

VSP Preliminary Data Sheet

Date: 6 AUG 2002 Type of Phones 0/0

1. Well Name X5

2. Location of Well

X= 9963.10 Y= 10023.25 Z= 849.93

Casing Elevation: 849.93

3. Depth to top of water table (measured from CE) 7.83 ft = 2.38658m sub CE

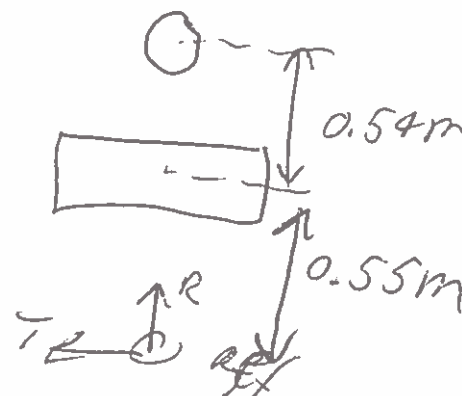
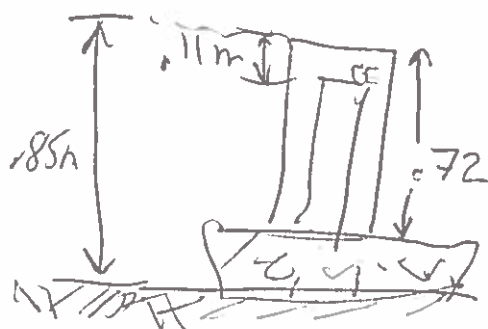
4. Casing Elevation, distance above ground level= 0.74 $\nabla \pm 847.54$

5. Reference phone offset from borehole= 1.09m

6. Reference phone depth below ground level= .05m

7. Source Offset from borehole= 0.54m

8. Sketch of setup:



9. Blue Box switch settings:

Channel	Component
<u>1</u>	Vertical
<u>2</u>	Longitudinal (radial)
<u>3</u>	Transverse

VSP Check List

Project: URISP

Date: 6 AUG

Odometer Start: 27520 Finish: 27541

Time Out: 8:41 Time In: 13:00

Item	Out	In	Comment
BHG-2 Borehole Geophone	✓	✓	
BHGC-1 Control Box (Blue)	✓	✓	
Cable: Spool to BHGC-1	✓	✓	
Cable: BHGC-1 to Bison	✓	✓	
Ban/Alligator Power Cables BHGC-1	✓	✓	
OYO 3-c Reference Phone (Blue)	✓	✓	
Dummy tool	✓	✓	
Snatch Block and Come-a-long	✓	✓	
Bison Seismograph <i>NO</i>			
90° Hammer Source <i>NO</i>			
Tripod , head and 3 poles <i>NO</i>			
135° Hammer Source	✓	✓	
WD-40 and Black Tape	✓	✓	
Observer's Sheets/Note Book	✓	✓	
Rope	✓	✓	
→ Claw Hammer and Large Nails	✓	✓	
Tape measure (50m)	✓	✓	
Gloves	✓	✓	
Compass and Maps	✓	✓	
24Volt Clamp Battery	✓	✓	
Gas Card & Keys	✓	✓	
Water Table Logging Probe	✓	✓	

Voltmeter

Laptop PPL cable

Batteries Deep cycle

208-863-7378 cell

*✓ ✓
✓ ✓ ✓*

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 174 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 V=Channel 24 V=Channel 21
 R=Channel 23 R=Channel 20
 T=Channel 22 T=Channel 19
 Configuration: Ref. Polarization: Az
 V 0
 R 0
 T 270
 Vert.
0
90
90

Date: 6 AUG 2002 Location: X5-VSP
 High-Cut 1000 Low-Cut 0 Sample Int. 0.0025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
1		21.25					0	-54	270	135
2		21.25					1	7	90	135
3		21.00					1	7		
4		21.00					1	7		
5		20.75					1	7		
6		20.75					1	7		
7		20.50					1	7		
8		20.50					1	7		
9		20.25					1	7		
10		20.25								

↑ V = 897.5842

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: .74 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9763.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 Configuration: V=Channel 24 V=Channel 21
 R=Channel 23 R=Channel 20
 T=Channel 22 T=Channel 19
 Date: 6 AUG 2002 Location: X5-VelSP
 High-Cut 1000 Low-Cut 0 Sample Int. .00025 Number Samples 2000

Offset: 1.09 m
 Azimuth 180
 Elev. 0.05 m below G.L.
 X = 0 m
 Y = -1.09 m
 Ref. Polarization: Az
 V 0
 R 0
 T 270
 Vert. 0

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
11		20.00					0	-54	270	135
12		20.00					1	1	90	135
13		19.75								
14		19.75								
15		19.50								
16		19.50								
17		19.25								
18		19.25								
19		19.00								
20		19.00					1		1	

