we chain West 187.5 ft and find Railroad spike set by John W. Curo on true S line Sec. 5 in 1937. cut out the line from I.M. SE cor Lot 8 on E $\frac{1}{4}$ Cor bet Sec. 5-8 to pond or swamp. go to dinner

52

May 2nd 1952

P.M.

Turn R.R. spike hub on true S. line
Sec. 5 - 187.5 feet N of E $\frac{1}{4}$ Cor
bet Sec. 5-8 - Site E on flag at I.M.
and cause 60° spike hub to be
set W in $\frac{1}{2}$ Tar Road S.A.R. No 6
said spike on true South line Lot 8
at intersection of said South line
and the $\frac{1}{2}$ of S.A.R. No 6.

from said intersection spike
we chain N. Easterly along the $\frac{1}{2}$ of
said S.A.R. 550 ft. set 60° spike

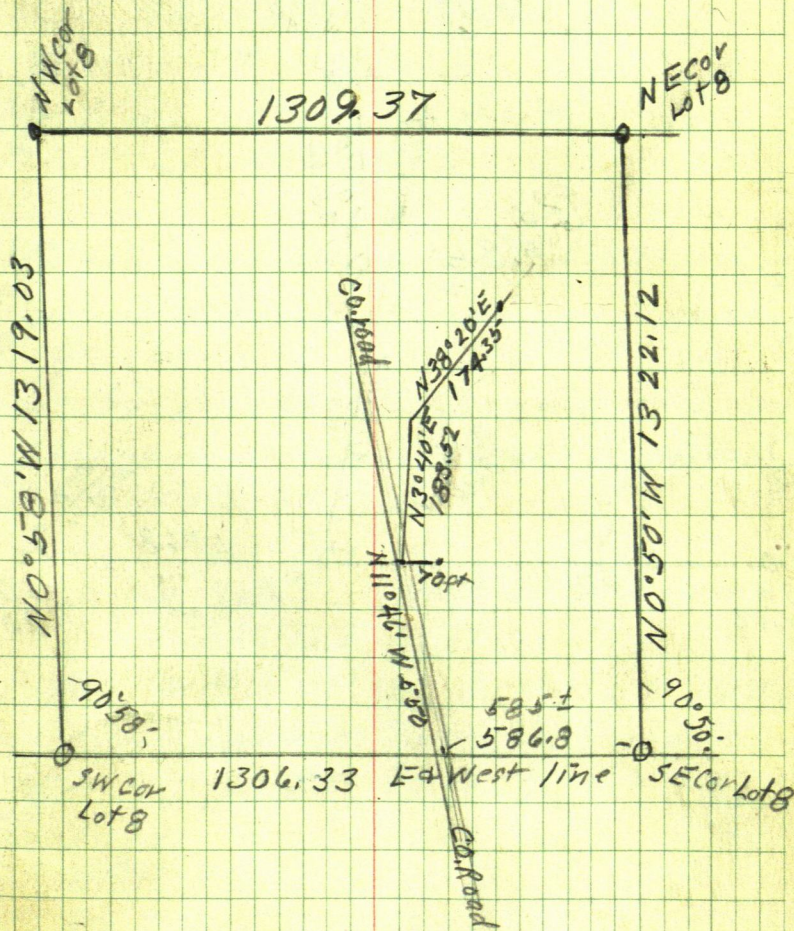
Turn 60° spike at intersection
of S. line & S.A.R. No 6 B.S. East on
True E $\frac{1}{4}$ Cor and run N $11^{\circ}46'W$
550 ft to 60° spike in $\frac{1}{2}$ Tar road

Turn 550 ft spike in $\frac{1}{2}$ S.A.R. No 6
B.S. S $11^{\circ}46'E$ and run West
@ 66.5 d $\frac{1}{2} \times 9"$ Pipe sets S. 45° of a foot
@ 80 set a 60° spike pt for I.M.

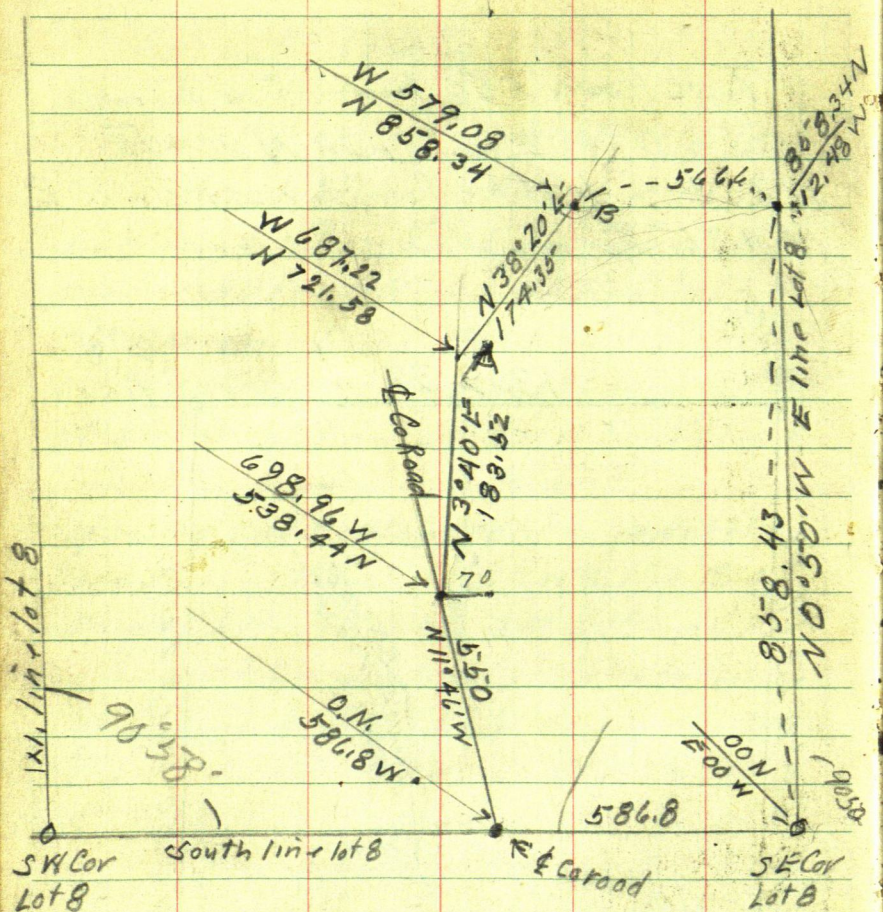
Note spike @ intersection of S. line Lot 8
& $\frac{1}{2}$ Tar road is 586.8 W of SE Cor
of said Lot 8

At Stillmore 550 feet in the road

BS S $11^{\circ}46'E$ and run N $3^{\circ}40'E$
 183.52 to pt A from A run N $38^{\circ}20'E$
 174.35



54



May 3 1952 Sat.

Mr. Wicklund came in last night so did
 @ M Weber. Elmer + I with Mr. Wicklund
 go to the S. line of Wicklunds property
 he shows me the stakes he bought to
 and claims as his southerly line

Elmer + I go to pt "B" and run E. 26.6
 feet to a point 540 feet W. of the E line
 of lot 8 on shore line of Ox Lake get Mr.
 Weber and show him where this Northerly
 line comes according to his deed. it does
 Not come as far West as he said Otto Seckel
 set his stake

at the pt 540 feet W. of E line I drive
 a 2X30" pipe in chanel about 1 ft Northerly
 from S bank of chanel Take Ties
 Tower. IM Ties

Oak 8 N $82^{\circ}50'$ W 25.25' spot at Base

J.P. 6 S $23^{\circ}16'$ E 42.87' spot at Base

White Pine 14 N $79^{\circ}20'$ E 4.68' to bottom Not Blazed

WP is on narrow pt. S. line lot 8 called E + W

We go to point 70 ft E of tower set 2X18" pipe
 take ties

N.P. 18 N $70^{\circ}35'$ W 12.4 spot 3 ft up

R.O. 9 S $17^{\circ}50'$ W 32.6

S. line called E + W

56

$$\begin{array}{r} 139 \\ 190 \\ \hline 329 \end{array}$$

From IM 70 ft E of $\frac{1}{4}$ bar road
 I Mon Lake shore of Ox Lake
 540 ft W of E line course reads
 N $13^{\circ}27'E$ 190 + 139 = 329 ft

@ 140 NE of pt 70 from $\frac{1}{4}$ we
 set a 2x18" IM to mark the line
 between Ox Lake Resort and the land
 owned by C. M. Weber

We go to N line Lot 8.

Turn 60^d spike 2262.55 W of
 Sec. Cor NE cor Sec 5 run S $31^{\circ}30'W$

125.35 to spike in $\frac{1}{4}$ bar 132.5 S. of N line

Turn 60^d spike in center of **BAD** N $\frac{1}{2}$ 6

132.5 measured along $\frac{1}{4}$ of road from N
 line Lot 8

IM on lake app. 80 ft from intersection
 of N line Lot 5 with shore of Ox Lake

bear N $64^{\circ}06'E$ 85.7 - 8 fms. water

IM @ right of way ? bear N $63^{\circ}40'E$
 31.6.

Tower Sta A Toka Stada of Q tar
road - S A R N° 6

98- N 43° W - 123 N 36° 25' W
150- N 32° 15' W - 180 N 29° 08' W
210 N 27° 20' W - 240 N 26° 10' W
270 N 25° 30' W - 300 N 25° W
332 N 24° 40' W - 363 N 24° 30' W
395 N 24° 30' W 423 N 24° 33' W
453 N 24° 37' W 490 N 24° 46' W
520 N 25° 01' W 540 N 25° 06' W

end of road Stada reading

Still at Sta A Toka Stada of channel
105 S 79° 45' E 115 N 79° E
130 N 66° 15' E 150 N 64° E
160 N 52° 30' E 180 N 49° E

R417.

210 N 22° 17' E Sta

R417

210 N 27° W 175 N 21° W
100 N 10° 30' W 55 N 6° E
45 N 43° E 80 S 50° E north channel
115 S 40° 45' E channel

58

Fisherman Point

April 28th 1953

I received a letter from
Manley H. Frisch, 300 Minnesota Bldg
St. Paul 1, Minn. Phone St Paul. Cedar 7331
or Minneapolis Midway. 0066

Copy of letter written Apr. 27-1953
Mr. Jack or Harold Curo - surveyors
Walker Minn

Dear Mr Curo

Please be advised that I represent
Mr & Mrs Herman Paster who are the
owners of Fishermen's Point Resort on
Cross Lake Minnesota

You no doubt are acquainted with
Mr & Clifford Hardy who are the managers
of this Resort

Mr & Mrs Hardy have sold a portion
of this resort property to Mr & Mrs James
L Maloney.

On Sunday Apr. 19-53 Mr & Mrs
Maloney, Mr Hardy and my self went
upon the premises and determined the
North boundary line of the premises to
be conveyed to the Maloney's

Consequently, Mr. Hardy is familiar with the North line of the premises to be conveyed to the Maloneys.

It was understood that I was to write to you to request you to make a survey and to design the property being purchased by the Maloneys.

I would, therefore, appreciate your proceeding to the Fishermen's Point Lodge or Resort at your convenience and communicating with Mr. Clifford Hardy who will point out to you the lines where the North end of the property purchased by the Maloneys is to be located.

You will recall that you surveyed and made a plat of the Cross Lake Fishermen's Point resort in June of 1949.

I herewith enclose a plat of your survey made at that time.

It would appear from my knowledge of the situation that the Maloneys have purchased the property located in that part of Gov't lot 6 Sec. 17 Twp. 137 N of Rge 27th described as follows

beginning at a point where the N line of said Lot 6 intersects the shore of Cross Lake; thence Westerly along the N line of said Lot 6 to a point in the center line of County Road No 8 said point being 198.6 ft east of the NW cor of said Lot 6 thence South $37^{\circ}09'W$ 222.0 feet; thence $S 59^{\circ}56'W$ 60 ft to the West line of Gov't Lot 6 - 593.2 feet; thence $S 70^{\circ}35'$ east 347.9 feet to the shore of Cross Lake; thence NEly along said shore to pt of beg. Subject to Highway & road easements, flouage right an mineral rights & reservations of record.

After Mr Hardy has pointed out to you the N boundary line of the property conveyed I would appreciate your making a plat of survey which will show the exact lines of the property purchased by the Maloney's.

Please send me an original and three or four copies of the plat together with your statement for services rendered.

