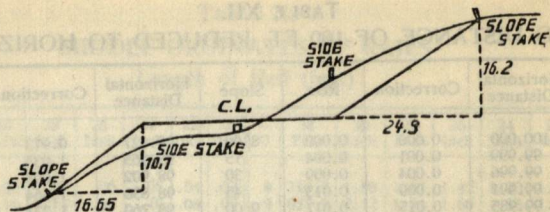


MINING  
TRANSIT BOOK

CCC 30

MINING  
TRANSIT BOOK

CCC 30



**DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.**

SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

Page	Description
58-26	534
4	Traverse
10	Lot 8
12	" 4
14	T147.25 Sec. 14
16	T147.25 " 33
18	" " 27

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING-  
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.  
FOR SINGLE TRACK EXCAVATION.

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

Scanned

8-20-12

Ranney

Sept. 27 '35 Line bet. 5134.14 <sup>59N</sup> 26W  
 P App. h = 28°20' h = 28°20' + 16' - 1' - 1' = 28°02'  
 P = 50°45' - 16' = 50°29'

log sin φ = 9.86832      log cos φ = 9.82885  
 " " h = 9.67208      " " h = 9.94580  
 log .34706    9.54040      9.77465

34706  
 sin 1°25' .02472

log .37178 = 9.57028  
9.77465

log cos 51°20' = 9.79563  
50°29'

Course N0°51'W.

P App h 25°50' h = 26°06' s = 6°27'

P 542°03E

log sin φ = 9.8676      log cos φ = 9.8297

" " h = 9.6433      " h = 9.9533

log .3246    9.5109      9.7830

sin 9' = .1123

log .4369 = 9.6404

9.7830

log cos 46°04' 9.8574

42°11'

Sept. 17 '35

○ A. h = 32°5'      A. P 51°25'

h = 32°05' + 16' - 1' + 1' = 32°21'      P = 51°41'

log sin φ = 9.86832      log cos φ = 9.82885

" " h = 9.72843      " " h = 9.92675  
 log .39514    9.59675      9.75560

39514  
 sin 2°21' .04129  
 log .35385 = 9.54882  
9.75560  
 log cos 51°36' 9.79322

Sept. 18 '35

Ah = 32°45'      Ap. P 48°44'  
 P 49°00'

h = 32°45' + 16' = 33°01'

log sin φ = 9.86832      log cos φ = 9.82885  
 " " h = 9.73630      " " h = 9.92351  
 log .40237    9.60462      9.75236

40237  
 sin 2°02' = .03519  
 log .36718 = 9.56488  
9.75236

log cos 49°30' 9.81252

Course = N0°30'E      Line 5344  
 N end. Jack horse

Observation Sept. 10 '35 8:15

$$h = 25^{\circ}22' \quad \delta = 5^{\circ}10'$$

$$+1' - 2' + 16'$$

$$= 25^{\circ}37'$$

$$\log \sin \phi = 9.86832 \quad \log \cos \phi = 9.82885$$

$$\log \sin h = 9.63583 \quad \log \cos h = 9.95507$$

$$\log .31927 = 9.50415 \quad \log .78392 = 9.78392$$

$$\log \sin 5^{\circ}10' = \frac{.31927}{.09005} = .36025$$

$$\log \cos 67^{\circ}51' = \frac{9.78392}{9.57633}$$

Sept 16

$$h = 35^{\circ}30' \quad \text{R } 43^{\circ}53' + 16' = 44^{\circ}09'$$

$$\text{true } h = 35^{\circ}30' + 16' - 1' + 1' = 35^{\circ}46'$$

$$\log \sin \phi = 9.86832 \quad \log \cos \phi = 9.82885$$

$$\log \sin h = 9.76677 \quad \log \cos h = 9.90924$$

$$\log .43161 = 9.63509 \quad \log .73809 = 9.73809$$

$$\log \sin 2^{\circ}46' = \frac{.43161}{.04827} = 9.58358$$

$$\log \cos 44^{\circ}29' = \frac{9.73809}{9.84549}$$

Observations Sept. 6, '35 8:30 a.m.

$$h = 26^{\circ}15' + 16' \quad \delta = 6^{\circ}41.8'$$

$$= 26^{\circ}31' + 1' - 2' \quad 2^{\text{hrs}} \times .93 = 1.86$$

$$h = 26^{\circ}30' \quad \delta = 6^{\circ}42' \times \text{should be } 6^{\circ}39'$$

$$\log \sin \phi = 9.86832 \quad \log \cos \phi = 9.82885$$

$$\log \sin h = 9.64953 \quad \log \cos h = 9.95179$$

$$\log 32951 = 9.51785 \quad \log 78064 = 9.78064$$

$$\log \sin 6^{\circ}48' = \frac{.32951}{.11840} = 9.32451$$

$$\log \cos 69^{\circ}31' = \frac{9.78064}{9.54887}$$

$$h = 30^{\circ}5' + 15' = 30^{\circ}20'$$

$$\log \sin \phi = 9.86832 \quad \log \cos \phi = 9.82885$$

$$\log \sin h = 9.70332 \quad \log \cos h = 9.93606$$

$$\log .37295 = 9.57164 \quad \log .76491 = 9.76491$$

$$\log \sin 4^{\circ}4' = \frac{.37295}{.11840} = 9.40576$$

$$\log \cos 44^{\circ}4' = \frac{9.76491}{9.64085}$$

$$h = 25^{\circ}02'$$

$$\log \sin \phi = 9.86832 \quad \log \cos \phi = 9.82885$$

$$\log \sin h = 9.62649 \quad \log \cos h = 9.93716$$

$$\log .31247 = 9.49481 \quad \log .78591 = 9.78591$$

$$\delta = 6^{\circ}42' - .93 \times 10 = 6^{\circ}33'$$

$$\log \sin 8' = \frac{.31247}{.11407} = 9.29754$$

$$\log \cos 71^{\circ}03' = \frac{9.78591}{9.51163}$$

Observations at  $\frac{18}{19} \frac{17}{20}$  T59 R26 9-3-35  
p.m.

$h = 30^{\circ}20' + 16'$  R Rdg.  $65^{\circ}47'$   $\delta = 7^{\circ}40'$

$$\cos Z_s = \frac{\sin \phi \sin h - \sin \delta}{\cos \phi \cos h}$$

$\log \sin \phi = 9.86832$      $\log \cos \phi = 9.82885$   
 $\log \sin h = 9.70675$      $\log \cos h = 9.93487$   
 $\log .3759 = 9.57507$      $9.76372$

$\sin 7^{\circ}40' = .1334$   
 $\log .2425 = 9.38471$   
 $9.76372$   
 $\log \cos 65^{\circ}49' = 9.62099$

My line is  $0^{\circ}28'$   
E of S.

$h = 33^{\circ}36'$  R Rdg. =  $61^{\circ}22'$

$\log \sin \phi = 9.86832$      $\log \cos \phi = 9.82885$   
 $\log \sin h = 9.74303$      $\log \cos h = 9.92060$   
 $\log .40865 = 9.61135$      $9.74945$

$\sin 7^{\circ}40' = .13341$   
 $\log .27524 = 9.43970$   
 $9.74945$   
 $\log \cos 60^{\circ}39' = 9.69025$

My line is  $0^{\circ}43'$   
E of S.

$h = 25^{\circ}00'$  R Rdg. =  $73^{\circ}40'$

$\log \sin \phi = 9.86832$      $\log \cos \phi = 9.82885$   
 $\log \sin h = 9.62595$      $\log \cos h = 9.95728$   
 $\log .31209 = 9.49427$      $9.78613$

$\sin 7^{\circ}40' = .13341$   
 $\log .17868 = 9.25207$   
 $9.78613$   
 $\log \cos 73^{\circ} = 9.46594$

My line is  $40'$  E of S

$h = 43^{\circ}20'$  2:15 E.S.T.

