

T145N - R27W - 5th P.M.

5th P.M.

Book #3

RS
FIELD BOOK

82-0012

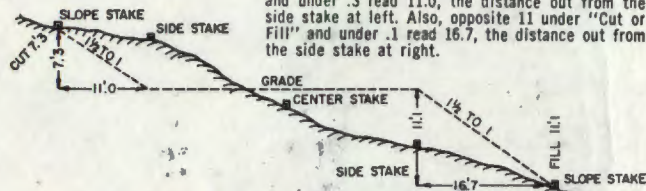
T 145 N

R 27 W

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



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

DISTRICT RANGER
U. S. Forest Service
P. O. Box 308
Deer River, MN 56636

Phone (218) 246-2123

66
2
182



The paper in this book is made of 50% high grade rag stock with a WATER RESISTING surface sizing.

KEUFFEL & ESSER CO.

CASS COUNTY, MN USFS

T 145N R 27W 5th P.M.

①

Index

T 145N R 27W 5th Principal M.

	0	5	10	15	20	
7	8	9	10	11	12	
15	17	18	19	20	21	
18	20	21	22	23	24	
30	29	28	27	26	25	
6						
7	31	32	33	34	35	36
2	4	5	10			

Sept. 8, 1981

Sunny & Warm

K. Whitehorn
R. Oleson

Started at the Standard corner between Sections 31, Twp 145 N, R27 W and Section 36, Twp 145 N, Rge 28 W on 11th Standard Parallel. Found the 1937 GLO monument in good condition. Rough chained north along Range line between R27 W and R28 W 2650' and found Cass County monument and BT with Forest service tags. In good condition. Awaiting info on corner from Terry Freeman, Cass County Surveyors Office.

Sept 9, 1981

Sunny & Warm (80°)

K. Whitehorn
R. Oleson

Started at the Standard Corner between Section 31 - T145N - R27 W and Section 36 - T145N - R28W on 11th Standard Parallel. Rough chained EAST (Mag)

2

T145N

Cass County
2" galv IP with
Well cap

Old FS Road

Mag
N

R28W

R27W

2650'

