



BLASTING REPORT

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CUSTOMER NAME:	Eastside Rock	DAY:	16	DIRECTION AND DISTANCE TO NEAREST (NON-MINE/CONSTRUCTION) RELATED STRUCTURE:	DISTANCE/FT.	DIR.	WEATHER:	Partly Cloudy
LOCATION/CITY:	Fall City	MONTH:	May		754	Northeast	TEMPERATURE/°F:	Cool
LOCATION/STATE:	Washington	YEAR:	2017	LOCATION/ADDRESS:	329 Ave SE		WIND DIRECTION:	N/A
BLAST LOCATION:	Multiple Benches	TIME:	4:10	METHOD OF MEASUREMENT:	G.P.S.		WIND SPEED:	None
QUARRY/PIT ID.:	Raging River Quarry	AM/PM:	PM	G.P.S. LOCATION (STATION/STRUCTURE):	N 47°33'04.85 W 121°54'07.96		CEILING LEVEL:	Low
BLAST NO.:	N/A			G.P.S. ACCURACY +/- (STATION/STRUCTURE) /FT.:	15'			
JOB NO.:	1858			G.P.S. LOCATION (BLAST ZONE):	N 47°32.833' W 121°54.319'			
				G.P.S. ACCURACY +/- (BLAST ZONE)/FT.:	9'			

	1	2	3	4		1	2	3	4
TYPE OF HOLES:	Vertical (production)	Vertical (production)	Vertical (production)		BURDEN/FT.:	9'	8'	8'	
NO. OF HOLES:	42	17	7		SPACING/FT.:	9'	9'	8'	
HOLE DIAMETER/ IN.:	3 1/2"	3 1/2"	3 1/2"		SUBDRILL/FT.:	0'	0'	0'	

HOLE DEPTH/RANGE/AVG.FT.:	27' - 34'	29'	8' - 23'	18'	8' - 14'	12'		MATERIAL BLASTED:	basalt	basalt	basalt
STEMMING LENGTH/RANGE/AVG.FT.:	9' - 26'	9'	7' - 10'	7'	7' - 9'	7'		STEMMING TYPE:	3/8"minus	3/8"minus	3/8"minus

EXPLOSIVES COMPANY USED:	Dyno Nobel	EXPLOSIVE PRODUCTS USED	SIZE	UNITS	WEIGHT/LBS.	DETONATORS USED	SIZE/FT.	QUANTITY
DECKING:	NO	1 DYNOMIX	BAG(S)	43	2150.000			
BLASTING MACHINE USED:	R.C.B.M.	2 DYNOMIX WR	BAG(S)	20	1000.000	EZ DET 25/350	24	15
METHOD OF FIRING:	NONEL	3 NONEL LEADLINE	2500' ROLL	1	0.024	EZ DET 25/350	30	11
BLASTING MATS USED:	NO	4 BLASTEX	2 1/2 X16	14.8 cs.	593.340	EZ DET 25/350	40	33
QUANTITY OF BLASTING MATS USED:	N/A	5 SPARTAN BOOSTER	350 G	71	53.250	EZ DET 25/350	50	12
		6				EZTL #17	12	1
		7				EZTL #25	12	10
		8				EZTL #42	12	19
		9						
		10						

MAX. NO. OF HOLES/DECK PER 8 MS:	3	TOTAL EXPLOSIVES USED/LBS.:	3,796.614	TOTAL NO. OF DETONATORS USED:	101
MAX. WT. OF EXPLOSIVES PER HOLE / DECK:	90.25	TOTAL VOLUME/CUBIC YARDS:	4,695.0	SHOT RESULTS	
MAX. WT. OF EXPLOSIVES PER ANY 8 MS INTERVAL:	270.75	ROCK DENSITY/SPECIFIC GRAVITY:	2.00	FRAGMENTATION:	MEDIUM
GROUND RESPONSE(K) FACTOR:	130	TOTAL WEIGHT/TONS:	9,390	MUCK PILE CONFIGURATION:	SLOPED
PREDICTED P.P.V.:	0.42	POWDER FACTOR/LBS./CUBIC YARDS:	0.81	FLYROCK:	NO
SCALED DISTANCE:	45.82	POWDER FACTOR/LBS./TON:	0.40	ALL HOLES DETONATED:	YES

BLASTING CREW	LICENSE NO.	B.I.C.	BLASTING CREW	LICENSE NO.	B.I.C.	BLASTING CREW	LICENSE NO.	B.I.C.
Tim Fredericks	U-21478	YES						
Travis Martin		N/A						
Matt Calvert		N/A						
Jeremy Siefert		N/A						
Shelby Spahr		N/A						

