

C.C.C.  
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FIELD BOOK

364A

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# KEUFFEL & ESSER CO.

## DRAWING MATERIALS AND SURVEYING INSTRUMENTS. NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

### TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.  
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.  
FOR SINGLE TRACK EXCAVATION.

"Copyright, 1895, by Keuffel & Esser Co."

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	5
6	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	6
7	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	7
8	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	8
9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	9
10	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	10
11	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	11
12	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	12
13	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	13
14	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	14
15	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	15
16	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	16
17	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	17
18	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	18
19	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	19
20	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	20
21	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	21
22	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	22
23	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	23
24	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	24
25	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	25
26	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	26
27	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	27
28	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	28
29	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	29
30	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	30
31	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	31
32	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	32
33	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	33
34	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	34
35	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	35
36	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	36

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

For Keith's Railroad Curve Tables see end of book.

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Page	Sec.	Tp.	R.	Remarks etc.
3	34	38	5	Tyler Road Traverse
6	21	39	5	Cruise $\frac{1}{2}$ SE $\frac{1}{4}$
8	23	38	5	$\frac{1}{8}$ cor $\frac{1}{2}$ + trav. (A)
10	30	"	"	Cruise $\frac{1}{2}$ + $\frac{1}{2}$ SW SE
11	3	"	"	Setting $\frac{1}{8}$ corners
12	5	"	"	random Township line
13	30	39	5	Cruise in S $\frac{1}{2}$ (cabin lot)
14-17	30	38	5	$\frac{1}{2}$ W $\frac{1}{2}$ - (eye pickets)
22-24	33	35	6	Levels - F. P. H. Q. (City of Tomahawk)
36-38	7-18-8	39	7	Cruising Hatchery
39-48	7-8-18	"	"	lines + corners "
49-51	19-18	39	5	Orig WC etc.
52-56	"	39	7	$\frac{1}{8}$ line
57-59	"	"	"	Hatchery ponds.
60-64	18+7	"	"	" Survey.
66	32	39	5	S + W $\frac{1}{4}$ (part to find)
67	71	"	38	5 for planting
70	5	"	"	" "
73	10+15	"	"	Genl Search
74	23	39	5	Cruise
75	27	"	"	"
77	4	38	5	"
78	12+13	38	4	"
76	19	38	5	v meas R. L. $\frac{1}{2}$ mile
79	9	38	5	$\frac{1}{2}$ + Orig SW cor.
80	"	"	"	$\frac{1}{2}$ W $\frac{1}{2}$ + " S $\frac{1}{2}$
83	2	38	4	$\frac{1}{2}$
84	6	39	5	SW $\times$
18	30	38	5	(29)

APR 10 1986

# Index (continued)

Page	Sec.	T <sup>N</sup>	R <sup>E</sup>	Character + comment.
85	27+28	39	5	Find Orig 1/4 S.
86	8	39	7	1st S 1/4 line.
90	"	"	"	NW 1/4 (E+W 1/8 line)
97-98	12+13	38	5	New line up. Find cor.!
91-98	8	39	7	
99	27	39	5	
100	3	38	7	State Garage in Lot 1
101	13+23	38	5	W.C.D. Monuments
102	1	38	9	Reconnaissance Tower site
103		38	5	County Monuments
		37	4	
105	1	37	4	Project 29 (extension)
107-146	33	35	6	Towahawk warehouse
147	1+2	37	4	Orig corners.
149-155	33	35	6	Towahawk warehouse.
157		39	7	Township Diagram
159				County monument Tabulation
170				" " marked only 7/9/36
20	17+20	38	5	Eye picket random

Sat. Oct. 14, 1933

Dan Jessart

Starting about 1/4 Post between  
 Secs. 9 + 10 - 38-4  
 South on old grade 20 rods  
 thence N-70 W on old grade 10 Rods  
 10 Rods N-23 W

4:40 E 5 E

4:13 T E 23° E

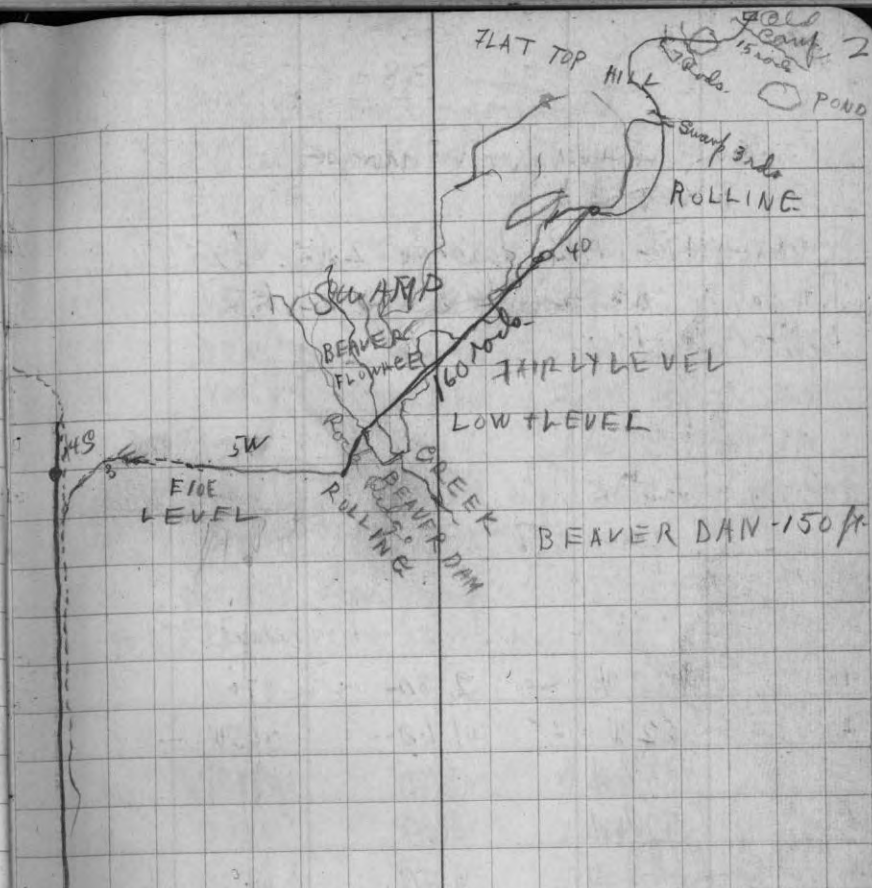
AT 6 1/2 T VAR E 7° W

Grade Ends. At 80 Rods.

Course level not much bent

N - 15° W - 23 Rods - Beaver flowage

N - 45 W - 160 Rods - 40 Rods more to swamp



Sec. 34 - 38 - 5

## Tyler Road Traverse

December 17<sup>th</sup> 1934 Foggy - calm +20°  
 R.H. Hall. M<sup>r</sup> Ronald Lozwick  
 Pocket Compass on staff var. 0°  
 Chain Tape.

P.O.B. = junction Tyler Road with (4) which is  
 approx. 36.72 S and 75 W  
 from Orig. North ¼ S.  
 Reduced to 3° E var.

1	N 75 W	2.30	= N 72 W
2	S 62 W	1.60	" S 65 W
3	N 83 ¾ W	3.80	N 80 ¾ W
4	S 72 ¼ W	4.10	S 75 ¼ W
5	S 64 ¼ W	3.20	S 67 ¼ W
at 1 ch. <sup>to</sup> vince swamp on left.			
D <sup>o</sup> var = 3° E var. ch.			
6	S 46 W	S 49° W	2.70
7	S 73 W	S 76 W	2.00 <sup>.80 to 1.30</sup> Swamp
8	N 49 ¾ W	N 46 ¾ W	2.10
9	S 78 ½ W	S 81 ½ W	2.20 picket
10	S 47 ½ W	S 50 ½ W	3.20
11	S 64 ½ W	S 67 ¼	1.70
			13.90

## Tyler Road - continued

	0° var	3° E var.	ch.
12	S 48 W =	N 89° W	2.30
13	S 63 W =	S 66 W	3.70 To swamp .75 wide.
14	N 56 ¾ W	N 53 ¾ W	2.20
15	N 5 W	N 2 W	2.80 To swamp
16	N 29 ½ W	N 26 ½ W	2.00 @ 1.20 over swamp.
17	N 72 W	N 69° W	1.60 drive peg
* 18	S 80 W	S 83 W	3.30 48 to 1.30 swamp
19	S 65 W	S 71° W	4.00
@ 1.11 blaze found. 21.90			
+ 18	S 80 W	@ 2.79 sec line ±	2.97 N 2 ¼ S 2/9/34
20	S 54 ¾ W	S 57 ¾ W	4.00
21	S 43 W	S 46 W	2.20
22	S 23 W	S 26 W	1.20 Junction - rd hrs N 80 W
23	S 1 W	S 4° W	2.20
24	S 29 ¾ W	S 32 ¾ W	3.60
25	S 48 ½ W	S 51 ¼ W	2.60
26	S 24 W	S 27 W	1.50
27	S 47 W	S 50 W	4.60
28	S 5 W	S 8 W	2.70
29	S 48 W	S 51 W	4.30 to junction - main line hrs S 9 E
30	S 25 W	S 28 W	.70
31	N 77 W	N 74 W	1.70

Sec. 34-38-5

	0 var	3 <sup>6</sup> E. var.	ch
32	S 82 W	S 85 W	1.30
33	N 62 <sup>3</sup> / <sub>4</sub> W	N 59 <sup>3</sup> / <sub>4</sub> W	1.80
34	S 80 <sup>3</sup> / <sub>4</sub> W	S 83 <sup>3</sup> / <sub>4</sub> W	5.30
35	N 67 W	N 64 W	3.70
36	N 54 W	N 51 W	.90
37	N 89 <sup>3</sup> / <sub>4</sub> W	N 86 <sup>3</sup> / <sub>4</sub> W	1.40
38	S 76 <sup>3</sup> / <sub>4</sub> W	S 79 <sup>3</sup> / <sub>4</sub> W	3.00
	to 5 lbs N <sub>2</sub> from 12" N. Pine found marked 1407 S to <sup>1</sup> / <sub>4</sub> S.		
	" =		21.37 ch.

38	=	36.72	75
	=	+ 21.65 S	+ 79.01 W var 3°
	=	58.37 S	+ 79.76 W of Nth. <sup>1</sup> / <sub>4</sub> S.
		80	8
		21.63 ch.	
		.05	
		21.68 said Y.P.	
		21.37	
		31 out N <sub>2</sub> S	34 E <sub>2</sub> W ✓

Sec. 21-39-5 E

SE <sup>1</sup>/<sub>4</sub> Crising.

December 18<sup>th</sup> - 1934 Snowing 30°  
 RA Hall. McDonald. Jozwiak  
 Chain N. thru bush from Sig. Co. 21-22-27-28  
 var 1<sup>1</sup>/<sub>2</sub> or 2° E

9.45 lv. Swamp NE + SW 4' + 5".  
 Considerable dead Tam, E of line  
 16.00 over ridge - re-enter Swamp NE SW  
 alders + dead 6" Tam.  
 20.10 fall .14 W. of <sup>1</sup>/<sub>8</sub> post found  
 old bearings to same:  
 Tam 8" S 58 W .18  
 " 5" S 60 E .07  
 looks like H<sub>2</sub>V + about 30 yrs old +

Sec. 21 39-5

Continued

North again from  $\frac{1}{8}$  S  $\vee$   $1\frac{1}{2}$  E

2.37 old winter road N45W + S70E ±  
SE x pine clump bis N60W 5ch ±  
11.32 To winter road N30E  
+ enter dead margin cedar  
13.84 " green " N6SW

16.91 Creek .05 runs SW  
20.00 Fall about .30 w. of Owl  $\frac{1}{4}$  S.  
Identified by both bearings  
marks OK.

The NE tree is cedar - leaning E.  
" SW Tam. in fine shape (dead)  
Bearings meas. .26 apart. rec. = .22

Set near post .13 from Tamarac.

P.C. New { Cedar 9° S19E .085

Comes practically at N. margin Swamp

Sec. 23-38-5

December 19<sup>th</sup> 1934 Overcast. snowing 25°  
P.H. Hall, M<sup>r</sup> Donald Jozwiak  
Correct  $\frac{1}{4}$  SW  $\frac{1}{4}$  by 90° N. from sta. 76.207  
on random see (Book 3 P. 39)  
= 9.357 ch. 588 19' E of SW x

Continuing - hence " " of true line:

11.122  $\frac{1}{4}$  Cedar Falls Rd.

11.327 Hub for temp. line marker

-750.3 " 6/14/35

" Initiate traverse of Cedar Falls road  
true ± Courses by Premier. (cutting corners)

② N35°-24'E 9.82

③ N59°-50'E 3.78

④ N72°-20'E 12.68

$\frac{1}{2}$  @ 2.11<sup>3</sup> on 71°-20' temp. peg. W. edge  
⑤ @ 1.77<sup>2</sup> " " int. on random  $\frac{1}{8}$  line

⑤ N50°-31'E 3.91

⑥ N21°-16'E 4.53

⑦ N8°-49'E 4.92

⑧ N41°-55'E 3.85

⑨ N71°-51'E 3.675 To Intersection  
of  $\frac{1}{4}$  rd + on  $\frac{1}{4}$  S. line random

" turns 181°-58' ✓  
should be 182°-00'

Sec. 23 - 38 - 5

SW 1/4

December 20<sup>th</sup> 1934

Same party

Set West 1/8 on  $\frac{1}{2}$  as in Book 3 Page 38

Run  $N 2^{\circ} 51' E \pm$  in approx. 1/8 line on assumption that ~~4~~ Sec 23 is straight. (The probability is that W 1/4 if it exists stands W. of such a line.)

Intersect our traverse .34 W 1/4 S 71<sup>o</sup> 20' W  
 of  $\frac{1}{2}$   
 calc .38

N.B. December 21<sup>st</sup> to 31<sup>st</sup>

RH Hall in Rhinelanders copying his survey notes (June '33 to Dec. '34) from red County field records into Official County Record Vol 1  
 Page 140 to \_\_\_\_\_

30-38-5

January 7<sup>th</sup> 1935 Overcast foggy 35°  
 Hall, McDonald - Jozwiak  
 Identify Original 1/4 Sec. between Secs. 30 + 31 by Original BT marks on NE bearing other merely a mound.

Record course + dist from NE BT + drive Cedar post. Snow too deep to make detailed search - did not have scribe.

P.C.	}	old cruiser mark	
O'var.		N 34 E	.05 1/2
	}	" "	South .05
not scribed -		W. Pine 15 S 46 W	.38

Cover is on knoll or ridge between swamps

Run Nly on approx 1/4 line Var  $\frac{1}{2}^{\circ} E$   
 Chaining thru bush.  
 (Friend ran down from N 1/4 on  $2\frac{1}{4}^{\circ} E$  + fell 8 rods<sup>+</sup>)

<sup>15'</sup> 2.34 enter Swamp NNW + NE  
 20.00 set picket for approx 1/4

E. from " "  $V 2\frac{1}{2}^{\circ} E$   
 16.58 mark tally on 16" birch

all Swamp



3-38-5

Hard travelling

## Corrections

January 8<sup>th</sup> 1935 Overcast 25°  
 Hall, McDonald, Jozwiak  
 Set both 1/8 @ corners in on H-3  
 see book 1 pages 105 + 107

and 1/8 on E 1 " 30

(drove small iron rods alongside posts.  
 " " mark class on H-  
 post " " " E)

Sec. 5-38-5

4  
 January 9<sup>th</sup> 1935 Overcast 30°  
 Rain + snow

" 16" deep +  
 Ray H. Hall, McDonald, Jozwiak, Puddy  
 Continue random H Sec. 5-38-5  
 (See Book 1 page 143)

by aligning hubs 20.518 + 27.08  
 Course appears to be 270-00' from 1933 obs.

27.08 Hub

34.239 " on south shoulder of pinnacle  
 (N. edge of hub)

40.00 Tamarac hub at record  
 no stumps visible - all open

42.37 enters open marsh NE & SW.  
 45.50-55-60-65-70-75-80 tally pickets by eye  
 as Transit became fogged. ✓

Our eye line receded to S. (possibly 25 ch @ 8000)

Sec. 30-39-5

January 11<sup>th</sup> 1935 Overcast 10°  
 Ray H. Hall. M<sup>r</sup> Donald. Jozwiak  
 Cruise Wly, measuring thru brush  
 from a point 20.83 ch. Sly from orig. E  $\frac{1}{4}$   
 (or on  $\frac{1}{2}$  S  $\frac{1}{2}$  as measured  $\pm$ )  
 Var. 3°-50' or 4° E.  
 3  $\frac{1}{2}$  ch. hr. S. margin of swamp  
 7 ridge, curves N + NE  
 11.41 To new telephone line  
 hr. S 29° E OK. over  
 14.00 Trappers cabin on  
 N 39° W (over) about 4  $\frac{1}{2}$  ch.  
 17.00 ridge.  
 Sante cabin on N 8 W . 4 .  
 19.22 N tip of open spruce swamp  
 & old slight road  
 " on N 23° E past cabin  
 20.00 mark Tally on pole  
 41.38 fall .22 N of Doors  $\frac{1}{8}$  S of Center  
 South from said  $\frac{1}{4}$  var 2° E.  
 1.10 swamp drain NW  $\frac{1}{8}$  E  $\frac{1}{2}$  V  
 20.00 mark Tally on 3" birch  
 Our record Tally from  $\frac{1}{4}$   $\frac{29}{32}$  hrs. S 15 steps 1.65  
 + W 38 " 1.65

Sec 30-38-5

Random  $\frac{1}{2}$  W  $\frac{1}{2}$   
 January 14<sup>th</sup> 1935 Mostly fair 0° +  
 Ray H. Hall. M<sup>r</sup> Donald. Jozwiak + L. Miller  
 (driver)  
 Monument Orig. SW cor by  
 intersecting record meas from all 4 of orig  
 Tamaracs. They look about  $\frac{1}{4}$  hr S of closing  
 N + S. find old post just S of mean  
 S meas. Drive 40  $\frac{1}{2}$  galv. pipes for cor.  
 + Tamarac post alongside.  
 New { W. Pine 16° S 5 W .832  
 0° var. { Border of Swamp S 1.00  
 Run E by eye pickets (Var. of cor 2° E)  
 leave Swamp. NE SW  
 4.524 picket  
 17.76  $\frac{1}{2}$  "  
 18.07  $\frac{1}{2}$   $\frac{1}{2}$  E project ~~29~~ NE SW  
 Jan 16<sup>th</sup> 35 re-meas. same  
 2.14<sup>8</sup> picket .045  
 168 2.55 hr. swamp SW + NW  
 3.41<sup>5</sup> ' pole (N. face) .072

Sec. 30-38-5  
continued

	4.52 <sup>8</sup>	picket	.095
337	5.10	Enter swamp NE SW	
	7.78 <sup>4</sup>	picket	.164
	9.95 <sup>4</sup>	"	.209
667	10.10	lv. swamp	
759	11.50	over d tip + re-enter same	
	11.16 <sup>5</sup>	picket	.235
	13.64	"	.287
	14.59 <sup>8</sup>	Tamarac (fasc)	.307
	15.90 <sup>5</sup>	picket	.335
1170 <sup>5</sup>	17.73 <sup>6</sup>	" at road	
	17.76 <sup>5</sup>	first meas continued to S $\frac{1}{4}$	
	.03	less than meas #1	
	18.07	at N with compass Set white sign post on W edge of road = 18.07 <sup>4</sup> ch	.38 ✓

Sec. 30-38-5  
continued

January 15<sup>th</sup> 1935 -20° Fair  
Hall. McDonald. Sozniak.  
Continue meas. begun by M<sup>c</sup>Donald + Miller  
→ Results as altered by subtracting .03% =

	19.317	picket	.40 <sup>6</sup>
	20.967	"	.441
	21.96	"	.479.46 ✓
	23.30	"	
	23.50	record for 1/8 S.	
	23.943	at N with compass .50 <sup>4</sup> + drive Cedar post for 1/8 S.	
over	Pople 7"	S64°W	.469
	Balsam 6"	S28°E	.379
		Cris on SE slope (stands NW of swamp)	
158 <sup>4</sup>	24 to 25	swamp again	(var on random 1 $\frac{1}{4}$ °E)
113 <sup>6</sup>	26.60 ±	re-enter "	SE NW
	28.444	picket	.598 ✓
	30.59 <sup>5</sup>	"	.643 ✓
229 <sup>7</sup>	34.80	lv. swamp	SE
	35.04 <sup>3</sup>	picket	.737 ✓
	37.97 <sup>2</sup>	"	.798 ✓
	40.10 <sup>8</sup>	"	.844

\$30-38-5  
continued

2651	40.17	u-enter	Swamp	VE + SSe	
	42.97	pick		.903	
2843	43.07	hr. swamp	N + SE		
	44.309	A-N	.932	to point	208.
	.011	W of 1/4 post		(var same)	
in 2925	44.320	A-N	.932	to 1/4 post	
		615'	.02101 =	1'-12"	

Did not check line for compass bearing as we reached 44.30  
found var. same

Sketch up our post +  
W.P. bearing.

	44.32	meas.	(on road)		
	43.50	Record			
	43.50	.82	Surp.		
	.01885		per ch.		
	"	x 23.50 =	.443		
		Sta 1st 1/8	+ 23.50		304 N
			23.943 x .02101		
	"	x 20 =	.371		
			20.377		
			44.320 ✓		

v

v

Project (29) - line 30 + 31

Aug. '34

38-5

Continued from B 5 p. 81

(9)	S 10 W (224)	EC 7°C	3902.
		BC 12°C left	3937.
		EC do	4112.
(10)	S 11 E (695)	BC 12° left	4661.
		EC	4773.
		BC 24°C nt.	4782.
		EC "	4901.
(11)	S 24 1/2 E. 126.5	BC 16°C	4997.
		EC	5174.
		in marsh	
(12)	S 4 W 248.6	BC 16° left,	5253.6
			+ 26.4
		1 mile post	5280
(13)	S 32 W 277.2		
	@ 60 to 107 Swamp		
(14)	S 1° E on H. Friends line 1500'		
	1625 to P.I. 17°C left		
	(5286)		

- (15) S 28° E. 165.2 } 161° C. 40°  
 (16) S 33 W 138.2 }  
 (17) S 1. E on H. Friends line again  
 @ 2196 " "  
 1625  
 571

Secs 17 + 20 38-5

January 21<sup>st</sup> 1935 Fair -20° F  
 Rt Hall M<sup>r</sup> Donald & Jozwiak  
 Run new eye-picket line Wly from our  
 stake at Orig. Cor. 16-17-20-21  
 Same course as our first effort.

