

ROCKY CREEK
S.E.T.



Ben Meadows

1-800-241-6401

LEVEL BOOK

#101596

VOLUME I

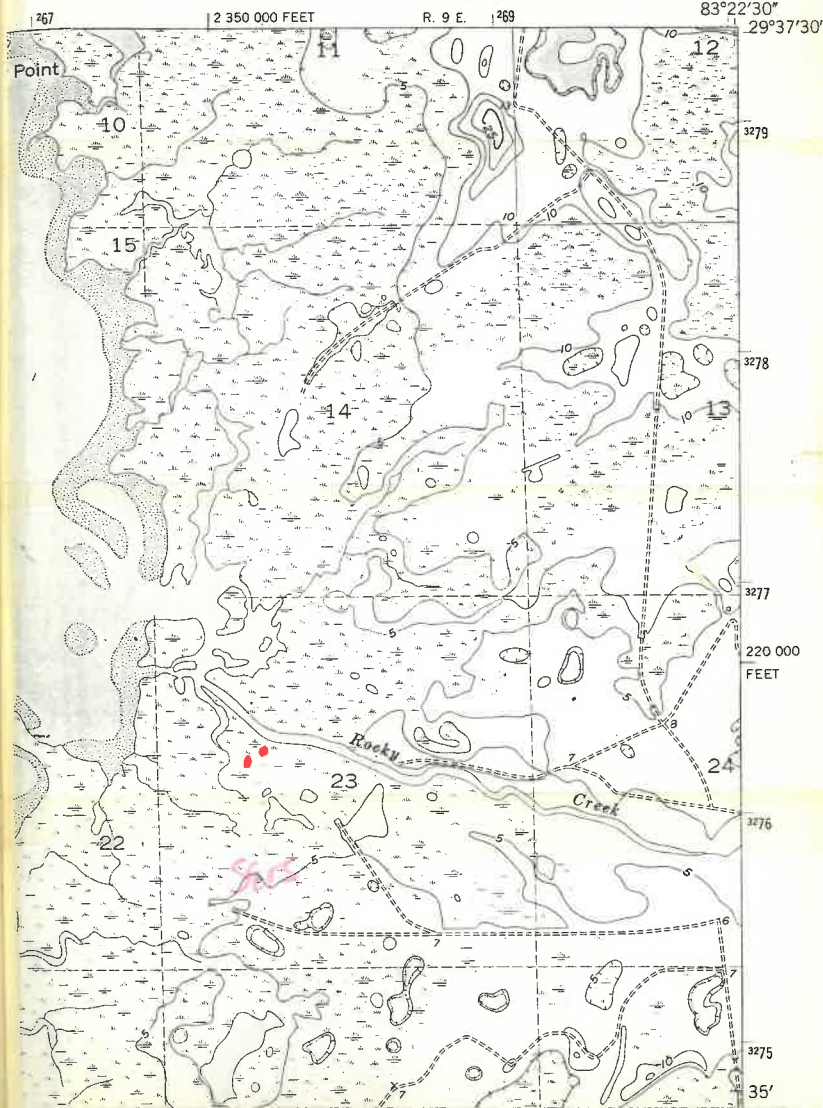
ROCKY CREEK S.E.T. VOL I

Roadway of any Width. Side Slopes 1½ to 1.

Diagram illustrating a road cross-section with a cut and a fill. The center stake is at the grade line. The cut side (left) has a slope stake at 11.0' from the center stake, with a 1.5 to 1 slope. The fill side (right) has a slope stake at 16.7' from the center stake, with a 1.5 to 1 slope. The distance from the side stake to the slope stake on the cut side is 11.0'. The distance from the side stake to the slope stake on the fill side is 16.7'.

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

7.5 MINUTE SERIES (TOPOGRAPHIC)



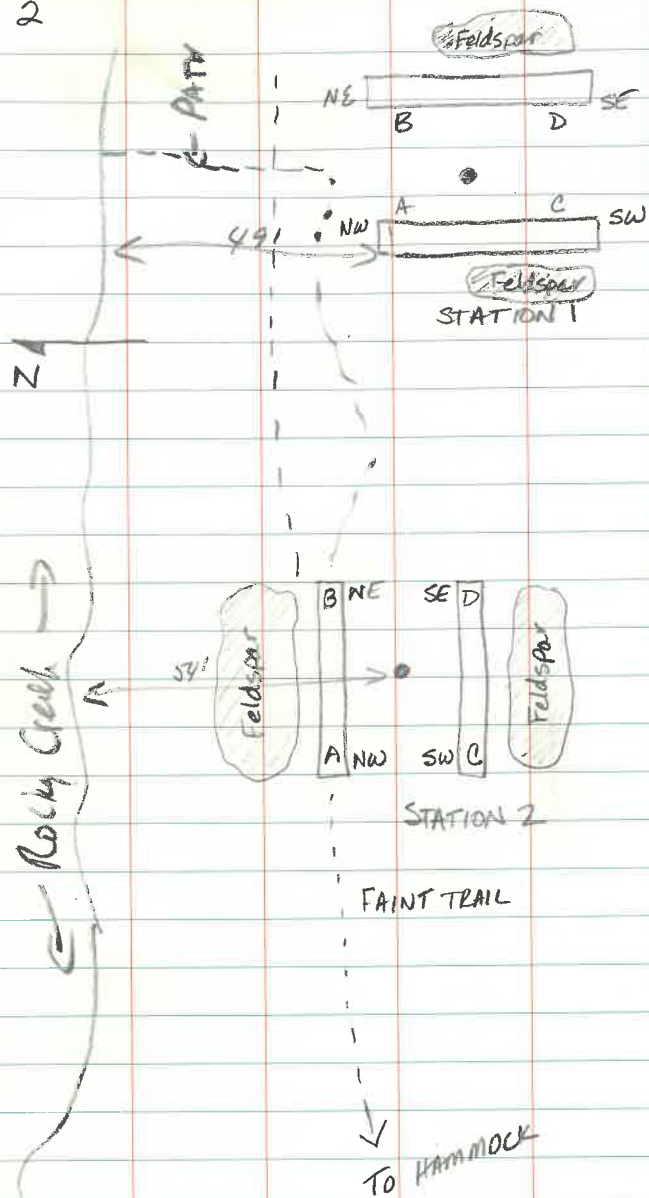
[illegible]

