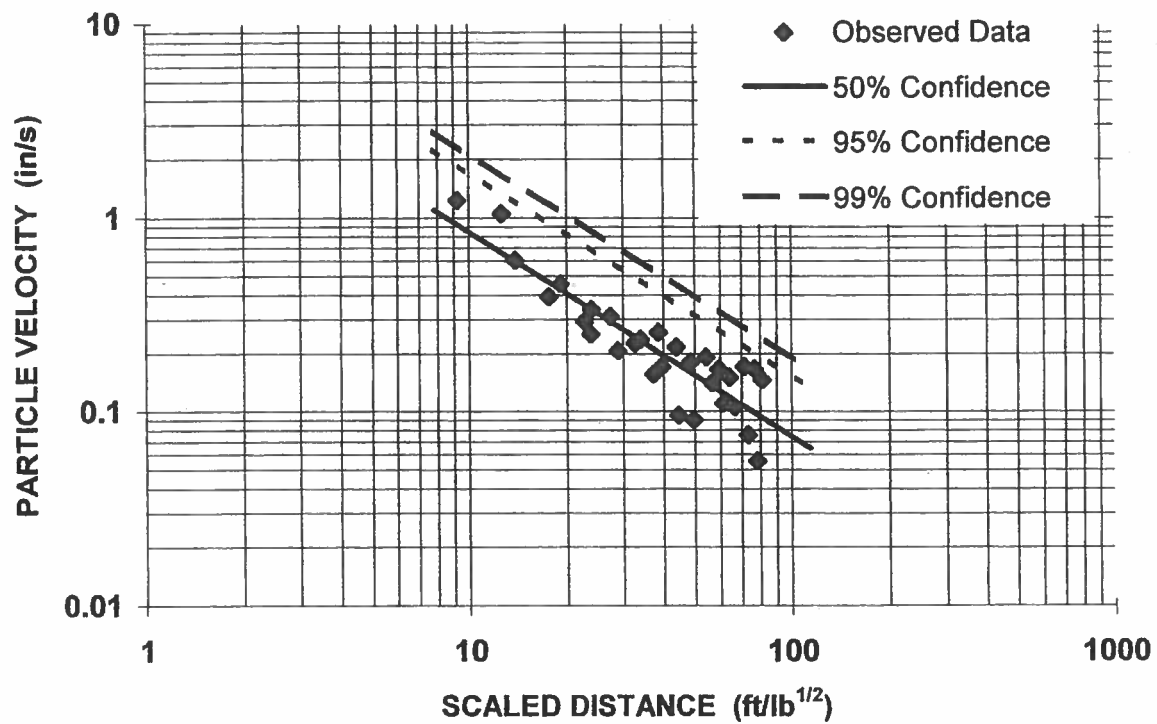


APPENDIX IV

**B-LINE
GROUND MOTION ATTENUATION STUDY,
SCALED DISTANCE, CHARGE WEIGHT,
& PPV TABLES,
VIBRATION RECORDINGS**

B-Line Regression Analysis

Feburary 25, 2004



Cripple Creek Regression Analysis Statistics

Data Points	Max SD	Min SD	Max PV	Min PV
30	81.54	9.26	1.22	0.055

Sum of SD	Sum of PV	Sum of SD ²	Sum of PV ²	Sum of SD x PV
109.0	-47.2	406.5	88.4	-182.3

Sum SD x Sum PV	Sum of (SD) ²	Sum of (PV) ²
-5148.4	11890.5	2229.2

SSX	SSY	SSXY	Xbar	Ybar
10.129	14.141	-10.729	3.635	-1.574

S	Se	R	R ²
0.315	2.78	-0.896	0.804

Slope	Intercept
-1.059	2.276

Regression Line Equation 50%		
PV=	2.28	X (SD) ^{-1.059}

95% Confidence Equation		
PV=	19.89	X (SD) ^{-1.059}

K Values		Z
9.74	K ₅₀	
17.73	K ₉₀	1.645
19.89	K ₉₅	1.96
22.73	K ₉₈	2.326
24.89	K ₉₉	2.576
32.30	K _{99.9}	3.291
40.18	K _{99.99}	3.891

Z values from Basic Statistical Methods for Engineers and Scientists
Neville and Kennedy 1964 , Table 10-1 p. 111

Matheson Mining Consultants, Inc. 2004

Matheson Mining Consultants, Inc. 3/5/04

Explanation of Regression Analysis

Data Statistics

Data Points is the number of data points used in the analysis.

Max PPV is the maximum peak particle velocity measured in inches per second used in the analysis.

Min PPV is the minimum peak particle velocity, measured in inches per second used in the data analysis.

Max SD is the maximum scaled distance ($SD = D/(W^{1/2})$) used in the analysis.

Min SD is the minimum scaled distance used in the analysis.

Calculated Sums

Sum of SD is the sum of the natural log (ln) of the Scaled Distance values

Sum of PPV is the sum of the ln of the Peak Particle Velocity values

Sum of SD^2 is the sum of the squares of the ln of the Scaled Distance values.

Sum of PPV^2 is the sum of the squares of the ln of the Peak Particle Velocity values.

Sum of SD x PPV is the sum of the ln of the SD values times the log of the PPV values.

Sums of Squares

SSX is the sum of the ln of the SD values squared minus the (Sum of SD)² divided by the Number of Data Points or: $SSX = \text{Sum of } SD^2 - (\text{Sum of } SD^2 / \text{Number of Data Points})$

SSY is the sum of the ln of the PPV values squared minus the (Sum of PPV)² divided by the Number of Data Points or: $SSY = \text{Sum of } PPV^2 - (\text{Sum of } PPV^2 / \text{Number of Data Points})$

SSXY = Sum of SD x PPV - ((Sum of SD * Sum of PPV) / Number of Data Points)

Sum of SD x Sum of PPV is the product of the sum of the ln of the SD's and the ln of the PPV's.

(Sum of SD)² is the square of the sum of the ln of the SD's.

Calculated Means & Calculated Coefficients

Xbar is the sum of the ln of the SD's divided by the Number of Data Points.

Ybar is the sum of the ln of the PPV's divided by the Number of Data Points.

Intercept is the value of Particle Velocity at Scaled Distance=1

K50 is the value of the Particle Velocity (Y) intercept of the mean line or e^a .

K95 is the value of the Particle Velocity (Y) intercept of the second standard deviation line.

K99 is the value of the Particle Velocity (Y) intercept of the third standard deviation line.

Slope is the value of the slope of the mean line and the value of the slope of confidence lines

Sample Standard Deviation & Coefficient of Correlation

S is the standard deviation.

Se_2 is the variance.

R is the correlation coefficient

R^2 is the multiple correlation coefficient or the "goodness of fit".

The 95% Confidence Level Equation – the equation of the second standard deviation from the mean line or $Y = K95 * X^{(B)}$

Where: Y is the PPV

X is the Scaled Distance

Charge Weight per Delay
Calculated From Given Distances for Particle Velocity
0.5 ips

Distance (feet)	Charge Weight (pounds)	Distance (feet)	Charge Weight (pounds)
100	10	3600	12368
200	38	3700	13064
300	86	3800	13780
400	153	3900	14515
500	239	4000	15269
600	344	4100	16042
700	468	4200	16834
800	611	4300	17645
900	773	4400	18475
1000	954	4500	19325
1100	1155	4600	20193
1200	1374	4700	21081
1300	1613	4800	21987
1400	1870	4900	22913
1500	2147	5000	23858
1600	2443	5100	24822
1700	2758	5200	25804
1800	3092	5300	26806
1900	3445	5400	27828
2000	3817	5500	28868
2100	4208	5600	29927
2200	4619	5700	31005
2300	5048	5800	32103
2400	5497	5900	33219
2500	5964	6000	34355
2600	6451	6100	35510
2700	6957	6200	36684
2800	7482	6300	37876
2900	8026	6400	39088
3000	8589	6500	40319
3100	9171	6600	41570
3200	9772	6700	42839
3300	10392	6800	44127
3400	11032	6900	45435
3500	11690	7000	46761



REGRESSION ANALYSIS

95% CONFIDENCE LEVEL
SCALED DISTANCE TABLE



Scaled Distance Particle Velocity		Scaled Distance Particle Velocity	
1	19.89	125	0.12
5	3.62	130	0.11
10	1.74	135	0.11
15	1.13	140	0.11
20	0.83	145	0.10
25	0.66	150	0.10
30	0.54	155	0.10
35	0.46	160	0.09
40	0.40	165	0.09
45	0.35	170	0.09
50	0.32	175	0.08
55	0.29	180	0.08
60	0.26	185	0.08
65	0.24	190	0.08
70	0.22	195	0.07
75	0.21	200	0.07
80	0.19	205	0.07
85	0.18	210	0.07
90	0.17	215	0.07
95	0.16	220	0.07
100	0.15	225	0.06
105	0.14	230	0.06
110	0.14	235	0.06
115	0.13	240	0.06
120	0.12	245	0.06

CRIPPLE CREEK & VICTOR GOLD MINING COMPANY, INC.
Ground Motion Attenuation Study Data Set
February 25, 2004

Shot Number	Recording Station	Charge Weight (pounds)	Instrument Number	Distance (feet)	Scaled Distance (ft/lb ²)	Peak Particle Velocity (inches per second)
1	B-1	100	BA7777	126.594	12.7	1.04
1	B-2	100	BC6487	239.727	24.0	0.335
1	B-3	100	BC8486	397.243	39.7	0.17
1	B-4	100	BE8352	568.274	56.8	0.140
1	B-5	100	BE8563	735.954	73.6	0.075
2	B-1	100	BA7777	176.446	17.6	0.390
2	B-2	100	BC6487	289.634	29.0	0.205
2	B-3	100	BC8486	447.146	44.7	0.095
2	B-4	100	BE8352	618.164	61.8	0.110
2	B-5	100	BE8563	785.846	78.6	0.055
3	B-1	100	BA7777	227.981	22.8	0.29
3	B-2	100	BC6487	341.110	34.1	0.235
3	B-3	100	BC8486	498.659	49.9	0.09
3	B-4	100	BE8352	669.692	67.0	0.105
3	B-8	100	BE6516	92.631	9.3	1.220
4	B-1	100	BA7777	275.049	27.5	0.31
4	B-2	100	BC6487	388.115	38.8	0.255
4	B-3	100	BC8486	545.695	54.6	0.19
4	B-4	100	BE8352	716.744	71.7	0.17
4	B-8	100	BE6516	139.701	14.0	0.600
5	B-1	100	BA7777	327.265	32.7	0.225
5	B-2	100	BC6487	440.354	44.0	0.215
5	B-3	100	BC8486	597.933	59.8	0.165
5	B-4	100	BE8352	768.976	76.9	0.165
5	B-8	100	BE6516	191.888	19.2	0.455
6	B-1	100	BA7777	373.743	37.4	0.155
6	B-2	100	BC6487	486.784	48.7	0.18
6	B-3	100	BC8486	644.384	64.4	0.15
6	B-4	100	BE8352	815.441	81.5	0.145
6	B-8	100	BE6516	238.372	23.8	0.250

Event Report

Date/Time Long at 11:31:14 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BA7777 V 4.37-4.35 BlastMate III
 Battery Level 6.1 Volts
 Calibration May 14, 2003 by Instancel Inc.
 File Name I7779ZSQ.O20

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

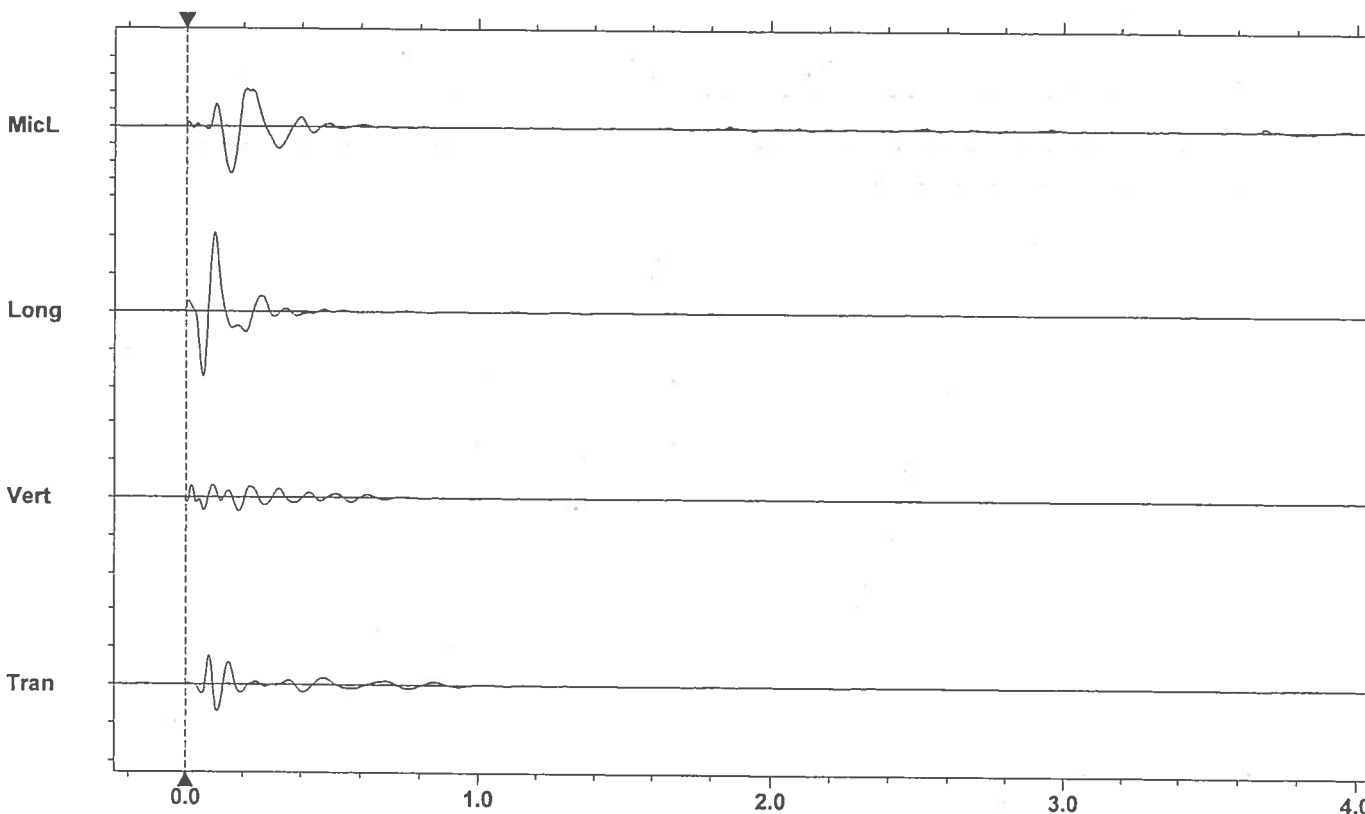
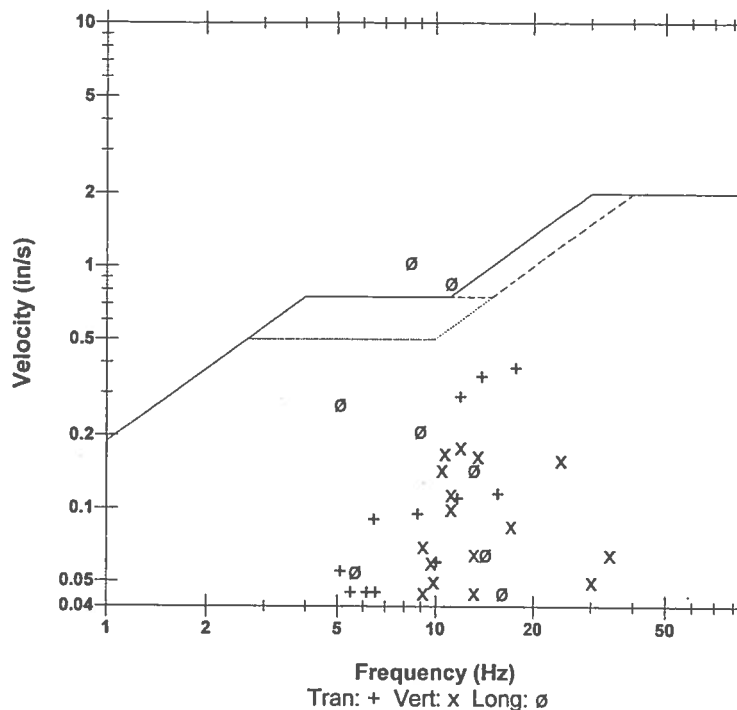
Blast 1 Location B-1

Microphone Linear Weighting
 PSPL 119.3 dB(L) at 0.155 sec
 ZC Freq 7.9 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 613 mv)

	Tran	Vert	Long	
PPV	0.380	0.180	1.04	in/s
ZC Freq	18	12	8.4	Hz
Time (Rel. to Trig)	0.081	0.185	0.100	sec
Peak Acceleration	0.119	0.0663	0.199	g
Peak Displacement	0.00425	0.00240	0.0167	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 1.08 in/s at 0.102 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.500 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 12:31:59 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BA7777 V 4.37-4.35 BlastMate III
 Battery Level 6.2 Volts
 Calibration May 14, 2003 by Instantel Inc.
 File Name I7779ZST.HB0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

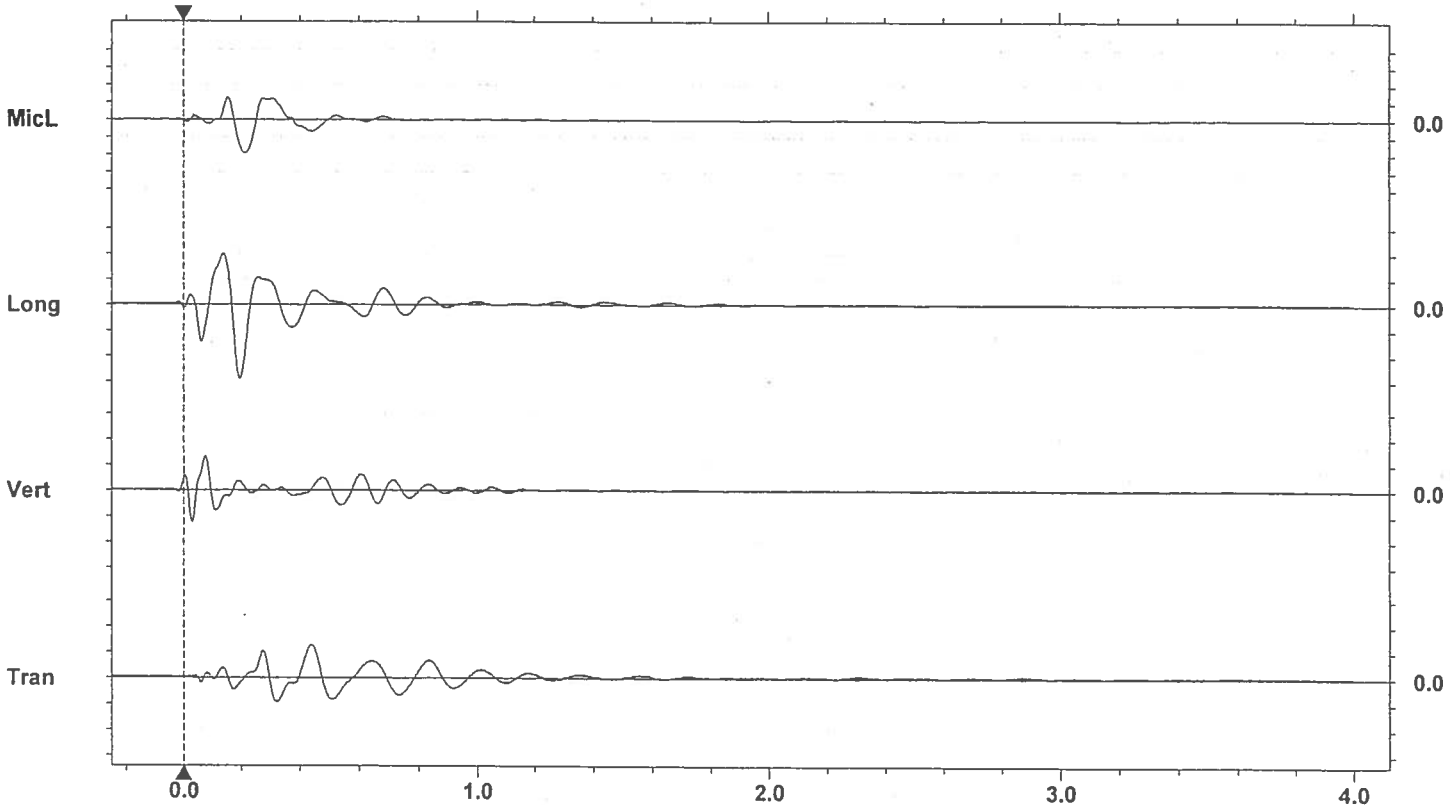
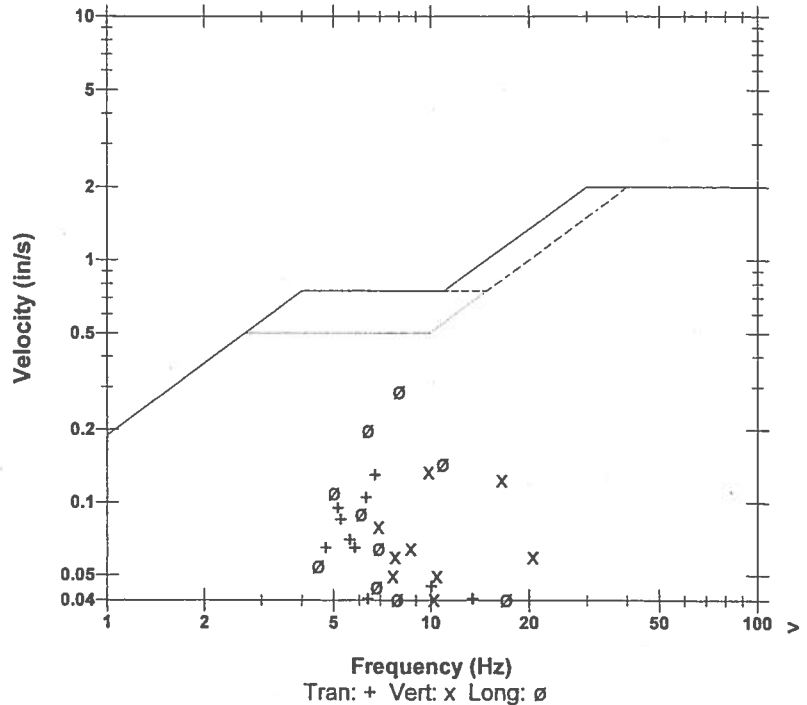
Blast 3 Location B-1

Microphone Linear Weighting
 PSPL 116.4 dB(L) at 0.212 sec
 ZC Freq 6.6 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 639 mv)

	Tran	Vert	Long	
PPV	0.130	0.135	0.290	in/s
ZC Freq	6.7	9.8	8.0	Hz
Time (Rel. to Trig)	0.437	0.078	0.194	sec
Peak Acceleration	0.0265	0.0398	0.0530	g
Peak Displacement	0.00299	0.00196	0.00555	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.293 in/s at 0.194 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 12:35:42 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BA7777 V 4.37-4.35 BlastMate III
 Battery Level 6.2 Volts
 Calibration May 14, 2003 by Instantel Inc.
 File Name I7779ZST.NIO

