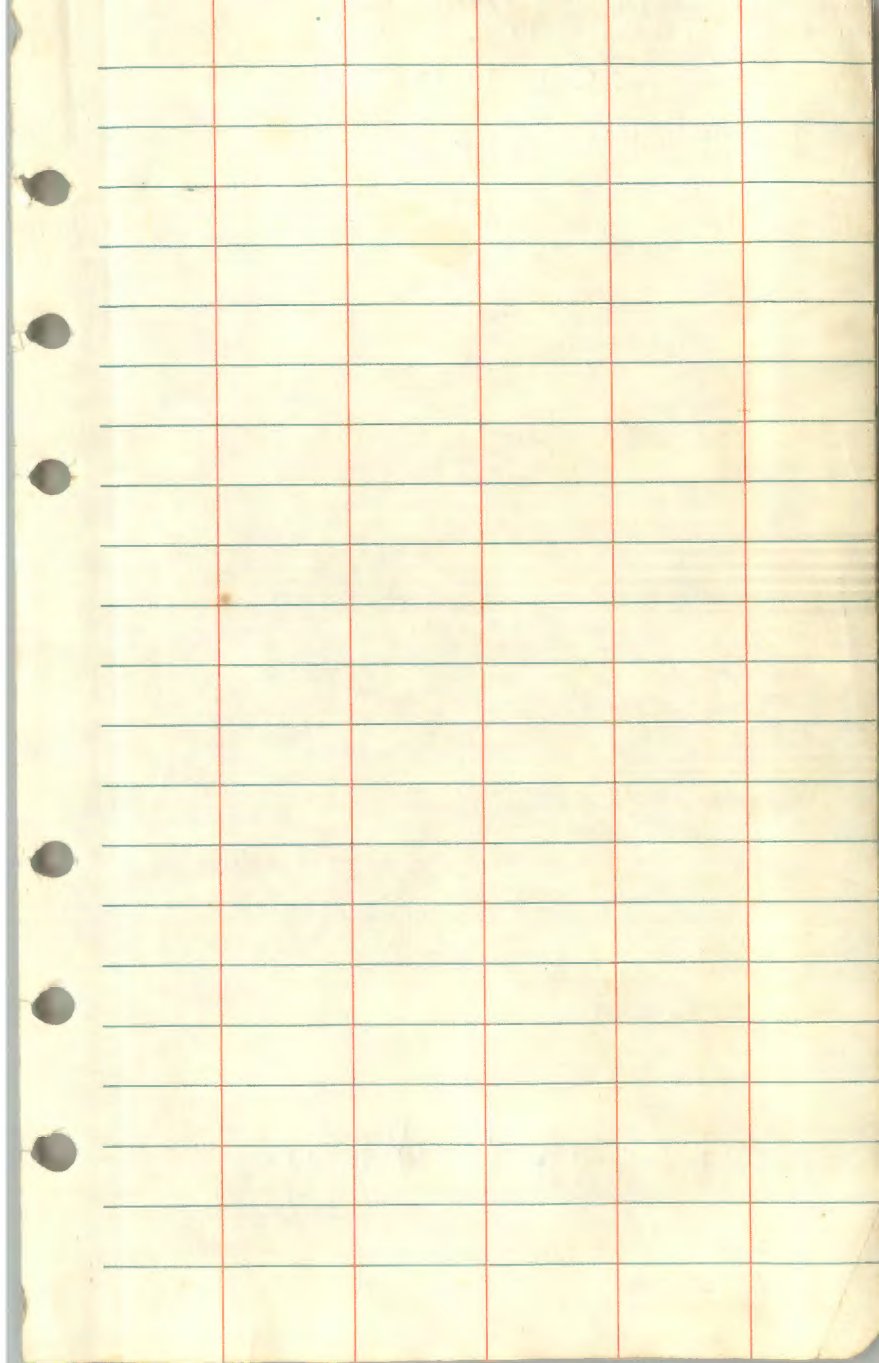


Surveying Field Book

If found, please
return to:

Cass Lake RANGER Dist
Cass Lake, Mn. 56633



T. 146 N. R. 31 W. Sec. 11

2/25/80 Monday Brannet 3 vaccs
Pulled from 2 BT'S at E $\frac{1}{4}$
bet. sec. 11 and 12, set PK nail
in road. Put 12' range pole
at N $\frac{1}{2}$ bet. sec. 11 + 12. ~~and~~
set instrument up over
PK nail and sighted to range
pole. Put another PK⁽²⁾ nail
in road about 1000' north
of E $\frac{1}{4}$ on line. Turned
angle of 271°-10'. Brushed
towards C $\frac{1}{4}$.

2/26/80 - Tuesday - Brannet 3 vaccs

T. 146 N. R. 31 W. Sec. 11.

Cont' brushing to C $\frac{1}{4}$.
was north of B.C. by
1.75'

Set instrument up at
N $\frac{1}{2}$ bet. sec. 11 + 12 at

and back sight to PK(2)
nail set in road, and
turned 92° . First
1600, went down road.
Brushed last 1000' to
CN $\frac{1}{16}$. Missed CN $\frac{1}{16}$ B.C.
by 1.1' north. Chained
east of CN $\frac{1}{16}$ 300' and
offset south 98'. Put
pickets on true line for
sign posts.

267/80 - Wednesday - BRAMA 3 Yaccs
T. 141. N. R. 31 W Sec. 11
Set instrument up at
CN $\frac{1}{16}$, back sighted to
pt. set on true line
between N $\frac{1}{16}$ & CN $\frac{1}{16}$. Turned
angle of $267^\circ 40'$ and
brushed north towards

$N\frac{1}{4}$, $N\frac{1}{4}$ is missing,
so no way to check line.

2/28/80 - Thursday - BRAMA 4 1/2 cc
T. 141 N. R. 31 W. Sec. 11.

Got county ties for $N\frac{1}{4}$
between sec. 2+11. Tried
to tie in $N\frac{1}{4}$ to checked
out brushed line. Corner
falls in a deep ditch.
County ties didn't
fit all the trees mark
near the $N\frac{1}{4}$. $\frac{7}{8}$

Pulled from old pine stump
BT for $W\frac{1}{4}$ bet. sec. 10+11
and tried to tie in corner.
Chained 13/6.7 from sec.
corner 10, 11, 14+15 and
corner seem to fall in
center of Blk. Top Road.

Marked corner with
yellow crayon.

Monday, 3/3/80

Safety meeting in morning.
Worked on corner cards in
afternoon.

Tuesday, 3/4/80 - BRAMA, Eckstam, Hurd, Premo
T. 146 N. R. 30 W. Sec. 11

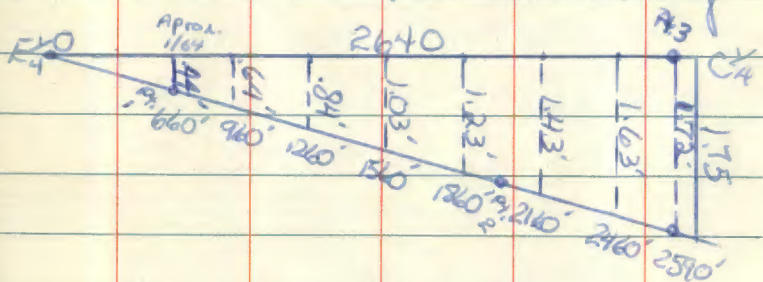
Set instrument up at $\frac{1}{6}$ (Pt. 1)
cor. & back sighted to $E\frac{1}{4}$ (Pt. 0)

Between sec. 10 & 11. Turned
 180° and set range pole
on line 300' down line.

Offset south .64' from
range pole and set picket
for sign post. Con't ~~chang~~
chain down line and
every 300'; followed same
procedure in offsetting.

Set instrument up at
pt. 2 between pickets

that were set down line at 1860' & 2160'. Back sighted to pt. 1 and turned 180°. Can't setting pickets for sign posts. Fifty feet from corner set a pt. on true line (pt. #3) for back sight from C $\frac{1}{4}$ to C5 $\frac{1}{16}$. See drawing



Posted line to standard from approx. $\frac{1}{64}$ to C $\frac{1}{4}$. Blazed a few true line trees. Brought C $\frac{1}{4}$ up to standard. See corner card.

Wednesday, 3/5/80 - Brama, Ekotang
Hare, Premo
T. 146 N. R. 31 W. Sec. 11

Set instrument up at $C\frac{1}{4}$ and
back sighted to Pt. #3 and
turned $88^{\circ}30'$. Brushed line
to $CS\frac{1}{6}$. Was west of B.C.
about $\frac{3}{5}'$. Turned instrument
on B.C. and read ^{new} angle
of $88^{\circ}21'$. Set instrument
up at $CS\frac{1}{6}$ and back sighted
to $C\frac{1}{4}$ and turned 180° .
Cut line to $S\frac{1}{4}$ and hit
B.C. Ties for $\frac{1}{4}$ cor. Maple BT 4290'
& telephone pole s. of road 37.15'.

Thursday, 3/6/80 - Brama, Hare & Premo

Set instrument up at $CS\frac{1}{6}$
and back sighted to $S\frac{1}{4}$ bet.
Sec. 11 & 14 and turned angle
of $91^{\circ}21'$. Brushed west
to $\frac{SW}{4} \frac{1}{6}$. Hit B.C. Moved

instrument up to ~~CW $\frac{1}{16}$~~ ^{SW $\frac{1}{16}$} and
back sighted to CS $\frac{1}{16}$ and
turned 180°. Brushed west
to S $\frac{1}{16}$ between sec. 10 & 11.
Was north of S $\frac{1}{16}$ by about
5.5'. S $\frac{1}{16}$ has to be set before
line can be posted.

3/9/80 T. 146 N, R. 31 W. sec. 11

BRAMA, Premo, Smith, Hare,
Signed & blazed between
CS $\frac{1}{16}$ & SW $\frac{1}{16}$. Marked 3 new
BT'S at SW $\frac{1}{16}$. See corner card.
Signed & blazed about
1,000' between ^(Sec. 11 & 12) N $\frac{1}{16}$ & CN $\frac{1}{16}$.
About 1600' of line falls
on road. Brought CN $\frac{1}{16}$
up to standard. Marked
3 new BT'S. See corner card.

Monday, March 10, 1980

T. 146 N. R. 31 W. Sec. 11 BRAMA, Hare, Premo

Sign + posted line from C S $\frac{1}{4}$ to the SW $\frac{1}{4}$. Brought SW $\frac{1}{4}$ up to standard. Mark three new BT'S. (See corner card).

Signed + posted line from CN $\frac{1}{4}$ east $\frac{1}{4}$ mile until line intersects road. Marked 3 new BT'S for CN $\frac{1}{4}$. Corner to standard. (See corner card).

Tuesday, March 11, 1980

T 142 N. R. 30 W. Sec. 34 Krause, Schoonover, BRAMA
Hare, Premo

Pulled from BT'S for $\frac{1}{4}$ between Sec. 27 + 34. Set point on

line between N $\frac{1}{4}$ + N $\frac{1}{2}$ with instrument by straddling in looking at N $\frac{1}{4}$ + turning 180 to W $\frac{1}{2}$.

Put pickets on line for sign posts.

Chained + ran compass from AP 6 + AP 1 sec. 27 west to AP 5 + AP 2 sec. 27. Chained 1320' and looked for corner. Didn't find.

Wednesday, 3/12/80

T. 142N. R. 30W, ^{sec 27} BRAMA, Hare, Premo

Straddled instrument on line between $N\frac{1}{4}$ between sec. 34 and sec. 27, and $CN\frac{1}{16}$.

Set pt. and put pickets on line for sign posts.

Signed + blazed lines

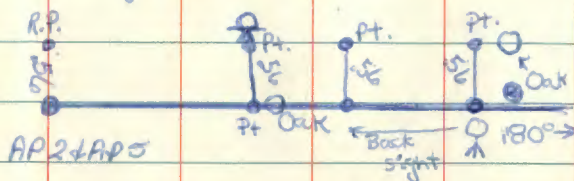
between $CN\frac{1}{16}$ and $N\frac{1}{4}$, and $N\frac{1}{4}$ and $W\frac{1}{16}$. Brought $CN\frac{1}{16}$, $N\frac{1}{4}$ and $W\frac{1}{16}$ up to standard. (See corner cards).

Brought AP 6 & AP 1 in sec. 27
up to standard. Marked
three new BT'S. (See corner card)
Looked for AP 2 & AP 5, ⁿ sec. 27
corner with metal
detector and found: it
went north with B.C. almost
touching ground. I.P. in
place. Corner fell about
12' north & 3' west
from where I had chained
the day before.

Thursday, 3/13/80

T. 142 N. R. 30 W. BRAMA, Premo, the
Set ~~it~~ instrument up
at AP 2 & AP 5 sec. 27 and
back sighted to W 16, turned
angle of $89^{\circ} 56'$ and

Brushed towards AP 6 + AP 1.
About 400' from AP 2 + AP 5,
had to offset around two
big Oak trees.



Hit B.C. at AP 1 + AP 6.
Put pickets on line. Signed
& blazed line. Marked
Red Oak as true line tree.
Marked 3 new BT's for
AP 1 + AP 6. Corner to
standard & line. (See corner
card).

Friday, 3/14/80

Krause, Schoonover,
BRAMA, Hare, Premo.
Worked with Krause &

Schoonover on running
traverse from C $\frac{1}{4}$ to N $\frac{1}{4}$.
EDM line and recorded
angles in Kurt Krause
field book. T. 141 N. R. 31 W. Sec ²²

MONDAY, 3/17/80

BRAMA, Schoonover, Premo

Set instrument up at sec.

corner 21, 22, 27, + 28^{pt. 1} and

back sighted to Pt. 11, turned
angle of $88^{\circ}-38'-57''$ set

pt. 93.69' east of corner (Pt. 2)

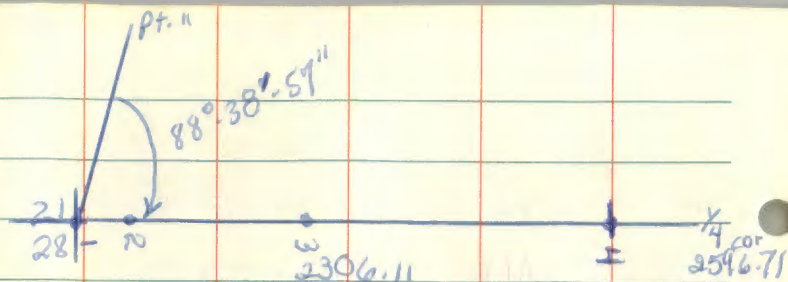
Set up instrument at pt. #2

and back sight to Pt. 1, turned
 180° and can't brushing.