83° 23' 51.6" W

9° 35' 22" N
83° 23' 86" W

29.5822
93.3886

STATION 1



4

8-18-95

ROCKY CREEK

HOT

HUMID

99+°F

A^{NW}B^{NE}C^{SW}D^{SE}

STATION 1

1	14.1	15.0	14.3	POST
2	13.5	12.8	14.1	16.6
3	13.4	13.5	11.7	12.1
4	13.5	11.8	16.5	13.2
5	15.2	15.4	16.5	13.7
6	14.0	12.9	12.8	12.7
7	X	16.7	9.9	16.9
8	14.6	15.6	13.9	13.5
9	18.1	11.8	11.9	13.6

5

8-18-95

ROCKY CREEK

STATION 2

A^{NW}B^{NE}C^{SW}D^{SE}

1	19.4	20.0	16.0	21.7
2	21.3	21.8	14.0	22.9
3	19.9	20.2	18.2	22.7
4	20.1	19.6	22.0	21.3
5	21.1	19.1	20.5	23.5
6	20.4	23.0	19.0	23.5
7	21.6	22.0	20.7	19.9
8	18.8	19.2	19.6	23.2
9	19.9	20.2	19.8	21.9

6

Steve
Jim

10-18-95

ROCKY CREEK 11:10

* this station pushed north "OPAL"

STATION 1

	A	B	C	D
1	15.5	15.1	15.7	X
2	15.8	13.4	X	16.7
3	15.2	^{CRAB HOLE} 14.8	16.6	16.2
4	14.4	11.4	15.5	15.2
5	14.5	15.1	13.4	14.7
6	15.9	17.2	X	12.9
7	X	13.0	13.7	16.3
8	14.4	16.0	13.1	17.3
9	16.7	14.6	X	14.8
AVE	15.3	14.5	14.6	15.5 = 15.0

CRYO

1
2
3

7

STATION 2

	A	B	C	D
1	21.6	20.7	20.7	22.6
2	22.8	23.4	21.2	21.0
3	23.5	21.9	17.8	21.8
4	21.7	21.5	17.9	18.6
5	22.5	22.2	19.5	19.1
6	20.6	21.7	21.4	21.9
7	21.9	21.9	20.5	18.5
8	20.5	22.4	14.7	22.1
9	21.0	22.3	20.6	20.0
AVE	21.8	22.1	19.9	20.6 = 21.1

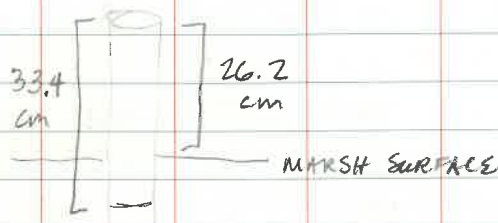
CRYO

mm 10.75
7.9
6.5

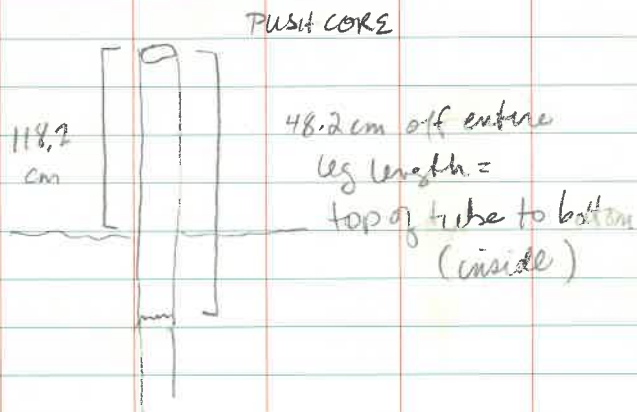
2.0

bioturbated

3/13/96 INTERTIDAL ^{210}Pb CORE
at STATION A - see 1st MAP



Could not retrieve after 3 attempts



4-3-96

ROUCHY CREEK

STATION 1

	A	B	C	D	
1	16.2	16.1	16.9	—	?
2	15.9	13.5	15.5	17.5	
3	15.3	14.0	16.1	16.5	
4	14.9	13.3	15.8	16.0	
5	17.0	16.1	17.0	16.1	
6	14.2	16.8	18.2	17.3	
7	14.9	17.5	17.1	17.4	
8	13.7	17.8	14.8	17.5	
9	17.6	18.5	13.3	18.2	
Avg	15.5	16.1	16.0	17.1	= 16.9

Cryo

1	3.1	1.6	2.1	2.4
2	3.0	1.1	3.3	2.4
3	2.3	1.2	4.4	4.1
4	2.2		3.3	3.8

STATION 1 A sed = 1.9 mm

10/95 to 4/96

4-3-96

ROCKY CREEK

STATION 2

	A	B	C	D
1	22.7	17.2	20.1	22.2
2	21.9	22.2	21.6	23.0
3	23.0	22.6	18.7	22.5
4	21.5	22.6	21.8	22.7
5	22.4	21.6	21.2	22.7
6	22.2	21.5	21.6	22.8
7	22.3	20.4	20.9	22.7
8	20.4	20.0	20.1	23.7
9	20.8	22.3	21.6	24.4
AVE	21.9	21.2	20.8	23.0 = 21.7

