

POLK COUNTY

K-S

LEVEL BOOK

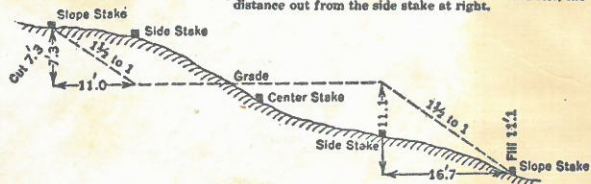
82 0040

1
9
6
7

47

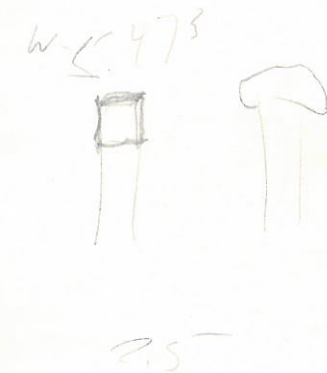
DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING Roadway of any Width. Side Slopes 1½ to 1.

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



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

KEUFFEL & ESSER CO.



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

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✓
W-4806 B.S. H.I. F.S.

ELEV.

B.M.

189.00'

TP₁ 1.46 190.46 11.82 178.64

20.61

TP₂ .44 179.08 9.99 169.09

TP₃ 4.46 173.55 5.16 168.39

6.36

26.97

6.36

20.61

Polk Co.

June 16, 1967

Labeland Quad, Joplin, Rd. Intense, Elev.

Owner - Sniffen & Rogers Inc.

Clear to Cloudy & Hot

Region - Level

Dom - Rod



W-7630	B.S.	H.I.	F.S.	ELEV.	Polble	June 16, 1967
B.M.	4			134.984	U.S.C+GS + State Survey B.M.	U. 2 134.984
TP ₁	4.57	139.55	6.73	132.82	9.61	
TP ₂	3.54	136.36	6.32	130.04	126.36	Owner - C.L. Daugh Paradise Cove Trailer Park
TP ₃	3.70	133.74	5.30	128.44		
TP ₄	3.48	131.92	5.80	126.12	Overcast + Hot	
TP ₅	5.50	131.62	4.92	126.70		
TP ₆	5.46	132.16	5.26	126.90	Lyon Level	
TP ₇	5.76	132.66	6.50	126.16	Iron Rod	
TP ₈	5.36	131.52	5.16	126.36		
	37.37		45.99			
			57.37			
			2.62			



✓
W-5876 B.S. H.T. F.S.

B.M.

TP₁ 5.80 133.70 4.96 128.74

TP₂ 5.20 133.94 7.56 126.38

TP₃ 4.80 137.18 4.86 126.32

15.80

17.38

15.80

1.58

127.90

1.58

126.32

Pole 6

June 16, 1967

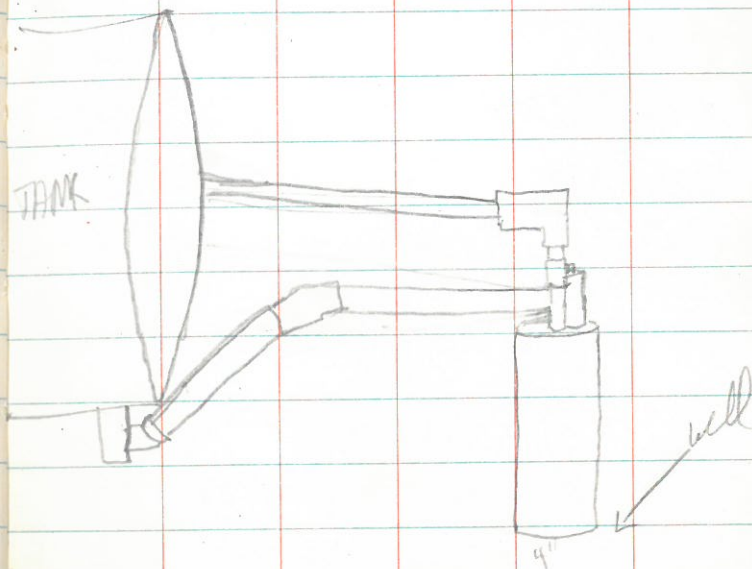
T.B.M. from W-7630 from U.S. CGS. B.M. #412

Owner - Philip De Cicco, Jr.

Overcast 2 hot

Ryan - Level

Son - Rod



✓
W-6536

B.S.

H.I.

F.S.

Elev.

Polk Co

June 16 1965

B.M.

190.00

Lateland quad, Topo Rd. Inter. Elev.

TP₁ 7.30 197.30 1.95 195.35TP₂ 8.55 203.90 3.21 200.69TP₃ 7.80 208.49 4.32 204.17TP₄ 6.41 210.58 4.33 206.25TP₅ 5.63 211.88 9.00 202.88TP₆ 5.41 208.29 10.12 198.17TP₇ 4.30 202.47 2.89 199.58TP₈ 7.00 206.58 3.00 203.58

52.40

38.82

38.82

13.58

owner City of Lateland

Clear to cloudy and Hot

Tom - Level

Ryon - Rod

Reading from Concrete

Floor of well house. N/A

to Enter Well house

W-5444

BS.

H.I.

F.S.

ELEV.

Adm Co.

June 19, 1967

B.M.

134.00

Lakeland Jopo Rd intencei elevation

TP.

6.08 140.08 4.72 135.36

4.72

1.36

Owner U.S. G.S. 803-154-34

Overcast + threatening

Ryan - Level
Som - Rod

✓
W-3766

BS.

H.I.

F.S.

Elev.

P.O.K.C.

June 1946

BM,

139

Takeland Topo Rd inters. Elevation

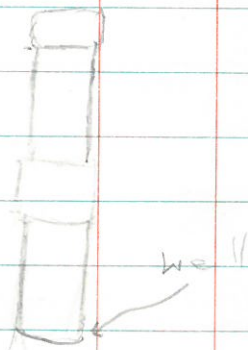
TP. 4.30 143.30 5.80 137.50

4.30 1.50

1.50 39.00

OWNER USGS

OVERCAST, Threatening

Tom Level
Ryan-Rod

✓ W-3309		B.S.	H.I.	F.S.	Elev	Polk Co.	June 19, 1967
B.M.					130.00	Lakeland Topo Rd Inter	Elevation
TP ₁	2.30	132.30	6.80	125.50	6.60		
TP ₂	3.89	129.39	6.94	122.45	123.40	Owner E.A. Esposito	
TP ₃	5.63	128.08	5.00	123.08			
TP ₄	4.82	127.90	4.50	123.40			
	16.64		23.24				
			16.64				
			6.60				

W-5125 P.S. H.I. F.S.

ELEV.

Polk Co.

June 20, 1967

B.M.

142.38

L.P.D. B.M. - r.f. spike in telephone pole seen from

T.P. 5.34 147.72 9.62 138.10

5.89
130 50

U.S. C & G.S. State Survey B.M. DC 31 1939, near last tower

T.R. 3.68 141.78 5.28 136.50

9.02

1490

9.02

5.88

Owner - Eliza Spruce

Ryan - Level

Tom - Rod

Wall has been filled in and
is now under the concrete porch to the
owner's trailer.

✓
W-4775 B.S. H.I. F.S.

B.M.

TP 5.28 141.78 5.22 136.56

TP 6.02 142.58 4.54 138.04

11 30

476

ELEV.

136.50

1.54

138.04

P. & L. Co.

Run from W-5125

June 20, 1967

Dweller - M.M. SPIVEY

Ryan - Level

Tom - Rod



rod

W-5140 B.S. H.T. F.S. ELEV. Pdblo. June 20, 1967

B.M.

138.04

From W-4775

TP. 4.54 142.58 5.48 137.10

.82
137.12

TP. 5.08 142.18 5.06 137.12

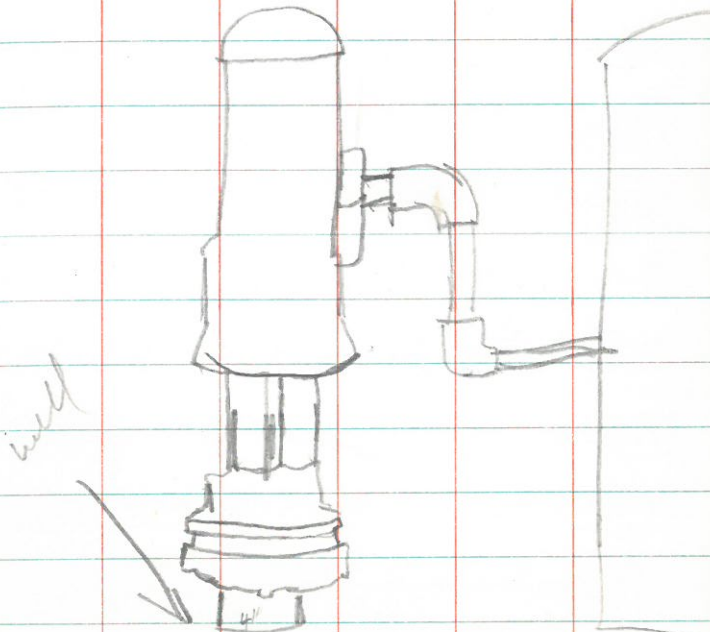
9.62

105.4

7.62
82

Owner - Mrs. Margie Denton

Ryan - Level
Som - Rod



W-4748 B.S. H.I. F.S. Elev.