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 74 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X= 9963.10 Y= 10023.25 Z= 849.93
 Channel Borehole Phone Reference Phone
 Configuration: V=Channel 24 V=Channel 21 Az
 R=Channel 23 R=Channel 20 0
 T=Channel 22 T=Channel 19 90
 Ref. Polarization: V 0
 R 0
 T 270
 Vert. 0
 90
 90

Date: 6AUG2002 Location: XS-URSP
 High-Cut 1000 Low-Cut 0 Sample Int. 0.0025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
21		18.75					0	-54	270	135
22		18.75							90	135
23		18.50								
24		18.50								
25		18.25								
26		18.25								
27		18.00								
28		18.00								
29		17.75								
30		17.75								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 174 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 Configuration: V=Channel 24 V=Channel 21 Az
 R=Channel 23 R=Channel 20 0
 T=Channel 22 T=Channel 19 90
 Ref. Polarization: V 0
 R 0
 T 270
 Vert. 0
 90
 90

Date: 6 AUG 2002 Location: X5-URSP
 High-Cut 1000 Low-Cut 0 Sample Int. .0025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
41		16.25					0	-54	270	135
42		16.25							90	135
43		16.00								
44		16.00								
45		15.75								
46		15.75								
47		15.50								
48		15.50								
49		15.25								
50		15.25								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 174 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 V=Channel 24 V=Channel 21
 R=Channel 23 R=Channel 20
 T=Channel 22 T=Channel 19
 Configuration: Ref. Polarization: Az Vert.
 V 0 0
 R 0 90
 T 270 90

Date: 6 AUG 2002 Location: XS-URSP
 High-Cut 1000 Low-Cut 0 Sample Int. 0.0025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
51		15.00					0	-54	270	135
52		15.00							90	135
53		14.75								
54		14.75								
55		14.50								
56		14.50								
57		14.25								
58		14.25								
59		14.00								
60		14.00								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 174 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 V=Channel 24 V=Channel 21
 R=Channel 23 R=Channel 20
 T=Channel 22 T=Channel 19
 Configuration: Ref. Polarization: Az
 V 0
 R 0
 T 270
 Vert.
0
90
90

Date: 6 AUG 2002 Location: XS-URSP
 High-Cut 1000 Low-Cut 0 Sample Int. .0025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
61		13.75					0	-54	270	135
62		13.75							90	135
63		13.50								
64		13.50								
65		13.25								
66		13.25								
67		13.00								
68		13.00								
69		12.75								
70		12.75								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 79 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 Configuration: V = Channel 24 V = Channel 21 Az 0
 R = Channel 23 R = Channel 20 90
 T = Channel 22 T = Channel 19 90

Date: 6 AUG 2002 Location: XS-URISP
 High-Cut 1000 Low-Cut 0 Sample Int. 0.0025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
71		12.50					0	-154	270	135
72		12.50							90	135
73		12.25								
74		12.25								
75		12.00								
76		12.00								
77		11.75								
78		11.75								
79		11.50								
80		11.50								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 74 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 V=Channel 24 V=Channel 21
 R=Channel 23 R=Channel 20
 T=Channel 22 T=Channel 19
 Configuration: Ref. Polarization: Az
 V 0
 R 0
 T 270
 Vert. 0
 Offset: 1.09 m
 Azimuth 180
 Elev. 05 m below G.L.
 X = 0 m
 Y = -1.09 m

Date: 6 AUG 2002 Location: XS-URSP
 High-Cut 1000 Low-Cut 0 Sample Int. 00025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
81		11.25					0	-1.59	270	135
82		11.25					1		90	135
83		11.00					1			
84		11.00					1			
85		10.75					1			
86		10.75					1			
87		10.50					1			
88		10.50					1			
89		10.25					1			
90		10.25								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 74 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 Configuration: V=Channel 24 V=Channel 21
 R=Channel 23 R=Channel 20
 T=Channel 22 T=Channel 19
 Date: 6 AUG 2002 Location: X5-VSP
 High-Cut 1000 Low-Cut 0 Sample Int. 0.0025 Number Samples 2000
 Offset: 1.09 m
 Azimuth 180
 Elev. 105 m below G.L.
 X = 0 m
 Y = -1.09 m
 Ref. Polarization: Az
 V 0
 R 0
 T 270
 Vert. 0

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
91		10.00					0	-59	270	135
92		10.00							90	135
93		9.75								
94		9.75								
95		9.50								
96		9.50								
97		9.25								
98		9.25								
99		9.00								
100		9.00								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 34 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 Configuration: V=Channel 24 V=Channel 21 Az 0
 R=Channel 23 R=Channel 20 R 0
 T=Channel 22 T=Channel 19 T 270
 Ref. Polarization: V 0 Az 0
 X = 0 Y = -1.09 m below G.L.
 Offset: 1.09 m
 Azimuth 180
 Elev. 05
 Vert. 0

