

K+M

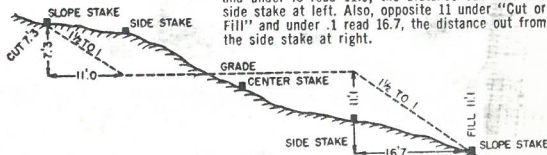
LEVEL BOOK

82 0040

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

W.R. Ogleby
Bureau of Geology
Fla. Dept. Natl Resources
PO Box 631, Tallahassee

Book 70-2



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

KEUFFEL & ESSER CO.

8/7/70

Station	Time	Read	HT	Elev.	BM	Notes
① Bridge	8:08	09937	0.0		SRD	Canal 6 Miles N of Indian
	8:10	09937	-		Disc	population where S-846 & S-833 meet

② Wellhead	8:40	6993	1.5			Ground level at MHP #1
	8:42	6994	-			Seminal, Tr 60

① Pond	9:08	09931	0.0			
	9:10	09933	0.0			

Location	Time	Notes
HOR #1 Lehigh Acres	10:30 AM	
Firewall OK Concrete	11:05	HOR Lehigh-Consolidated
Lease Clean - adequate spacing between storage & heater - Need Lease		fr Alabama St #82
Sign Designation Milwaukee Ave	TD 11:45	C. Loffland Bros
	11:50	Sum R. J. Gille B-31-1
	TD 3505	Cementing 9 5/8 in
		Entire Rig 1

8/7/70

12:05

HO R Loe Cypress 30-3

Empire Rig 4 OK

Empire Rig 3

HO R Lee Cypress 30-4

12:15

OK

Sam Oil Co

25-1

Simco - Felda

28-3

5 heater treater

28-1

+ 1 casing

33-2

unit

21-4

Lead storage tanks

no fire well

8/11/70

Station	TIME	Read	IH	EL	BM
"B"	9:55 ^{AM}	10979	1.5		
Anglers	10:00	10981	-		
Motel	7:47 ^{PM}	10978	✓		
Druck	7:50	10976	✓		

B-1 11:04 10361 1.5' 1.5'

Sunday Bay.

B-2 12:08 09983 1.5' 3.0'

Huston Bay

B-3 1:20 09834 1.2' 0.0

Chevalier Bay

8/9/70

Station	Time	Real	Lt.	EL.	Bm.
Punta ①	10:50	12265	1.5	4'	5' ESE
Rasa	10:52	12261	✓		

Point ②	11:25	12112	1.2'	6'	USGS
Y bel	11:27	12114			1952
Base					ERS

③	11:48	12295	0.8		S-242
	11:50	12295			1965
					USC 66

④	12:50	13783	0.7	2'	USGS
Reddish					1952
Pass Bar	12:52	13783			1965
					TT 83
					JFS

Point ②	1:31	12117	1.2'	6'	USGS
Y bel					
Base	1:33	12118	✓		ERS
	3:54	12098	✓		1952
	3:56	12102	✓		
	3:58	12101	✓		

At the SW cor of the Tral
Callepna Bldg for the Samibel
Bridge

Beneath Samibel Island
Lighthouse as USGS Disc
Flush with ground. 64.1 mib.

68.1

8/9/70

Station Time Read E1 1H BM
 Tahiti ⑤ 2:47 12684 5 Est 1.2'
 Drive 132:49 12684 - -

Blind ⑥ 09-071-030 4 → 3:15 13001 13 0.0 No2
 Pass Bridge 3:18 12998 - 3 USC/65
 10.0 1965

⑦ 09-071-133 3:32 12765 5 1.0' USGS
 3:35 12767 119 ERS

Punta ① 09-071-0271 4:17 12271 5 1.5'
 Pass 4:19 12269 5 -

Fl Myers 4:45 11659 0.0
 Base 4:47 11661

@ headwall of NW pier of
 bridge 3' below pier level

BM is 1' above ground

8/10/70

Station	Time	Read	'11	E1	Bm
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Ft Myers	8:09	11643	0.0		
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Base	8:11	11651	✓		
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	8:13	11647			
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	8:14	11655	0.0		
--	------	-------	-----	--	--

	8:15	11655	✓		
--	------	-------	---	--	--

	8:17	11655	✓		
--	------	-------	---	--	--

Cape Coral Rd	8:37	12904	0.8'	12.37	VSSG
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Base	8:39	12904	✓	✓	106
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(031)

	1:14	13245	0.4'	✓	ERS 1952
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	1:15	13246	✓	✓	
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Pine Island	9:39	14151	0.0	9'	BMC7
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Center	9:41	14160	✓	✓	1946
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Base	9:42	14160	✓	✓	USFM
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(032)

	11:43	14172	✓	✓	Harkin
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	11:45	14171	✓	✓	Survey
--	-------	-------	---	---	--------

	12:33	14191	✓	✓	
--	-------	-------	---	---	--

	12:35	14191	✓	✓	
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0.1 miles W of road leading
S. to Cape Coral off SR 78

Bronze disc set on center of
cultivation W side of S-787
+ N side of SR 78 after common
intersection on Pine Island
Center

8/10/70

Station	Time	Read	HT	EI	Bm
St James ⁽¹⁰⁾	10:12	12877	1.1		C-260
					1966
Base	10:14	12875			C+GS

⁽¹¹⁾ Culvert	10:42	13441	1.5	7595'	P-241
					SRD
	10:44	13438	-	-	Base

⁽¹²⁾ Boreelia	11:17	15155	1.5'		C+GS
					Boreelia
Base	11:19	15158			1934-1938

⁽¹³⁾ Trout	11:39	14460	1.2'	8.799	C+GS
					6241
Base	11:41	14461			1965

⁽¹⁴⁾ Englewood	2:56	18144	1.5	14'	N.R.
	2:58	18145			
	4:45	18129 ^{le}	1.5		
	4:47	18135			
	4:49	18136			

Dec 10 - 455 - 22 E

Pine Island Center Guard

17 - 22E - 445

Captiva Guard

At Standard for Green St NW on
 SR 775 1 Block S of SR 777
 Junction

8/10/70

Station	Time	Read	IH	El	Bm
(15)	3:11	17603	1.5	4'	N Rec
X	3:13	17601	L	L	

(16)	3:44	17191	1.2'	8'	N Rec	BM not rec. - use SPD
163	3:46	17191				R/W monument

(17)	3:58	16711	1.5'	6'	N Rec
164	4:00	16708			

(18)	4:08	16426	1.5		N Rec
165	4:10	16428			

166	4:17	15990	0.0		
Coral	4:25	15990	0.0		
Creek	5:30	16500	1.5'	10.164	L-38
Punk	5:32	16520		3 1/2	
Gade				and	
Base				GL	
020					

SR 771
NE Pier of Bridge over
Coral Creek in 12. 42S-20E

9/29/70

Station	Time	Read	IH	FI	BM
S St Augustine	8:35	11245	0.1	7.608	J15
I Base	8:37	11246	-	-	R160
	10:43	11227	-	-	-
	10:45	11228	-	-	-

New

Station	Time	Read	IH	FI	BM
Jacksonville	9:34	16333	1.5'	14.619	R-2
Base	9:36	16333	(1.1' below BM)	-	1910
					R160

Station	Time	Read	IH	FI	BM
Imeson	1:57	17363	0.0	17.200	
(USAF)	2:00	17363	-	25.0' Fx.	
Calibration	Lat	30° 22' 16.8" W			
	Long	81° 38' 79" W			
Base					

Station	Time	Read	IH	FI	BM
(New)	2:25	16325	1.5'		
Jax	2:27	16326	(1.1' below BM)	14.619	R-2
Base					1910

Old Slave Market in St Augustine. The base is about 2' above G.L. - Read on wall
 1/2 Face of base, about 2" high than disc
 Lat 29° 53.53' N St Augustine
 Long 81° 18.68' W Quad

SE corner Mayflower Hotel
 2.6' above street
 30° 19.63' N. Tax Quad.
 81° 39.73' W.