Set point #3 740.01' from pt. #2,

back sighted or turned 180° .

Pt. #4 was set 1472.40'
from pt. #3. Line EDM.



Tuesday - 3/18/80 - BRAMA, Schoonover, Smith

T. 141N. R. 31W. Sec. 22

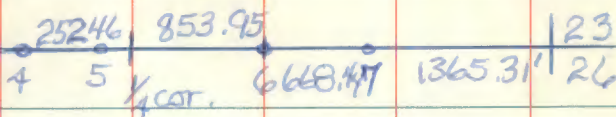
Set instrument up at pt. 4
and back sighted to pt. 3 and
turned 180°. Brushed east.

At 252.46' from pt. 4, set
pt. 5 on line and 38.14' west
of $\frac{1}{4}$ cor. Set pt. 6 1106.42'

east of pt. 4. Set instrument
up at pt. 6 and back sighted
to range pole at pt. 4 and
turned 180°. Con't brushing.

Set pt. 7 668.44' east of pt.
6. Moved instrument up to
pt. 7 and back sight to pt. 6
and turned 180°. Shot ~~the~~

to the Sec. corner, from
 pt. 7, 1365.55'. Was
 north of the Sec. cor 2.1'

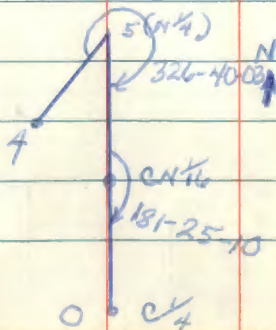


Wed. - 3/19/80 - BRAMA, Schoonover + Hare

T. 141 N R. 31 W. Sec. 34

Finished running traverse
 between $C\frac{1}{4}$ to $N\frac{1}{4}$. DATA
 recorded in Kurt Krause field
 book.

Mike Hayes figured out angle
 to turn from pt. 4 set up
 at $N\frac{1}{4}$ to cut south.



Started brushing out and figured out positions for pts. on the next traverse from $N\frac{1}{4}$ bet.

Sec. 27+34 to sec. cor. 26,27,34+35.

3/20/80 - BRAMA, Schoonover, Hare, Smith

T. 141 N. R. 31 W. Sec. 27

Blazed + posted line from

sec. cor. 21, 22, 27+28 to $N\frac{1}{4}$

between Secs. 22 + 27. Our land

to the south of line. Blazed

one true line (R.P.) about

200' west of $\frac{1}{4}$ cor. $\frac{1}{4}$ cor.

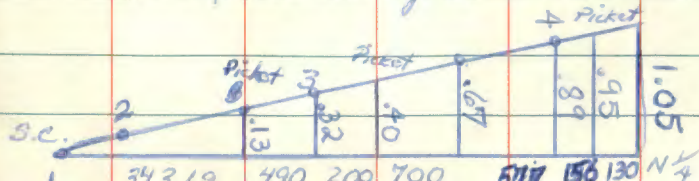
not set yet. Brought sec. cor.

up to standard. Marked two

new BT'S. and put a 6'

sign post with prop. boundary

+ attention signs. See corner card.



3/25/80 - BRAMA, Krause, Schoonover, Hare.

T. 141N. R. 31W Sec. 34.

Ran tranverse from $N\frac{1}{4}$ bet.
Sec. ~~cor~~ 27+34 to sec. cor.

26, 27, 34, 35. Turned data into

Mike Hayes to figure out
angle to turn from pt. 4 and

cut true line. Tied in pt. 13.

EDM. from sec. cor. 26, 27, 34+35

North on compass 1324.8' and
looked for $S\frac{1}{4}$ between sec. 27+26.

Metal detector found I.P.

below ice and in about 2'
of water. Corner is about

35' east of upland and it

falls in a swamp. Put in

8' sign post along side I.P.

and put on attention sign.

3/26/80-BRAMA, Krause, Schoonover, Hare

T. 141 N. R. 31 W. sec. 22

Set instrument up at sec. cor.

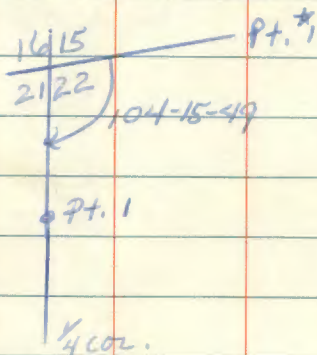
15, 16, 21 + 22 and back-sighted

to PT *1. Turned angle of

$104^{\circ}-15'-49$ and brushed

south. At 1579.23 set pt. 1

and EDM back to sec. cor.



3/27/80-BRAMA, Schoonover, Hare, Main

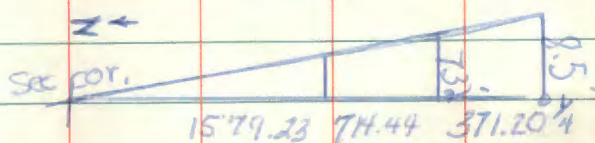
T. 141 N. R. 31 W sec. 22

Set instrument up at pt. 1

and back-sighted to sec. cor.,

Turned 180° and brushed

south. Set pt. 2, 714.44'
 south of pt. 1. Set up
 at pt. 2, back sighted to
 pt. 1 & turned 180° . Brushed
 south to $\frac{1}{4}$ cor. Distance
 from ~~pt. 2~~ pt. 2 to $\frac{1}{4}$ cor. ⁽²⁺³⁾ 371.20'.
 Was 8.5' east of cast iron
 county monument.
 Offset pt. 2, 7.32' west.



Set instrument up at $\frac{1}{4}$ cor.
 and back sight to pt. 2,
 turned 180° and brushed
 south. Set pt. 4, 1177.55'
 south of quarter corner.
 set instrument up at
 pt. 4 and back sighted to
 $\frac{1}{4}$ cor. Brushed south about 300'
 Went by Aprox $5\frac{1}{16}$.

3/28/80 - BRAMA, Schoonover, Krause, Hayes,
T. 141N. R. 31W. Sec. 22 Here

Set instrument up at
pt. 4 and backsighted $\frac{1}{4}$ cor.
and turned 180° . Projected line
to sec. cor. 21, 22, 27+28 and
was within a foot of hitting
brass cap. Krause & Hayes
set 5 $\frac{1}{16}$ between sec. 21+22.
Posted & blazed line from 5 $\frac{1}{16}$
to $\frac{1}{4}$ corner. Mark three new
BT'S at $\frac{1}{4}$ corner. Tag three
Cass county BT'S. See corner card.
Put 4 sign posts between corners.

3/31/80 - BRAMA, Schoonover, Krause,
Hare & Jablonsky

T. 146 N. R. 30 W. Sec. 2

Set instrument up on
line between sec. cor. $\frac{34|35}{3|2}$
and sec. cor. $\frac{35|36}{2|1}$.

Backsighted sec. cor. $\frac{35|36}{2|1}$ and
turned 180° and put pt. on
line for $\frac{1}{4}$ cor. and at mid-point.
Total distance was 5307.12
and $\frac{1}{4}$ was put 2635.56' from
either sec. corner.

$\frac{34|35}{3|2}$ 2635.56' $\frac{1}{4}$ cor. 2635.56' $\frac{35|36}{2|1}$
5307.12'

Put pickets down line for sign posts.

4/1/80 - BRAMA, Schoonover, Krause, Hare,
& Jablonsky

Posted & blazed line between

sec. cors. $\frac{34}{3/2} + \frac{35}{2/1}$.
Monumented both sec. corners.
and brought them up to standard.
Set $\frac{1}{4}$ corner and brought it
up to standard. (See corner cards).

4/2/80-BRAMA, Krause, Schoonover + HARE.

T. 146N. R. 31W, Sec. 6

Set instrument up ~~between~~
at SW $\frac{1}{6}$ and backsighted
pt. set on line between
CS $\frac{1}{6}$ and SW $\frac{1}{6}$. (This line
was brought to standard
in Dec., 1979). Turned 180°
and brushed line west
through blk. spruce swamp
to S $\frac{1}{6}$. Went south of
B.C. by 9". Turned instrument
to range pole at corner and
set pickets down line.

Post^d & blazed line and
brought SW $\frac{1}{16}$ & S $\frac{1}{16}$ corner
up to standard. See corner cards.

4/3/80 - BRAMA, Schoonover, Krause, Hare
T. 146 N. R. 30 W. Sec. 67

Set instrument on ridge
~~west~~^{east} of NW $\frac{1}{16}$ corner about
500' from corner. Backsighted
corner and turned 180° and
brushed line east to CN $\frac{1}{16}$.
Went south of CN $\frac{1}{16}$ by
4". MOVED instrument north
about 1.75' and backsighted
the NW $\frac{1}{16}$. Turned 180° and
hit BC. at the CN $\frac{1}{16}$. Put
pickets on line for
sign posts and a point
close to each corner
for future backsights.

MARKED NEW BT'S at both
CORNERS. (See corner cards).
Posted + blazed line.



Monday - 4/7/80 - Brama, Hare + Northbird.

T. 141. N. R. 31W. Sec. 27

Set instrument up at MC
between sec. 27 + 28. Back sighted
to sec. corner 21, 22, 27, 28 and turned
 180° . Cut line to N $1/4$. Moved
instrument up to N $1/4$ and
backsighted to M.C., turned 180°
and cut south. Was west of
 $1/4$ between sec. 27 + 28 by $70'$.
Put pickets on line along the way.

Tuesday - 4/18/80 - Brana, Schoonover,
Hare, Northbird.

T. 141. N. R. 31W Sec. 27

Set instrument up at $\frac{1}{4}$
corner between sec. 27+28.

Backsighted pt. set on line
between $\frac{1}{4}$ and $N\frac{1}{16}$. Turned
 180° and cut south. Went
west of $S\frac{1}{16}$ by .50". Set
instrument up at $S\frac{1}{16}$ and
backsight pt. ^{put} ~~set~~ on line
by offset and turned 180° .

Cut line to sec. corner
27, 28, 33+34. Put ~~pick~~

Missed sec. corner by .65" to
the west. Put pickets on
line along the way between
 $\frac{1}{4}$ and sec. corner.

4/9/80

Wed. - Brama, Schoonover + 4 more.

T. 141N. R. 31W. Sec. 27

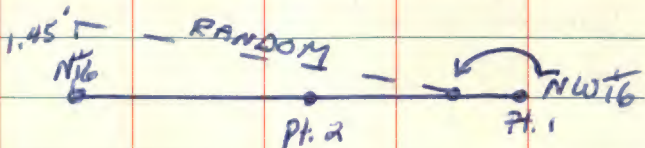
Posted line from sec. corner
21, 22, 27, 28 to sec. corner
27, 28, 33, 34. Brought MC, N $\frac{1}{6}$,
 $\frac{1}{4}$ corner, and south $\frac{1}{6}$ up to
standard. See corner cards.

Thur. - 4/10/80 - Brama, Schoonover, Hare, Northrup

T. 146N. R. 30W. Sec. 7

Set instrument up at NW $\frac{1}{6}$ and
backsighted Pt. 1 that was set on
line (4/3/80), turned 180° and
cut line west to N $\frac{1}{6}$. Went
north of N $\frac{1}{6}$ by 1.45°.

Straddled instrument in
between corners and set pickets.



Friday - 4/11/80 - Brana + Northbird

T. 14 N. R. 31 W. Sec. 26

Run compass & chained lines starting at Witness to $\frac{1}{4}$ corner between sec. 26 + 34 and ran north to $CS\frac{1}{16}$. 120' west of corner. From $CS\frac{1}{16}$, went E. to $SE\frac{1}{16}$, 21' north of corner. From $SE\frac{1}{16}$, went north to $CE\frac{1}{16}$ (bearing of $N5^\circ E$) and was 56' east of corner. From $CE\frac{1}{16}$, went to MC on Portage lake (bearing $S89^\circ E$, 4.5' north of corner. Reran from Witness to $\frac{1}{4}$ corner to $CS\frac{1}{16}$ on a bearing of $N5^\circ E$. Was 16.5' west of corner. From $CS\frac{1}{16}$, ran bearing of $S89^\circ E$ to $SE\frac{1}{16}$. Hit corner.

Monday 4/14/80 - Brama, Schoonover,
Hare, Northbird

T. 14 NR. 31 W. Sec. 26

Set instrument up at
witness to $\frac{1}{4}$ corner between sec.
26 & 34. Shot a ribbon down
line ^{turned 1°} and cut a random.

Went west of C5T6 by 5.5'.

Turned Set instrument up
at witness $\frac{1}{4}$ corner and turned
14° to the right from random
line. Hit C5T6 and put
pickets on line. Set instrument
up at C5T6 and shot a down
ribbon line to SE T6. Cut
random to SE T6. Went north
of corner by about 2.0'.

Figured out offset angle and
recut line where needed. Hit
corner and put pickets on line.
Angle turned at C5T6 from W $\frac{1}{4}$ to SE T6 was
315° 14' 00"

Tuesday - 4/15/80 - Brama, Schoonover,
T. 141 N. R. 31 W Sec 26 Nare and Northbird

Set instrument up at SE 1/4
and shot ribbon line
north and turned instrument
to the left $2^{\circ} 25'$. Cut line
north. Midway down line,
found a lot pipe and
was within a foot of it.
From this pt., straddled
instrument between corners
SE 1/4 and CE 1/4. I.P. is
east of line about 5.0".
Set pickets down line.

~~Set~~ Set instrument
on CE 1/4 and shot ribbon
line east. Cut random line
to MC on Portage Lake.

Was within a foot of pipe
so offset pickets and put

them down line. ^{Fd.} I.P. 2" x 48" ^{set 2" high}

(County surveyor set 2" x 48" I.P.) AREA undisclosed

Wed. - 4/16/80 - Brama, Hare,
Schoonover, Northbird.

T. 141 N. R. 31 W. Sec. 26

Posted and blazed line from
witness to $\frac{1}{4}$ corner to C 5 $\frac{1}{16}$, to
SE $\frac{1}{16}$, to CE $\frac{1}{16}$, to M.C. on Portage
Lake. Brought all corners up
to standard, except M.C. M.C. is
just a I.P. See corner cards.

FSLP on M.C., -6" N. Pine, bears 885° W at 7.0'.
Sign post with both signs west 11.10'

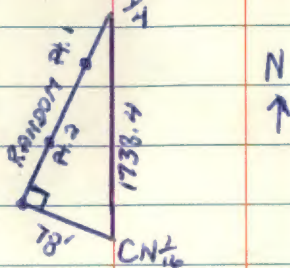
Thurs. - 4/17/80 - Brama, Hare, Northbird

T. 141 N. R. 31 W. S 24

Set instrument up at $\frac{1}{4}$ corner
between sec. 27 and 34.

