

BK3

T59N R25W

T59N R25W

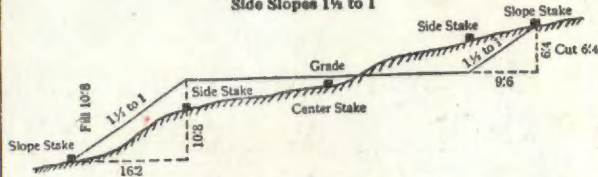
BK3

MINING

MINING
TRANSIT BOOK

No. S422V

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING
 Roadway of any Width
 Side Slopes 1½ to 1



In the figure above Opposite 8 under "Cut or Fill" and under .4 read 9/6 the distance from the side stake to the slope stake at right. Opposite 10 under "Cut or Fill" and under .8 read 16/2, the distance from the side stake to the slope stake at the left.

Cut or Fill	Distance out from Side or Shoulder Stake									Cut or Fill	
	0	.1	.2	.3	.4	.5	.6	.7	.8		.9
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

EUGENE DIETZGEN CO.

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(218) 246-2123

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Made in U. S. A.

BK#3

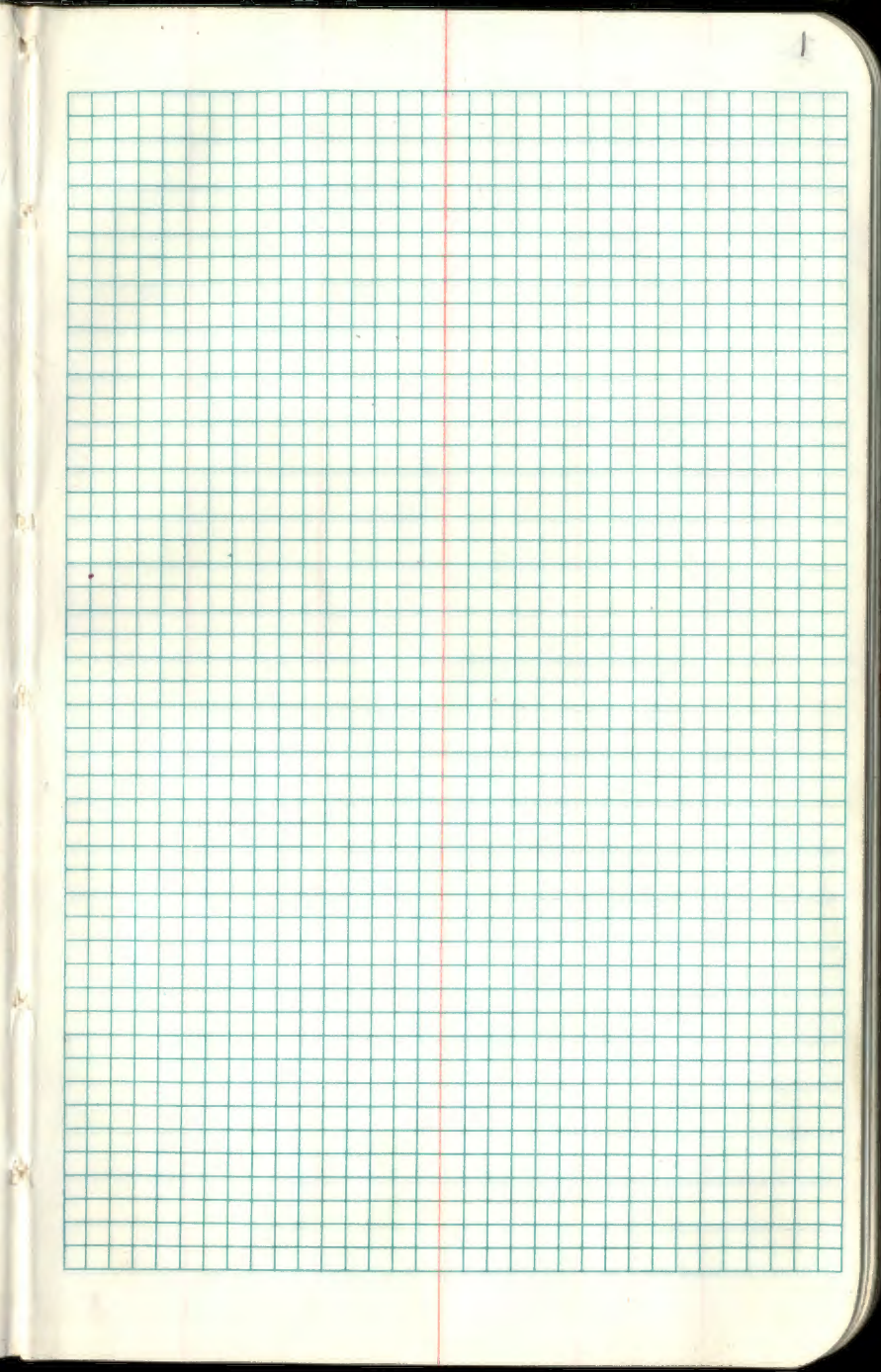
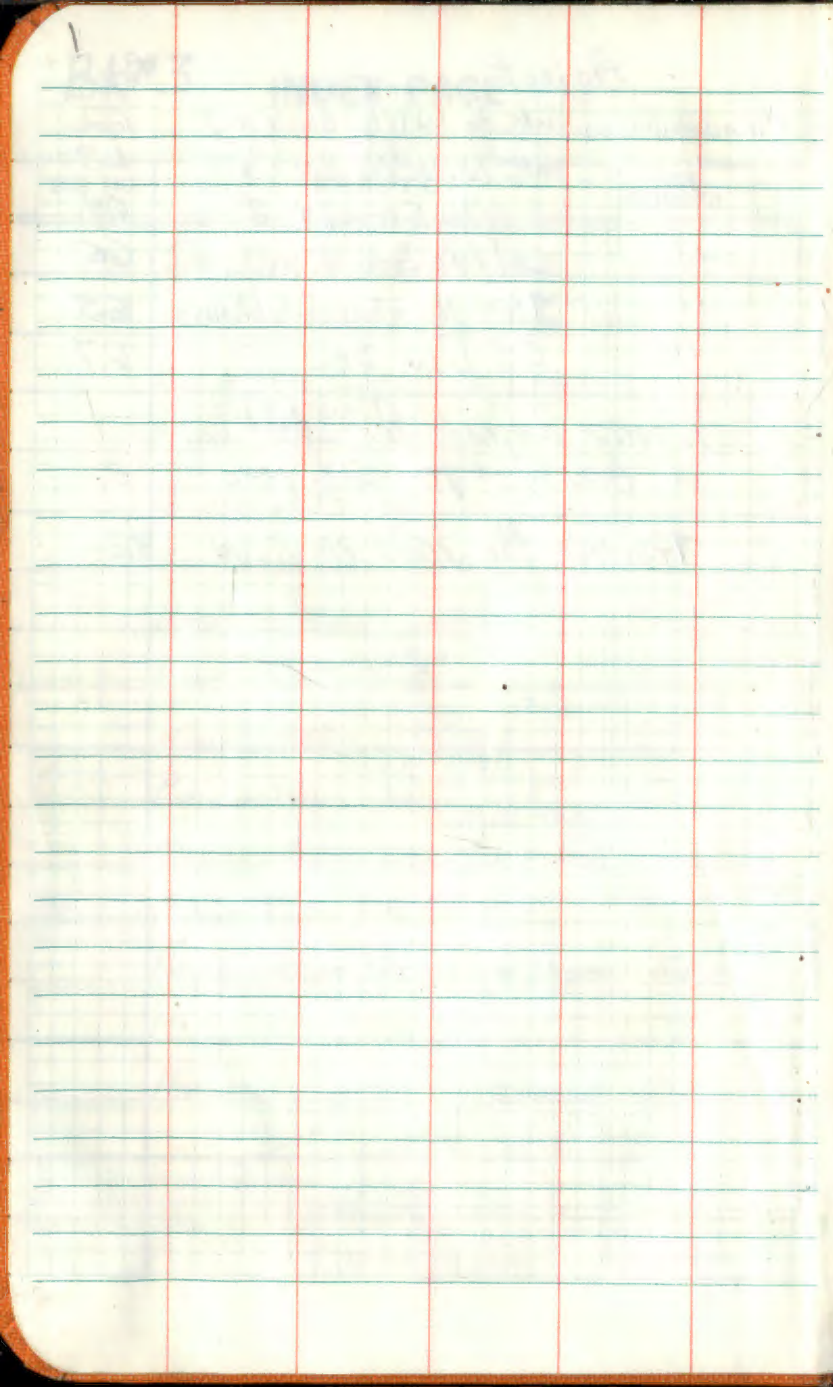
INDEX PAGE

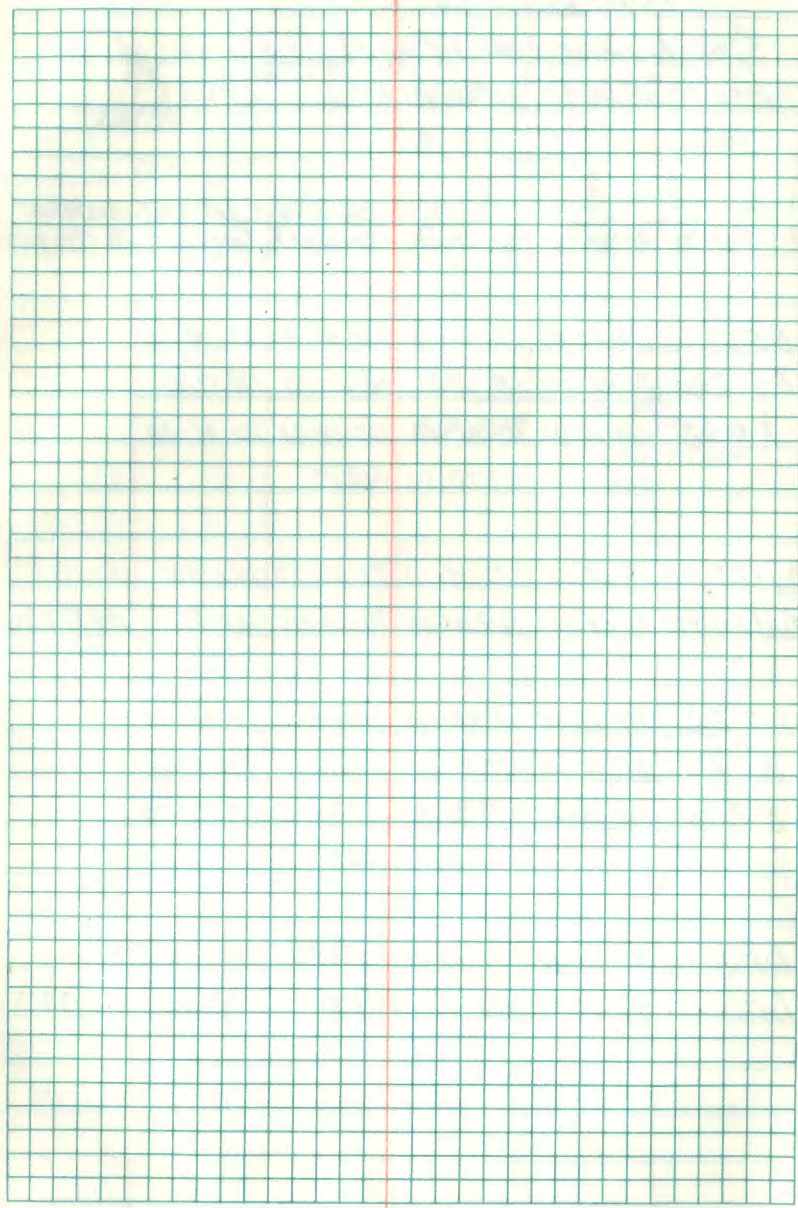
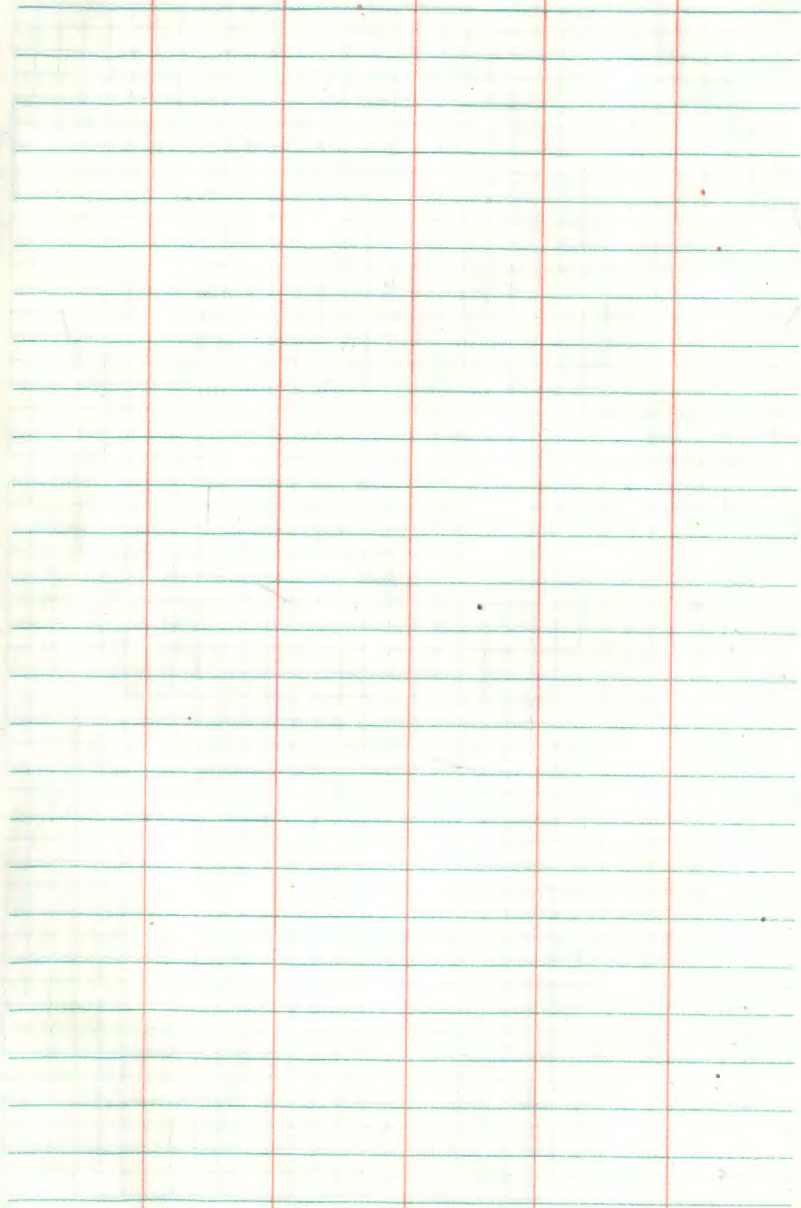
JOB NO.	PROJECT	PAGE NUMBER
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	Monumentation ^{1/4 S$\frac{1}{2}$ 8} 3401	54
	Monumentation ^{SW $\frac{1}{16}$ S$\frac{1}{2}$} 6007	60
	Monumentation ^{NW $\frac{1}{16}$ S$\frac{1}{2}$} 6010	61
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" C $\frac{1}{16}$ Sec 7	65
" SMC No. shore Clubhouse	65
" CS $\frac{1}{16}$ Sec 7	67

