

GENERAL
SURVEYS

CHIPPENAW NATIONAL
FOREST.

111

By J. A. GILFILLAN

MINING

CL

TRANSIT BOOK

No. 4221

CCC #96

found 1/17/92

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EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS
Chicago New York San Francisco New Orleans Pittsburg Toronto

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be $30.6 + (20 - 16) \div 2$ or 2 ft. added to $30.6 = 32.6$. For slopes of 1 on $1\frac{1}{2}$ see inside of back cover.

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Lot #3 - See 31 T 14 N R. 28 W

377 instead
of 13.75

This Field Book is manufactured
of a high grade 50% Rag Paper
having a WATER RESISTING surface.

Traverse around Lake

chs
Fm. 4231

P1
6.00

	Lo 400s	Lo 51m	S	E	W
	9.865185	9.832561			
	2.778157	2.778157	4.40		4.08
S42°57'W	2.643336	2.610912			

	9.961902	9.603305			
	2.778157	2.778157	5.985		2.907
S23°39'W	2.740053	2.387456			

6.00

	9.960109	9.612421			
	2.602060	2.602060	3.65		1.69
S24°11'W	2.562169	2.214981			

4.00

	9.992478	9.266051			
	2.840106	2.840106	6.80		1.272
S10°38'W	2.832584	2.106157			

6.92

	9.983558	9.431429			
	2.602060	2.602060	3.85	1.08	
S.15°40'E	2.585618	2.033989			

4.00

	9.993851	9.977794			
	3.600868	3.000868	3.129	9.52	
S.71°50'E	2.994719	2.978662		10.60	9.404
			27.32		

G.L.O.
1/4 cot.

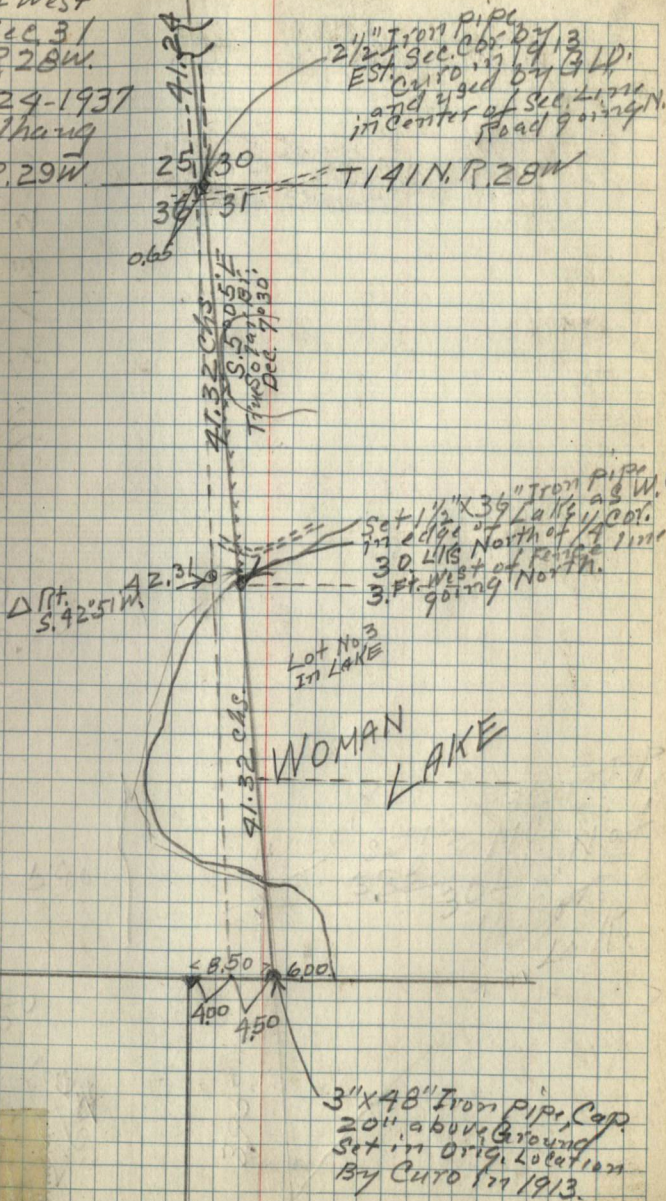
Survey of West
Line of Sec 31
T.141N.R.28W.

Sept. 23-24-1937

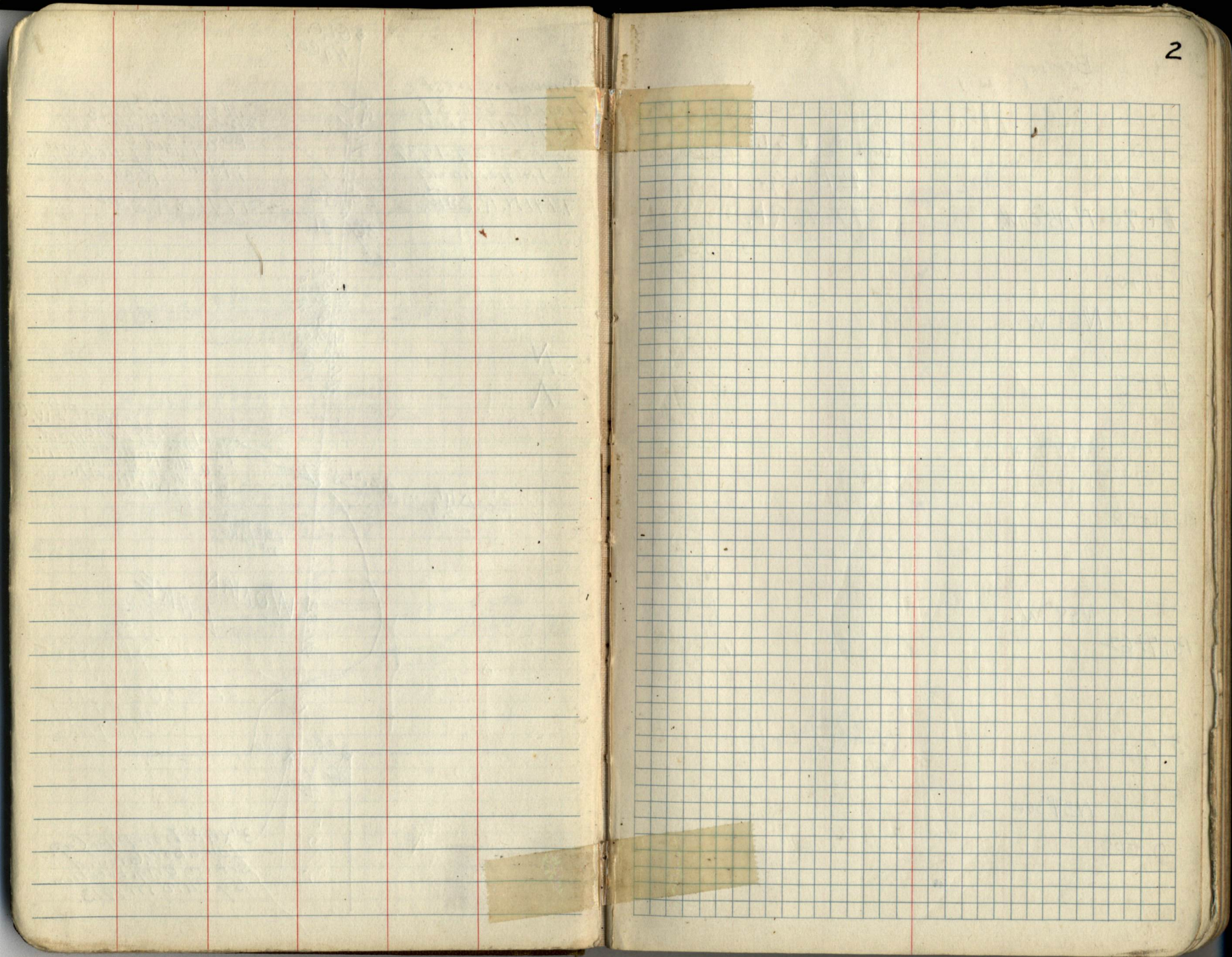
JAG Jetharu

T.141N.R.29W

N



3" x 48" Iron Pipe Cap
20" above ground
Set in orig. location
By Curo in 1913.



Sta. Bearing

38+10

Farm Road to L.

32+71

E Bridge.

31+70 N45°00'W

T.T. to Pt.

Pt. 24+00

N63°W

Pt. 19+88

N77°30'W

Pt. 11+08

N58°W

Pt. 7+62

on Long
Pike
leave lake
at 10 mi.

5+00

Lake Left

N38°30'W

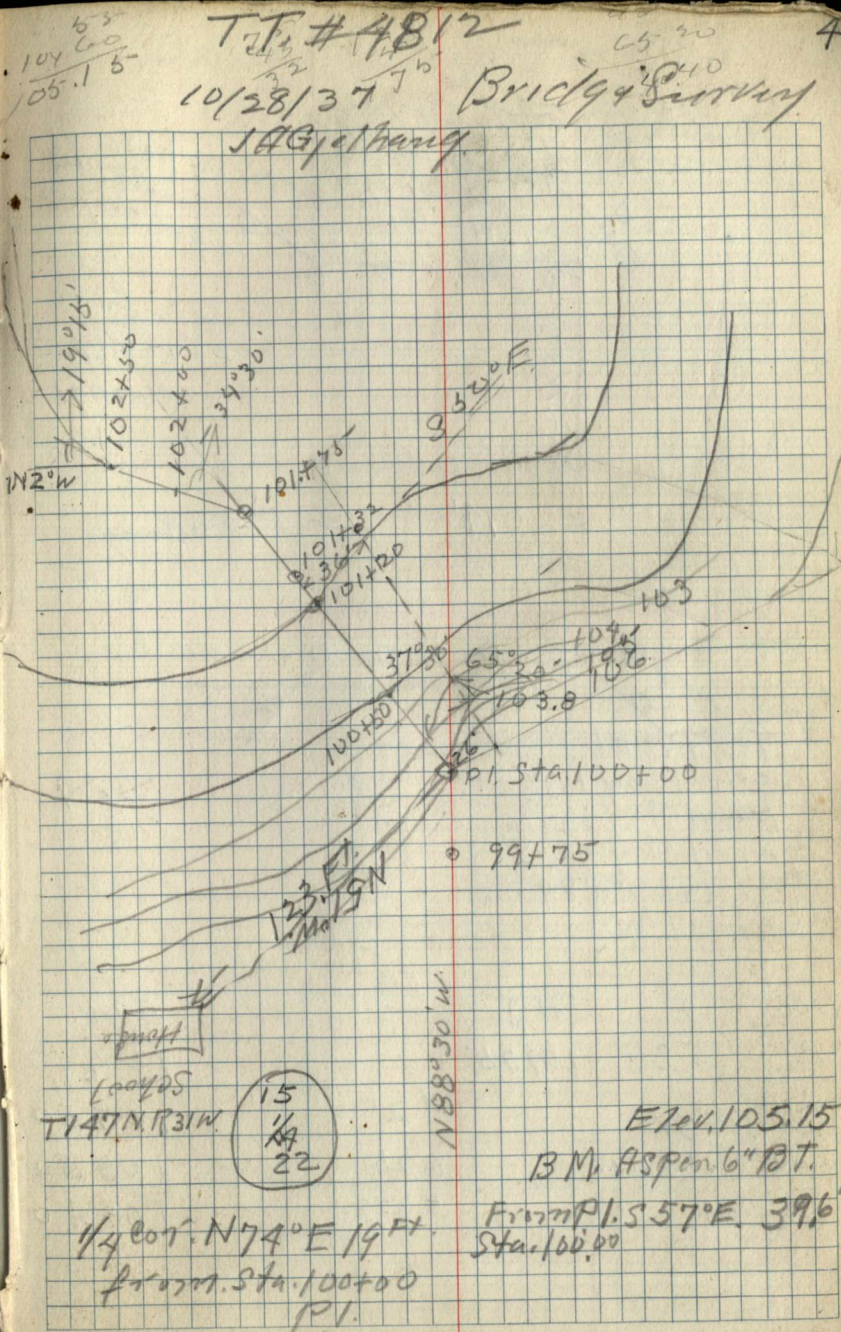
0+00

Touch trail
to right

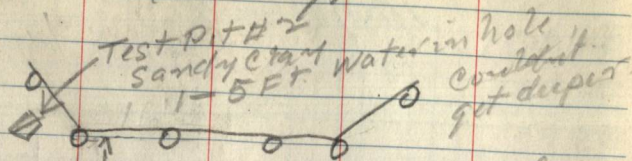
Lake

No

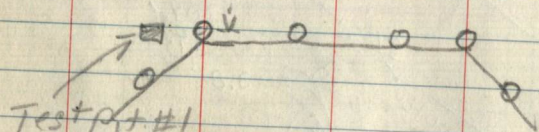
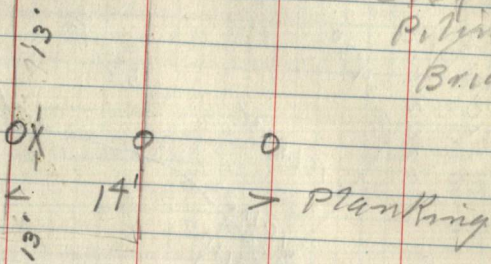
Sta.	+	H.L.	-	Elev.
B.M.	525	110.40		105.15
99+75			2.20	108.20
100+00 P.I.			3.20	107.20
100+25			6.50	103.90
100+50 water			10.40	100.00
100+60			12.40	98.00
100+75			14.90	95.50
100+90			14.80	95.60
101+00			12.40	98.00
101+20			11.00	99.40
101+32			10.20	100.20
101+65			9.00	101.40
101+75 P.I.			7.70	102.70
102+00			7.20	103.20
102+50			6.00	104.40
Top of Main P Tanking Bridge			6.00	104.40
Meadow E. of Bridge			8.80	101.60
Road E. of Bridge			7.20	103.20



Old Bridge.



