Department of Mines & Petroleum
Western Australia

Harvey-2

Survey Type**: Zero Offset VSP**

Borehole Seismic
Field Report

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Date: 24-Feb-15

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Survey Report

Survey date	23-Feb-2015
Job reference	SO 902164605
Type of service	VSP Rig Source
Country	Australia
Field	Harvey
Well location east	392052.65 E
Well location north	6347141.74 N
Rig name	DDH1 Rig16
Rig heading	n/a
Datum description	AHD
Seismic datum elevation	at AHD
Well reference level	RT
Reference level elevation	16.05 m above AHD
Water velocity	1500.0 m/s
Total Depth	1351.2 m (driller)
Well deviation	Vertical
Casing details	1323.5m
Liner details	N/A
Wireline contractor	Halliburton
Observer	M.Fadhli ; Enly Roseno
Client representative	Dominique Van Gent
Tool system	ANALOG
Controller type	GSP
Sample interval	1000 us
Tool system zeroed at	Bottom Receiver
Gamma tool	GPST
Gamma tool depth offset	1.8 m
Sinker weight	None
Cable adapters	HAL-7; HAL-1
Additional equipment	None

Receiver report

Tool 1

Type	ASR
Sensor pack	FIXED
Serial number	335
Depth offset from zero	-15.00 m
Arm	Short

Tool 2

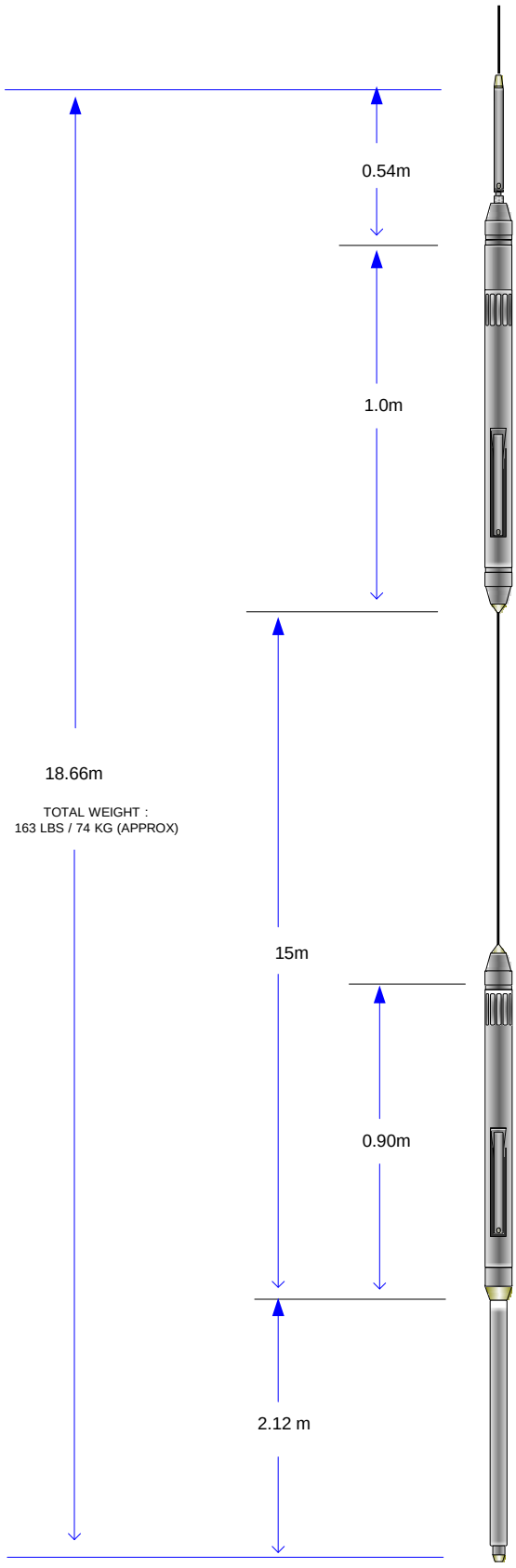
Type	ASR
Sensor pack	FIXED
Serial number	140
Depth offset from zero	0.00 m
Arm	Short

Sensor polarity as supplied by Avalon Sciences.

Channel report

Channel allocation			Sensor description	Scaling applied
1	Tool 1	VZ	SMC2400-OMNI-15HZ	1.000
2	Tool 1	HX	SMC2400-OMNI-15HZ	1.000
3	Tool 1	HY	SMC2400-OMNI-15HZ	1.000
4	Tool 2	VZ	SMC2400-OMNI-15HZ	1.000
5	Tool 2	HX	SMC2400-OMNI-15HZ	1.000
6	Tool 2	HY	SMC2400-OMNI-15HZ	1.000
7	Reference	Pilot sweep		1.000
8	Auxiliary	Time break		1.000
9	Auxiliary	Pilot sweep		1.000
10	Auxiliary	Radio similarity		-1.000

VSP SEISMIC TOOLSTRING
DUAL ASR GEOPHONE 15M SPACING



1 11/16"" SSPT CABLEHEAD

3" HAL-7 ADAPTER

3.3" OD GIMBALED GEOPHONE POD

LENGTH : 35" / 884 mm
WEIGHT : 38 LBS / 17 KG
SHORTH ARM : 3.5" - 9"
STANDARD ARM : 5" - 13"
LONG ARM : UP TO 22"

TOOL INTERCONNECT
WEIGHT : 29 LBS / 13 KG (APPROX)

3.3" OD GIMBALED GEOPHONE POD

LENGTH : 35" / 884 mm
WEIGHT : 38 LBS / 17 KG
SHORTH ARM : 3.5" - 9"
STANDARD ARM : 5" - 13"
LONG ARM : UP TO 22"

1 11/16" OD CORRELATION GAMMA RAY
WEIGHT : 23LBS/10.4 KG

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Source 1 report

LAND

Observer	Hi-Seis
Source	Vibroseis Univib
SCX (Easting)	34.3 m
SCY (Northing)	52.8 m
Source control system	Pelton
External delay	0.0 ms
Air supply	N/A
Airgun pressure	0 psi
Fire control	RELAY A
Source reference channel	7
Record data length	19000 samples
QC data length	6000 samples
Source reference elevation (SRE)	15.4 m above AHD
Source depth below SRE	0.0 m
Monitor	n/a
Monitor distance from source	n/a
Source environment	Sandy Land
Weathering velocity	n/a
Weathering depth	n/a
Elevation velocity	n/a
Reference pick	Positive peak
Geophone pick	Negative peak

Vibrator details

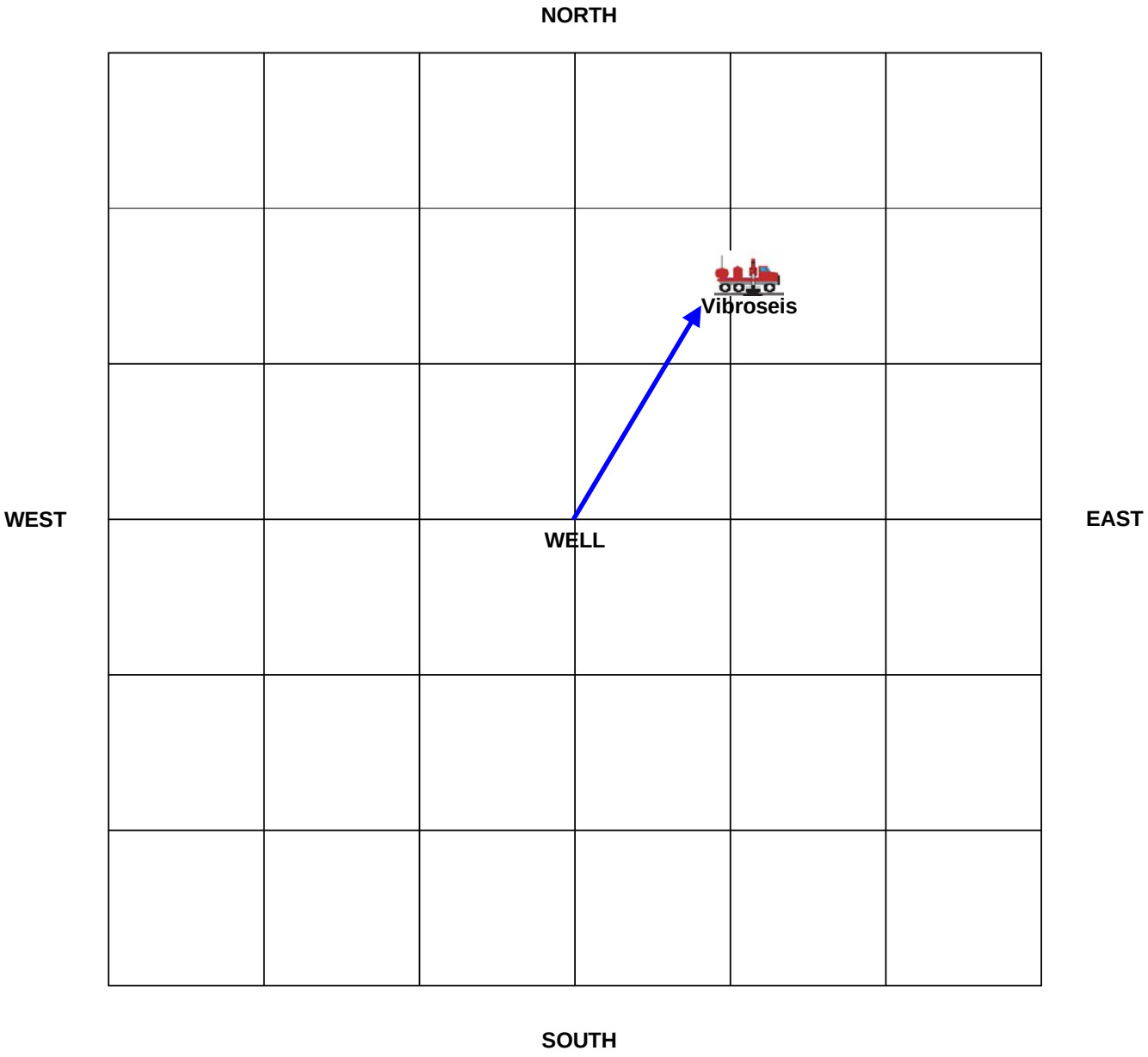
Vibrator electronics	Pelton
Reference sweep generator	Encoder
Sweep period	12000.0 ms
Start frequency	8.0 Hz
End frequency	120.0 Hz
Sweep description	Linear
Start taper period	250.0 ms
End taper period	250.0 ms
Encoder sweep phase	0 degrees
Vibrator sweep phase	0 degrees
Phase locking	Ground Force
Vibrator type and unit numbers	Univib_HS-01

