

3

COUNTY 3

1949

1

9

4

9

ALACHUA

LAKE

MARION

OSCEOLA

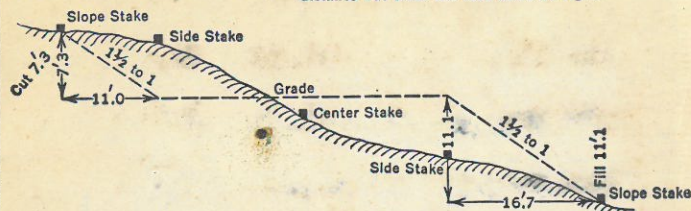
POLK

9

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	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	Cut or Fill
	Distance out from Side or Shoulder Stake										
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

3

Fla. Geological Survey
Tallahassee, Fla.

H.T. Chittum - level
R.C. Gray - Rod

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

TRAV#60 Weirsdale Marion Co.
leveling From BM-M.17 to W-1691

Sta	+S	HI	-S	Elev
BM-M.17	2.43	124.90		122.47
TP ₁	1.37	115.31	10.96	113.94
TP ₂	1.70	106.10	10.91	104.40
TP ₃	2.21	97.35	10.96	95.14
W-1654			4.89	92.46
TP ₄	1.84	92.47	6.72	90.63
TP ₅	3.61	86.24	9.84	82.63
W1693	¹³ 57.16		6.73	79.51
W1691	^{57.34} 44.18		7.95	78.29
			57.34	44.18 ✓
W-1691	^{3 2} 7.69	85.98		78.29
TP ₁	9.24	92.55	2.67	83.31
TP ₂	6.67	97.60	1.62	90.93
TP ₃	10.71	105.86	2.45	95.15
TP ₄	9.21	114.96	0.11	105.75
TP ₅	10.64	125.53	0.07	114.89
M.17	54.16		3.03	122.50 122.47
	9.95		9.95	44.21 ✓
	44.21			

May 23, 1949 Hot & Sunny

Elev. diff. 44.18 check

Elev. diff 44.21 check

W-1654 92.46

W-1693 79.50 ±.02

W-1691 78.27 ±.01

TRAV# 61
leveling From M19 to W-1900

MARION Co

Sta	+S	HI	-S	Elev
M19	3.70	75.71		72.01
TP1	2.47	71.97	6.21	69.50
TP2	10.11	81.50	0.58	71.39
TP3	5.52	86.59	0.43	81.07
TP4	0.57	76.39	10.77	75.82
TP5	3.52	73.76	6.15	70.24
TP6	7.47	76.65	4.58	69.18
TP7	10.38	86.94	0.09	76.56
TP8	11.37	92.11	6.20	80.74
TP9	11.33	103.33	0.11	92.00
TP10	10.46	113.73	0.06	103.27
TP11	10.29	123.91	0.11	113.62
BM#1	87.19		2.14	121.77
	37.43		37.43	49.76
	49.76			

May 24, 1949

Hot & Sunny

Elev diff 49.76 check

RR Spike in W side of 15" pecan tree
on top of first high hill N of st rd
42 on rd running along line between
sec 21 & 22, about 18' E of center
line of Rd. about 18" above gnd.

STATION	TRAV #61	+5	HI	-5	Elev
TBM #1	25	1.85	123.62		121.77
TP12		0.44	112.97	24 3 11.09	112.53
TP13		0.36	102.21	11.12	101.85
TP14		0.21	91.27	11.15	91.06
TP15		10.07	98.44	2.90	88.37
TP16		10.99	109.37	0.06	98.38
TP17		11.03	120.30	0.10	109.27
TP18		11.32	131.32	0.30	120.00
TP19		10.32	141.04	0.60	130.72
TP20		3.53	190.87	3.70	137.34
TP21		10.71	145.61	5.97	134.90
TP22		8.04	153.62	0.03	145.58
TP23		6.58	158.99	1.21	152.41
W-1900		85.45		4.09	154.90
		52.32		52.32	33.13 ✓
		33.13			

May 24, 1949

Kot!

Elev. diff. 33.13 checks

TRAV #61
leveling From

W-1900 to M-17

26
May 25, 1949

Hot + Sunny
RAIN

Sta	+S	HI	-S	Elev.
W-1900	2.62	157.52		154.90
TP1	1.50	147.88	11.7	146.38
TP2	1.65	138.42	11.11	136.77
TP3	10.10	137.89	10.63	127.79
TP4	10.61	148.45	0.05	137.84
TP5	7.87	153.66	2.66	145.79
TP6	1.20	147.31	7.55	146.11

TBM #2

(6.51 140.80)

TP7	6.82	148.36	5.77	141.54
TP8	6.83	154.90	0.29	148.07
TP9	2.03	147.72	9.21	145.69
TP10	2.36	142.61	7.47	140.25
TP11	1.46	132.97	11.10	131.51
TP12	4.04	127.24	9.77	123.20
TP13	10.27	130.15	7.36	119.88
TP14	6.47	136.39	0.23	129.92
TP15	2.14	129.39	9.16	127.23

BM M17

77.99

6.89

122.50

110.39

32.40

MK. IN SE COR OF CON. STEP TO
MARION Co. CITRUS CO PACKING PLANT 1.4
Mi. N of WEIRSDALE ON Hwy 441.

Elev diff 32.40 check

TRAV # 02

leveling from USGS RM#4 to W-1097

RM#4 5.66 68.12 62.46

W-1097 8.27 8.27 59.85
2.61 2.61 ✓W-1097 8.47 68.32 59.85USGS
RM#4 5.85 5.85 62.47
2.62 2.62 ✓

May 27, 1949 Hot & Sunny

TRAV # 63

MARION CO

Leveling From BM B17 to PROCTOR CORNER

JUNE 2, 1949

Hot + Breeze

Sta	+S	HI	-S	Elev
B 17	1.44	138.58		137.14
TP ₁	1.26	128.94	10.90	127.68
TP ₂	0.87	118.75	11.06	117.88
TP ₃	0.35	108.10	11.00	107.75
TP ₄	1.08	98.22	10.96	97.14
TP ₅	5.32	95.57	7.97	90.25
TP ₆	8.44	103.83	0.18	95.39
TP ₇	84.8	112.22	0.09	103.74
TP ₈	9.10	121.25	0.07	112.15
TP ₉	8.96	130.06	0.15	121.10
TP ₁₀	9.25	139.18	0.13	129.93
IBM#1	54.55		6.38	132.80

58.89 4.34
 54.55
 + 4.34 139.18

Missing BM (B16)

135.65
 3.53

Rod should read:

BM has been DESTROYED (BM-B16)

Elev. diff. 4.34 check

(PROCTOR INTERSECTION)
 TOP OF SRD R/W MARKER IN NW COR
 OF CROSSROADS STS 25 + 318 IN TEXACO
 STA. DRIVEWAY. ABOUT 2" ABOVE GRD.
 ABOUT 5' W. OF A TELEPHONE POLE.

TRAV #63

LEVELING FROM TBM#1 to BM B17

Sta.	IS	HI	-S	Elev
TBM#1	⁺ ⁺ ⁺ 2.15	134.95		132.80
TP ₁	3.01	127.10	¹⁺ ⁶ 10.86	124.09
TP ₂	0.05	116.58	10.57	116.53
TP ₃	1.08	106.52	11.14	105.44
TP ₄	2.72	98.37	10.87	95.65
TP ₅	6.90	96.69	8.58	89.79
TP ₆	9.86	106.38	0.17	96.52
TP ₇	10.51	116.37	0.52	105.86
TP ₈	9.69	125.79	0.27	116.10
TP ₉	11.04	136.58	0.25	125.54
TP ₁₀	7.06	142.24	1.40	135.18
B17	64.07		5.08	137.16
	59.71		59.71	4.36 ✓
	4.36			

JUNE 2, 1949

SUNNY & WINDY

DUST IS EATING US UP.

Elev diff 4.36 CHECK

TRUE ELEVATION OF TBM#1
 is : 137.14 (BM B17)
 - 4.35 (AV. ELEV. DIFF.)
 132.79 ± .01 FT.

TRAV # 63

LEVELING FROM TBM#1 TO W-1869

JUNE 3, 1949

CLEAR + HOT

STA.	+S	HI	-S	ELEV.
TBM#1	0.13	132.92		132.79
TP ₁	1.70	123.50	^{33 3} 11.12	121.80
TP ₂	0.83	113.26	11.07	112.43
TP ₃	3.25	105.37	11.14	102.12
TP ₄	5.71	107.65	3.43	101.94
TP ₅	2.83	106.02	4.46	103.19
TP ₆	2.67	102.71	5.98	100.04
TP ₇	0.32	96.33	6.70	96.01
TBM#2	17.44		4.34	91.99
W-1869			9.51	86.82
			63.41	45.97 ✓
			17.44	
			45.97	

B

STORAGE
 TOP GASOLINE TANK TOP NEAREST
 TEXACO STA. bldg 1 mi N of
 Proctor CORNERS, 7.5' N of
 STA. HEARN'S TRAILER PARK,
 IN TOWN OF ORANGE LAKE 0.2 mi
 S. of ROAD LEADING TO POST
 OFFICE.

TRAVEL #63

LEVELING FROM TBM#2 to TBM#1

Sta.	+S	HI	-S	Elev.
TBM#2	³⁺ ₃ 7.90	99.89		91.99
TP ₁	6.14	103.36	⁺ ₊ 2.67	97.22
TP ₂	6.25	106.79	2.82	100.54
TP ₃	3.67	106.72	3.74	103.05
TP ₄	3.82	105.56	4.98	101.74
TP ₅	10.13	115.52	0.17	105.39
TP ₆	8.97	123.75	0.74	114.78
TP ₇	10.38	133.84	0.29	123.46
TBM#1	57.26		<u>1.02</u>	132.82
	<u>16.43</u>		16.43	40.83 ✓
	40.83			

JUNE 6, 1949

No TX Sunny

Elev. diff 40.83 Check

TRUE Elev. TBM#2 is:

132.79 TBM#1

-40.81

91.98 ± 0.02

W- 1869 15 86.81 ± 0.02

TRAV #64 * Reddick, MARION Co.
LEVELING FROM BM H286 to W-1766

Sta	IS	HI	-S	Elev
H286	5.68	89.29		83.61

TP ₁	9.61	93.71	5.19	84.10
-----------------	------	-------	------	-------

TP ₂	9.06	102.34	0.43	93.28
-----------------	------	--------	------	-------

W-1766	24.35		5.00	97.34
--------	-------	--	------	-------

10.62
13.73

10.62 13.73 ✓

W-1766	4.82	102.16		97.34
--------	------	--------	--	-------

TP ₁	1.31	93.89	9.58	92.58
-----------------	------	-------	------	-------

TP ₂	5.32	89.39	9.82	84.07
-----------------	------	-------	------	-------

H286	11.45		5.78	83.61 ✓
------	-------	--	------	---------

25.18 13.73

11.45

13.73

June 9, 1949

Not YSUNAN

Elev. diff 13.73 CHECK

W-1766 is 97.34

Elev. diff 13.73 check

*

BM H286 is located

WRONG in Bull. 32. -

IS 30 FT East of $\oplus$ OF Hwy 25

251.8 N NW by N OF CONC.

Arch.