Polkco

June 21, 1967

Bm

198

Lake/and Topo road inters, elevation

TP ₁	2.76	200.76	7.00	193.76
-----------------	------	--------	------	--------

TP ₂	3.21	196.97	7.68	189.29
-----------------	------	--------	------	--------

TP ₃	2.70	191.99	4.78	187.21
-----------------	------	--------	------	--------

TP ₄	7.50	194.71	4.85	189.86
-----------------	------	--------	------	--------

TP ₅	6.53	196.39	5.15	191.24
-----------------	------	--------	------	--------

TP ₆	6.15	199.39	5.81	191.58
-----------------	------	--------	------	--------

	28.85		35.27	6.42
--	-------	--	-------	------

			28.85	108.00
--	--	--	-------	--------

			6.42	
--	--	--	------	--

owner Mrs. T.E. Bollinger

Clear

Tom-Level

Ryan-Rod

Will in a small concrete block
wellhouse immediately behind

Mrs. Bollinger's Trailer

✓
W-5367

B.S.

H.T.

F.S.

ELEV.

P.M. Co.

June 21, 1967

B.M.

JP.

TP.

TB

TP.

TPK

21.70

3.34

184.34

6.48

177.86

2.70

180.56

9.78

170.78

2.12

172.90

3.66

169.24

8.02

177.26

1.96

175.30

5.52

180.82

8.84

171.98

30.72

21.70

9.02

181.00

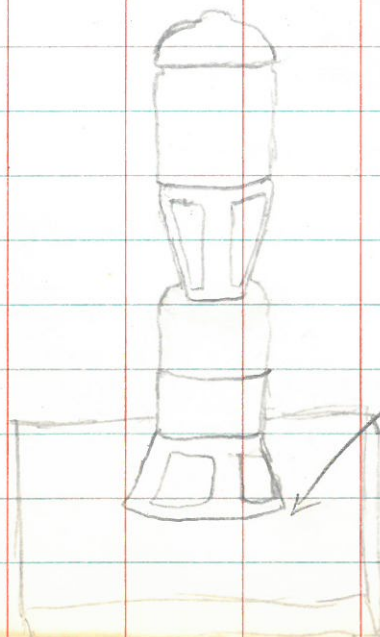
9.82

171.98

U.S. G.S. B.M. # 6104 Revert 1949

Owner - W. E. Hales

Clear + Hootch !!

Spear - Level
Sum - Rod

W-4884 B.S. H.I., F.S.

B.M.

TP₁ 3.55 162.24 8.00 154.24TP₂ 4.40 158.64 5.30 153.34TP₃ 5.55 158.89 5.30 153.59

13.50

18.60 5.10

13.50

5.10

Elev. Polk Co.

158.69

USC + GS Bm #C-104-1942

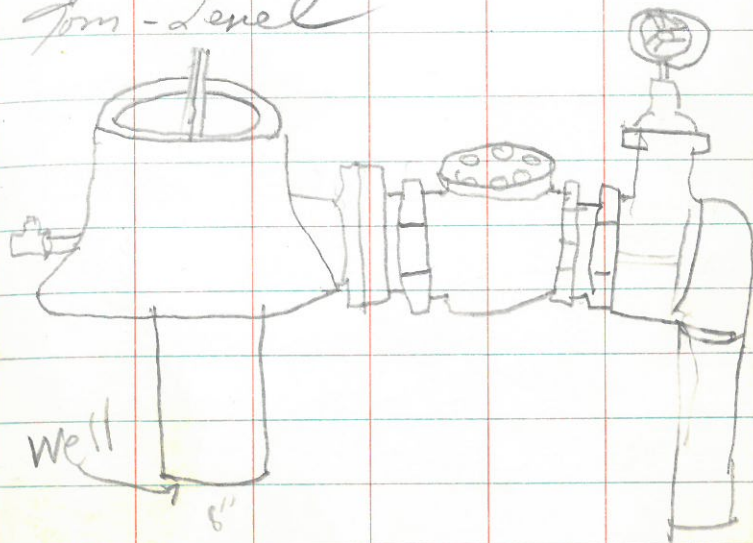
June 21 1967

owner W. T. Fusselle

clear to cloudy

Ryan - Rod

Tom - Level



W-4821

B.S.

H.T.

F.S.

ELEV. 156.6

June 21, 1967

B.M.

157.00 Providence 200 shed W. Worcester, Canton

TR

5.21 162.21 6.02 156.19

TR

5.12 161.31 5.26 156.05

1033

1128

10.33

95

Owner - Combe's Equipment Co.

Rye - Lend

Som - Rod

Clean. Co. & Hot



4"

✓ W-6863 B.S. H.I. F.S.					ELEV.	Pd. Co.	June 26, 1967
B.M.	4.2				155.00	Label at Top. Rd. Intersection	Elevation
TP ₁	4.46	159.46	5.74	153.72	19.36		
TP ₂	3.84	157.56	7.48	150.08	135.64		
TP ₃	2.88	152.96	8.00	144.96			Dunes - George Jenkins - Lone Palm Golf Course
TP ₄	2.30	147.26	8.44	138.82			
TP ₅	2.70	141.52	4.28	137.24			Overcast & Hot
TP ₆	4.36	141.60	5.50	136.10			Ryan - Leed
TP ₇	5.34	141.44	5.64	135.80			Gom - Rod
TP ₈	4.54	140.34	4.70	135.64			
30. TP ✓				197.8			Well made & locked well
				30.42			house at 13 th hole
				11.36			

W-7749 BS. H.I. F.S. Elev.

Polk Co

June 22, 1961

B.M

193

Lakeland Topo Rd. Intersec. Elera

TP₁ 4.00 197. 3.35 193.75

TP₂ 2.33 196.08 11.15 184.93

TP₃ .85 185.78 11.70 174.08

TP₄ 1.30 175.38 7.95 167.43

TP₅ 4.00 171.43 5.80 165.63

TP₆ 4.95 170.58 4.25 166.33

TP₇ 7.20 173.53 4.30 169.23

24.63

46.40

23.77
193.00

24.63

23.77

owner - City of Lakeland

Hot and Cloudy

Tom - level

Ryan - Rod

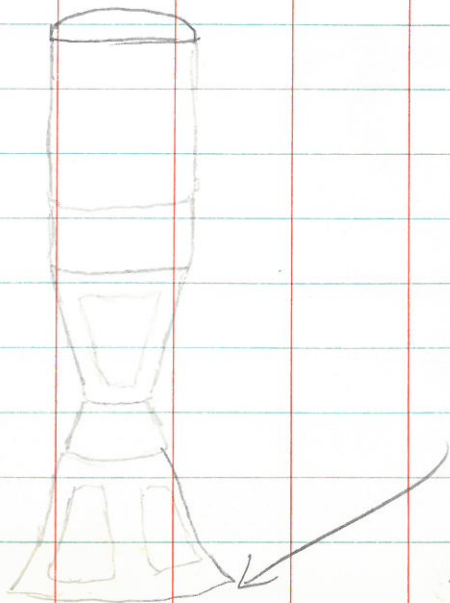
W-5826	BS.	H.I.	F.S.	FLV.
B.M.				148.00
TP	0.10	148.10	10.20	137.90
TP	0.40	138.30	10.58	127.72
TP	3.86	131.58	7.24	124.34
TP	6.34	130.68	1.20	129.48
TP	11.02	140.50	3.32	137.18
	21.72		32.54	
			21.72	
			10.82	

Pdbs Co. June 22, 1967
 Mulberry Jopo Street, Elev. Rd. intersection

Owner - Dan Beerman

Clear to Cloudy & Hot

Hydro - Level
 Iron Rod



N-4932 B.S. H.I. F.S.

Elev. Pdk Co

JUNE 22 1967

B.M.

