

DRAFT

Q-Borehole Survey Report

Schlumberger

Survey type:

Company: Origin Energy Resources Ltd.

Well: Yolla-4

Field: Yolla

Country: Australia

Run: 4

Date: 15-Jul-2004

Recorded by: Greg Ruthven / Kevin Hermansen

Witnessed by: Mike Woodmansee / Mark Tindale

Field Report

- Not depth corrected (shorter bridle issue)
- Final report and processing will be provided by Schlumberger DCS

Well Information

Company	Origin Energy Resources Ltd.
Well	Yolla-4
Field	Yolla
Country	Australia
State	Tasmania
Logging Date	15-Jul-2004
Run Number	3
Service Order	VEA041000905
Well Head (Latitude)	39 50' 40.5920" S
Well Head (Longitude)	145 49' 06.0569" E
Well Head (X Coordinate)	398905.2 UTM
Well Head (Y Coordinate)	5588821.5 UTM
Total Depth - Driller	3235.0 m
Total Depth - Logger	3235.5 m
Maximum Hole Deviation	25.6 deg
Azimuth of Maximum Deviation	200.9 deg
Program Version	12C0-301
Bit Size	12.250 in
Recorded by	Greg Ruthven / Kevin Hermansen
Witnessed by	Mike Woodmansee / Mark Tindale

Elevation Information

Permanent Datum	Mean Sea Level
Elevation Permanent Datum	0.0 m
Above Permanent Datum	43.0 m
Drilling Measured From	Drill Floor (RT)
Derrick Floor	43.0 m
Ground Level	-81.0 m
Kelly Bush	43.0 m
Log Measured From	Drill Floor (RT)
Elevation Log Zero	43.0 m

Depth Corrected Information

Water Velocity	1524.0 m/s
Seismic Reference Datum	0.0 m

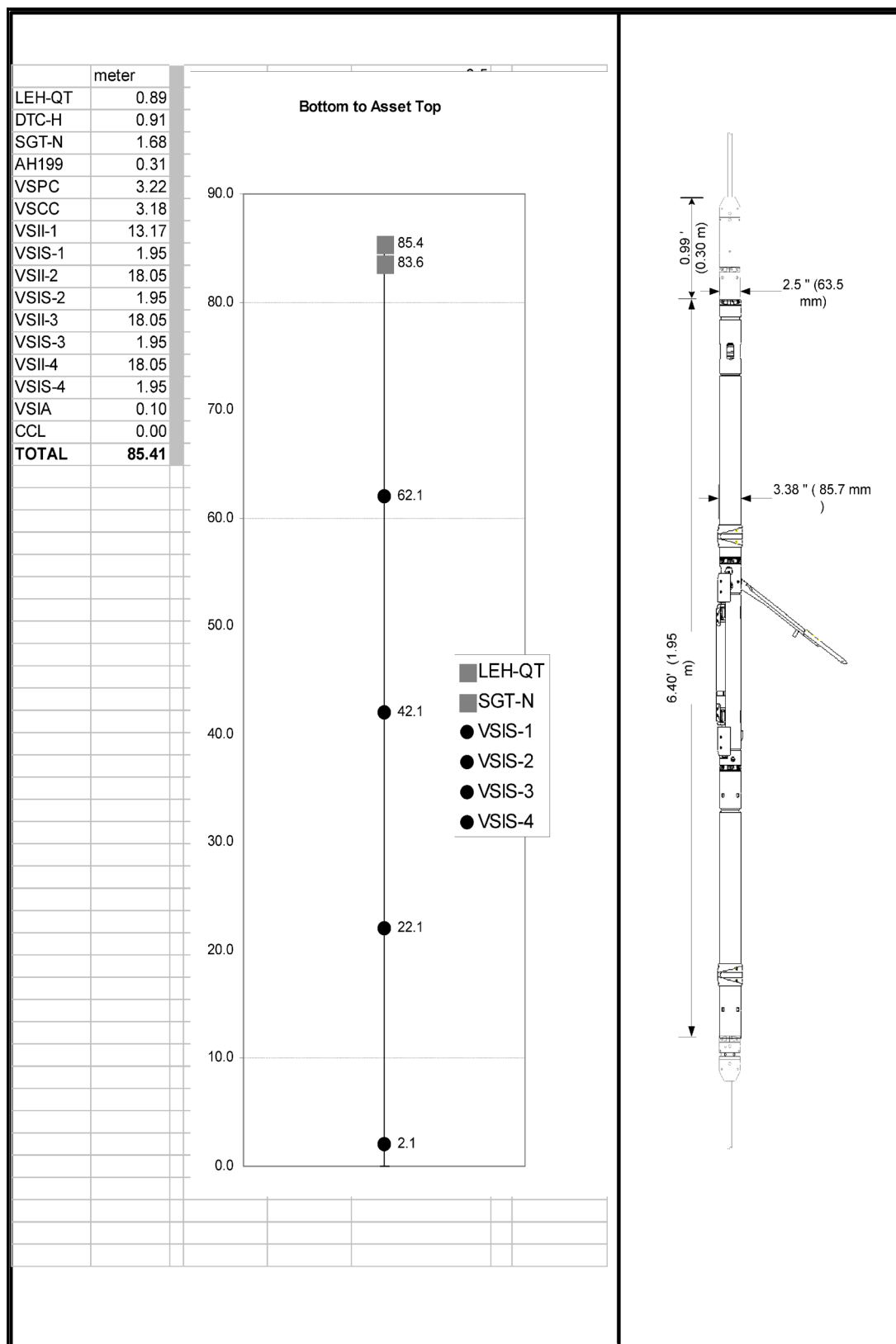
Remarks

Subsequent run in hole.
Log correlated to previous log (CMR-HRLA-PEX-SP) using GR.
Toolstring run as per toolsketch. DVSP acquired with 4 shuttles.
Two G Guns were used with 2000 psi and 6 m bellow Mean Sea Level.
Time reference from TGS-8 (S2) and hydrophone was 3.2 m bellow gun (for qc only).
Survey interval from 3230 to around 1070 when casing arrivals starts.
Data affected by noise at some intervals.
Bridle below shuttle number 2 (from top) was found wrapped around tool causing 5 m shorter bridle.
This will affect depth measurements on both shuttle number 3 and 4.
TD not tagged. Driller's TD used.
Survey station/level 2590 was moved up 5 m due to casing shoe. See observer notes (job listing).
Two stations/levels were overlapped with (20 m higher) due to noise on shuttle 2 and 4.
These two overlaps were at stations 2750 and 2670 and were re-shot at 2730 and 2650 respectively.
Maximum recorded temperature was 136 degC (head thermometer).
Low and high tide data only available from 8 Jun 2004 - High tide level + 0.9 m and low tide level -0.5 m.
Additional mud data:
PV/YP = 31/27, Gels = 6/9/11 LGS/HGS = 5.6%/0.4%

Well Sketch

[illegible]

Tool Sketch



Downhole Equipment Information

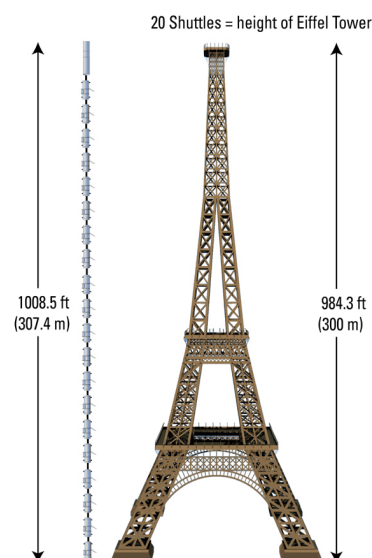
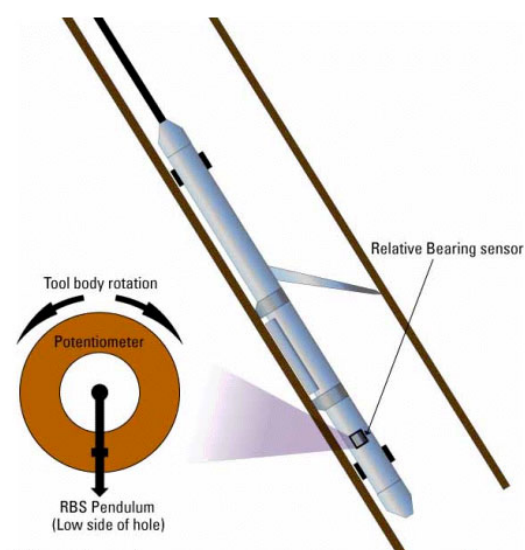
Tool Type	VSI
Surface Equipment	WSAM-TGS-8
Combined Tool	DTC-H, SGT-N
Number of Shuttles	4
Nominal Receiver Spacing	20 m
Gimbaled (Y/N)	N
Downhole Geophone Type	GAC-D x 3 each (Orthogonal)
Sensitivity	> 0.5 V/G +/- 5 %
Natural Frequency	20 Hz
GAC band width	2 – 200 Hz
Coil Resistance	1500 Ohm +/- 5 % @ 25 Deg C
Receiver #1	VSIS # 8230
Receiver #2	VSIS # 8226
Receiver #3	VSIS # 8228
Receiver #4	VSIS # 8229

VSI Tool Specification

Minimum Tool Length	5340 mm
Tool Diameter	3 3/8 in or 2 1/2 in without standoff
Minimum Hole/Casing Size	3 in (slim caliper configuration)
Maximum Hole/Casing Size	22 in (large caliper configuration)
Maximum Operating Temperature	150 deg C
Maximum Operating Pressure	20,000 psi
Maximum Deviation	90 deg
Telemetry System	Digital Telemetry System
Decimation	1.5, 1, 2 or 4 msec
Maximum Anchoring force (6 in)	76 kgf
Maximum Anchoring force (15 in)	91 kgf
Clamping System	Mechanical

Sensors

Manufacturer	Schlumberger KK
Model	GAC-D
Natural Frequency	20 Hz
Sensitivity	0.5 V/G
Coil Resistance	1500 Ohm



General Information

Survey Type	Vertical Incidence VSP
Surface Recording Length	1000.0 ms
Surface Sampling Rate	1.0 ms
Downhole Recording Length	5000.0 ms
Downhole Sampling Rate	1.0 ms
Top of Survey	770.0 m
Bottom of Survey	3230.0 m
Number of Shots	176
Number of Downhole Traces	704
Number of Downhole Traces used for Processing	646

Source Configuration (Air Gun)

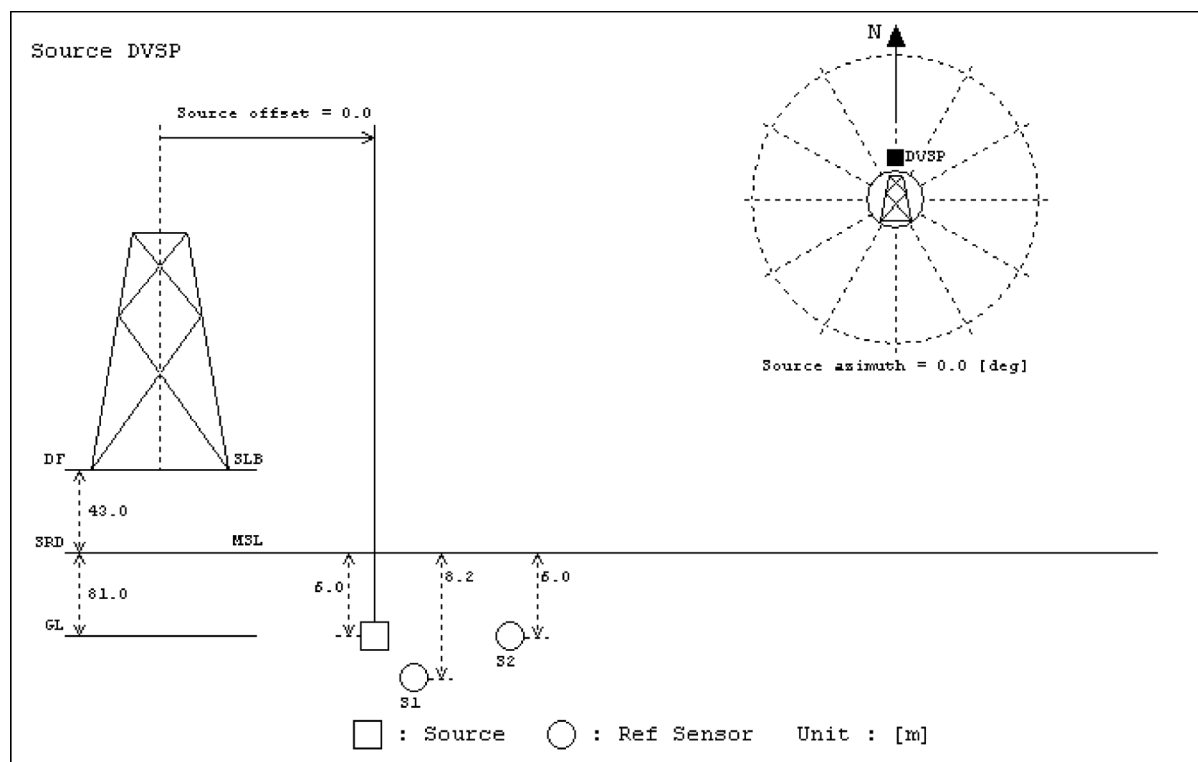
Source Location (Rig, Boat, Pit, Borehole)	Boat
Source Offset (for fixed offset)	Vertical Incidence – see navigation listing
Source Azimuth (for fixed offset)	Vertical Incidence – see navigation listing
Source Depth from Surface	6 m
Source Depth from Logging Zero	49 m

Gun Controller Model Name	TGS-8
Gun Type	G-Gun
Gun Configuration (3 Gun Cluster, Gun Array, etc.)	2 Gun Cluster
Gun Chamber Volumes	150 in

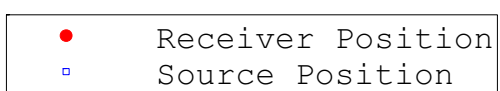
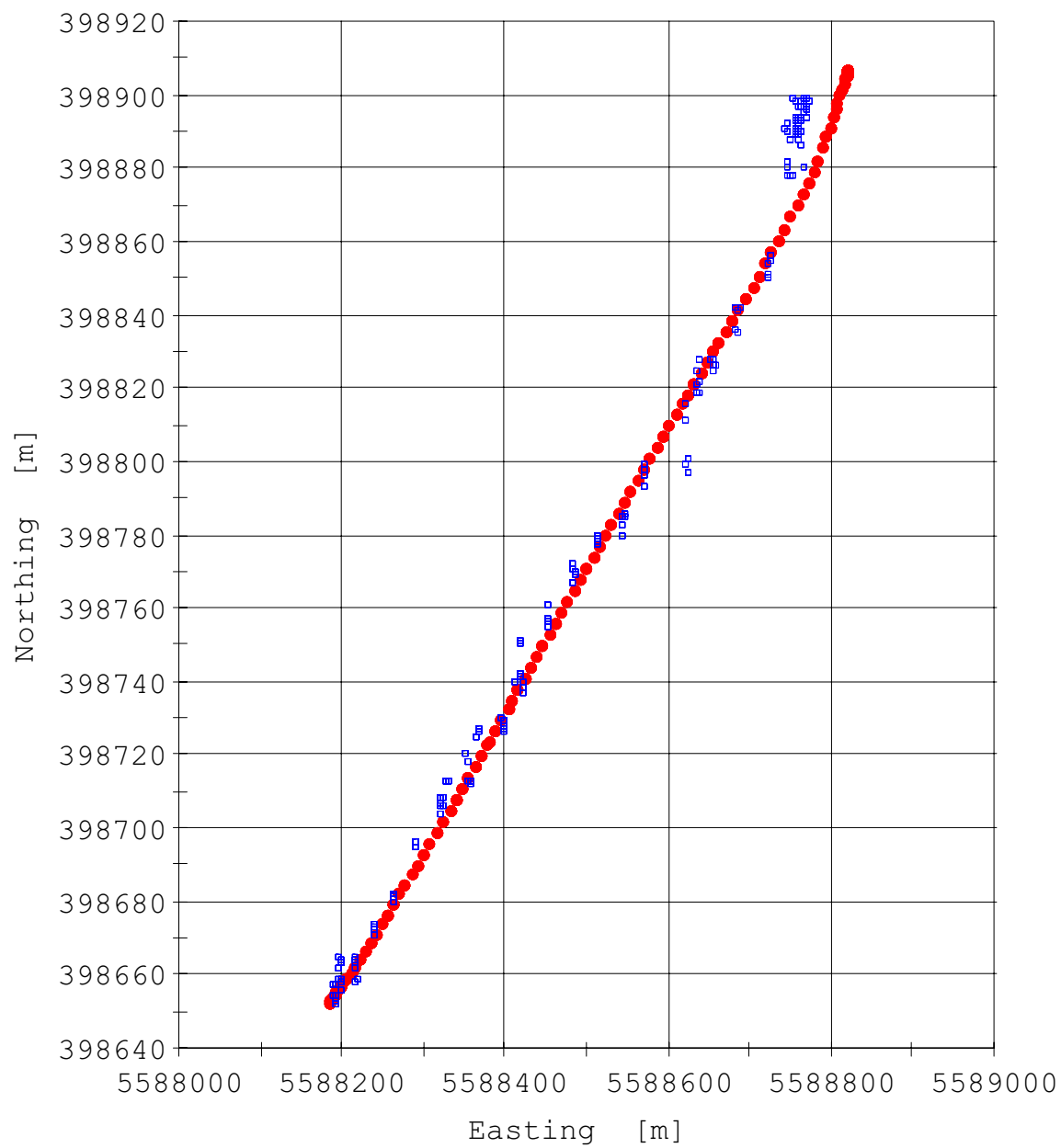
Surface Sensor Configuration