I would appreciate your giving
this matter your attention at your
early convenience

I wish to thank you in advance for
your courtesy and cooperation herein

Very truly yours

Marley H. Frisch

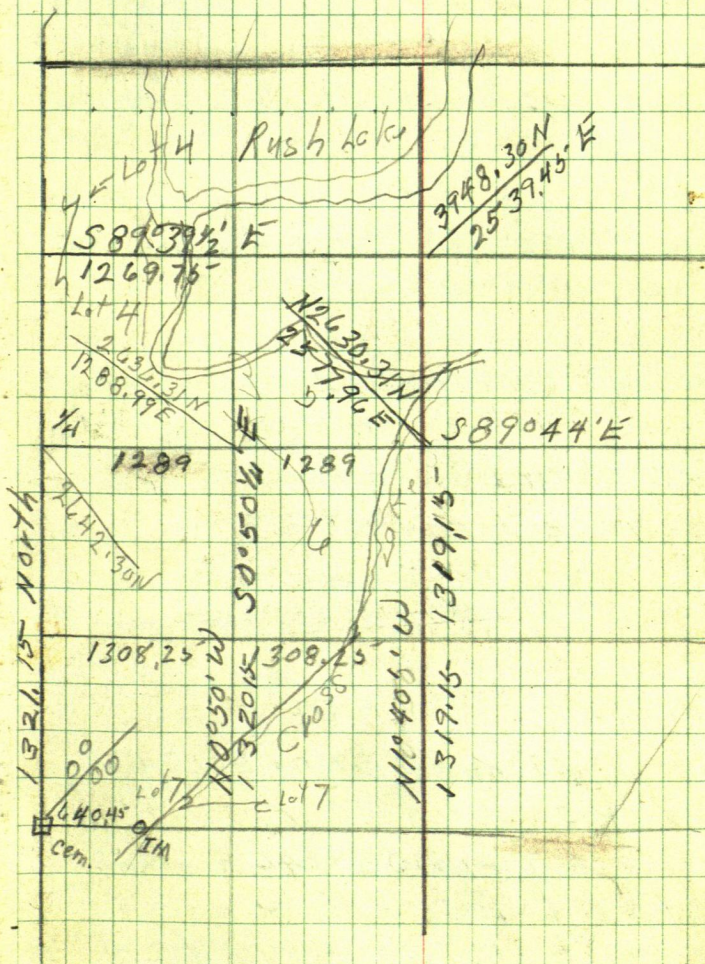
MHF:FW

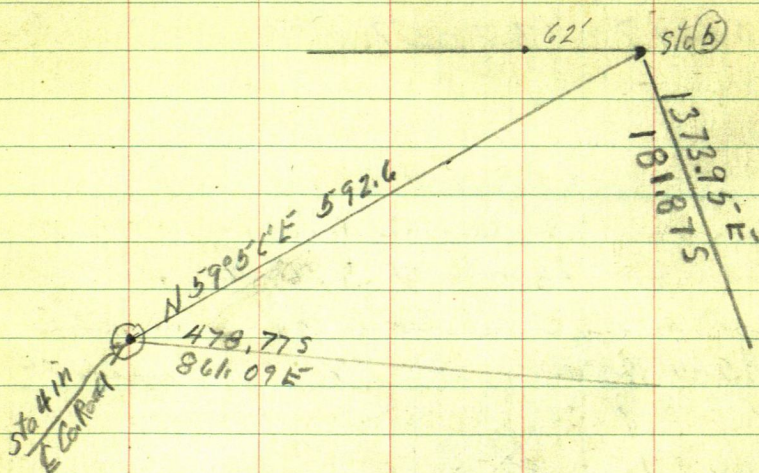
ENCLOSURE

CC Mr & Mrs Clifford Hardy
Fishermen's Point Resort
Cross Lake, Minn

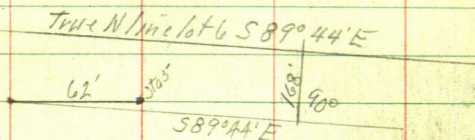
I check old Notes in book 212-424
and 429

Sec 17-137-27





From sta 5 run West 62 feet Then
 62 run $S 0^{\circ} 50' 44'' E$ on West line of Lot 6
 Then 62 run $S 89^{\circ} 44' E$ — ft
 to clear lake then North



From sta (5) run $N 37^{\circ} 09' E$ 384.3 to
 sta (6), cross E and W @ 216.7'
 From 216.7 run $S 89^{\circ} 44' E$ along
 True E & W @ E to the lake
 Note point 216.7 is 212.78 ft E of
 NW Cor of Gov't Lot 6 Sec 17-137-27

Sta 5 is 175.48 ft south of N line of lot 6 and 82.38 E of the West line of lot 6

at points all gone

beg at S $\frac{1}{2}$ W side Sec 17-137-27

Ed. + I chain N 370-1.8 - 368.2^{sta 1}

spike in E Tar Road. run N 60° 23' E

along E tar road. from 60° spike to

Chain S 60° 23' W - 100 + 100 = 200 + 300 =

500 + 300 = 800 + 300 = 1100 + 300 = 1400 +

124.5 = 1524.5^{sta 2} to spike in E of Tar road

on W line Sec 17

Then 60° spike to run N 44° 26' E 100 -

21.5 = 97.5 to 60° spike in E tar road

Then 97.5 run S 44° 49' E @ 33 spike + 131.3 = 164.3

Then 164.3 run N 82° 57' E 33 + 251.8 back

+ 10' to water

T @ 164.3 Water S 81° 15' E 50 paces +

point to W N 86° E 46 paces

Then I Montlake shore SE corner of
Fisherman Point Property run
N 70° 35' W 347.9

Then 347.9 run N 0° 50' W

to E tar road,

66

Fig.

Sta 1 = spike in road 368.2 ft N of S 1/4
bet Sec. 17-18-137-27

run N $60^{\circ}23'E$ 15245 to No 2

S $N 60^{\circ}23'E$

Sine, $869351 \times 15245 = 1325.33 E$

Cosine, $494195 \times 15245 = 153.40 N$

Sta 2 is 1325.33 E and 521.60 N of 1/4

from Sta 2 run N $44^{\circ}26'E$ 975

N $44^{\circ}26'E$

Sine

Cosine

continued from page 65 -

@ 35 enter pond @ +125 ± point
pond $\overline{K35}$ $\left(\begin{smallmatrix} 125' \\ 35' \end{smallmatrix} \right)$

intersect. road a 41.6 S 60° 23' W of sta ②

iii. hub about 7' 3" of the chain

S 0° 50' 1/2" E 37.5 pt for IM + 98 + 10.7 hub
+ 74.6 hub 3 ft from pond

68 AW Miller Eden Prairie
Nov 10th 1953 P.O. Hopkins R#1

I Lu Walker drive to Cross Lake
where I pick up Pat DeZeller and
drive to I M NE 1/4 lot 5 Sec 20
137-27 arrive @ 11 AM

Now I M on high cut bank

site W on Cement Mill Car

Turn L on S $51^{\circ}35' = 538^{\circ}25' W$

Sine 621376

Cosine 783513 into 33 =

$$\begin{array}{r} 783513 \quad 42.118 \\ 783513 \overline{) 33000000} \\ \underline{3134052} \\ 1659480 \\ \underline{1567026} \\ 924540 \\ 783513 \\ \underline{1410270} \\ 783513 \\ \underline{6267570} \end{array}$$

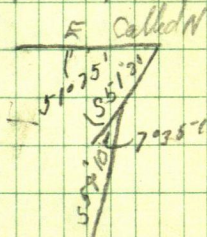
$$\begin{array}{r} 523 \quad 127.247 \\ 783513 \overline{) 100.000000} \\ \underline{7} \\ 5484591 \\ 783513 \\ \underline{2164870} \\ 1567026 \\ \underline{5978440} \\ 5784591 \\ \underline{1938490} \\ 1567026 \\ \underline{3714640} \\ 3134052 \end{array}$$

580588

@ 42.12 at 60° angle pt for IM SE
 cor of 33' Street + 127.25' for each
 100 ft lot cor.

42.12 + 127.25 + 127.25 A.P. all pt 110 ft
 from brink

$$\begin{aligned} \text{True AP} - 59^{\circ}10' &= 0 \\ - 51^{\circ}35' & \\ \hline &= 7^{\circ}35' \text{ E} \end{aligned}$$



$$\begin{aligned} 90^{\circ} - 59^{\circ}10' &= \\ 59^{\circ}10' & \\ \hline 30^{\circ}50' & \end{aligned}$$

530°50' W

Sine 512543

Cosine 858662

$$\begin{array}{r} 4544, \quad 117.777 \\ 858662 \end{array}$$

$$\begin{array}{r} 858662 \overline{) 100000000} \\ 7 \quad 858662 \\ \hline 5908634 \end{array}$$

$$\begin{array}{r} 423 \\ 858662 \end{array}$$

$$\begin{array}{r} 5 \\ 4293310 \end{array}$$

$$\begin{array}{r} 858662 \\ 4413380 \\ 858662 \\ \hline 6547180 \\ 5908634 \\ \hline 6385460 \\ 5908634 \\ \hline 4768260 \\ 4293310 \\ \hline 474950 \end{array}$$

From A.P. chain along 12 ft ±
from edge of brink 117.78

up + 117.78 + 117.78 = A.P.

Cut bank 30 ft high 30 ft to pt +
20 ft to water

$$\begin{array}{r}
 1200 \\
 533 \\
 \hline
 667 \\
 150 \\
 \hline
 517
 \end{array}$$

$$\begin{array}{r}
 8960 \\
 6947 \\
 \hline
 2013
 \end{array}$$

From A.P. 25" to Brink

44° W 69° 47' S

90° - 69° 47' = 20° 13' W

Sine 345571

Cosine 938393

as this lot will have to be 117 ft
wide .3 .3 .

$$\begin{array}{r}
 938393 \div 117.000000 \\
 \hline
 4 \quad 938393 \\
 \hline
 3753572 \quad 2316070 \\
 2938393 \quad 1876786 \\
 \hline
 6 \quad 4392840 \\
 \hline
 3753572 \\
 \hline
 6392680 \\
 3938393 \quad 5630358 \\
 \hline
 7587144 \quad 742322 \\
 \hline
 75
 \end{array}$$

6th lot from the N will be 117 ft wide
measured along the bank of Croy
Lake 124.68 - 6 ft from brink
7th lot will be 100 ft wide measured
along bank

106.566

938393) 100000000
938393

938393
65
4691965

6160700
5630358
5303420
4691965
6114550
5630358
484192

150
11.7
33
300

Tower A.P. 21 ft from brink
run $76^{\circ}30'W = 13^{\circ}30'$
Sine 233445
Cosine 972370

102.84
972370) 100000000
8- 972370
2763000
1944740
8182600
7778960
403640

from A.P. chain 102.84
+ 102.84, A.P. 6 ft from Brink

From A.P. run W $71^{\circ}33'51'' = S18^{\circ}27'W$

Sine 316477

Cosine 948600

105.42

^{27 2}
948600 / 1000000

9486

51400

47430

39700

37944

17560

From A.P. run W $70^{\circ}48' 220-$

0.90

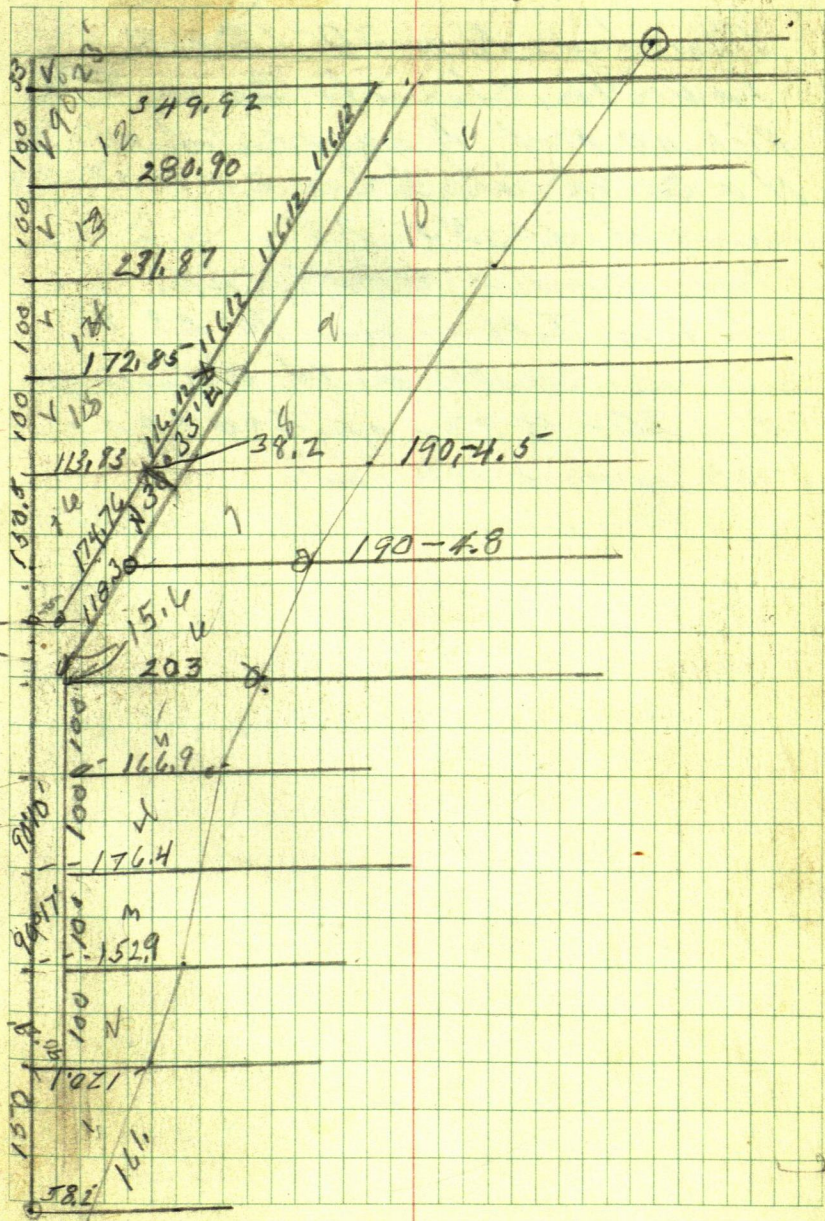
Tower

IM. @ 1200 S. to

W $22^{\circ}37' 92$ ft.

' quit @ 4.45

73



Monday Nov 30-1953

Lu Walker drive to Cross Lake
 Pick up Pat Hegella drive to
 NW Cor of lot 5 Sec 20-137-27
 arrive at 10-55-AM.

Tower Cement this corner
 Site E on I.M. Turn $90^{\circ}23'R$
 and run South on the W line of
 Sec. 20- @ 33 - spike + @ 100 spike
 + 100 spike + 100 spike

Dec. 1st 1953

Lv Walker drive to Cross Lake

Pick up Pat drive to lot 5 Sec 20
137-27

Tower spike SE Cor lot 10

Site W $S 89^{\circ} 37' W$ on SW corK40 $N 30^{\circ} 33' E$

July, 14th 1958

Claude E Kennedy
Manager at Fisherman Point
owned by Herman Paster
comes to Walker, Ed brings
to show house and get me where
I am at Show.

