

Forestry Suppliers, Inc.

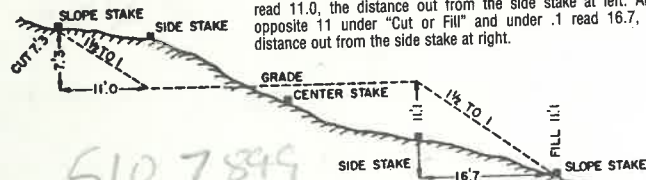
1-800-647-5368

#49354 Level Book

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

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



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

Dana 722-798-6279
Cell

Michelle Lachman
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John Miller

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510 7899

116
70

Pops Personal Cell

850-510-7899

Personal Cell

850 528-2840

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

[illegible]

December 3, 2002 Site Site NA1

Time 5:06 pm. Sky ~~blue~~ cloudy

→ Single NAISS

→ Simple NAB

→ Sample NA, MB

→ Sample N A 1 B B

Datum WGS84 RMS 21'

Dec 4, 2002

Temp 60

Time 7:58 AM

Weather Cloudy Site NA2

Beach Narrows took 3 samples

* Location: N 30° 41' 46.2"
W 81° 25' 38.0"

→ Sample NA2 SS

* Location: N 30° 41' 46.1"
W 81° 25' 38.3"

→ Sample NA2 MB

* Location N 30° 41' 46.2"
W 81° 25' 38.9"

Sample NA2 BB

Beach Narrows took 3 samples Site NA3

Location: N 30° 40' 54.0"

RMS 11' W 81° 25' 43.5"

Sample NA3 MB

Location N 30° 40' 53.9"

RMS 9' W 81° 25' 44"

Sample NA3 BB

Location N 30° 40' 54.0"

W 81° 25' 43.2"

Sample NA3 SS 43.2"

RMS 14' Beach Narrows took 3 samples Site NA4

Location N 30° 40' 02.1"

W 81° 25' 50.4"

Sample NA4 SS

Location N 30° 40' 01.9"
W 81° 25' 50.4"

Sample NA4 MB

Location N 30° 40' 02.0"
W 81° 25' 50.8"

Sample NA4 BB

Note Beach Narrows took 3 samples
2 to 3 feet wave cut scarp &
Swash zone

RMS 0' Site NA5

* Location N 30° 39' 09.8"
W 81° 26' 00.4"

→ Sample NA5 BB

* Location N 30° 39' 09.5"
W 81° 25' 59.8"

→ Sample NA5 MB

* Location ~~N 30° 39'~~ N 30° 34' 09.5"
W 81° 25' 59.4"

Sample NA5 SS

Note Beach Narrows took 3 samples
4 feet wave cut scarp & Swash
zone

Site NA6

Location 30° 38' 18.0"
81° 26' 09.5"

Sample NA6 MB

Location 30° 38' 17.9"
81° 26' 09.1"

Sample NA6 ~~MB~~ SS

Location 30° 38' 17.9"
81° 26' 10.1"

Sample NA6 BB

Note: Beach Narrow took 3 samples
1 foot water cut scarp at Swah
Zone

Rms 8'

Site NA7

Location 30° 37' 25.8"
81° 26' 19.1"

Sample NA7 BB

Location 30° 37' 25.87"
81° 26' 18.7"

Sample NA7 MB

Location 30° 37' 25.6"
81° 26' 18.7"

Sample NA7 SS

Note: Beach Narrow took 3 samples

Rms 14'

Site NA8

Location 30 36 33.8
81 26 27.9

Sample NA8 BB

Location 30 36 33.7
81 26 27.4

Sample NA8 MB

Location 30 36 33.8
81 26 26.9

Sample NA8 SS

Note: Beach Narrow took 3 samples

Rms 9'

Site NA9

Location 30 35 41.7
81 26 34.1

Sample NA9 BB

Location 30 35 41.6
81 26 33.7

Sample NA9 ~~MB~~ MB

Location 30 35 41.6
81 26 33.5

Sample NA9 B

~~Note: Beach Narrow took 3 samples~~

30 35 41.5
81 26 32.5

Sample NA9 SS

Rms 10'

Site NA10

Location	30	34	49.3
	81	26	36.0

Sample NA10 BB

Location	30	34	49.5
	81	26	34.8

Sample NA10 MB

Location	30	34	49.4
	81	26	34.9

Sample NA10 B

Location	30	34	49.3
	81	26	33.7

Sample NA10 SS

Rms 56' Site NA11

Time 1:50 PM Location	30	33	57.4
	81	26	36.2

Sample NA11 BB

Location	30	33	57.4
	81	26	35.5

Sample NA11 MB

Location	30	33	57.4
	81	26	34.7

Sample NA11 B

Location	30	33	57.4
	81	26	33.7

Sample NA11 SS

Rms 125'

Site NA12

Location	30	33	04.9
	81	26	26.9

Sample NA12 SS

Location	30	33	04.6
	81	26	26.9

Sample NA12 B

Location	30	33	04.7
	81	26	30.5

Sample NA12 MB

Location	30	33	04.5
	81	26	31.8

Note: Vine at scarp 4' high edge of SZ

Sample NA12 BB

Rms 11' Site NA13

Location	30	32	12.8
	81	26	16.2

Sample NA13 SS

Location	30	32	12.5
	81	26	18.8

Sample NA13 B

Location	30	32	12.3
	81	26	19.8

Sample NA13 MB

Location	30	32	12.1
	81	26	21.5

Sample NA13 BB

RMS-7

Time 3:00 PM 12/4/02 Site NA14

Location	30	31	19.9
(8)	26	06	04.6

Sample NA14 SS

Location	30	31	20
----------	----	----	----

81	26	06
----	----	----

Sample NA14 B

Location	30	31	20.1
----------	----	----	------

81	26	08.4
----	----	------

Sample NA14 MB

Location	30	31	20.4
----------	----	----	------

81	26	12.2
----	----	------

Sample NA14 BB

Note (will dig along "dune" to base of red dune climbed over it and collected a sample (NA14BB) at the base of the dune

Site NA15

Location	30	30	28.1
----------	----	----	------

81	27	13.5
----	----	------

Sample NA15 SS

Location	30	30	28
----------	----	----	----

81	27	27.4.2
----	----	--------

Sample NA15 MB

Location	30	30	27.7
----------	----	----	------

81	27	14.3
----	----	------

Sample NA15 BB

Water wave cut bluff into just
beach now look 3 samples

Dec 4 815 km across high tide Site NA16

KMS-20' Location

30	29	38.6
----	----	------

81	26	15.9
----	----	------

Sample NA-16 BB

Location	30
----------	----

81

Sample NA-16 NT

Location	30
----------	----

81

Sample NA-16 NT

Location	30
----------	----

81

Beach 3 ft wide at high tide
only one sample taken at that
base of scarp photo taken

RMS-20' ✓
Site 17 Not collected and not ocean ✓ NA Site 18

Location	30	27	49.8
	81	24	41.4

Sample NA-18 BB

Location	30	27	49.6
	81	24	40.6

Sample NA 18-SS

Note ~~Location NA-18-SS~~

Only two samples taken Beach
veg Sample narrow path 5 ft

Scrap at vegetation point around

Picture taken

→ Took the Sample end of sequence Site NA²⁰

Location	30	26	44.1
----------	----	----	------

RMS 20'	81	24	27.1
---------	----	----	------

Sample NA 20 - BB

Location	30	26	04.1
----------	----	----	------

	81	24	26.7
--	----	----	------

Sample NA 20 - MB

Location	30	26	04.0
----------	----	----	------

	81	24	25.7
--	----	----	------

Sample NA 20 - SS

Wave at Scrap at base of vegetation

RMS 18 ft. Rainy 60° Site NA 19.