0.0 Cor.

— Spring creek SE

— br. Swamp NW.

392 = 5.93

¢ (2)

6.15

fall about 1' S of our loc. post  
 Brush line ahead 1 or 3" Spruce

January 22<sup>nd</sup> '35

Fair -18° Same party.

9.34<sup>6</sup> picket

9.99 pole 1' S of line

12.275 picket

124 = 14.005

" + enter SE tip small marsh  
 do br NW about 3.00

125 = 17.00

P. tip another small marsh

126 = 19.25

enter Spruce Swamp W + SE.

20.00

tally picket in do

17-38-5-

26.45 br. Swamp E & SW

30.41<sup>c</sup>

picket

30.828

E edge 8" pipe top  
in line

40.19

picket at US record  
find nothing  
2 1/2' of snow

44.00

picket

44.995

face 7" pipe

→ Resume on page

✓

Levels in Tomahawk

Feb 15<sup>th</sup> 1935

To determine relative elevation of Iron Works (Now Conservation Headquarters) and city sewer system.

→ Board of Health has recommended a grade of  $\frac{1}{8}$ " per foot for sewer  
- equivalent to 1% -

Feb 15<sup>th</sup> Snowing 25°

RH Hall - Brehm

K & E Transit + self reading rod used

Use main floor of Iron Works Bldg as 100.00  
at point directly beneath center of paint  
room overhang. (" " E. edge)

Paint room floor meas 10.91 above M.F. or 110.91

Meas difference in level of main floor &  
Basement toilet floor. along pipe line.

floor drain (by transit) = 7.5'  
- .97' lower  
or 8.37 - 100. = 91.63

Copied  
5/11/37

## Levels - Tomahawk

100.00 B.M. Main floor.

+ 5.03

105.03 H I - 5.08 = 99.95 B.M. =

West outer edge sill of East

- small door S. side Bldg.

- 2.48 = 102.55 T.P.

on Sten. Grain Co. stoop

+ 2.81 FS

= 105.36 H I between marks

- 4.44

100.92 T.P. on CW

+ 6.22

107.14 H I - 5.60 = 101.54 T.P.  $\phi$ 

from N.

on Ry. St.

- 5.16 = 101.98 rim N.H.

① in  $\phi$  Tomahawk + Stone+ Approx 921' E. of  $\phi$  from Works Bldg.

- 12.32 depth

89.66 bottom 20'

main mo N

10/24/35

Main N+S meas 20" dia.

Inlet from E. 10"

" " NW 6"

Copied

## Return rim

107.14 H I - 5.60 T.P.  $\phi$  ✓

- 6.23

100.91 T.P.

+ 4.42

105.33 H I

- 2.78

102.55 T.P. on stoop  $\square$ 

+ 2.41

104.96 H.I. - 5.01 = 99.95 Sill. B.M. ✓

- 4.95 = 100.01 M.F. B.M. ✓

Run to M.H. at  $\phi$  Washington + Railway sts.101.54 T.P.  $\phi$ 

+ 4.86

106.40 H I

5.67

100.73 rim of M.H. (SW edge) Wash. + Ry. sts.

- 10.00 meas to bottom of sewer N.

90.73

+ Approx 950 from SE ex Warehouse.

(907' + 43') = 950

+ 40'  $\pm$ 

1000' from proposed

toilet loc. in

Bldg.

 $\phi$  St. from  $\phi$  Warehouse to

MH at Wash. + Ry. sts. = 907' (541 + 366)

Same Ry.

Copied

## City of Tomahawk

$\therefore \frac{1}{8} \times 1000 = 125'' = 10.42$  required  
drop.

100.00 M.F. - 90.73 = 9.27  
from M.F. to bottom sewer #2

91.63 - 90.73 = .90  
drop from cellar drain to #2

Feb 16<sup>th</sup> Hall. Behm + Stanton.

Check elev. of E rail of all R.R. tracks on  $\frac{1}{2}$  Smd.  
Track 56  $\frac{1}{2}$  of Main track

100.50

100.07

" 14.7 W " " " 100.19

" 15.4 " " " " 100.00

" 60. " " " " 99.93

" 73.1 " " " " 99.82

" 120 " " " " 99.62

" 298.2 - " " " " 99.89

" 344.8 " " " " 99.93

Project levels from BM on front low sill  
103.09 T.P. on Cedarwood pile  
99.85 top of low fence post  
SW of pond.

## Topographic - (Tomahawk)

Feb. 18<sup>th</sup> 1935 25° Snowing  
R + Hall + Behm (on snowshoes)  
(transit on snow blocks)

Decide on line 51' W of W RR jog for  
convenient line for profile  
since it misses lumber piles + is  
far enough West to avoid pond hollow.

$\Delta 1$

Get transit on <sup>W</sup> line of RR jog (approx  
178' W. of iron works.)

and 64' S. of line of N. face stacks  
on N face Foundry.

Orient to  $0^{\circ}32'$  on line N.

99.85

+ 3.91

103.76 H.I.

	Red	Clear	Stadia	Azimuth
①	6.4 =	97.4	139'	$112^{\circ}30'$
②	6.8 =	97.	88'	$112^{\circ}45'$
③	7.8	96.	14'	$102^{\circ}$
④	6.55	97.2	27'	$351^{\circ}$
⑤	7.6	96.2	83'	$342^{\circ}40'$

ooo



St.	Rod.	Elev.	Stadia	Az.
27	103.76 H.I.			
②	7.2	96.6	155	353°25'
⑦	8.8	95.	142	359°15'
⑧	5.8	98.	"	338°15'
⑨	7.4	96.4	112	319°45'
⑩	7.	96.8	52	299°25'
⑪	6.9	96.9	21	226°15'
⑫	5.9	97.9	70	229°05'
	at N.E. cor. cordwood			
⑬	4.7	99.1	147	199°40'
	.68	103.08	Tp. on woodpile on v-	
⑭	4.6	99.2	135	183°12'
⑮	5.	98.8	140	165°10'
⑯	5.6	98.2	95	145°15'
⑰	5.2	98.6	123	127°35'
⑱	6.5	97.3	198	329°05'
⑲	6.1	97.7	196	313°15'
⑳	5.7	98.1	168	293°50'
㉑	6.3	97.5	147	267°20'
㉒	6.2	97.6	138	236°05'
㉓	4.6	99.2	180	173°10'
㉔	3.8	100.	246	164°
㉕	4.1	99.7	158	162°45'
⊕	10.46	93.30	43	74°10' T.P.
			willow strip in basin	

## Iron Works - Tomahawk

2.8

Readings at 50' intervals on ± 57' line  
beginning 40' N of  $\pm$  Iron Works Bldg  
Wood pile 607' feet over line at S. end.

0	Rod.	Elev.		
0	3.1	100.7		
+50	4.3	99.5		
1	5.3	98.5		
1+42.7			Across wood pile line N face cor. on Iron Works	
1+50	6.	97.8		
2	6.4	97.4		
2+50	6.8	97.0		
3	5.9	97.9		
3+40	5.2	98.6		Summit
400	7.3	96.5		
③" Δ			205'	343°57'
Run 92' contour of basin	H.I. 103.76	Rod 11.7		
a	65'	93°35'		
b	40'	82°35'		
c	24'	33°		
d	53'	2°15'		
e	95'	0°30'		
f	136	8°		
g	178	11°30'		
h	210	16°10'		
③ Δ Iron hole	96'	10°34'		
upper left cor lbs	pile 60	" "		

Drow Works

at  $\Delta 3$  (approx margin of <sup>sewer</sup> pond)  
 Alex Foundry bld.  $121^{\circ}40'$

93.30

Rod

17

5.81

93.47 H.I.

5.88

5.84

-584 = 87.63

See level

in pond  
= 12.37 below floor

Contours of pond:

Stadia

Az.

1	45'	$168^{\circ}35'$
2	90	$147^{\circ}05'$
3	163	$131^{\circ}$
4 at sewer outlet	206	$112^{\circ}50'$
5	207	$103^{\circ}08'$
6	197	$86^{\circ}45'$
7	246'	$82^{\circ}07'$
8	232	$68^{\circ}$
9	171	$60^{\circ}10'$
10	127	$48^{\circ}20'$
11	79	$37^{\circ}40'$
12 = A		

Topographic - Drow Works

Feb. 19<sup>th</sup> 1935 Fair. Windy  $15^{\circ} \pm$

Hall + Brehm

R at  $\Delta 2$  = station 400 on profile  
 99.85 T.P. on face post

+ 2.86 Rod

102.71 H.I.

at 4+50 = 8.6 = 94.1

5 = 7.2 = 95.5

5+50 = 7.0 = 95.7

6 = 7.8 = 94.9

Sta	Rod	Elev.	Stadia	Azimuth.
1	5.8	96.9	116	$69^{\circ} \frac{1}{2}$
2	6.1	96.6	76	$48^{\circ}55'$

- NS at Mv. for SWx RR tract

3	6.3	96.4	130	$19^{\circ}40'$
4	6.6	96.1	170	$10^{\circ}25'$
5	7.	95.7	158	$340^{\circ}$
6	6.5	96.2	116	$316^{\circ} \frac{1}{4}$
7	5.4	97.3	145	$292^{\circ}50'$
8	"	"	"	$260^{\circ}$
9	5.	97.7	159	$279^{\circ}40'$
10	5.	"	128	$207^{\circ}10'$



## Topographic-continued

	Red	Elev.	Stadia	Az.
11	6	96.7	202	204°-25'
12	5.7	97.0	230	232°
13	5.8	96.9	245	257°-20'
14	5.4	97.3	215	280°-05'
15	7.5	95.2	237	307°-50'
16	8	94.7	230	331°-10'
17	6.7	96.0	83	335½°
18	6.8	95.9	48	304°-45'
19	7.4	95.3	29	27°
20	5.2	97.5	53	200°-40'
	3.67	99.04	tp. on top of st post line of wagon.	

at 700 on profile

99.04	T.P.
+ 2.74	red
101.78	H.I. @ 700
at 6+50	6.9 = 94.9
7	6.3 = 95.5
7+50	5.6 = 96.2
8	5.4 = 96.4
8+50	3.7 = 98.1

Sta	red	Elev.	Stadia	Amuth
		H.I. 101.78		
a	8.8	93.	128	39°
b	12.1	89.7	163	65°
c	11.9	89.9	180	86½°
d	11.6	90.2	106	80°
e	8.	93.8	59	106°-45'
NW cor RR tract				
f	6.6	95.2	68	39½°
g	7.8	94.	76	132°-10'
h	5.9	95.9	120	152½°
i	5.3	96.5	185	162°-50'
j	5.9	95.9	165	197°-10'
k	6.9	94.9	166	223°
l	6.9	94.9	126	252°
m	5.1	96.7	121	297°
n	5.9	95.9	102	331°
o	3.6	98.2	176	333°
	- 5.27 =	96.51 T.P.		
		+ 8.50		
		105.01 H.I. at A 8+88		
at 8+88				
9	6.2	98.8		
9+50	5.4	99.6		
10	5.8	99.2		
10+35	8.6	96.4		

in N. N. spur

## Topography

Sta.	Rod	Elev.	Stadia	Az.
1)	6.4	98.6	118	33°
2)	7.1	97.9	103	61½°
3)	8.1	96.9	113	88°
4)	5.3	99.7	86	315°
5)	7.4	97.6	170	64½°
6)	6.9	98.1	250	77°-40'
	9.17	95.84	T.p. on last fence post.	
		+ 1.79		
		97.63	H.I.	

Rod on ice

10.36 at shore = station 10+84

~~10.31~~~~10.78~~

11.65

~~11.82~~

cor. 11.73 = 85.90 sea in flowage.

~~-100~~

14.10 below flood.

Feb 20<sup>th</sup> 1935 Fair 10°

Since it appears to be best policy to connect with City Sewer System:

Make check run from Iron Works to min of M.H. in E Washington &amp; Ridgway Sts. (set-ups on snow + ice)

99.95 B.M. on sill at office  
+ 5.27105.22 H.I.  
5.06100.16 T.P. on W rail of 1<sup>st</sup> track W. of M.H. should be 100.19

+ 5.56

105.72 H.I.  
4.33

101.39 T.P. on CW

+ 4.42

106.25 H.I.  
5.54100.71 min of M.H. ✓ Prev. elev 100.73 ✓  
Use elev. as " "

McCoy's ties to SE x track. 8/15/35

SE x brick N W

11.4

SW x frame N E

18.2

} 29.6

39-76

Fish Hatchery Property.

i.e. Lots 5-6 + 7 in Sec 8

SW NW

That part of lot 2 lying W of the N + S  
1/8 line in W 1/2 Sec 8(or described as) all that part of lot 3  
lying S + E of the Carbonitas Creek.  
(1 1/2 acres ±)

The	SE	SE	Sec. 7
Lot 1			" 17
Lot 1			" 18

Since B.F. Don surveyed this area in  
1894 - 1903 - 1907 :

Feb 26<sup>th</sup> PM only + Feb 27<sup>th</sup> (all day)  
L. Miller + I cruise on snowshoes to identify  
such corners as we can with this amount  
of snow. (2' ±).

18-39-7

Identify Orig Cor to 7-8-17-18 by  
Doris at Pine + DAK's Hemlock. marks OK  
falls on side hill. at considerable  
distance N + W of lake shore  
(data indicates it should stand  
on shore.)

Fail to find the MC S of this cor.  
Find Doris  $\frac{1}{8}$  S (N  $\frac{1}{8}$  on  $\text{\textcircled{E}}$ )  
Pine grown short but squarish  
balsam indicates it is the place  
(Doris record S from lake - paced)

Why from - this  $\frac{1}{8}$  S. on flayed line  
- three timber. var  $\frac{3}{4}^{\circ}$  E  $\pm$   
60 steps vis # 47 tall NE + SE.  
463 in open small poplar  
find nothing.

Thence N. ( $4^{\circ}$  E var)  
fail to find blaze or  $\frac{1}{8}$  S.  
Find Doris MC ("2.25 N of E  $\frac{1}{8}$  H.)  
Post + Hem. BT OK.

Return E on blaze from approx E  $\frac{1}{8}$  H.  
397 vis. 47  
466  $\pm$  See Cor.

8-39-7.

Ely from supposed loc. MC on  $\text{\textcircled{E}}$   $v 25^{\circ}$   
178 to 295 intersect N end of open marsh.  
Fail to find  $\frac{1}{8}$  S on S  $\frac{1}{4}$ .

N. on  $\frac{1}{4}$  line  $\pm$   
Record for Center falls in swamp  $\frac{1}{4}$  of ridge.  
cannot find W, P. stp.

Thence W. var  $3\frac{1}{2}^{\circ}$  E.  
445 run into Doris  $\frac{1}{8}$  W of Center  
(figured 494)

Find his BT plain on green Hem. +  
his post down under snow.  
cor. is on ridge between Swamps.  
" his N from cor.

Thence N on var  $4^{\circ} 10'$  E  $\pm$   
Swamp.

414 old wire fence to W. on  $2^{\circ}$  W. var  $\pm$   
" intersect about 12' W of E end fence.  
500  $\text{\textcircled{E}}$  Buffalo L. Road in gully  
on reverse curve NE + SW.

489 = Pro rate - may have made error in pace.

655 to Creek bottom NE SW.  
farm house to S W.

792 over creek or lake.

978 Doris  $\frac{1}{8}$  pool in wire fence  $v$  with his  
(OK to line)  $36^{\circ}$  stp.

18-39-7

March 4<sup>th</sup> 1935 P.M. only.  
 Fog & moisture from trees  
 R.H. Hall & L. Miller + McDonald  
 Shovel away snow at Orig. N.E. cor 18  
 + find old post down  
 " hole very definite - rotted wood  
 Set anchored Wis. Cons. Mon.  
 8" exposed.

R over monument - Dons bearing r on  $V 2^{\circ} 07' E$   
 10.40 { H.V. Hem 7"  $N 43^{\frac{1}{2}} W$  .05 $\frac{1}{2}$  = 3.6'  
 10.40 { Dons Pine 6"  $N 13^{\frac{1}{2}} W$  .11' = 7.3'  
 V 9 $\frac{1}{2}$  0' { New  
 Sup. Cor. { Y. Pine 10"  $N 7^{\frac{1}{2}} E$  .364 = 24.  
 " { Hem 6"  $S 19 W$  .125 = 8.25  
 18 $\frac{1}{2}$

Remove snow at  $N \frac{1}{8} E$   
 Find 2 iron pipes - South pipe r with  
 Dons Pine. on  $V 2^{\circ} 07'$   
 Set post found alongside pipe + mark.  
 p. 0.0 { Hem 9"  $S 74^{\frac{1}{2}} W$  40 $\frac{5}{8}$  = 26.7  
 V 9 $\frac{1}{2}$  40' { " 9"  $N 16^{\frac{3}{4}} W$  .16 = 10.6'  
 17 $\frac{1}{4}$   
 Dons Pine  $N 72 E$  .13 $\frac{1}{2}$  = 8.9'

Other pipe about 2 $\frac{1}{2}$  ft N. of  $\frac{1}{8}$   
 (may be one pro-rate then the  $\frac{1}{2}$  mile.)  
 hardly - diff. would = 12 $\frac{1}{2}$  lbs  $\pm$

17-39-7 (H NW NW) 40

March 5<sup>th</sup> 1935  
 40 $\frac{1}{2}$  very sloppy 2' snow  
 R.H. Hall with N = Donald + Miller  
 Transit at Dons  $N \frac{1}{8} 40$  (J.P) page 39  
 by var  $2^{\circ} 48' E$  which is at rate of  
 decrease 1 $\circ$  since 1907

Run  $E 88^{\circ} 50' E$ .  
 Run 6' on random var  $2^{\circ} 48' E$   
 6.0  $\frac{1}{8} S$ , (another pipe to N about 25 $\circ W$   
 2.00 ft.)  
 2.844 Hub  $V 2^{\circ} 52' E$  .0512  
 6.25 $\frac{6}{8}$  picket .112  
 old tagged line  $\emptyset$  of snow.  
 10.06 @ face 9" birch .180  
 11.586 Hub  $V 2^{\circ} 52' E$  .207  
 14.687 " .26 $\frac{1}{2}$   
 17.542 " .313  
 20.295 Dons record  
 20.32 Hub var  $3^{\circ} 15' E$   
 + Turn 1 W to S to Dons  $\frac{1}{8}$   
 $92^{\circ} 02'$  .3635 ch.

17-39-7

continued

Find 2 iron pipes about 4' apart.  
one evidently driven beside Dons post.  
We remove this & drive in old post hole  
agreeing with both of Dons Sugar tree  
" grown shut.

20.33<sup>3</sup> at  $\angle$  S  $\frac{.3635}{.01787}$  to  $\frac{1}{16}$  @  
Tang 1° 01.4'

20.33<sup>6</sup> true line

Var 2° 48' on W. end

3° 15'

1° 01'

2° 14' 8" end.

1° 01'

1° 47' actual

ave. var of true line 2° 8.

Therefore by 1° 01' less var than calc.

17-39-7

E Lot 1 (NW NW)

March 6<sup>th</sup> 1935 Fair 20°  
Hall. Mc Donald - Miller.

Run N by  $N 02^{\circ} 26' W$   
from Dons  $\frac{1}{16}$  in NW  $\frac{1}{4}$   
var. 2° 07' E

Intended to run on  
2° 24'  
but picked out nearest opening  
thru blazed trees. (Dons flags?)

0.0 Iron Pipe

8 2° 07' { Dons Sugar N 61  $\frac{1}{2}$  E .06<sup>4</sup>  
" " S 5 W .16<sup>109</sup>  
new bick 10 S 75 W .039<sup>2.0</sup>

.36 intersect E to W random + Turn  $\angle$   
W to N 90° 44'  $\angle$  ② 181° 29'

2.077 Hub

267 4.047 " (Wood marsh to N 78 W)

8.05 " " "

B'd 6'  $\angle$  of hub

11.53 Hub

15.252 " ?

19.835 " "

find Dons  $\frac{1}{8}$  post down & noted  
bearing stop chared

var 2° 10' E  
S 87 W  $\angle$  "  
true to random  
angle 89° 42' 6"

(are coming close)



17-39-7  
continued

March 8<sup>th</sup> 1935 Fair +10° to 25°  
 Hall M<sup>r</sup> Donald + Miller.  
 Find 2 iron pipes for posts W & H  
 Neither of them where post stood.

We plant anchored pipe 1" x 4" in old  
 post hole. Nags. exactly .40 from stump.  
 Bearings with Var E.

(14)

new { Davis atp  
 Birch  
 " Aspen

Cor. is in NW slope

at 18.835 on N40° random  
 < def. right (- to cor.)

0°-37' ② 0°-37' ✓ 1.089 ch.  
 S. = .01076 x

Cor. .99994 = .01172

18.835  
 1.089  
 ---  
 19.924 full W

0.00039  
 = 0°-02'

↓

Observe Sun at 18.835 Temp +15° F.  
 Zenith set on 0° (sight S. on random  
 Horizontal angle random to sun S to SE  
 Vertical " after adding 0°-03' for adjustment

① 9:40½ CST (watch found 1' slow) ∴ 9:41½  
 v 29°-19' h. 43°-06'  
 29°-22' Sun = S43°-28'E Random N0°-22'W

9:55 30°-53½' h.  
 ② 9:54 v 30°-50½' 39°-41'  
 Sun = S40°-09'E " N0°-28.7'W

③ 9:55.6 v 31°-09' h 38°-58'  
 9:56.6 31.1 Sun = S39°-25'E " N0°-27'W  
 Average = N0°-26'W.

v

Run Wly on random from W & H as set (P.  
 < S to W turned from hub 18.835) 89°18'  
 < " " true line to random = 89°-53'

0.0 i S  
 4.73<sup>3</sup> Hub var 2°-35'E

7.525 " " opposite old post down  
 at N.C.

4<sup>th</sup> Lot 1 Sec. 17 - 39-7

10.302 at  $\angle$  N to MC } 12 lbs  
 (var 2-20 $\frac{1}{2}$ °) .01165 = tang  
 . 0° 40'

Drive I.P. at base of old post (down).