141

Mulberry Tapo sheet Rd Inter. Elev

TP, 7.38 148.38 5.30 143.08

OWNER A.B. Curls

TP, 5.30 141.00

OVERCAST

Tom-Lever

Ryan-Rod

W-5982 BS. HI FS. Elev. BKK Co JUNE 23 196

B.M. 198

TP₁ 2.32 20032 9.25 191.07 9.09

TP₂ 1.40 19247 10.80 181.67 193.91

TP₃ 2.00 183.67 8.55 175.12

TP₄ 4.55 179.67 2.16 177.51

TP₅ 9.05 186.56 2.00 184.56

TP₆ 11.80 196.36 2.50 193.86

TP₇ 4.48 198.34 4.43 193.91

35.60
30.69
4.91

39.69
35.00
4.69

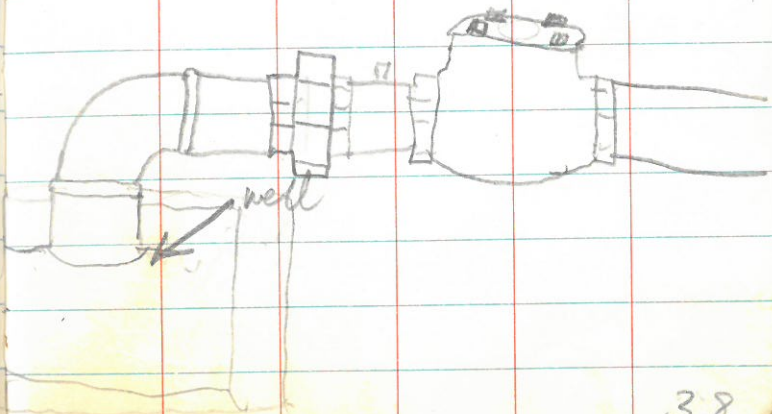
Mulberry Topo sheet Ad. Int. Elev.

owner Lakeland Highland Coop
Assn

Hot and Cloudy

Tom - Level

Ryan - Rod



Polk County

ELEV.

June 23, 1967

W-5448

127.00'

Owned by Kraft Foods Co.

W-5952

127.00'

Located on Interstate # 4
West of Lakeland, Florida

The plant site had been
graded to a level of
127.00' according to the
plant engineers.

W-5448 West of Water Tower

W-5952 - Well under the water tower

Gravity Sta.

Bartow

B.S.

H.T.

F.S.

ELEV.

108.5

H.SSUM.

Polk Co.

North side of road

July 9, 1924

B.M.

10.00

5+00 4.24 14.24 4.38 9.86

5+10 14.24 4.40 9.84

5+20 4.46 9.78

5+30 4.52 9.72

5+40 4.58 9.66

5+50 4.64 9.60

5+60 4.70 9.54

5+70 4.78 9.46

5+80 4.85 9.39

5+90 4.92 9.32

6+00 4.98 9.26

6+10 5.04 9.20

6+20 5.12 9.12

6+30 5.15 9.09

6+40 5.24 9.00

6+50 5.34 8.90

Series

9125

B.M.

10.00

North Side

July 9, 1967

6+60 4.24 14.24 5.44 8.80

6+70 5.56 8.68

6+80 5.68 8.56

6+90 5.78 8.46

7+00 5.82 8.42

7+10 5.92 8.32

7+20 5.94 8.30

7+30 5.88 8.36

7+40 5.76 8.48

7+50 5.74 8.50

7+60 5.68 8.56

7+70 5.64 8.60

7+80 5.56 8.68

7+90 5.56 8.68

8+00 5.54 8.70

8+10 5.48 8.76

Sinks

H. J.

D.S.

Elev.

10.00

B.M.

8+20

4.24

14.24

5.48

8.76

8+30

5.48

8.76

8+40

5.44

8.80

8+50

5.40

8.84

8+60

5.36

8.88

8+70

5.26

8.98

8+80

5.26

8.98

9+00

5.24

9.00

9+10

5.20

9.04

9+20

5.22

9.02

9+20

5.14

9.10

North Side July 9, 1967

Barlow	B.S.	I.T	F.S.	FLIP	108.57 Hroun.
B.M.					10.00

Sand Jet

0+10	4.24	14.24	4.28	9.96
0+20			4.36	9.88
0+30			4.40	9.84
0+40			4.46	9.78
0+50			4.52	9.72
0+60			4.58	9.66
0+70			4+66	9.58
0+80			4+74	9.50
0+90			4+82	9.42
1+00			4+88	9.36
1+10			4+96	9.28
1+20			5+06	9.18
1+30			5.14	9.10
1+40			5.24	9.00
1+50			5.32	8.92
1+60			5.40	8.84

Lmbs

Flow

South Side of Road July 9, 1967

1+70	4.24	14.24	5.48	8.76
1+80			5.56	8.68
1+90			5.62	8.62
2+00			5.68	8.56
2+10			5.74	8.50
2+20			5.76	8.48
2+30			5.72	8.52
2+40			5.68	8.56
2+50			5.62	8.62
2+60			5.60	8.64
2+70			5.60	8.64
2+80			5.58	8.66
2+90			5.56	8.68
3+00			5.56	8.68
3+10			5.52	8.72
3+20			5.52	8.72

Elm

South Side of Road

3+30 4.24 14.24 5.54 8.70

3+40 5.52 8.72

3+50 5.50 8.74

3+60 5.46 8.78

3+70 5.42 8.82

3+80 5.40 8.84

3+90 5.36 8.88

4+00 5.30 8.94

Barrow	B.S.	H.T.	F.S.	Elev.	Assum
B.M.					108.57
					10.00

Stakes 30' from S side of Road July 9, 1961

10+00	4.24	14.24	3.20	11.04	
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10+30 ✓			3.22	11.02	
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10+60 ✓			3.56	10.68	
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10+90 ✓			3.44	10.80	
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11+20 (perpet line)			3.62	10.62	
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11+50 ✓			3.80	10.44	
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11+80 ✓			3.74	10.50	
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12+00 (perpet line)			4.20	10.04	
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12+10			4.44	9.80	
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12+20			4.28	9.96	
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12+30			4.36	9.88	
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12+40			4.42	9.82	
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12+50			4.52	9.72	
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12+60			4.42	9.82	
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12+70			4.40	9.84	
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12+80 (perpet line)			4.46	9.78	
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Stake 30 Iron Seed head

117

10.00 10
(C. neibers)

4.80 / 4.80 4.92 9.88

3400

4.84	9.96
------	------

13 A32

4.84

13760

13290

4.80 10.00

19720

4.70 11.12

1430 (propyl line)

B.S. I.T. F.S. Elev. Assun.

Stake 60' back of Road

B.M.

108.57
10.00

14+00 4.66 14.66 2.92 11.74

14+30 3.00 11.66

14+60 3.28 11.38

14+90 3.42 11.24

15+50 3.70 10.96

15+80 3.82 10.84

16+10 3.96 10.70

16+20 4.12 10.54

16+30 4.20 10.46

16+40 4.26 10.40

16+50 4.22 10.44

16+60 4.18 10.48

16+70 4.24 10.42

16+80 4.16 10.50

16+90 4.44 10.22

17+00 4.28 10.38

prop. line

Stake 60' South of Road July 9, 1964

17+10 4.36 10.30

17+20 4.40 10.26

17+30 4.32 10.34

17+40 4.18 10.48

17+50 4.22 10.44

17+60 4.24 10.42

17+70 4.38 10.28

17+80 4.24 10.42

Bartow
B.M.

Elev.

108.57
Mean

10.00

0+00

July 13, 1927

20+00 8.30 18.30 4.92 13.38

20+30 5.05 13.25

20+60 5.52 12.78

20+90 5.92 12.38

21+20 6.32 11.98

21+50 6.56 11.74

21+70 6.56 11.74

Bartow
B.M.

30' S of 20+00 line July 3

25+00 8.30 18.30 4.84 13.46

25+30 5.26 13.04

25+60 5.64 12.66

25+90 5.98 12.32

26+20 6.26 12.04

July 13, 1967

Elev. ~~Assu~~
10.00

B.M.

26+50 8.30 19.30 6.49 11.82

26+80 6.50 11.80

27+10 6.46 11.84

27+40 6.78 11.52

27+70 6.88 11.42

28+00 7.36 10.94

28+30 7.40 10.90

28+60 7.52 10.78

28+90 7.56 10.74

29+20 5.20 15.94 5.46 10.48

29+50 5.44 10.50

29+80 5.66 10.28

Griffin ✓
1 B.S. H.I. F.S. ELEV

B.M.

T.P. 6.84 116.34 3.38 112.96

3.38

3.46

109.50

3.46

112.96

Polk Co.

10+00 Northernmost stake of line D

Run from S.R.O. B.M. By Cannon.

Owner F.G.S. of F.B.L.

Clear + Hot afternoon

Rye - Seed

Don - Rod

July 3/1917

Buffin ✓
#2 D.S. H.T. F.S. Elev.

B.M.

TP	4.54	114.04	6.94	107.10	109.50
			4.54		2.40
			2.40		107.10

P.B.L.