Sec 36

Sec 31

GLO Concrete Mon w/ Brass Cap

Cass County
2" galv IP w/well cap

11th Standard Parallel

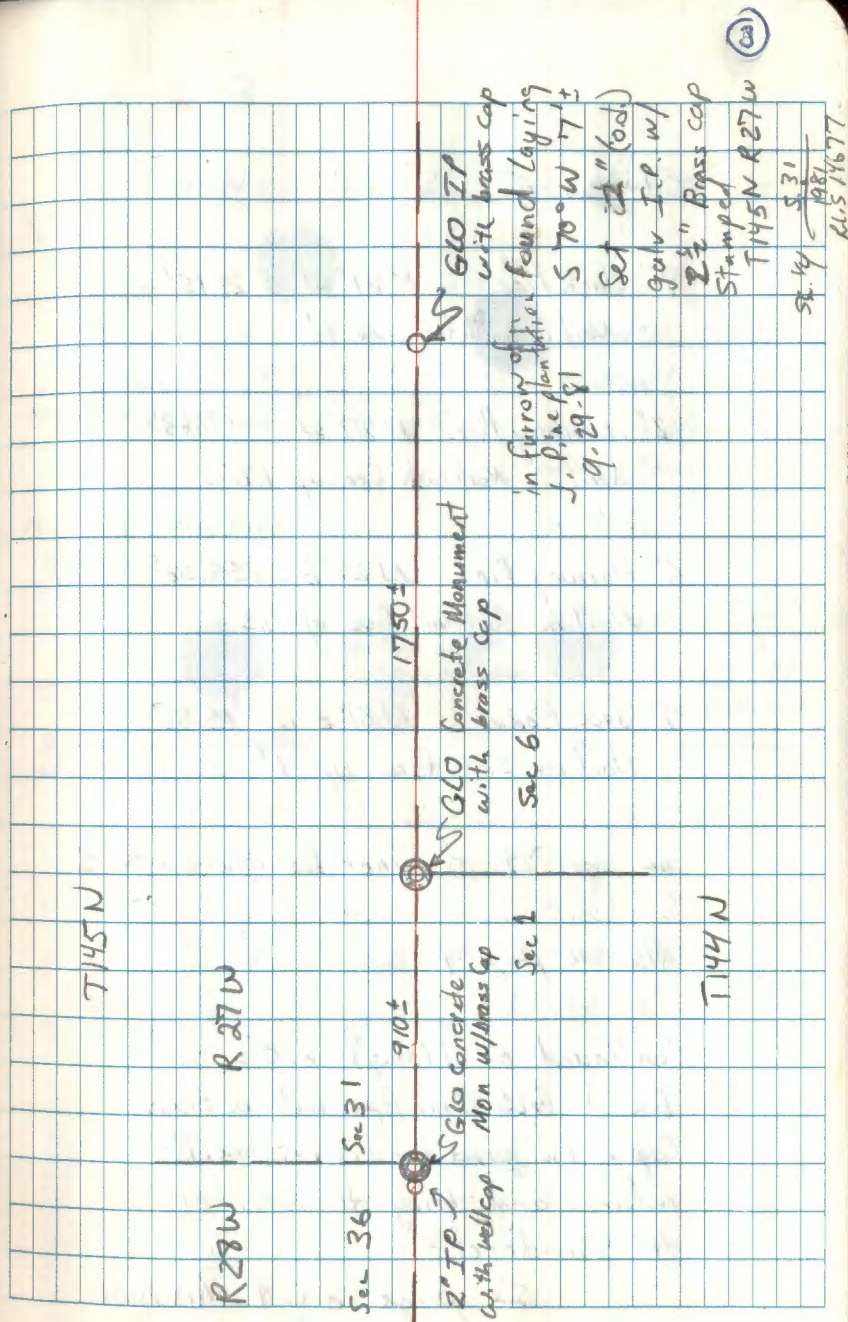
Sec 1

T144N

For information on the SE township corner of T145N R28W see T145N R27W Book 2 pg 4.

910'± and found a GLO Concrete Monument for closing corner of Sec 6-T144N-R27W & Sec 1-T144N-R28W. In good condition. Continued EAST (Mag) 1750'± to Location of S¹/₄ cor Sec 31-T145N-R27W. Area has been furrowed and planted. Found no trace of the GLO Monument but did find a 11" snag (approx 30' tall) with a blaze at the base and painted blue. Scribe in blaze: SC V4531 RT.

74' to the southwest we found an 8"± badly charred stump with a 1¹/₂ x 1¹/₂ inch remnant of a blaze mark (axe marks visible). Appears to be the lower end of the blaze (up 10"). No scribing visible but fits the record bearing and distance with the location as established from the snag. We set a temporary point using a spike as we had no monument with us.



Cut New BT's

9" Jack Pine N 81° W 21.15'
Nail in South face up 1'

12" Norway Pine N 27° W 78.63'
Nail in Northeast face up 1.8'

6" Norway Pine N 27° E 55.02'
Nail in Southeast face up 0.5'

7" Jack Pine N 81° E 15.86'
Nail in South face up 1'

See page 73 of Corner Restoration Book 1

Also see page 9

Continued EAST (Mag) 820'± and
found GLO Iron Pipe with a Brass
Cap. In good condition. Will
return and bring this corner
to standard.

See page 8 & 9 This Book


2-3


T 145 N


Sec 31

R 27 W


1937 GLO



N. Pine snag
N 43 4/4° W 161.04'



N 27° W 78.63'
16d nail, up 1.8' in
the northeast face
of a 12" Norway Pine



N 27° E 55.02'
16d nail, up 0.5'
in the Southeast face
of a 6" Norway Pine

1937 GLO J. Pine Stamp


N 71 1/4° W 165.66'


N 81° W 21.15'
16d nail, up 1' in South face
of 9" Jack Pine

2" x 5" 1p w/  3" brass cap


N 81° E 15.86'
16d nail, up
1' in the south face
of a 7" Jack Pine

T 144 N

Sec 6

R 27 W

See Book 1, pp 19 T 144 N R 27 W
See Book 1, pp 73 T 145 N R 27 W

Continued EAST (Mag)

520'± Road (F.S.)
 700'± old FS Road.
 1400'± 70' wide marsh
 1700'± Edge of marsh
 1800'± Edge of marsh
 1830'± found GLO Concrete
 Monument with a
 brass cap, flush with
 the ground on high spot
 in marsh.