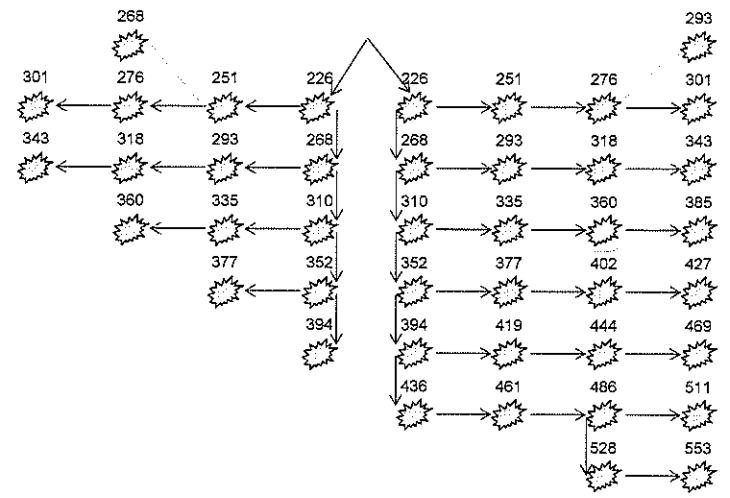
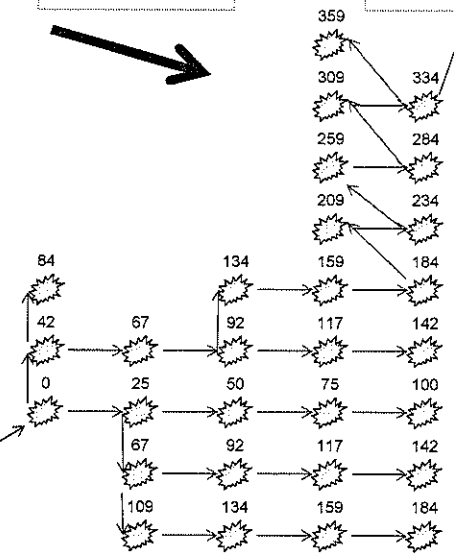
SEISMOGRAPH TYPE:	INSTANTEL	LOCATION OF SETUP:	329 Ave SE
NO. OF SEISMOGRAPHS USED:	4	DISTANCE FROM BLAST/FT.:	754
SEISMOGRAPH OPERATOR(S):	Shelby Spahr	IF USED SEISMOGRAPH RECORD(S) ATTACHED TO BLAST REPORT	
	N/A	SIGNATURE OF BLASTER IN CHARGE	Tim Fredericks
	N/A		
	N/A		
COMPANY:	McCALLUM ROCK DRILLING		
COMMENTS:			

CUSTOMER NAME:	Eastside Rock
LOCATION/CITY:	Fall City
BLAST LOCATION:	Multiple Benches
JOB NAME/#:	1858
DATE:	5/16/2017

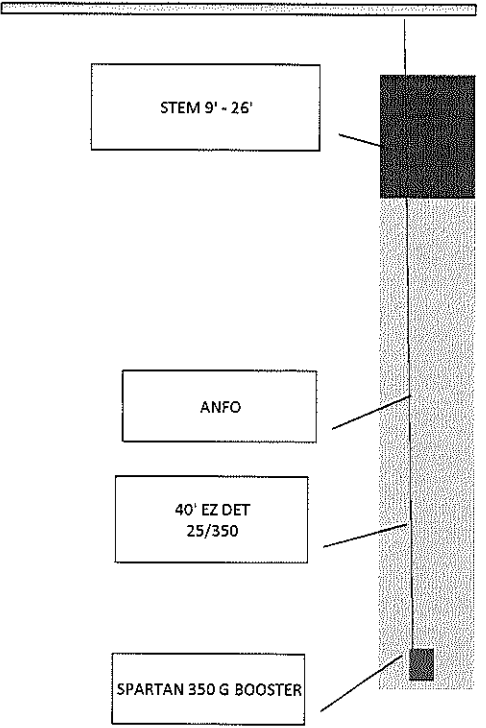
NORTH

N 47°32.833' W 121°54.319'

INITIATION POINT



HOLE PROFILE



Date/Time Vert at 4:10:04 PM May 16, 2017
Trigger Source Geo: 0.030 in/s, Mic: 115.0 dB(L)
Range Geo: 10.000 in/s
Record Time 4.0 sec at 4096 sps
Job Number: 1
Operator/Setup: Tim Fredericks/Eastside 1.mmb

Serial Number UM8589 V 10-82 Micromate ISEE
Battery Level 3.8 Volts
Unit Calibration October 18, 2016 by Instantel
File Name UM8589_20170516161004.IDFW
Scaled Distance 50.9 (854.1 ft., 281.3 lb.)

GPS Location **Latitude** **Longitude**
 Source: 000 0.000 N 000 0.000 W
 Sensor1: 000 0.000 N 000 0.000 W
 Distance: 000.0 ft.