Traverse diagram for West line
of Gov't lot 10 sec 6 redo 31

Traverse for redo West line 32-





T59N R25W Sec 6 & 7 Sub

Spur traverse from MC East Lk to SVA Sec 4

STA 1st H&D 2nd H&R 3rd H&D 4th H&R

H&

Dist 279-26 90-08-00 269-51-50 could not get this distance.
to work, maybe need ~~to~~ mirror

FS 201 170-01-40 350-01-10 170-01-40 350-01-00

BS 26 00-00-00 179-59-20 00-00-00 179-59-20

K @ 279 170-01-40 170-01-50 170-01-40 170-01-40

170-01-42.5

Dist 279-201 89-24-50 270-35-00 89-24-55 108.73 108.724

Dist 201-279 90-54-30 269-05-00 90-54-45 108.73 108.716

FS 202 199-33-00 19-32-10 199-33-00 19-32-10

BS 279 00-00-00 179-59-20 00-00-00 179-59-20

K @ 201 199-33-00 199-32-50 199-33-00 199-32-50

199-32-55

Dist 201-202 82-55-40 277-04-10 82-55-45 112.36 111.506

Dist 202-201 97-23-00 262-36-40 97-23-10 112.43 111.499

Jan 5, 1953⁴

T-2 S/N 265184

Red TA

ELF = -1

SEE - 59.25 BK 1 PG 77

Ply cldy, calm, mild

PC set T T G. Kasenko

Aide - T. Scriber

- S. Carr

STA 279 =

County
MC
East Shore
East Lake

108.720

STA 201 = bad spike

111.501

T59N R25W Sec 6 & 7 Sub

Spur traverse cont'd from pg 3

STA 1st H&D 2nd H&D 3rd H&D 4th H&R

H&R

FS 203 169-13-00 349-12-20 169-13-00 349-12-30

BS 201 00-00-00 179-59-20 00-00-00 179-59-30

T@202 169-13-00 169-13-00 169-13-00 ~~349-13-00~~

169-13-00

Dist 202-203 83-08-30 276-51-00 83-08-45 98.32 97.617

Dist 203-202 97-12-40 262-46-40 97-13-00 98.39 97.611

FS 204 181-29-20 01-28-30 181-29-00 01-28-30

BS 202 00-00-00 179-59-20 00-00-00 179-59-10

T@203 181-29-20 181-29-10 181-29-00 181-29-20

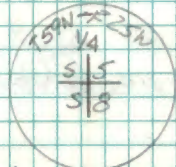
181-29-12.5

Dist 203-204 87-38-40 272-21-20 87-38-40 482.80 482.392

Dist 204-203 92-25-40 267-34-10 92-25-45 482.82 482.386

Jan-5, 1984

STA 202 =



Itasca Co Monument

97.614

STA 203 = 60d spike

482.389

5 T59N R25W Sec 617 Sub

Spur trav cont'd from pg 4

STA 1st H&D 2nd H&R 3rd H&D 4th H&R

H4

FS 205 179-38-00 359-37-40 179-38-10 359-37-40

BS 203 00-00-00 179-59-20 00-00-00 179-59-20

TR@204 ~~179-38-00~~
~~10-00-00~~ 179-38-20 179-38-10 179-38-20

179-38-12.5

Dist 204-205 91-16-40 268-43-00 91-16-50 2065.27 2064.754

Dist 205-204 ~~91-16-40~~ 271-15-30 98-~~44~~25 2065.28 2064.781

FS 206 181-46-00 01-45-00 181-45-30 01-44-50

BS 204 00-00-00 179-58-50 359-59-20 179-58-50

TR@205 181-46-00 181-46-10 181-46-10 181-46-00

181-46-5

Dist 205-206 78-51-00 281-09-00 78-51-00 134.16 131.628

Dist 206-205 101-24-00 258-35-00 101-24-30 134.29 131.637

Jan. 5, 1984

STA 204 = 60d spike

2064.768

STA 205 =



181.632

6

T59N R25W Sec 6+7 Sub

Spur trav cont'd from pg 5

STA 1st H&D 2nd H&R 3rd H&D 4th H&R :

H&D

FS 207 179-52-00 359-51-10 179-52-00 359-51-20

BS 205 00-00-00 179-59-20 00-00-00 179-59-20

T@ 206 179-52-00 179-51-50 179-52-00 179-52-00

179-51-57.5

Dist 206-207 83-54-90 276-15-30 83-54-15 430.22 427.789

Dist 207-206 96-10-20 268-49-00 96-10-40 430.29 427.791

FS 208 180-13-40 00-13-00 180-13-30 00-13-00

BS 206 00-00-00 179-59-20 00-00-00 179-59-20

T@ 207 180-13-40 180-13-40 180-13-30 180-13-40

180-13-37.5

Dist 207-208 90-04-20 269-55-10 90-04-35 666.59 666.589

Dist 208-207 89-58-40 270-01-30 89-58-35 666.61 666.610

6

Jan 5, 1984

STA 206 = 60d spike

427.789

STA 207 = 60d spike

666.590

T59N R25W Sec 6+7 Sub

Spur trav cont'd from pg 6

STA 1st H&D 2nd H&R 3rd H&D 4th H&R

HX

FS 209 179-50-20 359-50-10 179-50-10 359-50-00

BS 207 00-00-00 179-59-20 00-00-00 179-59-20

AC@208 179-50-20 179-50-40 179-50-10 179-50-40

179-50-29.5

Dist 208-209 91-05-40 268-54-20 91-05-40 562.99 562.887

Dist 209-208 88-58-10 271-02-00 88-58-00 562.96 562.868

FS 210 180-00-50 00-00-00 180-01-00 00-00-00

BS 208 00-00-00 179-59-00 359-59-40 179-59-00

AC@209 180-00-50 180-01-00 180-01-00 180-01-00

180-00-57.5

Dist 209-210 92-47-50 267-12-00 92-47-55 817.45 816.475

Dist 210-209 87-14-20 272-45-30 87-14-25 817.43 816.482

Jan 9, 1984

Windy, snow

PC @ AC @ Glenn Kosanko

Same crews as Jan 5

ECF = 0

STA 208 = bad spike

562.878

STA 209 = bad spike

816.478

8

T59N R25W Sec 6+7 Sub

Spur trav, cont'd from p. 7.
 STA 1st H&R 2nd H&R 3rd H&R 4th H&R
 H&R

BS 209

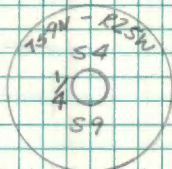
T0210

END OF SPUR TRAV

Jan 9, 1984

00

STA 210 =

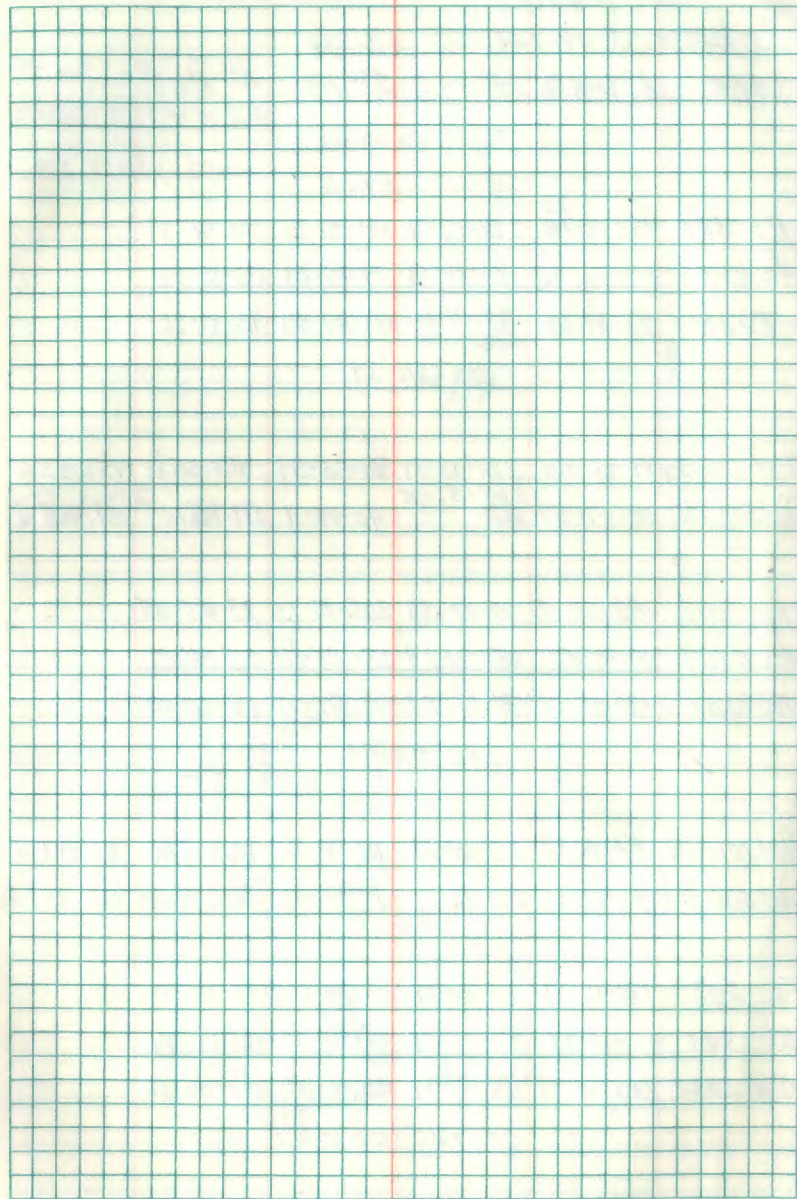


Itasca Co Monument
 From which:
 Old BT's

B. Spruce, 7", N02°E, 37.56'

Tamarack, 9", S10°E, 40.12'

Also 4 new county ties



T59N R26W Sec 6 sub

Interior traverse of sec 6

STA 1st H&D 2nd H&R 3rd H&D 4th H&R

H 4

FS 301 95-38-15²³ 275-38-12 151-53-03 331-52-54BS 2730 0-00-~~50~~⁵⁰ 180-00-39 56-15-29 236-15-18

T@ 2731 95-37-33 95-37-33 95-37-34 95-37-36

95° 37' 34"

Dist 2731-301 79-56-44 270-03-03 89-56-51 458.55 ft 458.55 ft

Dist 301-2731 90-07-57 ~~87~~²⁶⁹⁻⁵¹⁻³⁵ 90-08-11 139.765 m 139.765 m

FS 302 180-00-47 00-00-38 203-45-15 23-45-05

BS 2731 00-00-40 180-00-29 23-45-18 203-45-05

T@ 301 180-00-07 180-00-09 179-59-57 180-00-00

180° 00' 03"

Dist 301-302 87-40-37 272-18-45 87-40-56 80.463 m 80.397 m

Dist 302-301 90-42-59 269-16-39 90-43-10 263.76 ft 263.739 ft

FS 303 180-00-38 00-00-23 223-34-56 43-34-40

BS 301 0-00-38 180-00-19 43-34-53 223-34-44

T@ 302 180-00-05 180-00-04 180-00-03 ~~180-00-56~~¹⁷⁹⁻⁵⁹⁻⁵⁶

180° 00' 02"