Location	30	26	57.1
----------	----	----	------

	81	24	36.2
--	----	----	------

Sample NA 19-SS

Location	30	26	57.2
----------	----	----	------

	81	24	37.6
--	----	----	------

Sample NA 19-BB

Location	30	26	57.1
----------	----	----	------

	81	24	30.9
--	----	----	------

Sample NA 19-MB

Wave at Scrap at base of vegetation

RMS 16' NA Site 21

Location	30	25	02.2
----------	----	----	------

	81	24	24.7
--	----	----	------

Sample NA 21-BB

Location	30	25	02.6
----------	----	----	------

	81	24	24.2
--	----	----	------

Sample NA 21-MB

~~Location~~

Location	30	25	02.9
----------	----	----	------

	81	24	23.1
--	----	----	------

Sample NA 21-SS

		Site NA 22		
Location	30	24	20.2	
	81	24	12.1	
Sample	NA-22 BB			
Location	30	24	20.0	
	81	24	11.1	
Sample	NA-22 MB			
Location	30	24	20.3	
→ Sample	NA-22-SS	81	24	09.5

Birds were there sample
just north of breakwater
lost Nassau County sample
to south

RMS-12 ft

First Duval County Site to North DU-1

Location	30	23	28.7
	81	23	38.0

Sample	DU-1 SS		
Location	30	23	29.3
	81	23	39.5

Sample	DU-1 MB		
Location	30	23	29.8
	81	23	40.7

→ Sample DU-1 BB

Location	30	22	33.4
	81	23	47.0

Sample	DU-2 SS		
Location	30	22	33.8
	81	23	49.6

Sample	DU-2 MB		
Location	30	22	33.9
	81	23	50.5

Sample DU-2 BB

Birds were there but just no birds
Several pictures taken

RMS-8 ft Site Du-3

Location	30	21	42.6
	81	23	48.1

Sample Du-3-SS

Location	30	21	42.6
	81	23	49.8

Sample Du-3 MB

Location	30	21	42.7
	81	23	51.8

Sample Du-3 BB

Bank Broad no berm

→ Site Du-4

Location	30	20	50.7
	81	23	45.3

Sample Du-4 SS

Location	30	20	50.5
	81	23	47.6

Sample Du-4 MB

Location	30	20	50.3
	81	23	49.3

Sample Du-4 BB

Bank Broad no berm

RMS-8 ft Site Du-5

Location	30	18	58.4
	81	23	40.0

Sample Du-5-SS

Location	30	20 19	58.3
	81	23	42.3

Sample Du-5-MB

Location	30 30	19 19	58.2
	81	23	43.8

Sample Du-5-BB

Bank Broad no berm

RMS-11 ft Site Du-6

Location	30	19	06.3
	81	23	33.4

Sample Du-6 SS

Location	30	19	06.0
	81	23	35.3

Sample Du-6 MB

Location	30 30	19	06.0
	81	23	36.7

→ Sample Du-6B

Bank Broad no berm

pictures of development taken

Rms 20 ft

Du-7

Location

30 18 14.3

81 23 25.5

Sample

Du-7-SS

Location

30 18 12.8

81 23 28.7

Sample

Du-7-BB

Location

30 18 14.1

81 23 27.0

Sample

Du-7-MB

Beach broad flat with no berm

Rms-15 ft

Du-8

Location

30 17 21.9

81 23 17.0

Sample

Du-8-SS

Location

30 17 21.7

81 23 16.8

Sample

Du-8-MB

Location

30 17 21.4

81 23 18.0

Sample

Du-8-BB

Beach flat no berm

Rms 12'

Du-9

Location

30 16 29.3

81 23 04.3

Sample

Du-9-SS

Location

30 16 29.1

81 23 06.3

Sample

Du-9-MB

Location

30 16 28.6

81 23 08.3

Sample

Du-9-BB

Beach Broad + Flat no berm

Du-10

Location

30 15 37.2

Rms 13 ft

81 22 53.3

Sample

Du-10-SS

Location

30 15 36.8

81 22 54.8

Sample

Du-10-MB

Location

30 15 36.3

81 ~~22~~ 56.5

Sample

Du-10-BB

time 3:45 pm Beach flat no berm

	RMS-14			ST-1 DU-X
	Location	30	14	44.0
		81	22	41.3
→	Sample	ST-1 DU-X	-SS	
	Location	30	14	43.8
		81	22	43.5
→	Sample	ST-1 DU-X	-B	
	Location	30	14	43.8
		81	22	43.2
→	Sample	ST-1 DU-X	-MB	
	Location	30	14	43.7
		81	22	43.6
→	Sample	ST-1 DU-X	-BB	

Note this sample set is actually in St John's County and represents the first occurrence of a discernable beam

January 28, 2003
~~Location~~ GA-1

Location 30 42 57.3
81 26 54.6

Sample ~~BB~~ GA-1 BB

Location 30 42 56.7
81 26 53.6

Sample GA-1 SS
Location 30 42 56.7

81 26 54.1

Sample GA-1-MB

NA-17-BB

Lat Corr.

30° 28' 39.3"

583968

Jan 29, 2003

NA-17

Location 30 29 39.3

81 24 44.0

Sample NA-17 BB

Location 30 28 39.4

81 24 43.3

Sample NA-17 MB

Location 30 28 39.6

81 24 42.1

Sample NA-17 SS

Jan 29, 2003 Bud Island

Is 1.4

OS 2.1 Location 30 29 45.1

Based on 81 25 57.9

BI Core #1

Locator 30 29. 44.2

OS 3.1 Based on 81 25. 58.4

IS 3.7 Slope

BI Core #2

OS 3.7 Location 30 29 43.3

IS 3.8 81 25 58.5

BE Core #3

W18428-
18430?

Verity County

WA-201-1 → 3

Renamed

DU-201-1 → 3

March 12, 2003 off Skunk Creek

* 29 35 25.9

8333 33 33.8

Water depth 22'

MS 42.15

C° 19.8

* 29 33 57.2

8333 36 15.0

MS 44.55 45.57

C° 19.6

Water depth 25.5'

* 29 33 57.6

83 36 14.1

MS 50.9

C° 17.1

Water depth 26.0

Site logged

29 31 05.01

8340 10.4

MS 45.43

C° 19.3

Water depth 35.7

* 29 31 13.1

8338 52.3

46.44

21.2

Boobyland

Site 1

Site 1A
"Spring 3"

March 12, 2003

begin first line SSS at 1220
Shot first line at 50m range
Switched to 100m range for
subsequent lines just opening
0.1 mile has shot so that
4 lines lie above fix and
line of position then fix and
four lines lie below fix

29 31 47.1 83 40 95.1

MS 47.12

C^o 21.6

29 31 37.9

83 40 42.6

MS 50.3

C^o 18.4 at full cable

MS 46.73

C^o 21.6 at 4'

29 31 39.4

83 40 44.6

47.43

19.5 at full cable

46.73

21.6 at surface

29 33 58.2

83 36 11.7

MS 43.96

C^o 21.9

at cable length

43.99

C^o 21.9

at 4'

April 28, 2003 Concho from
Bird Island

W18359, W18360, W18361

Sept 23, 2003

* 8:15 Shooting line SJ-21
off St. Augustine Sea State
marginal 2-3 feet and
some SC noise & only part
line but almost all line is 7 miles
long 9:45 EOL

* Line SJ-20 10:00 km EOL 12:00

Line SJ-19
* SOL 12:20 Line SJ-19 EOL 2:30

* SOL Line SJ-18 3:02
~4:00 Searcher pulled with
equipment pulled equipment
in and pulled out
we reset the line

9/24/03 EOL 5:02

* SOL SJ-17 8:00 Sea
State good 1 foot swells
shaky with sea anchor
cut behind boom of
stunner EOL ~9:45

SOL SJ-16 ~10:30

EOL ~12:00

SOL ~12:45 SJ-15

EOL 2:30 Sea State

decreasing

9/25/03 Sea state not optimal

SOL SJ 14 ~ 8:00

EOL 9:50

SOL SJ 13 10:10

EOL 11:53

Shot line SJ 12 out 5/11+
Poor with shoot over

9/26 8:40 SOL SJ 12 Sea state

2-3" data quality not

optimal but acceptable

9:53 EOL

SOL SJ 11 10:45

EOL

Line running up to

10' pulled and again put

lost sea anchor in

process of untangling it

from boom

9/27 SOL SJ 10 10:48

EOL 12:15

SOL SJ 10 A 12:40

shot twin piece EOL 12:40

SOL SJ 9 12:40

EOL 2:09 Sea Anchor

phased along now returned
it

SOL SJ 9 2:14

Checked to see if noise on
record was due to engines
by repeatedly taking echolot
off gear no visible effect on
noise was noted

Broken at 2:55 while trying
to get rid of noise shot

line SJ 8A 2:58 then

line broken into ABCD

EOL 4:00

9/28 SJ 7

EOL 10:20

Jump to SJ 6A SOL 10:24

EOL SJ 6A 11:07

turning to true line T4

Exec T4 3:35

9/29 Start true 6:30

SOL SJ 5 8:55

cloudless day 2' swell

wind 5 mph out of North

EOL 10:55 moving to

true SJ 3

10/21 SOL SJ3 11:00

EOL SJ3 12:10

SOL SJ3A 12:10

EOL SJ3A

SOL SJ4 2:10

10/22

Shot Linc 1

At 4:00 Started Linc 1

11/03 Beach Sampling St.
≈ 2:30 PM Johns County

First Sample south of
~~St. John's River~~ St. Augustine
Inlet

SJ - 26

SJ-26

Sample ~~SJ-26~~ S

21 ft Location 29 54.185

~~Sample SJ-26 MB~~

~~Location~~ 81 16.582

SA

Sample ~~SJ-26~~ MB

Location 29 54.190

81 16.609

Sample SJ-26 BD

Location 29 54.176

81 16.649

SJ - 27

Sample SJ-27 S

15 ft Location 29 53.341

~~Sample SJ-27~~ 81 16.452

Sample SJ-27 MB

Location 29 53.338

81 16.470

Sample SJ 27

Location 29 53.336

81 16.485

1
* Sample SJ 28
Sample SJ 28 S
Location 29 52.537
81 16.222

Sample SJ 28 MB
Location 29 52.533
81 16.241

Sample SJ 28 BB
Location 29 52.530
81 16.251

→ Took two photos on N on S
will be just 2 on chip

* Sample SJ 29
Sample SJ 29 S
Location 29 51.741
81 16.969

SJ-29-SS
Long Corr.
81°-15.969?