Number of Surface Reference Sensors	2
Surface Recording Length	1000 ms
Surface Sampling Rate	1
Sensor Type (S1)	Hydrophone
Sensor Type (S2)	TGS-8 estimated firing time
Sensor Depth from Surface (S1)	9.2 m (3.2 m below gun – used for QC only)
Sensor Depth from Surface (S2)	On gun – 6 m
Sensor Depth from Logging Zero (S1)	52.2 m
Sensor Depth from Logging Zero (S2)	49 m
Sensor Offset from Source (S1)	0
Sensor Offset from Source (S2)	0

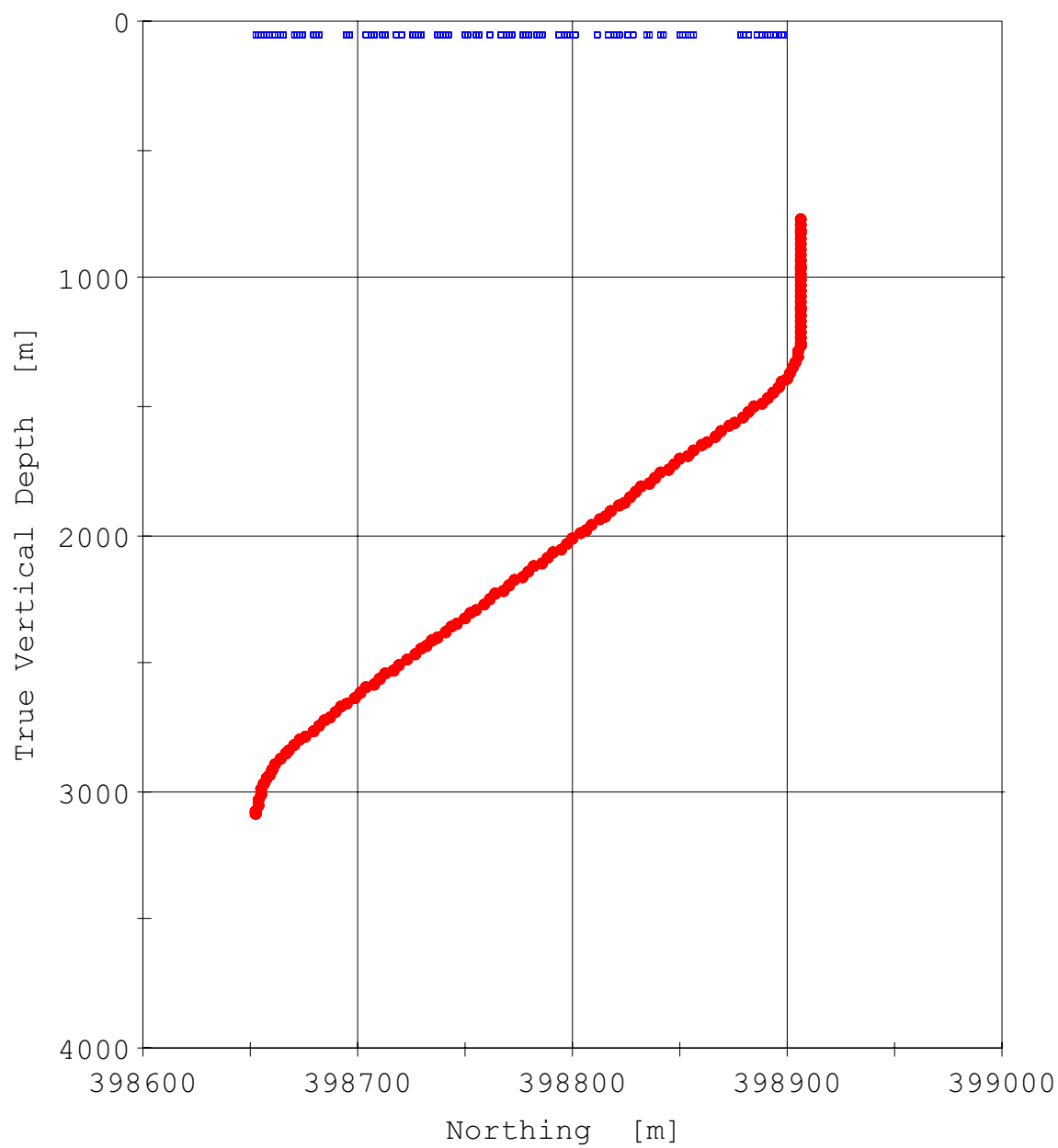
Source Geometry Sketch



Geometry Information Page (X-Y)

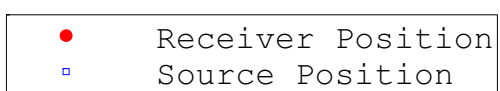
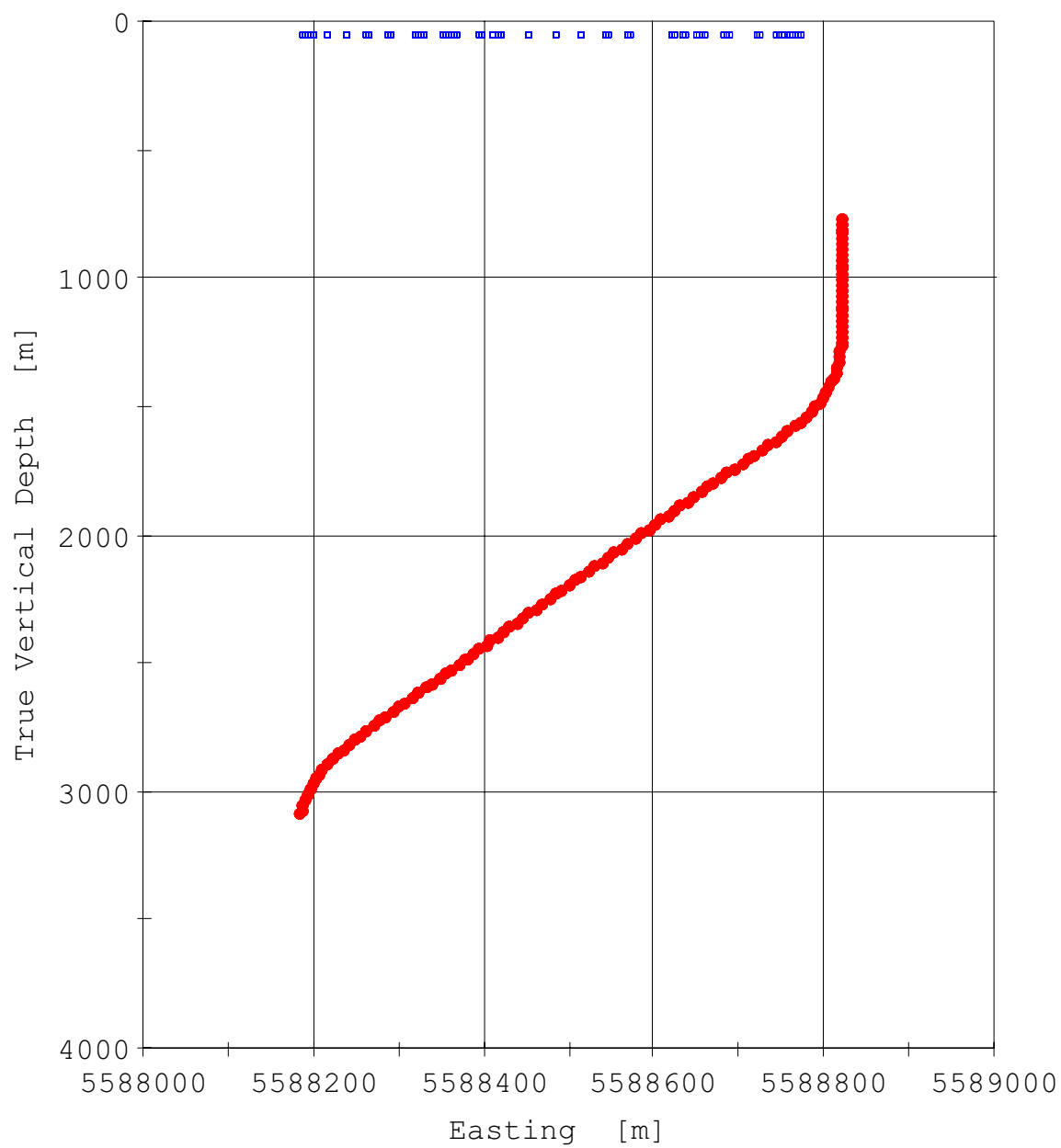


Geometry Information Page (X-Z)

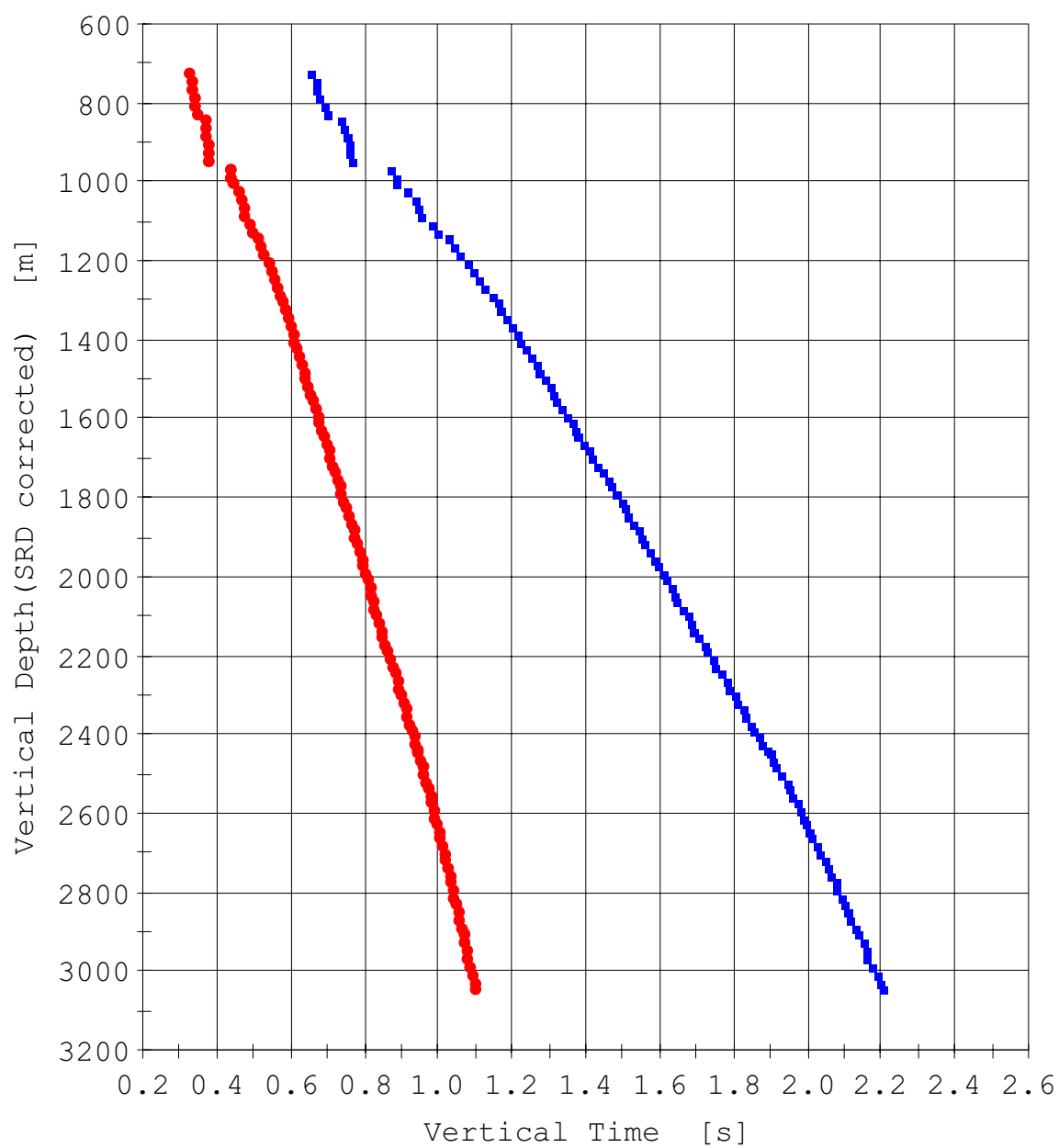


● Receiver Position
□ Source Position

Geometry Information Page (Y-Z)

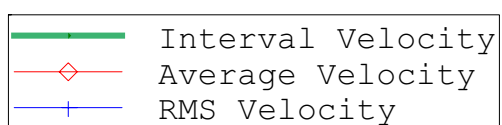
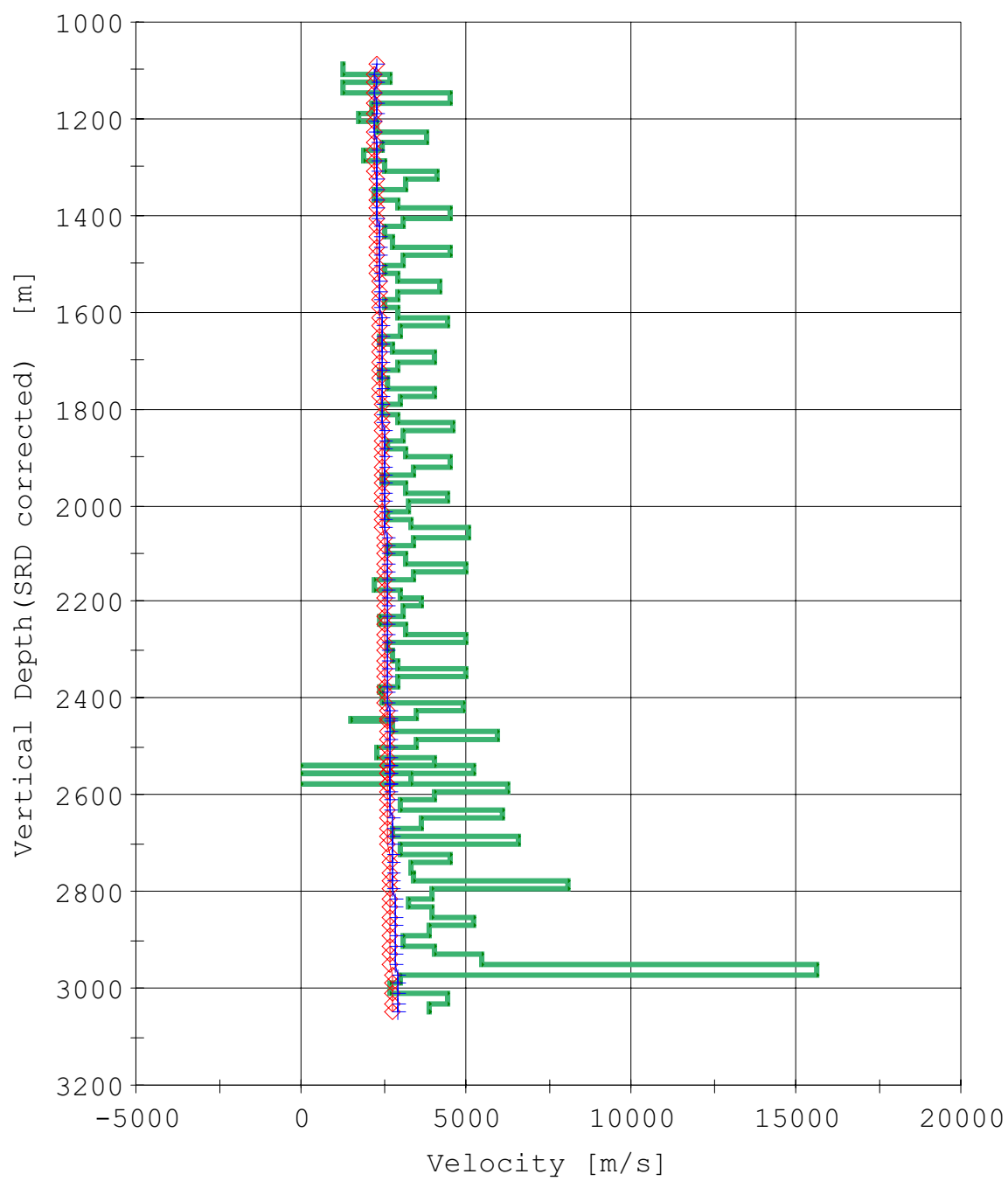