Imeson Airport, Jacksonville
 in front of Run 5th "Grandy
 Calibration Base 1963"
 "USAF 1381 685. M"
 Washington DC
 2.6' above sidewalk

9/29/70

See next page

For Sharp Trench

Station	Time	Read	1H	E1	Bm
new Jax	2:55	16335	1.5	14.619	R-2
Base	2:58	16333	-	-	1960

2.6'

dove point

Call to PROVINCIA in
Tallahassee from St Augustine
7:00 PM - 3 min

9/29/70

Station	Time	Read	IH	EI	BM
Jacksonville	2:41	16429	0.0	16.30	Net
Base	2:43	16427	-	Net	Net
Natural	3:09	16432	✓	12' E	0.5
Gravel	3:11	16433			1966
Net					

Union Station
Jacksonville RR Terminal
30° 19.66' N
81° 40.28' W
Tax Qual

9/30/70

Station	Time	Read	1H	51	BM
Sanderson	9:26	12258	1.3'	-	-
D.B.	9:28	12259	✓	✓	✓
	11:07	12247	✓	✓	✓
	11:09	12248	-	✓	✓
	1:14	12275	✓	✓	✓
	1:16	12276	✓	✓	✓

Jacksonville	10:12	16421	0.0	WSB
Wahomee	10:14	16422	✓	1966

Live Oak	12:01	12761	1.5'	107.497	C&GS 1916
Base	12:04	12765	(5" below disc)		
	12:06	12764			
	2:18	12797	✓		
	2:20	12795	New Bell		
	2:21	12793			

20/12 - 12/20/12

Located at the base of a sign reading "Sanderson 1" at the intersection of I-10 + S-229 1 mile south of Sanderson. On S. side of metal pole bearing sign

RR Station, C&GS disc 20" above pavement

1/11/71 - Lee County Survey

Station Time Read IH BM FI

Estero #2 8:47 ^{del} 11675 0.0 TT75 WTM16 15.869

09-071-108 8:50 11681 ✓ 1952 USGS

8:52 11680 ✓

8:52 11682 ✓

Estero 9:05 11794 1.3' W-244 13.558

Base 9:07 11795 ✓

Estero #2 9:15 11681 0.0 TT-75 15.869

Base 9:17 11680 ✓ WTM16 1952

Bonita 9:50 11472 1.3 Q-246 11.998

Spinn 9:52 11468

Base 9:56 11470

Estero #2 10:15 11695 0.0 TT75

10:16 11693 ✓ WTM16

10:18 11692 ✓

33-25E-46S - Estero Quad.

09-071-021

09-071-020

Note: Calculate all
Base Stations before
starting 1 B.S.

~~1 B.S.~~
↑ Note

1/11/71

Station Time Read IH BM E1

FT Mays 11:04 13688 1.5' V37

Base 11:06 13690 - 1932

11:27 13692 - -

11:08 13690 - -

Eslero 11:40 11796 1.3 W-244

Base 11:42 11795

Eslero 11:48 11682 0.0 1176

#2 11:50 11683 - -

Station 2:18 12574 0.0 SRD

#43 2:20 12576 - Disc

Bridg 3:04 12578 0.0 -

#143 3:06 12576 - -

021-149

Disc is 1' above paving

4- 48 S - 28 E

Collier County - Bridge Pier

SRD Disc

11/11/71

Station	Time	Read	IH	EI	BM
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Innukalee	2:40	12328	0.0	33.730	SRD
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Base	2:42	12327			Disc
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021-029

Bridge 136 - Innukalee Base

11/12/71

Station	Time	Reed	1H	FI	Bo
Estero	9:13	11687	0.0	15869	TRK WTM
#2	9:15	11691	0.0		16
038	9:17	11691	✓		
	10:42	11704	✓		
	10:44	11702	✓		
	11:01	11702			
	11:03	11702			
	12:57	11708			
	12:59	11705			

△ 9:50 11528 1.2' 20.15'

Corkscrew Road Base 9:52 11528

09-071-108

Sec 22-46S-26E, 7.2 mi. 's
East of Estero #2, on
Road shoulder at base of a
Galvanized Corner post at the
NE cor of Farm Road going
N from Corkscrew Rd.

11/12/71

Station Time Read Ht El BM

(2) 10:41 11864 1.3' 7' Est

(137) 10:43 11862 ✓

(3) 11:19 11654 0.0 16' Est

11:21 11653 ✓

(4) 11:30 11607 1.5 17' Est

11:32 11607 ✓

(5) 11:46 11573 1.2' 19' Est

11:50 11571

11:52 11574

11:54 11571

Grand level 12' below RR Grade Land

32-46S-25E old RR

Grade, New Power Line right of way.

Sec line betw Sec 34 & 35 in
46S-25E, Center of East headcut
of embankment across ditch on N side
of Cokesburg Rd

N side of Cokesburg Rd - SW SW SW 25
46S-25E - at rd shoulder on

S. side Cokesburg Rd - Sec line & T. line
25/30 46S R 25E/26E

1/12/71

Station Time Peak 1/H EI BM

(6) 12.09 11542 1.2' 18' Est

X 12.11 11541

(7) X 12.30 11507 1.3' 19' Est

12.32 11506

(1) X 09-071-136
12.40 11548 1.3' 20' Est

12.42 11548 - -

Eslero 1.56 11711 0.0

TT75

#2 1.58 11712 -

WTM

(1) X 2:05 11539 1.3

2:07 11545

2:08 11541

2:10 11541

Trial leads to Corkscrew Rd Jan Suite
in 20-46 S - 26 E

S. side Corkscrew Rd ^{Set} 20/21
46 S - 26 E

22-46 S - 26 E - Corkscrew
Rd Base

1/12/71

Station Time Read Ill BM El.

(8) 2:23 11538 1.2 20'

Y 2:25 11538 Est

09 071-143

(9)

09-071-144
Y 2:43 11562 1.2 24'

2:45 11562 Est.

(10) X 09-071-145
2:56 11555 1.2 26'

2:58 11555 Est

(11) Y 09-071-146
3:10 11646 1.2 28'

3:12 11647 Est

(12) Y 09-071-147
3:22 11659 1.3 28' Est

3:24 11657 ~

Section Line ^{Post} 22+23 - 46S-26E
S side Corkscrew Rd

Section Line Marker ^{Post} - N side
Corkscrew Rd 23+24 46S-26E

Range Line ^{Post}
Section Line S side of Corkscrew
Rd 24+19 46S-26+27E

At Fence post (Corner) ground level
Fence post at section line 19/20
S side Corkscrew Rd 46S-27E

Cap Post. S side
Corkscrew Rd in 28/29
46S 27E

Fund $\frac{26}{29} \frac{21}{28}$

11/2/71

Station Time Recd 1H EI BM

(13) 3:38 11731 1.4 28'
 09-071-148 3:40 11729 - Est

(14) 09-071-149 3:51 11760 0.9' 28'
 3:53 11760 C Est

(15) 09-071-150 4:02 11841 1.4' 29' Est
 4:04 11843

(16) 09-071-151 4:12 11990 1.2' 26'
 4:14 11990 ✓ Est

(17) 4:30 12005 1.2'
 4:31 12001 -
 4:32 11999 -
 4:34 12000 -

09-021-162 collar

Side Calksaw Rd line
 let's 28/27 150 N of
 House - 46 S - 27 E

S side Calksaw Rd - 27/26
 46 S - 27 E

S side Calksaw Rd 26/25
 46 S - 27 E

Lee - Collin Line
 7' N of Fence Corner

24 19
 25 30
 27 26
 28 18
 29 14
 30 12

Side Calksaw Rd

11/12/71

Station Time Read 114 El Bm

Bridge 4:45 12607 0.0

143 4:47 12605

021-149

(= 1183 at Esker 2)

1/13/71

09-071-157

(16)

1:37 11986 1.2 26'

✓

1:39 11985 - Est

(17)

2:56 11998 ✓ ✓

2:58 11998 ✓ ✓

Lee

3:30 11999 ✓ ✓

3:32 11999 ✓ ✓

(18)

09-071-1370
2:15 11580 1.4

2:17 11580 - Lee

Bridge 3:12 12624 0.0

143 3:15 12627 ✓ collen

(43)