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

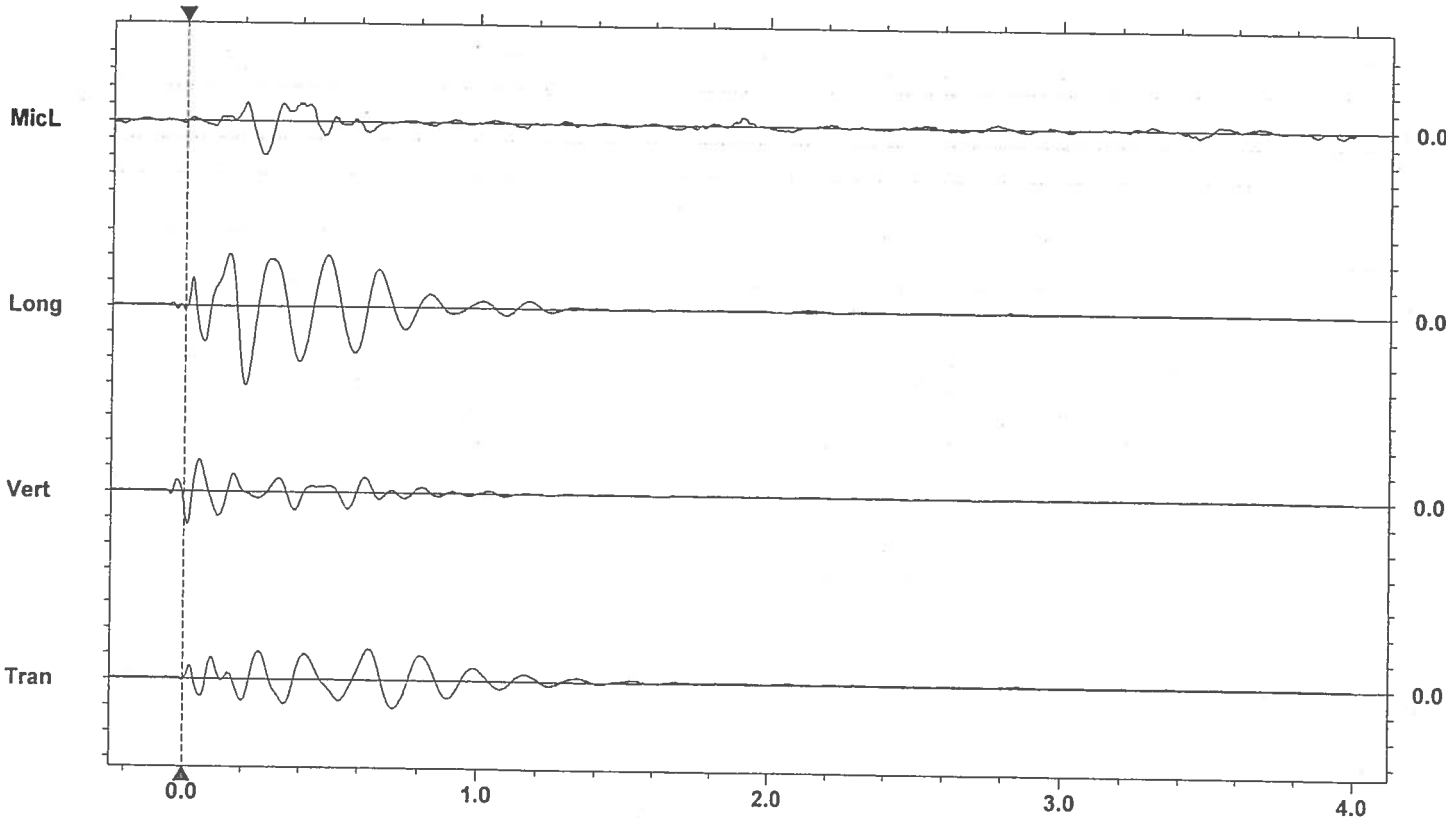
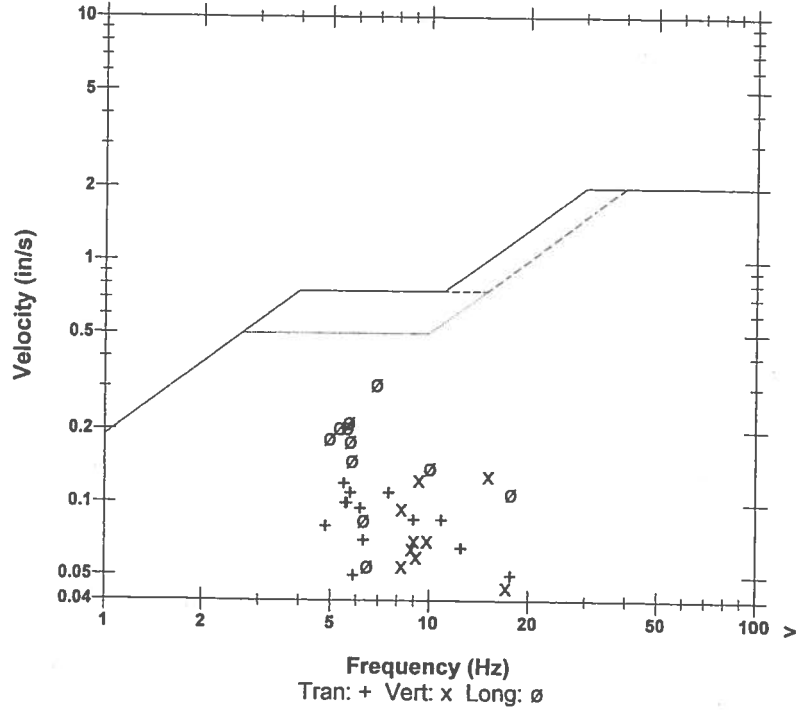
Post Event Notes
 Blast 4 Location B-1

Microphone Linear Weighting
 PSPL 116.4 dB(L) at 0.268 sec
 ZC Freq 6.2 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 639 mv)

	Tran	Vert	Long	
PPV	0.120	0.130	0.310	in/s
ZC Freq	5.5	15	6.9	Hz
Time (Rel. to Trig)	0.631	0.013	0.207	sec
Peak Acceleration	0.0265	0.0398	0.0530	g
Peak Displacement	0.00341	0.00206	0.00680	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.319 in/s at 0.207 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 12:45:15 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BA7777 V 4.37-4.35 BlastMate III
 Battery Level 6.2 Volts
 Calibration May 14, 2003 by InstanTel Inc.
 File Name I7779ZSU.3F0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

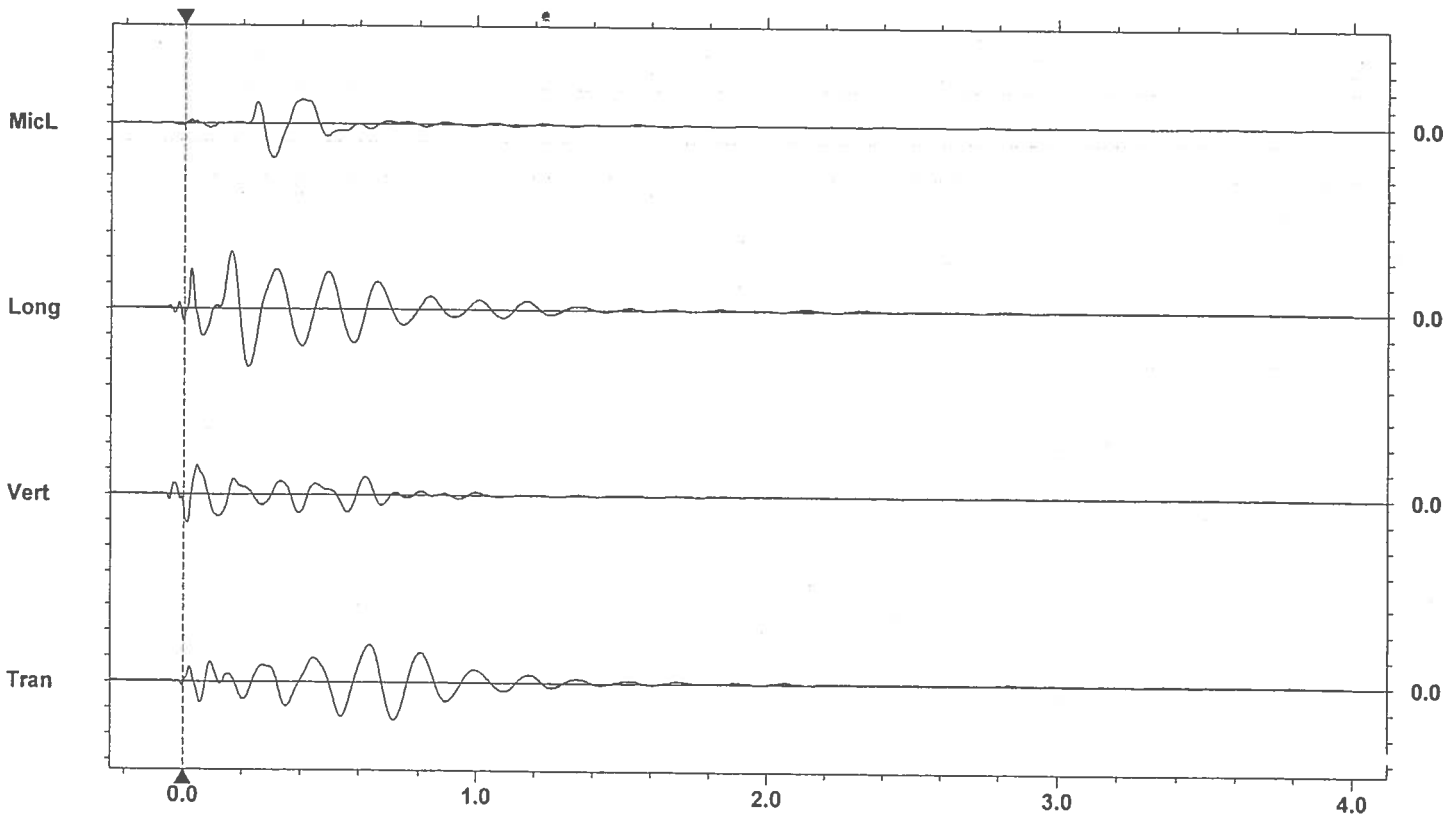
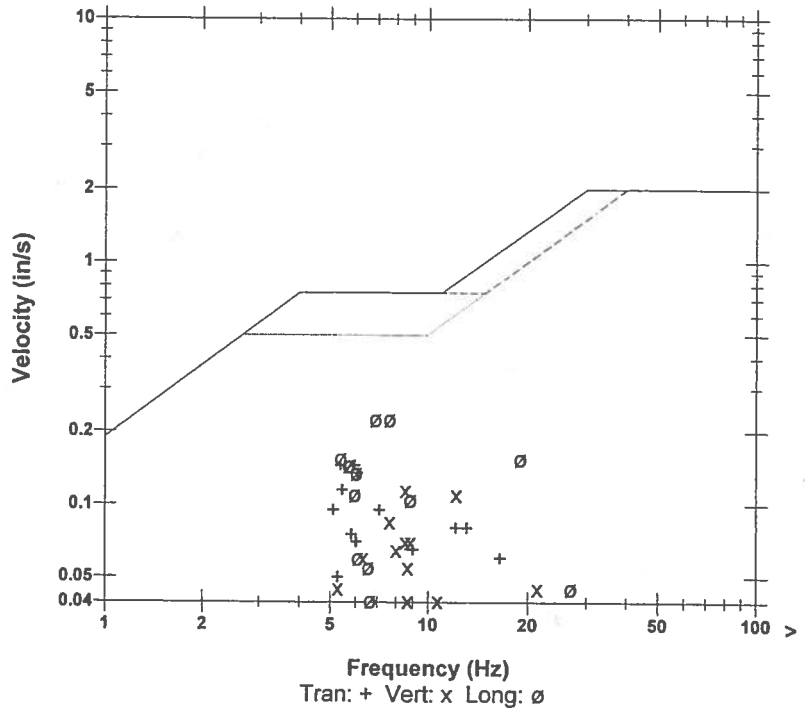
Post Event Notes
 Blast 5 Location B-1

Microphone Linear Weighting
 PSPL 116.7 dB(L) at 0.304 sec
 ZC Freq 6.2 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 639 mv)

	Tran	Vert	Long	
PPV	0.145	0.115	0.225	in/s
ZC Freq	5.4	8.5	7.6	Hz
Time (Rel. to Trig)	0.632	0.046	0.161	sec
Peak Acceleration	0.0265	0.0398	0.0530	g
Peak Displacement	0.00434	0.00201	0.00518	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.233 in/s at 0.217 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 13:08:48 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo :10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BA7777 V 4.37-4.35 BlastMate III
 Battery Level 6.2 Volts
 Calibration May 14, 2003 by InstanTel Inc.
 File Name I7779ZSV.600

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

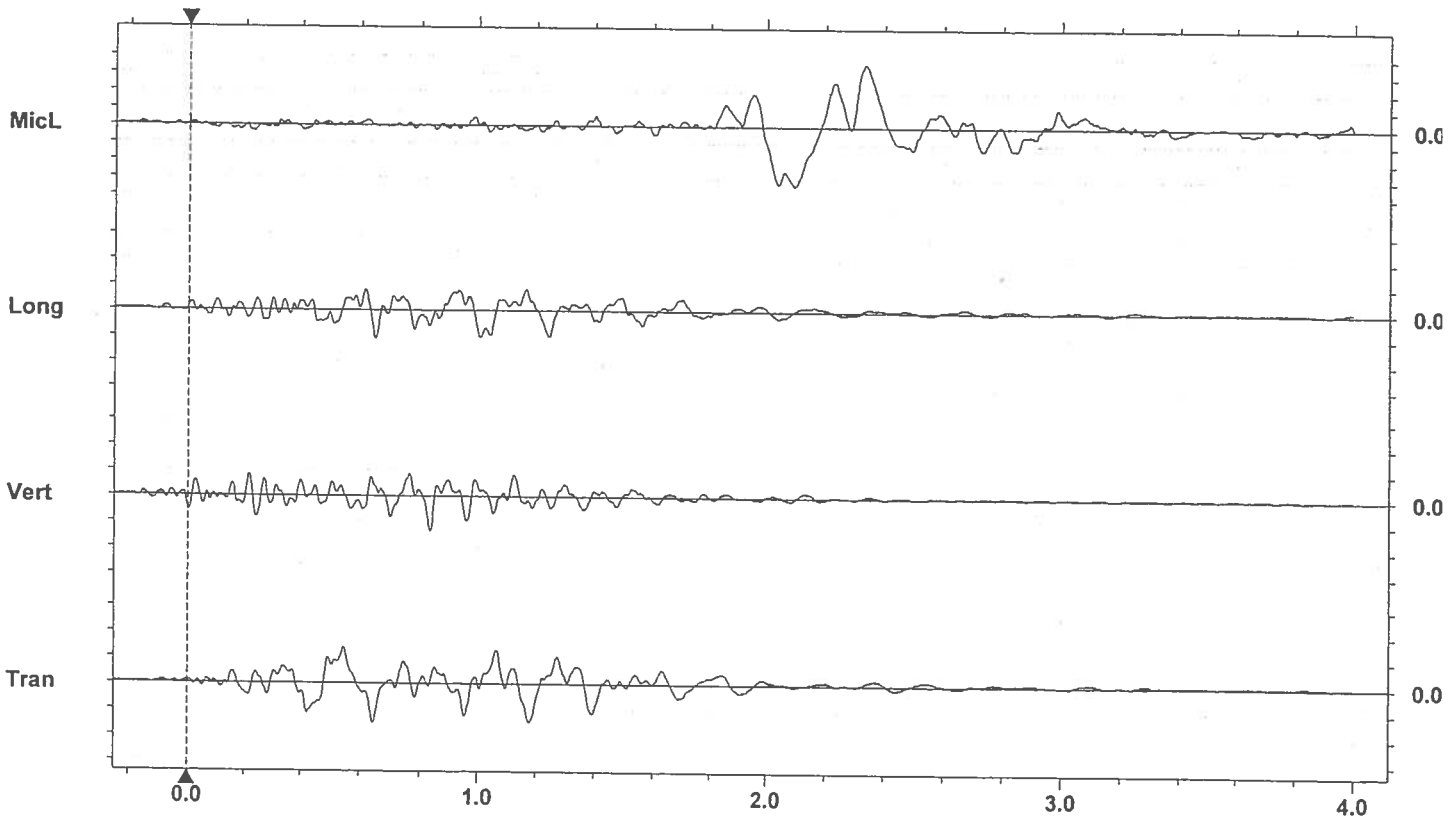
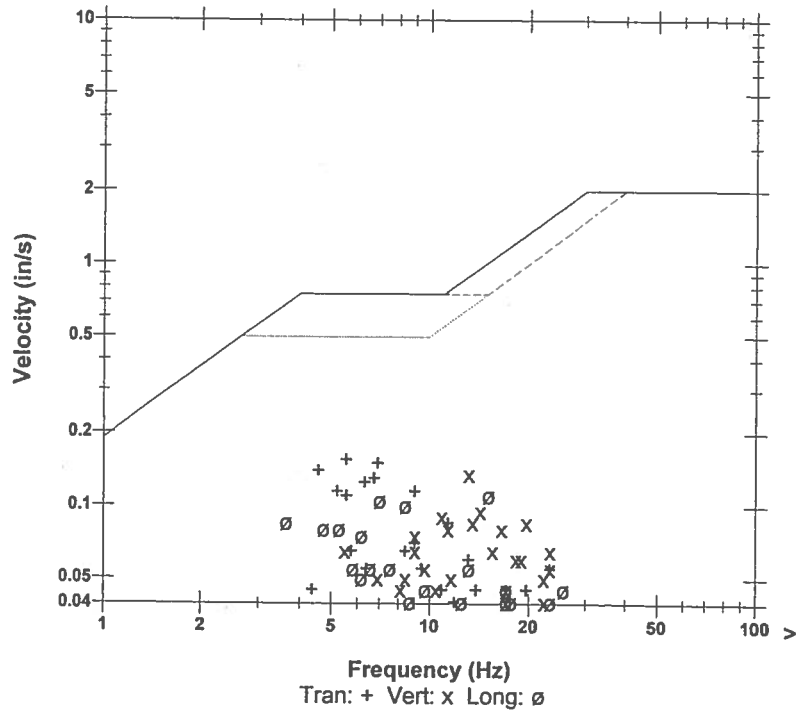
Blast 6 Location B-1

Microphone Linear Weighting
 PSPL 122.0 dB(L) at 2.333 sec
 ZC Freq 4.2 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 639 mv)

	Tran	Vert	Long	
PPV	0.155	0.135	0.110	in/s
ZC Freq	5.6	13	15	Hz
Time (Rel. to Trig)	0.646	0.834	0.647	sec
Peak Acceleration	0.0398	0.0530	0.0265	g
Peak Displacement	0.00427	0.00144	0.00257	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.193 in/s at 0.646 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 11:31:17 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo :10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6487 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name H4879ZSQ.050

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

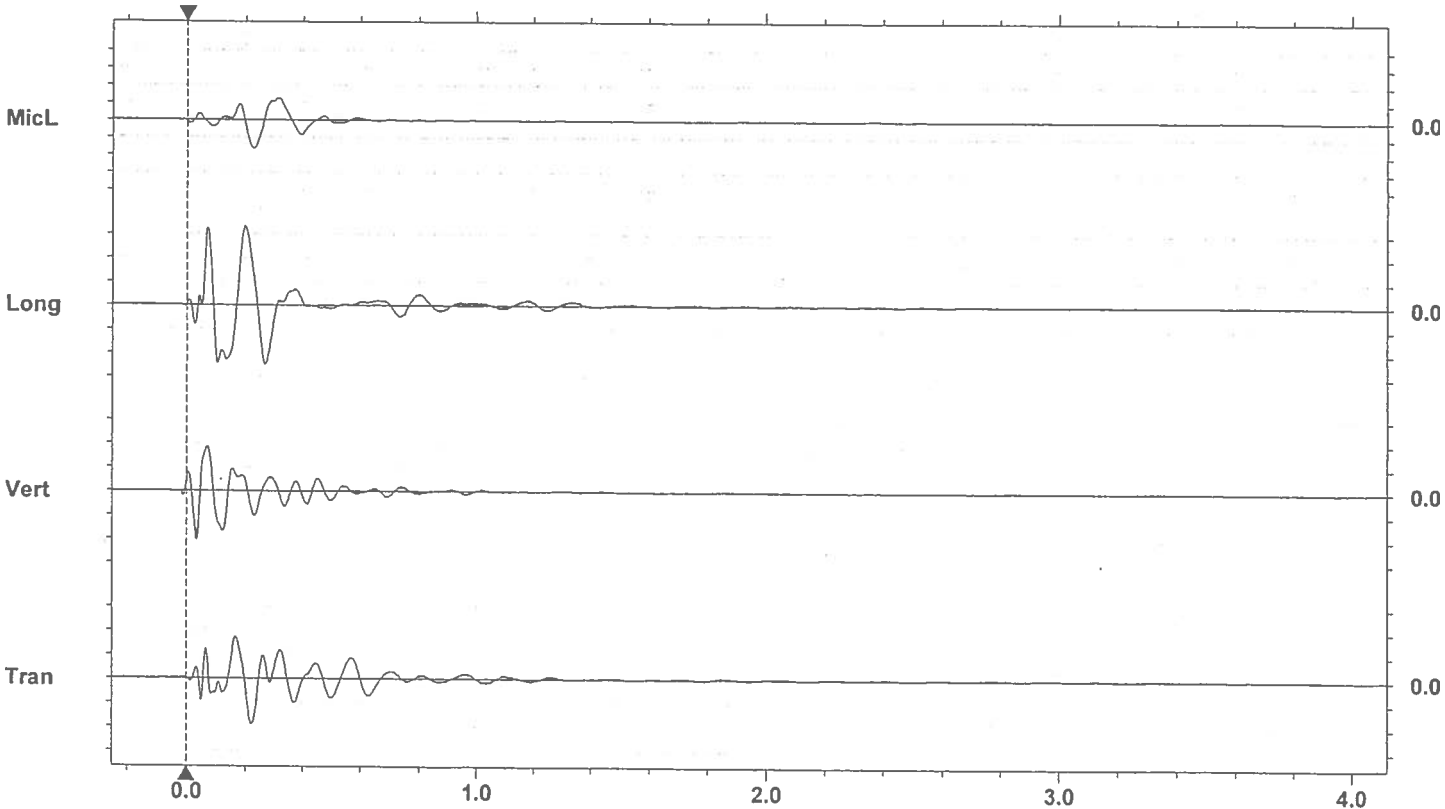
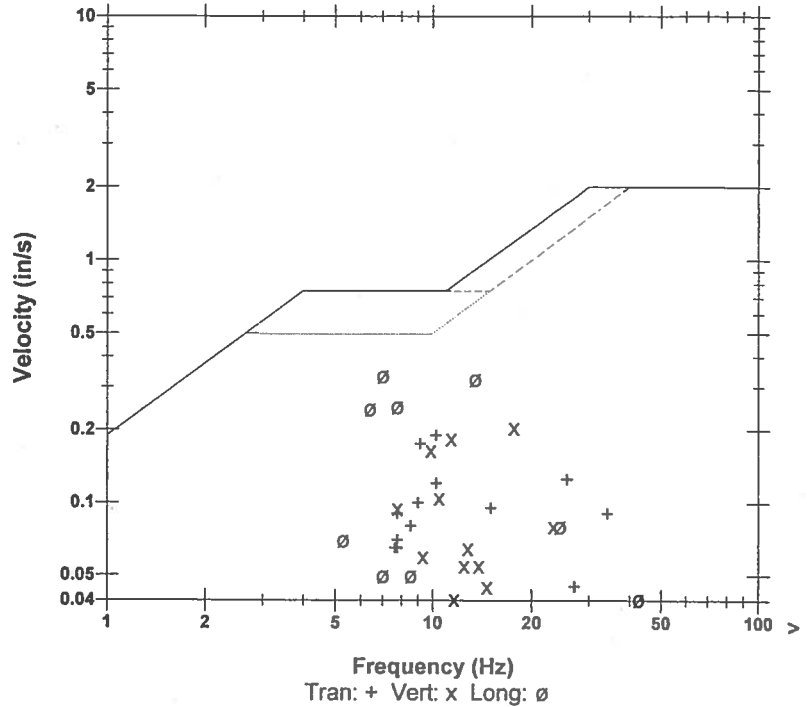
Blast 1 Location B-2