June 7, 1985

TEMP: 69° F

Whitehorn

A-TZ (SN: 265184)

BAROMETER: 29.30 in Hg

Whitehorn

A-RED 1A (SN: 4823)

KOSINKO

PC

IITZ PRISM: 30mm

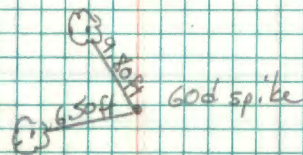
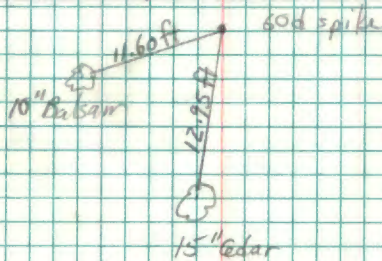
AUSK

Φ

• Pasca Co.
Monument
See page

N
↑

458.547 ft



Dist 300-303 90-49-34 269-11-55 90-48-50 717.47A 717.398A

Dist 303-328 89-15-02 270-44-31 89-15-16 218.682m 218.664m
717.398ft

FS 304 87-05-39 267-05-24 106-26-04 286-25-48

BS 302 ~~0-00-29~~ 180-00-44 17-21-23 199-21-10

TR 303 87-04-39 87-04-40 87-04-41 87-04-38

87-04-40 ✓

18-26

Dist 303-304 89-35-12 270-24-35 89-44-54 179.122 m 179.120 m

Dist 304-308 90-27-20 269-32-02 90-27-39 587.69 ft 587.671ft

~~FS 309~~

~~BS 303~~

~~TR 304~~

~~Dist 309-305~~

~~Dist 305-304~~

~~FS 306~~

~~BS 304~~

~~TR 305~~

CK BA 6-2-84

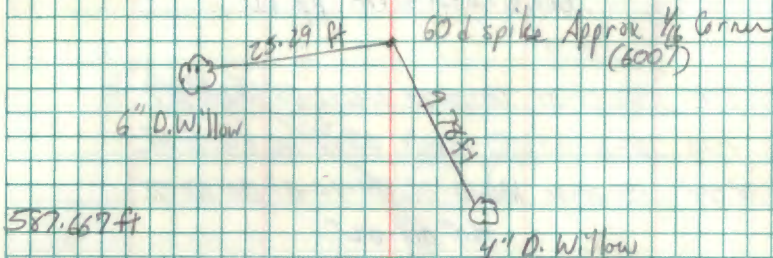
June 7, 1984

P.M.

Temp 75°F

Baro 29.25 in Hg

1 PPM



Continued from pp 11

ES 305 180-00-33 00-00-27 202-12-05 22-11-57

BS 303 02-00-33 180-00-21 22-12-04 202-11-55

T 304 180-00-00 180-00-06 180-00-01 180-00-02

180° 00' 02"

Dist 304-305 88-51-07 271-08-13 89-51-27 358.47 ft 358.399 ft

Dist 305-304 91-14-29 268-45-01 91-14-44 109.266 m 109.240

ES 306 180-00-49 0-00-42 238-05-30 58-05-19

BS 307 0-00-57 180-00-48 58-05-42 238-05-32

T 305 179-59-52 179-59-54 179-59-48 179-59-47

179° 59' 50"

Dist 305-306 87-47-37 272-11-58 87-47-50 106.570 106.491

Dist 306-305 92-18-16 267-41-35 92-18-21 349.65 ft 349.367

ES 307


BS 305

T 306

CK BA 6-21-84

June 11, 1984

Whitehorn MA

Kasenka Ansk 

Sky: Sunny

WIND: CALM - LIGHT

T2 (SN: 265184)

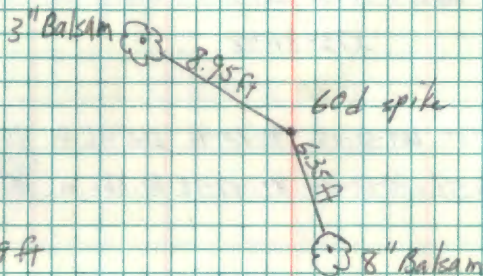
REDIA (SN: 4863)

Gietz Prism 30 mm

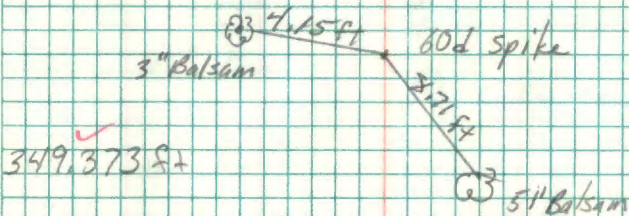
TEMP: 60 °F

BAROMETER: 29.80 in Hg

0 PPM



358.399 ft



349.373 ft

FS 307 ² 273-31-71
 BS 305 ²¹ 0-00-30 180-00-05 100-14-44 280-14-36
 T 306 ⁴⁰ 273-31-30 273 31 55 273-31-47 273-31-50 1260.10ft
 273-31-48

30
 306-307 90-20-39 269-39-05 90-20-46 265.16 ft 265.155ft
 307-306 89-46-59 270-12-24 89-47-18 80.822 m 80.821 m

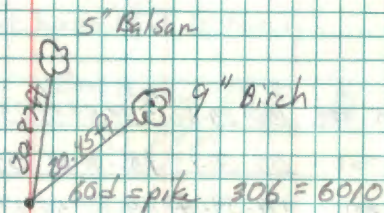
FS 308
 BS 306 See page 14

T 307

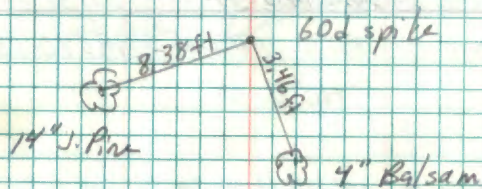
~~307-308~~

~~308-307~~

June 11, 1984



265.158ft



Continued from Page 13

FS 308	180-00-02	359-59-55	239-53-04	59-52-55		
BS 306	00-00-13	180-00-01	59-53-16	239-53-05		
1307	179-59-49	179-59-54	179-59-48	179-59-50		
		179° 59' 50"				
308-308	89-38-00	270-21-23	89-38-18	94.962 m	94.760 m	
308-307	90-28-36	269-30-45	90-28-56	311.55 ft	311.539	

FS 309	180-00-32	00-00-21	231-33-59	51-33-53		
BS 307	00-00-25	180-00-20	51-33-59	231-33-50		
1308	180-00-07	180-00-01	180-00-00	18000-03		
		180° 00' 03"				

308-309	83-29-06	276-30-19	83-29-24	400.74 ft	398.156 ft	
309-308	95-28-33	264-30-52	95-28-51	121.908 m	121.351 m	

June 13, 1984

T2 (SN: 265184)

Rad 2A (SN: 4863)

Sky: ~~to~~ Cloudy light drizzle

Winds: Moderate

Temp: 57°F

K. Whitehorn

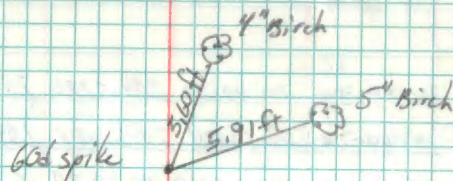
G. Kosenko

B. Ansk

Barometer: 29.70 in Hg

0 ppm

311,544 ft



398.144 ft

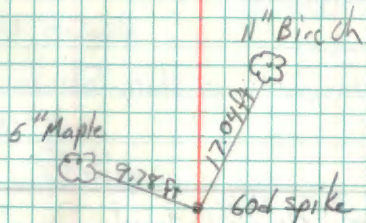
FS 310	180-00-30	0-00-17	223-22-45	43-22-37
BS 305	0-00-35	180-00-28	43-22-54	223-22-47
T 309	179-59-55	179-59-49	179-59-51	179-59-50
	179-59-51			

309-310	74-58-56	265-00-10	94-59-23	87.358 m	87.027 m
310-309	87-08-11	274-51-25	85-08-23	286.578	286.540 ft

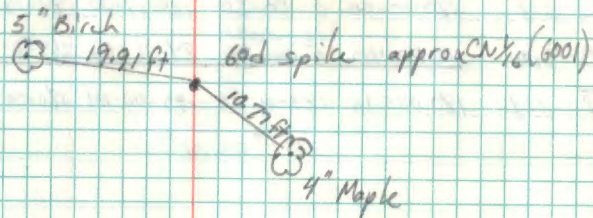
FS 311	180-00-36	00-00-29	209-52-30	29-52-19
BS 309	0-00-37	180-00-09	29-52-07	209-52-01
T 310	180-00-19	180-00-20	180-00-23	180-00-18
	180-00-20			

310-311	263-17-42	96-41-45	96-42-01	401.358	398.609 ft
311-310	73-23-21	276-36-22	83-23-30	122.309 m	121.476 m

June 13, 1984



286.073 ft



398.609 ft

Sideshot to point for SMC W shore Slausen Lake

FS 312

BS 310

TA 311 180-00-00 Double Centered.

-0.24 ft

311-312 90-24-08 269-35-15 90-24-27 142.297M 142.293m

313-312 ft

FS 313 180-00-56 0-00-36 264-17-00 84-16-51

BS 310 0-00-40 ~~0-00-36~~ 180-00-29 84-16-56 264-16-42

TA 317 180-00-10 180-00-07 180-00-04 180-00-09

180° 00' 00"

311-313 89-30-20 270-09-10 89-50-35 271.967 M 271.966m

313-311 269-47-40 90-11-55 90-12-08 892.29 ft 892.285 ft

June 13, 1984

P.M.

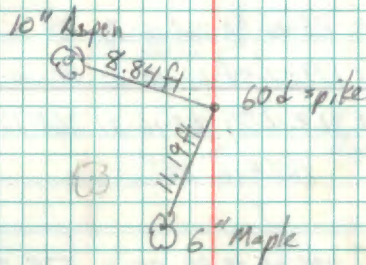
Sky: Partly Sunny

Wind: Light-Moderate

TEMP: 65 °F

BARO: 29.75 in. Hg

0 ppm



466.601 ft

TEMP: 67 °F
Barometer 29.80 in Hg

1 ppm

892.290 ft

T59N R25W Sec 6 & 7 sub

Interior traverse of sec 6 cont'd from pg 16

STA 1st H&D 2nd H&D 3rd H&D 4th H&D

H.C.

FS 314	268-16-31	88-16-28	268-16-34	88-16-29
BS 31	00-00-07	179-59-59	00-00-03	190-00-01
T 313	268-16-24	268-16-29	268-16-31	268-16-28 1266.95
	268° 16' 28"			

313-314	84-55-00	275-04-29	84-55-16	578.74	576.47
314-313	95-08-28	264-51-16	95-08-36	578.81	576.48

Sideshot to East SMC Slawson Lake

East SMC Hub is set on line between 311 & 313

Dist 313 to SMC East side Slawson Lake

92-29-30 267-30-06 92-29-42 140.45 ft 140.317 ft

140.84
119
125

June 14, 1984

Clear, warm, calm

PC EDT TT G. Kosenko

BPR=299 ECF=0 Axl B. Husk

Temp 65°F @ 9:30 AM T-2 S/N 265184

10" Birch Rod 1A S/N 4863
5' STR 313 = 60d spike
Approx NE 1/16

576.47 ft

Aspen hub w/ nail
in floating bog

T59N R25W Sec 6 & 7 Sub

Interior traverse cont'd from pg 17

STA 1st H&D 2nd H&D 3rd H&D 4th H&D

H &

FS 315

BS 313

NO 314

180-00-00

Dist 314-315

See Picture opposite

Dist 315-314

FS 316

BS 314

NO 315

180-00-00

Dist 315-316 91-01-54 268-57-44 91-02-05 472.654 472.573

Dist 316-315 89-02-19 270-57-09 89-02-35 472.645 472.574

179-57-50

14-12-50

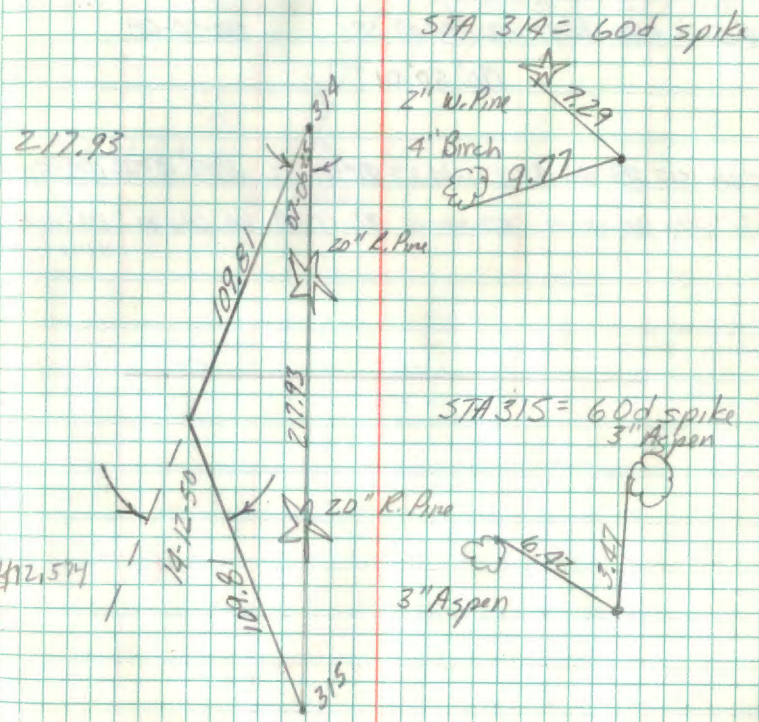
165.47-10

323-35
323-36-05
179-57-45
165-47-20

281
12
69

186-52-30
359-96-13
7 06-17

472.55
472.55-47
90-47-59
472.53



T59N R25W Sec 677 506

Interior traverse cont'd from pg 18

STA 1st H&D 2nd H&D 3rd H&D 4th H&DH&D

FS 317 180-50-22 00-50-17 180-50-18 00-50-18

BS 315 00-00-25 180-00-17 00-00-18 180-00-10

TP 316 180-49-57 180-50-00 180-50-00 180-50-08

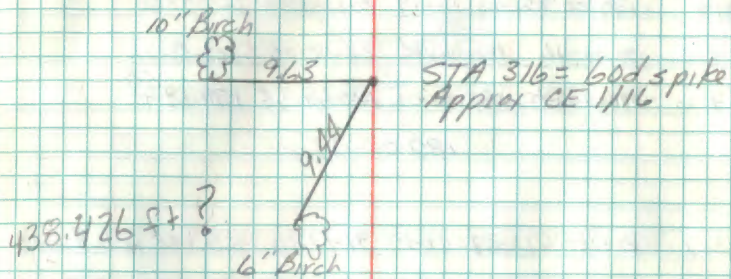
180° 50' 01"