SOURCE OFFSET

CLIENT: Departement Mines and Pertroleum
WELL: Harvey-2
RIG: DDH1 Rig#16
DATE: 23 - Feb – 2015

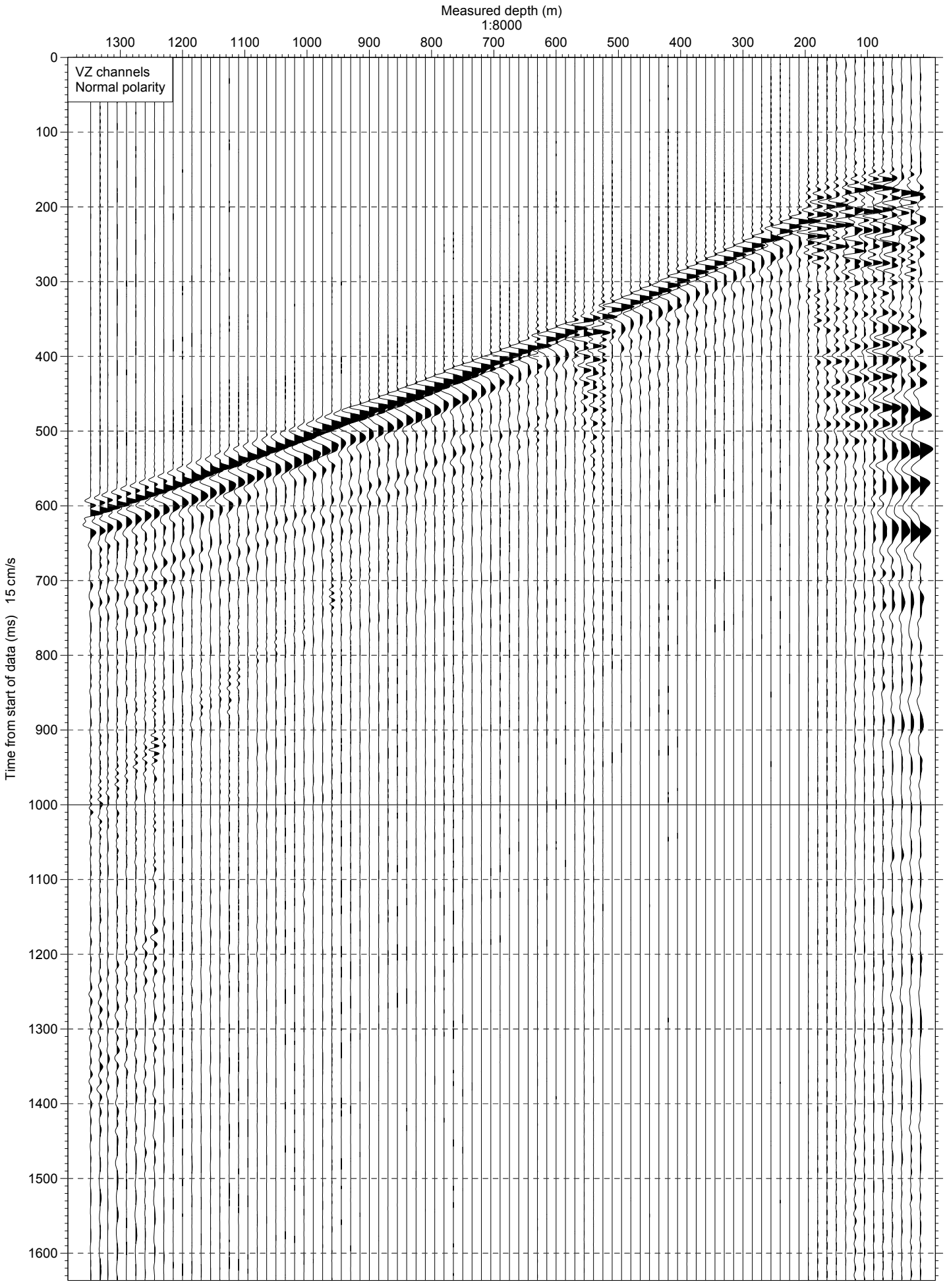
WELL LOCATION
X: 392078.7 E
Y: 6347167.8 N

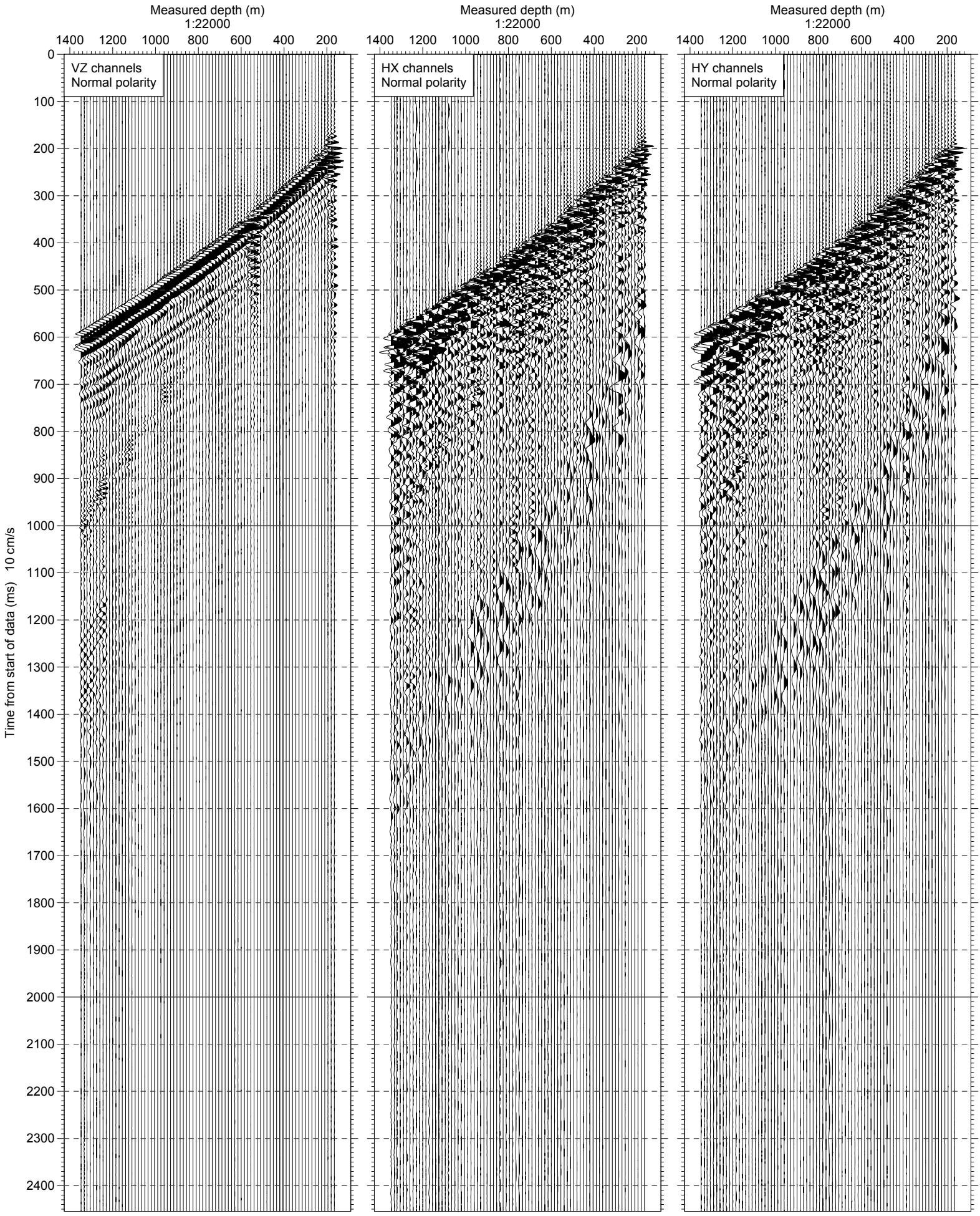
SOURCE TYPE:	Vibroseis		SOURCE X OFFSET	34.31	m
SOURCE DISTANCE:	63	m	SOURCE Y OFFSET	52.84	m
SOURCE DIRECTION:	33.0	Deg	HYD-SOURCE DISTANCE	N/A	m
SOURCE ELEVATION:	0	m	RIG BEARING:	N/A	Deg



