

2

COUNTY 2

1949

1949

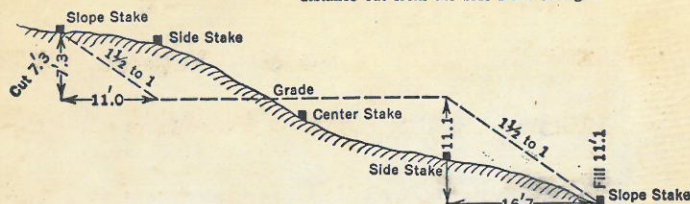
CITRUS
HERNANDO
LAKE
LEVY
MARION
SUMTER

2

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes $1\frac{1}{2}$ to 1.

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



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

#2

Fla. Geological Survey
Tallahassee, Fla.

H.T. Chittum, level
R.C. Grey. Rod

The paper in this book No. 373 A
is made of 50% high grade rag stock
with a WATER RESISTING surface sizing.

Leveling From TBM # 4 to Is. Pits N. of LeCanto

Sta.	+S	HI	-S	Elev.
TBM #4	^{7.5} 10.91	52.06		41.15
TP ₁	7.84	59.45	^{3.6} 0.45	51.61
TP ₂	5.32	56.44	8.33	51.12
TP ₃	11.29	65.88	1.85	54.59
TP ₄	7.98	73.71	0.15	65.73
TBM #15			<u>3.53</u>	<u>70.18</u>
TP ₅	12.00	85.48	0.23	73.48
TP ₆	11.16	96.35	0.29	85.19
TP ₇	0.97	86.70	10.62	85.73
TP ₈	2.47	77.43	11.74	74.96
TP ₉	0.01	67.59	9.85	67.58
TP ₁₀	0.01	56.07	11.53	56.06
TBM #16			<u>1.31</u>	<u>54.76</u>
TP ₁₁	10.32	65.76	0.63	55.44
TP ₁₂	0.81	^{56.135} 56.15	10.22	⁵⁴ 55.34
TP ₁₃	7.75	⁹⁵ 52.75	11.15	^{45.20} 45.00
TP ₁₄	11.55	⁸⁰ 59.60	4.70	²⁵ 48.05
TP ₁₅	100.39		0.15	⁶⁵ 59.45
	81.89		81.89	18.30
	18.50			18.50 ✓

Mar. 10, 1949

Cloudy, with gusty

Winds from 20 to 30 mph.

Elev. diff. 18.50 check

Mar. 10, 1949

Sta.	+S	HI	-S	Elev
TP ₁₅	^{4 9 9} 10.37	70.02		59.65
TP ₁₆	11.25	81.03	^{2 7 4} 0.24	69.78
TP ₁₇	11.86	92.77	0.12	80.91
TP ₁₈	10.67	103.27	0.17	92.60
TP ₁₉	11.95	114.66	0.56	102.71
TP ₂₀	9.31	123.82	0.15	114.51
N 9.1			4.36	119.46
TP ₂₁	0.61	112.80	11.63	112.19
TP ₂₂	1.13	102.21	11.72	101.08
TPM#17	10.78	102.15	10.84	91.37
TP ₂₃	8.96	110.91	0.20	101.95
TP ₂₄	6.49	116.17	1.23	109.68
TP ₂₅	4.15	110.48	9.84	106.33
TP ₂₆	1.28	107.96	3.80	106.68
TP ₂₇	0.65	96.91	11.70	96.26
TP ₂₈	1.59	86.89	11.61	85.30
TP ₂₉	6.97	82.36	11.50	75.39
TP ₃₀	108.02		12.00	70.36
	97.31		97.31	10.71
	10.71			

Elev- d. FF. 12 10.71 - check

TRAV. #19

Sta	+S	HI	-S	Elev.
TP ₃₀	0.82	71.18		70.36
TP ₃₁	11.98	72.36	10.80	60.38
TP ₃₂	11.39	83.73	0.02	72.34
TP ₃₃	11.16	94.68	0.21	83.52
TP ₃₂	9.22	103.74	0.16	94.52

Pit Edge 4.72 99.02

TP ₃₅	8.23	101.70	10.27	93.47
TBM #18	52.80		3.29	98.41
	24.75		24.75	28.05 ✓
	28.05			

Leveling From 2nd 1/2' pit to B.M. K41 at Holder

TBM #18	4.04	102.45		98.41
TP ₃₆	6.51	108.46	0.50	101.95
TP ₃₇	1.67	101.76	8.37	100.09
TP ₃₈	10.13	104.49	7.40	94.36
TP ₃₉	1.56	96.02	10.03	94.46
TP ₄₀	3.80	88.80	11.02	85.00
TP ₄₁	27.71		1.33	87.47
	38.65		38.65	10.94 ✓
	10.94			

MAR. 10, 1949

Windy + cold.

Elev. diff. 28.05 check.

R.R. Spike in SE side of 10" oak on
NW side of road - 9.9 SW of Holder. O/N of
of 1/2 pit.

MAR. 11, 1949

Windy + cold!!

Elev. diff. 10.94 check.

leveling from TBM # 18 to K41 at Holden

Mar. 11, 1949

windy & cold.

Sta	+S	HI	-S	Elev
TP41	² 10.89	98.36		87.47
TP42	7.75	105.91	³ 0.20	98.16
TBM #19			(4.91)	(101.00)
TP43	0.51	99.27	7.15	98.76
TP44	1.38	88.66	11.99	87.28
TP45	0.36	77.20	11.82	76.84
TP46	0.58	65.89	11.89	65.31
TP47	1.69	55.63	11.95	53.94
TP48	2.75	49.74	8.64	46.99
TP49	12.00	59.90	1.84	47.90
TP50	12.00	71.80	0.10	59.80
TP51	11.74	83.38	0.16	71.64
TP52	11.44	94.68	0.14	83.24
TBM #20			(2.44)	(92.24)
TP53	0.97	90.77	4.88	89.80
TP54	1.31	80.25	11.83	78.94
TP55	2.01	70.46	11.80	68.45
TP56	17.38		11.89	58.51
	106.28		106.28	28.90 ✓
	28.90			

Elev. diff. 28.90 check

→ R.R. spike in 10" pine stump on E
side of road 3.1 mi. Sw. of Holden.

RR spike in base of 14' oak on W side of
road 1.7 mi Sw of Holden.

leveling From TBM#18 to BMK41 at Hobbs

Mar. 11, 1949

Sta.	+S	HI	-S	Elev
TP ₅₆	⁵ 3.01	61.58		58.57
TP ₅₇	10.37	69.65	³ ⁶ ⁵ 2.30	59.28
TP ₅₈	7.71	76.74	0.62	69.03
TBM#21			1.82	74.92
TP ₅₉	0.27	66.76	10.25	66.49
TP ₆₀	0.80	60.47	7.09	59.67
TP ₆₁	10.07	67.59	2.95	57.52
TP ₆₂	10.75	78.08	0.26	67.33
TP ₆₃	12.00	90.03	0.05	78.03
TP ₆₄	8.53	98.31	0.25	89.78
TP ₆₅	2.49	92.48	8.32	89.99
TP ₆₆	2.34	83.00	11.82	80.66
TP ₆₇	1.44	72.48	11.96	71.04
TP ₆₈	3.91	64.54	11.85	60.63
BMK41	73.69		6.95	57.59 (58.04)
			74.67	00.98
			73.69	
			00.98	

Elev diff is 57.59 check.
RR. Spike in base of power pole support
on NW side of hwy 0.6 mi. SW of Hobbs

58.04

57.59

0.45

leveling to determine height of IV Hill.

March 11, 1949

Sta	+S	HI	-S	Elev
NPt	12.00	131.46		119.46
TP ₁	12.00	143.41	0.05	131.41
TP ₂	11.99	155.23	0.17	143.24
TP ₃	10.15	165.33	0.05	155.18
Top hill	46.14		3.24	162.09
	<u>3.51</u>		<u>3.51</u>	42.63 ✓
	42.63			

Elev. diff. 42.63 check

SW COR OF CONC. BASE to
flag pole.

TRAV. # 16-A

CITRUS - HERNANDEZ CO.

leveling From TBM #8 to W-~~1172~~

Mar. 15, 1949

cloudy + cool

Sta.	+S	HI	-S	Elev
TBM #8	⁴ 5.05	63.38	² 6.6	58.33 ($\pm .20$)

TP ₁	11.05	74.00	0.43	62.95
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TP ₂	9.71	82.46	1.25	72.75
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TP ₃	10.32	91.81	0.97	81.49
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TP ₄	11.39	103.02	0.18	91.63
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TP ₅	10.64	113.36	0.30	102.72
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TP ₆	10.92	123.95	0.33	113.03
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TP ₇	8.62	132.57	0.00	123.95
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TP ₈	8.51	140.96	0.12	132.45
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Heb. Azimuth			(7.69)	133.27
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TP ₉	1.66	130.83	11.79	129.17
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TP ₁₀	1.23	122.46	9.60	121.23
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TP ₁₁	1.15	122.27	1.34	121.12
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TP ₁₂	0.60	111.88	10.99	111.28
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TP ₁₃	7.17	119.02	0.03	111.85
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TBM #1-A			(3.03)	115.99
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TP ₁₄	0.23	107.91	11.34	107.68
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TP ₁₅	98.25		11.48	96.43
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	60.15		60.15	38.10 ✓
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38.10

Elev. diff. is 38.10 Check

TRAV. 16-A

leveling from TBM# 8 to W-

~~1442~~
~~1770~~

Sta. +S HI -S Elev.

TP₁₅ 0.01 96.44 96.43

TP₁₆ 1.25 86.00 11.69 84.75

TP₁₇ 1.09 75.61 11.98 74.52

TP₁₈ 4.49 70.18 9.92 65.69

TP₁₉ 11.10 80.84 0.44 69.74

W-~~1442~~
~~1770~~ 17.94 1.44 79.40

34.97 17.03 ✓

17.94
17.03

W-~~1442~~
~~1770~~ ^{4 3} 1.53 80.93 79.40

TP₁ 0.80 69.95 ⁴ 11.78 69.15

TP₂ 8.02 73.72 4.25 65.70

TP₃ 11.49 85.19 0.02 73.70

TP₄ 11.96 96.85 0.30 84.89

TP₅ 10.17 106.94 0.08 96.77

TP₆ 11.02 117.66 0.30 106.64

TBM# 1-A 3.56 119.48 1.74 115.92

TP₇ 3.73 113.25 9.96 109.52

TP₈ 62.28 0.89 11 2.36

29.32 29.32 32.96 ✓

32.16

Mar. 15, 1949

Bright sun, windy + cool

Elev. diff. 17.03 check

Elev. diff. is 32.96 check

Trav. #K-A

CHAS - HERNANDO Co.

leveling from W-~~1790~~¹⁹⁴² to TBM #8

Mar. 15, 1949

Bright Sun, Windy & Cool.