Meas.  $\angle$  from Origh & from Down stp.

u var. 1° 40' E	Down stp	N 88 $\frac{1}{2}$ E	44 = 29.04
	Origh	N 80 $\frac{1}{2}$ E	12 = 7.92
	new N.P. Pin 4	N 20 $\frac{1}{2}$ W	198 = 13.07
	" W " 7	S 36 W	.65 = 42.9

Continue same random leg

12.12 Hub at shore (correct N. 047)

13.302 Calc. intersect with true line  
 $\angle$  2° 17.4'

19.174 R (correct S. 235)  
 (20.00  $\pm$  lv. lake) N 6 SW

21.158 N  $\angle$  S 314 to Origh Sec. Cor.

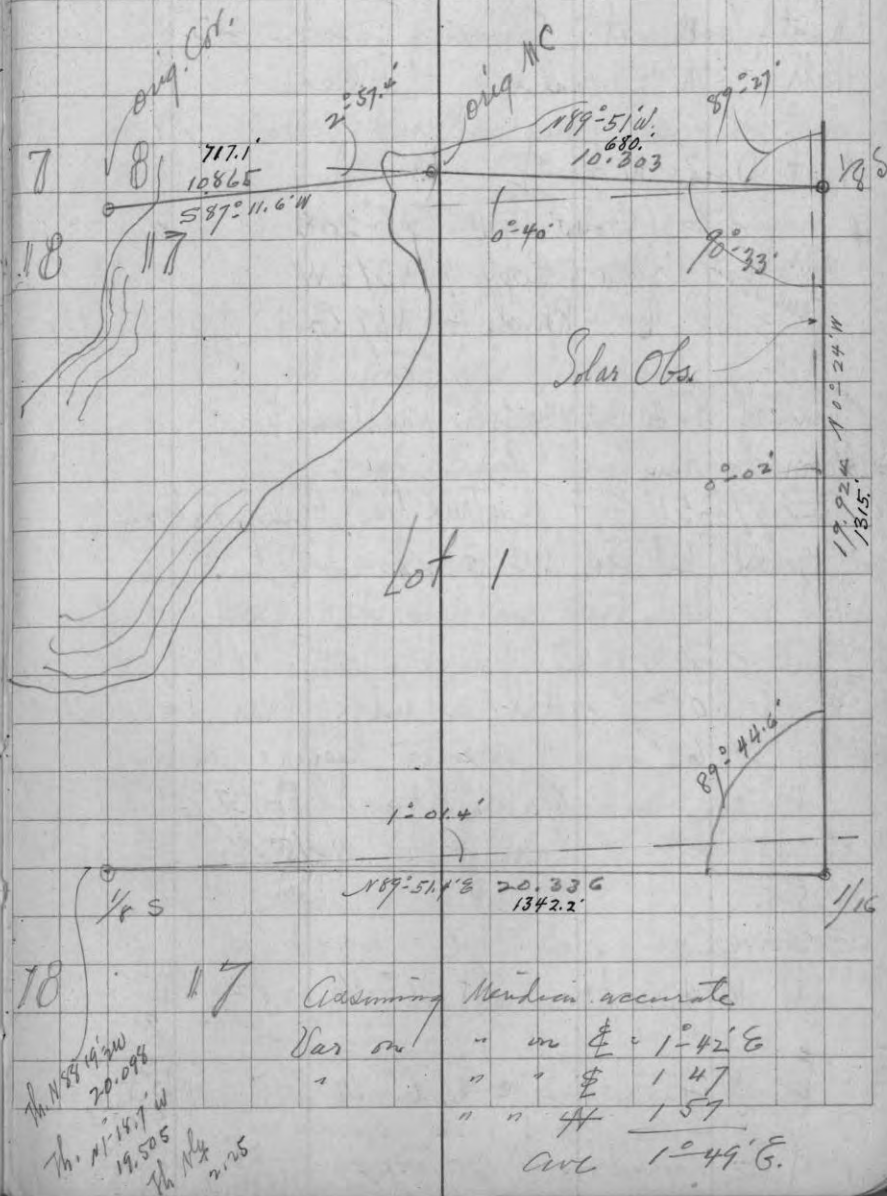
— 10.302  
 10.856 | .434  
 .03799 = tang 2° 17.4'

= angle of true line with random.

True dist MC to Sec Cor. (10.865)

$\angle$  true lines at MC. 2° 57.4'

Lines + angles to date  
 more corrected.



SE SW.

Monday, March 11<sup>th</sup> 1935

Mostly overcast - Snowing 20° 25°  
Hall, McDonald. Miller

9 at Dows W  $\frac{1}{2}$  SE

14	Var 1-52 <sup>°</sup> E	{ Dows str.	S7-20W	.40 = 26.4
	True for	{ New	Popl 4 N37 $\frac{1}{2}$ W	12.95
		{ "	Birch 4 N59 E	15.7

Turn off 0°-40' N Wly from random SE  
Reverse + run

S 89°-51' E = on "true line" being extension  
of line between MS +  $\frac{1}{8}$ .

0.0  $\frac{1}{8}$  S.

1.02 <sup>2</sup>	Hub on ridge	Var 1-52
305' = 4.62 <sup>2</sup>	" center	Semi-open swamp
	Var on Az =	1°-37' E
	Swamp to	N 45 E.

25°F.

Observed Sun

①	10:42 $\frac{1}{2}$ AM	alt	36°-36'	Az	152°-43'
			random calc		90°-00'

②	10:45	"	36°-48'	"	153°-26'
			random calc		90°-01'

< Az random 90°-09'

SE SW

6.4 = 9.38 hr swamp <sup>.0217</sup> hrs N30°E (PC) for  
about 4 ch. Th. Wly to N. extremely  
Swamp. possibly 7 ch N. of line

10.73 Dows? blaze on dead tree. on line

11.374 Hub <sup>.0263</sup>  
15.71 " Var on 0° 1°-50' E

20.304 fell <sup>.047</sup> S. of orig  $\frac{1}{4}$  S.  
old \* post hole alongside of D.P.  
found. \* agrees OK with stub  
of orig South bay. marks plain.

Did not dig for other nor Dows maple.

Drive temp oak hub in post hole  
7 + New Sugar 10" S 81°-50' E. 428 = 28.25

20.56 Hub from which \* post hole was  
240°-30' or N 79°-30' W .26

+ New-Sugar 10" hrs 94°-20'  
= 585°-40' E .169 from  
20.56

∴ OAz as assumed would appear to be ✓  
N 0°-08' W.

Sec. 19-39-5

March 18<sup>th</sup> 1935  
Hall + Freund  
Look out route for proposed road to  
connect Murray road with Bo-di-lac  
system in Sec 7.

Find Origin WC (300 S of [NW cor 19 in Pond])  
SW BT ok - dub 10' hi.  
No other evidence to be found.

March 19<sup>th</sup> 1935  
Overcast 20° windy  
Hall with Mc Donald + Miller  
Locate said WC by course + dist. from  
the remaining B.T. + drive 2" x 6"  
perforated Iron Pipe. 2' exposed.  
Comes 2 1/2' wks way of a 3" Tamarac  
Mark new:

PC ivar.	Tamarac	3"	N 32° E	27 <sup>2</sup>
		2	N 23° W	24 <sup>2</sup>

Two layers of ice - could not get down to  
bog to look for other BT or post.

Cor comes about 30 lks E of a drain (SW)

✓

Chain S from WC following old flag.  
Head Tamarac.

- 3.00 Sec Cor in pond  
0.0 Orig WC (S.P.)  
Try using on van 2' E but have to swing E  
a little to stay on spots.

\* 17.00 Large 1" spruce for approx 1/8 S.  
Normal course E agrees with 4-  
young Norway growth.

17.37 Sw. Swamp ls S 84° E PC  
thence " " more Ely + N E

19.31 re enter Swamp N 60° E ±

23.79 ls " N 15° E

27.37 enter " S 45° E

32.17 Bur mark for Approx BT location  
(Rec. 32.27)

Should look here when snow is gone

Ely thru Gush from \* 17.00  
@ 1.00 .60 N of hard land  
2.00 .50 " " "  
3.00 .25 " " "  
4.00 Sw. Swamp ls practically E.  
5.55 to 6.45 patch of swamps from N.

Approx.  $\text{E} \frac{1}{8}$  line NW  $\frac{1}{4}$  19-39-5

12  $\frac{1}{4}$  fall .50 $\pm$  S of S large pine <sup>W</sup> stump

15.00 bank to N  $1\frac{1}{2}$  ch  $\pm$

19.90 mark 4" cherry +

descend into lower ground

22.90 Approx record for  $\frac{1}{8}$

S of up 3" maple

fall 20 W.P. to  $\text{S} 45^{\circ} \text{E}$  Brooks  $\pm$

Run N from

5.00 to near edge of bank

Thence  $\text{E}$  5.00 Thence N  $55^{\circ} \text{E}$  toward <sup>lower</sup> dam

3.85 to narrows Thence N  $16^{\circ} \text{E}$

3.25 to base of knoll on N shore

4.00 " top  $\frac{1}{2}$  "  $\pm$

March 21<sup>st</sup> 1935 same party.

transverse + meas. thru bush - logical route

North  $\text{V} 2^{\circ} \text{E}$  6.00

@ 5.00  $\text{N} 6^{\circ} \text{E}$  cor. flowage to W 1 ch

N  $39^{\circ} \text{W}$  = N  $37^{\circ} \text{W}$  6.84 Toward maple top

E of twin w. Pines.

@ 6.84 interest blaze for  $\text{E} \frac{1}{8}$  Sec. line.

Thence North  $\text{V} 2^{\circ}$

@ 4.50 bushy dead hem to W. 40

bank of abyss "  $\text{E}$  1.00

16  $\frac{3}{4}$  enter scattering birch + hem

27.00 on route  $\text{S} 74^{\circ} \text{W}$

Sec. 8-39-7

March 22<sup>nd</sup> / 35 Fair 30°

Hall. Mc Donald + Miller

Don's W  $\frac{1}{8}$  + Post in  $\text{E} \frac{1}{8}$  fence, agreeing  
OK with Don's BT stump. 36"

Mark new BT on bark:

9 W. Birch 5" ( $\frac{1}{16}$  ft  $\phi$  of wire fence)

to Wly 47' = 31.1'

Set picket for P.D.

Meas. fly on trial random  $\text{V} 34^{\circ} \text{E}$   
 $\text{V} 4^{\circ} \text{E}$

0.0  $\frac{1}{8}$  S

498 7.55 to Made line L.  $\text{S} \text{W} + \text{N} \text{E}$

\* 12.49  $\frac{1}{2}$  stump set up on ice in line with  
old post found leaning against bank

Don says 13.00 to his  $\phi$ . MC. This agrees with  
remains of a hem. which may be the one.

Water level higher now?

Set temp. plug .25 S of said Hem. + in  
position to strike random line found  
running  $\phi$ .

\* 12.49  $\frac{1}{2}$   $\frac{1}{8}$  to N. on  $\text{V} 4^{\circ} 02' \text{E}$ .

shore to N  $17^{\circ} \text{E}$  " for 1.00  $\pm$  Th. NE  $\text{E}$

" " S  $15^{\circ} \text{W}$  .75  $\pm$  Thence to

angle in shore  $190^{\circ} \text{S} 30^{\circ} \text{W}$  from 12.49

End dam to  $\text{S} 51^{\circ} \text{W} 260'$  " " "

Gable of Anderson house to  $\text{S} 51^{\circ} 20' \text{W}$

8-39-7

- 12.49<sup>1/2</sup> turn defl = right to  
Assumed MC  
15° 03' .51
- @ 12.986 st = W .137 to MC? + continue  
from MC (backighting on 88)  
Dir 3° 34' E.
- @ MC = 12.986 assumed Pt to N60E .25  
Continue Sly via 3° 34' E thru random  
opening
- Page 97 13.116 Set MC on true line  
13.30 present shore line.
- 13.59 6 Hem  $\frac{9}{10}$  E of line .09
- 13.60 Hub
- \* #1/36 W. tank pit to W 5'
- + 16.26 Hub on shoulder .114  
= N to W to N. cor E. wall of dam
- 17.70<sup>+</sup> E old Highway N65W + S70E PC
- 1974 19.30 E Present " on curve
- 19.847 Hub .144
- 19.96 (Don's record)  
with 2 hub straddle found.
- 22.48<sup>1/2</sup> wire fence
- 23.078 Hub
- 25.364 " on summit.

brush to bottom of hill:

8-39-7 E

continued

March 25<sup>th</sup> 1935 Overcast 40°

Hall Miller McDonald

Set new monument + mark new trees  
at Don's 1/8 W. of Centre. find one D.P.  
driven near post hole + another  
2.6' by (why?) Remove same

+ set anchored  $\frac{3}{4} \times 3$ " round iron bar  
in loc. of post hole. Set cedar  
post about 4" S of mon.

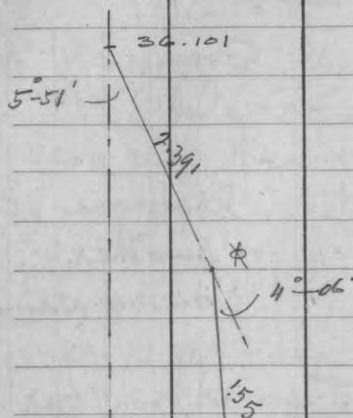
d	1.6	Don's Hem	S 19° W	.06 = 4'
✓	2.25	New "	N 78° E	.041 = 2.7
	10.40	" "	S 38 <sup>1/2</sup> ° W	.17 = 11.2
			36"	

Resume random N45<sup>1/8</sup> line in NW 1/4

25.364	Hub on summit	.184
27.858	slp 3" soft maple	.202
28.587	1" E of E face 7" birch	.208
1974 29.00	Enter Swamp 1E + SW	
30.053	pickit	.218
34.22	old winter road W SW, E NE	
2265 35.83	W Swamp SW + 1E	
36.101	Hub	.264

✓

8-39-7 E.



$$\begin{array}{r}
 19.995 \text{ P.R.} \\
 19.996 \text{ } \\
 + 20.004 \\
 \hline
 18.116 \\
 6.884 \text{ } \\
 \hline
 11.232
 \end{array}$$

correct  $\frac{1}{2}$  sec  
 11.232

40.029

.291

11.2

40.029 full .291 N. of 8 E.  
 .0027 = long 0-25

Begin random 1/4 sec line E from  
 1/4 E on offset of 2 hrs E to clear  
 trees.  $\angle$  N to E off track.  $92-32 \frac{1}{2}$   
 =  $\angle$  N to E off tree  $\frac{1}{8}$  line  $\frac{1}{20}$   
 $\rightarrow 91-12 \frac{1}{2}$

N to line

Near 40.029

Date 39.96

39.96 | .069 surp.

.001727" per ch x 19.96

= .034

@ 19.995 = 1.019.7

correct E.145

NC@ 13.022 correct E.095

8-39-7 E.

March 26<sup>th</sup> 1935 Fair to  
 Overcast 40°  
 Same party.

Continue random begun (from 8 E).  
 over slough to hub  
 $\angle$  W to NW to X. 40-50°  
 calc. on base 1.57 =

3 ch +

R E of ridge + return on X to true  
 random + st. Sun.  
 Set 90° Az. on line E.  
 Cent 1<sup>st</sup> time 42° F.

① 9:37 " " "  
 obs. alt. 35-33' az. 133-14

② 9:40  
 obs alt 35-58' az. 134-08'

③ 9:43.2 36-19' 134-57'

8'

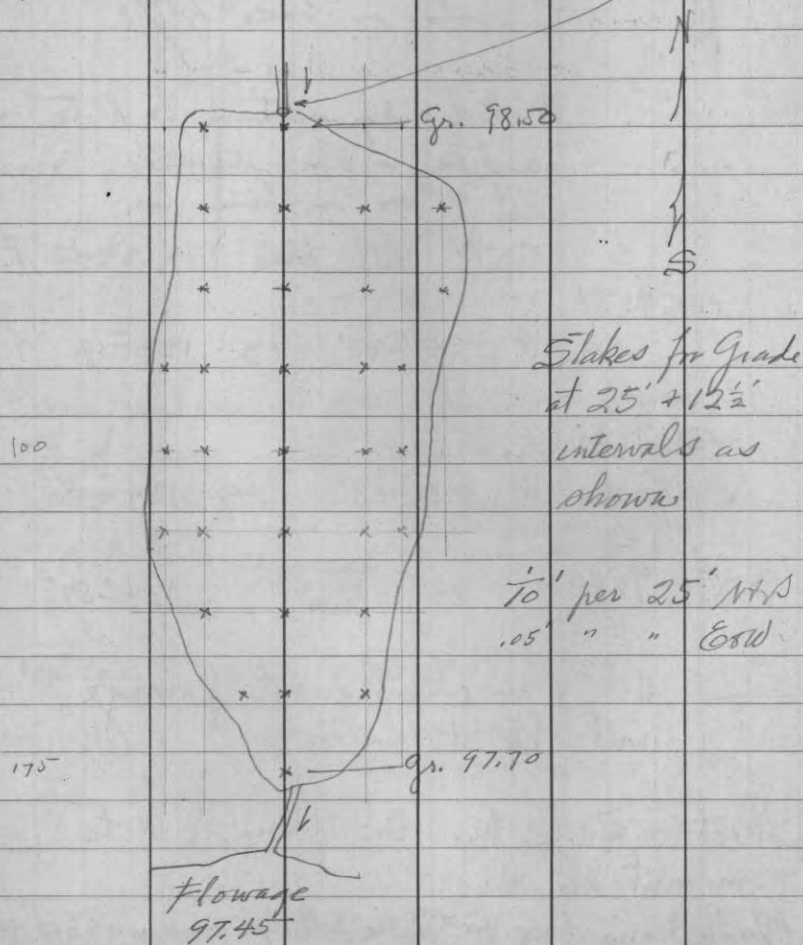
Hub + run into thinned flowage  
 will try it later.

Correct + stake true line from 1/8 N to  
 about 1/6 E.

(Think Davis bug for "Centre SE 1/4 means Cent. NW 1/4")

## Hatchery Ponds

in SW NW Sec 8-39-7

had deepened lower pond of chain  
by levels run Feb 25<sup>th</sup>Assumed invert of sewer pipe inlet  
from pond above as 100.00March 27<sup>th</sup> 1935

Overcast 35° To fair + warm

Hall M<sup>r</sup> Donald + L. Miller.Stake at pond No 3 (third one from S.)  
in similar fashion + read elev. on Top  
of stakes.Using same datum as of Feb 25<sup>th</sup>  
ascertain elev. as follows:

Invert outlet pipe Pond #2	99.89
NS in " "	
about 4' N of outlet pipe	97.7
" " .2 " 10' S of intake	97.5
Sill inlet bulkhead #2	97.0
Normal surface creek " "	
at pt. opp. outlet from 3	97.67
Sill Pond 3 outlet to creek	96.10
" " " " To #2	97.29
" " 3 inlet from 4	96.79
" " 4 outlet	96.64
NS in H about 3' N of bulkhead to 3	97.4
T.P. on top of bulkhead Pond 3 (into creek)	102.73
7" 6" willow stp. on W bank 3 about 50' N of S end 3	101.70



Thus we have present depth of 2  
lower than Pond 1 as about completed.

Drawing each into next lower entails  
deepening #1

Therefore to deepen #3 in such manner to  
drain into creek we establish

Grade for lower end as	97.75
" " upper " "	98.10
	7) .35
	.05
per 25'	
lateral drain as $\frac{1}{2}$	" per 25'

Pond meas	175'	N + S
+	70	E + W (ave).

March 28<sup>th</sup> 1935 Fair to snowy 25°  
Hall with Mc Donald + Miller.

Run (N 88° = 17.5' W)  $\pm$  on random from  
N  $\frac{1}{8}$  E

defl = st. from random  $\frac{1}{8}$  line in 17  
= 2° 52' 5° = 45 (2° 52'  $\frac{1}{2}$ ) ✓

$\therefore$  angle of true lines W to N to E = 178° 11'

Run as near parallel to old blazes as  
trees permit. Ver on line at 3.30 ch.  
= 8° 20' E.

0.0  $\frac{1}{8}$  S. Iron Pipe  
= 2.54 E Win  $\nabla$  47 NW + S E.

3.18 = B.S. <sup>210</sup>

3.30  $\pm$  A set-up. <sup>113</sup>

6.136 Hub + shift .08' N to pass <sup>224</sup>  
9" W. Birch @

7.472

10.42 Hub <sup>27</sup>  
<sup>11</sup>

+ change course  $\alpha = 06\frac{1}{2}'$  to right  
+ continue same meas.

90° = 13.75 lb heavy growth of W. Pine <sup>15"</sup><sub>20H</sub>  
 Hem. birch - spruce + Norway.  
 N + S.  
 14.48' Hub (1.08') 102  
 var of course 0°-26' E  
 20.098 fall .03 ch = 2.00  
 N. of Louis post (r OK with  
 his notched stp.  
 Find an I.P. = 1/2' NE of cor  
 + drive said pipe in post  
 hole.

Bearings on assumed var 2° E. 6.7  
 Louis stp S 49 3/4° E .102  
 Maple 2" S 10 3/4° W .137 = 9'  
 " on tank  
 Aspen 3" N 23 3/4° W .145 = 9.6  
 " 3" N 29 1/2° E .148 = 9.8

0°-6 1/2' in 9.678 = .0183 ch would have var. N if  
 we had continued random

$\frac{.030}{-.018} = .012$   
 $\div 20.098 = .00060 = \text{Tang. } 0^{\circ}-02'$

∴ N 88°-19 1/2' W = true line ±

18-39-7

LW NE NE'

April 1st 1935 Fair to overcast 30°  
 RH Hall with Pitt + Ziarak

$\frac{88-17.5}{2.5}$   
 $\frac{88-11.}{13.5}$   
 $\frac{78-24.5}{18.5}$

Set 36 x 1 3/4" Pipe with anchor  
 " 4" exposed  
 in Louis post hole at center NE 1/4  
 Find a pipe had been driven alongside post.