Sun's App. declina. =  $7^{\circ}43.6'$

$\log \sin 7^{\circ}44' = 9.12892$

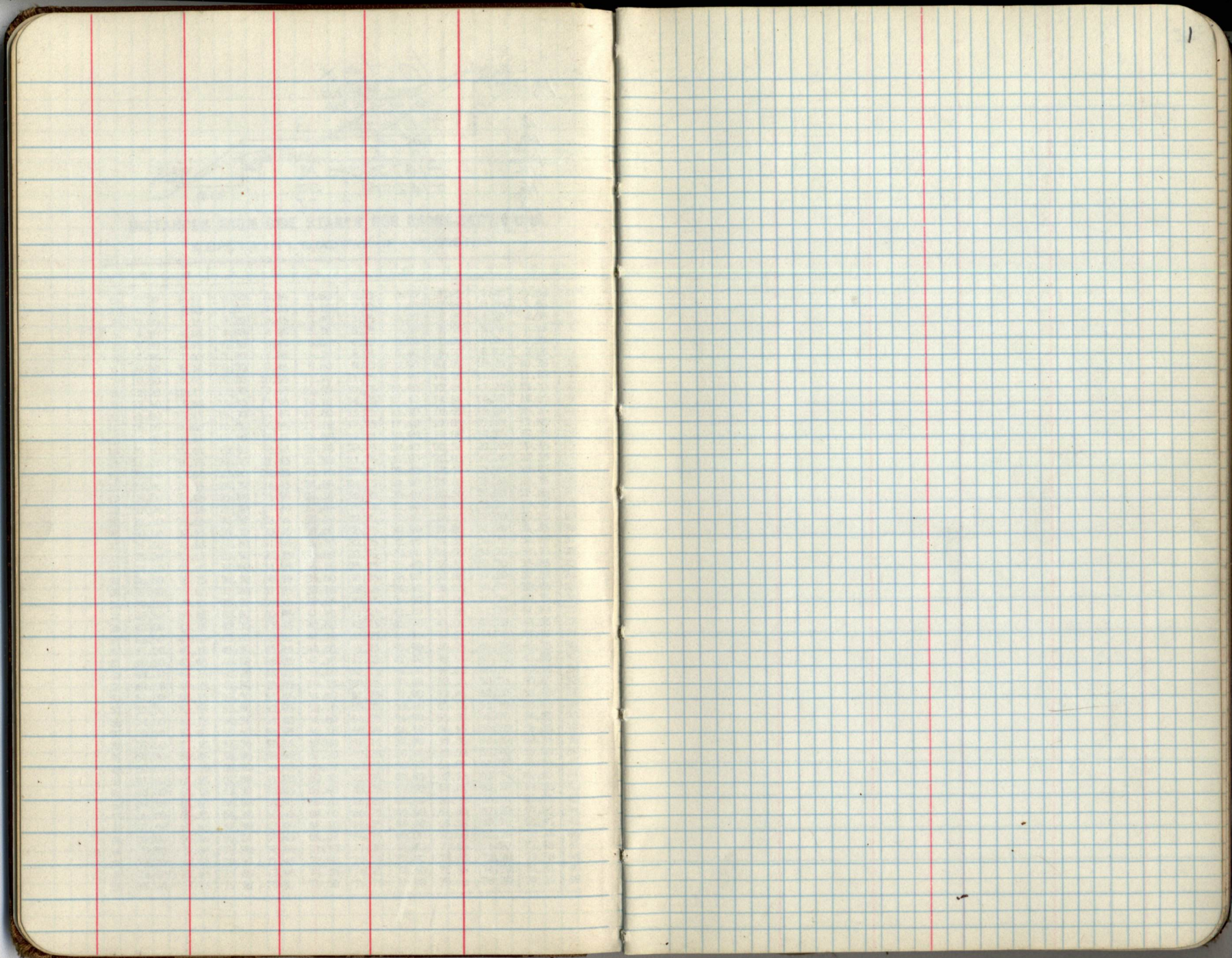
$\log \cos 43^{\circ}20' = \frac{9.86176}{9.26716}$

$\log \cos 47^{\circ}36' = \frac{9.82885}{9.43831}$

$\log \tan 43^{\circ}20' = 9.97472$

$\log \tan 47^{\circ}36' = \frac{.03947}{1.0332} = 1.01419$

$1.0332$   
 $\frac{2743}{7589}$   
 cos





2

3

## Check Traverse

Va. 900

Pt.	Bearing	Dist.	Dep.	Lat.	Σ Dep.	Σ Lat.
28   27 33   34	57° 00' W	1.84	$\frac{\sin 57^\circ}{1.22}$ - .22	$\frac{\cos 57^\circ}{.973}$ 1.83		
B	517° 20' E	8.02	$\frac{.298}{.720}$ 2.39	$\frac{.955}{.694}$ 7.65		
C	546° 04' E	4.61	$\frac{.837}{.548}$ 3.32	$\frac{.548}{.548}$ 3.19	2.17	9.48
D	556° 47' E	16.16	$\frac{.532}{.847}$ 13.52	$\frac{.847}{.847}$ 8.87	5.49	12.67
E	532° 09' E	8.92	$\frac{.603}{.798}$ 4.74	$\frac{.798}{.798}$ 7.55	19.01	21.54
F	537° 06' E	5.13	$\frac{.881}{.514}$ 3.10	$\frac{.472}{.458}$ 4.10	23.75	29.09
G	561° 49' E	12.95	$\frac{.316}{.571}$ 11.40	$\frac{.571}{.571}$ 6.11	26.85	33.19
H	530° 55' E	7.47	$\frac{.802}{.598}$ 3.83	$\frac{.598}{.598}$ 6.40	38.25	39.30
I	554° 44' E	19.40	15.83	11.20	42.08	45.70
J	553° 18' E	32.34	25.94	19.34	57.91	56.90
K	588° 59' W	4.14	-4.14	0.18	83.85	76.24
34   35 3   2		70.99	79.71	76.42	79.71	76.42

From E 532° 09' E 1.74 chs. Dep 19.93 chs

Lat. 23.02 chs. or 3.91 ch N to NW 1/4

Stake S of road 4.29 ch " " NW 1/4

From H N 61° 49' W 2.32 chs. Lat 38.21

Dep 36.21 or 3.65 ch E to App C 1/4

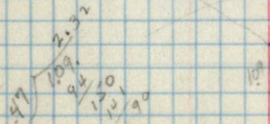
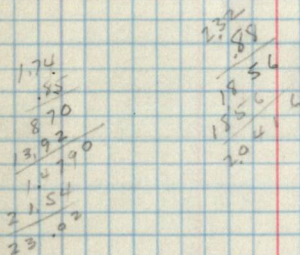
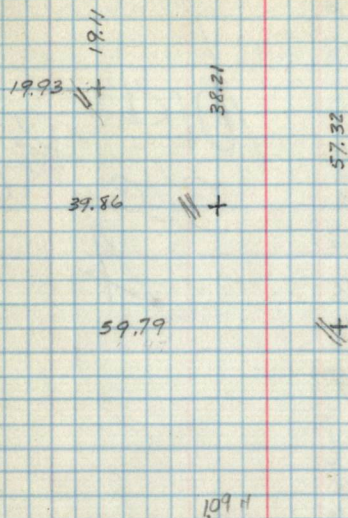
Stake W of road 3.85 ch E to " C 1/4

From J. 553° 18' E 0.70 chs. Lat. 57.32

Dep 58° 47' or 1.32 ch E to App. SE 1/4

Stake E of road 1.13 ch " " " SE 1/4

Note - 0.75 mi. speedometer rdg. to Pt  
4.29 ch S of NW 1/4 from Day Lake C.C.



6

Pl.	Bear	Dist
28/27 33/34	West	0.675 <sup>B</sup>
A	513°04'E	1.867 <sup>B</sup>
B	515°19'E	8.02 <sup>C</sup>
C	544°04'E	4.62 <sup>D</sup>
D	554°47'E	16.16 <sup>E</sup>
E	532°05'E	8.97 <sup>F</sup>
F	532°06'E	5.08 <sup>G</sup>
G	560°12'E	12.95 <sup>H</sup>
H	529°17'E	7.47 <sup>I</sup>
I	553°08'E	19.40 <sup>J</sup>
J	551°56'E	31.42 <sup>K</sup>
K	56°E	0.65 <sup>L</sup>
L	N89°23'W	3.57 <sup>32/31</sup>
+		

Void  
see  
A

7

90°37'

Beq. at approximate section  
corner established by U.S.F.S.

Void See Page 4

Pt.	Bear.	Dist.	Lat. <small>cos</small>	Dep. <small>sin</small>	$\Sigma$ Deps.
<del>28</del> <del>33</del> 27 34	West	0.68	..	-.68	
A	$513^{\circ}04'E$	1.87	1.82	.42	
B	$515^{\circ}19'E$	8.02	7.73	2.12	
C	$544^{\circ}04'E$	4.62	3.32	3.21	
D	$554^{\circ}47'E$	16.16	9.34	13.20	
E	$532^{\circ}05'E$	8.97	7.60	4.76	
F	$532^{\circ}06'E$	5.08	..	2.70	
G	$560^{\circ}12'E$	12.95	..	11.25	
H	$529^{\circ}17'E$	7.47	..	3.65	
I	$553^{\circ}08'E$	19.40	..	15.52	
J	$551^{\circ}56'E$	31.42	..	24.72	
K	$56^{\circ}00'E$	0.65	..	.07	
L	$N89^{\circ}23'W$	3.57	..	-3.57	
+				77.37	

Acquisition

Traverse of that  
portion of Lot 8, Sec. 34  
T 58 N, R 26 W, lying west  
of  $\frac{1}{2}$  state highway.

Va 5°E

Beg. at a point on  $\frac{1}{2}$  s.  
highway ~~167~~<sup>117</sup> chs. West of  
approx S.E.  $\frac{1}{16}$  thence west  
14.08 chs. to lake thence

N 31°16'W 3.59 chs thence N 63°50'W

5.20 chs, thence N 31°35'W 2.30 ch.

thence N 17°10'W 6.28 chs thence

N 36°22'W 15.6 chs thence N 62°36'W

2.63 chs thence N 38°54'W 4.20 chs

thence east ~~283~~<sup>270</sup> chs to pt. in  
 $\frac{1}{2}$  highway which is ~~3.51~~<sup>3.5</sup> ch W of

approx. C $\frac{1}{4}$  thence S 65°22'E

1.62 chs. thence S 30°16'E ~~7.19~~<sup>7.19</sup> chs.

thence S 53°34'E 20.67 chs. to

Pt. of beginning

12 Lot 4  
Sec 34  
T58N  
R26W

Acquisition

Traverse of that  
portion of Lot 4, Sec. 34,  
T58N R26W. lying West  
of  $\frac{1}{2}$  of State Highway

$\frac{1}{2}$  50'

beg. at a point in  $\frac{1}{2}$  Rd.