2-3
 STD SE
 cor 831

found GLO BT:

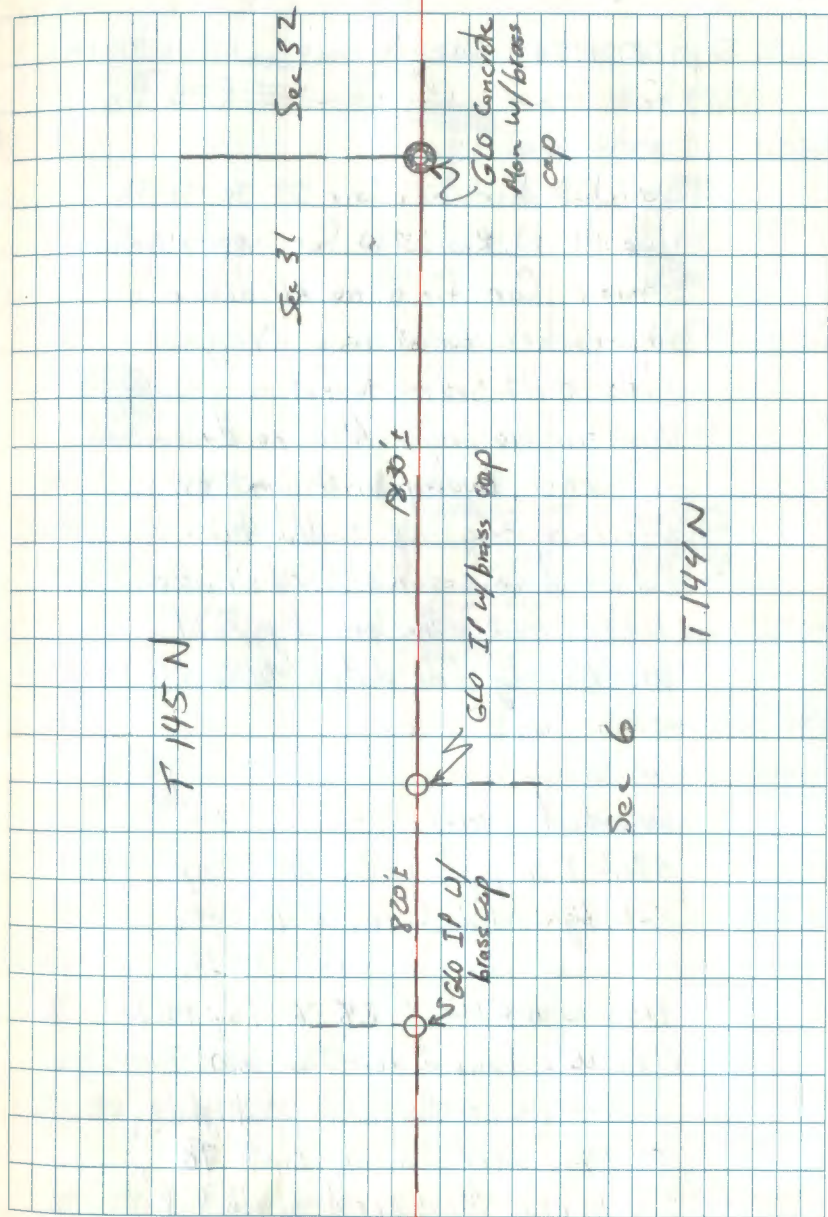
16" White Pine N40°W 63.56'
 GLO: N41°W 63.36'

cut New BT:

12" White Pine N63°W 20.34'
 Nail in southwest face up 1.5'

9" Tamarack S57°E 4.77'
 Nail in Southwest face up 1'

