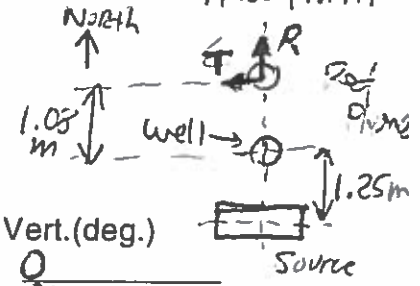
BSU GEOPHYSICS VSP OBSERVER'S LOG

Water Table = 16.1ft Below Casing
T/D = 17.33+1.1m

Coordinate System Origin at Borehole
Casing Elevation: 0.61m above G
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Downhole Ph. Break Out Box Ref. Phone
B D F
A C E
1 2 3
B D F
A C E
4 5 6
Wire Station Channel

Reference Phone: Offset 1.08m
Azimuth 0
Elev. G - .1m
X= 0
Y= 1.08



Channel Configuration: (Geostuff Phone)
Borehole Phone
V=Channel 1
R=Channel 2
T=Channel 3
Blue Box configuration →

Reference Phone
V=Channel 4 (C D)
R=Channel 5 (E F)
T=Channel 6 (A B)

Reference Polarization:

	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 4/May/96 Location: RSmw 15 [Capitol STATION]
High Cut 1000 Low Cut 4HZ Sample Int. .0002 Number of Samples 2500
RSmW15 [X = 9759.92333 Y = 10179.61006 Z = 999.22472] meters

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
1	RSmw0001	1.25m		1.25m	~~270~~	G			270	90
2				1.25m					90°	90
3	RSmw0003	17.0m		1.25m					270°	90
4		17.0m							90°	90
5		16.5m							270°	90
6		16.5m							90°	90
7		16.0m							270°	90
8		16.0m							90°	90
9		15.5m							270°	90
10		15.5m							90°	90

Test

BS

(1)

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0.61m above ℄
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.08
Azimuth 0
Elev. ℄ − .1m
X= 0
Y= 1.08

Channel Configuration:

	Borehole Phone	Reference Phone
V	Channel 1	Channel 4
R	Channel 2	Channel 5
T	Channel 3	Channel 6

Reference Polarization:

	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 4 mar 96 Location: RSMW 15
High Cut 1000 Low Cut 4 117 Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
11		15.0m		1.25m		℄			270	90
12		15.0m		↓		↓			90°	90
13		14.5m							270	90
14		14.5m							90°	90°
15		14.0m							270°	90
16		14.0m							90°	90
17		13.5m							270°	90
18		13.5m							90°	90°
19		13.0m							270	90
20		13.0m		↓		↓			90°	90°

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0.61m above ℄
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.08m
Azimuth 0
Elev. ℄-.1m
X= 0
Y= 1.08

Channel Configuration:

	Borehole Phone	Reference Phone
V	Channel 1	Channel 4
R	Channel 2	Channel 5
T	Channel 3	Channel 6

Reference Polarization:

	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 4 mar 96 Location: RSMW 5
High Cut 1000 HZ Low Cut 7HZ Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
21		12.5m		1.25m		℄			270	90
22		12.5m							90	90
23		12.0m							270	90
24		12.0							90	90
25		11.5							270	90
26		11.5							90	90
27		11.0							270	90
28		11.0							90	90
29		10.5							270	90
30		10.5		↓		↓			90	90

12:54

(31)

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0.61m above ℄
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.08
Azimuth 0
Elev. ℄ -.11m
X= 0
Y= 1.08

Channel Configuration:

	Borehole Phone	Reference Phone
V=Channel	1	4
R=Channel	2	5
T=Channel	3	6

Reference Polarization:

	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 4 march 91 Location: RSMW 15
High Cut 1000 Low Cut 4HZ Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
31		10.0m		1.25		℄			270	90
32		10.0m		↓		↓			90	90
33		9.5m							270	90
34		9.5m							90	90
35		9.0m							270	90
36		9.0m							90	90
37		8.5m							270	90
38		8.5m							90	90
39		8.0m							270	90
40		8.0m		↓		↓			90	90

(2)

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0.61m above ℄
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.08m
Azimuth
Elev. ℄ - .1m
X= 0
Y= 1.08

Channel Configuration:

	Borehole Phone	Reference Phone
V	Channel 1	Channel 4
R	Channel 2	Channel 5
T	Channel 3	Channel 6

Reference Polarization:

	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 4 March 96 Location: RSMW 15
High Cut 1000 Low Cut 4 HZ Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
41		7.5m		1.25m		℄			270	90
42		7.5m							90	90
43		7.0m							270	90
44		7.0m							90	90
45		6.5m							270	90
46		6.5m							90	90
47		6.0m							270	90
48		6.0m							90	90
49		5.5m							270	90
50		5.5m							90	90

13:15

(5)

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0.61 m above GL
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.08m
Azimuth 0
Elev. GL -.1m
X= 0
Y= 1.08

Channel Configuration:

	Borehole Phone	Reference Phone
V=Channel	1	4
R=Channel	2	5
T=Channel	3	6

Reference Polarization:

	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 4 March 96 Location: RSMW 15
High Cut 1000 Low Cut 4 Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
51		5.0		1.25m		GL			270	90
52		5.0							90	90
53		4.5							270	90
54		4.5							90	90
55		4.0							270	90
56		4.0							90	90
57		3.5							270	90
58		3.5							90	90
59		3.0							270	90
60		3.0							90	90

(6)