He says Paster is selling some
land & wants a survey. I tell
him I will be out the next day
to see what is wanted

July 15-1958

Self + I drive to Fisherman's
Point is selling part of Lot 4 Sec 17
137-27 and a part of NWNW lying
N of Highway - I think

W

July 17th 1958

Ed + I to Fisherman Point we look
for starting Points we find the IM
at NE corner of Paster Property
set by J.W.C. in 1942 when he ran
out U.S. Overflow lines
from this IM. 1100ft N. of 1/4 bet 17-18
J.W.C. ran E 200ft to IM
we find these two IM. from IM
200ft E old notes page 62- book 418
run S 45° E page 63 same book
says **Old Notes**

Tower 200 Ties

Toilet W corner S 18° 35' E 55'
E " S 26° E 57.2
N " S 22° 20' E 53.

run S 43° E at 100pin @ 105 hub
in line with W wall. 8.00ft L E side 24.4
@ 136 hub in line E wall 13.20 L S " 30.3
at 200 hub RR spike @ 221.3 Auk RR spike
No head. & old deep rutted road
@ 337.8 hub @ 400pin @ 430 hub

Tower 430 BS N 45° W

Ties

RO 145 77° 14' W 25.45

N.P. 15 S 3° E 24.75

run South

78

420
395
25

from hub 430 run South
 @ 212.7 hub @ 295 water @ 395 L_v
 @ 469.2 hub @ 600 hub Turn
 Tower 600 Turn 90° run E 105' end
 water

Ed & I have supper at Cross Lake
 & take in show at Drive in.

over night in cabin at Fisherman
 Point.

July 18th 1950

Ed & I up at 7:30 drive to Bakery
 get eggs & Tart. drive back to
 Nord. of property from I M 200' E
 of N+S section line 1100 ft N of 1/4
 bet 17-18 + 137-27 we chain S 45° E
 at 200 we find JWC: old RR spike
 hub at 221.3 we find old RR spike mark
 in E old road @ 337.8 we find old RR
 spike hub @ 430 we find 2" I M.

Tower 2" I.M. BS N 45° W on flag at 337.8
 and run South @ 212.7 we find the
 old RR hub. we find RR spike hub
 at 469.2, + 130.8 ^{600.5} we find the 2" I M
 Level with the ground

Turn 600 S B S N on flag at hub. 469.2
and ran West 204.1. we find the
2 1/2" I.M. following old Notes of survey by JWC 1942

Turn I M 204.1 W B S East and
ran S 32° 31' E 490.1 we find this 2" I.M.
Note: I am following old Notes in Book
418 page 77 Survey made by me in 1949

Turn I M 490.1 B S N 32° 31' W + ran
S 70° 00' E 179.7 set 60' spike in ground
this I.M. gone.

Turn 60' spike B S N 70° W + Run
S 30° E 223.8 to pt in ground

We hit my old 60' spike in ground
about .8 S of white line 2" below
New Tar.

We go West to Sec. line
from ground Tar road we pass N 141. ft
where J.W.C. set hub at 2030.6
hub T.C.s

Red Oak 12 N 25° 40' E 2400.

Burr Oak 5 N 68° 35' W 25.00

We find both trees chain out and
find our old RR spike hub.

We walk S and find the
S $\frac{1}{4}$ IM bet sec 17-18

We drive N and open up
the line from 1100 N to
IM 200 ft E

Look for hub 1248 old Notes
find ties but no hub

We open up the section line
South find ties and hub
at pt Marked 1043.2 N
at 1248 N we find the ties but
no hub

Look for hub 976.9 Notes
do not find hub continue
cutting line S to spring lake
find IM pump point with
N of $\frac{1}{4}$ called 70 N and distance
changed to 84.31

Dinner & Supper at Ball's

overnight at fisherowns Point

July 19-1958

81

up at 8 as No body is open before then
drive to Bakery for breakfast.

drive to E line sec 17-137-22

Tower hub 2030.6 N of SW cor
sec 17

Ed take flag + rod around to
IM pump point N side of spring
Lake rod read 690'

distance from SW cor sec 17 to $\frac{1}{4}$
1321.15 in lake

$$\begin{array}{r} \text{Tower} \\ 1321.15 = \frac{1}{4} \\ 1030.6 \\ \hline 290.55 \end{array}$$

$$2642.30 = \frac{1}{4}$$

$$\begin{array}{r} 2030.6 \\ \hline 611.70 \\ 84.3 \\ \hline 696.00 \end{array}$$

roads read. between 690 + 700
can not see to well

Ed comes back + we open up sec
line S to Highway Tared road

82

14

July 19th 1958 continued
page 18 this book 296 says
on March 20th 1952 says

Tower RR spike hub 125 ft N of
S $\frac{1}{4}$ site S on $\frac{1}{4}$ cor. run N
243.5 to 60° spike in & tar
road 1691.2 N of SE cor Sec 17

2030.6 hub under T
1691.2 should be our old hub
339.4 S. from 2030.6 should
put us on my old spike in &
tar,

from hub 2030.6 chain S
39.4 set pin + 137.8 hub 14 ft S
of & old road NE-SW
39.4 + 300 = 339.4 pt in & Tar Road

this Book, 286 page 19 says ^{Tower site 4 ran}
Tower spike in & tar on W line ^{560°28' W 970.15 to}
site N spike in & tar ^{spike in & on W line}
60°28' = 29°32'

Sine 492920

Cosine 870069 into 50 = 57.47

" 33 = 37.93

Air Port Description

The E 30 acres of Govt lot 1

" 35 " " " 2

SE $\frac{1}{4}$ of SW $\frac{1}{4}$ all in Sec 9

137-27

Subj to highway + road easements
 + flowage rights of record

Tower spike in far road on W line
 sec 17-137-27 into N along Sec line
 chain N

Stop at Mike's Comes Looking
 for me. we drive to his place where he get
 in Sec 8-137-27

Cor. 315 N of IM on N side of Rush Lake
 thence E 225 to place of beg.
 thence S parallel with Sec line thence
 SW 120 along shore of Rush Lake
 thence N ^{parallel to West side} of road thence
 NE by to stop Beg.

Tower IM on bank of Rush Lake
 site Non point 225 E + 315 N of IM
 SE cor Sec 7.

84

160

895 210.1

119.8

698

618

40

Gov't Lot 7-8

From IM on the Line ?

224.75 E to 1 1/4" IM

Tower 224.75 Turn 90° run

S 1°44' W @ 200 pin E Tower + 66.3
hub.Lot cor lath replaced by 60" split
sets N 6°01' E 17.7

old IM sets S 3°38' E 81.85

run S 0°37' W 119.35 hub

Tower 119.35 BS N 0°37' E
stake at NW cor of back of land
bears N 75°52' W 117.8

IM on shore bears S 3°10' E

205.1 IM lot cor SE cor

Tower IM BS N 3°10' W run
S 68°16' W 119.8

SE cor Sec. 7 bears S 73°19' W

249.5^{Lot}
^{Lot}

Tower Sec Cor

stake on lot line bears N 51°50' E
67.4

Tower 67.4 BS S 51°50' W

lot line run N 14°30' W 121.8¹²⁰
+ S 14°30' E 84 - 15' from water
6' from brink

N 43-2' of ~~the~~ N $\frac{1}{2}$ Sec 8 ⁸⁵⁻

Twp 137-R-27

Except of E 660 ft thereof
Paster

Claude E Kennedy
Manager Fishermens Point
Cross Lake

Hermen Paster owner
Paster Enterprises

2227 University Ave

St Paul ~~14~~, Minnesota

Phone Midway 6-7901

Allen I Nilva NILVA

Paster's adviser

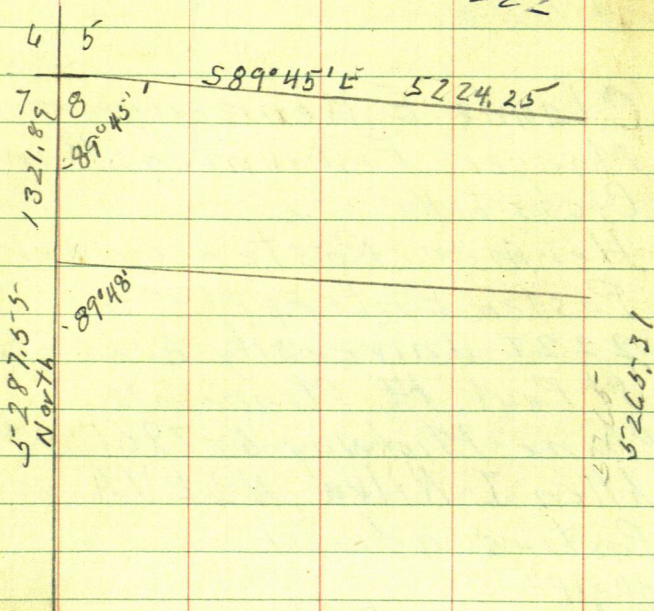
ADAIPH

Adolph P. Demmer

1432 Judith

St. Paul 13, Minn. bought
from Paster has work for me
at Cross Lake

86

998
25-6-7-8-137-27
taken from Book 223 pg. 711
-4
3
222

Lot 4 Sec 8-137-27

420
672 87
1191

F A Forster Cross Lake

Tax Receipt

over flow 10 acres

N 452 ft of N $\frac{1}{2}$ Lot 4 ^{and 8} except E 660'

May 3 1961

John Ed + I to Forster's where
we pick up Mr. Forster who shows
us IM at NW cor Sec. 8-137-27

being cor to Sec. 5-6-7-8

Book 235 page 50 says

Req at IM cor to Secs 5-6-7-8 chain South
on true line bet 7-8 - Var. 6' 10" at 370.2
hub RR spike & E + W road - @ 754.10 old
20' spike in wedge old 10" oak stump

See page 67 Book 227 of Oct 2-1931

P.M.

Work on line between NW Cor
Sec 8 and IM on Rush Lake
from NW Cor Chain S 452 ft at hub
Tower 452 site Non sec cor and
run S 89° 45' E parallel to N line
sec 8 at 33 spike pt for IM R/W line
at 487.2 hub spike on top

+ 237.6
724.8 hub
+ 110.0
115.5
950.3 hub

950.3
+ 97.8
1048.1 hub
+ 49.5
1097.6 hub 10 ft from water
Rush Lake

88

$$\begin{array}{r} 110 \\ 110.3 \\ \hline 220.3 \end{array}$$

1979

Notes 1097.4 BS N $89^{\circ}45'W$
 & run along shore N $29^{\circ}18'E$ 50'
 8 from water

Notes 50 BS S $29^{\circ}18'W$ run
 N $50^{\circ}17'W$ to & Trp road
 from & chain S $50^{\circ}17'E$ at 394 IM
 + 193.9

39.4
 233.3 hub

+ 211.3
444.6 IM 12 from water

90

$N 40^{\circ} E$

$\sin 669131 \times 13487 = 90.24 \quad S$

$\cos 743145 \times 13487 = 100.23 \quad E$

43°

$\sin 681998$

$\cos 731354$

Used Book 223 91
Mike Hammergreen
Lot 3 Sec 17-137-27 N of Road

Mike wants to plat his land
into as many lot as he can
around his home

see plat on page 9 also 63 this Book
I have figured the locations of
the center of sec 17 also the center
of the N $\frac{1}{2}$ of said section 17-137-27
as this is Mike's E line the North
and West line is Rush Lake &
Pine River the South line being
the $\frac{1}{2}$ of the old road. They have
built a new Bridge and road
by going to the S $\frac{1}{4}$ cor on the W
line of sec 17 and extending
same N to road then turning
E on said road will establish
Mike's East line from which
the distance North can be figured
from said line E as run and
the shore line of Rush Lake can
be run out also $\frac{1}{2}$ of old road.

To locate S $\frac{1}{4}$ West side
Sec 17-137-27 which is a RR
spike the two I think are gone may
be the spike from $\frac{1}{2}$ of road, chain

South 367 ft old notes 12 this
 book. From $5\frac{1}{16}$ there was a RR
 spike on line at 1445.7 RR spike @
 1689 & far road @ 1735 hub @ 2030.60
 hub Ties page 14 this book

1689.00 N

1445.7 N

243.3 from $5\frac{1}{16}$ Cham N 125
 ft rough ch. we found the RR spike on
 Mar. 15th 1952

Over this hub site S on $5\frac{1}{16}$ & run N
 $245.5 = 1691.2$ and drive a 60 ft spike
 in & far road

I forgot this Book so I
 used Book 223

N

SE $\frac{1}{4}$ of SW $\frac{1}{4}$
Sec 5-137-27

N 45.2' of Govt Lot 4 Sec 8-137-27

Lot 7 Sec 5-137-27
Sec 11111

6 5
7 8
63.74

452

11

N 5-0° 11' 11" E
444.6

92.9187

90'

80

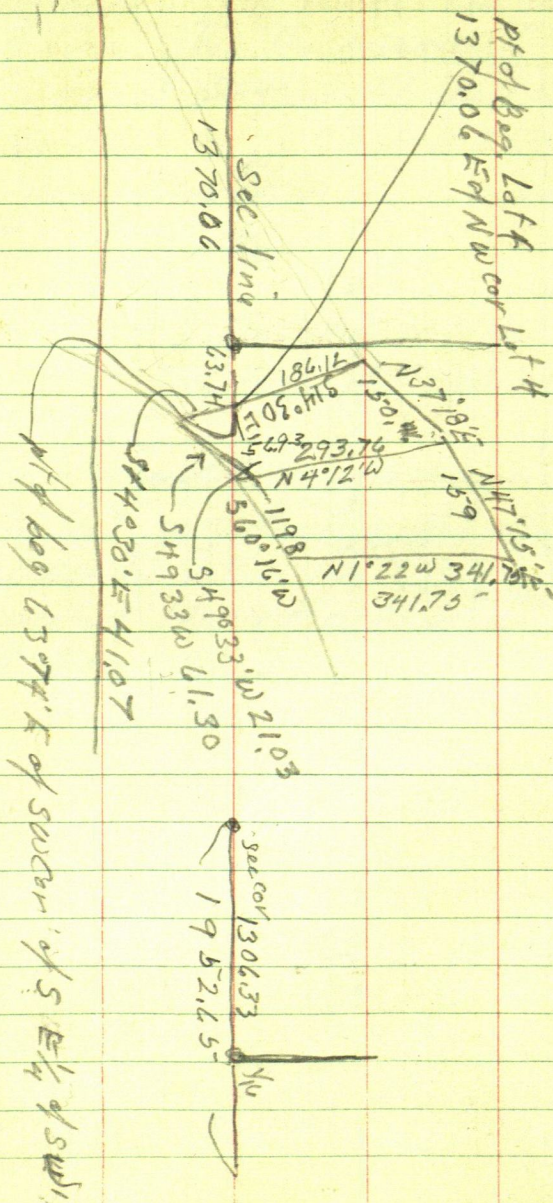
143

80-80 100

Main
Horn

132934
6374
3034

~~130806
137180
737180~~



189.3
139.4
Mon March 9th 1964

46.6
93
139.5

95

T over IM site S on IM set
spike in E tar road also one
on S edge of tar

T still over IM site S on IM. & set
spike on edge of bank S of IM
4.8 ft T over Spike Site N $14^{\circ}30'W$
run S $70^{\circ}06'W$ 50' Tower 50 BS N $70^{\circ}06'W$
run S $81^{\circ}30'W$ 50' pt for IM - 10 feet water
Tower 50 BS N $81^{\circ}30'E$ run N $14^{\circ}30'W$
parallel to E line

T still over 50 pt for IM run S $82^{\circ}41'W$
at 80 spike pt for IM. @ 160 spike pt for
IM.