021-149

09-021-149

11/13/71 ~~11/13/71~~ ##

Station	Time	Reg.	1H	FI	BM
Corkscrew	3:50	12080	1.4'	28'	CIGS
Base	3:51	12076		Est	
MA	3:53	12077		09-021-163	
Y	3:55	12075			

Reading level with BM and ground
 Could not get in fence to BM,
 25' NE of BM

(18) x 09-021-164
 4:08 12201 1.3' 26'
 4:10 12203 - -

Headwall of culvert NW side
 SR 850 - Sec 8 - 46S-28E

(19) 09-021-165
 4:28 12431 1.5' 25'
 4:29 12427 - Est
 4:30 12428 - -

9-46S-28E NW side of SR 850

(43) 09-021-149
 4:39 12625 0.0
 4:40 12627

Bridg
 143

11/14/71

Station Time Read IH El BM

① 8:51 11605 1.2'
Corkscrew Rd 8:53 11604 ✓

09-071-152
② 9:05 11553 1.5' 22'
X 9:07 11554 -

09-071-153
② 9:30 11529 1.5' 24'
Y 9:32 11531 ✓ Est

09-071-154
② 9:45 11649 1.3' 26'
X 9:47 11650 ✓ Est

09-071-155
② 9:55 11751 1.4' 25'
X 9:57 11752 ✓ Est

SW Sec 15 46S-26E

9-46S-26E

5 | 4
8 | 9

② 46S-26E
Roadside shoulder

6 | 5
7 | 8

46S-26E
Roadside shoulder

11/14/71

09-071-156

Station	Time	Read	HT	FI	BM
Alico	10:15	11847	1.5	20'	
R6	10:17	11844	✓	Est	
Base	10:18	11846	✓		
(3)	11:30	11864	✓		
	11:31	11866	✓		
	11:32	11867	✓		

A

Corkshaw Rd

10:35 11621 1.5

10:37 11621

09-051-157

(24)	11:03	11692	1.4	20' Est
	11:05	11690		

(105)	11:55	12626	0.0	10.262 K-24
W Mullock Creek	11:57	12624	✓	✓
(4)				

25E/26E

46S/1/6
12/7

Section line details
N-S power line - cross
At base of Pole located
about 100' S of Alico Rd
being westerly of the 12th Pair
of Power Poles S of Swift Rd.
opposite Pole # 126 M 4

19-46S-26E

09-075-105

4/14/71

Station Time Read Ht El Bm

④ 1:05 12624 0.0

N Mullack 1:07 12624 -

Creek 1:30 12623 -

1:31 12622 -

2:06 12635 ✓

2:08 12634 ✓

09-071-105

09-075-105

Estero 1:20 11897 1.3 09-071-021

Base 1:22 11899 -

W-244

09-071-021

Alico RI 1:50 11867 1.3 09-071-156

Base ③ 1:51 11867 -

1/14/71

Station	Time	Read	HT	EI	Bm
Jean Blvd	2:22	12328	1.5'	12'	
(25)	2:24	12328	-	Est	

(26)	2:36	12190	1.4'	16'	
x	2:37	12187	1.4'	Est	
	2:38	12186	-	-	

(27)	2:59	11975	1.1'	18'	
x	3:00	11973	-	Est	

(28)	3:10	11922	1.4'	20'	
x	3:11	11924	-	Est	

A	3:20	11874	1.2'	20'	
x	3:21	11872	-	Est	

Alice Rd at Jean Blvd -
beneath steel standard for Jean
Blvd sign 8-465-255

9-465-25E S of Alice
Rd at Powerline.

3/2	10/11	At Powerline Pole S of Alice Rd.
(29)		

NW Sec 12 - 465-25E
Where transectors Alice Rd

465-25E

11/15/70

1/14/71

1/14/71

Station	Time	Read	1H	FI	BM
7th Pk	3:38	11823	1.5	20'	
South	3:40	11822		Est	
Mico Pl					

09-071-162

25E 26E T465

12	7
13	18

7th Pk S. Mico Pl

Note: Tandom Pl 0-12'

09-071-163

30	3:53	11734	1.3'	20'
14th Pk South	3:55	11732	✓	Est

13	18
24	19

14th Pk S

31	4:22	11720	1.1	19'
21st Pk S	4:23	11720	✓	Est

24	19
25	30

21st Pk S

Estero	4:31	11803	0.0	1175
#2	4:33	11804	-	WTM

✓ Use 11/14/71
drift calculations between

Readings to illustrate
Established Base

~~X~~

✕

11/15/71

Station Time Road Ht FI BM

③

8:10 11869 1.5

8:12 11869 -

③②

8:28 11923 1.5 22'

8:29 ^{del} 11920 - Est

8:30 11923 -

8:31 11923

Whiskey 09-071-166
12:51 13739 1.1' 6' Est

Creek Base 12:53 13736 -

④ 12:55 13736 -

1:45 13738 1.1 -

1:47 13738 - -

3:10 13740 1.3 -

3:12 13741 -

1st Pole S of Aliso Rd

Midway betw pole 8 & 9

Aliso Rd

455 256 262
36 31
465 1 6

East Side of McGregor Blvd
at south approach to Bridge over

Whiskey Creek on SR 867

At base of McGregor Blvd

Monument with Tablet dedicated to

A. M. McGregor 10-455-24F

skip a page to Ft Myers
Base.

1/15/71

09-071-167

Station Time Read Ht El Bm

(33) X 2:31 13388 1.5 6' Adt

Egler 2:33 13387 ✓ Est Rec

Island 4:01 13385 ✓

Base 4:03 13384 ✓

(34) X 3:30 13944 1.1' 6' CLOS

Iona Rd 3:31 13945 D-38

Base 09-071-035 Reset 1961

Big (35) X 09-071-036
4:35 11802 0.8'

Hickory 4:37 11801 ✓

Base

CLOS

D248

1965

NE pier of bridge across

Big Hickory Pass - 24-47S-24E

Bonita Spgs Quad.

(36) X 09-071-168
4:50 11754 0.8'

New Pass 4:52 11753

Base

CLOS

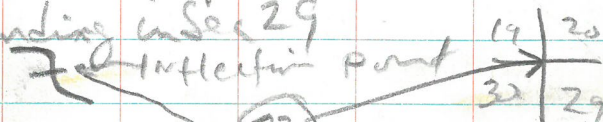
C-248

1965

NW Pier of bridge across

New Pass - Sec 13 - 47S-24E

Egler Quad

Across Rd from FPL Pole
45 G 69At the point of inflection of
the curve beginning in section
19 ending in Sec 29

3 Paces east of (33) black hip road

Intersection of Iona Rd &

McGregor Blvd Lin 31-45S-24E

1/15/71

Station	Time	Read	1H	EI	B/M
Fl Myers	1:20	13823	1.5'		Fl Myers
Base	1:22	13824			1932

(37) x	09-071-165				
Little	5:04	12133	0.8'		
Carlos	5:05	12132	-		
Base					

(38) x	09-071-170				
Big	5:14	12343	0.8		
Carlos	5:16	12343			
Base					

(39)

CGS
A-248
1965

CGS
BM No 3
1965

NW Pier of Bridge over
Little Carlos Pass - in Sec 11
47 S - 24 E - Estero Quad



NE Pier of Bridge over
Big Carlos Pass Sec 20 3
47 S - 24 E - Fl Myers Beach Quad

East side of Estero Rd, South
Cor of Intersection with ~~Buccaneer~~
Buccaneer Drive Boob 2
No 2, 1955 R160



1/15/71

Station	Time	Read	HH	EI	BM
(39)	5:35	12473	1.5		Boob
X	5:37	12475			#2
		09-071-057			1955

Beneath Sign Standard reading
 465 Estero Blvd + Buccanery Dr
 A on E side Estero Blvd in
 center lane of Drive R160
 Sec 3 47S - 24E