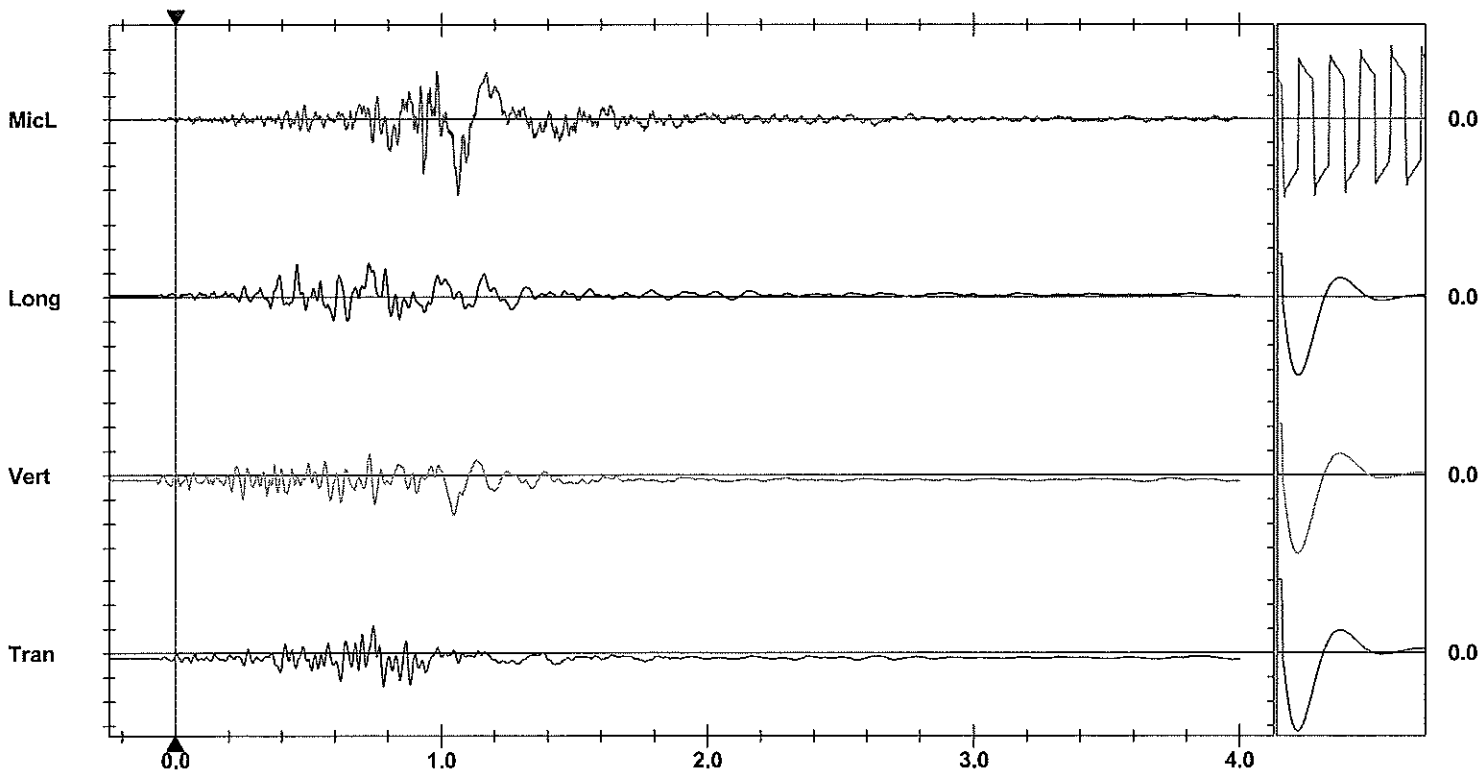
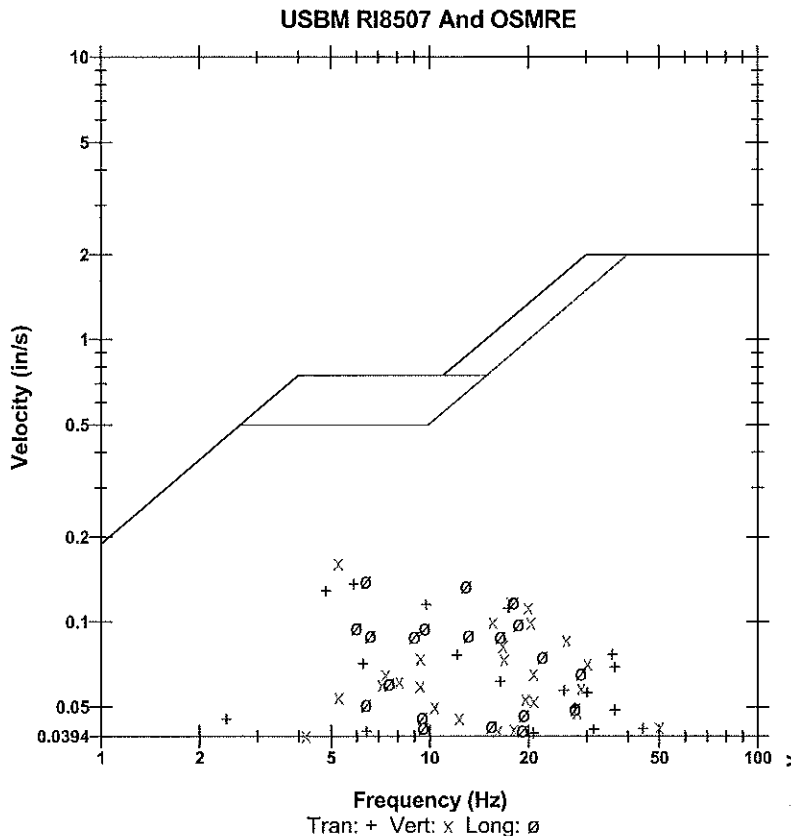
Notes
 Location: Raging River Quarry Fall City WA.
 Client: Eastside Rock Products
 User Name: Shelby Spahr / MRD
 General: Floor, Bench 1

