BSU Borehole Engineering Seismology
Preliminary Observations

Date: 20 May 98 Type of Phones OYO 14 W 7 ≈ 65000 ft³/s

1. Name of well X4

High Water Table

2. Location of well
   X= 9985.87831
   Y= 9983.00947
   Z= 849.39005 (mp Casing Elevation, CE.)

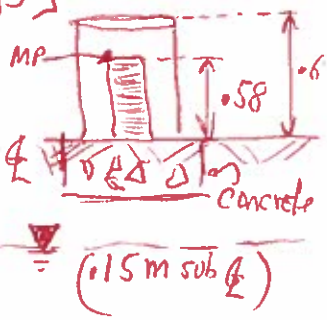
3. Depth to top of water table (measured from CE) (2.40ft) = [0.7315] m

4. Height above ground level to CE (.69-.11) = 0.58m

5. Reference Phone offset from borehole 1.57 m

6. Reference Phone depth below ground level _____

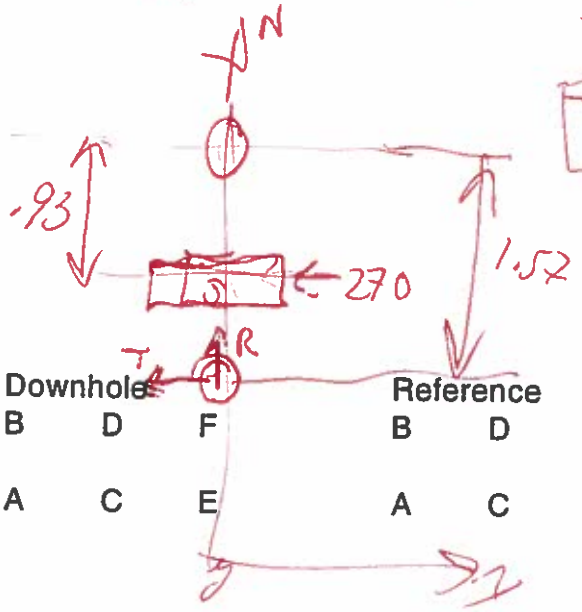
7. Source Offset from borehole .93m South



8. Sketch of setup

T/D = 21.54 1.12m

T/D = 22.62 m



9. Break out box wiring

Downhole			Reference		
B	D	F	B	D	F
A	C	E	A	C	E

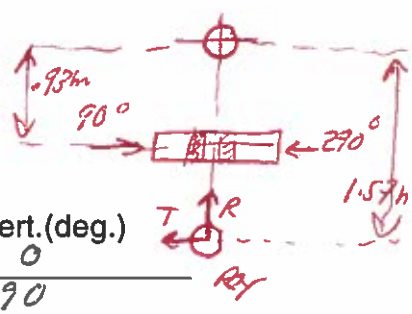
10. Blue box channel settings

Channel	Component
1	Vertical
2	Longitudinal (radial)
3	Transverse

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: .58m above ℄
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset 1.57m
Azimuth 180°
Elev. ℄
X= 0
Y= -1.57m



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

Well Coord
Reference Polarization:
X 9985.87831 m
Y 9983.0097 m
Z 849.39005 m above ℄

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

▽ .7315m sub CE

Date: 20 MAY 98 Location: ORISP X4 Well
High Cut 1000 HZ Low Cut 4 HZ Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone		Source (meters)					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
	w1x40001	22.0		0.93	180°	℄	0	-0.93	270°	135°
	0002	22.0							90°	135°
	0003	21.75							270°	135°
	0004	21.75							90°	135°
	0005	21.50							270°	135°
	0006	21.50							90°	135°
	0007	21.25							270°	135°
	0008	21.25							90°	135°
	0009	21.00							270°	135°
	0010	21.00							90°	135°

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: .58 m above ℄
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= −1.57 m

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: 20 MAY 98 Location: URISP X4 Well
High Cut 1000 HZ 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
	w1x400bi	20.75				℄	0	−.93	270°	135°
	0012	20.75				↓	↓	↓	90°	135°
	0013	20.50				↓	↓	↓	270°	135°
	0014	20.50				↓	↓	↓	90	135°
	0015	20.25				↓	↓	↓	270	135°
	0016	20.25				↓	↓	↓	90°	135°
	0017	20.00				↓	↓	↓	270°	135°
	0018	20.00				↓	↓	↓	90°	135°
	0019	19.75				↓	↓	↓	270°	135°
	0020	19.75				↓	↓	↓	90°	135°

10:35

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: .58m AE
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= -1.57 m

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: 20 MAY 98 Location: URISP X4 Well
High Cut 1000 HZ 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
	w1x4002i	19.50				E	0	-.93	270°	135°
Print →	0022	19.50							90°	135°
	0023	19.25							270°	155°
	0024	19.25							90°	155°
	0025	19.00							270°	155°
	0026	19.00							90°	155°
	0027	18.75							270°	135°
	0028	18.75							90°	135°
	0029	18.50							270°	135°
	0030	18.50							90°	155°