<sup>3.9'</sup>  
~~3.9'~~ ch S of NW  $\frac{1}{4}$  cor (Approx.)

thence  $533^{\circ}25'E$  <sup>7.25</sup>~~7.15~~ chs. thence

$536^{\circ}18'E$  <sup>5.17</sup>~~5.13~~ chs, thence  $555^{\circ}04'$

$3.63$  chs, thence  $566^{\circ}18'E$  <sup>7.10</sup>~~7.15~~ chs,

to a point  $3.51$  ch West of approx c/4

thence West <sup>7.90</sup>~~7.83~~ chs. to lake, thence

$N47^{\circ}05'W$   $3.80$  chs, thence  $N38^{\circ}21'W$

$9.19$  chs, thence  $N20^{\circ}40'W$   $0.32$  ch.

thence North <sup>5.10</sup>~~5.15~~ chs to Pt. of  
beginning

Pt.	Bear	Dist	Dep (sine)	Lat. (cosine)
		$533^{\circ}25'E$		

14

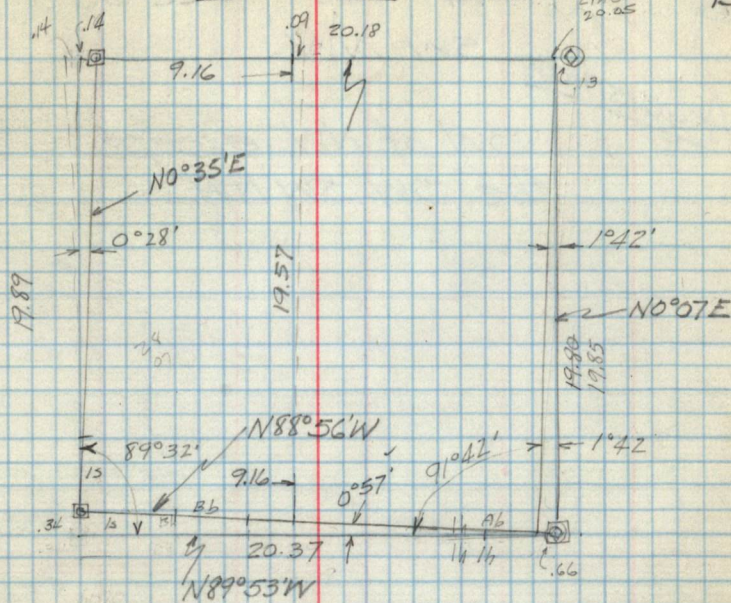
Sec 14 T147-R25

Traverse of the west  
18.2 Acres of NE SE Sec 14  
T147-25.

Acquisition

15

Sec 14 T147-R25



	.0167	19.80	.5900
20.39	34.00		39.60
	20.39		19.400
	13.610		17.820
	12.234		15.800
	13.760		15.840

	9.16
19.87	18200
	17883
	3170
	1987
	11830
	11922

16

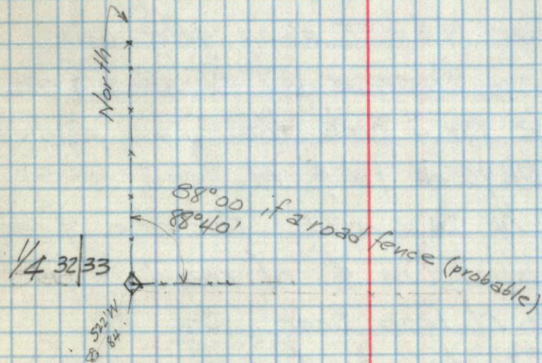
147-25 Sec 33

SW NW

Acquisition

SW of NW except  
the SW SW NW.

17  
Va 7°30'





## Acquisition

147N 25W Noso.

SE SE Sec 27

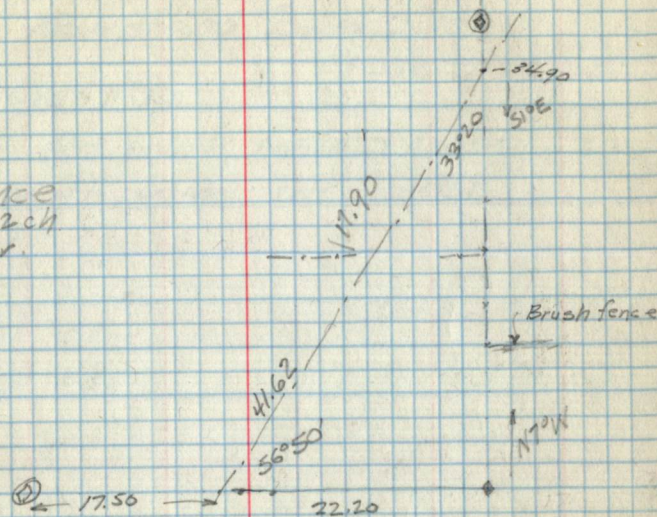
Beg. at on <sup>intersection</sup> E road + Sec.

Line between 27 + 34 ran

Mag. Bear  $N 82^{\circ} E$  along tele line22.20 chs. thence  $N 7^{\circ} W$  19.80 chsto fence cor + prob.  $\frac{1}{16}$  cor. continuing $N 7^{\circ} W$  34.90 ch to E rd. and 39.52ch to  $\frac{1}{4}$  S 26 + 27 thence from  
the point in E of road and

34.90 ch. N from scor S W

41.62 ch to pt. of beginning

~~N 72 E  
90 S~~Wire fence  
starts 12 ch  
N of S cor.

Survey of  
Bowstring Tower Site

Va 7°E.

Page 21-29 Inc.

Azimuth figured from  
South point thru west.

Pt.	Dist.	Az.	Mag. B.	Vert. L.	Dif. Elev.	Elev.
					100	100.0
A	35'	234°55'	N48½°E	0	98.6	98.6
Point A						103.2
1	90'	69°50'	S63W	-11°15'	-21.3	81.9
2	161	69°20'	S62½W	-6°20'	-21.7	81.5
3	115	101°15'	N94½W	-10°15'	-24.4	78.8
4	118	125°15'	N61½W	-9°15'	-22.8	80.4
5	84	125°	N62W	-9°15'	-18.1	85.1
6	35	125°30'	N61½W	-10°10'	-7.3	95.9
7	52	100°	N92W	-10°25'	-9.9	93.3
8	101	101°15'	N86W	-10°35'	-19.5	83.7
9	238	101°30'	N85½W	-10°50'		
10		101°10'	N86W	-8°40'		
11	24'	110°45'	N76W	0°	-6.3	96.9
12	100	112°45'	N74W	-9°20'	-17.0	86.2
13		113°50'	N73W	-10°25'		
14		112°00'	N75½W	-9°55'		
15		112°00'		-9°45'		
16		110°45'		-7°15'		
17		110°45'		-6°25'		
18	32'	125°10'	N62W	0°	-7.0	96.2
19	84	124°45'		-9°20'	-18.2	85.0
20	141	125°45'	N61½W	-9°30'	-25.4	77.8
21	176	"		-8°30'	-29.3	73.9

Center of existing tower.

Elev. of Pt. A

H.I. at "A"

Top knoll

Pt.	Dist	Az.	Mag. B.	Vert. L	Diff. Elev	Elev.
22	5.40 3.00 ✓	126°40	N60½W	-8°00'		
	6.12 4.10 ✓	126°15		-8°00		
	3.36 1.00 ✓	"		-8°05		
	15'	58°00	5.50W	0°	5.6	97.6
	4.80 4.00	78	55°30'	548½W	-11°10'	-19.8 83.4
	3.00 2.00	97	56°00		-11°25'	-22.1 81.1
	5.25 4.00	124	55°15'		-7°15'	-16.4 86.8
	5.46 4.00	145	55°15'		7°10'	-22.9 80.3
	5.67 4.00	165	"		-7°15'	-25.7 77.5
	6.51 6.00	51	32°15'	S25°W	-8°15'	-13.7 89.5
	4.24 3.00	122	33°30		-8°30'	-21.9 81.3
	4.24 2.00 ✓	33°15'			-8°40'	
	6.64 4.00 ✓	31°45'			-7°40'	
	4.62 1.00 ✓	30°15			-6°15'	
	6.10 5.00 ✓	39°20	531½W		-8°40	
	6.10 3.10 ✓	19°15'	512°W		-7°20	
	5.30 3.00 ✓	"			-7°35'	
	6.82 5.00	177	19°00		-9°05	-34.3 68.9
	6.15 5.00	114	19°30'		-7°40	-20.9 82.3
	3.65 3.00	65	359°15'	N8W	-7°15'	-11.6 91.6
	4.16 3.00	115	"		-7°30	-18.7 84.5
	6.72 5.00	170	"		-7°40'	-28.8 74.4
	6.45 4.00 ✓	"			-5°30'	
	7.05 4.00 ✓	"			-5°55'	

103.2 H.I.

76.4  
8

Same slope for 50' farther then flattens.