Extended Notes
 Seismograph located at Station # 1. (Outside quarry gate)
 (N 47°32.804' W 121°54.120' acc. +/- 9')

Microphone Linear Weighting
PSPL 115.0 dB(L) 0.002 psi(L) at 1.062 sec
ZC Freq 5.1 Hz
Channel Test Passed (Freq = 19.7 Hz Amp = 1432 mv)

	Tran	Vert	Long	
PPV	0.136	0.162	0.140	in/s
PPV	33.69	35.21	33.94	dB
ZC Freq	5.9	5.3	6.4	Hz
Time (Rel. to Trig)	0.784	1.047	0.727	sec
Peak Acceleration	0.086	0.066	0.076	g
Peak Displacement	0.006	0.004	0.003	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.5	7.3	Hz
Overswing Ratio	3.4	3.7	4.1	

Peak Vector Sum 0.182 in/s at 0.747 sec



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
 Trigger = \blacktriangleleft \blacktriangleright

Sensor Check

Date/Time Vert at 4:10:02 PM May 16, 2017
Trigger Source Geo: 0.030 in/s, Mic: 115.0 dB(L)
Range Geo: 10.000 in/s
Record Time 4.0 sec at 4096 sps
Job Number: 1
Operator/Setup: Brandon Babka/Eastside 2.mmb

Serial Number UM8590 V 10-86 Micromate ISEE
Battery Level 3.8 Volts
Unit Calibration October 18, 2016 by Instantel
File Name UM8590_20170516161002.IDFW
Scaled Distance 40.9 (686.4 ft., 281.3 lb.)

GPS Location **Latitude** **Longitude**
 Source: 000 0.000 N 000 0.000 W
 Sensor1: 000 0.000 N 000 0.000 W
 Distance: 000.0 ft.