Dist 316-317 89-44-42 270-14-57 89-44-52 438.434 438.4264

Dist 317-316 90-19-14 269-40-15 90-19-29 143.640 M 143.638
471.252

CK BA 6-21-84

June 14, 1989



FS 318	180-00-25	00-00-17	202-40-00	22-39-50
BS 316	0-00-16	180-00-15	22-40-05	202-39-52
T 317	180-00-09	180-00-02	179-59-55	179-59- ⁵⁸ 48
	180-00-01 ✓			

543.447

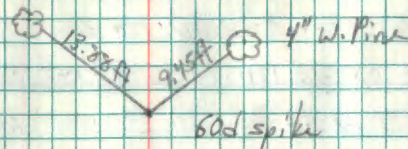
317-318	91-16-57	88-42-39	91-17-10	165.685 m	165.643
318-319	88-46-35	271-14-47	88-45-54	543.59 ft	343.464

FS 319	180-00-29	00-00-19	252-16-43	72-16-35
BS 317	00-00-26	180-00-15	72-16-41	252-16-31
T 318	180-00-03	180-00-04	180-00-02	180-00-04
	180-00-03 ✓			

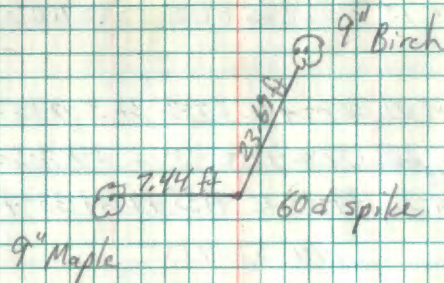
318-319	89-20-10	270-39-28	89-20-21	312.78 ft	312.759
319-318	90-46-25	269-13-03	90-46-41	95.343 m	95.334
					312.775

CK BA 6-21-84

TZ (SN: 265184) RT Whitehorn
 R-LIA (SN 4863) 30 mm P. Cont. P.C. Kasenko
 60°F 29.80 in Hg Oppm φ Kusk
 4" w. Pine



543.456 ✓



312.767 ✓

FS 320 180-00-06 0-00-00 199-20-20 14-20-32

BS 318 0-00-07 179-59-59 14-20-39 194-20-31

T 319 179-59-59 180-00-01 180-00-01 180-00-01

180-00-01 ✓

319-320 76-37-05 261-22-40 98-37-14 82.028m 266.079
81.101

320-319 81-30-15 278-29-05 81-30-35 269.06 266.171

FS 144-34-04 329-34-00 211-47-34 31-47-31

BS 319 10-00-28 180-00-17 67-13-52 247-13-50

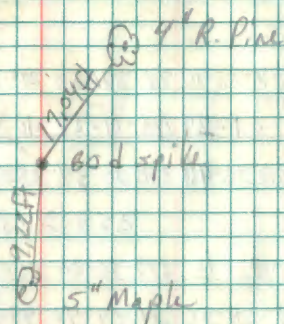
BS 320 144-³³~~34~~-36 144-33-15 144-33-42 144-33-41

144-33-41 ✓

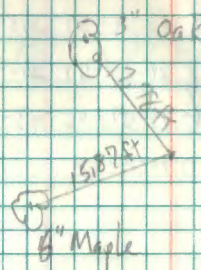
320-321 89-57-00 278-12-19 89-57-21 902.40 902.400

321-320 90-05-04 269-54-30 90-05-17 275.051 275.051
902.395

CK BA 6-21-84



266.095 ✓



902.400 ✓

FS 22 ²³	258-38-10	79-39-00	299-31-37	119-31-33
BS 320	0-04-24	180-01-22	110-55-01	220-53-20
X@ 321	258-36-46	258-36-38	258-36-96	258-36-33
	258-36-38			115.436
	80-23-13	279-36-20	80-23-27	85.686 m 35.185
	99-54-50	260-04-40	99-55-05	117.18 ft 115.429

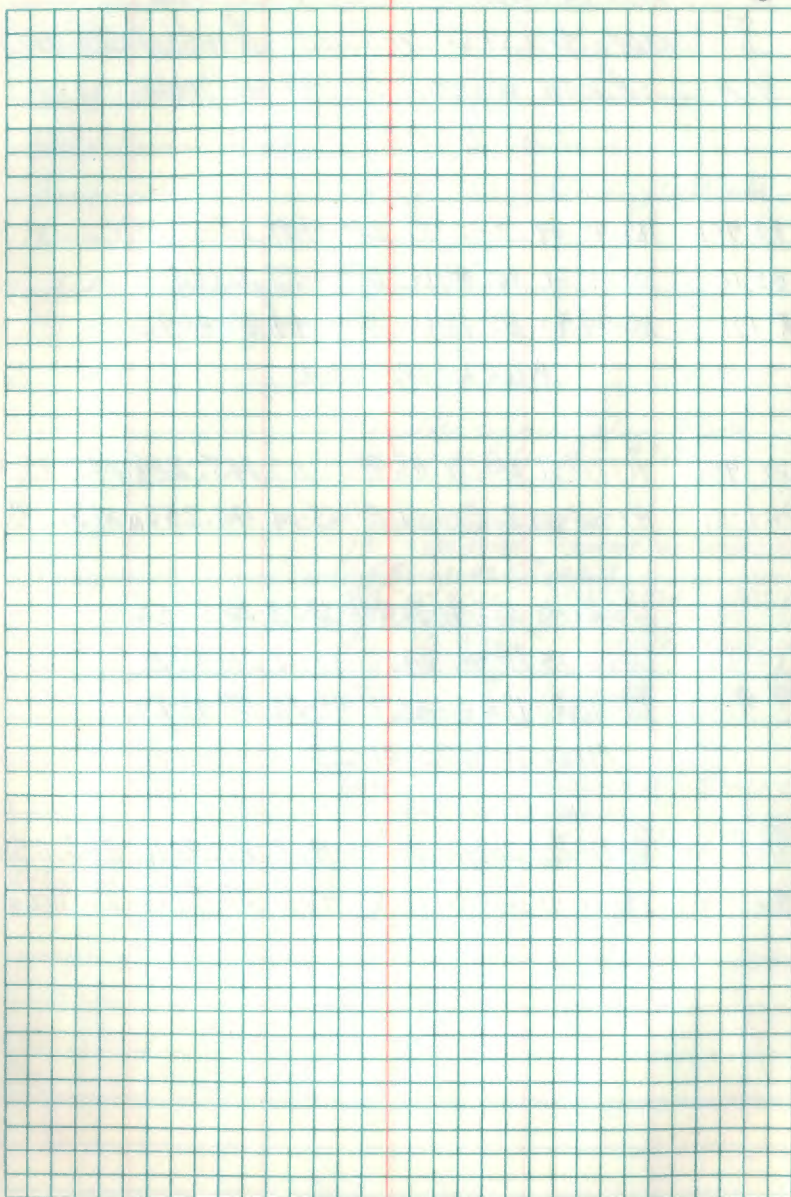
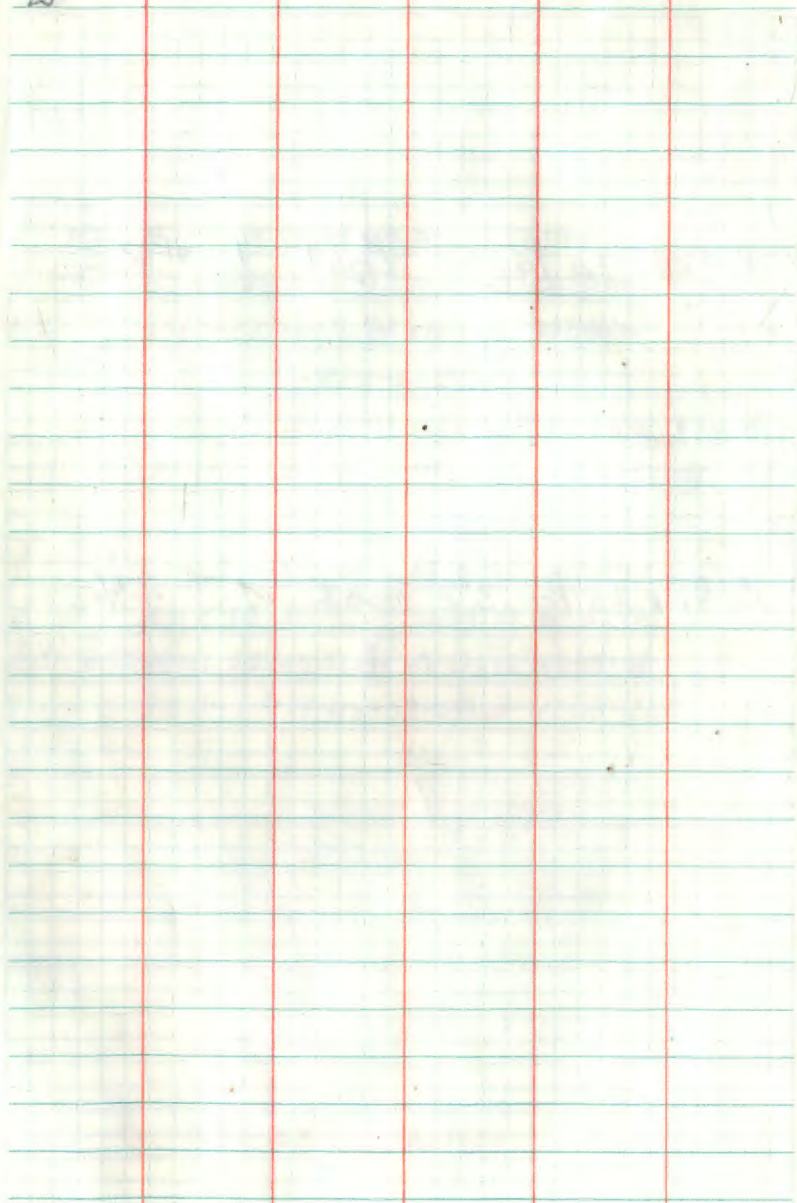
FS 24	43-10-47	223-10-58	63-26-54	243-36-50
BS 321	0-01-35	180-01-31	20-27-48	200-27-42
X@ 22 ²³	43-09-12	43-09- 07 ⁰⁷	43-07-06	43-09-08
	43-09-08 ✓			

CK BA 6-21-84

REFER to Pg 36 Book 1 #23

115.433 ✓

REFER to Pg 37 Book 1 #24



24

T59N R25W Sec 6 & 7 Sub

Interior traverse around Gov't Lot 2 and 3

STA 1st H&D 2nd H&D 3rd H&D 4th H&D

H&D

FS 401 185-44-04 5-43-57 244-49-39 64-49-23

BS 16 0-00-21 180-00-14 59-05-55 329-05-41

T 17 185-44-43 185-43-43 185-43-44 185-43-42

Mean \pm 185-43-43

17-401 98-21-56 261-38-03 98-21-57 145.288 143.73A

401-17 81-53-00 278-06-51 81-53-04 94.253M 143.73A

FS 402 175-41-45 355-41-34 206-38-08 26-37-54

BS 17 00-00-15 180-00-04 30-56-43 210-56-25

T 401 175-41-30 175-41-30 175-41-25 175-41-29

Mean \pm 175-41-28401-402 ⁹⁰ 17-26 269-40-30 90-19-28 82.921M 272.05A

402-401 89-48-45 220-11-44 89-48-30 271.97A 271.968A

June 21, 1984

24

T2 (SN: 265184) T

Red AA (SN 4863) T

Liese Prism 30mm

Temp: 60°F

Barometer 29.80

ELF = 0 ppm

P.C. G. Kosenko

W.A.T. K. Whitehorn

B. Ansk

Sky: Cloudy/Light-Moderate

Calculate traverse around lake
to get to E Line of Gov't Lot 2

143.73A

16	S 82-07-26 E	242.94	
17	S 83-03-42 E	143.73	
401	S 87-22-14 E	272.05	401
402	S 44-46-53 E	516.93	520
403	N 80-58-41 E	58.00	51961.778
404			
6016	S 0°12'04" W	300.00	51492.429
404		303561.226	51491.376