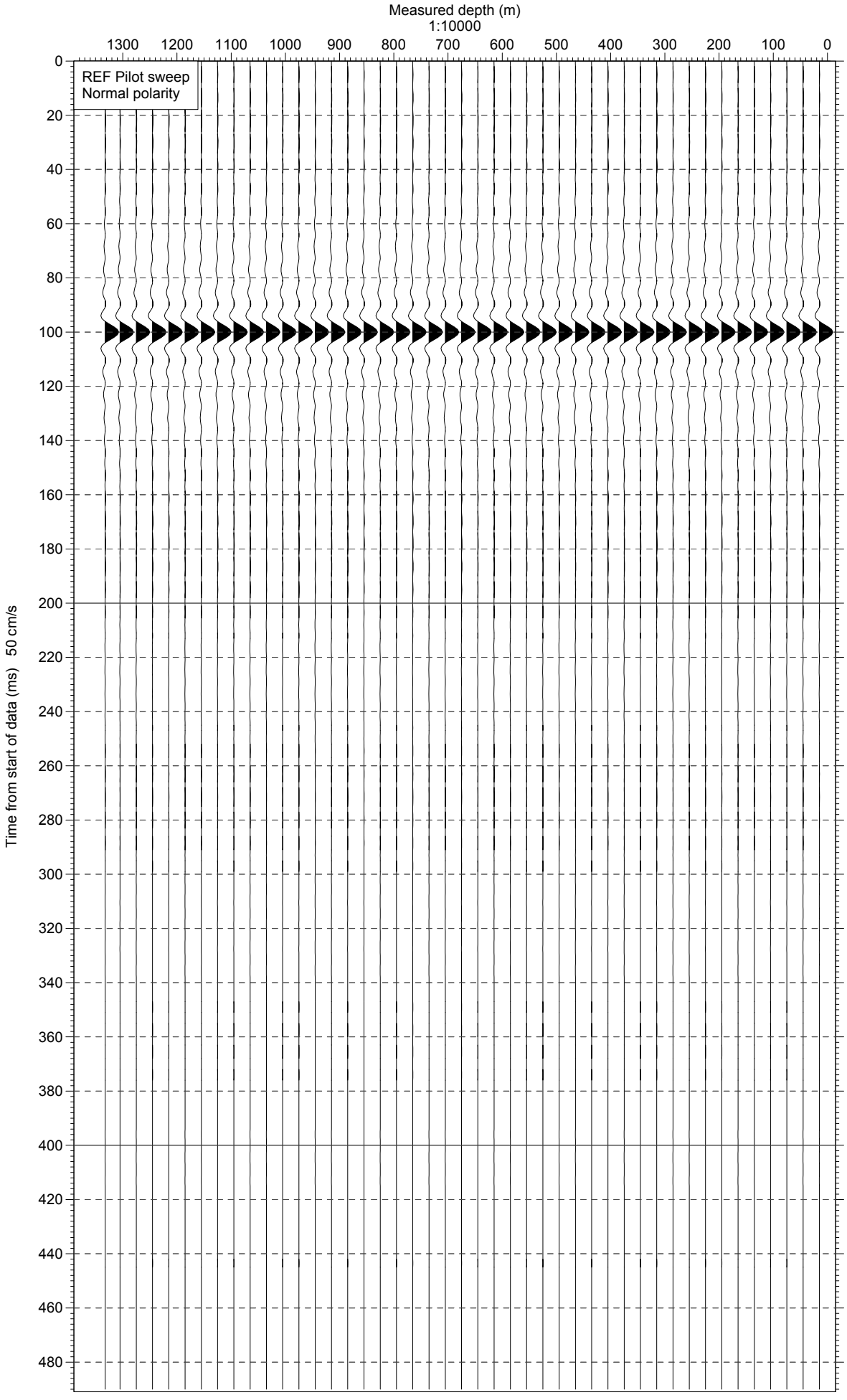
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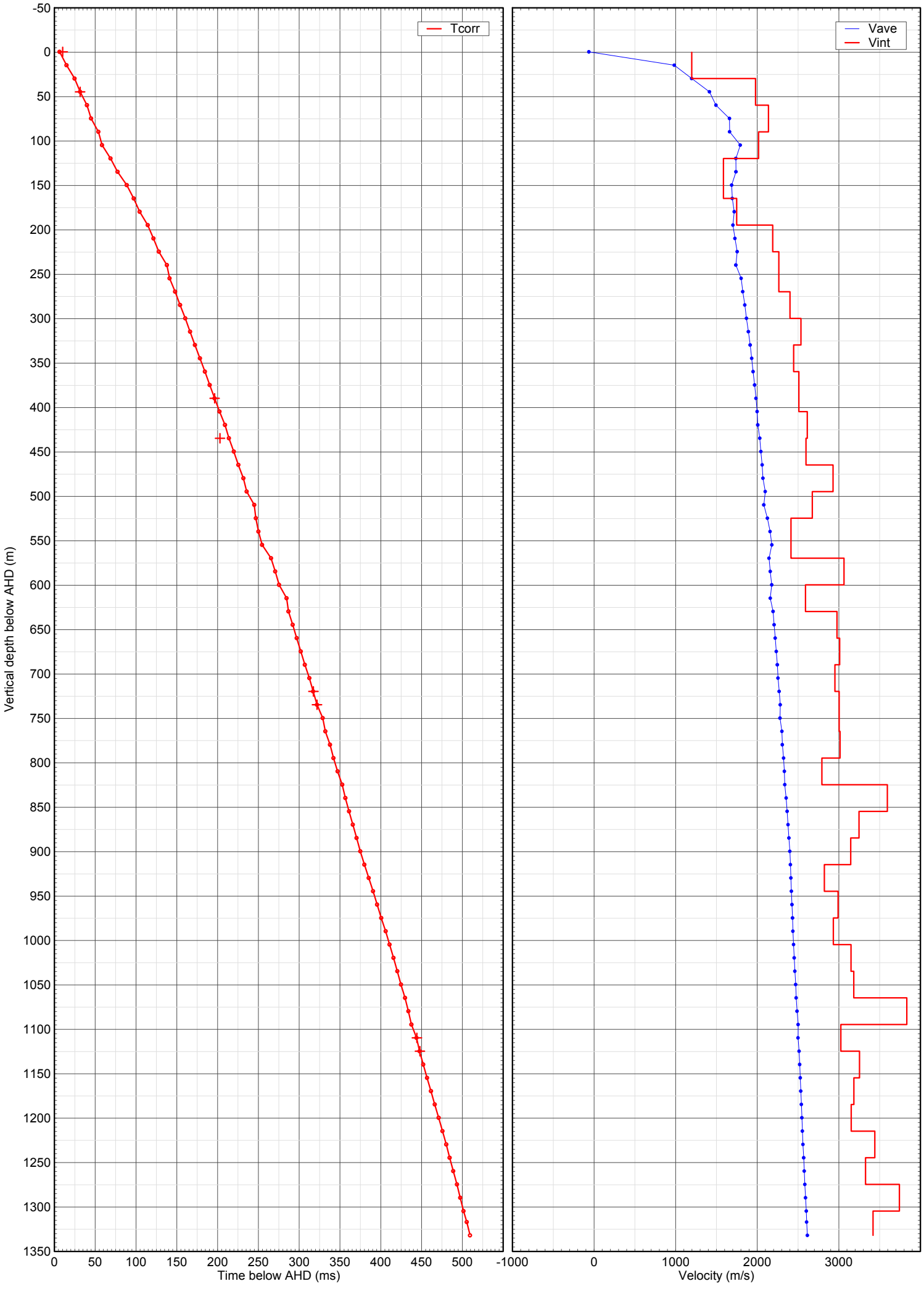
Stacked data




Measured depth (m)
1:22000
1400 1200 1000 800 600 400 200
VZ channels
Normal polarity
HX channels
Normal polarity
HY channels
Normal polarity
Time from start of data (ms) 10 cm/s
0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400

Stacked data




Tcorr
Vave
Vint
Vertical depth below AHD (m)
-50
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
1050
1100
1150
1200
1250
1300
1350
0
50
100
150
200
250
300
350
400
450
500
Time below AHD (ms)
-1000
0
1000
2000
3000
Velocity (m/s)

Journal

Date	Time	Record	Src/Set	Stk	MD(m)	Fix	SCX(m)	SCY(m)
23Feb2015	12:22:45	>Just Zero tool and RIH to MSL(AHD) 15m						
23Feb2015	12:24:04	>Stand by for Vibroseis Setup						
23Feb2015	15:26:25	>Finish HW SIM move vibe to job position						
23Feb2015	15:26:55	12	1/1	1	30.0	0	34.3	52.8
23Feb2015	15:28:13	13	1/1	1	30.0	0	34.3	52.8
23Feb2015	15:29:28	14	1/1	1	30.0	0	34.3	52.8
23Feb2015	15:33:07	15	1/1	1	30.0	0	34.3	52.8
23Feb2015	16:04:11	16	1/1	2	420.0	0	34.3	52.8
23Feb2015	16:06:05	17	1/1	2	420.0	0	34.3	52.8
23Feb2015	16:09:50	18	1/1	2	420.0	0	34.3	52.8
23Feb2015	16:10:47	19	1/1	2	420.0	0	34.3	52.8
23Feb2015	16:13:15	20	1/1	2	420.0	0	34.3	52.8
23Feb2015	16:18:38	>depth on this point suppose to be 405m and 420m						
23Feb2015	16:27:23	>						
23Feb2015	16:31:01	21	1/1	3	750.0	0	34.3	52.8
23Feb2015	16:33:15	22	1/1	3	750.0	0	34.3	52.8
23Feb2015	16:34:06	23	1/1	3	750.0	0	34.3	52.8
23Feb2015	16:57:11	24	1/1	4	1140.0	0	34.3	52.8
23Feb2015	16:58:09	25	1/1	4	1140.0	0	34.3	52.8
23Feb2015	16:58:54	26	1/1	4	1140.0	0	34.3	52.8
23Feb2015	17:11:51	>go to 1200m to do GR correlation						
23Feb2015	17:35:27	>No Depth Adjustment, GR Correlation on depth, continue run in hole						
23Feb2015	17:48:51	27	1/1	5	1347.4	0	34.3	52.8
23Feb2015	17:50:16	28	1/1	5	1347.4	0	34.3	52.8
23Feb2015	17:50:55	29	1/1	5	1347.4	0	34.3	52.8
23Feb2015	17:51:50	30	1/1	5	1347.4	0	34.3	52.8
23Feb2015	17:52:59	31	1/1	5	1347.4	0	34.3	52.8
23Feb2015	17:59:57	32	1/1	6	1320.0	0	34.3	52.8
23Feb2015	18:01:06	33	1/1	6	1320.0	0	34.3	52.8
23Feb2015	18:02:25	34	1/1	6	1320.0	0	34.3	52.8
23Feb2015	18:03:12	35	1/1	6	1320.0	0	34.3	52.8
23Feb2015	18:03:50	36	1/1	6	1320.0	0	34.3	52.8
23Feb2015	18:07:19	37	1/1	7	1290.0	0	34.3	52.8
23Feb2015	18:07:53	38	1/1	7	1290.0	0	34.3	52.8
23Feb2015	18:08:49	39	1/1	7	1290.0	0	34.3	52.8
23Feb2015	18:10:28	40	1/1	7	1290.0	0	34.3	52.8
23Feb2015	18:11:06	41	1/1	7	1290.0	0	34.3	52.8
23Feb2015	18:11:38	42	1/1	7	1290.0	0	34.3	52.8
23Feb2015	18:15:08	43	1/1	8	1260.0	0	34.3	52.8
23Feb2015	18:15:46	44	1/1	8	1260.0	0	34.3	52.8
23Feb2015	18:16:13	45	1/1	8	1260.0	0	34.3	52.8
23Feb2015	18:16:39	46	1/1	8	1260.0	0	34.3	52.8
23Feb2015	18:17:15	47	1/1	8	1260.0	0	34.3	52.8
23Feb2015	18:17:41	48	1/1	8	1260.0	0	34.3	52.8
23Feb2015	18:21:12	49	1/1	9	1230.0	0	34.3	52.8
23Feb2015	18:21:38	50	1/1	9	1230.0	0	34.3	52.8
23Feb2015	18:22:08	51	1/1	9	1230.0	0	34.3	52.8
23Feb2015	18:23:13	52	1/1	9	1230.0	0	34.3	52.8
23Feb2015	18:23:41	53	1/1	9	1230.0	0	34.3	52.8
23Feb2015	18:24:30	54	1/1	9	1230.0	0	34.3	52.8
23Feb2015	18:25:11	55	1/1	9	1230.0	0	34.3	52.8
23Feb2015	18:25:44	56	1/1	9	1230.0	0	34.3	52.8
23Feb2015	18:27:39	57	1/1	9	1230.0	0	34.3	52.8
23Feb2015	18:28:09	58	1/1	9	1230.0	0	34.3	52.8
23Feb2015	18:32:52	59	1/1	10	1200.0	0	34.3	52.8
23Feb2015	18:34:29	60	1/1	10	1200.0	0	34.3	52.8
23Feb2015	18:35:05	61	1/1	10	1200.0	0	34.3	52.8
23Feb2015	18:36:28	62	1/1	10	1200.0	0	34.3	52.8
23Feb2015	18:37:12	63	1/1	10	1200.0	0	34.3	52.8