See page 24 Corner Restoration Book # 1



V-1

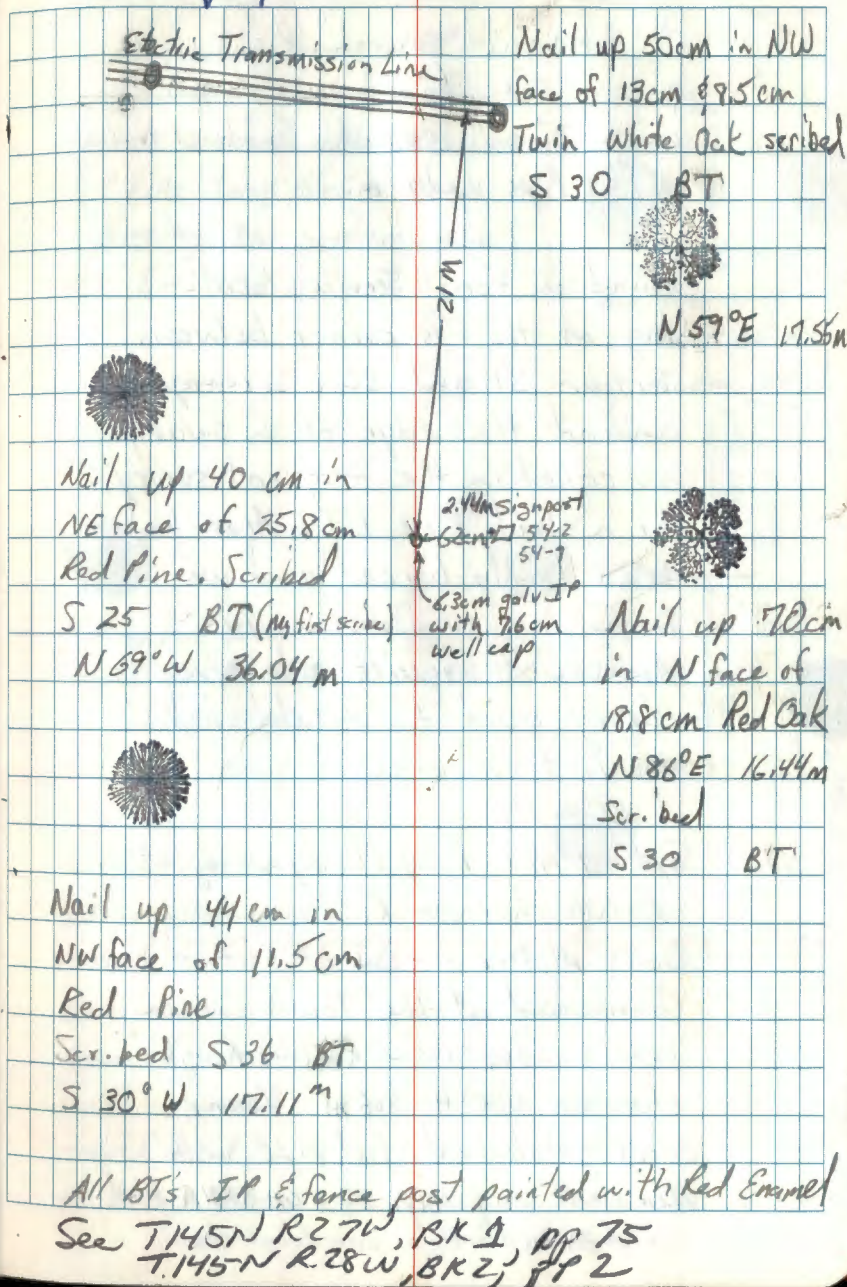
Sept 10, 1981 Hazy & humid K. Whitehorn
R. Olson

Searched for Sec Cor 29-30-31-32
Twp 145 N, Rge 27 W for approximately
3 hrs. Can find no evidence of
any corner location. Original
calls don't seem to fit anything.
Very frustrating. Also no evidence
of corner, swamp with post or
reference tag as called by
Edward Iverson's 874-9 dtd
10-3-24 or the one by Earl
M. Handy (no date).

Started search for 2" x 48"
galv Iron pipe with well cap
set by John Caro in 1912
for Sec Cor between 30, 31,
T145 N R27 W & 25, 36, Twp 145 N
R28 W. Found Forest Service Tag
on tree on north side of highway
#2 (tag said 33 chs south $\frac{1}{4}$
 $\frac{1}{4}$ cor). Measured south 482'

⑥

V-1



X-1

To commence search, light under power line. Found a 2 1/2" galv IP. with 3" well cap. No Evidence of any BT's Pipe up 46cm.

found a Forest Service location tag at the 1/4 corner between section 31 and 32. Scrounged around the edge of a swamp as called in the original survey for a Jack Pine BT. Area had been badly burned and we found no evidence. This Area will require extensive survey work to established the lost corners.