272.01A

	31-11				
FS 402	222-36-49	42-36-11	241-30-58	61-30-46	
BS 401	359-55-37	190-00-46	18-65-30	198-55-20	
	0-00-38				
T 402	222-35-34	222-35-25	222-35-28	222-35-16	516.93
	Mean \bar{x} 222-35-26				

402-403	81-51-46	270-07-36	89-51-55	516.93ft	516.93ft
403-402	90-12-32	269-47-30	90-12-31	516.88	516.88

FS 404	75-45-47	755-45-26	105-26-19	285-26-55	
BS 402	0-00-10	179-59-53	29-40-56	209-40-42	
T 403	75° 45' 37"	75-45-28	75-45-23	75-45-23	58.00 ft
	Mean \bar{x} 75° 45' 28"				

~~403-404~~
~~404-405~~
~~404-403~~
~~405-404~~

Measured by tape

June 21, 1984 25

29.90 in Hg
 65°F
 0 ppm

3" Tamarack snag

3/1/84

set 60d spike, approx Ref corner to 6016

14.53 ft

5" Tamarack snag

516.925

58.00

→ Sideshot

FS 405 149-14-15 327-14-07

BS 403 0-00-51 190-00-36

TB 404 149-13-24 149-13-31

149-13-28

404-405 90-24-00 269-35-58 90-24-02 55.336 m 55.335

FS 406 329-13-43 149-13-26 ~~352-37-32~~ 172-37-22 ~~352-37-32~~

BS 403 0-00-19 190-00-09 23-24-14 203-24-01

T of 404 329-13-24 329-13-17 329-13-18 329-13-21

Mean 4 329-13-20 ✓

404-406 83-51-14 276-08-46 83-51-14 163.174 m 532.269 162.236

406-404 96-13-10 263-46-45 96-13-13 535.38 ft 532.228

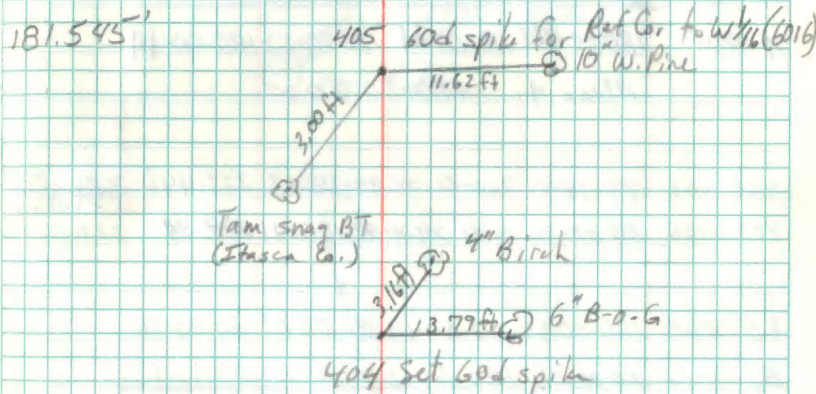
CK BA 6-21-84

June 21, 1984 26

29.80 in Hg

75° F

FCF = 1 ppm



FS 407	180-01- 24 ¹⁰	0-01- 07 ⁰²	226-02-55	46-02-47
BS 404	180-01-02 ⁰⁰⁻⁵⁰	180-00- 21 ⁴¹	46-02-32	226-02-30
T 406	180-00- 20	180-00- 21	180-00-23	180-00-19
Mean	4	180-00-20 ✓		

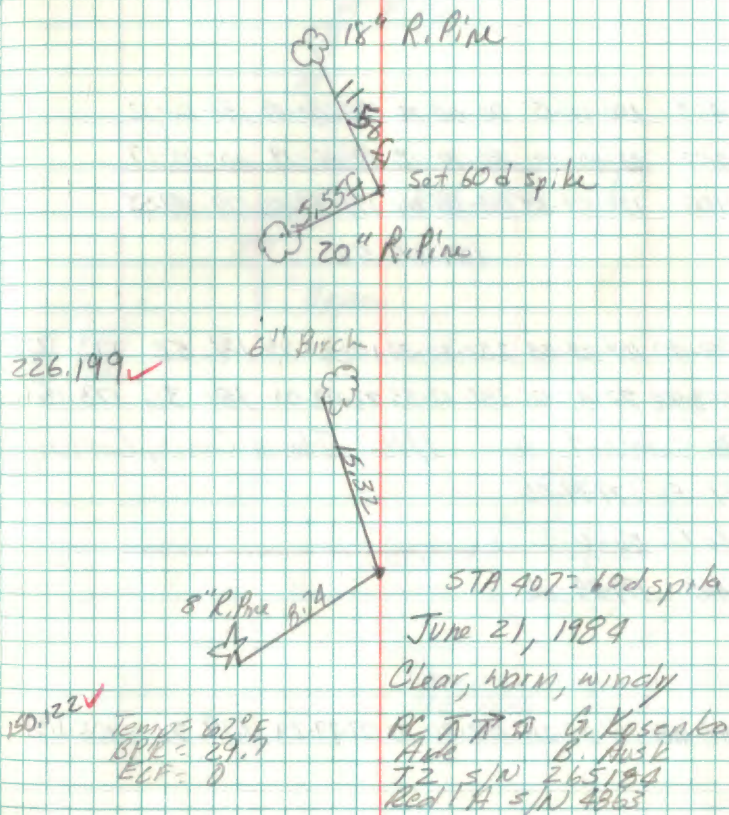
405-401	99-38-51	260-21-05	99-38-53	229.44A	226.195
407-406	80-30-36	279-29-14	80-30-41	229.34	226.202

FS 408	180-00-33	00-00-19	180-00- 28	00-00-16
BS 406	00-00-21	180-00-13	00-00-23	180-00-13
T 407	180-00-12	180-00-06	180-00-05	180-00-03
		180-00-07 ✓		

Dist 407-408	77-10-22	282-49-40	77-10-21	153.96	150.118
Dist 408-407	103-03-25	256-56-32	103-03-27	154.11	150.125

CK BA 6-21-84

June 21, 1984



FS 407 180-00-15 00-00-20 180-00-09 180-00-12

BS 407 00-00-20 180-00-18 00-00-19 00-00-17

T@ 408 179-59-55 180-00-02 179-59-50 179-59-55

179-59-56

Dist 408-409 107-29-28 252-30-30 107-29-29 181.52 173.127

Dist 409-408 72-41-55 287-17-53 72-42-01 181.36 173.156

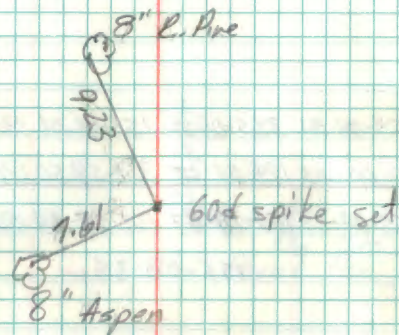
→ Sideshot to 1/16 Itasca County Corner

4081 FS 179-39-46

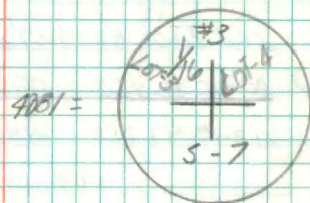
BS 407 00-00-20

T@ 408 179-39-26

Dist 408-409 107-29-28 252-30-30 107-29-29 109.71 106.637



173.141



Itasca Co. Monument for
NE 1/16 Sec 7

FS 410 155-08-34 335-08-~~27~~⁰² 155-08-24 335-08-15

BS 408 00-00-03 179-59-~~30~~³⁰ 359-59-50 179-59-32

TI@ 409 155-08-31 155-08-~~31~~³² 155-08-34 155-08-43

155-08-35 ✓

Dist 409-410 89-22-30 270-37-27 89-22-32 1312.10 1312.022

Dist 410-409 90-39-18 269-20-31 90-39-24 1312.13 1312.044

FS 1 262-20-05 82-19-57 262-20-00 82-19-55

BS 409 00-00-16 180-00-08 00-00-15 180-00-10

TI@ 410 262-19-49 262-19-49 262-19-45 262-19-45

262-19-47 ✓

Dist 410-1 90-19-50 269-40-06 90-19-52 2407.23 2407.190

Dist 1-410 89-41-14 270-18-34 89-41-20 2407.20 2407.165

CK BA 6-21-84

STA 409 = 60d spike
No ties around
Paint for SMC

1312.033 ✓

60d spike

2407.177 ✓

FS 2 302-34-35 122-34-28 302-34-32 122-34-05

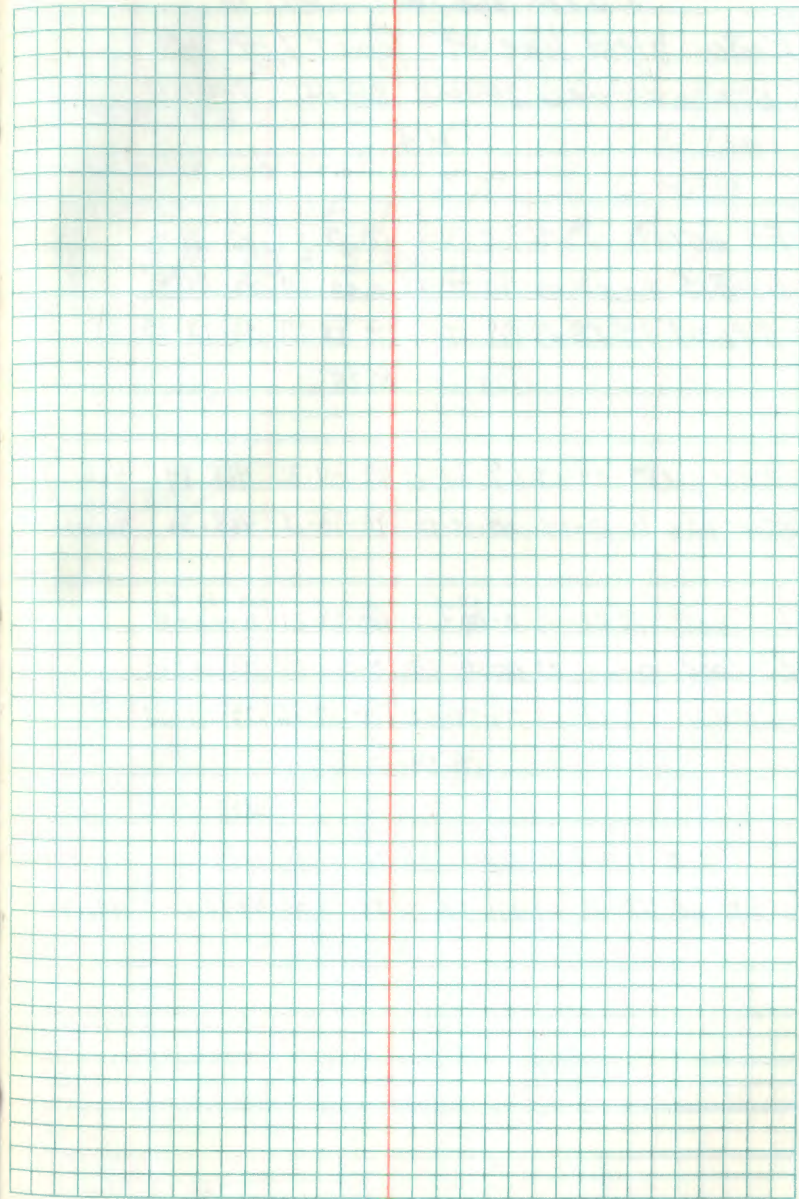
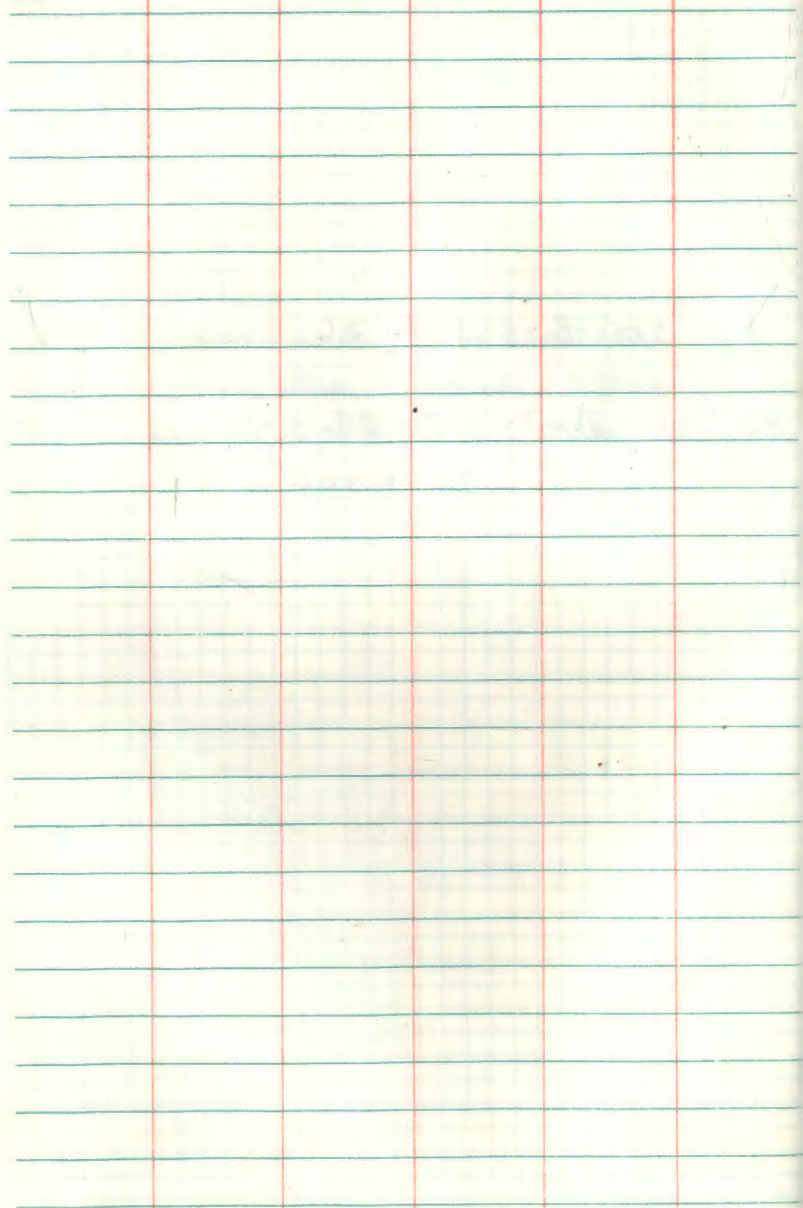
BS 410 00-00-21 180-00-19 00-00-22 179-59-51