Time Depth Plot Page



- One-way Vertical Time
- Two-way Vertical Time

Velocity Plot Page



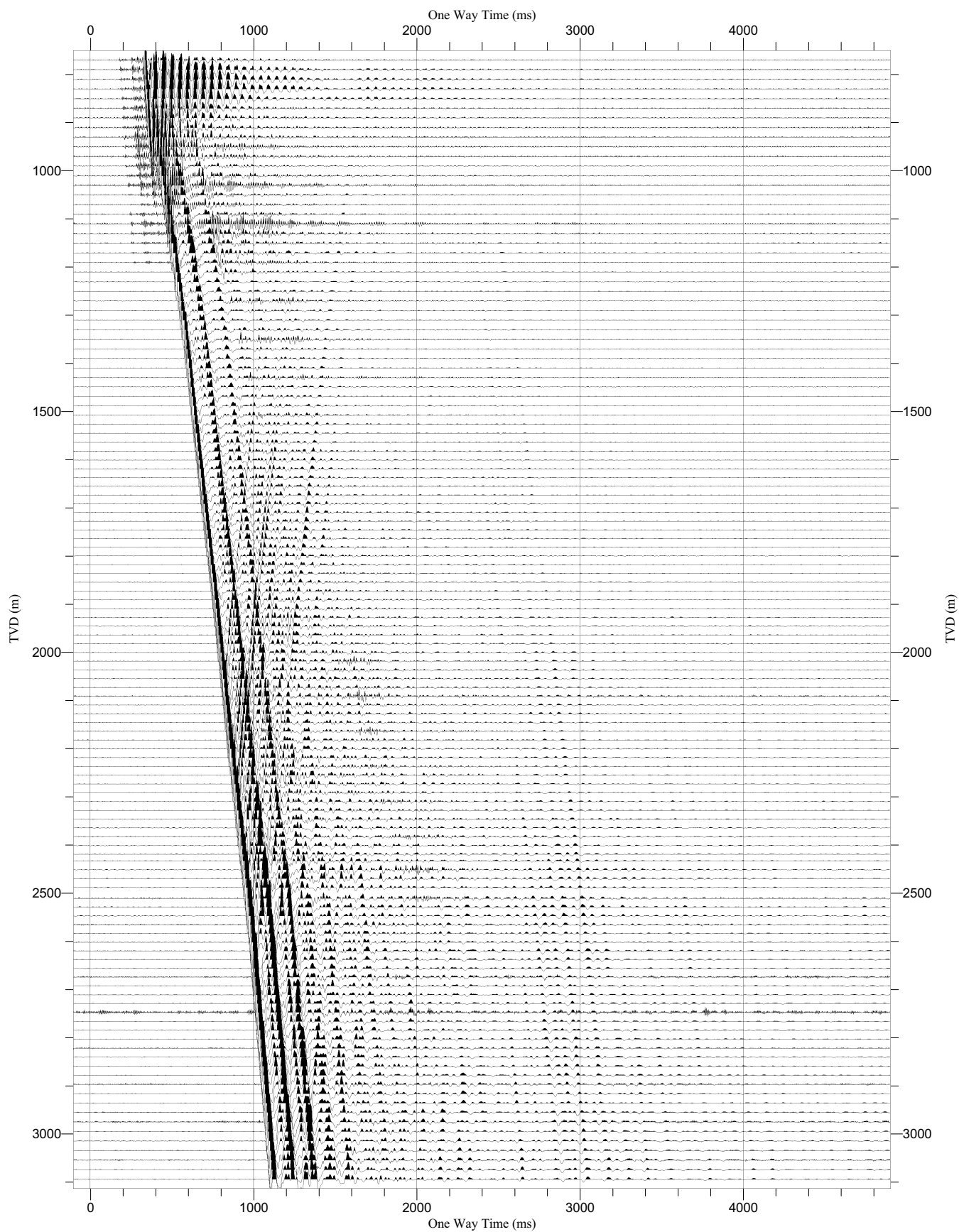
Raw Stack (TRY)

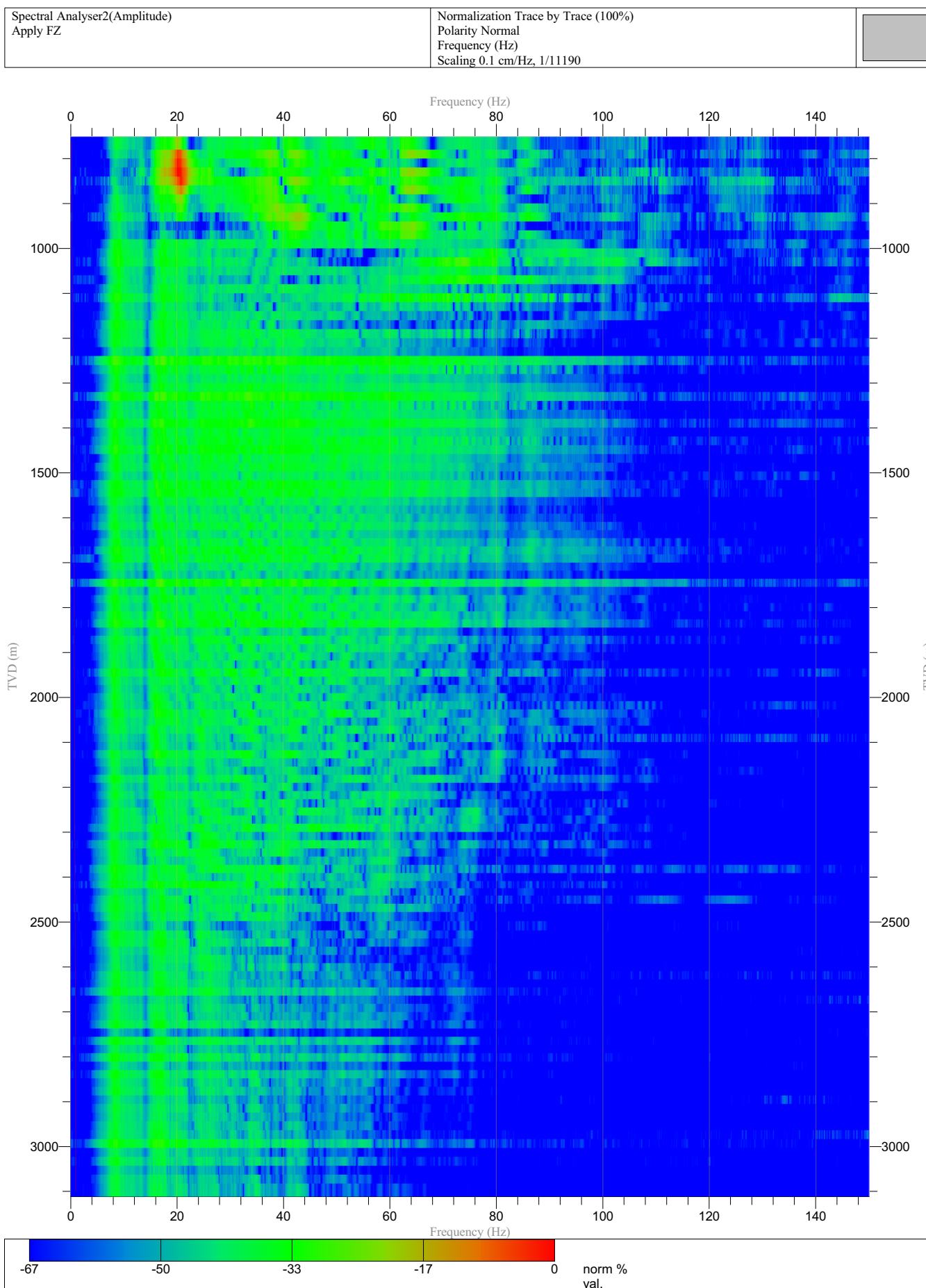
Normalization Trace by Trace (432%)

Polarity Normal

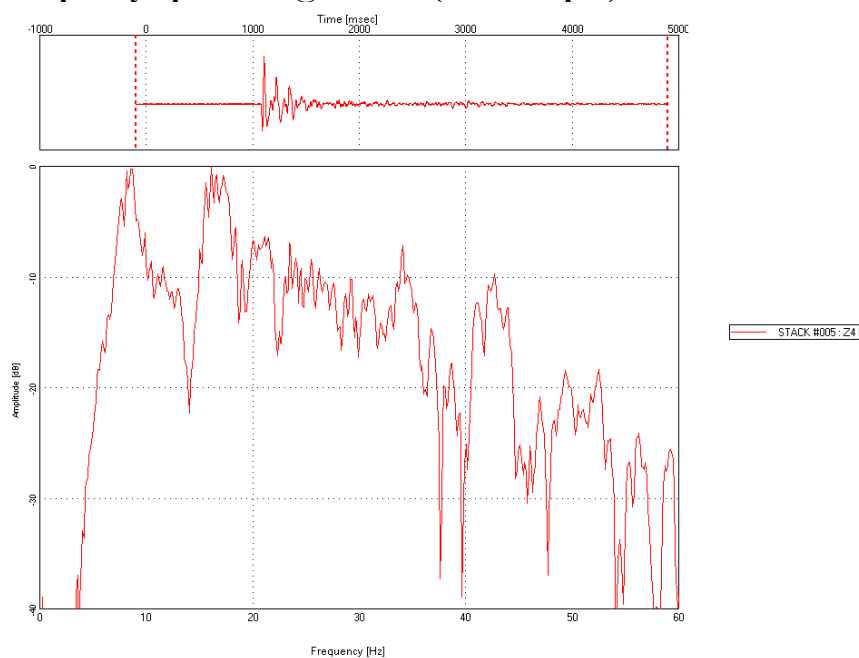
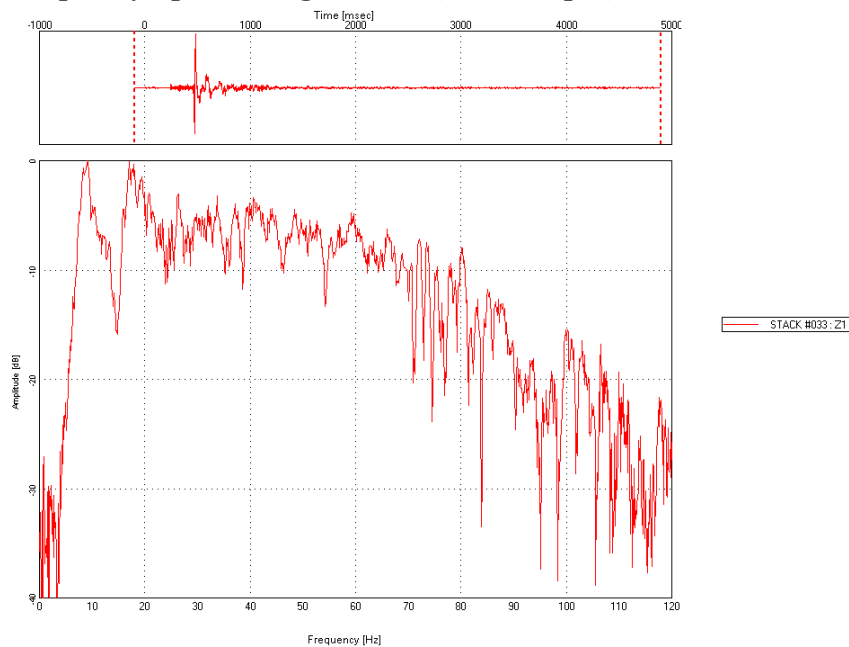
One Way Time (ms)


Scaling 3.0 cm/sec, 1/11150

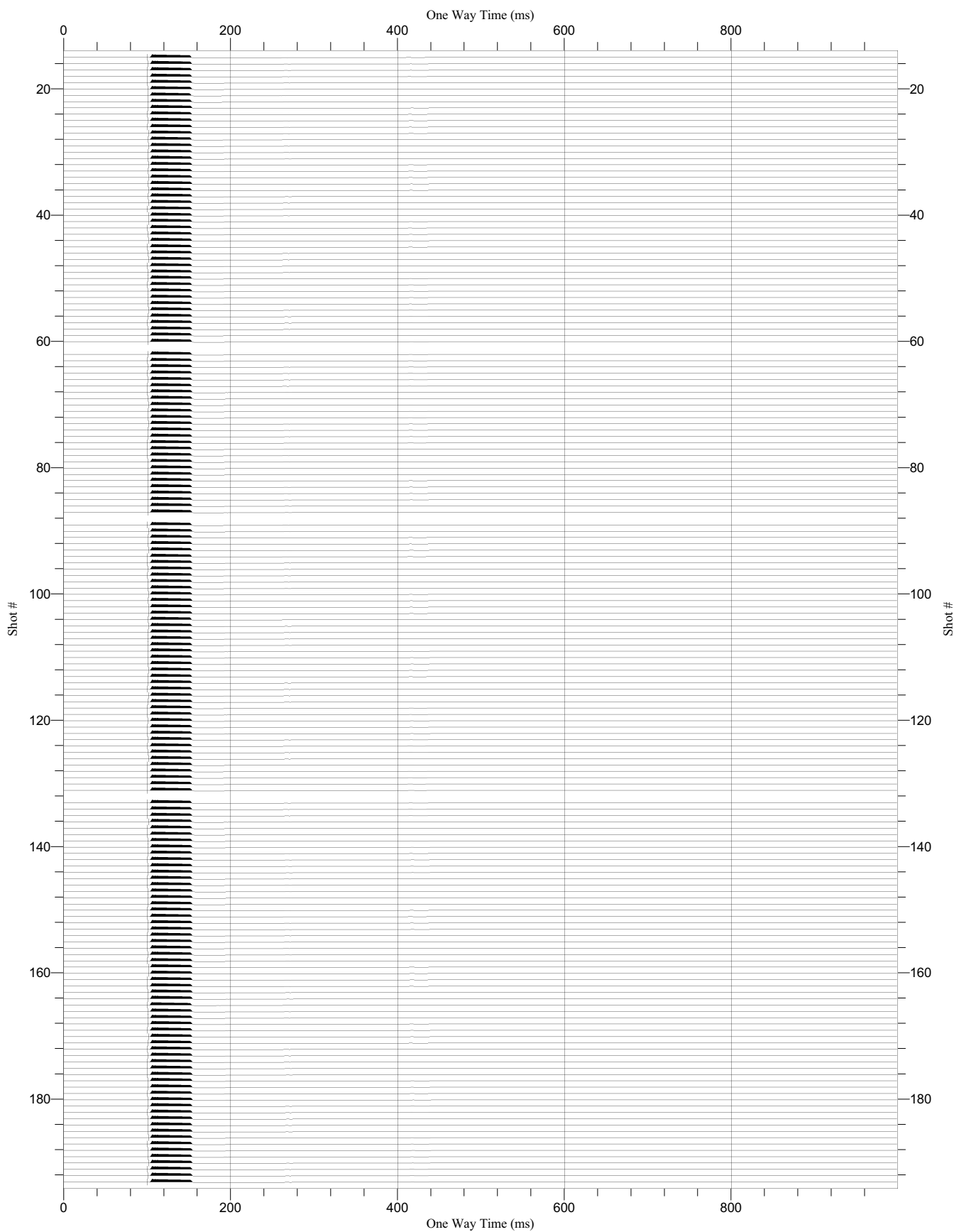




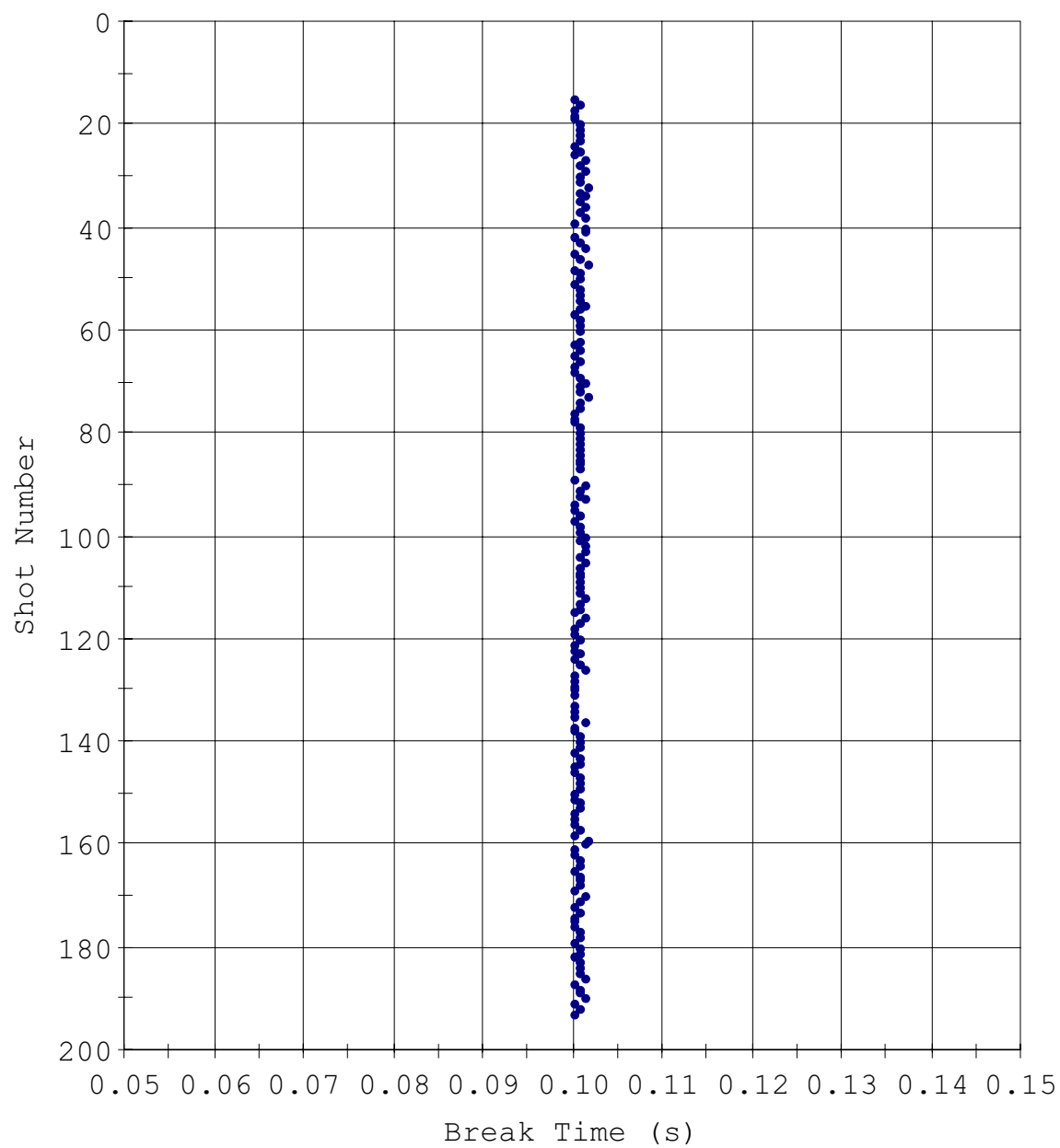
mai

Frequency Spectrum @ 3150 m (Cable Depth)**Frequency Spectrum @ 1090 m (Cable Depth)**

