T142N R31W

FIELD BOOK

TRAVERSE

Sec. 29

[redacted]

T142N R31W Sec. 29 Traverse

USFS, CASS COUNTY, MN I

T142N R31W

subdivision of section 29

2/16/88 — 11/29/89

Solar Observation II & III

Main Traverse Page 1 – 37

Tie to interior 1/16 cors. 39 – 54 & 61

1/64 corners. 55 – 60

Tie to SW 1/16 cor. hole 61

E Establishment of N 1/16 Bet secs 4/5 62-64

II

Lat = 47°04' 52.5"

Long = 94°38' 07.2"

DUT = 0.00"

PT3 - 000-00-00

D 249-13-55 15.58030
D 249-23-41 15.58449
D 249-38-35 15.59491

R 069-53-12 16.00538
R 070-02-08 16.01322
R 070-12-45 16.02166

PT3 179-59-38

Set 3

=49.4531

PT3 - 000-00-00 Time

D -
D -
D -

R -
R -
R -

PT3

Set 4

III

JA
GR

Sun Observation 2/17/88

Sunny
25°

9:30 AM

Instr. @ Pt 4 mean S 69°45'48" W

Backsighting Pt 3

Turning to Sun

PT3 000-00-00 Time -.00,05 sec

D 243-22-43 15.32216
D 243-36-51 15.33221
D 243-43-37 15.33564

R 063-55-45 15.34511
R 064-04-18 15.35295
R 064-14-08 15.36141

Set 1

249-45-57

PT3 180-00-15

PT3 000-00-00

D 246-38-45 15.46542
D 246-54-14 15.48020
D 247-06-27 15.48551

R 067-45-31 15.51441
R 067-55-42 15.52288
R 068-05-01 15.53081

Set 2

249-45-56

PT3 180-00-05

IV

V

1.

Instr at Pt 2

SW sec 29 PT. 1 , 000-00-30 ✓

4 180-00-00

PT. 3 2. 190-23-06 190-22-42.5 ✓

3 010-22-49

42 ✓

PT. 1 8 090-00-49 190-22-42.5

5 270-00-40

PT 3 7 280-23-21 190-22-42.5 ✓

6 100-23-31

V∠ = 90-51-30

PT 1 0 090-51-26 233.340 FT. 233.314

R 269-08-26 71.121 M. ✓

PT 3 0 099-18-25 371.990 FT. 367.093

R 260-42-09 113.384 M. ✓

V∠ = 99-18-08

57.5 / 15 / 42.5

86.0 / 44.5 / 26 / 60

86 / 44.5 / 42.5

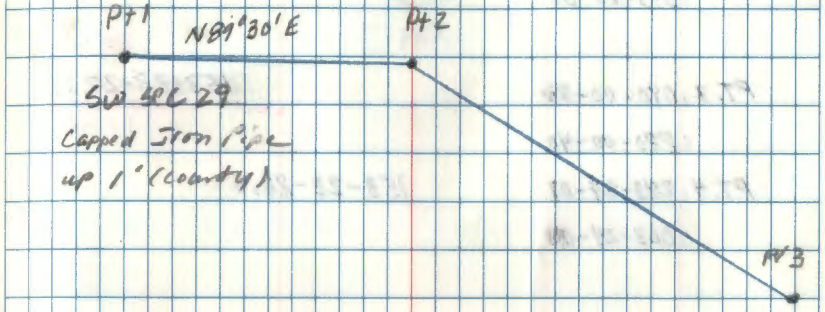
MCH

2/16/88 1.

IA R Partly cloudy

TS W 30°

GA TS CS 4



SW sec 29

Capped Iron Pipe

up 1' (county)

Tie:

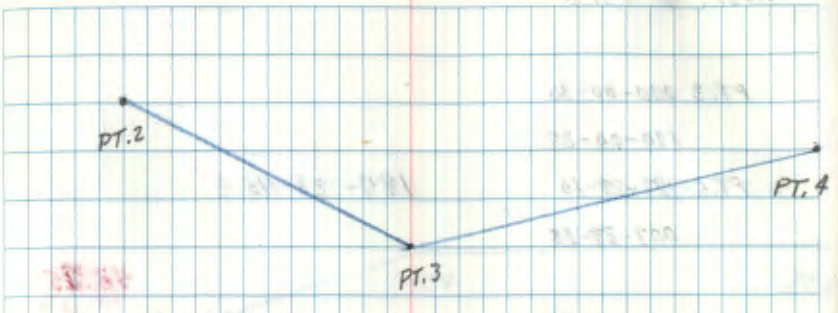
Aspen 14" NE 5.37'

Rock 4" S-SE 3.45'

INSTR. @ PT. 3

PT. 2 : 000-00-30
4 : 180-00-28
PT. 4 : 153-23-55 — 153-23-26
3 : 333-23-55

PT. 2 : 090-00-38 — 153-23-27.25
5 : 270-00-40
PT. 4 : 243-24-07 — 153-23-28.5
6 : 063-24-08



TIES:

10" W. PINE SW 16.56
8" ASPEN NW 9.98

INSR. @ PT. 4

PT. 3 000-00-30
180-00-27

PT. 5 187-29-10 187-28-45.5
007-29-18

PT. 3 090-00-40 187-28-47.75
270-00-40

PT. 5 277-29-29 187-28-49
097-29-29

V4 = 91-23-21

PT. 3 091-23-35 695.945 FT. 695.739
pt 4 R 268-36-53 212.124 M.
PT. 5 091-22-08 1005.085 FT. 1004.798
R 268-38-26 306.350 M.

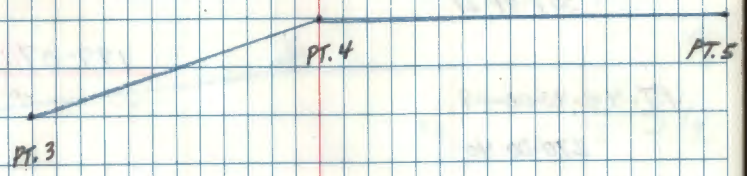
VX = 91-21-51

28.5 / 14.0 / 4.5

37 / 55

89 40 / 49

13.10 / 28.5 / 45.5



TIES:

3" BIRCH NW - 22.68'

3" BIRCH NE - 20.99'

Inst. @ PT. 5

PT. 4 000-00-30
4 180-00-25 2.5

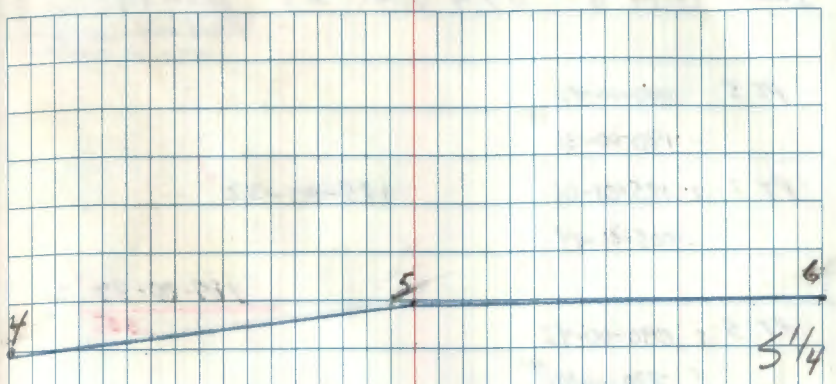
PT. 6 177-07-27 177-06-57.5 ✓
3 357-07-27

177-07-00.25 ✓

PT. 4 90-00-38
5 270-00-40 39

PT. 6 267-07-38 177-07-01 ✓
6 087-07-42

87° 81 40
27 39
59.5 01



Ties

6" Aspen N -6.63

15" Aspen NE -7.34

Inst @ Pt 6 5¼ sect 29 Iron Pipe ℄ of old Rd flush with surface nail in center.

Pt 5 000-00-30
4 180-00-31 .5

Pt 7 2 185-01-01 185-00-32 ✓
3 005-01-04

185.00.34 ✓
35

Pt 5 8 090-00-42
5 270-00-40 41

Pt 7 7 275-01-18 185-00-36 ✓
6 095-01-16 37

VΔ=89-48-00

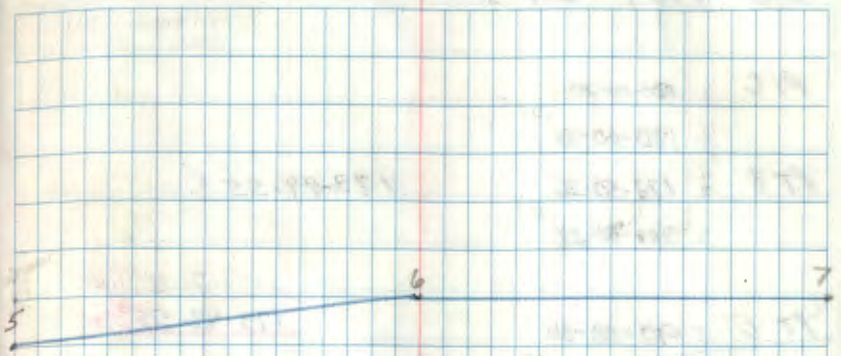
Pt. 5 Q 089-48-23 336.790 FT 336.788
R 270-12-24 102.654 ✓m.

Pt. 7 Q 088-54-02 288.315 FT 288.262
R 271-06-24 87.878 ✓m.

VΔ=88-53-49

37
41
36

30.5
62.5
20.5
42



Ties #6
7" w. oak N -10.14'
3" Ash NW -12.14'

6/13/86 Hayes & Krause: viewed this 5¼ iron in the old roadbed. Top of iron has been chipped off though still visable. only 1" is above ground. Evidence of to BT's within the last ± 15 yrs. Unknown origin.

Inst @ PI 7 5th 5

Pt 6	1 000-00-30	31 5	
	4 180-00-33		
Pt 8	2 173-50-26		173-49-55 5 ✓
	3 353-50-28	27	
			173-49-55 ✓
Pt 6	8 90-00-36		
	5 270-00-40	38	
Pt 8	7 263-50-31	1.5	173-49-54 5 ✓
	6 083-50-34		

PT 8	D 90-58-00	2444.86 FT	2444.512
	R 269-03-02	745.195 M ✓	

VA = 90-57-29

OK MCA

47 0
31 5
55 5

42 5
38 0 32 5
54 5

MCA

Ties 8" Maple SE 29.38
3" W. OAK S.W 19.52

Inst @ PT 8 SE. Sect. corner Sect 29.

PT 7 1 000-00-30

4 180-00-28 29

PT 9 2 114-30-23 114-29-53

3 294-30-21 22

114-29-55.25

PT 7 8 090-00-42

5 270-00-40 41

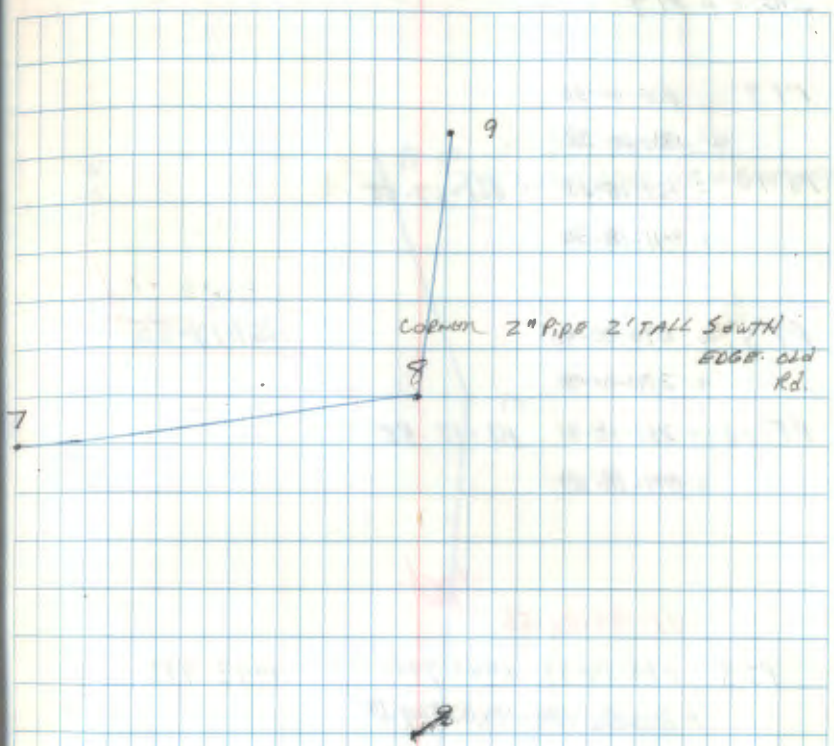
PT 9 7 204-30-35 114-29-57 5

6 024-30-42 38 5

7
82
29
53

985
41
57 5

MCH



6/13/58 Hayes & Krause - viewed this iron. The county Hwy. Dept has recently placed this iron where they found the old county pipe damaged MCH

Instr @ Pt 9

Pt 8	1	600-00-30		
	4	180-00-38		
Pt 10	2	161-18-28	161-17-55 ✓	
	3	341-18.30		
			161-17-55 ✓	
Pt 8	8	090-00-40		
	5	270-00-40		
Pt. 10	7	251-18-31	161-17 55 ✓	
	6	071-18-39		