Sample SJ 29 MB
Location 29 51.735
81 16.000

Sample SJ 29 BB
Location 29 51.723
81 16.053

BB Sample taken at sand face
beach has eroded scarp
photo at previous sample
Location

* Sample SJ 30
Sample SJ 30 S
Location 29 50.901
81 15.847

Sample SJ 30 MB
Location 29 50.902
81 15.862

Sample SJ 30 BB
Location 29 50.903
81 15.917

MB+BB ~~at~~ dune
deflation surface BB
Sample taken at sand face
beach has eroded scarp
as previously photographed
3 to 4'

* Sample SJ 31
Sample SJ 31 S
Location 29 50.093
~~Sample SJ 31~~ 81 15.816
Location Sample SJ 31 MB
Location 29 50.091
81 15.838

Sample SJ 31 BB
Location 29 50.093
81 15.865

Sampled BB at sand face
me as eroded scarp noted

Sample SJ 32

Sample SJ 32 S

Location 29 49.282

19/11

81 15.749

Sample SJ 32 MB

Location 29 49.284

81 15.769

Sample SJ 32 BB

Location 29 49.280

81 15.790

BB Sample taken of dune
no animal scap.

Sample SJ 33

Sample SJ 33 S

Location 29 48.432

81 15.637

Sample SJ 33 MB

Location 29 48.433

81 15.657

Sample SJ 33 BB

Location 29 48.429

81 15.678

Sample SJ 34

Sample SJ 34 S

Location 29 47.599

18/11

81 15.474

Sample SJ 34 MB

Location 29 47.607

81 15.498

Sample SJ 34 BB

Location 29 47.607

81 15.519

Sample SJ 35

Sample SJ 35 S

Location 29 46.82

16/11

81 15.275

Sample SJ 35 MB

Location 29 46.818

81 15.291

Sample SJ 35 BB

Location 29 46.811

81 15.315

Sample Location SJ 36

18 ft
Sample SJ 36 S
Location 29 45.996
81 15.019

Sample SJ 36 m B
Location 29 45.995
81 15.039

Sample SJ 36 B B
Location 29 45.993
81 15.062

Sample Location SJ 37

16 ft
Sample SJ 37 S
Location 29 45.218
81 14.739

Sample SJ 37 m
Location 29 45.215
81 14.760

Sample SJ 37 B
Location 29 45.207
81 14.782

Sample Location SJ 38

Sample SJ 38 S
Location 29 44.442
81 14.436

Sample SJ 38 m
Location 29 44.438
81 14.458

Sample SJ 38 B
Location 29 44.432
81 14.481

Sample Location SJ 39

Sample SJ 39 S
Location 29 43.641
81 14.098

Sample SJ 39 m
Location 29 43.635
81 14.117

Sample SJ 39 B
Location 29 43.632
81 14.135

22/1 Sample Point ~~40~~
 Sample SJ 40 S
 Location 29 42.887
 81 13.701
 Sample SJ 40 M
 Location 29 42.883
 81 13.734
 Sample SJ 40 B
 Location 29 42.875
 81 13.785

Dec 2, 2003

Sample Point 41
 Sample SJ 41 S
 Location 29 42.434
 81 13.638
 Sample 41 M
 Location 29 42.445
 81 13.665
 Sample 41 B
 Location 29 42.479
 81 13.691

Sample taken 0.2 mile north of point
 was in mud

Sample Point ^{.5J} 42
 Sample ~~42~~ SJ ~~42~~ 42 S
 Location 29 41.746
 81 13.334
 Sample SJ 42 M
 Location 29 41.741
 81 13.346
 Sample SJ 42 B
 Location 29 41.735
 81 13.358

Sample point ~~is~~ just south
 of rock wall curving
 BBend / note at base of erosion
 scarp 4' high

Sample Point SJ 43
 Sample SJ 43 S
 Location 29 40.955
 81 13.050
 Sample SJ 43 M
 Location 29 40.952
 81 13.061
 Sample SJ 43 B
 29 40.951
 81 13.069

Sample Point SJ 44

Sample SJ 44 S

Location 29 40.326

81 12.817

Sample SJ 44 m

Location 29 40.324

81 12.822

Sample SJ 44 B

Location 29 40.323

81 12.830

Sample Point SJ 44

Washed Section most

St Johns County Sample Point

Sample Point SJ02

Sample SJ02 S

Location 30 14.524

81 22.648

Sample SJ02 m

Location 30 14.159

81 22.668

Sample SJ02 B

Location 30 14.510

81 22.678

SJ-02-MB

Lat

30° 14.519'