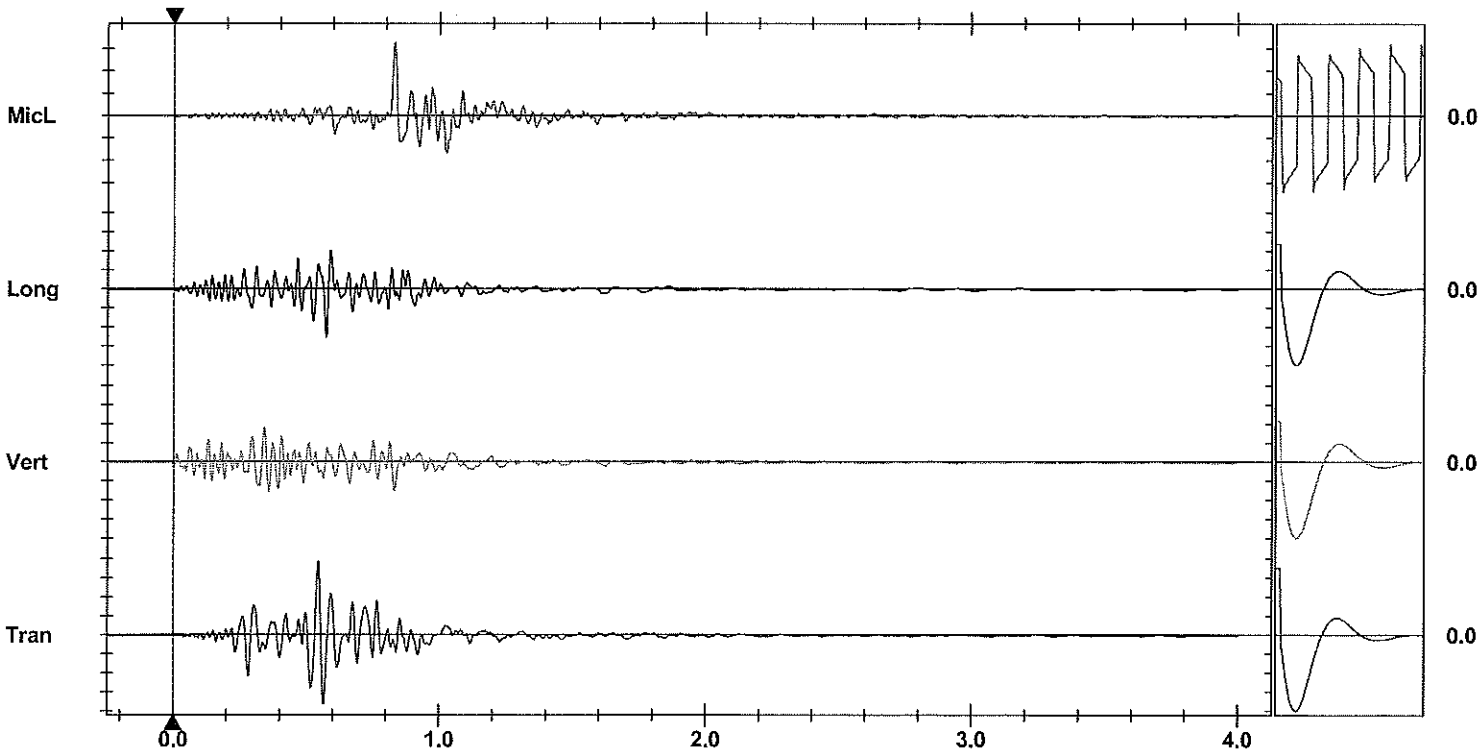
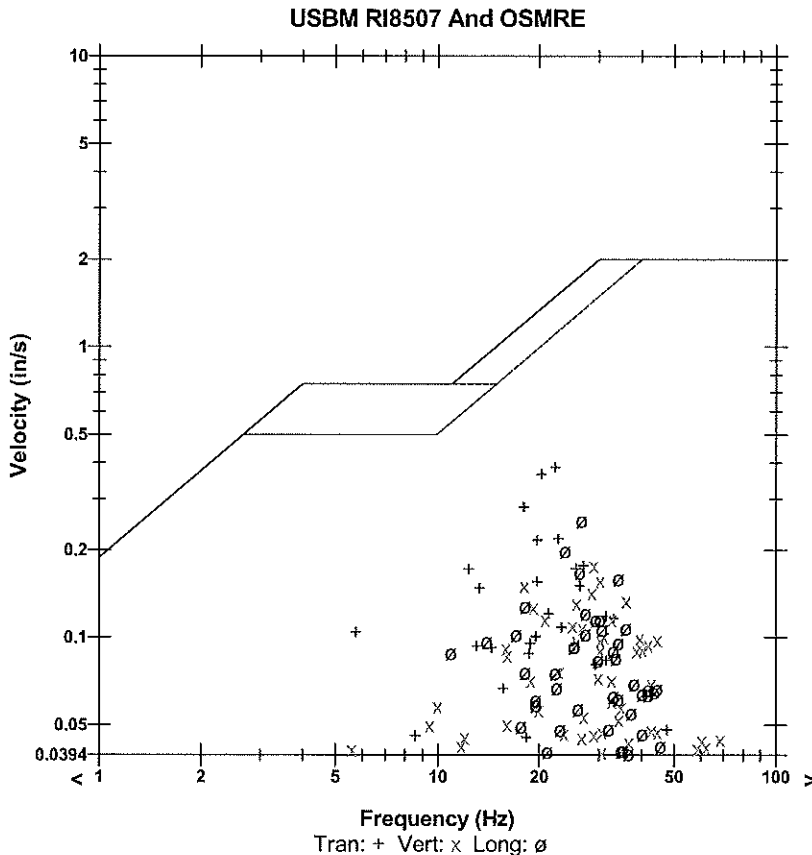
Notes
 Location: Raging River Quarry Fall City WA.
 Client: Eastside Rock Products
 User Name: Shelby Spahr / MRD
 General: Floor, Bench 1

Extended Notes
 Seismograph located at Station # 2. (Designated area at end of 329 Ave SE.)
 (N 47°32.917' W 121°54.170' acc. +/- 9')

Microphone Linear Weighting
PSPL 121.1 dB(L) 0.003 psi(L) at 0.831 sec
ZC Freq 18.0 Hz
Channel Test Passed (Freq = 19.7 Hz Amp = 1434 mv)

	Tran	Vert	Long	
PPV	0.386	0.177	0.254	in/s
PPV	42.74	35.97	39.11	dB
ZC Freq	22.3	28.8	26.6	Hz
Time (Rel. to Trig)	0.546	0.341	0.574	sec
Peak Acceleration	0.303	0.171	0.158	g
Peak Displacement	0.003	0.002	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.3	7.3	Hz
Overswing Ratio	4.4	4.2	4.3	

Peak Vector Sum 0.409 in/s at 0.546 sec



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
 Trigger =

Sensor Check

Date/Time Vert at 4:10:02 PM May 16, 2017
Trigger Source Geo: 0.030 in/s, Mic: 115.0 dB(L)
Range Geo: 10.000 in/s
Record Time 4.0 sec at 4096 sps
Job Number: 1
Operator/Setup: Tim Fredericks/Eastside 3.mmb

Serial Number UM6218 V 10-81 Micromate ISEE
Battery Level 3.8 Volts
Unit Calibration July 28, 2016 by InstanTel
File Name UM6218_20170516161002.IDFW
Scaled Distance 88.2 (1478.4 ft., 281.3 lb.)

GPS Location **Latitude** **Longitude**
 Source: 000 0.000 N 000 0.000 W
 Sensor1: 000 0.000 N 000 0.000 W
 Distance: 000.0 ft.