CRYO

1	1.6	0.9	12.5
2	0.0	0.0	21.6
3	0.9	1.1	31.2
4	0.0	0.6	42.6
			50.0
			138

STATION 2 Δ sed = ± 0.6 mm
10/95 to 4/96

7-16-96

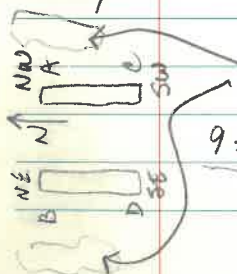
12 NOON

STATION 1

	A	B	C	D
1	16.4	16.7	16.6	X POST
2	15.6	16.4	15.0	17.2
3	16.3	17.3	15.5	15.2
4	16.9	15.2	16.4	11.3
5	18.0	16.8	16.2	17.4
6	17.1	17.8	16.3	18.0
7	15.0	17.9	16.8	16.7
8	16.7	17.5	13.0	17.2
9	18.4	16.5	12.5	16.0
AVE	16.7	16.9	15.4	16.1 16.3

CRYO

	A	B	C	D
1		9.0		12.7
2				12.4
3				11.4
4				12.1



$$9 + 12.1 \div 2 = 10.6$$

NOTE: - (A) shows nearby activity
walking etc in SE near A

7/16/96

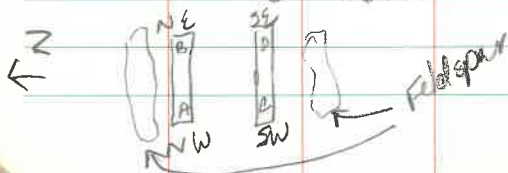
STATION 2

	A	B	C	D
1	22.8	24.3	23.4	21.4
2	23.0	23.0	22.3	21.7
3	23.3	23.8	21.2	21.8
4	22.8	25.5	24.3	21.9
5	21.5	24.2	23.0	21.7
6	22.6	23.5	21.5	22.7
7	21.6	23.4	22.4	22.9
8	22.2	22.9	22.7	22.5
9	22.1	23.2	22.4	21.6
Ave	22.4	23.8	22.6	22.0 = 22.7

Cryo	A	B	C	D
1	8.3	4.6	3.0	6.4
2	8.3	2.1	2.4	5.7
3	8.2	2.1	3.2	6.2
Ave	8.3	2.9	2.9	6.1 = 5.0

$$\text{CRYO } 1+2 = 10.6 + 5.0 \div 2 = 7.8$$

$$\text{SET } 1+2 = 16.3 + 22.7 \div 2 = 19.5$$



NOTE:
walked on area
near A+B

8/6/96

SHALLOW SET

1	30.4
2	29.9
3	29.9
4	29.1
5	31.6
6	29.5
7	28.7
8	28.1

14

JIM, RON, CLIFF

10-21-96

2:18pm * 2 weeks after TS

Josephine

sunny 70°

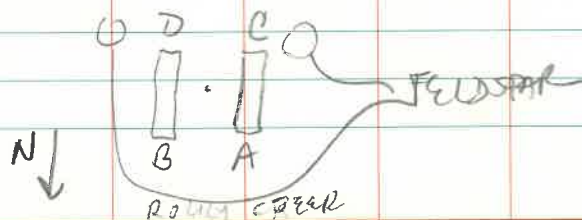
STATION 1

	A	B	C	D
1	17.1	16.1	17.5	X
2	15.5	16.1	X	15.8*
3	16.7	15.4	18.2	18.7
4	15.5	17.2	18.4	17.1*
5	18.5	16.7	17.4	8.5*
6	17.9	17.8	X	18.8
7	X	18.4	18.4	18.1
8	16.5	17.6	18.6	18.0
9	17.5	17.4	18.3	18.7
AVE	16.9	17.0	18.1	16.7 > 17.2

* in hole by post

Cryo

	A	B	C	D
1	12.1	11.9	9.2	9.8
2	9.0	7.9	12.4	9.9
3	10.7	9.8	10.2	7.3
4	11.7	11.9		12.5
AVE	10.9	10.4	10.6	9.9 > 10.4



15

STATION 2

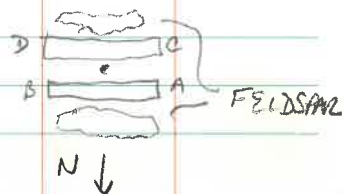
	A	B	C	D
1	22.5	19.8	21.1	23.4
2	24.8	23.9	21.4	22.2
3	23.6	22.2	19.5	22.4
4	23.4	22.5	18.5	19.8
5	23.6	22.6	20.8	23.6
6	23.9	23.9	23.4	21.3
7	22.2	23.4	21.5	22.8
8	23.5	23.3	19.9	23.8
9	22.8	23.5	20.9	23.4
AVE	23.4	22.8	20.8	22.5 > 22.4

Cryo

	A	B	C	D
1			5.1	11.3
2			4.8	15.0
3			5.1	13.2
4			6.1	
AVE			5.3	13.2 = 9.2

Set 1+2 AVE = 19.8

Cryo 1+2 AVE = 9.8



16

10-21-96

210 Pb Core Attempt #2

35 INSIDE > SURFACE TO TOP
25 OUTSIDE > OF CORE TAKEN

SET A sed 10-21-95 to 7-16-96

$$19.8 - 19.5 = +0.3 \text{ cm}$$

Cryo A from 10-21-95 to 7-16-96

$$9.8 - 7.8 = 2.0 \text{ cm}$$

CLIFF DEBRA ADOL 17

5-22-97

STATION 1

	A	B	C	D
1	16.8	17.2	17.6	16.2
2	16.7	19.0	—	16.5
3	17.1	17.5	18.4	15.2
4	18.2	17.8	18.8	15.2
5	16.7	19.1	18.3	15.9
6	18.1	18.0	—	15.9
7	17.4	17.5	18.9	—
8	17.2	18.7	18.7	17.0
9	17.7	18.7	—	16.6