Backsighted pt. 4 from
traverse ran 3/4/80, turned ~~at~~
angle that Mike Hayes figured
out of ~~229~~ 326° - 49 - 03

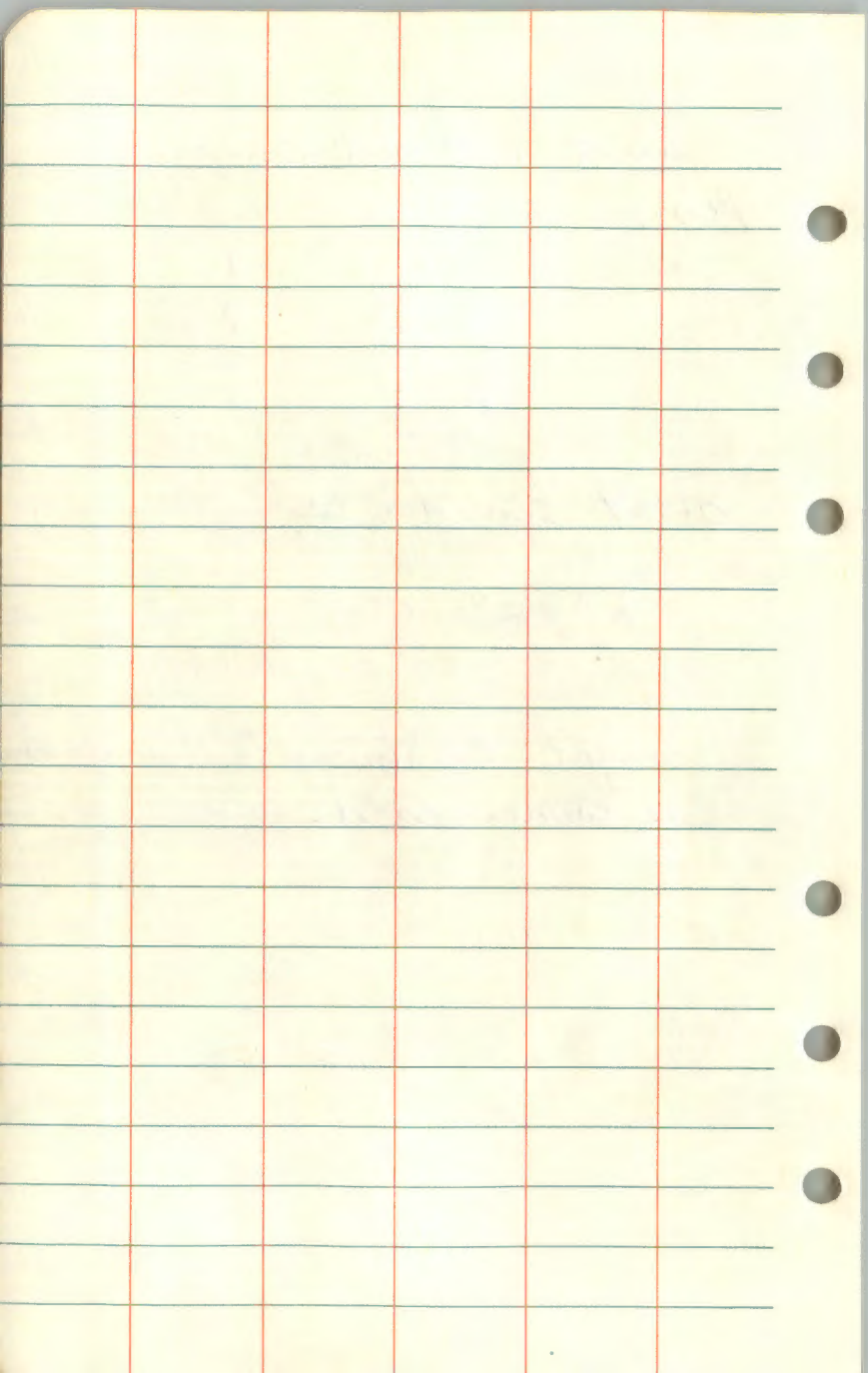
Went west of CNT to by
78.0.



$$\text{Offset } \sin A = \frac{78}{1738}$$

$$\angle A = 2^{\circ} - 34' - 20''$$

Brought CNT up to standard.
See corner card.



Temp. 89°F Hot!

Monday - 4/21/80 - BRAMA, Schoonover, Hares &

T. 141 N. R. 31 W. Sec. 34

Northbird

Set instrument up at $\frac{1}{4}$ corner between sec. 27 and 34. Sighted pt. down line and turned instrument to the left

$2^{\circ}-34'-20''$ and recut line.

Hit the C.N. $\frac{1}{6}$. Put pickets on line. Posted & blazed line to standard. (See corner cards)

Tuesday - 4/22/80 - Brama, Northbird & Hares

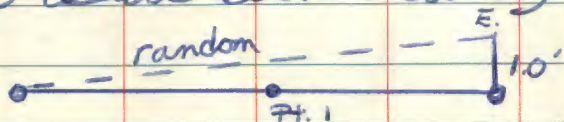
T. 141 N. R. 31 W. Sec. 34

Set instrument up at C.N. $\frac{1}{6}$ and backsighted pt. set on line between N $\frac{1}{4}$ and C.N. $\frac{1}{6}$.

Turned 180° and cut line south. Went east of the

C $\frac{1}{4}$ about a foot. With instrument sitting about

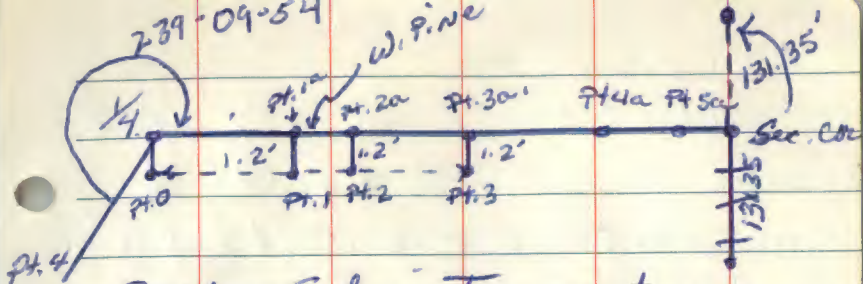
midway down ^{random} line at pt. 1,
 & straddled instrument
 onto line between corners
 and set pickets on line.
 Posted & blazed line to standard.
 (See ~~corner~~ corner card).



Wed. 4/23/80 - Beama, Hare & Northbird
 T. 14. N. R. 31 W. Sec. 34

Set instrument up at N $\frac{1}{4}$ between
 sec. 27 & 34. Backsighted to pt. 4
 (from transverse ^{3/25/80}) and turned new
 & 239-09-54 Bushed line east
 towards sec. corner 26, 27, 34 & 35.

About 500' from N $\frac{1}{4}$ offset
 around W. line. Offset ~~to~~ 1.2'
 south ^{at} $\frac{1}{4}$ corner and 1.2'
 south from pt. 12. from W. line.
 to pt. 1.

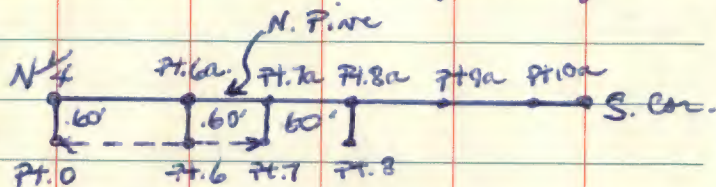


Backset instrument up
 at Pt. 1, and backsighted
 Pt. 0 and turned 180° . Set pt. 2
 and pt. 3. Measured 1.2' north
 to get back on line. Moved
 instrument up to pt. 3a.
 and backsighted to pt. 2a.
 Turned 180° and con't cutting
 to sec. corner. Went south
 of the sec. corner by $131.35'$.

Thurs. 4/24/80 - Brama, Hare Northline
 T. 141 N. R. 31 W. Sec. 34

Set instrument up at $N\frac{1}{4}$
 and sighted pt. 1a. Turned an
 angle of $2^\circ-59'-48''$ to the
 left and cut line over.

About 500' from N¹/₄, offset around N. Pine. Offset to the south ~~to~~ .60' at the N¹/₄ and at Pt. 6a (in front of N. Pine)



Set instrument up at pt. 6 and backsighted pt. 0 and turned 180°. Set pt. 7 and pt. 8. Offset back on line .60'. Set instrument up at pt. 8a. and backsighted pt. 7a. and turned 180°. Can't brushing. Missed pipe for E 16 by 1.0' south. Was on the north edge of the sec. corner. Set pickets on line along the way.

Friday - 4/25/80 - Biama, Hove,
Schoonover, Northbird.

T. 141. N. R. 31 W. Sec. 34

Posted line between

$\frac{1}{4}$ corner between sec. 27 and
sec. 34, to standard section

corner 26, 27, 34, 35. Put up

FSLP on R. Pine, 21", 553°W

at 17.53' to marked $E \frac{1}{16}$.

Steel sign post set east of
pipe .80' with both signs.

I.P. sits about 1.0' above the
ground. See corner cards.

Monday - 4/28/80 - Brama, Honey & Northbird

T. 141 N. R. 31. W Sec. 26

Ran compass lines from $\frac{1}{4}$ cor between secs. 23 & 26 south to $C\frac{1}{4}$ corner of sec. 26. ^(SW $\frac{1}{4}$) Found county pipe set at $C\frac{1}{4}$ $\frac{1}{16}$. From $C\frac{1}{4}$ cor. I ran compass line west to the $\frac{1}{4}$ corner between sections 26 & 27. $C\frac{1}{4}$ $\frac{1}{16}$ seems to fall in a beaver pond. From $\frac{1}{4}$ corner, I ran compass line north to $N\frac{1}{16}$ and section corners 22, 23, 26, 27. Ran compass line from $\frac{1}{4}$ corner between sections 23 & 26 east to MC set on Portage Lake. Found MC setting 2' above the ground. Put up ribbon lines on all lines to use on random lines.

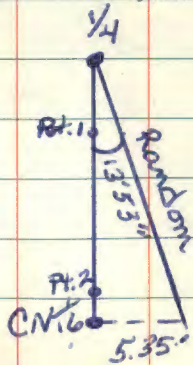
4/29/80 - Brama, Mare & Northbird

T. 141 N. R. 31 W. Sec. 26

Set instrument up at $\frac{1}{4}$ cor.
^{between} sections 23 & 26 and turned
instrument to ribbon line.

Cut random line south
towards C.N. $\frac{1}{6}$. Was east
of I.P. by $5.35'$. Set instrumen.
up again and zeroed to
pt. on line and turned
 $13'53''$ to the right and
cut line over. Hit I.P.

Two pts. were set on line
Pt. #2 will be used for
backsight to run line from
C.N. $\frac{1}{6}$ to C. $\frac{1}{4}$.

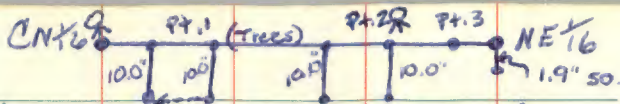


Post line to #5.
Standard

4/30/80 - Brama, Hare & Northbird
T. 14 $\frac{1}{2}$ N. R. 30 W. Sec. 7

Set instrument up at CN $\frac{1}{16}$
of sec. 7 and backsighted
pt. #3 between CN $\frac{1}{16}$ and N $\frac{1}{16}$,
turned 180° and cut line
east towards NE $\frac{1}{16}$. Offsetted
south 10.0" to get around
2 large oak trees. Offsetted
north 10.0" after trees to
get back on line. Was
south of NE $\frac{1}{16}$ by 1.90".

Measured pickets that
were set on ^{random} line ^{from} CN $\frac{1}{16}$ and
moved them north the
correct distance to be on
true line. ~~Blazed~~ Blazed
& posted line to standard.
Blazed the 3 oak trees as,
on line trees. CN $\frac{1}{16}$ was
NE $\frac{1}{16}$



brought \angle to standard.
See corner card.

5/1/80 - Brama, Hare & Northbird
T. 141. N. R. 31 W Sec. 26

Set instrument over CN $\frac{1}{6}$
of sec. 26 and backsighted
to pt. 2 and turned 180° .

Cut ~~sa~~ line south to
C $\frac{1}{4}$ corner. Set one pt. ^{#1} on
top of a big ridge, about
midway down line. Missed
C $\frac{1}{4}$ by 1.15" east. Straddled
instrument ^{starting} at pt. 1 on ridge
until instrument was
on line between CN $\frac{1}{6}$ and
C $\frac{1}{4}$ corner. Moved pt. 1 on line
and set pickets on line.
Posted and blazed line. Put
FSLP on 4" maple at bearing

of $S 14^{\circ} E$ at a distance of
22.35' from ^{CN¹⁶} corner. Sign
post was ~~so~~ put north
of corner 4.37' with both signs.
The corner of the C¹/₄ falls
in a swamp with beaver
runs. Put a sign post north
of corner 1.35' with both signs.
Sign post was put up against
the I.M. on the north edge. It
has a property boundary sign
and is facing south.

Monday - 5/5/80 - Worked on corner cards. No crew.

Tuesday - 5/6/80 - Brama, Hare, Northbird
T. 141 N. A. 31 W Sec. 26

Set instrument up on ribbon line west of $C\frac{1}{4}$ about 400'.

Backsighted $C\frac{1}{4}$ and turned a 180° . Cut random line west.

Set pts. on top of ridges if possible. About where the $CW\frac{1}{6}$ falls (out in a spruce island) we looked for pipe.

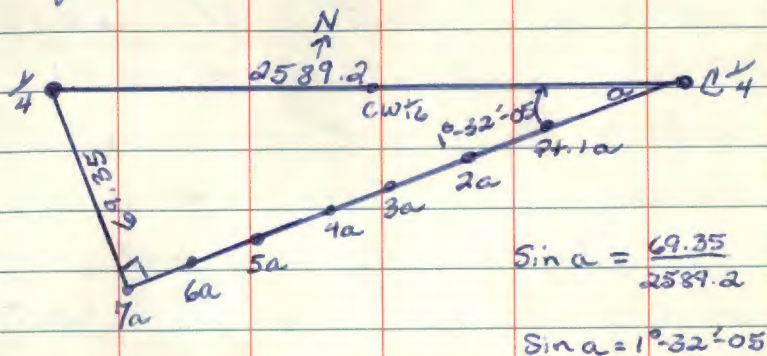
Didn't find it, so set a point on the other side

of the beaver pond at the base of a ridge. (pt. 3). Set

pts. 4, 5a & 6a on top of ridges.