Sept 29, 1981 Partly Cloudy, windy, showers.
K. Whitehorn - R. Olesar

~~Gone Metric~~

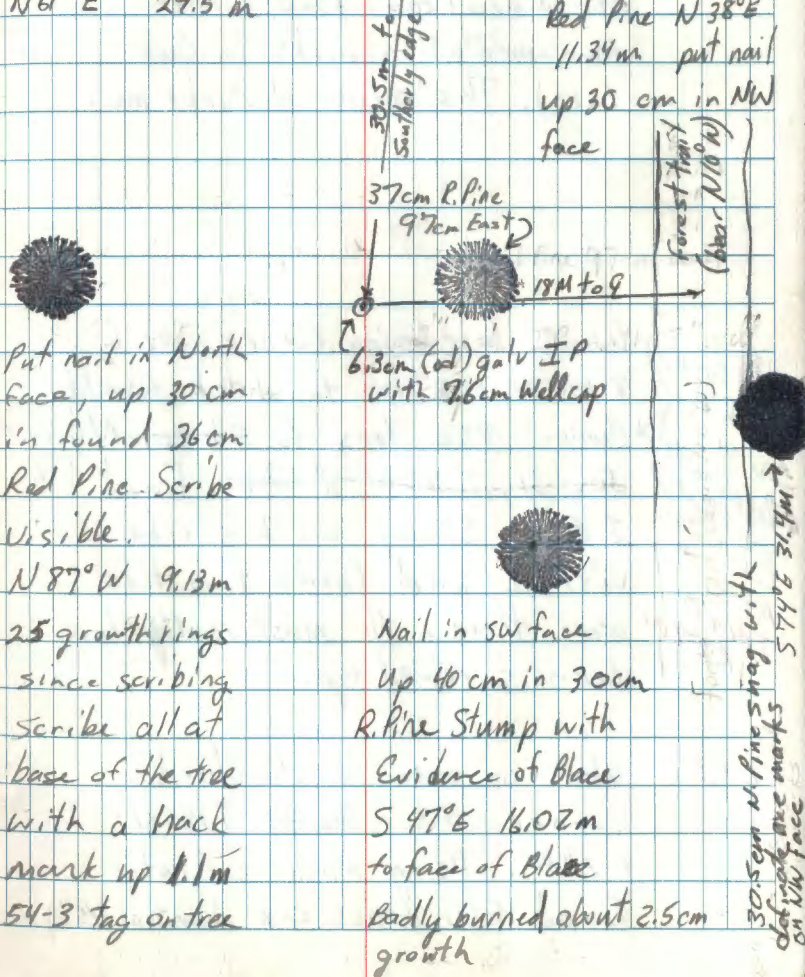
Commenced at the Town Corner (SW sec 36, T145N, R27W) Rough chained NORTH 808m found 6.3cm galvanized steel pipe with 76cm well cap up 30.5cm 53.31m West and 20.42m North of our Rough chain.

X-1

Pipeline (bears N 88° W)

definite axe mark in blaze style of R. Pine Stump 15cm of time of Blazing. No scribing visible

N 61° E 29.5 m



Put nail in North face, up 30 cm in found 36cm Red Pine. Scribe visible.

N 87° W 9.13m

25 growth rings since scribing scribe all at base of the tree with a track mark up 1.1m 54-3 tag on tree

Nail in SW face up 40 cm in 30cm R. Pine Stump with Evidence of Blaze S 47° E 16.02m to face of Blaze Badly burned about 2.5cm growth

30.5cm N pin shag with definite axe marks 54° E 31.9m on NW face

Curo's 1912 corner may fall at
west edge of road near location
posts. traverse needed to
confirm. BT's don't fit anything
of record (can't find corner
monumentation books in Cass
Lake). This corner disturbs me.

See Survey
Book B
Survey
Record
Cass County
Courthouse
A-3
T144N
R27W

Went to closing corner Sec 6,
T144N, R27W to check Harold
Curo's 1952 ties to ~~S 1/4 cor~~ N 1/4 cor
~~Sec 31, T145N, R27W~~. found 56
1 6LO Stump with scribe
visible and Curo's two ties
were there. He must really have
been screwed up.