Sample Point SJ03

Sample SJ-03 S

Location 30 13.707

81 22.438

Sample SJ-03 B

Location 30 13.707 30 13.706

81 22.451

Sample SJ03 Not Collected

Location

Beach know two samples only

Sample Point SJ-04

Sample SJ-04

Location 30 12.839

~~Sample SJ-04~~ 81 22.193

Sample SJ-04 B

Location 30 12.832

81 22.207

Sample Point SJ-05

Sample SJ-05

Location

Sample SJ-05

Location

Not collected
No known

Sample Point SJ-06

Sample SJ-06

Location 30 11.096

~~Sample SJ-06~~ 81 21.693

Sample SJ-06 B

Location 30 11.098
81 21.696

Sample Point SJ-07

Sample SJ-07 S

Location 30 10.353

81 21.505

Sample SJ-07 B

30 10.353

81 21.510

Sample Point SJ-08

Sample SJ-08 -S

Location 30 09.530

81 21.290

Sample SJ-08-B

Location 30 09.529

81 21.295

Sample Point SJ-09

~~Could not be
accessed~~

Sample Point SJ-09

Sample SJ-09 S

Location 30 08.670

81 21.082

Sample SJ-09 B

Location 30 08.676

81 21.085

Sample Point SJ-10

Sample SJ-10 S

Location 30 07.840

81 20.880

Sample SJ-10 B

Location 30 07.838

81 20.887

Sample Point SJ-11

Sample SJ-11 S

Location 30 07.011

81 20.673

Sample SJ-11 B

Location 30 07.010

81 20.685

Sample Point SJ-12

7/18/11

Sample SJ-12 S

Location 30 06.164
81 20.468

Sample SJ-12 B

Location 30 06.160
81 20.428

Sample Point SJ-B

Sample SJ-13-S

Location 30 05.293
81 20.265

Sample SJ-13-B

Location 30 05.292
81-20.271

Sample Point SJ-14

Sample SJ-14 S

Location 30 04.442
81 20.059

Sample SJ-14 B

Location 30 04.439
81 20.064

Sample Point SJ-15

Sample SJ-15-S

7/19/11

Location 30 03.586
81 19.063

Sample SJ-15-B

Location 30 03.585
81 19.073

Sample Point SJ-16

Sample SJ-16-S

Location 30 02.768
81 ~~19~~ 19.700

Sample SJ-16-B

30 02.766
81 19.708

Sample Point SJ-17

Sample SJ-17-S

Location 30 01.916
81 19.501

Sample SJ-17-B

30 01.915
81 19.503

12/3/03

< SJ

Sample Point 18

Sample SJ 18 S

Location 30 01.060

81 19.278

Sample SJ 18 B

Location 30 01.056

81 19.286

Sample Point SJ 19

Sample SJ 19 - S

Location 30 00.219

81 19.067

Sample SJ 19 - B

Location 30 00.217

81 18.082

Sample Point SJ 20

Sample SJ 20 - S

Location 29 59.403

81 18.071

Sample SJ 20 - B

29 59.404

81 18.058

Sample Point SJ 21

Sample SJ 21 - S

Location 29 58.555

81 18.637

Sample SJ 21 - B

Location 29 58.556

81 18.646

Sample Point SJ 22

Sample SJ 22 S

Location 29 57.725

81 18.398

Sample SJ 22 B

Location 29 57.719

81 18.409

Sample Point SJ 23

Location Sample SJ 23 S

Location 29 56.931

81 18.159

Sample SJ 23 B

Location 29 56.928

81 18.171

Sample Point 24
Sample ST ~~24~~ 24 S
Location 29 56.110
81 17.897

Sample ST 24 B
Location 29 56.109
81 17.907

Sample Point 25
Sample ST 25-S
Location 29 55.250
81 17.498

Sample ST 25-B
Location 29 55.245
81 17.518

First
Flycatcher Samples

Sample Point FG 01
Sample FG 01 S
Location 29 39.634
81 12.518

Sample FG 01 B
Location 29 39.632
81 12.525

Sample Point FG 02
Sample FG 02 S
Location 29 38.864
81 12.196

Sample FG 02 B
Location 29 38.864
81 12.209

Sample Point FG 03

Sample FG 03 S
Location 29 38.118

~~Sample FG 03~~ 81 11.898

Sample FG 03 B
Location 29 38.115

81 11.912

Sample FG 03 MB
Location 29 38.114
81 11.909

Sample Point FG-04
Sample FG-04-S
Location 29 37.385
81 11.580

Sample FG-04-B
Location 29 37.382
81 11.591

Sample Point FG-05
Sample FG-05-S
Location 29 36.573
81 11.217

Sample FG-05-B
Location 29 36.571
81 11.234

Sample Point FG-06
Sample FG-06-S
Location 29 35.825
81 10.912
Sample FG-06-B
Location 29 35.821
81 10.924

Sample Point FG 07
Sample FG-07-S
Location 29 35.085
81 10.595

Sample FG-07-B
Location 29 35.082
81 10.607

Sample Point FG 08
~~Sample Location~~ FG 08-S
Location 29 34.356
81 10.290

Sample FG 08-B
Location 29 34.353
81 10.300

Sample Point FG 09
Sample FG 09-S
Location 29 33.594
81 09.948

Sample FG 09-B
Location 29 33.580
81 09.950

Sample Point FG10
Sample FG-10-S
Location 2932.845

Sample FG10-B
Location 2932.845
8109.608

Sample Point FG11
Sample FG-11-S
Location 2932.228
8109.292
Sample FG-11-B
Location 2932.226
8109.303

Sample Point FG12
Sample FG-12-S
Location 2931.544
8108.939
Sample FG-12-B
2931.537
8108.949

Sample Point FG-13
Sample FG-13
Location 2930.8213
8108.588
Sample FG-13-B
Location 2930.819
8108.590

Sample Point FG14
Sample FG-14-S
Location 2930.078
8108.202
Sample FG-14-B
Location 2930.076
8108.216

Sample Point FG-15
Sample FG-15 S
Location 2929.366
8107.865
Sample FG-15B
Location 2929.365
8107.873

Sample Point FG-16
Sample FG-16 -S
Location 29 28.636
81 07.514

Sample FG-16 -B
Location 29 28.632
81 07.521

Sampled at RipRap Sew
wall

Sample Point FG-17
Sample FG-17S
Location 29 27.923
81 07.178

Sample FG-17B
Location 29 27.922
81 07.183

Sample Point FG-18
Location Sample FG-18S
Location 29 27.215
Sample 81 06.849
Sample FG-18-B
Location 29 27.215
81 06.857

Sample Point FG-19
Sample FG-19 S
Location 29 26.502
81 06.525

Sample FG-19B
Location 29 26.501
81 06.535

North boundary of Gamble Rogers
State Recreational Area

Sample Point FG-20
Sample FG-20 S
Location 29 25.787
81 06.210

Sample FG-20B
Location 29 25.786
81 06.212

Dec 4 2003

Sample Point SJ-05
Sample SJ-05 S
Location 30 12.017
Sample SJ-05 = 81 21.949

Sample SJ-05B
Location 30 12.014
81 21.958

Oct 18, 2004 1145 Am
#1 WAS 56 (COE)
Attempt WD 54 feet

N 30 23.196 168

W 081 17.190 198

± 29 feet

vibrated 6 minutes

11" 2" recovery sands
at top & bottom

#2 Attempt WD 54 feet

N 30 23.168

W 081 17.198

± 29 feet

vibrated start 12:27 PM

5 minutes 12:32 PM

core tube bent due
to adverse current

± 4' of recovered core

#3 Attempt WD 56'

N 30 23.161

W 91 17.214

± 18 feet

1:40 PM

8 minutes vibrated 1:48 PM

lost core tube

New #51

#4 Attempt WD 56' 227 PM

30 23.162

81 17.236

± 18'

v. brat

6 minutes

14' 3"

Recovery

#1 Attempt

WAS 55 (COE)

WD 54'

30 22.736

81 17.149

± 18 feet

3:35 PM

vibrated 9 minutes

3:44

Lost core tube

Attempt #2

30 22.738

81 17.151

WD 53'

4:03 PM

± 15'

Vibrating

Attempt #3

New #52

30 22.738

4:24 PM

81 17.151

4:31 PM

WD 53'

± 17'

14' 6" in shaft given 50'

Oct 21, 2004

Old 51 New 53

30 19.521

81 15.971

WD 54 ft

+ 16 ft

Vibrated 6 minutes

10:30 AM

17' 5"

10:36 AM

Top gray sand bottom

stiff green clay sand

Old 52 New 54

30 18.911

81 16.685

+ 20 ft

WD 52 ft

12:08 PM

12:14 PM

~~Old 53~~ 19' 5"

Old 57 30 18.444

#1 81 16.359 364

WD 49

1:50 PM

Lost. Core

#2

30 18.451

New 55

81 16.361

+ 15 ft

2:25 PM

- 10 ft of core recovered

continued
gray sand at top + bottom
V of core

November 3, 2004 $\approx$ 303' and

Sec 2 foot in box

Old 51 New 56

30 19.505 $\pm$ 15'

81 16.444

Start V at 10:56 V $\approx$ 10 min

WD 58'

Unsuccessful shell in
bottom of core tube will
move + 2 try backing
to the left + shelly material
in bottom of tube

30 19.501 $\approx$ 287' out

81 16.448 $\pm$ 20 ft

Start V at 11:39 End 11:55

recovered $\approx$ 5' of shelly
sand under the bottom

Nov 3 2004
move to old 58
WD 48'

30 19.537

81 15.053 ± 18 ft

Start of U 1:27 EOL 1:38

Water broken with returned
line again

30 19.534 ∓ 14 ft

81 15.055

Start U 1:57 2:07 Towards

73' New 56
~~56~~ of total core
good small top + bottom

Move to old 61

30 18.970

81 14.772 ∓ 29 ft

WP 55 ft

Start U at 2:00 EOL 3:16

Lost SLOC

30 18.971

81 14.771 ± 16 ft

March 17, 2005

* Shot of line 2 at 9:15 am
average speed 4.3 knots see
1 to 2 ft + calm, sky overcast.
fish swimming at about 2 ft
below surface current ≈ 16 ft
fish got lip of in work of
operating pump. Fixed O line
hanging in tank ~~was~~ ~~was~~ ~~was~~
to center hole. Line being
shot is from O line from the
north end of survey area.
Shooting SSS at 50 m side
looks only water depth
at end of line ≈ 10 ft
line only 38 ft of wire was
fish EOL 10:24

* SOL 3 at 10:28 WD 10 ft
cannot fishing out of
line brought speed up to
2.4 knots EOL 11:33

* SOL 4 11:35 WD 15 ft
S calling to 10' at end of
of line speed ≈ 4.8 knots EOL 12:40
* SOL 5 12:42 EOL 1:45

* SOL 6 1:48 EOL 2:50

March - 18, 2005

SOL 7 10:00 WD ≈ 12 feet $\rightarrow 16$
EOL 11:44

SOL 8 11:15 WD $\approx 16'$
EOL 12:17

SOL 9 12:20 ~~WD~~ WD ≈ 10 or less
EOL 1:23 $\rightarrow 16$ feet

SOL 10 1:25 WD ≈ 16 to $10'$
EOL 2:29

SOL 11 2:30

EOL 3:36

March 19, 2005 descending 1-2' sons

SOL 12 9:05

EO 10:24

SOL 13 10:26

EOL 11:31

SOL 14 11:37

EOL 12:40

SOL 15 12:42

~~SOL 16~~ EOL 148

SOL 16 150

EOL 301

March 24, 2005 Water Close

Attempting to shoot SSS, both by
SBP.