Cryo

1	8.7	8.7	11.2	11.7
2	broken	broken	scattered	13.6
3				10.0
4				

18

5-22-97

STATION 2

	A	B	C	D
1	22.1	21.5	23.0	23.9
2	21.3	24.3	22.8	22.5
3	24.0	24.0	22.9	22.4
4	21.3	23.1	22.7	22.5
5	24.6	24.6	22.8	21.2
6	22.7	22.0	23.7	23.9
7	23.2	22.2	22.5	—
8	22.2	23.7	22.0	23.8
9	22.3	23.9	23.0	23.1

Cryo

1	5.9	8.2	5.1	10.5
2	scattered	7.1		8.5
3		5.0		10.7
		good layer		

VISIBLE EROSION

SURFACE RHYO LOMES VISIBLE

CLIFF DABRA CHEN 19

5-29-97

10:40am Sunny

11:54am Hydrolab removed

HYDROLAB SURVEY

TRANSIT SETUP NEAR SHORELINE

1ST TURN FROM TRIPOD ON MARSH

TO BOTTOM (IN CREEK) S 12.5° E

ELEVATION 10.50 FT

HIGHEST POINT ON STADIA ROD

AT HYDROLAB 5.35 FT

2ND TURN FROM TRIPOD TO TOP
OF SET PIPE #2

N 14.5 W

4.17 FT

(a)

DISTANCE TOP OF PIPE TO MARSH
SURFACE

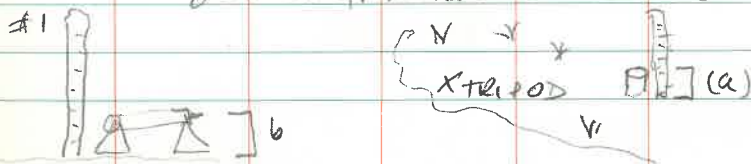
17.3 cm

17.8 cm

18.1 cm

(b)

DISTANCE FROM BOTTOM TO SENSOR 2



20

1-7-98

JIM, RON, DEBRA
cloudy windy

11:20 am

TIDE RISING 3cm

AT SET PIPE

STATION 1

	A	B	C	D
1	15.1	13.9	16.2	X
2	15.8	15.4	X	13.9
3	13.5	12.4	18.3	13.1
4	13.9	13.2	17.9	8.8
5	15.5	16.5	15.7	11.3
6	13.2	15.5	X	14.2
7	X	12.3	16.6	14.6
8	15.5	11.2	14.3	13.1
9	15.5	12.2	18.1	12.5

Cryo A B-D C

1	25.4	40.1	15.3
2	25.8	41.2	18.2
3	26.9	44.9	30.8
4	25.0	37.3	25.3
5	27.8		

1	11.6	} discontinuous
2	11.5	
3	12.5	
4	15.7	

21

1-7-98

STATION 2

	A	B	C	D
1	21.8	22.9	28.1	22.1
2	23.5	22.5	27.4	22.0
3	23.0	20.8	29.1	18.6
4	22.3	22.2	27.5	21.8
5	21.4	22.3	27.3	19.9
6	21.9	22.0	28.2	20.8
7	20.1	22.5	29.6	21.4
8	20.9	22.6	28.6	19.7
9	22.4	21.4	29.4	20.2

Cryo A-B

1	21.9
2	22.1
3	19.1
4	24.6

Iron out of nitrogen

50 mins to do both stations

8-27-98

Ron
Jin

STATION 1

	NWA	NEB	SWC	SED
1	12.7	12.9	16.2	blocked
2	12.4	13.0	blocked	12.0
3	14.7	11.6	15.2	13.0
4	13.9	13.0	14.2	13.9
5	13.8	12.0	14.0	11.8
6 *	10.5	12.6	blocked	11.8
7	blocked	13.1	13.3	15.2
8	13.2	12.1	14.8	13.3
9	14.5	13.4	13.8	13.9

*
Crab holeCry O 8/11

1	32.45	35.3	27.15
2	23.05	26.65	20.3
3	50.0		21.95
4		faint scattered	24.45
			27.00

8-27-98 cont.

STATION 2

	NWA	NEB	SWC	SED
1	22.0	19.6	21.4	19.6
2	23.1	19.7	21.3	17.3
3	24.0	22.9	20.0	18.6
4	21.6	21.1	18.0	21.8
5	22.3	19.7	19.6	19.2
6	21.6	18.5	21.3	20.0
7	20.0	22.8	18.9	20.6
8	21.1	20.5	20.7	22.9
9	23.2	21.7	20.3	19.8

Cry O 8/11

	A-B	C-D'	C-D''
1	11.9	15.85	32.2
2	15.4		
3	17.1		
4			

Rocky Creek

Jim L
29 Chn

STATION 1

	A NW	B NE	C SW	D SE
1	18.4	14.5	13.3	Block
2	17.2	13.8	15.1	16.4
3	17.3	11.5	Block	17.5
4	15.4	14.6	11.0	13.0
5	15.8	14.7	15.3	17.7
6	14.0	14.6	16.3	17.3
7	Block	14.3	11.0	14.7
8	14.3	12.4	15.6	15.6
9	13.8	15.3	13.9	15.6

Cryo 1 15.58

2 18.2

3

4

Jim L
29 Chn

Rocky Creek

2-23-99
Station 2

STATION 2

	A NW	B NE	C SW	D SE
1	23.1	22.2	22.4	19.1
2	23.1	21.4	20.0	21.4
3	23.6	22.5	22.3	20.8
4	21.4	20.7	20.2	20.2
5	19.4	20.2	22.1	20.1
6	18.9	23.3	22.2	20.5
7	22.2	29.3	21.6	19.9
8	21.1	19.8	21.1	21.2
9	21.3	21.0	21.1	21.5