OK for
Piling
Bridge.



Test Pit #1
Sandy clay 1-3 1/2'
Hard clay 3 1/2-4 1/2'
Hard clay 4 1/2-5'
Could not Dig
Thru.

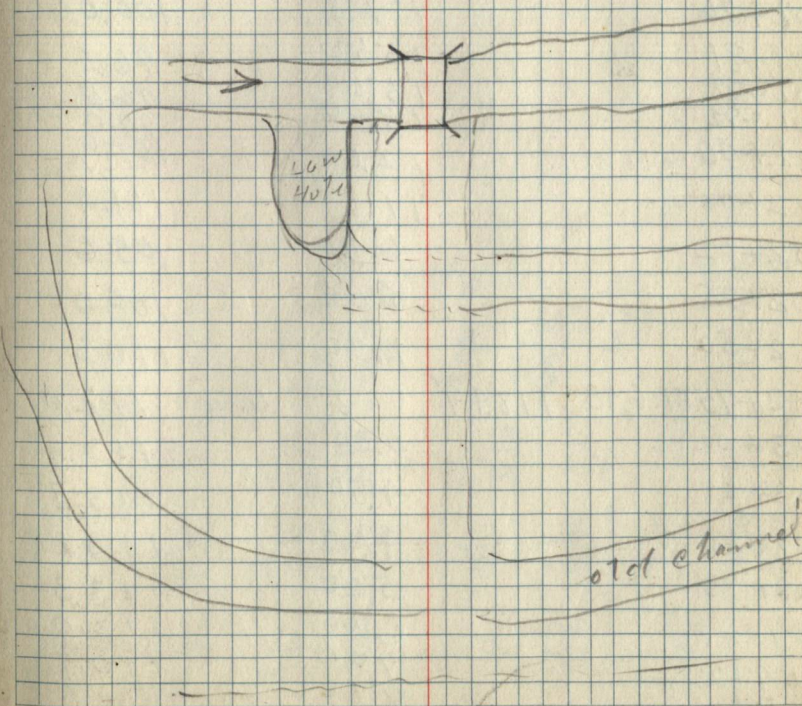
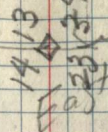
Sta.	+	H I	-	Elev.
BM.	5.35	109.75		104.40
Highest part of old Bt			4.25	105.50
under Cl. Braces.			6.25	103.50
under Sill.			5.35	104.40

Bridge Survey T.T. # 4713

5

11/10/37

T. 147 N. R. 31 W.



11/10/37

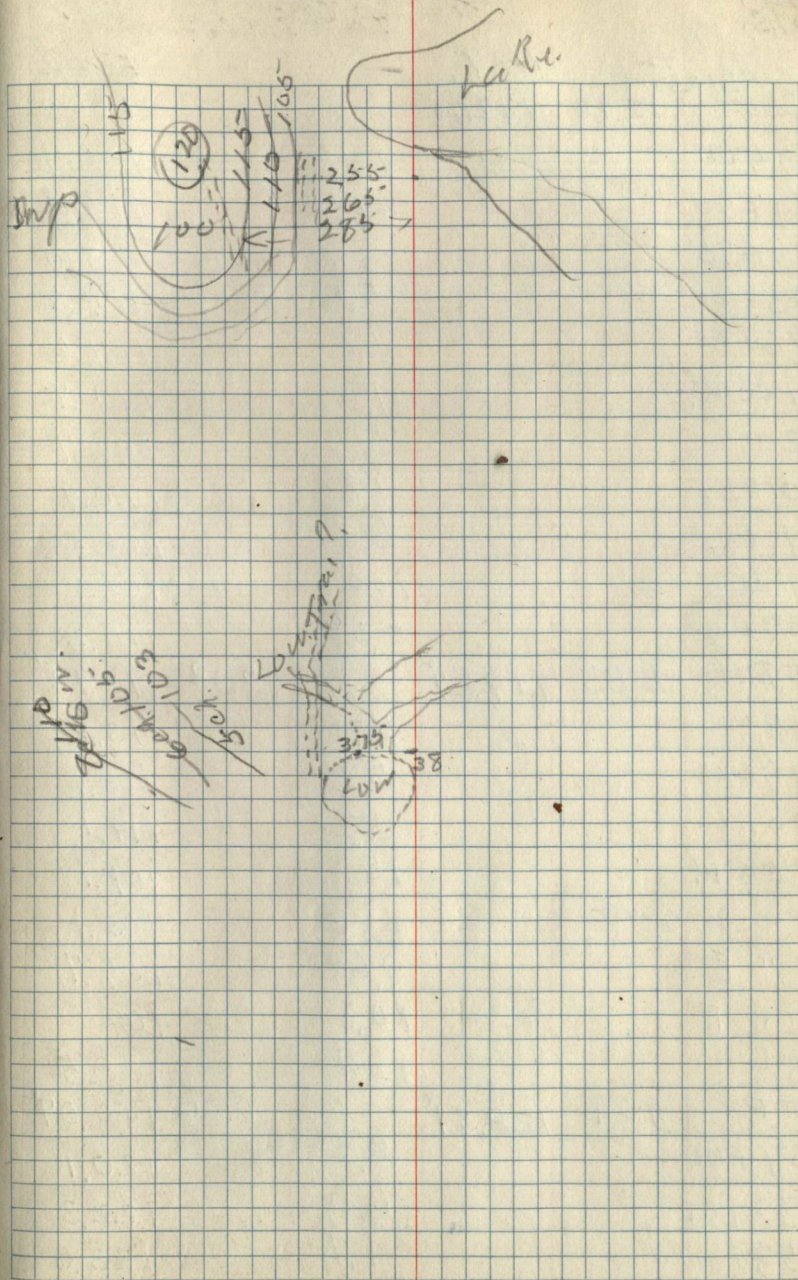
Station	H.I.	—	Elev.
BM	112.03	7.63	104.40 ✓
99+75		9.50	102.5 ✓
100+00		9.50	102.5 ✓
100+25		9.50	102.5
100+50		9.30	102.7
100+75		9.00	103.0
101+00		8.60	103.4
101+25		8.30	103.7
101+50		7.80	104.2
101+75		7.30	104.7
102+76		12.03	100.0
101+81		15.50	96.5
101+88		15.50	96.5
101+92		15.00	97.0
101+96		12.00	100.0
102+00		11.00	101.0
102+02		6.40	105.6
102+25		4.00	108.0
102+50		1.70	110.3
102+75 RP 6.48	118.99 ✓	0.02	112.01 ✓
103+00		5.30	113.2 ✓
103+25		4.80	113.7
103+50		4.70	113.8
103+75		5.20	113.3
104+00		6.50	112.0
104+25		7.80	110.7
105+00		8.00	110.5
See Cor. 106+00		9.70	113.8

Bridge Survey T.F. #4713 North. South. 6

Station	LT	RT	Spikes in
30' 595° E from SE Cor. of Bridge			43 pins 16"
	$\frac{100}{-1}$	$\frac{12}{-1}$	$\frac{8}{0}$
	$\frac{68}{-1}$	$\frac{65}{-3}$	$\frac{15}{-2}$
	$\frac{52}{-7}$	$\frac{30}{-2}$	$\frac{12}{-1.5}$
	$\frac{73}{-2}$	$\frac{70}{-4}$	$\frac{8}{0}$
			$\frac{10}{-2}$
			$\frac{100}{-2}$
			$\frac{105}{-5}$
			$\frac{135}{-5}$
			$\frac{100}{-2.5}$
			$\frac{35}{-3}$
			$\frac{30}{-6}$
			$\frac{15}{-6}$
			$\frac{8}{0}$
			$\frac{8}{0}$
			$\frac{12}{-2.5}$
			$\frac{100}{-2.5}$
			$\frac{50}{0}$
			$\frac{12}{-2.5}$
			$\frac{25}{-4.5}$
			$\frac{65}{-3}$
			$\frac{16}{+3}$
			$\frac{30}{+2}$
			$\frac{75}{+3}$
			$\frac{75}{+3}$
			$\frac{15}{+5}$
			$\frac{75}{+3}$
			$\frac{15}{+3}$
			$\frac{50}{+4}$
			$\frac{75}{+3}$
			$\frac{8}{-2}$
			$\frac{15}{0}$
			$\frac{75}{0}$
			$\frac{15}{-2}$
			$\frac{75}{0}$

Sta. Chs. In So. Sec. Cor.	Levels West Twin Lake Camp Ground Base Sec. Line North.		Elev.
	+	H -	
Ice.	582	10582	100.00
40+00		5.4	100.4
2 chs W.		4.7	101.1
2 40' W.		3.0	102.8
2 50' W Trail.			104.0
2 55' W			105
2 65' W			110
2 85			115
3 00 Trail.			116.
3 50			118.
39+00		4.2	101.6
TP 38+35 7.10	112.62		0.30 105.52
38+25		2.10	110.5
38+00		5.20	107.4
1 ch. E.		5.5	107.1
2 " E.		5.6	107.0
3 " E.		7.1	105.5
4 " E.		9.7	104.9
4+0 E		7.7	100.0
5+00 F Lake.		9.8	102.8
1 ch W.		11.6	101.0
2 " W.		11.6	101.0
3 " W.		8.7	103.9
4 " W.		9.9	102.7
5 " W		8.8	103.8
37+00			
36+00 TP 6.08	110.90		7.80 104.82

Cont. on Page 11

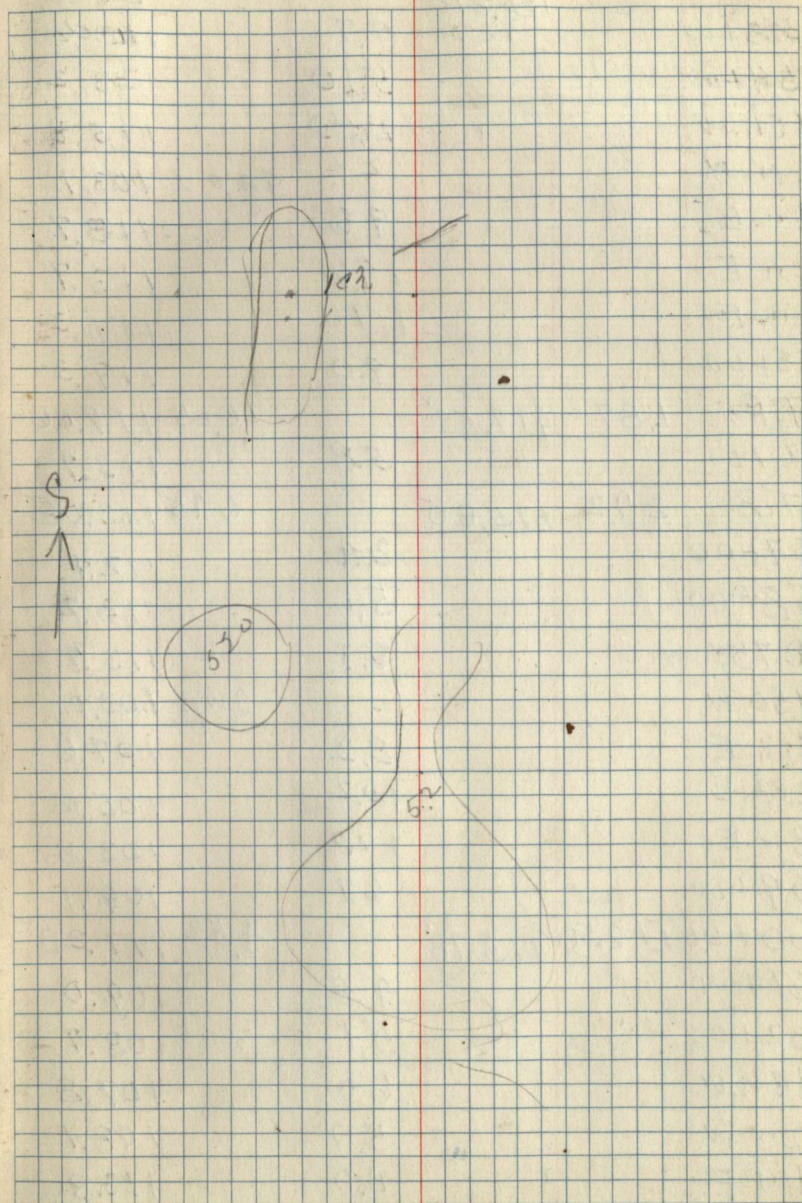


Sta. in
chs.West Twin Lake 11/19/37
Camp Ground.