Source Sensor Signature	Normalization Trace by Trace (45%) Polarity Normal One Way Time (ms) Scaling 15.54 cm/sec, 0.12/cm	
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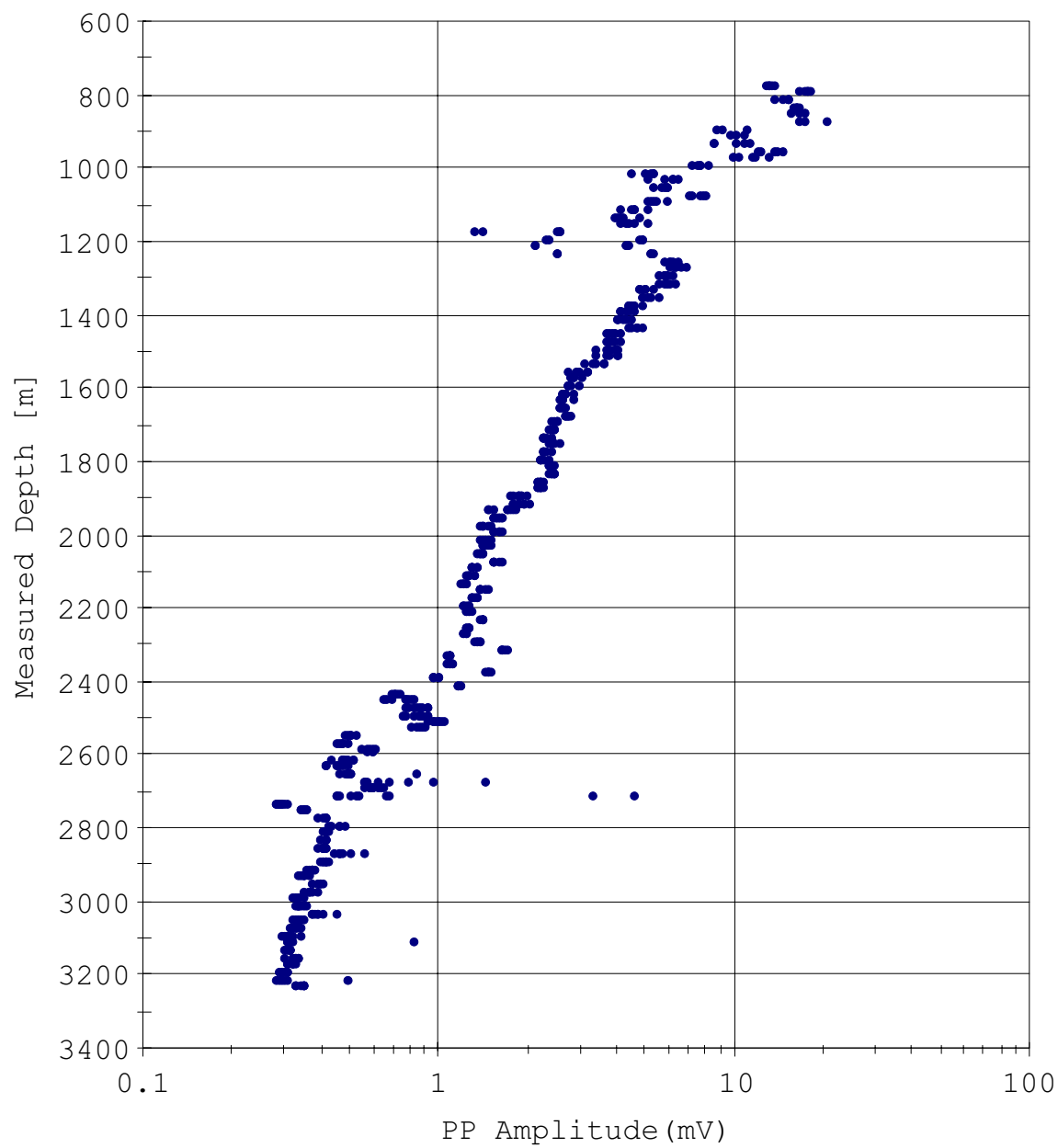


Surface Sensor QC Plot Page



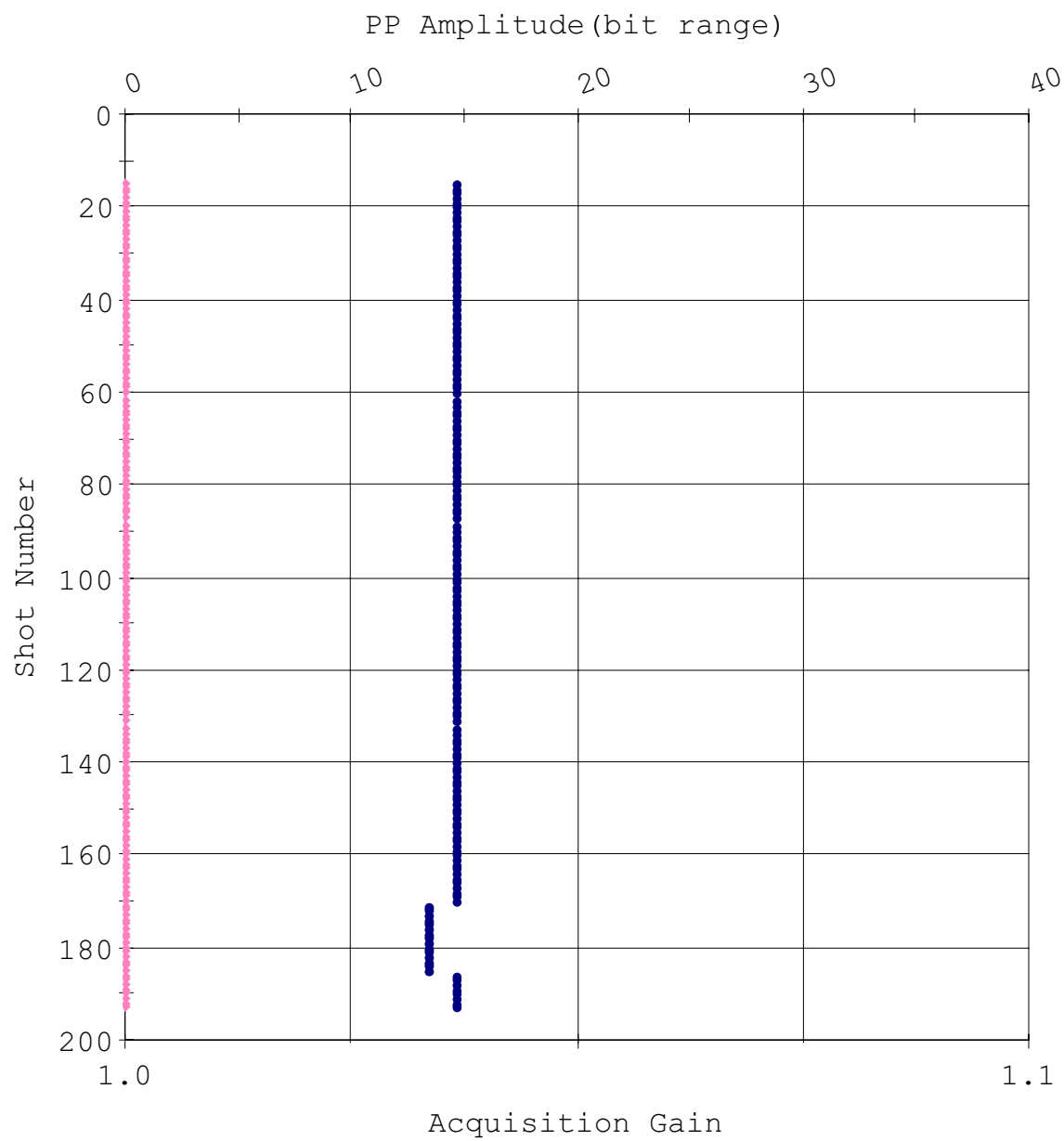
Surface Sensor Break Time

Peak To Peak Plot (Z)



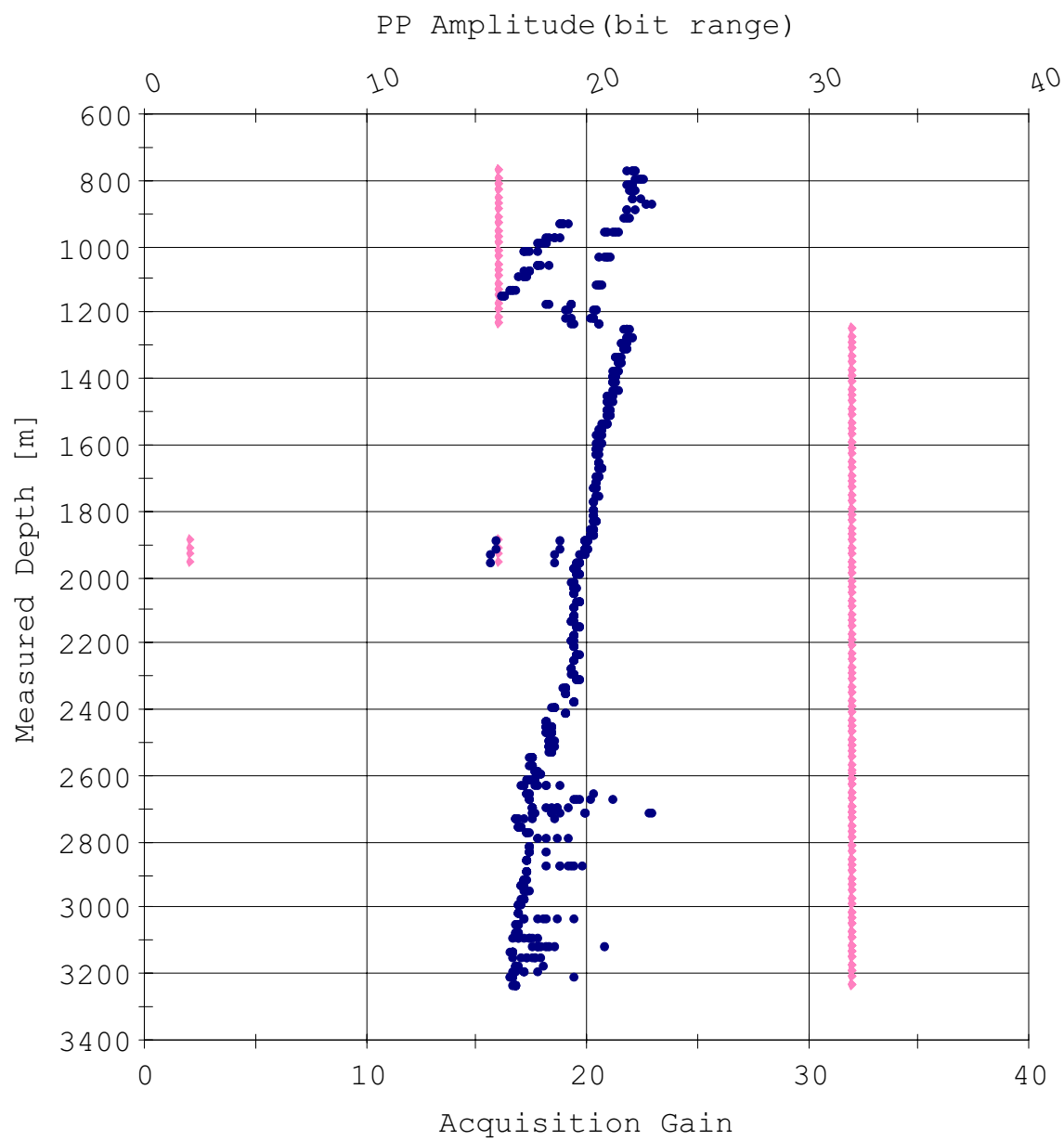
• PP Amplitude (mV)

Amplitude QC Plot (Surface)



• PP Amplitude (bit range)
♦ Acquisition Gain

Amplitude QC Plot (Z)



- PP Amplitude (bit range)
- ◆ Acquisition Gain

Shot Summary Listing (1/5)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
770.0	1	37	92.6	9.5	835.6	189, 190, 191, 192, 193
790.0	2	37	12.4	9.1	656.0	189, 190, 191, 192, 193
810.0	3	37	24.7	9.5	770.7	189, 190, 191, 192, 193
830.0	4	37	-5.6	9.6	782.8	189, 190, 191, 192, 193
850.0	1	36	90.5	9.5	812.3	186, 187, 188
870.0	2	36	12.5	9.1	677.8	186, 187, 188
890.0	3	36	24.6	9.5	764.1	186, 187, 188
910.0	4	36	-7.2	9.6	772.4	186, 187, 188
930.0	1	35	92.4	9.6	826.2	181, 182, 183, 184, 185
950.0	2	35	11.3	9.1	684.8	181, 182, 183, 184, 185
970.0	3	35	28.3	9.6	759.6	181, 182, 183, 184, 185
990.0	4	35	-10.7	9.6	777.5	181, 182, 183, 184, 185
1010.0	1	34	91.4	9.5	792.2	176, 177, 178, 179, 180
1030.0	2	34	12.0	9.0	677.5	176, 177, 178, 179, 180
1050.0	3	34	34.4	9.5	763.3	176, 177, 178, 179, 180
1070.0	4	34	-12.6	9.6	776.8	176, 177, 178, 179, 180
1090.0	1	33	89.1	9.5	779.4	171, 172, 173, 174, 175
1110.0	2	33	15.9	9.0	638.6	171, 172, 173, 174, 175
1130.0	3	33	40.5	9.6	734.5	171, 172, 173, 174, 175
1150.0	4	33	-13.1	9.6	738.5	171, 172, 173, 174, 175
1170.0	1	32	96.4	9.5	781.6	166, 167, 168, 169, 170
1190.0	2	32	18.2	9.0	655.2	166, 167, 168, 169, 170
1210.0	3	32	55.8	9.5	741.5	166, 167, 168, 169, 170
1230.0	4	32	-14.7	9.6	745.3	166, 167, 168, 169, 170
1249.9	1	31	96.5	9.5	800.8	161, 162, 163, 164, 165
1269.9	2	31	29.8	9.0	639.2	161, 162, 163, 164, 165
1289.9	3	31	56.1	9.6	730.5	161, 162, 163, 164, 165
1309.9	4	31	-9.3	9.6	744.0	161, 162, 163, 164, 165

Shot Summary Listing (2/5)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
1330.0	1	30	36.4	9.4	792.5	156, 157, 158, 159, 160
1350.0	2	30	-9.0	9.0	645.9	156, 157, 158, 159, 160
1370.0	3	30	17.3	9.5	731.0	156, 157, 158, 159, 160
1390.0	4	30	1.5	9.5	723.3	156, 157, 158, 159, 160
1410.0	1	29	30.0	9.4	771.0	151, 152, 153, 154, 155
1430.0	2	29	-14.2	8.9	625.4	151, 152, 153, 154, 155
1450.0	3	29	16.3	9.4	720.9	151, 152, 153, 154, 155
1470.0	4	29	0.6	9.5	707.0	151, 152, 153, 154, 155
1490.0	1	28	31.0	9.4	753.4	146, 147, 148, 149, 150
1510.0	2	28	-9.0	9.0	620.7	146, 147, 148, 149, 150
1530.0	3	28	14.2	9.4	686.5	146, 147, 148, 149, 150
1550.0	4	28	0.2	9.5	679.7	146, 147, 148, 149, 150
1570.0	1	27	24.1	9.3	744.8	141, 142, 143, 144, 145
1590.0	2	27	-17.3	8.9	597.8	141, 142, 143, 144, 145
1610.0	3	27	10.3	9.4	696.2	141, 142, 143, 144, 145
1630.0	4	27	-0.5	9.5	684.4	141, 142, 143, 144, 145
1650.0	1	26	22.0	9.3	776.5	136, 137, 138, 139, 140
1670.0	2	26	-17.9	8.9	618.7	136, 137, 138, 139, 140
1690.0	3	26	10.7	9.4	678.2	136, 137, 138, 139, 140
1710.0	4	26	-0.9	9.5	671.7	136, 137, 138, 139, 140
1730.0	1	25	21.8	9.4	734.6	130, 131, 133, 134, 135
1750.0	2	25	-18.1	8.8	611.8	130, 131, 133, 134, 135
1770.0	3	25	10.3	9.4	666.4	130, 131, 133, 134, 135
1790.0	4	25	-1.4	9.5	648.8	130, 131, 133, 134, 135
1810.0	1	24	20.8	9.4	731.7	124, 125, 126, 127, 128, 129
1830.0	2	24	-17.8	8.9	600.2	124, 125, 126, 127, 128, 129
1850.0	3	24	10.1	9.4	663.3	124, 125, 126, 127, 128, 129
1870.0	4	24	-1.5	9.5	646.1	124, 125, 126, 127, 128, 129