T over 80 run N $14^{\circ}46'W$

T over 160 run N $14^{\circ}30'W$

More T West Tower IM 50 ft from
line site N $50^{\circ}17'W$ and run N $0^{\circ}16'E$
at 90 ft spike pt for IM. at 120 spike
angle point on shore line

T over A.P. 120 BS S $0^{\circ}16'W$ on IM run
N $21^{\circ}04'E$ 50' pt for IM.

T over 50 BS S $21^{\circ}04'W$ run N $36^{\circ}19'E$
174.9
N $30^{\circ}46'W$

40
41
30.9

70.1

97

Tower IM on see page 87
extend line N 50° 17' W to
Q tar

Tower pt for IM. 90' tract BS S 0° 16' W
on IM & run N 42° 51' W

Tower pt in tar road site S 42° 51' E
pt on tar bears S 66° 07' W
strike in tar bears N 70° 06' E

March 12th 1964

213
6
219

As thing do not check
out Bob & I go to FA Forster's
Govt Lot 4 Sec 8-137-27
have to detour around by Fifty
Lakes to get there
eat lunch. We go to
Forster's South line 452
ft sap cor to 5-6-78-137-27
where we pickup old line
Page 87 this book we find my
old hubs at 487.2 - 724.8 - 950.3

98

Tower 950.3 BS N 89° 45' ^W ~~E~~ 4 run
N 75° 45' E 176.8 to IM on 50

Tower

st lake shore tract

Tower IM on NE cor of 50' Lake shore
tract BS S 75° 45' W & run N 50° 17' W
at spike hub

run N 0° 17' E at 90 IM Tract cor
@ 120 AP.

Tower 90 BS S 0° 17' W lot line runs
N 42° 50' W

Tower AP. 120 BS S 0° 17' E run.
N 21° 17' E 50' to pt for IM Tract cor

Tower 50 BS S ~~21° 17'~~ 21° 17' W lot line
runs N 30° 45' W

Still at ~~500~~ 50 lot cor run
N 34° 08' E 186.75 - 65 S of old spike

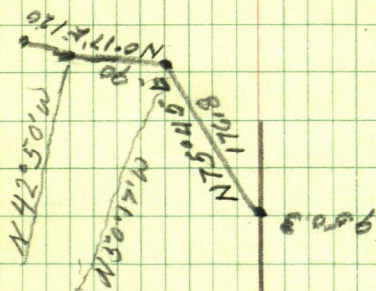
Tower 180.75 BS S 34° 08' W run
N 14° 55' W along lot line

T. still over 180.75 runs $N 81^{\circ} 18' E$
 80' runs $N 81^{\circ} 37' E$ 160

T. over 160 I.M. at 80 bears $S 81^{\circ} 55' W$
 runs $N 80 38' E$ 50 $N 75^{\circ} 03' E$ 100

T. over 100 B.S. $S 80 38' W$ the 50' spike bears
 $S 69^{\circ} 20' W$ 50

I.M. on old track line bears
 $N 15^{\circ} 17' W$



100

May 13 1964

Bob + Jeri + I to Rush Lake
as Bob + I did not finish
checking because of rain

Tower spike on Lot line

BSS $50^{\circ}17'E$ and continue lot
line to Φ road,

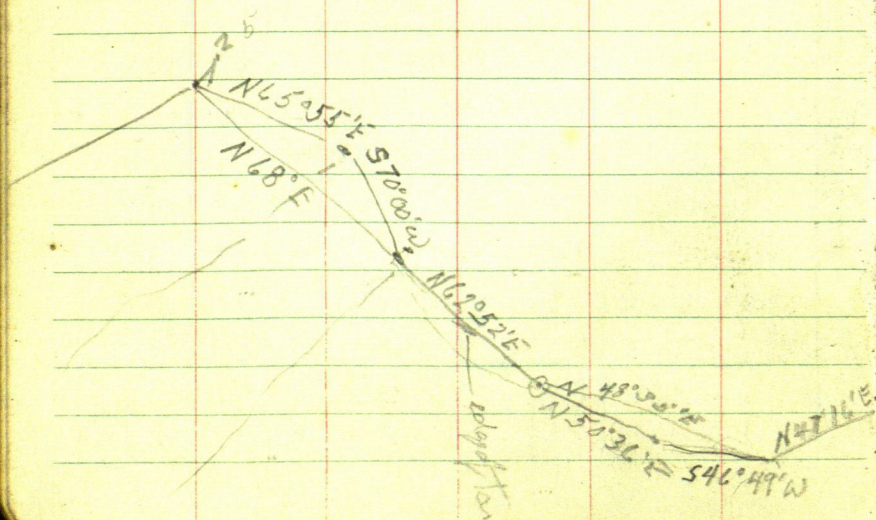
IM's set by Whelan along
this line run to all around East
from IM on edge of road chain
 $S 50^{\circ}17'E @ 200 \text{ pin } 100 = 300 \text{ pin}$

$$+ 104.1 = 404.1$$

$$+ 396.5$$

$$443.75$$

Tower pin in Φ BS $S 50^{\circ}17'E$
spike in Φ on lot line bears



633.9
161.7
795.6

80
6.2 off
73.8

101

Tower I M on shore BS 58118'W

I M on lake shore bears N 81° 50' E

lot line runs N 15° 30' W

Tower I M lot line runs N 16° 27' W

Monday May 17th 1964

Bob + I to Sec 8-137-27

Tower spike put on the S line

of the N 452 ft of said Sec 8

at a point 487.2 ft E of W line

side E on flag at spike put 724.8

and back the line in to the West line

of sec 8 from hub 487.2 chain West

we find this distance to be 387.2 and

Not 482.2

Tower Sec cor side South on flag

at 387.2 and runs S 89° 45' E

@ 250 p.m. + 83.90 = 333.90 hub on top

+ 300 = 633.9 p.m. + 161.7 = 795.6 hub

Tower 795.6 Var on 90 runs S 0° 17' W

73.8 to spike in E

Tower spike in E S 65° 09' W

S 43° 06' E lot line - N 69° 48' E S 30° 41' E

runs N 62° 42' E T S 15° 40' E 2nd line

N 50° 23' E S 15° 51' E lot line N 46° 35' E

S 15° 37' E lot line N 47° 03' E

S 15° 17' E Lot line

fig from page 103

Want 1370

have 1319.56

50.44

S 89° 45' E 1011.8

Sine 99999 x 1011.8 = 1011.8 E

Cosine 00436 x 1011.8 = 441 S

N 50° 24' E 385.4

Sine 77051 x 385.4 = 296.95 E

Cosine 63742 x 385.4 = 245.66 N

E 1370.8

N 14° 30' W 186.12

Sine 25038 x 186.12 = ~~466~~ 46.60 W

Cosine 96815 x 186.12 = 180.19 N

1370.8

46.60 W

1323.40 ~~W~~ + 180.19 N = description

1319.54

50.46

1370.00

1011.80 E

296.95 E

1308.75 E

245.66 N

441

241.25 N

241.25 N

180.19 N

61.06 N

1323.40 ~~W~~

1308.75 E

14.65 E

1011.8

186.2

1118.1

191.45

1319.54

June 10th 1964

As things do not check out at Forster's I think Transit is out of order I send it in and get another one. ✕

Bob & I to Forster's to see if we can make things check out.

Check chain S line of S 452 ft strip from spike hub 387.2 out on chain East + 237.5 + 110 + 115.5

Tower I M sec cor. Site S. on flag Tarn L & run S 89° 45' E 216.2 + 795.6

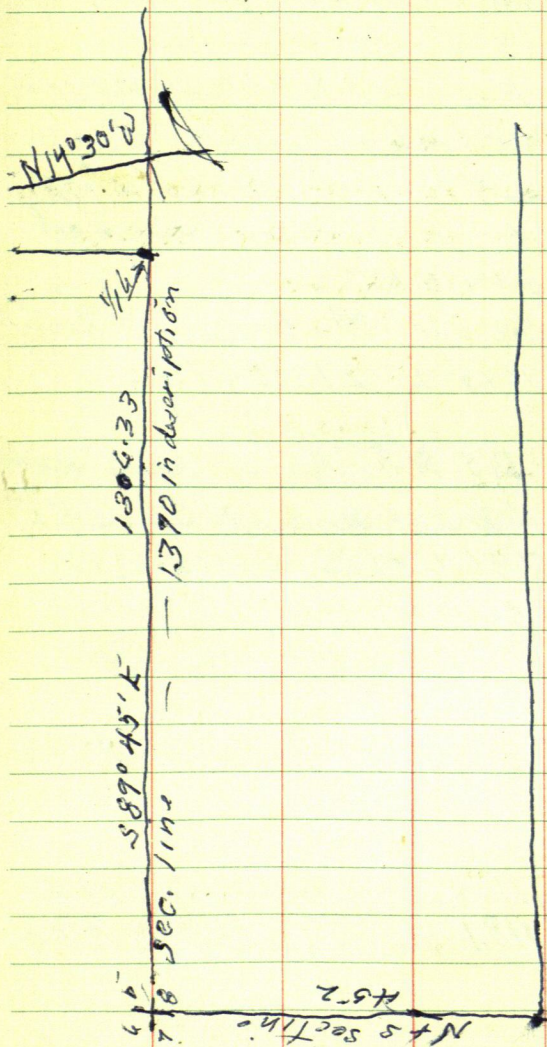
Tower 1011.8 BS N 89° 45' W spike ~~and~~
NE cor of 100 ft tract bears N 50° 24' E
from hub 795.6 chain E 50 + 120 +
N edge of road + 46.20 =

50	795.6
120	216.2
46.2	1011.8
216.2	

1011.8

Tower 1011.8 E Lot cor bears N 50° 24' E
385.4

From hub 1011.8 E continue line East
+ 106.3 = 1118.1 hub + 191.45 = 1319.54
✕



Tower 1370 in IP bears $W 1^{\circ}05'N$
 50.48 ft.

A still at 1370 E. int. W. Van. on 00
 IM on bank bears $S 33^{\circ}04'E 44.8$

fig East lot 1111

Spike in E road is 1309.83 E & 244.37 N

IM on shore is 1384.44 E & 37.54 S

244.37 N

37.54 S

2819.1 N & S

1384.44 E

1309.83 E

74.61 E or W

2646.59 =

281.91 / 74.61

106

Fisherman Point

Lot 6 Section 17-137-27 & Lot 5

I am to make a map of the property left in fisherman point. Lot 6 Sec 17 137-27. Mike Hammergren is to send me a sketch and some papers which he has not did to date.

Tue May 25 1965 I drive to Brown and copy Deed descriptions drive to Akeley and check old plats and notes make a rough sketch of what I have.

To morrow I have to go to Walker what I have to do at Fisherman Point first check chain between I M. to see if the ones we found are the right ones according to descriptions

from I M on shore of Harbor chain $982^{\circ}57'W$ 58.8 to I M from I M at 58.8 chain $N44^{\circ}49'W$ 131.3.

Take one of these I M site on one and take stadia of Harbor put in a point so as to get the shore line of Cross Lake and set a point from which I can get locations of new Road and shore line of Pine River bet. old & new roads.

Edt I to Fisherman Point
Cross Lake

Tower Sta 2 BS N 44° 49' W 131.3
S 69° 38' E 131.00 to Sta (4)

Tower Sta 1 BS S 44° 49' E to run
N 29° 01' E 695 to Sta A on shore
of road by Bridge - 370 from A to & drive
way

Tower Sta 2 BS N 44° 49' W take Stada
of Harbor.

110' S 77° 30' E

77 N 8° 15' W ✓

140 N 6° 30' W L

147 N 15° 40' E ✓

137 N 69° 50' E

Tower Sta 4 BS N 69° 38' W

N 80° 25' E 140 to Sta 5

At St. 11 at Sta 4 harbor N 10° E 20'

Tower Sta 5 BS S 80° 25' W to
Stada of harbor

95' N 58° 30' W

70 N 28° 30' W ✓

100 N 8° 50' E edge of Cross Lake

Thru along shore of Cross Lake

N 37° E 40' to intersection of Harbor + & Lake
S side of Harbor

108

190' N 7° E — 270 N 113° E

220 + 260 N 21° 45' E

570 N 22° 50' E

660 N 28° 10' E

Tower Sta A BSS 29° 01' W

Take sta of shore cross +
Lake

405 S 86° E

420 N 89° 15' E

420 N 83° E

380 N 79° 30' E cross Lake - P. in Kure

320 East

280 N 85° 15' E

200 N 80° E

265 N 67° E

295 N 62° 45' E

355 N 53° 45' E at Taral Bridge

146 N 54° 13' E " 292

132 N 54° 29' E "

108 N 55° E 4

83 N 56° 10' E 4

~~117~~

292 N 54° 10' E at Bridge

264 N 55° 28' E 4

217 N 55° 03' E 4

168'	N 56° 09' E	Q
117'	N 58° 15' E	Q
69'	N 64° 10' E	Q
24'	S 81° 55' E	Q
40	S 18° 15' W	Q
86	S 32° 14' W	Q
136	S 35° 38' W	Q
185	S 36° 37' W	Q
234	S 36° 51' W	Q
285	S 36° 40' W	Q

193

Run S 85° 35' E 183.8 to Sta. B

Tower B B S N 85° 35' W

Take bearings.