USCACS
H N0288
RIVER →

Disci

←

TRAIL # 65 MARION CO.
LEVELING FROM TBM #2 (TRAIL # 63) to L. ORANGE

JUNE 10, 1949

Hot & Sunny.

STA	+S	H.I.	-S	ELEV.
TBM #2	0.91	92.89		91.98 (± 0.02)
TP ₁	5.65	88.50	10.04	82.85 ✓
TP ₂	10.32	89.87	8.95	79.55 ✓
TP ₃	10.80	100.47	0.20	89.67 ✓
TP ₄	1.08	96.56	4.99	95.48 ✓
TP ₅	1.16	87.68	10.04	86.52 ✓
TP ₆	0.61	77.51	10.78	76.90 ✓
TP ₇	1.06	68.80	9.77	67.74 ✓
L. ORANGE	31.59		9.87	58.93
	64.64		64.64	33.05
	3.05			
L. ORANGE	10.30	69.23		58.93
TBM #1	9.43	77.48	1.18	68.05
TP ₁	10.61	87.62	0.47	77.01
TP ₂	10.05	96.57	1.10	86.52 (TP ₅) ↑
TP ₃	5.23	101.78	0.02	96.55
TP ₄	0.67	91.45	11.00	90.78
TP ₅	6.56	88.40	9.61	81.84
TP ₆			5.40	83.00

TOPEKA RAIL A.C.L. RR AT Rd CROSS
IN ORANGE LAKE

BOPP NAILING BASE OF 10" OAK TREE
NEAREST CONC. BLOCK CONST. IN CENTER
OF PARKING AREA AT Floating Island Fish
CAMP.

TRAY #65

TP ₆	9.87	92.81	83.00
TBM#2		0.89	91.98

L. ORANGE	8.98	67.71	58.73
TP ₁	7.46	74.19	0.98 66.73
TBM#2	16.44	1.10	73.09
	2.08	2.08	14.36 ✓
	14.36		

TBM#2	0.91	74.00	73.09
TP ₁	0.83	67.76	7.07 66.93
L. Orange	1.74	9.01	58.75
		16.08	14.34 ✓
		1.74	
		14.34	

JUNE 10, 1949

JUNE 13, 1949 Hot & Sunny
AT McIntosh Fish Camp

TRAV #65
LEVELING FROM ACL STA to OD HUFF WEL.

JUNE 13, 1949

Sta	+S	HI	-S	ELEV
TBM #2	4.60	77.68		73.08 ($\pm .03$)
TBM #3			(3.85)	73.83
TP ₁	7.09	81.15	3.62	74.06
TP ₂	2.01	77.11	6.05	75.10
TP ₃	4.11	74.00	7.22	69.89
TP ₄	2.64	68.37	8.27	65.73
10' WELL OD HUFF	20.45		5.57	62.80
	30.73		30.73	10.28 ✓
	10.28			
OD HUFF	6.04	68.84		62.80
TP ₁	7.21	74.77	1.28	67.56
TP ₂	7.02	76.22	5.57	69.20
TP ₃	6.66	80.85	2.03	74.19
TP ₄	3.84	78.02	6.67	74.18
TBM #3	30.77		4.23	73.79
	19.78		19.78	10.99 ✓
	10.99			

TOP E RAIL opposite ACL RR
STA. AT McIntosh

→ CROSS IN NW COR CONC
STEP LEADING to Colored waiting
Room MC Intosh RR STA.

Elev. diff. 10.28 check

Elev diff 10.99 check

Well is 62.82 $\pm .05$

AV. Elev. diff is 10.26

73.08

62.82

TRAV #66 LAKE CO
LEVELING FROM M2 to W-1632

STA +S HI -S ELEV.

M2 6.87 119.69 112.82 (SRD)

TP1 5.08 123.90 0.87 118.82

TP2 9.15 131.81 1.24 122.66

TP3 4.96 133.33 3.44 128.37

W-1632 26.06 (4.36 128.97)

TBM#1 8.95 3.40 129.93

17.11 8.95 17.11 ✓

TBM#1 133.28 3.35 132.32 128.97 129.93

W-1632 131.78 3.66 130.82 5.16 127.16 128.12

TP1 124.26 2.70 123.30 10.22 120.60 121.56

TP2 120.09 0.92 119.13 5.09 118.21 119.17

TP3 10.63 7.27 111.86 112.82

M2 27.74 17.11 17.11

10.63

17.11

JUNE 17, 1949

HOT + SULTRY

ELEV. DIFF. 17.11 check

Top of 'T' on well.

ELEV. DIFF 17.11 check

TRAV #67

MARION CO.

LEVELING FROM BM H61 to W-937

JUNE 22, 1949

WARM + cloudy

Sta	+S	HI	-S	Elev
BM H61	0.38	152.30		151.92
TP1	8.44	154.14	6.60	145.70
TP2	10.48	164.45	0.17	153.97
TP3	10.70	174.97	0.18	164.27
TP4	10.51	185.44	0.04	174.93
TP5	8.28	193.58	0.14	185.30
TP6	8.81	201.00	1.39	192.19

W-937 57.60 4.85 196.15 Grad.

TBM#1	11.45	2.93	198.07
	46.15	11.45	46.15

TBM#1 0.98 199.05 198.07

TP1 2.88 191.03 10.90 188.15

TP2 0.52 180.45 11.10 179.93

TP3 6.54 176.86 10.13 170.32

TBM#2 10.92 8.63 168.23

TBM#3 32.24 8.41 168.45

21.32

TP4 0.11 176.75

32.14 21.32

Elev. diff. 46.15 check

Top SW cor. CONC. pump base.

	Sta	+S	HI	-S	Elv.
B	TP ₄	¹²² 10.22	186.97	3 3	176.75
	TP ₃	6.38	190.38	2.97	184.00
	TP ₆	0.70	180.09	10.99	179.39
	TP ₇	0.21	169.29	11.01	169.08
	TP ₈	0.29	158.55	11.03	158.26
	TP ₉	<u>7.51</u>	155.62	10.44	148.11
	BM H61	25.31		<u>3.68</u>	151.94
10				50.12	24.81 ✓
7				<u>25.31</u>	
				24.81	

TRAV#68
LEVELING FROM RR STA MCINTOSH TO ODDAPT #2

MARION CO

JUNE 29, 1999

HOT + cloudy
(89°F)

STA +S +HI -S ELEV.

TBM#3 ^{5 6 6} 7.18 81.01 ^{8 6} 73.83 ±.03

TP₂ 10.60 90.99 0.62 80.39

TP₂ 10.35 101.21 0.13 90.86

TP₃ 9.24 106.81 3.64 97.57

TP₄ 9.50 116.02 0.29 106.52

TP₅ 1.06 113.23 3.85 112.17

TP₆ 10.70 120.20 3.73 109.50

TP₇ 0.41 112.83 7.78 112.42

TBM₁ 7.46 105.37

TP₈ 11.21 118.06 5.98 106.85

TP₉ 10.26 128.14 0.18 117.88

TP₁₀ 10.92 138.43 0.63 127.51

TP₁₁ 9.45 147.47 0.41 138.02

TP₁₂ 8.79 146.68 9.58 137.89

TP₁₃ 10.36 154.91 2.13 144.55

TP₁₄ 5.47 159.77 0.61 154.30

TP₁₅ 11.04 167.31 3.50 156.27

Well #2 136.54 0.73 166.58

43.71
76

43.79 92.75

Elev diff 92.75 check

R.R. SPIKE IN BASE OF TEL. POLE
IN NW COR. OF +ROADS Sec 89

Well #2	+56	HT	-5	ELEV.
	0.86	167.44		166.58
		159.68	35.5	159.68
TR	3.27	169.85	11.03	166.58
				157.48
TBM#2	—		2.22	157.36
		156.20		155.07
TP ₂	1.13	152.93	4.61	151.80
		146.32		145.15
TP ₃	1.17	143.05	11.05	141.88
		147.79		138.11
TP ₄	9.68	144.52	8.21	134.84
		139.52		136.69
TP ₅	2.83	136.25	11.10	133.42
		130.97		128.36
TP ₆	2.61	127.90	11.16	125.09
		119.98		119.96
TP ₇	0.02	116.71	11.01	116.69
		109.21		109.19
TP ₈	0.02	105.94	10.79	105.92
TBM#1	—		3.72	105.49
				105.33
TP ₉	10.59	119.62	0.18	109.03
TP ₁₀	1.07	110.47	10.22	109.40
TP ₁₁	9.50	118.36	1.61	108.86
TP ₁₂	0.93	108.39	10.90	107.46
TP ₁₃	4.81	102.76	10.44	97.95
TP ₁₄	0.41	92.05	11.12	91.64
TP ₁₅	1.09	82.00	11.14	80.91
TBM#3	49.99		7.98	74.02 (TRAV#65)
	142.59		142.55	92.56

JUNE 29, 1949 Net + Survey
(97°F)

R. R. SPIKE IN BASE OF POWER POLE

Elev. of 92.56 CHECK

WELL #2 15 166.48 ± .12
TBM#1 15 105.335 ± .07

TRAV# 68 CONT.

LEVELING FROM TBM #1 TO SLOAN WELL

JUNE 30, 1949

Hot & Sunny

STA	+S	HI	-S	Elev
TBM #1	⁵ 3.53	108.86	⁵	105.33
TP ₁	8.97	108.72	⁵ 9.11	99.75
TP ₂	0.86	103.50	6.08	102.64
TP ₃	8.16	100.79	10.87	92.63
TP ₄	7.88	101.31	7.36	93.43
TP ₅	0.12	90.77	10.66	90.65
TBM #3	—		(3.16)	(98.15)
TP ₆	0.29	80.10	10.96	79.81
TP ₇	2.67	75.46	7.31	72.79
TP ₈	6.74	77.44	4.76	70.70
TP ₉	5.44	78.20	4.68	72.76
SLOAN WELL	44.66		4.43	73.77
			76.22	31.56
			44.66	
			31.56	

RR SPIKE IN POWER pole support on +
ROADS OF ROADS LEADING TO BOARDMAN
+ EVINSTON

TRAV # 68

BOARDMAN, MARION CO.