Journal

Date	Time	Record	Src/Set	Stk	MD(m)	Fix	SCX(m)	SCY(m)
23Feb2015	18:38:11	64	1/1	10	1200.0	0	34.3	52.8
23Feb2015	18:39:41	65	1/1	10	1200.0	0	34.3	52.8
23Feb2015	18:41:15	66	1/1	10	1200.0	0	34.3	52.8
23Feb2015	18:41:47	67	1/1	10	1200.0	0	34.3	52.8
23Feb2015	18:47:42	68	1/1	11	1170.0	0	34.3	52.8
23Feb2015	18:50:13	>constantly get random noise on channel 5, swap DCP panel with backup						
23Feb2015	18:54:33	69	1/1	11	1170.0	0	34.3	52.8
23Feb2015	18:55:21	70	1/1	11	1170.0	0	34.3	52.8
23Feb2015	18:55:47	71	1/1	11	1170.0	0	34.3	52.8
23Feb2015	18:56:12	72	1/1	11	1170.0	0	34.3	52.8
23Feb2015	18:56:48	73	1/1	11	1170.0	0	34.3	52.8
23Feb2015	18:58:04	74	1/1	11	1170.0	0	34.3	52.8
23Feb2015	18:58:39	>last shot is misfire						
23Feb2015	19:02:05	75	1/1	11	1170.0	0	34.3	52.8
23Feb2015	19:05:39	76	1/1	12	1140.0	0	34.3	52.8
23Feb2015	19:06:02	77	1/1	12	1140.0	0	34.3	52.8
23Feb2015	19:06:24	78	1/1	12	1140.0	0	34.3	52.8
23Feb2015	19:06:48	79	1/1	12	1140.0	0	34.3	52.8
23Feb2015	19:07:18	80	1/1	12	1140.0	0	34.3	52.8
23Feb2015	19:11:29	81	1/1	13	1110.0	0	34.3	52.8
23Feb2015	19:11:53	82	1/1	13	1110.0	0	34.3	52.8
23Feb2015	19:12:16	83	1/1	13	1110.0	0	34.3	52.8
23Feb2015	19:12:41	84	1/1	13	1110.0	0	34.3	52.8
23Feb2015	19:13:13	85	1/1	13	1110.0	0	34.3	52.8
23Feb2015	19:16:14	86	1/1	14	1080.0	0	34.3	52.8
23Feb2015	19:16:45	87	1/1	14	1080.0	0	34.3	52.8
23Feb2015	19:17:17	88	1/1	14	1080.0	0	34.3	52.8
23Feb2015	19:17:50	89	1/1	14	1080.0	0	34.3	52.8
23Feb2015	19:18:15	90	1/1	14	1080.0	0	34.3	52.8
23Feb2015	19:18:39	91	1/1	14	1080.0	0	34.3	52.8
23Feb2015	19:21:46	92	1/1	15	1050.0	0	34.3	52.8
23Feb2015	19:22:08	93	1/1	15	1050.0	0	34.3	52.8
23Feb2015	19:22:30	94	1/1	15	1050.0	0	34.3	52.8
23Feb2015	19:22:52	95	1/1	15	1050.0	0	34.3	52.8
23Feb2015	19:23:15	96	1/1	15	1050.0	0	34.3	52.8
23Feb2015	19:26:06	97	1/1	16	1020.0	0	34.3	52.8
23Feb2015	19:27:27	98	1/1	16	1020.0	0	34.3	52.8
23Feb2015	19:27:52	99	1/1	16	1020.0	0	34.3	52.8
23Feb2015	19:28:43	100	1/1	16	1020.0	0	34.3	52.8
23Feb2015	19:29:04	101	1/1	16	1020.0	0	34.3	52.8
23Feb2015	19:29:25	102	1/1	16	1020.0	0	34.3	52.8
23Feb2015	19:32:16	103	1/1	17	990.0	0	34.3	52.8
23Feb2015	19:32:45	104	1/1	17	990.0	0	34.3	52.8
23Feb2015	19:33:06	105	1/1	17	990.0	0	34.3	52.8
23Feb2015	19:33:27	106	1/1	17	990.0	0	34.3	52.8
23Feb2015	19:33:49	107	1/1	17	990.0	0	34.3	52.8
23Feb2015	19:36:25	108	1/1	18	960.0	0	34.3	52.8
23Feb2015	19:37:01	109	1/1	18	960.0	0	34.3	52.8
23Feb2015	19:37:23	110	1/1	18	960.0	0	34.3	52.8
23Feb2015	19:37:44	111	1/1	18	960.0	0	34.3	52.8
23Feb2015	19:38:05	112	1/1	18	960.0	0	34.3	52.8
23Feb2015	19:40:52	113	1/1	19	930.0	0	34.3	52.8
23Feb2015	19:41:25	114	1/1	19	930.0	0	34.3	52.8
23Feb2015	19:41:47	115	1/1	19	930.0	0	34.3	52.8
23Feb2015	19:42:08	116	1/1	19	930.0	0	34.3	52.8
23Feb2015	19:42:29	117	1/1	19	930.0	0	34.3	52.8
23Feb2015	19:47:42	118	1/1	20	900.0	0	34.3	52.8
23Feb2015	19:48:12	119	1/1	20	900.0	0	34.3	52.8
23Feb2015	19:48:33	120	1/1	20	900.0	0	34.3	52.8

Journal

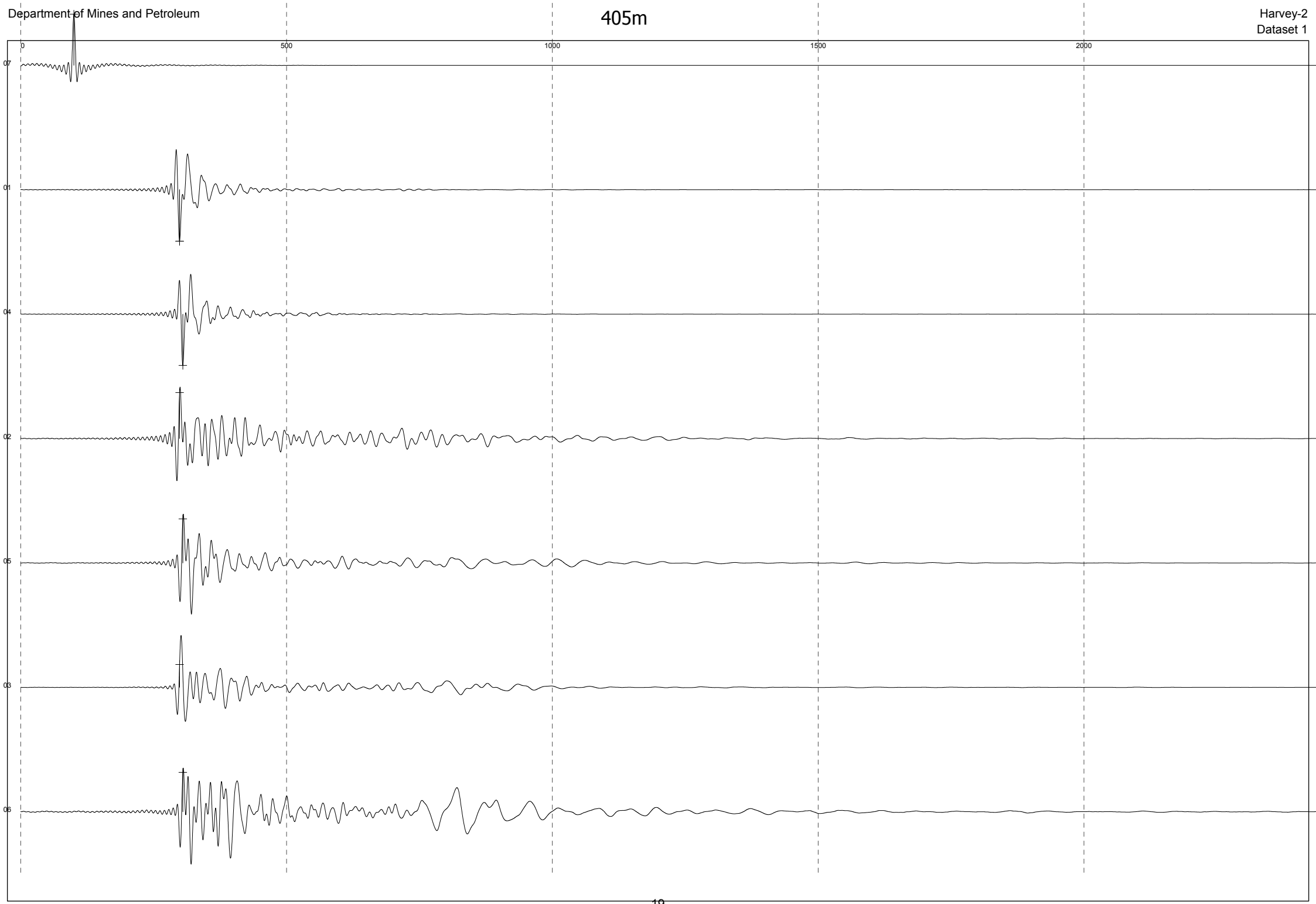
Date	Time	Record	Src/Set	Stk	MD(m)	Fix	SCX(m)	SCY(m)
23Feb2015	19:48:54	121	1/1	20	900.0	0	34.3	52.8
23Feb2015	19:49:16	122	1/1	20	900.0	0	34.3	52.8
23Feb2015	19:51:50	123	1/1	21	870.0	0	34.3	52.8
23Feb2015	19:52:29	124	1/1	21	870.0	0	34.3	52.8
23Feb2015	19:52:50	125	1/1	21	870.0	0	34.3	52.8
23Feb2015	19:53:11	126	1/1	21	870.0	0	34.3	52.8
23Feb2015	19:53:32	127	1/1	21	870.0	0	34.3	52.8
23Feb2015	19:56:06	128	1/1	22	840.0	0	34.3	52.8
23Feb2015	19:56:44	129	1/1	22	840.0	0	34.3	52.8
23Feb2015	19:57:05	130	1/1	22	840.0	0	34.3	52.8
23Feb2015	19:57:27	131	1/1	22	840.0	0	34.3	52.8
23Feb2015	19:57:48	132	1/1	22	840.0	0	34.3	52.8
23Feb2015	20:00:45	133	1/1	23	810.0	0	34.3	52.8
23Feb2015	20:01:14	134	1/1	23	810.0	0	34.3	52.8
23Feb2015	20:01:35	135	1/1	23	810.0	0	34.3	52.8
23Feb2015	20:01:57	136	1/1	23	810.0	0	34.3	52.8
23Feb2015	20:02:18	137	1/1	23	810.0	0	34.3	52.8
23Feb2015	20:05:27	138	1/1	24	780.0	0	34.3	52.8
23Feb2015	20:06:03	139	1/1	24	780.0	0	34.3	52.8
23Feb2015	20:06:24	140	1/1	24	780.0	0	34.3	52.8
23Feb2015	20:06:45	141	1/1	24	780.0	0	34.3	52.8
23Feb2015	20:07:07	142	1/1	24	780.0	0	34.3	52.8
23Feb2015	20:10:20	143	1/1	25	750.0	0	34.3	52.8
23Feb2015	20:10:50	144	1/1	25	750.0	0	34.3	52.8
23Feb2015	20:11:11	145	1/1	25	750.0	0	34.3	52.8
23Feb2015	20:11:33	146	1/1	25	750.0	0	34.3	52.8
23Feb2015	20:11:54	147	1/1	25	750.0	0	34.3	52.8
23Feb2015	20:15:23	148	1/1	26	720.0	0	34.3	52.8
23Feb2015	20:16:06	149	1/1	26	720.0	0	34.3	52.8
23Feb2015	20:16:27	150	1/1	26	720.0	0	34.3	52.8
23Feb2015	20:16:48	151	1/1	26	720.0	0	34.3	52.8
23Feb2015	20:17:09	152	1/1	26	720.0	0	34.3	52.8
23Feb2015	20:21:01	153	1/1	27	690.0	0	34.3	52.8
23Feb2015	20:21:43	>last shot misfire						
23Feb2015	20:21:48	154	1/1	27	690.0	0	34.3	52.8
23Feb2015	20:22:16	155	1/1	27	690.0	0	34.3	52.8
23Feb2015	20:22:37	156	1/1	27	690.0	0	34.3	52.8
23Feb2015	20:22:58	157	1/1	27	690.0	0	34.3	52.8
23Feb2015	20:23:20	158	1/1	27	690.0	0	34.3	52.8
23Feb2015	20:25:48	159	1/1	28	660.0	0	34.3	52.8
23Feb2015	20:26:16	160	1/1	28	660.0	0	34.3	52.8
23Feb2015	20:26:37	161	1/1	28	660.0	0	34.3	52.8
23Feb2015	20:26:58	162	1/1	28	660.0	0	34.3	52.8
23Feb2015	20:27:19	163	1/1	28	660.0	0	34.3	52.8
23Feb2015	20:30:17	164	1/1	29	630.0	0	34.3	52.8
23Feb2015	20:31:14	165	1/1	29	630.0	0	34.3	52.8
23Feb2015	20:33:00	>1m slack						
23Feb2015	20:33:08	166	1/1	29	630.0	0	34.3	52.8
23Feb2015	20:33:54	167	1/1	29	630.0	0	34.3	52.8
23Feb2015	20:35:08	168	1/1	29	630.0	0	34.3	52.8
23Feb2015	20:35:39	169	1/1	29	630.0	0	34.3	52.8
23Feb2015	20:38:42	>630m ringing on break,suspect bad coupling behind the pipe						
23Feb2015	20:43:22	170	1/1	30	600.0	0	34.3	52.8
23Feb2015	20:43:52	171	1/1	30	600.0	0	34.3	52.8
23Feb2015	20:44:22	172	1/1	30	600.0	0	34.3	52.8
23Feb2015	20:44:43	173	1/1	30	600.0	0	34.3	52.8
23Feb2015	20:45:04	174	1/1	30	600.0	0	34.3	52.8
23Feb2015	20:49:53	175	1/1	31	570.0	0	34.3	52.8
23Feb2015	20:51:30	>slack 1.5m						