Cryo 1

13.0

2

13.3

3

4

Mis labeled
Ponds -

Need to change the field labels
from C to D, or switch
C and D in the field

Jim
Chen
Mary

Rocky Creek 6/23/99

Station 1

	A	B	C	D
1	13.1	14.3	13.9	12.5
2	13.2	13.8	blocked	13.6
3	14.5	13.8	15.5	12.9
4	14.3	12.5	14.7	12.1
5	13.0	14.5	15.5	15.6
6	14.8	CH	blocked	12.4
7	blocked	113.9	14.3	13.6
8	14.5	12.6	12.8	14.4
9	13.9	14.0	blocked	13.2

Cryo	A-C	B-D
1	29.9	none
2	28.8	
3	27.5	
4	26.1	
5	30.5	

Creek

#2

6/23/99



Jim
Chen
Mary

Rocky Creek 6/23/99

Station 2

	A	B	C	D
1	22.1	21.7	19.6	20.3
2	21.7	21.7	20.8	21.8
3	22.1	22.7	22.5	21.4
4	21.4	21.0	19.8	22.0
5	21.6	21.6	18.7	21.1
6	22.0	22.2	20.7	20.0
7	22.1	20.3	20.1	22.0
8	22.9	20.3	20.0	22.3
9	22.2	21.0	20.2	19.4

A+B
recorded
as 10.0

Discontin-
uous

Discont

Cryo	A-B	C-D
1	32.0	30.5
2	none	
3	none	
4		

*new
feldspar

Creek

feldspar
addition
6/23/99



12-7-99

Jim B
Jim LRocky Ck
STA 2

A NW B NE C SW D SE

1	13.1	15.3	15.2	Blocked
2	13.5	14.7	Blocked	17.3
3	13.5	13.5	15.4	15.5
4	13.5	14.1	16.0	CH
5	13.7	13.2	15.6	15.0
6	13.4	14.6	Blocked	14.9
7	Blocked	13.8	15.9	14.5
8	14.1	14.6	13.2	14.5
9	12.6	13.7	Blocked	14.1

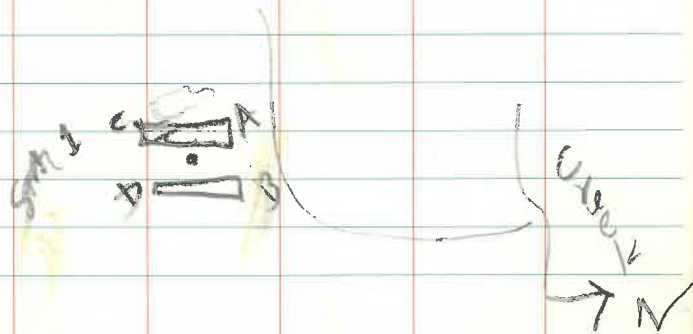
AC AC

Cryo 1 12/19/99 33.03

2 30.92 33.98

3 32.59 30.84

4



12-7-99

Jim B / Jim L

Rocky Ck
STA 2

A NW B NE C SW D SE

1	22.1	22.1	20.5	22.7
2	23.8	21.9	21.1	19.1
3	21.8	21.0	18.4	20.8
4	22.0	21.8	19.9	22.4
5	19.6	19.6	19.5	20.4
6	21.9	19.2	19.6	22.1
7	21.0	20.5	19.2	19.8
8	23.7	20.5	21.5	19.0
9	23.4	21.5	20.3	21.0

D-C

Cryo 1

D

2

31.19

3

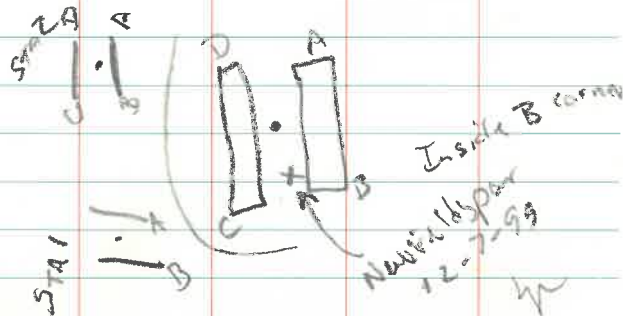
36.66

4

30.10

5

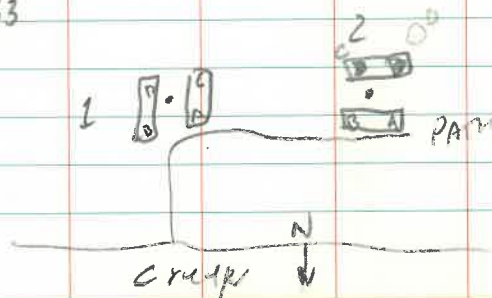
34.52



5-8-2000 Jim L Allen with
Rocky Creek #1

	A NW	B NE	C SW	D SE
1	13.4	15.3	13.7	blocked
2	12.9	13.7	12.5	11.8
3	13.9	13.4	13.8	13.4
4	13.3	13.8	13.7	14.5
5	12.9	13.4	12.7	13.4
6	12.4	11.5	15.8	12.7
7	blocked	12.3	12.0	15.0
8	14.3	12.0	14.2	14.6
9	12.5	12.8	12.8	14.9

	AC	BD
Cryo 1	17.72	12.32
2	19.11	13.75
3	23.31	
4	19.9	
5	23.33	



Rocky Creek #2 5-8-2000

	A NW	B NE	C SW	D SE
1	22.7	21.9	20.1	21.3
2	21.4	21.9	20.8	21.4
3	21.0	22.4	22.0	20.1
4	21.2	22.3	20.3	19.1
5	20.8	21.3	21.6	22.4
6	20.5	22.4	21.2	21.0
7	21.6	21.7	20.4	20.2
8	21.8	20.3	20.7	19.8
9	21.2	21.4	21.2	21.3