Microphone Linear Weighting
 PSPL 115.0 dB(L) at 0.224 sec
 ZC Freq 7.4 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 676 mv)

	Tran	Vert	Long	
PPV	0.190	0.205	0.335	in/s
ZC Freq	10	18	7.0	Hz
Time (Rel. to Trig)	0.219	0.033	0.197	sec
Peak Acceleration	0.0530	0.0663	0.0795	g
Peak Displacement	0.00297	0.00295	0.00714	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.388 in/s at 0.069 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger = >----->

Event Report

Date/Time Vert at 11:37:22 February 25, 2004
Trigger Source Geo: 0.0500 in/s
Range Geo: 10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BC6487 V 4.37-4.35 MiniMate Plus
Battery Level 6.3 Volts
Calibration April 30, 2003 by InstanTel Inc.
File Name H4879ZSQ.YA0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

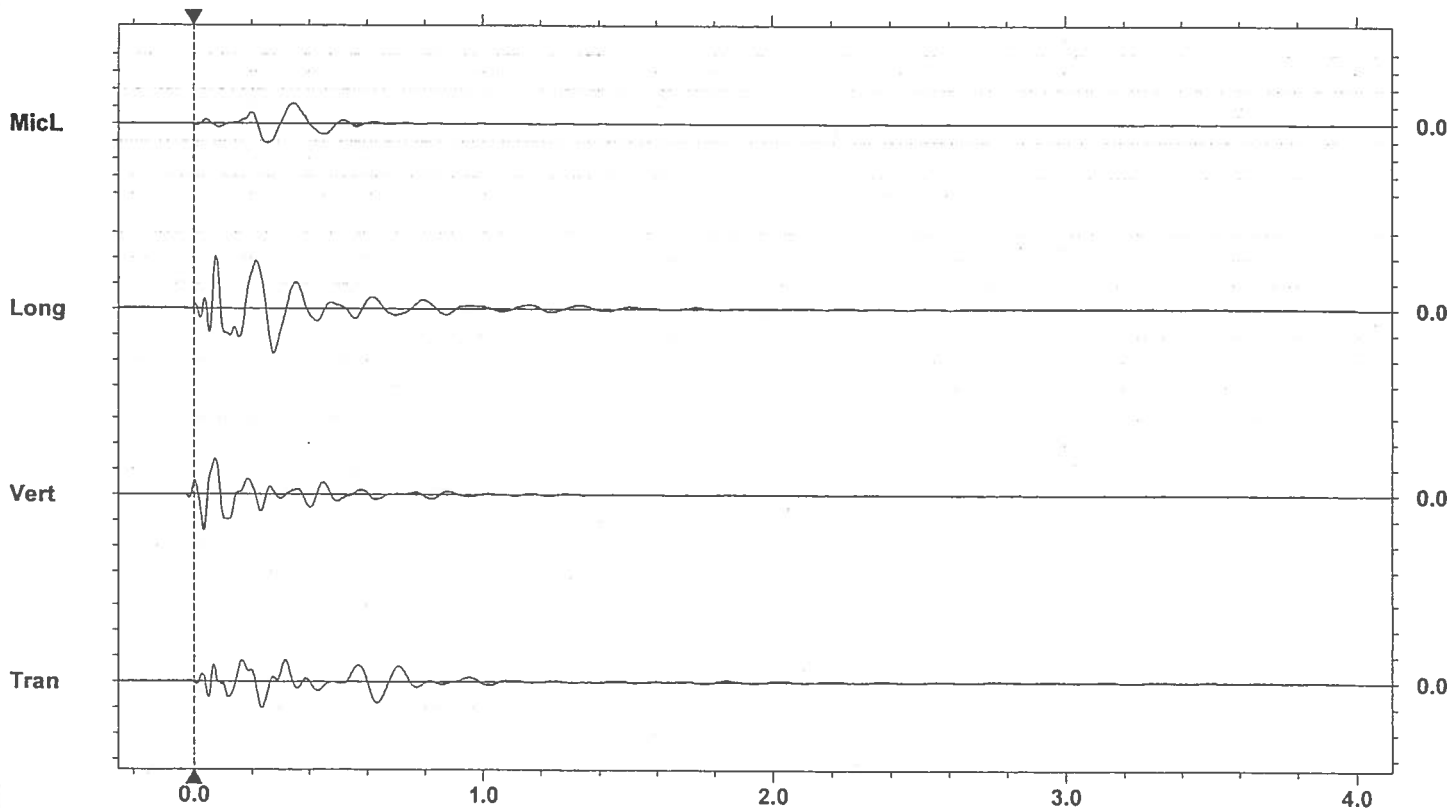
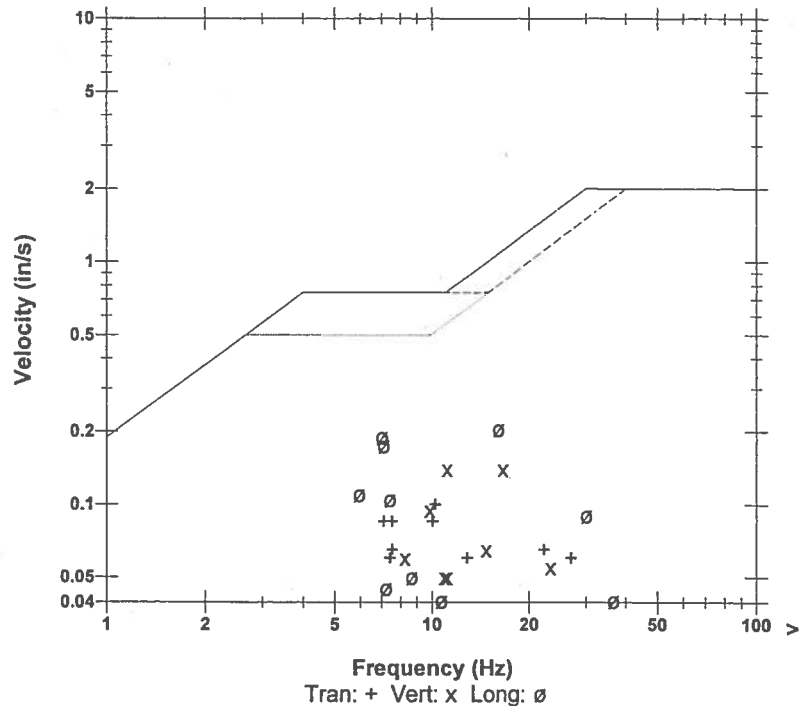
Blast 2 Location B-2

Microphone Linear Weighting
PSPL 112.0 dB(L) at 0.343 sec
ZC Freq 5.1 Hz
Channel Test Passed (Freq = 19.7 Hz Amp = 676 mv)

	Tran	Vert	Long	
PPV	0.1000	0.140	0.205	in/s
ZC Freq	10	17	16	Hz
Time (Rel. to Trig)	0.229	0.032	0.075	sec
Peak Acceleration	0.0398	0.0530	0.0663	g
Peak Displacement	0.00187	0.00211	0.00423	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.247 in/s at 0.075 sec

USBM R18507 And OSMRE



Event Report

Date/Time Vert at 12:32:02 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo :10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6487 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name H4879ZST.HE0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

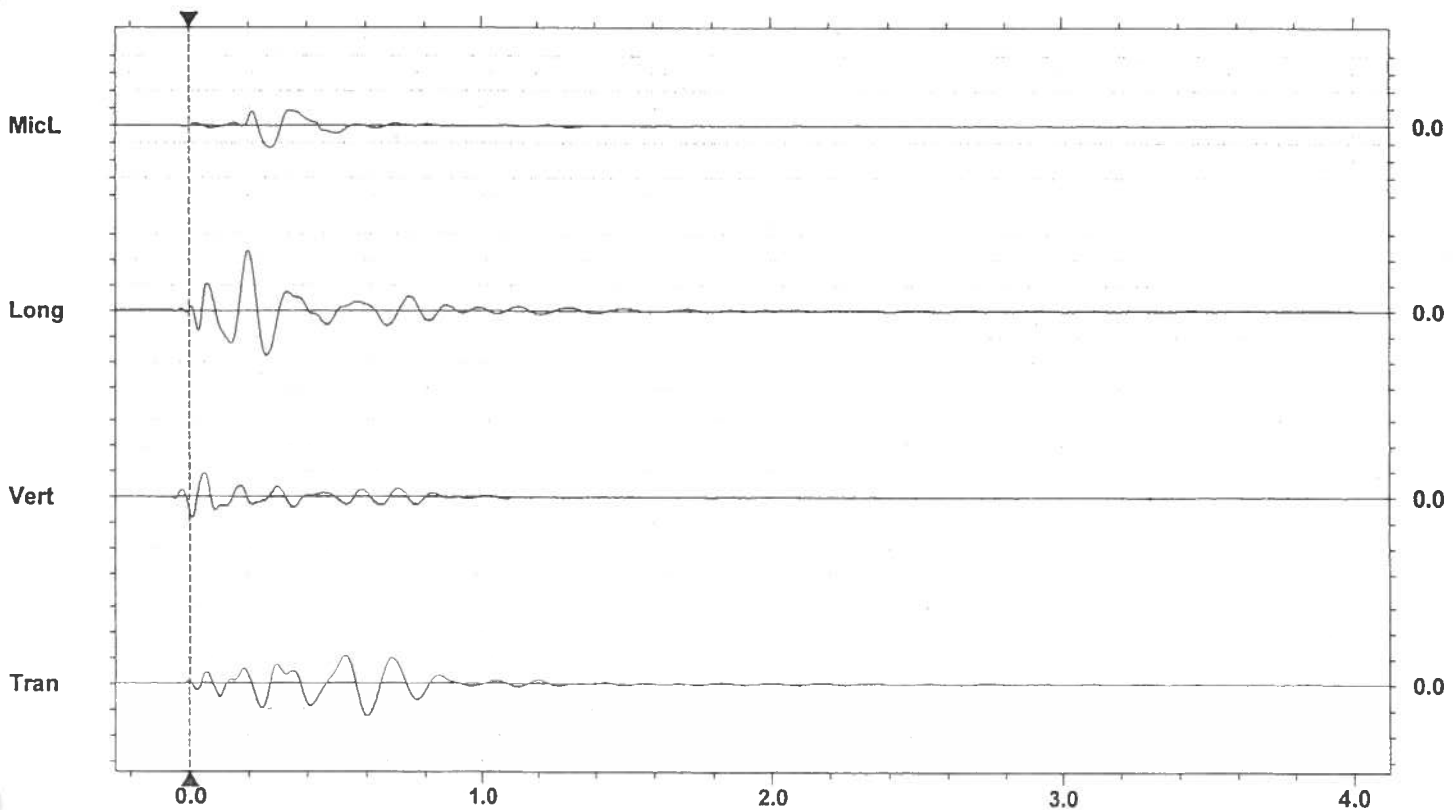
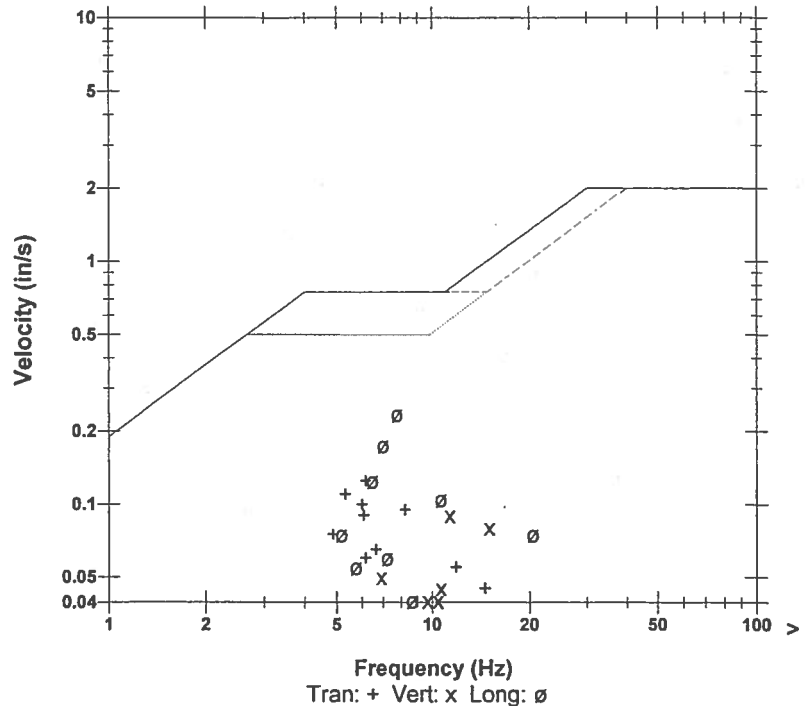
Blast 3 Location B-2

Microphone Linear Weighting
 PSPL 112.8 dB(L) at 0.271 sec
 ZC Freq 6.4 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 656 mv)

	Tran	Vert	Long	
PPV	0.125	0.0900	0.235	in/s
ZC Freq	6.2	11	7.8	Hz
Time (Rel. to Trig)	0.598	0.045	0.197	sec
Peak Acceleration	0.0265	0.0265	0.0398	g
Peak Displacement	0.00331	0.00131	0.00474	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.239 in/s at 0.197 sec

USBM RI8507 And OSMRE



Event Report

Date/Time Long at 12:35:46 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6487 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name H4879ZST.NMO

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

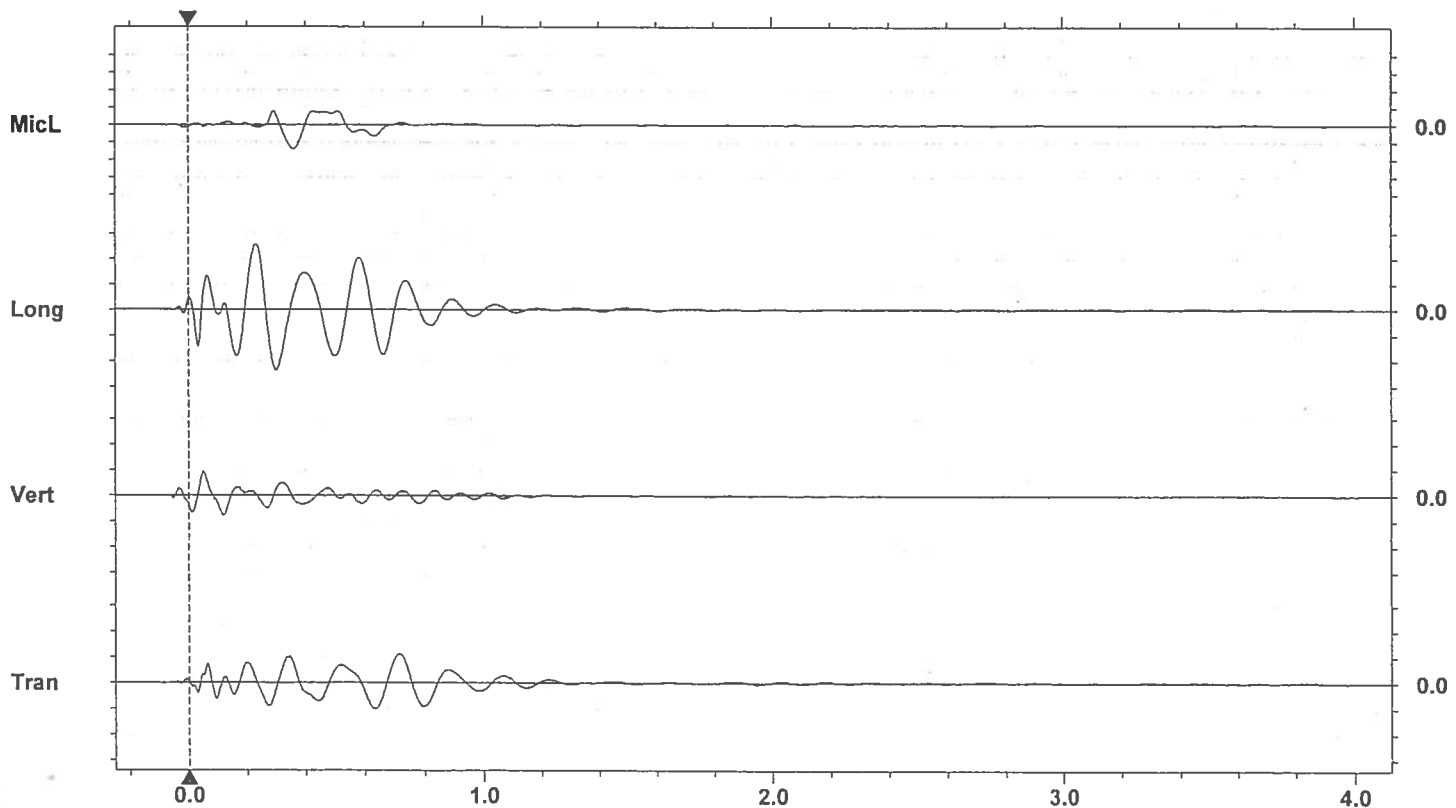
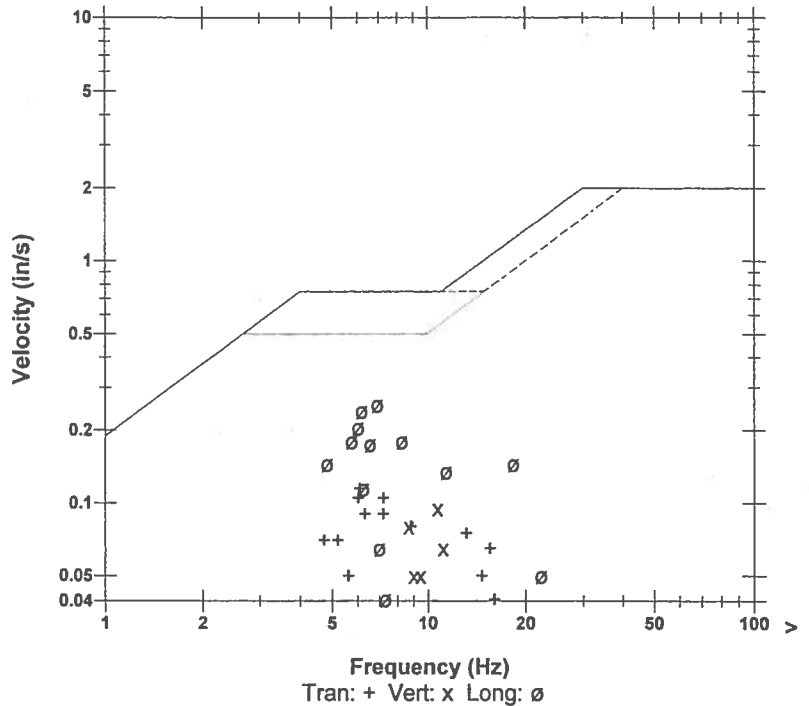
Post Event Notes
 Blast 4 Location B-2

Microphone Linear Weighting
 PSPL 113.8 dB(L) at 0.358 sec
 ZC Freq 6.0 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 656 mv)

	Tran	Vert	Long	
PPV	0.115	0.0950	0.255	in/s
ZC Freq	6.1	11	6.9	Hz
Time (Rel. to Trig)	0.717	0.049	0.226	sec
Peak Acceleration	0.0265	0.0265	0.0530	g
Peak Displacement	0.00298	0.00127	0.00596	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.256 in/s at 0.226 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:45:19 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6487 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name H4879ZSU.3JO

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

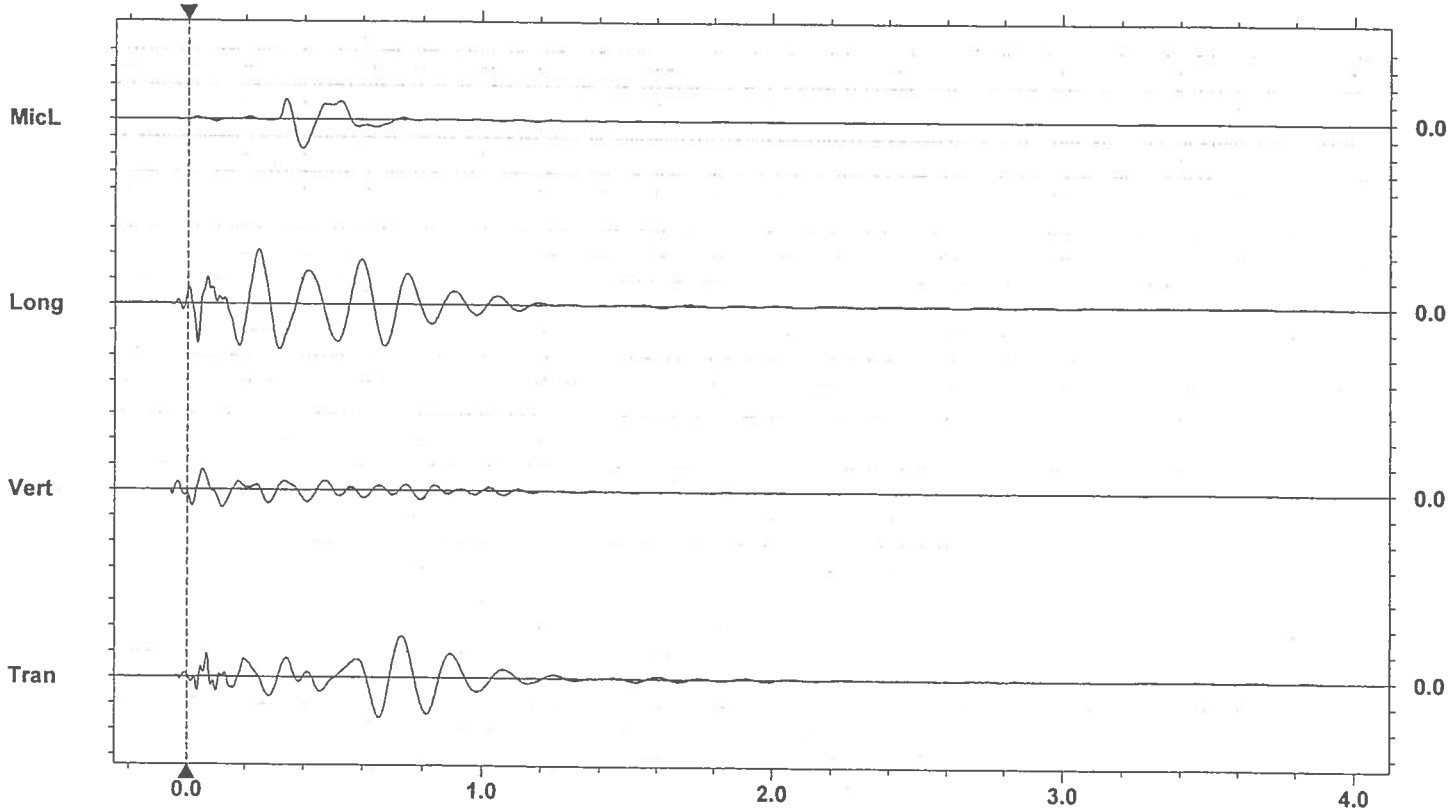
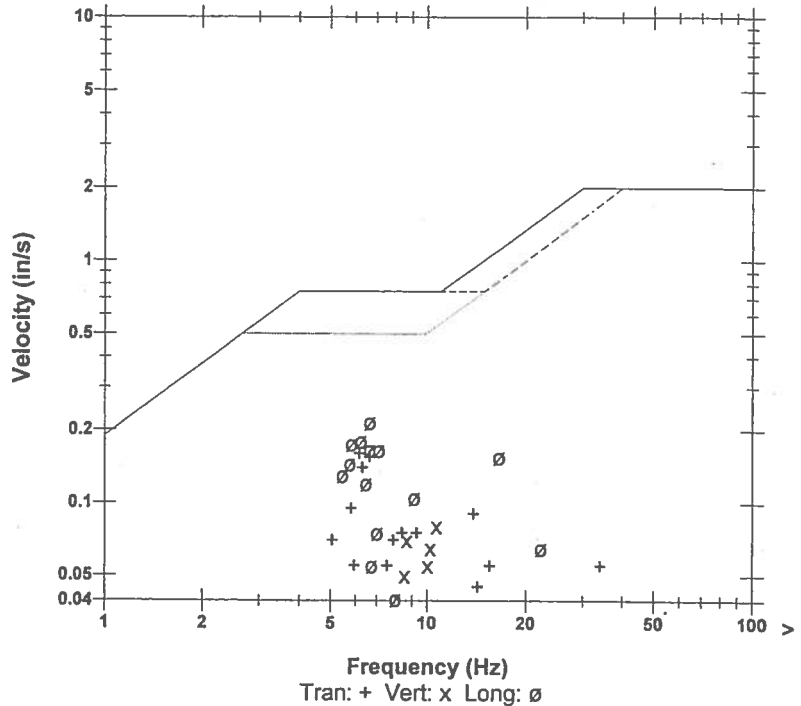
Blast 5 Location B-2