HOTTER

Sta.	+S	HI	-S	Elv.
Sloan Well	4.22	77.99		73.77
TP ₁	4.34	77.08	5.25	72.74
TP ₂	4.15	74.79	6.44	70.64
TP ₃	6.03	76.91	3.91	70.88
TP ₄	5.66	78.57	4.00	72.91
TP ₅	10.79	89.13	0.23	78.34
TP ₆	10.23	99.25	0.11	89.02
TBM#3	—		(1.11)	(98.14)
TP ₇	3.72	99.13	3.84	95.41
TP ₈	7.28	101.18	5.23	93.90
TP ₉	7.34	99.02	9.50	91.68
TP ₁₀	9.56	108.44	0.14	98.88
TP ₁₁	1.98	106.23	4.19	104.25
TP ₁₂	8.78	107.12	7.89	98.34
TBM#1	84.08		1.75	105.37
	52.48		52.48	31.60 ✓
	31.60			

Elv. diff. 31.60 check

Well is 73.79 ± .09

TRAV #69
leveling from MP 737 to Kilgore well

JUNE 7, 1949

Hot + Sunny

STA	+S	HI	-S	Elev
MP 737	²² 0.73	70.13		69.4
TP ₁	4.35	66.56	7.92	62.21
TP ₂	9.13	75.35	0.34	66.22
TP ₃	11.12	81.20	5.27	70.08
TP ₄	11.08	91.22	1.06	80.14
TP ₅	10.97	101.02	1.17	90.05
TBM#1	47.38		0.17	100.85
	15.93		15.93	31.45
	31.45			

Elev. diff. is 31.45 check

TBM#1	8.90	109.75		100.85
TP ₆	10.95	119.91	0.79	108.96
TP ₇	10.51	129.89	0.53	119.38
TP ₈	11.00	140.47	0.42	129.47
TP ₉	10.84	151.05	0.26	140.21
TP ₁₀	7.70	158.13	0.62	150.43
TBM#2	59.90		15.76	152.37
TP ₁₁	4.84		2.22	155.91
	55.06		4.84	55.06

RAIN

JUNE 8, 1949 cloudy + warm

TRAV #69

JUNE 8, 1997

Sta +S HI -S Elv.

TP₁₁ 8.70 164.61 155.91TP₁₂ 6.03 169.22 1.42 163.19

Kilgore well 5.20 164.02

14.73
6.62
8.11 6.62 8.11 ✓

Kilgore W. 5.08 169.10 164.02

TOP CASING (4.25 164.85)

TP₁ 3.32 164.66 7.76 161.34TP₂ 1.94 157.82 8.78 155.88

TBM#2 (5.40 152.42)

TP₃ 0.19 147.37 10.64 147.18TP₄ 1.00 137.48 10.89 136.48TP₅ 3.40 129.82 11.06 126.42TP₆ 1.02 119.80 11.04 118.78TP₇ 0.41 109.22 10.99 108.81

TBM#1 16.36 8.31 100.91

79.47 63.11 ✓

16.36

63.11

RAIN —

sta	+S	HI	-S	Elev
TBM#1	0.42	101.33		100.91
TP8	0.52	90.82	11.03	90.30
TP9	1.26	80.93	11.15	79.67
TP10	5.32	75.60	10.65	70.28
TP11	0.09	65.33	10.36	65.24
TP12	6.88	70.31	1.90	63.43
MP737			0.91	69.40 69.4

TRAV #70
Leveling From BM B23 to JOHNSON WEL

MARION CO

STA. +S HI -S ELEV.

B 23 ^{8.5} 2.25 119.94 117.69

TP₁ 1.34 110.39 ^{4.7} 10.89 109.05

TP₂ 2.20 101.58 11.01 99.38

TP₃ 3.68 97.15 8.11 93.47

TP₄ 9.28 106.17 0.26 96.89

TP₅ 9.40 115.37 0.20 105.97

M TP₆ 2.06 115.18 2.25 113.12

TP₇ 1.20 95.44 10.94 ^{104.24} ~~94.24~~

TP₈ 9.75 99.05 6.14 89.30

TP₉ 10.93 102.16 7.82 91.23

TP₁₀ 1.70 103.99 0.07 102.09

TP₁₁ 1.05 95.44 9.40 94.39

TP₁₂ 4.63 92.11 7.96 87.48

TP₁₃ 5.70 96.95 0.86 91.25

TP₁₄ 10.86 107.18 0.63 96.32

TP₁₅ 9.84 116.99 0.03 107.15

TP₁₆ 10.90 125.40 2.49 114.50

TP₁₇ 96.77 ^{135.19} ~~0.21~~ 125.19

99.29 TP₁₇ 17.50

July 20, 1949 cloudy & warm

Elev. diff. 17.50 check

MK IN CATTLE GAP WHERE TRAV. WEL.

Rd #

TRAV # 70

July 20, 1999

SHOWERS + clouds

Sta	+S	NI	-S	Elv.
TP ₁₇	^{3 3 3} 10.91	146.10		135.19
TP ₁₈	7.03	148.38	^{3 + 3} 4.75	141.35
TP ₁₉	1.07	138.34	11.11	137.27
TP ₂₀	5.29	136.76	6.87	131.47
TP ₂₁	7.38	133.18	10.96	125.80
TP ₂₂	6.00	133.94	5.24	127.94
TP ₂₃	4.62	135.60	2.96	130.98
TP ₂₄	10.72	142.31	4.01	131.59
TP ₂₅	<u>6.01</u>	146.96	1.36	140.95
Johnson W.	59.03		4.50	142.46
	<u>51.76</u>		51.76	7.27 ✓
	7.27			

Johnson W	4.60	147.06		142.46
TP ₁	2.04	140.43	8.67	138.39
TP ₂	2.72	135.27	7.88	132.55
TP ₃	1.20	132.20	4.27	131.00
TP ₄	<u>8.86</u>	130.24	10.82	121.38
TP ₅	19.42		0.60	129.64
	<u>37.24</u>		37.24	12.82 ✓
	12.82			

Elv. diff 7.27 check

1/4 Sec Cor 5 + 8

Elv. diff 12.82 check

1/4 Sec Cor 5 + 8

→ Rain

TRAV # 70

July 21, 1999 Mt Ignatty

STA	+S	HI	-S	EIV
TP ₅	^{6.7} 7.00	136.64		129.64
TP ₆	10.30	143.84	^{2.7} 3.10	133.54
TP ₇	3.40	146.76	0.48	143.36
TP ₈	0.85	137.31	10.30	136.46
TP ₉	1.85	128.22	10.94	126.37
TP ₁₀	3.80	121.21	10.81	117.41
TP ₁₁	2.01	113.17	10.05	111.16
TP ₁₂	3.73	105.67	11.23	101.94
TP ₁₃	4.32	102.72	7.27	98.40
TP ₁₄	8.36	111.03	0.05	102.67
TP ₁₅	6.02	116.50	0.55	110.48
TP ₁₆	0.92	106.43	10.99	105.51
TP ₁₇	4.74	106.34	4.83	101.60
TP ₁₈	9.62	115.92	0.04	106.30
TP ₁₉	2.15	115.37	2.70	113.22 (TP ₆)
TP ₂₀	0.49	105.05	10.81	104.56
TP ₂₁	4.35	98.36	11.04	94.01
TP ₂₂	73.91		0.50	97.86
	105.69		105.69	31.78
	31.78			

Elev. diff is 31.78 check

July 21, 1949

TP ₂₂	10.98	108.84		97.86
------------------	-------	--------	--	-------

TP ₂₃	10.76	119.56	0.04	108.80
------------------	-------	--------	------	--------

B23	21.74	1.79	117.77	(117.69)
-----	-------	------	--------	----------

	1.83	1.83	19.91	
	<u>19.91</u>			

Elev Diff is 19.91 check

True Elev. Johnson well is:

117.69	142.46
--------	--------

- 142.46	+ 117.77
----------	----------

+ 24.77	- 24.69
---------	---------

24.77	117.69
-------	--------

24.69	+ 24.73
-------	---------

2	49.46
---	-------

142.42

24.73

±.04

TRAV #71 (TRAVE 67)
LEVELING FROM TBM #2 to IW Riggs #1

July 21, 1949 cloudy

STA	+S	HI	-S	ELEV
BM#2	⁵ 4.58	172.81		168.23
TP ₁	0.57	162.40	²⁶ 10.98	161.83
TP ₂	0.76	152.16	11.00	151.40
TP ₃	0.05	141.15	11.06	141.10
TP ₄	0.75	130.90	11.00	130.15
TP ₅	0.66	120.54	11.02	119.88
TP ₆	0.90	110.47	10.97	109.57
TBM	0.43	108.92	1.98	108.49
TP ₇	4.83	102.71	11.04	97.88
TP ₈	9.99	111.27	1.43	101.28
TP ₉	1.08	106.88	5.47	105.80
TP ₁₀	5.32	101.22	10.98	95.90
TP ₁₁	10.41	111.43	0.20	101.02
TP ₁₂	9.78	121.14	0.07	111.36
TP ₁₃	9.70	130.56	0.28	120.86
TP ₁₄	<u>6.12</u>	135.59	1.09	129.47
IWRiggs #1	65.93		<u>4.47</u>	131.12
			103.04	37.11
			65.93	
			37.11	

RR spike on power pole

Elev diff 37.11 check

TRAV #71

Sta	+S	HI	-S	Elev
1W Riggs #1	^{3.6} 4.10	135.22		131.12
TP ₁	0.41	124.67	^{2.6} 10.96	124.26
TP ₂	0.20	113.82	11.05	113.62
TP ₃	0.24	102.95	11.11	102.71
TP ₄	10.02	101.92	11.05	91.90
TP ₅	9.82	111.37	0.37	101.55
TP ₆	0.00	107.56	3.81	107.56
TP ₇	4.65	102.89	9.32	98.24
TP ₈	10.84	108.67	5.06	97.83
TBM	0.22	108.78	<u>0.11</u>	<u>108.56</u> 108.40
TP ₉	11.23	^{119.68} 120.01	^{0.22} 14.23	⁴⁵ 108.78
TP ₁₀	10.94	130.85	0.10	119.91
TP ₁₁	10.35	141.03	0.17	130.68
TP ₁₂	10.57	151.48	0.12	140.91
TP ₁₃	8.64	160.09	0.03	151.45
TP ₁₄	<u>10.94</u>	<u>170.95</u>	0.08	<u>160.01</u>
B.M. #2	102.95		^{168.30} 232	168.63
	^{65.77} 37.18		65.77	37.18

July 21, 1949

Rain 2001

TRUE ELEV. IN Riggs #1 is:

131.08 ± 0.03 ✓

ELEV. DIFF 15 37.18 check

TRAV # 72

MARION CO.