~~VA~~

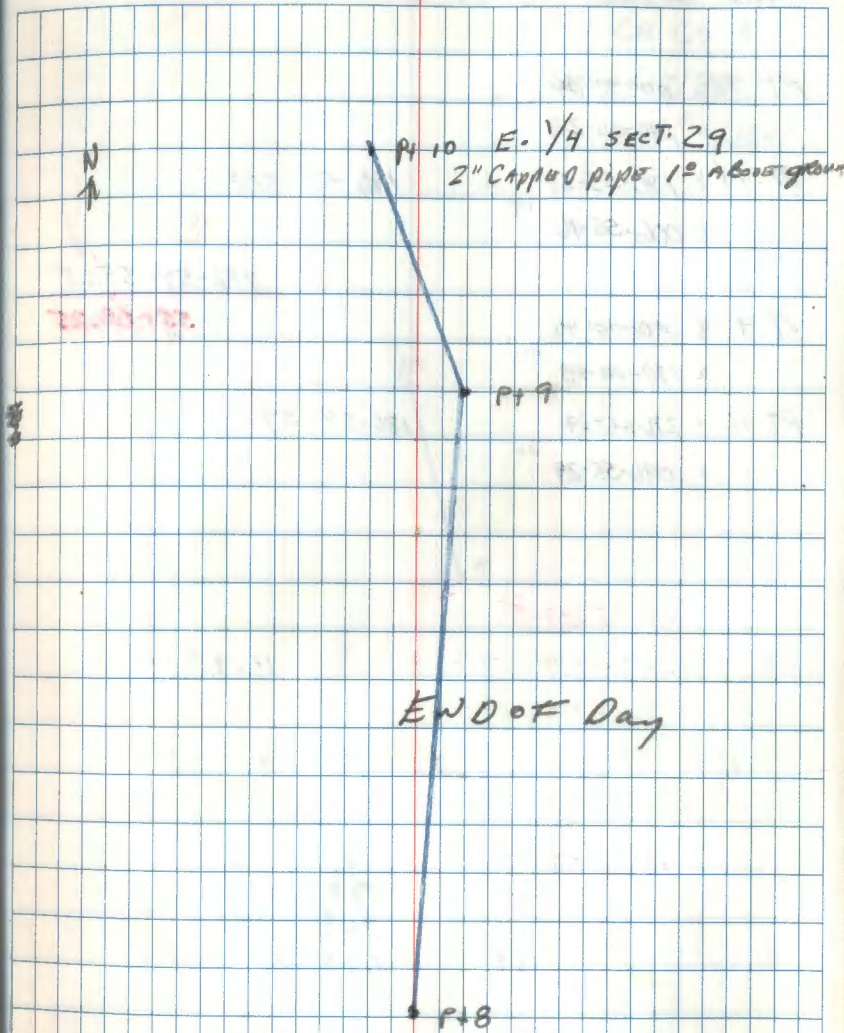
VA = 89-53-58

Pt 8		089-54-37	1443.795'	1443.793
	R	270-06-43	440.869 ✓	
Pt. 10		086-50-37	413.160'	412.533
	R	273-09-55	125.932m ✓	

VA = 86-50-21

89
34
55

95
43
55



Ties:

W. Oak 5" East 9.33'
W. Oak 3" SE 14.29'

Inst at 10 E, Y4 sect 29

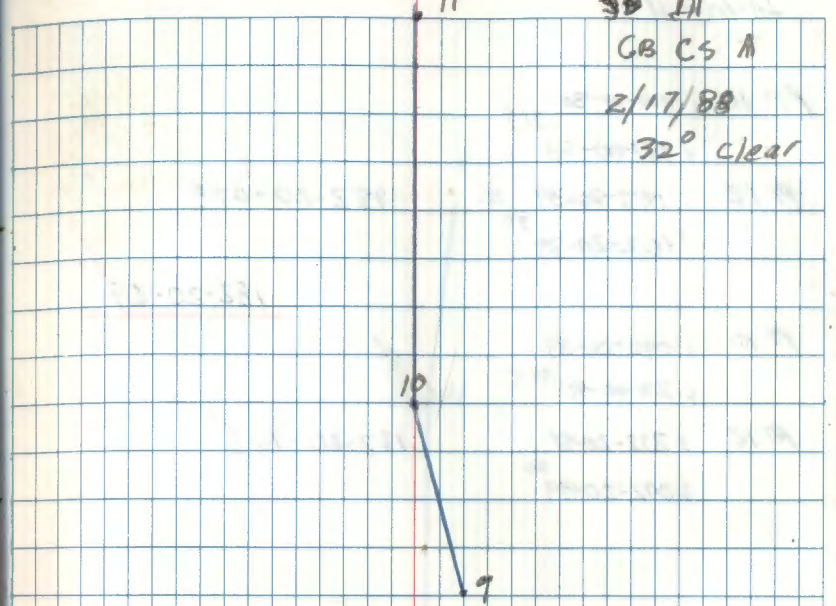
Pt 9	4	180-00-23	
	1	000-00-30	26 5
Pt. 11	2	186-55-20	186-54-51 5
	3	006-55-16	18
			186-54-55.25
Pt 9	8	090-00-40	
	5	270-00-40	40
Pt. 11	7	276-55-39	186-54-59
	6	096-55-39	39

99
40
59

7
78 0
26 5
51 5

JMCH

IA I
~~SB~~ II
CB CS A
2/17/88
32° clear



Instr @ 11

PT 10 1 000-00-30 31.5
4 180-00-33

PT 12 2 182-20-39 182-20-07.5
3 002-20-39 31

182-20-09

PT 10 9 090-00-39
5 270-00-40 39.5

PT 12 7 272-20-51 182-20-10.5
6 092-20-49 50

VS = 91-23-34

PT 10 D 91-23-47 525.030 FT 524.874
R 268-36-39 160.029 m.

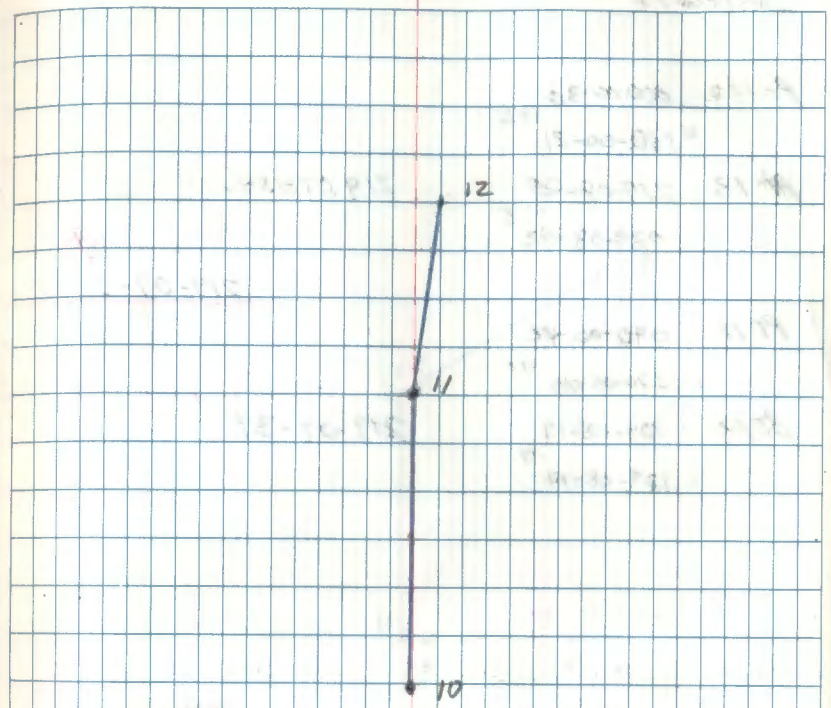
PT 12 D 92-45-43 258.645 FT 258.344
R 267-14-56 78.834 m.

VS = 92-45-24

49 50 0
39 5
10 5

38 0
31 5
07 5

MCH



Ties

10" Rock N.E 5.60'
10" " S.E 17.27'

Instr @ 12

Pt 11 , 000-00-30
4 180-00-21 25 ±

Pt 13 2 219-08-05 219.07-38
03 ±
3 039-08-02

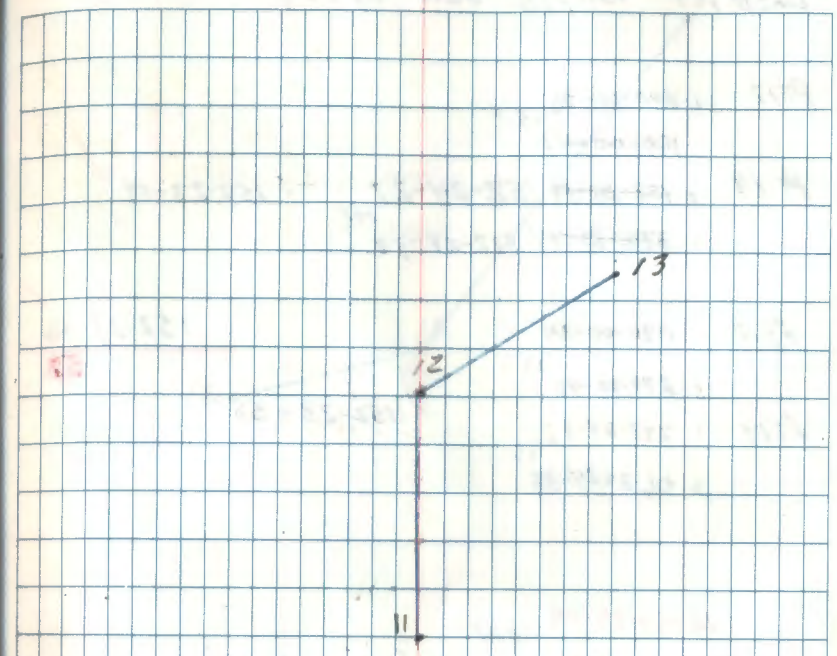
38
219-07-37.5

Pt 11 5 090-00-42
5 270-00-40 41

Pt 13 7 309-08-19 219-07-37
6 129-08-17 18

78
41
37

5
83 ±
255
38 °



Ties:

7"	R. OAK	S.E	12.46
10"	11	N.E	4.85

Capped Iron P.I.P. 8" Above

Eastn. 13 NW 1/16 Sec. 28-29

PT 12 1. 000-00-36 35"
4 180-00-41

PT 14 2 ~~152-25-35~~ 152-24-27 152-23-54
3 ~~332-25-44~~ 332-24-32 29"

PT 12 8 090-00-34 152-23-56
5 270-00-40 37

PT 14 7 242-24-32 152-23-58
6 062-24-38 35

VK = 84-25-04 dist.

PT 12 0. 084-25-15 171.790' 170.976'
R 275-35-08 52.362

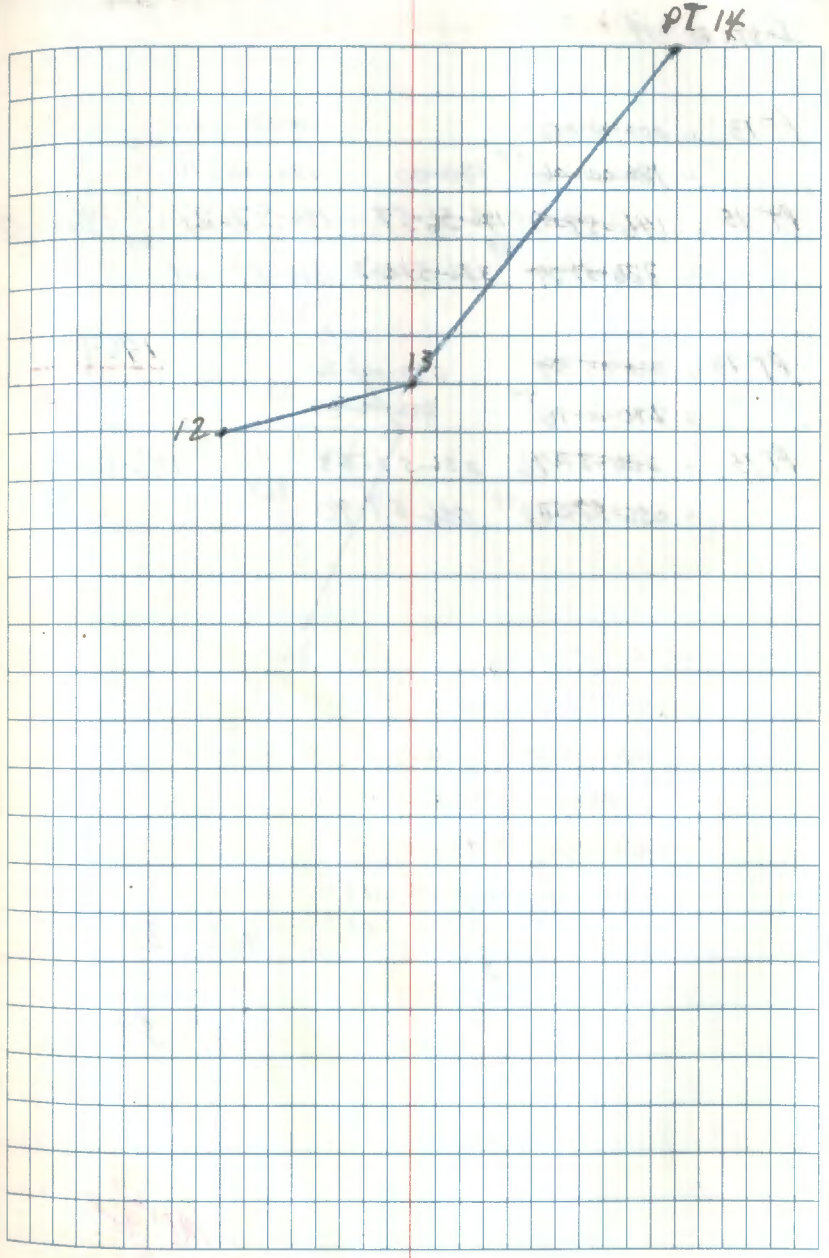
P.T 14 0. 90-27-11 753.310' 753.286'
R 269-33-30 229.608

VK = 90-26-51

8 95
37
58

~~8 95~~
35 8
540

MCH



Instr @ #14

PT 13	1	000-00-30		000-00-30	29
	4	180-00-~~04~~ 18	180-00	180-00-16	✓
PT 15	2	146-57-08	146-56-57	146-57-21	21 146-56-~~58~~
	3	326-57-09	326-57-03 83	326-57-21	
					✓ 146-56-58 2
PT 13	4	~~240-00-38~~	090-00-36		
	5	270-00-40 49	270-00-40 38		
PT 15	7	~~236-57-76~~	236-57-33	146-56-58 5	✓
	6	056-57-50 48	056-57-40 36 5		