Sta.	+S	HI	-S	Elev.
TP ₈	^{2 5} 10.41	122.77		112.36
TP ₉	8.88	126.13	^{3 6 4} 5.52	117.25
TP ₁₀	10.93	136.31	0.25	125.88
Web. Agim.	6.86	140.07	3.10	133.21
TP ₁₁	2.76	131.24	11.59	128.48
TP ₁₂	1.84	121.28	11.80	119.44
TP ₁₃	0.32	109.82	11.78	109.50
TP ₁₄	1.23	99.34	11.71	98.11
TP ₁₅	1.92	90.25	11.01	88.33
TP ₁₆	0.08	82.14	7.69	82.56
TP ₁₇	3.17	73.95	11.86	70.78
TP ₁₈	0.57	63.81	10.71	63.24
TBM #8	48.47		<u>5.50</u>	<u>58.31</u>
			102.52	54.05
			<u>48.47</u>	
			54.05	

Elev. diff. 54.05 check

Corr. Elev. Well ~~1790~~¹⁹⁴² is 79.39 ±.21

TRAV # 22

Hernando Co.

leveling From BM #1 (SRD) to W-1442

Mar 16, 1949

Sta	+S	HI	-S	Elev
BM #1 SRD	9.74	81.40		71.66
TP ₁	10.53	90.48	1.45	79.95
TP ₂	9.99	100.09	0.38	90.10
TP ₃	11.86	111.43	0.52	99.57
TP ₄	8.50	119.58	0.35	111.08
TP ₅	3.85	117.85	5.58	114.00
TP ₆	1.44	112.49	6.80	111.05
TP ₇	1.52	102.10	11.91	100.58
TP ₈	1.09	91.24	11.95	90.15
TP ₉	2.56	81.88	11.92	79.32
TP ₁₀	0.80	70.77	11.91	69.97
TP ₁₁	2.80	^{62.07} 62.17	11.50	59.27
TBM #1			^{57.78} 4.79	57.88
TP ₁₂	10.25	^{71.87} 71.97	0.45	^{61.62} 61.72
TP ₁₃	11.23	^{82.73} 82.83	0.37	^{71.50} 71.60
TP ₁₄	9.77	^{92.27} 92.37	0.23	^{82.50} 82.60
TP ₁₅	11.18	^{102.83} 102.93	0.62	^{91.65} 91.75
TP ₁₆	107.11		0.10	^{102.73} 102.83
	^{76.04} 07		76.04	^{31.07} 31.17

80 penny nail in root of 20" oak .50' left of
Sta 341+80 St. Rd 34-41-50 SE 1/4, SE 1/4

Sec 4, T23S, R20E.

Elev. diff. 31.07-check

leveling from

BM#1 (SRD) to W-~~1442~~

MAR. 16, 1949

Clear, windy & cool

Sta.	+S	HI	-S	Elev
TP ₁₆	^{2 4 6} 11.38	114.11		102.73
TP ₁₇	9.59	123.52	^{2 5 5} 0.18	113.93
TBM#2	3.63	125.26	1.89	121.63
TP ₁₈	10.21	135.31	0.16	125.10
TP ₁₉	11.00	146.15	0.16	135.15
TBM#3	8.74	45	3.44	142.71
TP ₂₀	5.36	142.77	8.74	137.41
TP ₂₁	5.25	147.59	0.43	142.34
TP ₂₂	0.47	136.10	11.96	135.63
TP ₂₃	11.69	144.19	3.60	132.50
TP ₂₄	10.37	154.24	0.32	143.87
TP ₂₅	10.98	165.04	0.18	154.06
W- 1442	89.93		4.61	160.43
	<u>32.23</u>		32.23	57.70
	57.70			
W- 1442	4.69	165.12		160.43
TP ₁	0.27	154.34	11.05	154.07
TP ₂	1.48	144.04	11.78	142.56
TP ₃	6.44		11.53	132.51
	<u>34.36</u>		34.36	27.92
	27.92			

X cut in top of S. side of deserted
cistern. 75' N of Rd #50.

Elev. diff 57.70 check

Elev. diff 27.92 check

leveling from W-¹⁷⁹⁰~~1442~~ to SRD BM#1

MAR. 16, 1949

Sta	+S	HI	-S	Elev
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TP ₃	3.63	136.14		132.51
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TP ₄	11.89	147.57 ^{2 3 4}	0.46	135.68
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TP ₅	1.35	142.90	6.02	141.55
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TP ₆	5.41	146.88	1.43	141.47
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TBM#3	1.61	144.26	4.23	142.65
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TP ₇	0.29	134.56	9.99	134.27
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TP ₈	1.19	124.46	11.29	123.27
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TBM#2	25.37		2.89	121.57
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	36.31		36.31	10.94
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10.94

TBM#2	1.60 ^{3 2}	123.18		121.58
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TP ₉	1.33	112.78 ^{4 3}	11.73	111.45
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TP ₁₀	1.56	102.57	11.77	101.01
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TP ₁₁	0.01	90.91	11.67	90.90
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TP ₁₂	1.31	80.38	11.84	79.07
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TP ₁₃	1.78	70.80	11.36	69.02
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TP ₁₄	2.76	62.12	11.44	59.36
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TBM#1	10.35		4.30	57.82
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	74.11		74.11	63.76
--	-------	--	-------	-------

63.76

Elev. diff. 10.94 check

MAR. 17, 1949

Elev. diff. 63.76 check

leveling from W-¹⁷⁹⁰~~1442~~ to SRO BM #1

Mar 17, 1949

STA	+S	HI	-S	Elev
TBM #1	^{5 4} 4.30	62.12		57.82
TP ₁₅	10.13	71.91	^{1 3 4} 0.34	61.78
TP ₁₆	10.11	81.75	0.27	71.64
TP ₁₇	10.74	92.73	0.26	81.49
TP ₁₈	10.64	102.75	0.12	92.11
TP ₁₉	11.43	113.92	0.26	102.49
TP ₂₀	10.28	123.04	1.16	112.76
TP ₂₁	0.06	113.90	9.20	113.84
TP ₂₂	0.62	103.71	10.81	103.09
TP ₂₃	0.88	92.71	11.88	91.83
TP ₂₄	0.97	81.68	12.00	80.71
SRO BM #1	70.16		10.11	71.57
	<u>56.41</u>		<u>56.41</u>	<u>13.75</u> ✓
	13.75			

Elev. diff. 13.75 - check.

Elev. well is 160.38 ± .04

TRAV # 23 Levelling Co.
 leveling From BM BG 12 to W-1870

MAR 18, 1949

Sta	+S	HI	-S	Elev
BG 12	<u>5.34</u>	72.94		67.60
W-1870	<u>5.59</u>		5.59	<u>67.35</u>
	.25			.25 ✓
W-1870	<u>5.69</u>	73.04		67.35
BG -12	<u>5.44</u>		5.44	<u>67.60</u>
	.25			.25 ✓

TRAV # 24 Gilchrist Cor
 leveling From BM P-50 to W-1860

Sta	+S	HI	-S	Elev
P-50	<u>7.87</u>	63.67		55.80
W-1860	<u>5.12</u>		5.12	<u>58.55</u>
	2.75			2.75
W-1860	<u>5.14</u>	63.69		58.55
P-50	<u>7.89</u>		7.89	<u>55.80</u>
	2.75			2.75

TRAV. # 25

Levy Co.

leveling From Gulf Hammock to Wekiva Sprg

MAR. 22, 1949

very windy & cloudy

Sta.	+S	HI	-S	Elev.
US. # 19	^{4.55} <u>(4.39)</u>	18.05		13.50
TP ₁	7.41	17.74	^{8.6} 7.72	10.33
TP ₂	5.62	16.54	6.82	10.92
TP ₃	4.88	16.85	4.57	11.97
TP ₄	7.64	20.85	3.64	13.21
TP ₅	1.39	18.41	3.83	17.02
TP ₆	4.79	21.75	0.95	17.46
TBM #1	2.95	18.48	6.22	15.53
TP ₇	5.28	19.83	3.93	14.55
TP ₈	2.83	17.63	5.03	14.80
TP ₉	11.18	^{21.57} 22.57	7.24	^{13.78} 10.39
TP ₁₀	4.74	^{18.52} 19.52	7.79	^{13.94} 14.78
TP ₁₁	6.70	^{20.64} 21.64	4.58	^{13.94} 14.94
TP ₁₂	5.74	^{22.28} 23.28	4.10	^{16.54} 17.54
TP ₁₃	6.99	^{21.58} 22.58	7.69	^{14.59} 15.59
TBM #2	6.42	^{21.98} 22.98	6.02	^{15.56} 16.56
TP ₁₄	6.47	^{25.94} 26.44	3.01	^{18.97} 19.97
TP ₁₅	95.08 88.49		^{83.14} 5.35	^{20.01} 21.01
	6.59		88.49	7.59 6.59 ✓

Elev. diff 6.59 check

TRAV # 25
leveling From Gulf Hammock to Wekiva Spr.

MAR. 22, 1949

RAIN

Sta	+S	HI	-S	Elev
TP ₁₅	3.11	23.20		20.09
TP ₁₆	5.83	24.47	4.56	18.64
TBM #3	2.17	26.50	0.14	24.33
TP ₁₇	6.56	30.51	2.55	23.95
TP ₁₈	8.37	33.62	5.26	25.25
TP ₁₉	5.90	35.86	3.66	29.96
TP ₂₀	4.57	37.14	3.29	32.57
TP ₂₁	5.40	38.44	4.10	33.04
TP ₂₂	2.66	37.23	3.87	34.51
TP ₂₃	5.52	35.80	6.95	30.28
TP ₂₄	5.08	34.35	6.53	29.27
TP ₂₅	4.20	31.36	7.19	27.16
TP ₂₆	6.90	34.61	3.65	27.71
TP ₂₇	4.33	34.93	4.01	30.60
TP ₂₈	4.62	35.38	4.17	30.76
TP ₂₉	4.46	36.34	3.50	31.88
TP ₃₀	4.87	36.11	5.10	31.24
TP ₃₁	84.85		5.86	30.25
	74.39		74.39	10.16 ✓
	70.16			

Elev. diff. 10.16 check

Trav # 25

Levy Co.