Shot Summary Listing (3/5)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
1890.0	1	23	19.3	9.3	728.2	119, 120, 121, 122, 123
1910.0	2	23	-17.5	8.9	629.0	119, 120, 121, 122, 123
1930.0	3	23	10.3	9.4	678.9	119, 120, 121, 122, 123
1950.0	4	23	-2.7	9.5	654.2	119, 120, 121, 122, 123
1970.0	1	22	20.2	9.3	721.7	114, 115, 116, 117, 118
1990.0	2	22	-17.3	8.9	601.3	114, 115, 116, 117, 118
2010.0	3	22	10.1	9.4	654.7	114, 115, 116, 117, 118
2030.0	4	22	-3.8	9.5	644.1	114, 115, 116, 117, 118
2050.0	1	21	21.2	9.3	727.1	109, 110, 111, 112, 113
2070.0	2	21	-16.4	8.9	609.6	109, 110, 111, 112, 113
2090.0	3	21	10.3	9.4	667.6	109, 110, 111, 112, 113
2110.0	4	21	-0.5	9.5	613.0	109, 110, 111, 112, 113
2130.0	1	20	20.5	9.3	714.7	104, 105, 106, 107, 108
2150.0	2	20	-18.7	8.9	602.4	104, 105, 106, 107, 108
2170.0	3	20	10.0	9.4	650.0	104, 105, 106, 107, 108
2190.0	4	20	-0.6	9.5	611.4	104, 105, 106, 107, 108
2210.0	1	19	20.0	9.3	727.1	99, 100, 101, 102, 103
2230.0	2	19	-17.6	8.9	596.0	99, 100, 101, 102, 103
2250.0	3	19	10.0	9.4	649.2	99, 100, 101, 102, 103
2270.0	4	19	-1.4	9.5	618.6	99, 100, 101, 102, 103
2290.0	1	18	21.9	9.3	695.4	94, 95, 96, 97, 98
2310.0	2	18	-17.1	8.9	579.7	94, 95, 96, 97, 98
2330.0	3	18	9.6	9.4	620.1	94, 95, 96, 97, 98
2350.0	4	18	-2.0	9.5	606.1	94, 95, 96, 97, 98
2370.0	1	17	19.6	9.3	695.9	89, 90, 91, 92, 93
2390.0	2	17	-17.0	8.9	580.8	89, 90, 91, 92, 93
2410.0	3	17	10.1	9.4	626.7	89, 90, 91, 92, 93
2430.0	4	17	-2.5	9.5	613.1	89, 90, 91, 92, 93

Shot Summary Listing (4/5)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
2450.0	1	16	23.6	9.3	677.5	83, 84, 85, 86, 87
2470.0	2	16	-16.4	8.8	548.5	83, 84, 85, 86, 87
2490.0	3	16	9.9	9.4	587.5	83, 84, 85, 86, 87
2510.0	4	16	-3.7	9.4	565.5	83, 84, 85, 86, 87
2525.0	1	15	22.2	9.3	682.3	78, 79, 80, 81, 82
2545.0	2	15	-14.4	8.8	530.3	78, 79, 80, 81, 82
2565.0	3	15	9.6	9.4	569.6	78, 79, 80, 81, 82
2585.0	4	15	-6.2	9.4	573.5	78, 79, 80, 81, 82
2590.0	1	13	15.5	9.8	668.7	75, 76, 77
2610.0	2	13	-22.5	12.9	464.9	75, 76, 77
2630.0	3	13	7.2	9.3	583.3	75, 76, 77
2650.0	4	13	-7.5	9.9	599.3	75, 76, 77
2670.0	1	11	21.8	9.5	646.9	67, 68, 69
2690.0	1	10	26.2	9.6	651.0	59, 60, 62, 63, 64, 65, 66, 67, 68, 69
2690.0	2	11	-19.1	9.1	517.5	59, 60, 62, 63, 64, 65, 66, 67, 68, 69
2710.0	2	10	-17.5	9.3	546.1	66, 67, 68, 69
2710.0	3	11	11.0	9.2	572.9	66, 67, 68, 69
2730.0	3	10	16.3	10.6	534.4	59, 60, 62, 63, 64, 65, 66, 67, 68, 69
2730.0	4	11	-1.1	9.2	484.4	59, 60, 62, 63, 64, 65, 66, 67, 68, 69
2750.0	4	10	-4.8	9.2	570.3	59, 60, 62, 63, 64, 65, 66
2770.0	1	9	24.7	9.1	632.0	54, 55, 56, 57, 58
2790.0	2	9	-4.0	9.5	525.8	54, 55, 56, 57, 58
2810.0	3	9	-4.0	9.8	556.9	54, 55, 56, 57, 58
2830.0	4	9	-8.9	9.7	538.8	54, 55, 56, 57, 58
2850.0	1	8	23.1	9.4	625.7	47, 48, 49, 50, 51, 52, 53
2870.0	2	8	-6.2	9.2	483.0	47, 48, 49, 50, 51, 52, 53
2890.0	3	8	-8.7	9.4	553.7	47, 48, 49, 50, 51, 52, 53
2910.0	4	8	-7.2	9.1	533.4	47, 48, 49, 50, 51, 52, 53

Shot Summary Listing (5/5)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
2930.1	1	7	26.9	9.3	573.7	42, 43, 44, 45, 46
2950.1	2	7	4.7	9.2	469.9	42, 43, 44, 45, 46
2970.1	3	7	-7.4	9.4	564.2	42, 43, 44, 45, 46
2990.1	4	7	-13.0	9.3	540.1	42, 43, 44, 45, 46
3009.9	1	6	36.4	9.1	583.8	35, 36, 37, 38, 39, 40, 41
3029.9	2	6	5.7	9.3	458.7	35, 36, 37, 38, 39, 40, 41
3049.9	3	6	-8.4	9.4	546.1	35, 36, 37, 38, 39, 40, 41
3069.9	4	6	-17.8	9.4	514.6	35, 36, 37, 38, 39, 40, 41
3090.0	1	5	47.3	8.7	524.7	27, 28, 29, 30, 31, 33, 34
3110.0	2	5	16.9	9.0	459.5	27, 28, 29, 30, 31, 33, 34
3130.0	3	5	0.5	9.2	536.0	27, 28, 29, 30, 31, 33, 34
3150.0	4	5	-12.9	9.1	518.1	27, 28, 29, 30, 31, 33, 34
3170.0	1	4	92.5	8.5	579.9	22, 23, 24, 25, 26
3190.0	2	4	48.3	8.9	446.9	22, 23, 24, 25, 26
3210.0	3	4	23.1	9.2	505.1	22, 23, 24, 25, 26
3230.0	4	4	6.9	9.6	503.7	22, 23, 24, 25, 26

Stack Summary Listing (1/5) from VSI_003 DVSP_geo_wavfield_z.ldr

Stack Number ACQUISITION SHOT_ NUMBER	Measured Depth [m] CABLE_ LENGTH	True Vertical Depth [m] RECEIVER_ CORRECTION_ Z	Measured Time [s] TRANSIT_ TIME	One-way Vertical Time [s] TRANSIT_ TIME_SRD	Two-way Vertical Time [s] TRANSIT_ TIME_ INITIAL	Interval Velocity [m/s] VELOCITY_ 1	Average Velocity [m/s] VELOCITY_ 2	RMS Velocity [m/s] VELOCITY_ 3
	0	0	0	0	0			
37	770.0	727.0	0.3259	0.3290	0.6580			
37	790.0	747.0	0.3304	0.3335	0.6670			
37	810.0	767.0	0.3330	0.3362	0.6723			
37	830.0	787.0	0.3366	0.3398	0.6796			
36	850.0	807.0	0.3418	0.3448	0.6896			
36	870.0	827.0	0.3464	0.3494	0.6989			
36	890.0	847.0	0.3658	0.3689	0.7377			
36	910.0	867.0	0.3692	0.3723	0.7445			
35	930.0	887.0	0.3719	0.3751	0.7503			
35	950.0	907.0	0.3759	0.3791	0.7582			
35	970.0	927.0	0.3774	0.3807	0.7613			
35	990.0	947.0	0.3789	0.3822	0.7643			
34	1010.0	967.0	0.4319	0.4352	0.8704			
34	1030.0	987.0	0.4383	0.4415	0.8831			
34	1050.0	1007.0	0.4396	0.4429	0.8857			
34	1070.0	1027.0	0.4541	0.4573	0.9147			
33	1090.0	1047.0	0.4667	0.4699	0.9399			
33	1110.0	1067.0	0.4710	0.4743	0.9485			
33	1130.0	1087.0	0.4728	0.4761	0.9521		2283.2	2283.2
33	1150.0	1107.0	0.4882	0.4915	0.9829	1298.7	2252.4	2258.9
32	1170.0	1127.0	0.4958	0.4990	0.9979	2670.7	2258.6	2265.6
32	1190.0	1147.0	0.5119	0.5151	1.0301	1243.1	2226.9	2240.8
32	1210.0	1167.0	0.5163	0.5195	1.0390	4511.0	2246.4	2269.8
32	1230.0	1187.0	0.5257	0.5289	1.0579	2115.5	2244.1	2267.1
31	1249.9	1206.9	0.5371	0.5403	1.0805	1760.4	2234.0	2257.7
31	1269.9	1226.9	0.5458	0.5490	1.0980	2283.7	2234.7	2258.1
31	1289.9	1246.9	0.5511	0.5543	1.1086	3779.2	2249.5	2277.4
31	1309.9	1266.9	0.5593	0.5625	1.1250	2433.5	2252.2	2279.7
						1924.6		

Stack Summary Listing (2/5) from VSI_003 DVSP_geo_wavfield_z.ldb

Stack Number ACQUISITION SHOT_ NUMBER	Measured Depth [m] CABLE_ LENGTH	True Vertical Depth [m] RECEIVER_ CORRECTION_ Z	Measured Time [s] TRANSIT_ TIME	One-way Vertical Time [s] TRANSIT_ TIME_SRD	Two-way Vertical Time [s] TRANSIT_ TIME_ INITIAL	Interval Velocity [m/s] VELOCITY_ 1	Average Velocity [m/s] VELOCITY_ 2	RMS Velocity [m/s] VELOCITY_ 3
30	1330.0	1286.9	0.5695	0.5729	1.1458	2558.2	2246.2	2273.8
30	1350.0	1306.8	0.5773	0.5807	1.1614	4135.4	2250.4	2277.8
30	1370.0	1326.6	0.5820	0.5855	1.1710	3185.0	2265.8	2299.1
30	1390.0	1346.4	0.5882	0.5917	1.1834	2248.7	2275.5	2310.2
29	1410.0	1366.1	0.5971	0.6005	1.2009	2965.9	2275.1	2309.3
29	1430.0	1385.7	0.6037	0.6071	1.2142	4489.0	2282.6	2317.5
29	1450.0	1405.3	0.6080	0.6114	1.2229	3103.1	2298.4	2340.1
29	1470.0	1424.8	0.6142	0.6177	1.2355	2543.1	2306.6	2349.2
28	1490.0	1444.2	0.6216	0.6253	1.2507	2789.6	2309.4	2351.6
28	1510.0	1463.4	0.6284	0.6322	1.2645	4558.6	2314.7	2356.8
28	1530.0	1482.5	0.6326	0.6364	1.2729	3103.4	2329.4	2378.0
28	1550.0	1501.4	0.6386	0.6425	1.2850	2576.2	2336.8	2385.9
27	1570.0	1520.0	0.6459	0.6498	1.2995	2947.4	2339.4	2388.1
27	1590.0	1538.6	0.6522	0.6560	1.3121	4191.6	2345.3	2394.1
27	1610.0	1556.9	0.6565	0.6604	1.3208	2935.3	2357.5	2410.4
27	1630.0	1575.1	0.6627	0.6666	1.3333	2514.4	2362.9	2415.8
26	1650.0	1593.3	0.6700	0.6739	1.3477	2905.7	2364.5	2416.9
26	1670.0	1611.5	0.6762	0.6801	1.3602	4436.7	2369.5	2421.8
26	1690.0	1629.6	0.6803	0.6842	1.3684	3039.3	2381.8	2438.8
26	1710.0	1647.7	0.6862	0.6901	1.3803	2391.4	2387.5	2444.6
25	1730.0	1665.8	0.6939	0.6977	1.3954	2746.7	2387.5	2444.0
25	1750.0	1683.8	0.7004	0.7043	1.4085	4070.1	2390.9	2447.0
25	1770.0	1701.8	0.7048	0.7087	1.4174	2939.3	2401.4	2460.5
25	1790.0	1719.9	0.7109	0.7148	1.4297	2371.0	2406.0	2465.0
24	1810.0	1737.9	0.7186	0.7224	1.4449	2608.9	2405.6	2464.0
24	1830.0	1756.0	0.7255	0.7294	1.4587	4080.5	2407.5	2465.4
24	1850.0	1774.1	0.7299	0.7338	1.4676	3023.1	2417.7	2478.4
24	1870.0	1792.3	0.7359	0.7398	1.4797	2438.8	2422.6	2483.3
23	1890.0	1810.6	0.7434	0.7473	1.4946	2963.3	2422.8	2482.8

Stack Summary Listing (3/5) from VSI_003 DVSP_geo_wavfield_z.ldb

Stack Number ACQUISITION SHOT_ NUMBER	Measured Depth [m] CABLE_ LENGTH	True Vertical Depth [m] RECEIVER_ CORRECTION_ Z	Measured Time [s] TRANSIT_ TIME	One-way Vertical Time [s] TRANSIT_ TIME_SRD	Two-way Vertical Time [s] TRANSIT_ TIME_ INITIAL	Interval Velocity [m/s] VELOCITY_ 1	Average Velocity [m/s] VELOCITY_ 2	RMS Velocity [m/s] VELOCITY_ 3
23	1910.0	1828.8	0.7495	0.7535	1.5069		2427.2	2487.1
						4571.1		
23	1930.0	1847.0	0.7535	0.7575	1.5149		2438.5	2502.7
						3085.4		
23	1950.0	1865.3	0.7595	0.7634	1.5267		2443.5	2507.7
						2634.0		
22	1970.0	1883.5	0.7664	0.7703	1.5406		2445.2	2508.9
						3179.0		
22	1990.0	1901.7	0.7721	0.7760	1.5521		2450.6	2514.5
						4549.8		
22	2010.0	1919.9	0.7761	0.7800	1.5601		2461.4	2529.1
						3379.3		
22	2030.0	1938.1	0.7816	0.7854	1.5708		2467.7	2535.9
						2463.8		
21	2050.0	1956.3	0.7889	0.7928	1.5856		2467.6	2535.2
						3142.2		
21	2070.0	1974.5	0.7946	0.7986	1.5971		2472.5	2540.2
						4432.0		
21	2090.0	1992.6	0.7987	0.8027	1.6053		2482.5	2553.4
						3246.7		
21	2110.0	2010.8	0.8043	0.8083	1.6165		2487.8	2558.8
						2586.0		
20	2130.0	2029.0	0.8114	0.8153	1.6306		2488.6	2559.1
						3339.7		
20	2150.0	2047.1	0.8168	0.8207	1.6414		2494.3	2565.0
						5066.4		
20	2170.0	2065.3	0.8204	0.8243	1.6486		2505.5	2581.1
						3376.8		
20	2190.0	2083.4	0.8258	0.8297	1.6594		2511.1	2587.1
						2647.8		
19	2210.0	2101.6	0.8326	0.8365	1.6731		2512.2	2587.6
						3141.6		
19	2230.0	2119.8	0.8384	0.8423	1.6847		2516.6	2591.8
						4960.5		
19	2250.0	2138.0	0.8421	0.8460	1.6920		2527.2	2606.7
						3411.3		
19	2270.0	2156.2	0.8474	0.8513	1.7027		2532.7	2612.5
						2243.7		
18	2290.0	2174.4	0.8555	0.8594	1.7189		2530.0	2609.3
						3054.5		
18	2310.0	2192.6	0.8615	0.8654	1.7308		2533.6	2612.6
						3624.8		
18	2330.0	2210.8	0.8665	0.8704	1.7409		2539.9	2619.6
						3107.4		
18	2350.0	2229.0	0.8724	0.8763	1.7526		2543.7	2623.1
						2410.1		
17	2370.0	2247.2	0.8799	0.8839	1.7677		2542.5	2621.4
						3161.9		
17	2390.0	2265.5	0.8857	0.8896	1.7793		2546.6	2625.3
						5004.3		
17	2410.0	2283.8	0.8894	0.8933	1.7866		2556.6	2639.3
						2624.9		
17	2430.0	2302.1	0.8963	0.9003	1.8005		2557.1	2639.2
						2813.0		
16	2450.0	2320.3	0.9028	0.9068	1.8135		2559.0	2640.5
						2909.8		
16	2470.0	2338.6	0.9091	0.9130	1.8261		2561.4	2642.5
						4993.0		