Cryo 1	1.4
2	0.92
3	0.56
4	

10/4/00 Rocky Creek Station 1 Jim L. Brown C

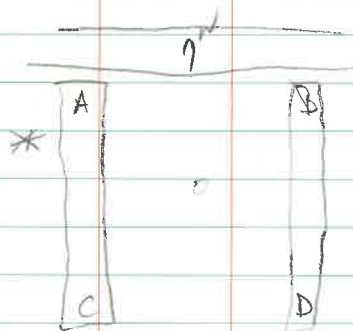
NW A NE B SW C SE D

1	13.6	12.2	14.1	blocked
2	12.7	14.5	13.7	14.8
3	16.4	13.9	13.5	14.1
4	14.4	14.1	14.1	11.8
5	14.2	12.6	15.6	15.3
6	13.4	11.4	11.9	15.7
7	blocked	13.9	13.2	14.1
8	15.0	13.0	13.3	14.4
9	13.7	13.6	12.8	14.8

C

Cryo 30.1

1	28.7
2	28.5
3	29.9
4	



10/4/00 Rocky Creek Station 2 Jim L. Brown C

NW A NE B SE C SW D

1	21.5	19.9	20.4	20.9
2	22.1	20.6	21.0	20.5
3	22.4	21.9	19.6	21.3
4	21.9	20.9	18.3	19.5
5	21.3	20.4	21.0	19.2
6	21.2	21.9	20.5	19.9
7	21.4	19.0	22.1	20.3
8	21.0	20.0	20.4	20.0
9	20.8	21.6	19.7	19.1

D

Cryo 2.8

1	3.6
2	8.7
3	11.9
4	9.8
5	6.9



5/10/01 11:38 a.m. Rocky Creek

Tom L.
Brewer Co.

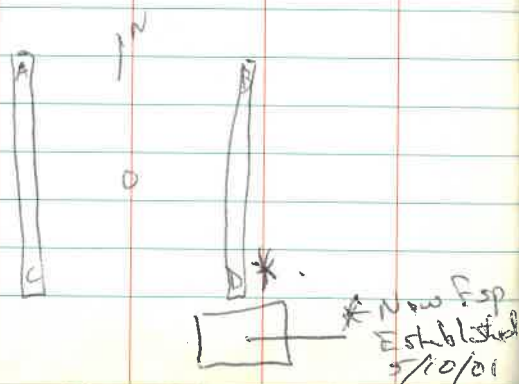
Station 1

	B	A	C	D
1	15.2	13.7	17.7	blocked
2	14.5	15.1	16.0	14.4
3	14.4	13.6	16.9	15.3
4	14.2	15.5	18.2	15.5
5	15.9	15.3	14.7	15.8
6	13.1	14.8	16.0	15.3
7	15.1	14.1	18.7	14.6
8	14.4	14.5	17.3	14.4
9	12.6	14.0	13.9	15.4

Cryo

	D
1	12.39
2	10.79
3	14.03
4	16.19
5	23.53

Temp = 23.8
 Sol = 32.3
 Cor Cond = 49.4
 Distance = 49'



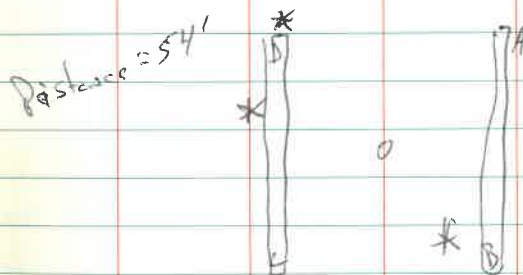
5/10/01 Rocky Creek Tom L.
Brewer Co.

Station 2

	A	B	C	D
1	22.2	19.7	21.6	22.3
2	22.0	20.3	20.7	20.1
3	19.5	19.7	23.4	18.7
4	22.3	21.8	19.7	18.6
5	20.0	21.2	21.0	20.5
6	22.2	18.5	21.5	21.6
7	21.5	22.6	21.3	20.9
8	21.8	20.1	20.4	19.7
9	23.3	21.9	20.1	20.4

Cryo

	B	C	D
1	5.91	13.20	6.48
2	4.67	13.91	6.60
3	5.04	17.05	9.88
4	5.54	16.14	7.70
5	8.88		5.85
	6.04		



* New Esp
 Established
 5/10/01

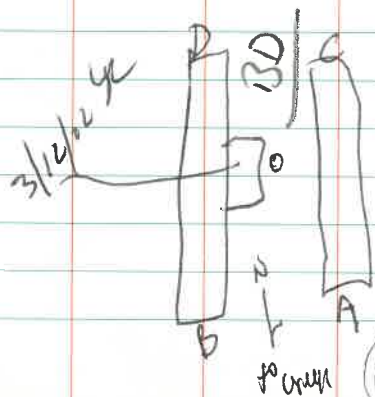
3/12/02 Jim & Jim B Rocky Creek 12:10pm

SET 1

	A NW	B NE	C SW	D SE
1	11.6	14.8	18.6	Blocked
2	14.1	11.1	18.9	14.3
3	13.6	14.1	16.3	13.9
4	18.0	14.6	16.2	9.9
5	14.8	13.2	14.7	13.2
6	13.7	13.7	16.1	17.5
7	Blocked	14.6	18.7	15.2
8	15.8	10.6	12.1	12.9
9	14.1	12.2	18.0	15.1

Cryo 14.5 13.2 16.6 14.0 = 14.6

2
3
4



Rocky Creek 03/12/0

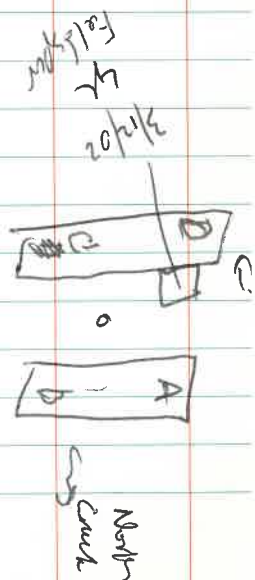
SET 2

	A NW	B NE	C SW	D SE
1	22.7	21.3	20.1	21.2
2	21.9	20.6	18.9	20.6
3	20.8	20.1	19.0	18.7
4	21.3	21.2	20.7	20.9
5	20.0	20.0	18.8	20.6
6	21.7	21.1	19.1	22.2
7	21.7	20.1	19.9	20.8
8	20.3	20.9	18.5	19.9
9	22.1	21.1	19.4	20.8