	H. 1.	—	Err.
42+25 ⁺ Ice.	12.70	142.70	100.00
43+00		12.3	100.4
44+00		11.2	101.5
44+75		9.7	103.0
45+00		5.4	Top of 13409.3
46+00		5.1	107.6
1 ch. W.		1.0	111.7
2 " "		5.0	107.7
0.75 E.		1.8	110.9
1.0 E.		6.2	106.5
1.20 E.		10.0	102.7
47+00		2.50	110.2
T.P.	6.85	119.27	0.28 112.42
48+00		6.2	113.1
49+00		5.9	113.9
50+00		5.2	114.1
1 ch. W.		15.2	104.1
2 " W SWP		16.2	103.1
1 " E.		9.60	109.7
2 " E.		10.3	109.0
3 " "		10.8	108.5
T.P.	9.24	128.31	0.20 119.07
51+00		8.2	120.1
52+00		6.0	122.3
53+00		4.7	123.6

J.A. Gelband. T.
Frank Pafko Rid.

8



Levels for West Twin Lake
Camp Ground

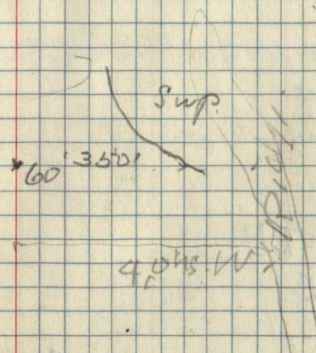
Sta	+	H. I. ✓	-	Elev. ✓
53+00		128.31 ✓	4.7	123.6
54+00			5.10	123.2
1 ch. W.			12.50	115.8
2 u W				Swp. L. 103.1
1" E.			9.6	118.7
2" E.			14.6	113.7
3" E.			17.0	111.3
55+00			9.0	119.3
T.P.	1.87	119.53 ✓		10.65 117.66 ✓
56+00			5.8	113.7
T.P.	2.72	115.80 ✓		6.45 113.08 ✓
57+00			3.4	112.4
58+00			5.1	110.7
D. 750 W.			2.1	113.7
150 W.				Swp. 103.1
1 ch. E.			8.2	107.6
2 ch. E.			10.2	105.6
3" E.			12.0	103.8
59+00			6.7	109.1
60+00	T.P. 2.50	113.78 ✓		4.52 111.28 ✓
61+00			4.8	109.0
62+00			5.1	108.7
1 ch. W.			6.0	107.8
2 u W			5.7	108.1
1" E.			0.0	113.8
1.25 E.			L.R.	100.0

11/19/37

East

west

9



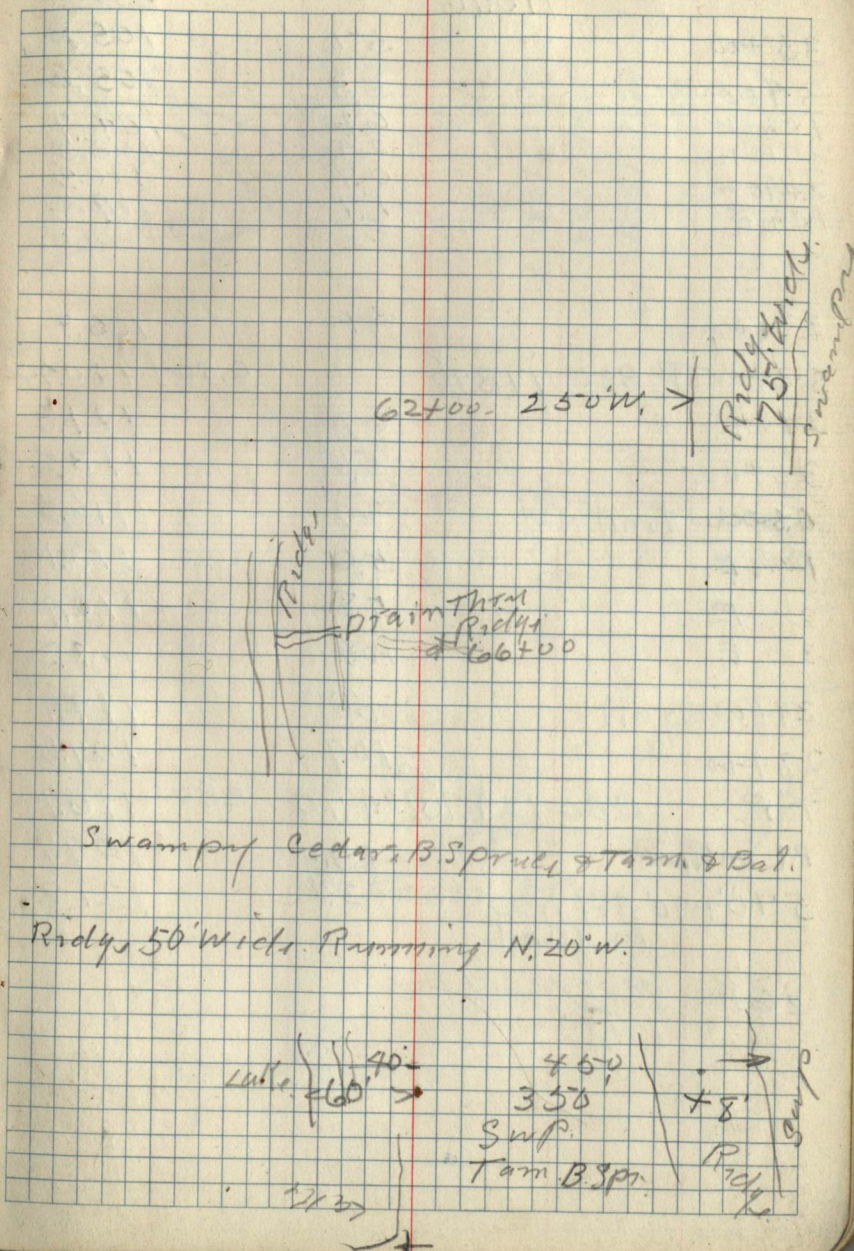
Levels for West Twin Lake
Camp Ground.

Sta.	+	H ₁	-	ELV.
63+00		113.70	5.8	108.0
64+00	TP 5.28	113.34	5.72	108.06
65+00			5.9	107.9
66+00			5.1	108.2
1 Ch. E.			2.8	110.5
150' E			Lake	100.0
1 Ch. W.			5.7	108.2
2 " W.			5.1	108.2
Ice Lake	13.95	113.95		100.00
TP Sta 62	4.57	113.02	5.50	108.45
63+00			4.8	108.2
64+00			4.4	108.6
65+00			5.8	107.2
66+00			5.3	109.7
90' E.			2.4	110.6
110' E Lake				100.0
100' W.			5.0	108.0
200' W			5.0	108.0
250' W			3.0	110.0
350' W			0.0	113.0
68+00			5.2	107.8
70+00 TP			4.05	108.97
40' E			2.00	
71+00				110.0
72+00				113.0
74+00				115.0

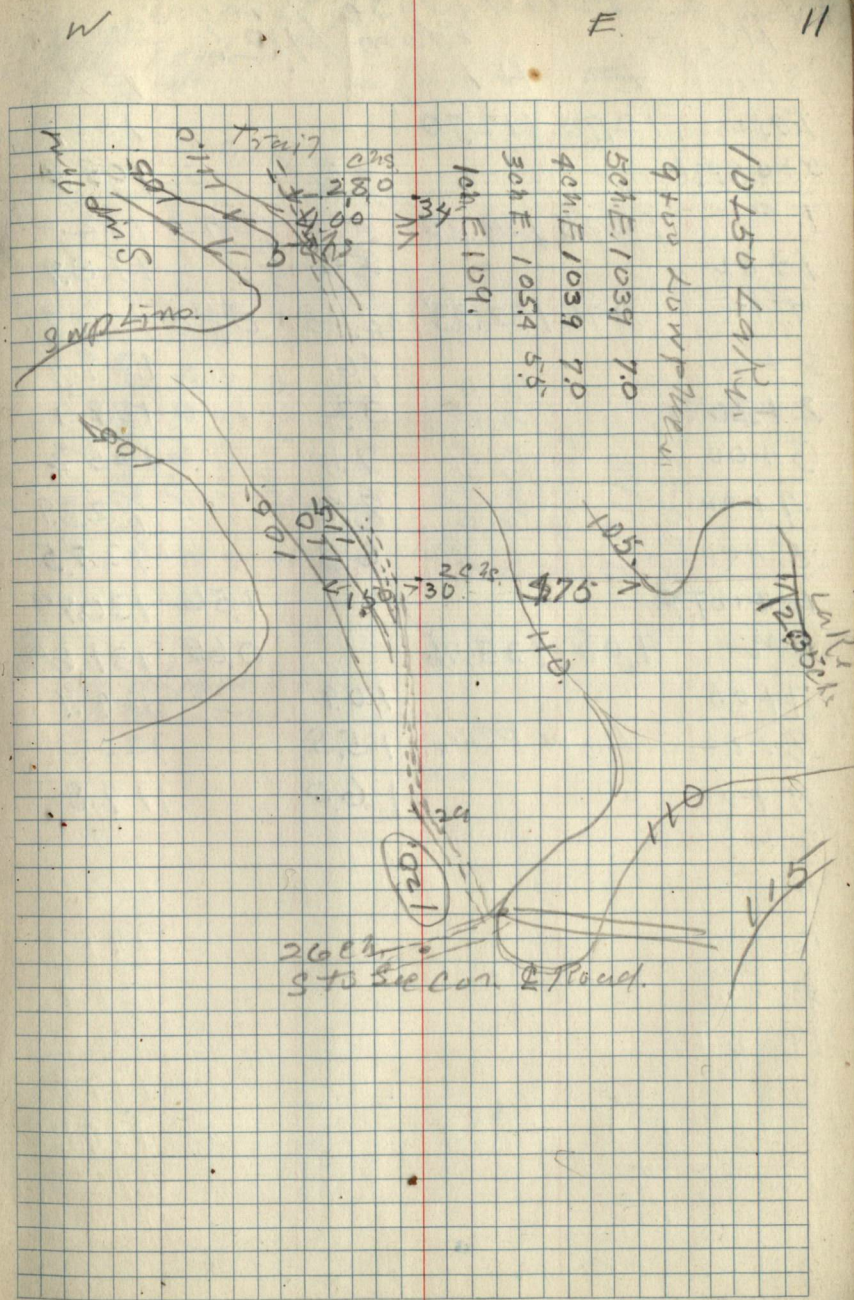
11/19/37

12/2/37

10



	H	I	-		EW.
				11090	
35+00				5.1	105.8
34+00				5.3	105.6
1 ch. W				6.2	104.7
2 11 W.				2.4	108.5
2+90 W.				0.9	110.0
1 ch. E.				1.7	109.2
33+00				4.0	106.9
32+00 T.P. B30	118.70		0.50		110.40
31+00				6.9	111.8
30+00				5.5	113.2
0.60 ch. Trail. NW.				2.2	116.5
1 ch. E.				5.6	113.1
2 " E.				7.8	110.9
3 " E.				10.4	108.3
29+00 Trail				3.8	114.9
28+00				10.9	107.8
T.P.	8.80	124.70	2.70	2.80	115.90
P1 on Road.				15.0	109.7
570'+90' E of line on Road				3.5	121.2
26+00 # of Road					



S. f. m. Mc.

Main Base going So.
From M.C.