186 S 16° 57' W

166 S 15° 28' W

176 S 5° 47' W

125 S 1° 06' E

106 S 6° 59' E

118 S 14° 48' E

103 S 41° 54' E

96 S 45° 30' E

93 S 52° 52' E

120 S 54° 13' E

110

Back over Sta A to the River

306 N $48^{\circ} 42' E$

275 N $43^{\circ} 23' E$

84 N $18^{\circ} 58' E$

119 N $10^{\circ} W$

158 N $3^{\circ} 40' E$

195 N $7^{\circ} 05' E$

276 N $12^{\circ} 03' W$

Fishermans Point Cross Lot 11

Working for Amos Chalupsky
Montrose Minn.

July 5-65- Ed + I to fisherman
Point on Cross Lake

from S side of cabin chain S 21.5'

chained from E end & w end for

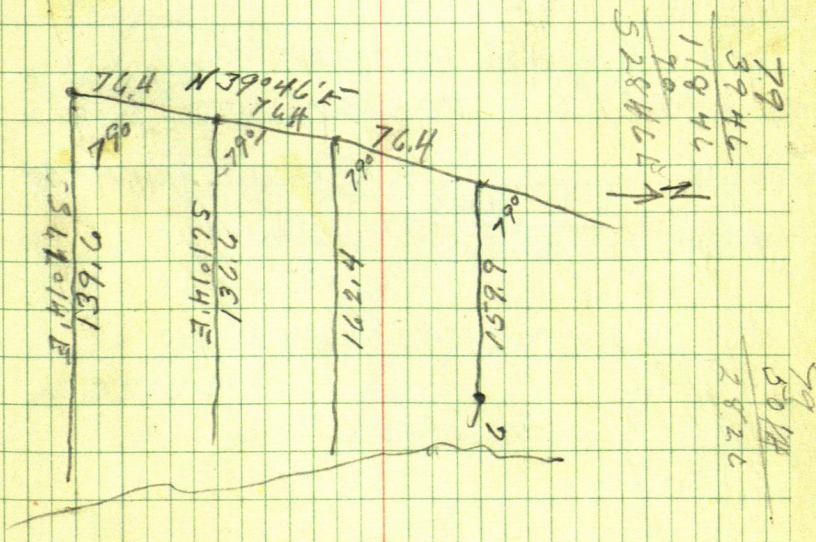
S line of tract we are surveying
To over SW cor tract N-1 NE angle 79°

fig. 75 // Lots @ 90°

79° - 11°

sine 98163 into 75 = 76.4

cosine 19081



π back on old Sta 1. S. to $S44^{\circ}49'E$
on old Sta 2 and run. N. $19^{\circ}04'E$
544.7 to Sta. 1A.

Then 1ABS $S19^{\circ}04'W$ SW cor Tract
bears $S67^{\circ}57'E$ 258.5

π still at Sta 1A

fig

$N19^{\circ}04'E$ 544.7

Sine $32667 \times 544.7 = 177,94 E$

Cosine $94514 \times 544.7 = 513,00 N$

Sta 1 is $150.78 E$ & $131,33 S$ of NW cor C
17794E 383,67 N of NW cor L
328,72 E

old Sta in ϕ old road is

$284,29 E$ $500,73 N$ $328,72 E$
 $383,67 N$ $284,29 E$

$117,06 S$

$379,549$

$117,06 \sqrt{4443.0}$

$44,43 W$

37946

$67^{\circ}42\frac{1}{2}'$ or $22^{\circ}18,5'$

37973

$75,919$ Tan. $20^{\circ}47'$

$379,59$

Cor. 93493

T still at 1A run $N 20^{\circ} 47' W$ 125.21

Town SW cor of tracts the back line
run $N 39^{\circ} 46' E$

Scaled on sketch
 $N 15^{\circ} 00' W$ 110 to A.P.

Town No 1A BS $S 19^{\circ} 04' W$ on IM
run $N 15^{\circ} W$ 110

Town 110 BS $S 15^{\circ} E$ + run
 $N 22 15' E$ 267' \pm to river
at spike

from spike chain E along Pine
River 100 ft. at pt.

T still at 110 run $S 17^{\circ} 46' E$ 43 ft
to spike in Φ for old No 8

Town spike in Φ spike on river
bank 100 ft E of all road bears
 $N 35^{\circ} 14' E$

	180
	<u>120</u>
	300
	<u>-3.4</u>
	296.6

114

Ed Carro + Al Martin To Fishermans
Point 7-25-68. and set pipe as shown
As Amos Chalupsky is not home I have
to come back and see him about the width
of the access to the harbor which we staked
out at 16.5. After I talked to Amos we
decide to make the access 20' wide so I
will have to move some pipe

116

Duane Enger

203-58-54

47-57-44 203-58-52

102-21-24

204-42-34 102-21-17

259-49-30

159-38-40 259-49-20

560

519

216.1015

387.15

171.29

50.99

120.35

195.86

88-50-28

177-39-56 88-49-58

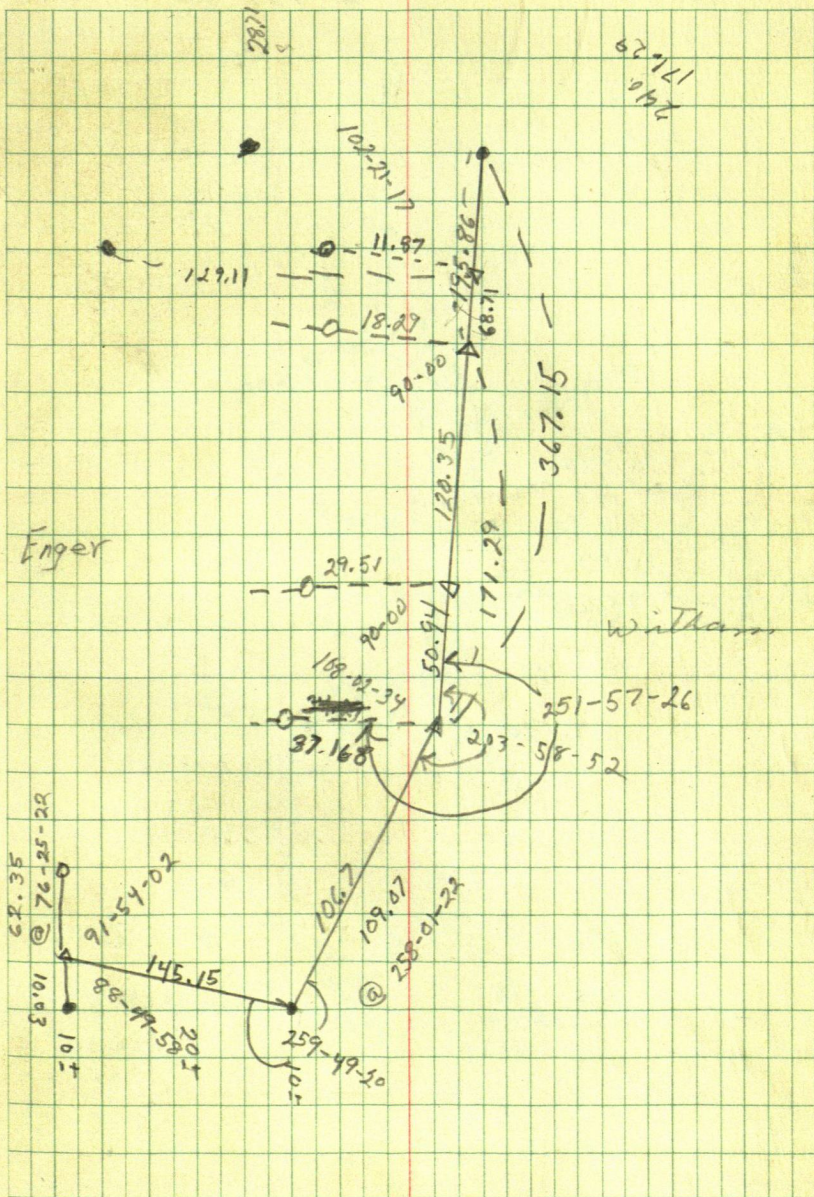
91-54-10

183-48-04 91-54-02

359-59-60

108-02-34

251-57-26



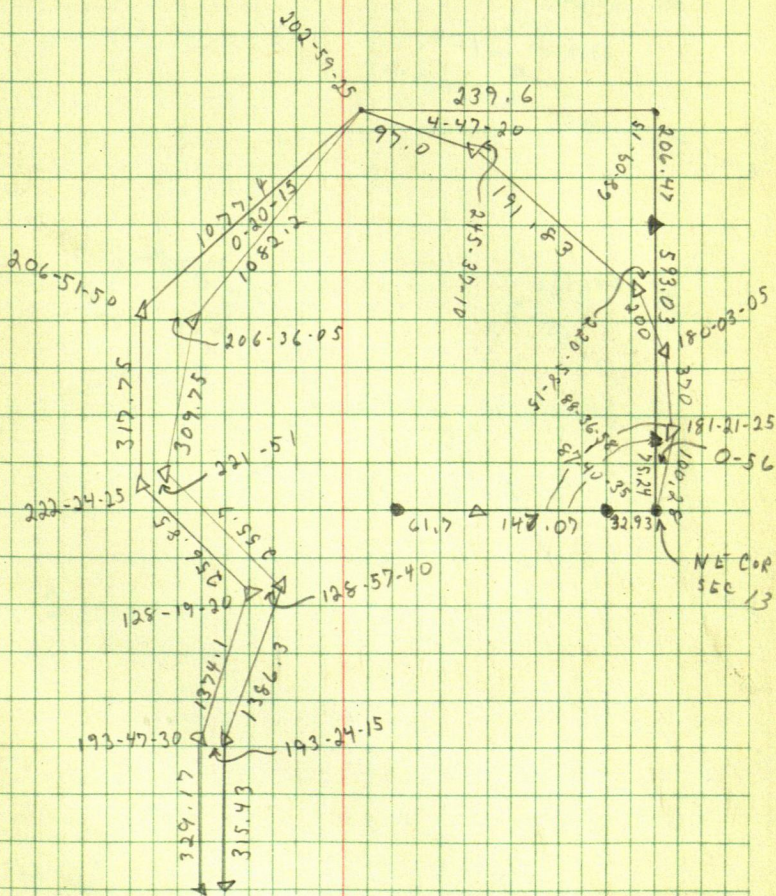
118

GREEN

12-137-28

120

13-137-28



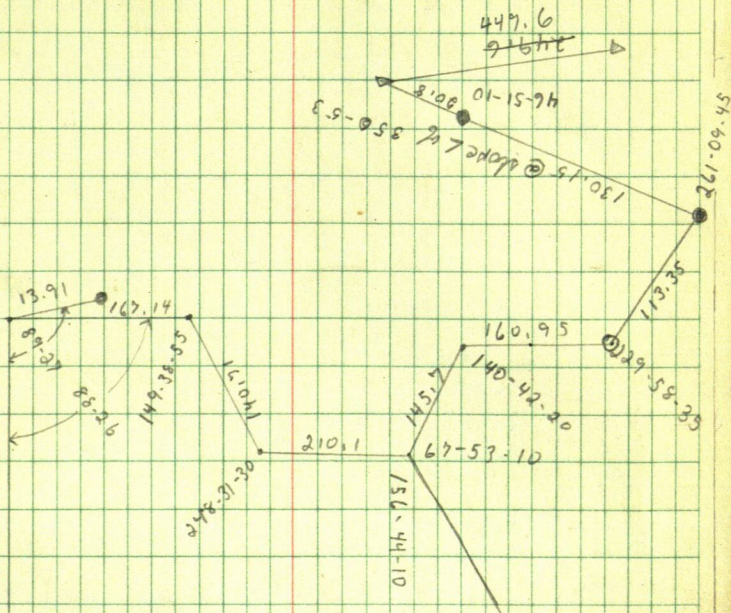
122

13-137-28

1121.60

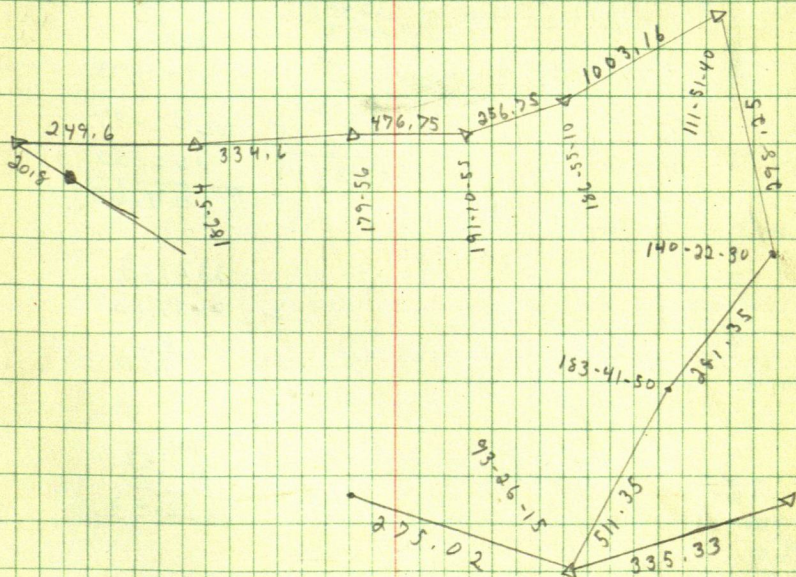
19.0 14 88-55-55
33 - - - 300 - - -

1/16 COR



124

13-137-28



126

LAKE HATTIE

DUANE ENGER

139 N - 29 W

210

160

370

- 7.45

362.53

SET STRADLES @ 960'

from Nail on line

Find Large Spike

North about 1.8 ft.

~~2285.07~~~~1323.08~~62

2160

130

2290

- 4.93

2285.07

961.33

1323.74

2285.07

362.53

2647.60

2647.60

1323.8

2647.60

1323.8

1.60

1.60

960

362.53

1322.53

1322.53

1323.8

- 1322.53

1.33

RON, DOUG

6/19/78

127

Lake Hattie

Bench mark

177-46-50

0

0

20.0 5" WP

2'9"

E 1/4
SEC 31

1323.74

2285.07

SET

961.33

180°

362.53

SE. SEC
CON of
SEC 31

128

RON, Paul, Mark

145-29

290-58-16

145-29-05

215.88 @ 93-47-20

Vert Angle Dist.