July 13/1967

10+00 - to the next stn. of line D, nearly

Leaving for S.R.D. B.M.

Dinner - F.G.S. & F.B.C.

Clear & Hot afternoon

Ryan - Level

Don - Rob

Richland ✓
B.M. #1

B.M.

TP	5.20	113.77	4.72	109.05	108.57
			4.72		2.48
			4.72		109.05

	BS	HI	F.S.	Elev.	10857					FS	FLA
BM					10.00	53480				5.80	11.20
49+00	7.00	17.00	4.35	12.65		54410				6.22	10.78
49+30			4.48	12.52	98.57	54440				5.64	11.36
49+60			4.98	12.02							
49+90			5.28	11.72							
50+20			5.50	11.50							
50+50			5.56	11.44				BS	HI	FS	
50+80			5.60	11.40		Bm					12.65 (49+00)
51+10			5.40	11.60		49-60	5.22	17.87	5.00	12.87	
51+40			5.55	11.45		49-90			5.35	12.52	
51+70			5.70	11.30		49-110			7.16	10.71	
52+00			5.76	11.24		49-120			7.10	10.77	
52+30			5.92	11.08		52+40	5.24	16.34	5.31	11.00	11.10
52+60			5.90	11.10		52+50		16.34	5.24	11.10	
52+90			5.56	11.44		52+70		16.34	5.20	11.14	
53+20			5.74	11.26		52+80		16.34	5.22	11.12	
53+50			5.90	11.10		52+60+10W			5.12	11.22	
52+60+10E	5.24	16.34	5.14	11.20		← 52+60+20W			5.04	11.30	

	B.S.	H.T.	F.S.	FLV.	(49+00)					
B.M.					12.65					
55+00	4.14	16.79	6.16	10.63	>	59+80		5.76	11.03	
55+10			6.30	10.49		60+10		5.76	11.03	
55+30			4.26	12.53		60+40		5.64	11.15	
55+60			4.42	12.37		60+70		5.68	11.11	
55+90			4.30	12.49		61+00		5.70	11.09	
56+20			4.32	12.47		61+30		5.50	11.29	
56+50			4.48	12.31		61+60		5.52	11.27	
56+80			4.94	11.85						57+40
57+10			5.18	11.61		B.M.				11.35
57+40		16.79	5.44	11.35		57+50	4.94	16.29	5.02	11.27
57+70			5.46	11.33		57+60		5.10	11.19	
57+00			5.58	11.21		57+80		5.38	10.91	
58+30			5.50	11.29		57+90		5.38	10.91	
58+60			5.72	11.07						
58+90			5.60	11.19						
59+20			5.60	11.19						
59+50			5.76	11.03						

BS. H.T. F.S. FLIED (49+00)

B.M. 12.65
 36+40 3.70 16.35 3.86 12.49
 36+50 3.90 12.45
 36+70 4.18 12.17
 36+80 4.22 12.13
 36+60(A) 3.88 12.47
 36+60(B) 3.92 12.43
 36+60(C) 4.16 12.19
 36+60(D) 4.24 12.11

BS. H.T. F.S. FLIED July 26

B.M. (57+40) 11.35
 72+00 4.94 16.29 5.02 11.27
 72+10 5.20 11.09
 72+20 5.26 11.03
 72+30 5.26 11.03
 72+40 5.46 10.83
 72+50 5.44 10.85
 72+60 5.48 10.81

B.S. H.T. F.S. E.P.M. 56+50

July 19, 1967

B.M. 12.31

65+00 3.16 15.47 5.76 9.71 70+10 5.90 9.57

65+30 5.88 9.59 70+40 5.40 9.57

65+60 5.92 9.55 70+70 5.12 9.55

65+90 5.74 9.73 71+00 5.82 9.65

66+20 6.02 9.45 71+30 5.72 9.75

66+50 6.38 9.09 B.M. 65+00 9.71

66+80 6.58 8.89 64+70 5.42 15.23 5.28 9.95

67+10 6.68 8.79 64+40 5.08 10.15

67+40 6.62 8.85 64+10 4.56 10.67

67+70 6.54 8.93

68+00 6.50 8.97

68+30 6.42 9.05

68+60 6.32 9.15

68+90 6.30 9.17

69+20 6.14 9.33

69+50 6.04 9.43

69+80 5.96 9.51

B.S. H.T. F.S. ELEV. 108.57

B.M.

10.00

100+00	3.70	13.70	5.70	8.00
100+30			5.76	7.94
100+60			5.64	8.06
100+90			5.56	8.14
101+20			5.48	8.22
101+50			5.34	8.36
101+80			5.26	8.44
102+10			5.22	8.48
102+40			5.30	8.40
102+70			5.50	8.20
103+00			5.50	8.20
103+30			5.42	8.28
103+60			5.36	8.34
103+90			5.28	8.42
104+20			5.22	8.48
104+50			5.26	8.44

July 19, 1967

B.S. H.T. F.S. ELEV.

104+80	3.70	13.70	5.26	8.44
105+10			5.32	8.38
105+40			5.44	8.26
105+70			5.52	8.18
106+00			5.64	8.06
106+30			5.70	8.00
106+60			5.82	7.88
106+90			5.94	7.76
107+20			6.06	7.64
107+50			6.12	7.58

Rickland	B.S.	H.T.	F.S.	FLU.	100+00
B.M.		100+00			8.700
200+00	6.96	124.96	4.00	10.96	
200+30			3.92	11.04	
200+60			3.66	11.30	
200+90			3.28	11.68	
201+20			3.42	11.54	
201+50			3.76	11.20	
201+80			3.70	11.26	
202+10			4.10	10.86	
202+40			4.14	10.82	
202+70			4.50	10.46	
203+00			4.82	10.14	
203+30			4.80	10.16	
203+60			4.48	10.48	
203+90			4.52	10.44	
204+20			4.80	10.16	
204+50			4.88	10.08	
204+80			4.80	10.16	

Station	B.S.	H.T.	F.S.	FLU.	July 25/1983
205+10			4.98	9.98	
205+40			4.84	10.12	
205+70			4.82	10.14	
206+00			4.86	10.10	
206+30			5.12	9.84	
206+60			5.32	9.64	
206+90			5.60	9.36	
207+20			5.64	9.32	
207+50			5.36	9.60	

	B.S.	H.I.	F.S.	FLEV	100+00	Pd 66			July 26, 1967
B.M.					8.00				
110+00	7.54	15.54	7.56	7.98		115+10	6.12	9.42	
110+30			7.72	7.82		115+40	6.08	9.46	
110+60			6.64	8.90		115+70	6.16	9.38	
110+90			6.40	9.14		116+00	6.36	9.18	—
111+20			6.28	9.26		116+30	6.28	9.26	
111+50			6.12	9.42		116+60	6.32	9.22	
111+80			5.96	9.58		116+90	6.40	9.14	
112+10			5.98	9.56		117+20	6.56	8.98	
112+40			6.22	9.32		117+50	6.66	8.88	
112+70			6.28	9.26		Parkland			
113+00			6.32	9.22		Well #2	Shale Lane		July 26, 1967
113+30			6.28	9.26		B.M.			106.57
113+60			6.24	9.30		T.P.	7.54	114.11	5.02 109.09
113+90			6.00	9.54					
114+20			5.92	9.62					
114+50			5.96	9.58					
114+80			6.10	9.44					

B.S.

H.I.

F.S.

Elev.

P.M.

Aug 26/90

8.00

120+00 7.54 15.54 7.26 8.28

120+30 6.68 8.86

120+60 5.74 9.80

~~120+90~~
~~no station~~

121+20 5.06 10.48

121+50 5.00 10.54

121+80 5.08 10.46

122+10 5.20 10.34

122+40 5.22 10.32

122+70 5.24 10.30

123+00 5.50 10.04

123+30 5.32 10.22

123+60 5.44 10.10

123+90 5.26 10.28

124+20 5.06 10.48

124+50 5.06 10.48

124+80 5.10 10.44

125+10 5.08 10.46

125+40 5.26 10.28

125+70 5.24 10.30

126+00 5.48 10.06

126+30 5.70 9.84

126+60 5.24 10.30

126+90 5.26 10.28

127+20 5.54 10.00

127+50 5.58 9.96

Richland B.S. H.I. F.S. FLEU

P. 66

July 26, 1967

P.M.

108.03

300+00 2.54 110.57 3.82 106.75

300+30 4.02 106.55

300+60 4.18 106.39

300+90 4.26 106.31

301+20 4.50 106.07

301+50 4.38 106.19

301+80 4.40 106.17

302+10 4.58 105.99

302+40 4.64 105.93

302+70 4.76 105.81

303+00 4.96 105.61

Each of these elevations are
0.24' too high.