Notes

Location: Raging River Quarry Fall City WA.
Client: Eastside Rock Products
User Name: Shelby Spahr / MRD
General: Floor, Bench 1

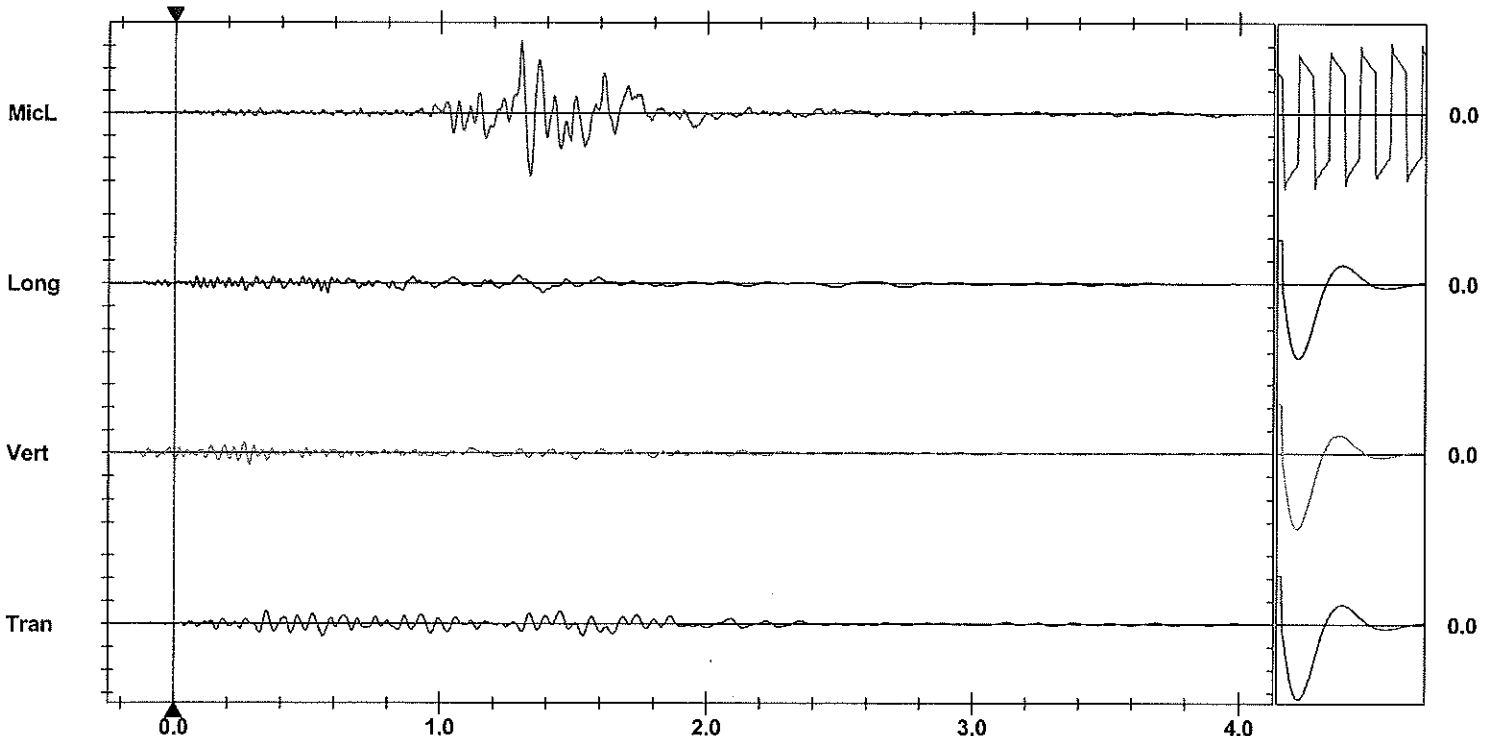
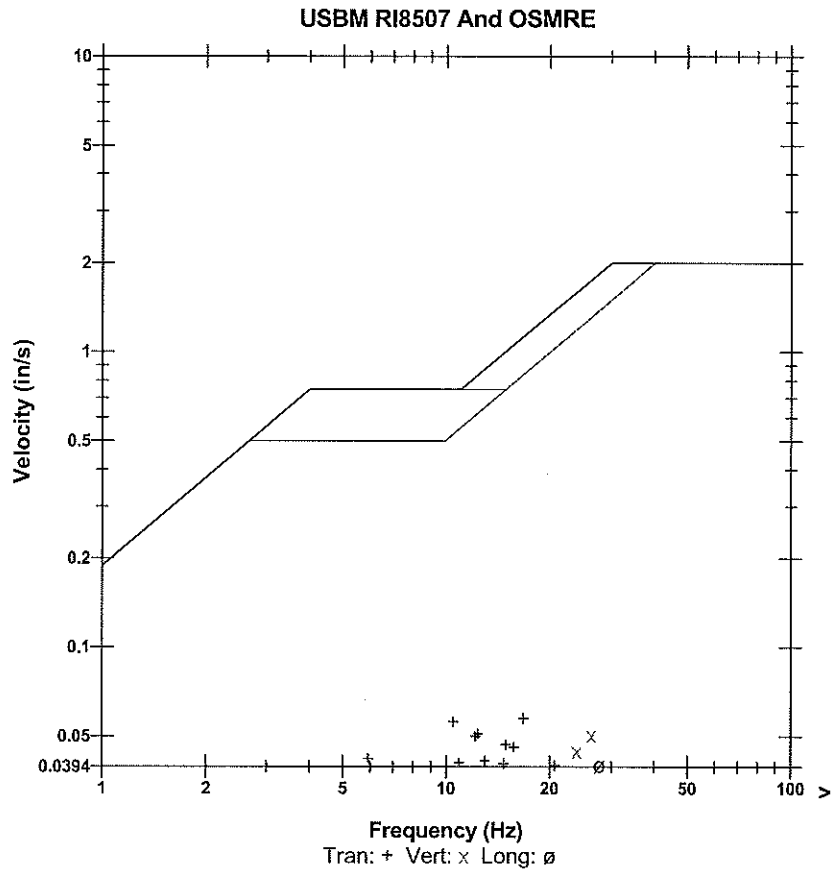
Extended Notes