Went south of $\frac{1}{4}$ corner between sec. 26 & 27, 69.35' south

Offset to turn to the right
from pt. 1a is $1^{\circ}-32'-05''$.



Wed. - 5/7/80 - Brama, Hare Northbird

T. H. (N. R. 31 W. Sec. 26

Set instrument up at C $\frac{1}{4}$.

(knee deep water) Sighted pt. 1a
on random line and turned
 $1^{\circ}-32'-05''$, Set pt. 1 on line.

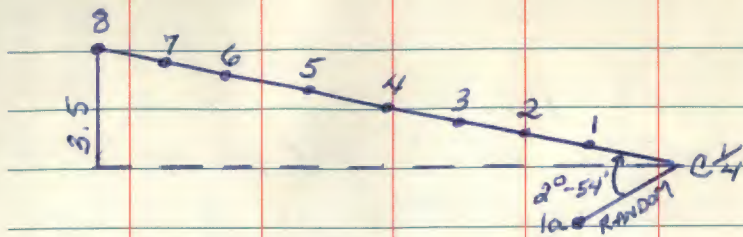
Set instrument up at pt. #1
and backsight the C $\frac{1}{4}$. Turned
 180° and can't cutting line.

Set pt. 2 about 600' from
corner. Pt. 3 was set on top

of a ridge about 200' west of pt. 2. Pt. 4 was set about 200' west of the approx. CW 1/4. Was cutting down the ribbon line set by compass most of the time. Pt. 5 set on top of a ridge about 150' west of pt. 4. Set pt. 6 about 500' west of pt. 5. Set pt. 7 about 250.0' east of 1/4 corner between sec. 26 & 27.

Thursday, 5/8/80 - Brama, Hare, Northwind
T. 14, N. R. 31W. Sec. 26

Set instrument up at pt. 7 and backsighted pt. 6, turned 180° and brushed line west towards 1/4 corner. Set pt. 8 at 3.5' north of the corner.



Set instrument up over the
N^o between sec. 26 & 27.

Sighted the ribbon line ^{towards S.C.} and
turned 2°-54' to the left.

(Missed ^{sec. C 21, 22, 26, 27} a corner from compass
line by 67' east.)

$$\sin A = \frac{67.0}{1324.8}$$

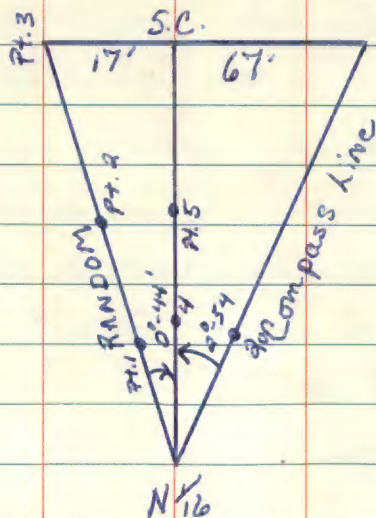
$$\sin A = 2^{\circ}-54'$$

Cut random line and went
west of the corner by 17.0'.
Figured out offset angle,
and it should be 44' to the
right from random line.

$$\sin A = \frac{17.0'}{1324.8'}$$

$$\sin A = 44'$$

Set up over $N \frac{1}{16}$ and sighted pt. 1 set on random line and turned to the right $0^{\circ}-44'$. Cut true line north. Set pt. 4 about 400' north of corner. Backsighted the corner and turned 180° . Pt. 5 was set about 700' north of corner. Set instrument there and backsighted pt. 4, 180° and cont cutting.



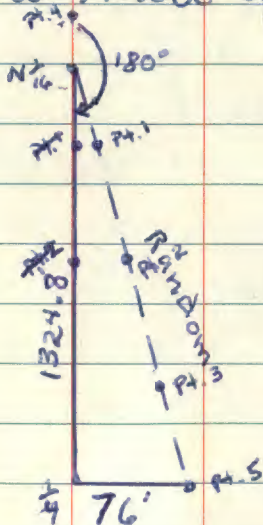
Friday, 5/9/80 - Brama, Here, Northbird

T. 14 N. R. 31 W. Sec. 26

Set instrument up at pt. 5 and backsighted pt. 4, turned 180° and hit the section corner (21, 22, 26, 27). Set pickets down line for sign posts.

Set instrument up at $n/6$ between sections 26, 27. Backsighted pt. 4 and turned 180° . Cont line south towards $1/4$ between sec. 26 & 27. Set pt. 1 about 200' south of corner in a tam. & spruce swamp. Backsighted the corner & 180° . Pt. 2 was set south of the swamp on a ridge. Backsighted pt. 1 and turned 180° and cont cutting.

Pt. 3 was set on a ridge about 400' before the $\frac{1}{4}$ corner. Set instrument on pt. 3 and turned ~~180~~ to backsighted pt. 2 and turned 180° . Projected line to $\frac{1}{4}$ corner and set a point 76.0' east of corner to mark end of line. Something is wrong in this half-a-mile of line.



5/12/80-Monday-Brama, Paue, Northland

T. 141 N. R. 31 W. Sec. 26

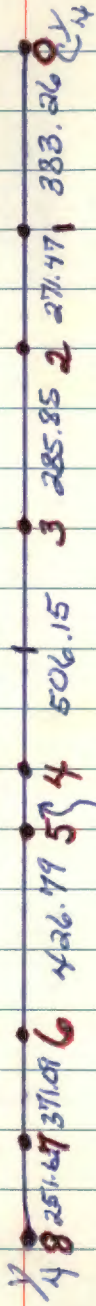
E.D.M. line from the $\frac{1}{4}$ to the $\frac{1}{4}$ corner between sec. 26+27.

<u>Station</u>	<u>Occp.</u>	<u>Vert. \angle</u>	<u>Dist.</u>	<u>Corr. Dist.</u>
Pt. 0		96°-58'	386.11	383.26
Pt. 1		00-00	000	
Pt. 2		89°-07	271.50	271.47
Pt. 2		88° 45'	285.92	285.85
Pt. 3		00-00	000	
Pt. 4		89°-40'	506.16	506.15
Pt. 4		92°54'	140.70	140.52
Pt 5		00-00	000	
Pt. 6		93°25'	427.55	426.79
Pt. 6		87°	371.60	371.09
Pt. 7	00-00 →			
Pt. 8		89°	251.66	251.62 2636.75'

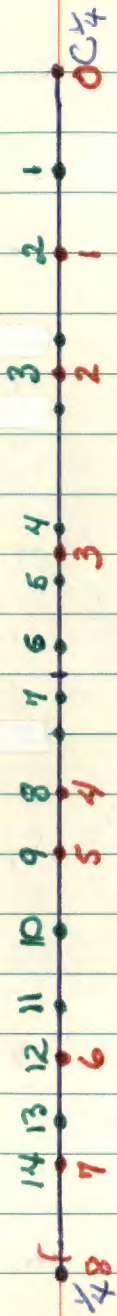
ED.M. Pickets down the line
for sign posts at the same time.

<u>Station Occup</u>	<u>\angle</u>	<u>Dist.</u>	<u>Correct Dist</u>
1 st S.P.	98°32'	282.56	279.43
St. 1 (2 nd S.P.)			<u>383.26</u>
St. 2 (3 rd S.P.)			(271.47) <u>654.73</u>
4 th S.P.	89°38'	49.28'	49.28'
St. 3 (none)			<u>285.85</u>
5 th S.P.	97°42'	101.36	100.44
6 th S.P.	95°35' 92°09'	85.42 429.296	85.01
7 th S.P.	92°09'	429.296	428.59'
St. 4 (8 th S.P.)	89°40'	506.16'	<u>506.15'</u>
St. 5 (9 th S.P.)			<u>140.52'</u>
10 th S.P.	97°08'	289.93	286.87
11 th S.P.			
St. 6 (10 th S.P.)			<u>426.79</u>

Total E.D.M Measurement



E.D.M. Line for Sign Post Placement

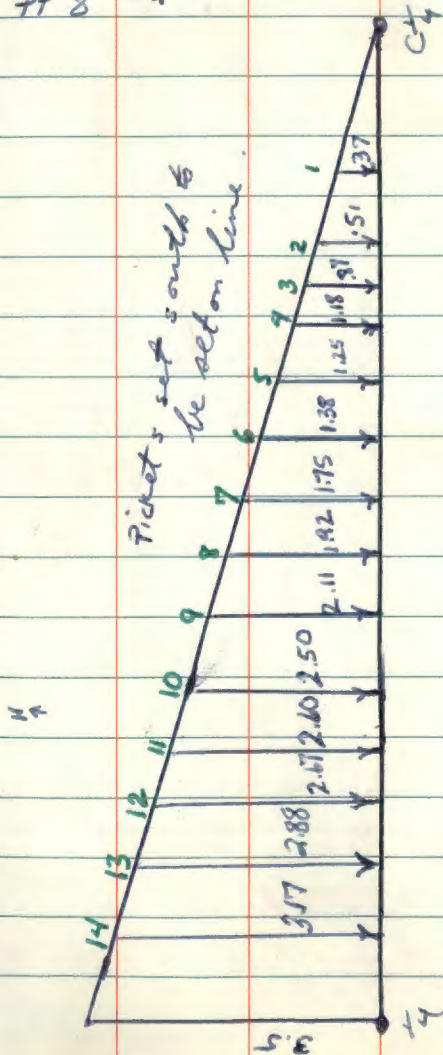


Station Occup. Dist Corc. Dist

13th S.P. 90°35' 217.97 217.96

Pt. 7 (14th S.P.) 371.62

Pt 8 $\frac{1}{4}$ 251.62



5/13/80 - Brama, Hare & Northbird

T. 141 N. R. 31 W. Sec. 26

Posted & blazed line from
C $\frac{1}{4}$ to $\frac{1}{4}$ corner. Brought
 $\frac{1}{4}$ cor. up to standard. Offset
sickets from result ^{from} E.D.M. line

5/14/80 - Brama & same crew.

T. 141 N. R. 31 W. Sec. 26

Measured 38' west from
N $\frac{1}{6}$ bet sec. 26 & 27. Ran
compass line from this pt.
south to $\frac{1}{4}$ cor. & ribboned line.

Ran compass north from ~~N $\frac{1}{6}$~~
new pt. for N $\frac{1}{6}$ and
ribboned line to sec. cor. 22, 23, 26 & 27.

5/15/80 - Brama & same crew

T. 141 N. R. 31 W. sec. 26

Set instrument up over
 $\frac{1}{4}$ cor. bet sec. 23 & 26.

Sighted ribboned line and
cut line east. Went north
of M.C. by 8.0'. Set up
again over $\frac{1}{4}$ corner and
sighted pt. down random,
turned offset angle. Recut
line. Set mon.

5/19/80. ~~Posted~~ Brama +
same crew.

T. 141 N. R. 31 W. Sec 26
Posted and blazed line
from $\frac{1}{4}$ corner between sec.
23 + 26 to M.C. on NW shore
of Portage Lake.

5/20/80 - Brama, Northbird + Hare

T. 141 N. R. 31 W. Sec 26
Fd. M.C. on north shore of
Ten Mile Lake, 1549' east of

sec. cor. 26, 27, 34 & 35. Conc.
mon in place. Found another
M.C. 323' east of the other M.C.
2' under the bog mat laying
down. Stood 2" x 4" I.P.
straight up and wired green
sign post to I.P. and put on
attention sign. FSLP was put
up on an 8" ash, S 87° W at 37.20'
Found another M.C. in place
in bog mat leaning some
located on the north shore of lake,
973' east of s.c. Wired sign
post to 2" x 48" I.P. and put
attention sign on. Put up FSLP
on 5" ash N 18° W at 42.90'.

5/21/80 - Brama, Hare & Northbird
T. 141 N. R. 31 W
Found sec. cor. 33 & 34.

Chained 1330.9' east with
compass. Looked for w¹⁶ bet.
sec. 34+3. Didn't find w¹⁶ mon.
Con't chaining east to $\frac{1}{4}$ corner
(1330.9'). Found 2" x 36" I.P.

laying above ground between
a couple of oak trees south of
county road. Ran compass
line north of $\frac{1}{4}$ and chained
1443.6'. Found I.P. 1" diam
marking C.S. $\frac{16}{16}$ of sec. 34
in place east of road about
20'. Put up a FSLP on a
W. Oak, 4" at S 86° W at 54.80'.

5/22/80 - Brought sec. cor.
33+34 up to standard.
See corner card.

5/23/80 - Brama + Hayes

T. 146 N., R. 31 W. Dec. 11

Pulled a couple of ties for $\frac{1}{4}$ corner bet sec. 24 & 11. Stood on car ~~to~~ hard to pulled ties because corner falls in ditch. Pulled ties from poplar stub (county highway engineer tie) and GLO tie 24' x 24' concrete foundation SW of corner. Set instrument up over pt. set on line between CN 16 and $\frac{1}{4}$ cor. which was set last winter and backsighted pt. on line, turned 180° and went west of $\frac{1}{4}$ corner by .6'. Line OK to post.

5/27/80 - Switch trucks

5/28/80 - Worked on notes.

5/29/80 - Brama Hare, Northbird
T. 14 N. R. 29 W Sec. 8

Edm line from N¹/₆ to
NE¹/₆. Set instrument
up over ~~N¹/₆~~ N¹/₆ and
measured the distance to
the NE¹/₆. Measured the
distance to a pt. set
about midway down line
bet N¹/₆ and NE¹/₆.

<u>Station</u>	<u>Sighted</u>	<u>∠</u>	<u>Dist.</u>	<u>Hor. Dist.</u>
	N ¹ / ₆	90°	1247.54	1247.54
	pt.	90°	624.08	624.08
station occup.	NE ¹ / ₆	00	00	00

Proportionate distance
is 623.77'

624.08

623.77

.31 Move pt. east .31'

to be set proportionally

G.L.O. measured 1248.72'
between N $\frac{1}{6}$ & NE $\frac{1}{6}$.

I measured 1247.54'

6/2/80 - Brane, Jeff, Kevin, & Dave
T. 141 N. R. 29 W Sec. 8

Set instrument up at pt. 1
and backsighted $\frac{1}{4}$ cor. between
sec. 8 & 9, turned 180° and cut
line west towards C.E. $\frac{1}{16}$.