90-44-55

181-29-40

90-44-50

T@4 BS 5

179-59-50

360-00-20

180-00-16

177-59-40

360-00-10

180-00-05

3

1323.89 90-02-20 1323.89

5

961.174 90-25-15 961.20

6

286.054 91-14 286.12

99-59-50

179-59-20

89-59-40

T@5 BS ASE SECCOR

179-59

359-58-50

179-59-25

179-59-25

360-00-30

180-00-15

359-59-40

T@5 BS SECCOR BS 5 4

90-27-40

180-55-20

90-27-40

5 4

2655.961 88-59-40 2656.37

5

362.333 88-01 362.55

T@6 BS 7

135-53-40

271-47-20

135-53-40

T@7 BS 6

164-18-20

328-37-40

164-18-50

164-18-20

328-37

164-19

T@7 BS 8

195-41

328-37-15

195-41-07

8

333.668

89-48-20

333.67

341-23-15

6

270.966

87-20

271.26

T@8 BS 7

132-50-50

265-42-10

132-51-20

9

153.985

96-07-40

154.87

10

92-37-10

227-08-20

91-18-40

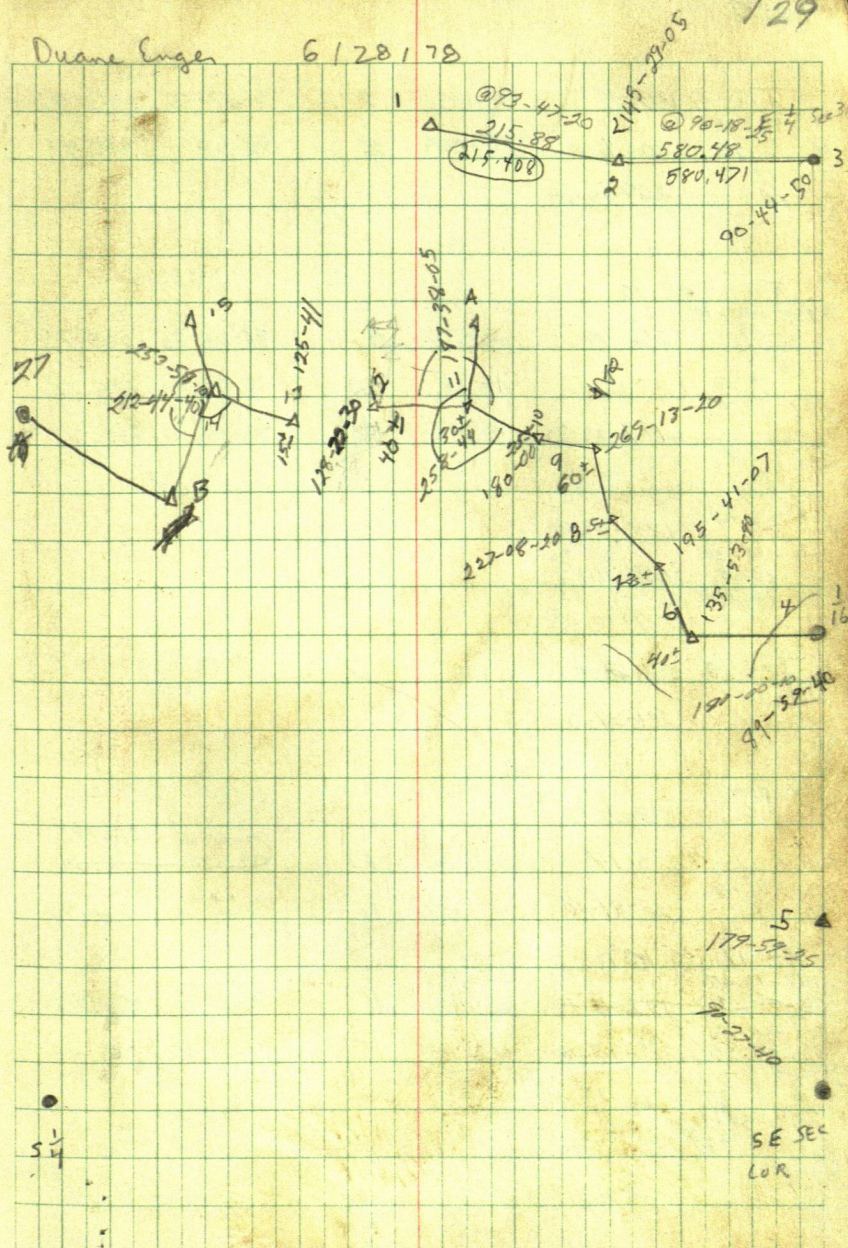
227-08-20

3454

next page

6128178

129



130

$\pi @ 9$	BS 8	153.985	8	96-07-40	154.87
90-46-35					
181-32-20	90-46-10	285.589	10	92-48	285.93
269-13-30					
178-28-40	269-12-20				
360					
534					

$\pi @ 11$	BS 10				
258-44-10					
157-29	258-44	264.957	19	85-34-20	265.75
360					
517					
$\pi @ 11$	BS 12	246.20	11	89-59-30	246.20
187-39-10					
13 17	187-38-30	250.792	12	90-41-40	250.77
360					
375-17					

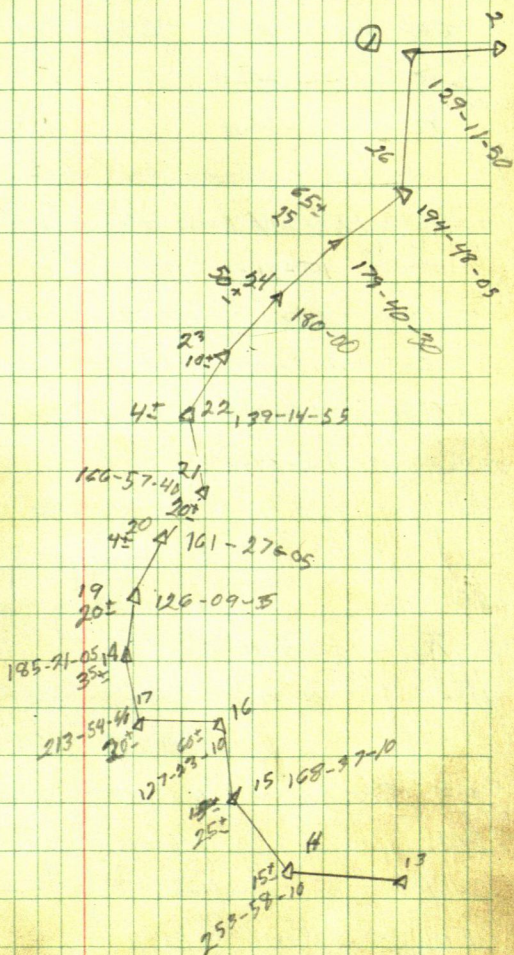
197-37-50					
15-16-40					
325-16-40	187-38-20				
172-21-20					
344-43-30	172-21-45				
187-38-20					
15 17-10	187-38-05				

$\pi @ 12$	BS 11				
231-36					
103-14-20	231-37-10				
300					
463					
128-22-20					
256-45	128-22-30				

$\pi @ 13$	BS 14	217.176	13	90-39-40	217.19
125-41-10				88-37-40	216.44
251-22	125-41-00	216.377	14	88-37-10	216.44

$\pi @ 14$	BS 13				
147-14-40					
224-55-30	147-15-45	221.26	B	90-32-20	221.27
212-44-30					
153-29-20	212-44-40	163.348	15	92-01-25	163.45
360					

425	$\pi @ 14$	BS 13			
253-57-55					
147-56-20	253-59-10				
360					
507	$\pi @$				



132

T@ 15 BS 16

168-36-50
337-14-20 168-37-10

T@ 16 BS 15

127-23-20
254-46-25 127-23-13 190.625 15 90-43-10 190.69

T@ 17 BS 18

227.64 17 89-58-40 227.69

~~146-04-40~~
~~222-10-40~~ ~~146-05-20~~
213-54-50
67-49-20 213-54-40

360

427

T@ 18 BS 17

171.572 17 91-43-45 171.65
185-30-30
10-42-10 185-21-05 168.544 19 92-27-50 168.70
360SW cor cabin 190-18-45 44' 26'4" x 16'4"
SE cor cabin 216-04-55 47'

T@ 19 BS 20

126-09-40
252-19-10 126-09-35NW cor cabin 38-01-10 59'5" 16'4" x 20'4"
SW " 48-29-20 46"
SE " 64-02-40

T@ 20 BS 21

161-26-40
922-54-16 161-27-05 204.39 19 89-59-35 204.39
269.779 21 89-12-00 269.80

NE cor cabin 106-43

NW - 114-11 77' 16'4" x 20'4"

SW 123-02 87'

NW cor cabin 31-06-05 14'4" x 26'5"

SW 11 36-41 95'

SE 46-02-25 116'

$\pi @ 21 BS 20$

166-57-20

333-55-20 166-57-40

 $\pi @ 22 BS 23$

139-14-50

278-29-50 139-14-55 (166.932) 21. 270-33 166.94

(238.875) 23. 269-38 238.90

 $\pi @ 23 BS 24$

154-33-55

309-09-50 154-34-25

 $\pi @ 24 BS 23$

(170.091) 23. 99-02-20 172.23

180-00

(133.134) 25. 85-28-20 133.55

 $\pi @ 25 BS 26$

179-40-20

359-21 179-40-30

 $\pi @ 26 BS 1$

378.607 25. 84-13-20 380.54

194-47-50

29-36-10 194-48-05 519.654 1. 89-25-20 519.68

360

389

 $\pi @ 1 BS 2$

129-11-40

252-23-40 129-11-50

M 686.477

 $\pi @ B BS 27$

2248.951 27. 90-09-40 2248.96

102-42-20

205-24-40 102-42-20

 $\pi @ A BS 11$

NW cor House 247-06 27 1/2'

SW cor porch 276-18-40 33'

South sedge house 279-29 46' SW on 24' long

134

K @ 27 BS B

189-31-05

19-02-30

360

189-31-15

379

M 82.834

A @ 28 BS 27

271.69

27.

268-41-50 F 271.76

119-47-10

237-34-30 118-47-15

29.

220-48-40

F 288.06 M 87.902

(288.056)

A @ 29 BS 30

157-02-40

314-05-40 157-02-50

A @ 30 BS 29

29.

269-12

F 426.12

M

129.883

152-05

309-12-15

31.

268-35-20

287.04

87.491

152-05

(286.952)

304-11

152-05-30

A @ 31 BS 29

171-12

~~342-25-40 171-12-50~~

188-47

17-34-40 188-34-20

360

387

A @ 32 BS 33

51-34-50

103-09-26 51-34-40

31.

93-24-10

(357.219)

357.85

109.072

~~402.45~~~~122.666~~

1.

33.

90-33-50

402.45

122.666

A @ 33 BS 32

152-38-50

309-17-40 152-38-50

(402.431)

A @ 34 BS 35

35.

89-26-40

(208.73)

208.74

63.625

163-15-40

326-32-10 163-16-05

33.

86-35-15

173.45

52.868

163-15-40

(173.142)

326-32-10

A @ 35 BS 34

144-13-40

288-30-50 144-15-25

W $\frac{1}{4}$

● 32.90

A 35

144-13-40

A 39 163-16-05

152-38-50 A 33

A 51-34-40

A 3 188-34-26

152-05-20 A 30

A 29 157-02-50

118-47-15 A 28

189-31-15 A 27

45

136

ROBERS, William

GOVT LOT # 1 (22-142-27)

T @ D BS E TURN RIGHT

(C) 108-06-30 @ 84.92

(B) 222-41-30 @ 27.59

(A) 263-24 @ 119.40

T @ E BS D TURN RT.

(F) 104-51-30 209-43-00 104-51-30 D @ 151.09

T @ E BS G TURN RT.

(F) 179-50 359-39-30 179-49-45 G @ 125.86

T @ F BS E TURN LT.

(H) 163-00-30 326-01-30 163-00-45 E @ 106.95

T @ H BS F TURN LT.

(J) 33-49 67-37-30 33-48-45 F @ 114.23

T @ J BS H TURN LT.

(K) 135-36 271-12 135-36 H @ 374.68

T @ K BS J TURN RT.

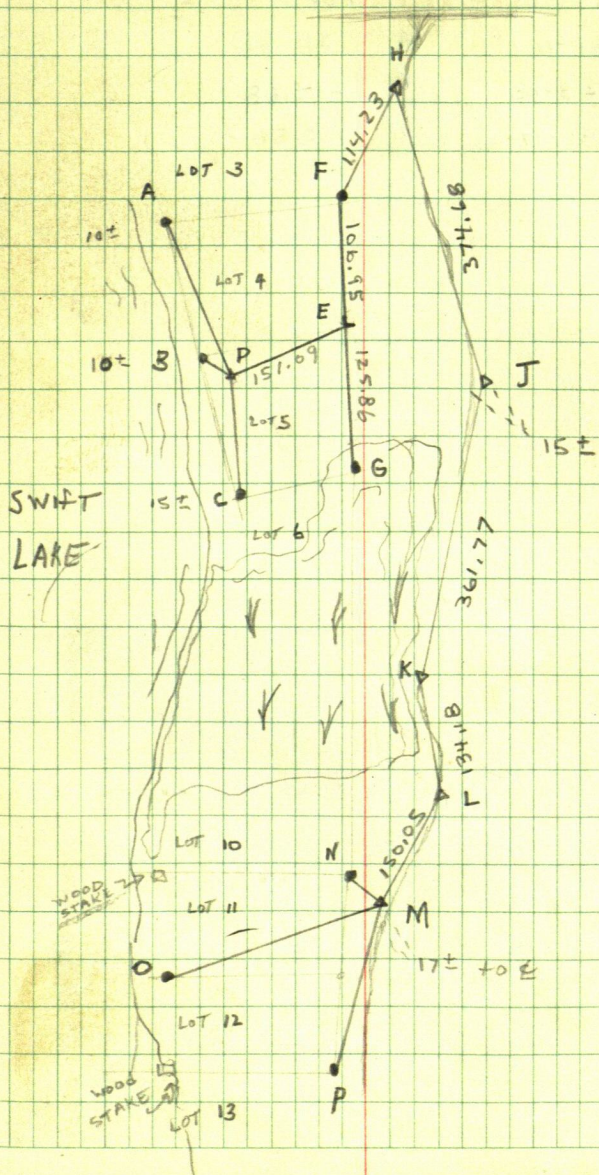
(L) 167-55-30 335 51-30 167-55-45 J @ 361.77

T @ L BS K TURN LT.