Example: 300+00 106.75

- 0.24
106.51

X

Benton
Richland
Well #3

2.54 110.57 3.22 107.35

F. 66 1 Well on
Bear Creek Rd.

Right hand	B.S.	H.T.	I.S.	FLUO	July 27	Right hand	B.S.	H.T.	I.S.	FLUO	July 27
B.M.	300+00				106.75	B.M.	300+00				106.75
400+00	5.98	112.73	4.78	107.95		305+00	5.48	112.73	5.38	107.35	
400+30			4.88	107.85		305+30			5.72	107.01	
400+60			5.00	107.73		305+60			5.80	106.93	
400+90			5.22	107.51		305+90			5.74	106.99	
401+20			4.94	107.79		306+20			5.92	106.81	
401+50			5.68	107.05		306+50			6.04	106.69	
401+80			5.72	107.01		306+80			6.06	106.67	
402+10			5.14	107.59		307+10			6.16	106.57	
402+40			5.20	107.53		307+40			6.44	106.29	
402+70			6.52	106.21		307+70			7.16	105.57	
403+00			6.62	106.11		308+00			7.40	105.33	

Correction factor $\delta = 0.24$ ft.

Correction factor $\delta = 0.24$ ft.

Run/End	BS.	H.I.	F.S.	ELEV	2627
B.M.		300+00			106.75
310+00	5.48	112.73	4.54	108.19	
310+30			4.74	107.99	
310+60			4.86	107.87	
310+90			4.52	108.21	
311+20			4.72	108.51	
311+50			4.50	108.23	
311+80			4.96	107.77	
312+10			5.00	107.73	
312+40			5.24	107.49	
312+70			6.98	105.95	
313+00			6.82	105.91	

Correction factor of -0.24 ft.

Pickland B.S. H.T. F.S. ^{11.19.67} August 1, 1967

B.M. 65+00 9.71

75+00 5.42 15.13 3.72 11.41

75+30 4.66 10.47

75+60 4.86 10.27

75+90 4.46 10.67

76+20 4.78 10.35

76+50 4.84 10.29

76+80 4.84 10.29

77+10 5.24 9.89

77+40 5.14 9.99

77+70 5.36 9.77

78+00 5.50 9.53

78+30 5.58 9.55

78+60 5.26 9.87

78+90 5.00 10.13

79+20 4.86 10.27

79+50 4.76 10.37

Pickland B.S. H.T. F.S. ^{11.19.67} August 2, 1967

B.M.

80+00 5.42 15.13 4.80 9.33

80+30 5.46 9.67

80+60 5.46 9.67

80+90 5.30 9.83

81+20 5.06 10.07

81+50 5.18 9.95

81+80 5.58 9.55

82+10 5.74 9.39

82+40 5.80 9.23

82+70 5.76 9.37

83+00 5.76 9.37

83+30 5.86 9.27

83+60 5.58 9.55

83+90 5.60 9.53

84+20 5.44 9.69

84+50 5.28 9.95

Reckard	B.S.	H.T.	F.S.	Reckard	B.S.	H.T.	F.S.
BM		65+00		BM		65+00	
85+00	7.32	17.03	4.18	90+00	6.16	15.87	3.84
85+30			4.12	90+30			4.18
85+60			6.46	90+60			4.30
85+90			6.90	90+90			4.44
86+20			4.90	91+20			4.06
86+50			4.84	91+50			3.94
86+80			4.94				
87+10			5.14				
87+40			5.74				
87+70			5.68				
88+00			6.20				
88+30			6.16				
88+60			6.34				
88+90			6.76				
89+20			6.34				
89+50			6.50				

9.71

9.71

August 2, 1967

P. H. Unit	B.S.	H.T.	F.S.	F.L.C.	August 2	P. H. Unit	B.S.	H.T.	F.S.	F.L.C.	August 2
B.M.		65+00			9.71	B.M.		65+00			9.71
92+00	6.16	15.87	3.96	11.91		96+00	6.16	15.87	4.08	11.79	
92+30			4.02	11.85		96+30			4.16	11.71	
92+60			4.20	11.67		96+60			4.52	11.35	
92+90			4.34	11.53		96+90			5.22	10.65	
93+20			4.58	11.29		97+20			4.88	12.99	
93+50			4.50	11.37		97+50		11.17	4.70	11.17	
93+80			4.42	11.45		97+80			4.54	11.33	
94+10			4.26	11.61		98+10			4.56	11.31	
94+40			3.98	11.89		98+40			4.26	11.61	
94+70			3.90	11.97		98+70			4.36	11.51	
95+00			4.02	11.85		99+00			4.52	11.35	
95+30			3.96	11.91		99+30			4.48	11.39	
95+60			3.94	11.93		99+60			4.38	11.49	

Rickland	B.S.	H.T.	F.S.	ELEV.	August 2, 1967	Rickland	B.S.	H.T.	F.S.	August 4, 1967
B.M.		97+50		11.17		B.M.		0+00		12.00
500+00	5.78	16.95	4.84	12.11		169+10	5.00	15.00	4.94	10.06
500+30			4.82	12.13		169+40			4.70	10.30
500+60			4.68	12.27		169+70			4.62	10.38
500+90			4.70	12.25		170+00			4.62	10.38
501+20			4.70	12.25		170+30			5.24	9.76
501+50			4.64	12.31		170+60			5.48	9.52
501+80			4.74	12.21		170+90			5.76	9.24
502+10			5.02	11.93		171+20			5.62	9.38
502+40			4.78	12.17		171+50			5.52	9.48
502+70			4.22	12.73		171+80			5.48	9.52
503+00			3.82	13.13		172+10			5.14	9.86
503+30			4.10	12.85		172+40			4.96	10.04
503+60			4.36	12.59		172+70			5.04	9.96
503+90			4.80	12.15						
504+20			3.78	13.17						
504+50			4.38	12.57						

Pullard	BS	H.T.	F.S.	F.I.E.W.	August 4
B.M.		01.00			10.00

165+00	5.00	15.00	5.06	9.94	12.40	15.48	5.06	10.42
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165+30			5.22	9.78	162+70		5.22	10.26
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165+60			5.20	9.80				
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165+90			5.22	9.78				
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166+20			5.26	9.74				
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166+50			4.92	10.08				
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166+80			4.22	12.78				
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Pullard	BS	H.T.	F.S.	F.I.E.W.	August 4
B.M.					10.00

160+00	5.48	15.48	4.42	11.06	155+00	5.48	15.48	4.54	10.94
--------	------	-------	------	-------	--------	------	-------	------	-------

160+30			5.16	10.32	155+30			4.70	10.78
--------	--	--	------	-------	--------	--	--	------	-------

160+60			5.40	10.08	155+60			4.88	10.60
--------	--	--	------	-------	--------	--	--	------	-------

160+90			5.40	10.08	155+90			5.02	10.46
--------	--	--	------	-------	--------	--	--	------	-------

161+20			5.52	9.96	156+20			5.26	10.22
--------	--	--	------	------	--------	--	--	------	-------

161+50			5.50	9.98	156+50			5.24	10.24
--------	--	--	------	------	--------	--	--	------	-------

161+80			5.36	10.12	156+80			5.12	10.36
--------	--	--	------	-------	--------	--	--	------	-------

162+10			5.16	10.32	157+10			5.12	10.36
--------	--	--	------	-------	--------	--	--	------	-------

					157+40	15.48	5.06	10.42
--	--	--	--	--	--------	-------	------	-------

B.S. N.I. F.S. ELEV.

B.M.

10.00

150+00 5.48 15.48 4.38 11.10

150+30 4.52 10.96

150+60 4.76 10.72

150+90 4.76 10.72

151+20 4.94 10.54

151+50 5.12 10.36

151+80 5.38 10.10

10.42

152+10 4.92 15.34 4.82 10.52

152+40 4.78 10.56

152+70 4.58 10.76

B.S. N.I. F.S. ELEV.

B.M.

303+00

105+61

350+00 5.28 110.89 3.36 107.53

350+30 3.50 107.39

350+60 3.38 107.51

350+90 3.00 107.89

351+20 3.26 107.63

351+50 2.86 110.51 3.12 107.39

B.S. on
F.H.D.

351+80 110.89 3.24 107.65

352+10 3.86 107.03

352+40 3.98 106.91

352+70 4.04 106.85

353+00 3.82 107.07

Correction factor of - 0.24 ft.

B.S. H.T. F.S. ELEV August 4

B.M.

351+80

107.65

355+00 2.86 110.51 3.20 107.31

355+30 3.56 106.95

355+60 3.72 106.79

355+90 3.90 106.61

356+20 3.84 106.67

356+50 3.62 106.89

356+80 3.56 106.95

357+10 3.78 106.73

357+40 4.00 106.51

357+70 4.06 106.45

358+00 3.90 106.61

358+30 3.74 106.77

358+60 3.86 106.65

358+90 3.88 106.63

B.S. H.T. F.S. ELEV

B.M.