(33)					09-071-167
Estero	5:50	13388	1.5		
Island	5:51	13391			
Base	5:52	13391			

~~2/8/71~~ 2/9/71

Station	Time	Reading	1H	EI	BM
93 # Bridge 143	3:56	10832	0.0		
Bar 09-071-031	8:05	13284	1.0		US GS
	8:07	13284	✓		106
	8:09	13288	✓		ERS
	8:11	13286	✓		1952
	9:19	13313	✓		
	9:24	13268	✓		

2/10/71

071-031	8:57	12157	0.8		106
09-071-031	8:59	12158	✓		ERS
	10:03	12113	✓		
	10:05	12115	✓		

Alva SE Quad

3-46 S-28 E Collin City
High Wind - ¹²~~20-25~~ knots

Winds too high

2/9/71

Station	Time	Read	HT	EI	Bm
09-076-032	8:40	14508	0.0		BMC7
					1946
Base	8:42	14504	-		US Engs.
	8:44	14503	-		Hunter
					Survey

2/10/71

Station	Time	Read	HT	EI	Bm
071-032	9:26	13331	0.0	8.556	BMC-7
					1946
Pine	9:37	13335	✓		
Island	9:33	13337	✓		
Center	10:40	13325	✓		
Base	10:42	13329	✓		
	10:44	13331	✓		
	12:24	13345	✓		
	12:26	13346	✓		
	2:00	13351	✓		
	2:03	13351	✓		
	3:33	13370	✓		
	3:35	13369	✓		

2/10/71

Base
Station Time Read 114 E1 BM
071-033 11:05 12070 1.1 4.390 C-260
St Jude
Base 11:07 12073 1.1

203
A-1 11:23 11938 1.5 1.0 EST
11:25 11938 -

204
A-2 11:47 11874 1.5 2' EST
11:49 11875 -

Base
Station 12:09 12076 1.1 C-260
071-033 12:11 12079 ✓
1:04 12087 ✓
1:06 12091 ✓

205
A-3 1:13 12154 1.1 4.012 A-260
St Jude 1:15 12156 1966
Base C-265

Pine Island Center Quad

Sanibel Quad
2-46 S-22 E
Southern Tip of Pine Island
60' SE of end of Black top.

Sanibel Quad
2-46 S-22 E
SE tip of Pine Island

490.1

26-45 S-22 E Pine Island Center

2/10/71

Station Time Read Ht El Bm
Z-259 1:27 12251 0.0 7.077 Z-259
SGS
STRO

A-8 1:29 12253 ✓

206

A-4 2:27 13181 1.2 7.634 Pine Island

Pine Island 2:29 13180

Azimuth 207

A-5 2:41 13003 1.0' 7.736 A
~~7.677~~ A-241

Marion Drive Base 2:43 13004
208

A-6 2:59 12828 1.4' 8.399 S-241
209 3:01 12830 1966

A-7 3:20 12477 1.0' 9.393 Q-241

210 3:22 12476

26- 22E-44S

Pine Island Center Quad

Pine Island Center
"Pine Island Azimuth 1934
Reset 1955" 33-22E-44S

4- 45S- 22E

Pine Island Center Quad
Stamped L-241

10- 46S-22E

Pine Island Center

2/10/71

Station	Time	Read	IH	EI	BM
A-8	3:49	13510	1.1'	6.732	F-241 CJGS 1965
A-11	3:51	13512			
211					

A-9	4:21	13888	1.1	10.210	H-241 CJGS 1965
212	4:23	13894			
	4:25	13895			

A-10	4:59	14181	1.0'	8'	TT 82 JFS 1952 USGS
213	5:01	14182			

Pine Island Center Bush
071-632

21- 44S - 22E
Pine Island Center

2/11/71

Station	Time	Read	IH	EI	Brn
High	9:32	14562	0.8'	12'	
Branch	9:23	14565	✓	USGS	Sandy
Base	9:35	14564	✓	1934	CTGS
①	10:45	14564	✓	RIGD	
	10:47	14566	✓		
039	11:55	14572	✓		
	11:57	14573	✓		
	1:02	14585	✓		
	1:03	14589			
	1:04	14583			
	1:05	14579	✓		
	1:09	14577	✓		
	1:10	14579	✓		
	2:40	14584	✓		
	2:42	14584	✓		
	3:34	14567	✓		
	3:35	14565	✓		

Matlacha Quail

NE Cr Sec 6 - 435-23E

West of SR 765, 100 yds

S of Lee Charlotte H.C. line

CTGS Triangulation base

" Sandy 1934 "

45.6 miles to 46.55

Punta Grande SE

701.5

2/11/71

Station	Time	Read	IH	FI	Bm
071-032	10:09	13438	0.0		Bm
Pine Island					Bm
Point B	10:10	13439	-		C-7

020	11:13	15764	1.5'	L-38	
Gorda	11:15	15766	-	Reset	Bm is 2.5' above GL
				1961	in Court House Wall

Base				USGS
2	12:12	14445	1.5'	12'
143			-	Est
Yucca	12:14	14447		
Pear Creek				
Base				
3	12:24	14311	1.5	10'
Burnt				Est
Shore	12:26	14310		

4	12:40	14182	1.5	9'
Burnt				Est
Shore Rd	12:43	14182	-	

5	12:51	14032	1.5'	7'
Burnt				Est
Shore	12:53	14031		

6 | 5
7 | 8 (2)

43 S-23 E Rd 765
Roadside Sec Cr.
Matlacha Quad

7 | 8
18 | 17 (3)

43 S-23 E Sec Cr.

16 | 17
19 | 20 (4)

43 S-23 E Sec Cr
Concrete marker
White Painted Post

19 | 20
30 | 29 (5)

43 S-23 E Sec Cr
at Section Line Rd.
Matlacha

2/11/71

177
Station Time Read Ht El Bm
Gate Slough 1:35 13546 1.5 6' USGS
(6) Est

Burnt
Street 1:36 13941
1:37 13941 USGS
6'

Tipped
Hammock 1:45 13787 1.5 6' USGS
(7) Burnt St Rd Est

178

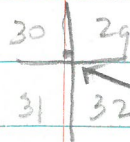
(8) GAC 1:54 13617 1.5 6' USGS
Central 1:56 13613 Est
179

(9) Burnt 1:58 13612 USGS
Street 2:05 13430 1.5 5'
180 Est

(10) Burnt 2:15 13144 0.0 5' USGS
Street 181 2:17 13144 Est

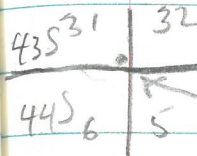
(11) Sec Cr 2:21 13145 1.5 5' USGS
40' West 2:22 13144 6.0 not Est

Matfacha Quad.



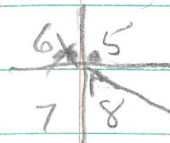
435-23E

Sec Corner



435-23E

Sec Cr.

Loc Corner on Quad
Point Street
SW Cr Sec 8

445-23E Sec Cr.

Loc Corner
on Quad SW Cr Sec 8-445-23E

Matfacha

Intersection of SR 765 & SR 78
in SW 17 445-23Ein center of headwall of culvert
on West Side Burnt Street Rd

4765

2/11/71

Station	Time	Read	HT	FI	BM
071-031	3:08	12235	0.8'		106
Base	3:10	12234			ERS

Pine Island	3:53	12677	1.1		S-24L
Tower 182	3:54	12680	✓		1965
Base	3:55	12678	✓		CTGS
(11)					

071-031	4:08	12249	0.8'		106
Base	4:10	12251			ERS

2/12/71

Station	Time	Read	I.H.	EI	Bm.
Cape ⁽¹²⁾	9:08	11413	1.5'	4.2'	Temp
Coral	9:10	11413	✓	✓	Stump
Base	9:45	11389	✓		5.38'
USE	9:46	11393	✓		
01105	9:47	11394	✓		
09-011-040	10:47	11395	✓		
	10:49	11397			
	11:35	11392	✓		
	11:37	11387	✓		
	11:39	11386	✓		
	12:45	11387	✓		
	12:47	11386	✓		
	3:18	11354			
	3:19	11350			
	3:20	11349			
	5:10	11339			
	5:12	11339			

Fort Myers SW Quad.

SE Cor of SE 47th and

Del Prado Blvd - SESE 7

455 - 24E

= 1.18' above G.C.