Road

Pf	Dist	Az.	Mag B.	Vert. L.	Diff Elev	Elev.	
						103.2	
4.57 3.00	185	349° 15'	N 18 W	-7° 05'	-26.5	76.7	
4.15 1.00	✓	350° 15'		-4° 52'			
6.28 5.00	147	336° 15'	N 30 1/2 W	-5° 40'	-20.4	82.8	
6.24 4.00	✓	"		-5.35			
7.82 5.00	✓	331°	N 36 W				
4.08 2.00	✓	330° 30'		-6° 00'			
5.25 4.00	125	331°		-5° 55'	-17.5	85.7	
5.22 4.00	122	320°		-6° 05'	-19.5	83.7	
3.00 1.00	200	"		-6° 00'	-22.9	80.3	
3.47 1.00	✓	320° 30'		-5° 50'			
4.35 1.00	✓	"		-3° 40'			
5.96 4.00	195	314° 30'	N 52° W	-5° 55'	-22.9		
6.56 4.00	✓	"		-5° 00'			
	24	221° 45'	N 35 1/2 E				
	39	221°					
	42'	239° 45'					
	31'	249° 45'					
T B	6.6 6.00	66	54° 00'	S 48 W	+5° 25'	0	100.0
T	6.74 6.10	65	1° 00'	S 6 E	-0° 45'	-7.3	92.7
	8.32 5.00	131	357° 15'		-3° 45'	-14.4	85.6
	5.12 3.00	✓	"		-3° 50'		
	5.82 3.00	✓	"		-4° 00'		
	8.00 8.00		340 1/2		-4° 05'		
	7.30 6.00	130	"		-4° 35'	-17.0	83.0

H.I.

Tower leg

" "

Tower

H.I. of Instrument

Foot slope

Pt.	Dist.	Az.	Mag B	Vert L	Diff Elev.	Elev.
5.50 5.00	50	310°	557E	-500	-9.7	90.3
7.18 6.20	113	307½°	359E	-6°25'	-19.2	80.8
3.96 2.00	195	"		-5°45'		
7.04 5.00	✓	292½°	574E	-6°15'		
7.23 6.00	123	"		-6°10'	-19.9	80.9
5.55 5.00	55	269½°	N84½E	-6°15'	-11.3	78.7
7.63 7.50	14	231°	N45E	0°	-7.6	92.4
5.33 5.20	14	"		-0°15'	-5.3	94.7
5.15 4.80	36	116½°	N80°W	-0°10'	-5.0	95.0
5.72 5.00	72	67°	S60W	+3°30'	-9.7	90.3
5.49 5.00	66	181½°	N4½W	-13°10'	-20.9	79.1
4.15 3.00	110	"		-12°45'	-28.6	71.4
3.30 2.00	125	"		-12°15'	-29.9	70.1
2.83 1.00	179	"		-9°25'	-31.6	68.4
7.15 5.00	✓	178°		-7°15'		
5.60 3.00	✓	163°		-7°20'		
4.68 5.00	165	"		-9°25'	-33.1	67.9
7.27 6.00	125	162		-9°20'	-27.1	72.9
4.81 4.00	78	"		-12°00'	-21.1	72.9
7.63 7.00	61	213½°	N18E	-12°15'	-20.6	79.4
7.10 6.00	106	213°		-12°20'	-29.7	70.3
5.00 3.00	✓	207½°	N22E	-9°00'		
7.20 5.00	✓	223°	N38E	-12°00'		
2.60 1.00	153	"		-10°45'	-31.3	68.7
6.96 6.00	92	"		-13°00'	-27.7	72.3

100.0 H.I.

Level

Pt.	Dist.	Az.	Mag. B	Vert. L	Diff. Elev.	Elev	
						100.0	H.I.
7.16 C.00	112	234 1/2	N48 1/2 E	-11°25'	-29.3	70.7	
6.84 5.00	181	233		-8°00'	-32.1	67.9	
6.80 5.00	✓	243 1/2	N57 1/2 E	-7°45'			
6.12 5.00	109	"		-11°00'	-26.8	73.2	
7.30 6.00	127	258 1/2	N72 E	-9°15'	-27.4	72.6	
4.88 3.00	✓	260		-7°35'			
3.05 1.00	✓	"		-7°50'			
5.00 3.00	✓	274 1/2	N88 E	-7°15'			
7.45 5.00	✓	"		-8°00'			
2.75 1.00	✓	292 1/2		-7°25'			
4.84 4.00	81	292 1/2		-7°40'	-15.4	84.6	
5.56 5.00	56	329 1/2	S38 E	+5°30'	-0.2	99.8	± Tower shot. H.I.
4.56 4.00	54	164	N23°W	-13°00'	-16.8	83.0	
3.16 2.00	112	165		-11°30'	-25.4	74.4	
3.75 2.00	✓	167		-7°50'			
5.76 4.00	✓	152		-6°25'			
4.35 3.00	132	"		-9°40'	-25.5	74.3	
3.28 2.00	126	134°	N53°W	-9°20'	-23.2	76.6	
6.70 5.00	✓	135 1/2		-5°25'			On ridge
7.02 5.00	✓	134 1/2		-5°20'			
4.00 2.00	✓	127°30'	N60 W	-7°30'			
6.35 5.00	132	"		-7°50'	-23.9	75.9	

Tower Base to Bowstring Lake

Pt	Dist.	Az.	Mag. B	Vert L	Diff Elev	Elev	Lat South.	Dep. East
						100.0		
T <sup>o</sup> D	<sup>6.10</sup> 3.80	<sup>80 30</sup> 228	125°45'	N61W	+6°45'	-22.1'	77.9	0
					+18°05'	+74.3'	152.2	0
E	<sup>3.80</sup> 1.00	281	343°30'	S23½E	+0°55'	+2.1'	80.0	
T <sup>o</sup> F	<sup>5.74</sup> 3.00	277	157°45'	N29°W	-0°50'	+8.4'	88.4	
G	<sup>4.52</sup> 2.00	253	337°30'	S29E	-0°45'	-7.1'	81.3	
T H	<sup>3.03</sup> 2.00	103	186°00'	N1°W	+3°30'	-3.8'	77.5	
Sec Cor.	<sup>8.00</sup> 4.73	174	272°30'	N86E	-1°30'			
I	<sup>6.05</sup> 4.00	205	91°10'	S86W	-4°45'	-22.0'	55.5	
T J	<sup>3.90</sup> 1.00	490	185°25'	N1°W	+1°02'	-5.4'	50.1	
K	<sup>6.85</sup> 2.00	485	18°10'	S11W	-2°00'	-21.4'	28.7	
T L					0°	<sup>3.9</sup> +3.9'	32.6	
Lake	<sup>4.74</sup> 3.00	169'			-10°55'	-36.3'	-3.7	

Tower base  
B.S. to E tower  
Tower Platform  
Shot from D.

B.S. on E from F  
Shot from G from F  
B.S. on G from H

Shot on Sec Cor  $\frac{718}{18.17}$  from H  
Shot on I from H. I is at Intn Rd. & drive.

B.S. on I from J.  
Shot on K from J  
B.S. on K " L.

Shot on Bowstring from L  
Bowstring about 1330'.



Traverse of road to  
Jessie Lake tower site

38.75 E to cor.

Old rd. 17 ch E of  $\frac{1}{4}$  4/33.

77 to cor.

Culu at 47 ch 56 69.5

Culu needed at 43.75 ch

End f. post on east 39.95 ch

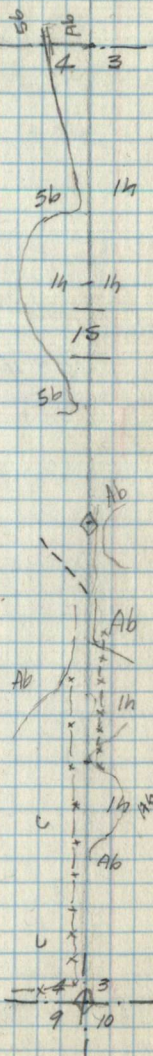
↑ Culu. needed about ch. 33

39.79 ch N to  $\frac{1}{4}$  Sec 314 scribed

59.70 " " "  $\frac{1}{16}$  U.S.P.S

End fence post on W 27 ch N of cor

First post on E 19.95 N of cor



Rod	H.I.	Dist.	Mag. Bear	Elev
			N86E	
				100.0 B.M.
+4.9	104.9	78'	S86W	
-4.3		64'	S20E	100.6
-5.9		225'	N86E	99.0
-7.1		121'	N83E	97.8 T.P.
+5.6	103.4	90'	S5W	$\pi$
-5.2				98.2 at $\pi$
-3.9		65'	North	99.5

$\pi$  on line bet 54+33

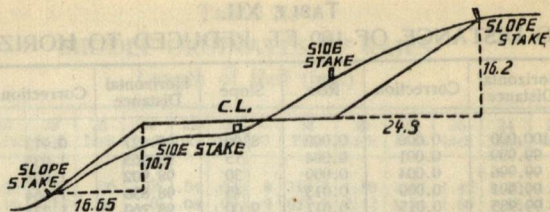
Elev. of Ground at  $\frac{1}{4}$  54+33 T147+148 N R 25W.  
 $\pi$  at Pt. A.