Z-3
Went on over to standard
corner S 1/4 Sec 31. T145N-
R27W. Using Magnetic Locator
found 6LO Brass cap bent at 45°

and lying $7' S 70^{\circ} E$ of
our position established on
Sept. 8th 1981. Set our 5cm galv
IP with 63cm Brass cap at
record Bearing & dist from
found evidence. Stamped

(See page 4.)

T145N R27W

Sc. 4 5.31

1981

RLS 14677

Old GLO monument was under
about 1/2 cu of dirt in a furrow.

Z-9

T145N R27W

1871 GLO Original Gov't Survey

set cor to sec's 32 & 33 (George R. Stuntz)

From which:

Aug 1871

Tamarack, 6 ins, N34°W, 3 lbs

Tamarack, 7" , N62°E, 37 lbs

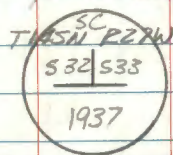
1929 H.E. Johnson Recovery (CCC 874)

Recovered:

Norway Pine, 17", NE sec: 533 BT

Location poster on 7" Ash S side of line 7 lbs (4.62 ft)

1937 GLO Dependent Resurvey



Set a concrete monument, 2ft long, 6 ins. diam., 20 ins. in the ground with a brass tablet, 3 1/2 ins. diam., 3 ins stem from which:

N. Pine, 18, N15 1/2°E, 108 lbs (71.28 ft)

Cedar, 7, N21 3/4°W, 66 lbs (44.0 ft)

1962 Morrison and Tucker Recovery

Blue line painted east to west

Tag on 20 ins red pine

Tag on 10 ins cedar

No brass cap found

10

7-22-82 Ken Whitehorn RLS & Kleth Matson find
6 in x 24" concrete mon leaning over
ft south of edge of swamp straight
straightened & pulled ties

New Cedar 8.3 in N68 1/2°E 53.83'
to spike in base of BT block. Scribed
"SC T145N R27W 533" & "BT"

End N. Pine 22 1/2 in N14 1/2°E 70.85 ft
to 60d in base of blaze (red)

Hub for laser transmitter at edge of
Swamp N0°E 31 ft

End Cedar 16.6 in N22 1/2°W 49.45 ft
tapped nail in SW side of tree.

Put cedar log by corner with ribbon
2 1/2" Brass cap stamped SC

T145N R27W

532 | 533

1937

Certificate by Milo Steffan

5/23/83 See pg 72 Book #1 T145N R27W

①

TRAVERSE BET SECTION 445

1ST H&D 2nd H&D 3RD H&D 4TH H&D

FS 3	282-37-08	102-37-02	282-37-17	102-37-10
------	-----------	-----------	-----------	-----------

BS 1	00-00-00	179-59-57	359-59-59	179-59-54
------	----------	-----------	-----------	-----------

TC 2	282-37-08	282-37-05	282-37-18	282-37-16
------	-----------	-----------	-----------	-----------

(282-37-12)

Ft. Meters

DIST 2-1	90-05-51	269-58-59	359-59-40	333.53	101.658
----------	----------	-----------	-----------	--------	---------

DIST 2-3	90-12-28	269-47-16	359-59-49	761.63	232.132
----------	----------	-----------	-----------	--------	---------

FS 4	149-58-16	329-58-13	149-58-08	329-58-07
------	-----------	-----------	-----------	-----------

BS 2	00-00-03	179-59-55	359-59-59	179-59-50
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TC 3	149-58-13	149-58-18	149-58-10	149-58-17
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(149-58-15)

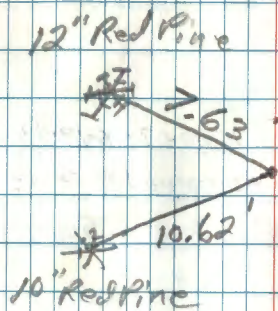
FS 5	210-25-07	30-25-02	210-25-03	30-24-58
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BS 3	00-00-08	180-00-01	00-00-08	180-00-07
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TC 4	210-24-57	210-25-01	210-24-55	210-24-54
------	-----------	-----------	-----------	-----------