Microphone Linear Weighting
 PSPL 115.2 dB(L) at 0.390 sec
 ZC Freq 6.3 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 656 mv)

	Tran	Vert	Long	
PPV	0.160	0.0800	0.215	in/s
ZC Freq	6.2	11	6.6	Hz
Time (Rel. to Trig)	0.726	0.053	0.245	sec
Peak Acceleration	0.0398	0.0265	0.0530	g
Peak Displacement	0.00422	0.00117	0.00487	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.216 in/s at 0.245 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 13:08:52 February 25, 2004
Trigger Source Geo: 0.0500 in/s
Range Geo :10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BC6487 V 4.37-4.35 MiniMate Plus
Battery Level 6.4 Volts
Calibration April 30, 2003 by Instantel Inc.
File Name H4879ZSV.6S0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

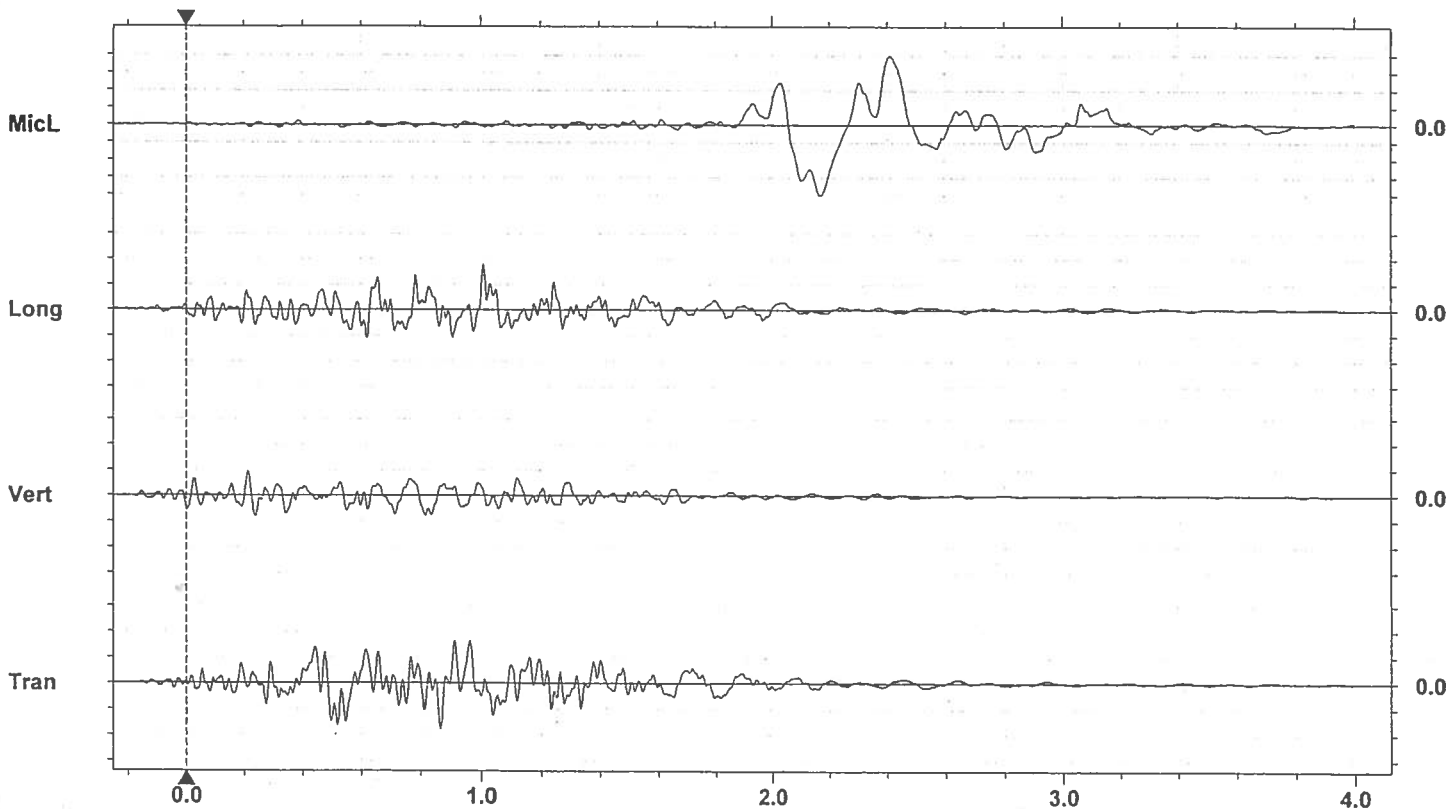
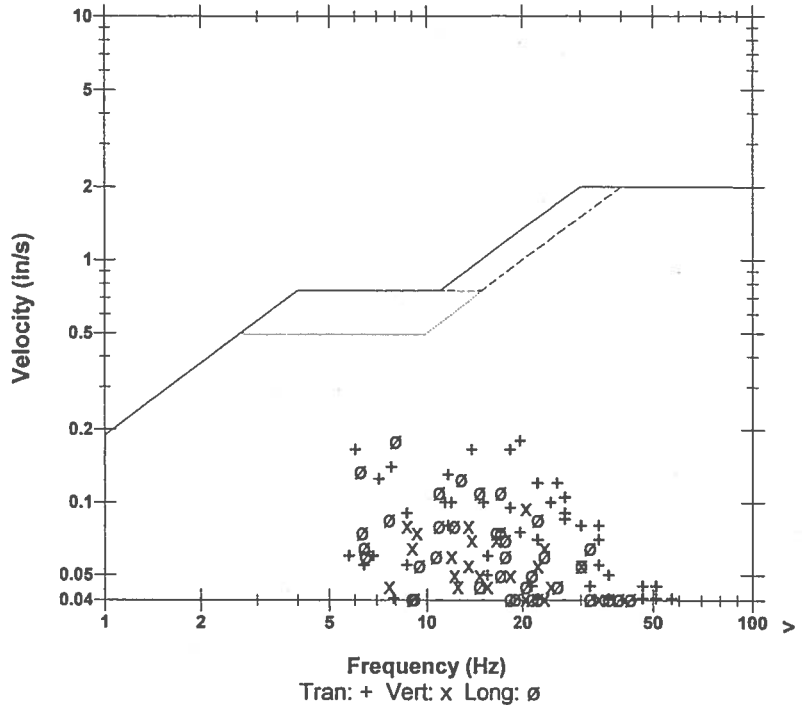
Post Event Notes
 Blast 6 Location B-2

Microphone Linear Weighting
PSPL 122.9 dB(L) at 2.167 sec
ZC Freq 2.4 Hz
Channel Test Passed (Freq = 19.7 Hz Amp = 656 mv)

	Tran	Vert	Long	
PPV	0.180	0.0950	0.180	in/s
ZC Freq	20	20	8.0	Hz
Time (Rel. to Trig)	0.864	0.215	1.009	sec
Peak Acceleration	0.0530	0.0398	0.0530	g
Peak Displacement	0.00391	0.00149	0.00255	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.193 in/s at 0.864 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
Trigger = ————▶

Event Report

Date/Time Vert at 11:31:18 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6486 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration April 30, 2003 by Instantel Inc.
 File Name H4869ZSQ.060

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

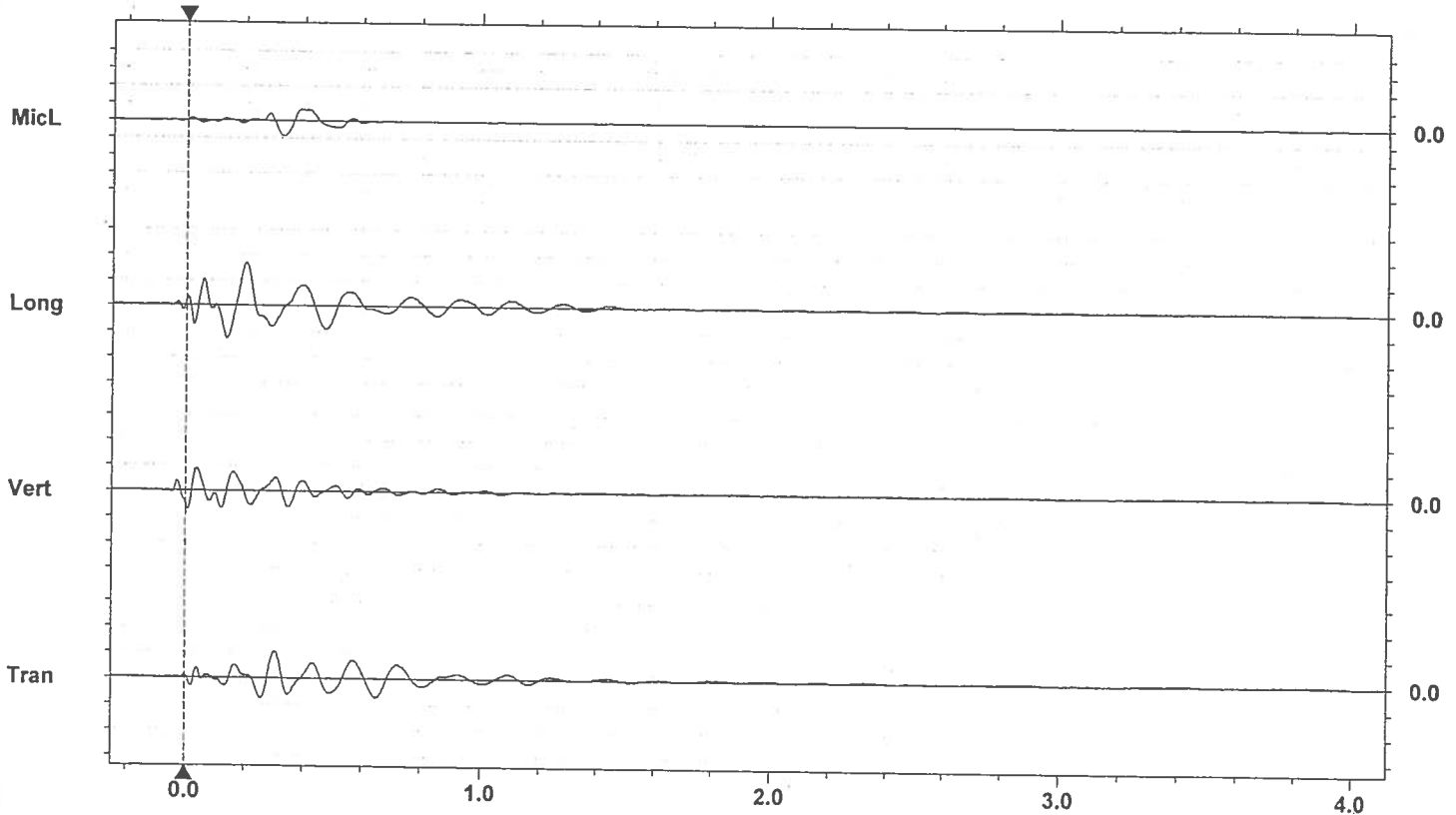
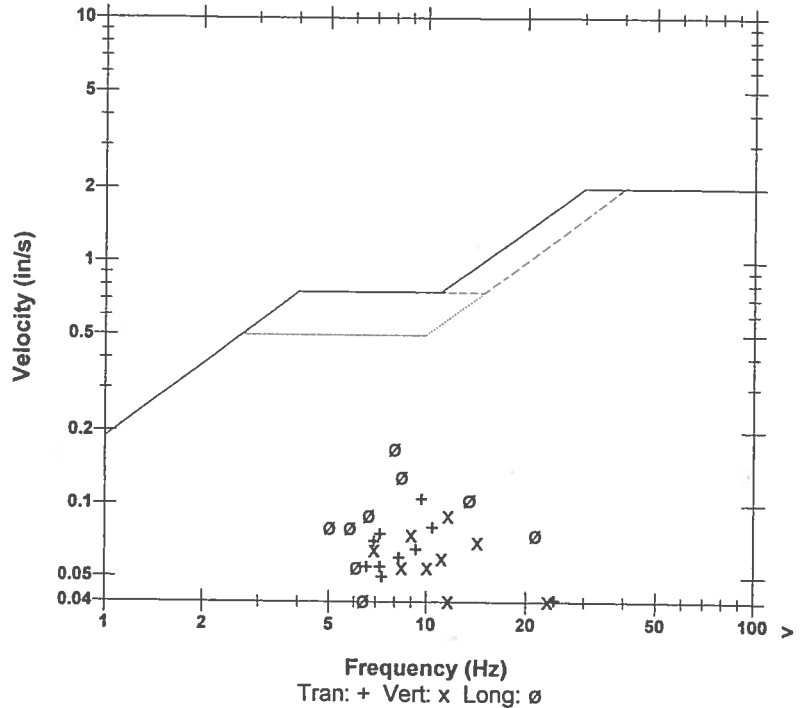
Blast 1 Location B-3

Microphone Linear Weighting
 PSPL 109.5 dB(L) at 0.322 sec
 ZC Freq 7.5 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 648 mv)

	Tran	Vert	Long	
PPV	0.105	0.0900	0.170	in/s
ZC Freq	9.7	12	8.0	Hz
Time (Rel. to Trig)	0.303	0.038	0.201	sec
Peak Acceleration	0.0265	0.0398	0.0265	g
Peak Displacement	0.00173	0.00131	0.00316	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.171 in/s at 0.202 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 11:37:23 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6486 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name H4869ZSQ.YB0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

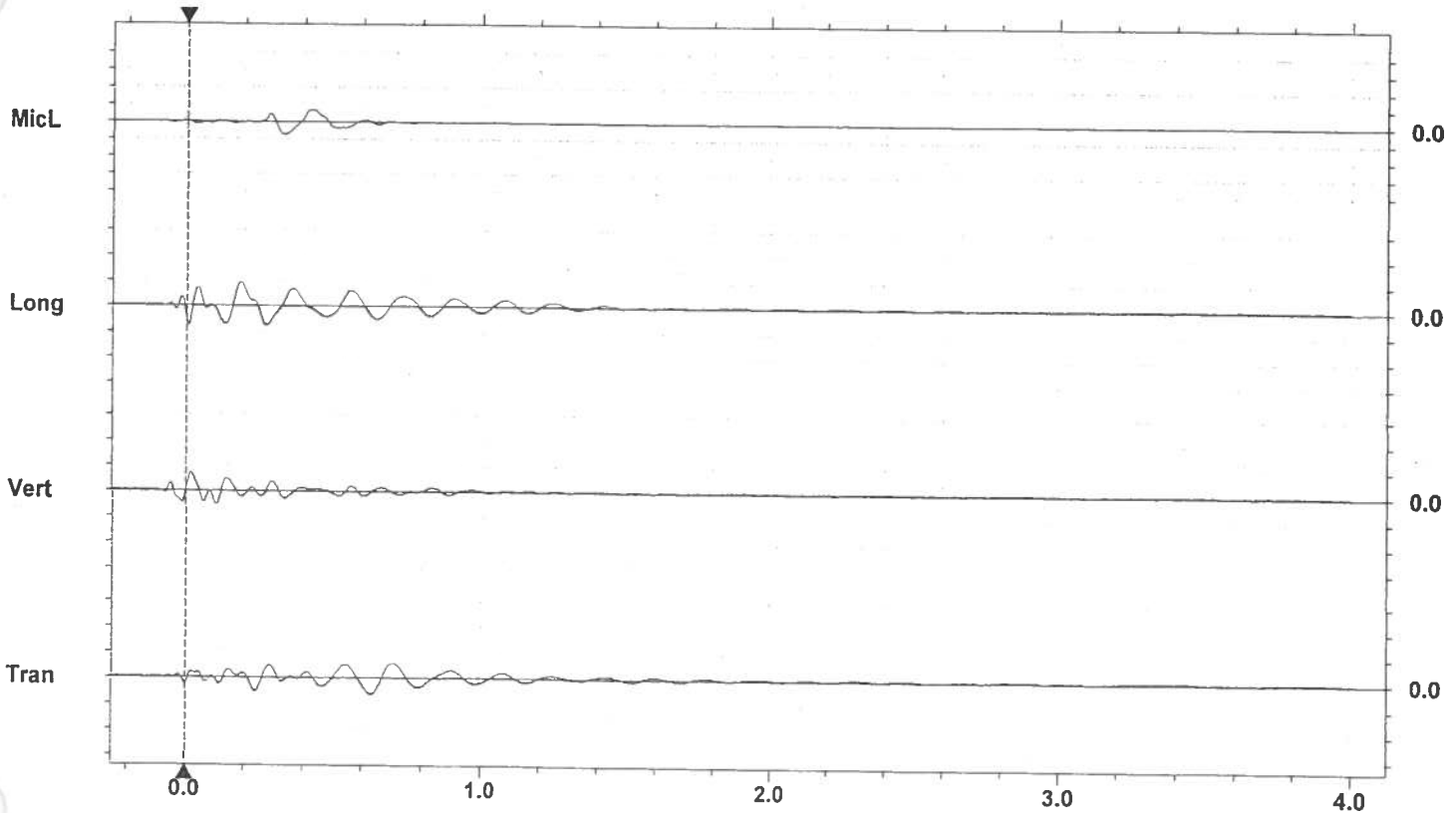
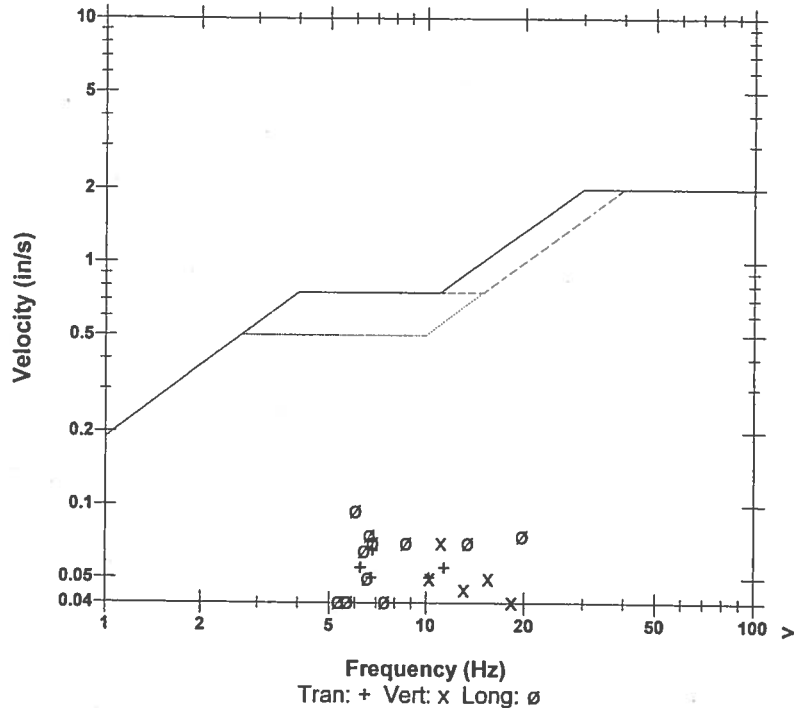
Blast 2 Location B-3

Microphone Linear Weighting
 PSPL 108.4 dB(L) at 0.335 sec
 ZC Freq 6.2 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 648 mv)

	Tran	Vert	Long	
PPV	0.0650	0.0700	0.0950	in/s
ZC Freq	6.8	11	6.0	Hz
Time (Rel. to Trig)	0.630	0.016	0.184	sec
Peak Acceleration	0.0265	0.0265	0.0398	g
Peak Displacement	0.00154	0.00093	0.00202	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.0967 in/s at 0.184 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:32:03 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6486 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name H4869ZST.HF0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

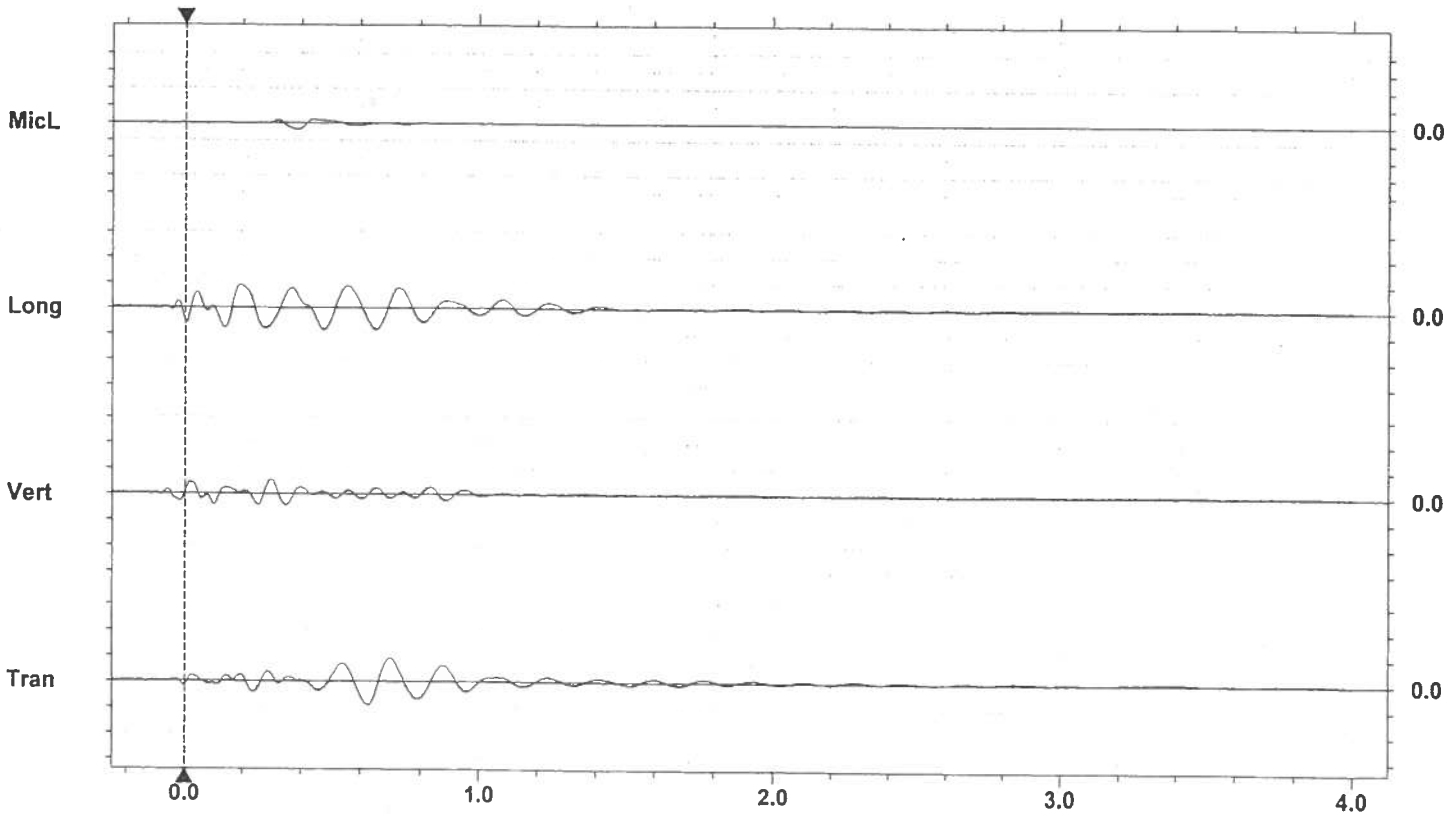
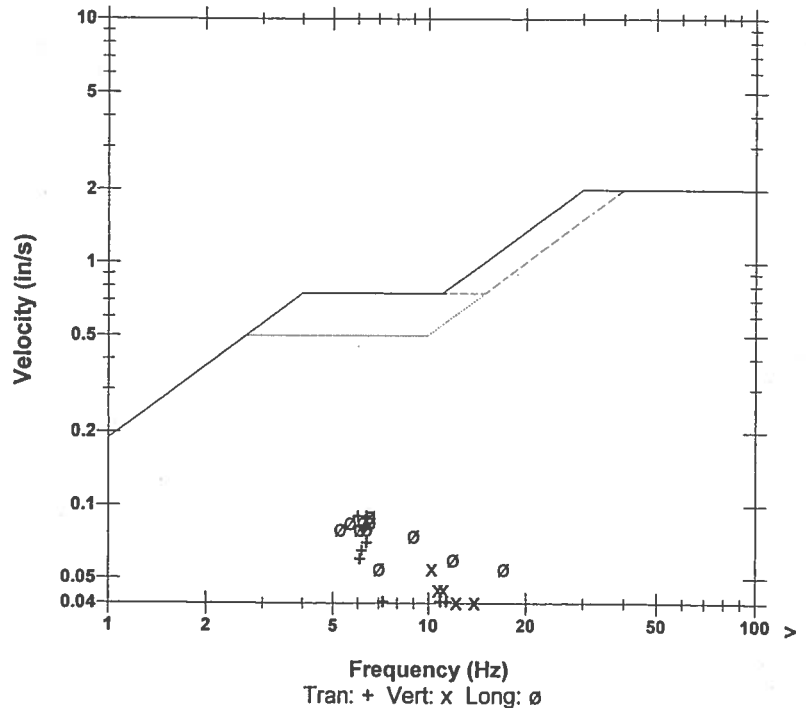
Post Event Notes
 Blast 3 Location B-3

