McCALLUM ROCK DRILLING

BLASTING REPORT

PO Box 599
Chehalis, WA 98532
T (360)748-7259
F (360)748-8823

PO Box 4030
Salem, OR 97302
T (503)581-7525
F (503)581-7280

www.mccallumrockdrilling.com

CUSTOMER NAME:	Eastside Rock Products	DAY:	29	DIRECTION AND DISTANCE TO NEAREST (NON-MINE/CONSTRUCTION) RELATED STRUCTURE:	DISTANCE/FT. 580	DIR. South	WEATHER:	Clear
LOCATION/CITY:	Falls City	MONTH:	August	LOCATION/ADDRESS:	6109 Preston-Fall City Rd SE, Fall City, WA 98024		TEMPERATURE/°F:	Hot
LOCATION/STATE:	Washington	YEAR:	2017	METHOD OF MEASUREMENT:	G.P.S.		WIND DIRECTION:	N/A
BLAST LOCATION:	Bench 2			G.P.S. LOCATION (STATION/STRUCTURE):	N47°32.797 W121°54.185			
QUARRY/PIT ID.:	Raging River Quarry	TIME:	4:00 PM	G.P.S. ACCURACY +/- (STATION/STRUCTURE) /FT:	9'		WIND SPEED:	None
BLAST NO.:	N/A			G.P.S. LOCATION (BLAST ZONE):	N 46°42.511' W 122°45.107.604'			
JOB NO. :	1944	AM/PM:	PM	G.P.S. ACCURACY +/- (BLAST ZONE)/FT.:	9'		CEILING LEVEL	N/A

	1	2	3	4		1	2	3	4
TYPE OF HOLES:	Vertical (production)				BURDEN/FT. :	9'			
NO. OF HOLES:	21				SPACING/FT. :	9'			
HOLE DIAMETER/ IN. :	3 1/2"				SUBDRILL/FT. :	0'			
HOLE DEPTH/RANGE/AVG.FT. :	47' 47'				MATERIAL BLASTED:	basalt			
STEMMING LENGTH/RANGE/AVG./FT. :	8' - 32' 8'				STEMMING TYPE:	3/8"minus			

			EXPLOSIVE PRODUCTS USED	SIZE	UNITS	WEIGHT/LBS.	DETONATORS USED	SIZE/FT.	QUANTITY
EXPLOSIVES COMPANY USED:	Dyno Nobel	1	SPARTAN BOOSTER	350 G	3 ea.	2.250	MS 350	16	11
DECKING:	NO	2	DYNO MIX	BAG(S)	43	2150.000	EZ DET 25/350	60	21
		3	DYNO MIX WR	BAG(S)	1	50.000	EZTL #25	20	2
BLASTING MACHINE USED:	R.C.B.M.	4	BLASTEX	2 1/2 X16	.83 cs	33.340	EZTL #42	20	2
		5	DYNO AP	1 1/8 X 16	33	18.890			
METHOD OF FIRING:	NONEL	6							
		7							
BLASTING MATS USED:	NO	8							
QUANTITY OF BLASTING MATS USED:	N/A	9							
		10							

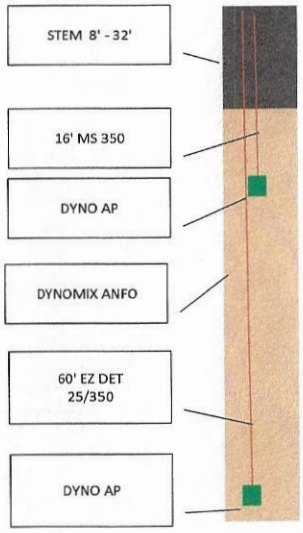
MAX. NO. OF HOLES/DECK PER 8 MS :	1	TOTAL EXPLOSIVES USED/LBS.:	2,254.480	TOTAL NO. OF DETONATORS USED:	36
MAX. WT. OF EXPLOSIVES PER HOLE / DECK :	133				
MAX. WT. OF EXPLOSIVES PER		TOTAL VOLUME/CUBIC YARDS :	2,961.0	SHOT RESULTS	
ANY 8 MS INTERVAL :	133	ROCK DENSITY/SPECIFIC GRAVITY :	2.00	FRAGMENTATION:	MEDIUM
GROUND RESPONSE(K) FACTOR:	100	TOTAL WEIGHT/TONS :	5,922	MUCK PILE CONFIGURATION:	SLOPED
PREDICTED P.P.V.:	0.28	POWDER FACTOR/LBS./CUBIC YARDS:	0.76	FLYROCK:	NO
SCALED DISTANCE :	50.29	POWDER FACTOR/LBS./TON:	0.38	ALL HOLES DETONATED:	YES