303+00

105.61

7P. 6.06 111.67 4.24 107.43

7P2 6.96 114.39 5.58 108.81

13.02 9.82

9.82
3.20

Correction factor ± 0.24 ft.

11-7307 BS H.T. F.S. FCFU

B.M.

TP. 6.24 177.76 538 172.38

rPv 5.46 177.84 5.62 172.22

11.70

11.00

171.518
70

172.22

Polk Co.

B.M. USCGS

U27, 1934

August 8, 1967

Owner - City of Eagle Lake

Ryan - Level

Don - Rod

Well inside small well
house about 100 ft. West
of Eagle Lake Water Tower

W-5362 BS H.T. F.S. FLEV

BM

142.00

TP1	5.00	147.00	6.38	140.62	2.40
-----	------	--------	------	--------	------

TP2	4.28	144.90	5.50	139.40	139.40
-----	------	--------	------	--------	--------

9.28					
------	--	--	--	--	--

12.88					
-------	--	--	--	--	--

2.60					
------	--	--	--	--	--

Pdbles

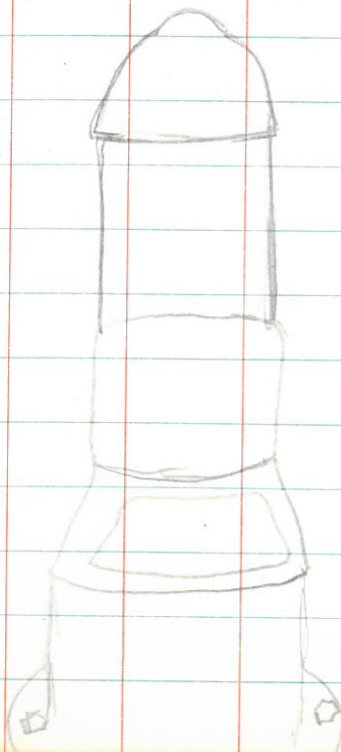
August 8, 1967

Classical Rd. Intersect. Chart

Lake Course Totals

Rise Level

For Rod



W-5678 BS H.T. F.S. ELEU

B.M.					123.00
TP	1.04	124.04	11.90	112.14	810
TP	0.18	112.32	8.84	103.48	114.84
TP	9.74	13.22	1.38	111.84	
TP	6.18	118.02	3.18	114.84	
	7.14		25.30		
			17.14		
			8.16		

P. 66

August 15, 1961

Driller N.F. 2nd - Rd. Intersection

Owner - Assembly of God (Alapogood Camp)

Ryan - Level

Tom - Rod



well

W 5135 BS. H.T. F.S. FLEU.

B.M.

143.00

TP 8.04 151.04 0.94 150.10 9.00

TP 7.00 157.10 4.34 152.76

TP 5.08 159.84 5.34 152.50

TP 20.12 10.62

10.62

9.50

P. 66.

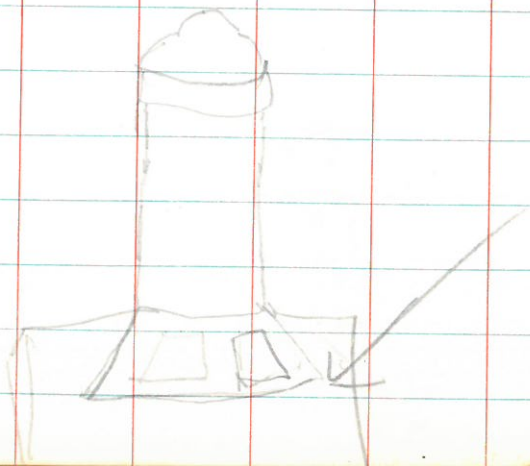
August 15, 1961

2nd prod.

Dinner F.S. Davidson, Leon Ray, James Lee

Ryan - Level

Don - Rod



W. 6/58 B.S. H.T. F.S. ELEU

A.M.

143.00

TP 8.04 151.04 0.94 150.10

10.22

TP 7.00 157.10 4.34 152.76 153.22

TP 5.08 157.84 4.62 153.22

20.12

9.90

9.90

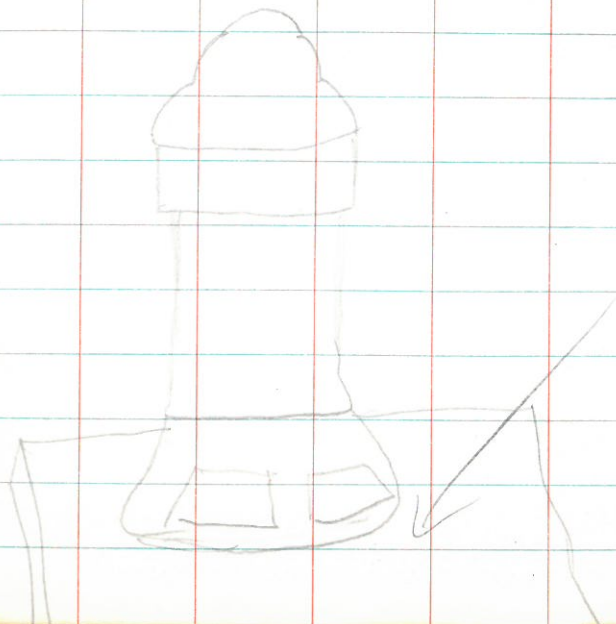
10.22

Falble

August 15, 1967

Dunes F.S. Davidson, Sun Bay, Nova Scotia

Rye - Level
Sun - Red



✓
W-5351

B.S.

A.T.

F.S.

FLEV

P. 66

August 15, 1967

B.M.

129.20

Calson Park Rd. Elevation

TP

6.72

135.72

6.74

128.98

3.00

TP

5.12

134.10

4.10

130.00

132.40

Owner - Polk County Commissioners

TP

7.56

137.56

4.32

133.24

TP

5.24

138.48

6.08

132.40

Lyn Level

Tom Pot

246.4

21.24

21.24

3.40

Well Located well house
 Behind Office Building 1
 Polk County Maintenance Yard District 2

W[✓] PS A.I F.S. FUEL

B.M.					78.00
TP	6.76	84.76	2.46	82.30	2.18
TP~	4.26	86.56	5.24	82.32	77.18
TP3	5.60	86.92	6.74	80.18	
	<u>16.62</u>		<u>14.44</u>		
	14.44				
	<u>2.18</u>				

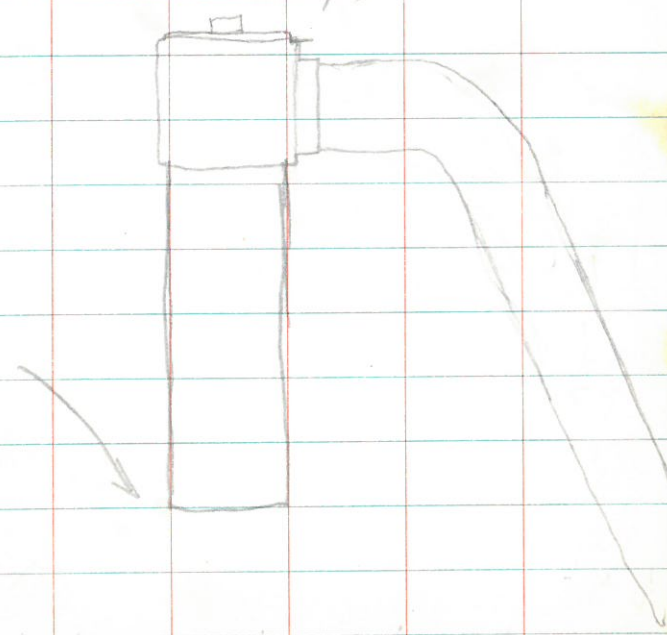
Palke August 15, 1967

Topo Map Rd Intersection location

Gas - Level

Don Rod

Dinner for Forehand (Walking
Water Fish Camp)



W-5470 B.S. H.T. F.S. F.C.A.

B.M.

132.00

T.P. 4.28 136.28 7.18 129.10

Roll 60

August 16/1967

Poyner Topo Sheet Id. later elevation

Quincy - U.S.G.S. # 815-149-3

River - Level

Tom - Rod



W-4919 B.S. H.I. F.S. ELEV

B.M.					180.00
TP ₁	2.56	182.56	8.22	174.34	^{8.48} 172.02
TP ₂	3.78	178.12	9.08	169.04	
TP ₃	2.30	171.34	6.06	165.28	
TP ₄	11.30	176.58	7.56	172.02	
	<u>19.94</u>		<u>27.9</u>		
			<u>19.94</u>		
			<u>7.98</u>		

Pollito.

August 17, 1967

Sum Lake Dope St. Rd. Intersect. elevation

Owner - Holly Wells, Inc.