Leveling From Gulf Hammock to Wekiva

Sta	+S	HI	-S	Elev.
TP ₃₁	2.37	32.62		30.25
TP ₃₂	4.71	36.04	1.29	31.33
TBM#4	4.75	36.47	4.32	31.72
TP ₃₃	5.27	35.97	5.77	30.70
TP ₃₄	3.05	35.55	3.47	32.50
TP ₃₅	5.61	31.82	9.34	26.21
TP ₃₆	4.32	29.56	6.58	25.24
TBM#5	6.93	31.52	4.97	24.59
Top Rock	30.08		6.51	25.01
	-35.74		35.74	5.66 ✓
	5.66			

Leveling From Wekiva Springs to US Hwy #19

Sta	+S	HI	-S	Elev.
TBM#5	5.17	29.76		24.59
TP ₁	6.03	31.46	4.33	25.43
TP ₂	8.33	37.06	2.73	28.73
TP ₃	4.94	34.63	7.37	29.69
TP ₄	24.47		3.01	31.62
	17.44		17.44	1.03
	7.03			

Mar. 22, 1949

Sunny + breezy

Elev. diff 5.66 check

Mar. 23, 1949

RAIN

11.35 RAIN stopped

TP ₄	^{8 7} 4.60	36.22		31.62
TP ₅	4.23	^{31 .68} 35.52	^{11 5} 4.93	31.29
TP ₆	5.87	36.85	4.54	30.98
TP ₇	4.97	36.44	5.38	31.47
TP ₈	4.10	35.21	5.33	31.11
TP ₉	6.42	34.73	6.90	28.31
TP ₁₀	7.78	38.04	4.47	30.26
TP ₁₁	4.10	35.54	6.60	31.44
TP ₁₂	3.63	37.85	1.32	34.22
TP ₁₃	4.51	37.57	4.79	33.06
TP ₁₄	4.39	35.46	6.50	31.07
TP ₁₅	4.57	30.40	9.63	25.83
TP ₁₆	2.75	26.25	6.90	23.50
TBM#3	0.17	24.47	1.95	24.30
TP ₁₇	3.85	22.60	5.72	18.75
TP ₁₈	6.90	25.63	3.87	18.73
TP ₁₉	4.08	22.77	6.94	18.69
TP ₂₀	76.92		6.50	16.27
	92.21		92.21	15.35 ✓

Elev diff. 15.35 check

TP₂₀ 5.43 21.70 16.27

TP₂₁ 7.63 22.59 6.74 14.96

TP₂₂ 4.06 19.45 7.20 15.39

TP₂₃ 4.57 21.76 2.26 17.19

TP₂₄ 7.69 20.34 9.11 12.65

TP₂₅ 4.03 19.82 4.55 15.79

TP₂₆ 6.74 17.50 9.06 10.76

TP₂₇ 3.64 18.81 2.33 15.17

TP₂₈ 3.86 18.24 4.43 14.38

TB/MH2 2.96 15.28

TP₂₉ 7.03 22.17 3.10 15.14

TP₃₀ 8.35 21.72 8.80 13.37

TP₃₁ 4.67 17.82 8.57 13.15

TP₃₂ 4.73 16.60 5.95 11.87

TP₃₃ 3.55 15.53 4.62 11.98

TP₃₄ 4.44 17.03 2.94 12.59

U.S. 19 3.63 13.40

Instrument Check

conc. base 2.07

stake 5.14

3.07 = Elev. diff.

conc. base 3.17

stake 6.25

3.07 = Elev. diff

3.17 Read at Conc. base

~~6.24~~ Figure which should be read at stake:

6.25 Actually Read at stake with instrument level.

Instrument corrected to read
6.24 with bubble level.

Mar 24, 1949

Trav # 26

Summit Co

Mar 25, 1949

Leveling From B.M. AM 6 to W-1735

Sta	+S	HI	-S	Elev
AM. 6	^{2 2} 3.09	67.22		64.13
TP ₁	8.70	71.62	^{7 4} 4.30	62.92
TP ₂	3.47	72.22	2.87	68.75
AM. 7			3.89	68.33 (68.35)
TP ₃	2.64	66.40	8.46	63.76
TP ₄	7.06	67.71	5.75	60.65
TP ₅	11.20	75.42	3.49	64.22
TP ₆	11.12	85.05	1.49	73.93
W-1735	47.28		1.15	83.90
	<u>27.51</u> 19.77		77.51	19.77 ✓
W-1735	1.75	85.65		83.90
TP ₁	1.36	77.31	9.70	75.95
TP ₂	3.27	69.74	10.84	66.47
TP ₃	7.81	67.95	9.60	60.14
TP ₄	7.11	71.98	3.08	64.87
AM 7	21.30		3.65	68.33 (68.35)
			36.87	15.57 ✓
			<u>21.30</u> 15.57	

Elev. diff. 19.77 check

Elev. diff. 15.57 check

TRAV. 27

SUN TR Co

Mon 28, 1949

leveling From SRDBM#18 to W-1721

Sta	+S	HI	-S	Elev.
SRDBM#18	4.83	93.12 91.51		88.29
TP.	2.17	92.51	3.78	89.34 89.67
W-1721	7.06		1.84	90.67 ✓
	5.62		5.62	2.38 1.38
		91.68		89.67
W-1721	2.01	92.68		90.67 89.38
TP.	3.95	93.33	2.30	90.38
SRDBM#18	5.96		5.04	88.29
	7.34		7.34	1.38 ✓
	1.38			

Elev. diff 1.38 check

1.38 "

TRAV #28

LARE Co.

leveling From Sta. D #25 to W-1634

MAR. 29, 1949

Sta. +S HI -S E/cv.

Sta. 1387 11.85 115.19 103.34 103.34

Sta. 1386 10.83 104.36 104.37

Sta. 1385 9.25 105.94 106.07

W-1634 4.29 4.29 110.90
7.56 7.56 ✓

W-1634 2.96 113.86 110.90

Sta. 1387 10.51 103.35
2.96 7.55

7.55

TRAV #29 LAKE Co
Leveling from RR MP #52 to W-1117

MAR. 31, 1949

Sta. +S HI -S Elev.

Sta 1 Rail 9.25 114.55 105.30

Sta 1 TP 0.86 111.15 4.26 110.29

Sta 1 W-1117 6.75 104.40

W-1117 6.70 111.10 104.40

V TP 3.50 114.50 0.10 111.00

Sta 1 Rail 9.20 105.30

Trav # 30 Lake Co.
Leveling From BMD-55 to W-1697

April 1, 1949

Sta	+S	HI	-S	Elev
BMD-55	^{+8 7} 4.49	109.08		104.59
TP ₁	6.63	107.71 ^{3 5 4}	8.00	101.08
TP ₂	7.23	114.81 115.81	0.13	107.58
TP ₃	7.95	122.60 123.60	0.16	115.65
TP ₄	5.25	116.84 117.84	11.01	111.59
TP ₅	1.33	107.65 108.65	10.52	107.32
TP ₆	11.57	114.52 115.52	4.70	102.95
TP ₇	11.93	126.43 127.43	0.02	114.50
TP ₈	10.46	136.71 137.71	0.18	126.25
TP ₉	10.15	146.84 147.84	0.02	136.69
TBM #1			2.25	144.59
TP ₁₀	1.37	142.88 143.88	5.33	141.51
TP ₁₁	1.86	133.24 134.24	11.50	131.38
TP ₁₂	0.86	122.35 123.35	11.75	121.49
TBM #2			10.20	112.15
TP ₁₃	0.68	111.17 112.17	11.86	103.15
TP ₁₄	4.42	103.96 104.96	11.63	110.49
TP ₁₅	86.18		4.25	99.54
	91.06		91.06	99.71
	4.88			90.71
				4.88 ✓

Elev diff. 488 check

RR SPIKE IN Blazed 6" PINE 14' NE
OF ROAD.

April 1, 1949

Sta.	+S	HI	-S	Elev
TP ₁₅	^{2 2} 9.85	109.56		99.71
TP ₁₆	11.83	121.26	^{1 2} 0.13	109.43
TP ₁₇	12.00	133.14	0.12	121.14
TP ₁₈	11.15	144.12	0.17	132.97
TP ₁₉	6.56	149.61	1.07	143.05
TP ₂₀	4.09	147.27	6.43	143.18
W-1697	55.48		4.84	142.43
	^{12 76} 42.72		12.76	42.72 ✓
W-1697	^{3 2} 4.44	146.87	^{1 4 3}	142.43
TP ₁	0.71	149.72	2.86	144.01
TP ₂	0.80	133.79	11.73	132.99
TP ₃	1.31	123.24	11.86	121.93
TP ₄	1.05	112.65	11.64	111.60
TP ₅	3.25	103.96	11.94	100.71
TP ₆	9.78	109.14	4.60	99.36
TP ₇	10.44	119.55	0.03	109.11
TBM #2	31.78		7.42	112.13
TP ₈	54.92		0.26	119.29
	23.14		54.92	23.14 ✓

Elev. diff 42.72 check

Elev. diff 42.72 check

April 1, 1949

Sta	+S	HI	-S	Elev
TP ₈	⁶ _{12.00}	131.29		119.29
TP ₉	9.94	140.83 ⁵⁴	0.40 ³	130.89
TP ₁₀	9.50	150.15	0.18	140.65
TBM#1	1.59	146.13	5.61	144.54
TP ₁₁	1.93	138.95	9.11	137.02
TP ₁₂	0.91	129.43	10.73	128.52
TP ₁₃	0.29	120.01	9.71	119.72
TP ₁₄	5.47	116.73	8.75	111.26
TP ₁₅	9.08	123.29	2.52	114.21
TP ₁₆	4.40	117.54	10.15	113.14
TP ₁₇	2.55	113.08	7.01	110.53
TP ₁₈	4.32	106.12	11.28	101.80
TP ₁₉	<u>8.03</u>	109.03	5.12	101.00
B.M.-D55	70.01		<u>4.42</u>	<u>104.61</u>
	84.69		84.69	14.68
	14.68			

Elev. diff 19.68

Trav # 30 Cont.

Lake Co.

leveling From TBM #2 to W-1594

April, 1, 1949

Sta.	+S	HI	-S	Elev.
TBM #2	0.02	112.18		112.16 ±.01
TP ₁	6.62	115.78	3.02	109.16
TP ₂	0.83	105.36	11.25	104.53
W-1594	7.47		3.60	101.76
	<u>17.87</u>		<u>17.87</u>	10.40 ✓
	10.40			
W-1594	5.21	106.97		101.76
TP ₁	9.70	115.57	1.10	105.87
TP ₂	3.70	112.30	6.97	108.60
TBM #2	18.61		0.14	112.16 ✓
	<u>8.21</u>		<u>8.21</u>	10.40 ✓
	10.40			

Elev diff. 10.40 check

10.40

leveling from BM #46 (2nd) to W-964

April 14, 1949

Rain

Sta +5 HI -5 Elev.