At notch on inside of
sidewalk where curvature
starts - 3 paces from gutter
of SE 47th St

2/12/71

Station Time Read 1/H E1 Bm

077-031 9:25 12203 0.9'

Base 9:26 12200

✓ 9:28 12199

✓ 10:00 12199

10:02 12199

(13) 183 Del Prado 10:15 11859 1.0' ^{USGS} 10' Est

(14) Whiskey 11:09 10831 1.2'

Creek 11:11 10833

Base

(14) 184 11:25 10987 1.5

11:28 10996

11:30 10993

"SE 6 LN at Del Prado Blvd."
At base of Sign on SE Cor.

Base of Flagpole at tollhouse
on bridge - 17-455-24E
Fort Myers SW Quad.

2/12/71

Station	Time	Read	IH	EI	Bm
---------	------	------	----	----	----

(15) 185	12:58	11483	1.0'	9' Est	
----------	-------	-------	------	--------	--

Palacio Grande	1:00	11483	-		
----------------	------	-------	---	--	--

(16) Everest	1:15	11184	1.3'	4' Est	
--------------	------	-------	------	--------	--

Prng 186	1:17	11186	-		
----------	------	-------	---	--	--

(17) Everest	1:27	11559	1.1'	USGS 7	
--------------	------	-------	------	--------	--

Prng 187	1:29	11558		Est	
----------	------	-------	--	-----	--

(18) SE 15 th	1:39	11693	1.2'		
--------------------------	------	-------	------	--	--

Terrell	1:40	11687	✓		
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188	1:42	11689	✓		
-----	------	-------	---	--	--

	1:44	11689	✓		
--	------	-------	---	--	--

077031	1:55	12173	0.9		
--------	------	-------	-----	--	--

Bent	1:57	12175	✓		
------	------	-------	---	--	--

#1 Myers SW Quad.

Del Prado Blvd at SE Cr
Palacio Grande at base of sign

Beneath sign
Everest Prng at SE 26 Place
near Calosahatche River 33-44S-24E

SE Cr Everest Prng at
Del Prado Ave. - beneath sign
NW Cr Sec 32-44S-24E

SE Cr 15 Terrace & Del
Prado Blvd - beneath sign
SW Sec 20-44S-24E

2/12/71

Station	Time	Ready	1H'	EI	Bm
19	2:18	12412	1.5'	12'	
Pine Island Rd	2:19	12416		EST	
189	2:21	12417			

20 Nicholas	2:31	12170	1.2'	11'	
189 Burdum	2:33	12171		EST	

(21) SE	2:47	11967	1.2'		
25 th Lane	2:49	11969		EST	
191					

(22) SE	3:02	11812	1.3'	6'	
40 th St	3:04	11799		EST	
192	3:06	11798			

4' EST

(23)	3:53	11401	1.4'		
193	3:55	11403			

S Side SR 78 SW 12

44S - 23E - on Black top

N1 E side Santa Barbara S
Side Nicholas Pkwy E - See

24 - 44S - 23E

SE Cor SE 25th Lane at
Santa Barbara 36 - 44S - 23ESW Cor ^{See 1} - 45S - 23E on
South side E 40th St - East Side
Santa Barbara

Ft Myers SW

S side Lucerne Pkwy E side
Carmado Pkwy NW Cor 19
45S - 24E

2/12/71

Station	Time	Read	1H	El	Bm
(24) Redfish Point Base	194 4:09	11211	0.0	4'	
	4:10	11214		Est	
(25) Nautilus Drive Point	195 4:27	11284	1.2	5' Est	
	4:29	11285			

26 Cape Coral Bridge Approach	196 4:41	11178	1.5	2' Est	
	4:42	11181			

(27) Sea wall	197 4:55	11266	0.0	4' Est	
	4:56	11273			
	4:57	11267			

ft Myers SW

At S end of Riverside Drive
Sec 19 - 455 - 24 E - Seawall

Nautilus Drive - S End
S.E. 18 - 455 - 24 E

Palacio Grande at Caloosahatchee
River on Sea Wall (N or E)

2/13/71

Station Time Read P.H. FI BM.

FT Myers 7:48 10782 1.5' + V-37

X⁰⁰¹ Base 7:50 10783

Disk is 1' above ground

N. FT Myers 8:07 11617 0.6'

104

Base 8:09 11614

ERS

026 9:12 11610

1952

9:14 11614

071-031 8:21 12078 0.8'

C+GS

13.507 106

Base 8:23 12080

ERS

FT Myers 8:37 10801 1.5'

V-37

X⁰⁰¹ Base 8:39 10802

071-031 9:00 12075 0.4'

C+GS

13.507 106

Base 9:02 12075

ERS

2/13/71

S Station Time Read IH EI BM
 198 (28) Nelson 10:01 12464 0.8' 12.257 Nelson
 X Rd Base 10:03 12466 1934

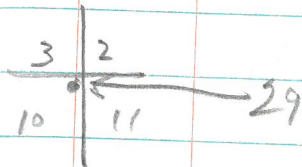
199 (29) N Nelson 10:15 12753 1.2' 15'
 Fred 10:17 12754 USGS

(30) 200 Little Pine Island Base 11:01 13223 1.2 1.294 E-241
 11:03 13225 ✓ 1965

Pine Island Center 032 May 1 mi / Dist BM
 11:09 13285 0.0 C-7
 11:11 13282 ✓

(31) 201 11:33 13157 1.4' 7.5' AM
 11:36 13173
 11:37 13169

St Myers NW
 Sec 14 445 - 23E



445 - 23E

2/13/71

Station	Time	Read	HT	EI	Bar
EMatlaacha	11:51	13267	1.2	4.229	B-240
Base	11:52	13256			
202	11:53	13254			

Station	Time	Read	HT	EI	Bar
Pine Island	12:03	13279	0.0		BM
Cedar Box	12:05	13281			C-7

Station	Time	Read	HT	EI	Bar
Pine Island	12:40	12518	1.2'		S-246
Tower Box	12:42	12518			

Matlaacha River

On East Matlaacha Island
24 - 44S - 22E

5/17/71

Station	Time	Reel	III	EI	Bm
Big	8:36	151470.9'			D-248 Bridge - NE end
Hickory	8:38	15147			1965
Pass	9:15	15153			CIGS.
Base	9:19	15156			
09-071-036	9:20	15153			
X	11:46	15188			
	11:48	15186			

X Bonita	8:57	14957	1.3'		Q-246
Springs	8:59	14956	-		
Base	11:06	14972	-		
09-071-020	11:08	14975	-		

5/17/71

Station Time Recd 114 FI BM
 ① X Bonita 09-071-257
 9:31 15242 1.3' L-246
 Beach IB 9:33 15244 1965 Bonita Spgs.
 CTGS

② X McLaughlin 09-071-258
 9:52 15226 1.2
 Blvd IB 9:54 15228 1.2'

M-246 31-47 S-25E
 CTGS
 1965 Bonita Spgs.

③ X Wiggins 09-071-041
 10:10 15159 1.4' 8
 Base 10:12 15163
 A

Wiggins SW Cr Sec 31-47 S-25E
 1934
 1970 Bonita Spgs
 CTGS

X ④ Imperial 09-071-259
 10:20 15115 1.3' 7'
 Shores 10:23 15115 Est

32-47 S-25E

⑤ X Wind 09-071-260
 10:25 15021 1.2' 14'
 R 10:26 15023 Est

33-47 S-25E
 Instrument fellows in Case

5/17/71

Station Time Read HH FI BM
 (6) x 09-071-261
 10:52 15003 0.0 17' Disk
 10:54 15001 E247

Sec 3 - 48 S - 25 E
 Disk in Culvert - SRT

(7) ↑ 09-071-262
 Dakota Drive 12:32 16284 1.2'
 12:33 16290
 12:34 16286 use
 Ft Myers 09-071-042 043
 Beach Box 1:15 17040 0.0
 1:17 17040

H-245
 C+GS
 1965

33 46 S - 24 E
 Ft Myers Beach

C+GS
 BM 2
 1965

19 - 46 S - 24 E
 1st Street Ft Myers Beach

(34) x 09-071-035
 1:45 17312 1.3'
 1:47 17314

D-38
 Rose 7
 1961
 C+GS

(9) x ✓ 09-071-263
 2:01 17169 1.2'
 2:03 17169
 09-071-264
 2:20 17172 1.2'

B-245
 1965
 C+GS

(10) x ✓ 09-071-264
 Home Ave. 2:22 17173 5' East

NW 18 - 46 S - 24 E
 San Carlos Blvd at
 Home Ave.