Apparent high spot

" " "

T.P.

Pages 040-End  
are Blank



### DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

Page	Description
	58-26 534
4	Traverse
10	Lot 8
12	" 4
14	T147.25 Sec. 14
16	T147.25 " 33
18	" " 27

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING-  
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.  
FOR SINGLE TRACK EXCAVATION.

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

Scanned

8-20-12

Ranney

Sept. 27 '35 Line bet. 5134.14 <sup>59N</sup> 26W  
 P App. h = 28°20' h = 28°20' + 16' - 1' - 1' = 28°02'  
 P = 50°45' - 16' = 50°29'

log sin φ = 9.86832 log cos φ = 9.82885  
 " " h = 9.67208 " " h = 9.94580  
 log .34706 9.54040 9.77465

.34706  
 sin 1°25' .02472

log .37178 = 9.57028  
9.77465

log cos 51°20' = 9.79563  
50°29'

Course N0°51'W.

P App h 25°50' h = 26°06' s = 6°27'

P 542°03E

log sin φ = 9.8676 log cos φ = 9.8297

" " h = 9.6433 " h = 9.9533

log .3246 9.5109 9.7830

sin 9 = .1123

log .4369 = 9.6404

9.7830

log cos 46°04 9.8574

42°11

Sept. 17 '35

○ A. h = 32°5' A. P 51°25'

h = 32°05' + 16' - 1' + 1' = 32°21' P = 51°41'

log sin φ = 9.86832 log cos φ = 9.82885

" " h = 9.72843 " " h = 9.92675  
 log .39514 9.59675 9.75560

.39514  
 sin 2°21' .04129  
 log .35385 = 9.54882  
9.75560  
 log cos 51°36' 9.79322

Sept. 18 '35

Ah = 32°45' Ap. P 48°44'  
 P 49°00'

h = 32°45' + 16' = 33°01'

log sin φ = 9.86832 Log cos φ = 9.82885  
 " " h = 9.73630 " " h = 9.92351  
 log .40237 9.60462 9.75236

.40237  
 sin 2°02' = .03519  
 log .36718 = 9.56488  
9.75236

log cos 49°30' 9.81252

Course = N0°30'E Line 534  
 N end. Jack horse

Observation Sept. 10 '35 8:15

$$h = 25^{\circ}22' \quad \delta = 5^{\circ}10'$$

$$+1' - 2' + 16'$$

$$= 25^{\circ}37'$$

$$\log \sin \phi = 9.86832 \quad \log \cos \phi = 9.82885$$

$$\log \sin h = 9.63583 \quad \log \cos h = 9.95507$$

$$\log .31927 = 9.50415 \quad \log .78392 = 9.78392$$

$$\sin 5^{\circ}10' = \frac{.31927}{.09005}$$

$$\log \frac{.31927}{.09005} = \frac{9.50415}{9.78392} = .36025$$

$$\log \cos 67^{\circ}51' = 9.57633$$

Sept 16

$$h = 35^{\circ}30' \quad R \quad 43^{\circ}53' + 16' = 44^{\circ}09'$$

$$\text{true } h = 35^{\circ}30' + 16' - 1' + 1' = 35^{\circ}46'$$

$$\log \sin \phi = 9.86832 \quad \log \cos \phi = 9.82885$$

$$\log \sin h = 9.76677 \quad \log \cos h = 9.90924$$

$$\log .43161 = 9.63509 \quad \log .73809 = 9.73809$$

$$\frac{.43161}{.04827} = \frac{9.63509}{9.73809} = 9.58358$$

$$\log \cos 44^{\circ}29' = 9.784549$$

Observations Sept. 6, '35 8:30 a.m.

$$h = 26^{\circ}15' + 16' \quad \delta = 6^{\circ}41.8'$$

$$= 26^{\circ}31' + 1' - 2' \quad 2^{\text{hrs}} \times .93 = 1.86$$

$$h = 26^{\circ}30' \quad \delta = 6^{\circ}42' \times \text{should be } 6^{\circ}39'$$

$$\log \sin \phi = 9.86832 \quad \log \cos \phi = 9.82885$$

$$\log \sin h = 9.64953 \quad \log \cos h = 9.95179$$

$$\log 32951 = 9.51785 \quad \log 78064 = 9.78064$$

$$\sin 6^{\circ}48' = \frac{.32951}{.11840}$$

$$\log \frac{.32951}{.11840} = \frac{9.51785}{9.78064} = 9.32451$$

$$\log \cos 69^{\circ}31' = 9.54887$$

$$h = 30^{\circ}5' + 15' = 30^{\circ}20'$$

$$\log \sin \phi = 9.86832 \quad \log \cos \phi = 9.82885$$

$$\log \sin h = 9.70332 \quad \log \cos h = 9.93606$$

$$\log .37295 = 9.57164 \quad \log .76491 = 9.76491$$

$$\frac{.37295}{.11840} = \frac{9.57164}{9.76491} = 9.40576$$

$$\log \cos 44^{\circ}4' = 9.64085$$

$$h = 25^{\circ}02'$$

$$\log \sin \phi = 9.86832 \quad \log \cos \phi = 9.82885$$

$$\log \sin h = 9.62649 \quad \log \cos h = 9.93716$$

$$\log .31247 = 9.49481 \quad \log .78591 = 9.78591$$

$$\delta = 6^{\circ}42' - .93 \times 10 = 6^{\circ}33'$$

$$\sin \delta = \frac{.31247}{.11407} = 9.29754$$

$$\log \frac{.31247}{.11407} = \frac{9.49481}{9.78591} = 9.51163$$



Observations at  $\frac{18}{19} \frac{17}{20}$  T59 R26 9-3-35  
p.m.

$h = 30^{\circ}20' + 16'$  R Rdg.  $65^{\circ}47'$   $\delta = 7^{\circ}40'$

$$\cos Z_s = \frac{\sin \phi \sin h - \sin \delta}{\cos \phi \cos h}$$

$\log \sin \phi = 9.86832$      $\log \cos \phi = 9.82885$   
 $\log \sin h = 9.70675$      $\log \cos h = 9.93487$   
 $\log .3759 = 9.57507$      $9.76372$

$\sin 7^{\circ}40' = .1334$   
 $\log .2425 = 9.38471$   
 $9.76372$   
 $\log \cos 65^{\circ}49' = 9.62099$

My line is  $0^{\circ}28'$   
E of S.

$h = 33^{\circ}36'$  R Rdg. =  $61^{\circ}22'$

$\log \sin \phi = 9.86832$      $\log \cos \phi = 9.82885$   
 $\log \sin h = 9.74303$      $\log \cos h = 9.92060$   
 $\log .40865 = 9.61135$      $9.74945$

$\sin 7^{\circ}40' = .13341$   
 $\log .27524 = 9.43970$   
 $9.74945$   
 $\log \cos 60^{\circ}39' = 9.69025$

My line is  $0^{\circ}43'$   
E of S.

$h = 25^{\circ}00'$  R Rdg. =  $73^{\circ}40'$

$\log \sin \phi = 9.86832$      $\log \cos \phi = 9.82885$   
 $\log \sin h = 9.62595$      $\log \cos h = 9.95728$   
 $\log .31209 = 9.49427$      $9.78613$

$\sin 7^{\circ}40' = .13209$   
 $13341$   
 $\log .17868 = 9.25207$   
 $9.78613$   
 $\log \cos 73^{\circ} = 9.46594$

My line is  $40'$  E of S

$h = 43^{\circ}20'$  2:15 E.S.T.