Stack Summary Listing (4/5) from VSI_003 DVSP_geo_wavfield_z.ldb

Stack Number ACQUISITION SHOT_ NUMBER	Measured Depth [m] CABLE_ LENGTH	True Vertical Depth [m] RECEIVER_ CORRECTION_ Z	Measured Time [s] TRANSIT_ TIME	One-way Vertical Time [s] TRANSIT_ TIME_SRD	Two-way Vertical Time [s] TRANSIT_ TIME_ INITIAL	Interval Velocity [m/s] VELOCITY_ 1	Average Velocity [m/s] VELOCITY_ 2	RMS Velocity [m/s] VELOCITY_ 3
16	2490.0	2356.9	0.9127	0.9167	1.8334		2571.1	2656.0
						2938.5		
16	2510.0	2375.1	0.9190	0.9229	1.8458		2573.5	2658.0
						2343.8		
15	2525.0	2388.8	0.9248	0.9288	1.8575		2572.1	2656.1
						2467.9		
15	2545.0	2407.1	0.9322	0.9362	1.8723		2571.3	2654.7
						4953.3		
15	2565.0	2425.4	0.9359	0.9399	1.8797		2580.6	2667.6
						3519.2		
15	2585.0	2443.7	0.9411	0.9450	1.8901		2585.8	2673.0
						1521.3		
13	2590.0	2448.2	0.9441	0.9480	1.8961		2582.4	2670.1
						2777.3		
13	2610.0	2466.4	0.9507	0.9546	1.9092		2583.8	2670.9
						5980.9		
13	2630.0	2484.6	0.9537	0.9576	1.9153		2594.5	2687.8
						3471.4		
13	2650.0	2502.8	0.9590	0.9629	1.9257		2599.3	2692.7
						2265.7		
11	2670.0	2521.1	0.9670	0.9709	1.9419		2596.5	2689.5
						4062.6		
10	2690.0	2539.3	0.9715	0.9754	1.9509		2603.3	2697.4
						4.8		
11	2690.0	2539.3	0.9735	0.9774	1.9548		2598.1	2694.7
						5214.5		
10	2710.0	2557.5	0.9769	0.9809	1.9617		2607.4	2707.8
						-11.6		
11	2710.0	2557.5	0.9761	0.9801	1.9601		2609.5	2708.9
						3318.1		
10	2730.0	2575.6	0.9816	0.9855	1.9710		2613.4	2712.6
						21.3		
11	2730.0	2575.6	0.9820	0.9860	1.9719		2612.3	2712.0
						6259.6		
10	2750.0	2593.7	0.9849	0.9888	1.9777		2622.9	2729.1
						4016.5		
9	2770.0	2611.7	0.9894	0.9933	1.9867		2629.2	2736.3
						2976.2		
9	2790.0	2629.8	0.9955	0.9994	1.9988		2631.4	2737.8
						6111.4		
9	2810.0	2648.0	0.9985	1.0024	2.0048		2641.7	2754.0
						3633.6		
9	2830.0	2666.3	1.0035	1.0074	2.0149		2646.7	2759.1
						2782.1		
8	2850.0	2684.7	1.0101	1.0140	2.0281		2647.5	2759.2
						6615.3		
8	2870.0	2703.1	1.0129	1.0168	2.0337		2658.4	2777.1
						2987.6		
8	2890.0	2721.6	1.0191	1.0230	2.0460		2660.4	2778.4
						4507.6		
8	2910.0	2740.0	1.0232	1.0271	2.0542		2667.8	2787.4
						3303.5		
7	2930.1	2758.6	1.0288	1.0327	2.0654		2671.2	2790.5
						3412.0		
7	2950.1	2777.3	1.0342	1.0382	2.0764		2675.1	2794.1
						8062.1		
7	2970.1	2796.0	1.0366	1.0405	2.0810		2687.1	2816.9
						3999.7		

Stack Summary Listing (5/5) from VSI_003 DVSP_geo_wavfield_z.ldb

Stack Number ACQUISITION SHOT_ NUMBER	Measured Depth [m] CABLE_ LENGTH	True Vertical Depth [m] RECEIVER_ CORRECTION_ Z	Measured Time [s] TRANSIT_ TIME	One-way Vertical Time [s] TRANSIT_ TIME_SRD	Two-way Vertical Time [s] TRANSIT_ TIME_ INITIAL	Interval Velocity [m/s] VELOCITY_ 1	Average Velocity [m/s] VELOCITY_ 2	RMS Velocity [m/s] VELOCITY_ 3
7	2990.1	2814.7	1.0413	1.0452	2.0904		2693.0	2823.3
						3287.0		
6	3009.9	2833.5	1.0470	1.0509	2.1018		2696.3	2826.0
						3945.4		
6	3029.9	2852.5	1.0518	1.0557	2.1114		2702.0	2832.1
						5243.0		
6	3049.9	2871.7	1.0554	1.0594	2.1188		2710.7	2844.0
						3884.8		
6	3069.9	2891.1	1.0604	1.0644	2.1288		2716.2	2849.8
						3098.4		
5	3090.0	2910.7	1.0668	1.0707	2.1414		2718.5	2851.3
						4028.7		
5	3110.0	2930.4	1.0716	1.0756	2.1512		2724.4	2857.7
						5504.6		
5	3130.0	2950.1	1.0752	1.0792	2.1583		2733.7	2870.6
						15656.5		
5	3150.0	2969.9	1.0765	1.0804	2.1609		2748.8	2918.4
						3054.5		
4	3170.0	2989.7	1.0830	1.0869	2.1739		2750.6	2919.3
						2728.5		
4	3190.0	3009.6	1.0903	1.0942	2.1884		2750.5	2918.0
						4444.9		
4	3210.0	3029.4	1.0947	1.0987	2.1973		2757.4	2925.9
						3850.5		
4	3230.0	3049.3	1.0999	1.1038	2.2076		2762.5	2930.9

Navigation Message Listing (1/3)

Shot #	Shot Time-UTC	Nav Shot #	Nav Fix #	Nav Shot Time	Gun East [UTM-meter]	Gun North [UTM-meter]	Distance off Line [m]	Along Track Error [m]	Distance off Target [m]
15	12:32:31								
16	12:37:01	72	72	13:38:08	398828	5588639	0	0	0
17	12:39:30	73	73	13:40:37	398822	5588638	0	0	0
18	13:09:39	100	100	14:10:46	398740	5588412	0	0	0
19	13:10:21	101	101	14:11:28	398750	5588418	0	0	0
20	13:10:46	102	102	14:11:53	398751	5588418	0	0	0
21	14:45:56	21	21	15:47:04	398654	5588191	0	0	0
22	14:48:47	22	22	15:49:54	398657	5588192	0	0	0
23	14:49:25	23	23	15:50:33	398652	5588193	0	0	0
24	14:49:53	24	24	15:51:01	398653	5588191	0	0	0
25	14:50:23	25	25	15:51:30	398657	5588189	0	0	0
26	14:51:03	26	26	15:52:10	398654	5588188	0	0	0
27	14:59:09	27	27	16:00:16	398663	5588200	0	0	0
28	15:02:45	28	28	16:03:52	398664	5588199	0	0	0
29	15:03:25	29	29	16:04:32	398665	5588198	0	0	0
30	15:04:01	30	30	16:05:08	398659	5588200	0	0	0
31	15:04:25	31	31	16:05:33	398656	5588199	0	0	0
32	15:04:48	32	32	16:05:55	398659	5588198	0	0	0
33	15:05:10	33	33	16:06:17	398662	5588198	0	0	0
34	15:05:39	34	34	16:06:46	398658	5588199	0	0	0
35	15:11:52	35	35	16:12:59	398662	5588216	0	0	0
36	15:12:12	36	36	16:13:19	398663	5588216	0	0	0
37	15:12:28	37	37	16:13:35	398664	5588216	0	0	0
38	15:12:53	38	38	16:14:01	398664	5588216	0	0	0
39	15:13:24	39	39	16:14:31	398665	5588217	0	0	0
40	15:14:03	40	40	16:15:10	398659	5588218	0	0	0
41	15:14:26	41	41	16:15:33	398658	5588217	0	0	0
42	15:21:52	42	42	16:23:00	398672	5588239	0	0	0
43	15:22:13	43	43	16:23:20	398671	5588239	0	0	0
44	15:22:57	44	44	16:24:04	398672	5588239	0	0	0
45	15:23:12	45	45	16:24:19	398673	5588239	0	0	0
46	15:23:28	46	46	16:24:35	398674	5588239	0	0	0
47	15:29:46	47	47	16:30:54	398680	5588264	0	0	0
48	15:30:07	48	48	16:31:14	398681	5588264	0	0	0
49	15:30:25	49	49	16:31:33	398682	5588264	0	0	0
50	15:30:50	50	50	16:31:57	398682	5588264	0	0	0
51	15:31:16	51	51	16:32:24	398681	5588264	0	0	0
52	15:32:06	52	52	16:33:13	398681	5588263	0	0	0
53	15:32:22	53	53	16:33:30	398681	5588264	0	0	0
54	15:39:25	54	54	16:40:32	398696	5588289	0	0	0
55	15:39:47	55	55	16:40:55	398695	5588289	0	0	0
56	15:40:02	56	56	16:41:10	398695	5588289	0	0	0
57	15:40:43	57	57	16:41:50	398695	5588289	0	0	0
58	15:41:14	58	58	16:42:21	398696	5588290	0	0	0
59	15:47:06	59	59	16:48:13	398706	5588324	0	0	0
60	15:47:38	60	60	16:48:45	398708	5588325	0	0	0
62	15:50:41	61	61	16:51:49	398704	5588322	0	0	0
63	15:51:07	62	62	16:52:14	398706	5588321	0	0	0
64	15:51:22	63	63	16:52:29	398708	5588321	0	0	0
65	15:51:39	64	64	16:52:46	398708	5588321	0	0	0
66	15:51:54	65	65	16:53:01	398707	5588321	0	0	0
67	15:57:47	66	66	16:58:55	398713	5588330	0	0	0
68	15:58:04	67	67	16:59:11	398713	5588329	0	0	0
69	15:58:22	68	68	16:59:29	398713	5588328	0	0	0
70	16:04:15	69	69	17:05:22	398713	5588357	0	0	0
71	16:04:39	71	71	17:05:46	398712	5588357	0	0	0
72	16:04:57	72	72	17:06:04	398713	5588356	0	0	0
73	16:05:25	73	73	17:06:32	398718	5588355	0	0	0
74	16:06:00	74	74	17:07:07	398720	5588353	0	0	0

Navigation Message Listing (2/3)

Shot #	Shot Time-UTC	Nav Shot #	Nav Fix #	Nav Shot Time	Gun East [UTM-meter]	Gun North [UTM-meter]	Distance off Line [m]	Along Track Error [m]	Distance off Target [m]
75	16:14:06	75	75	17:15:13	398725	5588364	0	0	0
76	16:14:42	76	76	17:15:50	398727	5588367	0	0	0
77	16:15:09	77	77	17:16:16	398726	5588369	0	0	0
78	16:26:27	78	78	17:27:34	398730	5588396	0	0	0
79	16:26:56	79	79	17:28:04	398729	5588397	0	0	0
80	16:27:11	80	80	17:28:19	398728	5588397	0	0	0
81	16:27:27	81	81	17:28:34	398726	5588398	0	0	0
82	16:27:47	82	82	17:28:54	398727	5588397	0	0	0
83	16:37:17	83	83	17:38:24	398741	5588420	0	0	0
84	16:37:35	84	84	17:38:42	398742	5588419	0	0	0
85	16:37:51	85	85	17:38:58	398740	5588421	0	0	0
86	16:38:06	86	86	17:39:13	398737	5588421	0	0	0
87	16:38:23	87	87	17:39:30	398738	5588422	0	0	0
89	16:45:33	89	89	17:46:40	398755	5588453	0	0	0
90	16:45:50	90	90	17:46:58	398756	5588453	0	0	0
91	16:46:05	91	91	17:47:13	398756	5588453	0	0	0
92	16:46:20	92	92	17:47:28	398757	5588454	0	0	0
93	16:46:35	93	93	17:47:43	398761	5588454	0	0	0
94	16:52:30	94	94	17:53:37	398767	5588484	0	0	0
95	16:52:45	95	95	17:53:52	398769	5588485	0	0	0
96	16:53:00	96	96	17:54:07	398770	5588485	0	0	0
97	16:53:15	97	97	17:54:22	398771	5588484	0	0	0
98	16:53:30	98	98	17:54:37	398772	5588484	0	0	0
99	16:59:00	99	99	18:00:08	398777	5588515	0	0	0
100	16:59:22	100	100	18:00:29	398780	5588515	0	0	0
101	16:59:37	101	101	18:00:44	398779	5588515	0	0	0
102	17:00:04	102	102	18:01:11	398778	5588515	0	0	0
103	17:00:19	103	103	18:01:26	398779	5588515	0	0	0
104	17:05:33	104	104	18:06:41	398786	5588547	0	0	0
105	17:06:10	105	105	18:07:17	398785	5588546	0	0	0
106	17:06:25	106	106	18:07:33	398783	5588545	0	0	0
107	17:06:41	107	107	18:07:49	398780	5588544	0	0	0
108	17:07:06	108	108	18:08:14	398785	5588543	0	0	0
109	17:12:33	109	109	18:13:41	398793	5588570	0	0	0
110	17:12:48	110	110	18:13:56	398796	5588571	0	0	0
111	17:13:03	111	111	18:14:11	398798	5588570	0	0	0
112	17:13:18	112	112	18:14:26	398799	5588571	0	0	0
113	17:13:34	113	113	18:14:41	398799	5588572	0	0	0
114	17:18:41	114	114	18:19:48	398799	5588623	0	0	0
115	17:18:56	115	115	18:20:03	398797	5588624	0	0	0
116	17:19:12	116	116	18:20:19	398801	5588624	0	0	0
117	17:19:27	117	117	18:20:34	398811	5588623	0	0	0
118	17:19:50	118	118	18:20:57	398816	5588621	0	0	0
119	17:25:25	119	119	18:26:32	398819	5588637	0	0	0
120	17:25:40	120	120	18:26:47	398819	5588636	0	0	0
121	17:25:55	121	121	18:27:02	398821	5588636	0	0	0
122	17:26:29	122	122	18:27:36	398825	5588635	0	0	0
123	17:26:52	123	123	18:27:59	398821	5588635	0	0	0
124	17:32:50	124	124	18:33:57	398825	5588656	0	0	0
125	17:33:05	125	125	18:34:12	398826	5588660	0	0	0
126	17:33:20	126	126	18:34:27	398826	5588657	0	0	0
127	17:33:35	127	127	18:34:42	398826	5588654	0	0	0
128	17:33:50	128	128	18:34:57	398828	5588654	0	0	0
129	17:34:08	129	129	18:35:16	398828	5588652	0	0	0
130	17:41:27	130	130	18:42:35	398842	5588683	0	0	0
131	17:41:53	131	131	18:43:00	398836	5588684	0	0	0
133	17:44:32	133	133	18:45:39	398835	5588685	0	0	0
134	17:45:04	134	134	18:46:11	398841	5588687	0	0	0
135	17:45:19	135	135	18:46:26	398842	5588688	0	0	0

Navigation Message Listing (3/3)

Shot #	Shot Time-UTC	Nav Shot #	Nav Fix #	Nav Shot Time	Gun East [UTM-meter]	Gun North [UTM-meter]	Distance off Line [m]	Along Track Error [m]	Distance off Target [m]
136	18:37:46	136	136	19:38:53	398850	5588722	0	0	0
137	18:38:03	137	137	19:39:10	398851	5588722	0	0	0
138	18:38:23	138	138	19:39:31	398854	5588724	0	0	0
139	18:38:38	139	139	19:39:46	398856	5588725	0	0	0
140	18:38:53	140	140	19:40:01	398855	5588725	0	0	0
141	18:47:10	141	141	19:48:17	398878	5588752	0	0	0
142	18:47:25	142	142	19:48:32	398878	5588750	0	0	0
143	18:47:40	143	143	19:48:47	398878	5588748	0	0	0
144	18:47:55	144	144	19:49:02	398880	5588747	0	0	0
145	18:48:10	145	145	19:49:18	398882	5588748	0	0	0
146	18:57:42	146	146	19:58:49	398890	5588760	0	0	0
147	18:57:57	147	147	19:59:04	398891	5588761	0	0	0
148	18:58:12	148	148	19:59:19	398892	5588761	0	0	0
149	18:58:27	149	149	19:59:34	398893	5588760	0	0	0
150	18:58:42	150	150	19:59:49	398893	5588762	0	0	0
151	19:05:32	151	151	20:06:39	398891	5588744	0	0	0
152	19:05:47	152	152	20:06:54	398892	5588748	0	0	0
153	19:06:02	153	153	20:07:10	398892	5588747	0	0	0
154	19:06:17	154	154	20:07:25	398890	5588747	0	0	0
155	19:06:32	155	155	20:07:40	398888	5588750	0	0	0
156	19:12:30	156	156	20:13:38	398894	5588756	0	0	0
157	19:12:45	157	157	20:13:53	398894	5588762	0	0	0
158	19:13:05	158	158	20:14:12	398897	5588760	0	0	0
159	19:13:20	159	159	20:14:27	398886	5588762	0	0	0
160	19:13:40	160	160	20:14:47	398880	5588767	0	0	0
161	19:19:18	161	161	20:20:26	398893	5588756	0	0	0
162	19:19:33	162	162	20:20:41	398890	5588757	0	0	0
163	19:19:53	163	163	20:21:00	398888	5588761	0	0	0
164	19:20:08	164	164	20:21:15	398889	5588758	0	0	0
165	19:20:23	165	165	20:21:30	398892	5588760	0	0	0
166	19:25:59	166	166	20:27:06	398889	5588759	0	0	0
167	19:26:14	167	167	20:27:21	398889	5588759	0	0	0
168	19:26:29	168	168	20:27:36	398890	5588761	0	0	0
169	19:26:44	169	169	20:27:51	398891	5588761	0	0	0
170	19:27:03	170	170	20:28:10	398890	5588762	0	0	0
171	19:44:44	171	171	20:45:51	398899	5588766	0	0	0
172	19:44:59	172	172	20:46:06	398895	5588765	0	0	0
173	19:45:20	173	173	20:46:28	398897	5588764	0	0	0
174	19:45:39	174	174	20:46:46	398894	5588769	0	0	0
175	19:45:55	175	175	20:47:02	398888	5588761	0	0	0
176	19:52:58	176	176	20:54:05	398899	5588766	0	0	0
177	19:53:13	177	177	20:54:20	398898	5588767	0	0	0
178	19:53:28	178	178	20:54:35	398895	5588768	0	0	0
179	19:53:46	179	179	20:54:54	398894	5588759	0	0	0
180	19:54:01	180	180	20:55:09	398897	5588768	0	0	0
181	19:59:16	181	181	21:00:24	398895	5588766	0	0	0
182	19:59:31	182	182	21:00:39	398896	5588770	0	0	0
183	19:59:46	183	183	21:00:54	398893	5588758	0	0	0
184	20:00:01	184	184	21:01:09	398891	5588757	0	0	0
185	20:00:17	185	185	21:01:24	398898	5588773	0	0	0
186	20:08:45	186	186	21:09:52	398899	5588766	0	0	0
187	20:09:47	187	187	21:10:54	398898	5588762	0	0	0
188	20:10:21	188	188	21:11:29	398898	5588757	0	0	0
189	20:21:09	189	189	21:22:16	398898	5588757	0	0	0
190	20:21:37	190	190	21:22:45	398897	5588771	0	0	0
191	20:21:52	191	191	21:23:00	398895	5588768	0	0	0
192	20:22:09	192	192	21:23:16	398899	5588771	0	0	0
193	20:22:30	193	193	21:23:37	398899	5588754	0	0	0