Sta.	+ H1	-	EV
Ice-	12.70	112.70	100.00
0+00 M.C.		3.6	109.1
T.P.	12.25	124.25	0.70 112.00
1+00		5.4	11.89
T.P.	8.96	132.33	0.88 123.37
2+00		4.6	127.7
2+20		3.2	129.1
3+00		7.1	125.2
4+00		8.4	123.9
5+00		6.8	125.5
6+00 T.P.		1.56	130.77
B.M.	4.08	135.76	0.65 131.68
7+00		10.9	124.9
8+00	Low Place	15.5	120.3
9+00		16.0	119.8

10
11
12
13
14

East Twin Lake Camp G-12

J. G. Gullhang T. Rich.
F. Pakko W

12/3/37

N E

Level	Height	Notes
6	122.69	124.9
5	122.40	125.9
4	122.99	124.38
3	116.31	118.14
2	131.51	117.51
1	121.91	124.77
AS		20.40
1-E	263.60	
2-E	263.70	
3-E	223	
4-E	153	
4+50	14.4	

B.M. Nail in
4" Birch
of Stake

Low

10

#	East. Twin Lake Camp Gr.				East. Twin Lake Camp Gr.
#1	East. W. Base				
chs.					
3 rd	+ H1	-			EW
BM.	4.08	135.76			131.68
1 ch. E			8.9		126.9
" E.T.P.	1.96	125.20		125.2	123.24
2" E			4.8		120.4
3" E			9.0		116.2
4" E			11.7		113.5
5" TP	6.40	121.20	1.04	10.40	114.80
6" E			5.3		115.9
7" E			6.2		115.0
8" E	Lake				100.0
6+30 BM			3.15		118.05
BM.	3.35	135.03			131.68
1 ch. W, #1 Base			5.5		129.5
1" W			9.8		125.2
3" W					118.2
3 + 95					115.2
4" W					116.2
5" "					125.0
7 chs. 3	Main Base		10.6		124.4
8" "	TP		15.2		119.8
9" "			15.2		119.8
TP	0.50	125.28		10.25	124.78
10 chs.			8.0		117.3
1 ch. W, #2 Base			12.3		113.0
3" W	West edge of Pond				113.0
11 + 10 T.P.			9.15		116.13

J. A. Gillum
12/3/37 N.

125.2

75' $\frac{1}{2}$
35' $\frac{1}{15}$

107' $\frac{1}{2}$ = 121.6

30' $\frac{1}{2}$ = 118.5

2-8' = 119.9

S

BM on 2" Ash. Stp. Fresh end.

Nail in Birch 4" SW of Stale - Main Base.

H.I.
125.28

12-3 Main Base

9.60 116.2

13-3

7.9 117.9

#2 East + west Base

Chs. Sta.	+	# 1	-	Elev.
Main Base Sta. 10		125.28		
1-E.T.P. 7.80		126.83	6.25	119.03
2-E			6.5	120.3
3-			5.6	121.2
4-			5.0	121.8
4+50 Trail, SE				
5-E			5.7	121.1
6-E			5.1	121.7
7-E.T.P. 7.20		125.73	8.30	118.53
8-E			8.1	117.6
9-E			5.0	120.7
10-E.T.P. 11.25		136.13	0.85	124.88
11-E			5.0	131.1
12-E			11.9	124.2
13-E			11.6	124.5
14-E			7.8	126.3
15-E			5.2	130.9
16-E			4.70	131.43

East Twin Lake Camp Cr. 1A

N.

S

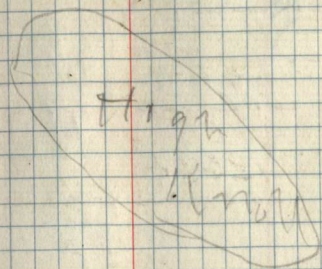
3 East and West Base

Sta.	H	1	-	ERU.
Main Base St. 14		123.63	5.3	118.3
1-W.			5.9	117.7
2-W.			7.5	116.1
3-W.			7.4	114.2
4-W.			9.2	114.9
1-E.			6.7	116.9
2-E.			11.2	112.9
3-E.			8.8	119.8
4-E.			6.2	117.9
5-E.			9.5	119.1
5-TP 12.67	135.20		1.10	122.53 ✓
6-E.			11.5	123.7
7-E.			6.3	128.9
8-E.			4.8	130.4
8-TP 9.35	144.30		0.25	134.95 ✓
9-E.			7.2	137.1
10-E.			5.9	138.9
11-E.			4.8	139.5 ✓
12-TP 5.00	136.85		12.45	131.85
13-E.			5.7	131.1
14-E.			5.6	131.2
15-E.			5.5	131.3
16-E.			5.5	131.3 ✓
17-TP 5.30	141.90		0.25	136.60
18-			7.7	137.0
19-			15.8	134.2
20-E.				126.1

T.P. 7.50 123.63 116.13

East Twin Camp Cr. 15

Trail SE



W. side of Balsam. End.

T.P. at 11+10 Main Base.

Black Palmer RS State
 State. Sewer. Sta. +
 B.M. + HI - Rod Elev. 100.00

upper end Top of 6" of sewer 14.05 5.24

Rod 0.820

5.31

5.38

5.42

5.52

5.58

5.65

5.71

15' 5.80

Lower end Top of 6" 14.68 5.86

Length of stick 8.82

12/17/37
 JAG/Kong.

	Empt.	Rod
	5.24 ✓	
	5.31 ✓	
16.6	5.38 ✓	
16.6	5.42 ✓	
19.3	5.52 ✓	
23.1	5.58 ✓	
24.	5.65 ✓	
23.1	5.71 ✓	
14.5	5.80 ✓	
17.1	5.86 ✓	
14.5		

1/21/38
11:00 AM.

BM	f	H1	-	ELV.
BM.	6.37	1341.51		1335.14
#330 TP	1.40	1331.35	11.56	1329.95
T.P.	1.50	1321.35	11.50	1319.85
T.P.	1.83	1311.66	11.52	1309.83
T.P.	5.20	1309.50	7.36	1309.30
B.M.	2.70	1308.73	3.77	1306.03

R.R. Spk
in "Oak" "

Lake B.M. (approx.)	4.90			1303.83
Lake Cass.	7.20			1301.53
Miss. R.	8.90			1299.83

Cass Lake. (approx.) 1302.83
9/29/37

1/21/38

Water at RITIMI Lake. 3:00 P.M. transfer by water level

Water at RITIMI Lake.	6.65	1308.18		1301.53
1st cabin Floor Bottom.		3.90		1304.28
2nd Cabin Floor Bottom.		3.00		1305.18
Ground Elev.		4.80		1303.38

Levels at Knutson Dam: 11
JAGJellgang 1/22/38.

→ 150' S. of Dam gate R.R. Spk in
8" Oak.
9/29/37
Elev. 102.50 Lake elev. 101.50

Jan 22-1938

Frage 2m
1304.08
← Cabin just North of Bridge.
By War. Dept. Map.

W.C. to

M.C. Birch 7°S 35°E 30

Ash 6°S 40°W 15 1/2

Orig. Meander Notes starting at North M.C.
79 Lks. North of G.L.O. W.C. to M.C.

S. 38°W. 4.50

South 2.40

S. 33°E 3.30

South 2.10

S. 20°W. 2.50

S. 38°E 2.77 to M.C.

Bottom Cab. North H. 1
Floor 4.20 1309.38

1305.18

" 4.68 1308.96

1304.28

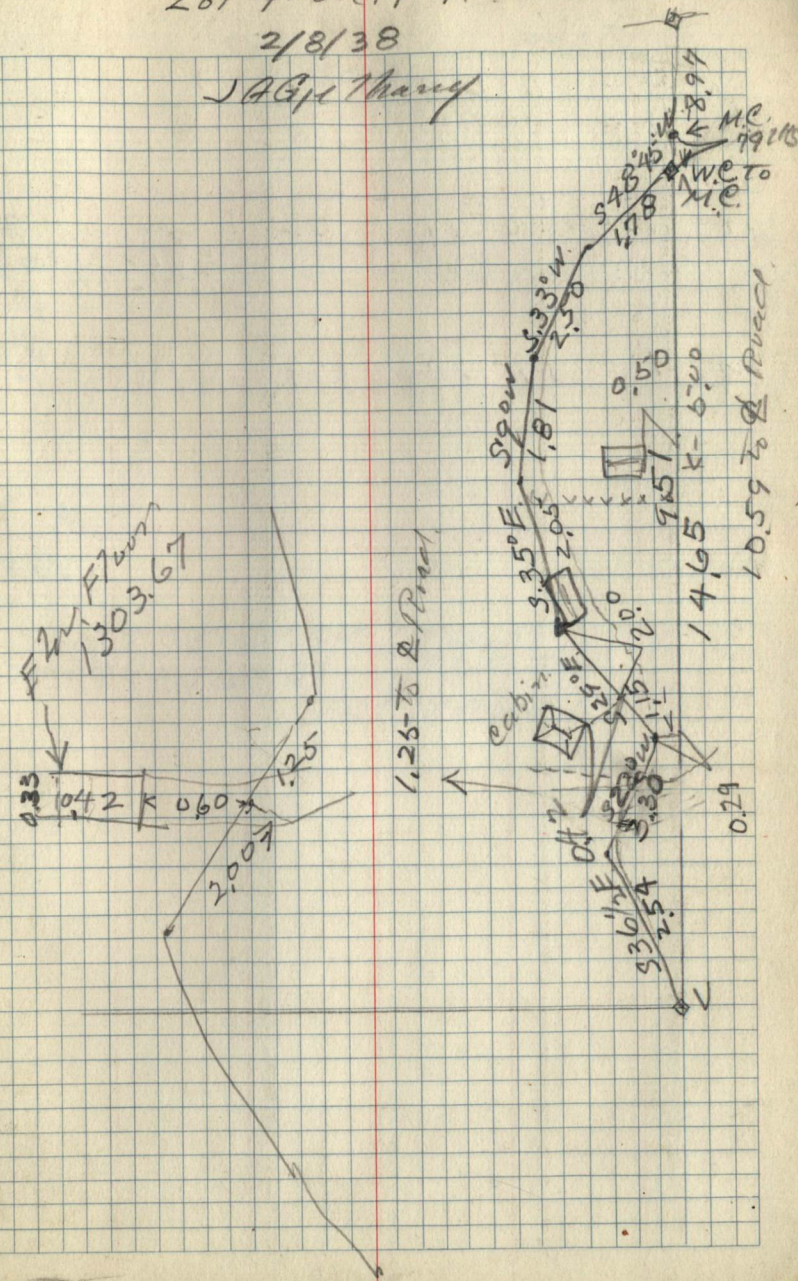
Cab. S. 1309.17 Mean

Floor H. 5.50 1303.67

Lot 4 - Sec. 7 T146 N. R. 30. 18

2/8/38

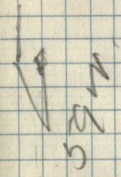
JAG & Thany



S 89° E
80.46

west.

S 31° 32' W
38.35



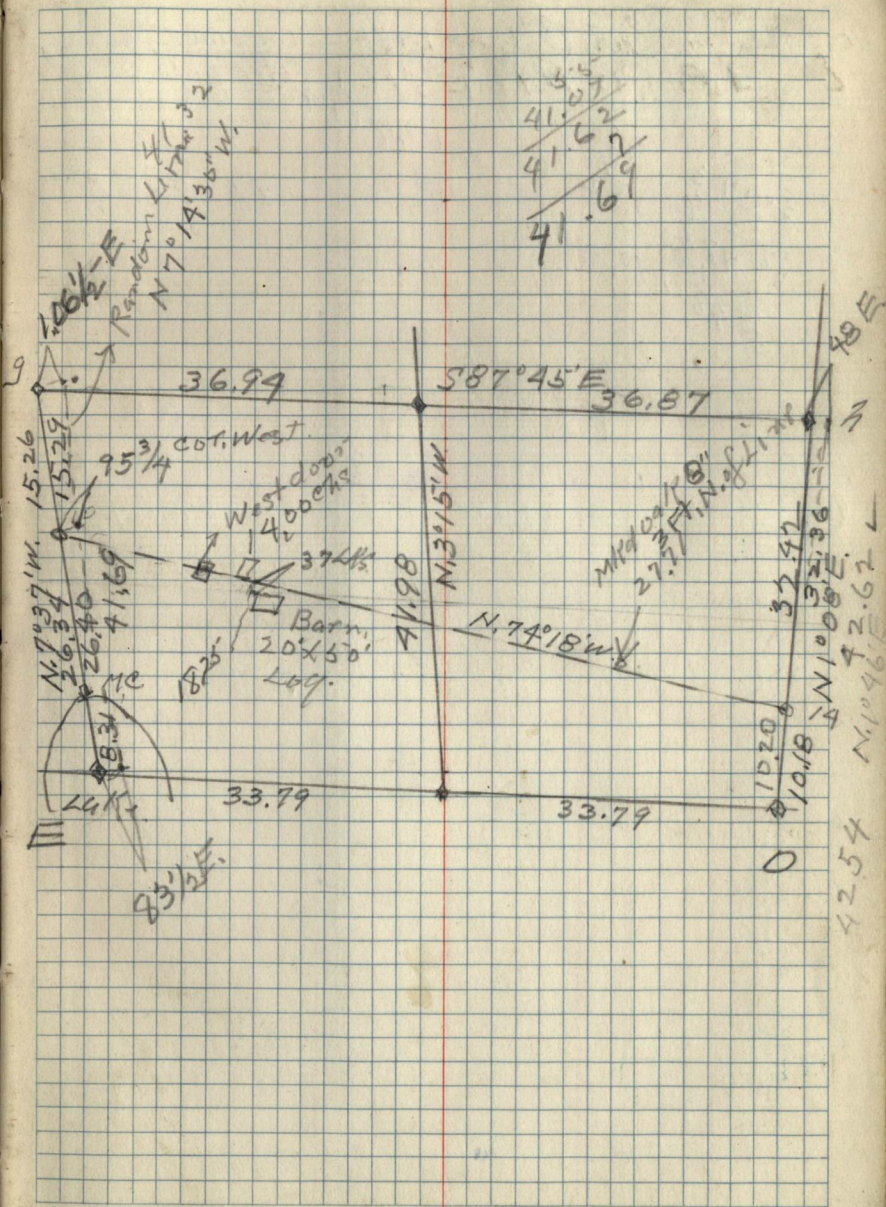
Birch 7' S. 57 1/2° W 44 1/2 } Placech
Tangle 6" N. 5 1/2° W 37 1/2 } F.S. Paster
Dist. scribbled. O.K.