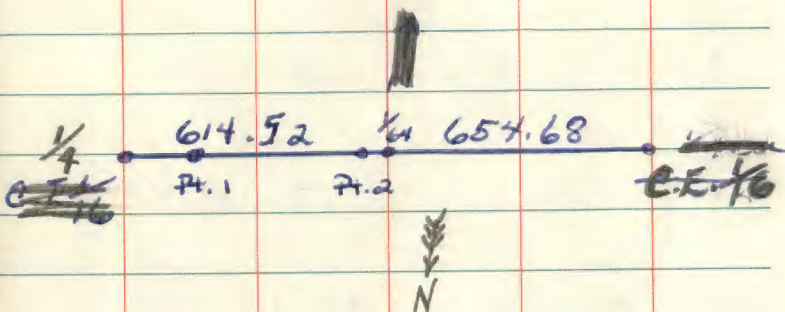
Set pt. 2 about half way
down line. Went south of
C.E. $\frac{1}{16}$ by .5'. Set instrument
up at pt. 2 and straddled in
on line between $\frac{1}{4}$ and C.E. $\frac{1}{16}$.
Set E.D.M. up at pt. 2 and
measured distance to $\frac{1}{4}$ cor.
and C.E. $\frac{1}{16}$.

	\angle	Dist.	Cor. Dist.
pt. 2 to $\frac{1}{4}$ cor.	$98^\circ 33'$	614.70	614.52
pt. 2 to C.E. $\frac{1}{16}$	$90^\circ 14'$	654.69	654.69

Proportionate dist. 634.16' 1269.2'
Measured 20.08' west of pt. 2 and
set 400 nail in ground ^{and on line} marking
 $\frac{1}{16}$ corner. GLO - 1269.2

ties for nail in ground
marking $\frac{1}{64}$.

1.



6/3/80 - Brama, Hare, Moz

T. 14 | N. R29 W. Sec. 8

Set instrument up over $\frac{1}{64}$
corner half way between C.E. $\frac{1}{6}$
and $\frac{1}{4}$ cor. bet. Sec. 8 & 9.

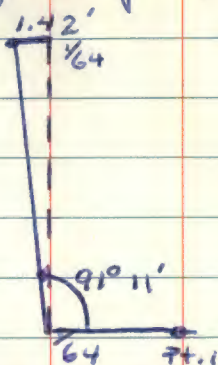
Backsighted pt. 1 and turned
instrument to the left $91^{\circ} 11'$.

Cut line north towards

$\frac{1}{64}$ corner between NE $\frac{1}{64}$ & N $\frac{1}{6}$.

Went west of $\frac{1}{64}$ by 1.42'.

Will chain & offset pickets
east and for sign posts.



6/4/80 - Brama, Hare, Mor

T. 141 N. R. 29 W. Sec. 8

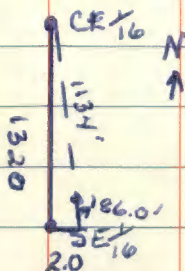
Set instrument up over
C.E. 16 and backsighted 1/64
corner between C.E. 16 and
1/4 cor. Turned angle of $89^{\circ} 34'$.

Cut line south to SE 1/64

Went east of corner 2.0'.

Measured back to last
point sent on the random
line (pt. 2) and it was 186.0'.

I.P. bent N.E. Put hub in grd. to mark corner
 spot. Offset pt. 2 1.72' west
 from random line.



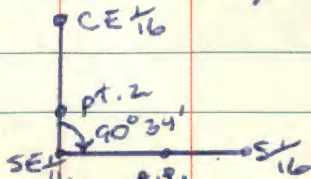
$$\text{Offset of pt. 2} = \frac{1134 \times 2.0}{1320}$$

$$= 1.72'$$

Set instrument up over SE $\frac{1}{16}$
 and backsight pt. 2 and
 turned $90^\circ 34'$ to the right.
 Cut line towards S $\frac{1}{16}$.

Cut line to A.P. 1 + 2 which
 sets in marsh about half
 way down line. I.P. leaning
 over, but stood it up straight.

Set pt. 1

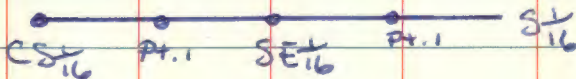


6/5/80 - Bruma, Hase, Northbird & Mor

T. 141 N. R. 29 N. Sec. 8

Set instrument up over pt. 1 near a. p. 172 and backsighted S.E. $\frac{1}{16}$ and turned 180° . Cont cutting. Found S $\frac{1}{16}$ bent over and under a road. Straighten pipe and our line hit the B.C.

Set instrument up over S.E. $\frac{1}{16}$ and backsighted pt. 1 and turned 180° . Got line cut ~~to~~ half way, set pt. 1 and it started to pour!

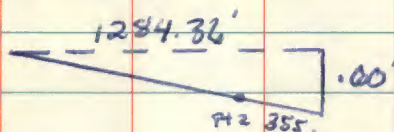


6/6/80 - Bruma & same crew

T. 141 N. R. 29 N. Sec. 8

Set instrument up over

over pt. 1 and backsighted
 the S.E. $\frac{1}{4}$, turned 180° and
 finished cutting line to
 C.S. $\frac{1}{4}$, was north of B.C.
 by .60'. Measured back
 to pt. 2 ^(355.0') that was set on
 line and offset pt. south
 (.45')



$$\begin{array}{r} 1284.36 \\ 355 \\ \hline 929.36 \end{array} \times .6 = \frac{557.616}{1284.36} = .45$$

Set instrument up over
 C.S. $\frac{1}{4}$ and backsighted pt. 2
 and turned an angle of $89^\circ 54'$
 (to the right). Started cutting
 south to $\frac{1}{4}$ corner.

6/9/80 - Blama + Same crew

T. 141 N. R. 29 W Sec. 8

Set instrument up over
C.S. 16 and turned the $89^{\circ}54'$ again.

Can't cutting to the $\frac{1}{4}$ cor.

Set one pt. Went east of
the corner 1.35'. Chained
back to pt. set on line

289.6' and offset pt. 1.05'
west to be on true line.

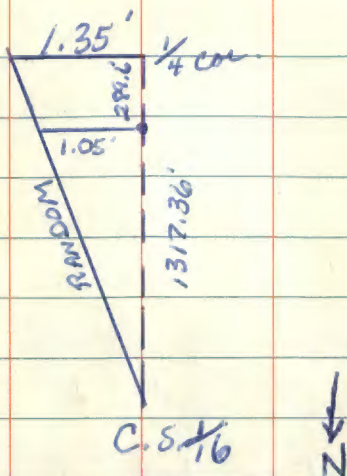
$$1317.36 - 289.6 \times 1.35 = 1317.36 =$$

(DRAWING ON NEXT PAGE) 1.05'

Set instrument up at the
S.E. 1/4 and backsighted
pt. 186' from corner and set
on line between C.E. 1/4 + S.E. 1/4

Turned 180° and cut line
south through a beaver pond.

(Filled the boots.) Got to the other
side + quit for the day.

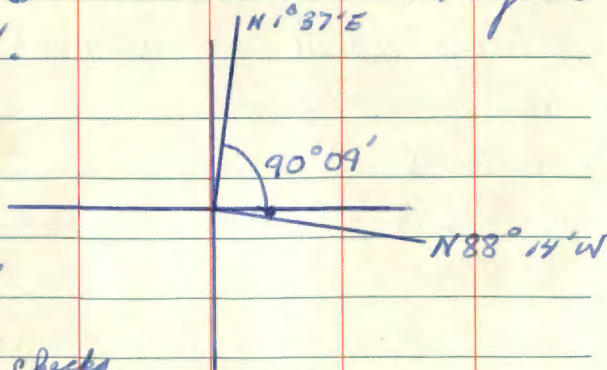


6/10/80 - Brama & same crew.

T. 141. N. R. 29 W. Sec. 8

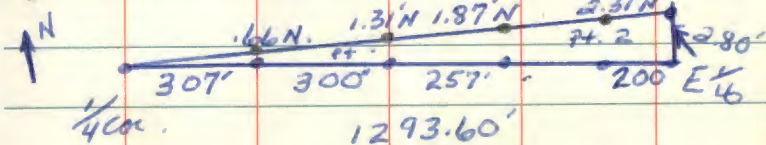
Set instrument up at $\frac{1}{4}$ cor. between sec. 8 & 17, backsighted pt. set on line between $\frac{1}{4}$ c. & C.S. 16. Turned to the right $90^{\circ} 09'$.

$$\begin{array}{r} 3960 \\ 137 \\ \hline 8823 \\ 146 \\ \hline 8969 \\ 18137 \\ 8814 \\ \hline \end{array}$$



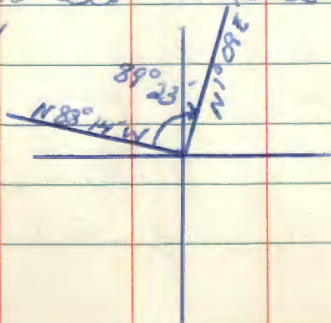
$$\begin{array}{r} 26951 \text{ checks} \\ 9009 \\ \hline \end{array}$$

Cut line to the E 1/6. Set
 2 pts. along the way. One
 pt was set 200.0' west
 of the E 1/6 (used later for
 backsight after offsetting).
 Went south of the corner
 by 2.80'. Chained from
 the 1/4 cor. east and offset
 pickets set on random line.

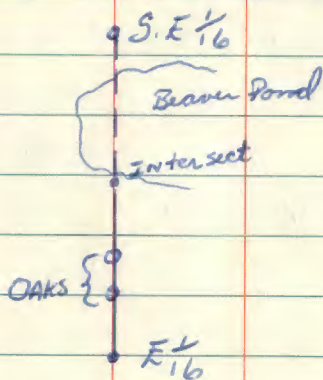


Set instrument up at
 the E 1/6 and backsighted
 pt. 2 and turned to the
 right $89^{\circ} 23'$

$$\begin{array}{r} 88\ 14 \\ 1\ 09 \\ \hline 89^{\circ} 23' \end{array}$$



Cut line north ~~and on~~ to the beaver pond and intersected line coming down from the south. Didn't set any pts. because have to offset around two oaks at a later date when there's time.



6/11/80 - Brana, Mo, Jeff R. & Kevin
T. 141. N. R. 29 W. Sec. 8

Set instrument up over
E 1/6 and backsighted pt. 2
and turned 180° and cut
line east towards S.C. 8, 9, 17 & 16

Went north of A.P. 3+4 Brass
Cap by 40'. Can't cutting
out to the road. Set pt.
in center of road to mark
line. ~~Set up today and to~~
determine where the S.C.
falls, we check the G.L.O.
bearing trees, nothing.
Check for iron in road,
nothing. So we set
instrument up over the
5/16 between sec. 8+17 and
backsighted the 1/4 between
8+17 and turned 180° and
set a pt. down near the
section corner area. (intersected
the east, west line. EDM
distances from 5/16 to 1/4 and
from 5/16 to S.C.

	3	Dist.	Cor.	Dist.
Station 0 ^{1/4}	90° 21'	1323.15		1323.12'
Station 1 ^{5/16}	00 00	000		
Station 2 ^{S.C.}	90° 3'	1319.29		1319.29
				<u>1321.21</u>
				2642.41

G.L.O. Distances

1/4 cor to 5/16	=	1321.98
5/16 to S.C.		<u>1321.98</u>
		2643.96

Something is wrong!

5/16 is out of place.

6/12/80 - Brama, Fuller, Reimer, + Nov
 S. T. 14 | N. R. 29 W Sec. 8, 9, 16, 17
 Set instrument up over
 AP 344. Backsighted E 1/16
 and turned 180° and set a
 pt. up on a ridge. Move
 instrum. to that pt. and
 backsight A.P., turned

180° and set pt. in center of a road.

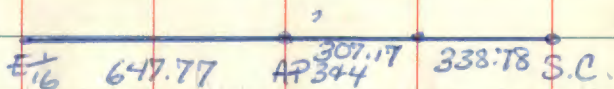
E.D.M. line starting at A.P. station and shooting to E16 (station 0).

Stations	\angle	Dist.	Cor. Dist.
0	90°	647.77	647.77
1	00	000	000
2	92° 13'	307.40	307.17
3	91° 37'	338.91	<u>338.78</u>
			645.95

647.77

- 645.95

1.82 has to be move east



GLO recorded 646.80 from E16 to A.P. 344.

Total distance 1293.60'

After moving 1.82' the total
distance of E.D.M. line is
1295.54'

Distance difference is 1.94'

E.D.M. line from S.C. to
N¹/₆ between sec. 16 & 17.

	Dist.	Cor.	Dist.
N ¹ / ₆ to S.C. 90° 48'	1306.83		1306.70

GLO measured 1306.80'

Moved S.C. ~~10~~ 10' north.

E.D.M. line from S.C. to S¹/₆
between sec. 8 & 9.

	Dist.	Cor.	Dist.
90° 02'	1320.11		1320.11

Distance from $S\frac{1}{2}$ to $\frac{1}{4}$ cor.
which was measured the
day before is 1323.15'

Total of both distances:

1323.12

1320.11

2643.23'

GLO measured 2643.96'

Difference .73'

6/17/80 Brama, Fuller Reimmer, Harv,
Northbird, Mor

T. 141 N. R. 29 W. Sec. 8 & 9

Set instrument up over

S.C. and backsighted pt.

set on line between $E\frac{1}{2}$ & S.C.

Turned to the right $174^{\circ} 11'$.

Cut line east towards

$W\frac{1}{2}$ between sec. 9 & 16.

Went north of W₆ by 3.0'.
Turned instrument to corner
and set pickets for sign posts.
EDM. line.

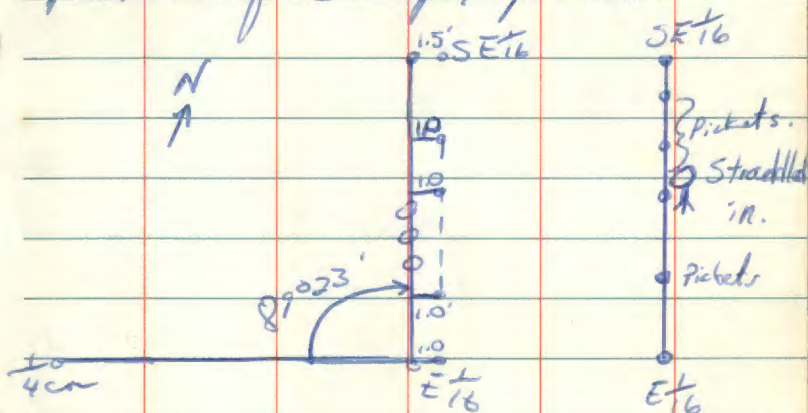
Station	∠	Dist	Corr. Dist.
O(S.C.)	00	00	00
I(W ₆)	89°54'30"	969.84	969.84

GLO measured 970.20'
Diff. of .36'

Where S.C. falls.

Set instrument up over
E₆ and backsighted pt. set
between $\frac{1}{4}$ cor and E₆, turned
89°23' and set pt. Offset
1.0' east to get around three

oak trees. Offset back to true line and shot the SE 1/6. Went west 1.5' from corner. Straddled instrument between corners and set pickets for sign posts.