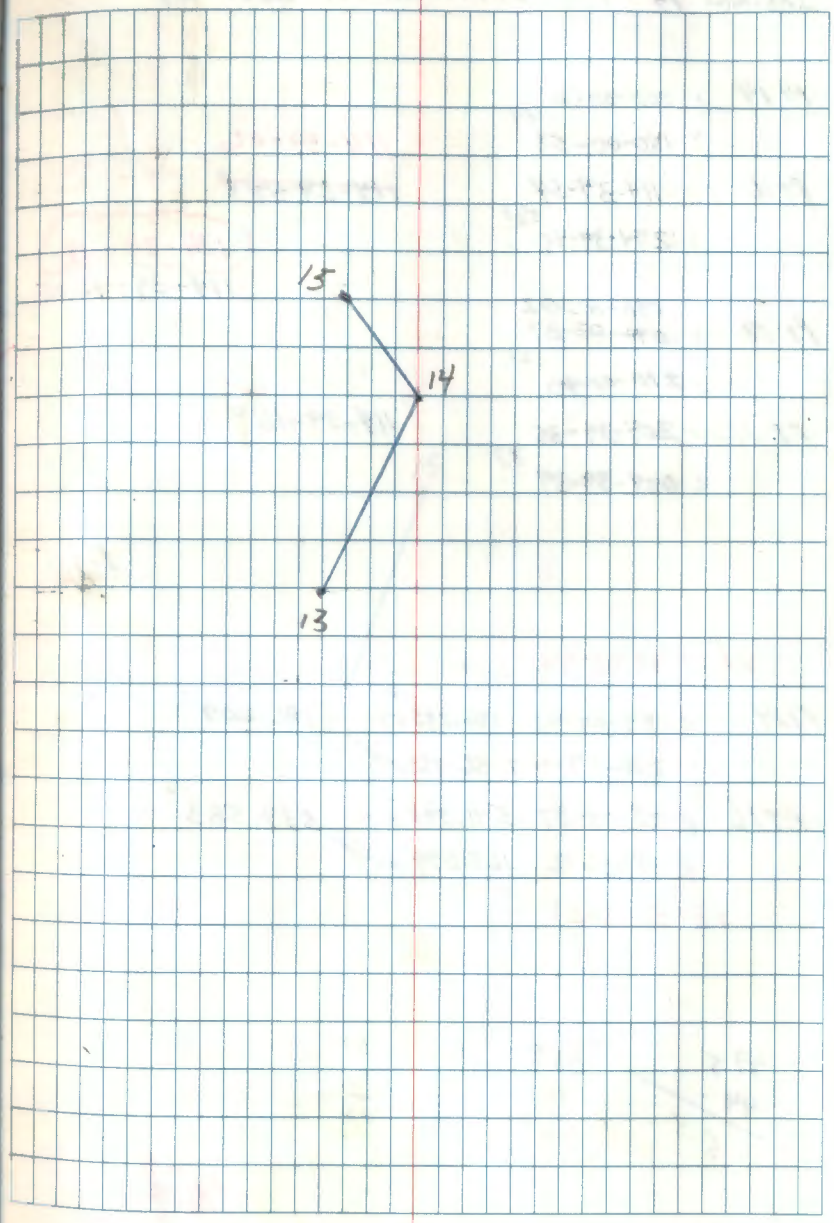
10 5 / 49 / 59

18 0 / 08 / 10 5

96 5 / 39 / 58 5

81 / 23 / 58

MCH



2" CAPPED Iron Pipe
2' Above Ground.

Instr@ 15 NE Sect. Corner Sec T 29

PT 14	1	000-00-30 44		
	4	180-00-58	114-39-06	
PT 16	2	114-39-54 58.5	~~114-39-17~~	
	3	294-39-45	114-39-11	
			114-39-15.25	
PT 14	8	090-00-02 090-02-29 21		
	5	270-00-40		
PT 16	7	204-39-35 37	114-39-16	
	6	024-39-39		

VX = 89-02-28 Dist

PT 14	D	89-02-43	186.235 FT	186.209'
	R	270-57-47	56.765 m	
PT 16	D	85-03-37	541.595 FT	539.583'
	R	274-56-56	165.079 m	

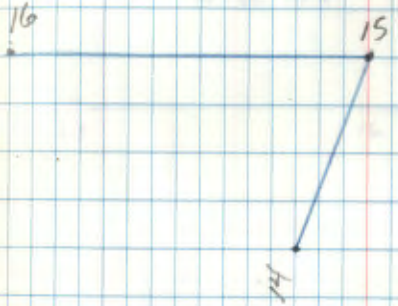
VX = 85-03-21

49.5 / 44 / 5.5

58.5 / 44 / 14.5

37 / 21 / 16

NCH



Instr @ 16

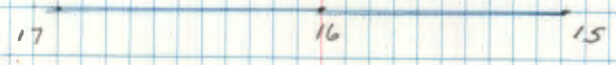
PT 15	1	000-00-30	
	4	180-00-30	
PT 17	2	179-59-23	179-58-53 ✓
	3	359-59-23	
PT 15	4	090-00-38	179-58-52 ✓
	5	270-00-40	
PT 17	7	269-59-31	179-58-51 ✓
	6	089-59-29	

53 30 = 53

30 23 07

90 39 51

MCH



Ties

8" Maple S.E. 21.95'

6" R. oak S.E 13.59

16

capped pipe
2' Above ground.

Inst@ 17 E 1/16 sect 20+29

Pt 16	1	000-00-30	31	
	4	180-00-32		
Pt 18	2	178-38-12 ~~178-38-23~~		178-37-40 ✓
	3	358-38-10		
				40 ✓
				178-37-40.5
PT 16	8	090-00-39		
	5	270-00-40	39.5	
Pt 18	7	268-38-20		178-37-41 ✓
	6	088-38-21	20.5	

V∡= 86-54-19

PT 16	D	86-54-38	737.635 FT	736.562'
	R	273-06-01	224.835 M = 737.646	
PT 18	D	085-33-46	158.820 FT	158.344'
	R	274-26-49	48.408 M ✓	

V∡= 85-33-28

41
31
40

80.5
39.5
41.0

MCH

16

Distance 18

At 17	1.	000-00-30	
	4	180-00-34 32	
At 19	2	185-17-52	185-17-20
	3	005-17-52 52	
			185-17-20
At 17	8	090-00-38	
	5	270-00-40 39	
At 19	7	275-17-59	185-17-20
	6	095-17-59 59	

52
32
20

Ties

7" Birch S.E 6.80

8" Birch S.W 8.00

18 Instr @

PT 19

PT18 000-00-30' 000-00-30'

4. 180-00- 180-00-29' 29.5

PT 20 2. 175-14-01 175-14-32 175-14-05 ✓

3 355-14-01 355-14-37 34.5

PT18 8 90-00-40 40 175-14-04.5

5 270-00-40'

PT 20 7 265-14-44 175-14-04 ✓

6 085-14-44 44

VA = 90-27-48

PT18 D 90-28-00 257.230' EST 257.221'

R 269-32-23 78.403 m ✓

PT 20 D 91-02-03 786.200' EST 786.072'

R 268-58-36 239.633m. ✓

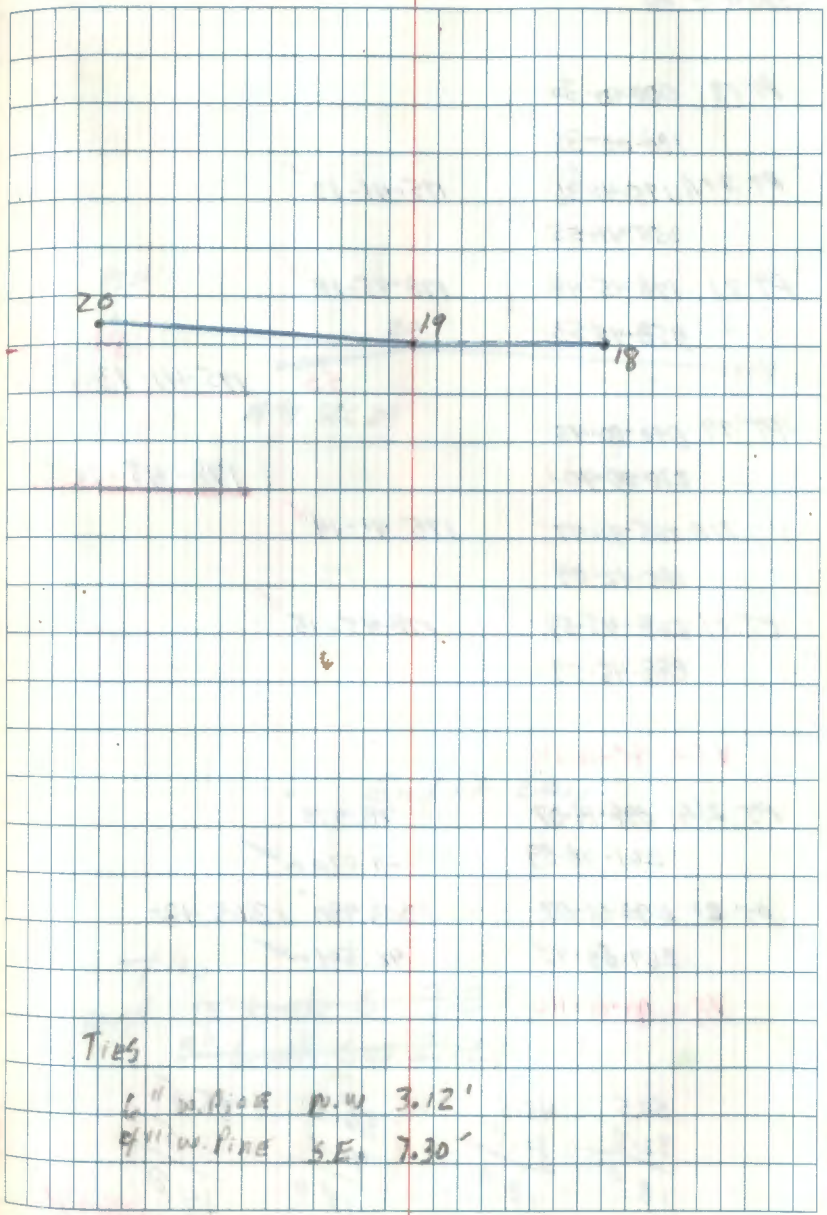
VA = 91-01-44

44 34.5

10 29.5

4 5.0

18



Inst @ 20

PT 19	000-00-30		
	180-00-35		
PT 21A	175-41-36	175-41-13 ✓	
	355-41-55		
PT 21	178-45-48	178-45-18 ✓	
	358-45-53		
		55	~~175-41-13.5~~ 14
PT 19	090-00-43		178-45-16.5
	270-00-40		
PT 21A	265-41-47	175-41-14 ✓	
	085-42-04		
PT 21	268-45-54	178-45-15 ✓	
	088-45-59		

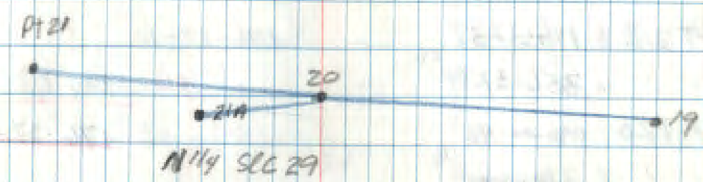
VX = 98-14-04

PT 21A	098-14-07	78.975'	
	261-~~46~~ 45-59	24.070m ✓	
PT 21	090-01-07	303.480'	303.480
	269-58-45	92.501m ✓	

VX = 90-01-11

50.5	45.5	56.5	55.5
32.5	32.5	41.5	41.5
18.0	13.0	15.0	14.0

MH



End of Day

Ties:

None ~~13" R. Oak S 3.27~~

~~5" R Oak S00 21.29~~

Instr @ 21

At 20 000-00-30 25
180-00-20

At 21A 001-04-24 001-03-52
181-04-10 17

PT 22 176-37-38 176-37-11
356-37-34 36

SS 001-03-52.25
176-37-10

RT 20 090-00-42
270-00-40 44

PT 21A 091-04-30 001-03-52.5
271-04-37 33.5

PT 22 266-37-51 176-37-09
086-37-49 50

VA = 91-06-19

Dist

PT 21A 91-06-28 225.710 FT
268-53-51 68.796 M

PT 22 89-45-53 1097.845 FT 1097.835
270-14-22 334.624 M

VA = 89-45-46

50 93 5 77 36
41 41 25 25
09 52 52 11

278-88 Sunny 38°F J.A. J.S. M.N. K.C. C.A. B.20

TIES

13" R. oak S 3.27

5" R oak S.W. 21.29

Inste. @ Z2

PT 21 000-00-30'
R. 180-00-34 32

PT 23 182-37-55 182-37-23 ✓
002-37-55 55

PT 22A 284-51-52 505 28451- 18 ✓
R. 104-51-49

PT 21 090-00-40 182-37-22.25 ✓
R. 270-00-40 48 55 284-51-1875
20

PT 23 272-38-03
R. 092-38-00 03 182 -37-21 ✓

PT 22A 014-52-02
R. 194-52-00 01 284-51-21 ✓

VA = 96-50-41.