Ryan - Level

Tom Rod

The well was located inside a large
tree well house north of a
vertical water tank.

Reading taken on concrete base of
well house.

W-5471

BS.

H.J.

F.S.

ELEU.

P. 66

August 17, 1967

BM

118.00

Intercession Ct, Joppe Road, Ellevation

TP1

1.90

119.90

11.64

108.26

$$\begin{array}{r} 118.00 \\ 14.04 \\ \hline 113.96 \end{array}$$

TP2

2.20

110.46

6.50

113.96

well #1

Danner. U.S. G.S. 815 - 134 - 1

$$\begin{array}{r} 110.46 \\ 4.10 \\ \hline \end{array}$$

6.78

113.68

well #2

Reyn - Level
Som - Rod

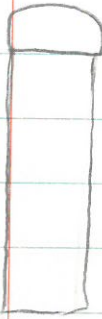
$$\begin{array}{r} 113.68 \\ 18.14 \\ \hline \end{array}$$

$$\begin{array}{r} 113.68 \\ 4.12 \\ \hline \end{array}$$

$$\begin{array}{r} 113.68 \\ 14.24 \\ \hline \end{array}$$

#2

#1



old Lake Arthur Rd

W-5474 B.S. H.I. F.S. ELEV.

B.M.

182.00

TP. 5.04 187.04 4.68 182.36 $\frac{4.22}{186.82}$

TP 8.56 190.94 4.12 186.82 #1 well

13.62 3.96 186.98 #2 well

$\frac{8.90}{4.82}$

880

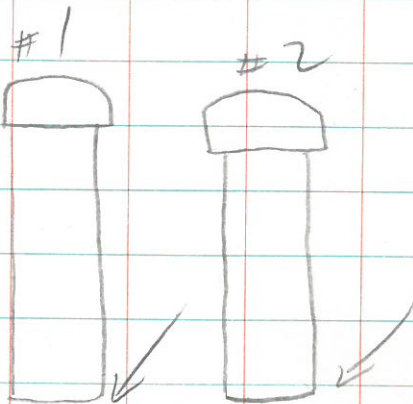
Polk Co

August 17, 1967

26. Louis SW Top Ad. stem. Elev.

Owner U.S.G.S. 815-139-2

Rgn. Level
Som. Rod



H.W.

27

W-5821

B.S.

H.T.

F.S.

ELEV.

B.M.

TP

TP₂TP₃TP₄TP₅TP₆TP₇

$$\begin{array}{r}
 40.40 \\
 39.24 \\
 \hline
 1.16
 \end{array}$$

5.34

0.40

0.00

5.30

10.94

11.96

6.46

166.31

154.71

142.83

138.79

148.01

159.93

165.59

12.00

11.88

9.34

1.72

0.04

0.80

3.46

$$\begin{array}{r}
 39.24 \\
 \hline
 1.16
 \end{array}$$

154.31

142.83

133.49

137.07

147.97

159.13

162.13

160.971

7.16

12.13

Pell Co.

H.S.C. & G.S.B.M.

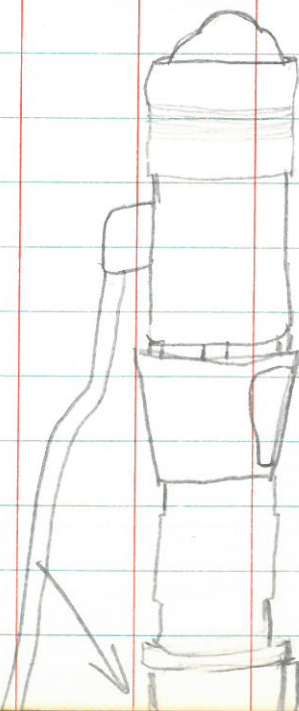
P17

1933

Owner - City of Maine City

Rye Level
Iron Rod

August 18, 1967



W-5098	B.S.	H.I.	F.S.	ELEV.	
B.M.					131.00
TP	2.06	133.06	5.22	127.84	<u>5.00</u>
TP	3.60	131.44	7.32	124.12	126.00
TP ₃	4.56	128.68	2.66	126.02	
TP ₄	5.16	131.18	5.18	126.00	
TP ₅	<u>15.38</u>		<u>20.38</u>		
TP ₆			<u>15.38</u>		
			<u>5.00</u>		

Polk Co.

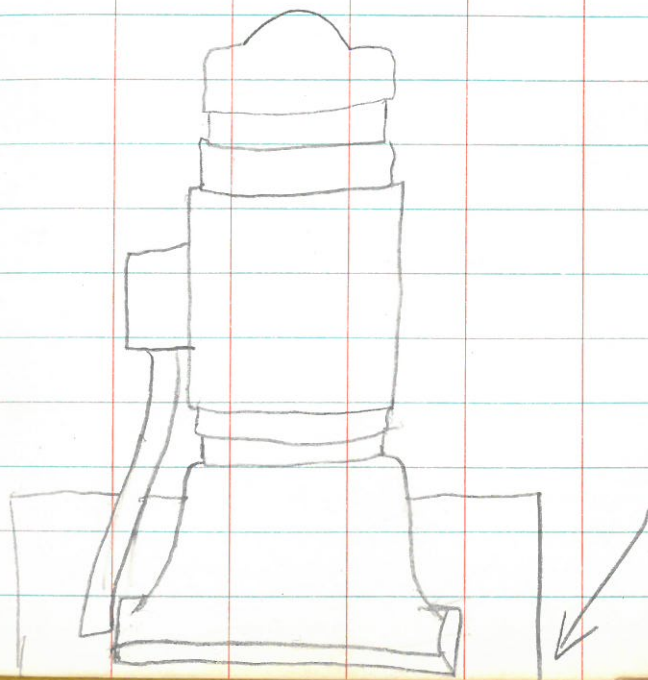
August 18, 1967

Walter Haver Sports St. Rd. Antenna Elev.

Owner - Lake Region Yacht & Country Club

Ryan - Level

Don - Rod



W-6296 BS HT F.S. F.F.V.

B.M.

152.52

TP₁ 5.76 154.28 8.90 149.38

TP₂ 3.62 153.00 4.32 148.68

9.38

3.22

9.38

3.84

Polk 6

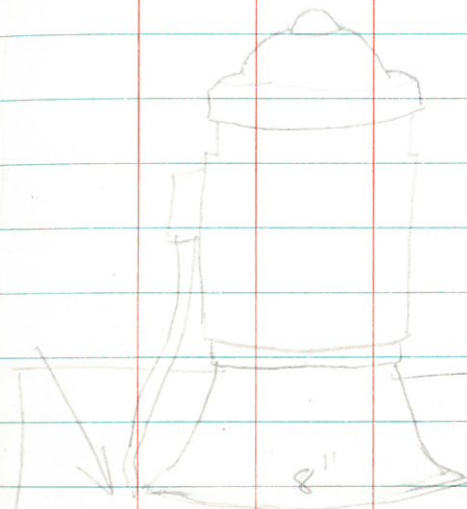
August 22, 1967

U.S.C. & G.S. BM V 17 152.519' 1933

Dinner - Adams Packing Assoc. Inc.

Upper Level

Lower Rod



W. 6095 B.S. 11.5 FLED
 B.M. 152.52
 T.P. 7.30 154.82 7.94 151.88 $\frac{1.22}{152.52}$
 T.P. 5.60 157.48 6.18 157.30
 $\frac{12.90}{157.48}$ $\frac{12.90}{157.30}$
 $\frac{1.22}{157.30}$

P. 166 August 22, 1967

U.S. & G.S. B.M. V 17 152.59' 1933

Dunbar - Adams Packing, Adams, Inc.

Pyron - Level

Don - Rod

Well inside locked concrete
 block wall house on McKean Street
 between bridge (see) & HW. 92
 overpass

W-4412 B.S. H.I. F.S. ELEV.

B.M.

134.00'

TP 5.20 134.20 5.20 134.00

TP 3.14 137.14 3.54 133.60

TP 8.34 47.4

P. 66.

August 22, 1962

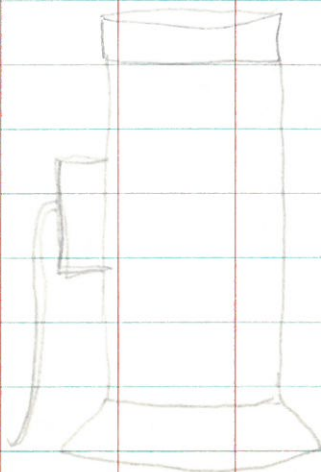
USCGS B.M. W 117

Recd 1962

Dinner - Josephine Rubinos

Papa Sand

Tom Rod



W-5700 B.S. H.S. F.S. ELEV

B.M.