Run Nly on var. 3°-32' E. on random  
 " N 1°-24 1/2' W ±

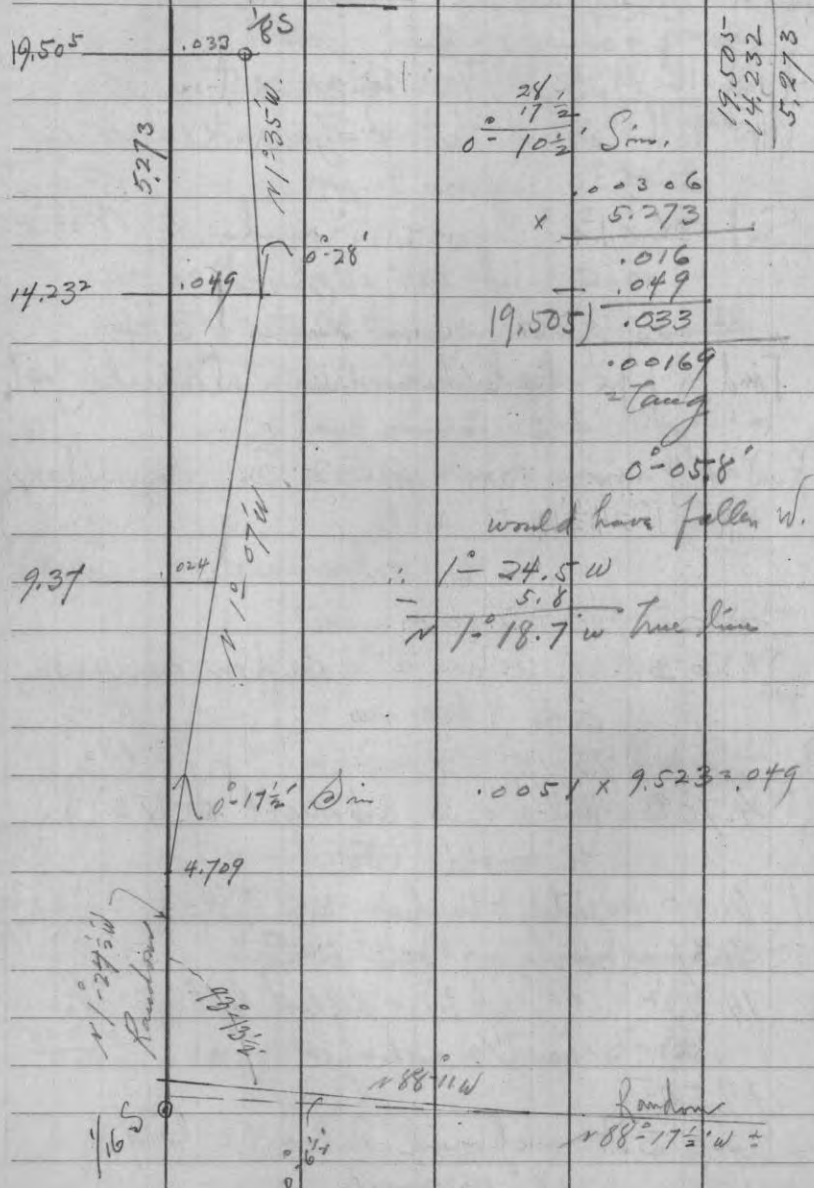
0.0 1/16 S. cor.  
 .03 - A + Turn = of random courses.  
 E to N  
 $\frac{.153}{.0082}$  93°-13 @ 186°-25 = 93°-13 1/2'  
 4.709 Hub + deflected right 0°-17 1/2'  
 to avoid tree.

40° 6.00 enter timber E + W.  
 9.37 Hub W (.008 W) = .53' W  
 14.232 (.025 (A.P.)) + deflected left 0°-28'  
 to 1/4 cor. @

19.505  
 " S.t anchored I.P. 4 1/2' long  
 18" exposed (over.)

18-39-7

calc.



Omitted

not copy.

7-39-7

March 15<sup>th</sup> 1935 Foggy To Fair  
Hall. Miller + Mc Donald

Find Doris MC on E+W 1/2 line in SE 1/4  
Post in fence line + at N. edge State timber  
Doris single big grown shut  
Open up enough to identify  
Post as found meas. only 25 1/4 lks from BT  
+ is off slightly for course.

(probably shifted when fence was built)  
Set temp peg for MC according to Doris note  
N 30 W (P.C.) .26 1/3 from BT = 17.4'

new { Hem 20° S <sup>47 3/4</sup> W (PC) .56 1/2 <sup>37°</sup>

Run picket line 1/4 from (V2) Doris MC on N+W 1/2 line  
after making one new big.

W. Pline 5° S <sup>33</sup> 31 1/2 W (PC) .352 = 23.2'

2.25 (Horizontal meas.) fall .037 W of  
Doris old post (down). found I.P. alongside.

New big from hole { Hem 12° S 27 E .38' = 25.2'  
+ rare  
25°  
This may be Doris (I had copied his @ N 47 E)

Hatchery 8-39-7

Pond #5

April 17 <sup>th</sup> + 18 <sup>th</sup> Fair	
Check elev. on outlet blkhd 3	102.73
" " " willow str.	101.68
Top on boulder in extreme SEx bridge approach	103.49
Top on top of W. end outlet blkhd in Pond 5	103.23
Bottom of pond 4 (3' S of inlet)	97.6
" " " (in Center)	"
" " " 3' N. of inlet	97.0

Elev. of surface of creek opposite outlet from #5	98.0
Bed of creek N. of bridge	96.90

Bottom of pond #5	
In Center (25' N of S. end)	98.3
25' W. of " 75' " " "	98.3
50' " " 125' " " "	98.2
" " 150' " " "	98.6
50' E. " 150' " " "	100.2

Decide on grade for foot of pond #5 97.7  
 .05' rise per 25' going N.  
 .02 1/2 " " " lateral  
 ∴ Grade at N end (200') = 98.10

This is largest pond.  
 Extreme length N-S 215' +  
 " width E-W 122' +

Drive stakes in 25' grid + figure out from  
 top of do.

32-39-5

April 13<sup>th</sup> 1935 R.H. Hall + Arthur Johnson  
 Search on bare ground for South 1/4 S.  
 Find nothing. Many slips entirely covered.  
 Course N 1/4 mile W 1/4 N 1/4 + W 1/4 +  
 search for W 1/4 corner  
 Apparently falls in marshy draw or slough  
 with rocky ridge N. of it where  
 the 2 Norways may well have  
 grown. Find nothing.

Sec. 11 - 38 - 5

April 20<sup>th</sup> 25

Preliminary cruise for planting  
Hall, Knutson, Ahlborn Pinkowsky & Thrall  
Knutson & Pinkowsky travel Ely on N  
Sec 11 from NW<sup>1/4</sup> to  
Tomahawk R. bottom.

Report very bushy - otherwise good for G.P.

Thrall & Ahlborn travel Ely from N<sup>1/2</sup> E<sup>1/4</sup> W

Report conditions ideal altho  
Apob may be lacking in shade.

Hall paces E from West  $\frac{1}{4}$  cor.  $V 3\frac{1}{2}^{\circ} E^{\pm}$   
" = ch.

150 6.50 enter swamp SE & NW  
200 8.66 hr do S + NE  
345 14.94 tall 5" Norway tree

soil slightly rocky.

Growth jack: birch + poplar

3" " predominate.

old stps indicate w. pine " prev.

462  $\frac{20.00}{29.25}$  sq. up 3" poplar

606 old road - passable N65W + S70E

690 29.90 to big swamp  
(River bottom?)  
hr @ 50° E.

11 - 38 - 5

Ely from approx  $\frac{1}{8}$  S. bet  $N\frac{1}{4}$  E  
= 462 paces E  $\frac{1}{4}$  S.  $V 3\frac{1}{2}^{\circ} E^{\pm}$   
Terrain rolling. Considerable rotten pine  
trunks + bush bark. dead aspen etc.

Steps = chains

71 = 3.07 same road (N 20 W here)  
123 5.33 same swamp hrs E  $2\frac{1}{2}$  ch here  
190 8.23 enter same " E + W  
226 9.78 hr do " " + cross  
old winter road W + W  
250 10.82 Thence N 45 E (43° PC)  
240 10.70 to head of boat shaped <sup>flow</sup> marsh  
about 8 ch N + S +  $4\frac{1}{2}$  ch E + W.

over



Apr. 24<sup>th</sup> 1935Am with Knutsons + Ahlboms crews  
planting in NW 1/4

Ahlbom works Sly from our random 4+11

Pinkowsky - Sly " E+W 1/2 line

Knutson " Sly " " " "

P.M. Zairik completes picket 4 Sly to  
Tomahawk bottom

Approx 1/4 mile E of NW x.

Would fall slightly N. of timber <sup>on</sup> NE NE

N.B. I had paced them + my 1/2 mile

fell about 1 rod N. of a 1/4 corner

N side of what appears to have  
been a bearing tree.The old fence cor is 3 or 4 rods E  
+ 5 or 6 - N.No signs of bearings as noted  
can be found at fence cor.

P.M. I look over prospects in NE NE 10

Wly from Grid 2-3-10-11

first 300 very broken highland - much <sup>subsid</sup>

427 16.50 old road NW + SE.

53.5 ± to N+SE open marsh.

r. 21

April 25<sup>th</sup> Hall + Zairik.Set 1/4 bet 10+11. as noted in 1/42  
with tape only. (Pitch post).

Run picket line E to swamp. 13' 6" ±

a piece within 3' of blazed stub found @ 15 ch ±

Dig around half buried pine trunk for evidence  
of origin 1/4 bet. 10+11 (all rotted).This is only W. Pine (of size noted) in vicinity.  
Evidence hardly conclusive. could find  
no post hole or birch.

Examine evidence at 1/4 bet 14+15.

2 old cruisers marks on W. side of river  
road and a down jack pine? with  
very evident charred facing indicate that  
the corner stood in vicinity.Found very deep post hole? 16 lbs from  
facing mentioned but in wrong direction.If 1/4 were placed equidistant between Sec  
Corners it would fall in cedar swamp  
about 3 ch. E of all the evidence.

Must consult Mr. Shaw.

Secs. 10 + 15 38-5

April	26 <sup>th</sup>	1935	P.M. fair 60°
Hall + Zairik			
Pace	Wly from	Quil Co.	10-11-14-15
	ch		var 2° E.
110	=	4.76	enter balsam + alder swamps <sup>NW + SE</sup>
189	=	8.16	lv. do NW E
226		9.78	Tang #10 bs N18E.
"			" " " S48W
233		10.08	± #10 on Curve.
"			only blaze found bs of 44 steps (a jack 15 yrs ±)
326	=	14.12	enter open marsh NW just N of bay
469		20.31	fall 4 steps N of an old stake in open marsh
769		33.30	lv marsh N + S
837		36.25	enter marsh N + SE
895		38.77	lv do " "
938			look for 4 of find nothing.

Sec. 23-39-5

May 2 <sup>nd</sup>	1935	Overcast 50°
Hall + Zairik		
Course	W. bet 23 + 26	from Origl $\frac{1}{4}$ d.
		see Book 3 page
Figure	924 steps	per $\frac{1}{2}$ mile
steps	ch	var 2 $\frac{1}{2}$ ° E ±
0.0	=	$\frac{1}{4}$ d.
250	=	fall 2 steps S. of old blaze on down Tamaras
413	=	OK with blaze - birch.
"		Rough terrain - much down timber. ± arrive on plateau
462	=	20.00 set pole jacket
"		found old blaze - down
607	=	fall 4 steps E of an old blaze
644	=	1 <sup>st</sup> old road N37°E PC
910	=	OK with small stake found about 6" W of a post hole (NW flag would fall in road NE " represented by hole where people stood. ✓

Henry Hilborn remembers when good post stood here. No doubt of authenticity of this cor.



Orig NE cor just described.

Dive pine post in hole for Cor 22-23-26-27

{ Pople 4" trs. N 34 W 73  
o var.

(See page 99)

Cross W<sub>2</sub> on var 2 1/2" G.

8 =

old road N 7 + S 8 1/2.

157 =

Fall 9 steps S. of a recent blaze.

206

8.90

at old road at top of hill - trs S 48 W + N 60 E

Anderson House S 68 W

E shore lake N 6 W

SW " N 60 W

NW " N 32 W

279

12.05

Enter open marsh

House + " border S 63 W

" " N 15 E

462

1/2 loc ± in bog

House trs S 27 W

hr bog S 6 + N.

520

22.45

{ SW x lake trs N 43 E

572

24.10

{ SE x " " N 64 E

House S 23 E

steps ch.

587 =

Possible old blaze on 24" W.P.

tr 1 S 9 steps

599 . 25.66

Enter old field 24" S of 4 do

4 do trs @ 78 W

820 35.40

to field " " "

949 41.

Fall 10 steps N. of corner of fence which trs S on var 1° E

W - - 16° W  
- 0.105 +  
- 0.36"

After talking with Mr Shaw, am satisfied that corner as marked by fence is orig. A depression NE of J agrees pretty well.

at along fence from cor.

204

to old road S & SW

362

fence cor N + W

462

Thence E following S. line of timber. Find a few blazes @ 300 to 400 steps E.

44-19-38-5 5 1/2

May 30/1935 PM - re-meas. our random.

See 2/38 + Search again for NW x no luck

Secs. 4-38-5

May 10<sup>th</sup> 1935 P.M.

R# Hall

Cruise S. from #14 on our approx. 4W-  
422 = ch. var 2° E.

To approx 1/2 S.  
Terrain appears to be more  
for Norway. Such W.P. as has  
seeded itself not of rapid growth.  
var 2° E.

Thence E.

160 to NW side open marsh 525W  
Lake visible 520 E 9 ch ±  
Hardland 545 E 8 ±

Thence N.

100 r 2°  
84 Thence E 160  
to marsh near NW x  
" to N 3 rods ±

Thence N to #14

at " N.P. reproduces good. Evidently from  
1/2 doz large trees in clump.

Secs. 12+13 38-4

May 13<sup>th</sup> 1935 Misty 50°

R# Hall. Zairuk & Pitt

Pace west by from temp SE x 12. (Sta 40.00 2/27)  
var 8° E.

124 = pass 20' S of S. tip of marsh  
320 = W. rim of abyses. no sign of  
line. old pine holes down + found

465 Square up - poplar 3"  
519 #14 5' N. of N. W. Pin of group

524 birch clump  
712 W. plateau NE SW for abyses  
790 boulders outcrop N.E.

930 Square up poplar at record  
birch  
fail to find 1/4 S.

Thence west

768 new blazes N.E. trail? " 6W  
930 Record mark a sapling  
950 To marsh to N.E.

" " in SE corner of do  
find large doe carcass in marsh

Plv

Explore Hemlock + birch clump - apparently in  
SE SE 14-38

have not been able to locate SE x 14

Sec. 9 - 38 - 5 E.

May 15<sup>th</sup> 1935 PM fair 55°  
 P.H. Hall + Ray Zairick  
 Cruise S. from our post at orig.  
 1/4 E bet, 8-19  
 var. 3' E.

1<sup>st</sup> 150±

Hilly - burnt. W. birch + Hem.  
 Rubbish.

Shaw people 2" growth.

N. tip marshy frog pond <sup>SE+SW</sup>  
 old sleigh haul E+W  
 over marsh to island

293

344

357

397 to

421

462

Same marsh E+W  
 people picked for tung 1/8  
 lone Norway "

hr N67 E PC 57 steps  
 water hole hr W 1ch

575

to marsh NE+W narrow to 260±

679

54

652

over " @ 45 W

fall 30 steps W. of pt  
 old blaze found. 4' tall

Change course 2°-40' + continue to 15°-70'

654 old blaze.

664 hr.

800

hr. marsh - steep hill.

To marsh W - E SE.

\* Orig. Cor. 8-9-16-17 (38-5) 80

924

916

Record.

fall 34 E of Orig SW x.  
 .037 = 2°-10'

Identify same by stubs of both Orig  
 Tamarac bearing trees - marked in good shape.

Intersect meas from both.

Point falls about 3" E of 2' section of very  
 old post under bog. may be  
 point of orig stake?

\* Old bearings are adjacent to E side of jack pine  
 island.

Give jack pine post at intersection of record meas.

	Orig. N66W	Record
over	" S37W	"
P.C.	new Jack 2" S16 E	.294
	" 6" N61 W	1.128
	" 6" S41 W	.942

5°-40'

3 10'

2°-30'

Cruise E from SW x var 3'E  
 34 Intersect NW pacing 8 N. of rec.  
 210 = 600 hr. marsh SE NW  
 234 954 Enter - S.E. + NW.  
 463 1152 Over narrows  
 424 121" hr marsh E + SW  
 443 fall 2 steps S of I  
 old down hem. blaze  
 515 141" over + low E am marsh  
 in E extremity  
 641 fall 5 steps S of old blaze trail  
 to line of west spot found  
 5 ch I ±  
 738 Enter low alder land  
 906 254" OK with Orig 1/4 S  
 as follows:

Kind 4' stump of W. Pine (down)  
 Upper facing looks good but not conclusive  
 chop out lower facing + find BT OK  
 Spaighten up the stp. I do not believe  
 it is more than 1' from Orig. position  
 Base + roots of large tree  
 meas 10 1/2 lbs from Pine instead of 13

May 16<sup>th</sup> 1935 Fair 65°  
 Hall Pitt + Zairik Am only  
 Decide to locate cor by record from  
 the Tamarac as more definite than pine.  
 almost coincides with 3" people.  
 \* Set 4' section of R R rail W of people  
 + 6 lbs from tree.  
 8" exposed.  
 Set sciled cedar post just W of mon.  
 Mark  
 o'var { Shell of 13" W. P. stp.  
 S 170° W. 149  
 \* Set white post at W. side Fire lane #2  
 = 1.03 lbs on 68' E of 1/4 iron  
 #2 = 1.215 ch " " "  
 2d. white post is 1.13 ch S of mark  
 I put on people at time of traverse  
 of June 34  
 Dec 1933 2/107

\* placed aluminum  
 plaque May 7<sup>th</sup> 1936



Sec. 2-38-4 with Zairk + Patt

May 17<sup>th</sup> 35

§

with Zairk + Patt

Monument SWx, S $\frac{1}{4}$  + W $\frac{1}{8}$  §

as described Book 2 page 158.

At SWx as marked by very old post.

Drive 6' Iron Pipe in marsh +

Dry scribed cedar post.

new	}	Tamarac 2"	N16W	.244
o'var.		"	2	S13W .817

This is too far S to agree with N edge of swamp  
Anderson et al. this by "True line" west  
from SEx. Says he ran on 7'

Probably meant 11'

Assuming H 2 to be normal, the diff. bet  
Record W + Record E amounts to 2'13"

Therefore there is something  
Haywire about his claim to var 7'  
on both lines.

Set 3 $\frac{1}{2}$ ' c iron + cedar post at W $\frac{1}{8}$ " 5 $\frac{1}{2}$ ' iron bar + " " " 1/4 S.

" White cedar plaque post in place  
of pole @ 478' E of 1/4

Fail to find any more evidence at 1/4 S.

v

Orig Cor to 1-6-7-12.

June 7<sup>th</sup> 1935 Variable. Cool.

Rt Hall with Pitts. Zairk + Delgoff.

Since town of Minocqua is constructing  
a "road" E + W 1<sup>st</sup> on Sec. line  
which passes over the said corner:

Set steel plow point 24" long at Orig cor.  
Top of " being 1'-9" below  
natural surface of ground.

Transect over point as marked by Burnett's post  
Var 3' E

Orig's read:

N 60 W	.109	only BT visible
N 15 E	.29	rotted remains only
S 74 W	.278	"
S 56 E	.154	"

Set cedar post .50 N on Van 1-48' E <sup>ac</sup> northBurnett's birch 12" N 29 $\frac{3}{4}$  E .41 = 27'

New-Hew 16" S 72 W .887 = 585'

(marked in feet)

v

Secs. 27 &amp; 28 39-5

June 7<sup>th</sup> '35 P.M.Chain S. from point 13½ steps S of our  
207 pace picket at road.  
var 1¾° E.

9.30 rough calc. for ¼

9.58 fall 8 or 10 ft. E of  
what must be ¼ S.

Base of large N-way (only one near.)

by S 30° W P.C. .50 + find

square hole under the soil.

" " about 3' x 3' with rotted wood.

Set temp plug.

Did not have shovel when here in '34

August 1<sup>st</sup> 1935 P.M. Hot fair

Hall + Tousey

Set anchored iron shaft ¾" for corner.

with cedar post alongside.

Assume 2½° E var to ½ ± normal.

Y. Pine	11"	S 78° E	2.032
Jack	5"	N 92° E	.497
In S.	7"	S 45½ W	.49
edge hollow & dd rad		E.	.22

Sec 8-39-7 E.

Hatchery

S ¼ line - random

June 13<sup>th</sup> 1935 FairR.H. Hall with Pitt - Zarek - Delgoff  
transit over our Temp plug ditch in South  
old post hole (3" S of I.P. found) ¼ S.

Sight Wly to Corvated station 15.71 (P. 48)

Az of random being S 89° 51' E.

$$+ \begin{array}{r} 8' \text{ connects} \\ 589^{\circ} 59' \text{ E true line} \end{array}$$
Variation of set. true  $\pm$  = 8° 50' E.

Run Nly by var. of 0° 05' W.

← W to N. (true line to random) 90° 29' = 180° 58'

Agrees with old blaze on 5" maple @ 1¾ ch N.

← N to SE to New Sugar Post 97° 45'

∴ course ¼ S to " " = S 81° 45' E

.428 ch.

2.22 Hub hilly

4.17 picket

6.02 Hub

Var on line here = 1° 05' E.

7.39 fall .21 W of Boris blaze .02842

9.63 " .193 " " .02004

Correct line E Ar. 0.02423

@ 10.75 " E .2604

11.66 " E .28½

13.20 " E .32

= N 195° E

July 15<sup>th</sup> 1935 Fair - warm  
 Ray H. Hall + V. Pitt  
 Search again for evidence of orig  
 bearings at West + South 1/4 corners of 12  
 West 1/4 of 13 + Corner of 11-12-13 + 14  
 No success.  
 Am satisfied that the dead Jack Pine  
 found 73 lbs SE of my P.R. corner  $\frac{11}{14} \frac{12}{13}$   
 is Orig. No signs of a post or of aspens.

\* Set post at location determined by Pro rate  
 both ways (see Book 2 page 149)  
 over. } Orig. Jack 339 E 729  
 " } New " 3' 54 1/2 W 624

Set cedar post for 1/4 S. bet 12 + 13  
 as determined by pro-rate meas.  
 over. } Jack Pine 8 S 51 E .478  
 " } " " 5 S 65 1/2 W 1.075

\* Aug. 15 '35  
 Set cons. mon at final loc. cor 11-12-13-14.  
 .029 N<sup>o</sup> from from wood post set 7/15/35  
 (Orig.? Jack 5 35° E .751  
 var 3° E. } New " 3" S 43°-05' W .648  
 v

Orig.