PT 22A 96-50-51 96.115 FT
R 263-09-30 29.296m. ✓

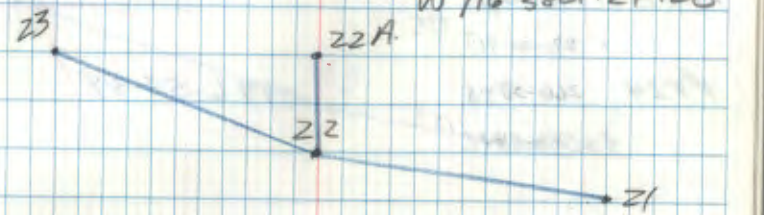
PT 23 087-32-40 349.155 FT 348.834
R. 272-27-45 106.423m ✓

VA = 87-32-27

61 40 21 | 61 40 21 | 40 32 18 | 55 32 23

21

CAPPED IRON PIPE
1' ABOVE GRND
W Y16 sect. 29 +20



TIES 8" R. OAK NE 8.43
8" R. OAK SE 13.14

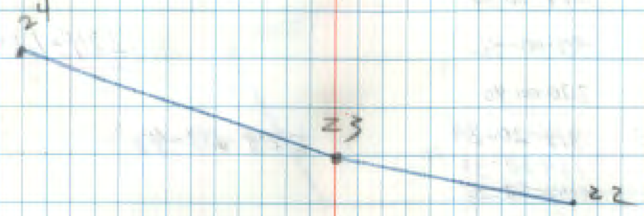
Instr @ 23

PT 22	1. 000-00-30	40	
	4R. 180-00-50		
PT 24	2. 176-58-19	17	176-57-37 ✓
	3R. 356-58-15		
PT 22	90-00-39		176-57-~~35.5~~ 36
	R. 270-00-40	39.5	
PT 24	266-58-15		176-57-34 ✓
	5 086-58-12	13.5	

4 1 5
7 3 5
3 9 5
3 4 P

77
40
37

MCH



Ties
7" Birch NW 6.23
6" Dead R. Oak SW 6.55

Instr @ 24

Pt 23. 000-00-30
180-00-15 225

Pt 25 224-20-42 08 224-19-45
044-20-04

Pt 23 90-00-46 43 224-19-47
270-00-40

Pt 25 314-20-29 31 224-19-48
134-20-33
~~044-20-04~~

VA = 92-18-50

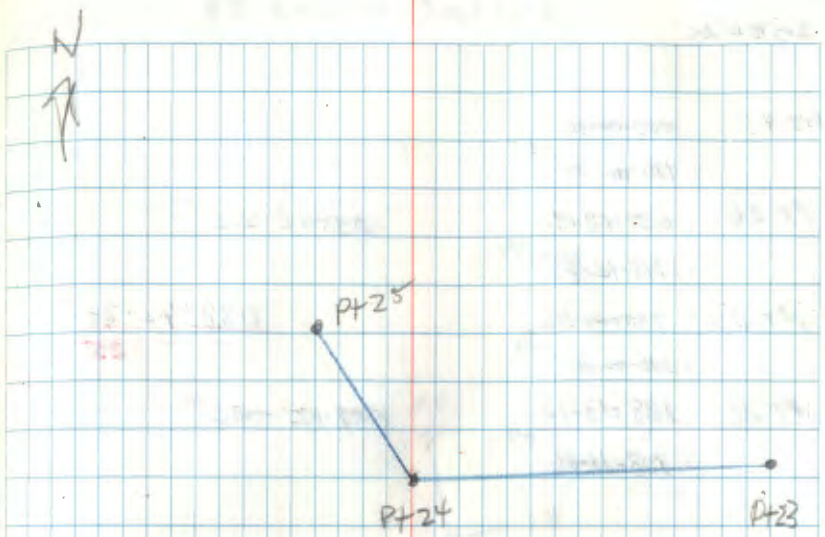
Pt 23 D. 92-19-02 727.185 ft 726.590
R. 267-41-22 221.647 m
89-28-08

Pt 25 D. ~~90-19-36~~ 275.485 ft 275.473
270-32-18
R ~~269-40-46~~ 83.967 m

VA = 89-27-55

3/91
43
49

68°
22'
45"



Ties
4" Maple SE. 6.19
2" Ironwood S.E 10.95

24

Capped Iron Pipe 2 2 Above Ground
NW Sect. of Sect. 29

Instr @ 25

Az 4 000-00-30" 25
4 180-00-20

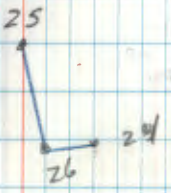
Pt 26 2 038-12-47 038-12-22"
3 218-12-47 47

Pt 24 1 090-00-46 038-12-24
5 270-00-40" 43

Pt 26 7 128-13-12 038-12-26"
6 308-13-06 09

47
35
47

6 9
4 2
2 6



Instr @ 26

PT 25 100-00-30"
4 179-59-58 44"

PT 27 3. 200-22-04
3. 020-21-39 21 5/8

PT 25 0. 90-00-41
R. 270-00-40 29"

PT 27 0. 290-22-00
R. 110-22-00 00

200-21-37.5
~~200-21-27.5~~
200-21-36
~~200-21-29.25~~
~~[illegible]~~

~~200-21-31~~
200-21-34.5

VA = 91-25-19

PT 25 0. 91-25-32 198.350' FT 198.288'
R. 268-34-54 60.456 m

PT 27 0. 90-41-36 369.403' FT 369.376'
269-18-44 112.595' m

VA = 90-41-26

5 10 / 29 / 31
31 / 40 / 11 / 2"
58 / 30 / 29 / 14
39 / 44 / 35 / 173

T: 47 5/8 / 44° / 27 5/8

Ties

4" Rock SE 17.14
14" Rock SE 11.65

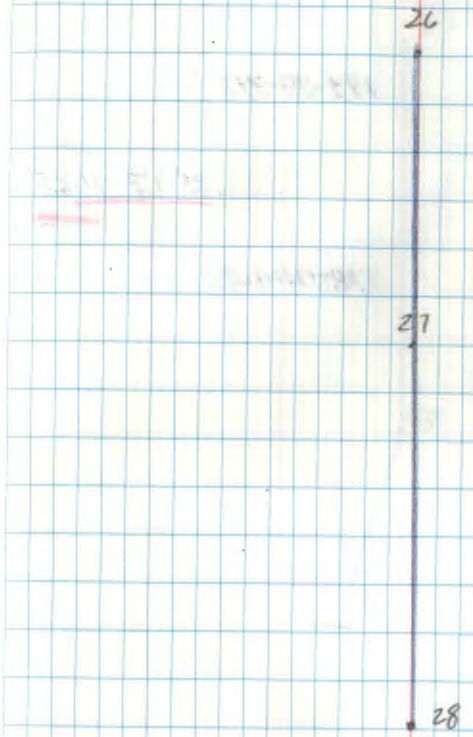
Inst @ 27

PT 26	000-00-30"		
4	180-00-30	30	
PT 28	2 174-17-52	174-17-21 ✓	
3	354-17-50	51	
PT 26	090-00-39	174-17-18.5	18
	270-00-40"	19.5 ~~20.5~~	
PT28	264-17-57	174-17-16 ✓	
R	084-17-54	55 ~	

41' 5
~~55~~ 5
39 5
16 0

51
30
21

MCH



Ties

18" R.oak NW	16.72
5" R.oak NE	8.57

Instr @ 28

PT 27, 1 000-00-30
4 180-00-31 30 E

PT 29 2 185-20-14 185-19-42 E
3 005-20-12 13

PT 27 090-00-34 185-19-41 25
5 270-00-40 37

PT 29, 275-20-22 185-19-40
6 095-20-12 17

VA = 91-19-12

PT 27 91-18-25 525.325 FT 525.188
268-42-00 160.119 m

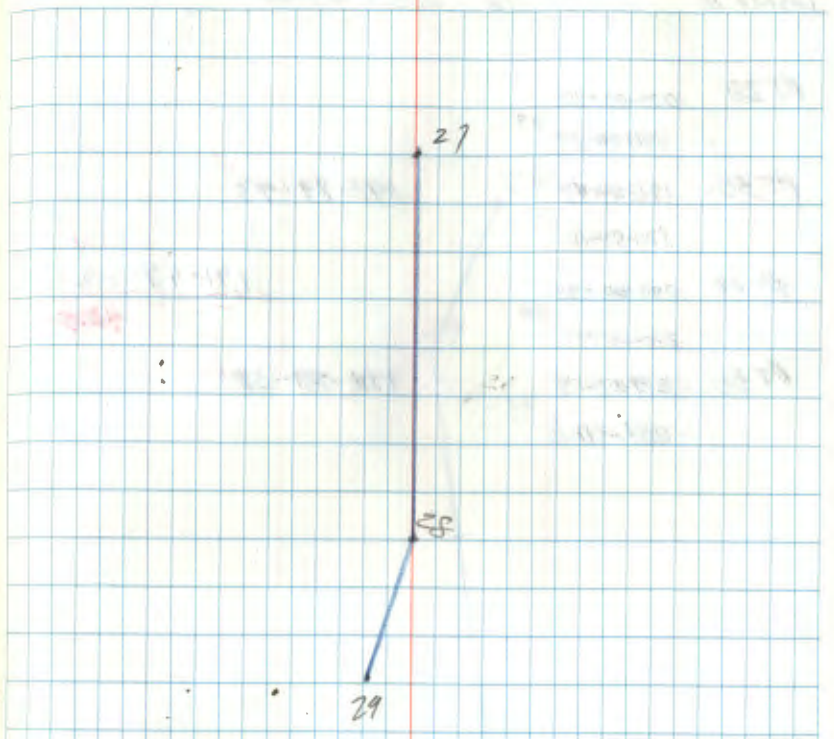
Pt. 29 88-43-33 179.215 FT 179.171
271-16-47 54.625 m

VA = 88-43-23

73 20
30 5
425

77
37
40

M27



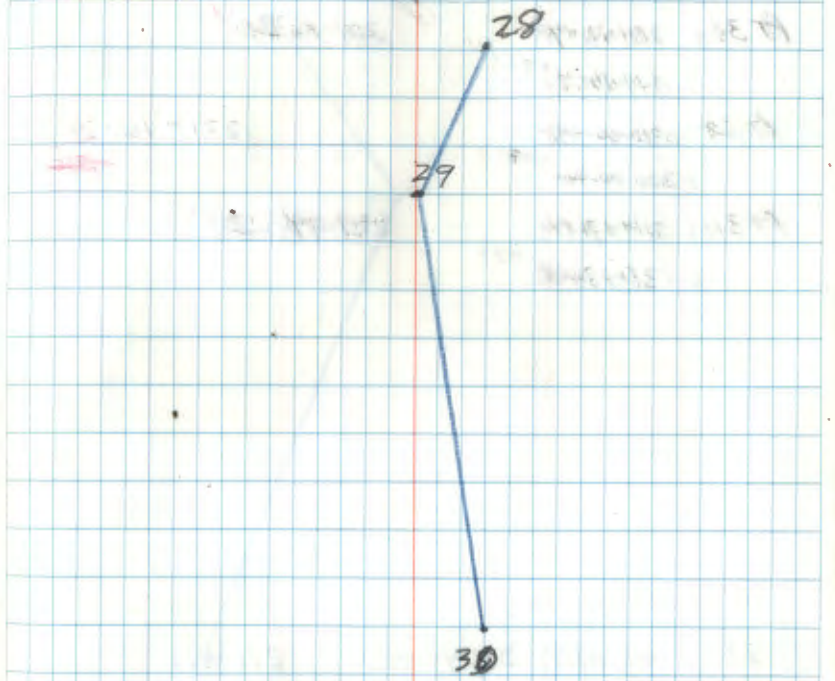
TIES 15" R.OAK N 15.7
13" Aspen SE 10.65

CAP 50 pipe 1/2 above Ground.

Instr@29 N 1/16 Sect. 29-30

Pt 28	000-00-30		
	180-00-28	29	
Pt 30	141-50-14	141-49-43 ✓	
	321-50-10	12	
Pt 28	090-00-38		40 141-49-40.5
	270-00-40	39	
Pt 30	231-50-18	141-49-38 ✓	
	051-50-16	17	

41 61
42 77
29 39
43 38



BnSk@30

At 29	4	000-00-30" 180-00-21	25
At 31	2	221-16-48	45
	3	041-16-43	
At 29	5	090-00-45 270-00-40	42.5
At 31	7	311-17-03	02.5
	6	131-17-02	

221-16-20 ✓

221-16-20 ✓

221-16-20 ✓

VA = ~~89-02-34~~

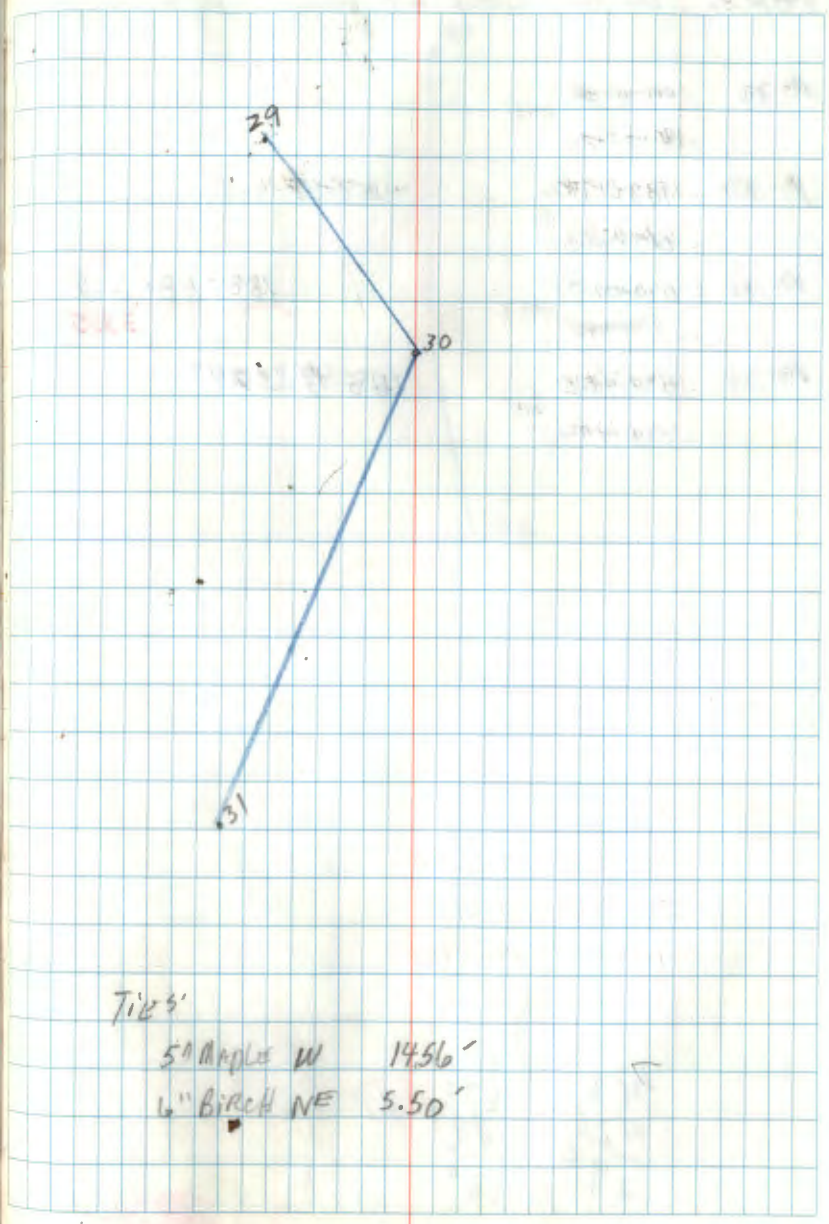
PT 29	8	89-02-48	276.450 Ft	276.412'
	9	270-57-40	84.264 M	
PT 31	0	89-25-30	1041.090 Ft	1041.027'
	R	270-34-53	317.327 M = 1041.049'	