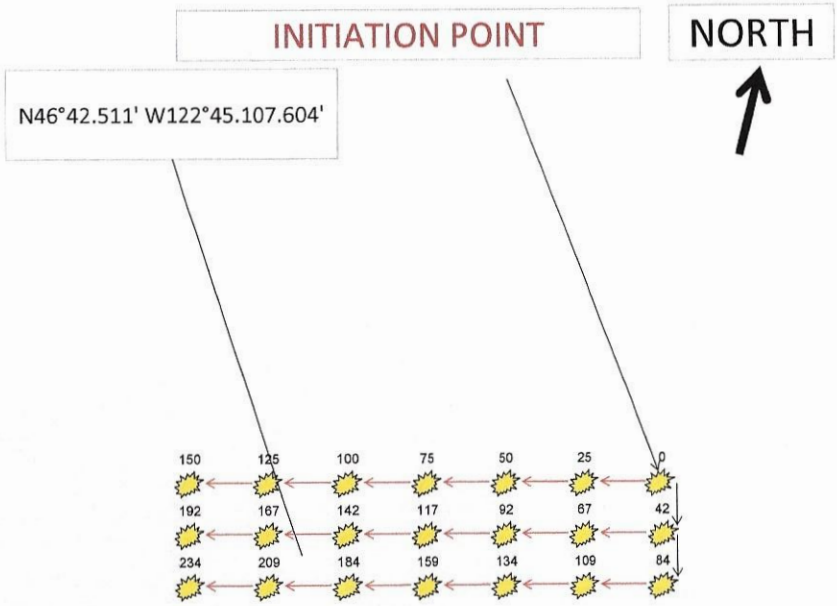
BLASTING CREW	LICENSE NO.	B.I.C.	BLASTING CREW	LICENSE NO.	B.I.C.	BLASTING CREW	LICENSE NO.	B.I.C.
Tyler Hallett	EXCUS00021692	YES						
Sean Lockwood		N/A						
Brandon Kofoed		N/A						
Andrew Sipp		N/A						
John Hardenbrook		N/A						
Derek Schmidt		N/A						

SEISMOGRAPH TYPE:	INSTANTEL	LOCATION OF SETUP:	6109 Preston-Fall City Rd SE, Fall City, WA 98024
NO. OF SEISMOGRAPHS USED :	3		
SEISMOGRAPH OPERATOR(S):	Tyler Hallett	DISTANCE FROM BLAST/FT.:	580
		IF USED SEISMOGRAPH RECORD(S) ATTACHED TO BLAST REPORT	
COMPANY:	McCALLUM ROCK DRILLING	SIGNATURE OF BLASTER IN CHARGE	Tyler Daniel Hallett
COMMENTS:	Shot layed forward		

CUSTOMER NAME:	Eastside Rock Products
LOCATION/CITY:	Falls City
BLAST LOCATION:	Bench 2
JOB NAME/#:	1944
DATE:	8/29/2017

HOLE PROFILE





Event Report

Date/Time	Vert at 16:00:35 August 29, 2017
Trigger Source	Geo: 0.030 in/s, Mic: 130.0 dB(L)
Range	Geo: 10.000 in/s
Record Time	4.0 sec at 4096 sps
Job Number:	1
Operator/Setup:	TYLER HALLETT/EAST ST1.mmb

Serial Number	UM6219 V 10-81 Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	August 2, 2016 by Instantel.
File Name	UM6219_20170829160035.IDFW
Scaled Distance	49.4 (580.0 ft., 138.0 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:	Falls City, WA
Client:	Eastside Rock Products
User Name:	Tyler Hallett/ MRD
General:	Bench 2 Raging River Quarry