6/18/80 - Brama, Krause, Schoonover
Went to court house.

6/19/80 - Brama, Krause, Northbird,
Hare & Mor

T. 141 N. R29 W. Sec. 8

E.D.M line from $\frac{1}{4}$ cor.
 between sec. 8 & 17 to S.C. 8, 9,
 16 & 17.

Station	\angle	Dist.	Corr. Dist.
0 ($\frac{1}{4}$)	$90^{\circ}44'$	480.61	480.57
1	00	00	00
2 ($E\frac{1}{16}$)	$98^{\circ}28'$	812.71	<u>812.68</u>
			1293.25
2 ($E\frac{1}{16}$)	$90^{\circ}04'$	647.72	647.72
3 (A.P.)	00	00	00
4	$88^{\circ}12'$	307.36	307.21
4			
5 S.C.	$91^{\circ}34'$	340.74	<u>340.61</u>
			1295.54

GLD distance from $\frac{1}{4}$ to $E\frac{1}{16} = 1.94'$
 1293.60' Difference of .35'

Posted line from S.C. 8, 9, 16, 17
to $W\frac{1}{16}$. Blazed trees accordingly.
Posted line from S.E. to south
to $E\frac{1}{16}$ of sec. 8 and from
 $E\frac{1}{16}$ to S.C. 8, 9, 16, 17. Blazed
line accordingly. Brought
corner $E\frac{1}{16}$ up to standard
(See corner card).

6/20/80 - Brama, Schomover, Krause & Main
T. 141 N. R. 29 W. Sec. 16, 17, 20

Found GLO 2 inch I.P. in
place in the center of road.

I.P. bent over so put in new
monument. Brought corner
up to standard. Sec. corner 16, 17, 20

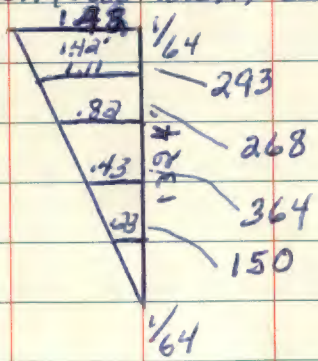
Found $S\frac{1}{16}$ between sec.
16 & 17 in place and center
of road. B.C. gone and I.P.
bent. Will mon. at a later date.

On vacation for a week. Caught
 a 9 lb 2 oz. walleye on Fishhook Lake

6/30/80 - Brana, Fulke, Reimer, Main
 T. 141 N. R 29 W. Sec. 8

Posted + blazed line from
 $\frac{1}{64}$ corner bet. NE $\frac{1}{16}$ + N $\frac{1}{16}$
 south to $\frac{1}{64}$ corner between
 $\frac{1}{4}$ and CE $\frac{1}{16}$, Sec 8. Chained
 from north $\frac{1}{64}$ south to offset
 pickets from random to true line.

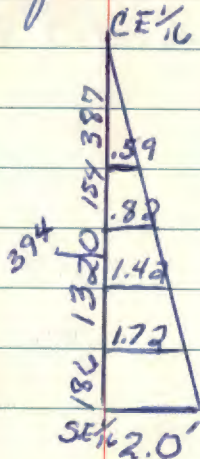
Posted



Feet Posted + blazed line
 from the south $\frac{1}{64}$ to

CE $\frac{1}{16}$. Brought CE $\frac{1}{16}$ up
to standard. (See corner card).

Chained from CE $\frac{1}{16}$ to SE $\frac{1}{16}$
Posted



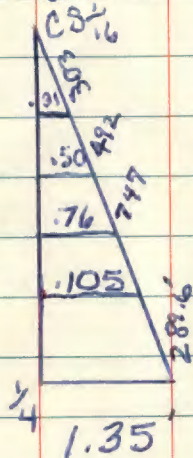
Posted & blazed line from
SE $\frac{1}{16}$ west to CE $\frac{1}{16}$. Brought
CE $\frac{1}{16}$ up to standard.
(See corner card).

7/1/80 - Brama, Krause, Schoonover
same crew.

T. 141 N. R. 29 W. Sec. 8

Fixed up $\frac{1}{4}$ corner between
sec. 8 & 9. ~~Posted~~

Chained line from
CS $\frac{1}{16}$ to $\frac{1}{4}$ c bet. 8 & 17. Posted



7/2/80 - Beama & same crew.

T. 141 N. R. 29 W. Sec. 8

Posted line from $\frac{1}{4}$ corner
bet. 8 & 17 to E $\frac{1}{16}$. (See corner
card).

Posted and blazed line

from S.E. $\frac{1}{16}$ to S $\frac{1}{16}$.

7/3/80 - Brama, Main, Morsich,
& Hayes.

T. 141 N. R. 29 W. ^{bet.} Sec. 16 & 21.

Set up laser range pole
over W $\frac{1}{16}$ and the (gun)
over $\frac{1}{4}$ corner bet. 16 & 21.

Set pt. on line to cut by.
Fix W $\frac{1}{16}$ corner. (See corner card).

2/7/80 - Brama, Main, Fuller, Reimer,
& Morsich

T. 146 N. R. 31 W. Sec. 11

Posted line from $\frac{1}{4}$ corner
between sec. 11 & 2 south
to CN $\frac{1}{16}$.

Posted line from NW $\frac{1}{16}$
of sec. 7 (146 N. R. 30 W) to N $\frac{1}{16}$
bet sec. 7 & 12 on township line.

Brought ^{NW 16} corner up to standard.
(See corner card).

Line between NW 16 & N 16
was determined by straddling
instrument in down line.

7/8/80 - Brama, Schomover, Main,
Mossich, Fuller, Reimer

T 141 N. R 29 W. Sec. 16 & 21

Out line from $\frac{1}{4}$ corner bet.
16 & 21 to W 16. Instrument
set at $\frac{1}{4}$ corner and sighted
pt. set on line by laser
range pole. Set two pts.
along line. Went 10'

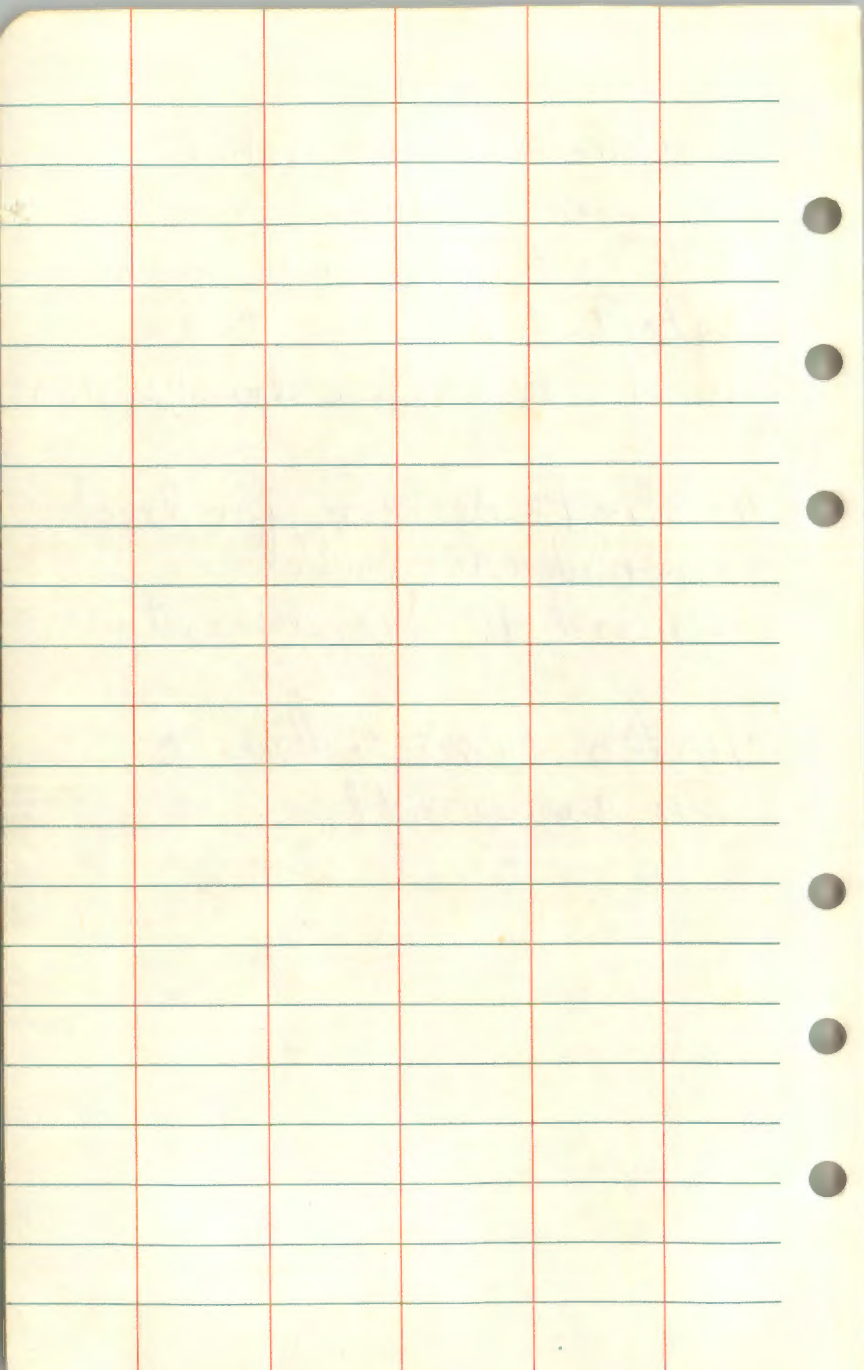
south of W 16. Put pickets
down line and posted & blazed
line. Brought ^{following} corners up
to standard: $\frac{1}{4}$ corner bet. 16 & 21;
 $\frac{1}{4}$ corner bet. sec. 9 & 16; and

w/16 bet. sec. 9+16 (See
corner card).

*Pt. set by laser was
offseted on line to be
used for future backsights.

7/9/80 - Made box for back
end of carry-all.
Poured 96 monuments.

7/10/80 - Finished work
on carry-all.



7/14/80 - Brama, Main, Krause, Schuman

T. 146 N. R. 31 W. S. corner 6, 7, 142

Pulled from three U.S.F.S BT'S
to determine the location
of sec. corner which is
below a blk. top hwy.

(There is three ¹⁰²⁰county ties
from road survey in 1964).
Full PK nail in center of road.

Dug up in blk. top road
for sec. corner 10, 11, 142. Fd.

conc. mon. in place from
bearing west with about
6" from the top missing.

Straighten mon. and put
in U.S.F.S. 2" galv. pipe
2' long. MK'd. new trees.

(See corner card).

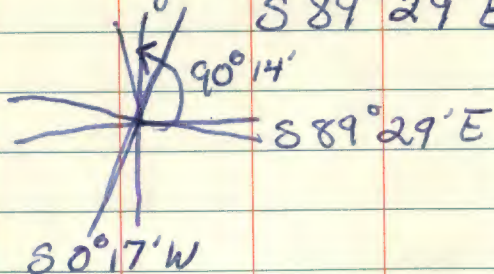
7/15/80 - Brama, Main, Pederson &
Kadic.

T. 146 N. R. 31 W. ^{2nd.} Sec. 7 & 12

Set instrument up over N¹/₆
and backsighted pt. set on
line between NW¹/₆ + N¹/₆.

Turned instrument to the left
 $90^{\circ} + 14'$. Set two pts. down
line. Went east of sec. cor.
by .60'. Posted & blazed
line to standard. (Sign
posts down true line).

BEARINGS $S 0^{\circ} 17' W$
 $S 89^{\circ} 29' E$



7/16/80 - Brama, Krause, Schoonover,
Main

T. 146 N. R. 31 W Sec. Corner 10, 11, 14, 15

Set E.D.M. up at this
section corner and E.D.M.
to all ⁴ corners and
section corner 1, 2, 10 & 11.

Pinspotted area where
sec corner 10, 11, 14 & 15 should
fall. Dug under blk. top
but didn't find conc.
monu.

7/17/80 - Same crew.

T. 146 N. R. 30 W sec. cor. 3, 4, 10, 9

Met the county surveyors
at this corner and they
dug it up with their
backhoe. Fd. it 3.5' under
blk. top. Put in cast iron

county iron. Tied in mon.
position:

NW Telephone 76.01'

NE Spruce 68.52'

SW Telephone 48.83'

SW PK 8.0'

NW PK 8.0'

T. 146 N R. 31 W Sec. 11

Dug up $\frac{1}{4}$ corner bet. 10711
and fd. ~~it~~ 6" iron pipe
bent but in place.

Straighten pipe and set
it 4" below blk. top.

Dug ~~up~~ under blk. Top
for $5\frac{1}{16}$ bet. 10711, but
didn't find iron.

7/18/80 - Same crew

T. 144 N. R. 30W sec. 10+11

Run compass lines
for timber crew. Will
be future sight for
line to standard.

7/21/80 - Brann, Schoonover, Main + Morise

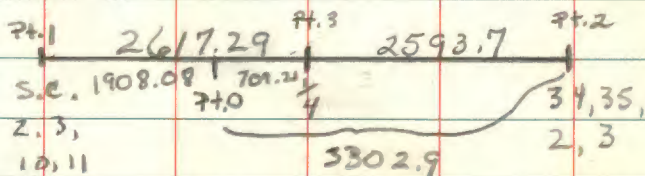
T. 146 N. R 31W.