S 10° W

1996 E 0 1/2 L

J.A. Giffney 3/8/38
 Sec. 29-T. 141 N. R. 28 W. 20

Cor. at.	Spec.	Dia	Bearing	Dist.	Remarks
MC	N. Pin	14"	N 4° 10' E	405 1/2	Old B.T.
10-	W Pin	10"	S 17° W	52	ES. Post Set Oak Post 3" x 60"
14-	N. Pin	8"	N 74° W	127	Mkd. B.T. Set 3" x 6" Oak Post 3/10/38



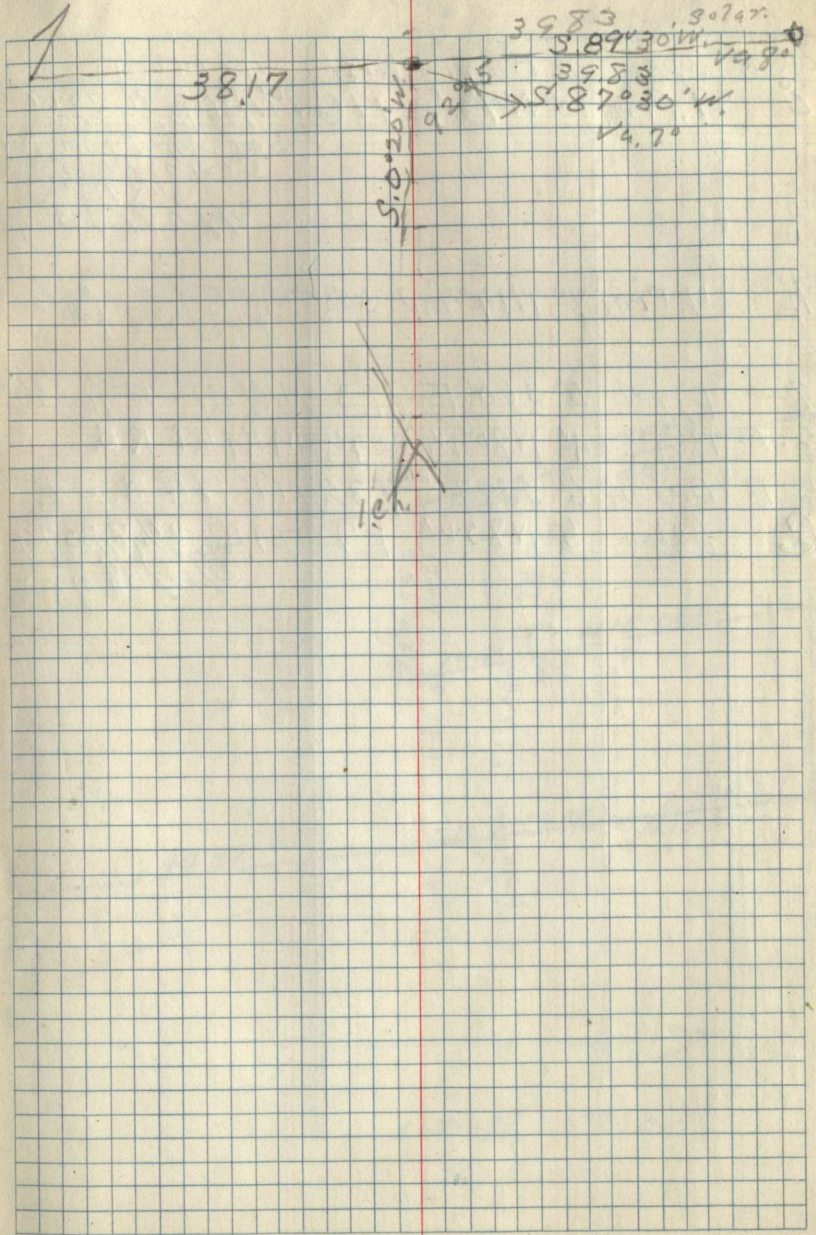
$$\begin{array}{r} 30513 \\ 3 \\ \hline 30474 \\ 14 \\ \hline 30488 \end{array}$$

$$\frac{82}{177}$$

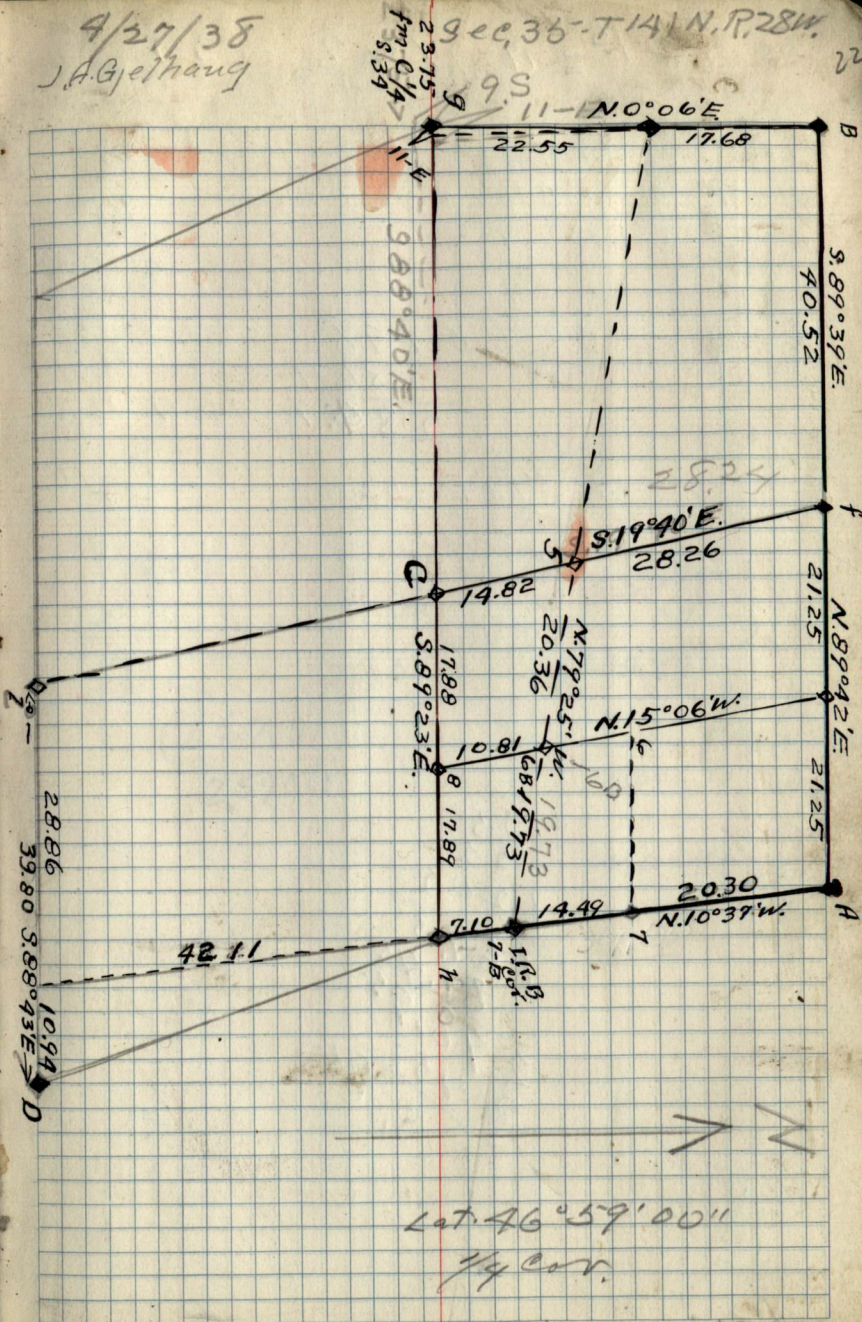
 41° W
 1.4
 47° 01' 45" W

1.34 S,

Sec. 24 - T14N R31W. 21



Cor. at	Spec.	Du Barry Dist	Remarks
C	J. Pine	12' N43°E 116	Mkd. BT and set 3/4" Iron rod cedar post 3 1/2 x 40" 4/27/38
H	W Pine	7" N140°W 50 1/2	Mkd. BT set Cedar post 3 1/2 x 48"
8-	Birch	5" S60°E 13	Mkd. BT E 1/6 S 35-
6-B	B. Spruce	4" N80°W 24 3/4	Mkd. BT R.B.
5-B	B. of Birch	6" S39°W 73 1/2	Mkd. BT R.B.
C	Aspen	5" N85°W 17	Mkd. C 1/4 S. 35- 5/13/38



L. 15 11 142 - 37

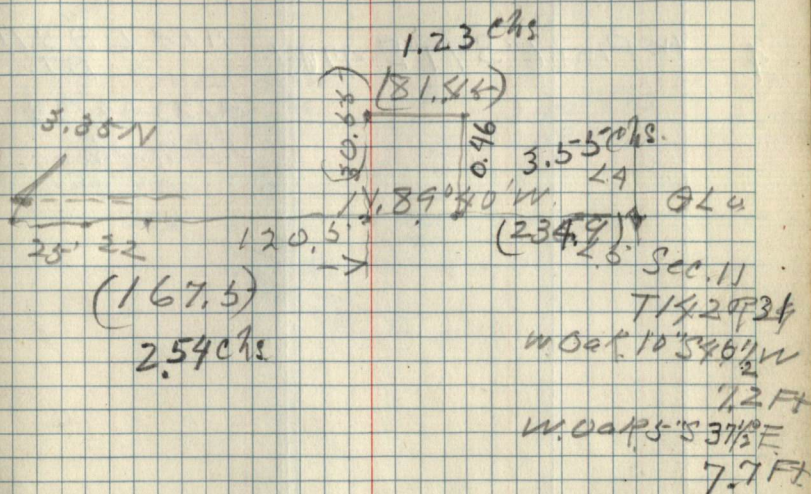
198
369
234.9

25
22
120.5
167.5
81.45
48.95
246.95
23

1.62

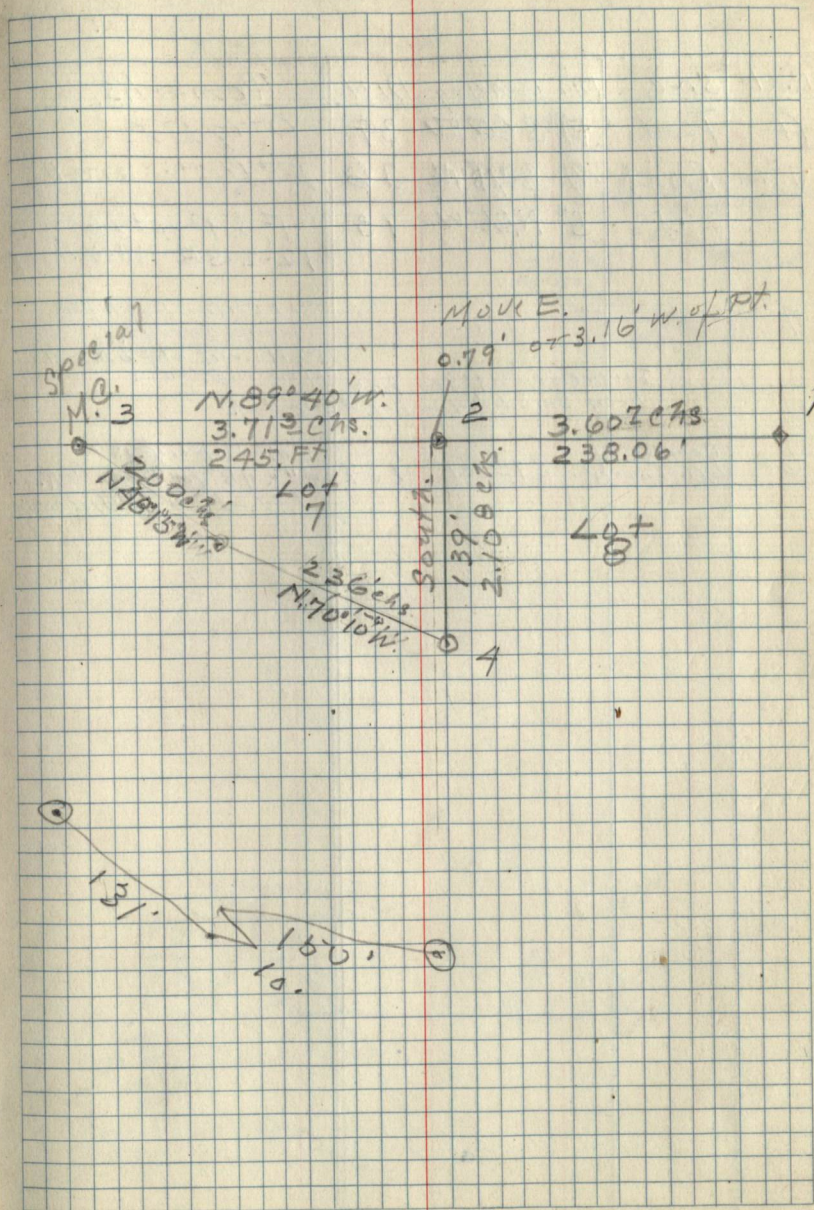
369

23



Special Survey of Lot 5 Sec. 11
T. 142 N. R. 31 W.