Journal

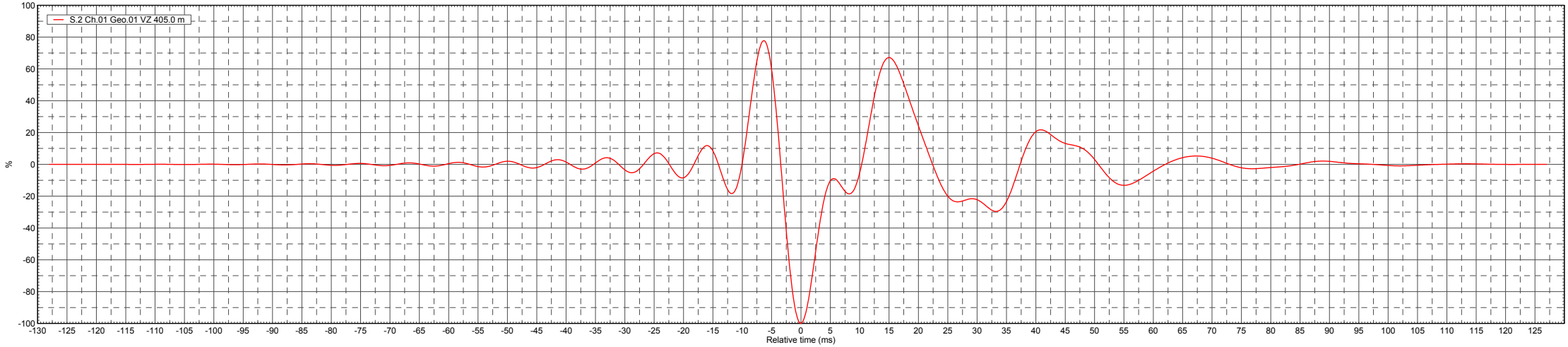
Date	Time	Record	Src/Set	Stk	MD(m)	Fix	SCX(m)	SCY(m)
23Feb2015	20:52:32	176	1/1	31	570.0	0	34.3	52.8
23Feb2015	20:53:59	177	1/1	31	570.0	0	34.3	52.8
23Feb2015	20:56:23	>ringing suspect free pipe						
23Feb2015	20:56:26	178	1/1	31	570.0	0	34.3	52.8
23Feb2015	20:58:21	179	1/1	31	570.0	0	34.3	52.8
23Feb2015	20:58:51	180	1/1	31	570.0	0	34.3	52.8
23Feb2015	21:03:06	181	1/1	32	540.0	0	34.3	52.8
23Feb2015	21:03:52	182	1/1	32	540.0	0	34.3	52.8
23Feb2015	21:04:28	183	1/1	32	540.0	0	34.3	52.8
23Feb2015	21:05:25	184	1/1	32	540.0	0	34.3	52.8
23Feb2015	21:05:52	185	1/1	32	540.0	0	34.3	52.8
23Feb2015	21:06:16	186	1/1	32	540.0	0	34.3	52.8
23Feb2015	21:07:57	>ringing on both tools						
23Feb2015	21:09:26	187	1/1	33	510.0	0	34.3	52.8
23Feb2015	21:10:04	188	1/1	33	510.0	0	34.3	52.8
23Feb2015	21:10:25	189	1/1	33	510.0	0	34.3	52.8
23Feb2015	21:10:46	190	1/1	33	510.0	0	34.3	52.8
23Feb2015	21:11:35	191	1/1	33	510.0	0	34.3	52.8
23Feb2015	21:12:01	192	1/1	33	510.0	0	34.3	52.8
23Feb2015	21:15:41	193	1/1	34	480.0	0	34.3	52.8
23Feb2015	21:16:17	194	1/1	34	480.0	0	34.3	52.8
23Feb2015	21:16:38	195	1/1	34	480.0	0	34.3	52.8
23Feb2015	21:16:59	196	1/1	34	480.0	0	34.3	52.8
23Feb2015	21:17:20	197	1/1	34	480.0	0	34.3	52.8
23Feb2015	21:21:10	198	1/1	35	450.0	0	34.3	52.8
23Feb2015	21:21:40	199	1/1	35	450.0	0	34.3	52.8
23Feb2015	21:22:01	200	1/1	35	450.0	0	34.3	52.8
23Feb2015	21:22:22	201	1/1	35	450.0	0	34.3	52.8
23Feb2015	21:22:43	202	1/1	35	450.0	0	34.3	52.8
23Feb2015	21:26:22	203	1/1	36	420.0	0	34.3	52.8
23Feb2015	21:26:49	204	1/1	36	420.0	0	34.3	52.8
23Feb2015	21:27:10	205	1/1	36	420.0	0	34.3	52.8
23Feb2015	21:27:31	206	1/1	36	420.0	0	34.3	52.8
23Feb2015	21:27:52	207	1/1	36	420.0	0	34.3	52.8
23Feb2015	21:30:51	208	1/1	37	390.0	0	34.3	52.8
23Feb2015	21:31:16	209	1/1	37	390.0	0	34.3	52.8
23Feb2015	21:31:37	210	1/1	37	390.0	0	34.3	52.8
23Feb2015	21:31:58	211	1/1	37	390.0	0	34.3	52.8
23Feb2015	21:32:20	212	1/1	37	390.0	0	34.3	52.8
23Feb2015	21:36:14	213	1/1	38	360.0	0	34.3	52.8
23Feb2015	21:36:47	214	1/1	38	360.0	0	34.3	52.8
23Feb2015	21:37:08	215	1/1	38	360.0	0	34.3	52.8
23Feb2015	21:37:29	216	1/1	38	360.0	0	34.3	52.8
23Feb2015	21:37:50	217	1/1	38	360.0	0	34.3	52.8
23Feb2015	21:40:40	218	1/1	39	330.0	0	34.3	52.8
23Feb2015	21:41:07	219	1/1	39	330.0	0	34.3	52.8
23Feb2015	21:41:28	220	1/1	39	330.0	0	34.3	52.8
23Feb2015	21:41:49	221	1/1	39	330.0	0	34.3	52.8
23Feb2015	21:42:10	222	1/1	39	330.0	0	34.3	52.8
23Feb2015	21:44:52	223	1/1	40	300.0	0	34.3	52.8
23Feb2015	21:45:24	224	1/1	40	300.0	0	34.3	52.8
23Feb2015	21:45:45	225	1/1	40	300.0	0	34.3	52.8
23Feb2015	21:46:06	226	1/1	40	300.0	0	34.3	52.8
23Feb2015	21:46:27	227	1/1	40	300.0	0	34.3	52.8
23Feb2015	21:49:25	228	1/1	41	270.0	0	34.3	52.8
23Feb2015	21:49:57	229	1/1	41	270.0	0	34.3	52.8
23Feb2015	21:50:18	230	1/1	41	270.0	0	34.3	52.8
23Feb2015	21:50:39	231	1/1	41	270.0	0	34.3	52.8
23Feb2015	21:51:00	232	1/1	41	270.0	0	34.3	52.8
23Feb2015	21:54:25	233	1/1	42	240.0	0	34.3	52.8