BM #46 8.18 178.64 170.46

TP₁ 11.94 190.40 0.18 178.46TP₂ 10.05 200.19 0.26 190.14TP₃ 11.86 211.78 0.27 199.92TP₄ 10.94 222.60 0.12 211.66TP₅ 10.66 233.03 0.23 222.37TP₆ 11.93 243.94 1.02 252.01TP₇ 7.42 249.31 2.05 241.89

W-964 82.98 2.98 246.33

-7.11 7.11 +75.87 ✓

+75.87

W-964 3.12 246.33

TP₁ 4.92 249.45 9.32 240.13TP₂ 0.21 245.05 11.65 233.40TP₃ 1.08 233.61 11.93 221.68TP₄ 0.00 222.76 11.87 210.89TP₅ 0.92 210.89 11.93 198.96TP₆ +10.25 11.83 188.05

-68.53

-58.28

68.53 58.28 ✓

Elev. diff. +75.87 check

Elev. diff. -58.28 check

TRAV #31

April 4, 1949

RAIN

Sta.	+S	HI	-S	Elev.
TP ₆	0.58	188.63		188.05
TP ₇	2.21	179.17	11.67	176.96
BM#46	+2.79		8.69	170.48 (170.46)
	<u>-20.36</u>		20.36	17.57 ✓
	<u>-17.57</u>			

Elev. diff. -17.57 check.

TRAV #32
 Leveling From Sta. 937 (std. rd. 459) to W-1454 Lake Co.

Sta	+S	HI	-S	Elev.
Sta 937	5.54	164.05		158.51
TP ₁	11.71	174.10	1.66	162.39
TP ₂	10.98	184.57	0.51	173.59
TP ₃	3.05	187.58	0.04	184.53
W-1454	+31.28		2.34	185.24
	<u>4.55</u>		4.55	26.73 ✓
	<u>26.73</u>			

TRUE ELEV. W-964 is:

296.32 ± 0.1

Elev. diff. +26.73 check.

Elev. diff. -26.73 check.

W-1454	1.82	187.06		185.24
TP ₁	1.52	176.65	11.93	175.13
TP ₂	2.24	167.11	11.78	164.87
Sta 937	+5.58		8.60	158.51
			<u>32.31</u>	
			5.58	26.73 ✓
			<u>26.73</u>	

TRAV # 32

Lake Co

leveling From RR mile post 791 to W-1000

April 5, 1949

RAIN

Sta	+S	HI	-S	Elev.
MP 791	2.15	91.35		89.20
W-1000		8.40	82.95	
		2.15	6.25	✓
		6.25		
W-1000	8.18	91.13		82.95
MP 791	1.93		1.93	89.20
	6.25		6.25	✓

Elev. diff. 6.25 check

" " 6.25 "

TRAV # 33

Lake Co

leveling From RR MP 790 to W-998

April 5, 1949

CATS 'N dogs

Sta	+S	HI	-S	Elev
MP 790	2.96	79.66		76.70
TR	9.53	86.71	2.48	77.18
	12.49			
W-998	4.58		2.10	84.61
	7.91		4.58	7.91 ✓
W-998	2.15	86.76		84.61
TR	4.25	79.66	11.35	75.41
MP 790	6.40		2.96	76.70
			14.31	7.91 ✓
			6.40	
			7.91	

Elev. diff. 7.91 check

" " 7.91 "

TRAY #34

LAKE Co

leveling From MP 785 to W-1852

April 7, 1949

Sunny & Windy

Sta	IS	HI	S	Elev
RRMP 785	10.53	85.13		74.60

TP ₁	11.03	95.78	0.38	84.75
-----------------	-------	-------	------	-------

TP ₂	10.99	105.62	1.15	94.63
-----------------	-------	--------	------	-------

TP ₃	6.11	111.58	0.15	105.47
-----------------	------	--------	------	--------

W-1851	38.66	4.02	107.56
--------	-------	------	--------

W-1852	5.04 33.62	3.36	108.22
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	5.04	33.62
--	------	-------

W-1852	2.99	111.21	108.22
--------	------	--------	--------

TP ₁	0.16	105.64	5.73	105.48
-----------------	------	--------	------	--------

TP ₂	2.11	96.04	11.71	93.93
-----------------	------	-------	-------	-------

TP ₃	0.43	85.15	11.32	84.72
-----------------	------	-------	-------	-------

RRMP 785	5.69	10.55	74.60
----------	------	-------	-------

	39.31	33.62
--	-------	-------

	5.69
--	------

	33.62
--	-------

Elev diff 33.62 check

" " 33.62 "

Trav #35
leveling From RR MP 781 to W-1722

Sta	+S	HT	-S	Elev
MP 781	4.09	72.39		68.30
W-1722			7.73	64.66
			$\frac{4.09}{3.64}$	3.64 ✓
W-1722	7.55	72.21		64.66
MP 781	3.91		3.91	68.30 ✓
	3.64			3.64 ✓

Trav #36
leveling From BM RV2 to W-1709

BM RV2	4.77	83.87		79.10
TP ₁	4.31	76.66	11.52	72.35
TP ₂	3.39	72.79	7.26	69.40
W-1709	12.47		$\frac{4.10}{22.88}$	68.69
			$\frac{12.47}{16.47}$	10.41 ✓

W-1709	4.05	72.74		68.69
--------	------	-------	--	-------

John Wiedemann 3.91 68.83

TP ₁	4.38	76.63	0.49	72.25
TP ₂	8.24	83.11	1.76	74.87
BM RV2	16.67		4.03	79.08

$\frac{6.28}{10.39}$ 6.28 10.39 ✓

April 8, 1949

Elev. diff. 3.64 check

" " 3.64 check

Elev. diff. 10.91 check

NEW well being drilled 250' SE of W-1709

Elev. diff. 10.39 check

Elev. of W-1709 is 68.70 ± 0.1

TRAV. #37

LAKE CO.

Leveling From RRMP 783 to W-1383

April 8, 1949

Sunny & breezy

Sta	+S	HI	-S	Elev.
MP 783	3.65	75.55		71.90
TP ₁	5.10	73.09	7.56	67.99
W-1383	8.75		7.35	65.74
	<u>14.91</u>		<u>14.91</u>	6.16 ✓
W-1383	7.33	73.07		65.74
TP ₁	7.71	75.63	5.15	67.92
MP 783	15.04		3.73	71.90
	<u>8.88</u>		<u>8.88</u>	6.16 ✓

Elev. diff. 6.16 check

Elev. diff. 6.16. Check

TRAV #38

Leveling From TAVARES BM to W-1737

Sta	+S	HI	-S	Elev.
BM	4.31	81.80		77.49
TP ₁	1.22	80.60	2.42	79.38
TP ₂	4.48	79.91	5.17	75.43
TP ₃	3.39	79.00	4.30	75.61
TP ₄	2.46	75.07	6.39	72.61
TP ₅	7.25	77.50	4.82	70.25
W-1737	73.11		3.58	73.92
			<u>26.68</u>	3.57 ✓
			<u>23.11</u>	3.57

TRAV. #38 CONT

April 8, 1949

Hot + Sunny

Sta	+S	NI	-S	Elev.
W-1737	3.45	77.37		73.92
TP ₁	3.92	74.96	6.33	71.04
TP ₂	7.66	79.59	3.03	71.93
TP ₃	4.81	80.34	4.06	75.53
TP ₄	2.13	81.54	0.93	79.41
Trav. BM	21.97		4.02	77.52
	18.37		18.37	3.60 ✓
	3.60			

Elev. diff. 3.60 check

Elev. of W-1737 is 73.90 ± 0.01

leveling from BM N79 to W-

Sta	+S	NI	-S	Elev.
BM N79	6.95	81.44		74.49
TP ₁	6.01	83.69	3.76	77.68
TP ₂	6.31	89.23	0.77	82.92
TP ₃	3.37	88.82	3.78	85.45
TP ₄	3.96	88.14	4.64	84.18
TP ₅	2.73	84.15	6.72	81.42
TP ₆	29.33		4.29	79.86
	23.91		23.96	5.37 ✓
	5.37			

April 8, 1949

Hot + Sunny

Elev. diff. 5.37 check

APR 18, 1949

STA	+S	H1	-S	Elev
TP ₆	4.55	84.41		79.86
W-			11.20	73.21
TP ₇	3.10	82.54	4.97	79.44
TP ₈	4.07	80.29	6.32	76.22
TBM#1	11.72		2.81	77.48

14.10 2.38 ✓

11.72
2.38

TBM#1	^{3 4} 2.70	80.18		77.48
-------	---------------------	-------	--	-------

TP ₁	6.35	82.56	³ 3.97	76.21
-----------------	------	-------	-------------------	-------

TP ₂	5.06	84.53	3.09	79.47
-----------------	------	-------	------	-------

TP ₃	4.36	84.27	4.62	79.91
-----------------	------	-------	------	-------

TP ₄	7.35	88.80	2.82	81.45
-----------------	------	-------	------	-------

TP ₅	5.02	89.22	4.60	84.20
-----------------	------	-------	------	-------

TP ₆	3.94	89.41	3.75	85.47
-----------------	------	-------	------	-------

TP ₇	1.48	84.41	6.48	82.93
-----------------	------	-------	------	-------

TP ₈	4.14	81.82	6.73	77.68
-----------------	------	-------	------	-------

TP ₉	40.40		7.33	74.49
-----------------	-------	--	------	-------

43.39 2.99 ✓

40.40
2.99

TOP OF POST OPPOSITE WATSON DRIVEWAY

Elev. 238 check

Elev. diff. 299 check

leveling From TBM #1 to Astatula

Sta	+S	HI	-S	Elev
TBM#1	^{7 5 5} 9.92	87.40		77.48
TP1	3.57	88.00	^{6 8 8} 2.97	84.43
TP2	3.07	81.79	9.28	78.72
TP3	3.34	74.32	10.81	70.98
TP4	4.03	72.26	6.09	68.23
TP5	4.42	72.17	4.51	67.75
TP6	3.63	71.75	4.05	68.12
TP7	5.13	73.73	3.15	68.60
TP8	6.07	75.90	3.90	69.83
TP9	11.13	86.48	0.55	75.35
TP10	6.56	92.10	0.94	85.54
TP11	3.60	92.91	2.79	89.31
TP12	2.24	85.44	9.71	83.20
TP13	5.08	83.21	7.31	78.13
TP14	8.60	90.82	0.99	82.22
TP15	6.40	95.03	2.19	88.63
Rail Ast.	86.79		3.55	91.48
TP16	$\frac{71.70}{15.09}$		2.46	92.57
			71.70	15.09 ✓