(M) 154-30 309-00 154-30 K @ 134.18 150.05

7/13/78

RON, DONG



138

William Royers

$\pi @$	m BS L		TURN LEFT
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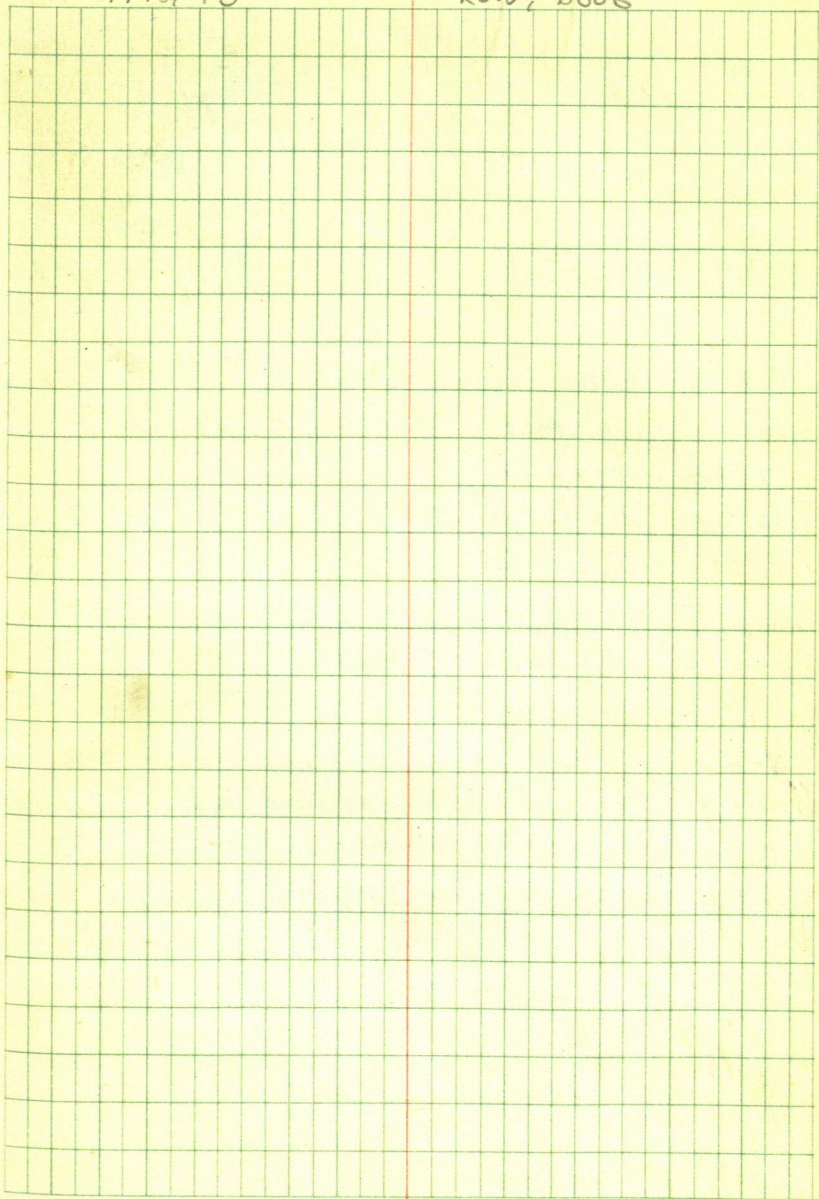
(N)	81-16	@	20.92
-----	-------	---	-------

(O)	123-05	@	214.68
-----	--------	---	--------

(A)	186-17-30	@	150.56
-----	-----------	---	--------

7/13/78

RON, DOUG



140

100

14.97

109-33
219-07

109-33-30

+58.44
158.34
166.6530-40
61-20

30-40

88.95

64-24
128-47

64-23-30

234.70
232.17
192.19
251.10
155.65

91.89

T @ A BS D TURN RT

HARBOR S EDGE (N EDGE 33±)

96' @ 109-45

161' @ 273-02

235' @ 262-18

BEACH

209' @ 263-27

241' @ 280-46

CABIN 5

84' @ 334-12

NE COR PORCH CABIN

75' @ 338-30

NE COR CABIN PORCH

72' @ 344-41

NW COR PORCH •

140-42-30
281-25-30

140-42-45

48-01

48-01

96-02

156-33

313-06-30

156-33-15

142

T @ E BS A

TURN RT

CABIN 1

79' @ 102-35

NE

60' @ 104-09

NW

66' @ 125

SW

CABIN 2

26' @ 129-12

NE

16' @ 162-48

NW

41' @ 176-37

SW

CABIN 3

61' @ 237-11

NE

55' @ 244-23

1

58' @ 258-12

2

66' @ 259-32

NW

CABIN 4

63' @ 303-41

SE

54' @ 313-58

1

65' @ 323-35

2

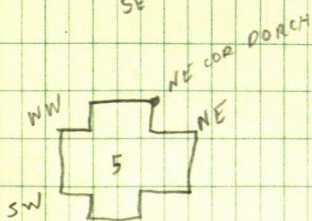
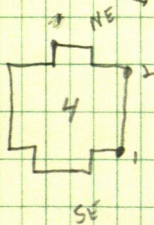
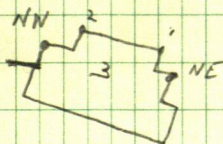
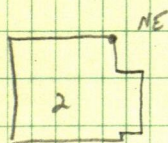
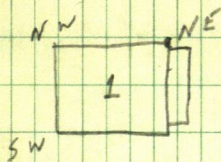
75' @ 329-26

NE

CABIN 5

95' @ 339-35

SW



144

T @ B BS D TURN RT.
LODGE

81' @ 11-51 SE

53' @ 22-46 NE

92' @ 61-13 NW

TRAILER HOUSE A

99' @ 18-48 NE

109' @ 71-14 NW

TOILETS

132' @ 85-15

125' @ 87-38

130' @ 91-37

SHED

150' @ 114-23

148' @ 119-00

159' @ 119-25

FIRE PLACE

50' @ 112-09

42' @ 111-10

43' @ 109-36

T @ C BS D TURN LEFT

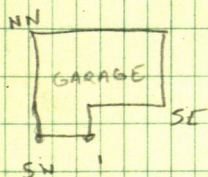
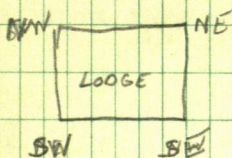
GARAGE

75' @ 110-55 NW

56' @ 98-52 SW

65' @ 94-10 I

80' @ 94-45 SE



146

π @ CBS D TURN RT

TRAILER RAMPER

50' @ 47-08

8' wide

61' @ 61-06

TRAILER HOUSE B

185' @ 87-26

182' @ 89-52

209' @ 91-15

TRAILER HOUSE A

100' @ 96-42

93-41

93-41-30

187-23

166-23-30

166-23

332-46

174-22-30

348-45

174-22-30

148

T @ F B S G

TURN LEFT

SWAMP

45' @ 176-32

80' @ 138

145' @ 135-20

170' @ 127-44

130' @ 115-28

150

RON, KEN

70-54-36

@ 40.40

Bm. 2.07'

LEECH LAKE 8.72'

DEAN FAY

SEE PAGE

141 Z



A

232.17

BRASS
CAP

40.40



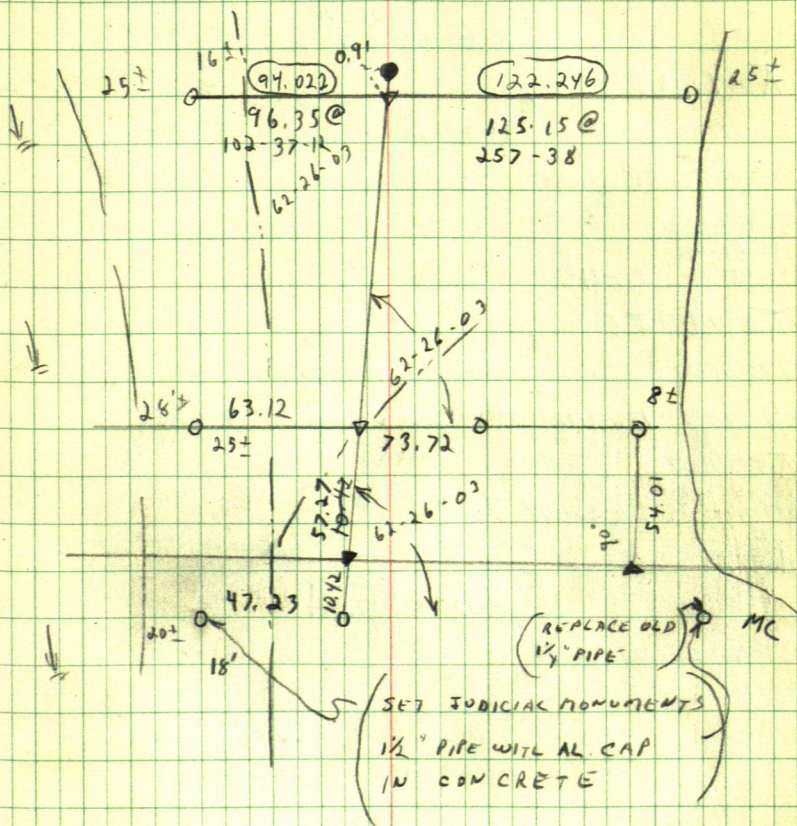
70-54-36



9" ELM

152

JOE FRIBERG



154

78-53-12

65-50

144-03-12 $\pi @ 2BS1$

139-17-48	3	87-11-40	538.58	537.934
278-35-68	2.	87-13-50	164.163	158.174
139-17-34	4.	98-13-34	158.21	47.833
	5.	90-12-48	48.224	223.778
			48.33	
			14.732	
			223.78	
			68.212	

 $\pi @ 4BS45$

152-21-48	6.	89-38-42	57.98	57.979
			17.675	

304-43-50 152-21-55

 $\pi @ 5BS2$ 149-51-40
299-48-00 149-51-30 $\pi @ 7BS45$

175-51-22	5.	91-19-52	372.37	372.269
351-42-36	8.	89-24-32	113.492	225.268
175-51-18			225.28	
			68.660	

 $\pi @ 8BS7$ 166-56-48
333-53-36 166-56-48 $\pi @ 9BS8$

78-53-18	8.	90-12-18	360.78	360.778
			109.966	

EX 157-46-24 78-53-12

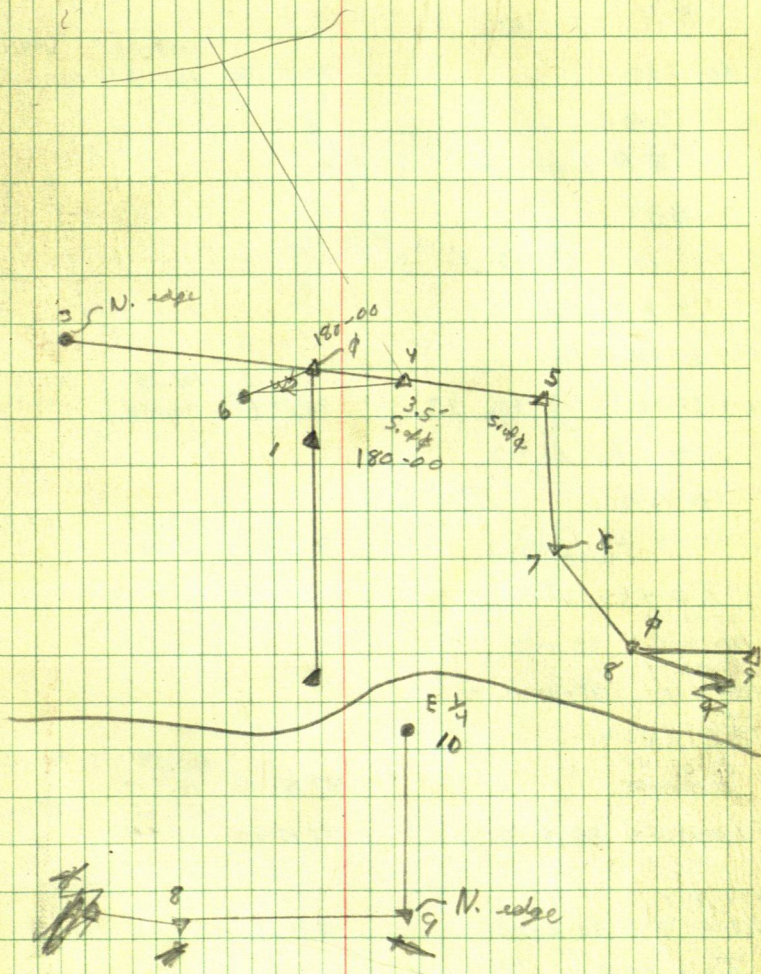
359-59-60
144-03-12
 215-56-48

223.78
48.33
 175.45

Paul
Ren
Ken

135

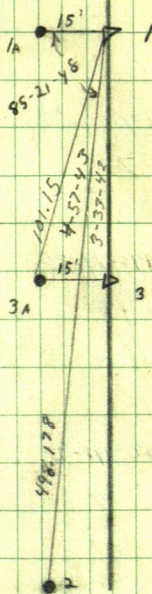
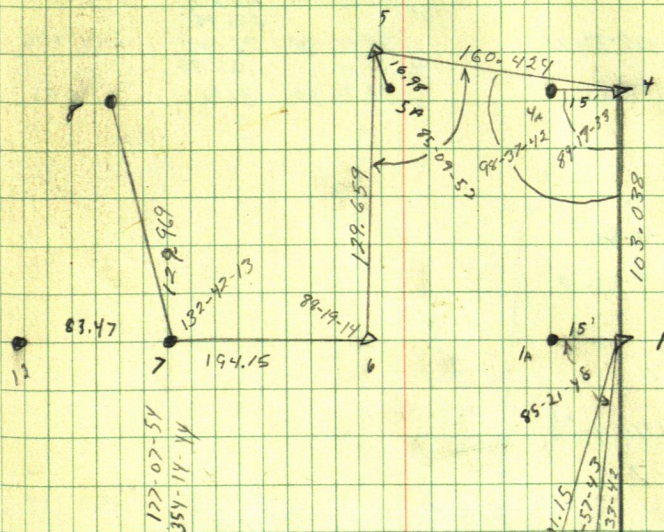
Lake Hattie