Sun's App. declina. =  $7^{\circ}43.6'$

$\log \sin 7^{\circ}44' = 9.12892$

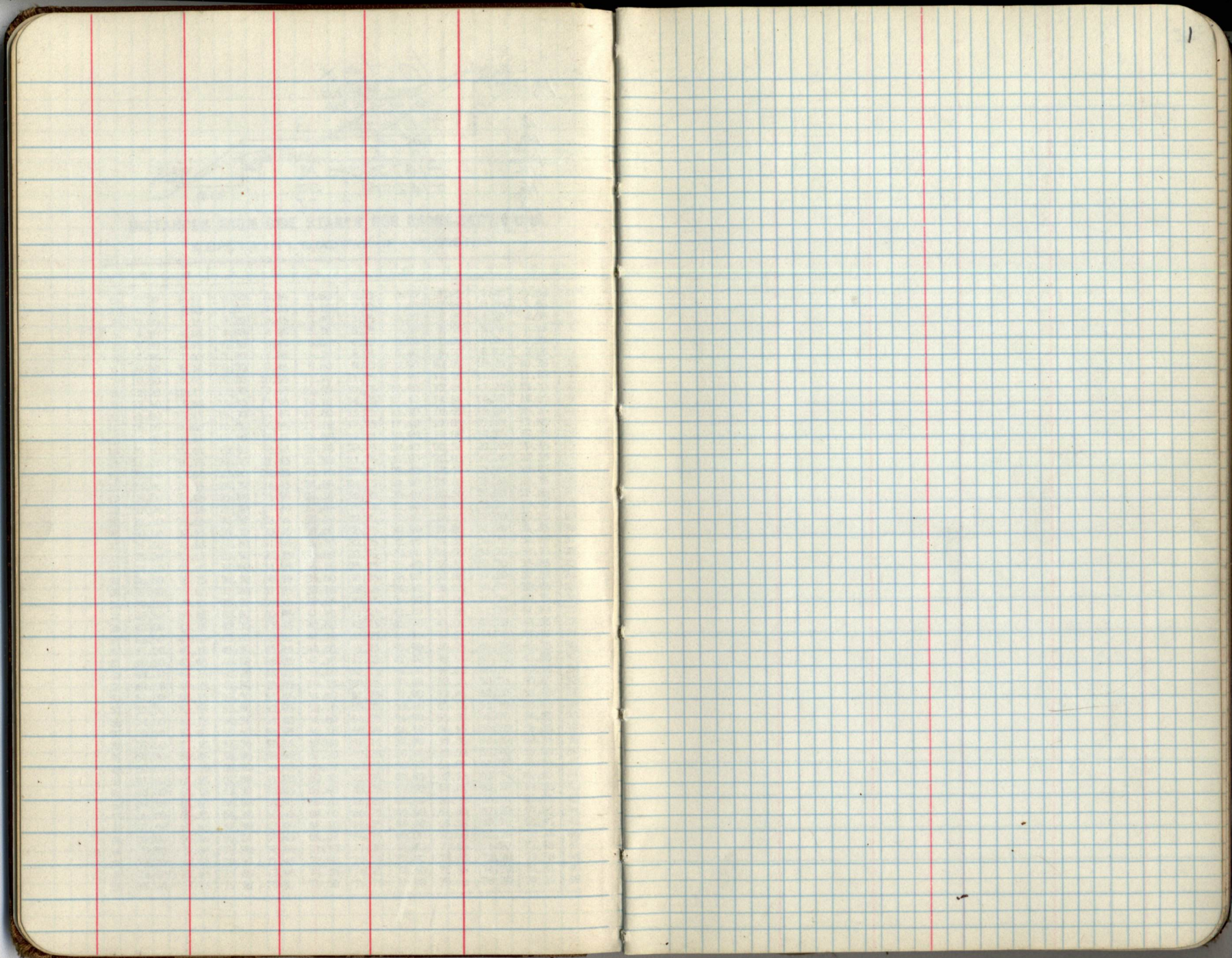
$\log \cos 43^{\circ}20' = \frac{9.86176}{9.26716}$

$\log \cos 47^{\circ}36' = \frac{9.82885}{9.43831}$

$\log \tan 43^{\circ}20' = 9.97472$

$\log \tan 47^{\circ}36' = \frac{.03947}{1.0332}$   
 $\log 1.0332 = 9.01419$

$1.0332$   
 $2743$   
 $\hline 7589$



2

3

## Check Traverse

Va. 900

Pt.	Bearing	Dist.	Dep.	Lat.	Σ Dep.	Σ Lat.
28   27 33   34	57° 00' W	1.84	$\frac{\sin 57^\circ}{1.22}$ - .22	$\frac{\cos 57^\circ}{.973}$ 1.83		
B	517° 20' E	8.02	$\frac{.298}{.720}$ 2.39	$\frac{.955}{.694}$ 7.65		
C	546° 04' E	4.61	$\frac{.837}{.548}$ 3.32	$\frac{.548}{.548}$ 3.19	2.17	9.48
D	556° 47' E	16.16	$\frac{.532}{.847}$ 13.52	$\frac{.847}{.847}$ 8.87	5.49	12.67
E	532° 09' E	8.92	$\frac{.603}{.798}$ 4.74	$\frac{.798}{.798}$ 7.55	19.01	21.54
F	537° 06' E	5.13	$\frac{.881}{.514}$ 3.10	$\frac{.472}{.458}$ 4.10	23.75	29.09
G	561° 49' E	12.95	$\frac{.316}{.571}$ 11.40	$\frac{.571}{.571}$ 6.11	26.85	33.19
H	530° 55' E	7.47	$\frac{.802}{.598}$ 3.83	$\frac{.598}{.598}$ 6.40	38.25	39.30
I	554° 44' E	19.40	15.83	11.20	42.08	45.70
J	553° 18' E	32.34	25.94	19.34	57.91	56.90
K	588° 59' W	4.14	-4.14	0.18	83.85	76.24
34   35 3   2		70.99	79.71	76.42	79.71	76.42

From E 532° 09' E 1.74 chs. Dep 19.93 chs

Lat. 23.02 chs. or 3.91 ch N to NW 1/4

Stake S of road 4.29 ch " " NW 1/4

From H N 61° 49' W 2.32 chs. Lat 38.21

Dep 36.21 or 3.65 ch E to App C 1/4

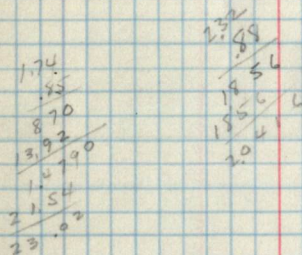
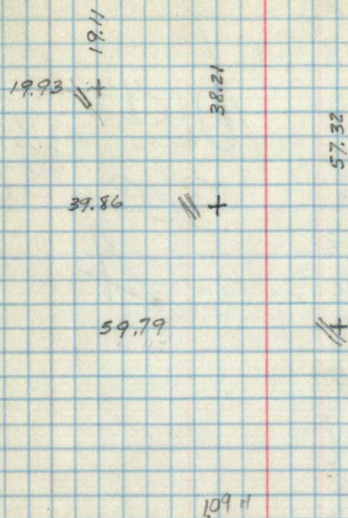
Stake W of road 3.85 ch E to " C 1/4

From J. 553° 18' E 0.70 chs. Lat. 57.32

Dep 58° 47' or 1.32 ch E to App. SE 1/4

Stake E of road 1.13 ch " " " SE 1/4

Note - 0.75 mi. speedometer rdg. to Pt  
4.29 ch S of NW 1/4 from Day Lake C.C.



60 - 42.85

6

Pl.	Bear	Dist
28/27 33/34	West	0.675 <sup>B</sup>
A	513°04'E	1.867 <sup>B</sup>
B	515°19'E	8.02 <sup>C</sup>
C	544°04'E	4.62 <sup>D</sup>
D	554°47'E	16.16 <sup>E</sup>
E	532°05'E	8.97 <sup>F</sup>
F	532°06'E	5.08 <sup>G</sup>
G	560°12'E	12.95 <sup>H</sup>
H	529°17'E	7.47 <sup>I</sup>
I	553°08'E	19.40 <sup>J</sup>
J	551°56'E	31.42 <sup>K</sup>
K	56°E	0.65 <sup>L</sup>
L	N89°23'W	3.57 <sup>32/31</sup>
+		

Void  
see  
A

7

90°37'

Beq. at approximate section  
corner established by U.S.F.S.

Void See Page 4

Pt.	Bear.	Dist.	Lat. <small>cos</small>	Dep. <small>sin</small>	$\Sigma$ Deps.
<del>28</del> <del>127</del> <del>33</del> <del>34</del>	West	0.68	..	-.68'	
A	$513^{\circ}04'E$	1.87	1.82	.42	
B	$515^{\circ}19'E$	8.02	7.73	2.12'	
C	$544^{\circ}04'E$	4.62	3.32	3.21	
D	$554^{\circ}47'E$	16.16	9.34	13.20	
E	$532^{\circ}05'E$	8.97	7.60	4.76	
F	$532^{\circ}06'E$	5.08	..	2.70	
G	$560^{\circ}12'E$	12.95	..	11.25	
H	$529^{\circ}17'E$	7.47	..	3.65	
I	$553^{\circ}08'E$	19.40	..	15.52	
J	$551^{\circ}56'E$	31.42	..	24.72	
K	$56^{\circ}00'E$	0.65	..	.07	
L	$N89^{\circ}23'W$	3.57	..	-3.57	
+				77.37	

Acquisition

Traverse of that  
portion of Lot 8, Sec. 34  
T 58 N, R 26 W, lying west  
of  $\frac{1}{2}$  state highway.

Va 5°E

Beq. at a point on  $\frac{1}{2}$  s.  
highway ~~167~~<sup>117</sup> chs. West of  
approx S.E.  $\frac{1}{16}$  thence west  
14.08 chs. to lake thence

N  $31^{\circ}16'W$  3.59 chs thence N  $63^{\circ}50'W$

5.20 chs, thence N  $31^{\circ}35'W$  2.30 ch.

thence N  $17^{\circ}10'W$  6.28 chs thence

N  $36^{\circ}22'W$  15.6 chs thence N  $62^{\circ}36'W$

2.63 chs thence N  $38^{\circ}54'W$  4.20 chs

thence east ~~283~~<sup>270</sup> chs to pt. in  
 $\frac{1}{2}$  highway which is ~~3.51~~<sup>3.5</sup> ch W of

approx. C  $\frac{1}{4}$  thence S  $65^{\circ}22'E$

1.62 chs. thence S  $30^{\circ}16'E$  ~~7.19~~<sup>7.19</sup> chs.

thence S  $53^{\circ}34'E$  20.67 chs. to

Pt. of beginning

12 Lot 4  
Sec 34  
T58N  
R26W

Acquisition

Traverse of that  
portion of Lot 4, Sec. 34,  
T58N R26W. lying West  
of  $\frac{1}{2}$  of State Highway

$\frac{1}{2}$  S. E.