Observer's Note (1/4)

Well depth [m]	Time	Shot Type	Shot#	Stack#	Source	Remarks
464.9	21:33:51	ENLO	1			
464.9	21:34:18	ENHI	2			
464.9	21:34:38	ETHD	3			
464.9	21:35:38	DRNG	4			
464.9	21:35:58	GA02	5			
464.9	21:36:10	GA04	6			
464.9	21:36:22	GA08	7			
464.9	21:36:34	GA16	8			
464.9	21:36:46	GA32	9			
464.9	21:38:08	XTLK	10			
464.9	21:38:30	XTLK	11			
464.9	21:38:51	XTLK	12			
464.9	21:39:20	EIMP	13			
1950.0	22:31:59	BKGD	14			
1950.0	22:32:31	SHOT	15	2	DVSP	Check shot - M1950 GP=1890 Depth = 5784
1950.0	22:37:01	SHOT	16	2	DVSP	-- GP=Gun Pressure, Depth=Gun Depth
1950.0	22:39:30	SHOT	17	2	DVSP	Check shot - M1950 GP=1890 Depth = 5784
2509.2	23:09:39	SHOT	18	3	DVSP	Check shot - M1950 GP=1644 Depth = 5867
2509.2	23:10:21	SHOT	19	3	DVSP	
2509.2	23:10:46	SHOT	20	3	DVSP	Check shot - M1950 GP=1644 Depth = 5867
3230.0	00:45:56	SHOT	21	4	DVSP	Station 01 - M3230 GP=1922 Depth = 6553
3230.0	00:48:47	SHOT	22	4	DVSP	-- Noisy shuttle - Re-anchoring
3230.0	00:49:25	SHOT	23	4	DVSP	
3230.0	00:49:53	SHOT	24	4	DVSP	
3230.0	00:50:23	SHOT	25	4	DVSP	
3230.0	00:51:03	SHOT	26	4	DVSP	Station 01 - M3230 GP=1922 Depth = 6553
3150.0	00:59:09	SHOT	27	5	DVSP	Station 02 - M3150 GP=1910 Depth = 6299
3150.0	01:02:45	SHOT	28	5	DVSP	
3150.0	01:03:25	SHOT	29	5	DVSP	
3150.0	01:04:01	SHOT	30	5	DVSP	
3150.0	01:04:25	SHOT	31	5	DVSP	
3150.0	01:04:48	SHOT	32	5	DVSP	
3150.0	01:05:10	SHOT	33	5	DVSP	
3150.0	01:05:39	SHOT	34	5	DVSP	Station 02 - M3150 GP=1906 Depth = 6299
3069.9	01:11:52	SHOT	35	6	DVSP	Station 03 - M3070 GP=1898 Depth = 6324
3069.9	01:12:12	SHOT	36	6	DVSP	-- Affected signal on shuttle 2
3069.9	01:12:28	SHOT	37	6	DVSP	
3069.9	01:12:53	SHOT	38	6	DVSP	
3069.9	01:13:24	SHOT	39	6	DVSP	
3069.9	01:14:03	SHOT	40	6	DVSP	
3069.9	01:14:26	SHOT	41	6	DVSP	Station 03 - M3070 GP=1898 Depth = 6324
2990.1	01:21:52	SHOT	42	7	DVSP	Station 04 - M2990 GP=1894 Depth = 6400
2990.1	01:22:13	SHOT	43	7	DVSP	
2990.1	01:22:57	SHOT	44	7	DVSP	
2990.1	01:23:12	SHOT	45	7	DVSP	
2990.1	01:23:28	SHOT	46	7	DVSP	Station 04 - M2990 GP=1894 Depth = 6400
2910.0	01:29:46	SHOT	47	8	DVSP	Station 05 - M2910 GP=1888 Depth = 6299
2910.0	01:30:07	SHOT	48	8	DVSP	-- Affected signal on shuttle 2
2910.0	01:30:25	SHOT	49	8	DVSP	
2910.0	01:30:50	SHOT	50	8	DVSP	
2910.0	01:31:16	SHOT	51	8	DVSP	
2910.0	01:32:06	SHOT	52	8	DVSP	
2910.0	01:32:22	SHOT	53	8	DVSP	Station 05 - M2910 GP=1888 Depth = 6299
2830.0	01:39:25	SHOT	54	9	DVSP	Station 06 - M2830 GP=1884 Depth = 6578
2830.0	01:39:47	SHOT	55	9	DVSP	
2830.0	01:40:02	SHOT	56	9	DVSP	
2830.0	01:40:43	SHOT	57	9	DVSP	
2830.0	01:41:14	SHOT	58	9	DVSP	Station 06 - M2830 GP=1884 Depth = 6578
2750.0	01:47:06	SHOT	59	10	DVSP	Station 07 - M2750 GP=1884 Depth = 6578

Observer's Note (2/4)

Well depth [m]	Time	Shot Type	Shot#	Stack#	Source	Remarks
2750.0	01:47:38	SHOT	60	10	DVSP	
2750.0	01:48:10	BKGD	61			
2750.0	01:50:41	SHOT	62	10	DVSP	
2750.0	01:51:07	SHOT	63	10	DVSP	
2750.0	01:51:22	SHOT	64	10	DVSP	
2750.0	01:51:39	SHOT	65	10	DVSP	
2750.0	01:51:54	SHOT	66	10	DVSP	Station 07 - M2750 GP=1884 Depth = 6578
2730.0	01:57:47	SHOT	67	11	DVSP	Station 7.5- M2730 GP=1878 Depth = 5968
2730.0	01:58:04	SHOT	68	11	DVSP	
2730.0	01:58:22	SHOT	69	11	DVSP	Station 7.5- M2730 GP=1878 Depth = 5968
2670.0	02:04:15	SHOT	70	12	DVSP	Station 08 - M2670 GP=1878 Depth = 6603
2670.0	02:04:39	SHOT	71	12	DVSP	
2670.0	02:04:57	SHOT	72	12	DVSP	
2670.0	02:05:25	SHOT	73	12	DVSP	
2670.0	02:06:00	SHOT	74	12	DVSP	Station 08 - M2670 GP=1878 Depth = 6603
2650.0	02:14:06	SHOT	75	13	DVSP	Station 8.5- M2650 GP=1872 Depth = 6248
2650.0	02:14:42	SHOT	76	13	DVSP	
2650.0	02:15:09	SHOT	77	13	DVSP	Station 8.5- M2650 GP=1872 Depth = 6248
2585.0	02:26:27	SHOT	78	15	DVSP	Station 09 - M2590 GP=1872 Depth = 6426
2585.0	02:26:56	SHOT	79	15	DVSP	-- This station moved 5 m up due to casing
2585.0	02:27:11	SHOT	80	15	DVSP	
2585.0	02:27:27	SHOT	81	15	DVSP	
2585.0	02:27:47	SHOT	82	15	DVSP	Station 09 - M2590 GP=1872 Depth = 6426
2510.0	02:37:17	SHOT	83	16	DVSP	Station 10 - M2510 GP=2006 Depth = 6553
2510.0	02:37:35	SHOT	84	16	DVSP	
2510.0	02:37:51	SHOT	85	16	DVSP	
2510.0	02:38:06	SHOT	86	16	DVSP	
2510.0	02:38:23	SHOT	87	16	DVSP	Station 10 - M2510 GP=2006 Depth = 6553
2430.0	02:45:33	SHOT	89	17	DVSP	Station 11 - M2430 GP=1990 Depth = 6553
2430.0	02:45:50	SHOT	90	17	DVSP	
2430.0	02:46:05	SHOT	91	17	DVSP	
2430.0	02:46:20	SHOT	92	17	DVSP	
2430.0	02:46:35	SHOT	93	17	DVSP	Station 11 - M2430 GP=1990 Depth = 6553
2350.0	02:52:30	SHOT	94	18	DVSP	Station 12 - M2350 GP=1986 Depth = 6299
2350.0	02:52:45	SHOT	95	18	DVSP	
2350.0	02:53:00	SHOT	96	18	DVSP	
2350.0	02:53:15	SHOT	97	18	DVSP	
2350.0	02:53:30	SHOT	98	18	DVSP	Station 12 - M2350 GP=1986 Depth = 6299
2270.0	02:59:00	SHOT	99	19	DVSP	Station 13 - M2270 GP=N/A Depth = N/A
2270.0	02:59:22	SHOT	100	19	DVSP	N/A = not recieved on TGS-8
2270.0	02:59:37	SHOT	101	19	DVSP	
2270.0	03:00:04	SHOT	102	19	DVSP	
2270.0	03:00:19	SHOT	103	19	DVSP	Station 13 - M2270 GP=N/A Depth = N/A
2190.0	03:05:33	SHOT	104	20	DVSP	Station 14 - M2190 GP=N/A Depth = 5968
2190.0	03:06:10	SHOT	105	20	DVSP	
2190.0	03:06:25	SHOT	106	20	DVSP	
2190.0	03:06:41	SHOT	107	20	DVSP	
2190.0	03:07:06	SHOT	108	20	DVSP	Station 14 - M2190 GP=N/A Depth = 5968
2110.0	03:12:33	SHOT	109	21	DVSP	Station 15 - M2110 GP=1652 Depth = 6553
2110.0	03:12:48	SHOT	110	21	DVSP	
2110.0	03:13:03	SHOT	111	21	DVSP	
2110.0	03:13:18	SHOT	112	21	DVSP	
2110.0	03:13:34	SHOT	113	21	DVSP	Station 15 - M2110 GP=1652 Depth = 6553
2030.0	03:18:41	SHOT	114	22	DVSP	Station 16 - M2030 GP=1966 Depth = 5994
2030.0	03:18:56	SHOT	115	22	DVSP	
2030.0	03:19:12	SHOT	116	22	DVSP	
2030.0	03:19:27	SHOT	117	22	DVSP	
2030.0	03:19:50	SHOT	118	22	DVSP	Station 16 - M2030 GP=1966 Depth = 5994
1950.0	03:25:25	SHOT	119	23	DVSP	Station 17 - M1950 GP=1954 Depth = 6070

Observer's Note (3/4)

Well depth [m]	Time	Shot Type	Shot#	Stack#	Source	Remarks
1950.0	03:25:40	SHOT	120	23	DVSP	
1950.0	03:25:55	SHOT	121	23	DVSP	
1950.0	03:26:29	SHOT	122	23	DVSP	
1950.0	03:26:52	SHOT	123	23	DVSP	Station 17 - M1950 GP=1954 Depth = 6070
1870.0	03:32:50	SHOT	124	24	DVSP	Station 18 - M1870 GP=1730 Depth = 6299
1870.0	03:33:05	SHOT	125	24	DVSP	
1870.0	03:33:20	SHOT	126	24	DVSP	
1870.0	03:33:35	SHOT	127	24	DVSP	
1870.0	03:33:50	SHOT	128	24	DVSP	
1870.0	03:34:08	SHOT	129	24	DVSP	Station 18 - M1870 GP=1730 Depth = 6299
1790.0	03:41:27	SHOT	130	25	DVSP	Station 19 - M1790 GP=1958 Depth = 6527
1790.0	03:41:53	SHOT	131	25	DVSP	
1790.0	03:44:32	SHOT	133	25	DVSP	
1790.0	03:45:04	SHOT	134	25	DVSP	
1790.0	03:45:19	SHOT	135	25	DVSP	Station 19 - M1790 GP=1958 Depth = 6527
1710.0	04:37:46	SHOT	136	26	DVSP	Station 20 - M1710 GP=1924 Depth = 6070
1710.0	04:38:03	SHOT	137	26	DVSP	
1710.0	04:38:23	SHOT	138	26	DVSP	
1710.0	04:38:38	SHOT	139	26	DVSP	
1710.0	04:38:53	SHOT	140	26	DVSP	Station 20 - M1710 GP=1924 Depth = 6070
1630.0	04:47:10	SHOT	141	27	DVSP	Station 21 - M1630 GP=1898 Depth = 6146
1630.0	04:47:25	SHOT	142	27	DVSP	
1630.0	04:47:40	SHOT	143	27	DVSP	
1630.0	04:47:55	SHOT	144	27	DVSP	
1630.0	04:48:10	SHOT	145	27	DVSP	Station 21 - M1630 GP=1898 Depth = 6146
1550.0	04:57:42	SHOT	146	28	DVSP	Station 22 - M1550 GP=N/A Depth = 6146
1550.0	04:57:57	SHOT	147	28	DVSP	
1550.0	04:58:12	SHOT	148	28	DVSP	
1550.0	04:58:27	SHOT	149	28	DVSP	
1550.0	04:58:42	SHOT	150	28	DVSP	Station 22 - M1550 GP=N/A Depth = 6146
1470.0	05:05:32	SHOT	151	29	DVSP	Station 23 - M1470 GP=N/A Depth = 6019
1470.0	05:05:47	SHOT	152	29	DVSP	
1470.0	05:06:02	SHOT	153	29	DVSP	
1470.0	05:06:17	SHOT	154	29	DVSP	
1470.0	05:06:32	SHOT	155	29	DVSP	Station 23 - M1470 GP=N/A Depth = 6019
1390.0	05:12:30	SHOT	156	30	DVSP	Station 24 - M1390 GP=N/A Depth = 5994
1390.0	05:12:45	SHOT	157	30	DVSP	
1390.0	05:13:05	SHOT	158	30	DVSP	
1390.0	05:13:20	SHOT	159	30	DVSP	
1390.0	05:13:40	SHOT	160	30	DVSP	Station 24 - M1390 GP=N/A Depth = 5994
1309.9	05:19:18	SHOT	161	31	DVSP	Station 25 - M1310 GP=N/A Depth = 6629
1309.9	05:19:33	SHOT	162	31	DVSP	
1309.9	05:19:53	SHOT	163	31	DVSP	
1309.9	05:20:08	SHOT	164	31	DVSP	
1309.9	05:20:23	SHOT	165	31	DVSP	Station 25 - M1310 GP=N/A Depth = 6629
1230.0	05:25:59	SHOT	166	32	DVSP	Station 26 - M1230 GP=N/A Depth = 6299
1230.0	05:26:14	SHOT	167	32	DVSP	
1230.0	05:26:29	SHOT	168	32	DVSP	
1230.0	05:26:44	SHOT	169	32	DVSP	
1230.0	05:27:03	SHOT	170	32	DVSP	Station 26 - M1230 GP=N/A Depth = 6299
1150.0	05:44:44	SHOT	171	33	DVSP	Station 27 - M1150 GP=N/A Depth = 6121
1150.0	05:44:59	SHOT	172	33	DVSP	
1150.0	05:45:20	SHOT	173	33	DVSP	
1150.0	05:45:39	SHOT	174	33	DVSP	
1150.0	05:45:55	SHOT	175	33	DVSP	Station 27 - M1150 GP=N/A Depth = 6121
1070.0	05:52:58	SHOT	176	34	DVSP	Station 28 - M1070 GP=N/A Depth = 5181
1070.0	05:53:13	SHOT	177	34	DVSP	
1070.0	05:53:28	SHOT	178	34	DVSP	
1070.0	05:53:46	SHOT	179	34	DVSP	

Observer's Note (4/4)