TP 11.00 180.33 0.82 179.51

10.18

169.33

10.18

179.51

Polk Co

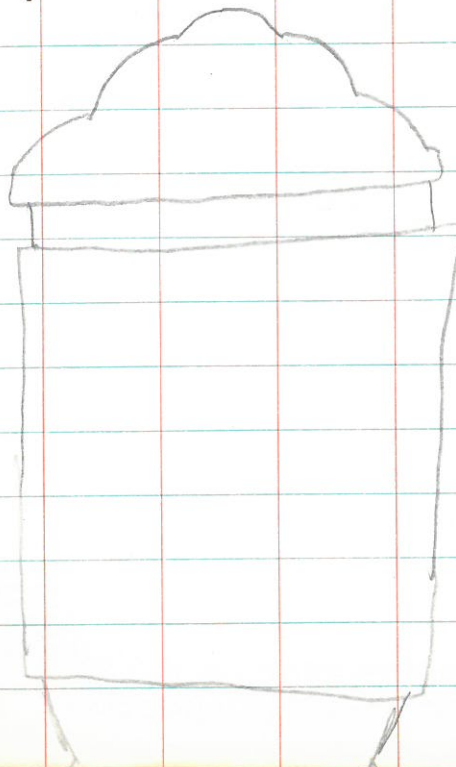
August 22, 1967

U.S. G.S. B.M. 517, 1933 161.330

Dune - edge of Lake Alfred

Ryan - Level

Don - Foot



TAKEN ON

Concrete

Flare

✓
W-5295 B.S. H.T. F.S. ELEV

B.M.

TP₁ 4.56 153.56 10.86 147.70 149.00
13.46

TP₂ 1.32 144.02 6.30 137.72 135.54

TP₃ 3.72 140.84 5.30 135.54

1.00

22.46

9.00

13.46

Roll Co

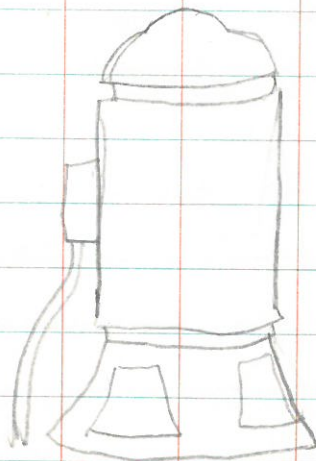
August 22, 1967

Winkler River Top Sta. Rd + RR Intersection

Owner - Raymond Stelbin

Ryan - Land

Tom - Land



W-5358 B.S. H.J. F.S. FLEO

P.M. Co.

August 22, 1988

B.M

143.00

Wash. Power Depo. St. Rd. Intersect. South

T.P. 5.70 148.70 4.70 144.00

1.22

T.P. 4.82 148.82 4.60 144.22

144.22

Owner - Paradise Island 5/10

10.52

9.30

9.30

1.22

Ryan - Lend

Don - Rod

Will make a large well house
in middle of subdivision.

W-6510 R.S. H.T. F.S. ELFU.
B.M. 127.00

TP₁ 5.32 132.32 4.66 127.66

TP₂ $\frac{4.66}{5.32}$

TP₃

TP₄

Polk Co.

August 24, 1967

Globe Lys. M. Rd. Stereo elevation

Owner - Wahneta Water System

Ryan - Level

Goon - Rod

W-5473 B.S. H.I. F.S. ELEV.

10/60

August 23, 1967

B.M.

135.00

U.S. G.S. B.M. TT 15 FFB 1958

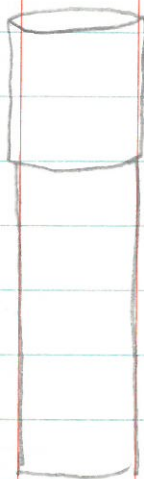
TP. 3.96 138.96 2.24 136.72 W. 11 A2

2 1/6 136.80 W. 11 A1

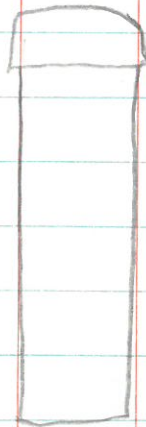
Owner - U.S.G.S. 814-143-1

Ryan - Land
Zon - Rod

#1



#2



W-5464 B.S. H.T. T.S. F.L.V.

Poll Co

August 23, 1967

B.M.

211.00'

Lake Wales Depo St. Rd intersection

TP₁ 10.76 221.76 1.16 220.60

35.70

TP₂ 8.34 228.94 2.38 226.56

246.20

Owner - City of Lake Wales

TP₃ 7.54 234.10 0.12 233.98

TP₄ 10.88 244.86 2.66 242.20

Ryan Sewer

TP₅ 10.04 252.24 5.54 246.70

Iron Rod

TP₆ 47.56

1186

1186

3570

Well inside larger green
concrete block building
Rod is taken on concrete base
of the building

at Summit
Ruckland #4

	B.S.	H.I.	F.S.	ELEV.		
B.M.					108.57	
TP ₁	8.22	116.79	6.44	110.35	1.43	
TP ₂	2.90	113.25	3.25	110.00	110.00	
	11.12		9.69			
	9.69					
	1.43					

0100 Will on site of first sink hole
on South side of Forest

Ruckland #5

	B.S.	H.I.	F.S.	ELEV.		
B.M.					108.57	
TP ₁	8.22	116.79	6.84	109.95	1.38	
	6.84				109.95	
	1.38					

0100 on Log Lane - Middle House
on West side

Ruckland #6

	B.S.	H.I.	F.S.	ELEV.		
B.M.					110.00	
TP ₁	3.25	113.25	5.60	107.65	1.63	
TP ₂	6.18	113.83	5.90	107.93	107.93	
TP ₃	5.46	113.79	5.42	108.37		
	13.29		10.92			

Ruckland #4 Baker House on Forest

W-5145 BS. H.T. FS ELEV

B.M.

TP₁ 8.44 137.44 4.54 132.90

TP₂ 6.54 139.44 3.30 136.14

TP₃ 1498 784

7.84

7.14

129.06

7.14

136.14

Polk Co

August 24, 1967

Close Japs H. Rd. Intersection elevation

Owner - Polk County School Board

Page - Level

Tom - Rod

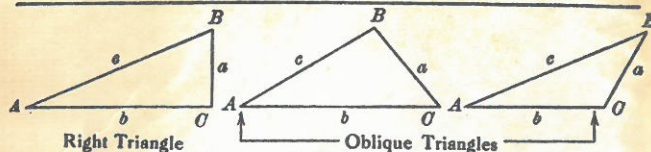
Well inside small gray
tin well house behind
school in Wahneta

$4 \times 2\frac{1}{2} = 10.00$
 2.00
 12
 14
 178.50
 150
 250
 28.00
 $280.$
 140
 420
 3
 $28\frac{1}{2}$
 14
 112
 28
 392
 7
 399
 140

500
 400
 280
 140
 2
 17
 14
 68
 171
 248.50
 1388.50
 637.00
 138.20
 139.20
 913.40
 100
 150
 1163.40
 178.50
 1341.90

4850

TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

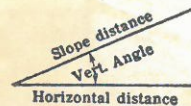
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{a}$, $\csc = \frac{c}{b}$

Given	Required	
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B, c = \sqrt{a^2 + b^2} = a \sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B, b = \sqrt{(c+a)(c-a)} = c \sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90^\circ - A, b = a \cot A, c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A, a = b \tan A, c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A, a = c \sin A, b = c \cos A$

Solution of Oblique Triangles

Given	Required	
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}, C = 180^\circ - (A + B), c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}, C = 180^\circ - (A + B), c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180^\circ - C, \tan \frac{1}{2}(A - B) = \frac{(a - b) \tan \frac{1}{2}(A + B)}{a + b}$ $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a + b + c}{2}, \sin \frac{1}{2}A = \sqrt{\frac{(s - b)(s - c)}{bc}}$ $\sin \frac{1}{2}B = \sqrt{\frac{(s - a)(s - c)}{ac}}, C = 180^\circ - (A + B)$
a, b, c	Area	$s = \frac{a + b + c}{2}, \text{area} = \sqrt{s(s - a)(s - b)(s - c)}$
A, b, c	Area	$\text{area} = \frac{b c \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = $5^\circ 10'$. From Table, Page IX, $\cos 5^\circ 10' = .9969$. Horizontal distance = $319.4 \times .9969 = 318.00$ ft.
 Horizontal distance also = Slope distance minus slope distance times (1 - cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained. $\cos 5^\circ 10' = .9969, 1 - .9969 = .0041$. $319.4 \times .0041 = 1.31$. $319.4 - 1.31 = 318.09$ ft.
 When the rise is known, the horizontal distance is approximately:—the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft. slope distance = 302.6 ft. Horizontal distance = $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.