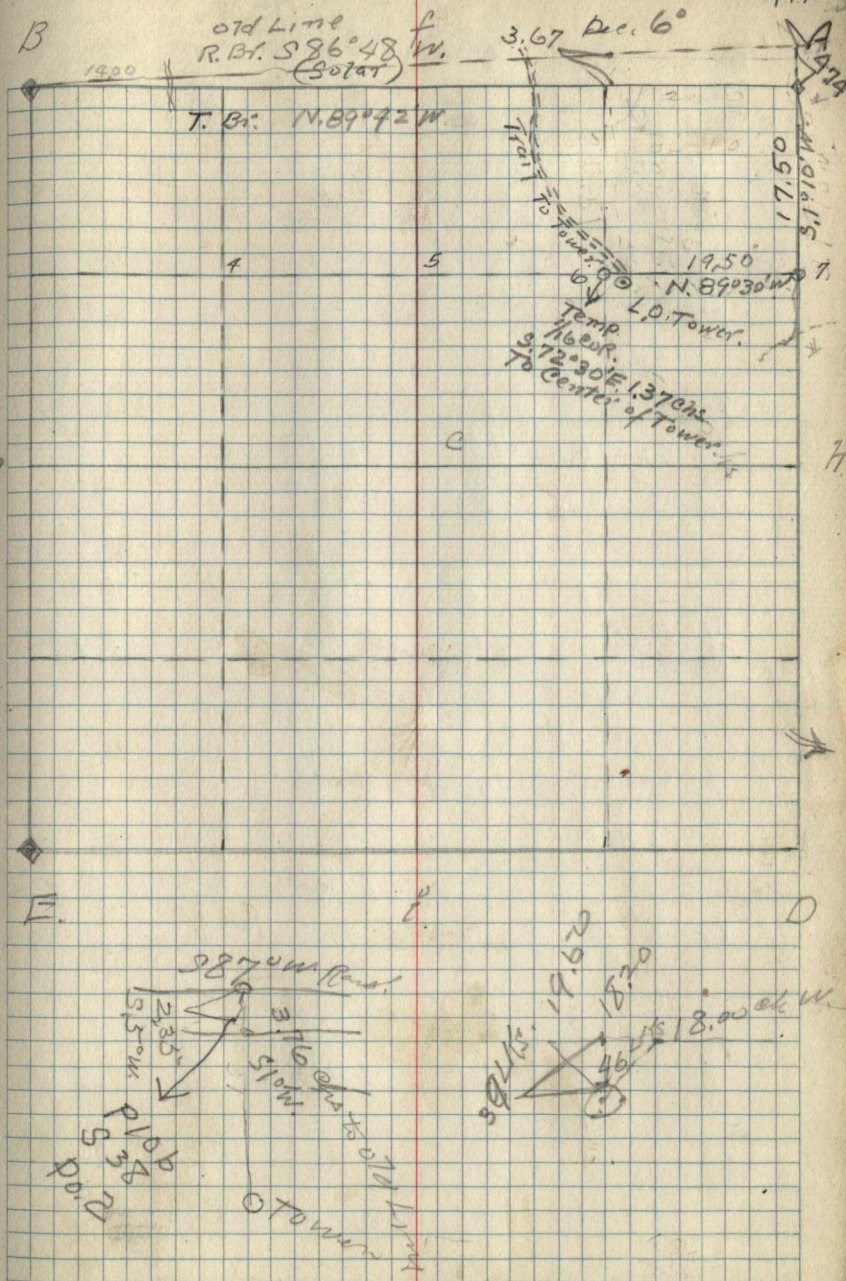
COR. at	Spec	dia	Bearing	Dist	Remarks
1	B. Oak	10"	S 46° 36' W	12	Measured to Center of tree.
"	"	5"	S 37° 30' E	12	BT ass. Cap. on 2" Iron Pipe. G.L.D. 8/23/38
2	W. Oak	5"	S 35° W	2.1 Ks.	Set 2" x 18" Iron Pipe in Cement Mk'd. B.T. L. 7 SH BT.
4	W. Pine	6"	S 77° E	47.1 Ks.	Mk'd. L B SH BT. 8/23-24/38 J. A. G. Hany.



COR. at	Spec	Dia	Bearing	Dist	Remarks
A	Tam.	5"	S 60° E	39	Orig BT.
✓	Birch	8"	S 21° W	36	F.S. Post on orig BT.
	"	5"	N 66° W	13	F.S. Post 12-2-38 J.A. B. G. Thayer
7					Set Cedar Post for Temp Corner. Followed old blazed line N. 89° 30' W.
Indications sec. has been subdivided by county.					
6-	Center of L.O. Town		S 72° 30' E	137	Set Maple post 4" x 48" for Temp Cor. 12/2/38 J.A. B. G. Thayer

Sec. 1. T. 149 N. R. 28 W.

25, 177-W



NE-NE Sec 1
T149 R28

N 89° 30' W

Wagnum Lake, O. T. T. 506-A.

6/14/39

Sta.	ΔL	Curv	Ex.	Tang.
0+00				T.T.# ?
1+00 P.C.	S 21° 30' W			
1+43.7 P.L.	23 1/2°	200' P.	4 Ft.	40'
1+83.7 P.T.	S 2° E			
3+22.6 P.T.	S 24° E	22°	200' P.	4 Ft. 41'
4+74.2	S 12° E	12°	400'	2 Ft. 42'
7+17.5 P.L.	18°	250'	3'	40'
	S 30° E	18°	250'	3' 40'
10+39.9 P.L.	10 1/2°	200'	1'	19'
12+95.5	S 19° 30' E			
14+72 P.L.	18 1/2°	300'	2'	33'
	S. 7° E.			
	53 1/2°	100'	12'	50'
16+61.9 P.L.	S 46° 30' W			
17+70.4 P.L.	29°	100'	3'	26'
	S 75° 30' W	20°		
18+56.3	31 1/2°	100'	4'	29'
	N 73° W.	31°		
20+40 P.L.	68°	100'	21'	68'
	S 39° W			

23.1 Wagnum Lake, O.

21

Drop. 10% grade.
 2+65 Place 12' C.M.C.
 10% grade to 4+74

80% grade down

110' E. to Sec. Co.

23.1 Project No. 424
Wagner Lake L.O.

Sta.	539m	Δ	Radius	Ey	Tangt
23+00 Pl		18°	500'	6'	80'
S	S 18° W				

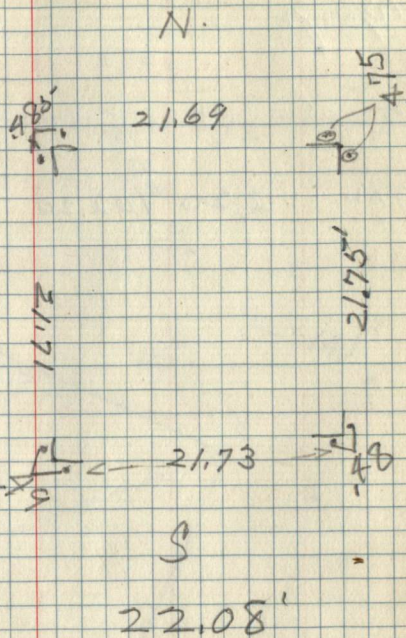
25+00 Pl

37 1/2° Lt

S 19° 30' E

25+61 = Lot Im 300' and 150' E of L.O. Sta

26+04 Pl



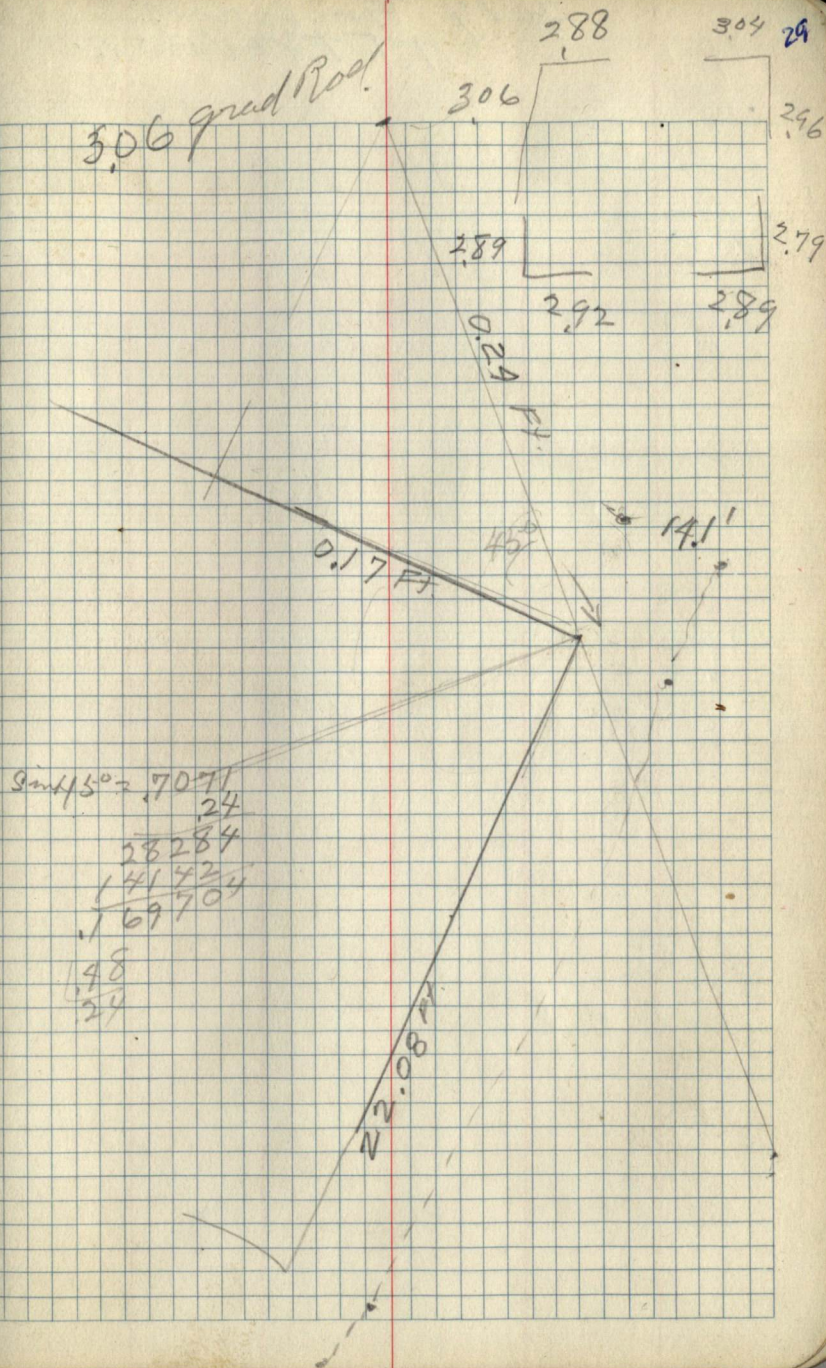
23° 17.1
~~23° 18.1~~
 11.65
 18.1

New Gratten LD

Sta	+	H.I.	-	F. Lev.
BM	195	101.95		100.00
Highsgn			3.72	98.23
			2.72	

BM	2.20	102.20	3.06	ELM
				99.14

306 grad Road



14 Gen. Surveys
T. J. Travers

Grove Lake Bridge

T.T. #503 Project No 306.

Sta.	+	H.L.	-	Elev.
B.M.	2.87			10000
+ Floodstop.		2.60	Exp. Pav.	10027
Stringers		9.01		98.76
Normal water		8.30		94.57

B.M. in 12" Birch Stp.

296	60' South of Bridge
190	12' west of Center Line
360	

183+34

@

180

Sta. 183+34

Center of Bridge

Sand-Quandary Lake
Bridges.