LEVELING From B.M. Y 79 Anthony to PREIST W.

July 22, 1949 Hot + sunny

STA	+S	HI	-S	ELV.
Y-79	4.70	89.23		84.53
TP ₁	3.30	86.23	4.30	82.93
TP ₂	6.10	90.33	2.00	84.23
TP ₃	2.82	82.12	11.03	79.30
TP ₄	4.59	85.38	1.33	80.79
TP ₅	2.19	80.16	7.41	77.97
TP ₆	3.86	81.33	2.69	77.47
TP ₇	5.37	77.03	9.67	71.66
TBM #1	32.93		0.10	76.93
	40.53		40.53	7.60
	7.60			

TBM #4	0.98	77.91		76.93
Well			1.04	76.87
TP ₁	9.27	80.95	6.23	71.68
TP ₂	2.80	80.28	3.47	77.48
TP ₃	7.24	85.25	2.27	78.01
TP ₄	1.49	82.52	4.22	81.03
TP ₅	21.78		2.99	79.53
	19.18		19.18	2.60 ✓
	2.60			

ELV. diff 7.60 check

RR SPIKE IN 14" OAK IN SE COR. E 1/2 of
 SE 1/4 NE 1/4 NE 1/4 SEC 10 T 14S R 22E
 ABOUT 100 FT. SSE of PREIST
 WELL.

TRAV # 72
PREIST WELL

TP ₅	10.63	90.16		79.53
TP ₆	1.81	86.23	5.74	84.42
TP ₇	6.19	89.27	3.15	83.08 (84.53)
Y79	18.63		4.72	84.55 ✓
	<u>13.61</u>		13.61	5.02 ✓
	5.02			

TRAV # 73 OKLAHAWA (Fordwell)

STA	+S	HI	-S	Elv.
USESRM	6.71	69.17		62.46
	2.24	66.56	4.85	64.32
Well			5.75	60.81 - 1.65
	5.67	66.48	2.00	64.48
	4.51	68.99	6.56	62.43 + 1.62

July 22, 1949 drizzle

-10.60	GRAY-LEVEL
+8.95	Chittum-Rod
<u>1.65</u> ✓	
+10.18	
- 8.56	
<u>1.62</u> ✓	

W-1933 is 60.83 ± .01

TRAV #73
LEVELING FROM STD BM #18 to W-1919

Sta	+S	HI	-S	EW
BM#18	4.480	69.505		65.025
W-1919	4.700		4.700	64.805
	.220			.220 ✓
W-1919	4.676	69.481		64.805
BM#18	4.450		4.450	65.031
	.226			.226 ✓

TRAV. #74

LEVELING FROM SRD BM #34 TO W-1918

Sta	+S	HI	-S	EW
BM#34	4.82	85.88		81.058
TP ₁	4.55	86.98	3.45	82.43
W-1918	9.37		(3.45)	(83.53)
	5.69			
TOPCASING	3.68		2.235	84.74
			5.69	3.68 ✓
TOPCASING	1.88	86.62		84.74
TP ₁	3.41	85.79	4.24	82.38
BM#34	5.29		4.75	81.04
	8.99		8.99	3.70 ✓

July 25, 1949

El. diff. 0.220 check

El. diff. 0.226 check

(HARSHLEY)
W-1919 is 64.802 ± 0.003

July 25, 1949

El. diff 3.68 check

El. diff 3.70 check

W-1918 is 83.54 ± 0.01 grd
84.75 ± 0.01 TOPCASING

TRAV #75
LEVELING FROM SRD BM #1 To Rushwell

July 25, 1949

Hot & Sunny

STA	+S	HI	-S	Elv.
BM #1	4.70	131.46		126.76
TP	4.76	134.51	1.71	129.75
Rush W	9.46		<u>2.34</u>	132.17 gnd
	3.60			
TOP CASING	5.86		1.89	132.62
			3.60	5.86 ✓
TOP CASING	2.03	134.65		132.62
TP	4.47	130.85	8.27	126.38
BM #1	6.50		<u>4.10</u>	<u>126.75</u>
	<u>12.32</u>		12.37	5.87 ✓
	5.87			

El. diff 5.86 check

El. diff 5.87 check

VI-1932 is 132.17 gnd
132.62 CAS'g

TRAVEL #76
LEVELING FROM Ocala Hot. Az MK to Fla Forest Service Well July 26, 1949 Hot. & Sunny

Sta	+S	HI	-S	Elev
Az MK	6.57	79.47		72.90
TP ₁	5.23	84.17	0.53	78.94
TP ₂	2.66	76.02	10.81	73.36
TP ₃	10.45	84.20	2.27	73.75
TP ₄	10.92	94.64	0.48	83.72
TP ₅	7.38	101.52	0.50	94.14
TP ₆	1.91	92.42	11.01	90.51
GRND	45.12		2.47	89.95
CAS'g	27.37		1.77	90.65
	17.75		27.37	17.75 ✓
CAS'g	1.76	92.41	2.2	90.65
TBM #1			11.13	81.28
TP ₁	10.61	101.93	1.09	91.32
TP ₂	1.00	94.81	8.12	93.81
TP ₃	0.94	84.71	11.04	83.77
TP ₄	3.06	76.84	10.93	73.78 (TP ₃)
TP ₅	8.43	83.98	1.29	75.55
TP ₆	25.80		7.61	76.37
	40.08		40.08	14.28 ✓

RR SPIKE IN Φ OF Rd INTERSECTING
SILVER SPRINGS Rd.

Elev. diff 17.75 check

RR Spike IN Φ OF Rd. 200' N ~ 100' W
OF FFS WELL

Elev. diff 19.28 check

TRAV #76
FFS WELL TO AZMK HOTEL

July 26, 1949

Hot & Sunny

TP ₆	3.21	79.58	76.37
AZMK		<u>6.66</u>	72.92 (72.90)
		<u>3.21</u>	3.45
		3.45	

Elv. Diff. 3.45 Check

FFS. WELL is: 89.94 ^{±01} GRD
90.64 ^{±01} CAS. P

TRAV # 77

MARION Co.

July 27, 1949

HOT & SUNNY

LEVELING FROM BM-K57 to W-1931

STA	+S	HI	-S	Elev.
K57	4.61	97.78		93.17
TP ₁	3.44	95.07	6.15	91.63
TP ₂	6.20	95.46	5.81	89.26
TP ₃	1.03	89.77	6.72	88.74
TP ₄	4.94	87.00	7.71	82.06
TP ₅	8.84	95.12	0.72	86.28
TP ₆	2.40	91.32	6.20	88.92
TP ₇	2.56	87.34	6.54	84.78
TP ₈	5.20	85.46	7.08	80.20
TP ₉	8.34	93.61	0.19	85.27
TP ₁₀	5.25	97.02	1.84	91.77
TP ₁₁	2.15	93.07	6.10	90.92
TP ₁₂	8.50	91.52	10.05	83.02
TP ₁₃	8.50	99.87	0.15	91.37
TP ₁₄	6.92	100.37	6.42	93.45
TBM #1	78.88		7.94	92.43
TP ₁₅	74.71		3.03	97.34
	4.17		74.71	4.17 ✓

El. diff. is 4.17 check

RR SPIKE IN C of Rd. 200' W of
CROSSING of HALF LINE of SEC 16.RR SPIKE IN C of Rd. AT CROSSING of
WEST SECTION LINE of SEC. 15

TRAN # 77 CONT.

STA	+S	HI	-S	Elv.
TP ₁₅	9.42	106.76		97.34
TBM #2			(5.20)	(101.56)
TP ₁₆	2.66	103.71	5.71	101.05
TP ₁₇	8.03	108.08	3.66	100.05
W-1931	20.11		4.98	103.10
	14.35		14.35	5.76 ✓
	5.76			

W-1931	⁴ 4.97	108.07	³ 103.10	
TP ₁₍₁₇₎	3.57	103.62	² 8.02	100.05
TP ₂	5.75	106.76	2.61	101.01
TBM #2			5.24	101.52
TP ₃	2.94	100.30	9.40	97.36
TBM #1			7.98	92.32
TP ₄	5.32	100.24	5.38	94.92
TP ₅	1.81	91.02	11.03	89.21
TP ₆	9.45	93.42	7.05	83.97
TP ₇	33.81		1.37	92.05
	44.86		44.86	11.05 ✓

July 27, 1949

HOT + Sunny

COR MK SW COR SEC 15

Elv. DIFF 5.76 check

TRAV # 77 (CONT)

TP ₇	5.10	97.15		92.05
TP ₈	2.48	94.34	5.55	91.86 (TP ₁₀)
TP ₉	2.60	88.31	8.63	85.71
TP ₁₀	4.92	85.14	8.09	80.22
TP ₁₁	7.61	90.50	2.25	82.89
TP ₁₂	9.13	96.68	2.95	87.55
TP ₁₃	1.69	90.12	8.25	88.43
TP ₁₄	4.52	87.12	7.52	82.60
TP ₁₅	9.96	93.45	3.63	83.49
TP ₁₆	3.74	94.28	2.91	90.54
TP ₁₇	4.72	95.59	3.41	90.87
TP ₁₈	<u>5.55</u>	97.49	3.65	91.94
K57	62.02		<u>4.13</u>	<u>93.36</u> .17

60.71 1.31

62.02

1.31

July 27, 1949 Hot & Sunny

Elv. diff 1.31 CHECK

W-1931 is 103.00 to

TRAVEL 78
LEVELING FROM USGS RM#4 TO CANDLER

July 28, 1949

Hot & Sunny

Sta	+S	HI	-S	Elev.
RM#4	⁹ 6.62	69.08		62.46
TP ₁	4.86	68.34	⁷ 5.60	63.48
TP ₂	7.43	72.18	3.59	64.75
TP ₃	6.22	75.34	3.06	69.12
TP ₄	5.73	78.05	3.02	72.32
TP ₅	2.94	73.82	7.17	70.88
TP ₆	3.47	69.43	7.86	65.96
TP ₇	4.71	68.29	5.85	^{63.58} 75.28
TBM#1	2.78	64.36	6.71	61.58
TP ₈	8.42	68.04	4.74	59.62
TP ₉	8.07	74.74	1.37	66.67
TP ₁₀	8.88	80.22	3.40	71.34
TP ₁₁	9.56	88.98	0.80	79.42
TP ₁₂	1.49	84.00	6.47	82.51
TP ₁₃	1.57	75.26	10.31	73.69
TP ₁₄	5.92	70.77	10.41	64.85
TP ₁₅	<u>5.19</u>	65.97	9.99	60.78
TP ₁₆	93.86		<u>0.25</u>	<u>65.77</u>
	<u>90.60</u>		<u>90.60</u>	<u>3.26</u>

RR SPIKE IN 16' PINE AT FIRST
BEND IN RD TO CANDLER

El. diff 3.26 check

TRAV #78

Sta	+S	HI	-S	E/V
TP16	^{8 7 5} 10.18	75.90		65.72
TP17	7.85	83.52	^{7 5} 0.23	75.67
TBM#2			2.52	81.00
TP18	0.57	79.42	4.67	78.85
TP19	4.13	75.21	8.34	71.08
TP20	8.19	78.58	4.82	70.39
TP21	10.58	88.42	0.74	77.84
TP22	10.30	98.14	0.58	87.84
TP23	7.72	105.75	0.11	98.03
TP24	7.91	111.35	2.31	103.44
TP25	6.34	110.11	7.58	103.77
TP26	9.63	118.63	1.11	109.00
TBM#3			3.02	115.61
TP27	4.61	116.18	7.06	111.57
TP28	7.20	114.54	8.84	107.34
TP29	8.84	115.78	7.60	106.94
TP30	8.91	117.25	7.44	108.34
MATHEWS	well 2.96		6.64	110.61
	^{68.01} 44.89		68.07	44.89

RR SPIKE IN TRANSFORMER POLE.