July 16<sup>th</sup> 1935 With Tackett.  
 Set line marker on W side #4  
 115' Wly on line from 1/4 bet 12 + 13.

Prepare to set cor 13-14-23 + 24 but  
 stumbled onto old post lying down which  
 checks OK with remains of 2 poples.  
 This is the corner, beyond a doubt,  
 being about 35 lbs W + 6 lbs ± N of  
 my double pro-rate.

@ 80,501 on E + W random - it = S. 446 to orig. cor. = 0°-19' <sup>0.00554</sup>

Set new cedar post in old stake hole +  
 mark:

true azimuth	}	Jack Pine 10'	N 70°-35' E	.6905
		" "	9' S 47°-05' W	1.017
var	}	" Pine 4'	S 51°-20' E	.43 <sup>428</sup>
		Orig pople	N 25° E	rec.
		" "	N 44° W	" P. 158

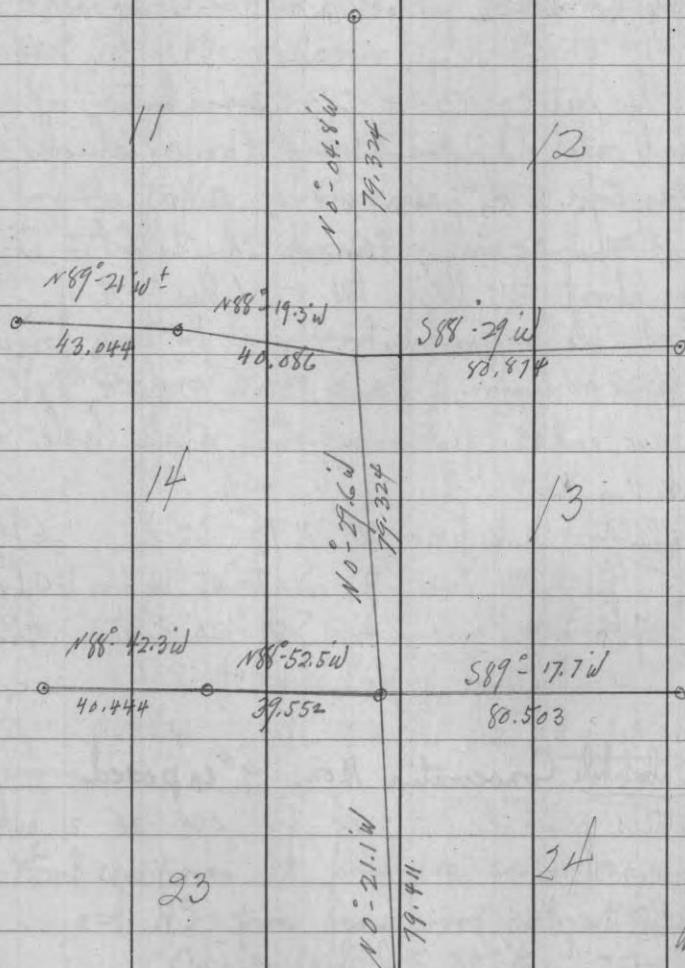
8/15/35 Substitute Conservation Mon. 9" exposed

This alters pro-rate N + E by .029  
 Making cor. 11-12-13-14 " N of location  
 marked (page 87)

This in turn changes line of 12 + 13  
 + " " my 1/4 " " + line markers.

July 18<sup>th</sup> PM Searched again for 1/4  $\frac{13}{24}$  found nothing.

Status of lines calc. to date July 17<sup>th</sup> '35  
 ♂ = Orig. cor. found



W 1/4 13  
 from  
 tieless

Have given up finding W 1/4 + S 1/4 of Sec 12  
 " " " " S 1/4 13

Sec 8-39-7 E.

July 19<sup>th</sup> 1935 with Tousey + Tackett.  
 Set temp. Center NW 1/4 by .145 E of sta 19.96 (P.55)  
 This is pro. data on BF over road.  
 Think the 36" Hem 38 has S-E is the one  
 he notes for Center SE 1/4. but can find no  
 signs of his post. (he says 32' lks)

trial bar. why to approx. N 1/8 W + then  
 run Ely on random from temp center NW 1/4  
 var 3'-35' E.

o.o Temp 1/6 sample req.

- 1.532 Half
- 4.313 "
- 6.03 "
- 531 8.043 " + enter open marsh NE + SW
- 543 12.765 " " lv. " " N + S
- 14.335 " on summit SW of road.
- " " E " "

Some rec. E from N 1/8 W = 21.43  
 44.13  
 22.70  
 would = 34 lks E in

v 4' 22"  
 1' 48"  
 2' 44"  
 theoretical  
 var



§-39-7  
Continued

July 22<sup>nd</sup> 1935

Fair - warm Hall, Tousey + Tackett

Continue random

1034<sup>+</sup> 15.67 ♀ Buffalo L. rd SE + NW.  
17.143 Hub  
19.31 "  
21.33<sup>8</sup> " + obs. Sun

Turning hor. = E to SE to Sun

① 9:56 AM C.S.T

rest = 53°-30'

hor. = 33°-49'

$189^{\circ} - 44' \frac{16}{25}$   
 $89^{\circ} - 19' \text{Sun.}$

② 10:00 AM

rest 54°-12'

hor 35°-13'

$189^{\circ} - 44' \frac{16}{25}$   
 $89^{\circ} - 24' \frac{16}{25}$

21.338 deflected left to Dons 8 S.  
6°-22' (2.44) 1.475 ch.

∴ 22.804 rest = N. .164  
.00719 = Tang 0°-24.7'

189°-20'6"

1 random

189°-19'6"

247

589°-43.7 W

random

Identified Dons 1/8 bet North Quarters by his post (down) hole plain agreeing with his scribed stumps. (38 lbs)

Set new scribed cedar post + mark =

Var 2<sup>06</sup> G. } Pople 11" N 19 E .313 - 20.7  
to agree } Birch 4 N 41 W .343 22.6  
with } Dons stp 529 3/4 E .38 25.1  
random

\* 10/25/40 Set 3' piece of 1/2" nail for corner

Thence Sly to Buffalo L. Road 180°

3.40 mark a dead poplar

3.87 ♀ road NW + NE curving.

Run Wly (S 89°-23' W) from Temp 76 NW 7  
by = left (of random) 0°-24.7'  
= W to N ("true lines") 88°-39'

0.0 Temp 76 = sta 22.805

58<sup>15</sup> .83 ± ♀ Hwy NE Sw → 24.662

\* 1.857 Hub =  
344<sup>3</sup> 5.278 " below 28.083

obs. Sun

80<sup>7</sup> a 2:41.5 PM rest 48°-45' hor. 24°-10'  
S 89°-20' W ?

b 2:45.5 " 48-12 " 23°-05'

S 89°-19' W

8-30-76

24483

5.278 fence  $\angle 12^{\circ} 45'$  at 5.429 <sup>359</sup>  
 "  $\angle 28^{\circ} 38'$  left 4.38 <sup>259</sup>  
 To line <sup>354</sup>  
 " on " 5.59 = 37.593  
 to hub in line of fence  $\odot$   
 = 20.378 + 22.805 = 43.183

July 29<sup>th</sup> 1935 Fair 75° <sup>28.083</sup>  
<sup>2.51</sup>  
<sup>37.593</sup>  
 Hall + Tenney  
 line out fence across field N +  
 fall E of Cor 5-6-7-8 as set by Dove.  
 Identified by old post at fence cor  
 agreeing with Dove 40" stump with BT

Meas  $\odot$  from Cor.  
 0.0 Sec Cor. (fence E + W + N)  
 10.93 wire fence E+W  
 19.83 " " "  
 20.13' our hub in  $\odot$  road +  
 at W. end of our  $\odot$  line (43.183)  
 Dove's rec  $\approx 20.105$

✓

Observe Sun at sta 43.183 (temp N 84°)  
 Sighting  $\odot$  on our line  $\approx 0^{\circ}$   
 80 F.

① 9:32.5 AM  $\angle 49^{\circ} 22'$  hor  $29^{\circ} 58'$   
 Sun calc  $S 60^{\circ} 51' E$ , lin - 189 = 11' E.

② 9:36 AM  $49^{\circ} 57'$   $30^{\circ} 58'$   
 lin - 189 = 16' E.

Turn defl  $\angle$  (fence line left to  $\pm$  Sec Cor)  $2^{\circ} 55'$   
 or " " out 1.02 E of cor.  
 Dove's random fell 1.06 " " "  
 $\therefore$  fence was built on random!

Continue Meas.  $\odot$  along fence  
 25.75 enter spruce swamp ESE + NW  
 27.50 lot to E + W  
 39.398  $\downarrow$  on tel pole  
 40.21 Dove's record.

41.234 N face (main) of W wall of  $\triangle 47$  bridge.  
 40.306 calc  
 .928 N of wall = 61.25'

✓

8-39-7 G

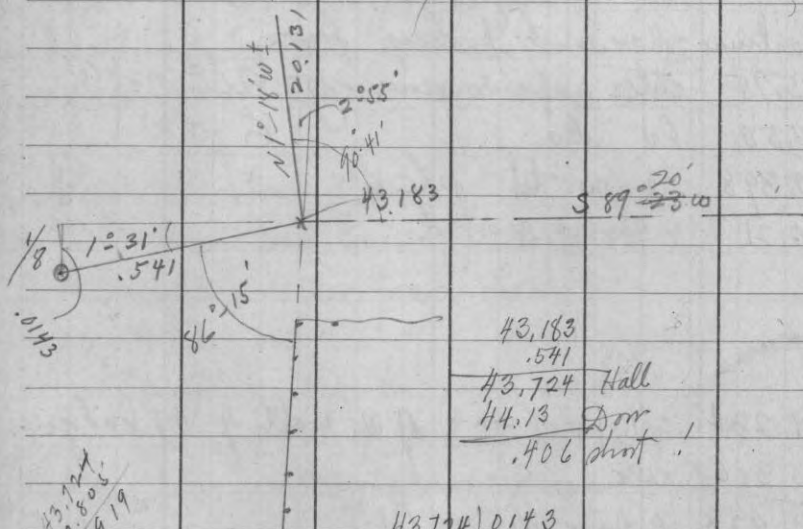
PM July 29<sup>th</sup>

Dig .53 W. of 43.183 in search of stone.  
 Found Davis reddish boulder 18" high  
 with notch in top + iron rod beneath.  
 ∴ Has not been molested.

Found it 4' under highway surface.

Mark new:

	Birch	9'	S 37 $\frac{1}{4}$ ' E	.446	29.44
True Az.	"	10'	S 14 $\frac{3}{4}$ ' W	.435	28.71
	N. Pine	3	S 62' W	.865	52.09
16	fence post		N 2' E	.351	23.17
	barrel		Ely	.591	



43.724) .0143

.00033 = (avg. 0° - 01.1')

∴ true line to S 89° 22' W.  
 + 89° = 19' E

8-39-7 E

July 30<sup>th</sup> 1935 Fair - breezy. 75°  
Hall + Towsey

Cored temp 1/6 S on line 5' + drove 6' piece  
of light R.R. rail for Center of NW 1/4 with  
Cedars post alongside.  
Rail:

True Ar 2:10 e	E	Maple 5" S 58 1/2° E .375 24.15
		Rotted Hem. stb 36 S 48° E .35 23.1
		R. Oak 7" S 55° W .029 1.9'
		do 9 N 73° W .037 2.4'
		White post br. N 1° 58' W 1.232 = 81.3'
E road " " .82 = 54.1		

Drive I.P. at SE shore Madeline L. for

MC on NW 1/4 line

484 N. of our corrected Hub (13600 P. 53)

$$= \frac{.484}{13.116} \text{ of } 8 = \frac{9246}{4657}$$

(Meas. 501 from Hub 1360)

x	PC	O'van.	11° 40'	Mark: { Hem 6" S 5 W .483 = 31.9
				" 16" N 58 E .589 = 38.9
				48 1/2

Correct hub at 28.083 + 2064 = <sup>18535</sup> 30.147 = <sup>1367</sup> 13.577 = 896.1

at 28.083 on random

{ SW x latine br.	87°-19'	78'
{ SE x " "	65°-28'	162'
{ Trav. hub	14°-15'	2408 = 159'

Correct hub 37.593 + meas Ely on true line  
= 4.131 = 482.5 Ely from 1/2

9.936 Hub = 36.659 W = 517.54

1.71 E Hatchery rd. 35.88 W = 517.54

3.103 Hub just W. of creek (about 25°)

= 34.49 = 609.4 E

774 = 51.1

crk = 629 1/2

Solar Obs. for Azimuth - Camp 75-S

R over my Q.P. S of Soft ball field

Target = V on SW leg tower.  
(Adjusted Az by Polaris last year - lost the dates)

Wed. July 31<sup>st</sup> 1935 CST. +75° F.

to Target to Sun.

①	8:16 AM	alt 36° 32'	< 110° 44'
	(Sun calc.)		
	②	8:19.5	37° 13'
	(Sun calc.)		
③	8:22	37° 41'	112° 01'
	(Sun Calc.)		

Turn back to Target + read 0° 01'

August 1st 1935 PM Sun. Hot.  
Hall. Pitt. Tousey  
Orign NE cor as identified (Page 75)  
Set anchored piece of narrow gauge  
R.R. rail in place of post  
+ set do alongside.

Mark: J.P. stp 14" S 27<sup>38</sup> W 82

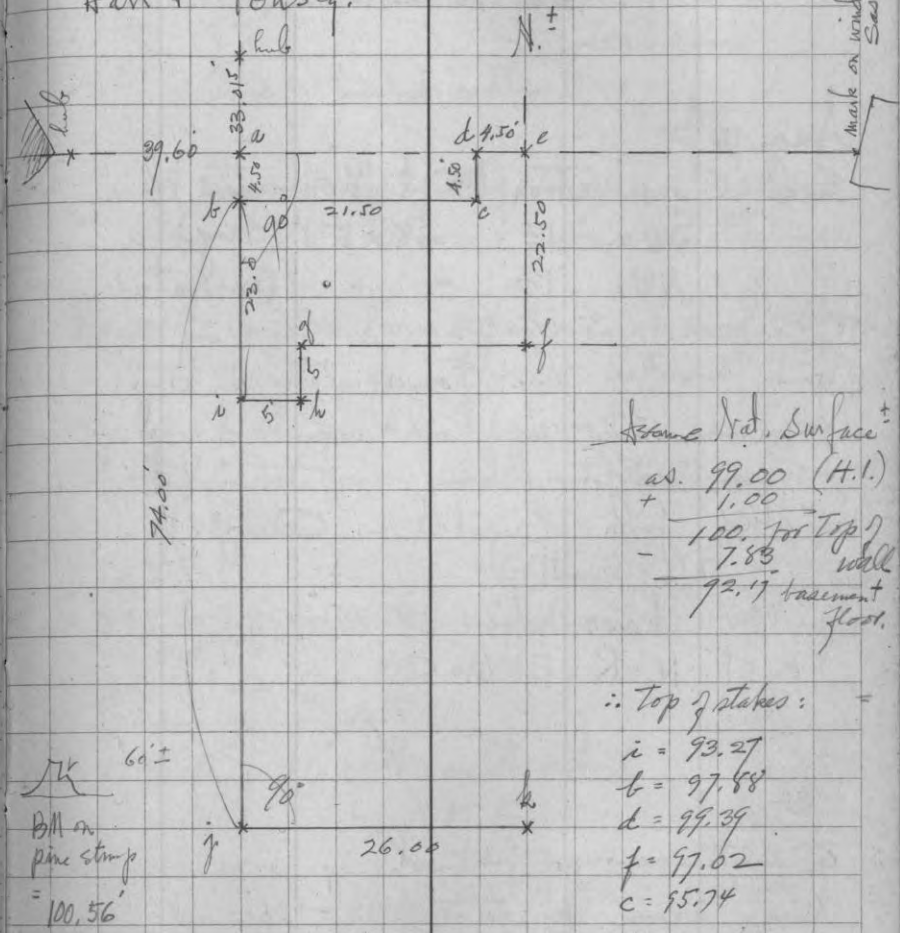
Assume var of 2-30'E. W. Pine 12" N 57<sup>22</sup> W 3.103

Observe sun for azimuth - turning right to left  
from the W. Pine BT  
(98° = J.P. stp)

80°F. ① 2:07 PM alt 51-37' = 71-10'  
+ 8.5  
2-15.5  
2-17.5  
② 2:09 PM alt 51-15' = 70-30'  
(Sun bet S 57<sup>34</sup> W with var 2<sup>1/2</sup> E)

J.B. Calc bug of BT = N 59-24 W  
+ 39 19 W  
= N 57-22 W  
57 15  
2-30  
2-23' var on 0 A2.

Alignment + levels for State Garage  
August 3rd 1935. AM  
Hall + Tousey.



Assume No. Surface ±  
as 99.00 (H.I.)  
+ 1.00  
100.00 for Top of wall  
- 7.83  
92.17 basement floor.

∴ Top of stakes:  
i = 93.27  
b = 97.88  
d = 99.39  
f = 97.02  
c = 95.74  
k = 98.26

at j - make x mark  
on N. face for  
100' below wall top

BM on  
pine stmp  
= 100.56'

Aug. + Sept.  
 Mostly on New 51 Telephone line  
 Cedar Falls Hazelhurst rd  
 Long Lake Road.

Aug 16<sup>th</sup>

Set Conservation Dept Monuments @

SW x 13 - 38 - 5 (Orig.)

NW x 13 " " (Pro-nate.)

Sept 22<sup>nd</sup> set do at SE x 23 " + SE x 12 - 38 - 5

(This finishes the Conservation Dept.

monuments we had marked a  
 year ago when we had  
 dies from Crystal L. Camp.)

Now have dies 9 to 0

+ T-N-R-E-M-C-S

County now furnishing monuments:

Misc. iron pipes - split + spread at  
 base and fitted with blank bronze cap  
 (threaded)

Ave. length 4"

Sec 1 - 38 - 9 E.

Proposed Tower site. (Lot 1)

August 30<sup>th</sup> 1935 Cool.

Rt# Hal - Kirkpatrick - Keck -  
 Swerigen

(no field notes)

Find signs of Orig MC on Range  
 line N. shore Sugar Camp.

Pace N on cut out line found. Var.

White post for SE x 1

Thence N<sup>ly</sup> on line found.  
 220 steps road at junction

505 ± " turns NE.

695 ± MC on Indian L. (orig)

From junction\*

N 40° W (0 var) in road 195 steps

Thence " N 45° E 35  
 to proposed site.

Plat out + submit to Ranger.

Looked up US + Vaughan's  
 notes. (afterward)

County monuments set as follows:

Sept. 23<sup>rd</sup> 1935 Fair 60'  
Hall, Lignan & Sweringen  
Set Mon. 3" exposed at N<sup>1</sup>/<sub>4</sub> Sec 1 orig.  
" " 6" " " NW " " "  
" " 12" " " NW " 2 "  
" " 10" " " E<sup>1</sup>/<sub>4</sub> " 1 "

Sept 25<sup>th</sup> 40'

Hall - Tousey - Lignan - Sweringen  
Set County mon 8" exp. at W<sup>1</sup>/<sub>4</sub> Sec 7-38-5  
" " " 8" " " C<sup>1</sup>/<sub>5</sub>-6-7-8 " "  
" " " 8" " " N<sup>1</sup>/<sub>4</sub> 3 " "

Oct 8<sup>th</sup> 1935

" " " 14" " " N<sup>1</sup>/<sub>4</sub> 1 - 37 - 4  
mark 1 new Bing. (0 var)

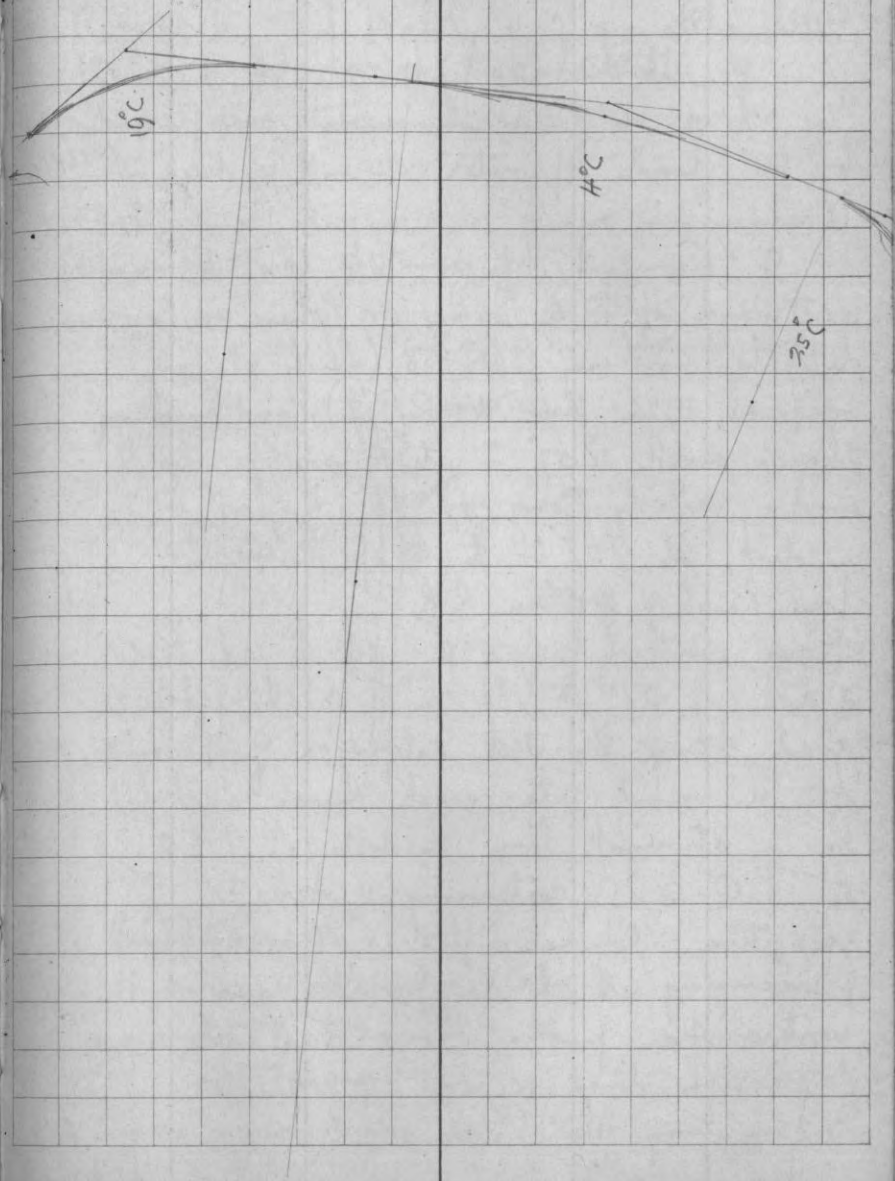
Wood post set on E side of mon.