80.8 M.

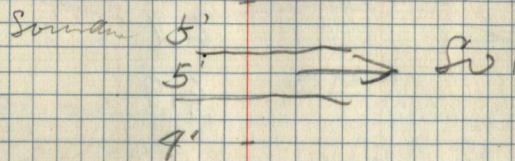
32

Sta	+ H.I.	- Bearing	Elev.
BM 101+50	7.02	107.02	3.7 N89°31'E 103.3
101+00			5.7 101.3
100+50			5.7 101.3
100+00 PJ			5.2 N 101.8
99+88			7.7 99.3
99+56			9.5 97.5
99+60			10.20 96.82
99+36			11.4 N.79°23'E 95.6
99+33			12.2 94.8
99+27			12.2 94.8
99+23			11.2 95.8
99+31 1/2 C of Cr.			
99+00		10.4	96.6
98+50		11.2	95.8
98+25		10.2	96.8
98+00		9.6	97.4
97+50		8.3	98.7
97+00		6.6	100.4

BM Nail in
N. Pine / STP. 16" 16 Ft. so. of Sta. 99+70
Elev. 100.00

~~A-6/1~~

80.8
31



99+00 - 3'

Low

98+75 3'

98+50 1'

~~A-6/1~~

98+25 1'

Sand Lake to Foy Lake
Bridges

Sta	+ H.I.	- Bear.	Elev
BM	4.55	104.55	100.00
33+00		3.2	101.9
33+50		4.5	100.1
34+00		3.2	101.9
34+50		5.0	99.6
		S 74° 45' E.	
35+00		6.0	98.6
+16		6.2	98.4
35+24	Center Br.	6.6	98.0
35+30		6.1	98.5
35+30		6.0	98.6
36+00		5.5	99.1
36+50		6.4	98.2
37+00		5.1	99.5
37+50		3.6	101.0

82.0

33

B.M. SPK in Aspen 6"
13.8 Ft. So. of Sta. 35+00
Elev. 100.00

A-b
/ 1

Sandy clay
Gravel

Soundings

2' middle
of Creek
Gravel

⊙ B.M.

Aspen 6"
13.8' So. of
Sta 35+00

98+00
63.36

34+64

82.0
~~80.8~~
81.2

5280
12

10560
5280

6336.0

Fox Lake to Holland
Bridge

Sta.	+ H 1	- Br	Levi
B.M.	4.30	104.30	100.00
25+75		0.00	104.3
25+50		2.3	102.0
25+00		9.30	S.D. 40 E 100.0
24+60		5.1	99.2
24+50	Center Bridge	6.1	98.2
24+40		5.1	99.2
24+25		5.1	99.2
24+00		5.2	99.1
23+50		4.7	99.6
23+00		3.6	100.8

83.35 M.

86.95 34
out.

B.M. S.P. in 3" willow.

23.7 Ft East of Sta 24+48

High Field

A-b
/1

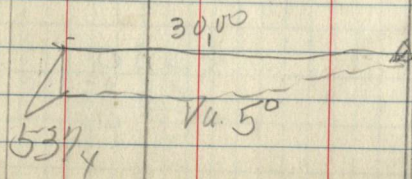
Fox
Lake

mosh

5280
1.331
0

COR. at	spec	Dia	Bearing	Dist	Remarks
MC	Cedar	10"	S 76° E	16	Orig Post 8/18/34
	"	6"	N 35° E	6	FS Post for Orig Post 4 1/4

Day Lake L.O.
Lat. 47° 29' 57"

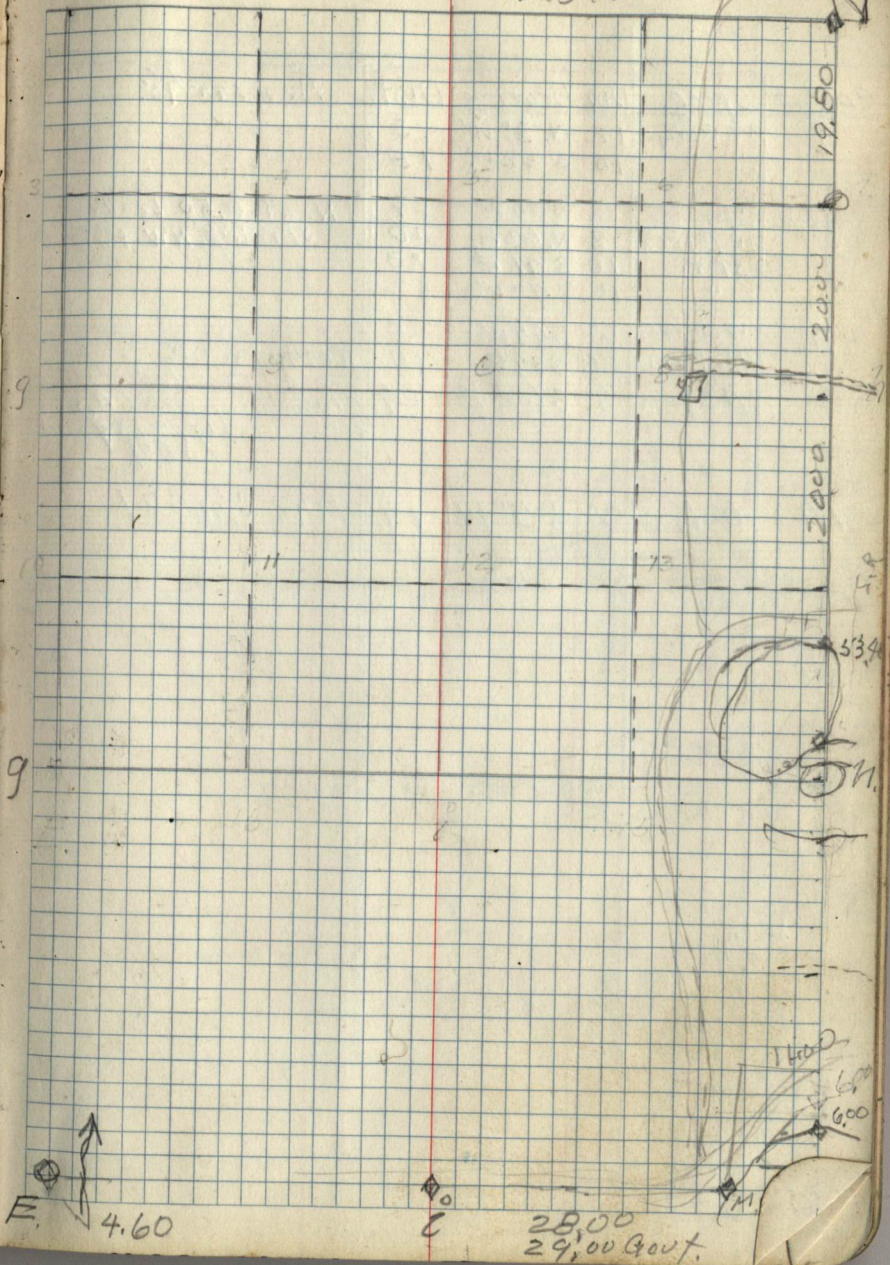


Sec. 1 - T. 60 N. R. 26 W. 4th P.M.M. 35

B

2

f Va 50° 15'



CoRat	Spec.	Diq	Bearing	Dist	Remarks
9	W. Pine	12	N. 3° W	13	
	" "	10	S 52° W	18	
D	Spruce	12	N 30° W	24	N. at 0.50 Leav spr. Snp NW & SE
	W. Birch	8	N. 62° E	20	
	SPR.	10	S 41° E	23	
	"	10	S 72° W	32	
11.	W. Birch	6'	S 47° W	5	Pottery. OK F.S. Post Iscribed Post Co 11/17/39 1/5/49
	N. Pine	20'	S 34° E	10	
	Aspen	3'	S 60° E	29	
14	OAK	3'	S 5° W	17	MK 1 S 1/6 S 21

6 1/4
3 1/4
5 1/4
4 1/4

Sec. 21-T. 58N. R. 25W.