Well depth [m]	Time	Shot Type	Shot#	Stack#	Source	Remarks
1070.0	05:54:01	SHOT	180	34	DVSP	Station 28 - M1070 GP=N/A Depth = 5181
990.0	05:59:16	SHOT	181	35	DVSP	Station 29 - M0990 GP=N/A Depth = N/A
990.0	05:59:31	SHOT	182	35	DVSP	
990.0	05:59:46	SHOT	183	35	DVSP	
990.0	06:00:01	SHOT	184	35	DVSP	
990.0	06:00:17	SHOT	185	35	DVSP	Station 29 - M0990 GP=N/A Depth = N/A
910.0	06:08:45	SHOT	186	36	DVSP	Station 30 - M0910 GP=N/A Depth = N/A
910.0	06:09:47	SHOT	187	36	DVSP	-- Casing arrivals
910.0	06:10:21	SHOT	188	36	DVSP	Station 30 - M0910 GP=N/A Depth = N/A
830.0	06:21:09	SHOT	189	37	DVSP	Station 31 - M0830 GP=N/A Depth = N/A
830.0	06:21:37	SHOT	190	37	DVSP	-- Strong casing arrivals - ending survey
830.0	06:21:52	SHOT	191	37	DVSP	
830.0	06:22:09	SHOT	192	37	DVSP	
830.0	06:22:30	SHOT	193	37	DVSP	Station 31 - M0830 GP=N/A Depth = N/A

VSI Seismic Evaluation Report							
ELECTRICAL NOISE LOW TEST							
2004/07/14 12:33:51							
Shot No: 1				Station Depth: 464.93 m			
Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
DC Offset	1	X	-25.1956	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	X	0.1238	micro V	-	0.5000	PASS
Noise Peak	1	X	0.4445	micro V	-	2.0000	PASS
DC Offset	1	Y	-25.1533	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	Y	0.1254	micro V	-	0.5000	PASS
Noise Peak	1	Y	0.5385	micro V	-	2.0000	PASS
DC Offset	1	Z	-25.1632	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	Z	0.1215	micro V	-	0.5000	PASS
Noise Peak	1	Z	0.4644	micro V	-	2.0000	PASS
DC Offset	2	X	-25.1431	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	X	0.1197	micro V	-	0.5000	PASS
Noise Peak	2	X	0.4967	micro V	-	2.0000	PASS
DC Offset	2	Y	-25.1983	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	Y	0.1209	micro V	-	0.5000	PASS
Noise Peak	2	Y	0.3850	micro V	-	2.0000	PASS
DC Offset	2	Z	-25.2152	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	Z	0.1211	micro V	-	0.5000	PASS
Noise Peak	2	Z	0.4385	micro V	-	2.0000	PASS
DC Offset	3	X	-25.3375	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	X	0.1209	micro V	-	0.5000	PASS
Noise Peak	3	X	0.4134	micro V	-	2.0000	PASS
DC Offset	3	Y	-25.2494	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	Y	0.1193	micro V	-	0.5000	PASS
Noise Peak	3	Y	0.4440	micro V	-	2.0000	PASS
DC Offset	3	Z	-25.1092	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	Z	0.1217	micro V	-	0.5000	PASS
Noise Peak	3	Z	0.4387	micro V	-	2.0000	PASS
DC Offset	4	X	-25.1526	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	X	0.1206	micro V	-	0.5000	PASS
Noise Peak	4	X	0.4434	micro V	-	2.0000	PASS
DC Offset	4	Y	-25.3437	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	Y	0.1240	micro V	-	0.5000	PASS
Noise Peak	4	Y	0.4389	micro V	-	2.0000	PASS
DC Offset	4	Z	-25.2297	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	Z	0.1258	micro V	-	0.5000	PASS
Noise Peak	4	Z	0.5011	micro V	-	2.0000	PASS
ELECTRICAL NOISE HIGH TEST							
2004/07/14 12:34:18							
Shot No: 2				Station Depth: 464.93 m			
Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
DC Offset	1	X	-25.1463	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	X	0.1206	micro V	-	0.5000	PASS
Noise Peak	1	X	0.4090	micro V	-	2.0000	PASS
DC Offset	1	Y	-24.9561	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	Y	0.1230	micro V	-	0.5000	PASS
Noise Peak	1	Y	0.4868	micro V	-	2.0000	PASS
DC Offset	1	Z	-25.0061	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	Z	0.1212	micro V	-	0.5000	PASS
Noise Peak	1	Z	0.4291	micro V	-	2.0000	PASS
DC Offset	2	X	-24.8792	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	X	0.1232	micro V	-	0.5000	PASS
Noise Peak	2	X	0.4195	micro V	-	2.0000	PASS
DC Offset	2	Y	-24.8228	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	Y	0.1239	micro V	-	0.5000	PASS
Noise Peak	2	Y	0.4674	micro V	-	2.0000	PASS
DC Offset	2	Z	-25.1681	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	Z	0.1254	micro V	-	0.5000	PASS
Noise Peak	2	Z	0.4688	micro V	-	2.0000	PASS
DC Offset	3	X	-25.3224	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	X	0.1205	micro V	-	0.5000	PASS
Noise Peak	3	X	0.4307	micro V	-	2.0000	PASS

DC Offset	3	Y	-24.9995	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	Y	0.1210	micro V	-	0.5000	PASS
Noise Peak	3	Y	0.4703	micro V	-	2.0000	PASS
DC Offset	3	Z	-24.6644	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	Z	0.1199	micro V	-	0.5000	PASS
Noise Peak	3	Z	0.4498	micro V	-	2.0000	PASS
DC Offset	4	X	-25.2021	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	X	0.1177	micro V	-	0.5000	PASS
Noise Peak	4	X	0.4468	micro V	-	2.0000	PASS
DC Offset	4	Y	-25.6669	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	Y	0.1212	micro V	-	0.5000	PASS
Noise Peak	4	Y	0.4339	micro V	-	2.0000	PASS
DC Offset	4	Z	-25.1647	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	Z	0.1217	micro V	-	0.5000	PASS
Noise Peak	4	Z	0.4580	micro V	-	2.0000	PASS

ELECTRICAL DISTORTION TEST**2004/07/14 12:34:38****Shot No: 3****Station Depth: 464.93 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Total Harmonic Distortion	1	X	-106.5896	dB	-	-90.0000	PASS
Total Harmonic Distortion	1	Y	-107.2178	dB	-	-90.0000	PASS
Total Harmonic Distortion	1	Z	-104.8712	dB	-	-90.0000	PASS
Total Harmonic Distortion	2	X	-107.6332	dB	-	-90.0000	PASS
Total Harmonic Distortion	2	Y	-109.2593	dB	-	-90.0000	PASS
Total Harmonic Distortion	2	Z	-113.2058	dB	-	-90.0000	PASS
Total Harmonic Distortion	3	X	-101.6860	dB	-	-90.0000	PASS
Total Harmonic Distortion	3	Y	-103.2160	dB	-	-90.0000	PASS
Total Harmonic Distortion	3	Z	-99.7727	dB	-	-90.0000	PASS
Total Harmonic Distortion	4	X	-98.5585	dB	-	-90.0000	PASS
Total Harmonic Distortion	4	Y	-100.0935	dB	-	-90.0000	PASS
Total Harmonic Distortion	4	Z	-97.0349	dB	-	-90.0000	PASS

SYSTEM DYNAMIC RANGE TEST**2004/07/14 12:35:38****Shot No: 4****Station Depth: 464.93 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
System Dynamic Range	1	X	107.5348	dB	103.0000	-	PASS
System Dynamic Range	1	Y	107.4358	dB	103.0000	-	PASS
System Dynamic Range	1	Z	107.1812	dB	103.0000	-	PASS
System Dynamic Range	2	X	107.4561	dB	103.0000	-	PASS
System Dynamic Range	2	Y	107.2603	dB	103.0000	-	PASS
System Dynamic Range	2	Z	106.7915	dB	103.0000	-	PASS
System Dynamic Range	3	X	107.4848	dB	103.0000	-	PASS
System Dynamic Range	3	Y	107.4454	dB	103.0000	-	PASS
System Dynamic Range	3	Z	107.2405	dB	103.0000	-	PASS
System Dynamic Range	4	X	107.6880	dB	103.0000	-	PASS
System Dynamic Range	4	Y	107.4184	dB	103.0000	-	PASS
System Dynamic Range	4	Z	107.5491	dB	103.0000	-	PASS

AMPLIFIER GAIN 2 TEST**2004/07/14 12:35:58****Shot No: 5****Station Depth: 464.93 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Gain Accuracy	1	X	0.1463	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	X	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Y	0.1407	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Y	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Z	0.1414	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Z	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	X	0.1422	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	X	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Y	0.1399	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Y	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Z	0.1496	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Z	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	X	0.1118	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	X	0.0000	dB	-0.5000	0.5000	PASS

Gain Accuracy	3	Y	0.1174	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Y	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Z	0.1133	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Z	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	X	0.1050	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	X	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Y	0.1220	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Y	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Z	0.1215	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Z	0.0000	dB	-0.5000	0.5000	PASS

AMPLIFIER GAIN 4 TEST**2004/07/14 12:36:10****Shot No: 6****Station Depth: 464.93 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Gain Accuracy	1	X	0.1481	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	X	-0.0018	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Y	0.1419	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Y	-0.0012	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Z	0.1402	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Z	0.0011	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	X	0.1420	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	X	0.0002	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Y	0.1407	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Y	-0.0008	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Z	0.1543	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Z	-0.0047	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	X	0.1105	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	X	0.0013	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Y	0.1188	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Y	-0.0014	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Z	0.1122	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Z	0.0012	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	X	0.1026	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	X	0.0024	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Y	0.1195	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Y	0.0026	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Z	0.1196	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Z	0.0019	dB	-0.5000	0.5000	PASS

AMPLIFIER GAIN 8 TEST**2004/07/14 12:36:22****Shot No: 7****Station Depth: 464.93 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Gain Accuracy	1	X	0.1506	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	X	-0.0043	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Y	0.1423	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Y	-0.0015	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Z	0.1403	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Z	0.0011	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	X	0.1424	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	X	-0.0002	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Y	0.1424	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Y	-0.0025	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Z	0.1583	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Z	-0.0087	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	X	0.1084	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	X	0.0035	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Y	0.1195	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Y	-0.0022	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Z	0.1130	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Z	0.0003	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	X	0.1027	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	X	0.0023	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Y	0.1194	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Y	0.0027	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Z	0.1216	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Z	-0.0001	dB	-0.5000	0.5000	PASS

AMPLIFIER GAIN 16 TEST**2004/07/14 12:36:34****Shot No: 8****Station Depth: 464.93 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Gain Accuracy	1	X	0.1464	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	X	-0.0001	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Y	0.1386	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Y	0.0022	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Z	0.1383	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Z	0.0030	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	X	0.1394	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	X	0.0028	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Y	0.1394	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Y	0.0005	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Z	0.1556	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Z	-0.0060	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	X	0.1022	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	X	0.0096	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Y	0.1195	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Y	-0.0021	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Z	0.1100	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Z	0.0033	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	X	0.0989	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	X	0.0061	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Y	0.1134	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Y	0.0086	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Z	0.1164	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Z	0.0051	dB	-0.5000	0.5000	PASS

AMPLIFIER GAIN 32 TEST**2004/07/14 12:36:46****Shot No: 9****Station Depth: 464.93 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Gain Accuracy	1	X	0.1471	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	X	-0.0008	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Y	0.1408	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Y	-0.0001	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Z	0.1385	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Z	0.0028	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	X	0.1439	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	X	-0.0017	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Y	0.1395	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Y	0.0004	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Z	0.1575	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Z	-0.0079	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	X	0.1019	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	X	0.0099	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Y	0.1204	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Y	-0.0030	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Z	0.1097	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Z	0.0036	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	X	0.1022	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	X	0.0028	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Y	0.1167	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Y	0.0053	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Z	0.1205	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Z	0.0010	dB	-0.5000	0.5000	PASS

CROSS TALK X TEST**2004/07/14 12:38:08****Shot No: 10****Station Depth: 464.93 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Cross Talk X-Y	1	-	-100.3594	dB	-	-90.0000	PASS
Cross Talk X-Z	1	-	-98.4288	dB	-	-90.0000	PASS
Cross Talk X-Y	2	-	-100.2543	dB	-	-90.0000	PASS
Cross Talk X-Z	2	-	-98.5325	dB	-	-90.0000	PASS
Cross Talk X-Y	3	-	-100.4506	dB	-	-90.0000	PASS

Cross Talk X-Z	3	-	-98.3851	dB	-	-90.0000	PASS
Cross Talk X-Y	4	-	-100.0149	dB	-	-90.0000	PASS
Cross Talk X-Z	4	-	-98.5830	dB	-	-90.0000	PASS
CROSS TALK Y TEST							
2004/07/14 12:38:30							
Shot No: 11				Station Depth: 464.93 m			
Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Cross Talk Y-Z	1	-	-98.0068	dB	-	-90.0000	PASS
Cross Talk Y-X	1	-	-99.5943	dB	-	-90.0000	PASS
Cross Talk Y-Z	2	-	-97.9445	dB	-	-90.0000	PASS
Cross Talk Y-X	2	-	-99.6085	dB	-	-90.0000	PASS
Cross Talk Y-Z	3	-	-98.0002	dB	-	-90.0000	PASS
Cross Talk Y-X	3	-	-99.5730	dB	-	-90.0000	PASS
Cross Talk Y-Z	4	-	-97.5588	dB	-	-90.0000	PASS
Cross Talk Y-X	4	-	-99.5593	dB	-	-90.0000	PASS
CROSS TALK Z TEST							
2004/07/14 12:38:51							
Shot No: 12				Station Depth: 464.93 m			
Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Cross Talk Z-X	1	-	-96.8023	dB	-	-90.0000	PASS
Cross Talk Z-Y	1	-	-96.3836	dB	-	-90.0000	PASS
Cross Talk Z-X	2	-	-96.8634	dB	-	-90.0000	PASS
Cross Talk Z-Y	2	-	-96.6155	dB	-	-90.0000	PASS
Cross Talk Z-X	3	-	-96.5115	dB	-	-90.0000	PASS
Cross Talk Z-Y	3	-	-96.1743	dB	-	-90.0000	PASS
Cross Talk Z-X	4	-	-97.0294	dB	-	-90.0000	PASS
Cross Talk Z-Y	4	-	-96.2743	dB	-	-90.0000	PASS
IMPULSE RESPONSE TEST							
2004/07/14 12:39:20							
Shot No: 13				Station Depth: 464.93 m			
Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Amplitude (0.3Hz)	1	X	-1.5381	dB	-5.0000	-	PASS
Amplitude (400Hz)	1	X	-3.5759	dB	-5.0000	-	PASS
Impulse Amplitude	1	X	573.7178	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	1	X	0.0000	degree	-	-	-
Amplitude (0.3Hz)	1	Y	-1.4704	dB	-5.0000	-	PASS
Amplitude (400Hz)	1	Y	-3.5760	dB	-5.0000	-	PASS
Impulse Amplitude	1	Y	573.4791	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	1	Y	-0.7901	degree	-	-	-
Amplitude (0.3Hz)	1	Z	-1.5598	dB	-5.0000	-	PASS
Amplitude (400Hz)	1	Z	-3.5760	dB	-5.0000	-	PASS
Impulse Amplitude	1	Z	573.3101	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	1	Z	0.1785	degree	-	-	-
Amplitude (0.3Hz)	2	X	-1.4894	dB	-5.0000	-	PASS
Amplitude (400Hz)	2	X	-3.5720	dB	-5.0000	-	PASS
Impulse Amplitude	2	X	574.2813	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	2	X	0.3752	degree	-	-	-
Amplitude (0.3Hz)	2	Y	-1.6092	dB	-5.0000	-	PASS
Amplitude (400Hz)	2	Y	-3.5739	dB	-5.0000	-	PASS
Impulse Amplitude	2	Y	573.9898	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	2	Y	1.4913	degree	-	-	-
Amplitude (0.3Hz)	2	Z	-1.4859	dB	-5.0000	-	PASS
Amplitude (400Hz)	2	Z	-3.5724	dB	-5.0000	-	PASS
Impulse Amplitude	2	Z	574.5685	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	2	Z	0.3038	degree	-	-	-
Amplitude (0.3Hz)	3	X	-1.5174	dB	-5.0000	-	PASS
Amplitude (400Hz)	3	X	-3.5793	dB	-5.0000	-	PASS
Impulse Amplitude	3	X	570.5185	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	3	X	0.7971	degree	-	-	-
Amplitude (0.3Hz)	3	Y	-1.4277	dB	-5.0000	-	PASS
Amplitude (400Hz)	3	Y	-3.5775	dB	-5.0000	-	PASS
Impulse Amplitude	3	Y	571.2465	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	3	Y	-0.1401	degree	-	-	-
Amplitude (0.3Hz)	3	Z	-1.5972	dB	-5.0000	-	PASS
Amplitude (400Hz)	3	Z	-3.5766	dB	-5.0000	-	PASS

Impulse Amplitude	3	Z	571.2098	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	3	Z	1.4827	degree	-	-	-
Amplitude (0.3Hz)	4	X	-1.4561	dB	-5.0000	-	PASS
Amplitude (400Hz)	4	X	-3.5768	dB	-5.0000	-	PASS
Impulse Amplitude	4	X	571.1880	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	4	X	-0.1800	degree	-	-	-
Amplitude (0.3Hz)	4	Y	-1.4369	dB	-5.0000	-	PASS
Amplitude (400Hz)	4	Y	-3.5766	dB	-5.0000	-	PASS
Impulse Amplitude	4	Y	572.0931	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	4	Y	-0.3130	degree	-	-	-
Amplitude (0.3Hz)	4	Z	-1.5432	dB	-5.0000	-	PASS
Amplitude (400Hz)	4	Z	-3.5747	dB	-5.0000	-	PASS
Impulse Amplitude	4	Z	572.2213	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	4	Z	0.7396	degree	-	-	-