April 18, 1949 cloudy to Sunny

Top of rail opp. SW cor Astatula RR Exp.
Bldg. MAIN TRACK

Elev. diff 15.09 check

April 18, 1949

Sta	+S	HI	-S	Elev.
TP ₁₆	7.79	100.36		92.57
TP ₁₇	9.75	109.79	0.32	100.04
TP ₁₈	3.92	112.57	1.14	108.65
TBM#2			4.50	108.07
TP ₁₉	9.89	116.51	5.95	106.62
W-982	31.35		8.61	107.90
	<u>16.02</u>		16.02	15.33 ✓
	15.33			
W-982	8.33	116.23	8	107.90
TP ₁	5.40	110.48	^{3 3 3} 11.15	105.08
TBM#2	5.61	113.67	2.42	108.06
TP ₂	1.85	107.42	8.10	105.57
TP ₃	2.37	99.44	10.35	97.07
TP ₄	2.28	94.93	6.79	92.65
Ast. 28			3.44	91.49
TP ₅	2.94	91.80	6.07	88.86
TP ₆	2.16	83.34	10.62	81.18
TP ₇	8.48	85.71	6.11	77.23
TP ₈	39.42		1.55	84.16
	<u>63.16</u>		63.16	23.74 ✓
	23.74			

Elev. diff 15.33 check

Elev. diff 23.74 check

April 18, 1949

Sta.	+S	HI	-S	Elev
TP ₈	^{67.8} 9.89	94.05		84.16
TP ₉	3.00	91.99	^{5.4} 5.06	88.99
TP ₁₀	1.26	83.25	10.00	81.99
TP ₁₁	1.78	77.45	7.58	75.67
TP ₁₂	3.94	74.26	7.13	70.32
TP ₁₃	3.38	72.78	4.86	69.40
TP ₁₄	4.22	72.19	4.81	67.97
TP ₁₅	4.43	72.39	4.23	67.96
TP ₁₆	4.49	72.18	4.70	67.69
TP ₁₇	6.39	74.85	3.72	68.46
TP ₁₈	9.71	83.94	0.62	74.23
TP ₁₉	6.49	89.63	0.80	83.14
TP ₂₀	2.45	87.04	5.04	84.59
TP ₂₁	4.87	81.77	10.14	76.90
TBM#1	66.30		4.25	77.52 (77.48)
			72.94	6.64 ✓
			66.30	
			6.64	

True Elev. W-982 is
107.92 ± 0.2

Elev. diff. 6.64 check

Leveling From St. Rd. 459-985 int. to W-989

Apr 12, 1949

Hot + Sunny

Sta	+S	HI	-S	Elev.
Int.	⁴ 6.99	99.79		92.80
TP ₁	2.84	97.37	⁵ 5.26	94.53
TP ₂	4.51	99.76	2.12	95.25
TP ₃	11.15	103.48	7.43	92.33
TP ₄	6.30	109.61	0.17	103.31
TP ₅	3.40	107.70	5.31	104.30
TP ₆	0.66	97.56	10.80	96.90
TP ₇	5.73	93.38	9.91	87.65
TP ₈	3.10	92.83	3.65	89.73
TP ₉	8.09	95.46	5.46	87.37
TP ₁₀	4.72	100.15	0.03	95.43
TBM#1	57.49		6.10	94.05
W-989			7.90	92.25
			58.04	.55 ✓
			⁵⁷ 1.97	
W-989	7.93	100.18	7.93	92.25
TBM#1	8.43	102.48	6.13	94.05
TP ₁	7.11	107.39	2.20	100.28
TP ₂	23.47		3.95	103.44
	12.28		12.28	11.19
	11.19			

Elev. diff is .55 check

Top NE cor. O'BRIEN property post.

April 20, 1949

Not Sunny

Sta	+S	WT	-S	Elev
TP ₂	⁵ 0.32	103.76		103.44
TP ₃	6.95	101.79	⁶ 8.92	94.84
W-976			9.46	92.33
TP ₄	8.40	108.13	2.06	99.73
TP ₅	2.62	103.39	7.36	100.77
TBM#1			9.32	94.07
TP ₆	1.25	96.44	8.20	95.19
TP ₇	5.45	92.99	8.90	87.54
TP ₈	2.98	93.86	2.11	90.88
TP ₉	7.22	94.97	6.11	87.75
TP ₁₀	11.16	105.89	0.74	94.73
TP ₁₁	8.81	108.65	6.05	99.84
TP ₁₂	0.13	105.50	3.28	105.37
TP ₁₃	3.80	98.41	10.89	94.61
TP ₁₄	1.38	96.96	2.83	95.58
TP ₁₅	5.42	100.67	1.71	95.25
Rd. Int.	65.89		7.84	92.83
	<u>76.50</u>		<u>76.50</u>	10.61 ✓
	10.61			

W-989 is 92.3

W-976 is 92.3

Elev. diff. 10.61 check

TRAV. 41

Take 00

leveling From SRDBM 78 to W-1011

April 20, 1949 Hot & Sunny

Sta	TS	HI	-S	Elev.
BM 78	³ 0.89	94.01		93.12
TP ₁	7.31	96.69	³ 4.63	89.38
TP ₂	6.19	93.95	8.93	87.76
TP ₃	5.82	94.45	5.32	88.63
TP ₄	3.77	94.71	3.51	90.94
TP ₅	6.92	97.84	3.79	90.92
W-1011	30.90		4.30	93.54
	^{30.98} 2.42		30.48	42 ✓

W-1011	² 4.14	97.68		93.54
TP ₁	3.49	94.29	6.88	90.80
TP ₂	4.72	95.30	3.71	90.58
TP ₃	2.14	^{91.52} 92.52	5.92	89.38
TP ₄	7.84	^{92.16} 93.16	7.20	84.32
TP ₅	5.66	^{95.00} 96.00	2.82	89.34
BM 78	27.99		1.83	^{93.17} 94.17
			28.36	37 ✓ 0.63
			^{27.99} 37	

Elev. diff 0.42 check

W-1011 is 93.57 ± 02

Elev. diff 0.37 check

TRAV #42
leveling From BM-M35 to W-1391

Lake Co

Sta	IS	HI	S	Elev.
BM M35	3.09	89.86		86.77
TP ₁	2.06	87.84	4.08	85.78
TP ₂	6.71	89.95	4.60	83.24 (MP-A22)
TP ₃	3.42	89.06	4.31	85.64
W-1391	15.28		5.94	83.12
	<u>18.93</u>			
	3.65		18.93	3.65 ✓

W-1391 6.01 89.13 83.12

TP₁ 4.13 89.77 3.49 85.64

TP₂ 10.14 6.53 83.24 (MP-A22)

10.02
.12

10.02

.12 ✓

April 22, 1949

Hot & Sunny

Elev. diff. 3.65 check

83.1 ✓

Mile post A-22 listed as 83.3 msl ∴ run
stopped here.

Elev. diff. 0.12 check

TRAV 43

LAGE Co.

leveling From BM H58 to W-1641

April 22, 1949

Hot & Sunny

Sta	+S	HI	-S	Elev
H 58	^{1 2} 0.41	98.20		97.79
TP ₁	4.43	92.30	^{2 2 2} 10.33	87.87
TP ₂	5.08	96.45	0.93	91.37
TP ₃	2.14	91.34	7.25	89.20
TP ₄	2.25	85.62	7.97	83.37
TP ₅	<u>4.24</u>	86.80	3.06	82.56
W-1641	18.55		3.42	83.38
	<u>32.96</u>		<u>32.96</u>	14.41 ✓
	14.41			
W-1641	3.26	86.64	3.26	83.38
TP ₁	3.85	85.26	5.23	81.41
TP ₂	8.56	92.74	1.08	84.18
TP ₃	3.23	95.57	0.40	92.34
TP ₄	<u>10.58</u>	98.06	8.09	87.48
H 58	29.48		0.27	97.79
	<u>15.07</u>		<u>15.07</u>	14.41 ✓
	14.41			

Elev. Diff. 14.41 Check

" " 14.41 "

83.38 ✓

Elev. ROAD intersection 44-500 E of Leesburg.

Bm 60' RT STA 819+00 RR spike

in power pole. 91.70

AT int. of $\frac{1}{2}$ E.V. is 90.7

88.71

1.97

90.68

TRAIL # 44

LAKE CO.

leveling From BM C-58 to W-1756

Sta ± 5 HI -5 Elev.BM-C58 4.20 71.40 67.20TP₁ 8.55 79.84 0.11 71.29TP₂ 10.93 90.51 0.26 79.58TP₃ 10.26 100.63 0.14 90.37TP₄ 11.21 111.72 0.12 100.51TP₅ 7.20 118.69 0.23 111.49TP₆ 2.78 117.58 3.89 114.80TP₇ 7.99 125.02 0.55 117.03TBM#1 1.98 123.04TP₈ 9.40 134.22 0.20 124.82TP₉ 4.42 134.24 4.40 129.82TBM#2 76.94 3.47 130.7713.37 13.37 63.57 ✓

63.57

April 25, 1949

Hot & Windy

Elev. diff. 63.57 check

Top of WATER hydrant support
 40' S of Rd # 44 0.8 mi. E of RR Sta.
 House No. 1300 E ORANGE AVE.
 RR. spike in base of 30" oak 18' N
 of Rd. #44 1 mi E of RR Sta. 1803 E
 ORANGE AVE. about 0.15 mile E.
 of E. city limits of Ruston.

TRAV # 44 CONT.

From TBM #2 to BM C58

April 25, 1949

Very Windy

Sta	+S	HI	-S	Elev
TBM #2	³ 3.10	133.87		130.77
TP ₁	1.44	130.41 ²	4.90 ⁴	128.97
TP ₂	0.34	120.00	10.75	119.66
TP ₃	6.50	120.23	6.27	113.73
TP ₄	2.36	115.80	6.79	113.44
TP ₅	1.01	105.68	11.13	104.67
TP ₇	1.29	95.89	11.08	94.60
TP ₈	1.46	86.91	10.44	85.45
TP ₉	2.23	78.09	11.05	75.86
TP ₁₀	4.56	71.78	10.87	67.22
BM-C58	24.29		4.58	67.20

87.86 63.57 ✓

24.29
63.57

Water level L. Eustis AT Eustis.

BM-C58 2.99 70.19 67.20

water level 7.76 62.43

2.99 4.77 ✓
4.77

April 26, 1949

cool + calm

AT 6:00 am.