VA = 89-25-19

42.5 / 20.0

45 / 5 / 25 / 30

ACH



Ties:

5" Maple W 14.56'

6" Birch NE 5.50'

30

CAPPED IRON PIPE
18" ABOVE GROUND

Instr 31 W 1/4 Sect 29

Pt 30		100-00-30"	29.5	
	4	188-00-29		
Pt 32	2	188-49-06	35	188-48-34.5
	3	008-49-01		
Pt 30	8	090-00-45	42.5	188-48-31.5
	5	270-00-45		
Pt 32	7	278-49-13	11.5	188-48-29.5
	6	098-49-10		

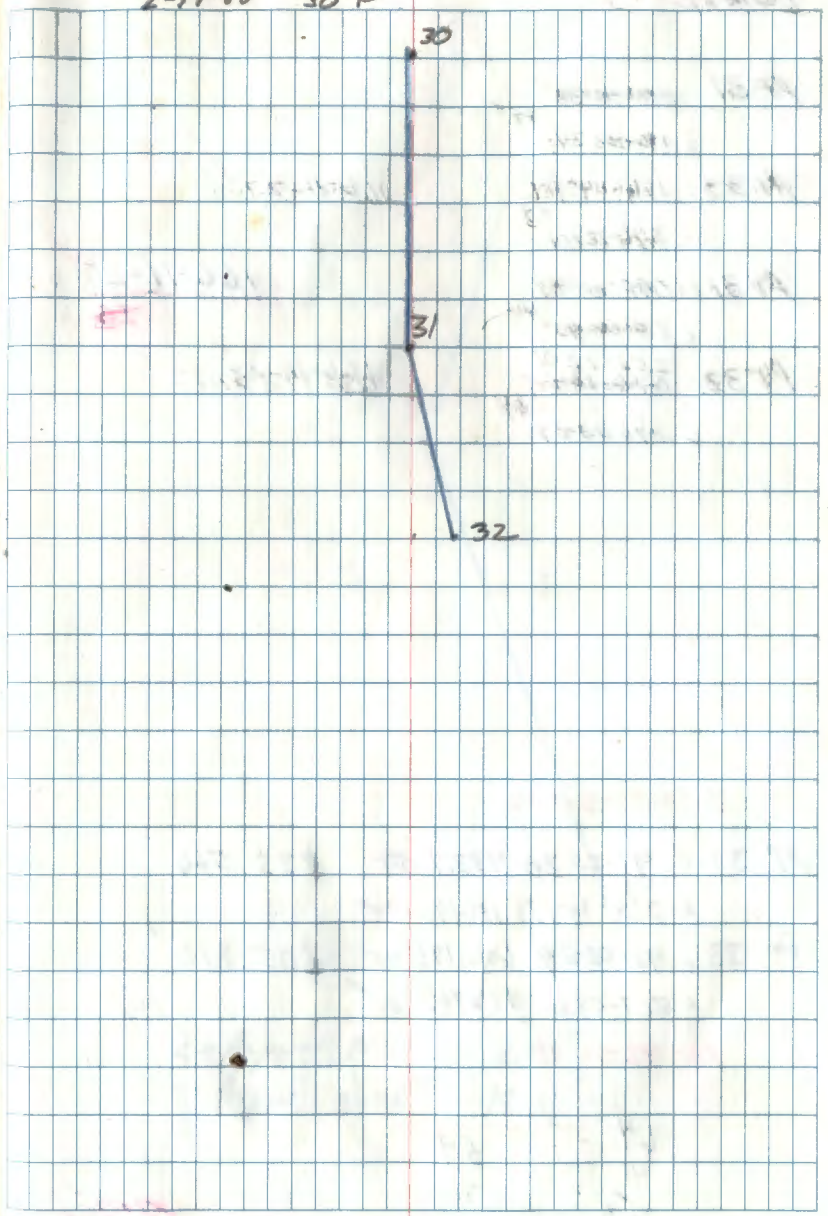
61 5
42.5
29.0

5
63.5
29.5
34.0

cloudy
Snow
2-19-88 30° F

J.A. GK. J.S. C.S.

30



Instr. 32

PT 31 000-00-30 32
× 180-00-34

PT 33 166-11-57 59
→ 346-12-01

166-11-27

PT 31 080-00-42 41
← 260-00-40

166-11-25

PT 33 256-12-01 ~~076-12-07~~ 04
← 076-12-07

166-11-23

VA = 91-25-02

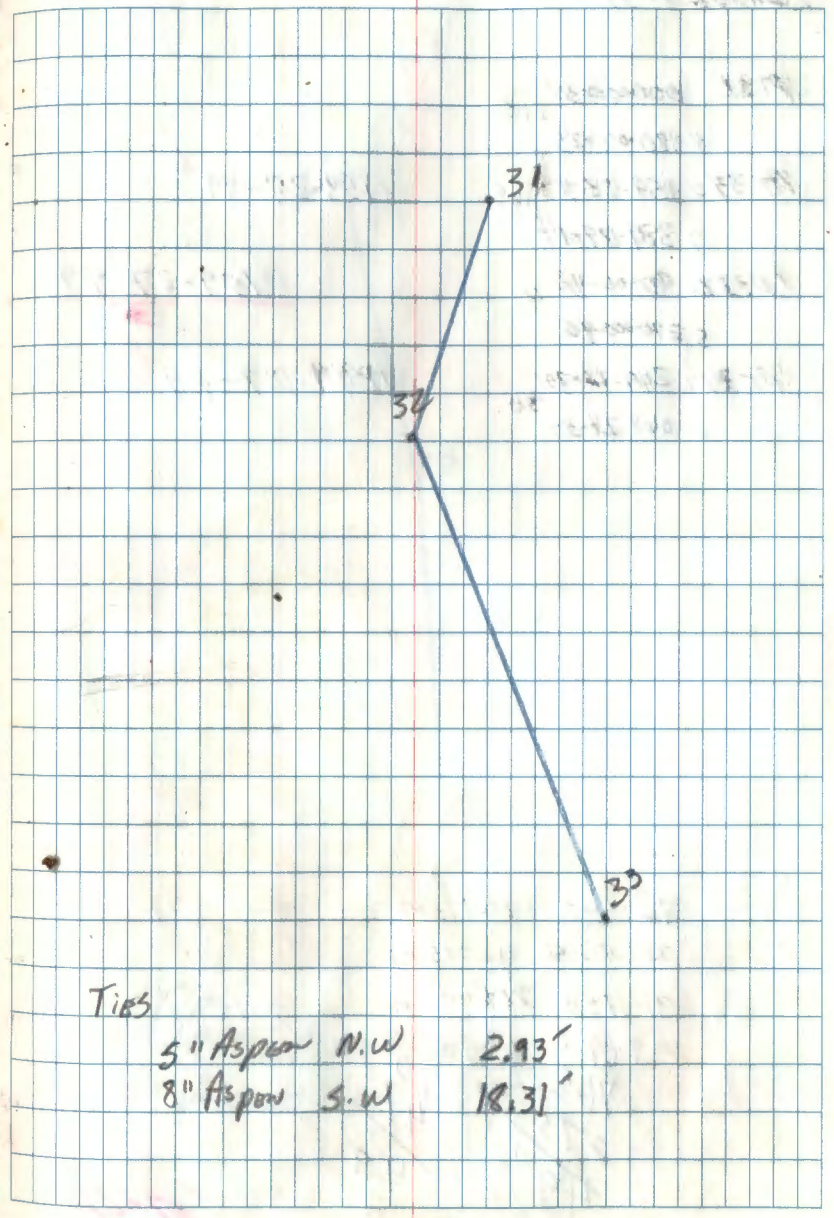
PT 31 ∠ 91-25-20 433.70 FT 433.566
↓ 268-35-17 132.192 m

PT-33 ∠ 92-02-24 606.195 FT 605.810
↓ 267-58-03 184.769 m

VA = 92-02-11

64
41
20

59
32
27



Ties

5" Aspen N.W 2.93'
8" Aspen S.W 18.31'

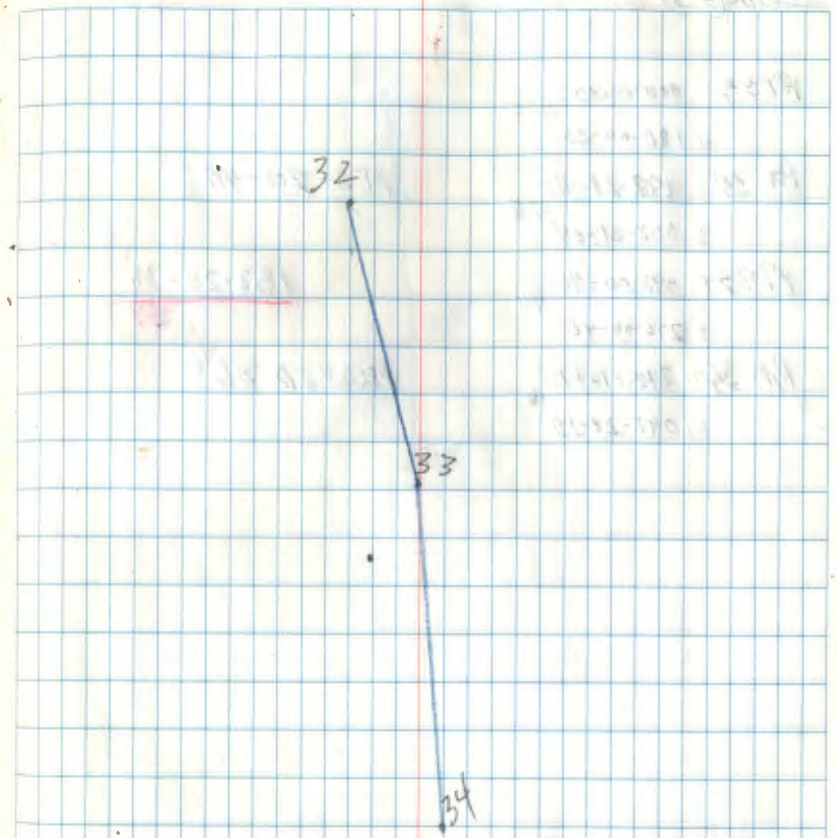
Inst @ PT 33

PT 32 000-00-30 275
4 180-00-25
PT 34 2 159-28-19 165 159-27-49
3 339-28-14
PT 33 90-00-42 241 159-27-49
5 270-00-40
PT 34 7 249-28-30 159-27-49
6 069-28-30 30

41
165
275
440

41
49

32



Ties
5" Birch NW 19.91
4" W. Oak NW 11.84

Instr @ 34

PT 33 600-00-30 275
4 180-00-25

PT 35 2 182-21-11 +0.13 182-20-40 4
3 002-21-04

PT 33 8 090-00-40 40 182-20-38 3
5 270-00-40

PT 35 7 272-21-17 16 182-20-36 4
6 092-21-15

VA = 92-56-27

PT 33 92-56-51 525.775 FT 525.079'
267-03-56 160.256 M

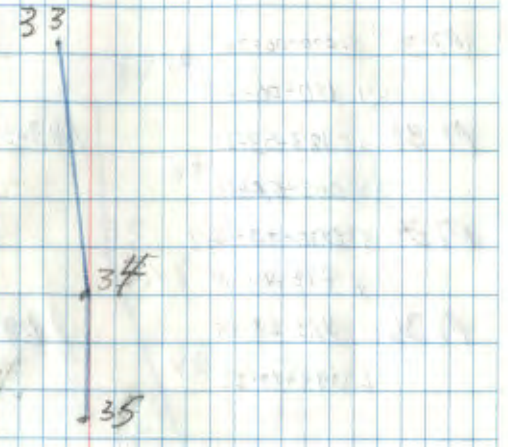
PT 35 91-11-39 209.895 FT 209.849'
269-48-54 63.976 M .879'