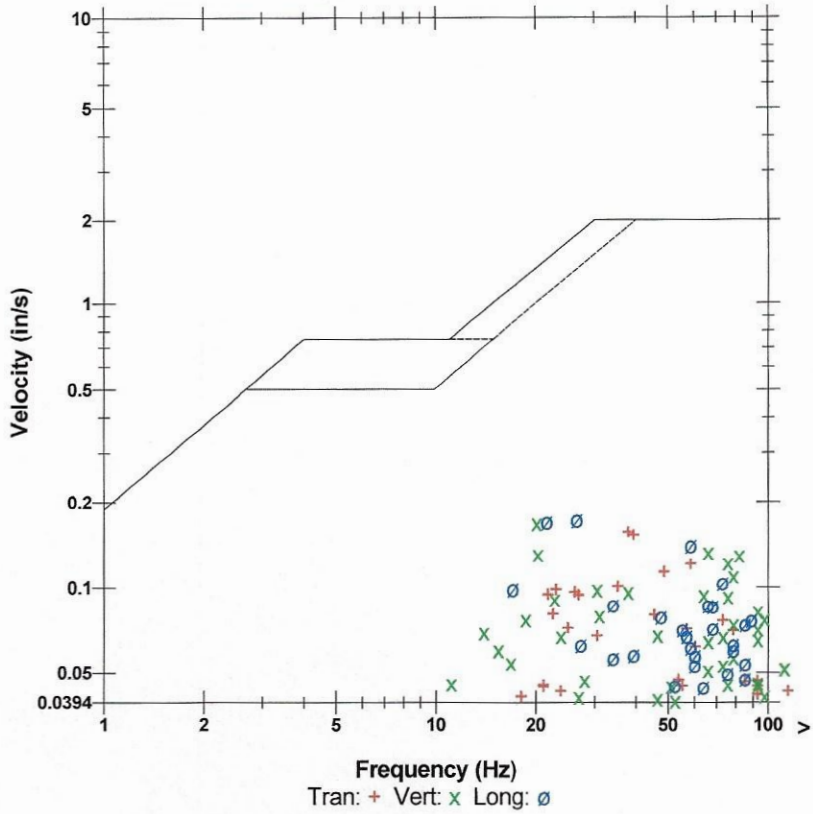
Extended Notes

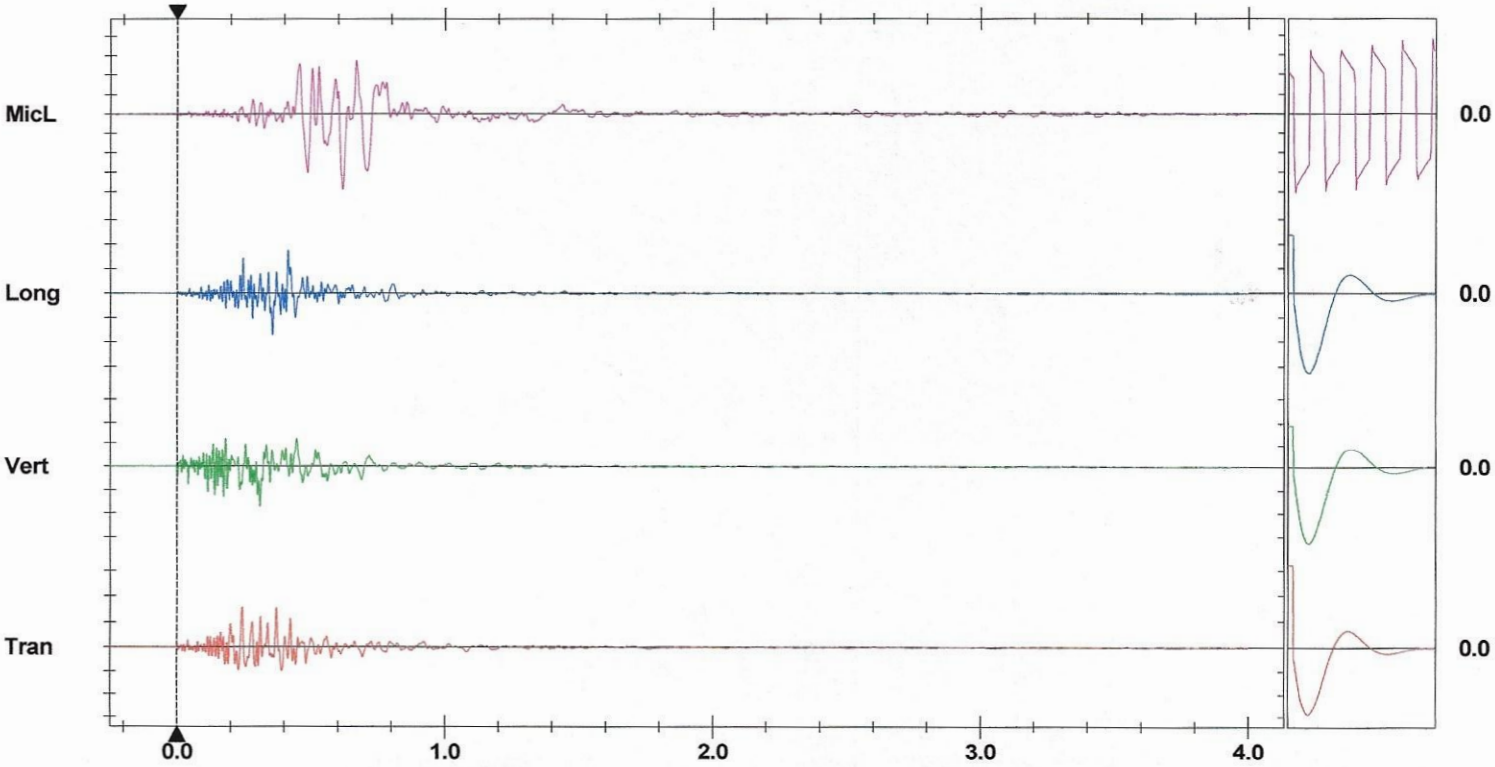
Seismograph located at station #1 designated area between home and scale house 30ft off river.Cord N47*32.797 W121*54.185Acc +/- 9ft