Elev. diff 4.77 check

FROM TBM# 2 to W-1756

April 26, 1949

COOL, Sunny + BREEZY

6:30 AM

Sta	+S	HI	-S	Elev
TBM#2	⁵ 5.82	136.59		130.77
TP ₁	4.03	134.70	⁶ 5.92	130.67
TP ₂	9.43	144.11	0.02	134.68
TP ₃	9.27	153.34	0.04	144.07
TP ₄	10.29	163.28	0.35	152.99
TP ₅	3.42	156.00	10.70	152.58
TP ₆	10.81	157.48	9.33	146.67
TP ₇	0.23	146.70	11.01	146.47
TP ₈	1.81	137.99	10.52	136.18
TP ₉	1.56	130.34	9.21	128.78
B TBM#3			<u>4.62</u>	<u>125.72</u>
TP ₁₀	1.06	121.46	9.94	120.40
TP ₁₁	4.25	114.84	10.87	110.59
TP ₁₂	3.73	114.16	4.41	110.43
B TP ₁₃	3.53	109.64	8.05	106.11
TP ₁₄	<u>1.69</u>	<u>105.39</u>	5.94	103.70
TP ₁₅	70.93		<u>11.01</u>	<u>94.38</u>
			107.32	36.39 ✓
			70.93	
			<u>36.39</u>	

CEMENT CORNER MARKER 25' S of 2d 44.

 RR SPIKE IN BASE OF 10" AUSTRALIAN PINE
AT INT. ST RD 44 WITH BASE AVE.

Elev. d.p.f. 36.39 check.

From TBM # 2

to W - 1756

Sta	+S	HI	-S	Elev
TP ₁₅	^{78.5} 0.30	94.68		94.38
TP ₁₆	2.05	85.77	^{24.5} 10.96	83.72
TP ₁₇	9.92	87.35	8.34	77.43
TP ₁₈	2.44	88.84	0.95	86.40
TP ₁₉	10.24	93.65	5.43	83.41
TBM # 4			<u>7.74</u>	<u>85.91</u>
TP ₂₀	10.97	104.55	0.07	93.58
TP ₂₁	5.11	109.55	0.11	104.44
TP ₂₂	9.79	118.70	0.64	108.91
TP ₂₃	10.21	128.28	0.63	118.07
TP ₂₄	8.22	136.46	0.04	128.24
TP ₂₅	9.91	145.86	0.51	135.95
TP ₂₆	4.72	150.34	0.24	145.62
TP ₂₇	10.73	156.23	4.84	145.50
TP ₂₈	9.76	165.87	0.12	156.11
TP ₂₉	10.00	175.65	0.22	165.65
TP ₃₀	8.84	184.23	0.26	175.39
TP ₃₁	123.21		0.11	184.12
	³³ 33.47		33.47	89.74 ✓
	89.74			

April 26, 1949

Sunny & windy

12:00 NOON

R.R. SPIKE IN Top of high butted ^{oak} stump
about 12' W of C of clay rd., about 90'
N of ST Rd # 44 about 3 mi from East's
city limits.

Elev. diff. 89.74 check.

FROM TBM #2 to W - 1756

Sta 45 HI -5 Elev.

TP₃₁ ^{5 4} 3.95 188.07 184.12TP₃₂ 1.93 178.99 ^{4 3} 11.01 177.06TP₃₃ 1.25 169.14 11.10 167.89TP₃₄ 2.67 166.61 5.20 163.94TP₃₅ 1.64 158.43 9.82 156.79TP₃₆ 0.93 150.81 8.55 149.88TP₃₇ 2.53 152.86 0.48 150.33TP₃₈ 2.68 144.56 10.98 141.88TP₃₉ 2.21 139.37 7.40 137.16TP₄₀ 4.15 137.90 5.62 133.75

TBM#5 23.94 3.18 134.72

73.34 49.40 ✓

23.94
49.40

TBM#5 3.68 138.40 134.72

TP₄₁ 2.17 129.73 10.84 127.56TP₄₂ 1.20 119.87 11.06 118.67TP₄₃ 7.05 6.68 113.1928.58
21.53

28.58 21.53

April 26, 1949

Hot + quiet

2:00

Elev. diff 49.40 check

Elev. diff 21.53 check

TRAV # 44 CONT
From TBM #2 to W-1756

Sta	+S	HI	-S	Elev
TP43	7.90	121.09		113.19
TP44	1.55	122.58	0.06	121.03
TP45	<u>6.14</u>	<u>117.87</u>	<u>10.85</u>	<u>111.73</u>
W-1756	15.59		<u>6.05</u>	<u>111.82</u>
			16.96	1.37 ✓
			15.59	
			<u>1.37</u>	

W-1756	5.87	117.69		111.82
TP1	9.47	123.85	3.31	114.38
TP2	2.85	119.84	6.86	116.99
TP3	9.71	123.14	6.41	113.43
TP4	10.60	133.72	0.02	123.12
TP5	4.63	138.34	0.01	133.71
TBM#5			<u>3.59</u>	<u>134.75</u>

TP6	5.30	139.12	4.52	133.82
TP7	6.83	145.74	0.21	138.91
TP8	<u>8.86</u>	<u>154.30</u>	<u>0.30</u>	<u>145.44</u>
TP9	<u>64.12</u>		<u>7.59</u>	<u>146.71</u>
	<u>79.23</u>		<u>29.23</u>	<u>34.89</u> ✓
	34.89			

April 26, 1949

Hot & Sunny.

RT 4:30 pm

Elev. diff. 1.37 check

111.8

Elev. diff. 34.89 check

From W-1756 To TBM # 4

April 26, 1949

cool + breezy

Sta	+S	HI	-S	Elev
TP ₉	^{9 7} 4.36	151.07		146.71
TP ₁₀	7.45	157.68	^{4 6 C} 0.84	150.23
TP ₁₁	10.13	166.83	0.98	156.70
TP ₁₂	8.43	166.04	9.22	157.61
TP ₁₃	10.83	176.70	0.17	165.87
TP ₁₄	10.69	187.36	0.03	176.67
TP ₁₅	3.61	183.41	7.56	179.80
TP ₁₆	1.69	173.98	11.12	172.29
TP ₁₇	0.58	163.43	11.13	162.85
TP ₁₈	0.76	153.13	11.06	152.37
TP ₁₉	3.96	150.14	6.95	146.18
TP ₂₀	0.80	145.94	5.00	145.14
TP ₂₁	1.50	136.42	11.02	134.92
TP ₂₂	1.30	126.73	10.99	125.43
TP ₂₃	0.74	116.36	11.11	115.62
TP ₂₄	3.33	108.81	10.88	105.48
TP ₂₆	2.14	104.44	6.51	102.30
TP ₂₆	12.30		11.11	93.33
	125.68		125.68	53.38 ✓
	53.38			

Elev. diff. 53.38 check

TRAV. # 44 CONT.

From W-1756 To TBM #4

Sta. +S HI -S Elev.

TP₁₀ 1.04 94.37 93.33TBM #4 8.44 85.931.04 7.40

7.40 ✓

From TBM #4 to W-1402

~~TBM #4 1.07 87.00 85.93~~~~TP₂₇ 9.95 92.45 4.50 82.50~~~~TP₂₈ 10.22 102.60 0.07 92.38~~~~TP₂₉ 1.92 102.46 2.06 100.54~~

TBM #6 5.16 97.30

April 26, 1949

Cool + breezy

Elev. diff. 7.40 check

April 27, 1949

Warm + sunny

Unable to prove identity of
well - W-1402 Right Farm
but No well drilled by L & F.

From TBM # 4 to TBM # 2

April 27, 1949

Het

Sta	+S	HI	-S	Elev
TBM # 4	6.53	92.46		85.93
TP ₁	8.48	90.77	10.57	82.29
TP ₂	5.00	84.90	10.87	79.90
TP ₃	8.01	92.80	0.11	84.79
TP ₄	11.05	103.48	0.37	92.43
TP ₅	6.55	109.90	0.13	103.35
TP ₆	8.33	112.76	5.47	104.43
TP ₇	5.48	115.11	3.13	109.63
TP ₈	4.39	114.76	4.74	110.37
TP ₉	11.02	123.47	2.31	112.45
TP ₁₀	6.83	130.15	0.15	123.32
TBM # 3			(4.34)	(125.81)
TP ₁₁	7.10	135.77	1.48	128.67
TP ₁₂	8.04	143.62	0.19	135.58
TP ₁₃	10.14	153.50	0.16	143.46
TP ₁₄	6.58	152.92	7.26	146.34
TP ₁₅	5.14	156.64	1.42	151.50
TP ₁₆	118.67		0.22	156.42
	48.18		48.18	70.49 ✓
	70.49			

Elev. diff. 70.49 check

TRAV #44

LAKE CO

From TBM #4 to TBM #2

April 27, 1949

H. Otter

Sta	+S	HI	-S	Elev
TP ₁₆	4.97	161.39		156.42
TP ₁₇			(8.39	153.00)
TP ₁₈	0.74	151.21	10.92	150.47
TP ₁₉	1.24	141.34	11.11	140.10
TP ₂₀	1.91	134.39	8.86	132.48
TP ₂₁	0.52	136.50	4.41	129.98
			5.70	130.80
TBM #2	10.41		5.67	130.83 (130.77)
	+4.97		41.00	25.62 ✓
	15.38		15.38	
			25.62	

CONC. COR. POST.

Elev. diff. 25.62 check

WATER LEVEL AT DEAD R. BRIDGE L. FUSTIS				
RV2	3.03	78.13		75.10
TP ₁	2.86	70.14	10.85	67.28
WATER level	5.89		7.67	62.47
			18.52	12.63
			5.89	
			12.63	✓

Elev. diff. 12.63 check

TRAV #45

leveling from water level. Eucis to W-1642

From corner stake Brummitt property
to lake with assumed elev. 100' at
stake.

Sta	+S	HI	-S	Elev.
Cor stake	4.11	104.11		100.00
TP ₁	4.42	105.03	3.50	100.61
TP ₂	3.90	104.65	4.28	100.75
TP ₃	4.87	105.41	4.11	100.54
TP ₄	2.09	102.35	5.15	100.26
	19.39		7.38	94.97 = 62.45
	24.42		5.03	
	5.03			

WATER L. ²² 7.39 69.84 62.45

TP₁ 4.75 72.67 ²¹ 1.92 67.92

well 4.86 67.81

TP₂ 4.65 72.73 4.59 68.08

TP₃ 4.08 72.60 4.21 68.52

TP₄ 3.42 71.52 4.50 68.10

COR STAKE 24.29 9.04 67.48

well 19.26 5.12 66.40
5.03 19.26 5.03

April 28, 1949

100.00

32.52
67.48

62.45
5.03

Elev. diff. 5.03 check

94.97
62.45
32.52

66.4

Elev. diff. 5.03 check

Trav # 46

Lake Co.