Cryo 21.4 20.7 19.4 20.6 = 20.6

2
3
4

Soil 21.5 ppt
Temp 20.9 °C
Cond 34.08 μS



04/22/03 Rocky Creek
SET 1

	A NW	B NE	C SW	D SE
1	15.6	16.0	16.1	Blocked
2	13.8	13.9	18.6	14.3
3	14.3	13.8	14.5	15.6
4	14.6	14.2	18.7	9.9
5	15.3	12.5	16.0	12.1
6	13.3	14.7	17.2	17.9
7	13.7	13.6	15.9	15.0
8	15.4	14.7	19.1	18.2
9	13.6	14.4	13.7	15.0

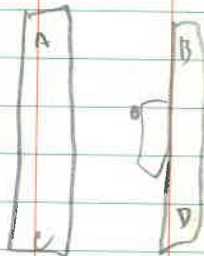
14.4 14.2 16.1 13.0 = 14.5

BD

Cryo

1	4.27
2	7.32
3	6.5
4	8.64

6.68 m
NW
SE



406 days

Rocky Creek 04/24/03
SET 2

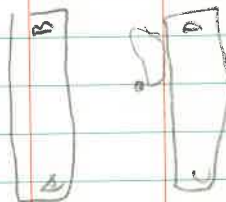
	A NW	B NE	C SW	D SE
1	22.8	21.4	21.4	16.9
2	22.1	20.8	21.1	18.6
3	21.3	20.8	21.5	21.3
4	22.0	21.8	20.8	23.4
5	21.9	20.9	20.0	17.4
6	21.1	24.4	20.5	23.6
7	21.8	21.4	20.3	20.7
8	21.9	20.8	19.4	19.6
9	20.6	23.8	20.4	20.9

21.7 21.8 20.6 20.3 = 21.1

Cryo DD

1	2.21
3	4.46
4	3.91
5	4.47

5.76 m
3.45
NW
SE



406 days

5-19-04

Rocky Creek

toe stand
Ladder

11:22 AM

SITE 1 (need to repair
wood)

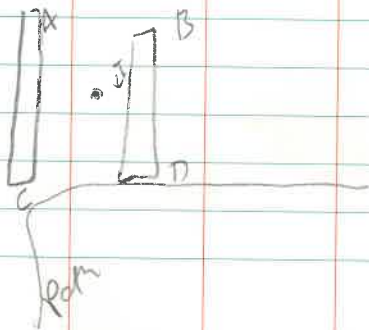
	A NW	B NE	C SW	D SE
1	13.2	17.0	15.7	X
2	13.2	15.2	X	15.2
3	11.1	16.6	16.1	11.6
4	9.6	16.8	16.2	12.8
5	12.7	16.4	14.9	11.1
6	13.8	14.9	X	13.5
7	X	17.4	14.5	13.3
8	14.8	17.6	14.8	14.2
9	16.1	16.8	15.0	15.1

X blocked

Cryo

BD
26.82
26.58
26.40
24.09
27.52

Finished all cryo
at 12:19 PM



5-19-04 Rocky Creek

140 m stream
Ladder

11:40 AM

SITE 2

	A NW	B NE	C SW	D SE
1	22.8	22.2	23.8	22.3
2	22.3	20.8	22.3	22.3
3	22.2	19.5	22.0	22.8
4	22.9	20.9	24.0	21.1
5	22.8	20.6	17.5	21.7
6	23.3	18.7	21.2	23.4
7	23.1	22.0	20.4	19.6
8	23.9	22.4	19.1	21.3
9	21.2	23.0	23.8	21.1

C change letter

Cryo

BD

19.18
16.75
13.75
11.99
11.43
24.62
21.46



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	.82412	30							.74896
40	.5688	.6916	1.2158	1.758	1.446	.82248	20							.74703
50	.5712	.6959	1.2183	1.751	1.437	.82084	10							.74509
35	.5736	.7002	1.2208	1.743	1.428	.81920	48							.74314
10	.5760	.7046	1.2233	1.736	1.419	.81756	50							.74120
20	.5783	.7089	1.2258	1.729	1.411	.81592	40							.73924
30	.5807	.7133	1.2283	1.722	1.402	.81428	30							.73728
40	.5831	.7177	1.2309	1.715	1.393	.81264	20							.73531
50	.5854	.7221	1.2335	1.708	1.385	.81100	10							.73333
36	.5878	.7265	1.2361	1.701	1.376	.80936	47							.73137
10	.5901	.7310	1.2387	1.695	1.368	.80772	50							.72940
20	.5925	.7355	1.2413	1.688	1.360	.80608	40							.72743
30	.5948	.7400	1.2440	1.681	1.351	.80444	30							.72546
40	.5972	.7445	1.2466	1.675	1.343	.80280	20							.72349
50	.5995	.7490	1.2494	1.668	1.335	.80116	10							.72152
37	.6018	.7536	1.2521	1.662	1.327	.80000	46							.71955
10	.6041	.7581	1.2549	1.655	1.319	.79884	50							.71758
20	.6065	.7627	1.2577	1.649	1.311	.79768	40							.71561
30	.6088	.7673	1.2605	1.643	1.303	.79652	30							.71364
40	.6111	.7720	1.2633	1.636	1.295	.79536	20							.71167
50	.6134	.7766	1.2661	1.630	1.288	.79420	10							.70970
38	.6157	.7813	1.2690	1.624	1.280	.79304	52							.70773
10	.6180	.7860	1.2719	1.618	1.272	.79188	50							.70576
20	.6202	.7907	1.2748	1.612	1.265	.79072	40							.70379
30	.6225	.7954	1.2778	1.606	1.257	.78956	30							.70182
40	.6248	.8002	1.2808	1.601	1.250	.78840	20							.70000
50	.6271	.8050	1.2838	1.595	1.242	.78724	10							.69818