" " " " SW " " "  
" " " " NW? " " "  
" " " " N " " "

(orig) " " " " N " " "  
" " " " NE " " " pile stones about  
" " " " N " " "

" " " " " W " " "  
Cedar 5" N34°W 15.7'

Extension of 29 in NW 1/4 1-37-4  
best





Addition to Concess. Propn.

Deed:

All that part of Govt. Lot 7  
 Sec 33-35-6 E which is not overflowed  
 by 36" head of water on roll of dam in <sup>10-34-6</sup>  
 to wit:

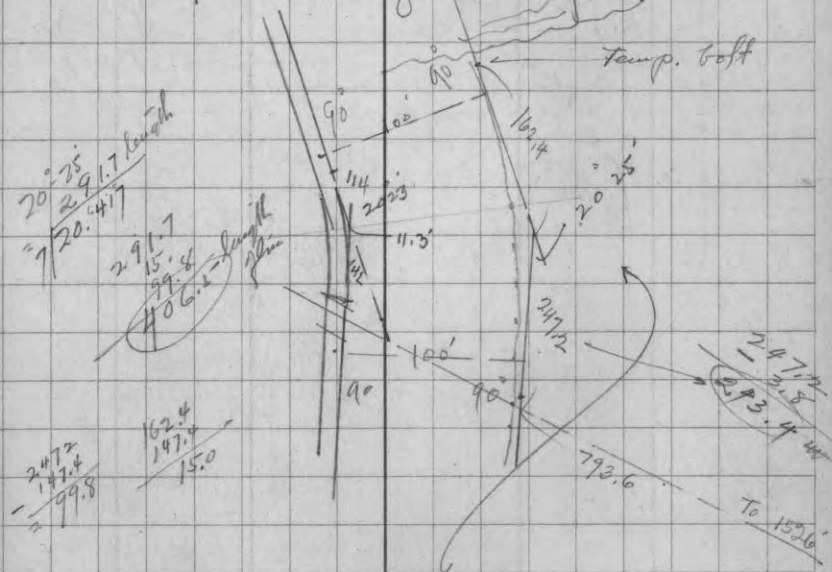
Com. at the point in the continuation  
 westward of  $\frac{1}{4}$  of Somo Av. where sd. avenue  
 deflects northerly  $36^{\circ} 58'$  (which pt. is  
 approx. 1526' from W Ry St.); and running  
 thence north  $1007' \pm$  to  $\frac{1}{4}$  sd Gov. Lot 7  
 and westerly along  $\frac{1}{4}$   
 a dist. of  $707' \pm$  to  $\frac{1}{4}$  of Marinette  
 Tomahawk + Western R.R.

Thence southerly along the sd  $\frac{1}{4}$  sd. P.O.W.  
 a dist. of  $275' \pm$  to the E of the public  
 road being the West extension of Somo  
 Av. in said city; and thence easterly  
 on a straight line a dist. of  $850' \pm$   
 to P.O.B. containing 11 Acres  $\pm$   
 excepting flowage rights, + also excepting  
 + reserving all ROW for all railroads,  
 waterworks, public hwy. + all telephone  
 + telegraph lines in. on. over etc.  
 + excepting the Bldgs. now on sd. described

# Tomahawk

Oct 15<sup>th</sup> 1935 Overcast windy.  $55^{\circ}$   
 R.H. Hall, Ed Dahl + 2 enrollees.  
 Attempt to identify location of  
 Somo Av. extension (NWly)

Determine degree of curve in main  
 line M.T.W. RR just S. of Wis. R.



Make Curve  $7^{\circ}$   
 Tang 147.4 Rad 819.  
 Ext 13.2  
 Offsets

1 <sup>st</sup>	50	1.53
2 <sup>nd</sup>		3.05

162.4  
 247.2  
 409.6

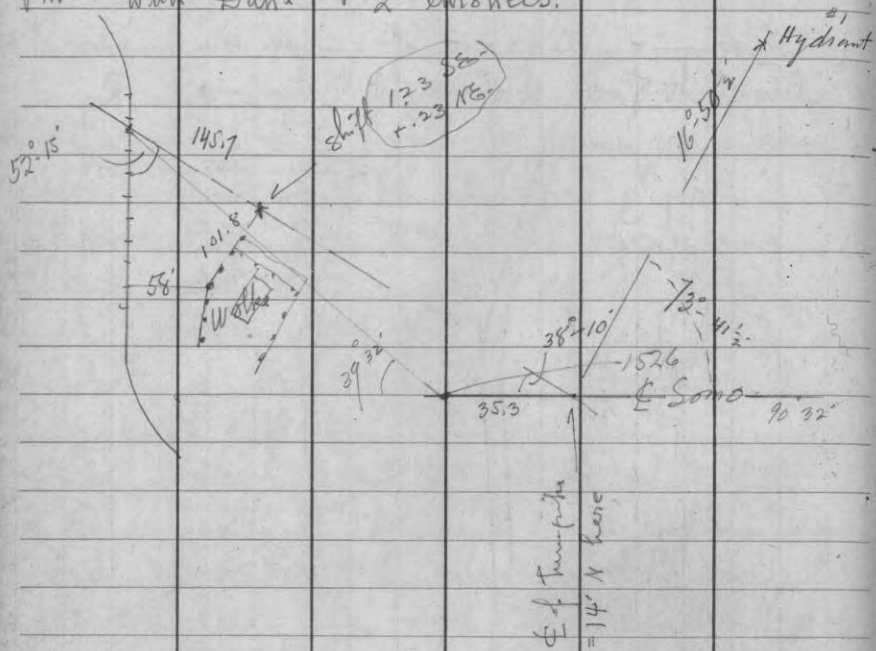
247.2  
 3.8  
 247.2  
 3.4

x 900.09

Oct. 16<sup>th</sup> 1935

AM. With S. B. McCoy & Brownstad  
Comparing data at Tomahawk Land Co.  
Office.

PM With Dahl + 2 employees.



89	28
35	10
51	18
52	25
57	21
57.1	

32
10
52
52

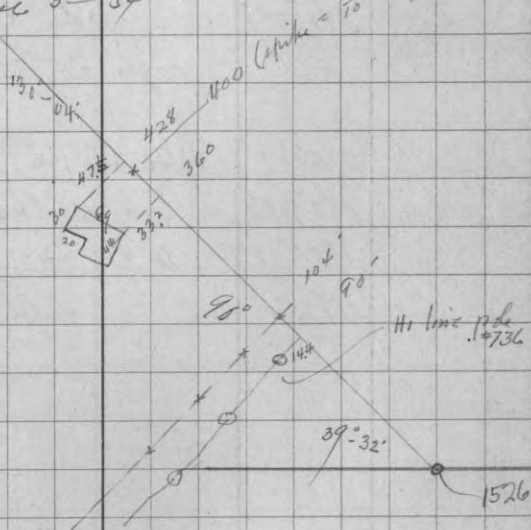
340  
160  
180

Tomahawk

@ 400	R	4.9 above N.S.	+ 4.0 above End.		
Hilmi pole #141	to	157°-22'	52'	lev	32.9
" "	"	"	"	win "	30.7
" "	"	289°-14'	73'	"	28.9
tel. pole	"	334°-20'	79'	"	28.7
" "	"	89°-37'	55'	"	29.1
tree (4 1/2" wire)	"	"	"	"	53
N.S.	"	48°-30'	100'	"	-5.9

wolke chimney 288°-19' 343'

Top 4°-40' rest = (33)  
base 3°-34' "



@ 793.6 Int. @ R.O.W. set spike  
Thence 361°-04' 247.2 To iron rod P.I.  
" left 20°-25' 162.4 " " at shore  
= 12 1/2°  
340°-39'

Copied

111 747.5 W face wolke house  
 801.3 & Spur track curving NE  
 @ 922.3 apparent intersectn of track + Road  
 at 145.7 by Wolke's deed.

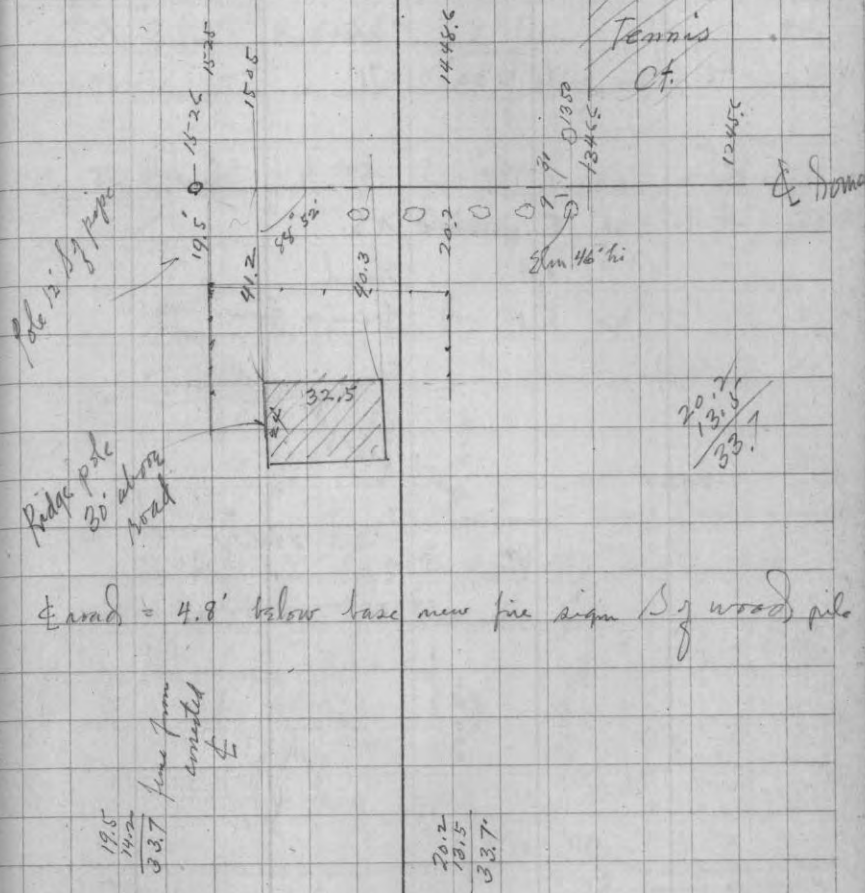
@ " 157° 03' Ex Wolke House  
 166° 22' W x " "  
 181° 00' & M.T. (M T & W Ry)

@ 793.6 H.I. 4.9 above & rd. + = Mc Ginnis' park  
 341° 07' pole line (Telephone)  
 " angle " 35½ 28.7 hi.  
 216° 07' Hi. line pole 38½ 38' hi.  
 182° 19' Ex Wolke House  
 195° 17' W x " "  
 189° 30' " Chimney 149'  
 base 9° 45' elev.  
 Top (33)

922.3  
 145.7  
 776.6  
 Copied  
 5/11/57

Towahawk

Property S. of Same at 1500 ± W of Ry. St.



Copied

N. Same

At bolt for <del>the</del> <del>project</del>	+ 679.9	W of 790' line.
Tel pole (294 ±)	42'	Elev. 29½ ft.
Trees	"	40'
Hi line pole (230)	71'	" 34.4
Elm	194'	57' Elev. 55'
H. l. =	5.1	above r.s.
	3.9	" road
	5.1	" tennis court.



## Towahunk

at 1183.6 on $\Phi$ (RR spike) X		
Pole at fence cor to S E 21'		Elev. 30ft.
Balm Gilead Tree in fence		" 44'
Tree may exceed ave. of others to E in yard.		
Hi line pole $\pm 40$ to S W 62'		Elev 28½
Tel pole " N E 44'		28.7
Elm in N. row to S E 44'		" 46.7
Trees in S row about same elev.		

Line of wire from Citrus Service 23 hi.  
 strikes line 235'  $\pm$  S of  $\Phi$  Same as occ.  
 at 150'  $\pm$  W of Marquette St.  
 - line along W side " " 28½ hi.

Copied

Touchhawk

Oct 18<sup>th</sup> 1935 fair.  
 Check up # Somos as we produced it W of RR.  
 by mark at NE x Ry St + by  
 on iron 1470 W " "  
 Replace temp bolt. aided by SB McCoy's  
 tie-ins. Check by E + S lines bldg.  
 SE x Birch Warehouse NW 11.40'  
 Gauge of W. rail at jt. E. 6.10'  
 being line of plat.  
 Re-run # Somos Wly from said SE x tract  
 0.0 " "  
 51 1/2 ± fall 65.3' N of NE x laty block gauge.  
 141 ± " 65.35 N - NW x do.  
 282 line of trees &  
 283.93 Dime round iron bolt for 790 pt.  
 293.6 line of Bradley's E. fence  
 cor of fence br S 56.4'  
 at 2 E to S 88°-25'  
 322 fall 2 1/2' N of E tree of row <sup>Elms</sup>  
 The turnpike apparently curves about at Ry. St.  
 " " toward Wolke's seems to intersect  
 our # Somos about at 1477'

Copied

At 183.6 on # Somos X (= 6' W of # Marmette)  
 Sight Ely on Az 98°-32'  
 " 349°-47' Hydrant #1  
 " 339°-03' 171' NE x Tennis Ct.  
 Stacks " 308°-33' 79 SE x do  
 " 208°-55' 101 Lone Elm  
 alt = 26 1/2° = (55)  
 117°-05' 180 SW x Cement shed  
 111 05 177 NW x do  
 " 200°-38' — SE x Cities Service <sup>Bldg</sup>  
 " 206 41' — NW x " "  
 " 211° 440 ± " " Tangle  
 alt 3°-25' = (31)  
 Copied  
 At station 104 on page 110  
 Sight SE on Az 130°-04'  
 28°-24 1/2' Hydrant. in field  
 Outline border low willow dump. area  
 a) 294°-35' 240'  
 b) 290 20 182 Stacks  
 c) 297° 47' 140 from  
 d) 305°-05' 110 104  
 e) 286°-35' 82  
 Copied

$$\frac{220 \times 04}{160 \times 04}$$

①	259° 50'	95
②	247° 45'	125
③	234° 15'	154
④	222° 25'	195

Meas. SW by on rt. c. line staked from <sup>=1630</sup> 104.  
 220 R Pole line E at 90° 28 ft.  
 405.5 ♀ center Surtel track into  
 Sand House.

at 220.	A2.	220 04' (40°-04')	
①	237° 22'	62	body
②	245° 38'	113	cat tail
③	248° 23'	154	Swamp
④	250° 28'	200	
⑤	254° 43'	240	
⑥	260° 20'	280	
⑦	287°	= about N border cat tails at 83' marsh = 8' below R. " " Poplar elev 14° 35' = $\frac{10 \times 4}{20}$	
⑩	171° 05'	66	NW x barn
⑪	175°	102	SW x "
	Dev. W. end ridge pole	20°	= 31 + 8 = 39
⑫	134° 05'	99	NW x "

Copied

$$\frac{130 \times 04}{200 \times 04}$$

## Tomahawk

Decide to define E Sono ave to fit  
 travelled way. This agrees as nearly as  
 possible with occupation W. of Warehouse.  
 Only disagreement of consequence is  
 fence warehouse E of Stock Yd. Track.  
 This is only inches N. of # as produced.

Decide to make angle of 0° 32' (Nly) at W. Ry. St.		
This = 14.21	@	1526
11.02	@	1183.6
7.35	@	790.
4.71	@	506.07
1.86	@	200 (£ M.T.)

will cut E. end Bradley fence 2.15'  
 " " W " " " .54'

# as marked, give N 13.68 @ 1490.7 F.P.  
 # as corrected calc. 554 S of Sto x Warehouse  
 4.45 S by Sto x "

£ " " 4.49 N of E end 1<sup>st</sup> Bldg.  
 5.37 N of W " do  
 opp F. P. H. Q.

Take ♀ at Marquette Ry. as per  
 W. of the Desc.  
 + ♀ at turn by turn pipe.

Copied

Copy of C. M. St. P. + P. Ry. Co deed  
(description) to State of Wis.  
executed Oct 30<sup>th</sup> '34  
(before my survey was submitted)

All that part of Gov. Lot 8 in Sec.  
33-35-6 enclosed within the following  
described boundary lines, viz:

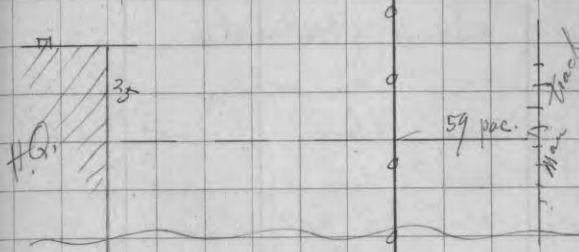
Begin at a point in the continuation  
westward of the H. Somo Ave. in the Town of  
Tomahawk, according to the recording plat  
thereof, dist. 790' W. from the H. Ry. St.  
in sd. town; thence N. on a line parallel to  
+ 790' W. of H. Ry. St. a dist. of 500';  
thence E. on a line parallel to the continuation  
of H. Somo Ave. a dist. of 280 ft. thence  
S<sup>89</sup> on a straight line 500' ± to a point in  
the continuation westward of sd. H. Somo Ave.  
+ dist. 8.5' westerly meas. at rt. ∠ from the E  
of 1<sup>st</sup> R.R. track Ely of the bldg. of Tomahawk  
Steel + Iron Wks. as the same is now there  
laid + operated; thence west along sd.  
continuation H. Somo Ave. a dist. of 280' ±  
to P.O.B. containing 3.1 Acres ±  
Excepting flowage rights etc etc.

from \* copy of Abstract. \* on file at F. P. H. Q.

Oct 22<sup>nd</sup> Snow + rain.  
Office work.

H. Q. line  
2 1/2 25

111  
Story Aviation  
across from H. Q.



Pace NW in road from E Mt + W + Somo E (by Wolke deed)  
45 steps H. line to S 23° W PC.  
14<sup>25</sup> 50 road turns left to Raymond's yd.  
15<sup>4</sup> 54 end of tel. line.

Trees in Wolke yd. Same elev as chimney except  
one just N of house (4' above).

Corrected H. Somo.

Oct 23<sup>rd</sup> '35 Fair 50°  
 Hall, Dahl + Herb  
 Re loc. SE tract by correcting Nly 4.71 at 89°  
 Drive temp pin 8 1/2 from S.Y. track  
 thence by N to E 89-32 + put  
 1/2 narrow on frame bldg E.  
 2.65' N of SW do

Line thus falls:

5.55 S SE H.Q.

4.47 S SW "

\* At 790 on orig. H. Somo

plant stack hrs. 81° alt 152° 171° 131°  
 6° 235°

" " correct S Nly 7.35 + drive down to ft 790.00

\* check L E to N to Pipes in line 500' + 700' N.

L " inches 0'-01'.

L N to E agrees 5.55 + 4.45 inch S. face H.Q.

At 790.03' H. Somo A-2 E = 91°-04'

Hydrant hrs 95°-47' 112.2'

Top do = 103.78

MH. hrs 7°-44' 52.4'

S Rim do dev. 100.00 invert 6" main NNE  
 depth. 9.76

Dev. 90.24

Correct

Outlet of sewer hrs. 9°-45' 2.78' stadia  
 alt invert. (87.37 elev.)

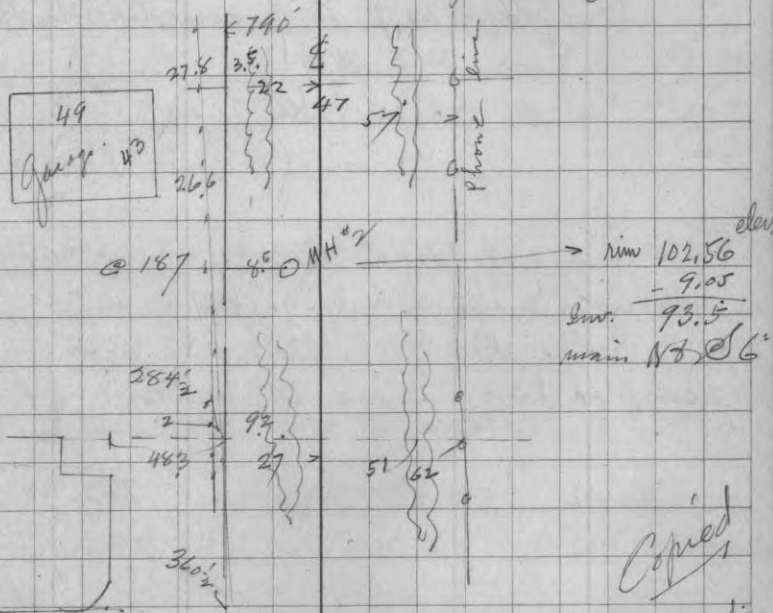
Row of 15 trees 4' E of + parallel 790' line opp. H.Q.

Near S on 790' line

o.o Corrected H. Somo.

33 drive from lot. 70' E Somo

82.2 line N face Bradley garage.



At 790' new H. Somo 3.7 above E rd.

E peak garage gable

tree hrs 210° 80'

alt 140°

" 33°  
 = 56' above rd.



Somo Ar.

Correct stations 1178 + 1183.6 on  $\Phi$  Somo.Drive down pins in ( $\Phi$ ) roadIntersect rd. corrected  $\Phi$  Somowith crown of hump pine NW<sup>ly</sup> sighting on  
sta  $\frac{922.13}{145.7}$  P. III + shifting until  
angle reads  $36^{\circ}57'$  (Station 1493.4)Drive belt under  $\Phi$ 

falls 32.7 E of corrected sta 1536.

3555 N<sup>60</sup> E3025 SW of  $\Phi$  P  $\frac{145.7}{51^{\circ}05'}$ Shift line 0.23' N<sup>67</sup> E at 793.7 for  $36^{\circ}58'$ In order to make a dist. of 145.7 from  
P.O.B. Wolke des. (to  $\Phi$  track + Somo) along  
accepted line, move 793.7 SE. 1.23

793.7

1.2  
792.5 beyond.