Leveling From USED BM GW 51 to W-990

April 29, 1949

STA	45	HI	-S	Elev.
GW-51	^{6.88} 4.03	74.20		70.17
TP ₁	6.28	74.49	^{4.88} 5.99	68.21
TP ₂	3.66	75.02	3.13	71.36
TP ₃	7.24	79.91	2.35	72.67
TP ₄	8.01	87.91	0.01	79.90
TP ₅	5.27	90.32	2.86	85.05
TP ₆	7.22	^{94.62} 94.64	2.92	^{87.40} 87.42
TP ₇	1.89	95.10	1.43	93.21
TP ₈	10.13	99.86	5.37	89.73
TP ₉	8.77	108.44	0.19	99.67
TP ₁₀	8.63	116.86	0.21	108.23
TP ₁₁	0.89	116.12	1.63	115.73
TP ₁₂	2.79	112.41	6.50	109.62
TP ₁₃	0.92	102.56	10.77	101.64
TP ₁₄	0.72	92.65	10.63	91.93
TP ₁₅	1.43	84.89	9.19	83.46
TP ₁₆	1.55	75.69	10.75	74.14
TP ₁₇	79.43		4.69	^{70.98} 71.00
	78.62		78.59	.81
	84			

U.S.E.D. BM GW-51 at
NE Cor. R.R. Sta. at
Lisbon Elev. 70.173 -

Elev. diff 0.81 check

Traverse 46
Leveling From BM 6 W 51 to W-990

April 29, 1949

Sta	+S	HI	-S	Elev
TP ₁	8.13	79.11		90.98
W-990	3.77		3.77	75.34
	4.36			4.36 ✓
W-990	3.78	79.12		75.34
TP ₁	8.12	77.90	9.54	69.58
TP ₂	7.39	84.89	0.20	77.50
TP ₃	9.63	93.00	1.52	83.37
TP ₄	9.89	102.77	0.12	92.88
TP ₅	9.62	112.34	0.05	102.72
TP ₆	8.20	117.71	2.83	109.51
TP ₇	0.11	113.88	3.94	113.77
TP ₈	2.09	105.13	10.84	103.04
TBM #1			1.37	103.76
TP ₉	1.25	95.66	10.72	94.41
TP ₁₀	6.53	94.66	7.53	88.13
TP ₁₁	1.84	94.77	1.73	92.93
TP ₁₂	6.09	90.75	10.11	84.66
TP ₁₃	74.54		6.56	84.19
	65.69		65.69	8.85 ✓
	8.85			

Elev. diff. 1.36 check

75.4

Elev. diff. 8.85 check

TRAV #46
leveling From W-990 to BM RW 51

April 29, 1949

Sta	FS	HI	S	Elev
TP ₃	1.97	86.16		84.19
TP ₄	3.39	80.12	9.43	76.73
TP ₅	1.89	75.90	6.11	74.01
TP ₆	5.74	75.95	5.69	70.21
TP ₇	2.88	73.35	5.48	70.47
TP ₈	5.47	74.39	4.43	68.92
BM	21.34		4.24	70.15
	35.38		35.38	14.04 ✓
	14.04			

Elev. diff 14.04 check

TRAV #46 cont
From TBM #1 to W-1910

May 2, 1949

TBM #1	1.52	105.28		103.76
TP ₁	2.30	96.66	10.92	94.36
TP ₂	4.45	91.55	9.56	87.10
TP ₃	5.28	91.71	5.12	86.43
W-	13.55		6.61	85.10
	32.21		32.21	18.66
W-	6.62	91.72		85.10
TP ₁	4.31		4.37	87.35
	2.25			2.25

(85.1)

Elev. diff. 18.66 check

Well owner Williams in Sec 26
T18S R25E. Libby + FREEMAN now
drilling. Loose sand & clay
("gritband") to 114 ft. - no samples.

May 3, 1949

Hot & steamy.

TP₁ 9.27 96.62 87.35TP₂ 9.42 105.44 0.60 96.02

TBM#1 18.69 1.64 103.80

72.29

2.24 16.45

16.45

Elev. Dip to 16.45 check

ASSIGNED NO. W-1910

COMPLETED MAY 4, 1949

TRUE Elev. 85.1

Leveling From BM GWSI to W-1658

May 9, 1949

Hot & sunny

Sta	+S	HI	-S	Elev
BM GWSI	3.17	73.34		70.17
TP ₁	6.86	78.12	2.08	71.26
TP ₂	3.34	76.59	4.87	73.25
TP ₃	6.37	76.96	6.00	70.59
TP ₄	7.89	84.33	0.52	76.44
TP ₅	4.51	86.68	2.16	82.17
TP ₆	5.46	88.35	3.79	82.89
TP ₇	7.16	93.85	1.66	86.69
TP ₈	2.88	93.35	3.38	90.47
TP ₉	2.14	86.93	8.56	84.79
TP ₁₀	3.02	82.30	7.65	79.28
TP ₁₁	1.76	77.33	6.73	75.57
TP ₁₂	1.86	70.69	8.53	68.82
TP ₁₃	4.67	70.93	4.43	66.25
TP ₁₄	8.91	76.78	3.06	67.87
TP ₁₅	5.99	82.60	0.17	76.61
W-1658	75.98		4.81	77.73
	68.46		68.46	75.6
	7.53			7.53

Elev. d.p.f. 75.3 check

leveling From W-1658 to GW SI

May 9, 1949

Hot & Sunny

Sta	+S	HI	-S	Elev.
W-1658	4.74	82.44		77.70
TBM#1			3.89	78.55
TP ₁	1.21	73.28	10.37	72.07
TP ₂	4.64	70.99	6.93	66.35
TP ₃	4.91	71.21	4.69	66.30
TP ₄	8.53	78.32	1.42	69.79
TP ₅	6.33	83.42	1.23	77.09
TP ₆	9.03	91.52	0.93	82.49
TP ₇	4.26	94.62	1.16	90.36
TP ₈	1.62	88.65	7.59	87.03
TP ₉	3.94	86.78	5.81	82.84
TP ₁₀	5.26	87.04	5.00	81.78
TP ₁₁	1.67	80.62	8.09	78.95
TP ₁₂	3.55	75.72	8.45	72.17
TP ₁₃	5.03	78.15	2.60	73.12
TP ₁₄	2.73	73.30	7.58	70.57
GW SI			3.11	70.19

RR Spike in base of power pole 1.8 mi. W of Lisbon bridge

W-1658 77.69 ± 01

leveling From MP 768 to W-1736

May 9, 1949

Hot + Sunny

Sta	+S	HI	-S	Elev.
Top Nail	3.44	83.54		80.10
TP ₁	4.15	83.42	4.27	79.27
W-1736	7.59		5.36	78.06
	9.63		9.63	2.04 ✓
	2.04			
W-1736	5.37	83.43		78.06
TP ₁	4.26	83.57	4.12	79.31
Top Nail	9.63		3.47	80.10
	7.59		7.59	2.04 ✓
	2.04			

Elev. diff. 2.04 ✓

Elev. diff. 2.04 ✓

W-1736 78.1

leveling TRAV # 49 From BM 557 to W-1810

May 9, 1949

Hot & sunny

Sta.	+S	HI	-S	Elev.
BM 557	4.15	85.85		81.70
TP ₁	9.05	88.80	6.10	79.75
TP ₂	10.77	98.66	0.91	87.89
TP ₃	7.14	105.27	0.53	98.13
TP ₄	3.58	106.05	2.80	102.47
W-1810	34.69		8.62	97.43
	18.96		18.96	15.73 ✓
W-1810	8.68	106.11		97.43
TP ₁	3.86	105.10	4.87	101.24
TP ₂	1.92	96.21	10.81	94.29
TP ₃	3.51	88.70	11.02	85.19
TP ₄	6.27	85.81	9.16	79.54
BM 557	24.24		4.12	81.69
			39.98	15.74 ✓
			24.24	
			15.74	

Elev. diff. 15.73 check

W-1810 97.43

Elev. diff 15.74 check

leveling From BM 557 to W-1799

May 9, 1949

Warm + Sunny

Sta	+S	HI	-S	Elev.
BM 557	4.09	85.79		81.70
TP ₁	6.02	85.70	6.11	79.68
TP ₂	3.96	84.62	5.04	80.66
TP ₃	4.36	86.22	2.76	81.86
TP ₄	6.50	85.17	7.55	78.67
W-1799	24.93		5.46	79.71
	<u>26.92</u>		26.92	1.99 ✓
	1.99			

W-1799	5.30	85.01		79.71
TP ₁	7.40	86.06	6.35	78.66
TP ₂	4.52	84.68	5.90	80.16
TP ₃	4.01	85.77	2.92	81.76
TP ₄	5.94	85.78	5.93	79.84
BM 557	27.17		4.09	81.69
	<u>25.19</u>		25.19	1.98 ✓
	1.98			

Elev. diff. 1.99 check

W-1799 79.71

Elev. diff. 1.98 check

TRAV # 51

leveling From base New H₂O Trk. to W 515

May 10, 1949

STA	+S	HI	-S	Elev.
low Bm	2.77	97.07		94.30 M/LWGL
hi. BM	3.17		1.63	95.44 (95.45)
W-515	0.40		3.17	93.90
				0.40

Elev. diff 0.40 check.