(210-24-57)

1/3/89

T R MAIN
T D OJANEN

(12)

	Vest		Fe	Meters
	1st H&D	2nd H&D	3rd H&D	4th H&D
DIST 4-3	89-57-11	270-02-54	1147.12	349.646
DIST 4-5	90-03-03	269-57-02	386.12	117.688
FS-6	³³⁹ 226-20-08	⁵⁹ 46-20-03	³³⁹ 226-20-03	46-19-58
BS 4	00-00-06	179-59-57	00-00-02	179-59-57
TC 5	226-20-02	226-20-06	226-20-01	226-20-11

(226-20-05)

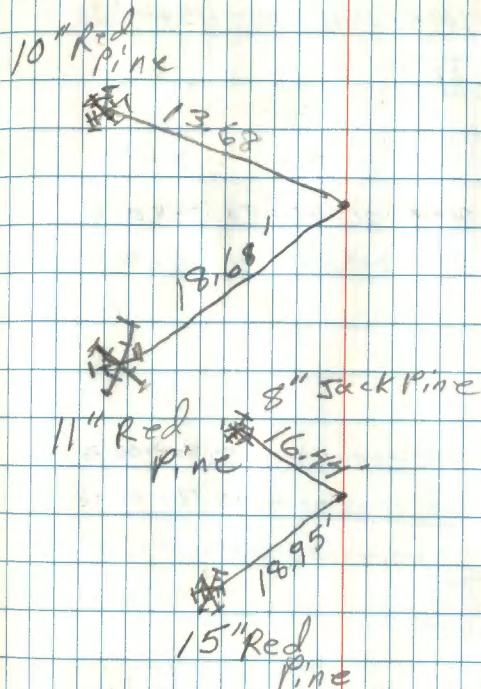
FS 7	178-50-53	⁰⁷ 358-50-73	178-50-51	358-50-46
BS 5	00-00-01	179-59-51	00-00-06	179-59-51
TC 6	178-50-52	178-50-52	178-50-45	178-50-55

(178-50-51)

DIST 6-5	90-19-27	269-40-52	1141.65	347.982
DIST 6-7	90-20-30	269-39-46	695.36	211.947

FS 8	155-59-38	³³⁵ 155-59-32	155-59-41	335-59-32
BS 6	00-00-14	180-00-02	00-00-08	180-00-01
TC 7	155-59-24	¹⁵⁵ 175-59-30	155-59-33	155-59-31

(155-59-30)



(13)

1/4/89

DT O. OJANEN
E. SCHMIEDT

FS 9 159-45-28 337-45-25 159-45-33 339-45-23

BS 7 00-00-10 180-00-03 00-00-10 180-00-00

K@ 8 159-45-18 159-45-22 159-45-23 159-45-23

159-45-22

Fh Mts

Dist 8-7 90-19-35 269-40-26 469.38 143.068

Dist 8-9 89-30-54 270-29-09 537.74 163.903

FS 10 163-06-50 343-06-58 163-06-52 343-06-38

BS 6 00-00-09 180-00-03 00-00-03 180-00-02

K@ 9 163-06-41 163-06-33 163-06-49 163-06-36

163-06-40

FS 11 193-24-12 13-24-05 ^{193-24-02 13-24-06} ~~00-00-07~~ ~~180-00-02~~

BS 9 00-00-04 180-00-03 ^{00-00-07 13-24-06} 193-24-02 180-00-02

K@ 10 193-24-08 193-24-02 193-23-55 193-24-04

193-24-02

Dist 10-9 89-37-19 ²⁷⁰⁻²²⁻⁴² ~~261-38-28~~ 581.12 177.127

Dist 10-11 90-21-23 261-38-28 372.83 113.638

(14)

FS 12 ✓ 196-16-00 16-15-51 196-16-02 16-15-52
 BS 10 100-00-14 180-00-07 100-00-13 180-00-10
 X@ 11 196-15-46 196-15-44 196-15-49 196-15-42

(196-15-45)

FS 13 271-37-01 91-37-04 271-36-57 47-36-56

BS 11 00-00-03 179-58-57 00-00-04 179-57-58

X@ 12 271-36-52 271-37-02 271-36-53 271-36-58

(271-36-59)