Microphone	Linear Weighting
PSPL	116.5 dB(L) 0.002 psi(L) at 0.617 sec
ZC Freq	17.2 Hz
Channel Test	Passed (Freq = 20.5 Hz Amp = 1244 mv)

	Tran	Vert	Long	
PPV	0.158	0.170	0.175	in/s
PPV	34.95	35.61	35.85	dB
ZC Freq	37.9	20.1	26.6	Hz
Time (Rel. to Trig)	0.244	0.310	0.414	sec
Peak Acceleration	0.197	0.290	0.224	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Check	Passed	Passed	
Frequency	7.7	7.3	7.3	Hz
Overswing Ratio	4.2	3.9	4.2	

USBM RI8507 And OSMRE





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

Trigger = ▶----------◀

Format © 1995-2015 Xmark Corporation

Event Report

Date/Time	Vert at 16:01:22 August 29, 2017
Trigger Source	Geo: 0.030 in/s, Mic: 130.0 dB(L)
Range	Geo: 10.000 in/s
Record Time	4.0 sec at 4096 sps
Job Number:	1
Operator/Setup:	Tim Fredericks/EAST ST2.mmb

Serial Number	UM8589 V 10-82 Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	October 18, 2016 by Instantel
File Name	UM8589_20170829160122.IDFW
Scaled Distance	58.4 (686.0 ft., 138.0 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

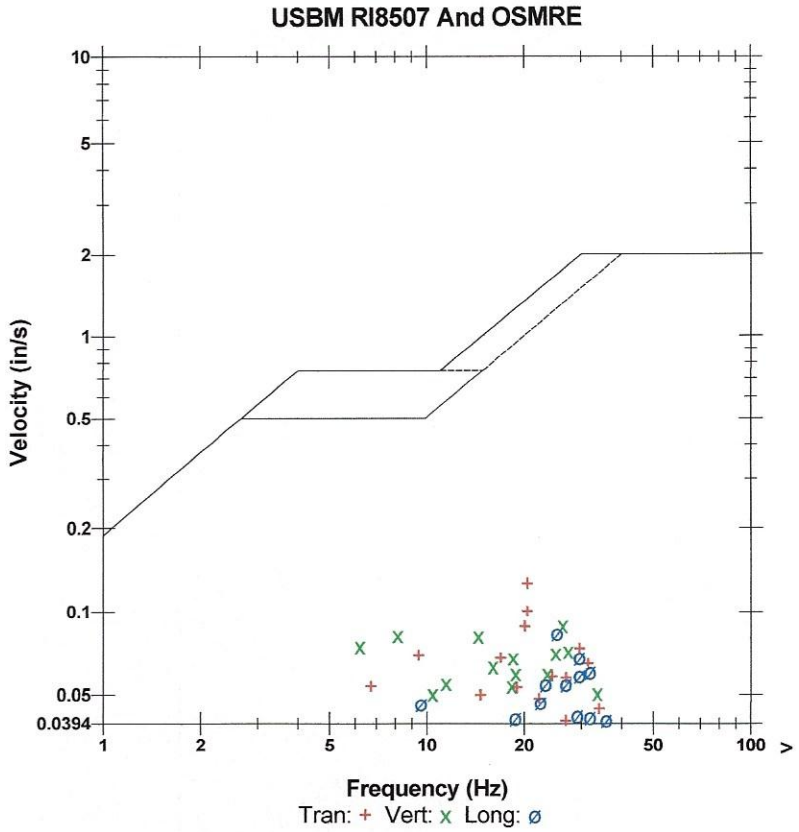
Location:	Falls City, WA
Client:	Eastside Rock Products
User Name:	Tyler Hallett/ MRD
General:	Bench 2 Raging River Quarry