39	.6293	.8098	1.2868	1.589	1.235	.77715	51
10	.6316	.8146	1.2898	1.583	1.228	.77531	50
20	.6338	.8195	1.2929	1.578	1.220	.77347	40
30	.6361	.8243	1.2959	1.572	1.213	.77162	30
40	.6383	.8292	1.2991	1.567	1.206	.76977	20
50	.6406	.8342	1.3022	1.561	1.199	.76791	10
40	.6428	.8391	1.3054	1.556	1.192	.76604	50
10	.6450	.8441	1.3086	1.550	1.185	.76417	50
20	.6472	.8491	1.3118	1.545	1.178	.76229	40
30	.6494	.8541	1.3151	1.540	1.171	.76041	30
40	.6517	.8591	1.3184	1.535	1.164	.75851	20
50	.6539	.8642	1.3217	1.529	1.157	.75661	10
41	.6561	.8693	1.3251	1.524	1.150	.75471	49
10	.6583	.8744	1.3284	1.519	1.144	.75280	50
20	.6604	.8796	1.3318	1.514	1.137	.75088	40
							30
							20
							10
							48
							50
							40
							30
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							40
							30
							20
							10
							45

7

2 SITES

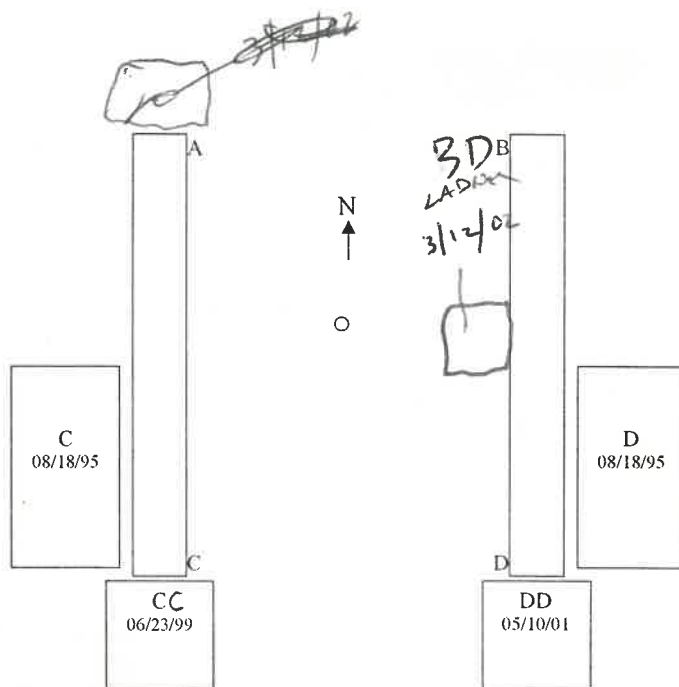
w/3 lat/lon

Cosin.	Cotg.	Cosec.	Sec.	Tan.	Sin.	Angle
Cosin.	Cotg.	Cosec.	Sec.	Tan.	Sin.	Angle

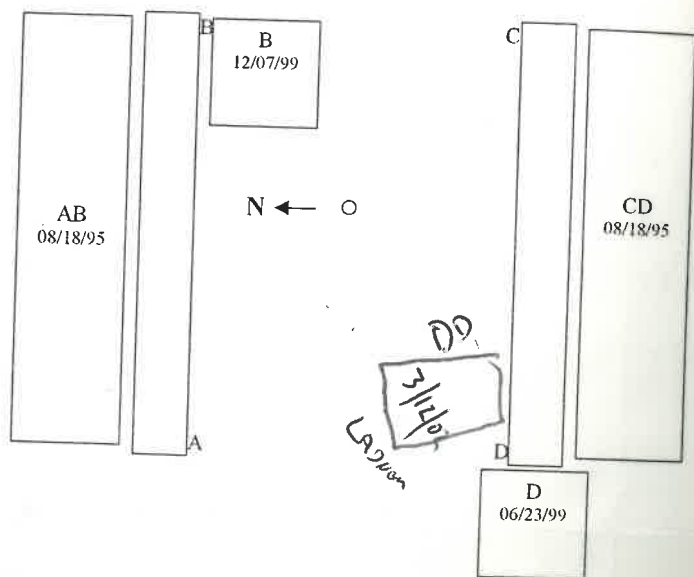
Cosin. Cotg. Cosec. Sec. Tan. Sin. Angle

Cosin. Cotg. Cosec. Sec. Tan. Sin. Angle

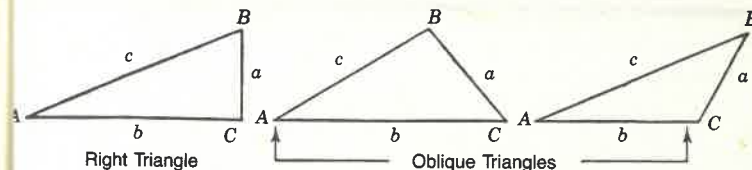
Station 1—Rocky Creek



Station 2—Rocky Creek



TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

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

Given A, B, c	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	$s = \frac{a + b + c}{2}$, $\sin \frac{1}{2} A = \sqrt{\frac{(s - b)(s - c)}{bc}}$, $\sin \frac{1}{2} B = \sqrt{\frac{(s - a)(s - c)}{ac}}$, $C = 180^\circ - (A + B)$
a, b, c	Area	$s = \frac{a + b + c}{2}$, $\text{area} = \sqrt{s(s - a)(s - b)(s - c)}$
A, b, c	Area	$\text{area} = \frac{bc \sin A}{2}$
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 distance = $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.