Microphone Linear Weighting
 PSPL 102.8 dB(L) at 0.384 sec
 ZC Freq 6.6 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 663 mv)

	Tran	Vert	Long	
PPV	0.0900	0.0550	0.0900	in/s
ZC Freq	6.4	10	6.6	Hz
Time (Rel. to Trig)	0.624	0.293	0.189	sec
Peak Acceleration	0.0265	0.0265	0.0265	g
Peak Displacement	0.00238	0.00087	0.00247	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.108 in/s at 0.632 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:35:46 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6486 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name H4869ZST.NM0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

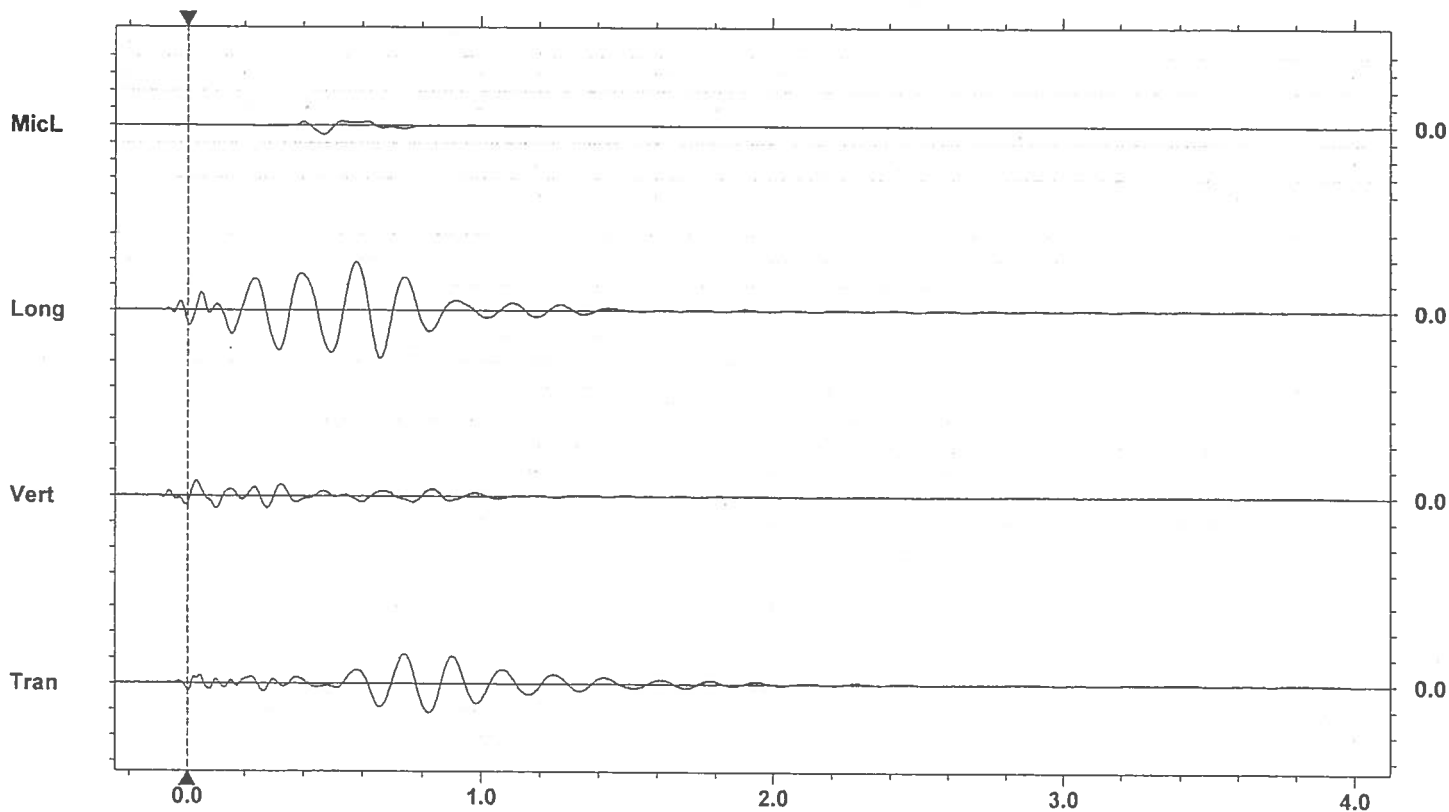
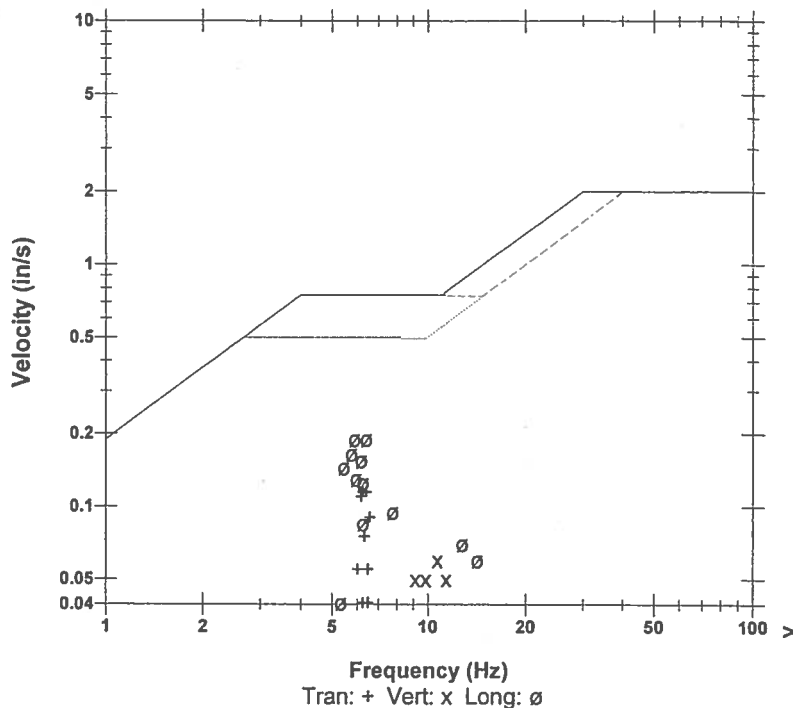
Blast 4 Location B-3

Microphone Linear Weighting
 PSPL 105.5 dB(L) at 0.467 sec
 ZC Freq 6.4 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 663 mv)

	Tran	Vert	Long	
PPV	0.115	0.0600	0.190	in/s
ZC Freq	6.2	11	5.9	Hz
Time (Rel. to Trig)	0.734	0.028	0.576	sec
Peak Acceleration	0.0265	0.0265	0.0398	g
Peak Displacement	0.00298	0.00088	0.00518	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.211 in/s at 0.658 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:45:19 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6486 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name H4869ZSU.3J0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

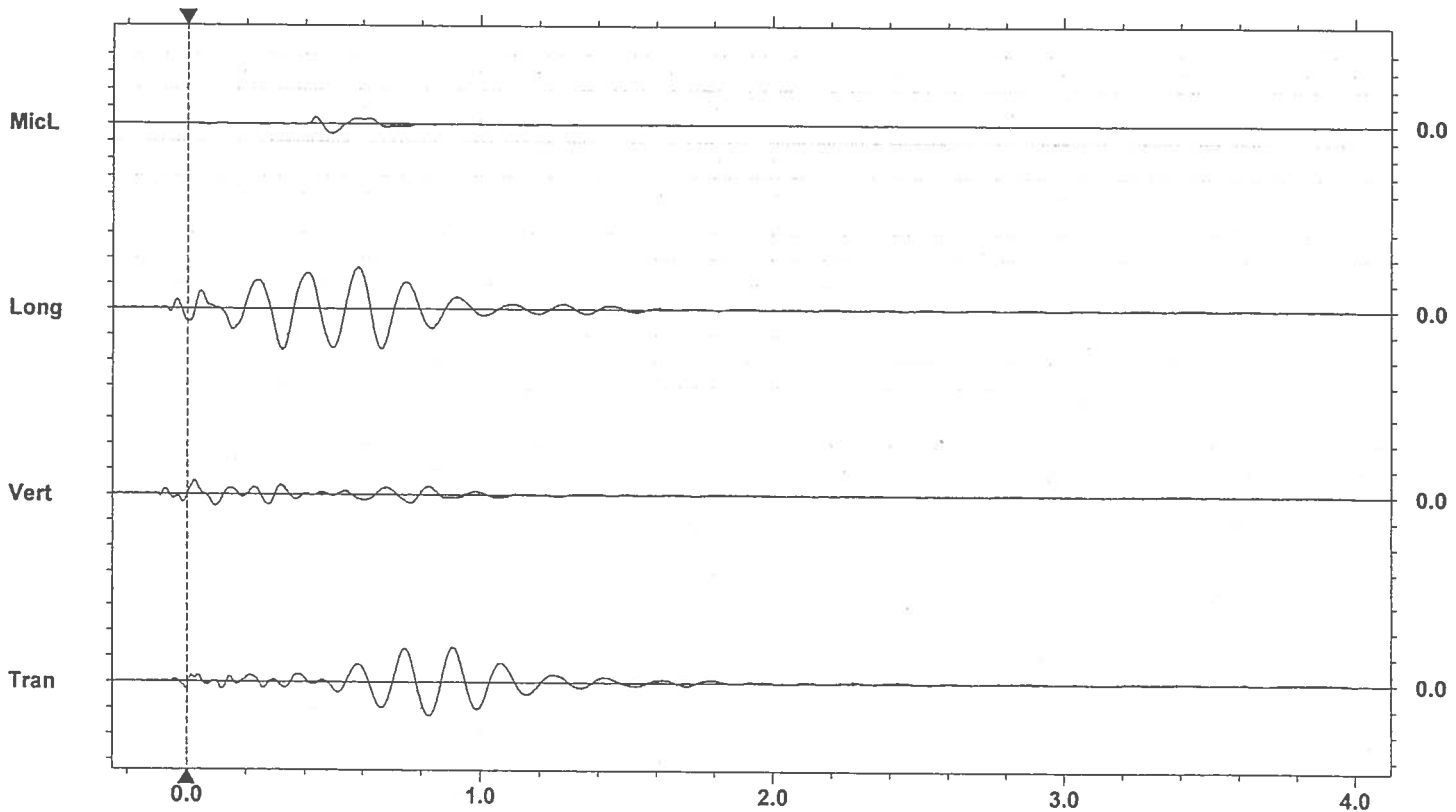
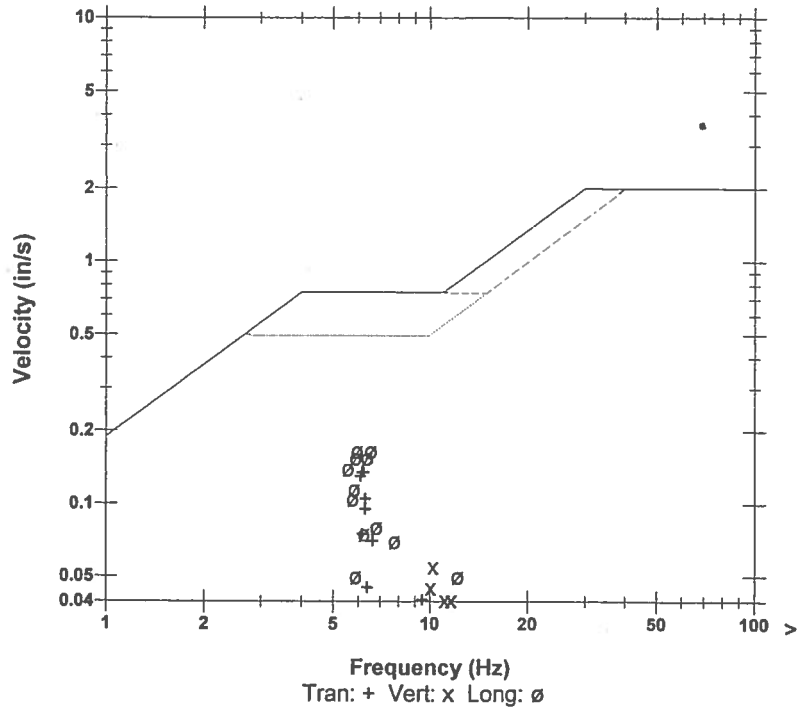
Blast 5 Location B-3

Microphone Linear Weighting
 PSPL 106.0 dB(L) at 0.491 sec
 ZC Freq 6.5 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 663 mv)

	Tran	Vert	Long	
PPV	0.135	0.0550	0.165	in/s
ZC Freq	6.2	10	6.6	Hz
Time (Rel. to Trig)	0.745	0.022	0.324	sec
Peak Acceleration	0.0265	0.0265	0.0265	g
Peak Displacement	0.00352	0.00078	0.00447	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.184 in/s at 0.664 sec

USBM RI8507 And OSMRE



Event Report

Date/Time Vert at 13:08:52 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6486 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration April 30, 2003 by Instancel Inc.
 File Name H4869ZSV.6S0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

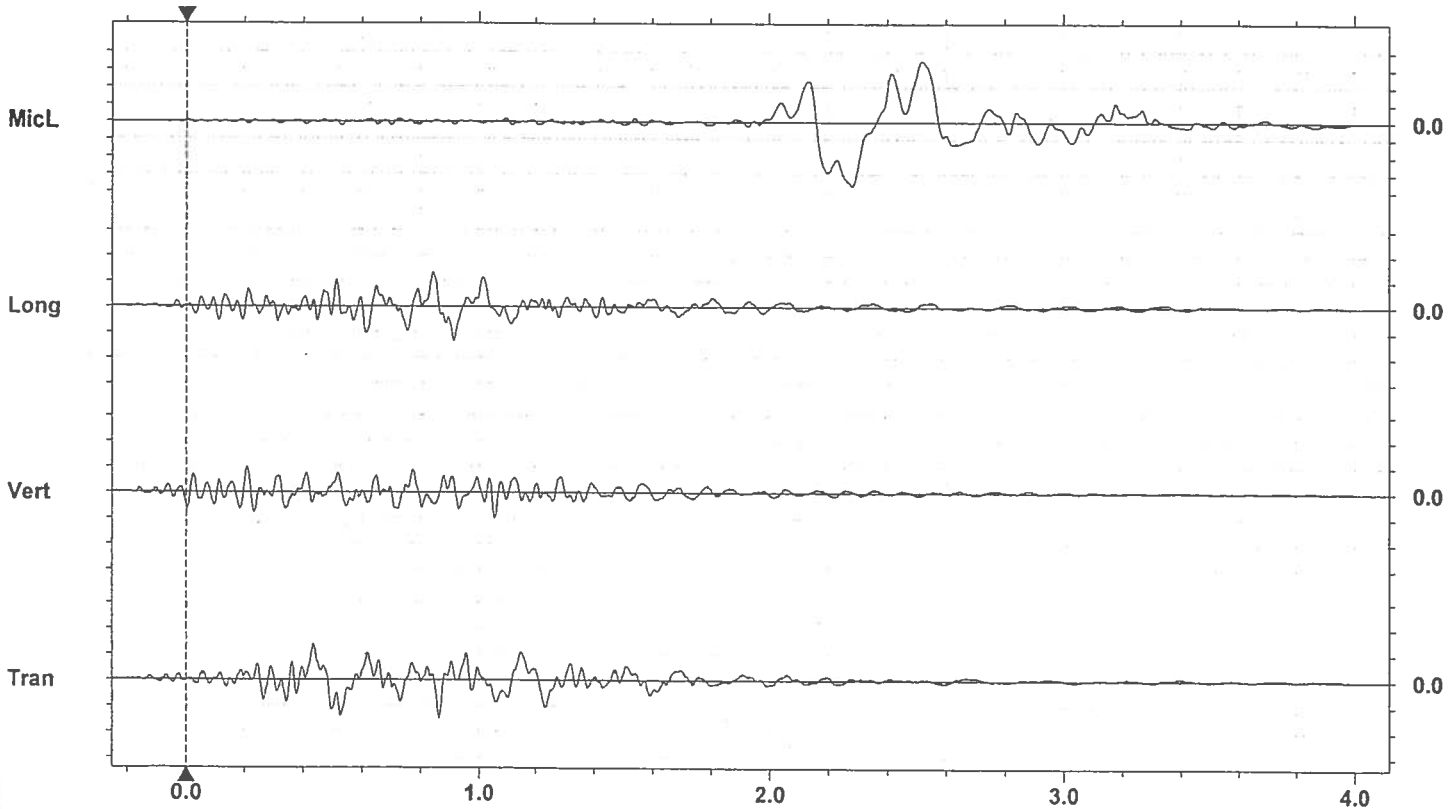
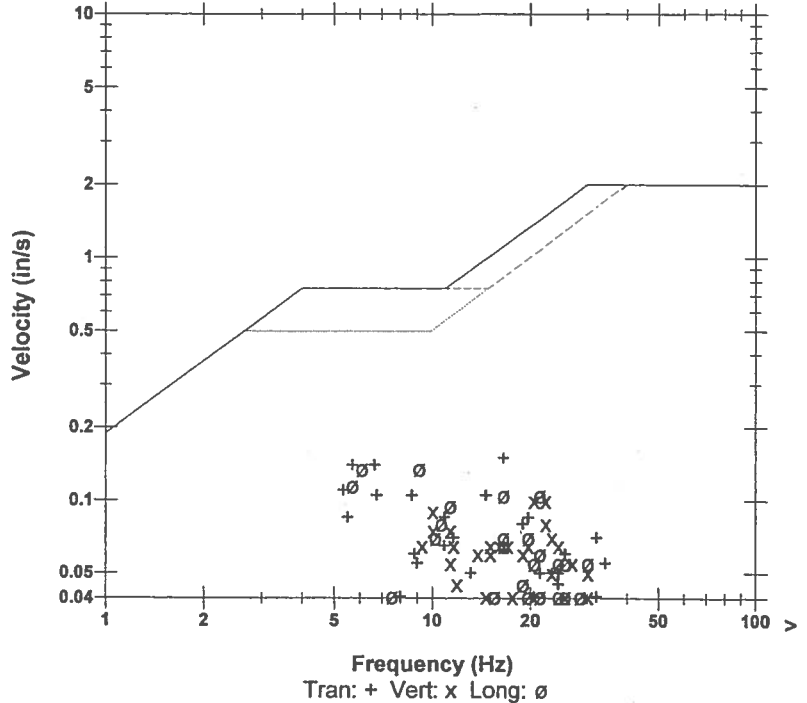
Post Event Notes
 Blast 6 Location B-3

Microphone Linear Weighting
 PSPL 122.0 dB(L) at 2.278 sec
 ZC Freq 2.5 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 663 mv)

	Tran	Vert	Long	
PPV	0.150	0.1000	0.135	in/s
ZC Freq	17	20	9.1	Hz
Time (Rel. to Trig)	0.861	0.209	0.840	sec
Peak Acceleration	0.0398	0.0398	0.0398	g
Peak Displacement	0.00318	0.00104	0.00247	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.151 in/s at 0.863 sec

USBM RI8507 And OSMRE



Event Report

Date/Time Long at 11:31:12 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE8352 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration July 24, 2003 by Instanetel Inc.
 File Name J3529ZSQ.000

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

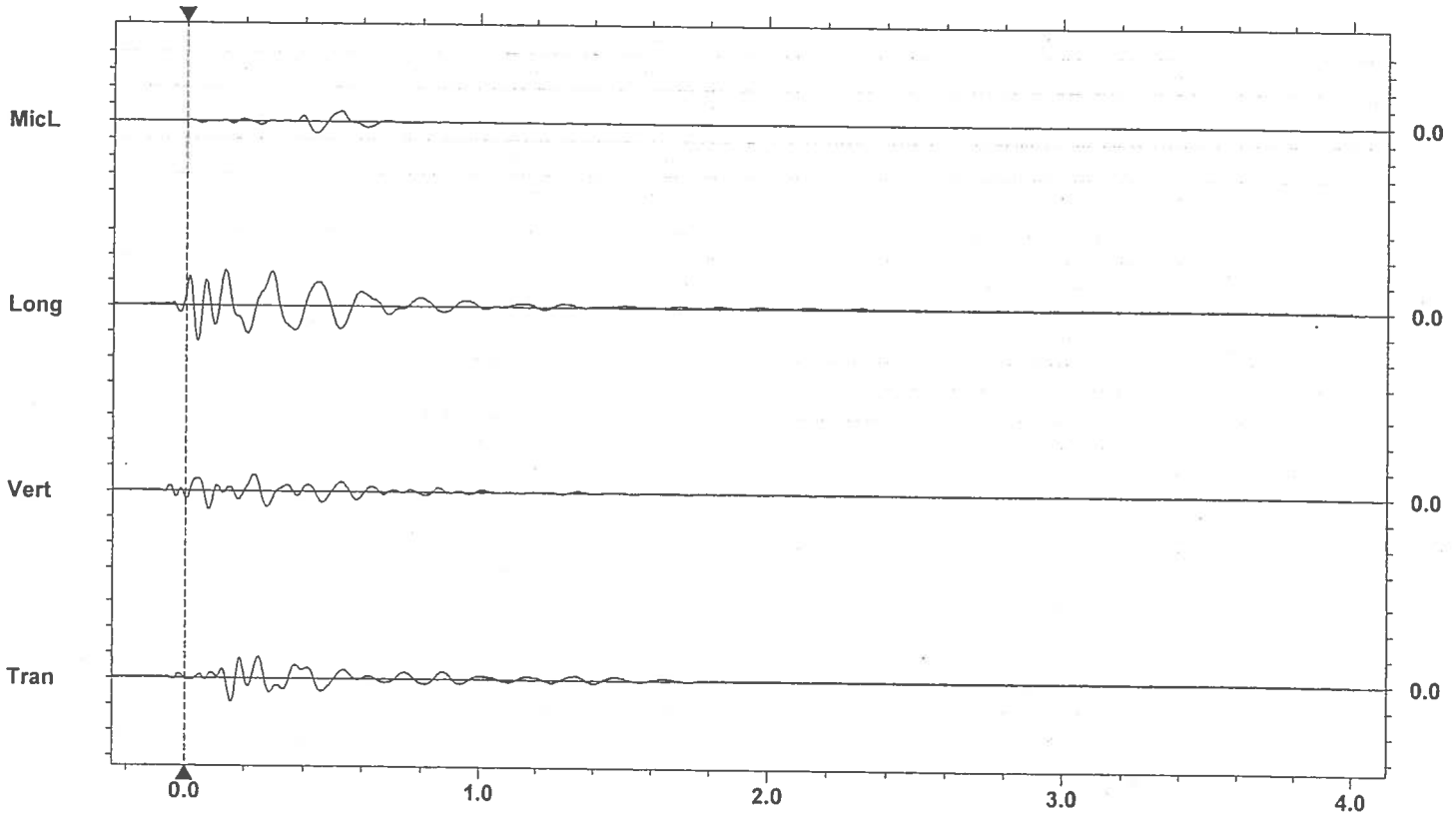
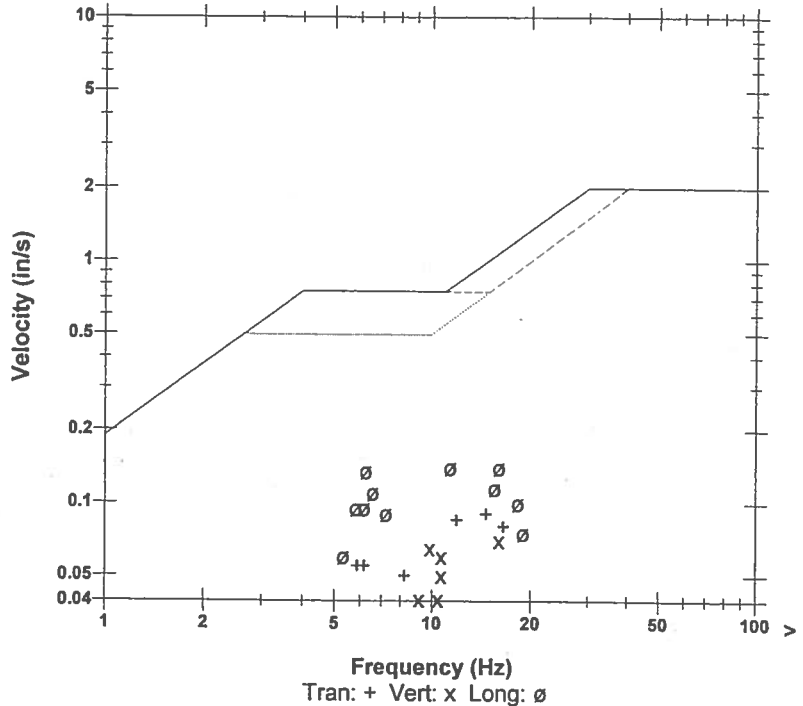
Post Event Notes
 Blast 1 Location B-4