145.7 P.I.

938.2 to crown

? to ROW.

Copied  
5/12/57P.M. Hall + M<sup>c</sup>Con.

Attempt to trace out desc.

by lining W. face old 20<sup>th</sup> frame on lot 1  
Blk — "West Tomahawk Plat"to N<sup>ly</sup> + in line falls only 18' SW of  $\Phi$   
RR bit about 20' from tang. further E.  
big + find nothing.Near W<sup>ly</sup> 329.2  $\Phi$  fall in RR bed.SE<sup>ly</sup> 450' + fall 2.8' W. of  $\Phi$  of  
row of trees which runs N + parallelto Bradley's W. fence + about 10' W<sup>ly</sup> of do.  
This indicates private road to be + wide +  
+ between trees + fence.Polaris Obs. Oct 23<sup>rd</sup> P.M. $\Phi$  on belt at 506.07 W of W Ry st. orig  $\Phi$  Somo  
0 on Polaris. $\Phi$  find time 0-2 $\frac{1}{2}$ ' slow by jewellers.② 9:09<sup>5</sup> P.M. = N to W to N<sup>60</sup> E HQ. 2 $^{\circ}03'$ 

Calc by H.A.

" " =  $358^{\circ}50.5' = N1^{\circ}09.5'$ ③ 9:23 P.M. = N to E to street lamp.  $93^{\circ}35'$ Calc  $94^{\circ}24\frac{1}{2}'$  or  $S 85^{\circ}35.8' E$ .

Copied

Oct 24<sup>th</sup> AM. 7:45 AM  $\pm$

Set vernier on  $358-50\frac{1}{2}$  on  $16 \times 16$  H.O.

Dig 4 Somo trees.

Lamp post

$90^{\circ}22'$

$94^{\circ}26'$

$4^{\circ}04'$

$358^{\circ}50\frac{1}{2}'$

$359^{\circ}24\frac{1}{2}'$

Hair line stripe W. border sign  
State forest.

$90^{\circ}23'$  line

$94^{\circ}26\frac{1}{2}'$  light.

$4^{\circ}03\frac{1}{2}'$

Oct 24<sup>th</sup> PM with S.B. Mc Coy.

Repeat Polaris obs.

watch time

( $\frac{1}{2}$  slow with depot.)

① 7:52 PM (alt  $46^{\circ}04'$ )  $\rightarrow$  to lamp post  $93^{\circ}10'$

Polaris calc.  $N 1^{\circ}139.8$

calc  $94^{\circ}23.9$

② 8:01 " " " "  $93^{\circ}14\frac{1}{2}'$

Polaris calc  $N 1^{\circ}11.8E$

calc  $94^{\circ}22.3$

lamp post

Ave =  $94^{\circ}25.1'$  Az of old line Somo =  $90^{\circ}20.8'V$

Stake  $\&$  Row MT. RW.  $7^{\circ}C$ .

less than 100 ft from  $\&$  in places.

Oct 24<sup>th</sup> AM with Herb + Dahl.

Re-meas  $\&$  Somo (beyond the turn.

793.7 from bolt opp. Wolkes  $\&$  to

P.I. accepted  $\&$  Somo

(LP  $36^{\circ}57'$  angle.)

" for  $0^{\circ}01' = 0.23$  ft. to adjust at  
Wolkes.

Find our hub for 900' N on 4th

tie in Hydrant.

$\rightarrow$  from 902.3 do to S  $SE$  351.6 ( $-40^{\circ}22'$ )

Our I.P. near shore @ 1046' checks OK.

Now. Hence why about parallel shore.

①  $254^{\circ}07'$  ( $\&$   $74^{\circ}07'W$ ) 200. (21)

line of Raymond's stack

vert  $\frac{1}{2}$  to top do  $3^{\circ}30'$

A 9' above wire R.

②  $264^{\circ}16'$  ( $\&$   $84^{\circ}16'W$ ) 200. (22)

@ 100

20' from shore

-154 old bull chain ditch

③  $257^{\circ}13'$  ( $\&$   $77^{\circ}13'W$ ) 272.8'

to Iron bolt in R.O.W fence (162.4 from P1)

@ 100'

12' from shore

200

4' "

Row line to  $160^{\circ}40'$  should be  $160^{\circ}39'$

Solar obs. at 900' on W (Fair 53°F)

Watch time. S to E to Sun

① 9:30.3 AM  $35^{\circ} 59'$  alt  $25^{\circ} 45'$   
 $\begin{matrix} 36 \\ 10 \\ 10 \end{matrix}$

② 9:33.3  $35^{\circ} 11.5'$   $26^{\circ} 01.5'$   
 $\begin{matrix} 35 \\ 28 \\ 16\frac{1}{2} \end{matrix}$

This averaged  $10^{\circ} 13\frac{1}{4}'$  W for W formerly used as meridian

Meas. Sewer man holes.

M.H. in  $\Phi$  Tomahawk + Sono

depth 12.3' ✓

Invert N+S main 20"

" from NW 6"

" E 10"

M.H. (SE of Bradley Garage) 187 S of Sono

min elev. 102.56 = 93.51

depth 9.05 6" N+S main

" invert from W 8.50' deep. 94.06

M.H. (W of HQ) min elev. 100.00

depth inv. N+S 6" 9.76

90.24

~~103~~  
~~3~~  
~~164~~  
 Copied  
 5/17/57

### Levels.

100.00 Assumed as elev. main warehouse floor.

99.95 W. end sill E, small door ✓

104.87 H.I.

102.51 B.M. W. end sill W, South window

New  $\Phi$  Sono<sup>west</sup> - surface levels:

0.0 =  $\Phi$  HQ Bldg. 100.

+ 50 100.1

100 100.4

150 101.1

200 101.75

250 102.15

$\Phi$  255.2  $\Phi$  at S.

300 102.15

350 102.05

400 102.15

450 101.9

500 101.5

106.54 \* T.p. mark on H.I. line pole # 738

path on Sono at NE of Bradley 101.3

C.W. " " " 101.88

NS at 790' + on new H Sono 100.9

Top of Hydrant 20' office 103.78

Copied

± Street E of Bradley;	S from ± Smd.
+50	102.
100	102.35
150	102.5
200	102.8
250	102.4
300	102.25
350	"
Rim of M # 187 S of H	102.56.
C rd about 195 SD	102.56
Rim of M # W. of H.	100.00
In. of sewer outlet in pond	87.37

New ± Somo

6.

61.3

61.

Bradley  
Garage

Hydrant

Elev. top =

103.42

Copied

P. on pole # 738 (N. face) about center of lettering elev.	106.54
" " " " S face " of Marmette	105.78

Profile near ± Somo. continued.

+500	101.6
+50	101.5
600	101.2
650	100.85
700	about ± Marmette trail S 100.4
+50	99.8
800	99.4
+50	98.9
900	98.8

Copied

± Marmette trail S.

0	= ± Somo.
+50	99.6
100	99.2
+50	99.3
200	99.8
+50	100.3
300	100.9

NS at Bradley's NW x	100.7
" 140' ± S of dr	100.5

Readings from 9 at sta 1183.6 on corrected  $\phi$ . Same

	Az	H.I.	Stadia	R.I.	Elev.
a	N.S.	61°-30'	145	6.	99.7
b	"	24°	113	6.9	98.8
c	"	232°	190	6.8	98.9
d	Tennis Ct.	311°-40'	145	7.8	97.9
e	Tel pole	1°-23'	33	(35°)	

$$= \frac{231}{105.7} \\ = \frac{128.8}{96.8}$$

30' h.c.

D  $\phi$  top of  
Raymond stack 285° Elev. 2°-39'

g) City Water Tank	68°-23'	3°-33'	2043	$\frac{126.7}{+105.7}$	232.4
-----------------------	---------	--------	------	------------------------	-------

h) RR Tank	57°-57'	1°-51'	1233	$\frac{139.8}{145.5}$	
i) Miller Brewhing	192°-48'	3°-44'	552	141.7	

j) W. Tank Cities Sew. (frame work)	211°-57'	3°-15'	$\frac{455}{105.64}$	$\frac{25.84}{131.52}$	
---	----------	--------	----------------------	------------------------	--

k) left pole H. Fixture	52°-21'	1°-15'	1086	127.4	
----------------------------	---------	--------	------	-------	--

l) Copied	349°-37'	Hydrant.			
-----------	----------	----------	--	--	--

Transit at corrected Sta. 1526

H.I.	Az.	9°-04'
103.09	227°-04'	4°-28'
	196°-40'	"

frame warehouse 17' hi.

207°-25'	145'	NE
220°-19'	164'	NW
200°-13'	200'	SE

thence 232°-12'	200	to	$\Delta N$
at $\Delta N$	H.I.	99.11	

273°	100	-12.9	=	86.2
------	-----	-------	---	------

elev. of cat tail swp.

250°-20'	140	-10.09	=	89.0
----------	-----	--------	---	------

invert sewer outlet

BM rock	280°-1/2°	40'	-5.31	=	93.80
	244°-50'	135'	-5.20	=	93.91

thence 233°-32'	235	stads	
To A	405.5'	Sw of 1630'	(in $\phi$ side track)
at	"	(sta 1630 has 40°-05')	
"	H.I.	103.39	

D	101°-46'	250'	NW x RR road house
E	114°-07'	245'	SW x do (64' $\phi$ road)

\$ Hdg lines out 6'  $\phi$  of 9

"	112°-01'	same vent.	elev 6-21
---	----------	------------	-----------

251' in	"	=	$\frac{28}{103.4}$
Copied			131.4

118. mis elev. 159

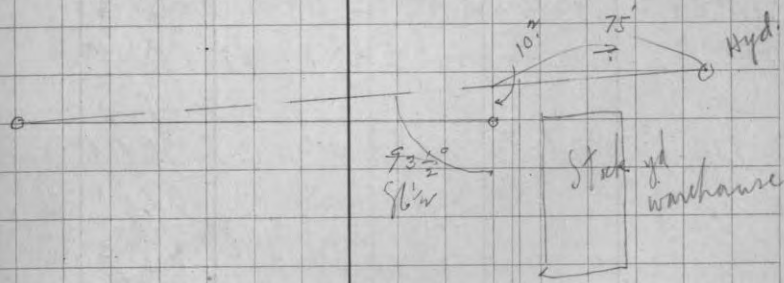
§

③ Miller Bros cupola	118-23'		3°35' ±	632'	$\frac{103.4}{143.0} \times 39.6$
④ RR junction					
NWx	164-44'	42'	25°-15'		$\frac{19.8}{123.2}$
NEx	147-07'	61'			
SWx	177-03'				
Raymond stack	300-19'		3°39'		
Vane on barn	307-24'		1°-41'		
RR Tank	323-48'		1°-44'		
⊕ Side track	289-03'	106' BC.			
"	306-02'	390 EC.			
Δ T	295-59'	243			
at do	100.17 #1				
switch pt. }	319-42' a	111			
int. M.T. }					
To P.I. (MT)	325-14' b	278'			
At P.I.	98.74 #1				
	148-59'	140-BC			
	0-56'	MT. tang fly			
		163 EC.			
T.P. at		GC.	94.68		
Raymond stack	295-17'	5°30'			
weather vane	299-43'	5°45'			
RR Tank	355-38'	6°45'			
Cities Service	119-39'	2°	= 131.89		
top Wolfson	16-30'	5°45'			
External meas	20.9'				

Copied

Azimuth shots from Hydrant in flying field:

- ② 86°-17' City water tank
  - ③ 88°-35' R.R. " "
  - ④ 130°-26' HQ stack
  - ⑤ 187°-00' Cities Service tank
  - ⑥ 267°-48' Raymond stack.
- 96-28' Hydrant near Stockyard  
 272-22'
- At NWx RR track 790' W of Ry St.  
 N side H fix. 109-88'

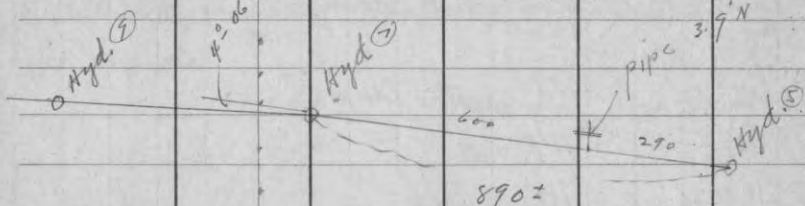


Wolfson fence in relation to new ⊕ street.  
 41.3 SW of " at N end  
 33.45 " " E cor.

Copied  
 5/13/37

N 87° 36' W

N 83° 32' W



Correct Somo &amp; in front of Wolke's:

793.7  
19.3  
813.0 NW of Pt. = toll for ROW.  
= 504 @ E of switch track + 3.5  
of front

Set toll for & + NW line Wolke dead.  
= 145.7 from & RR. long & Somo

@ 813. Hyd. ② has N 41° 18' E (SE to NE 16° 44')  
197.8'

Coped

old line Somo called N 89° 28' W = 270° 32'  
∴ new " " W. of Hyd. ① N 88° 56' W = 271° 04'  
∴ actual course = N 89° 07' W = 271° 15' / 270° 53'  
" " old line = N 89° 39' W = 270° 43'

Increase NW + SE by 0' - 11'

Polaris Obs. for Azimuth.  
Oct. 28<sup>th</sup> 1935 my watch. R#  
① 9:43 PM. " (2 1/2' slow?)

154° 06'  
247 53'

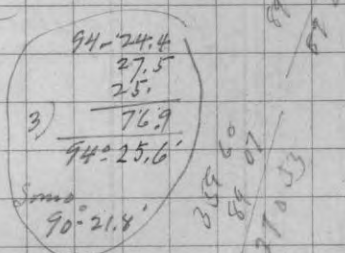
93° 49' N. to Az to lamp post.  
Polaris calc N 0° 35.4' E. 90° 20.7' Somo  
93 49  
94° 24.4' Az to lamp post.

② 9:55 PM.

247 = 51.5' Polaris N 0° 31' E.  
341 48. 90 56.5  
93 = 56.5' 94° 27.5' lamp post

③ 10:00.7 PM

6° - 16'  
100° 12'  
93° 56' S Polaris  
N 94° 25' light pole

Oct 29<sup>th</sup> R.H.

5:10 AM my watch (W. Elong) foggy

101° 48'  
193 38'

91° 50' = L to street line = 89° 39' E  
- 1 28.9  
90° 21.1 call it 90° 21' Az line of Somo as plotted.

L to W Polaris to NE x HD = 0° 18'  
1 28.9  
∴ Decrease old Az. + item N 1° 10.9' W  
+ Somo by 0° 11' Copied





139 St. Levels for prelin profile.

⊕ Mainette St. (taken 30' W of & parallel to Bradley's fence

↳ coincides with travelled way)

⊙ = ⊕ Somers & Mainette	100.45
+50	99.75
100	99.2
150	99.3
100+85 Sewer MH hrs W 39'	
200	99.8
+50	100.3
300	100.9
+50	101.4
400	101.7
+50	102.1
500	101.6
+50	100.8
600	101.3
6+18 ±	102.

6+66.8 ⊕ North Ave. 100.1

6+91.8 ± Stex CW on ⊕ N. St.  
 ⊂ N to W 72 1/2° ±

Copied

~~100.2  
100.2  
99.7~~

⊕ North St. (NW 1/4 from ⊕ Mainette)

⊙ " " " intersects	100.1
+50	99.8
100 (peak temp. 100.3)	100.1
+50 (opp #713)	100.4
200	100.1
250	99.4
300	99.1
350	99.
400	98.8
450	98.7
500	99.2

⊙ 353 line of wire fence for St SW  
 411.7 " " & fence from.  
 442 " " W " "  
 447 hyd trs at 90°  
 8 3/4' Nly from ⊕ St.

→ ⊕ as read meas. 20 + 25 = 45'  
 SWly from ⊕ Track at 90°  
 ⊕ grading trs slightly N. as we go W.

Copied

‡ North St E

0	= Intersect. ‡ Marquette.	100.1
+8	occupation for street SW	
+67	" " "	
+50		100.4
100		100.8
150		101.6
200		101.9
250		102.1
300		102.4
350		102.7
400		103.2
484 ±	‡ Conservator St.	103.2
405 ±	hydraul 7' Nly from ‡ St.	
510	1 in Cw.	

Distances for profile.

Somo.

- 921.	MH in ‡ Somo + Tomahawk
0	‡ warehouse H.A.
257/6	‡ 30' Rt S. (Conserv.)
696.5	‡ 30' " Marquette
982.2	" in Somo (NW)
666.8	Marquette St.
789.	Conservator St.

‡ Conservator St.

0.0 ‡ Somo.	102.1
50	102.0
100	102.4
150	102.5
200	102.9
250	102.6
(154 MH to W 18')	102.56 93.51 94.06
300	102.3
350	"
400	102.8
355 ± Cw. B.M.	102.23
450	103.15
500	103.1
550	103.45
600	103.7
650	104.3
700	"
750	‡ track curve NE, 104.1
760	" " " SE, 104.00
789	‡ grading 103.7
804	‡ Tang. N. st. 103.2
821.2	S. edge cw.

Oct. 30<sup>th</sup> 1935 PM rainy.

103.46	BM	
3.94		
107.40	H.I.	
0	MH bet	Bldgs 4+5
+50		4.1
100		4.05
150	line of Bldgs	3.8
200		4.1
250		4.75
300		5.0
350		5.45
101.09		
4.58		
105.67	H.I.	
400		4.3
400 + 9 =	E Main Track	4.39
400 + 23 1/4	" track	4.56
400 + 39	" "	4.34
400 + 54	" "	4.61
400 + 63.7	" "	4.62
500		4.4
5 + 29.8	" "	4.84
5 + 86	" "	3.51
600		3.3

103.51  
3.91  
107.42 H.I.

600	5.1	=	102.3
650	5.0	=	102.4
700	4.6		102.8
750	4.3		103.1
800	4.1		103.3

angle thence SW to  
E of E end North St.

850	3.6		103.8
890	E side track N 72 1/2 W		
	NE rail 3.74		104.18
900	3.7		104.2
950	3.7		103.7
958	E Cons. St		

(E Spirit Ave turnpike intersects  
E Cons. St. @ 775 = S of E Bldgs)

Oct 31<sup>st</sup> '35

Calc. Amount deducted from Raymond tract  
on W+S (by altering  $\angle$  Somo  $0^{\circ}32'$   
+ by initiating Meridian line from  
intersection (1493.4) = 1042.7' ~~40~~

= - 1.01 A. on W+S.  
+ .23 A more adjacent to Miller RR  
- .78  
23.54 former area  
\* 22.76 net area, by new survey

\* Subject to slight alteration on 3<sup>d</sup> A. tract  
at warehouse, according to wording in  
abstract.

Final desc. of Ry. tract.  
Beginning at pt on Somo Av. (790' W from W Ry St.  
[meas. at 90] = 790.03' along "  
thence N.  $0^{\circ}21'$  E. parallel to + 790.0. of W Ry St.  
500'.  
thence S  $89^{\circ}07'$  E. to new Somo Ave.  
280.  
" S  $0^{\circ}07'$  E. 500.05' to pt on W  
new Somo +  $8\frac{1}{2}'$  N. of  $\angle$  Ry track  
" N  $89^{\circ}07'$  W on W new Somo  
284.03 to P.O.B.  
Containing 3.237 A.

Lat. + Dep. table of "line tract" W of + adjoining Forestry tract.  
Bearing adjusted to actual True Azimuth.  
Beginning in  $\angle$  Somo 1493.4' W 2<sup>d</sup> W Ry Ave. (Totals. (adjusted))

Course	Feet	N	S	E	W	N
Change to	1042.0	1042.0				1042.0
"	237.3	1042.7	67.74		228.72	976.33
"	272.5	200.62	20.62		198.94	955.71
"	813.0	272.5	61.24		265.86	894.57
"	162.4	153.05	153.05	54.30		741.52
"	243.4	243.37	243.37		3.75	498.15
"	813.0	498.07	498.07	641.97		1.08
910.03' addition		1042.70	1042.07	696.27	696.86	
Reduce N <sup>th</sup> by .6		1042.10				
" W .6						
Area within traverse	465,913. sq.					
+ " in curve	972.0					
+ " along shore	476,543.					
		1042.0	1041.92	696.27	696.28	
						10.94 Acres conveyed.

2-37-4

November 20<sup>th</sup> 35

Hall + Swearingen.

After running diagonally SW across  
S 6 1/4 + encountering nearly all  
swamp, we return by route  
further west + search for 8 1/4.

Find the two orig. steps slightly  
more than record distance  
apart + about OK for course

Scribe marks ~~OK~~ on both.  
visible

Drive temporary Cedar stake.

1-37-4

Nov. 18<sup>th</sup> 1935 overcast 25°

Hall with Tousey + Liguian + Swearingen

Cruise W. on Tp. line from

Orig. 1/4 S bet 1 + 36

464 fall 7 steps N of a squared tree.

Continue W on bear 3°

following blazes

830 ± old winter road N + S

840 Cruisers mark on 6" Cedar

facing East

928 To Orig. cor.  $\frac{35 + 36}{2}$ 

Identify Cor. by ingrown notch on SE  
face of Hem. Shows in poor condition  
agreeing fairly well with axe cut  
on SW side of another Hem.

Other 2 frags. are doubtful. The SW  
one agrees fairly but is cedar.

Cor. is on NW shoulder of hill.

Drive new cedar post + put rocks  
around.

	new	Bakam 6"	N 26 E	12.1'
var 0°	W	Prich 7	S 60 W	10.8'
		on back		

orig. =	Hem.	N.	rec.
	Cedar	S 68 W	22.2'
	Hem	N 56 W	11.9'

Meas. S. thin brush var 3° E.

1000. enter swamp

1171.5 + 1201.5 find no tree nor rock

1289' intersect a blaze line about

2 ch W of the western tree of

squared up pairs. m = 27° E

1483 to old road N 50 W

1600 to swamp W + NE

2170 re enter swamp 2280 over do

2567' record + blaze tree.

thence E. 19 steps + S 17 steps to orig. 1/4

Tomahawk Warehouse

Sewers etc.

Dec. 2<sup>nd</sup> 35

Proposed Sump to be S. of SW x Bldg.  
in such manner that 4th  
coincides with dividing wall between  
shallow compartment (on E) +  
deep " (on W).