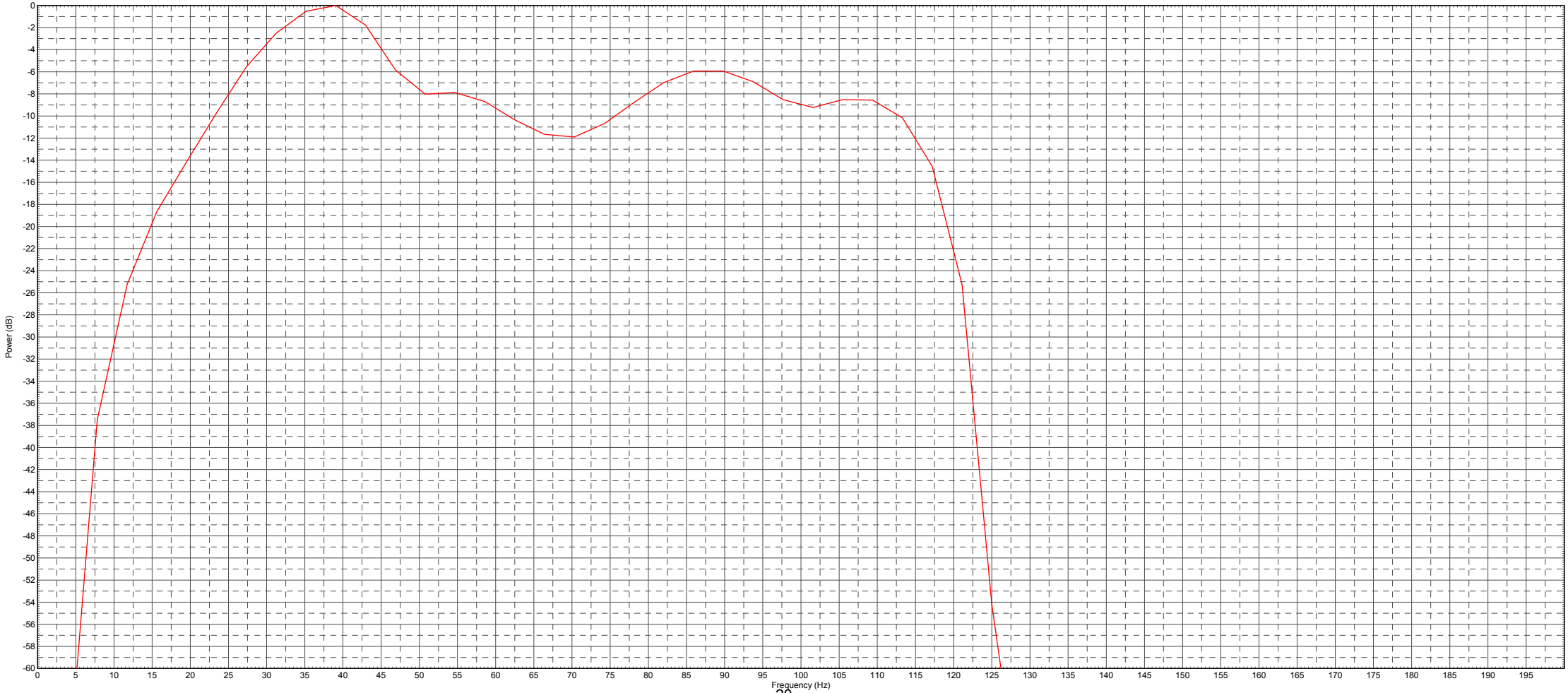
Journal

Date	Time	Record	Src/Set	Stk	MD(m)	Fix	SCX(m)	SCY(m)
23Feb2015	21:54:51	234	1/1	42	240.0	0	34.3	52.8
23Feb2015	21:55:12	235	1/1	42	240.0	0	34.3	52.8
23Feb2015	21:55:33	236	1/1	42	240.0	0	34.3	52.8
23Feb2015	21:55:55	237	1/1	42	240.0	0	34.3	52.8
23Feb2015	21:58:59	238	1/1	43	210.0	0	34.3	52.8
23Feb2015	21:59:28	239	1/1	43	210.0	0	34.3	52.8
23Feb2015	21:59:49	240	1/1	43	210.0	0	34.3	52.8
23Feb2015	22:00:10	241	1/1	43	210.0	0	34.3	52.8
23Feb2015	22:00:31	242	1/1	43	210.0	0	34.3	52.8
23Feb2015	22:02:26	>195m start ringing						
23Feb2015	22:04:06	243	1/1	44	180.0	0	34.3	52.8
23Feb2015	22:04:53	>last shot misfire						
23Feb2015	22:04:55	244	1/1	44	180.0	0	34.3	52.8
23Feb2015	22:06:23	245	1/1	44	180.0	0	34.3	52.8
23Feb2015	22:06:53	246	1/1	44	180.0	0	34.3	52.8
23Feb2015	22:07:16	247	1/1	44	180.0	0	34.3	52.8
23Feb2015	22:10:10	>data ringing, shallow point, expected no more clear break next level up						
23Feb2015	22:13:35	248	1/1	45	150.0	0	34.3	52.8
23Feb2015	22:14:13	249	1/1	45	150.0	0	34.3	52.8
23Feb2015	22:14:39	250	1/1	45	150.0	0	34.3	52.8
23Feb2015	22:15:06	251	1/1	45	150.0	0	34.3	52.8
23Feb2015	22:19:13	252	1/1	46	120.0	0	34.3	52.8
23Feb2015	22:19:44	253	1/1	46	120.0	0	34.3	52.8
23Feb2015	22:20:13	254	1/1	46	120.0	0	34.3	52.8
23Feb2015	22:20:54	255	1/1	46	120.0	0	34.3	52.8
23Feb2015	22:25:49	256	1/1	47	90.0	0	34.3	52.8
23Feb2015	22:26:24	257	1/1	47	90.0	0	34.3	52.8
23Feb2015	22:26:47	258	1/1	47	90.0	0	34.3	52.8
23Feb2015	22:27:10	259	1/1	47	90.0	0	34.3	52.8
23Feb2015	22:30:58	260	1/1	48	60.0	0	34.3	52.8
23Feb2015	22:31:26	261	1/1	48	60.0	0	34.3	52.8
23Feb2015	22:32:19	262	1/1	48	60.0	0	34.3	52.8
23Feb2015	22:32:44	263	1/1	48	60.0	0	34.3	52.8
23Feb2015	22:36:56	264	1/1	49	30.0	0	34.3	52.8
23Feb2015	22:37:26	265	1/1	49	30.0	0	34.3	52.8
23Feb2015	22:37:51	266	1/1	49	30.0	0	34.3	52.8
23Feb2015	22:38:14	267	1/1	49	30.0	0	34.3	52.8
23Feb2015	22:41:36	>finish VSP POOH						
23Feb2015	22:42:55	>Rezero tool,depth offset +0.41m						
23Feb2015	22:43:32	>Rigdown VSP						