Set EDM over pt. between

$\frac{1}{4}$ corner + sec. cor. 10, 11, 2+3

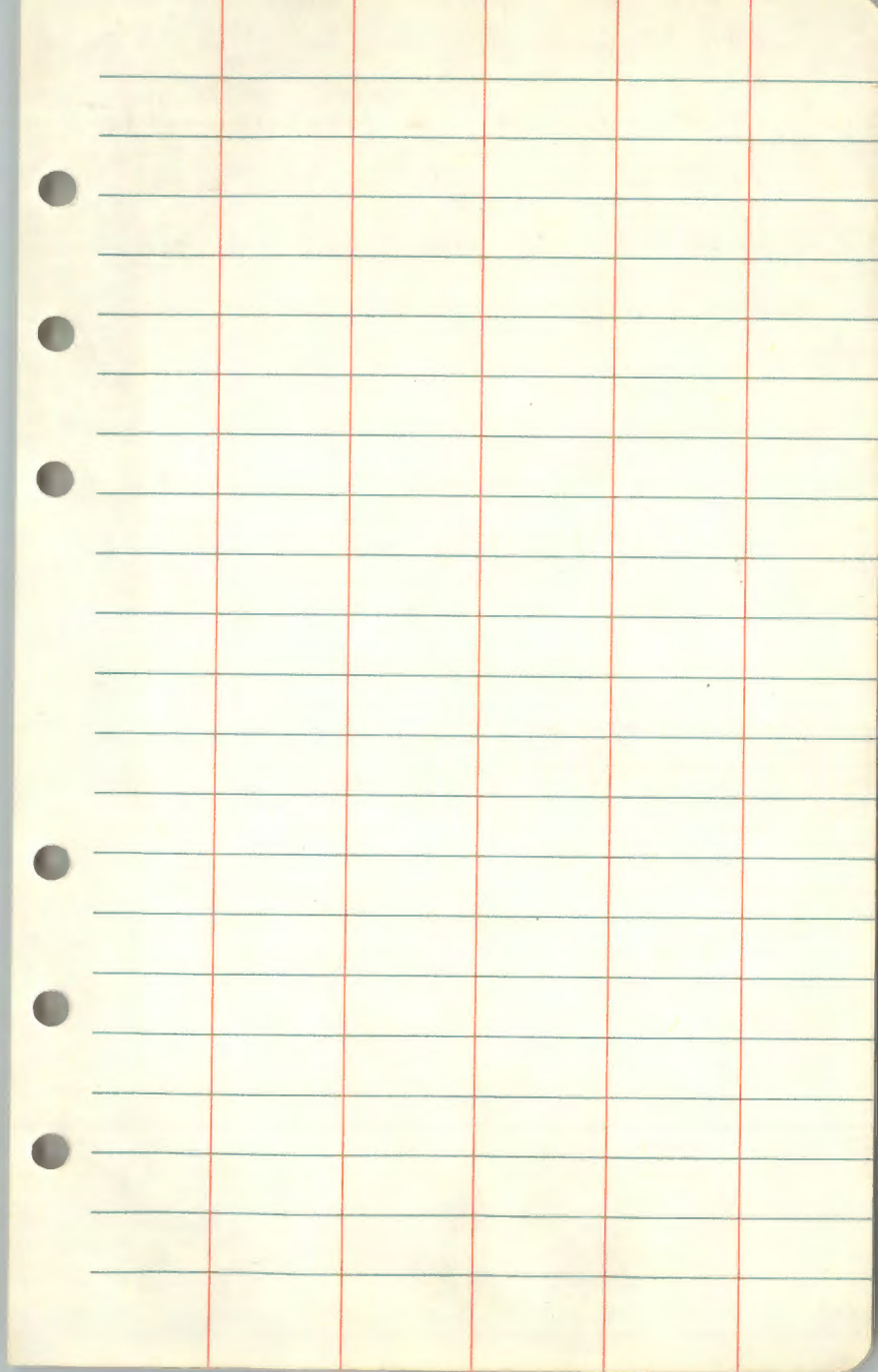
bet. sec. 2+3. EDM to sec. cor.

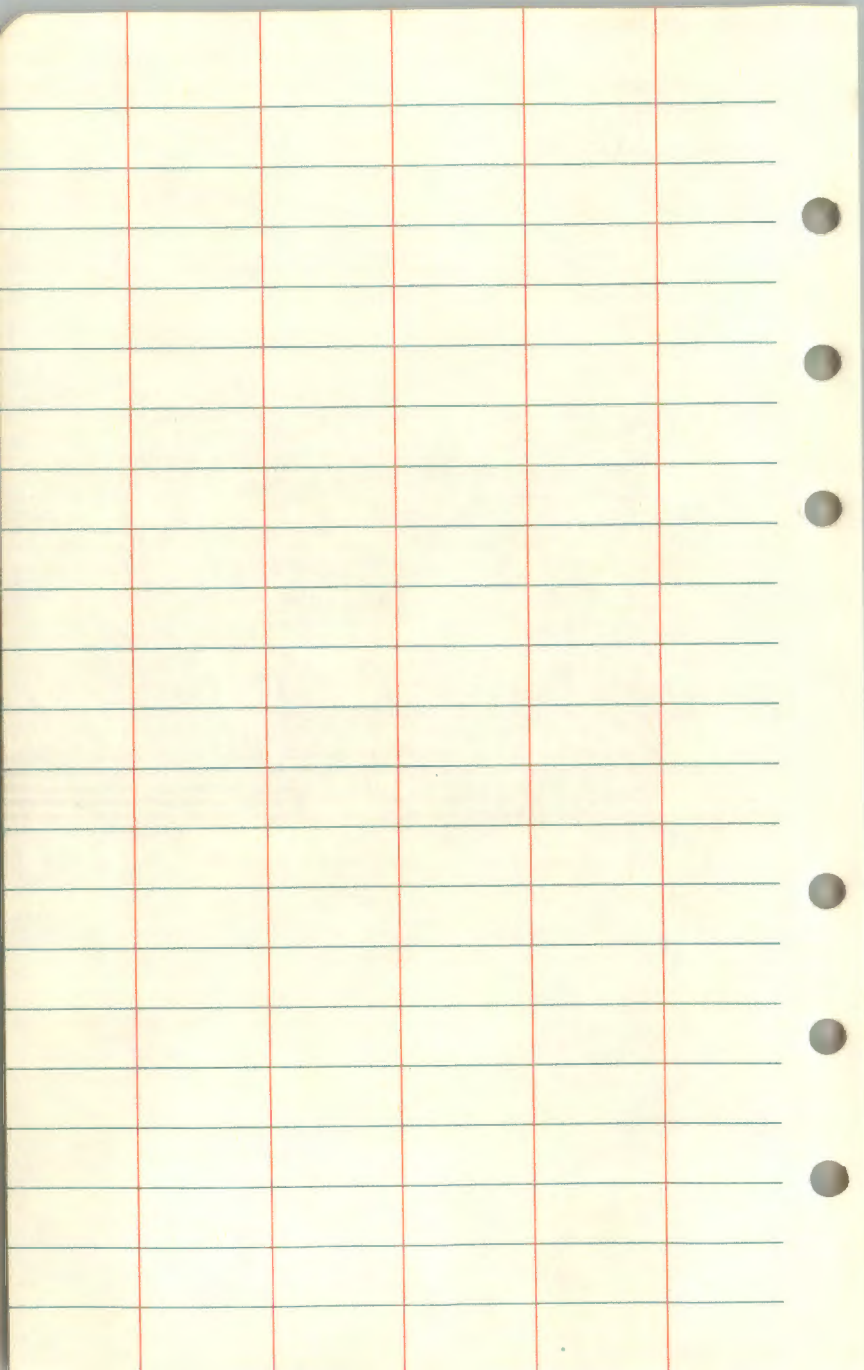
2, 3, 10, 11, $\frac{1}{4}$ corner and sec. cor. 2, 3, 34, 35



Set E.D.M. over sec. corner

10, 11, 14+15. Measured the distance





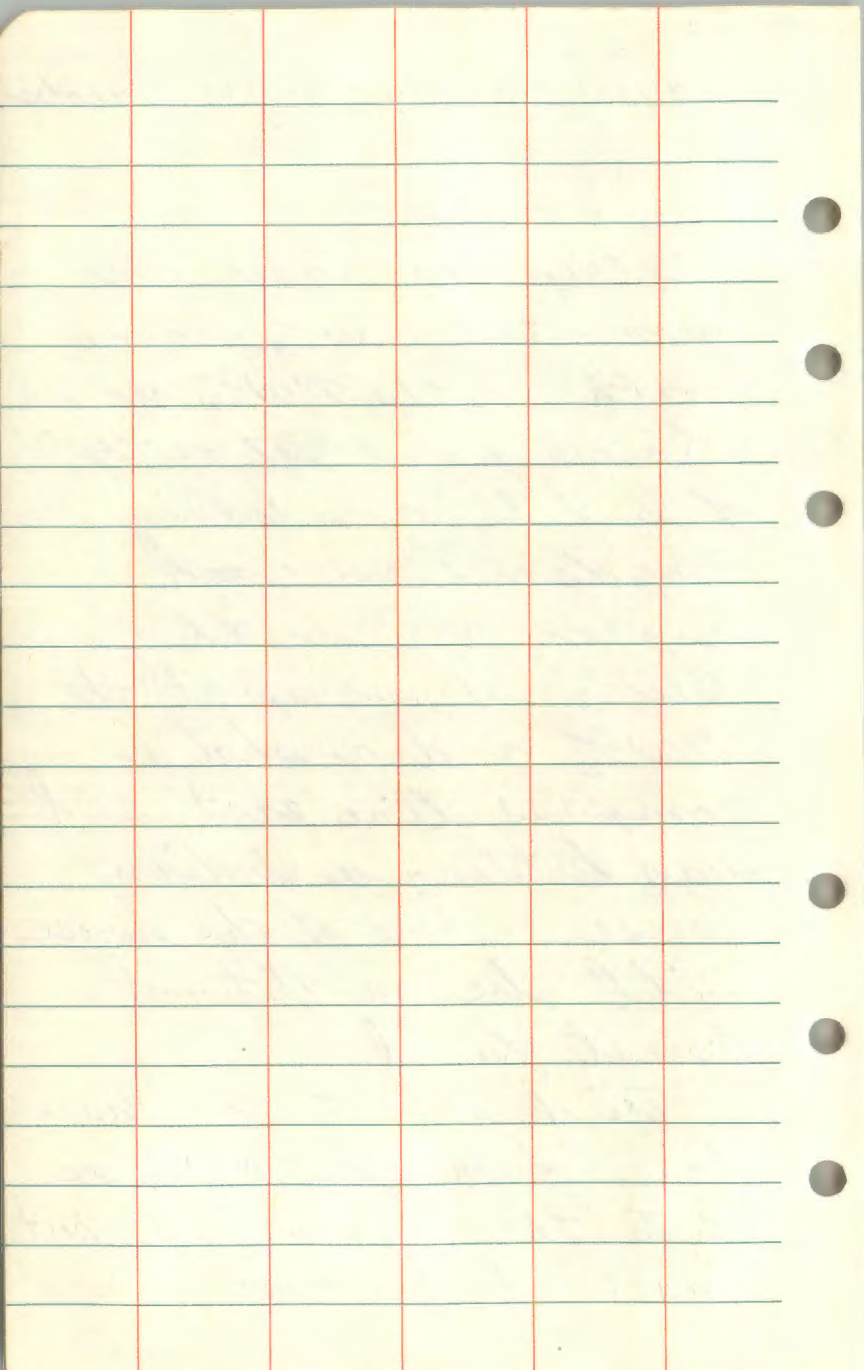
11/24/80 - Bramp, Hayes, Jacobs

T. 146 N. R. 30 W.

Set up the laser line from the CW $\frac{1}{4}$ sec. 26 north to the NW $\frac{1}{4}$ sec. 26.

Laser point set on top of a hill overlooking Knudson Dam Road approx 100' north of CW $\frac{1}{4}$. I was up at the NW $\frac{1}{4}$ and a shot a compass line east and was hitting a Indian house. Some of the house will be on National Forest land.

Tried to get the laser line from the NW $\frac{1}{4}$ sec. 26 to the W $\frac{1}{4}$ sec. 26, but laser lost power.