T@1 302-34-14 302-34-09 302-34-10 302-34-14

302-34-12 ✓

#2 SEE BOOK 1 Pg 26

#2 SEE BOOK 1 Pg 26



T59N R25W Sec 6

Redo West line of Gov't Lot 10

STA 1st H&R 2nd H&R 3rd H&R 4th H&R

H &

FS 601 177-28-32 357-28-43 179-28-54 357-28-40

BS 315 0-00-09 180-00-27 0-00-27 180-00-25

T@6004 179-28-23 179-28-16 179-28-27 179-28-15

179-28-20.25 ✓

Dist 6004-601 89-54-38 270-05-26 89-54-36 465.34 465.34 ✓

Dist 601-6004 90-10-14 267-47-50 90-10-12 465.36 465.36

FS 602 180-00-16 179-59-12 180-00-21 179-59-14

BS 6004 0-00-23 180-00-20 0-00-25 180-00-21

T@601 179-59-53 179-59-52 179-59-56 179-59-53

179-59-53.50

497.20

Dist 601-602 91-57-36 268-02-30 91-57-33 497.20 496.909

Dist 602-601 88-09-09 271-53-17 88-06-56 497.21 496.941

Nov 6, 1985

Partly cloudy, cool, calm

PC G. Kosenko

G. Robertson

T & G. Kosenko

B. Ausk

K. Whitcomb

T-2 S/N 265194

Reel A S/N 0803

RPR 21.40 1/2 GCF -1

Temp = 37°F @ 8:30 AM (T)

• 465.35 ✓

496.93 ✓

T59N R25W Sec 6

Tran cont'd from pg 32

STA 1st H&R 2nd H&R 3rd H&R 4th H&R

H&R

FS 603 180-00-40 0-00-29 180-00-36 0-00-32

BS 601 0-00-23 180-00-16 0-00-23 180-00-17

T@ 602 180-00-19 180-00-15 180-00-13 180-00-15

180-00-15 ✓

Dist 602-603 88-48-52 271-11-12 88-48-50 346.31 346.236 ✓

Dist 603-602 91-17-46 268-42-24 91-17-41 346.30 346.212 ✓

FS 604 180-00-27 0-00-18 180-00-28 0-00-19

BS 602 0-00-17 180-00-12 0-00-25 180-00-13

T@ 603 180-00-10 180-00-06 180-00-09 180-00-06

180-00-06.25 ✓

603-604 99-18-24 260-41-54 99-18-15 230.66 227.625 ✓

604 to 603 80-51-26 279-08-48 80-51-19 230.56 227.630 ✓

346.22 ✓

227.63 ✓

FS 6022	²⁰ 234-45-25	²⁰ 54-45-23	234-45-25	54-45-23
AS 603	359-59-58	179-59-53	359-59-54	179-59-58
AB 604	²² 234-45-29	²² 234-45-20	²² 234-45-21	²² 234-45-25
	234-45-27 ✓			

604 + 602	91-25-04	268-35-11	91-24-57	42.76	42.75
602 + 604	89-28-23	270-32-25	89-27-59	42.77	42.77

FS ³¹⁹ 320	306-39-39	³¹⁹ 26-39-35	306-39-45	126-39-34
BS 604	0-00-22	180-00-14	0-00-19	180-00-09
AB 6022	³⁹ 306-39-19	³⁹ 306-39-21	³⁹ 306-39-26	³⁹ 306-39-25
	306-39-22.25 ✓			

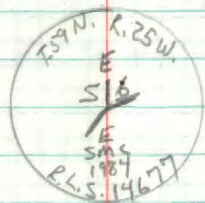
END OF TRAVERSE

6022 + 319	98-53-49	261-06-13	98-53-48	269.40	266.159 ✓
------------	----------	-----------	----------	--------	-----------

42.76 ✓

Monumentation of SMC - North
shore East Lake on E 1/16 line
Set Monument at Traverse pt # 604
see this Book pp 34
see this Book pp 53

Decl: 50°E



Reset 10 ft by 5/8 inch diameter
Aluminum rod with a 3.25
inch diameter Aluminum cap,
with magnetized pellet embedded,
stamped as shown and from
which: (Cap up 18 inches)

R. Pine 6.0 inch N11°E 10.20 ft to 16d nail
W. Birch 6.8 inch S75W 85.49 ft to 16d nail in
R. Pine 14.8 inch N29W 66.13 ft to 16d nail in
Red 8 ft long metal post NORTH (on property line)

All BT Red/with ring, 54-3 tag &

Nov 6, 1985

Mostly sunny/light breeze
P.C. G. Kosenko
⊙ G. Robertson
⊙ B. Ansk
⊙ K. Whitehorn

in Eastern face double blazed & scribed "56 SMC" "BT"
northern face double blazed & scribed "56 SMC" "BT" (4-5-84 BT)
SW face double blazed & scribed "56 SMC" "BT" (4-5-84 BT)
3.0 ft with 54-2 & 54-9 USFS signs attached
60d spike vertical in base of baseplate

PAGES

36-45

BLANK

46

T59N R25W Sec 677 Sub

Angles @ Property corners to Property line

STA 154810 2nd H&R

H&

FS 1403 184-38-37

BS 2730 0-00-34

T@ 2731 184-37-59

FS 1403 0-26-53 180-26-42

BS 2732 0-01-49 180-01-42

T 2731 0-25-04 0-25-00

46

June 18, 1984

T2 (SN: 265184)

Temp 65°

Sunny/humid

Light breeze

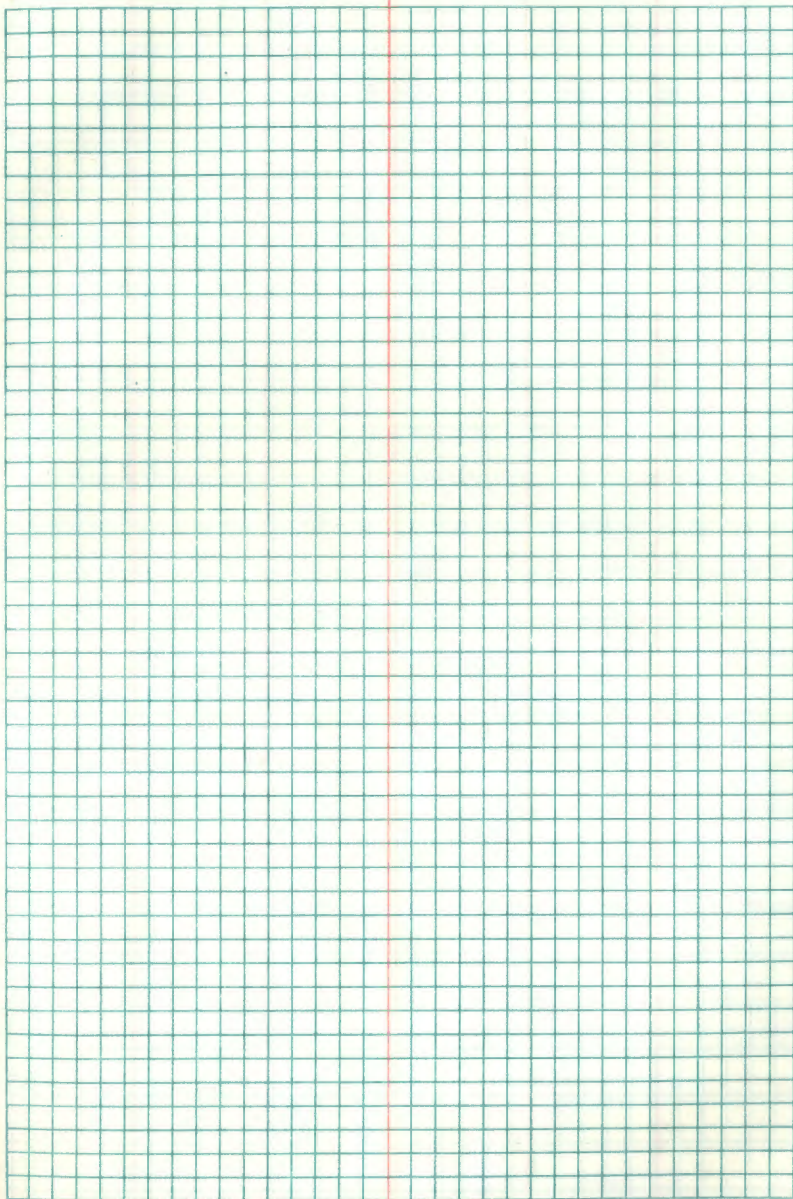
M K. Whitehorn

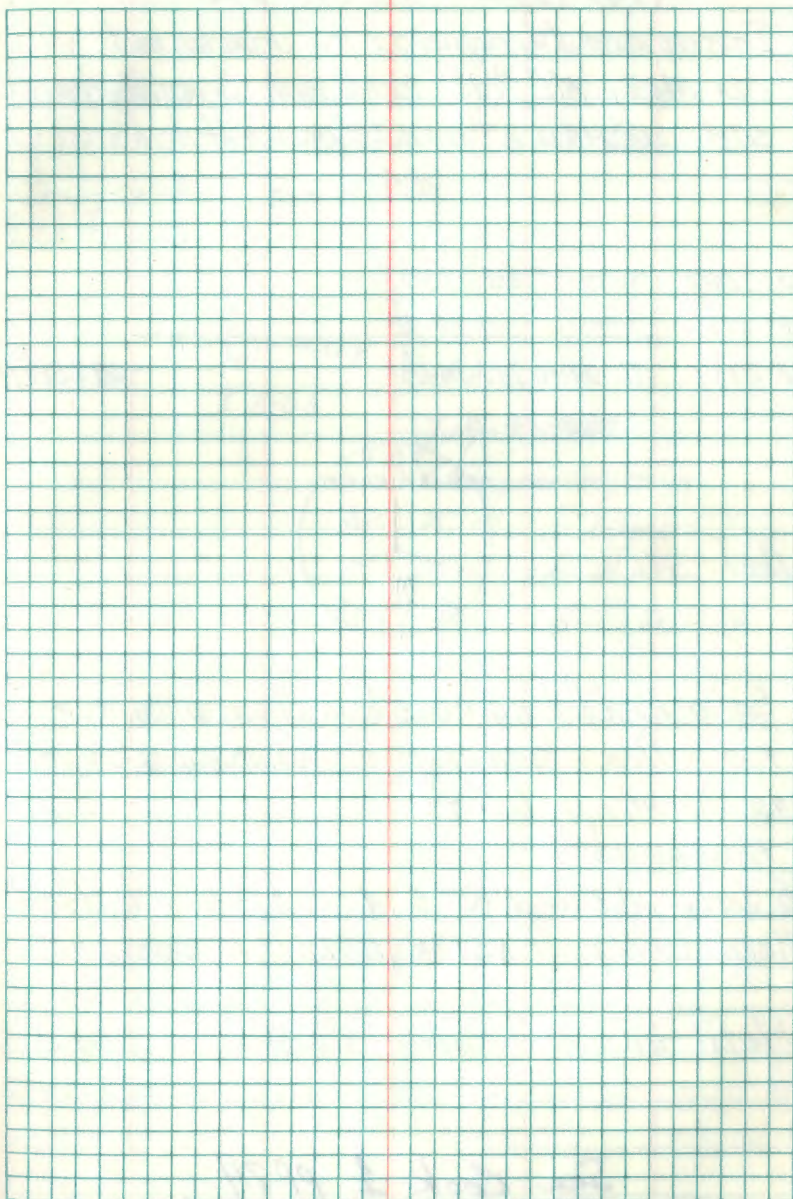
A.C. G. Kosenko

Φ B. Ansk

47

47





2012年11月18日

49.