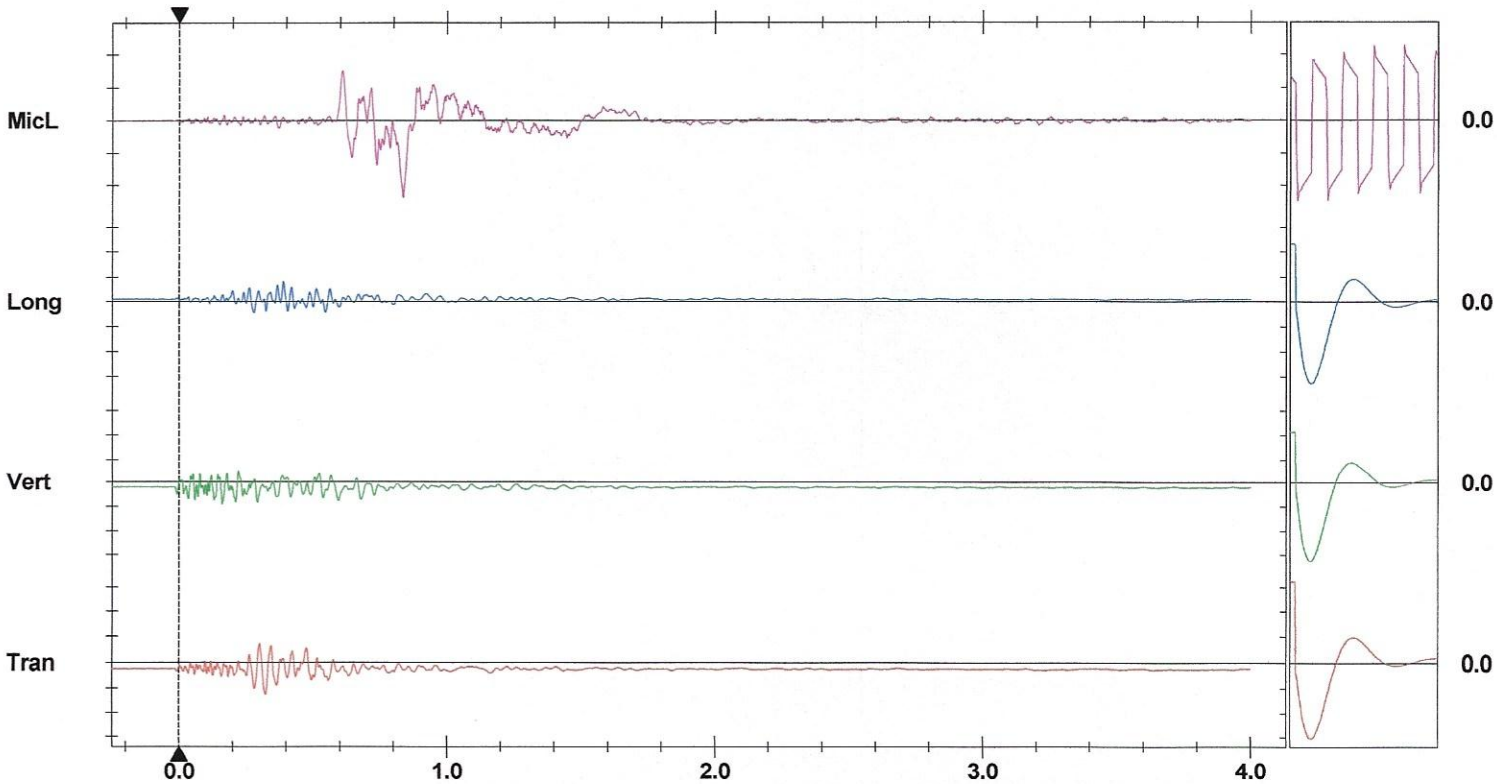
Extended Notes

Seismograph located at station #2 designated area at the end of 329th Ave SE N47*32.917' W121*54.710 Acc +/- 9ft