VA = 90-41-23

67.5
27.5
40.0

76
40
36

33



Ties

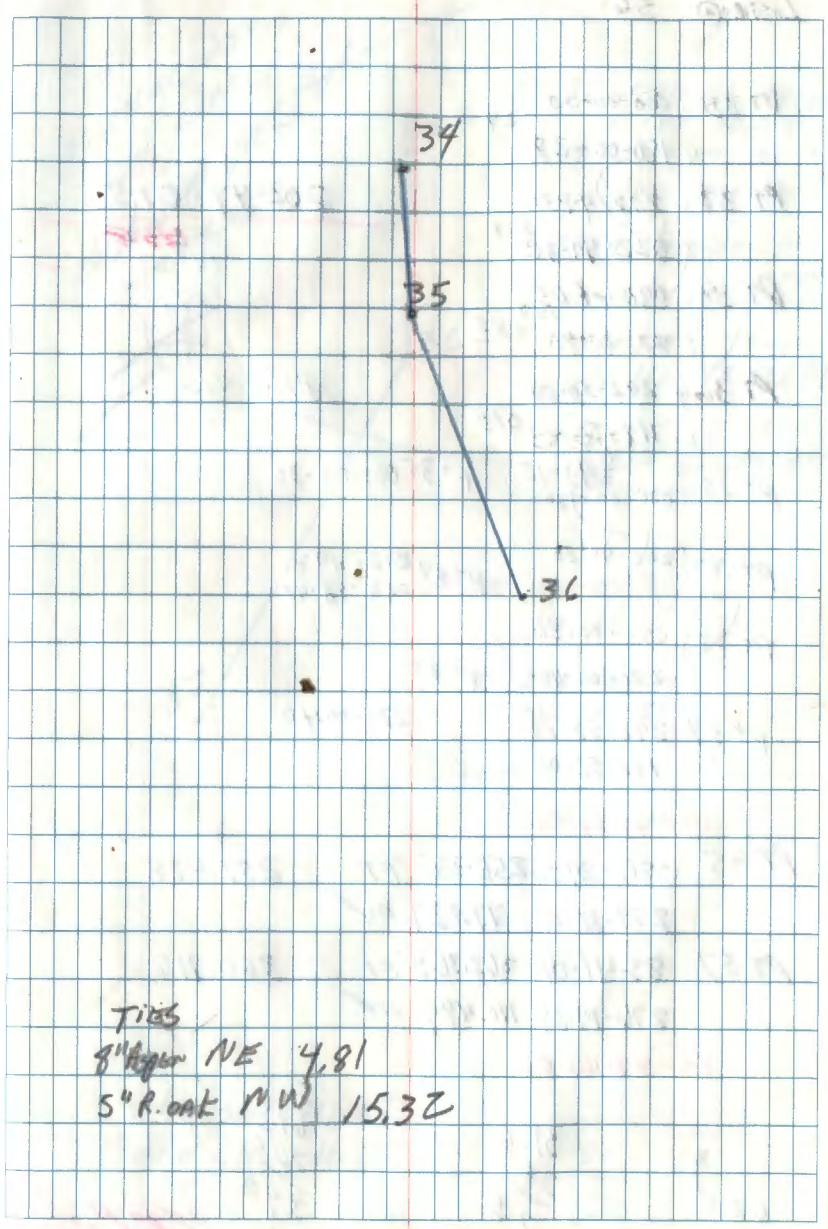
13" R. OAK SW 5.08
8" R. OAK SE 19.25

Instr @ PT 35

PT 34 1 000-00-30 27
4 180-00-24
PT 36 2 183-53-30 183-5303
3 003-53-30 30
PT 34 8 090-00-28 183-53-02
5 270-00-46 34
PT 36 7 273-53-35 183-53-00
6 093-53-33 34

12

30 34
27 34
00
03



Ties
8" Hickory NE 4.81
5" R. oak NW 15.32

35

Instr. @ 36

Pt 35 000-00-30

4 180-00-28

Pt 37 = 202-49-31

3 022-49-32

Pt 35 090-00-05

5 270-00-40

Pt 37 292-50-00

6 112-50-03

pt 35 000-00-30

pt 37 202-49-28

pt 35 090-00-36

270-00-40

pt 37 292-52-01

112-52-04

VA = 80-28-48

Pt 35 080-29-36 255.335 FT 251.828

279-32-01 77.827 m

Pt 37 83-41-04 362.365 FT 360.116

276-19-24 110.449 m

VA = 83-40-50

202-49-01.5

pt 35 000-00-30

pt 37 202-49-01
022-48-47

pt 35

pt 37

270-00-40

pt 35

pt 37

31.5
24
7.5

42.5
38
4.5

5'
61.5
22.5
390

M = 202-48-59

- Obstructions
- Low Line
- Restricted view of targets

pt 35 000-00-30 27
180-00-24
Pt 37 202-49-30
022-49-22 26
Pt 35 090-00-38 41
270-00-40 37
Pt 37 292-49-44
112-49-38 41

M = 202-49-04

pt 35 000-00-30 41
180-00 37
04
pt 37 202-42-57
022-42-51
pt 35
270-00-40
pt 37

Ties
6" W. Ring SW 11.07
4" W. Ring SE 16.31

7
86
27
59

41
2

Instr. 37

PT 36 000-00-30 28 ±
Y 180-00-27

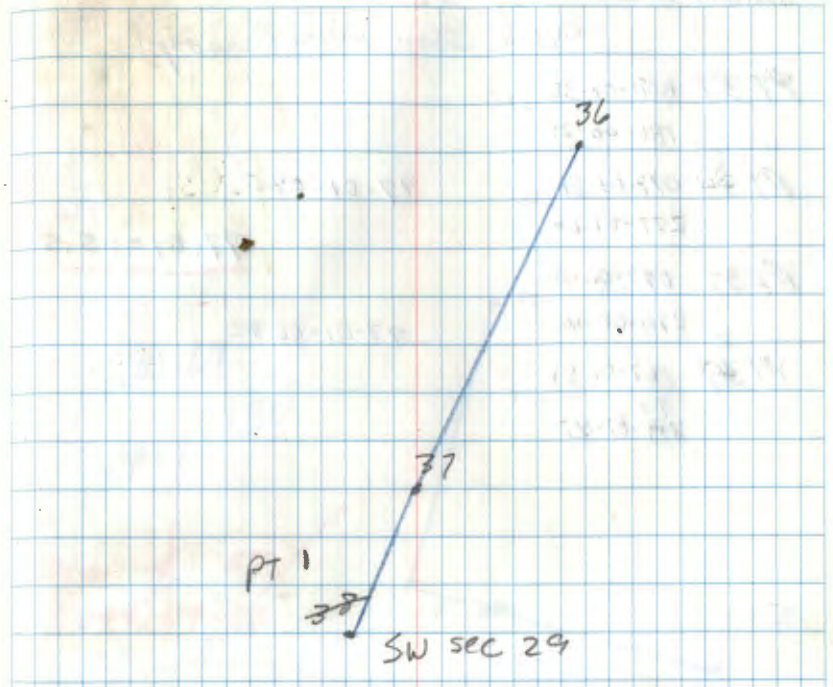
PT 38 174-23-28 174-22-57 ±
1 354-23-23 25 ±

PT 36 090-00-42 174-22-56.5
S 270-00-40 41

PT 38 264-23-39 174-22-56
1 084-23-35 37

11
85 ±
28 5-
57 0

97
41
56



Ties
7" Aspen N.W 5.8'
7" " W. 5.45

Inste. PT 1 SW Sec 29

Capped Iron Pipe (county)

PT 37 000-08-30 27.5

180-00-25

PT 2 34 077-01-38 32 77-01-04.5

257-01.26 06

77-01-05.5

PT 37 090-00-38 39

270-00-40 77-01-06.5

PT 2 34 167-01-44

47 45.5

374-01-47

VA = 92-36-39

PT 37 092-36-54 203.075' 202.863'

267-23-38 61.899 m

PT 2 34 089-04-06 233.330' 233.299

270-56-32 71.120 m

VA = 89-03-47

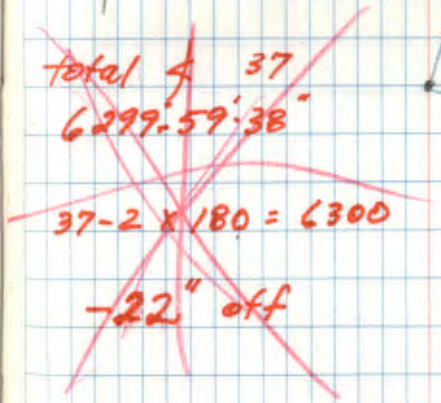
2 11 1 3 1

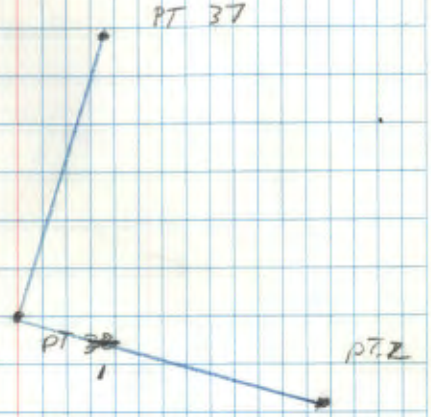
32 45.5

27.5 39

4.5 6.5

END OF TRAVERSE





Ties

38

Setting W1/16 sec 29 & 32

π at pt 4 backsighted pt 3
4 of 139°-27'-51" to ~~pt 105~~ pt 4 at 55.26'
(true W1/16)

check is 4 ∠

pt 3 000-00-30
pt 4 180-00-22 26

pt ~~105~~ 139-28-24 24 139-27-58
319-28-24

139-28-00.75
139-28-01

pt 3 090-00-42
pt 4 270-00-40 41 139-28-03.5

pt ~~105~~ 229-28-43 44.5
049-28-46

pt 4 - pt 3 99-56-21 56.075 55.233'
17.089 m

84 44.5
26 41
58 03.5

4/13/88 MCH

ties to true W1/16 - 60# spk down 1" in Road

W. oak 4" NE 56.40'
W. Oak 8" NW 23.03'

(W1/16)
pt 105

pt 4

pt 3

6/13/88 Hayes & Krause viewed this position. The iron fd. in Feb. along side of the road is about a 1½" dia. by 18" long galv. pipe with a 2"x2" plate welded on the bottom. It was bent & lying on the shoulder of road. There was no evidence of any BT's. The fence line coming up from the south is about 8' west of our position. The old fence line going north is quite aways further west. MCH

T at pt ~~105~~ 118

True W'ly Co.

pt 4 D 000-00-30 24
R 180-00-22

pt 38 D 154-04-00 59 154-03-33
R 334-03-58

154-03-37

pt 4 D 090-00-14 27
R 270-00-40

pt 38 D 244-04-05 67.5 154-03-40.5
R 064-04-10

59
24
32

67.5
27
40.5

MCH

C.F. G.B. J.A. J.S. M.H.

pt 38

pt 105
from 4/16 (w)

pt 4

ties: W Oak 4" NE 56.40'
W. Oak 8" NW 23.03'

118

PT ~~105~~ 00-00-30 32.5

π 38 180-00-35

PT 39 S. 179-58-34 179-57-58

359-58-27 30

PT ~~116~~ 115 S. 090-00-45 179-58-00

π 38 R. 270-00-40 42 179-59-59.75

PT 39 S 269-58-45 179

R. 089-58-43 44 ~~269~~-58-01

VA = 90-42-74

PT 105 S. 090-42-33 314.910 FT 314.886

R = 269-17-26 95.985 m

PT 39 S = 086-51-04 475.275 FT 474.557

R = 273-09-09 144.862 m.

VA = 86-50-58

90 42 33
32 5
58 28

44 3
42 5
1 58

MCH

PT 39

PT 38

PT 105

Tie5 oak stump SW 13.43

W. oak 7" N 4.53

	PT 38	00-00-30 34.5	
PT 39		180-00-35	
	PT 40	180-11-55	180-11-23
		000-11-54 34.5	180-11-21
	PT 38	~~090-00-40~~	180-11-21 25
		~~090-12-07~~ 40	
PT 39		270-00-40"	180
	PT 40	270-12-01	~~270~~-11-20 5
		090-12-00 00.5	

1.25

54.5
31.5
23°

60.5
40
20.5

MCH

TIES W.Pine 6" E 9.80'
Pine Stump 18" N 16.21'

PT 40 — PT 40A D 046-58-49 — 46-58-30
R, 226-58-46

PT 39 000 00-30"
PT 40 R 180-00-34 32
PT 41 D 179-50-55 — 179-50-25
R 359-50-59 54
179-50-22
PT 39 090 00-40 — 179-50 21.5
270-00-40
PT 40 ~~270-00-40~~
PT 41 269-50-56 — 179
~~359~~ 50-18
89-51-00 56
~~PT 39 180-00-24~~ — side shot 46-58-25
~~270-00-40~~
PT 40 226-58-58
PT 40A R ~~046-58-50~~ 54 — 46-58-22
D 046-58-50 — ~~46-58-20~~
(40A side shot sw 1/16)

57 58
32 40
25 18
VA = 89-32-43

PT 39 D 089-32-38 491.150' FT — 491.134
R: 270-27-13 149.702 m.
PT 41 D 092-38-08 547.190' FT — 546.611
267-22-03 166.786 m.
VA = 92-38-03

PT 40A D 087-36½ 136.130' FT 35 — 136.011
R 272-23-33 41.493 m. 24/115 — 51/58/13
VA = 87-36-19

.41

#119 .46
P40A
side shot
SW 1/16 pipe
County Fiber pipe

39

Ties 7" Birch NE 21.7
6" Ironwood NW 14.17

PT42. CW 1/16 Sect 29

PT40 000-00-30" 30

PT41 R. 180-00-30

PT42 178-35-57 53 ± 178-35-23 ±

R. 358-35-50 178-35-23

PT40 090-00-49 178-35-23.25

PT41 270-00-40 44 ±

PT42 268-36-07 178 ~~268~~-35-23 ±

R. 088-36-08 07 ±

53 ±
30
23

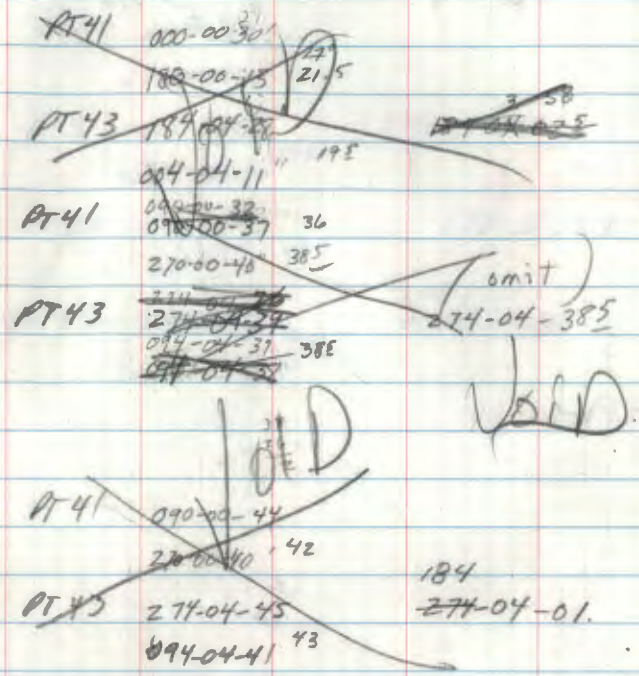
67 ±
44 ±
23 ±

42 CW 1/16

41.