Beq. at a point in  $\frac{1}{2}$  Rd.

<sup>3.9</sup>  
~~3.9~~ ch S of NW  $\frac{1}{4}$  cor (Approx.)

thence  $533^{\circ}25'E$  <sup>7.25</sup>~~7.15~~ chs. thence

$536^{\circ}18'E$  <sup>5.17</sup>~~5.13~~ chs, thence  $555^{\circ}04'$

$3.63$  chs, thence  $566^{\circ}18'E$  <sup>7.10</sup>~~7.15~~ chs,

to a point  $3.51$  ch West of approx c/4

thence West <sup>7.90</sup>~~7.83~~ chs. to lake, thence

$N47^{\circ}05'W$   $3.80$  chs, thence  $N38^{\circ}21'W$

$9.19$  chs, thence  $N20^{\circ}40'W$   $0.32$  ch.

thence North <sup>5.10</sup>~~5.15~~ chs to Pt. of  
beginning

Pt.	Bear	Dist	Dep (sine)	Lat. (cosine)
		$533^{\circ}25'E$		



14

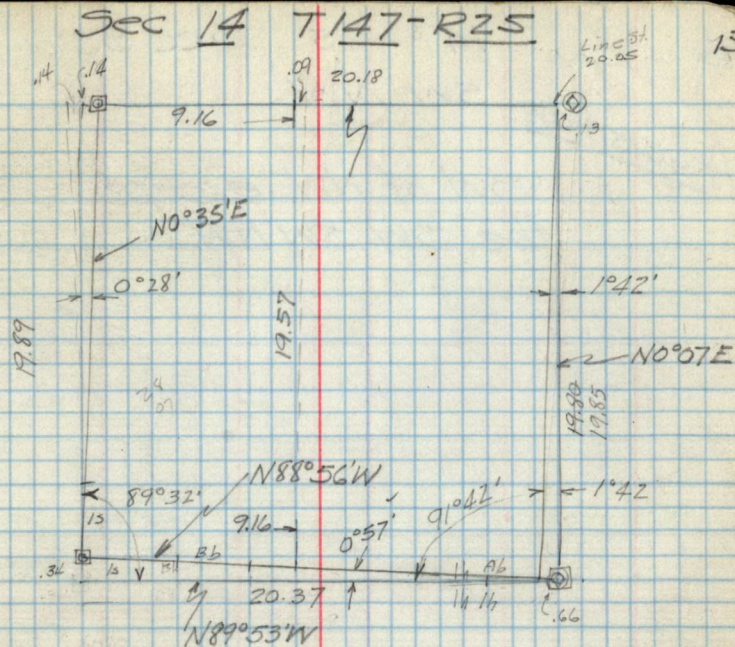
Sec 14 T147-R25

Traverse of the west  
18.2 Acres of NE SE Sec 14  
T147-25.

Acquisition

Sec 14 T147-R25

15



	.0167	19.80	.5900
20.39	34.00		
	20.39		39.60
	13.610		19.400
	12.234		17.820
	13760		15800
			15840

	9.16
19.87	18200
	17883
	3170
	1987
	11830
	11922

16

147-25 Sec 33

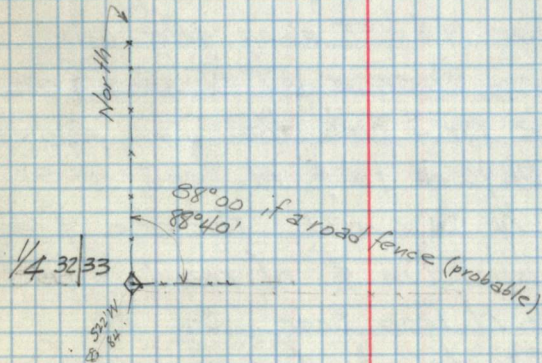
SW NW

Acquisition

SW of NW except  
the SW SW NW.

Va 7°30'

17



## Acquisition

147N 25W Noso.

SE SE Sec 27

Beg. at on <sup>intersection</sup> E road + Sec.

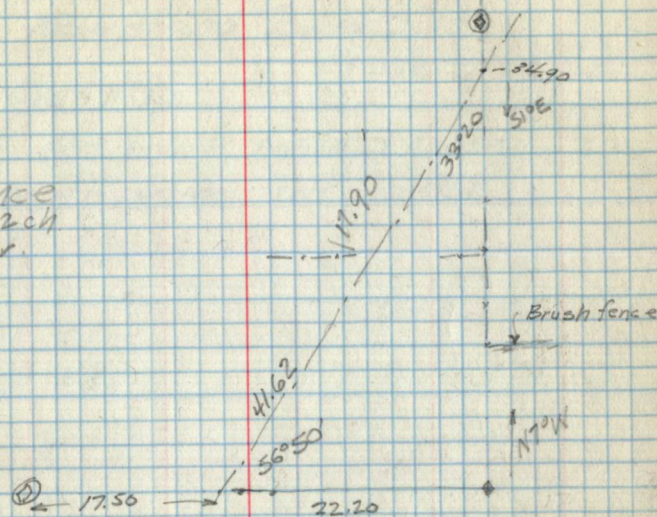
Line between 27 + 34 ran

Mag. Bear  $N 82^{\circ} E$  along tele line22.20 chs. thence  $N 7^{\circ} W$  19.80 chsto fence cor + prob.  $\frac{1}{16}$  cor. continuing $N 7^{\circ} W$  34.90 ch to E rd. and 39.52ch to  $\frac{1}{4}$  S 26 + 27 thence from

the point in E of road and

34.90 ch. N from scor S W

41.62 ch to pt. of beginning

N 72 E  
90 SWire fence  
starts 12 ch  
N of S cor.

Survey of  
Bowstring Tower Site

Va 7°E. Page 21-29 Inc.

Azimuth figured from  
South point thru west.

Pt.	Dist.	Az.	Mag. B.	Vert. L.	Dif. Elev.	Elev.
					100	100.0
A	35'	234°55'	N48½°E	0	98.6	98.6
Point A						103.2
1	90'	69°50'	S63W	-11°15'	-21.3	81.9
2	161	69°20'	S62½W	-6°20'	-21.7	81.5
3	115	101°15'	N94½W	-10°15'	-24.4	78.8
4	118	125°15'	N61½W	-9°15'	-22.8	80.4
5	84	125°	N62W	-9°15'	-18.1	85.1
6	35	125°30'	N61½W	-10°10'	-7.3	95.9
7	52	100°	N92W	-10°25'	-9.9	93.3
8	101	101°15'	N86W	-10°35'	-19.5	83.7
9	238	101°30'	N85½W	-10°50'		
10		101°10'	N86W	-8°40'		
11	24'	110°45'	N76W	0°	-6.3	96.9
12	100	112°45'	N74W	-9°20'	-17.0	86.2
13		113°50'	N73W	-10°25'		
14		112°00'	N75½W	-9°55'		
15		112°00'		-9°45'		
16		110°45'		-7°15'		
17		110°45'		-6°25'		
18	32'	125°10'	N62W	0°	-7.0	96.2
19	84	124°45'		-9°20'	-18.2	85.0
20	141	125°45'	N61½W	-9°30'	-25.4	77.8
21	176	"		-8°30'	-29.3	73.9

Center of existing tower.

Elev. of Pt. A

H.I. at "A"

Top knoll

Pt.	Dist	Az.	Mag. B.	Vert. L	Diff. Elev	Elev.
22	5.40 3.00 ✓	126°40	N60½W	-8°00'		
	6.12 4.10 ✓	126°15		-8°00		
	3.36 1.00 ✓	"		-8°05		
	15'	58°00	5.50W	0°	5.6	97.6
	4.80 4.00	78	55°30'	548½W	-11°10'	-19.8 83.4
	3.00 2.00	97	56°00		-11°25'	-22.1 81.1
	5.25 4.00	124	55°15'		-7°15'	-16.4 86.8
	5.46 4.00	145	55°15'		7°10'	-22.9 80.3
	5.67 4.00	165	"		-7°15'	-25.7 77.5
	6.51 6.00	51	32°15'	S25°W	-8°15'	-13.7 89.5
	4.24 3.00	122	33°30		-8°30'	-21.9 81.3
	4.24 2.00 ✓	33°15'			-8°40'	
	6.64 4.00 ✓	31°45'			-7°40'	
	4.62 1.00 ✓	30°15			-6°15'	
	6.10 5.00 ✓	39°20	531½W		-8°40	
	6.10 3.10 ✓	19°15'	512°W		-7°20	
	5.30 3.00 ✓	"			-7°35'	
	6.82 5.00	177	19°00		-9°05	-34.3 68.9
	6.15 5.00	114	19°30'		-7°40	-20.9 82.3
	3.65 3.00	65	359°15'	N8W	-7°15'	-11.6 91.6
	4.16 3.00	115	"		-7°30	-18.7 84.5
	6.72 5.00	170	"		-7°40'	-28.8 74.4
	6.45 4.00 ✓	"			-5°30'	
	7.05 4.00 ✓	"			-5°55'	

103.2 H.I.

76.4  
8

Same slope for 50' farther then flattens.