(Sta. 19)

TOP OF SUPPORT FOR CROSSING WARNING

SIGN WEST OF CROSS RAILS ATT

CANDLER

El. diff. 44.89, check

TRAV #78

July 28, 1949

NOT + SUNNY

STA	+S	HI	-S	E/V.
WELL	566 6.40	117.01	^{88.8}	110.61
TP ₁	7.27	114.53	9.75	107.26
TP ₂	6.92	114.97	6.48	108.05
TP ₃	6.53	118.09	3.41	111.56
TBM#3			2.47	115.62
TBM#4	5.46	118.05	5.50	112.59 →
TP ₄	2.25	113.02	7.28	110.77
TP ₅	4.09	109.02	8.09	104.93
TP ₆	1.93	109.06	1.89	107.13
TP ₇	0.20	101.50	7.76	101.30
TP ₈	1.59	92.91	10.18	91.32
TP ₉	0.32	82.15	11.08	81.83
TP ₁₀	2.14	76.27	8.02	74.13
TP ₁₁	4.49	75.11	5.65	70.62
TP ₁₂	10.63	82.88	2.86	72.25
TBM#2	2.52	83.58	1.82	81.06 (81.00)
TP ₁₃	1.20	75.47	9.31	74.27
TP ₁₄	63.94		10.93	64.54
	<u>110.01</u>		<u>110.01</u>	<u>46.07</u>

RR SPIKE IN BASE OF 28" OAK TREE
ABOUT 40' E OF E RAIL A/C RR. 25'S.
OF C OF DIRT ROAD. IN CANDLER.

El. diff. 46.07 check

TRAVE# 78

Sta	+S	HI	-S	Elv.
TP ₁₄	0.00	64.54		64.54
TP ₁₅	7.43	70.04	1.93	62.61
TP ₁₆	8.74	78.40	0.38	69.66
TP ₁₇	9.34	87.51	0.23	78.17
TP ₁₈	0.95	83.57	4.89	82.62
TP ₁₉	1.49	76.00	9.06	74.51
TP ₂₀	2.52	74.02	5.50	^{70.50} 71.56
TP ₂₁	2.32	69.31	7.03	66.99
TP ₂₂	3.12	65.24	7.19	62.12
TP ₂₃	7.09	68.97	3.36	^{60.88} 61.88
TBMA ₁	43.00		^{61.61} 62.61	

45.93 2.93 ✓

43.00

2.93

July 29, 1949 HOT & SUNNY

El. diff. 2.93 check

TRAX 78

Sta +S HI -S Elev.

TBM #1 3.94 65.55 61.61

TP₂₄ 3.28 64.33 4.50 61.05TP₂₅ 7.12 57.21TP₂₃ ⁴7.09 ⁴67.97 60.88TP₂₄ 4.50 68.53 ⁴3.94 ³64.03TP₂₅ 7.12 72.37 3.28 65.25TP₂₆ 6.98 77.89 1.46 70.91TP₂₇ 3.29 74.43 6.75 71.14TP₂₈ 2.54 70.15 6.82 67.61TP₂₉ 4.73 68.16 6.72 63.43TP₃₀ 3.96 68.09 4.03 64.13

RM #4 40.21 5.62 62.47 62.96

38.62

1.59

38.62 1.59 ✓

July 29, 1949

Hot + Sunny

Elev. diff. 1.59 check

Mathews wall 110.61

TRAY #79

From TBM #1

Trav # 76 to deck Costa Well

Aug. 5, 1949

Hot + Sunny

Sta	+S	HI	-S	Elv.
TBM#1	2.32	83.61		81.29 $\pm .01$
TP ₁	11.03	87.78	6.86	76.75
TP ₂	6.03	92.78	1.03	86.75
TP ₃	8.31	100.12	0.97	91.81
Costa Well	27.69		6.85	93.27
	$\frac{15.71}{11.98}$		15.71	11.98

El. diff. 11.98 CHECK

El. diff. 11.98 CHECK

(COSTA WELL IS 93.27 $\pm .01$ GRD.)

Costa	6.90	100.17		93.27
TP ₁	0.87	92.61	8.43	91.74
TP ₂	1.15	87.81	5.95	86.66
TP ₃	7.51	84.24	11.08	76.73
TBM#1	16.43		2.95	81.29
	28.41		28.41	11.98
	11.98			

TRAV# 80 ALACHUA CO.
LEVELING FROM TIGERT Δ + W-1773

STA +S HI -S ELv

TIGERT Δ 2.99 170.55 167.56

W-1773 grb. 7.35 163.20
2.99 4.36 ✓
4.36

W-1773 7.60 170.80 163.20

TIGERT Δ 3.23 3.23 167.57
4.37 4.37

TRA 1 # 81

ALACHUA CO

LEVELING FROM BM R1 to W-1894

STA +S HI -S ELv.

BM R1 5.31 145.96 140.65

ORD 4.17 4.90 141.06

CONC. BASE 1.14 4.17 141.79
1.14 ✓

CONC. BASE 4.22 146.01 141.79

R1 5.35 5.35 140.66
1.13 1.13 ✓

Aug. 8, 1949

Hot & Sunny

El. Diff 4.36 Check

" " 4.37 "

El. d. ff. 1.14 Check

" " 1.13 Check

TRAV #82 ALABAMA CO
LEVELING FROM WATER LEVEL CROSS CREEK TO W-1868

Aug 10, 1949

Hot + Sultry

STA	+S	HI	-S	E/v.
WATER L.	9.32	67.82		58.50
W-1868	3.50		3.50	64.32 92'd.
	5.82			5.82

El. diff 5.82 check

" " 5.82 check

W1868	3.54	67.86		64.32
W.L.	9.36		9.36	58.50
	5.82			5.82 ✓

TRAV #83

LEVELING FROM L. DACHLOSS TO W-1702

STA	+S	HI	-S	E/v.
W.L. 1702	10.45	68.96		58.51
TP.	7.34	73.74	2.56	66.40
CR'D	17.79		3.92	69.82
	6.04			
CAS'g.	11.75		3.48	70.26
			6.04	11.75 ✓

El. diff 11.75 check

" " 11.77 "

CAS'g W-1702	3.47	73.73		70.26
TP.	1.37	67.76	7.34	66.39
WL	4.84		9.27	58.49
	16.61		16.61	11.77 ✓
	11.77			

TRAV # 84
FROM HAW. HAW Δ to W-1505

Aug. 10, 1949

Hot Sultry

Sta +S HI -S Elev

HAWT. Δ 5.00 149.48 144.48

TP₁ 9.81 154.95 4.34 145.14

TP₂ 6.88 160.78 1.05 153.90

TP₃ 5.98 164.35 2.41 158.37

W-1505 27.67 3.81 160.54

$\frac{11.61}{16.06}$

11.61

16.06 ✓

W-1505 1.68 162.22 160.54

TP₁ 3.27 154.73 10.76 151.46

TP₂ 4.26 149.41 9.58 145.15

HAWTH Δ 9.21 4.93 144.48

25.27 16.06 ✓

9.21

16.06

El. diff 16.06 check

El. diff 16.06 ✓

TRAV # 85 WALDO ALACHUA
LEVELING FROM Y1 to W-1898

Sta +S HI -S ELEV

W Y1 6.41 161.79 155.38?

TP 3.08 162.74 2.13 159.66

W-1898 9.49 5.62 157.12

7.75
1.74 7.75 1.74

W-1898 5.62 162.74 157.12

W TP 2.11 161.78 3.07 159.67

Y1 7.73 6.40 155.38

9.97 1.74 ✓

7.73

1.74 ✓

Aug. 10, 1949

Hot & Sunny

El. diff 1.74 check

" " 1.74 ✓

TRAV #86
LEVELING FROM BM R51 to W-1379

Aug 11, 1949

Hot & Sunny

Sta +S HI -S Elv

R51 3.90 74.46 70.56

TP1 4.93 74.83 4.56 69.90

TP2 5.31 74.17 5.97 68.86

TP3 5.11 74.73 4.55 69.62

TP4 4.25 73.44 5.54 69.19

TP5 4.93 75.77 2.60 70.84

W-1379 28.43
28.15
.28 4.93 70.84
28.15 .28

El. diff 0.28 check

El. diff 0.25 check

W-1379 5.3
4.95 75.79 70.84

Fine Plug 2.14 74.83 3.10 72.69

TP1 3.85 73.25 5.43 69.40

TP2 3.78 74.08 2.95 70.30

TP3 5.91 74.27 5.72 68.36

TP4 4.51 75.00 3.78 70.49

TP5 4.98 74.76 5.22 69.78

R51 30.12 4.17 70.59

30.37
.25 30.37 .25

TRAV #89

Alachua

LEVELING From BM BH 54 to W-1871

Aug 12, 1999

RAIN

Sta	+S	HI	-S	Elev.
BH 54	3.10	104.20		101.10
TP ₁	2.24	99.58	6.86	97.34
TP ₂	1.94	94.60	6.92	92.66
W-1871	7.28		6.11	88.49
	<u>19.89</u>		<u>19.89</u>	12.61
	12.61			

W-1871	6.22	94.71		88.49
TP ₁	6.71	99.09	2.33	92.38
TP ₂	6.90	103.99	2.00	97.09
BH 54	19.83		2.93	101.06 / 01.1
	<u>7.26</u>		<u>7.26</u>	12.57
	12.57			

El. diff. 12.61 CHECK

El. diff. 12.57 CHECK

TRAV # 88
LEVELING FROM BM H61 TO W-1975

Aug. 18, 1949

Hot & Sunny

Sta	+S	HI	-S	Elw
H61	⁶ 0.56	152.48		151.92
TP ₁	0.43	141.98	³ 10.93	141.55
TP ₂	4.33	138.76	7.55	134.43
TP ₃	10.44	138.19	11.01	127.75
TP ₄	11.21	149.01	0.39	137.80
TP ₅	10.98	159.76	0.23	148.78
TP ₆	10.45	169.96	0.25	159.51
TP ₇	2.95	172.81	0.10	169.86
TP ₈	8.97	172.26	9.52	163.29
TBM #1			(6.06)	(166.20)
TP ₉	2.52	172.26	2.52	169.74
TP ₁₀	2.52	164.71	10.07	162.19
TP ₁₁	3.35	163.66	4.40	160.31
W-1975	68.71		6.42	157.24
	<u>63.39</u>		63.39	5.32
	5.32			

RR SPIKE IN BASE OF 12" OAK
ABOUT 15 PAGES W. OF ST RD.
500' ABOUT 400' NW OF HIGHEST
POINT ON RD. IN VICINITY. OAK
BLAZED ON 3 SIDES.