Put out all equipment moved
SSS to directly behind a tree
moved SBP to other side of
the opposite side of the boat
to get isolation from the SSS

SOL 17 9:00 Pursued noise
changed from SBP showing up
an SSS shot SBP ^{noise} down

and just by cutting power to
transmitter until reduced to 0%
noise diminished and did not go
away. Shot SSS down

EOL 17 10:25

Between SOL 18 there was
frequency and noise changed
frequency from 3.5 to 4.5 no
noise SOL 18 10:31

noise appeared and Jim
said SBP was chirping
shot SSS down

EOL 18

After EOL trip to
run the SBP line at 3.5
4.5 6.5 and 7.5
could not get more on
SSS to go away Subdan

SOL 19 11:48

EOL 19 12:50

SOL 20 1:00

EOL 21 2:10

SOL 21 2:16

EOL 3:00 & broke line
at middle line to
unfavorable weather
sea state coupled with
problems with auto pilot



3/29/05

SOL 21 Redstart 10:30

Balanced the gun nice clean
sky near less than 100 ft
EOL 11:34

SOL 11:35 Line 22

EOL 12:39

SOL 23 1:47

short line shift just to
back off shore and reset
3/30/05

SOL 23 3:20

reset fish with suit of pressure
long back about 2 meters
fish depth $\approx$ 2 ft below
sea surface

EOL 9:26

SOL 24 9:30

EOL 10:32

SOL 25 10:35

EOL 11:38

SOL 26 11:40

EOL 12:43

SOL 27 12:46

Alma Line at 12:50

arch crown of fish

SOL 27 12:54: A.A

SOL 27 1:01 Pump on

both engines

Cent line at 145

data generally not
determined

April 18, 2005

9:00 am seas 1-2 ft.

clear sky running to line
27 with attempt to shoot
with SSS 56d.

SOL 27 at middle

9:50 am fish 4 ft down

EOL line 27 10:30

SOL 28 10:33 fish down
about 4 feet

11:37 EOL 28

SOL 29 11:42

EOL 29 12:50

SOL 30 12:53

at 135 broke line to

circle due to traffic
return to line at 137

EOL 30 2:00

SOL 31 2:04

EOL 31 3:09

SOL 32 3:11

at mid point

~~SOL 32~~ in!

April 20, 2005

seas 1 to 2 feet

SOL 32 8:43 started in

middle.

EOL 32 9:30

SOL 33 9:33

Broke line at 10:20

fish fouled on crab

trap line will

come back on trap line

10:37 10 min line

EOL 33 10:53

SOL 34 10:57

EOL 34 12:02

SOL 35 12:07

EOL 35 1:12

SOL 36 1:16

EOL 36 2:21

SOL 37 2:25

EOL 37 3:33

April 21, 2005

Testing 555 in channel

Shot about a mile or so
in channel

9:20 hrs launched first
again fish about 5
ft down

SOL 38 at 9:21 hr

Speed 4.4 knots

EOL 38 at 10:25

SOL 39 at 10:35

EOL 39 at 11:37

SOL 40 at 11:40

EOL 40 at 12:42

SOL 41 at 12:47

EOL 41 at 1:49

SOL 42 at 1:54

Broke line in half

234

ESB

April 22

Began at end of line

42 7:50

EOL 42 8:15

SOL 43 8:20

EOL 43 9:24 Fish $\approx$ 5' down

SOL 44 9:27

EOL 44 10:29

SOL 45 10:33

Abolish line no more good data

Shut system down
and tried to reconnect

Abolish fault seems to
be battery depletion

switched to second battery
and system is back up

SOL 45 10:42

EOL 45 11:44

SOL 46 11:47

EOL 46 12:43

SOL 47 12:53

Broke line at 1:25

SO

May 3, 2005

Sea State unfavorable
trying to shoot from the point
stop line 47 at 8:22
SOL 47 middle of 8:50
sea running to the stars
EOL 47 9:20
SOL 48 9:27

May 4, 2005

Sea State unfavorable sea
out of NE - but hit 47 half
over again 7:50

May 6, 2005

11:56 running to middle of
line 47 sea state good
SSS record good fish
~5 down

SOL west 1/2 of line 47
at 11:57 WD 20'

EOL 12:30

SOL 48 12:33 WD 21'

EOL 48 1:38 WD 17 ft

SOL 49 1:41 WD 17 ft

EOL 49 2:44 WD 23 ft

SOL 50 2:46 WD 21.5 ft

About time for reeling

SOL 50 2:55 WD 21.5 ft

EOL 50 3:56 WD 17 ft

SOL 51 4:00 WD 15 ft

EOL 51 5:01 WD 18 ft

SOL 52 5:04 WD 18 ft

8 to 3
12 hour

May 7, 2005

6:00

↓

EOL 52 at midline point

5:28

SOL 52 at midline point 9:12

EOL 52 9:49

SOL 53 9:55 WD 15'

EOL 53 10:59 WD 19'

SOL 54 11:03 WD 15.5'

EOL 54 12:05 WD 16'

SOL 55 12:10 WD 16.5'

EOL 55 1:12 WD 22'

SOL 56 1:16

Note Sea buoy near the

point of line

EOL 56 2:17 WD 17.5'

SOL 57 2:21 WD 18'

EOL 57 3:22 WD 21'

made several
attempts
13.5

SOL 58 3:40 WD 22'

EOL 58 Broke in middle
data quality poor

May 8, 2005

6:00

SOL 58 in middle of
8:08 WD 17'

EOL 58 8:39 WD 16'

SOL 59 8:44 WD 16'

EOL 59 8:45 WD 20'

SOL 60 9:47 WD 20'

EOL 60 10:48 WD 17'

SOL 61 10:55 WD 17'

EOL 61 11:56 WD 22'

SOL 62 12:00 WD 21'

SOL 62 1:02 WD 19'

SOL 63 1:12 WD 19'

EOL 63 2:13 WD 22'

SOL 64 2:15 WD 22'

EOL 64 2:48 Broken in

5:00 11:00

May 9, 2005

6:00

SOL 64 in middle

8:00 WD 17'

EOL 64 8:30 WD 18'

SOL 65 8:34 WD 18'

Broke line due to drift

SOL 65 9:40 in middle of line

EOL 65 10:16

SOL 66 10:20 WD 20'

EOL 66 11:19 WD 18'

SOL 67 11:24

EOL 67 12:26 WD 21'

SOL 68 12:30 WD 20'

EOL 68 1:29 WD 19'

SOL ~~69~~ 1:32 WD 19'

EOL ~~69~~ 2:32 WD 21'

SOL ~~70~~ 2:37 WD 21'

12:50 6:30

May 10, 2005 SOL ~~70~~ 2:52 Broken

line in middle WD 24'

6:00

SOL 70 9:27 WD 21'

EOL 70 10:15 WD 17'

SOL 71 10:22 WD 17'

EOL² 71 11:23 WD 19.6'

SOL 72 11:25 WD 19.5'

EOL³ 72 12:27 WD 18.8'

SOL 73 12:32 WD 19.4'

EOL⁴ 73 1:33 WD 20.8'

SOL 74 1:36 WD 20.7'

EOL 74 2:38 WD 19.9'

SOL 75 2:42 WD 20.5'

EOL 75 3:44 WD 21.1'

SOL 76 3:48 WD 21'

EOL 76 4:51 WD 19.0'

Speed down to 35 knots

SOL 77	5:06	WD 19.9
EOL 77	6:31	WD 19.0
SOL 78	6:33	WD 19.1
8:00 EOL 78	7:49	WD 18.0
May 11, 2005		
7:30 SOL 79	8:30	WD 18.5
EOL 79	9:31	WD 18.0
SOL 80	9:36	WD 17.5
EOL 80	10:38	WD 19
SOL 81	10:40	WD 19
EOL 81	11:40	WD 17.5
SOL 82	11:43	WD 17.7
EOL 82	12:45	WD 19.4
SOL 83	12:48	WD 19.8
EOL 83	1:47	WD 19.1
SOL 84	1:50	WD 19.1
EOL 84	2:55	WD 21.0
SOL 85	2:59	WD 22
- EOL 85	4:01	WD 19.8
SOL 86	4:04	WD 19.5
EOL 86	4:28	