W-515 93.90

TRAV # 52

leveling from BM-M13 to W-1660

May 10, 1949

Breezy + cloudy

STA	+S	HI	-S	Elev.
M13	4.89	87.22		82.33
TP ₁	3.10	86.82	3.50	83.72
TP ₂	3.62	85.51	4.93	81.89
TP ₃	5.35	87.93	2.93	82.58
W-1660	16.96		5.42	82.51
	<u>16.78</u>		16.78	.18 ✓
W-1660	5.15	87.66		82.51
TP ₁	1.69	85.41	3.94	83.72
TP ₂	6.04	87.22	4.23	81.18
TP ₃	4.79	87.92	4.09	83.13
M13	17.67		5.60	82.32
			<u>17.86</u>	.19
			<u>17.67</u>	
			.19	

Elev. diff .18 check

W-1660 82.51

Elev. diff .19 check

leveling TRAVER 53 8m
From W-57 to W-1809

May 10, 1949

STA	IS	HI	-S	Elev.
W-57	9.37	80.28	31.9	70.91
TP ₁	10.91	90.98	0.21	80.07
TP ₂	11.15	102.09	0.04	90.94
TP ₃	10.62	112.65	0.06	102.03
TP ₄	4.05	116.05	0.65	112.00
TP ₅	2.03	106.92	11.16	104.89
TP ₆	1.18	96.94	11.16	95.76
TP ₇	1.32	87.02	11.14	85.70
TP ₈	1.55	77.46	11.11	75.91
TP ₉	9.99	84.16	3.29	74.17
TP ₁₀	10.86	94.90	0.12	84.04
TP ₁₁	10.96	105.69	0.17	94.73
TP ₁₂	5.96	111.56	0.09	105.60
TP ₁₃	1.31	101.78	11.09	100.47
TP ₁₄	2.29	94.52	9.55	92.23
TP ₁₅	1.61	84.99	11.14	83.38
TP ₁₆	5.47	83.00	7.46	77.53
TBM#1	100.63		5.58	77.42
			94.02	6.51
				6.51

(X) .10

MISTAKE

Elev. diff 6.61 check

May 11, 1949

STA	+S	HI	-S	Elev.
TBM#1	5.58	83.60 ¹⁰		77.52
W-1809	5.54		5.54	77.56
	04.			.04 ✓

Elev. diff. .04 check

W-1809	5.56	83.12		77.56
TBM#1	6.40	83.93	5.59 ⁴	77.53
TP1	8.88	92.77	0.04	83.89
TP2	10.49	103.22	0.04	92.73
TP3	9.66	112.82	0.06	103.16
TP4	0.40	102.11	11.11	101.71
TP5	0.22	91.16	11.17	90.94
TP6	0.29	80.34	11.11	80.05
TP7	5.62	78.94	7.02	73.32
TP8	9.90	88.76	0.08	78.86
TP9	11.04	99.70	0.10	88.66
TP10	10.90	110.50	0.10	99.60
TP11	7.07	117.52	0.05	110.45
TP12	86.43		11.12	106.40
	57.59		57.59	28.84
	28.84			

W-1809 77.51 ± .04

Elev. diff. 28.84 check

May 11, 1949

STA	+S	HI	-S	Elev.
TP ₁₂	0.37	106.77		106.40
TP ₁₃	0.04	95.63	11.18	95.59
TP ₁₄	0.29	84.71	11.15	84.48
TP ₁₅	<u>2.36</u>	77.25	9.88	74.89
W 57	3.06		<u>6.25</u>	<u>71.00</u>
			38.46	35.40 ✓
			<u>3.06</u>	<u>35.40</u>

SRD BMK'S

BM El. 73.27

103' LT STA 772+66

Nail in 10" oak

BM El. 67.56

90' LT STA 755+00

RR spike in 12" oak

Elev. diff 35.40 check

BM El. 83.78

70' RT. STA. 792+00

Nail in oak

BM El. 82.66

145' LT. STA 733+00

RR spike in 6" oak

$$\begin{array}{r} 114 \\ 150 \\ \hline -36 \end{array}$$

$$\begin{array}{r} 124 \\ 88 \\ \hline -36 \end{array}$$

BM El. 91.75

60' Rt Sta 685.435

E cor of top w conc. post

at filling sta.

BM. El 97.01

Lt. Sta 669+00

Rail stop w end

Negro Church

N. of Leisburg

RR spike 18" pine

80' Lt Sta 10+94

Elev 78.264

RR spike in 13' oak 75 ft abt.

Sta 138+54

El. 75.824

TRAV # 54
FROM BM Sta 128+54 TO W-1853

May 11, 1949 Hot & Sunny

Sta	+S	HI	-S	Elev
BM	4.44	80.26		75.82
TP	10.59	89.19	31.66	78.60
TP ₂	6.85	94.31	1.73	87.46
TP ₃	2.74	91.37	5.68	88.63
TP ₄	1.64	81.94	11.07	80.30
TP ₅	1.06	74.19	8.81	73.13
TP ₆	5.62	70.23	9.58	64.61

W-1853 32.94 - 5.85 64.38
 44.38
 11.44

W-1853	5.51	69.89		64.38
TP ₁	10.86	77.09	3.66	66.23
TP ₂	8.87	83.41	2.55	74.54
TP ₃	8.76	91.83	0.34	83.07
TP ₄	5.07	94.40	2.56	89.33
TP ₅	2.73	90.31	6.82	87.58
TP ₆	1.15	80.59	10.87	79.44
BM	42.95		4.75	75.84

31.49
 11.46

Elev. diff. 17.44 check

W-1853 64.37 +.01

Elev. diff. 11.46 check

TRAV# 55

leveling From BM M10 to W-1692

May 12, 1949

Sta	+S	HI	-S	Elev.
M10	5.72	72.30		66.58
TP ₁	6.41	73.38	5.33	66.97
TP ₂	10.09	83.20	0.27	73.11
TP ₃	5.87	86.56	2.51	80.69
TBM#1	28.09		2.38	84.18
	10.49		10.49	17.60 ✓
	17.60			

TBM#1	2.40	86.58		84.18
TP ₁	2.82	83.51	5.89	80.69
TP ₂	0.30	73.41	10.40	73.11
TP ₃	4.82	71.84	6.39	67.02
M10	10.34		5.26	66.58
			27.94	17.60 ✓
			10.34	
			17.60	

Elev. diff. 17.60 check

Elev. diff 17.60 check

TRAV #55

leveling From TBM #1 to W-1692

May 12, 1949

Sta	+S	HI	-S	Elev.
TBM#1	6.34	90.52		84.18
TP ₁	10.61	101.02	0.11	90.41
TP ₂	11.03	112.03	0.02	101.00
TP ₃	8.66	120.47	0.22	111.81
TP ₄	4.88	117.36	7.99	112.48
W-1692	41.52		3.38	113.98
	11.72			
	29.80		11.72	29.80 ✓

W-1692	3.44	117.42		113.98
TP ₁	6.88	120.31	3.99	113.43
TP ₂	0.70	110.29	10.72	109.59
TP ₃	0.69	100.14	10.84	99.45
TP ₄	1.38	90.57	10.95	89.19
TBM#1	13.09		6.39	84.18
			42.89	29.80 ✓
			13.09	
			29.80	

Elev diff. 29.80 check

lots 3+4, 21+22

NW⁴ NE⁴ + N² NW⁴ E of

441 Sec 15, T19S, R24E

W-1692 113.98

Elev. diff 29.80 check

TRAV # 56

(TRAV # 55)

leveling From TBM #1 to W- 1694

May 12, 1949

Hot & sunny

Sta	+S	HI	-S	Elev.
TBM #1	3.66	87.84		84.18
TP	3.58	90.96	0.46	87.38
W-1694	7.24		3.26	87.70
	<u>3.72</u>		3.72	3.52
	3.52			

W-1694	3.11	90.81		87.70
TP	0.79	87.77	3.83	86.98
TBM #1	3.90		3.59	84.18
			7.42	3.52
			<u>3.90</u>	
			3.52	

lots 22-27 Block 'A'
N. Leesburg Subd.Elev. diff 3.52 check
" " 3.52 check

W-1694 is 87.70

TRAV # 57

LAKA Co.

leveling From BM-M6 to W-1711

May 19, 1949

Hot + Sunny

Sta.	+S	HI	-S	Elev
BM-M6	7.84	80.15		72.31
TP ₁	1.23	80.47	0.91	79.24
TP ₂	5.31	84.49	1.29	79.18
W-1711	14.38		4.66	79.83
	<u>6.86</u>		6.86	7.52 ✓
	7.52			
W-1711	4.49	84.32		79.83
TP ₁	4.26	80.20	8.38	75.94
M6	8.75		7.88	72.32
			16.26	7.51 ✓
			<u>8.75</u>	
			7.51	

Elev. diff. 7.52 check

" " 7.51 "

W-1711 79.83

TRAV # 58 Marion Co
leveling from top Rail to W-1707

Sta	+S	ME	-S	Elev
Top W Rail	1.94	97.64		95.70
TP	2.04	88.57	11.11	86.53
W-1707	3.98		2.41	86.16
			13.52	9.54 ✓
			3.98	
			9.54	

W-1707	2.62	88.78		86.16
TP	9.32	97.92	0.19	88.59
Top Rail	11.95		2.22	95.70
	2.41		2.41	9.54 ✓
	9.54			

May 19, 1949

Hot & Sunny

Elev. of top 9.54 check

9.54

W-1707 86.2

7.15

1.82
8.97

TRAV#59

Leveling From BM AM 17 to W-1762

May 20, 1949

Hot & Sunny

Sta	+S	HI	-S	Elev.
BM	⁴ 3.48	115.97		112.49
TP ₁	1.49	106.43	³² 11.03	104.94
TP ₂	1.85	98.57	9.71	96.72
TP ₃	6.44	95.28	9.73	88.84
TP ₄	1.55	87.78	9.05	86.23
TP ₅	5.28	83.71	9.35	78.43
W-1712	6.64	85.64	4.71	79.00
TP ₆	4.48	86.50	3.62	82.02
W-1762	³¹ 6.21 <u>63.42</u>		² 6.22 <u>13.42</u>	80.28 32.21 ✓
W-1762	² 36.21	86.49	² 22	80.28
TBM			<u>4.75</u>	<u>81.74</u>
TP ₁	4.33	84.66	0.16	80.33
TP ₂	10.18	94.47	0.37	84.29
TP ₃	9.36	101.73	2.10	92.37
TP ₄	9.67	110.98	0.42	101.31
TP ₅	5.92	116.45	0.45	110.53
AM 17	45.67 <u>13.46</u> 32.21		<u>3.96</u> 13.46	112.49 32.21 ✓

Elev. diff 32.21 check

Elev. diff 32.21 check

W-1712 79.00

W-1762 80.28

Cut in base of dead oak in NW 1/4
NW 1/4 Sec 28 T17S, R23E

BM#1 71.66 80' 1/2" rail
IN root 20" oak 50' 1/2" of

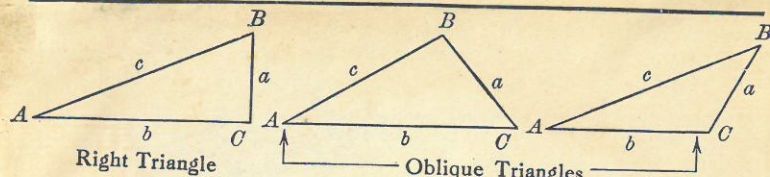
341 + 80

BM#2 82.18

Base 18" give 55' 1/2"

350 + 40

TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

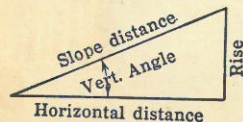
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{a}$, $\csc = \frac{c}{b}$

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, $\cos 5^\circ 10' = .9959$. Horizontal distance = $319.4 \times .9959 = 318.09$ 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. $\cos 5^\circ 10' = .9959$. $1 - .9959 = .0041$. $319.4 \times .0041 = 1.31$. $319.4 - 1.31 = 318.09$ 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.