Seismograph located at Station # 3. (Designated area at 5600 329 Ave SE.)
 (N 47°32.917' W 121°54.170' acc. +/- 9')

Microphone Linear Weighting
PSPL 114.9 dB(L) 0.002 psi(L) at 1.301 sec
ZC Freq 9.0 Hz
Channel Test Passed (Freq = 19.7 Hz Amp = 1433 mv)

	Tran	Vert	Long	
PPV	0.057	0.051	0.040	in/s
PPV	26.18	25.08	23.05	dB
ZC Freq	16.8	26.3	27.7	Hz
Time (Rel. to Trig)	0.347	0.281	0.574	sec
Peak Acceleration	0.026	0.033	0.033	g
Peak Displacement	0.001	0.000	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.1	7.5	7.1	Hz
Overswing Ratio	3.7	4.0	4.0	

Peak Vector Sum 0.070 in/s at 0.347 sec



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check

Date/Time Long at 4:09:46 PM May 16, 2017
Trigger Source Geo: 0.030 in/s, Mic: 115.0 dB(L)
Range Geo: 10.000 in/s
Record Time 4.0 sec at 4096 sps
Job Number: 1
Operator/Setup: Operator/Eastside 4.mmb

Serial Number UM10691 V 10-82 Micromate ISEE
Battery Level 3.8 Volts
Unit Calibration October 28, 2016 by InstanTel
File Name UM10691_20170516160946.IDFW
Scaled Distance 56.7 (950.4 ft., 281.3 lb.)

GPS Location **Latitude** **Longitude**
 Source: 000 0.000 N 000 0.000 W
 Sensor1: 000 0.000 N 000 0.000 W
 Distance: 000.0 ft.

Notes

Location: Raging River Quarry Fall City WA.
 Client: Eastside Rock Products
 User Name: Shelby Spahr / MRD
 General: Floor, Bench 1