Microphone	Linear Weighting
PSPL	118.2 dB(L) 0.002 psi(L) at 0.835 sec
ZC Freq	6.0 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1288 mv)

	Tran	**Vert**	**Long**	
PPV	0.126	0.089	0.084	in/s
PPV	33.03	30.02	29.46	dB
ZC Freq	20.5	26.3	25.3	Hz
Time (Rel. to Trig)	0.325	0.162	0.389	sec
Peak Acceleration	0.072	0.102	0.063	g
Peak Displacement	0.004	0.003	0.002	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.7	7.3	Hz
Overswing Ratio	3.1	3.5	3.5	





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

Trigger = ▶----------◀

Format © 1995-2015 Xmark Corporation

Instantel

Event Report

Date/Time	Long at 04:00:28 August 29, 2017
Trigger Source	Geo: 0.030 in/s, Mic: 130.0 dB(L)
Range	Geo: 10.000 in/s
Record Time	4.0 sec at 4096 sps
Job Number:	1
Operator/Setup:	Tyler Hallet/EAST ST4.mmb

Serial Number	UM8590 V 10-86 Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	October 18, 2016 by Instantel
File Name	UM8590_20170829040028.IDFW
Scaled Distance	80.9 (950.0 ft., 138.0 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:	Falls City, WA
Client:	Eastside Rock Products
User Name:	Tyler Hallett/ MRD
General:	Bench 2 Raging River Quarry