T59N R25W Sec 677 Sub

Inverse and Monumentation info to set
Sta 1403, MC # 97, North side Copenhagen KSTA 1st H&D 2nd H&R 3rd H&D 4th H&R

H4

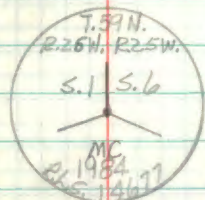
FS 1403 182-24-31 02-19-00

BS 2733 0-00-13 179-54-42

IT 2734 182-24-18 182-24-18

392.059 ft

182-24-18



Decl = 5° E

Set a 15 ft long by 5/8 in diam aluminum
rod with a 3/4 in diam aluminum cap stamped
as shown, up 1.5 ft

From which:

B. Spruce, 4.5 in, N83° E, 48.05 ft to a 1/2 in nail
Metal fence post N51° W, 10.28 ft to side of

Metal fence post, north, 3.0 ft w/542, 54-9

See Book 1 pp 24
See T 59N R 26W, BK 3, pp 18

June 18, 1984

219

T2 (SN: 26584)

K. Whithorn

LITZ REDIAL (SN: 4868)

P.C. G. Kosenko

Litz Prism 30 mm ECF = +1

B. Ansk

Temp 72° F

Baro: 29.60 inHg

3" B-O-G

392.05

20.26 ft
3" B-O-G

Set 60d spike

July 3, 1984

Clear, warm, calm

P.C. G. Kosenko

B. Ansk

G. Rubertson

All trees painted red and fence posts
painted red.in south face, double blazed, set "MC56BT" w/ 60d spike
post w/ BT tag attached

50

T59N R25W Sec 6+7 Sub

Inverse and Monumentation info to set

STA 1501, WCMC east side Copenhagen

STA 15H40

FS 1502

BS 14

R 15 180°00'00"

8.67 ft

50

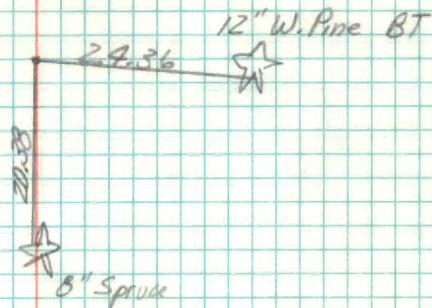
June ~~18~~²⁰, 1984

P.C. G. Kosenko

IOT K. Whitehorn

φ B. Ansk

- Set 60d spike for WC to MC
39.47 ft east of MC
See BK 2, PP 4, PP 17



51

1955

FS 6016 221-35-21 41-35-02

BS 14 0-00-13 177-59-54

A 1502 221-35-08 221-35-08

51

June 20

52

T59N R25W Sec 6 & 7 Sub

E-3

Inverse and Monumentation info to set

~~1901~~
~~1902~~, WC 114 6-7STA 1st H&D 2nd H&R

H&A

FS 1901 55-45-50 ⁸111-33-45 ^{106 2 2}167-23-00

BS 18 00-00-00 55-45-50 111-33-50

TA 19 55-45-50 55-47-55 55-46-10 2.58

5° Decl.

Reset County

Mon. on line

Iron Pipe 2" OD by

2.5' long with a 3" Aluminum Cap up 6"

Stamped as shown:

From which:

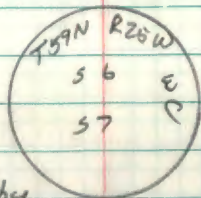
Birch 9.1" S09°W 20.80 to 16d nail on

oak 4.2" S67°W 45.91 to 16d nail on

R. Pipe 4.0" N39°W 28.08 to 16d nail on

Metal Fence Post West 30' w/54-9

Bts and Post Painted Red



CERTIFICATE FILED 84

52

Cloudy
67°FG. KOSENKO
B. AUSK
G. ROBERTSON

E. FACE Double BLAZE SCR. Not Visible 60d spike
 N.W. FACE Double BLAZE SCR. "WC 57 BT" 60d spike
 N. FACE Double BLAZE SCR. "WC 56 BT" 60d spike

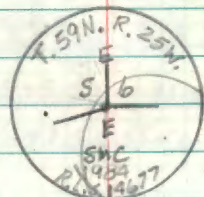
T59N R25W Sec 6+7 Sub

DE-4

Inverse and Monumentation info to
set SMC on north side East 1/4

Measured from st 320 N83°W, 0.59

Decl = 5° East

Set a 10 foot long by 5/8 inch diameter
aluminum rod with a 3/4 inch diameter
aluminum cap stamped as shown, up 1.5
feet from which:

W. Birch 9.9 in, N21°E 49.36 ft to a 16d nail
 W. Birch 6.7 in 578°W 44.39 ft to a 16d nail
 P. Pine 14.6 in, N02°W 80.59 ft to a 16d nail

Metal fence post, north, 5.0 ft w/542, 54-9

July 5, 1984

Partly cloudy, breeze, mild

PC by G. Kosenko

B. Husk

G. Robertson

All BT's and metal fence post
are painted red

in SE face, double blaze, ser: "56SMCBT" w/60d spike
 in north face, double blaze, ser: "56SMCBT" w/60d spike
 in east face, double blaze, ser: "56SMCBT" w/60d spike

See This Book page 35

T59N R25W Sec 6+7

Inverse and Monumentation info to set

STA 3401 E 1/4 Sec 7

STA 1st H&D 2nd H&R C.H. Dist M.H. Dist

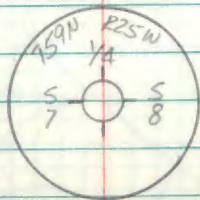
H&R

FS 3401 346-28-01 166-27-57

BS 33 00-00-20 180-00-16

T@ 34 346-27-41 346-27-41 5.06 5.06

Decl = 5° East



Moved the Itasca County iron pipe to the proper point (STA 3401). It's a 3-foot long by 2-inch outside diameter iron pipe with a 3-inch diameter aluminum cap stamped as shown, up 1.0 feet from which

W. Birch, 9.4 in., N28°E, 37.08 ft to 1/6d nail in

Red Pine, 19.0 in., S61°W, 53.91 ft to 1/6d nail in

W. Birch, 9.2 in., N64°W, 19.07 ft to 1/6d nail in

Metal fence post, south, 3.0 ft w/54-9, 54-2

Metal fence post, west, 3.0 ft w/54-2

July 11, 1989

Clear, warm, breeze

PC 10 G. Kosanko

B. Husk

G. Robertson

All BT's & posts painted red

NW face, double blaze, scr: "1/4S7BT" w/60d spike

NN face, double blaze, scr: "1/4S7BT" w/60d spike

S face, double blaze, scr: "1/4S7BT" w/60d spike

55

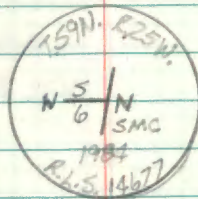
B-3,4 92.43

T.59N R25W Sec 607 Sub

Inverse and Monumentation info to set sta
west SMC on Slawson Lake

Measured N88°W, 0.75 ft

5°E declination



Set a 15 ft long by 5/8 in dia. aluminum
monument with a 3 in dia. aluminum
cap up 1.5 ft stmpd as shown.
From which bears:

B. of G. , 5.2 in, S45°W, 92.43 ft to a 16d nail

B. of G. , 8.6 in, N89°W, 105.28 ft to a 16d nail

Metal Fence Post, West, 3.70 ft w/ S42°54-9

All BT's have 60d spikes in the base of the BT

All BT's and posts painted red

July 5, 1984

G. Kasenko, B. Ausk,

G. Robertson

partly cloudy, 70°F, windy

55

in N. face, double blazed, scribed "SG SMC BT"
in S. face, double blazed, scribed "SG SMC BT"
blaze

56

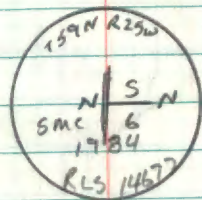
T 59N R25W SEC. 127 Sub.

B-3,4

INURSE AND MONUMENTATION info to SET
SMC EAST STANSON LAKE

MEASURED . N 86° W 0.79'

5° Decl.



SET A 15ft long by $\frac{5}{8}$ inch Diam Aluminum
Rod with a 3 inch dia. Aluminum Cap vp
1.5 ft stamped as shown:
FROM WHICH:

W. PINE 8.8" N 85° E 87.68ft to a 16d Nail

W. PINE 12.3" S 54° E 91.87ft to a 16d Nail

METAL FENCE Post EAST 3.0' W / 54.2 N 54.9

All post & Bts PAINTED RED

56

7-9-84

OVERCAST
HOT Humid
75°

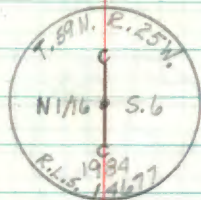
B. AUSK
G. ROBERTSON

IN N FACE Double Blazed SCR "56 SMC BT"
60d SPIKE Bottom BLAZE

IN NE FACE Double Blazed SCR "56 SMC BT"
60d SPIKE Bottom BLAZE

T59N R25W Sec 6 & 7 Sub B³
 Inverse and Monumentation info to set sta
 6001, CN 1/16

Measured from 310 to 6001 N88°W, 0.75 ft



Decl = 5° East

Set a 5 foot long by 2 1/2 inch outside diameter
 concrete filled galvanized iron pipe with a
 3 inch diameter brass cap stamped as shown,
 up 1.5 feet from which:

Aspen 10.0 in, East 58.92 ft to 16d nail in
 W. Birch 8.5 in, S58°W 27.10 ft to 16d nail in
 W Birch 10.5 in, N32°W 41.08 ft to 16d nail in

Metal fence post, east 3.0 ft w/54-2, 54-9
 Metal fence post, west 3.0 ft w/54-2

July 5, 1984

Fly sky, mild breeze

W. G. Robertson

B. Ansk

G. Robertson

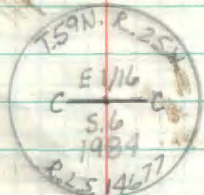
All bearing trees and metal fence posts
 are painted red.

South face, double blaze, ser: "CN 1/16 S 6 BT" w/60 d spike
 NW face, double blaze, ser: "CN 1/16 S 6 BT" w/60 d spike
 SW face, double blaze, ser: "CN 1/16 S 6 BT" w/60 d spike

Inverse and Monumentation info to set sta
6004, CE 1/16 Sec 6

Measured from sta 36 N 84°W, 0.72 ft

5° E Declination



Set a 3 foot long by 2 1/2 inch outside
diameter, concrete filled galvanized iron
pipe with a 3 inch diameter brass cap
stamped as shown, up 1.0 ft from
which:

W. Birch 7.0 in N 37°E 7.40 ft to 16d nail in
S. Maple 7.0 in N 12°E 52.56 ft to 16d nail in
P. Pine 9.8 in S 24°W 47.64 ft to 16d nail in

Metal fence post, north, 3.0 ft w/54-2

Metal fence post, south, 5.0 ft w/54-2, 59-9

July 5, 1981

100% clay, milt, bronze
PC G. Larson
PC G. Peterson
PC B. Husk

All bearing trees and metal fence
posts are painted

east face, double blaze, ser: "CE/11656BT" w/wood spike
east face, double blaze, ser: "CE/11654BT" w/wood spike
NW face, double blaze, ser: "CE/11656BT" w/wood spike

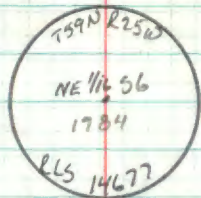
59

T59N R25W SEC 6 & 7 sub B-4

INVERSE AND Monumentation INFO to SET
6005, NE 1/4 SEC 6

MEASURED FROM STA. 313 N86°W 0.79'

5° Decl.