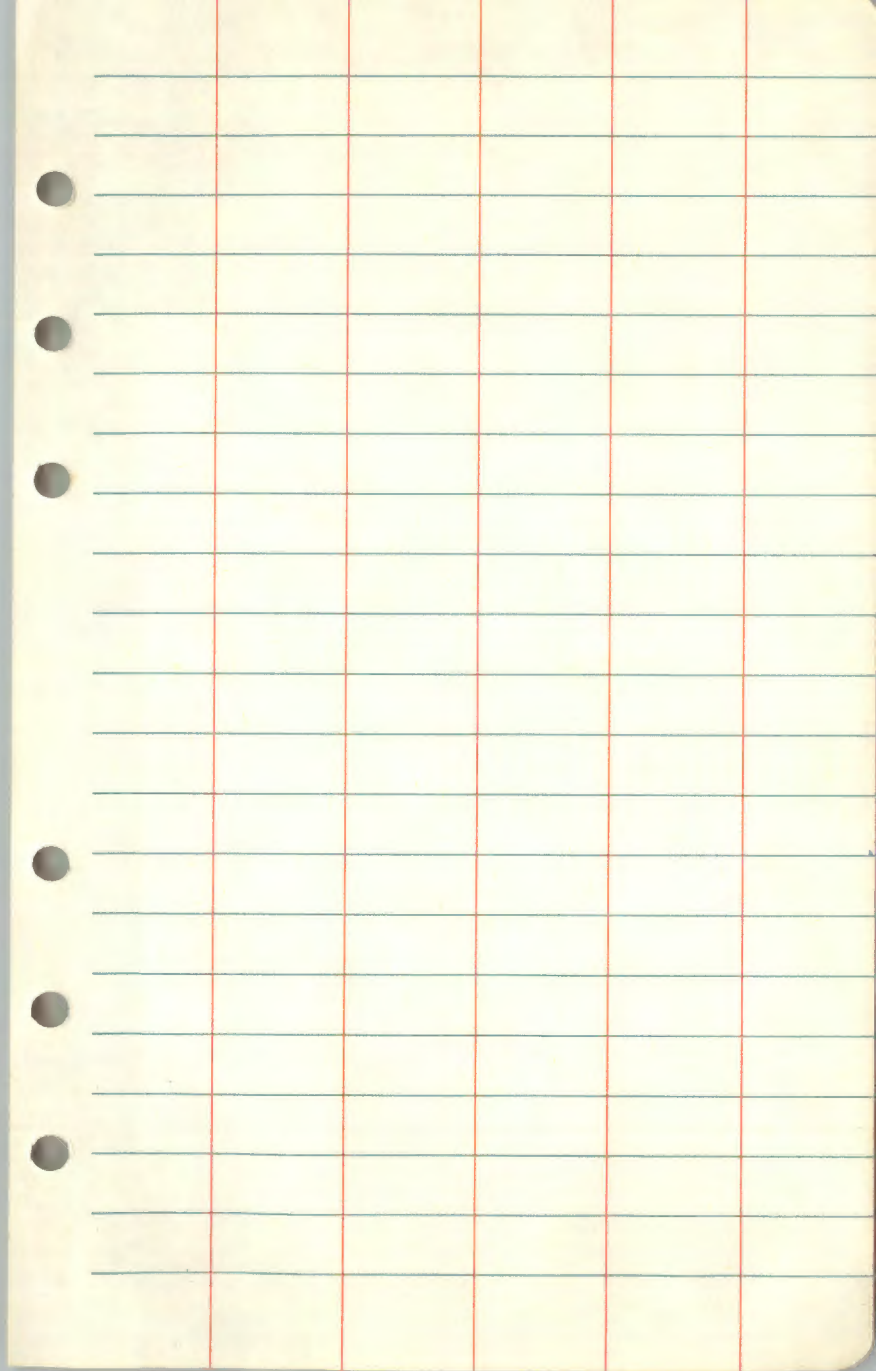
4/1/81 - BRAMA, Krause, Jacobs,
Gehrke

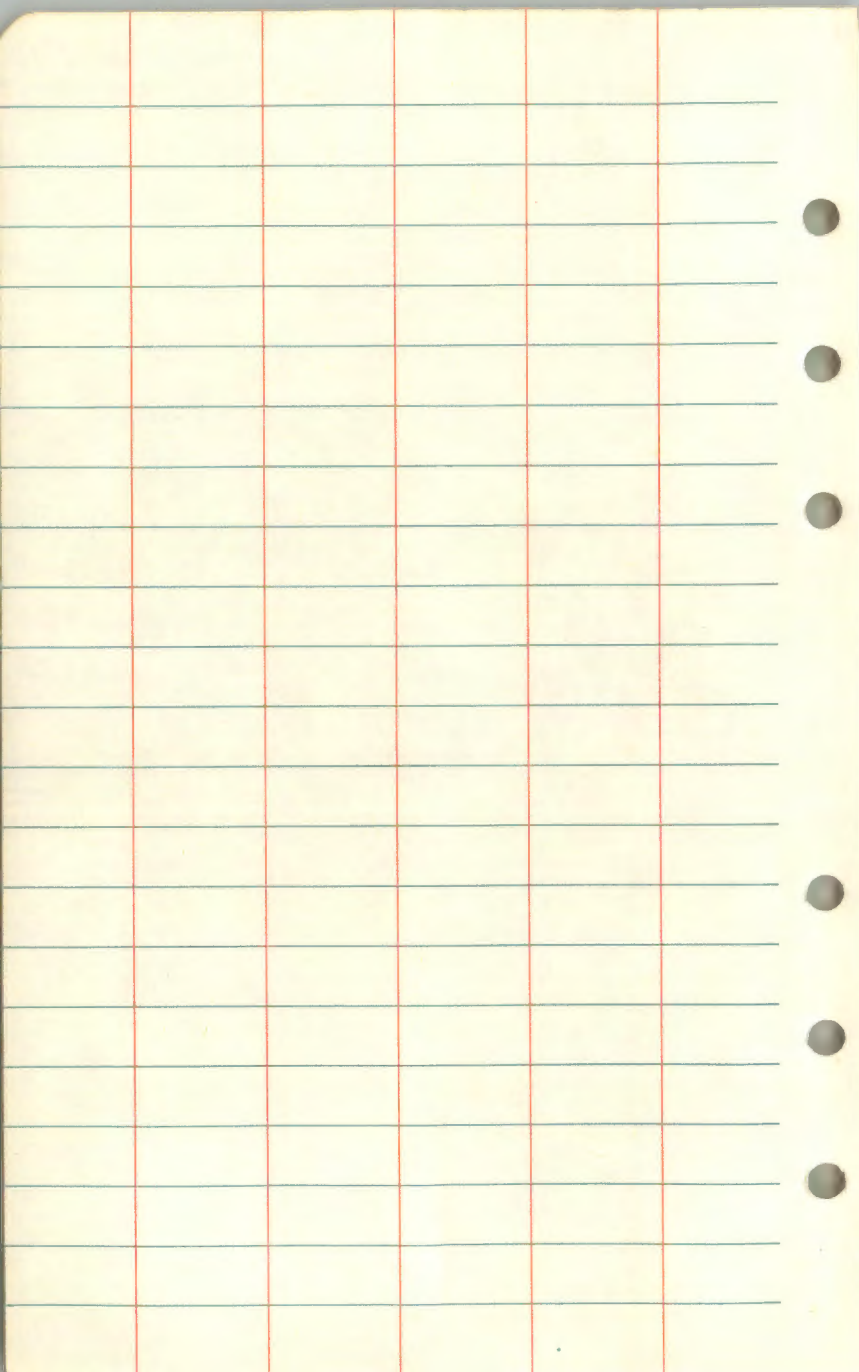
T. 146N. R. 30W. Sec. 22

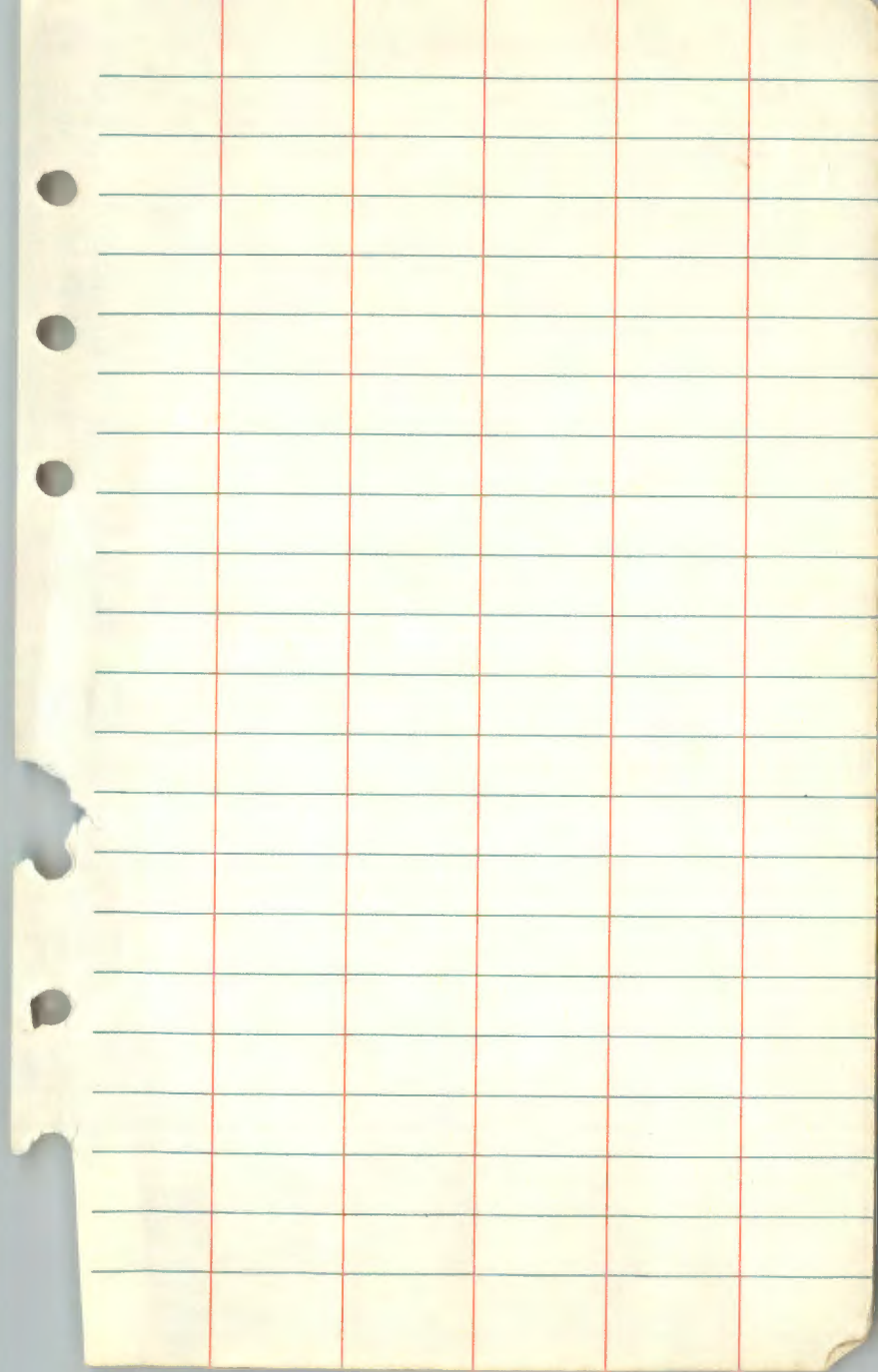
Cut line from NW $\frac{1}{4}$ Sec. 22
to CN $\frac{1}{4}$ Sec. 22. Sighted
over a trailer home which
is just east of the NW $\frac{1}{4}$
corner. This trailer home is
on National Forest land.

This house ~~to~~ wasn't here
last fall because a old
Indian house was there then
also, there's a trailer home
sitting on wheels south
of the boundary line,
completely on N. F. land.
Further down this line
(east of Blk. Dk. Hwy.) there's
been trees cut down on N. F.

land and garbage scattered.
We'll have to tie in
these trespasses.
See Diagram.







6/29/81 - BRAMA

T14/N. R29

Drive to $\frac{1}{4}$ corner bet sec. 7/18
and brought it up to standard.

Mkd three new BT's:

1. W. OAK, 4" $541^{\circ}E$ at 17.09

2. W. OAK, 4", $510^{\circ}W$ at 67.12'

3. W. OAK, 6", $N15^{\circ}W$ at 14.03'

5. p. west 28'

Walked to M.C. (bet sec. 17/18)
along the shore of Pine Lake.

Fd. corner about 7' above the
shore of Pine Lake on the bank.

Rocks around I.P. with the B.C.

Fd. R. Pine BT, 25" with scribe
visible. (Must have been a 20" in 1918.

also fd. another I.P. 2" x 48"

approx. 10.0' NW of GLO iron.

Drop off 5. posts at CE $\frac{1}{6}$ S. 18

& $\frac{1}{4}$ corner bet. sec. 17 & 18

7/2/81 - Krause & BRAMA

2014

- Set 2" x 36" galv pipe ^{with B.C.} for CE-E $\frac{1}{4}$ in sec. 9 off of traverse runned 6/2/80.

Ties mkd.

W. Oak, 5", N63°E at 58.48'

- W. Oak, 11", S87°E at 97.00'

Ash, 8", S62°W at 28.15'

see corner card

Set 2" x 24" galv. pipe with ^{for N $\frac{1}{4}$ bet. 8th & 9th} B.C. under county road 8" deep.

GLO iron is in 3 pieces placed on north side of new monument.

Corner was reset from survey by sighting from $\frac{1}{4}$ c. bet 8/9 to MC on shore of Leech Lake.

Distances check good.

- See corner card

Traverse on next page.

5/5/81

5/6/81

TRAVERSE to establish
Section Corner 8, 9, 16 & 17
in T. 14N. R. 29W.

Curt KRAUSE

Bill Olson

GARY BRAMA

Sunny & Clear, temp. 60's.

T1A

H.P. 3800 E.D.M.

2
 Stat. Occup
 Sighted
 Stat.
 1st
 3rd
 Vert
 Mean
 Dist.
 Corn.
 Dist.

S.C.
 8.9
 11.7

90-19 1139-71 1139.69

00-00-00 00-00-00

1
 1/2
 2

180-00-20 180-00-05 180-00-02

90-30 1503.69 1503.58

00-00-00 00-00-00

180-50-10 180-50-10 180-50-10
 180-50-10 180-50-10 180-50-10

90-57 1166.12 1165.98
 6

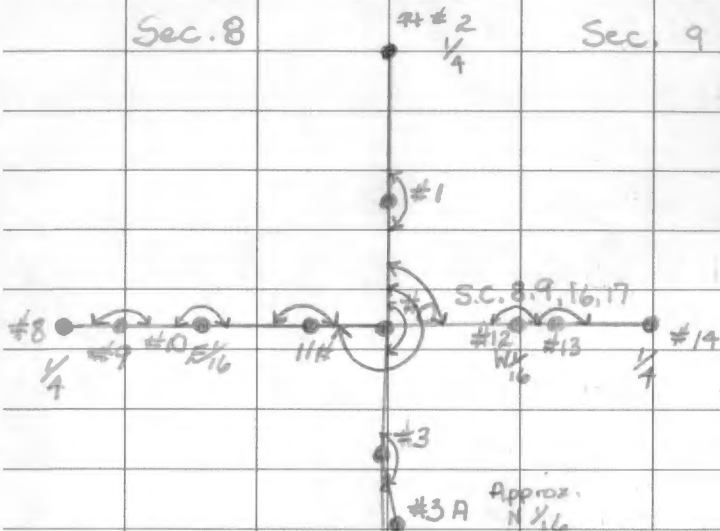
00-00-00 00-00-00

176-55-00 170-45-00 176-55-13

89-41 1424.95 1424.93

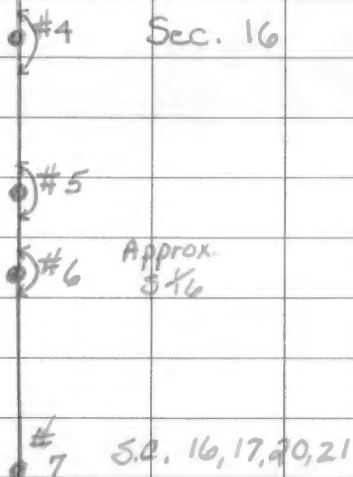
Sec. 8

Sec. 9



Sec. 17

Sec. 16



3rd Stat. Sighted
 1st *
 3rd *
 Vert. *
 Dist ±
 Corr. Dist

3 00-00-00 00-00-00

4

5 181-20-10 184-01-00 181-20-20

4 5 90-37 959.62 959.56

4

5 Approx. dist. 5/16 @ 14/17
 182-15-40 186-47-40 182-15-53
 182-15-43 186-47-44 182-15-55

5 6 90-47 389.84 389.80

5 00-00 20-00

6 S.D. 7 16.17 29.21
 176-50-20 170-30-40 176-50-13

6 7 89-41 1329.70 1329.68

0 00-00-00-00

3

3 A N^o 12
 Approx. 172-03-40 156-11-20 172-03-47

6 5/16 Fd iron pipe without brass
cap bent and below road
about .40.

3 A N 1/4 Fd. 2 pieces of the iron
pipe below road. Flanges were
all bent & twisted on one piece. 1.0' long

5 Stat Occup	5 Stat Sighted	1st. Sighted	3rd. Sighted	Mean $\frac{x}{n}$ Dist	Corr. Dist
11	0	88-32	340.12	340.01	
0	1	00-00	00-00		
0	11	271-0830	93-2600	271-08-40	
0	12	89-54	970.33	970.33	
0	1	00-00	00-00		
0	12	85-26-20 256-19-00 85-26-20 85-26-20 85-26-20			
0	0	00-00	00-00		
12	13	180-0330	180-09-00	180-09-13	
13	12	91-54	430.89	430.65	
13	12	00-00	00-00		
X	14	179-59-35	179-58-40	179-59-35	
13	14	91-57	539.72	539.40	

$\frac{1}{n} \sum x_i^2 = 916$