But we due to
poor data quality

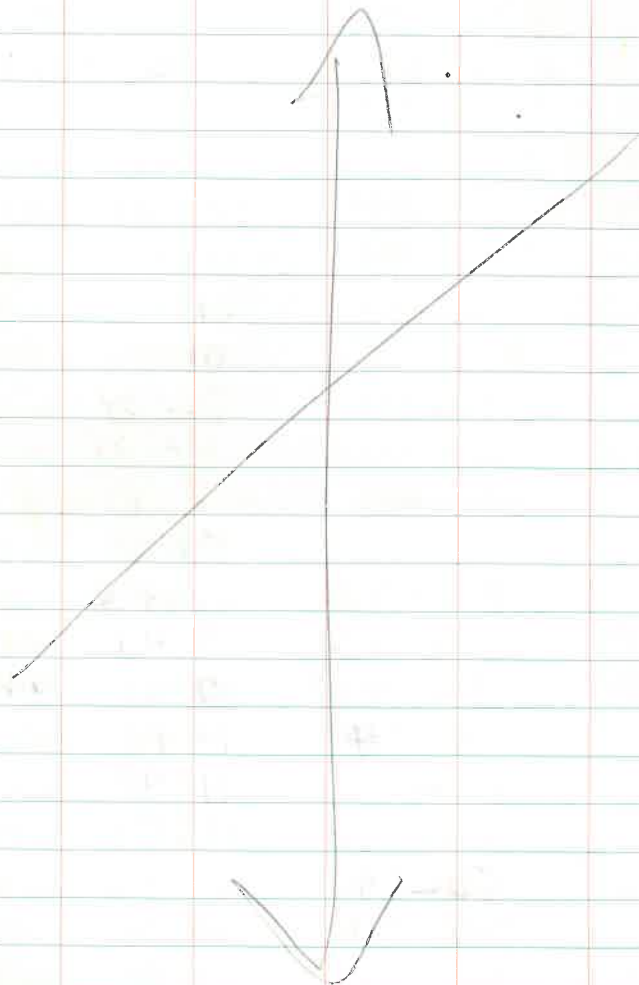
2407
2408
2409

PM

SOL 86	8:30	WD 19.3
EOL 86	9:10	WD 18.3
SOL 87	9:19	WD 19.0
EOL 87	10:22	WD 17.6
SOL 88	10:26	WD 17
EOL 88	11:25	WD 19
13.5 SOL 89	11:28	WD 19
May 12, 2005 EOL 89	12:29	WD 16
SOL 90	12:31	WD 17.7
EOL 90	01:32	WD 19.6
SOL 91	01:34	WD 20.6
EOL 91	02:34	WD 18
SOL 92	02:38	WD 18.7
EOL 92	About Restart	
SOL 92	02:51	WD 18.2
EOL 92	03:54	WD 22.6
SOL 93	9:41	WD 22.3
EOL 93	10:41	WD 19.3
SOL 94	10:45	WD 19.3
EOL 94	11:48	WD 22.6
SOL 95	11:51	WD 22.6
EOL 95	12:52	WD 19.3
SOL 96	12:56	WD 19.0
EOL 96	1:59	WD 22.9
S		

Propose with
to the time →

SOL 97 2:03 WD 23.5
 EOL 97 2:34 Breakline
 in middle



June 6, 2005

Rehook of line 23 west end

8:30 Start of line 23 rehook
 West half running west
 from rehook of line WD 17.5 feet
 Sea state flat

9:00 EOL 23 West Rehook

SOL 24 West Rehook

9:12 Running east WD 17.1 feet

9:35 EOL 24 West Rehook

Running to line 32 for rehook

9:35 East half will start
 from center of the line east

9:40 SOL 32 Proceeds from
 new end of line

10:13 EOL 32 Rehook

Proceeding to line 31 will
 start & back to west

10:16 SOL 31 Rehook

11:17 EOL 31 Start and to west

11:23 SOL 30 Start west to east

WD 19.6 Rehook

12:24 EOL 30 Rehook

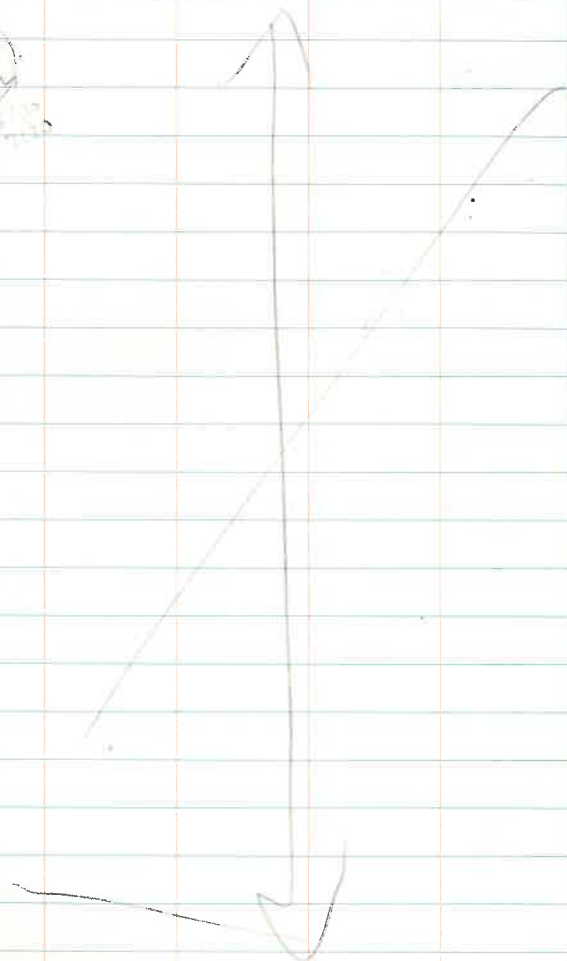
12:28 SOL 29 Start and to west

WD 19.8

1:37 EOL 29 Proceeds from end of line
 late of the line

1:33 SOL 28 Shot west to east
 2:34 EOL 28 Reshoot
 2:57 SOL 27 Shot east to west
 WD 10.2
 3:38 EOL 27 WD 19.0

13/10



June 7, 2005

8:50 SOL 96 ~~with~~ half Reshoot
 Shanty went to East
 9:24 EOL 20.2 Feet
 9:30 SOL 95 Reshoot East to West
 10:30 EOL 95 Reshoot W → E
 10:35 SOL 96 Reshoot W → E
~~EOL 96~~ Back full sample near
 11:34 EOL 96 Reshoot
 11:39 SOL 97 Reshoot E → W
 12:39 EOL 97
 12:45 SOL 98 W → E
 1:45 EOL 98
 1:50 SOL 99 E → W WD 24'
 2:50 EOL 99
 2:55 SOL 100 W → E 20.5'
~~2:55~~ 3:55 EOL 100 WD 23.6 ft
 4:05 SOL 101 E → W
 EOL 101 Continued from
 5:25 SOL 96 with half Reshoot
 5:57 EOL 96 Reshoot
 6:57 SOL 22 Reshoot Above

9:00

16:50

5:30 June 8, 2005

10:30 SOL 22 Restart E-W

11:31 EOL 22 Restart ~~W-E~~ WDP 7.5

11:35 SOL 21 Restart W-E

12:35 EOL 21 Restart 12 WDP

12:40 SOL 20 Restart E-W 11.2

12:40 EOL 20 B

1:44 SOL 19 Restart W-E

2:43 EOL 19

2:50 SOL 18 Restart E-W WDP 12.5

3:51 EOL 18

3:56 SOL 20 Went and restarted WDP 18

About

4:01 SOL 20 Went and restarted

About

4:11 SOL 20 Went and restarted

4:17 EOL 20 W-E

5:30 June 9

L

6:10

6:30 Am

6:30 Pm

630 June 14, 2005

12:15 Start of SBP Line 1

Note major problem noted
regards SBP system irregular with
dual cables + just resulting in the
and some very low power output
navigation system problems were
experienced with some

1:20 EOL

1:32 SOL SBP Line 2

2:34 EOL

2:45 SOL SBP Line 3

3:49 EOL

SOL SBP Line 4

8:10

* July 16
 Transit from Green Cove
 Springs to St. Augustine
 Start Tally at 5:00 Am
 End STA. at 830
 → 15.5 km

* July 17
 Rig up boat for shoot
 Start 8:00 Am
 End 7:30 Pm Pm

→ 11.5 hrs
 * July 18 Day 1
 Start 6:00 Am

10:20 Am Equipment deployed
 Sea state 1-2 foot 8 second period
 first line will be

05B01 WD-63'

* 10:24 Am start of line 05B01 shot W
 data quality acceptable
 11:45 EOL

11:50 SOL 05B02 shot South W 60
 about line 05B01 not
 recorded will rehook line

11:55 SOL 05B01A shot E
 1:20 EOL

1:20 SOL 05B02 shot South
 WD-64' Not recorded

1:35 EOL 05B02 ?