BSU GEOPHYSICS VSP OBSERVER'S LOG

10:43

Coordinate System Origin at Borehole
Casing Elevation: .58 above ℄
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= -1.57

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: 20 MAY 98 Location: URISP X4 Well
High Cut 1000 HZ 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
PT	w1x4003i	18.25				℄	0	-.93	270°	135°
	0032	18.25				↓	↓	↓	90°	135°
	0033	18.00				↓	↓	↓	270°	135°
	0034	18.00				↓	↓	↓	90°	135°
	0035	17.75				↓	↓	↓	270°	135°
	0036	17.75				↓	↓	↓	90°	135°
	0037	17.50				↓	↓	↓	270°	135°
	0038	17.50				↓	↓	↓	90°	135°
	0039	17.25				↓	↓	↓	270°	135°
	0040	17.25				↓	↓	↓	90°	135°

10:50

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: @ +.58m
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset
Azimuth
Elev.
X= 0
Y= −1.57m

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: 20 MAY 98 Location: ORISP X4 Well
High Cut 1000 HZ 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
	w1x4004i	17.00				@	0	−.93	270°	135°
P→	0042	17.00							90°	135°
	0043	16.75							270°	135°
	0044	16.75							90°	135°
	0045	16.50							270°	135°
	0046	16.50							90°	135°
	0047	16.25							270°	135°
	0048	16.25							90°	135°
	0049	16.00							270°	135°
	0050	16.00							90°	135°

10:56

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 6+.58m
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset
Azimuth
Elev.
X= 0
Y= -1.57

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: 20 MAY 98 Location: URISP X4 well
High Cut 1000 HZ 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
	w1x4005i	15.75				℄	0	-.93	270°	135°
	0052	15.75							90°	135°
	0053	15.50							270°	135°
P→	0054	15.50							90°	135°
	0055	15.25							270°	135°
	0056	15.25							90°	135°
	0057	15.00							270°	135°
	0058	15.00							90°	135°
	0059	14.75							270°	135°
	0060	14.75							90°	135°

11:02

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: @ +.58m
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset
Azimuth
Elev.
X= 0
Y= -1.57m

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: 20 MAY 98 Location: URISP X4 well
High Cut 1000 HZ 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
	wlx4006;	14.50				@	0	-.93	270°	135°
	0067	14.50							90°	135°
	0063	14.25							270°	135°
	0064	14.25							90°	135°
	0065	14.00							270°	135°
	0066	14.00							90°	135°
	0067	13.75							270°	135°
	0068	13.75							90°	135°
	0069	13.50							270°	135°
	0070	13.50							90°	135°

11:16

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: @ +.58m
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= -1.57m

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: 20 MAY 98 Location: URISP X4 Well
High Cut 1000 HZ 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
	w1x40071	13.25				@	0	-.93m	270°	135°
P-	0072	13.25							90°	135°
	0073	13.00							270°	135°
	0074	13.00							90°	135°
	0075	12.75							270°	135°
	0076	12.75							90°	135°
	0077	12.50							270°	135°
	0078	12.50							90°	135°
	0079	12.25							270°	135°
	0080	12.25							90°	135°

11:16

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: ℄ +.58
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= -1.57m

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: 20 MAY 98 Location: URISP X4 Well
High Cut 1000 HZ 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
	wlx4008;	12.00				℄	0	-.93	270°	135°
	0082	12.00							90°	135°
	0083	11.75							270°	135°
	0084	11.75							90°	135°
	0085	11.50							270°	135°
	0086	11.50							90°	135°
	0087	11.25							270°	135°
	0088	11.25							90°	135°
	0089	11.00							270°	135°
	0090	11.00							90°	135°

11:22

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: @ +.58
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= −1.57m

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: 20 MAY 98 Location: URISP X4 Well
High Cut 1000 HZ 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
	w1x40091	10.75				@	0	−.97	270°	135°
P→	0092	10.75							90°	135°
	0093	10.50							270°	135°
	0094	10.50							90°	135°
	0095	10.25							270°	135°
	0096	10.25							90°	135°
	0097	10.00							270°	135°
	0098	10.00							90°	135°
	0099	9.75							270°	135°
	0100	9.75							90°	135°

11:28

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: @ +.58m
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= -1.57m

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: 20 MAY 98 Location: URISP X4 Well
High Cut 1000 HZ 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
	w1x40101	9.50				@	0	-.93	270°	135°
	0102	9.50							90°	135°
	0103	9.25							270°	135°
P→	0104	9.25							90°	135°
	0105	9.00							270°	135°
	0106	9.00							90°	135°
	0107	8.75							270°	135°
	0108	8.75							90	135°
	0109	8.50							270°	135°
	0110	8.50							90°	135°

11:35

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 6 + .58
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= −1.57