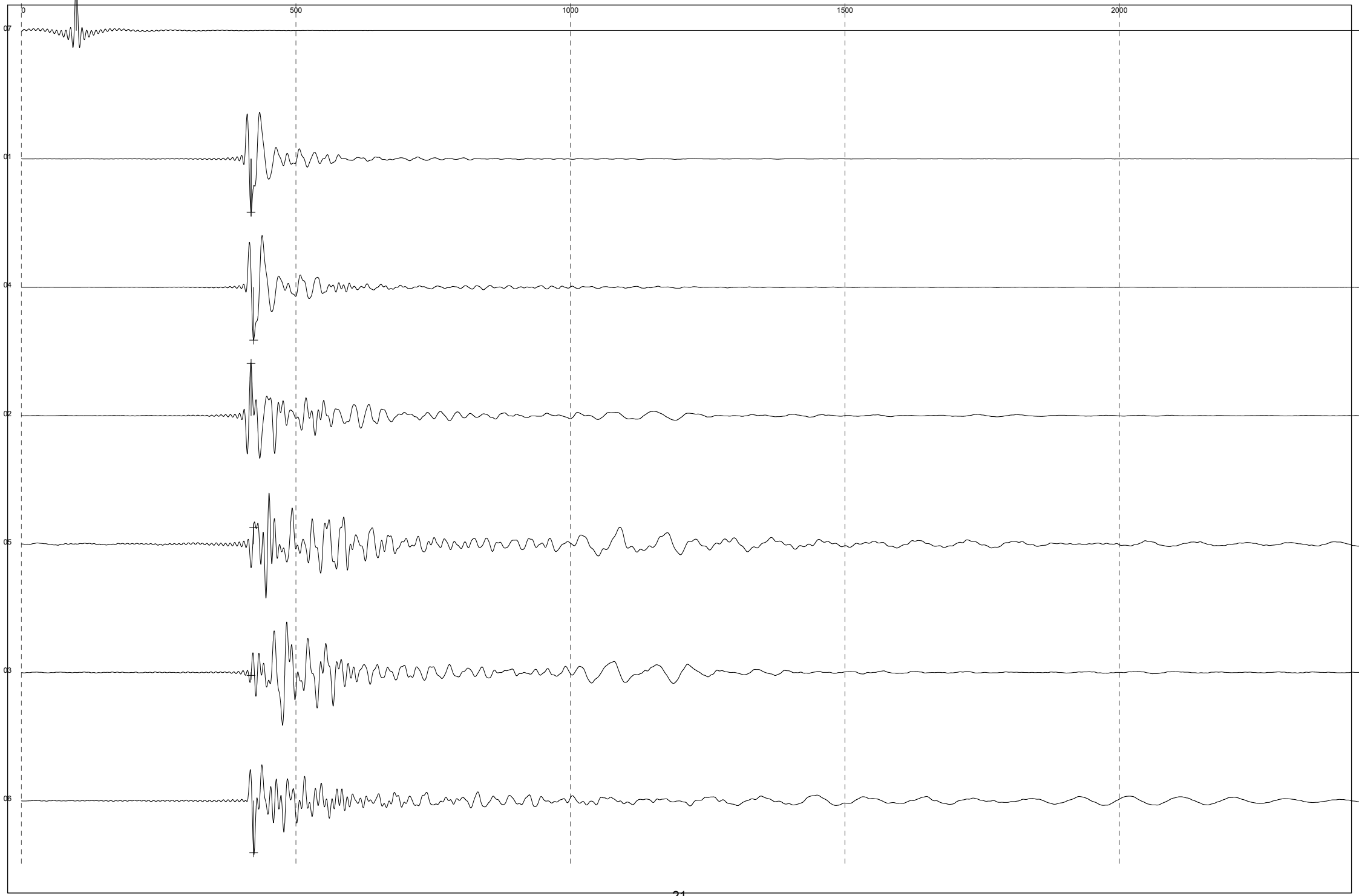

0
500
1000
1500
2000
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06

Spectral analysis

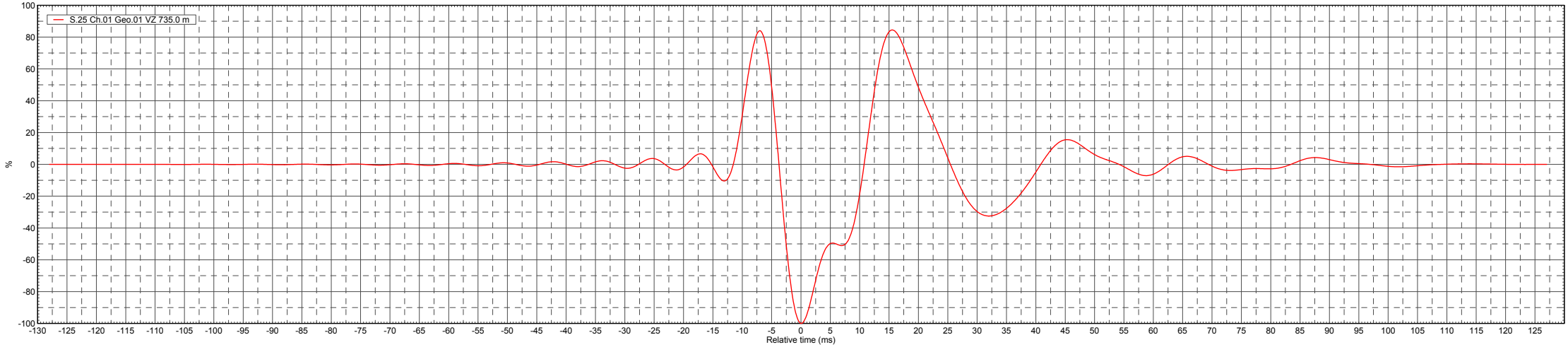




735m

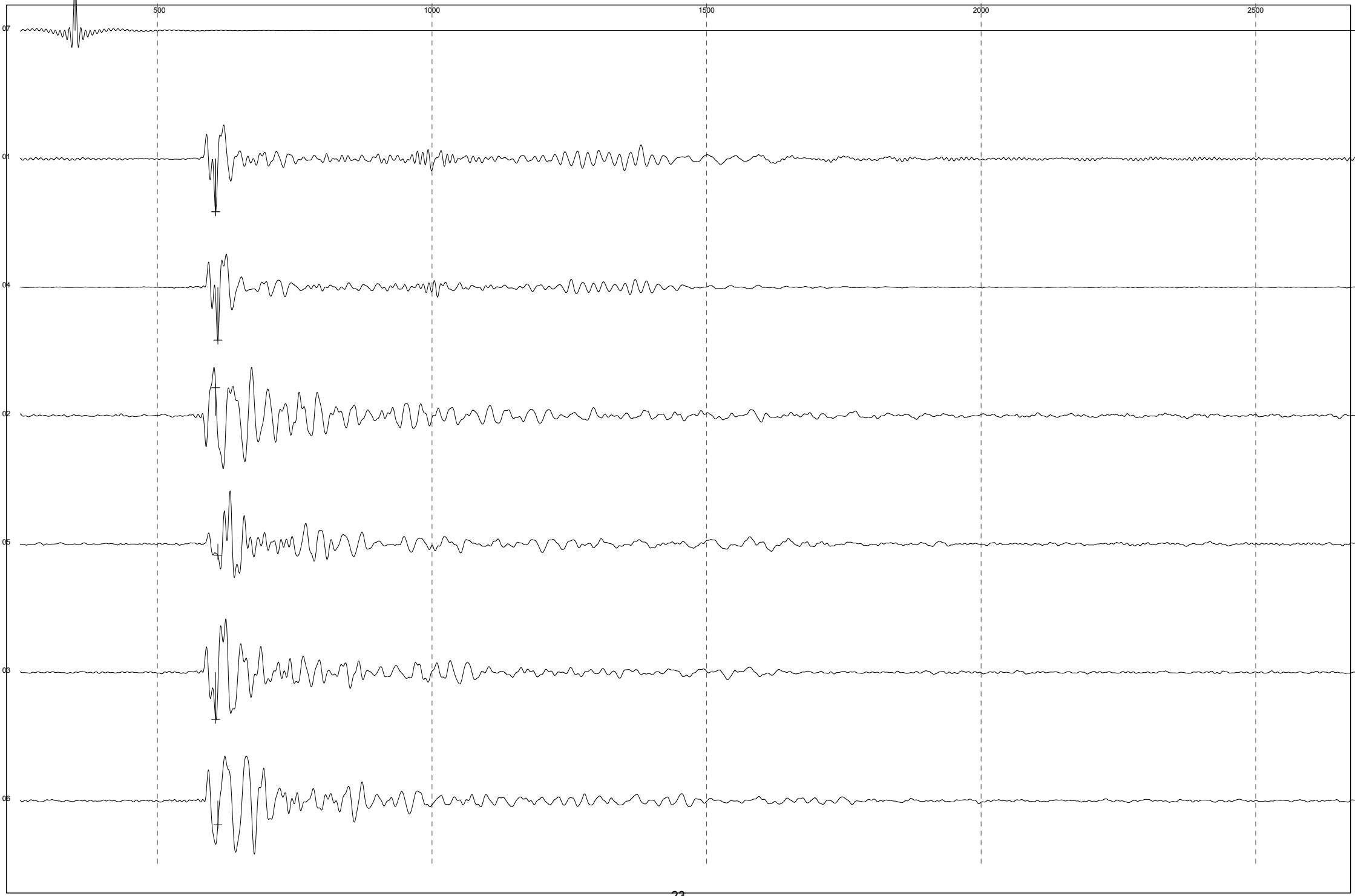


Spectral analysis

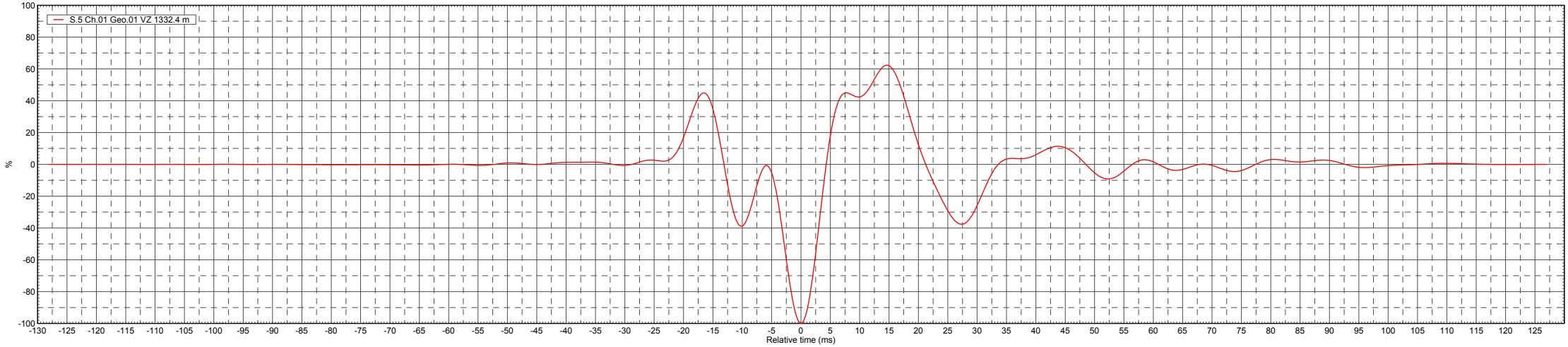




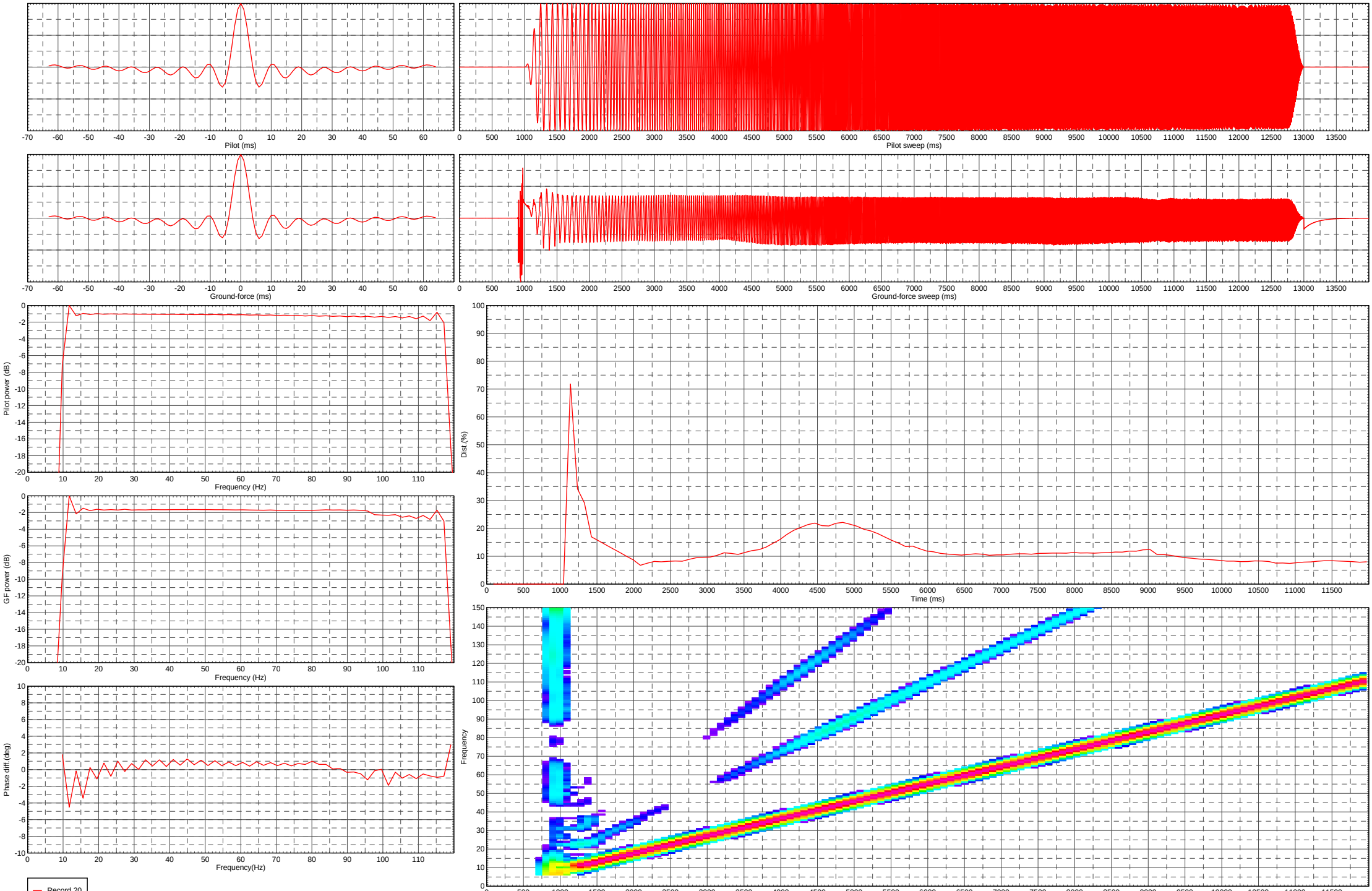
1347m

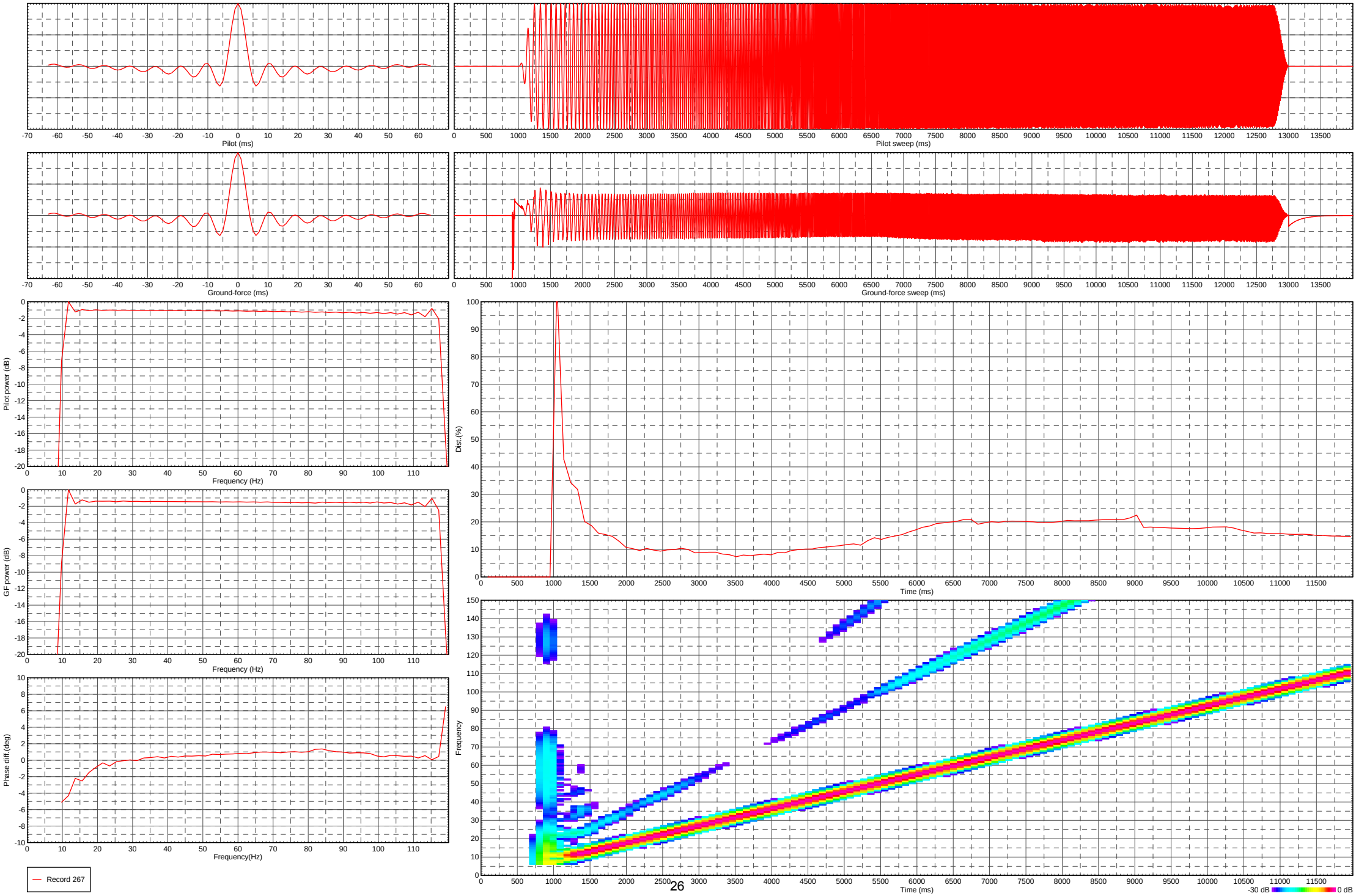


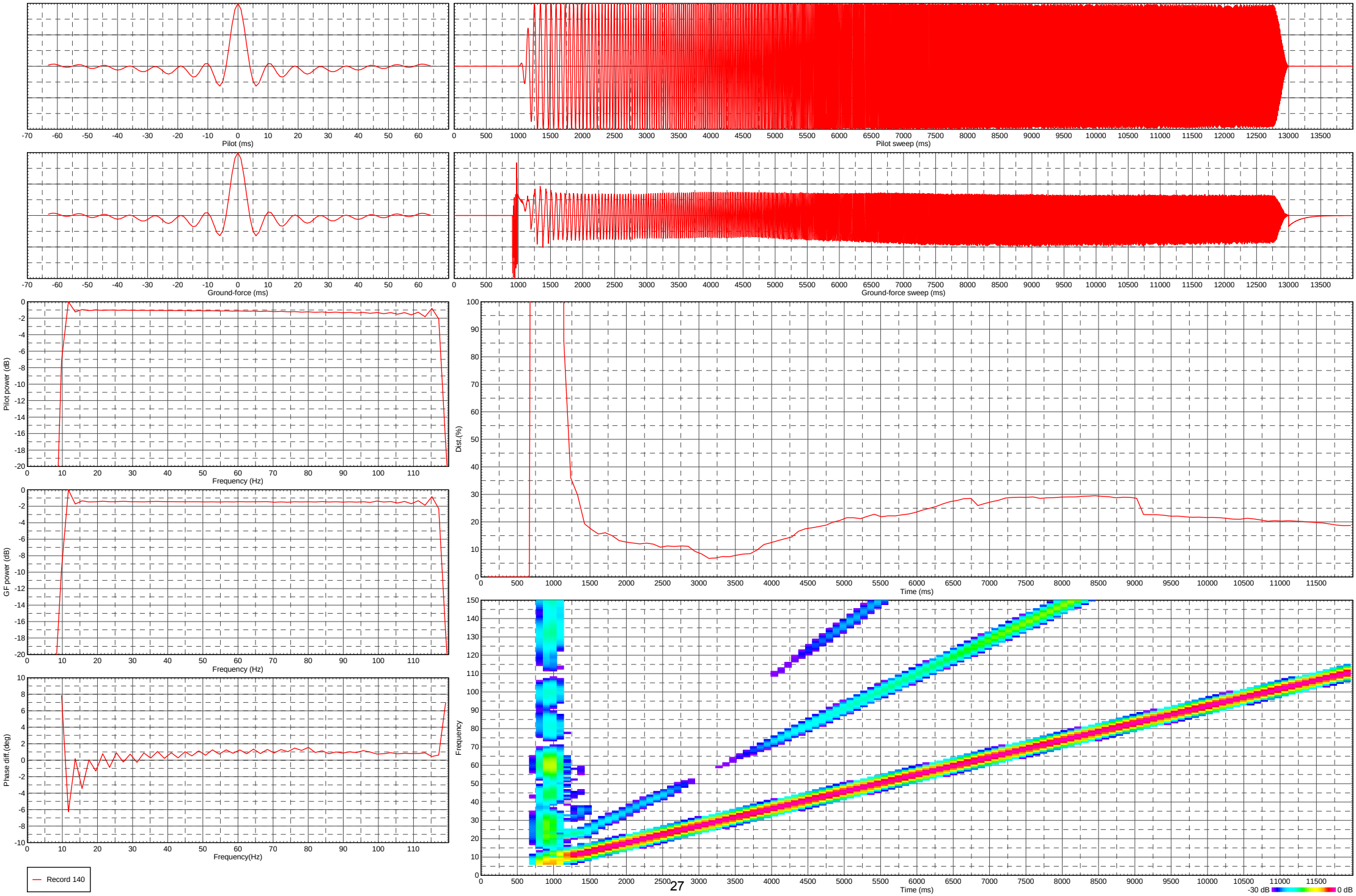
Spectral analysis






Pilot (ms)
Pilot sweep (ms)
Ground-force (ms)
Ground-force sweep (ms)
Pilot power (dB)
Frequency (Hz)
GF power (dB)
Frequency (Hz)
Phase diff.(deg)
Frequency(Hz)
Record 20
Dist.(%)
Time (ms)
Frequency
Time (ms)
-30 dB
0 dB


Pilot (ms)
Pilot sweep (ms)
Ground-force (ms)
Ground-force sweep (ms)
Pilot power (dB)
Frequency (Hz)
GF power (dB)
Frequency (Hz)
Phase diff.(deg)
Frequency(Hz)
Record 267
Dist.(%)
Time (ms)
Frequency
Time (ms)
-30 dB
0 dB


Pilot (ms)
Pilot sweep (ms)
Ground-force (ms)
Ground-force sweep (ms)
Pilot power (dB)
Frequency (Hz)
GF power (dB)
Frequency (Hz)
Phase diff.(deg)
Frequency(Hz)
Record 140
Dist.(%)
Time (ms)
Frequency
Time (ms)
-30 dB
0 dB