TRAV # 88 - RETRACK -

Sta +S HI -S ELV

W-1975^{3.5 7} 6.49 163.73 157.24

TBM#2 4.13 164.12^{3.5 8} 3.74 159.99

TP₁ 5.38 164.13 5.37 158.75

TP₂ 8.32 172.17 0.28 163.85

TP₃ 1.99 171.88 2.28 169.89

TBM#1 (5.67 166.21)

TP₄ 10.15 172.88 9.15 162.73

TP₅ 1.12 163.56 10.44 162.44

TP₆ 2.67 163.15 3.08 160.48

TP₇ 0.75 153.13 10.77 152.38

TP₈ 0.57 142.72 10.98 142.15

TP₉ 1.18 133.01 10.89 131.83

TP₁₀ 10.51 139.40 4.12 128.89

TP₁₁ 10.92 145.18 5.14 134.26

TP₁₂ 10.15 155.26 0.07 145.11

H61 74.33 3.30 151.96 151.92

79.61 79.61 5.28 ✓

5.28

SAME

HITTER

- RAIN STORM

10:45 CARL Gray INJURED PLACING

AM TBM IN OAK TREE.

Aug 19, 1949 Cloudy & WARM

Elv. diff 5.28 check

W- 1975 15.2 157.22 to 2

TRAVEL
LEVELING FROM BM #41 to Toddwell

Aug 22, 1949

cloudy & warm

Sta	+S	HI	-S	Elev	
H41	8.28	80.28		72.00	Tuber

TP1	3.17	79.63	3.82	76.46	
-----	------	-------	------	-------	--

El. diff. 8.62 check

TP2	11.00	87.83	2.80	76.83	
-----	-------	-------	------	-------	--

TP3	3.69	91.32	0.20	87.63	
-----	------	-------	------	-------	--

TP4	1.64	82.20	10.76	80.56	
-----	------	-------	-------	-------	--

TP5	5.59	81.64	6.15	76.05	→
-----	------	-------	------	-------	---

SEC 202 23 24 25 26 - T 145

TP6	4.09	83.01	2.72	78.92	
-----	------	-------	------	-------	--

R 21 E

TP7	4.08	86.84	0.25	82.76	
-----	------	-------	------	-------	--

TP8	5.16	85.37	6.63	80.21	
-----	------	-------	------	-------	--

TBM #1	46.70		4.75	80.62	
--------	-------	--	------	-------	--

38.08
8.62

38.08 8.62 ✓

RETRACE to H41

TBM #1	4.59	85.21		80.62	
--------	------	-------	--	-------	--

TP1	0.42	83.17	2.46	82.75	
-----	------	-------	------	-------	--

TP2	3.96	81.59	5.54	77.63	
-----	------	-------	------	-------	--

TP3	7.44	83.50	5.53	76.06	
-----	------	-------	------	-------	--

TP4	8.27	91.73	0.04	83.46	
-----	------	-------	------	-------	--

TP5	24.68		7.85	83.88	
-----	-------	--	------	-------	--

21.42
3.26

21.42 3.26 ✓

RR SPIKE IN BASE OF 12" OAK ON S.

SIDE OF BAND ROAD ABOUT ON 1/4 SEC

COR SEC 24 & 25

El. diff. 3.26 check

TRAV # 89

RETRALE CON'T.

Aug 22, 1949

RAIN!

STA	+S	HI	-S	ELV.
TPs	1.23	85.11		83.88
TP ₂	4.85	79.88	10.08	75.03
TP ₃	3.57	80.52	2.93	76.95
H#1	9.65		8.50	72.02
			21.51	11.86 ✓
			9.65	
			11.86	

El. diff. 11.86 CHECK

From TBM #1 to Todd well

Aug 23, 1949

CLEAR + HOT

STA	+S	HI	-S	ELV.
TBM #1	3.52	84.13		80.61 ±.01
TP ₁	10.90	88.19	6.84	77.29
TP ₂	10.44	98.57	0.06	88.13
TP ₃	3.14	100.08	1.63	96.94
TP ₄	8.69	104.17	4.60	95.48
TP ₅	8.31	112.03	0.45	103.72
TP ₆	1.55	102.70	10.88	101.15
TP ₇	0.63	92.22	11.11	91.59
TP ₈	47.18		11.19	81.03
	46.76		46.76	42 ✓

El. diff. 0.92 CHECK

TRAV # 89 CONT.

Aug 23, 1949

Hot + sunny

STA	+S	HT	-S	EL
TP ₈	^{5.6} 1.23	82.26		81.03
TP ₉	6.64	84.77	4.13	78.13
TP ₁₀	11.07	88.61	7.23	77.54
TP ₁₁	11.20	99.73	0.08	88.63
TP ₁₂	10.09	109.81	0.01	99.72
TP ₁₃	9.53	119.32	0.02	109.79
TP ₁₄	3.68	122.21	0.79	118.53
TP ₁₅	0.00	112.54	9.67	112.54
TP ₁₆	1.75	103.32	10.97	101.57
TP ₁₇	2.22	94.70	10.84	92.48
TP ₁₈	1.98	86.24	10.44	84.26
TP ₁₉	3.38	84.74	4.88	81.36
TP ₂₀	7.03	85.87	5.90	78.84
TP ₂₁	9.70	94.96	0.61	85.26
TODD W.	79.50		3.36	91.60
	68.93		68.93	10.57 ✓
	10.57			

El. diff. 10.57 check

RR SPIKE IN CENTER OF LS RD.

About 1000' W of INT. with
WEST ANTHONY ROAD ON 1/2 line
SEC 19 T14S R22E

RR SPIKE IN CENTER OF INT. OF
CLAY ROAD WITH WEST ANTHONY
ROAD. 1/4 SEC COR SEC 19 + 20
T14S R22E

TRAVERSE 89 RETRACE -

Aug. 23, 1949

Hot + Sunny

STA	+S	HI	-S	EN
TODD W	⁶ 3.43	95.03		91.60
TP ₁	0.30	86.59 ³⁵⁶	9.74	85.29 (TR ₁)
TP ₂	4.66	84.87	5.38	80.21
TP ₃	8.39	91.68	1.58	83.29
TP ₄	9.69	101.21	0.16	91.52
TP ₅	8.31	109.32	0.20	101.01
TP ₆			<u>7.70</u>	<u>101.62</u>
TP ₇	8.80	118.03	0.09	109.23
TP ₈	6.21	124.09	0.15	117.88
TP ₉	1.35	114.62	10.82	113.27
TP ₁₀	0.53	104.03	11.12	103.50
TP ₁₁	1.88	94.91	11.00	93.03
TP ₁₂	0.00	83.93	10.98	83.93
TP ₁₃	4.86	85.18	3.61	80.32
TP ₁₄	<u>6.34</u>	84.85	6.67	78.51
TRM#2	64.75		1.28	83.57
			72.78	8.03
			<u>64.75</u>	
			8.03	

El. diff. 8.03 check

RR SPIKE IN BASE OF POWER POLE ON

BASE LINE + 1/2 LINE SEC 24

TRAV # 89 cont.

Aug. 23, 1949

HOT & SUNNY

Sta	+S	HI	-S	Elv
TBM#2	⁵ 3.34	86.91		83.57
TP ₁₄	8.06	86.02	² ⁴ 8.95	77.96
TP ₁₅	9.90	95.81	0.11	85.91
TP ₁₆	10.21	105.87	0.15	95.66
TP ₁₇	5.83	111.44	0.26	105.61
TP ₁₈	1.95	102.53	10.86	100.58
TP ₁₉	8.34	100.84	10.03	92.50
TP ₂₀	1.48	97.09	5.23	95.61
TP ₂₁	1.77	88.10	10.76	86.33
TP ₂₂	<u>6.95</u>	84.32	10.73	77.37 80.61
TBM#1	57.83		<u>3.65</u>	<u>80.67</u> 2
			60.73	2.90 ✓
			57.83	
			2.90 ✓	

Todd well is 91.57 ± 0.03

El. Diff. 2.90 CHECK

TRAV #90

Alachua

LEVELING From Micanopy B7 to W-1867

Aug 24, 1949

Hot + Sunny

STA	+S	HI	-S	ELV
B7	4.47	98.37		93.90
TP	5.28	100.56	3.09	95.28
W-1867	9.75 9.51 0.24		6.42 9.51	94.14 0.24 ✓

W-1867	6.46	100.60		94.14
TP	3.07	98.35	5.32	95.28
B7	9.53 9.78 .25		4.46 9.78	93.89 .25 ✓

Elv. diff. 0.24 check

Elv. diff 0.25 check

W-1867 is 94.1

TRAVEL # 91

A/ACON/AA

LEVELING FROM BM B36 TO W-1703

Aug 24, 1949

HOT + Sunny

STA	+S	HI	-S	ELV
B36	⁶³ 2.41	159.91	⁴⁶⁴	157.50
TP1	0.70	153.73	6.86	153.05
TP2	1.53	148.98	8.30	^{145.45} 147.45
TP3	3.75	146.33	6.40	142.58
TP4	3.56	143.97	5.92	140.41
TP5	2.97	141.16	5.78	138.19
TP6	2.61	137.79	5.98	135.18
TP7	5.07	131.80	11.06	126.73
TP8	5.50	134.40	2.90	128.90
TP9	<u>7.62</u>	141.56	0.46	133.94
W-1703	35.72		<u>1.36</u>	^{138.20} 140.20
			55.02	19.30
			<u>35.72</u>	
			19.30	