156

Harold Rosenbrook

$\pi @$		1 BS	2		
85-21-48				90-44-32	498.22 151.853
1n 170-43-24					498.178,
$\pi @$		1 BS	3		
3-38-48					
2 7-07-24		3-33-42			
$\pi @$		1 BS	2		
4-57-48					
2A 9-55-26		4-57-43		92-32-26	101.25 30.880
					101.15
π		1 BS	2		
176-02-18					
4 352-04-26		176-02-13		90-21-30	103.04 31.410
					103.038
$\pi @$		4 BS	1		
89-17-36					
178-35-06		89-17-33			
99-37-54					
172-15-24		98-37-42			
$\pi @$		5 BS	4		
4 85-09-48				87-28-52	160.58 78.947
85-09-48					129.66
6 170-19-54		85-09-52		89-46-26	39.521
					129.659
SA 84-10-54					
168-21-40		84-10-50		16.98	
$\pi @$		6 BS	7		
88-19-20					
176-38-28		88-19-19			
$\pi @$		7 BS	8		
8 132-42-22				90-13-54	129.97 39.617
					192.79
6 265-24-26		132-42-13		78-59-24	60.284
					194.15



2" PIPE W/3" CAP

158

Harold Rosenbrook

 $\pi @ 9 BS \#1$

125-33-38

251-06-50 125-33-25

184-46-52

369-33-30 184-46-45

4

706.23

89-10-12

215.248

706.156

10

246.06

96-00-48

75.005

244.706

11

135.85

96-00-00

41.409

135.106

 $\pi @ 1 BS 2$ ~~176-47-12~~~~353-33-34 176-46~~

176-47-38

353-34-36 176-47-18

 $\pi @ 7 BS 6$

177-04-36

354-09-04 177-04-32

 $\pi @ 13 BS 7$

146-19-54

7

90-38-50

253.17

253.154

292-39-24 146-19-42

14

89-53-30

77.169

318.05

96.943

318.049

 $\pi @ 14 BS 13$

162-05-04

324-18-16 162-05-08

 $\pi @ 14 BS 15$

60-41-24

121-22-40 60-41-26

 $\pi @ 15 BS 14$

151-39-30

14

89-08-02

270.84

82.553

270.809

16

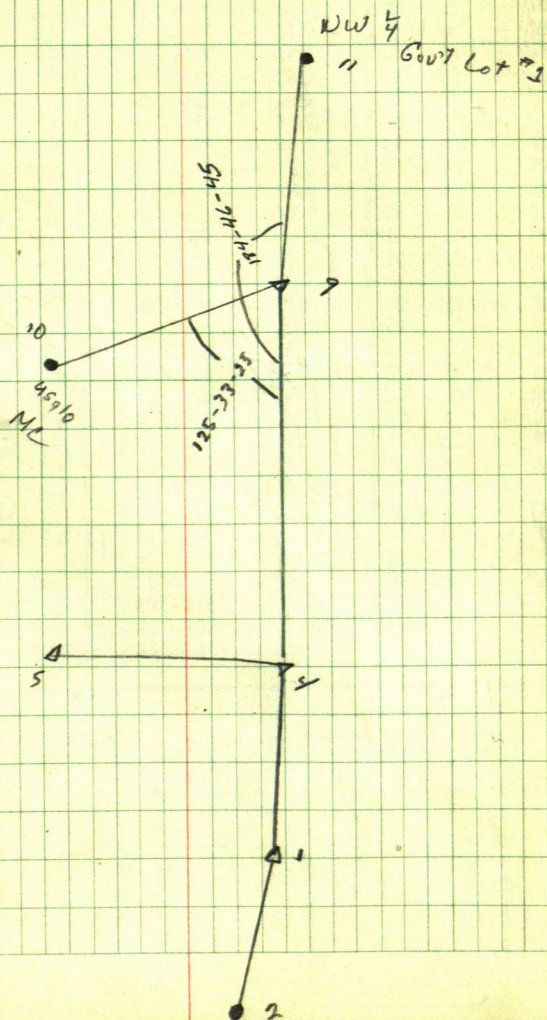
90-32-52

112.81

34.391

112.80

303-18-54 151-39-27



56c cor

G.S. PIPE

33

13

37

Not on
Line
as shown

17

14

7'5"

13

7

46

154

16

Mc
usglo

12

74.80

7

1.80

87-43-42

100

6

TABLE X.
MIDDLE ORDINATES OF RAILS
Length of Rail (feet)

C o	R Feet	30 Inch	28 Inch	26 Inch	24 Inch	22 Inch	20 Inch	C o	R Feet	30 Inch	28 Inch	26 Inch	24 Inch	22 Inch	20 Inch
0-20	17189	.08	.07	.06	.05	.04	.03	8	716.8	1.88	1.64	1.42	1.20	1.01	.84
0-40	8594	.16	.14	.12	.10	.08	.07	9	637.3	2.12	1.84	1.60	1.35	1.14	.94
1-0	5730	.24	.20	.18	.15	.13	.10	10	573.7	2.36	2.05	1.78	1.50	1.27	1.04
1-20	4297	.31	.27	.23	.20	.17	.13	11	521.7	2.59	2.26	1.95	1.65	1.39	1.15
1-40	3438	.39	.34	.29	.25	.21	.17	12	478.3	3.83	2.47	2.15	1.81	1.54	1.26
2-0	2865	.47	.41	.35	.30	.25	.20	13	441.7	3.05	2.66	2.30	1.96	1.66	1.36
2-20	2456	.55	.48	.41	.35	.29	.23	14	410.3	3.30	2.87	2.48	2.10	1.78	1.46
2-40	2149	.63	.55	.47	.40	.33	.27	15	383.1	3.54	3.08	2.68	2.26	1.91	1.57
3-0	1910	.71	.62	.53	.45	.38	.31	16	359.3	3.76	3.28	2.83	2.40	2.04	1.67
3-20	1719	.78	.68	.59	.50	.42	.35	17	338.3	4.00	3.48	3.02	2.57	2.16	1.78
3-40	1563	.86	.75	.65	.55	.46	.38	18	319.6	4.21	3.67	3.18	2.70	2.28	1.87
4-0	1433	.94	.82	.71	.60	.50	.42	19	302.9	4.45	3.89	3.36	2.86	2.41	1.98
4-20	1323	1.02	.89	.77	.65	.55	.45	20	287.9	4.70	4.09	3.55	3.00	2.54	2.09
4-40	1228	1.10	.96	.83	.70	.59	.48	22	262.0	5.16	4.44	3.84	3.30	2.80	2.29
5	1146	1.18	1.03	.89	.75	.63	.52	24	240.5	5.64	4.92	4.20	3.59	3.04	2.50
6	955.3	1.41	1.23	1.06	.90	.76	.62	26	222.3	6.07	5.29	4.58	3.88	3.29	2.70
7	819.0	1.65	1.44	1.24	1.05	.89	.73								

TABLE XI.
SHORT RADIUS CURVES

Radius Feet	Chord Feet	Central Angle	Deflection Angle	Deflection for 1 Foot
35	10	16-26	8-13	49.3
45	10	12-46	6-23	38.3
50	15	17-16	8-38	34.5
60	15	14-22	7-11	28.8
75	15	11-30	5-45	23.0
100	20	11-30	5-45	17.3
120	20	9-34	4-47	14.3
150	20	7-39	3-49	11.5
190	25	7-32	3-46	9.15
200	25	7-10	3-35	8.6
225	25	6-25	3-12	7.7
240	25	5-58	2-59	7.2
250	25	5-44	2-52	6.9
275	25	5-12	2-36	6.2
288	50	9-58	4-59	6.0
300	50	9-32	4-46	5.7
350	50	8-12	4-06	4.9
376	50	7-40	3-50	4.6
400	50	7-10	3-35	4.3
410	50	7-00	3-30	4.2

To find length of curve divide angle from P. C. to P. T. by central angle of chord, and multiply by length of chord.

199.45
 52.20
 120.5
 4621

TABLE XII.
 INCLINED DISTANCE OF 100 FT. REDUCED TO HORIZONTAL

Slope	Horizontal Distance	Correction	Rise Per Foot	Slope	Horizontal Distance	Correction	Rise Per Foot
0°00'	100.000	0.000	0.000	8°00'	99.027	0.973	0.139
15'	99.999	0.001	0.004	15'	98.965	1.035	0.143
30'	99.996	0.004	0.009	30'	98.902	1.098	0.148
45'	99.991	0.009	0.013	45'	98.836	1.164	0.152
1 00	99.985	0.015	0.017	9 00	98.769	1.231	0.156
15	99.976	0.024	0.022	15	98.700	1.300	0.161
30	99.966	0.034	0.026	30	98.629	1.371	0.165
45	99.953	0.047	0.031	45	98.556	1.444	0.169
2 00	99.939	0.061	0.035	10 00	98.481	1.519	0.174
15	99.923	0.077	0.039	15	98.404	1.596	0.178
30	99.905	0.095	0.044	30	98.325	1.675	0.182
45	99.885	0.115	0.048	45	98.245	1.755	0.187
3 00	99.863	0.137	0.052	11 00	98.163	1.837	0.191
15	99.839	0.161	0.057	15	98.079	1.921	0.195
30	99.813	0.187	0.061	30	97.992	2.008	0.199
45	99.786	0.214	0.065	45	97.905	2.095	0.204
4 00	99.756	0.244	0.070	12 00	97.815	2.185	0.208
15	99.725	0.275	0.074	15	97.723	2.277	0.212
30	99.692	0.308	0.078	30	97.630	2.370	0.216
45	99.657	0.343	0.083	45	97.534	2.466	0.221
5 00	99.619	0.381	0.087	13 00	97.437	2.563	0.225
15	99.580	0.420	0.092	15	97.338	2.662	0.229
30	99.540	0.460	0.096	30	97.237	2.763	0.233
45	99.497	0.503	0.100	45	97.134	2.866	0.238
6 00	99.452	0.548	0.105	14 00	97.030	2.970	0.242
15	99.406	0.594	0.109	15	96.923	3.077	0.246
30	99.357	0.643	0.113	30	96.815	3.185	0.250
45	99.307	0.693	0.118	45	96.705	3.295	0.255
7 00	99.255	0.745	0.122	15 00	96.593	3.407	0.259
15	99.200	0.800	0.126	15	96.479	3.521	0.263
30	99.144	0.856	0.131	30	96.363	3.637	0.267
45	99.087	0.913	0.135	45	96.246	3.754	0.271

TABLE XIII.
 MINUTES IN DECIMALS OF A DEGREE.

0 30"	.00833	10' 30"	.17500	20' 30"	.34167	30' 10"	.50833	40' 30"	.67500	50' 10"	.84167
1 00	.01667	11 00	.18333	21 00	.35000	31 00	.51667	41 00	.68333	51 00	.85000
30	.02500	30	.19167	30	.35833	30	.52500	30	.69167	30	.85833
2 00	.03333	12 00	.20000	22 00	.36667	32 00	.53333	42 00	.70000	52 00	.86667
30	.04167	30	.20833	30	.37500	30	.54167	30	.70833	30	.87500
3 00	.05000	13 00	.21667	23 00	.38333	33 00	.55000	43 00	.71667	53 00	.88333
30	.05833	30	.22500	30	.39167	30	.55833	30	.72500	30	.89167
4 00	.06667	14 00	.23333	24 00	.40000	34 00	.56667	44 00	.73333	54 00	.90000
30	.07500	30	.24167	30	.40833	30	.57500	30	.74167	30	.90833
5 00	.08333	15 00	.25000	25 00	.41667	35 00	.58333	45 00	.75000	55 00	.91667
30	.09167	30	.25833	30	.42500	30	.59167	30	.75833	30	.92500
6 00	.10000	16 00	.26667	26 00	.43333	36 00	.60000	46 00	.76667	56 00	.93333
30	.10833	30	.27500	30	.44167	30	.60833	30	.77500	30	.94167
7 00	.11667	17 00	.28333	27 00	.45000	37 00	.61667	47 00	.78333	57 00	.95000
30	.12500	30	.29167	30	.45833	30	.62500	30	.79167	30	.95833
8 00	.13333	18 00	.30000	28 00	.46667	38 00	.63333	48 00	.80000	58 00	.96667
30	.14167	30	.30833	30	.47500	30	.64167	30	.80833	30	.97500
9 00	.15000	19 00	.31667	29 00	.48333	39 00	.65000	49 00	.81667	59 00	.98333
30	.15833	30	.32500	30	.49167	30	.65833	30	.82500	30	.99167
10 00	.16667	20 00	.33333	30 00	.50000	40 00	.66667	50 00	.83333	60 00	1.00000

$$\begin{array}{r}
 50.2 \\
 \underline{7} \\
 43.2 \\
 56.6 \\
 \underline{} \\
 99.8
 \end{array}$$

$$\begin{array}{r}
 59.6 \\
 189.75
 \end{array}$$

$$\begin{array}{r}
 18 \\
 3.2 \\
 \hline
 180 \\
 \underline{3.2} \\
 176.8 \\
 \hline
 00
 \end{array}$$

130.36

$$\begin{array}{r} 14457 \\ 132075 \\ \hline 12505 \end{array}$$

	61
	<u>902</u>
60.13	<u>1502</u>
29.11	<u>7</u>
<u>89.24</u>	143.2