Rise from M H at Tomahawk + Somo

89.66	"	"
+ .83	= 1/2 dia 20" main	
90.49	= invert Proposed Somo sewer	
+ 4.59	= .0045 Gr. in 10 ft. at M.H.	
95.08	= Invert at outlet of pump.	
95.06	" " " " " "	

(Assume Sump meas 5' on E.  
7' " W  
12' E-W)

Must avoid water main which we find

19.8' S of 4th (Orig) Somo Ave @  
5' E of 4th Ry St. and

19.0' S of 4th (New) Somo Ave @ 676' W of  
W. Ry St.

*Copied*

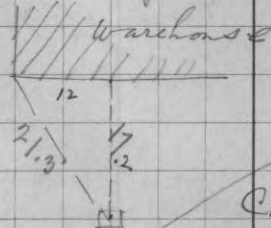
Find water shut-off (alleged to be in line of  
Main N. S + W.) @ Ry St. + Somo.

14.35' SE of 1/2 arrows on E face Tel. pole  
34.68' SE " " " " E. post Raymond  
Lbs. Co sign.

Elev. of rim of shut-off = 99.96  
" " - 34.4' = limit of meas. 6.27  
bottom of main. 93.69

Elev. of top of water main (E-W) @ 676' W  
of NW x Ry St + Somo Ave. = 94.12'  
102.51 sill  
2.41  
104.92  
10.80

Shut-off S. of warehouse



Plant cylindrical 6x36"  
Concrete man. with bronze  
cap in top @ SE x State Trust.

SE x warehouse bus NW 7.51'  
W. face W. rail " E of 5.92  
2 x 8 pit signs NW 6.92  
6" below surface

December 4<sup>th</sup> Fair 0  
 RH Hall + 2 W PA helpers.  
 Start digging at Somo + Ry pts to locate  
 M&D water main. Reported to be  
 about 24' W of Ry. St.  
 Frost very deep. abandon hole since  
 Krueger exhibits identical gate for  
 measurement. Thus determine  
 depth of main.

Decide to make angle in approx.  $\frac{1}{4}$  Ry. St. <sup>(31.8' W of Ry. St.)</sup>  
 14' S of Somo.  
 This to eliminate interfering with water main.  
 Thence in straight line to Sump &  
 " " " " M.H. in  $\frac{1}{4}$  Tomahawk

Proposed Grade of Sewer.	50' intervals	(.0045)
0	90.49	Invt at jc.
50	90.715	101.74 edge point
100	90.94	
150	91.165	
200	91.39	
250	91.615	
300	91.84	
350	92.065	
382	92.21	

400	92.29
450	92.515
500	92.74
550	92.965
600	93.19
650	93.415
700	93.64
750	93.865
800	94.09
850	94.315
900	94.540
950	94.765
1000	94.99
1016	95.07
1050	

assumed outlet from sump.  
 102.83 = T.P. on NW cor. W. of tel. warehouse.  
 E. end Main track + 100.37

@ 100 drive toll - Thence @ 90° mark bldgs  
 1/2 arrow on Whipple porch to 31'-11 1/2"  
 place X " " post 13.00 above Cr.  
 " " " " Tel. Bldg 11.00 " "  
 @ 150 SEx shed to N 1/4 25'-10" no level  
 @ 200 - toll.  
 1/2 arrow on W face Tel. pole to NE 19'  
 " " " " " " " " SW 33'  
 SEx blacksmith shop " NW 24'-5"  
 Set X for 12' above Cr. on toll poles  
 (steel)

December 6<sup>th</sup> 35 sheet - 30°  
Hall + 2 W.P.A.

@ 250 meas st. to stake found 21'-3 1/2"  
Top " 103.17

91.62 Gr.  
11.55 below

300 windmill till base st.

3+82 MH in Ry St. H.I. 106.20

92.21 Gr.

13.97

Gr. on pole\*

Tel pole no. NE 20'-11 1/2"

do NW 26'-11"

" SW 48'-4"

4+50 tel pole no N. N = 10'

5+22-9" line stake.

Toward Apple had to dig off.

P.M.

Set stakes W. from dump as follows:

1100 = +79 + 20' N = 102.68 - 91.8678 = 15.90

1194.2 = 1+73 " 103.53 87.20 = 16.33

1200 = 1+79 " 103.48 87.23 = 16.25

2+50 103.52 - 87.55 15.97 15 11 5/8

3+00 103.19 87.77 15.42 15 5"

3+50 103.01 88.00 15.01 15 0 3/8

4+00 103.84 88.22 15.62 15 7 1/2

4+50 103.13 88.45 14.68 14 8 3/8

5+00 102.44 88.67 13.77 9 1/2

5+50 102.59 88.90 13.69 8 3/8

5+85

stake 13' 2" NW 101.49 89.05 12.44 5 1/4

Plus readings between Ry St MH (382) + W.H.

5+00 Stake 10' N Top (elev) 102.09 Gr. 92.74 = 9.35

+53.5 E nail ① 100.28 92.58 7.30

6+07.7 " " M.T. ② 100.06 93.22

+37.8 " " ④ 99.95 93.36

+67.7 " " ⑥ 99.78 93.49

+80.8 " " ⑦ 99.81 93.55

7+7 Top of MH 102.54 93.67

+27.8 ⑧ 99.64 93.76

+70 end fence 94.22 6' 6"

8+29 6 1/2' N tel pole 7' N 94.71 94.57 7' 0"

9+5.6 ⑨ 99.79 94.77

+52.8 ⑩



## Tentative Descriptions of "17 A tract"

West of Old Bradley estate &amp; on S. side Somo.

\* Assuming W Bradley property is the line  
1178' W of + parallel W Ry. St.:\* Assuming that the 66' W of + adjoining  
rd. line be dedicated as Marinette St.:

Then — Beginning on the E Somo Ave.

1448 ft. W of W Railway St.:

Thence S 89° 07' E along the E Somo Av. 204';

Thence S 0° 21' W parallel to Railway St. and

1244 ft West of W thereof, a distance of 252.5;

Thence N 89° 03' W (at right angles) 204 feet;

Thence N 0° 21' E parallel to Ry St.,

254.4 feet to Place of Beginning +

Containing 1.19  
100 Acres.

52.276 = .271

66.07 .324

71.151 .343

75.836 .361

77.983

SW x 13-38-5

✓ 156

calc. Apr. 14- 1937

Since Orig Cor. found .067 W. of Sta - 1.341 N.  
+ 446 S . 80.501

∴ 157.307 Station

+ 1.341 - "

= 158.648

79.324

- 1.341

77.983

station for NW x 13. + W. .369

.067

= 1.436

Sta. 38.221

+ 19.831

.218

.369

= 79.324

= 39.662 - 77.983 =

19.831

- 1.341

Sta. 18.490

Sta. 58.152

= 1.587

.293

.067

.218

1.285

.142

line hub correction bet. 13 + 14

(Sta. + 1.341 x .00381 + .067)

∴ 8.10 " " " = .103

15.02 " " " .129

21.77 .155

27.055 .175

29.141 .183

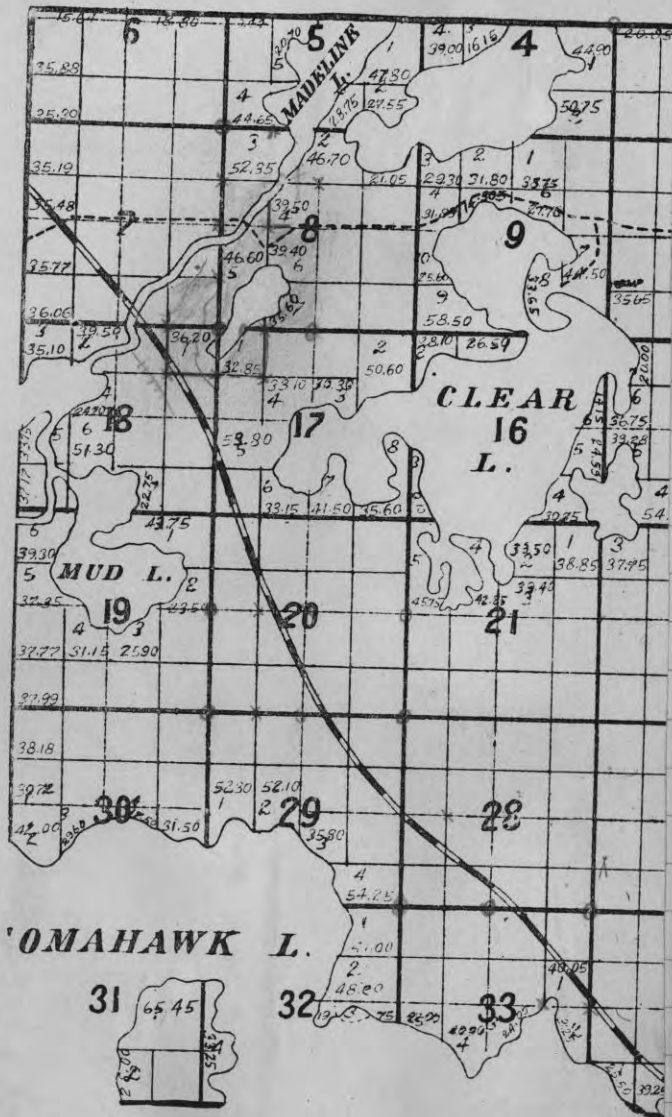
33.474 .20

36.318 .211

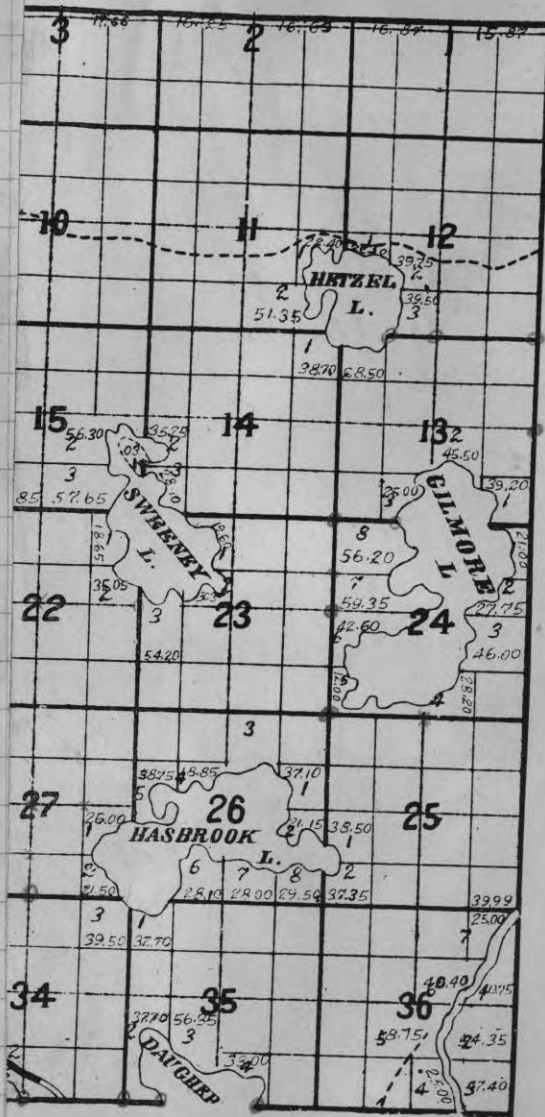
40.00 .225

42.72 .235

Town N<sup>o</sup> 39 N.



Range N<sup>o</sup> 7 E.



1	N 1/4	Sec	1	38-5	orig.
2	E 1/4	"	"	"	"
3	NW x	"	"	"	"
4	NW x	"	2	"	"
5	N 1/4	"	3	"	"
6	SE x	"	6	"	"
7	W 1/4	"	7	"	"
8 (10/8/35)	N 1/4	"	1	37-4	"
9	W 1/4	"	19	38-5	"
10 2/7/36	NW x	"	6	"	"
11 2/20/36	SW x	"	1	38-4	"
12 2/21/36	NE x	"	20	38-5	"
13 "	NE x	"	30	"	"
14 12/18/36	NE x	"	32	39-5	"
15 "	N 1/4	"	4	38-5	"
16 "	E 1/4	"	9	"	"

# KEITH'S RAILROAD CURVE TABLES.

Published by KEUFFEL & ESSER CO., New York.

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## HOW TO USE KEITH'S TABLES.

### EXAMPLE.

Wanted a Curve with an Ext. of about 12 ft. Angle  
of Intersection or I. P.= $23^{\circ} 20'$  to the R. at Station  
542+72.

Ext. in Tab. IV opposite  $23^{\circ} 20'$ =120.87  
 $120.87+12=132.87$ . Say a  $10^{\circ}$  Curve.

Tan. in Tab. IV opp.  $23^{\circ} 20'$ =1183.1  
 $1183.1+10=1193.1$ .

Tab. V. correction for A.  $23^{\circ} 20'$  for a  $10^{\circ}$  Cur.=0.16  
 $1193.1+0.16=1193.26$ =corrected Tangent.

(If corrected Ext. is required find in same way)  
Ang.  $23^{\circ} 20'$ = $23.33^{\circ}+10=33.33^{\circ}$ =L. C.

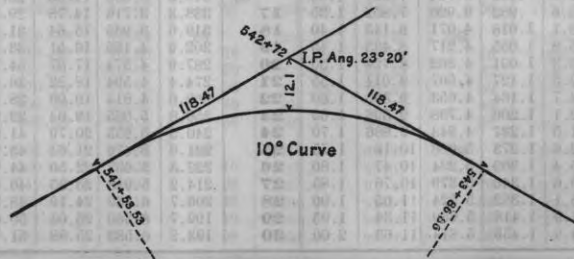
$2^{\circ} 19\frac{1}{2}'$ =def. for sta.	542	I. P.=sta.	542+72
$4^{\circ} 49\frac{1}{2}'$ = " " "	+50	Tan.=	118.47
$7^{\circ} 19\frac{1}{2}'$ = " " "	543	B. C.=sta.	541+53.53
$9^{\circ} 49\frac{1}{2}'$ = " " "	+50	L. C.=	2 33.33
$11^{\circ} 40'$ = " " "	543+	E. C.=sta.	543+86.86
	86.86		

$100-53.53=46.47 \times 3'$ (def. for 1 ft. of  $10^{\circ}$  Cur.)= $139.41'$ =  
 $2^{\circ} 19\frac{1}{2}'$ =def. for sta. 542.

Def. for 50 ft.= $2^{\circ} 30'$  for a  $10^{\circ}$  Curve.

Def. for 86.86 ft.= $1^{\circ} 50\frac{1}{2}'$  for a  $10^{\circ}$  Curve

(These tables are published in Field Books of  
KEUFFEL & ESSER CO., New York, N. Y.)



Natural Tangents

deg.	0'	10'	20'	30'	40'	50'	deg.	0'	10'	20'	30'	40'	50'	deg.	
0	0000	0029	0058	0087	0116	0145	89	40	8391	8441	8491	8541	8591	8642	49
1	0175	0204	0233	0262	0291	0320	88	41	8693	8744	8796	8847	8899	8952	48
2	0349	0378	0407	0437	0466	0495	87	42	9004	9057	9110	9163	9217	9271	47
3	0524	0553	0582	0612	0641	0670	86	43	9325	9380	9435	9490	9545	9601	46
4	0699	0729	0758	0788	0816	0846	85	44	9657	9713	9770	9827	9884	9942	45
5	0875	0904	0934	0963	0992	1022	84	45	1.0000	1.0058	1.0117	1.0176	1.0235	1.0295	44
6	1051	1080	1110	1139	1169	1198	83	46	1.0355	1.0416	1.0477	1.0533	1.0599	1.0661	43
7	1228	1257	1287	1317	1346	1376	82	47	1.0724	1.0786	1.0850	1.0913	1.0977	1.1041	42
8	1405	1435	1465	1495	1524	1554	81	48	1.1106	1.1171	1.1237	1.1303	1.1369	1.1436	41
9	1584	1614	1644	1673	1703	1733	80	49	1.1504	1.1571	1.1640	1.1708	1.1778	1.1847	40
10	1763	1793	1823	1853	1883	1914	79	50	1.1918	1.1988	1.2059	1.2131	1.2203	1.2276	39
11	1944	1974	2004	2035	2065	2095	78	51	1.2349	1.2423	1.2497	1.2572	1.2647	1.2723	38
12	2126	2156	2186	2217	2247	2278	77	52	1.2799	1.2876	1.2954	1.3032	1.3111	1.3190	37
13	2309	2339	2370	2401	2432	2462	76	53	1.3270	1.3351	1.3432	1.3514	1.3597	1.3680	36
14	2493	2524	2555	2586	2617	2648	75	54	1.3764	1.3848	1.3934	1.4019	1.4106	1.4193	35
15	2679	2711	2742	2773	2805	2836	74	55	1.4281	1.4370	1.4460	1.4550	1.4641	1.4733	34
16	2867	2899	2931	2962	2994	3026	73	56	1.4826	1.4919	1.5013	1.5108	1.5204	1.5301	33
17	3057	3089	3121	3153	3185	3217	72	57	1.5399	1.5497	1.5597	1.5697	1.5798	1.5900	32
18	3249	3281	3314	3346	3378	3411	71	58	1.6003	1.6107	1.6212	1.6319	1.6426	1.6534	31
19	3443	3476	3508	3541	3574	3607	70	59	1.6643	1.6753	1.6864	1.6977	1.7090	1.7205	30
20	3640	3673	3706	3739	3772	3805	69	60	1.7321	1.7437	1.7556	1.7675	1.7797	1.7917	29
21	3839	3872	3906	3939	3973	4006	68	61	1.8049	1.8165	1.8291	1.8418	1.8546	1.8676	28
22	4040	4074	4108	4142	4176	4210	67	62	1.8807	1.8940	1.9074	1.9210	1.9347	1.9486	27
23	4245	4279	4314	4348	4383	4417	66	63	1.9626	1.9768	1.9912	2.0057	2.0204	2.0353	26
24	4452	4487	4522	4557	4592	4628	65	64	2.0503	2.0655	2.0809	2.0965	2.1123	2.1283	25
25	4663	4699	4734	4770	4806	4841	64	65	2.1445	2.1609	2.1775	2.1943	2.2113	2.2286	24
26	4877	4913	4950	4986	5022	5059	63	66	2.2460	2.2637	2.2817	2.2998	2.3183	2.3369	23
27	5095	5132	5169	5206	5243	5280	62	67	2.3559	2.3750	2.3945	2.4142	2.4342	2.4545	22
28	5317	5354	5392	5430	5467	5505	61	68	2.4751	2.4960	2.5172	2.5386	2.5605	2.5826	21
29	5543	5581	5619	5658	5696	5735	60	69	2.6051	2.6279	2.6511	2.6746	2.6985	2.7228	20
30	5774	5812	5851	5890	5930	5969	59	70	2.7475	2.7725	2.7980	2.8239	2.8502	2.8770	19
31	6009	6048	6088	6128	6168	6208	58	71	2.9042	2.9319	2.9600	2.9887	3.0178	3.0475	18
32	6249	6289	6330	6371	6412	6453	57	72	3.0777	3.1084	3.1397	3.1716	3.2041	3.2371	17
33	6494	6536	6577	6619	6661	6703	56	73	3.2709	3.3052	3.3402	3.3759	3.4124	3.4495	16
34	6745	6787	6830	6873	6916	6959	55	74	3.4874	3.5261	3.5656	3.6059	3.6470	3.6891	15
35	7002	7046	7089	7133	7177	7221	54	75	3.7321	3.7760	3.8208	3.8667	3.9136	3.9617	14
36	7265	7310	7355	7400	7445	7490	53	76	4.0108	4.0611	4.1126	4.1653	4.2193	4.2747	13
37	7536	7581	7627	7673	7720	7766	52	77	4.3315	4.3897	4.4494	4.5107	4.5736	4.6382	12
38	7813	7860	7907	7954	8002	8050	51	78	4.7046	4.7729	4.8430	4.9152	4.9894	5.0658	11
39	8098	8146	8195	8243	8292	8342	50	79	5.1446	5.2257	5.3093	5.3955	5.4845	5.5764	10
40	60'	50'	40'	30'	20'	10'	deg.	deg.	60'	50'	40'	30'	20'	10'	deg.

deg.	0'	10'	20'	30'	40'	50'	deg.
80	5.6713	5.7694	5.8708	5.9758	6.0844	6.1970	9
81	6.3138	6.4348	6.5606	6.6912	6.8269	6.9682	8
82	7.1154	7.2687	7.4287	7.5958	7.7704	7.9530	7
83	8.1443	8.3450	8.5555	8.7769	9.0098	9.2553	6
84	9.5144	9.7882	10.078	10.385	10.7111	11.059	5
85	11.430	11.826	12.250	12.700	13.197	13.727	4
86	14.300	14.924	15.605	16.350	17.169	18.075	3
87	19.081	20.206	21.470	22.903	24.542	26.432	2
88	28.636	31.242	34.368	38.189	42.964	49.104	1
89	57.290	68.750	85.940	114.588	171.885	343.770	0
deg.	60'	50'	40'	30'	20'	10'	deg.

Natural Cotangents

in hand.  
curve  
shore

465 9 13. (160)  
9 10  
9720.

12560 / 476 543.

2/4/36

10.94 A.

County Monuments on hand (marked).

39-5

NW cor 33 — set 12/18/36

N 1/4 33

SW cor 31 Tp. Cor. — set 2/7/36 ✓

39-4

SW x 36

N 1/4 36

38-5

N 1/4 4 — set 12/18/36

N 20 x 20 — set 2/21/36

161

1/4/35

Barbott Lemke } apply for Town  
 Geo. Lott } jobs for 1935

Lat + Long. from map.

Fish Hatchery

8-39-7

Center Sec

45°-53. N

+

89°-37.8' W

SW x

45°-52.6

89°-38.4 W

N 1/2 A

45°-53.4

89°-38.1 W

Sugar Camp.

1-38-9 E.

S 1/8 § 1

45°-48.4' N. Lat.

89°-18' W. Long.

.217

MA in S Spirit Ave at alley  
midway bet Pilgr 4 + 5

order #  
3928

#935

import

23

padding

Pioneer  
 Surveyors chain tape 100 feet  
 05100

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES 1 1/2 TO 1.

FOR SINGLE TRACK EMBANKMENT.

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

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

2.5 in 29-7  
 3.8 " 38-10  
 .5 " 36-10  
 -----  
 6.8 = 7 miles in Nov.

23-11-25  
388