#117/71

Station Time Read H
 (11) ✓ 09-071-265
 2:39 17041 1.2'
 x 2:41 17041

E1 Bm.
 C165
 F-245
 1965

Ft Myers Beach

18-46 S - 24 E

(12) 09-071-266
 Library 2:57 16774 1.8'
 ✓ 2:59 16776

C165
 F-245
 1965
 Rese
 1970

Disk is 1.5' above ground
 in road 1.1' west of
 start of sloping concrete
 ramp to Library door
 at NW face of Library

(34) ✓
 035 3:16 17311 1.2'
 3:18 17312 -

D-38

(13) x ✓ 09-071-267
 IONA School 3:59 17393 1.1'
 4:00 17391

C165
 M-242
 1965

Rigo

(14) x ✓ 09-071-268
 Culvert 4:25 17514 0.0
 4:27 17515

G'
 EST

5/17/71

Station Time Reach 114 FL BM
 15 ~~Point~~ 4:47 17815 0.5 C+GS
 1965
 Rase 4:49 17813 Q-242

Disk is 9" above GL

16 ~~Point~~ 4:56 17752 1.0 C+GS
 1965
 4:58 17753 L-240

Sample on F1 Myers Beach
10-46 S-23 E

17 ~~Point~~ 5:13 17660 1.0 C+GS
 1965
 Point 5:15 17659 P-242

34 ~~Point~~ 5:30 17303 1.2 D-38
 5:32 17304

18 ~~Point~~ 5:42 17223 1.3 C+GS
 1965
 Drive 5:44 17226 J-242

19 ~~Whistle~~ 6:04 17105 1.2
 1965
 Creek Base 6:06 17107

5/17/71

89-071-273

Station ¹⁹ Time Recd 1H FI BM

Coral 6:20 17123 1.2 5242

Galle Brn 6:22 17126 1965

(34)^x 035 6:35 17332 1.2 D-38

6:37 17332

See 16 - 45 S - 24 E

BM - OK, Witness post

Controlled by marker

Station Time ^{5/18/71} ~~09-071-2692~~ EI B.M.
 (15) Punk 12:22 17812 0.5' Q-242

Rassa 12:24 17814
 1:35 17829
 1:37 17829

(20) ⁰⁹⁻⁰⁷¹⁻²⁷⁴ 12:34 17925 0.0 3' EST
 X 12:36 17924

(21) ⁰⁹⁻⁰⁷¹⁻²⁷⁵ 12:46 17867 0.0 2.5'
 X 12:48 17869 EST

(22) ⁰⁹⁻⁰⁷¹⁻²⁷⁶ 1:00 17775 1.0
 1:01 17775
 1:20 17783 1.2
 1:22 17780 1.2

Sampled
 Light 1:14 17645 1.2'
 028 1:15 17646

CIGS
 R242
 1965

1952
 123
 ERS

B.M. line 10" above GL

Small beneath S.E. end of
 Bridge

Small beneath SE end of
 Bridge

Common Co. Peninsular &
 Lindgren Sts. - NE Co.

May 22-1971

West Felda

Sun Oil Co - Alicoland Docks

✓ "C"-5-1 Permit # 462

Sec 5-46S-28E - Collier Pk

Cactus Rig spread here. - No violations

✓

Sun RC 'B' 33-2A Permit 488

45S-28E-22 No violation

Empire Drilling Co Rig spread here.

✓ Sun RC 'B' 33-2 Permit # 411

Sec 33-45S-28E - Hendry Co

No violation

✓ West Sunoco Felda Bottoms

No violations - Sun Oil Co

May 22-1971

West Felda

✓ Sun - Lee Cypress "A" 28-2

Permit 442 Sec 28-45S-28E

Hendry Co. - No violations

✓

Sun - Sunoco Felda Unit Oil

Tank Batt 19. - 3-1000661?

tasks done LTCL #24-1

S-T Well No 21-3; plus

3 more heater treaters not
designed

Lehigh River Field

HOR #142 Lehigh Area Inc

Permit 407 T 45S-R27E

Sec 14 NW NW Lee County

HOR #113 Consolidated Finance Corp

Permit 447 T 45S-R27E Sec 11

Lee County. No violations

5/18/71

Start	Time	Read	IH	FI	BM
(34)	1:48	17333	1.0		D-38
035	1:50	17333			

5/19/71

Station	Time	Depth	IH	FI	RM
(23) Y	9:25	15031	0.0	09-071-277	G247
Brite	9:27	15032			
Beach	9:57	15030			
Road	9:59	15032			
Base					

(6)	9:36	15013	0.0	09-071-278 261	E-24
X	9:38	15013			
Brite	9:48	14989	1.3	09-071-020	G-24
Spqs	9:49	14989			
Base	11:20	14976			
[020]	11:22	14978			

SRD Dist in headwells
Calcutt Signal + E of RR.

Brite Spqs Qual

5/19/71

Station	Time	Read	HT	El	BM
24 X	09-071-279				
Oak	10:09	15023	0.0	12'	
Creek	10:11	15023		Est	

25 X	09-071-280				
	10:23	14966	2.0	12'	7
	10:25	14968		Est	

26 X	09-071-281				
Trench line	10:36	14898	1.4'	15'	
	10:38	14900		Est	

27 X	09-071-282				
	11:06	15043	0.8'		C+GS H-24
	11:08	15042			1465

34 X	09-071-283				
0.35	12:06	17344	1.2'		D-38
	12:08	17346			
	12:57	17339			
	12:59	17341			
	2:51	17338			
	2:53	17340			

Banda Spgs. Quail

Send of culvert S side of
rd - Culvert 1.0 above road

Witness post buried to
18" by fill near rd. - BM not
recovered.

loc on road

31	32	485-26E
6	5	Cork saw SW

5/19/71

Station time Read IH EI BM

(28) x 12:15 17602 1.2 7' -

bona 12:17 17602 Est

(29) x 12:25 17758 1.2 5' 09-071-284

Core 12:27 17756 Est

(30) x 12:50 17205 1.3 9' 09-071-285

Holiday 12:52 17205 Est
1st N
translph

(31) x 1:10 17121 0.0 09-071-286

1:12 17122

(32) x 1:37 16922 1.2 09-071-287

1:39 16922 107

(33) x 1:50 16566 0.0 09-071-288

1:52 16568

Ft Myers SW Quad

36-45-S-23E

35-45-S-23E Ft Myers SW

L-245 SRD Disk - S side of
bridge center of culvert

CHB
M-245 R160

1965
8-14-65 NE headwall of culvert
1965

5/19/71

Status	Time	Depth	1H	F1	BM
(34) Home	2:01	16709	0.9	09-071-289	C+GS N-245
Craft	2:03	16708			1965

(35) X	2:11	16409	0.0	09-071-290	P247
	2:21	16411			

(36) X	2:38	16153	1.0	09-071-291	L-247
	2:40	16155			

(37) X	3:50	15640	1.2	09-071-292	26'
--------	------	-------	-----	------------	-----

	3:52	15643			Est
--	------	-------	--	--	-----

(38) X	3:57	15740		09-071-293	23'
--------	------	-------	--	------------	-----

	3:58	15740	1.2		Est
--	------	-------	-----	--	-----

(39) T	4:07	15805	1.3	09-071-294	21'
--------	------	-------	-----	------------	-----

	4:09	15813			Est
--	------	-------	--	--	-----

	4:11	15814			
--	------	-------	--	--	--

Ft Myers SE

SRD Disk in E head all
Culvert ver. 41

Disk (SRD) is 1' above road

Ft Myers SE
Sec 24 - 455 - 25E

23/24 455-25E

22/23 455-25E

5/19/71

Stat	Time	Road	HT	El	Bm.
(40) X	4:19	15931	1.2'	19'	
Mustang					
St	4:20	15933		FSY	
(41) X	4:27	16093	1.2'	17'	
	4:28	16091		FSY	
(42) X	4:34	16213	1.2	17'	
	4:35	16211		FSY	
(43) X	4:43	16370	1.3	19'	
Cancel	4:45	16369		FSY	
(44) X	4:51	16654	0.0		C165 S-247
	4:52	16653			1965
	5:41	16659			
	5:43	16664			
	5:45	16664			
(34) 035 Y	5:04	17352	1.1		
	5:05	17351			