Set a 5ft long by 2 1/2 inch IRON PIPE filled
with CONCRETE with a 3inch BRASS CAP
STAMPED AS SHOWN:

FROM WHICH:

W. PINE 15.4 inch S83°W 50.5184 to 16d NAIL ON
W. PINE 7.8 inch N43°W 54.00 to 16d NAIL ON
BIRCH 9.6 N50°E 8.53' to 16d NAIL ON
METAL FENCE POST SOUTH 3.0' W/54.2 + 54.9
METAL FENCE POST WEST 3.0' W/54.2

All Bts HAVE 60d SPIKE BOTTOM BLAZE
All Bts AND Posts ARE PAINTED RED

59

7-9-84

OVERCAST

HOT humid

75°

D. AUGST

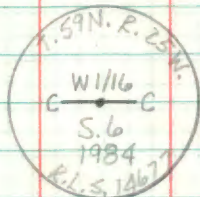
G. ROBERTSON

N FACE Double BLAZE SER "NE 1/4 56 BT"
SW FACE Double BLAZE SER "NE 1/4 56 BT"
NW FACE Double BLAZE SER "NE 1/4 56 BT"

T 59N R25W Sec 6 & 7 Sub
Inverse and Monumentation info to set sta
6007, CW 1/16 Sec 6

Used traverse sta for this corner

Decl = 5° East



Set a 5 foot long by 5/8 inch diameter
aluminum rod with a 3 1/4 inch diameter
aluminum cap, stamped as shown, up
1.5 feet from which:

W. Birch 9.2 in, $S24^{\circ}E$ 16.89 ft to 16d nail in
B. Spruce 19.7 in, $S28^{\circ}W$ 45.98 ft to 16d nail in
Tamarack, 17.4 in, $N03^{\circ}W$ 62.10 ft to 16d nail in

Metal fence post, North, 3.0 ft, w/54-2 & 54-9

Metal fence post, West, 3.0 ft, w/54-2

July 3, 1984

Clear, warm, breeze

PC Mr B. Kosenko

B. Husk

B. Robertson

All BT's are painted red and metal
fence posts are painted red

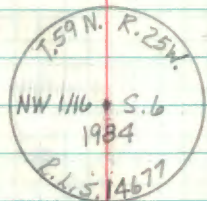
double blazed, scr: "CW 1/16 S6 BT", w/60d spike
Metal fence, double blazed, scr: "CW 1/16 S6 BT", w/60d spike
fence, double blazed, scr: "CW 1/16 S6 BT", w/60d spike

61 T59N R25W Sec 6+7 Sub

Inverse and Monumentation info to set sta
600, NW 1/16 sec 6

Used traverse sta for this corner

Decl = 5° east



Set a 5 foot long by 2 1/2 inch outside
diameter concrete filled galvanized iron pipe
with a 3 inch diameter brass cap stamped
as shown, up 1.5 feet from which:

Red Pine 14.4 in, N39°E, 49.66 ft to 1/2d nail in
Red Pine 15.8 in, S50°E 45.56 ft to 1/2d nail in
White Pine 6.6 in, S29W 44.94 ft to 1/2d nail in

Metal fence post, east, 3.0 ft, w/54-2

Metal fence post, south, 3.0 ft w/54-2 + 54-9

61

July 3, 1984

Atty body, warm, breeze
PC by G. Kosenko
B. Husk
G. Robertson

All BT's + posts painted red

SE face, double blaze, scr: "NW 1/16 S.6 BT" w/ 1/2d spike
SW face, double blaze, scr: "NW 1/16 S.6 BT" w/ 1/2d spike
West face, double blaze, scr: "NW 1/16 S.6 BT" w/ 1/2d spike

62 T59N R25W Sec 6+7 Sub E-1,2

Inverse and Monumentation info to set sta

6016, W 1/16 6-7

STA 1st H&R 2nd H&R 3rd H&R 4th H&R

H&R

FS 6016 192-07-22

BS 16 0-00-23

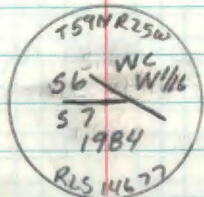
VOID

T@17 192-06-59

810.79

MEASURED from STA 402 N3°E 0.64 ft

W.C. to W 1/16



Set a 5/8" Aluminum Rod by 15' Long with
a 3" Aluminum Cap Stamped as shown
from which:

W. PINE 6.1" S77°W 77.69' to 16d nail on

Metal FENCE Post S46°E 16.28' W 54-3

Metal FENCE Post West 30' W/54-2 + 54-9

OVERCAST

62

7-10-84

B. AUSK

G. ROBERTSON

60d spike Rattom BLAZE
SE FACE Double BLAZE SR "WC 57 BT"

63

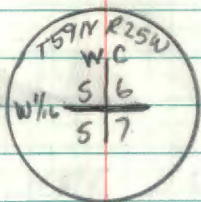
T59N R25W

E1 F2

INVERSE AND MONUMENTATION to set STA.
405 WC South of 6016 - W 1/4

Moved County Mon. ON LINE

SET A 2 1/2" OD IRON PIPE
BY 3' LONG WITH A
3" ALUMINUM BRASS CAP
STAMPED AS SHOWN =



FROM WHICH =

Old County Bts

N. PINE DEAD 9.2" S27°W 30.0' to 16d NAIL ON

TAMARACK 8.9" ^{DEAD} N85°E 23.80' to 16d NAIL ON

Established =

TAMARACK 4.9" N88°W 37.87' to 16d NAIL ON

TAMARACK 6.8" N61°E 29.52' to 16d NAIL ON

TAMARACK 7.6" S40°E 31.91' to 16d NAIL ON

METAL FENCE POST North 3.0' W/54.2° S 54-9

All Bts & Post ARE PAINTED RED

63

7-10-84

B. AUSK

G. ROBERTSON

SW FACE Double BLAZE SCR. NOT VISIBLE

S FACE Double BLAZE SCR. VISIBLE

60d SPIKES ON ALL BOTTOM BLAZES

N FACE Double BLAZE SCR. "WC 57 BT"

S FACE Double BLAZE SCR. "WC 57 BT"

SE FACE Double BLAZE SCR. "WC 57 BT"

T59N R25W Sec 6 & 7 Sub

Inverse and Monumentation info to set sta

7003, S 1/16 7 & 8

STA 1st H&D 2nd H&R

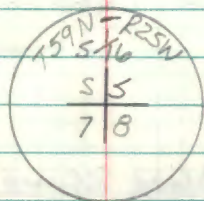
H&A

FS 7003 87-05-57 269-06-03

BS 119 00-00-23 180-00-15

T@ 1199 89-05-34 89-05-48

2.12



Reset the Itasca County monument at the proper position. The monument is a 3 foot long by 2 inch outside diameter iron pipe with a 3 inch diameter aluminum cap, stamped as shown, up 1.0 ft from which:

Aspen 7.4 in N28°E 15.35 ft to 1/2" nail in

Aspen 7.1 in S09°E 22.03 ft to 1/2" nail in

Aspen 8.3 in S56°W 15.64 ft to 1/2" nail in

Metal fence post, north, 3.0 ft w/54-2, 54-9

Metal fence post, west, 3.0 ft w/54-2

July 2, 1984

G. Kosenko, B. Ausk, & G. Robertson

Wild T2

Clear, Humid, & Windy

July 13, 1984

Same crews as before

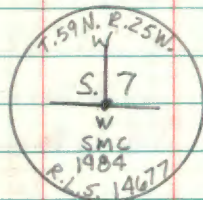
All BT's and posts painted red

east, double blazed, set: "S 1/16 SB BT" w/60d spike
 SW face, double blazed, set: "S 1/16 SB BT" w/60d spike
 NW face, double blazed, set: "S 1/16 SB BT" w/60d spike

T59N R25W Sec 6+7 Sub F.G. 2

Inverse and Monumentation info to set
the SMC, North shore Clubhouse Lake

Decl: 5° East



Set a 5 foot long by 5/8 inch diameter
aluminum rod with a 3/4 inch diameter
aluminum cap stamped as shown, up 18
inches from which:

Red Pine 6.9" N14°E 54.10 ft to 16d nail on

Red Pine 7.0" N16°W 56.49 ft to 16d nail on

Metal fence post, north, 3.0 ft w/54-2, 54-9

July 11, 1984

Clear, hot, calm

AC: BT G. Kosanko

G. Robertson

DR: B. Ausk

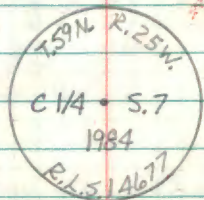
Painted only the blazes on the BT's
red. Also painted the post red
60d SPIKES Bottom BLAZES

NW FACE Double BLAZE Sec. "57 SMC BT" w/60d spike
SW FACE Double BLAZE Sec. "57 SMC BT" w/60d spike

TS9N R25W Sec 6+7 Sub
Inverse and Monumentation info to set
sta 7000, c/k Sec 7

Measured $S 72^{\circ} W$, 0.22 feet from sta 3408
to STA 7000

Decl = 5° East



Set a 10 foot long by $5/8$ inch diameter
aluminum rod with a $3/4$ inch diameter
aluminum cap stamped as shown, up 18
inches from which:

B. Spruce 9.2 in $N 18^{\circ} E$ 24.97 ft to 16d nail in
W. Birch 9.3 in $S 13^{\circ} E$ 41.58 ft to 16d nail in
Tamarack 12.7 in $N 63^{\circ} W$ 45.70 ft to 16d nail in

Metal fence post, east, 2.2 ft w/54-2
Metal fence post, south, 3.0 ft w/54-2, 54-9

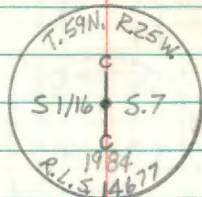
Pulled County Mo.

July 12, 1984
Clear, hot, calm
PC & P G. Kosenko
G. Robertson

west face, double blazed, scr: "C1/4 57 BT" w/60d spike
west face, double blazed, scr: "C1/4 57 BT" w/60d spike
south face, double blazed, scr: "C1/4 57 BT" w/60d spike

All BT's and fence posts painted
red.

T59N R25W Sec 6 & 7 Sub

Inverse and Monumentation info to
set STA 2002, CS 1/16 S7Measured S60°W, 0.23 ft from STA 343
to 7000

Decl = 5° East

Set a 5 foot long by 2½ inch outside
diameter concrete filled galvanized
iron pipe with a 3 inch diameter brass
cap stamped as shown, up 18 inches
from which:Balsam, 5.4 in, N34°E, 66.85 ft to 16d nail in
W. Birch, 8.1 in, ~~N49°W~~ 90.12 ft to 16d nail in
N05°WMetal fence post, north, 3.0 ft w/542, 549
Metal fence post, east, 3.0 ft w/542

All BTs & posts painted red

July 12, 1984

Clear, hot, breeze

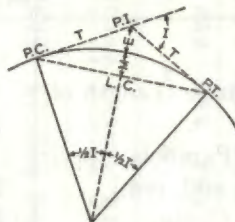
PC by G. Kosenko

G. Robertson

west face, double blaze, scr "CS 1/16 S 7 BT" w/16d spike
east face, double blaze, scr "CS 1/16 S 7 BT" w/16d spike

CURVE AND REDUCTION TABLES

Published by Eugene Dietzgen Co.



CURVE FORMULAS

1. Radius : $R = \frac{50}{\sin D/2}$
2. Degree of Curve: $D = 100 \frac{I}{L}$. Also, $\sin D/2 = \frac{50}{R}$
3. Tangent : $T = R \tan \frac{1}{2} I$. Also, $T = \frac{T \text{ for } 1^\circ \text{ curve}}{D} + C$.
4. Length of Curve: $L = 100 \frac{I}{D}$
5. Long Chord : $L.C. = 2R \sin \frac{1}{2} I$
6. Middle Ordinate: $M = R (1 - \cos \frac{1}{2} I)$
7. External : $E = \frac{R}{\cos \frac{1}{2} I} - R$. Also, $E = T \tan \frac{1}{4} I$.

EXPLANATION AND USE OF TABLES

Given P.I. Sta. 83+40.7, $I = 45^\circ 20'$ and $D = 6^\circ 30'$ find:

Stations—P.C. = P.I. - T. $T = \frac{T \text{ for } 1^\circ \text{ Curve}}{D} + C$. From Tables V and VI

$T = \frac{2392.8}{6.5} + 1.197 = 368.32 - 3 + 68.32$. Sta. P. C. = 83+40.7 - (3+68.32) = 79+72.38.

P. T. = P. C. + L, and $L = 100 \frac{I}{D} = 100 \frac{45.33}{6.5} = 697.38$ Therefore, P. T. = (79+72.38) + (6+97.38) = 86+69.76.

Offsets—Tangent offsets vary (approximately) directly with D and with the square of the distance. From Table III Tangent Offset for 100 feet = 5.669 feet. Distance

= 80 - Sta. P. C. = 27.62. Hence offset = $5.66 \times \left(\frac{27.62}{100}\right)^2 = .432$ ft. Also, square of any

distance, divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(27.62)^2 + (2 \times 881.95) = .432$ ft.

Deflections—Deflection angle = $\frac{1}{4} D$ for 100 ft., $\frac{1}{4} D$ for 50 ft., etc. For "X" ft., Deflection Angle (in minutes) = $.3 \times X \times D$. For Sta. 80 of above curve Deflection Angle = $.3 \times 27.62 \times 6.5 = 53.86'$. Also Deflection Angle = dfl. for 1 ft. from Table III $\times X = 1.95$

$\times 27.62 = 53.86'$. For Sta. 181 Deflection Angle = $53.86' + \frac{6^\circ 30'}{2} = 4^\circ 8.86'$.

Externals—From Table V for 1° curve, with central angle of $45^\circ 20'$, $E = 479.6$.

Therefore, for $6^\circ 30'$ curve, $E = \frac{479.6}{6.5} + \text{Correction from Table VI} = 7.378 + .039 = 7.417$.