ELV. DIFF 19.30 check

TRAV# 91

RETRACE

Aug. 24, 1949

HOT + SUNNY

^{4 5}
 W-1703 1.30 139.50 2.5 3 138.20

TBM#1 2.81 136.69

TP₁ 3.13 132.00 10.63 128.87TP₂ 3.56 130.13 5.43 126.57TP₃ 9.56 134.13 5.56 124.57TP₄ 5.82 139.37 0.58 133.55TP₅ 5.19 141.85 2.71 136.66TP₆ 5.17 144.09 2.93 138.92

TBM#2 4.69 139.40

TP₇ 6.66 147.51 3.24 140.85TP₈ 8.56 156.01 0.06 147.45TP₉ 5.95 160.45 1.51 154.50

B36 54.90 2.84 157.61

$$\begin{array}{r} 35.49 \\ 19.41 \end{array}$$

$$\begin{array}{r} 35.49 \\ 19.41 \end{array} \checkmark$$

Elev. d. ff. 19.41 Check

W-1703 15 138.1

LEVELING FROM BM B 59 to W-1971

Aug 25, 1949

HOT & Sunny

Sta	+S	HI	-S	ELV
BH 59	² 1.20	170.20		169.00
TP ₁	7.31	167.40	10.11	160.09
TP ₂	6.42	170.39	3.43	163.97
TP ₃	7.73	177.71	0.41	169.98
TP ₄	2.32	174.64	5.39	172.32
TP ₅	<u>7.19</u>	172.79	9.04	165.60
W-1971	32.17		<u>1.81</u>	<u>170.98</u>
	<u>30.12</u> 1.96		30.19	1.98 ✓
W-1971	² 1.82	172.80		170.98
TP ₁	9.09	174.67	³ 7.22	165.58
TP ₂	5.34	177.72	2.29	172.38
TP ₃	1.22	170.51	8.43	169.29
TP ₄	4.06	167.60	6.97	163.54
TP ₅	<u>10.21</u>	170.36	7.45	160.15
BH 59	<u>31.74</u>		<u>1.34</u>	<u>169.02</u>
	<u>33.70</u>		<u>33.70</u>	1.96
	1.96			

Elv. diff. 1.98 check

W-1971 is 171.0

El. diff. 1.96 check

TRAV #93

LEVELING FROM BM BAZI to W-875

Aug 26, 1949

HOT & Sunny

STA	+S	HI	-S	Elev.
BAZI	⁺ 3.95	191.95		188.00
TP ₁	2.79	189.36	⁺ 5.38	186.57
TP ₂	2.16	184.97	6.55	182.81
TP ₃	4.40	185.86	3.51	181.46
TP ₄	4.22	186.24	3.84	182.02
TP ₅	4.90	187.38	3.76	182.48
TP ₆	4.15	186.05	5.48	181.90
TP ₇	3.48	184.32	5.21	180.84
TP ₈	<u>4.28</u>	183.14	5.46	178.86
W-875	34.33		<u>6.26</u>	<u>176.88</u>
	<u>45.45</u>		45.45	11.12
	11.12			

Elev. Diff. 11.12 CHECK

TRAV # 93

RETRACE

Aug 26, 1949

Hot & Sunny

W-875 6.26 183.14 176.88

TP₁ 5.28 184.65 3.77 179.37

TP₂ 5.00 186.18 3.47 181.18

TP₃ 3.96 186.82 3.32 182.86

TP₄ 3.99 186.18 4.63 182.19

TP₅ 4.59 185.87 4.90 181.28

TP₆ 6.83 190.43 2.27 183.60

TP₇ 4.77 192.50 2.70 187.73

BA 21 40.68 4.44 188.06 (188.0)

29.50
11.18

29.50 11.18 -

El. diff. 11.18 check

W-875 is 176.9

TRAV# 94
LEVELING FROM City BM to W-1701

Aug 26, 1949

Hot + Sunny

Sta	+S	HI	-S	Elev
BM	⁵ 3.84	194.02		190.18
TP ₁	4.50	193.12	⁺ 5.40	188.62
TP ₂	3.86	191.00	5.98	187.14
TP ₃	5.59	193.46	3.13	187.87
TP ₄	3.27	191.22	5.51	187.95
TP ₅	1.83	186.12	6.93	184.29
TP ₆	3.25	178.36	11.01	175.11
TP ₇	4.94	180.35	2.95	175.41
W-1701	31.08		5.15	175.20
	<u>46.06</u>		46.06	14.98 ✓
	14.98			

El. diff. 14.98 check

W-1701	³ 4.94	180.14		175.20
TP ₁	9.08	182.70	³ 6.52	173.62
TP ₂	7.66	189.45	0.91	181.79
TP ₃	6.30	192.71	3.04	186.41
TP ₄	4.42	193.19	3.94	188.71
TP ₅	3.40	190.87	5.72	187.41
TP ₆	5.52	193.11	3.28	187.59
TP ₇	41.32		4.17	188.94
	<u>17.58</u>		27.58	13.74 ✓

El. diff. 13.74 check

RETRACE TRAV # 94

Aug 26, 1949

HOT + SUNNY

Sta	+S	HI	-S	Elev.
TP ₁	4.72	193.66		188.94
TP ₂	4.60	194.36	3.90	189.76
BM	9.32		<u>4.10</u>	<u>190.26</u> (190.18)
	<u>8.00</u>		8.00	1.32 ✓
	1.32			

Elev. diff. 1.32 CHECK

W-1701 is 175.16 ± .04

TRAV # 95
LEVELING FROM BM AM 2075 W-1978

BNA +S HI -S E/V.

AM 20 ² 6.27 95.95 ³ 89.68

TP₁ 10.77 100.63 6.09 89.86

TP₂ 5.56 105.76 0.43 100.20

TP₃ 1.39 96.27 10.88 94.88

TP₄ 2.07 87.76 10.58 85.69

TP₅ 7.07 91.02 3.81 83.95

W-1978 33.13 2.77 88.25
34.56 1.43

W-1978 1.94 90.19 88.25

TP₁ 2.40 81.96 10.63 79.56

TP₂ 9.87 85.43 6.40 75.56

TP₃ 10.11 95.34 0.20 85.23

TP₄ 4.05 94.53 4.86 90.48

AM 20 4.85 89.68

TRAV # 96

MARION CO

LEVELING From BM B19 to CA 69

SEPT. 12, 1949

CLEAR + WARM

IRVINE Fla to FAIRFIELD Fla

STA	+S	HI	-S	ELV.
B19	^{58 3} 0.81	160.06		159.25
TP ₁	2.41	150.79	^{67 4} 11.68	148.38
TP ₂	9.50	153.87	6.42	144.37 ✓
TP ₃	6.50	157.97	2.40	151.47 ✓
TP ₄	11.32	157.65	11.64	146.33 ✓
TP ₅	2.82	155.77	4.70	152.95 ✓
TP ₆	5.51	153.17	8.11	147.66 ✓
TP ₇	11.11	163.75	0.53	152.64 ✓
TP ₈	3.93	167.36	0.32	163.43 ✓
TP ₉	1.37	162.92	5.81	161.55 ✓
TRM#1			<u>4.74</u>	<u>158.18</u>
TP ₁₀	2.59	155.15	10.36	152.56 ✓
TP ₁₁	0.90	144.53	11.52	143.63 ✓
TP ₁₂	1.20	134.21	11.52	133.01 ✓
TP ₁₃	7.86	132.98	9.09	125.12 ✓
TP ₁₄	<u>4.65</u>	128.42	9.21	123.77 ✓
TP ₁₅	72.48		<u>8.91</u>	<u>119.51</u> ✓
	<u>112.22</u>		<u>112.22</u>	<u>39.74</u> ✓
	29.74			

RR SPIKE IN ROOT 20" OAK 1.45

MI. N ALONG DIRT ROAD FROM INT AT FAIRFIELD

El. diff. 39.74 CHECK

TRAV # 96
LEVELING FROM BM B19 to BM CAG9

STA	+S	HI	-S	EIV
TP15	3.82	123.33		119.51
TP16	10.09	126.01	7.41	115.92
TP17	4.26	129.96	0.31	125.70
TP18	0.78	119.18	11.56	118.40
TP19	5.33	118.98	5.53	113.65
TP20	4.62	118.03	5.57	113.41
CAG9	28.90		4.04	113.99
			34.42	5.52
			28.90	
			5.52	

SEPT 12, 1949

NOT + SUNNY.

EIV. DIFF. 5.52 CHECK

TOTAL HOURS Today 10

TRAV. # 96

— RETRACE —

STA	+S	HI	-S	Ely.
CA 69	^{4.5} 4.17	118.16	^{2.5} 2.31	113.99
TP ₁	2.51	117.36	3.31	114.85
TP ₂	11.41	127.71	1.06	116.30
TP ₃	0.11	125.97	1.85	125.86
TP ₄	8.67	124.25	10.39	115.58
TP ₅	7.49	131.18	0.56	123.69
TP ₆	3.13	130.62	3.69	127.49
TP ₇	8.99	134.22	5.39	125.23
TP ₈	11.80	145.72	0.30	133.92
TP ₉	11.63	157.15	0.20	145.52
TP ₁₀	5.94	163.00	0.09	157.06
TBM #1	75.85		4.75	158.25
	<u>31.59</u>		<u>31.59</u>	44.26 ✓
	44.26			

SEPT. 13, 1949

WARM & cloudy

El. diff 44.26 CHECK

TRAV # 96

RETRACE

Sta	IS	HI	-S	E/v.
TBM #1	6.78	165.03		158.25
TP ₁₁	0.90	164.72	1.21	163.82
TP ₁₂	1.03	154.03	11.72	153.00
TP ₁₃	5.63	152.79	6.87	147.16
TP ₁₄	8.20	160.69	0.30	152.49
TP ₁₅	5.71	155.49	10.91	149.78
TP ₁₆	4.03	151.34	8.18	147.31
TP ₁₇	9.94	157.96	3.32	148.02
TP ₁₈	7.03	162.94	2.05	155.91
B 19	49.25		3.66	159.28
	48.22		48.22	1.03 ✓
	1.03			

SEPT 13, 1949

El. diff = 1.03 CHECK

Av. El. diff total = 45.27 ±.01

BM LA 69 IS 113.97 ±.01

Rodman: E. GORDON HOWELL

216 LYNWOOD PLACE,

OCALA, FLA.

Ph. 1197 white.

TOTAL HOURS TODAY 6

TRAV # 97

Osceola Co.

LEVELING FROM BM A17 to W-984

Sept. 22, 1949

HOT + SUNNY!