Road

Pt	Dist	Az.	Mag B.	Vert. L.	Diff Elev	Elev.
						103.2
4.57 3.00	185	349° 15'	N 18 W	-7° 05'	-26.5	76.7
4.15 1.00	✓	350° 15'		-4° 52'		
6.28 5.00	147	336° 15'	N 30 1/2 W	-5° 40'	-20.4	82.8
6.24 4.00	✓	"		-5.35		
7.82 5.00	✓	331°	N 36 W			
4.08 2.00	✓	330° 30'		-6° 00'		
5.25 4.00	125	331°		-5° 55'	-17.5	85.7
5.22 4.00	122	320°		-6° 05'	-19.5	83.7
3.00 1.00	200	"		-6° 00'	-22.9	80.3
3.47 1.00	✓	320° 30'		-5° 50'		
4.35 1.00	✓	"		-3° 40'		
5.96 4.00	195	314° 30'	N 52° W	-5° 55'	-22.9	
6.56 4.00	✓	"		-5° 00'		
	24	221° 45'	N 35 1/2 E			
	39	221°				
	42'	239° 45'				
	31'	249° 45'				
T B 6.6 6.00	66	54° 00'	S 48 W	+5° 25'	0	100.0
6.74 6.10	65	1° 00'	S 6 E	-0° 45'	-7.3	92.7
8.32 5.00	131	357° 15'		-3° 45'	-14.4	85.6
5.12 3.00	✓	"		-3° 50'		
5.82 3.00	✓	"		-4° 00'		
8.00 8.00		340 1/2		-4° 05'		
7.30 6.00	130	"		-4° 35'	-17.0	83.0

H.I.

Tower leg

" "

Tower

H.I. of Instrument

Foot slope

Pt.	Dist.	Az.	Mag B	Vert L	Diff Elev.	Elev.
5.50 5.00	50	310°	557E	-500	-9.7	90.3
7.18 6.20	113	307½°	359E	-6°25'	-19.2	80.8
3.96 2.00	195	"		-5°45'		
7.04 5.00	✓	292½°	574E	-6°15'		
7.23 6.00	123	"		-6°10'	-19.9	80.9
5.55 5.00	55	269½°	N84½E	-6°15'	-11.3	78.7
7.63 7.50	14	231°	N45E	0°	-7.6	92.4
5.33 5.20	14	"		-0°15'	-5.3	94.7
5.15 4.80	36	116½°	N80°W	-0°10'	-5.0	95.0
5.72 5.00	72	67°	S60W	+3°30'	-9.7	90.3
5.49 5.00	66	181½°	N4½W	-13°10'	-20.9	79.1
4.15 3.00	110	"		-12°45'	-28.6	71.4
3.30 2.00	125	"		-12°15'	-29.9	70.1
2.83 1.00	179	"		-9°25'	-31.6	68.4
7.15 5.00	✓	178°		-7°15'		
5.60 3.00	✓	163°		-7°20'		
4.68 5.00	165	"		-9°25'	-33.1	67.9
7.27 6.00	125	162		-9°20'	-27.1	72.9
4.81 4.00	78	"		-12°00'	-21.1	72.9
7.63 7.00	61	213½°	N18E	-12°15'	-20.6	79.4
7.10 6.00	106	213°		-12°20'	-29.7	70.3
5.00 3.00	✓	207½°	N22E	-9°00'		
7.20 5.00	✓	223°	N38E	-12°00'		
2.60 1.00	153	"		-10°45'	-31.3	68.7
6.96 6.00	92	"		-13°00'	-27.7	72.3

100.0 H.I.

Level



Pt.	Dist.	Az.	Mag. B	Vert. L	Diff. Elev.	Elev	
						100.0	H.I.
7.16 C.00	112	234 1/2	N48 1/2 E	-11°25'	-29.3	70.7	
6.84 5.00	181	233		-8°00'	-32.1	67.9	
6.80 5.00	✓	243 1/2	N57 1/2 E	-7°45'			
6.12 5.00	109	"		-11°00'	-26.8	73.2	
7.30 6.00	127	258 1/2	N72 E	-9°15'	-27.4	72.6	
4.88 3.00	✓	260		-7°35'			
3.05 1.00	✓	"		-7°50'			
5.00 3.00	✓	274 1/2	N88 E	-7°15'			
7.45 5.00	✓	"		-8°00'			
2.75 1.00	✓	292 1/2		-7°25'			
4.84 4.00	81	292 1/2		-7°40'	-15.4	84.6	
5.56 5.00	56	329 1/2	S38 E	+5°30'	-0.2	99.8	± Tower shot. H.I.
4.56 4.00	54	164	N23°W	-13°00'	-16.8	83.0	
3.16 2.00	112	165		-11°30'	-25.4	74.4	
3.75 2.00	✓	167		-7°50'			
5.76 4.00	✓	152		-6°25'			
4.35 3.00	132	"		-9°40'	-25.5	74.3	
3.28 2.00	126	134°	N53°W	-9°20'	-23.2	76.6	
6.70 5.00	✓	135 1/2		-5°25'			On ridge
7.02 5.00	✓	134 1/2		-5°20'			
4.00 2.00	✓	127°30'	N60 W	-7°30'			
6.35 5.00	132	"		-7°50'	-23.9	75.9	

Tower Base to Bowstring Lake

Pt	Dist.	Az.	Mag. B	Vert L	Diff Elev	Elev	Lat South.	Dep. East
						100.0		
T <sup>o</sup> D	<sup>6.10</sup> 3.80	<sup>80 30</sup> 228	125°45'	N61W	+6°45'	-22.1'	77.9	0
					+18°05'	+74.3'	152.2	0
E	<sup>3.80</sup> 1.00	281	343°30'	S23½E	+0°55'	+2.1'	80.0	
T <sup>o</sup> F	<sup>5.74</sup> 3.00	277	157°45'	N29°W	-0°50'	+8.4'	88.4	
G	<sup>4.52</sup> 2.00	253	337°30'	S29E	-0°45'	-7.1'	81.3	
T H	<sup>3.03</sup> 2.00	103	186°00'	N1°W	+3°30'	-3.8'	77.5	
Sec Cor.	<sup>8.00</sup> 4.73	174	272°30'	N86E	-1°30'		71.8	
I	<sup>6.05</sup> 4.00	205	91°10'	S86W	-4°45'	-22.0'	55.5	
T J	<sup>3.90</sup> 1.00	490	185°25'	N1°W	+1°02'	-5.4'	50.1	
K	<sup>6.85</sup> 2.00	485	18°10'	S11W	-2°00'	-21.4'	28.7	
T L					0°	<sup>3.9</sup> +3.9'	32.6	
Lake	<sup>4.74</sup> 3.00	169'			-10°55'	-36.3'	-3.7	

Tower base  
B.S. to E tower  
Tower Platform  
Shot from D.

B.S. on E from F  
Shot from G from F  
B.S. on G from H

Shot on Sec Cor  $\frac{718}{18.17}$  from H  
Shot on I from H. I is at Intn Rd. & drive.

B.S. on I from J.  
Shot on K from J  
B.S. on K " L.

Shot on Bowstring from L  
Bowstring about 1330'.

Traverse of road to  
Jessie Lake tower site

38.75 E to cor.

Old rd. 17 ch E of  $\frac{1}{4}$  4/33.

77 to cor.

Culu at 47 ch 56 69.5

Culu needed at 43.75 ch

End f. post on east 39.95 ch

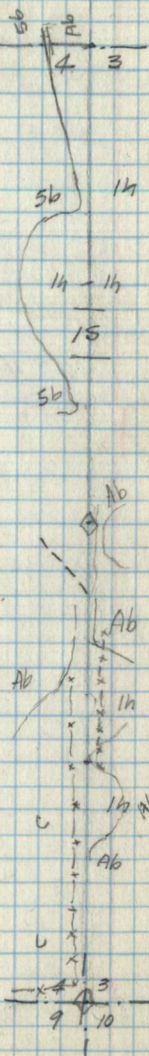
↑ Culu. needed about ch. 33

39.79 ch N to  $\frac{1}{4}$  Sec 314 scribed

59.70 " " "  $\frac{1}{16}$  U.S.P.S

End fence post on W 27 ch N of cor

First post on E 19.95 N of cor



Rod	H.I.	Dist.	Mag. Bear	Elev
			N86E	
				100.0 B.M.
+4.9	104.9	78'	S86W	
-4.3		64'	S20E	100.6
-5.9		225'	N86E	99.0
-7.1		121'	N83E	97.8 T.P.
+5.6	103.4	90'	S5W	$\pi$
-5.2				98.2 at $\pi$
-3.9		65'	North	99.5

$\pi$  on line bet 54+33

Elev. of Ground at  $\frac{1}{4}$  54+33 T147+148 N R 25W.  
 $\pi$  at Pt. A.

Apparent high spot

" " "

T.P.

Pages 040-End  
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