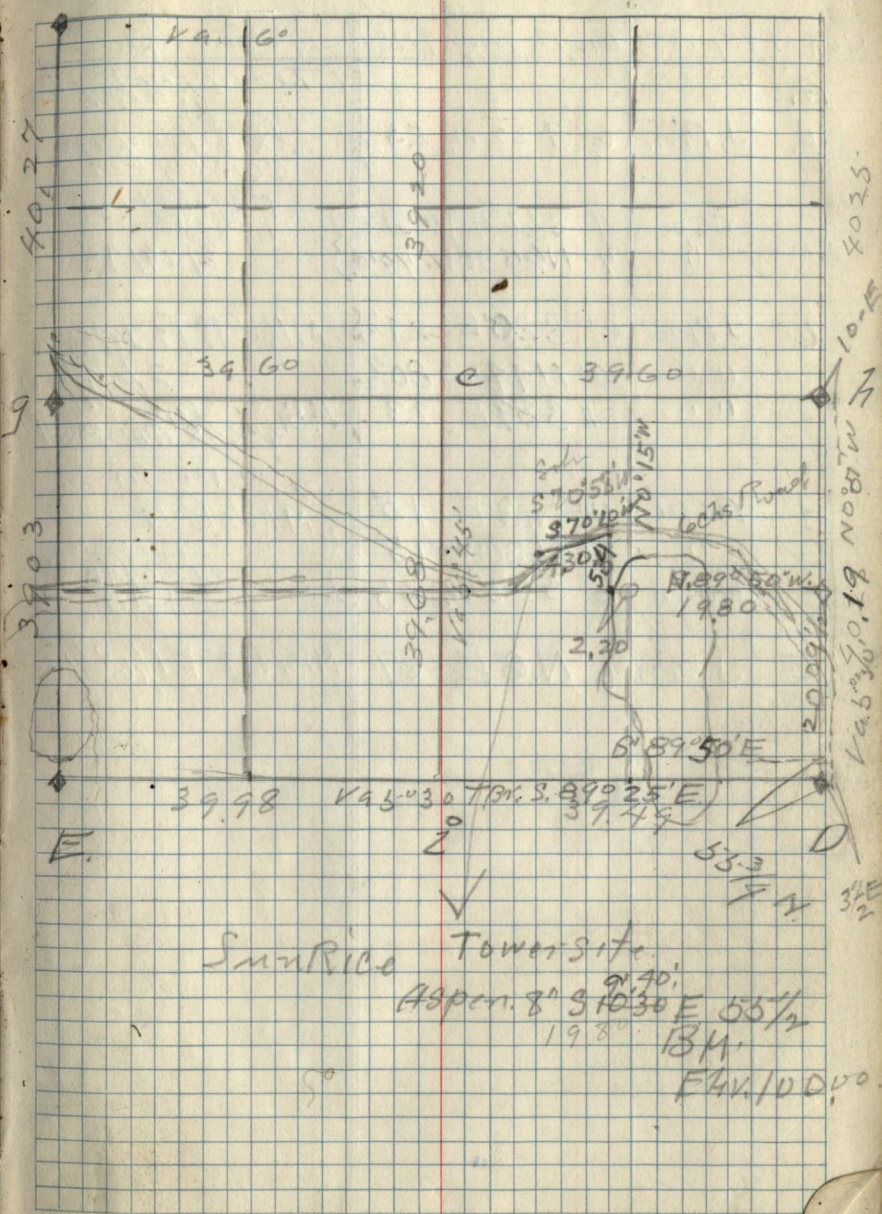
B

3960

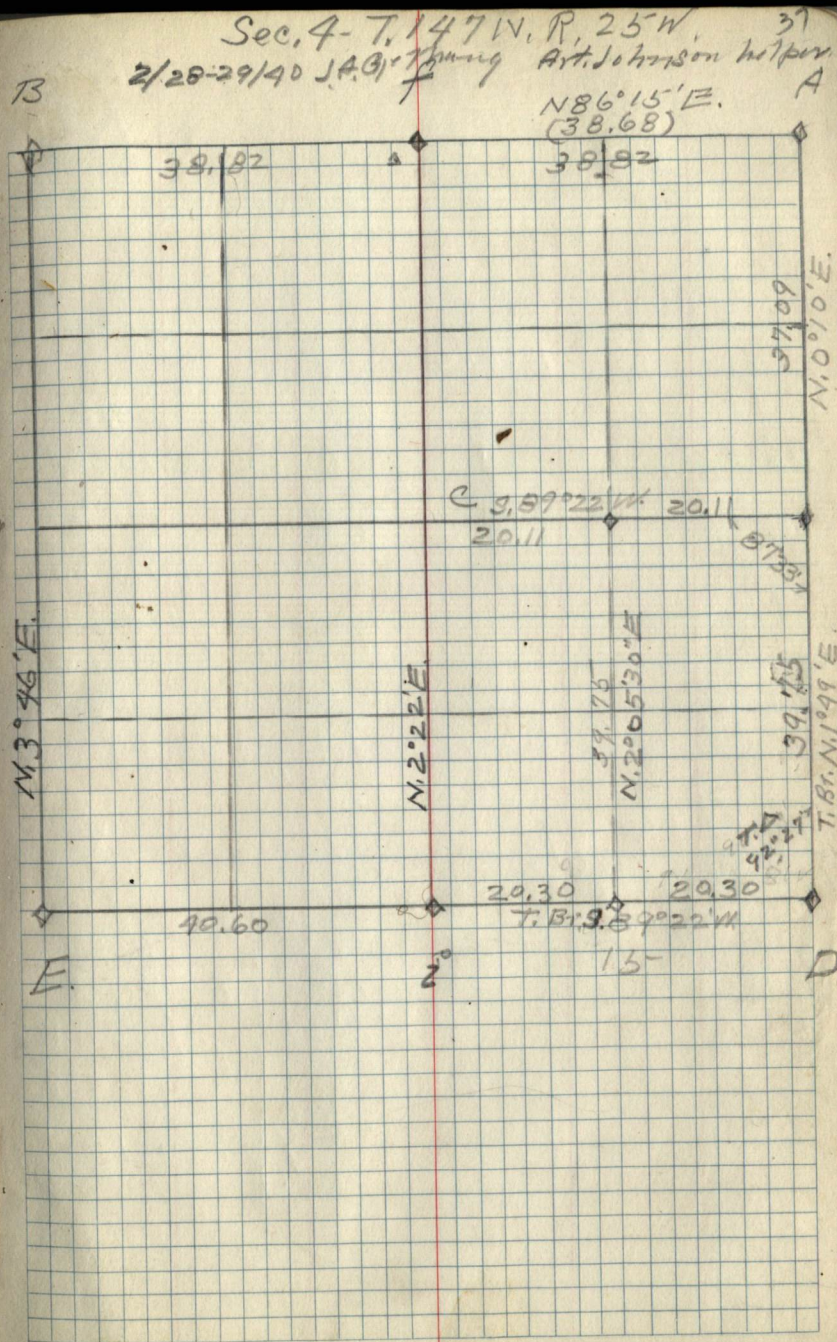
f

3960

36
A



Cor. at	Spec.	Dir Bearing	Dist	Remarks
A.				1" Iron p/ps by Co.
f.	J. Pin	6" S 22° W	25 3/4	FS Post 2" x 20" Iron pipe Co. R. by Co.
n.	Aspen	7" S 66° 45' E	59 1/2	FS Post Co. B.T.S. OR
	"	7" N 65° 30' W	79 1/2	2/29/40
i.	J. Pin	4" S 20° E	21 1/4	Mkd. B.T.S. JAG
	"	4" N 49° W	80 1/2	2/29/40
	"	3" S 89° E	23	FS Post 4" x 48" Aspen Post
B.	Aspen	7" N. 3° E	15	FS Post Mkd. B.T.S.
	"	7" N. 30° W	15	3" Cedar Post
	Asp	6" S 23° W	23	2/29/40 JAG
15	J. Pin	6" N. 6° E	69	Mkd. B.T.S. E 1/16 S 4



18
 66
~~108~~
~~118~~
 188

114' N. 14° 07' E.
 388'
 Iron Pt.
 1186' to
 W. 1/4 Sec.

250' ← 279' → 268.5'
 S 6° 50' W.

204.5'

Sy

3/29/40 JAG Gehring. 39
 T. 59 N. R. 26 W. 4 1/2 P. Mer.

← 1184' West to C 1/4 Cor. S. 187

Right of way
 for Electric Pole
 Line

1108.5'
 S. 12° 25' 22" W.
 389.5'

S. 7° 0' W.
 528'
 MARY ALLEY
 March 17

State Highway # 38

Sta	+	H.L	-	ELV
MSBM	5.40	1313.40		1308.00
FS.BM	3.68	1313.40		1309.715
Sta	107+50		4.35	1309.05
Bot. of Bridge		S. Side	3.22	1310.18
" " " "		N. Side	3.26	1310.14
TP	4.50	1308.06	9.84	1303.56
107+50			9.60	1298.36
106+50			5.40	1302.66
105+50			5.13	1302.93
105+00			5.40	1300.46
104+50			7.20	1300.86
104+00			6.70	1301.36
103+50			3.60	1304.46
103+00	11.68	1318.26	1.48	1306.58
102+50			9.80	1308.46
BM			4.94	1313.32
102+00			6.00	1312.26
101+50	8.20	1326.22	0.24	1318.02
101+00			9.00	1317.22
100+50			7.35	1318.87
100+00	5.98	1324.40	6.80	1319.42
99+50			7.00	1316.4
99+00			7.3	1316.1
98+50			6.30	1317.1
98+00			7.00	1316.4
97+50			8.5	1315.9

Mississippi Bridge 40
 4/22/40
 Project # 222
 #201 Burns Lake Bridge
 T.I. 469

Sta	+	H.L	-	ELV
Cator Hill				1309.05
Fill	1.70			1308.03
Fill	2.30			1305.00
Fill	1.70			1304.63
Fill	4.2			1304.63
Fill	2.0			1304.63
Fill	3.8			1304.63
Fill	3.3			1304.63
0.64	Fill			1305.00
0.15	Fill			1306.73
0.0	Grade			1308.46
1.8	cut			1310.42
5.6	cut			1312.42
2.8	cut			1314.42
2.5	cut			1316.42
1.0	cut			1318.42
Fill	0.8			1317.2
cut	0.2			1315.9
"	1.3			1315.8
cut	0.7			1315.7
cut	0.3			1315.6

3.40% Grade
 0.0 Grade
 3.83%
 4.0%
 2.50%
 0.20%

107+50		1298.36
106+50		1302.66
105+50		1300.46
105+00		1302.66
104+50		1300.86
104+00		1301.36
103+50		1307.46
103+00		1306.58
102+50		1308.46
102+00		1312.26
101+50		1318.02
101+025		1317.22
100+50		1318.87
100+00		1319.42
100+00		1317.42
BM	1077 B24.09 + #1.	1313.32

115 ft. from
Bull Floor
to G.W.

ENV
1298.36

Lt.	0.0	+3.0	+3.4	0.0	0.0	0.0
	11	5	6	12	30	4
	-3.0	0.0	0.0	-3.0		
	45	71	70	14		
	-2.6	0.0	0.0	-3.0		
	22	18	4	8		
	-2.6	0.0	-2.0			
	24	20	3			
	-0.8	+2.0	+2.0	-1.0		
	27	21	3	2		
	-1.0	+2.0	+2.0	-1.0		
	27	22	3	2		
	-4.2	0.0	0.0	-4.0		
	20	14	3	9		
	-5.8	-4.6	0.0	0.0	-5.0	
	18	14	9	10	16	
	-0.6	+1.4	-0.6	+0.4	+0.4	+1.6
	26	19	17	5	17	24
	9.1	7.2	12.3	10.2	11.8	12.7
	47	31	19	7	7	19
	9.7	8.1	6.5	6.0	9.3	8.4
	40	28	16	6.0	13	25
	8.5	6.9	7.7	6.9	7.4	6.1
	33	16	12	6.9	14	29
	6.3	5.2	4.0	5.9	5.2	5.7
	36	26	11	2	24	36
	3.8	2.0	5.2	5.8	4.8	5.7
	35	11	5.2	36	28	36
						6.0
						40

<7>

11.4 11.2

N30°15'W.

104+42 P1,

Ex = 6.4'

1'

N18°50'W.

103+73.5 P1,

Ex = 1'

103+00

N8°20'W.

102+20.4 PT

101+15 P1

100+00 PC

$\Delta = 11^{\circ}25'$
 $Ex = 6'$
 $R = 1200'$
 $D = 9^{\circ}45'$
 $T = 95.2'$

$\Delta = 10^{\circ}30'$
 $Ex = 1.8'$
 $R = 280'$
 $T = 233'$

PT

P1

$\Delta = 72^{\circ}00'$
 $T = 115'$
 $R = 300'$
 $Ex = 21.2'$

PC

+ A1 -

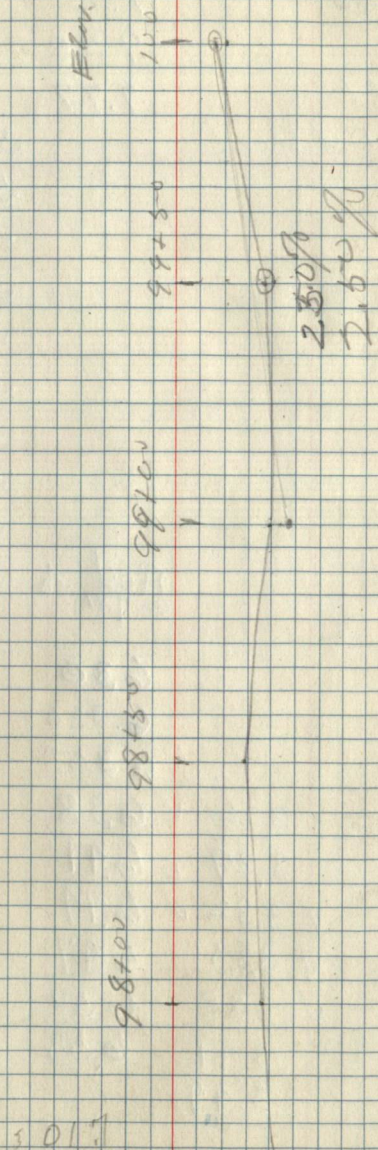
Elev.

110+50		7.0	1307.4
110+35		7.5	1306.9
110+00		9.4	1305.0
109+50		10.5	1303.9
109+10		11.00	1303.35
109+01			1301.70
109+00	N. end Bridge.	1.90	1312.45
WS. BM	635	1314.35	1308.00
107+80			
1	20		
109+00			

Elev. 1318.42

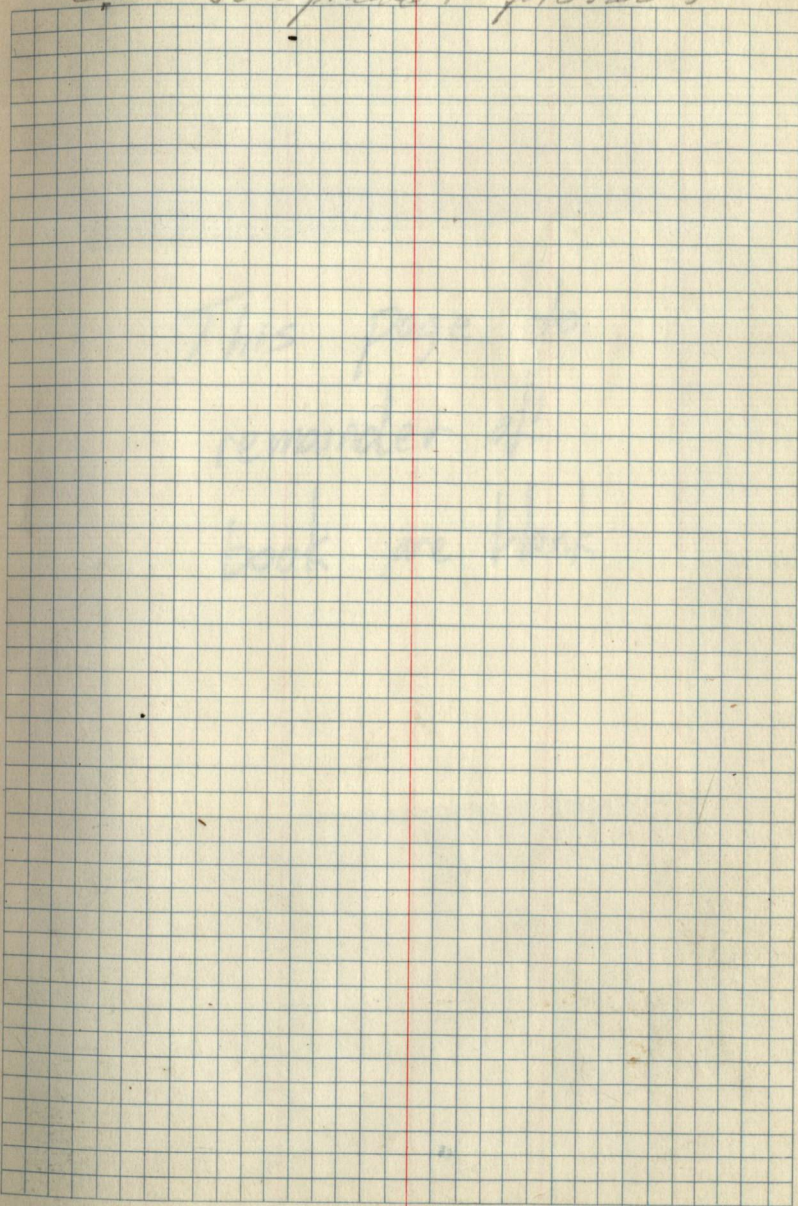
18.0
17.0
16.0
15.0

43



	+	#1	-	Red	Elev.
B.M.	6.10	106.10			100.00
Bot. Tip	7.23		7.23		98.87
Dist. Box			7.38		98.84
" " outlet			7.77		98.33
" " " Bot Board				5.27	100.83
10' ✓				5.295	
20' ✓				5.320	
30				5.345	
40 ✓				5.370	
50 ✓				5.395	
60 ✓				5.420	
70 ✓				5.445	
80 ✓				5.470	
90 ✓				5.495	
100 -				5.520	
12'		630		5.300	97.35
22'		6328		5.325	
32' ✓		6350		5.350	
42		326 ✓ 638		5.375	
52		329 ✓ 641		5.400	
62		✓ 3.32 ✓ 644			
72		✓ 3.35 ✓ 647			
82		✓ 3.38 ✓ 650			
92		✓ 3.41 ✓ 653			
102		3.44			

disposal Fries Grad 02.50/
2.50' above grade Ref. Boards



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