Sta	+S f ₃	HI	-S	ELV.
A17	3.62	91.16		87.54
TP ₁	4.04	87.20	^{3 3} 8.00	83.16
TP ₂	7.13	89.54	4.79	82.41
TBM#1	4.26	90.44	3.36	86.18
TP ₃	3.90	90.85	3.49	86.95
TP ₄	5.86	89.94	6.77	84.08
TP ₅	2.66	88.40	4.20	85.74
W-1734			4.42	83.98
TP ₆	3.87	88.12	4.15	84.25
W-984	35.34		6.80	81.32
	<u>41.56</u> 6.22		41.56	6.22 ✓

ELV. diff. 6.22 CHECK

W-984	7.47	88.79		81.32
TP ₁	4.73	90.41	² 3.11	85.68
TP ₂	6.79	90.91	6.29	84.12
TP ₃	3.88	90.60	4.19	86.72
TBM#1	22.87		4.39	86.21
TP ₄	<u>21.01</u> 1.86		7.42	83.18
			21.01	1.86 ✓

ELV. diff. 1.86 CHECK

TRAV #97 RETRACE

Sta.	+S	NI	-S	EL.
TP4	4.54	87.72		83.18
TP5	8.89	91.21	5.40	82.32
A17	13.43		3.57	87.64 87.54
	<u>8.97</u>		8.97	4.46
	4.46			

SEPT 22, 1949

HOT SUNNY
(96°)

El. Diff 4.46 CHECK

W- 1734 is 83.93 ± 05
(CONC. PUMP BASE)

W- 984 is 81.27 ± 05
(GROUND.)

TRAV #98

OSCEOLA Co.

LEVELING From Runway INT to W-913

STA	+S	HI	-S	Elev.
Run. int	3.07	83.07		80.00 80.0
TP	4.15	80.56	6.66	76.41
W-913			5.96	74.60
TBM#1			4.67	75.89
	+7.22		11.33	4.11 ✓
	-11.33			
	4.11			

TBM#1	5.47	81.36		75.89
TP	5.37	83.10	3.63	77.73
Run. INT.	10.84		3.11	79.99 80.0
	6.74		6.74	4.10 ✓
	4.10			

SEPT. 23, 1949

HOT & SUNNY

INT. OF NE-SW + NW-SE RUNWAYS, RR spike
N.T.C.N. TIEDOWN IN PARKING AREA 300' W of
W.913

El. Diff. 4.11 CHECK

W-913 is 75.89 GRD-

El. DIFF. 4.10 CHECK

TRAV # 99

LEVELING FROM TBM #1 (TRAV. 98) TO W-1715

SEPT. 23, 1949

NOT SUNNY

Sta	+S	HI	-S	EIV
TBM #1	4.18 ³	80.07		75.89
TP ₁	2.99	78.25	4.81 ²	75.26
TP ₂	5.08	77.54	5.79	72.46
TP ₃	4.32	75.57	6.29	71.25
TBM #2			(4.59)	(70.98)
TP ₄	4.97	75.04	5.50	70.07
W-1715	21.54		6.26	68.78
	<u>28.65</u>		28.65	7.11
	7.11			

— RETRACE —

W-1715	6.28 ²	75.06		68.78
TP ₁	5.16	75.49	4.73	70.33
TBM #2			(4.53)	(70.96)
TP ₂	6.21	77.26	4.44	71.05
TP ₃	5.76	78.42	4.60	72.66
TP ₄	4.67	79.93	3.16	75.26
TBM #1	28.08		4.04	75.89
	<u>20.97</u>		20.97	7.11
	7.11			

N.W. COR. CONC. STEPS OF HOUSE IN

NE COR SEC 29 T25S R21E

El. Diff. 7.11 CHECK

W-1715 IS 68.78 GRD

El. Diff 7.11 CHECK

TRAV# 100

OSC EOLA Co.

LEVELING FROM BM K59 to W-1016

STA	±S	HI	-S	EL.
K59	5.13	72.52		67.39
TP ₁	10.48	82.38	0.62	71.90
TP ₂	2.81	83.07	2.12	80.26
TP ₃	4.46	82.56	4.97	78.10
TP ₄	3.12	80.23	5.45	77.11
W-1016	76.00		4.21	76.02
	<u>17.37</u>		17.37	
	8.63		8.63	

W1016	4.35	80.37		76.02
TP ₁	5.30	82.73	2.74	77.63
TP ₂	1.73	81.82	2.84	80.09
TP ₃	0.22	72.62	9.42	72.40 (67.39)
BMK59	11.60		5.25	67.37 ←
	<u>20.25</u>		20.25	
	8.65		8.65	

SEPT 26, 1949 cloudy + cool

El. diff. 8.63 CHECK

W-1016 is 76.03 ±.01
GRD

El. diff. 8.65 CHECK

TRAY # 101

Pilk Co.

Holly H. & Fruit Co well from SRD BM 15

STA +S NE -S E/W

BM 15 4.240 135.155 - 130.915

GRD AT W

4.348 130.807

TOP CASING

3.688 131.467

.552

4.240

3.688

.552

TRAV #102 OSCEOLA Co.
LEVELING From BM-AP3 to W-1723

SEPT 28, 1949

Cloudy + warm

Sta	+S	HI	-S	Elev.
AP3	3.17	75.97		72.80
TP ₁	0.11	70.59	5.49	70.48
TP ₂	6.49	70.99	6.09	64.50
TP ₃	5.67	74.62	2.04	68.95
TP ₄	5.19	76.16	3.65	70.97
TP ₅	4.83	76.43	4.56	71.60
TP ₆	3.49	75.75	4.17	72.26
TP ₇	5.46	77.55	3.66	72.09
TP ₈	6.40	81.14	2.81	74.74
TP ₉	6.69	85.08	2.75	78.39
TP ₁₀	4.20	86.02	3.26	81.82
TP ₁₁	4.06	85.85	4.23	81.79
TP ₁₂	4.67	86.12	4.40	81.45
TP ₁₃	3.91	85.95	4.08	82.04
TP ₁₄	4.25	85.71	4.49	81.46
TP ₁₅	2.12	81.77	6.06	79.65
TP ₁₆	4.86	77.18	9.45	72.32
TBM#1	75.57		3.73	73.45
	74.92		74.97	.65

Q STA 115

" 125

" 135

" 145

+ mk
N.COR. OF W. END SOUTHSIDE CONC. BRIDGE.

El. DIFF. 0.65 CHECK

TRAV# 102 CONT.

SEPT. 28, 1949

cloudy & warm

STA	+S	HI	-S	EL.
TBM#1	4.44	77.89		73.45
TP ₁₇	5.13	82.82	0.20	77.69
TP ₁₈	5.18	84.72	3.28	79.54
TP ₁₉	5.73	86.26	4.19	80.53
TP ₂₀	5.04	86.47	4.83	81.43
TP ₂₁	3.96	82.36	8.07	78.40
TP ₂₂	9.32	88.52	3.16	79.20
TP ₂₃	3.42	89.50	2.44	86.08
TP ₂₄	1.30	82.72	8.08	81.42
TP ₂₅	4.18	83.46	3.44	79.28
TP ₂₆	4.16	83.50	4.12	79.34
TP ₂₇	5.96	85.66	3.80	79.70
TP ₂₈	5.03	84.83	5.86	79.80
TP ₂₉	6.00	87.12	3.71	81.12
TP ₃₀	4.74	87.75	4.11	83.01
TP ₃₁	4.13	87.08	4.80	82.95
TP ₃₂	3.93	86.40	4.61	82.47
TP ₃₃	81.65		5.10	81.30
	73.80		73.80	7.85
	7.85			

C STA. 171

RAIN

SEPT. 30, 1949

cloudy & warm

C STA 275

C STA 00+00

E.I. DIFF. 7.85 CHECK

TRAV # 102

STA	+S	HI	-S	EV.
TP ₃₃	4.41	85.71		81.30
TP ₃₄	8.24	86.30	^{1 2} 7.65	78.06
TP ₃₅	6.17	89.34	3.13	83.17
TBM#2			6.54	82.80
TP ₃₆	6.12	92.88	2.58	86.76
W-1723	24.94		4.46	88.42
	17.82		17.82	7.12
	7.12			
W-1723	^{5 3} 4.40	92.82	^{4 5}	88.42
TP ₁	2.66	89.61	5.87	86.95
TBM#2	4.70	87.48	6.83	82.78
TP ₂	1.69	83.79	5.38	82.10
TP ₃	4.31	85.45	2.65	81.14
TP ₄	4.89	86.65	3.69	81.76
TP ₅	4.79	87.30	4.14	82.51
TP ₆	4.81	87.94	4.17	83.13
TP ₇	3.40	86.37	4.97	82.97
TP ₈	35.65		5.28	81.09
	42.98		42.98	7.33
	7.33			

ESTD 0010

↓

TP ₈	3.61	84.70		81.09
-----------------	------	-------	--	-------

TP ₉	5.74	85.54	4.90	79.80
-----------------	------	-------	------	-------

TP ₁₀	3.97	83.64	5.87	79.67
------------------	------	-------	------	-------

TP ₁₁	4.45	83.54	4.55	79.09
------------------	------	-------	------	-------

TP ₁₂	5.94	84.93	4.55	78.99
------------------	------	-------	------	-------

TP ₁₃	6.17	83.38	7.72	77.21
------------------	------	-------	------	-------

TP ₁₄	8.22	89.61	1.99	81.39
------------------	------	-------	------	-------

TP ₁₅	3.80	90.22	3.19	86.42
------------------	------	-------	------	-------

TP ₁₆	3.13	83.40	9.95	80.27
------------------	------	-------	------	-------

TP ₁₇	5.60	83.53	5.47	77.93
------------------	------	-------	------	-------

TP ₁₈	4.76	86.16	2.13	81.40
------------------	------	-------	------	-------

TP ₁₉	5.22	86.48	4.90	81.26
------------------	------	-------	------	-------

TP ₂₀	4.86	84.68	6.66	79.82
------------------	------	-------	------	-------

TP ₂₁	4.26	83.80	5.14	79.54
------------------	------	-------	------	-------

TP ₂₂	1.24	79.02	6.02	77.78
------------------	------	-------	------	-------

TBM#1			5.59	73.43
-------	--	--	------	-------

79.54

B19-3.66

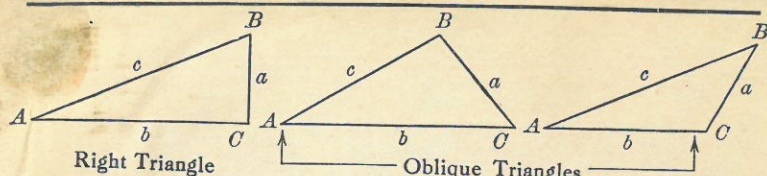
654321
789101112
181716151413
192021222324
302928272625
313233343536

O on g at Loch Lomond

55.827
2.680
58.507
58.51

8.10
6.65
1.45

TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

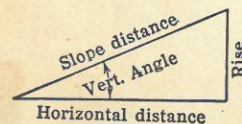
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\csc = \frac{c}{a}$

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