Microphone Linear Weighting
 PSPL 107.5 dB(L) at 0.439 sec
 ZC Freq 7.3 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 616 mv)

	Tran	Vert	Long	
PPV	0.0900	0.0700	0.140	in/s
ZC Freq	15	16	16	Hz
Time (Rel. to Trig)	0.152	0.078	0.038	sec
Peak Acceleration	0.0398	0.0265	0.0398	g
Peak Displacement	0.00157	0.00101	0.00304	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.151 in/s at 0.287 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 11:37:17 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE8352 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration July 24, 2003 by InstanTel Inc.
 File Name J3529ZSQ.Y50

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

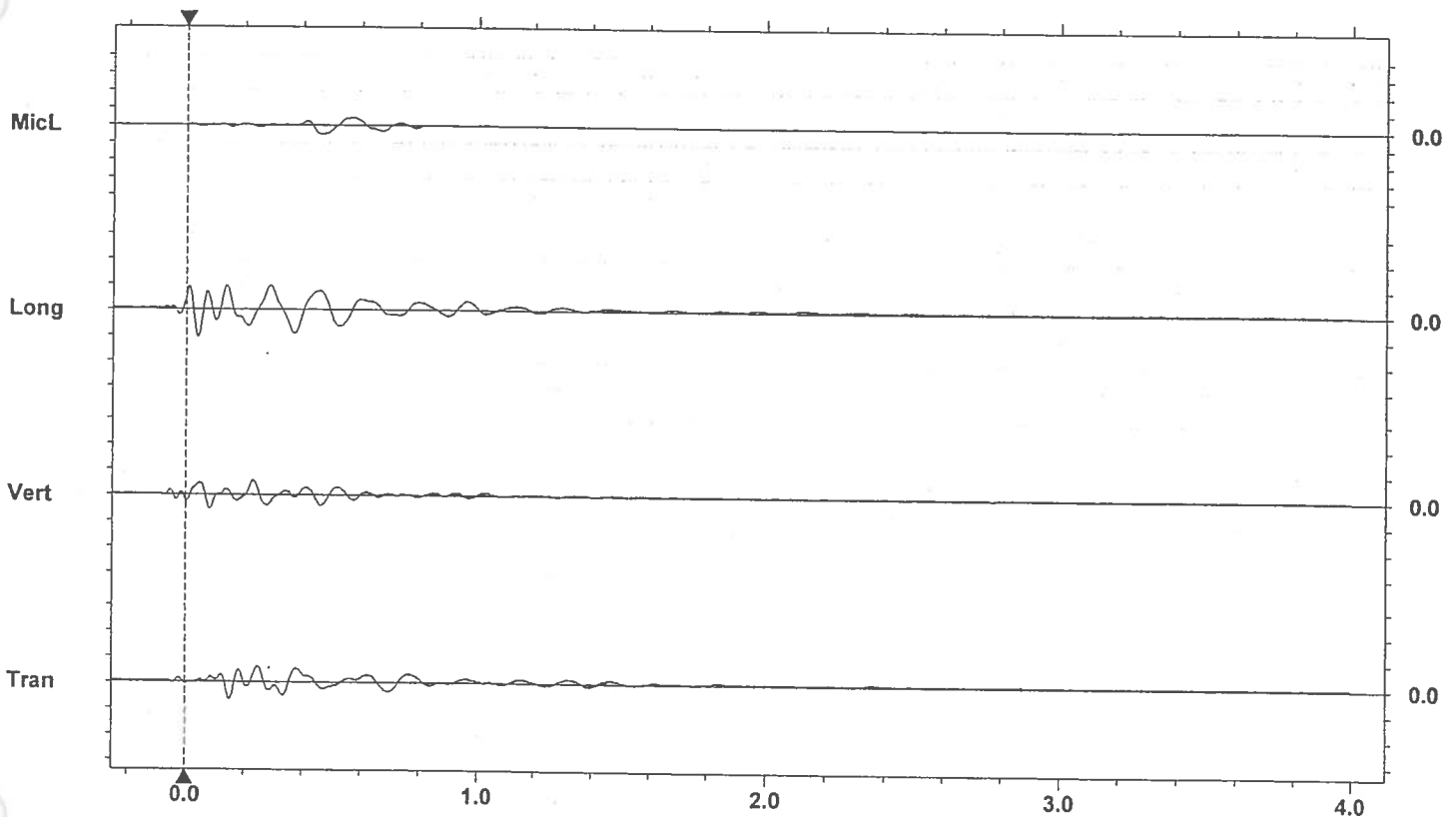
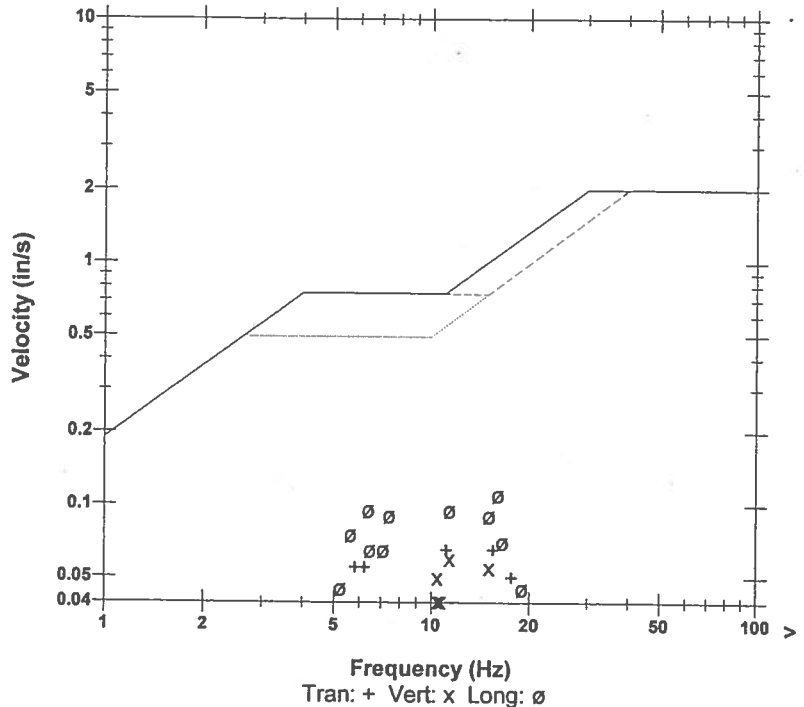
Post Event Notes
 Blast 2 Location B-4

Microphone Linear Weighting
 PSPL 104.9 dB(L) at 0.451 sec
 ZC Freq 6.2 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 616 mv)

	Tran	Vert	Long	
PPV	0.0650	0.0600	0.110	in/s
ZC Freq	16	11	16	Hz
Time (Rel. to Trig)	0.149	0.229	0.038	sec
Peak Acceleration	0.0265	0.0265	0.0398	g
Peak Displacement	0.00135	0.00080	0.00227	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.117 in/s at 0.038 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:31:57 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE8352 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration July 24, 2003 by Instanet Inc.
 File Name J3529ZST.H90

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

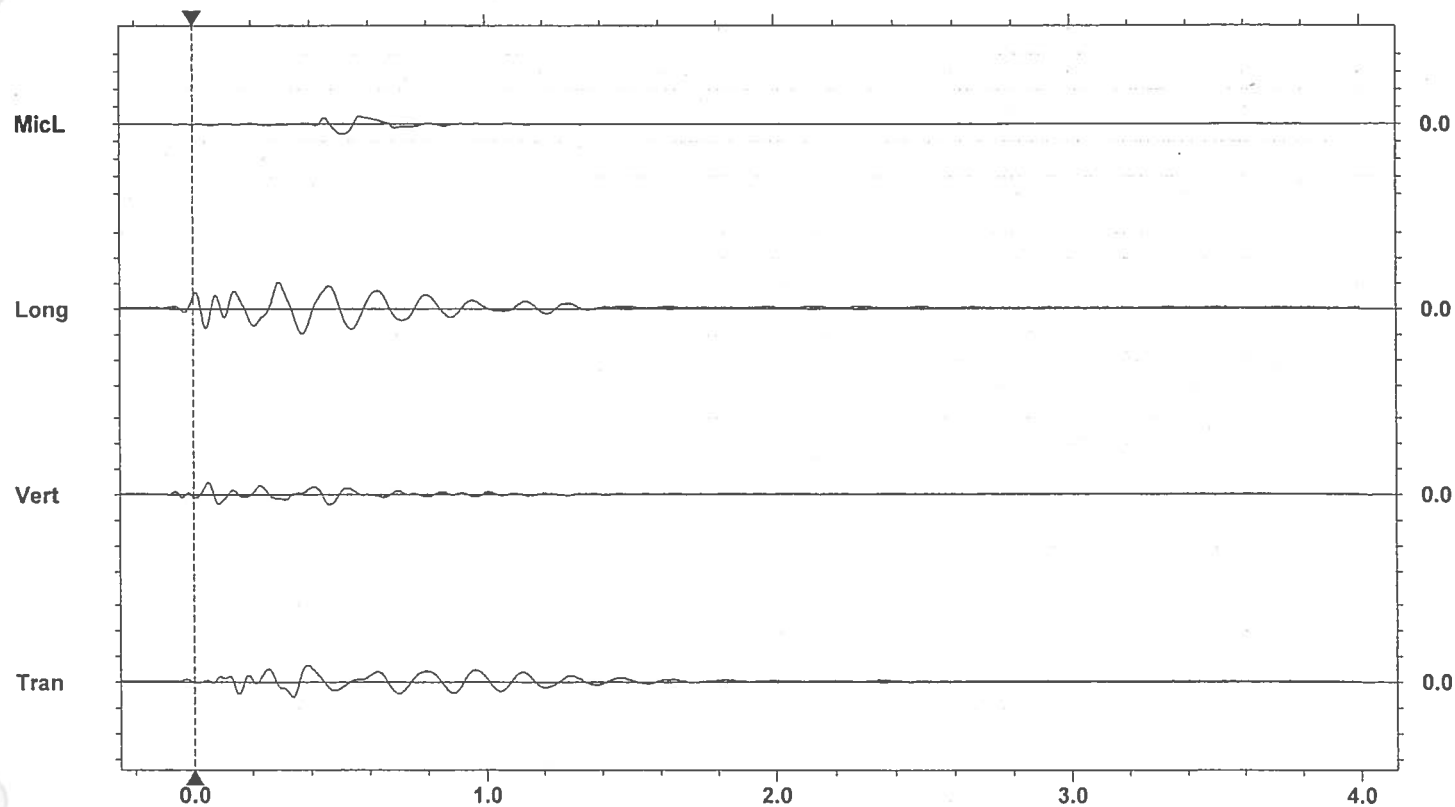
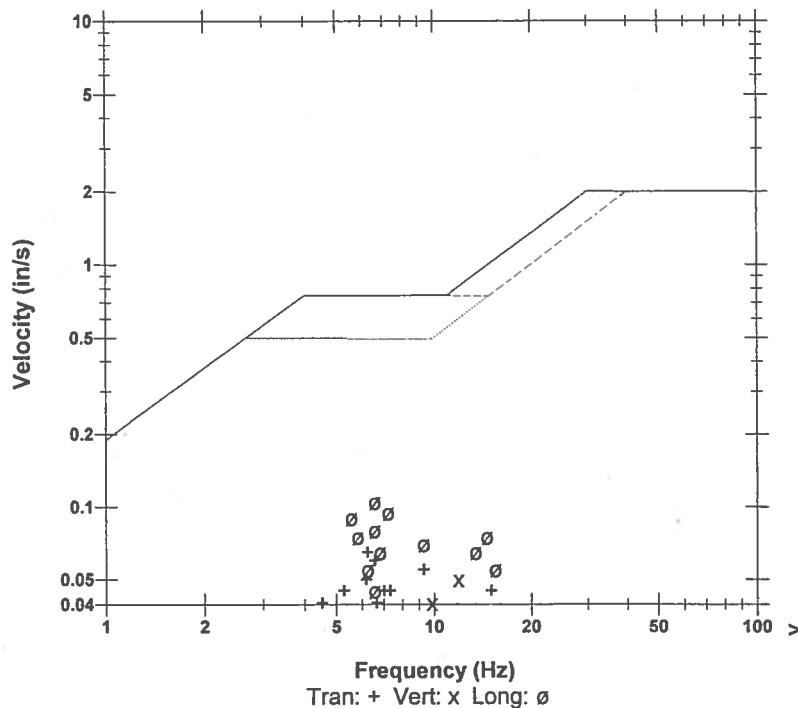
Blast 3 Location B-4

Microphone Linear Weighting
 PSPL 106.0 dB(L) at 0.505 sec
 ZC Freq 6.4 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 621 mv)

	Tran	Vert	Long	
PPV	0.0650	0.0500	0.105	in/s
ZC Freq	6.2	12	6.6	Hz
Time (Rel. to Trig)	0.382	0.048	0.287	sec
Peak Acceleration	0.0133	0.0133	0.0265	g
Peak Displacement	0.00167	0.00067	0.00257	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.113 in/s at 0.379 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:35:40 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE8352 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration July 24, 2003 by InstanTel Inc.
 File Name J3529ZST.NG0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

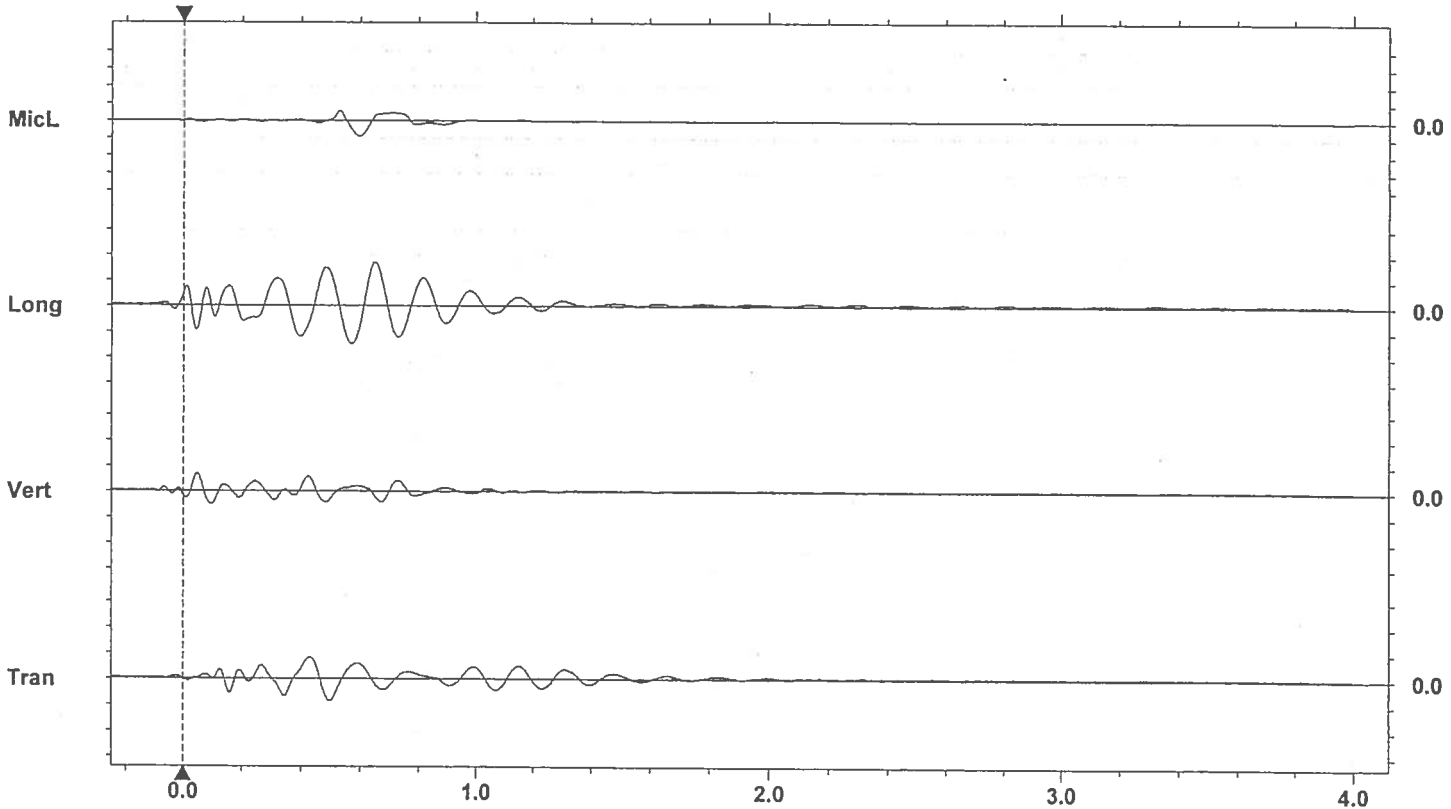
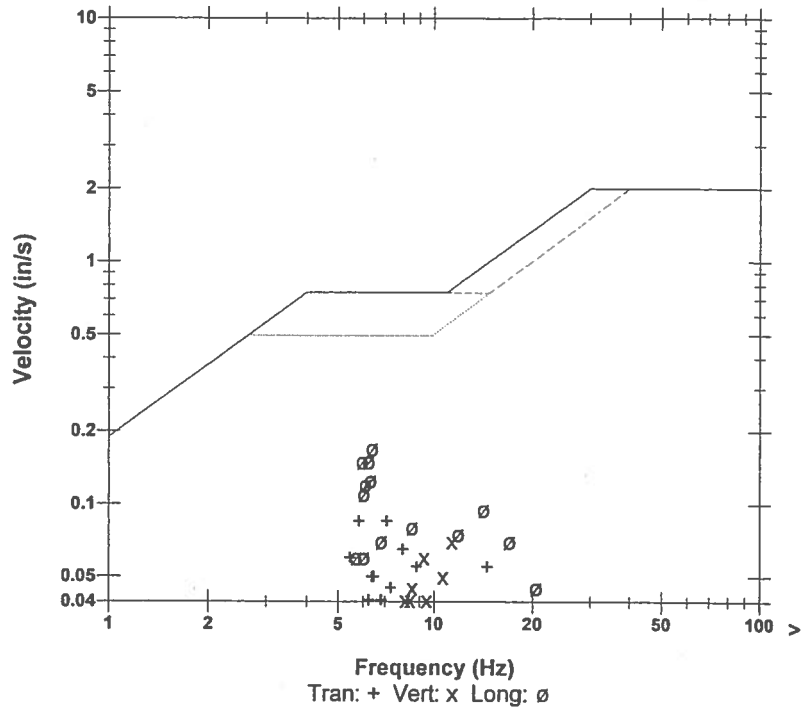
Post Event Notes
 Blast 4 Location B-4

Microphone Linear Weighting
 PSPL 109.9 dB(L) at 0.594 sec
 ZC Freq 6.0 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 621 mv)

	Tran	Vert	Long	
PPV	0.0850	0.0700	0.170	in/s
ZC Freq	5.8	11	6.4	Hz
Time (Rel. to Trig)	0.428	0.048	0.645	sec
Peak Acceleration	0.0133	0.0133	0.0398	g
Peak Displacement	0.00219	0.00101	0.00427	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.175 in/s at 0.488 sec

USBM RI8507 And OSMRE



Event Report

Date/Time Long at 12:45:13 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE8352 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration July 24, 2003 by InstanTel Inc.
 File Name J3529ZSU.3D0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