Dist 12-11 89-31-57 270-27-44 573.74 174.877

Dist 12-13 89-40-27 270-19-25 1160.89 353-839

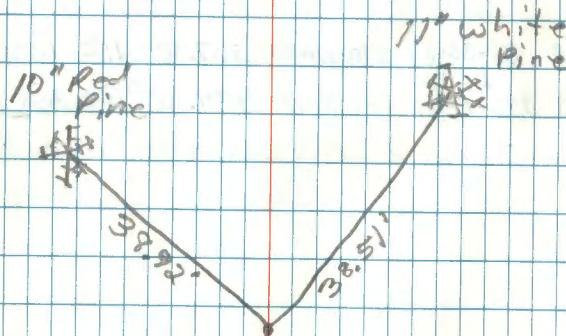
FS-14 282-52-48 102-52-41 282-52-43 102-52-37

BS 12 00-00-14 180-00-08 00-00-13 180-00-03

X@ 13 282-52-34 282-52-33 282-52-30 282-52-34

(282-52-33)

Dist 13-14 90-59-33 269-00-21 492.68 150.175



(15)

ESTABLISH $\frac{1}{4}$ POSITION BETWEEN SECTION
4 & 5 T145N R27W

FS A 245-41-13 65-40-55 245-41-16

BS 5 00-00-00 179-59-⁵²~~48~~ 359-59-54

TIC 6 245-41-13 245-41-03 245-41-22

245-41-13

FS B 180-00-00 359-59-46

BS 6 00-00-00 179-59-36

TICA 180 00 00 180-00-10

180-00-05

DEST 6-A 89-35-58 270-24-30 367.84 112.120

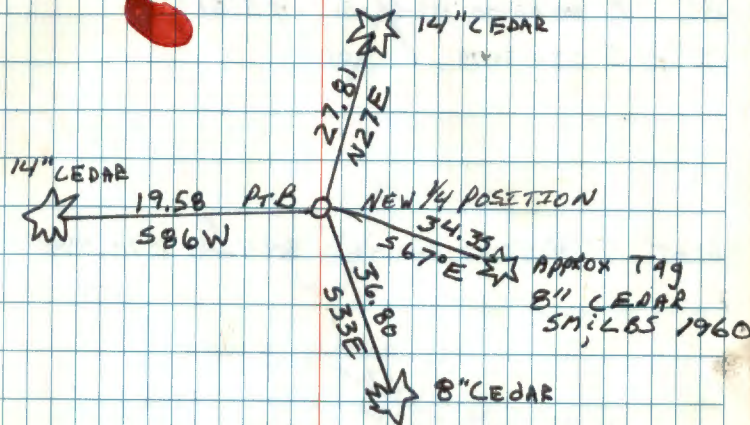
A-B ^{41 25}~~28-44~~ 268-49-13 494.92 150.855

TT R MAIN

J JACKSON

1/13/89

Temp 25



367.83

494.81

862.64 Add .34 to this total to SET CORNER

(16)

ESTABLISH NORTH $\frac{1}{16}$ POSITION BETWEEN SECTION

4 AND 5 T145N R27W

FS $\frac{1}{16}$ 250-35-19 ~~50-35-08~~ 50-84-51

BS 2 00-00-00 ~~179-58-01~~ 179-59-51

TP 3 230-35-19 ~~07~~

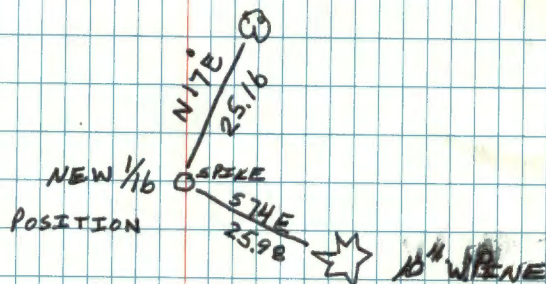
DIST 90.13-20 269.47-00 894.¹⁵~~18~~ 272.549

WIT R MAIN
O MARK

1/18/89

30°F

894.14



SUBTRACTED 1.03 FT FROM HORIZONTAL DISTANCE
TO SET $\frac{1}{16}$ CORNER

END OF
BOOK.

BLANK PAGES
AHEAD.