1:136 SOL 05B03 shot W

2:58 EOL 05B03 WD 61'

3:00 SOL 05B04 shot SE

3:17 EOL 05B04

3:19 SOL 05B05 shot E

2 WD 60'

4:26 EOL 05B05

End 8:00 Pm → 14 hrs

* July 19 DAY 2
 Start 6:30 Am

9:42 SOL 05B06 shot E
 WD-57' SWS 2'

11:35 EOL

11:38 SOL 05B07 shot SE

11:59 EOL

12:00 SOL 05B08 shot W

1:50 EOL 05B08

1:58 SOL 05B09 shot E

2:05 EOL 05B09 South start

SOL 05B10 shot E

End 7:PM WD-54' → 12.5 hrs

4:23 EOL 05B10

July 20
Dawn for equipment
7:Am 7:PM

→ 12 hrs Day 3
→ July 21
Start 6:30 Am

10:54 SOL 05B11 Shot E
WD-58'

2:07 EOL 05B11

2:09 SOL 05B12 Shot W
WD-60'

4:00 EOL 05B12 cut short

* 7:30 ~~Am~~ PM

* → 13 hrs Day 4
Start 6:30 July 22

10:20 SOL 05B13 Shot W

11:20 EOL 05B13

11:22 SOL 05B14 Shot S

11:37 EOL 05B14

11:40 SOL 05B15 Shot E

2:10 EOL 05B15

End 7:00 PM

→ 12.5 hrs



Start 6:30 July 23, 2005 Day 5

10:28 SOL 05B16 Seas 1' in low
WD 59' Shot E

11:35 EOL 05B16

11:37 SOL 05B17 Shot NW

12:00 EOL 05B17

12:02 SOL 05B18 Shot S

2:00 EOL 05B18

End 12:00 midnight

→ 17.5 hrs Day 6

Start 8:00 July 24, 2005 Seas 3-4'

10:00 SOL 05B19 Shot N

12:15 EOL 05B19 Behave only

12:17 SOL 05B20 Shot S

3:15 EOL 05B20

3:16 SOL 05B21 Shot NW

4:20 EOL 05B21

4:21 SOL 05B22 Shot E

5:43 EOL 05B22

SOL 05B23 Shot

EOL 05B23

End 9:00 Am to → 13.0 hrs

July 25, 2005

* 8:00 Am to 8:00 PM

→ 12 hrs

July 26, 2005 Day 7

Start 7:00 AM

9:40 SOL 05B24 Continuation of

~~9:40 SOL 05B24~~ 235 Lat W

10:09 EOL 05B24

10:10 SOL 05B25 Shot N

10:23 EOL 05B25

10:25 SOL 05B26 Shot E

EOL 05B26

SOL 05B27 Shot N

11:37 EOL 05B27

11:38 SOL 05B28 Shot ~~W~~ NE end

1:00 EOL 05B28

1:01 SOL 05B29 Shot E

2:10 EOL 05B29

2:11 SOL 05B30 Shot N

2:24 EOL 05B30

2:25 SOL 05B31 Shot W

3:34 EOL 05B31

3:40 SOL 05B32 Shot N

3:54 EOL 05B32

3:55 SOL 05B33 Shot E

5:43 EOL 05B33

End 7:00 PM

→ 12 hrs

July 27, 2005

Start 7:00 AM

12:00 SOL 05B34 Shot E

2:01 EOL 05B34

2:02 SOL 05B35 Shot N

2:13 EOL 05B35

2:14 SOL 05B36

3:54 EOL 05B36 Shot W

3:55 SOL 05B37 Shot W

4:07 EOL 05B37

4:10 SOL 05B38 Shot E

5:00 EOL 05B38

Break in shot

End 7:30 → 12.5 hrs

July 28, 2005

Start 6:00 AM

9:45 SOL 05B39 Shot W

10:58 EOL 05B39

10:59 SOL 05B40 Shot S

11:15 EOL 05B40

11:16 SOL 05B41 Shot E

12:19 EOL 05B41

12:20 SOL 05B42 Shot S

12:31 EOL 05B42

12:32 SOL 05B43 Shot W

1:29 EOL 05B43

1:30 SOL 05B44 Shot S
 1:43 EOL 05B44
 1:44 SOL 05B45 Shot E
 2:18 EOL 05B45
 2:19 SOL 05B46 Shot S
 3:50 EOL 05B46 Speed Lys
 3:51 SOL 05B47 Shot S
 5:05 EOL 05B47

End 8:00 → 14 hrs

Start 6:30 July 29, 2005

Sec. 1-2 8:55 SOL 05B48 Shot E

Continued on outline

9:48 EOL 05B48
 9:50 SOL 05B49 Shot NW
 10:05 EOL 05B49
 10:06 SOL 05B50 Shot W
 11:34 EOL 05B50
 11:35 SOL 05B51 Shot N
 11:45 EOL 05B51
 2-3 11:46 SOL 05B52 Shot E
 1:12 EOL 05B52

End 6:30

→ 12 hrs

July 30

Start 7:00 AM Transit to May Port
End 5:30 PM → 10.5 hrs.

July 31

Start 8:00 AM

6:30 PM

End

6:00 Am
6:30 PM

~~July~~ Oct 20, 2005

On Alpin Ocean Trench

preparing to Core time 9:30am

sees 2' below no clouds sunny

→ Started Vibrating on CB Du-05-01

10:27 Am ^{bluffs} stopped 10:30 Am

~~Start~~ recovering 9' 2" silty sand at base of core

10:47 Am going for run Oct 21st

10:50 Am vibrating stopped 10:54

recovered 9' 8" of core from
65' of water - refusal? note of
in bore of core stiff fine silty
sand with some clay?

→ Move to CB Du-05-03

11:40 on bottom 11:46

recovery V core rig 64' of water
fine silty clay silty sand at base

14' of recovery will try again
by getting below 12'

5' 9" of silt recovery

Move to CB Du-05-02

904-220-9286

one bottom 1:11 WD 49

1:15 retrieving core 18.7' penetration

18' 8" of recovered core

→ CB Du-05-02

Stop work for lunch

moving to CB Du-05-01
WD 52'

On Bottom 2:16 PM

19:25' penetration

Recover 19' 9" of core

→ Moving to CB Du-05-05

WD 62'

3:17 on bottom

3:19 ~~6~~ 6' 19" deep

18.8' penetration

15' 7" recovery in clump

in both of core some small
sand hard & chunky

→ Moving to CB Du-05-06

WD 55' 4:18 PM

18.77' Penetration 4:20 PM

17' 1" recovery

6:15 Am

Oct 21, 2005

Revs Assites 2' overcast
Setting Anchor 7:22 am

→ VNA-05-01 WD-60'
in battery 9:27 Am

19.22' penetration

16' 8" of core recovered

Shift long Sand at base of core

→ Moving to VNA-05-02
WD-59' 10:26 Am

18.92' of penetration

20' of core recovered

Sand to $\approx 15'$ from top of core

→ Moving to VNA-05-03
WD 59' 11:14 Am

19.90' penetration

18' 1" of core recovered

sand to $\approx 15'$ from top of core

WD 57' 1:04 PM

→ Moving to UDU 05-03

19.9' penetration
05-3 18' 2" of core recovered

57' WD

→ Moving to UDU 05-02

WD 55' 1:58 PM

19' 5" of core recovered

~~21' 10" of core recovered~~

→ Moving to UDU-03
WD-56' 2:47

19.91' penetration

19' 2" of core recovered

VDU 05-01 - 19.1 - 18708
05-02 - 19.3
05-03 - 18.0

VNA 05-01 - 16.8
05-02 - 19.7
05-03 - 17.9 - 18713
VNA-04 - 6'

Bottom-Finder/Echosounder/
[Sonic Sonar Device]

Dec 21, 2007.
Sampling at Deaman Island
Gulf Breeze FL

DI001 Out off seaward north
end of Island

N 30 21 49.4 Elevation 1 foot
W 087 11 23.1

150 paces

DI002 ↓

N 30 21 52.3 Clastic Runly
W 087 11 20.1 14 not

vertical true

150 Paces elevation $\approx 1.5'$

DI003 ~~DI002~~ Beach

N 30 21 55.7

W 087 11 18.0

Elevation read 0 feet
at water edge

DI003 Dune

N 30 21 55.5

W 087 11 17.05

Elevation read

Elevation read 10'

150 paces

↓

DI004 Beach

N 30 21 59.1

W 87 11 16.0

Elevation read 0'

at high water strip point

DI004 Dune

N 30 21 58.8

W 087 11 15.8

Elevation read 10'

150 Paces

↓

DI005 Beach

N 30 22 02.7

W 087 11 14.3

Elevation read 12'

at high water just below
eroding berm 1 foot high

DI005 Dune middle of Island

N 30 22 02.7"