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0.61m above ℄
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.08m
Azimuth 0
Elev. ℄ -.1m
X= 0
Y= 1.08

Channel Configuration:

	Borehole Phone	Reference Phone
V	Channel 1	Channel 4
R	Channel 2	Channel 5
T	Channel 3	Channel 6

Reference Polarization:

	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 4 mar 96 Location: RSMW 15
High Cut 1000 Low Cut 4 HZ Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
61		2.5		1.25m		℄			270	90
62		2.5							90	90
63		2.0							270	90
64		2.0							90	90
65		1.5							270	90
66		1.5							90	90
67		1.0							286	90
68		1.0							90	90
69		17.0							0	180
70		16.5							0	180

PV

Bow Spring 5

end SH

(7)

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0.61m above ℄
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.08m
Azimuth 0
Elev. ℄ −.1m
X= 0
Y= 1.08

Channel Configuration:	Borehole Phone	Reference Phone
	V=Channel 1	V=Channel 4
	R=Channel 2	R=Channel 5
	T=Channel 3	T=Channel 6

Reference Polarization:	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 4 MAY 96 Location: RSMU 15
High Cut 1600 Low Cut ANZ Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
71		16.0 m		1.25m		℄			0	180
72		15.5m		↓		↓			0	180
73		15.0m							0	180
74		14.5							0	180
75		14.0							0	180
76		13.5							0	180
77		13.0							0	180
78		12.5							0	180
79		12.0							0	180
80		11.5		↓		↓			0	180

P1

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0.61m
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.08m
Azimuth 0
Elev. ¢ - .1m
X= 0
Y= 1.08

Channel Configuration:

	Borehole Phone	Reference Phone
V	Channel 1	Channel 4
R	Channel 2	Channel 5
T	Channel 3	Channel 6

Reference Polarization:

	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 1 mar 96 Location: RSMW 15
High Cut 1000 Low Cut 4 Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
81		11.0		1.25m		¢			0	180
82		10.5							0	180
83		10.0							0	180
84		9.5							0	180
85		9.0							0	180
86		8.5							0	180
87		8.0							0	180
88		7.5							0	180
89		7.0							0	180
90		6.5							0	180

(2)

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0.61m above Gl
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.08m
Azimuth 0
Elev. Gl - .1m
X= 0
Y= 1.08

Channel Configuration:

	Borehole Phone	Reference Phone
V=Channel	1	4
R=Channel	2	5
T=Channel	3	6

Reference Polarization:

	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 4 mar 96 Location: RSMW 15
High Cut 1000 Low Cut 4Hz Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
91		6.0		1.25m		Gl			0	180
92		5.5							0	180
93		5.0							0	180
94		4.5							0	180
95		4.0							0	180
96		3.5							0	180
97		3.0							0	180
98		2.5							0	180
99		2.0							0	180
100		1.5							0	180

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0.61m above ℄
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.08
Azimuth 0
Elev. ℄ -.1m
X= 0
Y= 1.08

Channel Configuration:

	Borehole Phone	Reference Phone
V=Channel	1	4
R=Channel	2	5
T=Channel	3	6

Reference Polarization:

	Azi.(deg.)	Vert.(deg.)
V	0	0
R	0	90
T	270	90

Date: 4 Mar 96 Location RSMW 15
High Cut 1000 Low Cut 4 Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
101		1.0m		1.25m		℄			0	180
/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/

N
↑
Source
↓

(11)

Down Hole Geophone Field Check List

Project: Capitol Station

Date: 4 March 96 Odometer Start:_____ Finish:_____

OFFICE

Item	Out	In	Comment
BHG-2 Borehole Geophone	✓	✓	
BHGC-1 Geophone Controller (Blue)	✓	✓	
Cable: Spool to BHGC-1	✓	✓	
Cable: BHGC-1 to Bison	✓	✓	
Ban./Alligator Power CablesBHGC-1	✓	✓	
Break out Box	✓	✓	
Oyo 3-C Reference Phone (Blue)	✓	✓	
Dummy tool	✓	✓	
Pulley/Winch Assem.	✓	✓	
Bison Seismograph	✓	✓	
Vertical Hammer Source	✓	✓	
Black Tape	✓	✓	Need more
WD-40	✓	✓	
Observer's Sheets/Note Book	✓	✓	
Rope	✓	✓	
Rock Hammer	—	—	
Tape measure (50 m)	✓	✓	
Gloves	—	—	
Compass and Maps	✓	✓	
Trigger Switch Toggle Box	✓	✓	
Gas Card & Keys	✓	✓	
Water Table Logging Probe	✓	✓	

Lincoln Street and Garage

Item	Out	In	Comment
Bison Cable Box (yellow) Power Cable Trigger Cables Black Tape	✓	✓	check Triggers
Bison Tool Box (grey) Paper for bison Miscl. Electronics/Safety	✓	✓	
Tool Box			
Trigger Extension Cord	✓	✓	check out
Tripod Head	✓	✓	
Tripod Legs (3)	✓	✓	
Batteries (12V car) Need 2	(3)	✓✓	Recharge Bison
Jumper Cable for 24V operation	✓	✓	
Railroad Tie Horizontal Hammers	✓	✓	
Sand Bags (2)		✓	
Shovel	✓	✓	
Pick	✓	✓	
Nails to hold off hammer heads	✓	✓	

areas, wells affected by end-of-March deadline

1st priority deep

RSMW-16 MWCP 18A
18 SPT1
SPT2
SPT3

~~Shallow~~:
2nd priority
RSMW-5
-8
MWCP-8A