Fred Meyer SE

5/19/71

Stat Time Feet LH FI Bm

(45) X 5:20 17294 1.3 3' Est

JOANNA

4:22 17296

(46) X 5:28 17013 1.3 9' Est

5:30 17011

(47) A 5:35 16858 1.3 8' Est

5:37 16858

FI Myers SW Cypress Lake Dr

20-45S-24E + JOANNA

21/22 45S-24E

22/23 45S-24E

5/20/71

Stat x Time Read IH El ⁰⁴² BM
 (46) Bridge 7:54 15566 0.0 34' ~~3044~~ 341'
 #61 Base 7:55 15568 USGS USGS

09-021- ~~09-011-303-360~~ ✓
 (48) X 8:10 15930 1.2' 32' NT
 8:12 15932 Est Rec

(49) Collie 09-021- ~~233~~ ~~233~~
 Bridge 8:23 15978 0.0 31'
 142 8:25 15979 USGS.

(43) Base 09-021- 149.
 Bridge 8:32 16076 0.0 30'
 143 8:34 16077 USGS

(50) ✓ BM #1 09-021-235
 near city hie 8:46 15841 1.2' 33.2' S. km
 8:47 15843 32GL Est

(46) Bridge #61 09-071- ~~3044~~ ⁰⁴²
 Base 8:57 15581 0.0
 8:59 15580

Lee ES
 Alva SE Sec 35-45S-28E
 SR D Disk

County line 32 45S-28E
 Collier, Cty 5 46S

Alva SE
 Collier, Cty 4-46S-28E
 SRD Disk

Collier 3-46S-28E

Collier CT
 Spike in telephone Pole Sign BM 1"
 Old BM not Rec 32/5 + 45/-28E
 5-46S-28E 145S

5/20/71

Stat Time Read IH FI Bm

(51) ✓ 9:14 15633 ⁰⁹⁻⁰⁷¹⁻³⁰⁴ 1.2' 31'

9:16 15634 Est

(52) ✓ 9:24 16033 ⁰⁹⁻⁰⁷¹⁻³²¹ 1.2' 30'

9:25 16034 Est

(53) ✓ 9:38 16485 ⁰⁹⁻⁰⁷¹⁻³⁰⁵ 1.3' 26' (09-071-305)

(46) ✓ 9:40 16487 Est

Drift Bm

(46) ✓ 10:12 15591 ⁰⁹⁻⁰⁷¹⁻³⁰⁴ 0.0

Bax 10:14 15593

(53) old ✓ 10:19 16504 ⁰⁹⁻⁰⁷¹⁻³⁰³ 1.3' (09-071-305)

46 ✓ 10:20 16506

P.B. ✓ 12:00 16515 ✓

12:02 16519 ✓

12:51 16517 ✓

12:52 16518

Alva SE

22/27 45S - 27E

10/15 45S - 27E

Joel Blvd & 4th St East NW Corner 35°
44S - 27E at Road sign.

Alva SE

N

Station Time Read IH EI Bm

(54) ✓ 10:54 16642 1.2 25' Est

10:55 16638 Est

(55) ✓ 11:07 16720 1.3 25' Est

11:09 16719 Est

(56) ✓ 11:30 16611 1.3 27' Est

11:32 16612 Est

(57) ✓ 11:41 16527 1.3 27' Est

11:42 16527 Est

(58) ✓ 11:50 16441 1.3 29' Est

11:51 16440 Est

(59) ✓ 12:11 16680 1.2 24' Concrete Post

Base 12:13 16680 USGS

61 12:22 16709 1.3 25' Est

12:23 16710 Est

12:30 16824 1.3 24'5 Est

(61) ✓ 12:32 16824 Est

Alva SE
NE Cr 35 - 44S - 27E

NE 36 - 44S - 27E Ch. line

SE 36

SW 36

SW 35

Section Corner concrete post

22 | 23 44S - 27E

27 | 26

22 | 23

23 | 24

Alva

5/20/71

Station	Time	Run	1/H	EI	BM
(62)	12:38	16984	1.5	25'	
County line	12:40	16986		Est	r

Station	Time	Run	1/H	EI	BM
(59) Lehigh	12:57	16682	1.2	24'	Concast
Base	12:59	16681		USGS	Post
	2:18	16658			22/23
	2:20	16659			27/26

Station	Time	Run	1/H	EI	BM
(63) x	1:07	16604	1.2	24'	
	1:09	16602		Est	
(64) +	1:18	16545	1.2	22'	
	1:20	16547		Est	

Acc Hendry
71E 28E
24.19

Alva SE

Rem 09-071-045
between and 09-071-001

21/22 445-27E Alva

20/21 445-27E Olga

5/20/71

Station Time Read LH EI BM

(65) 1:26 16532 1.3 22'

X 1:27 16534 Est

(66) X 1:34 16460 1.3 21

1:35 16459 Est

(67) X 1:43 16390 1.3 20

1:45 16394 Est

(68) X 2:05 17433 0.5 18

2:07 17435 Est

(69) X 2:45 16187 1.3 25' ✓

2:46 16191 Est

(70) ~~2:48 16071 1.2 25~~ 09-071-359

Tyone Ave. 3:03 16068 Est

445 - 27E Olga

19 | 20

24 | 19

26E | 27E 445

Olga

4/24 445 - 26E Olga

435
34 35
3 2
445

27E Alva

25 - 445 - 26E Alva SW

27 - 445 - 26E -

Tyone Ave.

5/20/71

Start Time Road IH FI BM
 (71) Bridge 3:15 16185 1.5 23'
 #328 X 3:17 16188 Est

(72) X 3:35 16293 1.5 22'
 3:37 16295 Est

(73) X 3:53 16586 1.5 22'
 3:55 16567 Est

(74) X 4:04 16809 1.3 22'
 4:05 16810 Est

(75) X 4:12 17021 1.5 17'
 4:13 17018 Est

09-071-001 4:26 17261 1.5 11.460 V-37
 Camp House 4:28 17258 10.4(60) 1932
 CHS

Alva SW
 NE pier of Bridge
 Sec 29 44S - 26E

30- 44S - 26E
 Ft Myers SE

22- 44S - 25E
 Ft Myers

SE 17 44S - 25E
 Sign Post Box - Anderson - Michigan

SE 18 44S - 25E at
 Jay Nolen Welding - Starnes Av
 Ft Myers Court House Base

5/20/71

Stat	Time	Point	HT	EI	BM
(76) X	4:39	17074	1.5	16'	
W.C. Hoop.	4:46	17075		Est	

Stat	Time	Point	HT	EI	BM
(77) X	4:47	16948	1.5	15'	
Gottwein	4:48	16952		Est	
Av.	4:49	16953			