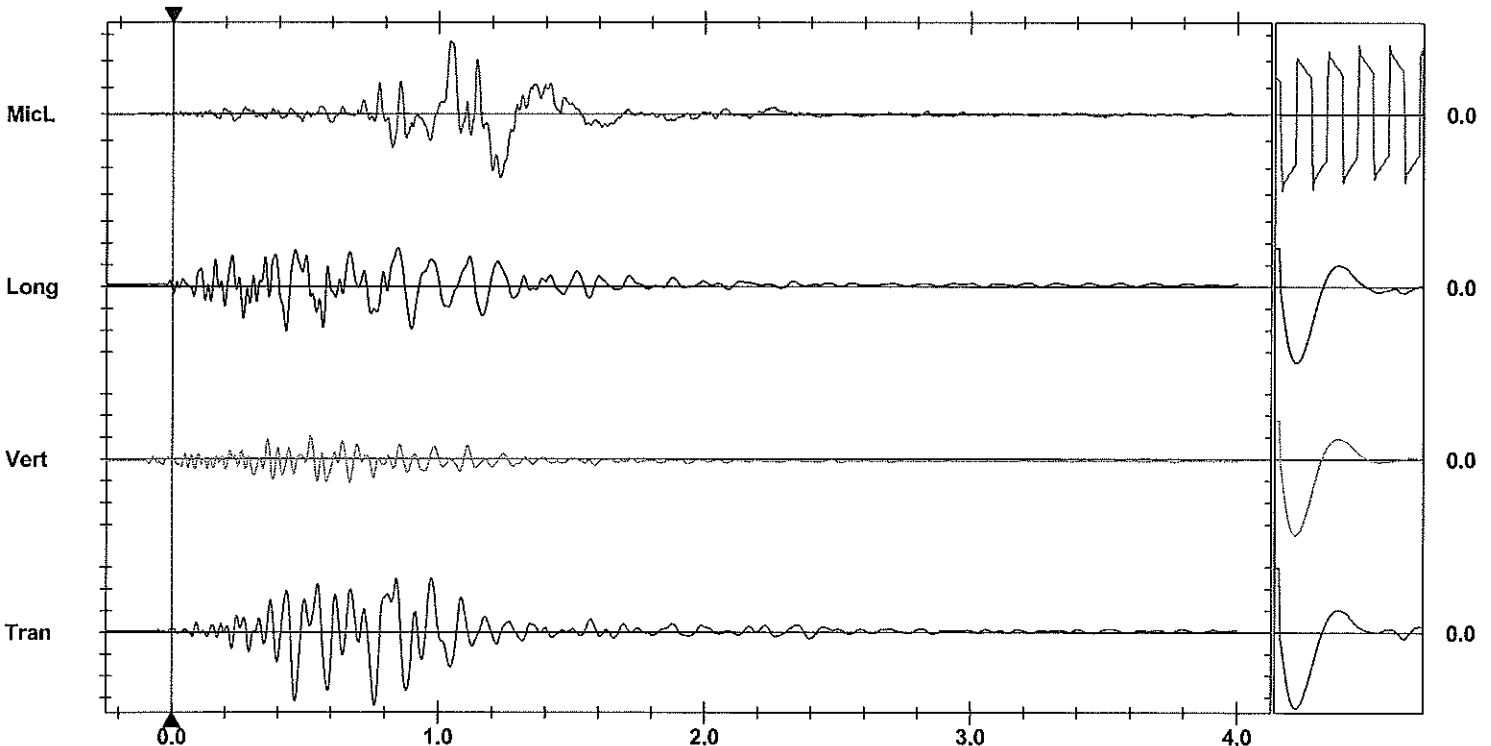
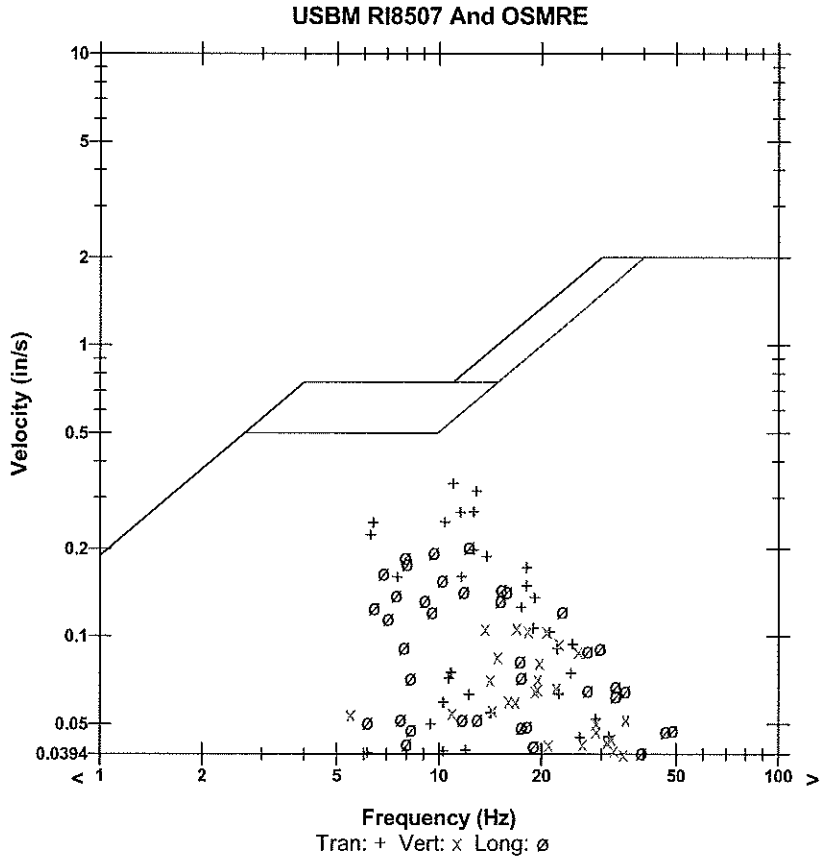
Extended Notes

Seismograph located at Station # 4. (Designated area at SE 58 st.)
 (N 47°32.942' W 121°54.492' acc. +/- 9')

Microphone Linear Weighting
PSPL 113.5 dB(L) 0.001 psi(L) at 1.041 sec
ZC Freq 6.2 Hz
Channel Test Passed (Freq = 19.7 Hz Amp = 1437 mv)

	Tran	Vert	Long	
PPV	0.335	0.107	0.204	in/s
PPV	41.50	31.59	37.19	dB
ZC Freq	11.0	16.9	12.3	Hz
Time (Rel. to Trig)	0.763	0.669	0.427	sec
Peak Acceleration	0.132	0.069	0.105	g
Peak Displacement	0.006	0.001	0.004	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.5	7.3	Hz
Overswing Ratio	3.3	3.7	3.5	

Peak Vector Sum 0.359 in/s at 0.463 sec



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.001 psi(L)/div
Trigger =

Sensor Check