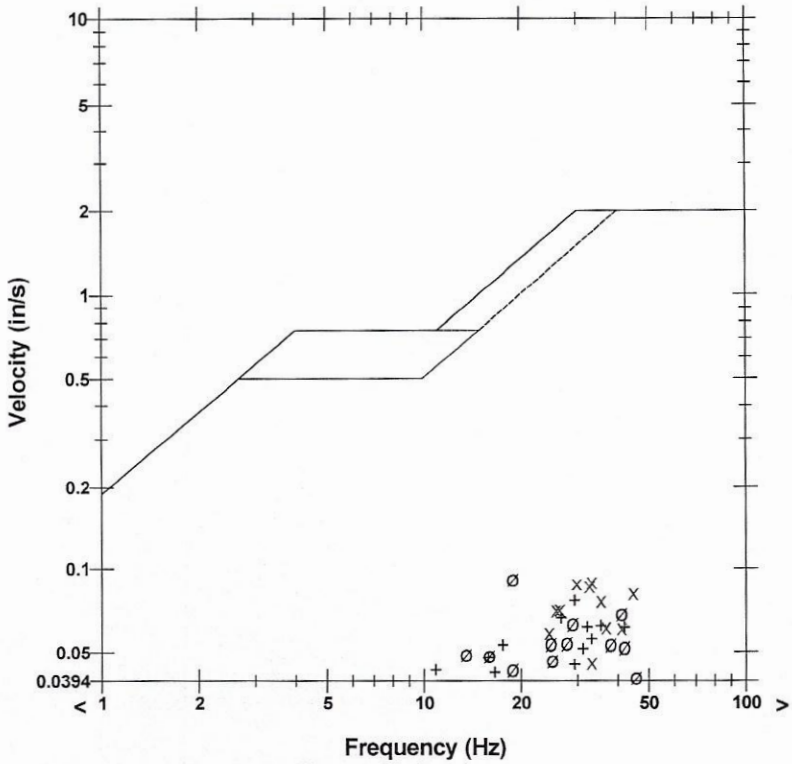
Extended Notes

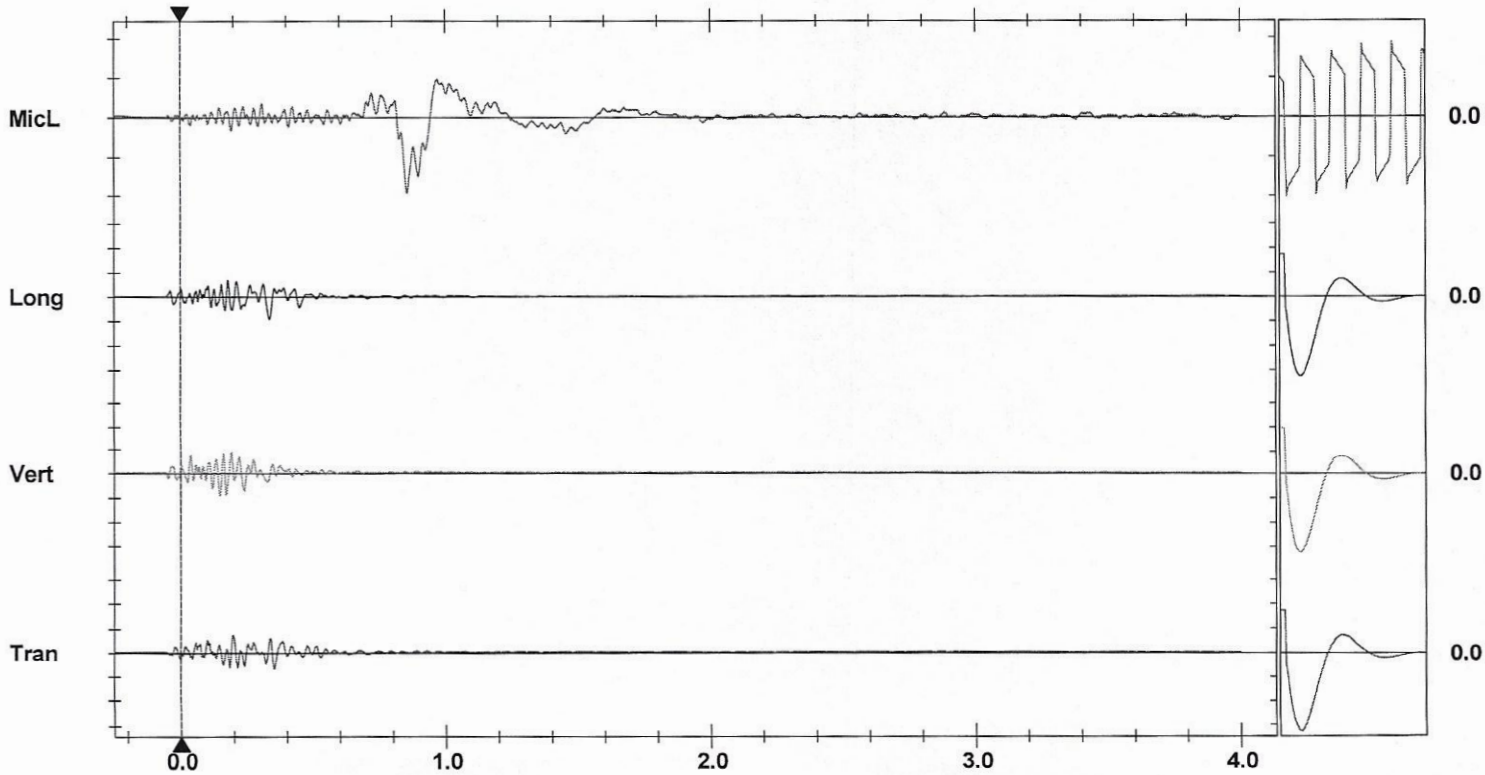
Seismograph located at station #4. Designated area at SE 58th St. 47*32.942' W121*54.492'

Microphone	Linear Weighting
PSPL	110.5 dB(L) 0.001 psi(L) at 0.856 sec
ZC Freq	4.0 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1288 mv)

	Tran	Vert	Long	
PPV	0.076	0.089	0.092	in/s
PPV	28.62	30.02	30.23	dB
ZC Freq	29.3	33.0	18.8	Hz
Time (Rel. to Trig)	0.197	0.148	0.336	sec
Peak Acceleration	0.069	0.115	0.089	g
Peak Displacement	0.001	0.001	0.001	in
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.5	7.3	Hz
Overswing Ratio	4.4	4.2	4.4	

USBM RI8507 And OSMRE





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

Trigger = ▶——◀

Format © 1995-2015 Xmark Corporation