40

Tibs R. Oak 7" NE 11.04'
W. Oak 6" E 18.45'



VA = 87-49-55

PT 41 0.087-49-58" 581.565' FT 581.149

R 272-10-08" 177.261 m

PT 43 0.088-47-54 603.895' FT 603.762

R 271-12-12 184.066 m.

VA = 88-47-51

#43

#42 CW 11/6

#41

pt41 000-00-30

pt42 180-00-26

pt43 184-04-20

004-04-26

pt41 090-00-30

pt42 270-00-40

pt43 274-04-26

274-04-28

184-03-55

184-03-54

184-03-53.5

184-03-52

	42	00-00-30	
43		180-00-35	
	44	175-42-59	175-41-26 ✓
		355-41-58	175-41-24
			175-41-24.25
		090-00-46	
	42		
43		270-00-40	175-41-22.5 ✓
		265-42-06	
	44	~~085-42-05~~	
		085-42-05	

54.5
32.5

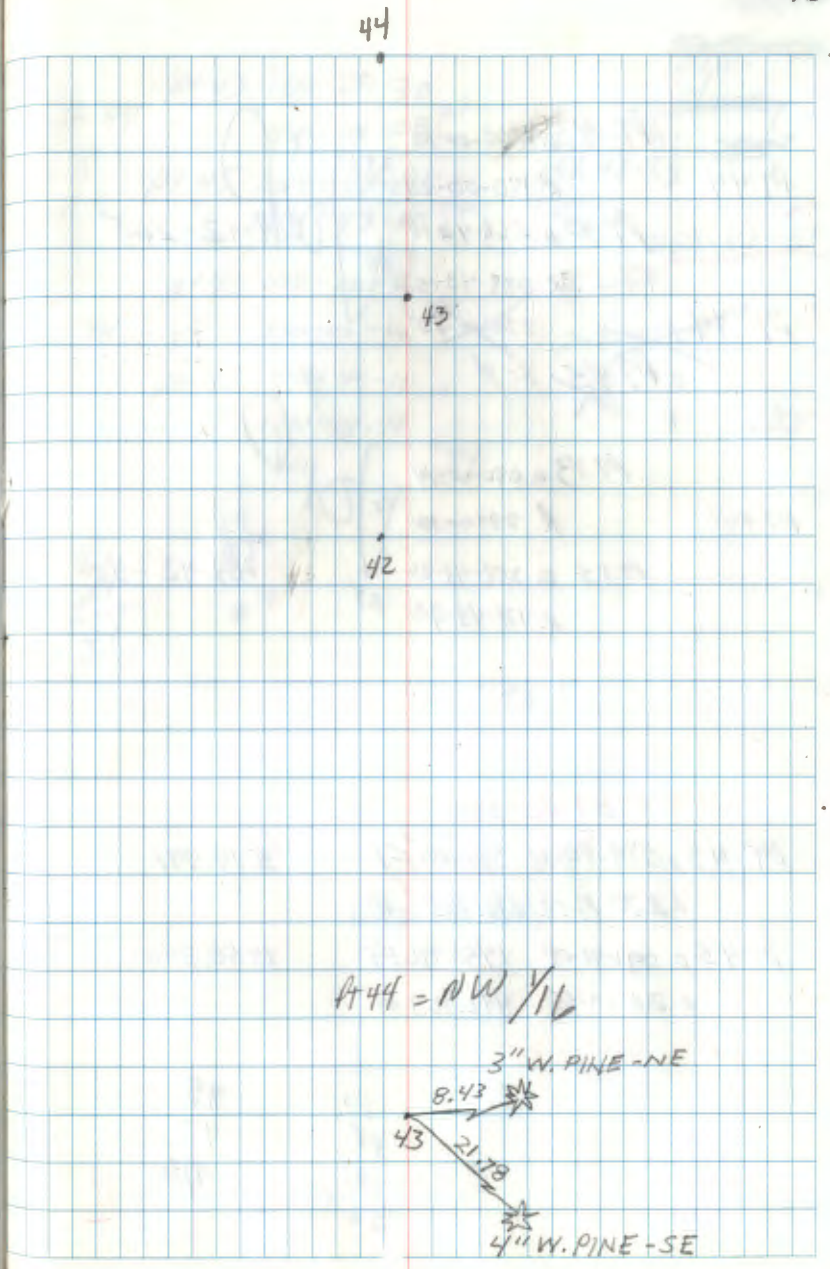
76.0

65.5
43

22.5

1.75 3.5

MCH



PT 43 D. 000-00-30

PT 44 R. 180-00-27 28.5

PT 45 D. 268-42-45 Void

~~PT 45~~ R. 088-43-05 55 268-42-26.5

~~PT 44 D.~~ ~~270-00-40~~

~~PT 45~~ X-~~N~~

R.

PT 43 D. 090-00-44

PT 44 R. 270-00-40 42 Void

PT 45 D. 358-43-26 ~~358~~ 268-42-53

R. 178-43-32 35

VA = 89-40-38

PT 43 D. 089-40-33 ~~580.000 FT~~ 579.991

R. 270-19-18 176.785 m.

PT 45 D. 091-42-04 ~~1450.990 FT~~ 1450.350

R. 268-17-55 442.263 m

VA = 91-42-05

55
28.5
26.5

93
42
51

MCH

~~JA F CF~~
~~cloudy~~
~~55°~~

pt 44 pt 43 000-00-30 29

180-00-28

pt 45 268-43-04 02 268-42-33

088-43-00 268-42-31

pt 43 090-00-50 45

pt 44 270-00-40 268-42-29

pt 45 358-43-10 14

178-43-18

•45

•44

62
29
37

74
45
29

31

•43

END OF DAY

	Pt 44	000-00-30		
Pt 45		180-00-29	29.5	
Side shot	Pt 45A	026-16-25		26-15-53
		206-16-20	22.5	
	pt 46	181-37-07		181-36-37
		001-37-06	66.5	
				26-15-50 25
				181-36-36
	pt 44	90-00-50		
		270-00-40	45	26-15-47.5
Side shot	pt 45A	116-16-36		
		296-16-29	32.5	181-36-35
	pt 46	271-37-24		
		091-37-16	20	

VA = 89-30-15

Side shot	pt 45A	89-30-26	169.815	169.809
		270-29-50	51.761	
	pt 46	89-44-50	630.600	630.594
		270-15-35	192.207	

VA = 89-44-38

92.5 / 29.5 / 53.0

92.5 / 45.0 / 47.5

46.5 / 29.5 / 37.0

80 / 45 / 35

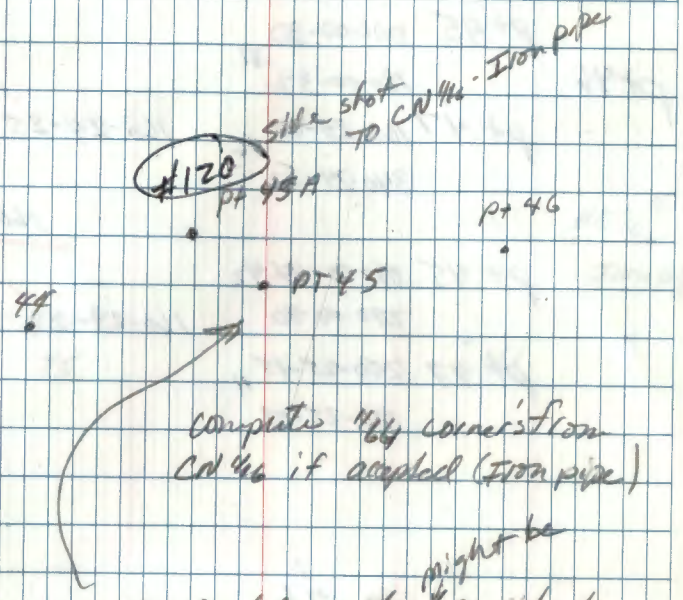
5.5

49

51.7

JATCK

Cloudy 55°



Compute 44 corners from CM 46 if accessed (Iron pipe)

In field - also might be possible to use in C'ly from this pt. Could not find on this date because of water runoff flooded search area

pt 45 000-00-30
pt 46 180-00-32 31
pt 47 160-25-00 56 160-24-25
340-24-52
160-24-27
pt 45 090-00-44 42
270-00-40 160-24-29
pt 47 250-25-15 11
070-25-07

31 / 25
42 / 29

NE 1/16 47
From plan

45 • 46

pt 46 000-00-30
pt 47 180-00-20 28
pt 48 194-47-33 27.5 194-47-025
014-47-22

194-47-01

pt 47 pt 46 090-00-46
270-00-40 43 194-46-59.5
pt 48 284-47-45 42.5
104-47-40

VA = 91-42-12

pt 46 91-42-07 528.600 528.367
pt 47 268-17-42 161.117
pt 48 89-25-00 785.660 785.620
270-35-15 239.470

XV = 89-24-53

27.5
25
02.5

92.5
43

59.5

County's
Cap'd Iron pipe up 4"
NE¼
pt 47 pt 48
pt 46

pt 47 000-00-30
pt 48 180-00-22 26
pt 13 180-14-58 180-14-28.5
000-14-51 54.5

180-14-27

pt 47 090-00-47
270-00-40 43.5 180-14-25.5
pt 13 270-15-10 9
090-15-08

54.5 67
26 43.5
28.5 25.5

pt 47 pt 48 pt 13
• • • N 1/16
NE 1/16

ties: R Oak stump 14" S 2.10'
R Oak 9" E 5.38'

pt 48 000-00-30

pt 13 180-00-15 22.5

pt 12 310-00-25 17.5 309-59-55

130-00-10 309-59-56

309-59-55.5

pt 48 050-00-35

270-00-40 37.5 309-59-56.5

pt 12 640-00-37 34

220-00-31

V.A. = 87-43-10

pt 48 87-43-01 503.060 502.661

272-16-42 153,333

94

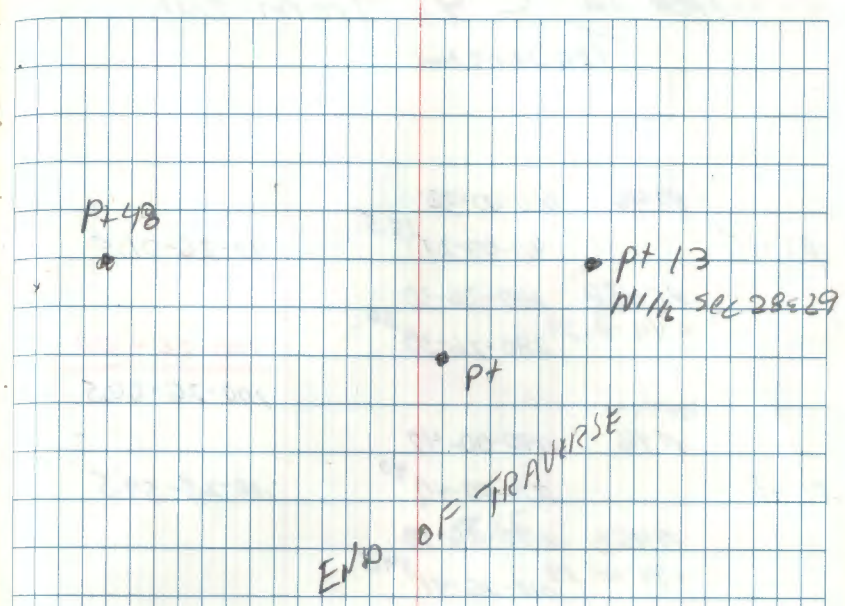
77.5

22.5

55.0

37.5

56.5



Tied in C 1/4 from our Traverse

PT 46 000-00-30

PT 45 180-00-27 28.5 100-26-01.5

PT 45B 100-26-30
C 1/4-SEC 29 280-26-30 30

100-26-00

100-26-00.5

PT 46 090-00-40

PT 45 270-00-40 40 100-25-59.5

PT 45B 190-26-38
C 1/4 SEC 29 010-26-41 39.5

	VERT ∠	SLOPE DIST	
PT 45	V∠ = 91-18-50		
PT 45B	91-18-56	1042.880	1042 605
C 1/4-SEC 29	268-41-17	317.872	

Witness Mon ##

• PT 46

• PT 45

• PT 45 B
C 1/4-SEC 29
CAPPED IRON PIPE

6/13/68 Hayes & Krause mined this corner. The iron is rusted and pitted. It sits in a low area flooded in the spring. Cattle frequent this spot - no evidence of pits. mcm