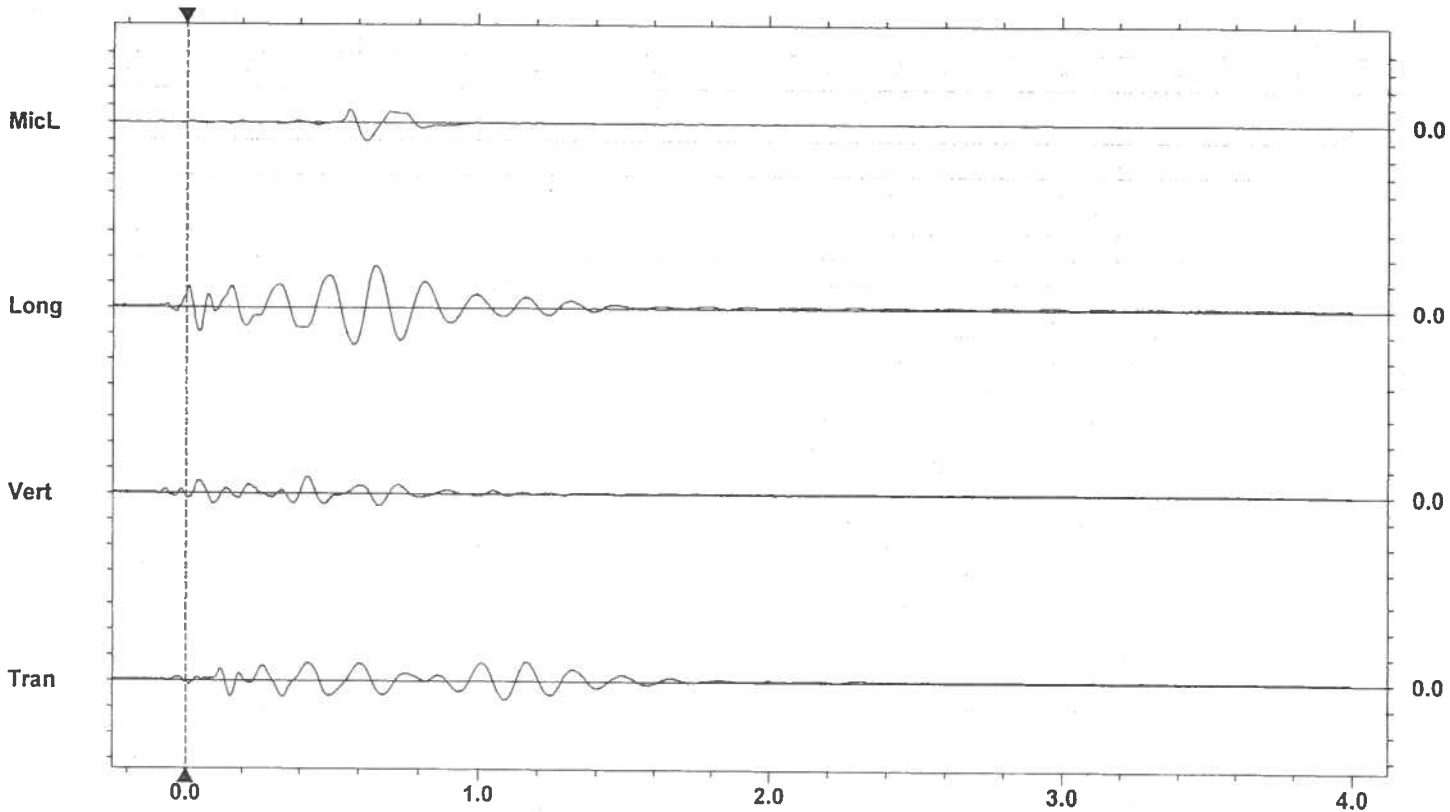
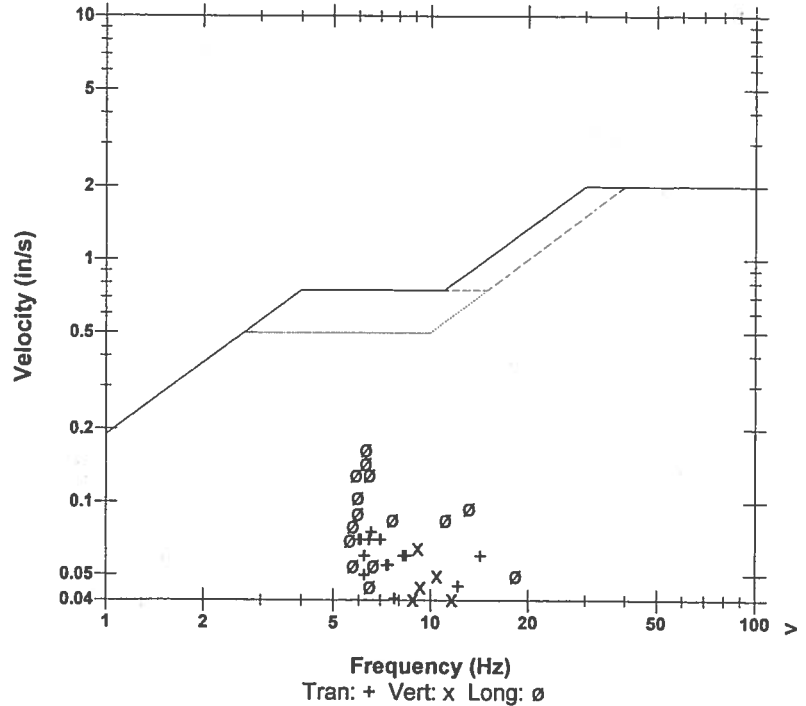
Post Event Notes
 Blast 5 Location B-4

Microphone Linear Weighting
 PSPL 111.2 dB(L) at 0.625 sec
 ZC Freq 6.2 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 621 mv)

	Tran	Vert	Long	
PPV	0.0750	0.0650	0.165	in/s
ZC Freq	6.6	9.1	6.3	Hz
Time (Rel. to Trig)	1.156	0.422	0.655	sec
Peak Acceleration	0.0133	0.0265	0.0265	g
Peak Displacement	0.00188	0.00117	0.00416	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.175 in/s at 0.664 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 13:08:46 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo :10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE8352 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration July 24, 2003 by InstanTel Inc.
 File Name J3529ZSV.6M0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

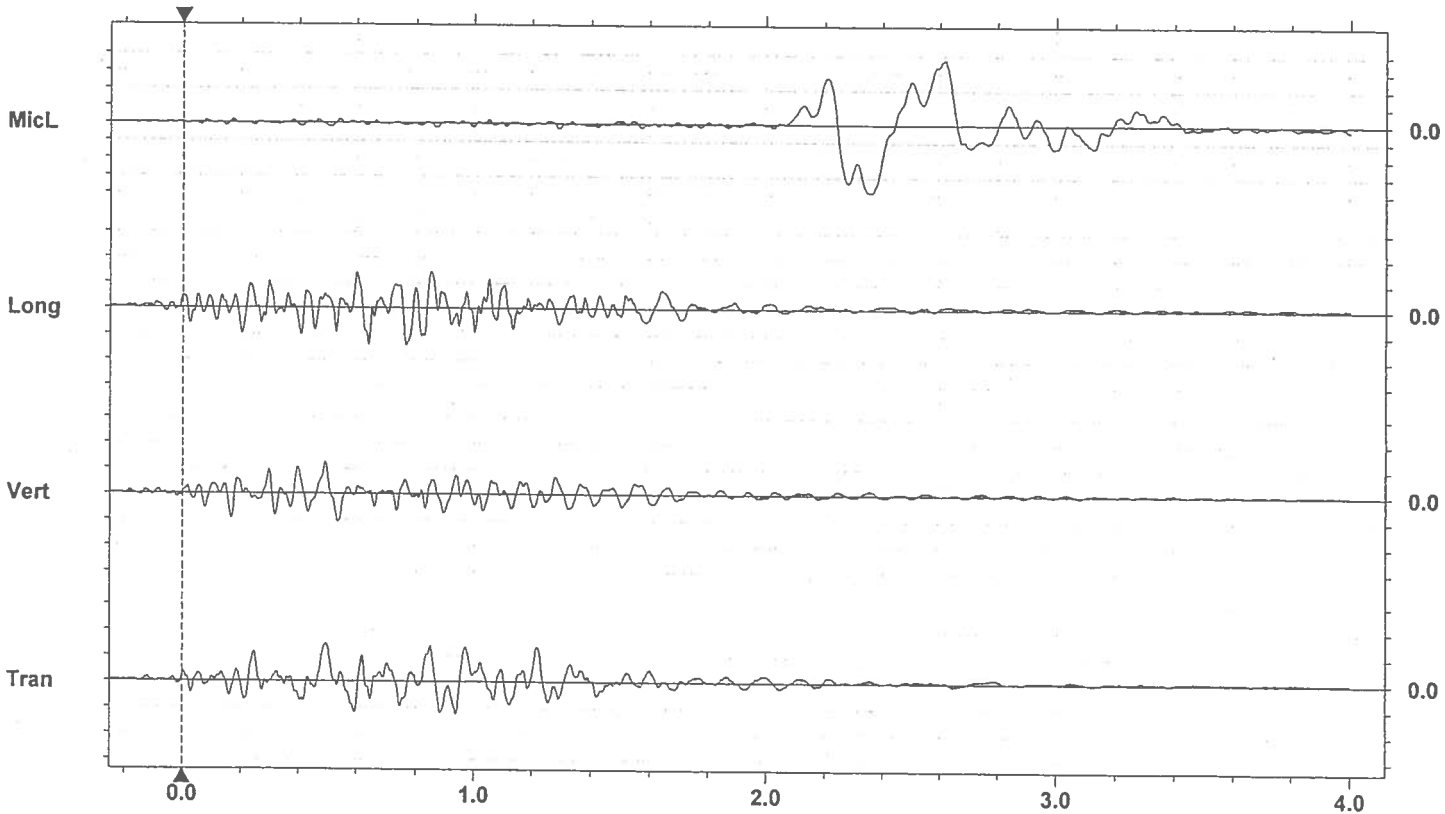
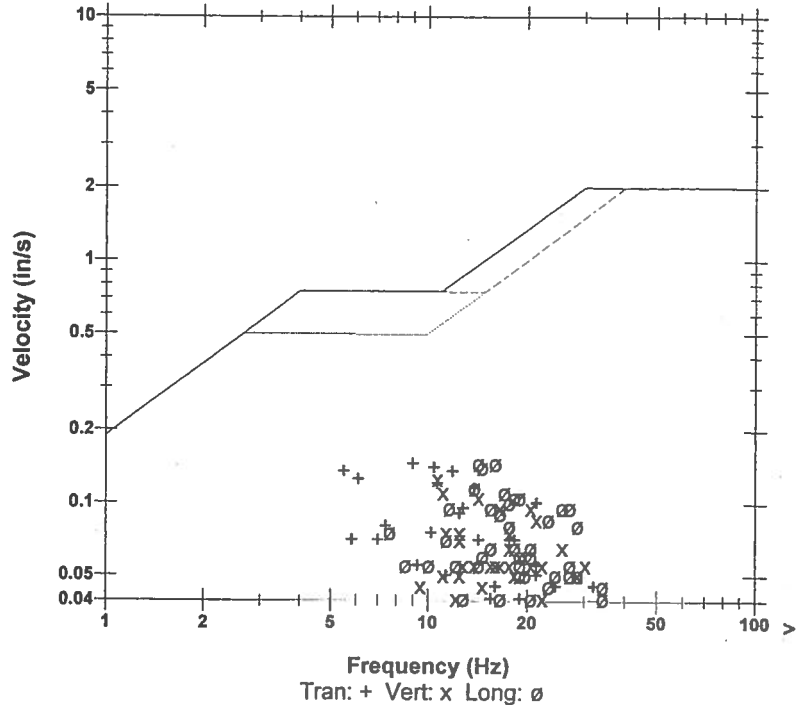
Post Event Notes
 Blast 6 Location B-4

Microphone Linear Weighting
 PSPL 122.6 dB(L) at 2.357 sec
 ZC Freq 2.5 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 621 mv)

	Tran	Vert	Long	
PPV	0.145	0.125	0.145	in/s
ZC Freq	9.0	11	16	Hz
Time (Rel. to Trig)	0.493	0.492	0.642	sec
Peak Acceleration	0.0398	0.0398	0.0663	g
Peak Displacement	0.00289	0.00147	0.00164	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.207 in/s at 0.853 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 11:31:13 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE8563 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration February 11, 2004 by InstanTel Inc
 File Name J5639ZSQ.O10

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

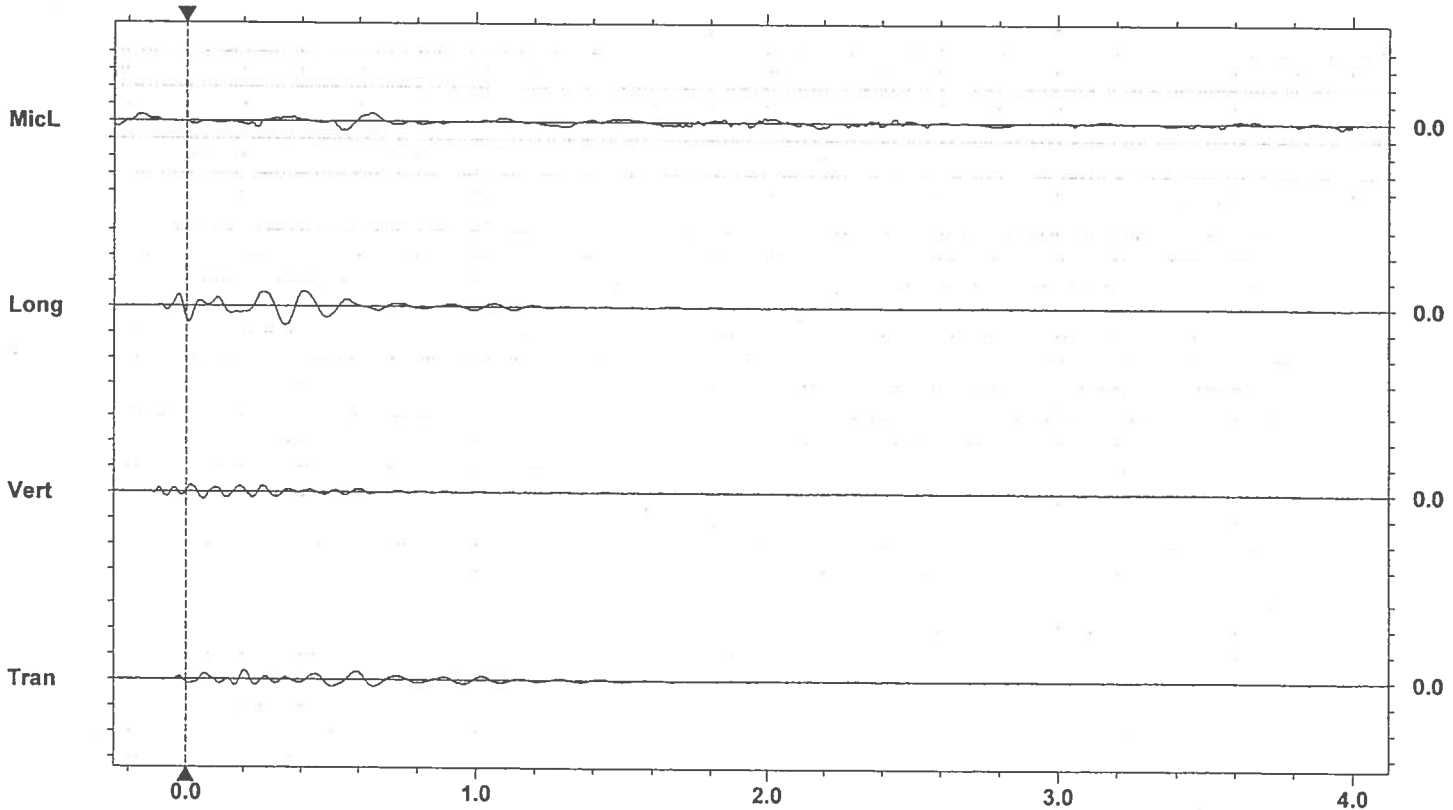
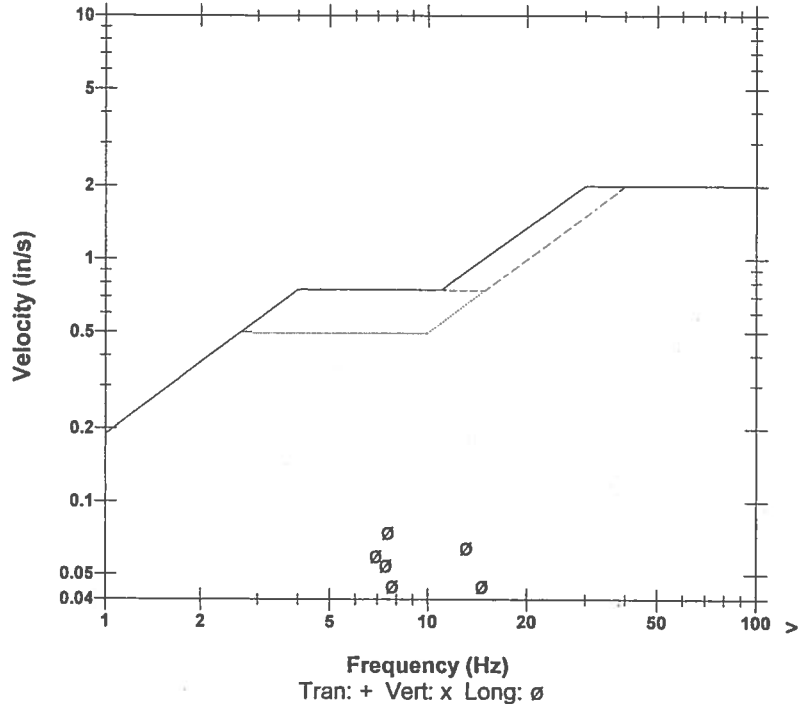
Blast 1 Location B-5

Microphone Linear Weighting
 PSPL 105.5 dB(L) at 0.537 sec
 ZC Freq 6.5 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 623 mv)

	Tran	Vert	Long	
PPV	0.0350	0.0300	0.0750	in/s
ZC Freq	15	15	7.5	Hz
Time (Rel. to Trig)	0.200	0.017	0.340	sec
Peak Acceleration	0.0133	0.0265	0.0265	g
Peak Displacement	0.00061	0.00031	0.00161	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.0763 in/s at 0.346 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 11:37:18 February 25, 2004
Trigger Source Geo: 0.0500 in/s
Range Geo :10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BE8563 V 4.37-4.35 MiniMate Plus
Battery Level 6.3 Volts
Calibration February 11, 2004 by InstanTel Inc
File Name J5639ZSQ.Y60

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

Blast 2 Location B-5

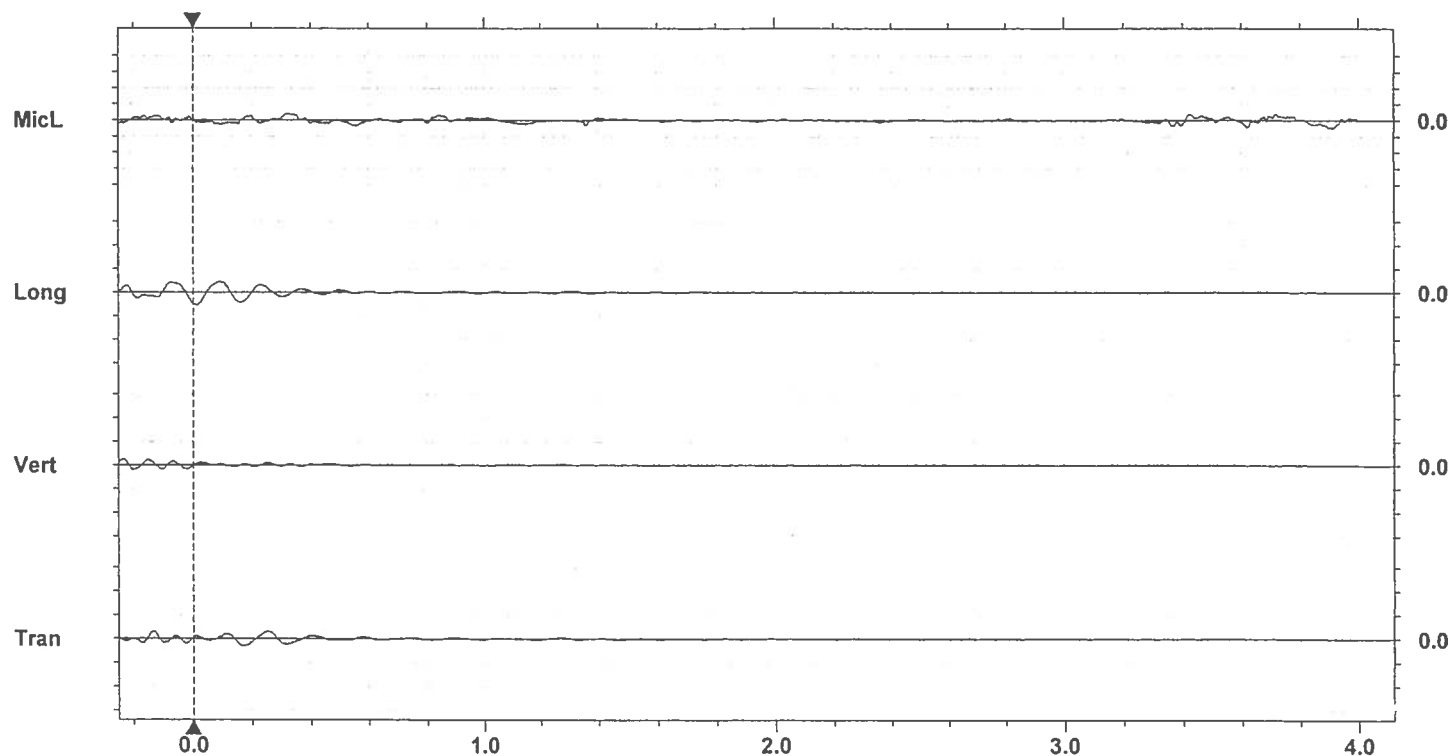
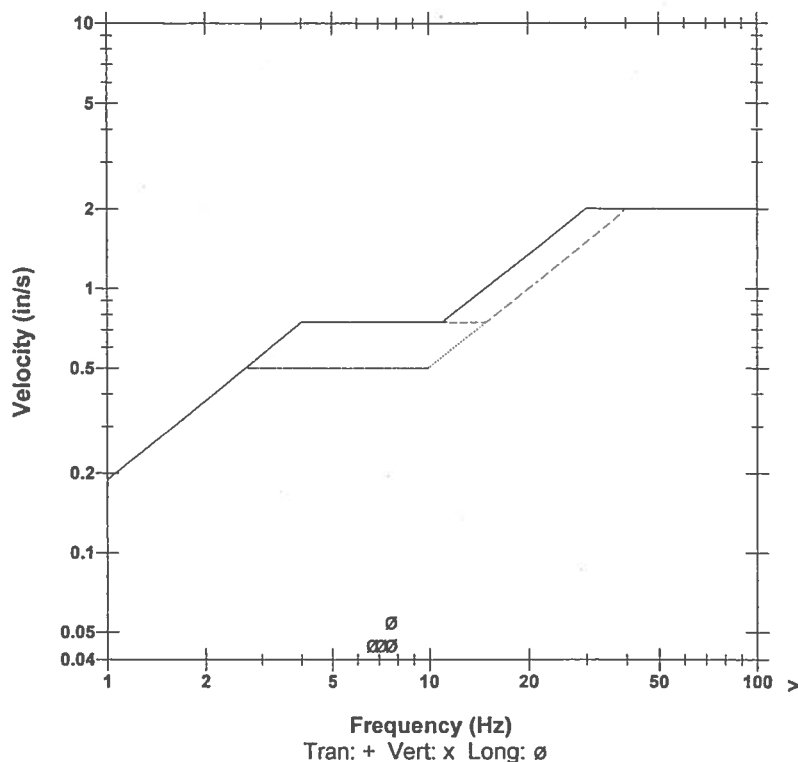
Microphone Linear Weighting
PSPL 104.9 dB(L) at 3.913 sec
ZC Freq 4.3 Hz
Channel Test Passed (Freq = 20.1 Hz Amp = 623 mv)

	Tran	Vert	Long	
PPV	0.0300	0.0250	0.0550	in/s
ZC Freq	14	N/A	7.6	Hz
Time (Rel. to Trig)	-0.139	-0.237	0.010	sec
Peak Acceleration	0.0265	0.0265	0.0133	g
Peak Displacement	0.00067	0.00029	0.00121	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.0579 in/s at 0.014 sec

N/A: Not Applicable

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
Trigger =

Event Report

Date/Time Vert at 12:31:57 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE6516 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration February 17, 2004 by Instantel Inc
 File Name H5169ZST.H90