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: 20 MAY 98 Location: ORISP X4 Well
High Cut 1000 HZ 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
	wix40001	8.25				↓	0	−0.93	270°	135°
	0112	8.25					↓	↓	90°	135°
	0113	8.00							270°	135°
	0114	8.00							90°	135°
	0115	7.75							270°	135°
	0116	7.75							90°	135°
	0117	7.50							270°	135°
	0118	7.50							90°	135°
	0119	7.25							270°	135°
	0120	7.25				↓	↓	↓	90°	

11:42

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 67.58m
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= -1.57

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: 20 MAY 98 Location: URISP X4 Well
High Cut 1000 HZ 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
	w1x40p21	7.00				4	0	-.93	270°	135°
	0122	7.00							90°	135°
	0123	6.75							270	135°
	0124	6.75							90°	135°
	0125	6.50							270°	135°
	0126	6.50							90°	135°
	0127	6.25							270°	135°
	0128	6.25							90°	135°
	0129	6.00							270°	135°
	0130	6.00							90°	135°

11:47

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: @ +.58m
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= -1.57

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: 20 MAY 98 Location: URISP X4 Well
High Cut 1000 HZ 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
	w1x40981	5.75				@	0	-.93	270°	135°
	0132	5.75							90°	135°
	0133	5.58							270°	135°
	0134	5.50							90°	135°
	0135	5.25							270°	135°
	0136	5.25							90°	135°
	0137	5.00							270°	135°
	0138	5.00							90°	135°
	0139	4.75							270°	135°
	0140	4.75							90°	135°

11:53

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: @ +.58m
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset ____
Azimuth ____
Elev. ____
X= 0
Y= -1.57m

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: 20 MAY 98 Location: URISP X4 Well
High Cut 1000 HZ 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
	wlx4 0141	4.50				@	0	-.93	270°	135°
	0142	4.50							90°	135°
	0143	4.25							270	135°
P→	0144	4.25							90°	135°
	0145	4.00							270°	135°
P→	0146	4.00							90°	135
	0147	3.75							270	135
	0148	3.75							90°	135°
	0149	3.50							270°	135°
	0150	3.50							90°	135°

12:00

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: 0 + .98
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset
Azimuth
Elev.
X= 0
Y= -1.57

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: 20MAY 98 Location: ORISP X4 Well
High Cut 1000 HZ 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
	w1x40151	3.25				0	0	-.93	270°	135°
	0152	3.25							90°	135°
	0153	3.00							270°	135°
	0154	3.00							90°	135°
	0155	2.75							270°	135°
	0156	2.75							90°	135°
	0157	2.50							270°	135°
	0158	2.50							90°	135°
	0159	2.25							270°	135°
	0160	2.25							90°	135°

p →

11:06

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
Casing Elevation: @ +.58
Azimuth of X-Axis 90°
Azimuth of Y-Axis 0°

Reference Phone: Offset
Azimuth
Elev.
X= 0
Y= -1.57

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: 20 MAY 98 Location: URISP
High Cut 1000 HZ 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
	0161	2.00				@	0	-.93	270°	135°
	0162	2.00							90	135
	0163	1.75							270°	
	0164	1.75							90°	
	0165	1.50							270°	
	0166	1.50							90°	
	0167	1.25							270°	
	0168	1.25							90°	
	0169	1.00							270°	
	0170	1.00							90°	

N
4
Spring
270

Down Hole Geophone Field Check List

Project: URISP

Date: 20 May 98 Odometer Start: 14388 Finish: 14160.0

9:00 13:30

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 NO			
Oyo 3-C Reference Phone (Blue)	✓	✓	
Dummy tool	✓	✓	
Pulley/Winch Assem.	✓	✓	
Bison Seismograph	✓	✓	
Vertical Hammer Source NO			
Black Tape	✓	✓	
WD-40	✓	✓	
Observer's Sheets/Note Book	✓	✓	
Rope	✓	✓	
Rock Hammer	✓	✓	
Tape measure (50 m)	✓	✓	
Gloves	✓	✓	
Compass and Maps	✓	✓	
Trigger Switch Toggle Box NO			
Gas Card & Keys			
Water Table Logging Probe out there			

DOWNLOAD 1.5 Mb/min (files) → 108 min 1.8 HRS estimate

Lincoln Street and Garage

Item	Out	In	Comment
Bison Cable Box (yellow) Power Cable Trigger Cables Black Tape	✓	✓	Order more black tape + duct tape
Bison Tool Box (grey) Paper for bison NO Miscl. Electronics/Safety			
Tool Box Red	✓	✓	
Trigger Extension Cord No			
Tripod Head	✓	✓	
Tripod Legs (3)	✓✓✓	✓✓✓	
Batteries (12V car) Need 2			
Jumper Cable for 24V operation			
Railroad Tie Horizontal Hammers No			
Sand Bags (2) No			
Shovel			
Pick			
Nails to hold off hammer heads			
24V Battery	✓	✓	
135° Source	✓	✓	