Date: 6 AUG 2002 Location: XS-URSP
 High-Cut 1000 Low-Cut 0 Sample Int. 0.0025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
101		8.75					0	-59	270	135
102		8.75							90	135
103		8.50								
104		8.50								
105		8.25								
106		8.25								
107		8.00								
108		8.00								
109		7.75								
110		7.75								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 77 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 Configuration: V=Channel 24 V=Channel 21 Az
 R=Channel 23 R=Channel 20 R
 T=Channel 22 T=Channel 19 T
 Ref. Polarization: V 0 Az 0 Vert. 0
 X = 0 m
 Y = -1.09 m
 Offset: 1.09 m
 Azimuth 180
 Elev. .05 m below G.L.

Date: 6AUG2002 Location: XS-URSP
 High-Cut 1000 Low-Cut 0 Sample Int. .00025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
<u>111</u>		<u>7.50</u>					<u>0</u>	<u>-.59</u>	<u>270</u>	<u>135</u>
<u>112</u>		<u>7.50</u>							<u>90</u>	<u>135</u>
<u>113</u>		<u>7.25</u>								
<u>114</u>		<u>7.25</u>								
<u>115</u>		<u>7.00</u>								
<u>116</u>		<u>7.00</u>								
<u>117</u>		<u>6.75</u>								
<u>118</u>		<u>6.75</u>								
<u>119</u>		<u>6.50</u>								
<u>120</u>		<u>6.50</u>								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 74 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 Configuration: V = Channel 24 V = Channel 21 Az 0
 R = Channel 23 R = Channel 20 R 0
 T = Channel 22 T = Channel 19 T 270
 Ref. Polarization: V 0 Az 0
 X = 0 m Y = -1.09 m Vert. 0
 Offset: 1.09 m

Date: 6AUG2002 Location: XS-URSP
 High-Cut 1000 Low-Cut 0 Sample Int. 0.0025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
121		6.25					0	-54	270	135
122		6.25					1	1	90	135
123		6.00					1	1		1
124		6.00					1	1		1
125		5.75					1	1		
126		5.75					1	1		
127		5.50					1	1		
128		5.50					1	1		
129		5.25					1	1		
130		5.25					1	1		

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 74 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 Configuration: V=Channel 24 V=Channel 21 Az 0
 R=Channel 23 R=Channel 20 R 0
 T=Channel 22 T=Channel 19 T 270
 Ref. Polarization: V 0
 Vert. 0

Date: 6 AUG 2002 Location: X5-VSP
 High-Cut 1000 Low-Cut 0 Sample Int. 0.0025 Number Samples 2000

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
131		5.00					0	-54	270	135
132		5.00							90	135
133		4.75								
134		4.75								
135		4.50								
136		4.50								
137		4.25								
138		4.25								
139		4.00								
140		4.00								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 79 m above G.L.
 Azimuth x-axis: 70
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 Configuration: V = Channel 24 V = Channel 21
 R = Channel 23 R = Channel 20
 T = Channel 22 T = Channel 19
 Date: 6 AUG 2002 Location: X5-VSP
 High-Cut 1000 Low-Cut 0 Sample Int. 0.0025 Number Samples 2000
 Reference Phone: Offset: 1.09 m
 Azimuth 180
 Elev. 05 m below G.L.
 X = 0 m
 Y = -1.09 m
 Ref. Polarization: Az Vert.
 V 0 0
 R 0 90
 T 270 90

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
141		3.75					0	-54	270	135
142		3.75							90	135
143		3.50								
144		3.50								
145		3.25								
146		3.25								
147		3.00								
148		3.00								
149		2.75								
150		2.75								

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 174 m above G.L.
 Azimuth x-axis: 90
 Azimuth y-axis: 0
 Well Coord: X = 9963.10 Y = 10023.25 Z = 849.93
 Channel Borehole Phone Reference Phone
 V=Channel 24 V=Channel 21
 R=Channel 23 R=Channel 20
 T=Channel 22 T=Channel 19
 Date: 6 AUG 2002 Location: X5-VSP
 High-Cut 1000 Low-Cut 0 Sample Int. 0.0025 Number Samples 2000
 Offset: 1.09 m
 Azimuth 180
 Elev. 105 m below G.L.
 X = 0 m
 Y = -1.09 m
 Ref. Polarization: Az 0
 V 0
 R 0
 T 270
 Vert. 0

Shot		Borehole Phone			Source			Source Polarization		
Rec.	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
151		2.50					0	-1.54	270	135
152		2.50							90	135
153		2.25								
154		2.25								
155		2.00								
156		2.00								
157		1.75								
158		1.75								
159		1.50								
160		1.50								

$N_4 S_6 N$

 Bow Spring

Date: 6 AUG 2002 Location: X5-URSP Sample Int. 00025 Number Samples 2000

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