Tied in old hole for SW 1/16 iron

#150 D R

FS #150	230-09-~~11~~	50-~~03~~-09	
~~BC~~ 40	231-08-55	51-08-47	
TC 39	358-54-24	358-54-22	358-54-23

89-51-24

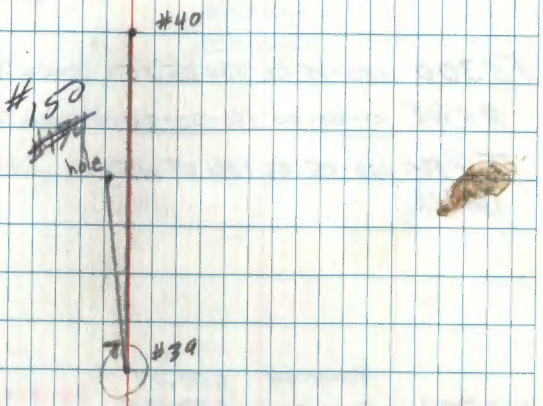
dist

39 to h/c 89-51-21 270-08-34 414.45 ft

126.324 m

See page 61

6/13/88 80° Hy 29.9 M. Hayes - T
Humid C. Krause - rod



The hole is a 2" dia vertical hole that is 3.2 ft deep (some soft dirt in the bottom 2 ft). It is in the top of a 1 foot mound. There are 2 square depressions about 24 to 30 inches square by 5 inches deep filled with old bottles. These pits are 6 ft. east & 6 ft. west of the hole in the mound. The pole had been over when first discovered. This hole is approx. 100 ft easterly of the recovered iron pipe for this corner. The 1915 survey calls for pits E & W. There are no pits visable at the existing iron. The existing iron can be pulled out of the ground leaving a hole just like the one found. It is my belief that the iron was pulled some years ago and moved to its present position in the fence line. MC Z

Traverse to 1/64 corners around SE¼NE¼NW¼

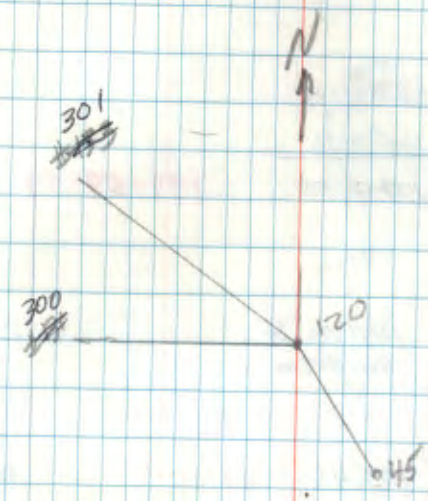
FS 300	150-25-22	330 25 35		
B.S. 45	0-00-00	180-00-20		
Δ @ 120 (CN¼)	150-25-22	150 25 15	150-25-18.5	
120-300	90-01-04 ~~90-01-36~~ 269-58-33	650.07 ~~650.465~~	90-01-15	
FS 301	194-25-23	029-06 16		
BS 45	0-00-00	194-4401		
Δ @ 120	194-25-23	194-25-15	194-25-19	
120-302	92-04-45 267-56-10	814.635 248.297M	92-04-18	HORZ. 814.099

T-2
Topcon

10/30/89 Clear
35-40°
30 Hg

Δ Brama
Hayes
Krause
Haney

#300 is CE NW¼
#301 is NE NW¼
#120 is existing CN¼



FS 134	247-26-38	82-57-03			
BS 45	0-00-00	195-30-16			
Δ @ 120	247-26-38	247-26-47		247-26-42.5	
FS ~~130~~ 302	180-00-00	345-51-14			
BS 120	0-00-00	165-51-16			
Δ @ 134	180-00-00	179-59-58		179-59-59	
134 - 120	90-06-30	145.70	ft		145.70
		44.409	m		
134 - ~~130~~ 302	93-33-18	403.45	ft	93-33-17	402.70
	266-26-45	403.475			
		122.979			

End this day

Pt 134 is

Pt. ~~130~~ 302 is CCW 1/64

Continue Trav. 1/64 corners

FS 235	179-59-56	16-31-14		
BS 120	0-00-07	196-31-24		
π @ ~~300~~ 235	179-59-49	179-59-50		179-59-49.5
FS 44	322-33-53	87-21-12		
BS 131	142-42-13	267-29-34		
π @ 235	179-51-40	179-51-38		179-51-39
135 - ~~45~~ 300	94-47-13	265-17-08	326.855	94-43-03
			99.625M	
135 - 44	87-18-08	272-42-23	324.825	97-17-52
			99.007M	
FS 43	322-52-10	167 28-03		
BS 235	228-09-23	72-45-18		
π @ 44	94-42-47	94-42-45		94-42-46

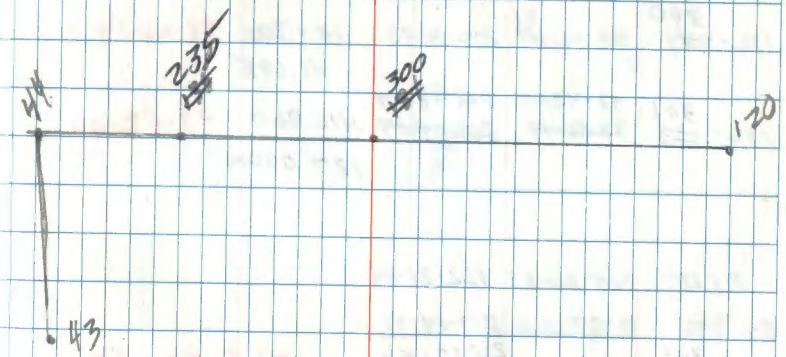
T-2

57

11/13/69 Topcon
Clear 32°
30.0 Hg

Hayes
Brama
Krause

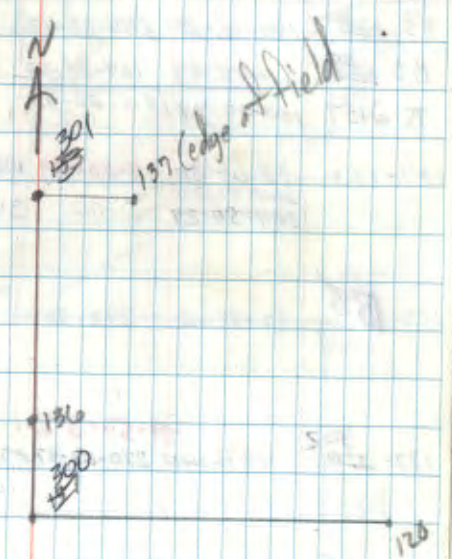
~~300~~ is temp CENW 1/64
120 is CN 1/16 pipe
235 is trav. pt. spike



Fs 136	262-25-27	43-51-20		
Bs 120	345-55-18	127-21-10		
Δ@ 300	276-30-09	276-30-10	276-30-9.5	
Fs 301 135	19-17-10	188-27-29		
Bs 300	199-16-48	08-27-15		
Δ@ 136	180-00-22	180-00 14	180-00-18	
136 - 300 #1	99-46-21	270-14-03	153.200	89-46-09
			46.695	
136 - 301 135	93-42-12	266-18-13	416.960	93-42-00
	93-56-17	266-04-07	127.090M	
Fs 137	265-20-53	122-36-34		
Bs 136	0-00-00	217-14-41		
Δ@ 301 135	265-20-53	265-20-53	265-20-53	

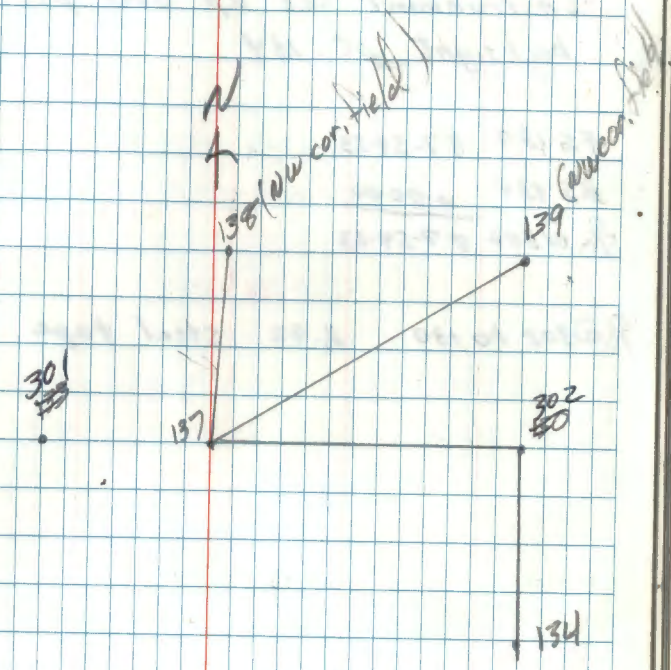
#136 is trav. pt spike

Pt 133 is NENW¼ (temp)



FS 138 to 301 Field	72-40-11		
BS ~~301~~	0-05-49		
π @ 137	72-34-22		
FS ~~138~~ 302	180-06-~~51~~	344-22-42	
BS ~~138~~ 301	0-05-49	164-22-02	
π @ 137	180-00-44	180-00-40	180-00-42
137-133	95-09-08	95-08-49	104.84
	264-51-30		31.955 M
	~~264-50-27~~		
137-~~BS~~ 301 Engg. field	92-74-10	292.36'	
137-~~130~~ 302	89-56-40	89-56-32 270-03-37	548.675
			167.239
FS 139 to ~~139~~ of field	169-34-27		
BS ~~139~~ 301	0-05-49		
π @ 137	169-33-38		
NE 139 of field	89-46-15	554.190	
		168.917M	
FS 134	324-50-04	166-20-28	
BS 137	49-46-37	251-11-21	
π ~~138~~ 302	275-09-27	27509-07	275-09-17

End this day



60 11/16/09 CK, GB 10°F
PARTLY CLOUDY
WINDY

Establishment of CNN¼64 Sec 29
Instrument set up over pt. 302 and backsight pt. 134

FS 130 87-54-23
BS 134 0-00-00
@302 87-54-23

@302 to 130 2.92 steel tape

11/29/89 CK, GB 20°s Clear WINDY

Tying in the SW 1/16 of Sec 29

FS 150	~~180-26-53~~ 179-56-55	00-27-03	195-35-42	015-35-~~15~~ 55	
BS 38	00-00-00	180-30-11	015-38-44	195-39-03	
π @ 39	179-56-55	179-56-52	179-56-58	179-56-52	
		179-56-54.25			
FS 41	180-15-57	000-16-17	180-06-29	010-06-44	
BS 39	00-00-00	180-00-08	009-50-26	189-50-41	
π @ 150	180-15-57	180-16-04	180-16-03	180-16-03	
		180-16-02			
π 150-39	89-59-15	270-01-10	414.330	126.288	414.330
π 150-41	92-40-11	267-20-12	604.050	190.211	623.373
FS 42	178-24-57	358-25-11	192-52-03	012-52-16	
BS 150	00-00-00	180-00-15	014-27-09	194-27-23	
π @ 41	178-24-57	178-24-56	178-24-54	178-24-53	
		178-24-55			

61

• Pt 42 CW 1/16 Center Mark

Pt 150 is 2" capped iron pipe marking SW 1/16. Set over center mark.

• Pt 41

• Pt 150 SW 1/16

• Pt 39

• Pt 38

62

		Horiz. Dist ft.	Horiz Dist Meters
FS 8	204-10-14	24-10-12	
BS 7	00-00-00	179-59-52	
∠ @ 200	204-10-14	204-10-20	
		(204-10-17)	
200-8		(1089.545)	332.091
~~FS 5~~			
BS 400	127-37-49	307-37-56	
BS 200	00-00-00	180-00-07	
∠ @ 8	127-37-49	127-37-49	
		(127-37-49)	
8-400		(237.765)	72.471
~~3-5~~			
FS 5	57-47-39	237-47-37	
BS 3	00-00-00		
∠ @ 3		1439.445	438.749m
3-5		1439.445	438.749m
FS 9	57-47-39	237-47-37	57-47-26 237-47-32
BS 400	00-00-00	179-59-54	359-59-59 180-00-01
∠ @ 8	57-47-39	57-47-43	57-47-27 57-47-31
		(57-47-35)	
8-9		(1439.445)	438.749m

Clear, 30's & up 62

2/6/02 Main, Geiger, Brama, Schooner

Pt 200's 1/16 bet Sec's 4/5. Cass Co. Iron pipe.

Pt 400's 1/4 corner bet sec's 4/5. Cass co. iron pipe

		F		M
FS 10	146-15-34	326-15-38	146-15-42	326-15-44
BS 8	00-00-00	180-00-00	00-00-08	180-00-11
Rec'd	146-15-34	146-15-38	146-15-36	146-15-33
		(146-15-35)		
9-10			(1012.69)	308.666
FS 500	156-21-24	336-21-29	156-21-20	336-21-21
BS 9	00-00-00	180-00-05	00-00-08	180-00-05
Rec'd 10	156-21-24	156-21-24	156-21-12	156-21-16
		(156-21-19)		
10-500			(519.26)	158.271

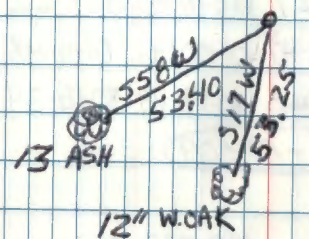
Pt 500 is NE of Sec. 5, Cass Co. iron pipe

Δ TO SET N 16 5/4

FT

FS	8	80-10-38	260-10-38
AS	3	00-00-00	180-00-10
~~AS~~	5	80-10-38	80-10-28

606.74



M

FS 3	180-18-38	0-18-27	180-18-15	0-18-22	180-18-47
BS 1	~~00-00-00~~	180-01-47	0-00-56	180-01-48	0-01-43
T @ 2	~~180-18-38~~	180-17-40	180-17-19	180-16-34	180-17-04

180-17-09

2-1	655,945 ✓	199,932 M	
2-3	410.955 ✓	125.259 M	

			178-40-52		
FS 4	178-40-52	358-40-59	~~359-59-49~~	358-41-00	
BS 2	00-00-00	180-00-07	359-59-49	180-00-11	
T 3	178-40-52	178-40-52	178-40-53	178-40-49	

178-40-52

3-4	250,370 ✓	76.316 M

BEARING 1-2 = EAST

A/= NW¼ SEC 12

65

209 [illegible] TO NEWAP

FS	5 AP	00-09 31	130-10-04
RS	2	00-00-00	18 00 16
T	3	09-31	09.48

3-5 409.30

END OF BOOK