Stat	Time	Point	HT	EI	BM
(78) X	4:56	16893	1.4	15'	
	4:58	16891		Est	

Stat	Time	Point	HT	EI	BM
(79)	5:05	16798	1.2	14'	
	5:07	16799		Est	

Stat	Time	Point	HT	EI	BM
001	5:22	17251		See	
CH	5:24	17255		over	
Blase					

Ft Myers

SE Cr 23 44S-24E

Canal St of US 41-NW side

SE Cr 26 44S-24E

Ft Myers SE

SE Cr 35 - 44S-24E

11 - 45S-24E

5/20/71
 Start time Recd 1H FI BM
 89-071-331
 (80) 5:36 17388 1.3 4'
 Cranford 5:37 17381 Est
 5:38 17382
 09-071-332
 (81) 5:46 17380 1.3 9'
 5:49 17374 Est
 5:50 17375
 09-071-333
 (82) 5:59 17321 1.4 11'
 6:00 17320 Est
 09-071-334
 (83) 6:08 17309 1.5 16'
 6:10 17308 Est
 09-071-335
 (84) 6:18 17355 17'
 6:20 17357 Est
 09-071-336 241
 (31) 6:32 17167 14 MT
 Williams 6:34 17169 Est ner
 6:42 17089 1.5 12' 0-73
 Buckingham Base 6:44 17093 USGS USGS
 09-071-339 245
 (35) Bluefish 7:00 15861 0.0 26'
 canal 7:02 15865 Es

FI Myers.
 SR 80 Sec 13-44S-24E
 SR 80 SE 7-44S-25E
 SR 80 Sec 8-44S-25E
 S-80 B at June SR 80 in
 4-44S-25E
 Orange River Rd SR 80
 Junction 3-44S-25E
 1 6 44S FI Myers.
 25 26
 Sec 5 - 44S - 26E
 33 34
 4 3 Culvert
 O/ga
 Alva SW

5/27/71

Station	Time	Real	HH	El	Bm
Buckingham	11:11	17031	1.5		0-73
Base	11:12	17035			1934
071-024	12:38	17047			USGS
	12:39	17053			
	12:40	17046			

O/ga

(85)	09-071-338	11:35	16186	1.5	23	
		11:37	16185		Est	
(86) R	09-071-339	11:45	16339	1.5	24 Est	
Lehigh		11:46	16344			
Arpent		11:47	16343			
(87)	09-071-340	11:57	16737	1.5	17'	
Sunland		11:59	16735		Est	

Sec 28-445-26E

O/ga

NW 22

SE 8 - 445 - 26E O/ga

5/21/71

Sta	Time	Read	HT	FI	BM
(88) x	12:09	16841	1.5	17	
	12:10	16837	✓	Est	

(89) x	12:20	16830	1.5	18	
	12:22	16829		Est	

(90) x	12:30	16888	1.2	13	
	12:31	16888		Est	

(91) x	12:48	17273	0.0	10'	
	12:50	17276	✓	Est	

(92) x	1:12	17667	1.5	12'	
	1:14	17672		Est	
	1:15	17671			

Old
Olga
Rd

Olga

10 - 445 - 26E

✓

4 - 445 - 26E Olga

SE 32 - 435 - 26E Olga
West Culvert - at south end28 - 435 - 28E Olga
Juncture Old Olga Rd + SR 80

5/24/71

Stat	Time	Read	HI	FI	BM
------	------	------	----	----	----

(93)		09-071-346			
Linwood	1:23	17766	1.2	10'	

Bryx	1:24	17767		Est	
------	------	-------	--	-----	--

(94) X	1:30	09-071-347	0.0	9'	
Hickory		17707			

Swamp	1:32	17709		USGS	
-------	------	-------	--	------	--

(95) X	1:43	09-071-348	1.4	5'	
Hickory		17666			

Creek	1:44	17668		Est	
-------	------	-------	--	-----	--

(96) X	1:59	09-071-349	1.3	15'	
Balsy		17601			

Road	2:00	17603		Est	
------	------	-------	--	-----	--

(97) X	2:11	09-071-350	0.0	10'	
		17656			

	2:12	17657		Est	
--	------	-------	--	-----	--

(98) X	2:20	09-071-351	1.2	13'	
River		17664			

Oaks	2:22	17664		Est	
------	------	-------	--	-----	--

O/ga
Sec 27 - 435 - 26 E23 - 435 - 26 E Warner Rd
Culvert N side Hwy - West end

25 - 435 - 26 E

30 - 435 - 27 E O/ga

29 - 435 - 27 E O/ga
Culvert S side 80

Sec 28 - 435 - 27 E

Alra

5/21/71

Stat	Time	Lead	114	F1	BM
Alva	2:30	17751	0.9'		K73
Base	2:31	17751			Reset
	3:52	17758			1948
(022)	3:53	17754			R16S
x	4:50	17787			
	4:52	17788			

Alva.

Bury + SPR 80 at Alva
Sec 27 435-27E

(99)	x	09-071-352			
Persimmon	2:40	18093	1.4	17'	
Ridge	2:41	18095		Est	

Persimmon
Ridge

N River Rd

Sec 22-435-27E

Alva

(100)	x	09-071-353			
	2:49	18361	1.5	19'	
	2:50	18361		Est	
(101)	x	09-071-354			
	3:03	18265	1.4	16'	
	3:04	18264		Est	

10-435-27E

15

NW Cr 24-435-27E

5/21/71

Stat Time Read IH F BM

(102) 3:12 18357 1.1 19'
3:14 18356 Est

Concrete boundary marker at section corner.

(103) 3:23 18564 0.0 15' SRD
3:25 18562 Est Disk

Outlet-S. side Rd 18 17
Hendy Ct 19 20 435 28E

(104) 3:30 18658 1.5 16'
3:31 18660 Est

NWCn 21 435-28E
Hendy Ct - Alva

(105) 4:10 17662 1.4 14' CICS
Geoplin Road 4:12 17664 USGS N area

29-435-27E O/ga
W. Mass Post Found BM W of tree

(106) 4:20 17420 1.3 18
Langford Rd 4:21 17420 Est

32 33 435-27E O/ga

(107) 4:39 17374 1.5 14
Hickey Creek 4:40 17376 Est

31 435-27E

Sunvald Field - May 18 '71

✓ HOR #18 GCRC - Permit #300
20-48S-30E, Collier Co.
Well is shutdown prep to?

✓ HOR #10(?) GCRC - SE/4 20-48S
30E 38.322 Ac. - In good order.
Heater tracks 7150' from well.
Electric motor driven pump.

✓ HOR #22 GCRC Permit 317
Sec 20-48S-30E Collier Co.
Reda Pump. No violations.

HOR #5 GCRC No violation
Permit #51

20-48S-30E Collier Co.
Lufkin 912 D.B. Pump
Driven by gas engine - excess
gas head gas burnt to pits.

✓ HOR #11 GCRC NW/SW Sec 20
48S-30E 38.322 Ac. - No violations.
Rafkin Pump - Electric motor
driven.

HOR Bath. No. 1 GCRC Sec 18
Sec 19-48S-30E Collier Co.
HOR Bath No. 2 LTCL Sec 19
48S-R 30E Collier.

3 tanks 2000 bbls each

3 tanks 1000 bbls + hand tank
5000 bbls - Fire walls

extended as requested.

Gas flared to pits

#6 GCRC
Well just west of tank battery.
~~No violation~~ recently cleaned
up + covered pit? - No
violation except NO well
designation. Electric motor

Twin Palms - Beecher

Pine Island

283-0696

\$75⁰⁰ 2BR

A.C. + Family.

60⁰⁰ 1BR

May 19 - 1971

Mobil #1 Barron Collier Jr

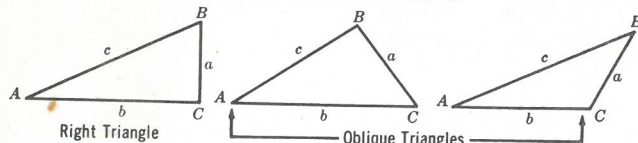
9-47 S - 28E Collier City

160 Acres - 2 se storage tanks

OK - Heater tanks OK

Well OK - LP gas runs meter

SOLUTION OF TRIANGLES



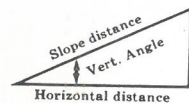
Solution of Right Triangles

For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\operatorname{cosec} = \frac{c}{a}$	
Given a, b	Required 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 A, B, a	Required 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 $s = \frac{a + b + c}{2}$, $\sin \frac{1}{2}A = \sqrt{\frac{(s - b)(s - c)}{b c}}$, $\sin \frac{1}{2}B = \sqrt{\frac{(s - a)(s - c)}{a c}}$, $C = 180^\circ - (A + B)$
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 X, $\cos 5^\circ 10' = .9959$. 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.