W 087 11' 13.8"

Elevation read 14'

↓ 100 Paces

DI006 Beach on the
end of the island

See next page

Beach
DI 006 Continued
Sample taken at erosion
Scarp base Scarp height
≈ 2'

N 30 22 05.2

W 087 11 14.1

Elevation read 6'
observation indicates ≈ 2

~~DI 008~~ 50 Paces

Beach DI 007 Base of 3 feet
erosion Scarp

N 30 22 06.2

W 087 11 13.9

Scarp Elevation indicates 7'
observation suggests 1 1/2

DI 008 Beach
Base of erosion Scarp
≈ 1 foot high

N 30 22 06.4

W 087 11 12.5

Elevation read 4 1/2'
observation suggests 1
Location is N end of island
Start of Spit

50 Paces from
DI 008

DI 009 Beach on
Spit

N 30 22 06.4

W 087 11 11.2

Elevation read 5'

observation suggests 2'

100 Paces from
DI 009

DI 010 Middle of Spit

N 30 22 05.4

W 087 11 08.5

Elevation read 2'

100 Paces from
DI 010

DI 011 Land end of Spit

N 30 22 05.2

W 087 11 06.0

Elevation read -1'

Angle	Sin.	Tan.	Sec.	Cosec.	Cotg.	Cosin.	Angle	Sin.	Tan.	Sec.	Cosec.	Cotg.	Cosin.
32	.5299	.6249	1.1792	1.887	1.600	.84805	58	.39	.6293	.8098	1.2868	1.589	1.235 .77715
10	.5324	.6289	1.1813	1.878	1.590	.84650	50	10	.6316	.8146	1.2898	1.583	1.228 .77531
20	.5348	.6330	1.1835	1.870	1.580	.84495	40	20	.6338	.8195	1.2929	1.578	1.220 .77347
30	.5373	.6371	1.1857	1.861	1.570	.84339	30	30	.6361	.8243	1.2959	1.572	1.213 .77162
40	.5398	.6412	1.1879	1.853	1.560	.84182	20	40	.6383	.8292	1.2991	1.567	1.206 .76977
50	.5422	.6453	1.1901	1.844	1.550	.84025	10	50	.6406	.8342	1.3022	1.561	1.199 .76791
33	.5446	.6494	1.1924	1.836	1.540	.83867	57	40	.6428	.8391	1.3054	1.556	1.192 .76604
10	.5471	.6536	1.1946	1.828	1.530	.83708	50	10	.6450	.8441	1.3086	1.550	1.185 .76417
20	.5495	.6577	1.1969	1.820	1.520	.83549	40	20	.6472	.8491	1.3118	1.545	1.178 .76229
30	.5519	.6619	1.1992	1.812	1.511	.83389	30	30	.6494	.8541	1.3151	1.540	1.171 .76041
40	.5544	.6661	1.2015	1.804	1.501	.83228	20	40	.6517	.8591	1.3184	1.535	1.164 .75851
50	.5568	.6703	1.2039	1.796	1.492	.83066	10	50	.6539	.8642	1.3217	1.529	1.157 .75661
34	.5592	.6745	1.2062	1.788	1.483	.82904	56	41	.6561	.8693	1.3251	1.524	1.150 .75471
10	.5616	.6787	1.2086	1.781	1.473	.82741	50	10	.6583	.8744	1.3284	1.519	1.144 .75280
20	.5640	.6830	1.2110	1.773	1.464	.82577	40	20	.6604	.8796	1.3318	1.514	1.137 .75088
30	.5664	.6873	1.2134	1.766	1.455	.82413	30	30	.6626	.8847	1.3352	1.509	1.130 .74896
40	.5688	.6916	1.2158	1.758	1.446	.82248	20	40	.6648	.8899	1.3386	1.504	1.124 .74703
50	.5712	.6959	1.2183	1.751	1.437	.82082	10	50	.6670	.8952	1.3421	1.499	1.117 .74509
35	.5736	.7002	1.2208	1.743	1.428	.81915	55	42	.6691	.9004	1.3456	1.494	1.111 .74314
10	.5760	.7046	1.2233	1.736	1.419	.81748	50	10	.6713	.9057	1.3492	1.490	1.104 .74120
20	.5783	.7089	1.2258	1.729	1.411	.81580	40	20	.6734	.9110	1.3527	1.485	1.098 .73924
30	.5807	.7133	1.2283	1.722	1.402	.81412	30	30	.6756	.9163	1.3563	1.480	1.091 .73728
40	.5831	.7177	1.2309	1.715	1.393	.81242	20	40	.6777	.9217	1.3600	1.476	1.085 .73531
50	.5854	.7221	1.2335	1.708	1.385	.81072	10	50	.6799	.9271	1.3636	1.471	1.079 .73333
36	.5878	.7265	1.2361	1.701	1.376	.80902	54	43	.6820	.9325	1.3673	1.466	1.072 .73135
10	.5901	.7310	1.2387	1.695	1.368	.80730	50	10	.6841	.9380	1.3711	1.462	1.066 .72937
20	.5925	.7355	1.2413	1.688	1.360	.80558	40	20	.6862	.9435	1.3748	1.457	1.060 .72737
30	.5948	.7400	1.2440	1.681	1.351	.80386	30	30	.6884	.9490	1.3786	1.453	1.054 .72537
40	.5972	.7445	1.2466	1.675	1.343	.80212	20	40	.6905	.9545	1.3824	1.448	1.048 .72337
50	.5995	.7490	1.2494	1.668	1.335	.80038	10	50	.6926	.9601	1.3863	1.444	1.042 .72136
37	.6018	.7536	1.2521	1.662	1.327	.79864	53	44	.6947	.9657	1.3902	1.440	1.036 .71934
10	.6041	.7581	1.2549	1.655	1.319	.79688	50	10	.6967	.9713	1.3941	1.435	1.030 .71732
20	.6065	.7627	1.2577	1.649	1.311	.79512	40	20	.6988	.9770	1.3980	1.431	1.024 .71529
30	.6088	.7673	1.2605	1.643	1.303	.79335	30	30	.7009	.9827	1.4020	1.427	1.018 .71325
40	.6111	.7720	1.2633	1.636	1.295	.79158	20	40	.7030	.9884	1.4061	1.422	1.012 .71121
50	.6134	.7766	1.2661	1.630	1.288	.78980	10	50	.7050	.9942	1.4101	1.418	1.006 .70916
38	.6157	.7813	1.2690	1.624	1.280	.78801	52		.7071	1.414	1.414	1.414	1.000 .70711
10	.6180	.7860	1.2719	1.618	1.272	.78622	50						
20	.6202	.7907	1.2748	1.612	1.265	.78442	40						
30	.6225	.7954	1.2778	1.606	1.257	.78261	30						
40	.6248	.8002	1.2808	1.601	1.250	.78079	20						
50	.6271	.8050	1.2838	1.595	1.242	.77897	10						
Cosin. Cotg. Cosec. Sec. Tan. Sin. Angle							Cosin. Cotg. Cosec. Sec. Tan. Sin. Angle						

A+A

386-756-9144

John Hall Cherry
255-4444

1386 7670683

A 1 A

850 528 2848

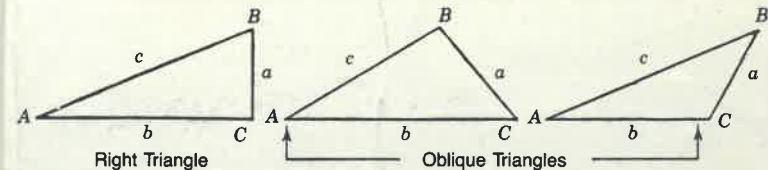
386-767-8533

727-

1000 LWT Insects
 Case 1607 at 1st
 4 3358 Fuel filters
 Case of 3133 Fuel filters
 Raising Cow thorns
 2 Cases gallons
 2050 wt.
 2 Cases straight
 40 wt.
 Rotella

Rice
 Pot + lid
 4 foil
 Cap of rice
 extra olive oil
 seasonings
 bread

TRIGONOMETRIC FORMULAE



Solution of Right Triangles

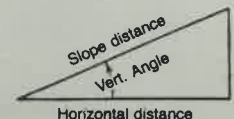
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{a}$, $\csc = \frac{c}{b}$

Given 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 IX. $\cos 5^\circ 10' = .9959$. Horizontal distance = $319.4 \times .9959 = 318.09$ ft.

Horizontal distance also = Slope distance minus slope distance times $(1 - \cos \text{vertical angle})$. 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

$$\text{distance} = 302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28 \text{ ft.}$$