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

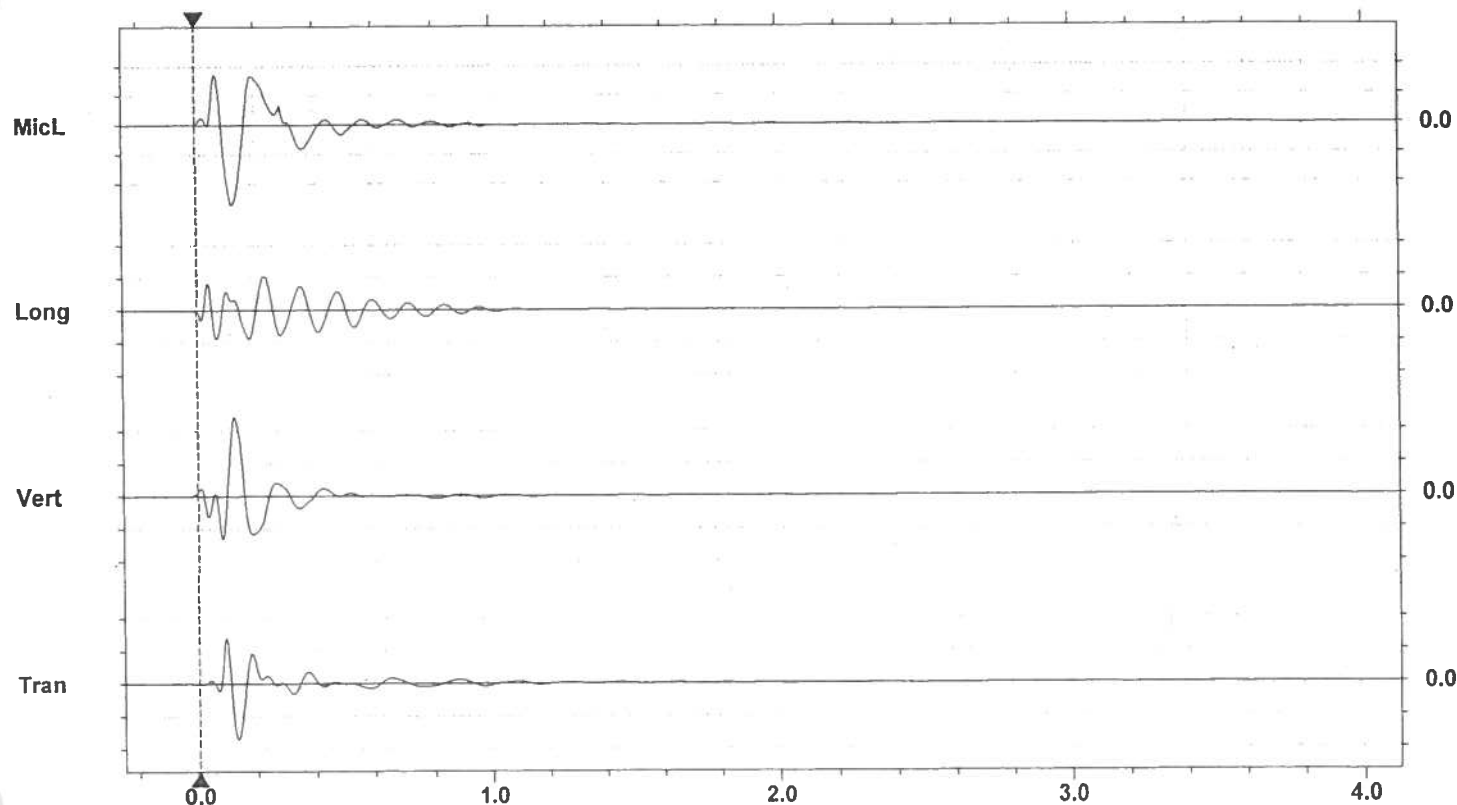
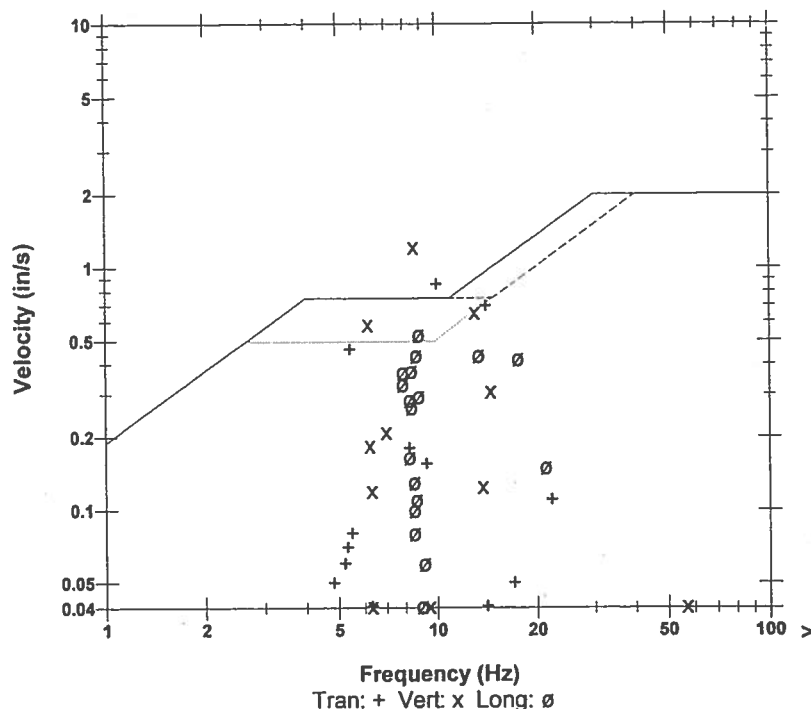
Blast 3 Location B-8

Microphone Linear Weighting
 PSPL 125.4 dB(L) at 0.124 sec
 ZC Freq 6.4 Hz
 Channel Test Passed (Freq = 19.3 Hz Amp = 630 mv)

	Tran	Vert	Long	
PPV	0.855	1.22	0.530	in/s
ZC Freq	10	8.5	8.8	Hz
Time (Rel. to Trig)	0.134	0.128	0.229	sec
Peak Acceleration	0.199	0.186	0.133	g
Peak Displacement	0.0139	0.0221	0.00962	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 1.48 in/s at 0.130 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.500 in/s/div Mic: 0.00200 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:35:41 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo :10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE6516 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration February 17, 2004 by InstanTel Inc
 File Name H5169ZST.NH0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

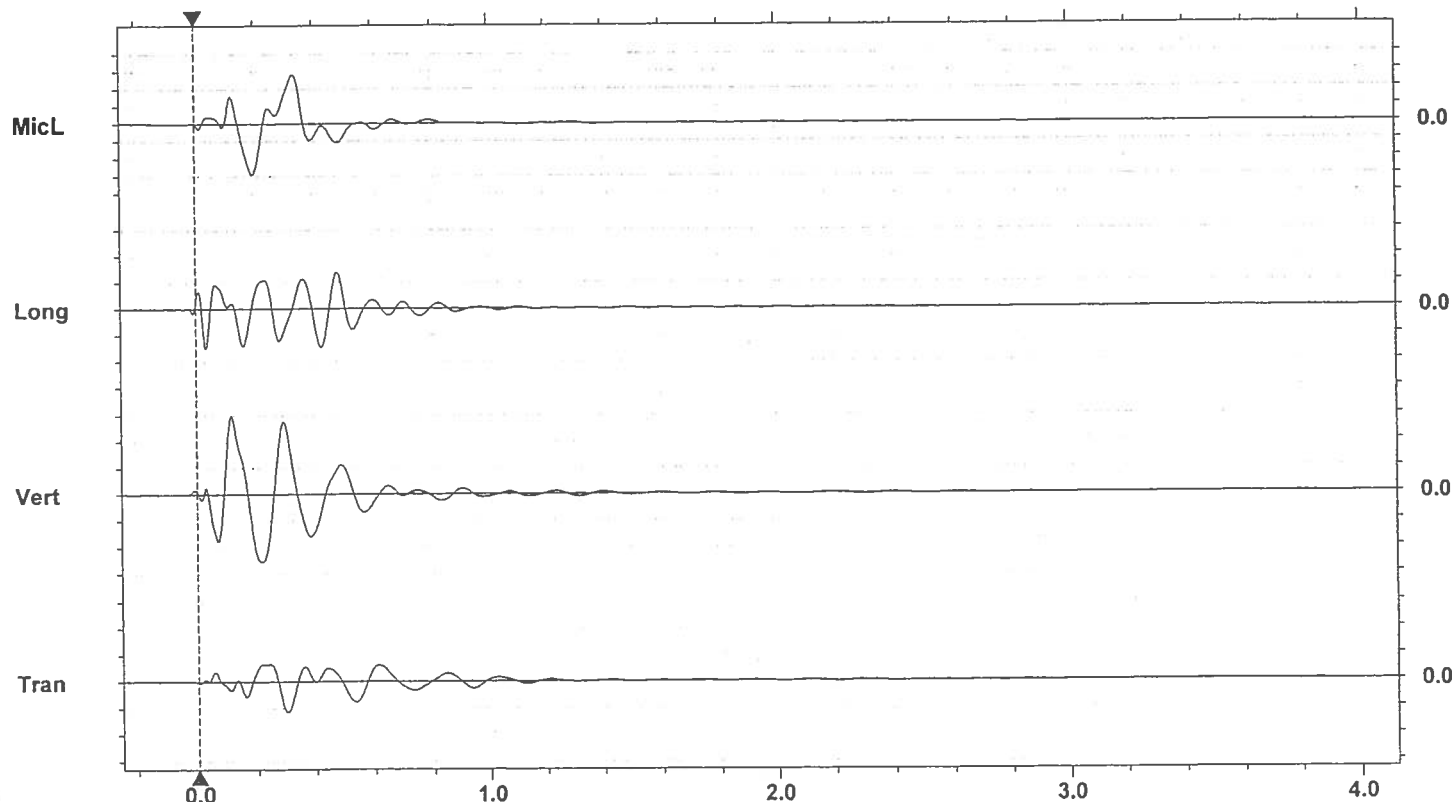
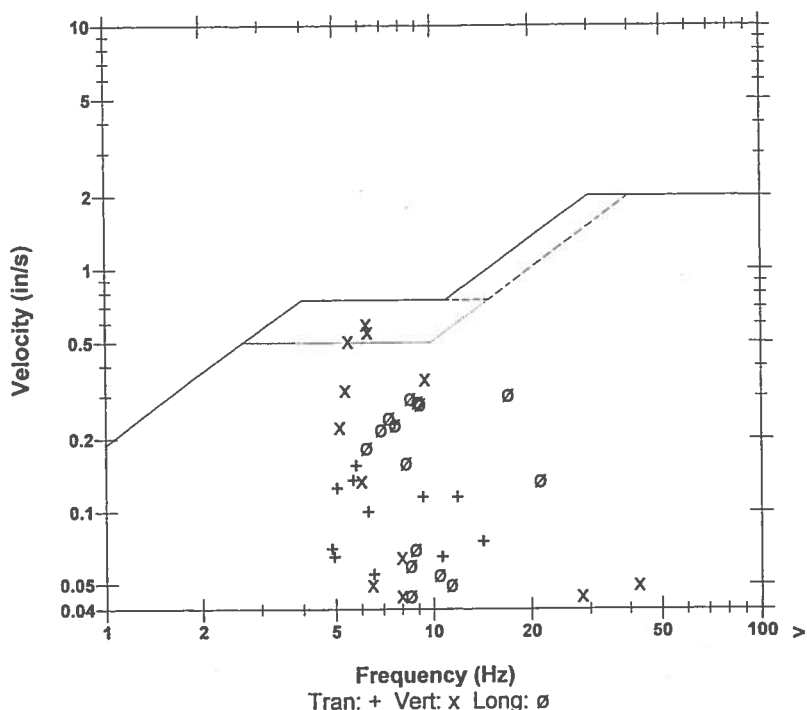
Post Event Notes
 Blast 4 Location B-8

Microphone Linear Weighting
 PSPL 120.0 dB(L) at 0.191 sec
 ZC Freq 5.8 Hz
 Channel Test Passed (Freq = 19.3 Hz Amp = 630 mv)

	Tran	Vert	Long	
PPV	0.230	0.600	0.305	in/s
ZC Freq	7.6	6.2	17	Hz
Time (Rel. to Trig)	0.299	0.117	0.034	sec
Peak Acceleration	0.0398	0.0928	0.0795	g
Peak Displacement	0.00471	0.0157	0.00562	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.630 in/s at 0.295 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.200 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:45:14 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE6516 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration February 17, 2004 by Instantel Inc
 File Name H5169ZSU.3E0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

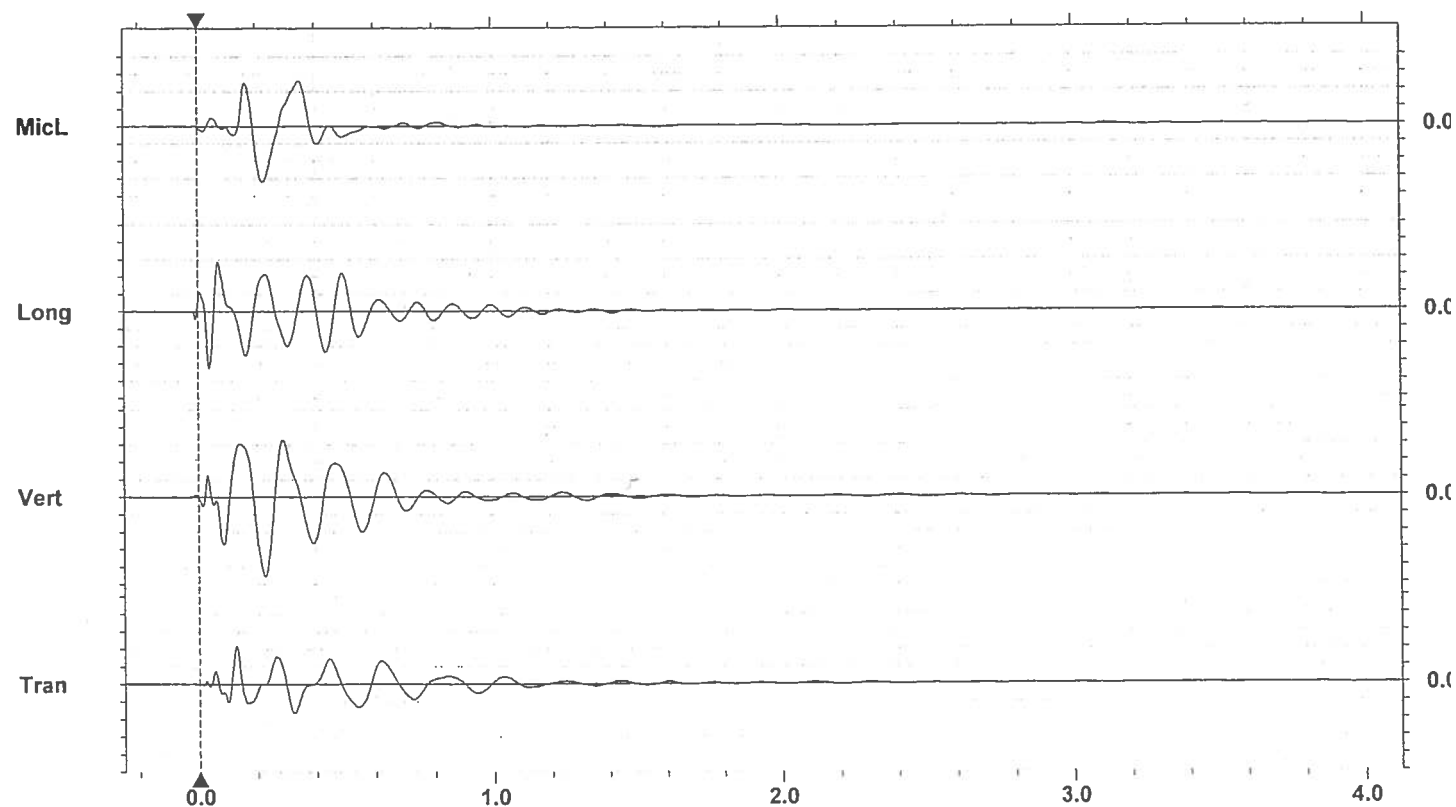
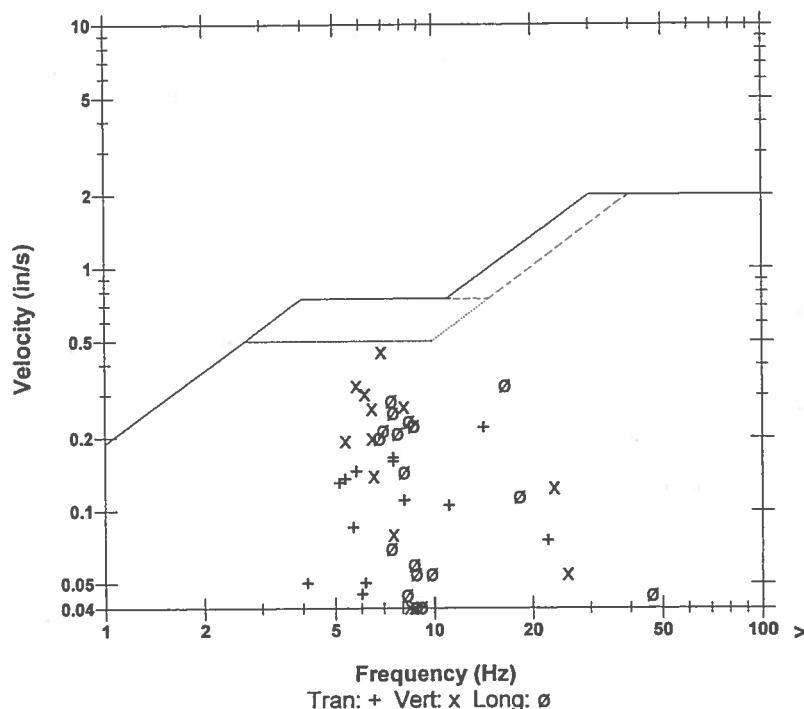
Blast 5 Location B-8

Microphone Linear Weighting
 PSPL 120.8 dB(L) at 0.224 sec
 ZC Freq 5.8 Hz
 Channel Test Passed (Freq = 19.3 Hz Amp = 630 mv)

	Tran	Vert	Long	
PPV	0.220	0.455	0.330	in/s
ZC Freq	14	6.9	17	Hz
Time (Rel. to Trig)	0.128	0.227	0.037	sec
Peak Acceleration	0.0530	0.0663	0.0928	g
Peak Displacement	0.00409	0.0104	0.00518	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.503 in/s at 0.229 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 13:08:47 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE6516 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration February 17, 2004 by InstanTel Inc
 File Name H5169ZSV.6N0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

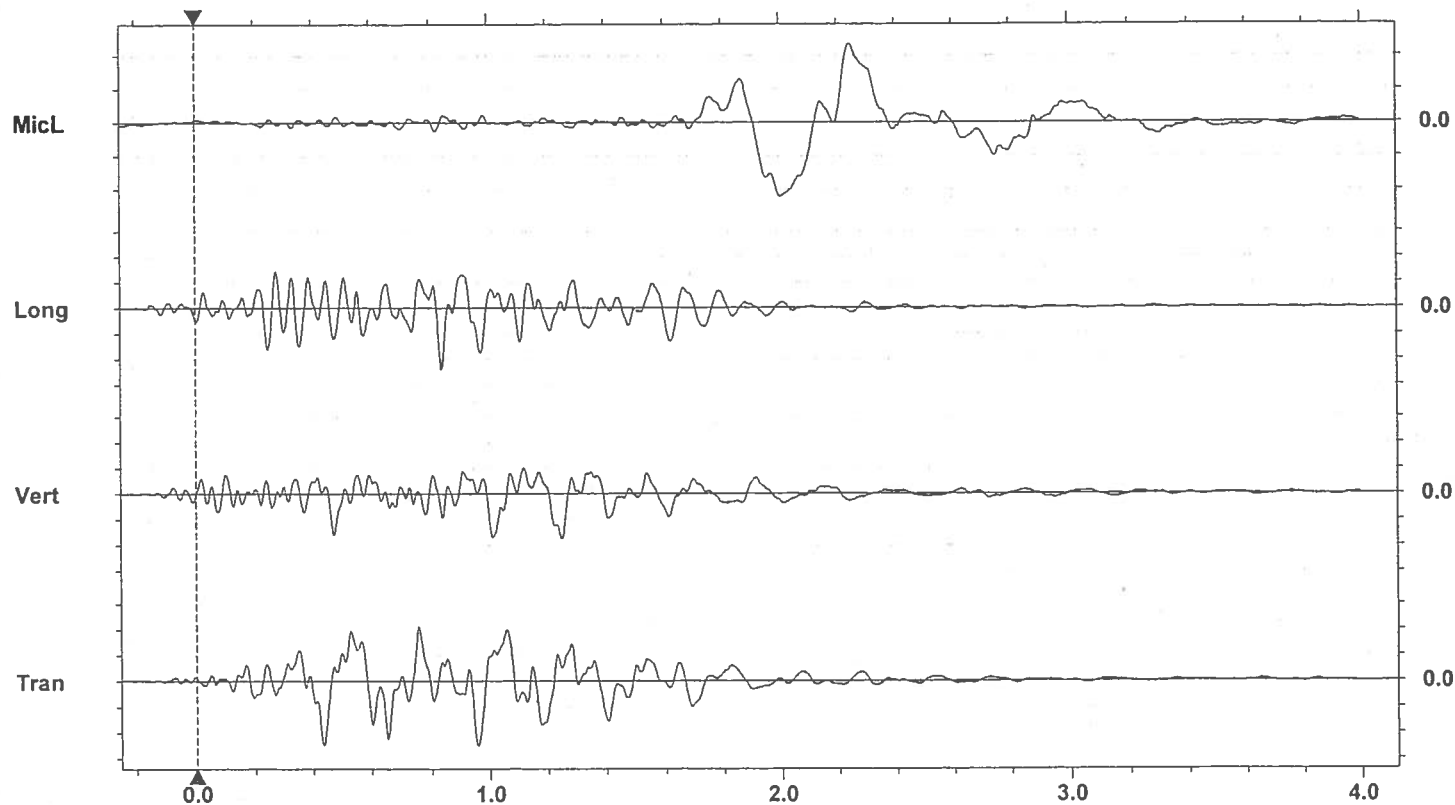
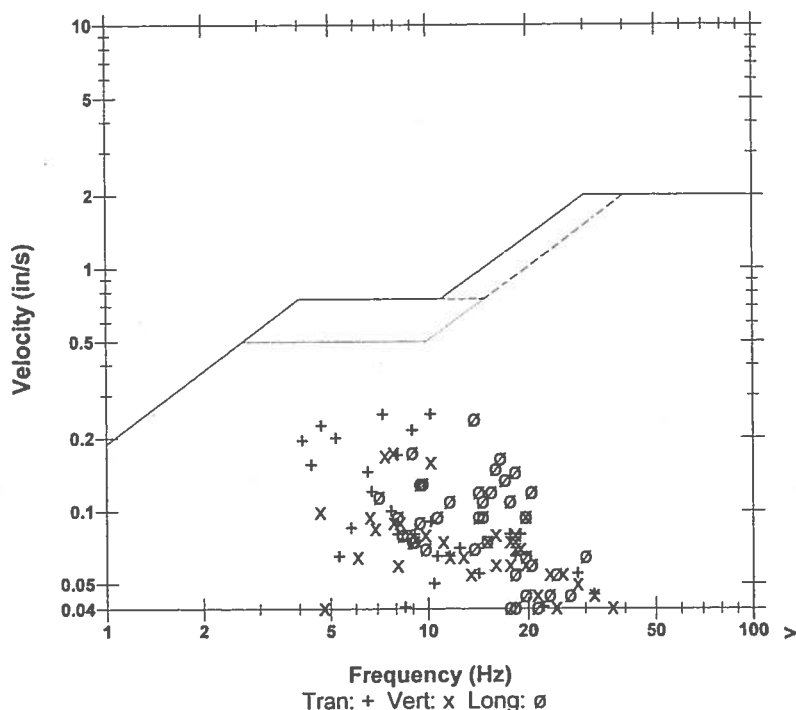
Blast 6 Location B-8

Microphone Linear Weighting
 PSPL 124.2 dB(L) at 2.245 sec
 ZC Freq 2.7 Hz
 Channel Test Passed (Freq = 19.3 Hz Amp = 630 mv)

	Tran	Vert	Long	
PPV	0.250	0.175	0.240	in/s
ZC Freq	7.3	7.9	14	Hz
Time (Rel. to Trig)	0.436	1.247	0.838	sec
Peak Acceleration	0.0530	0.0398	0.0663	g
Peak Displacement	0.00644	0.00353	0.00266	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.271 in/s at 0.965 sec

USBM RI8507 And OSMRE



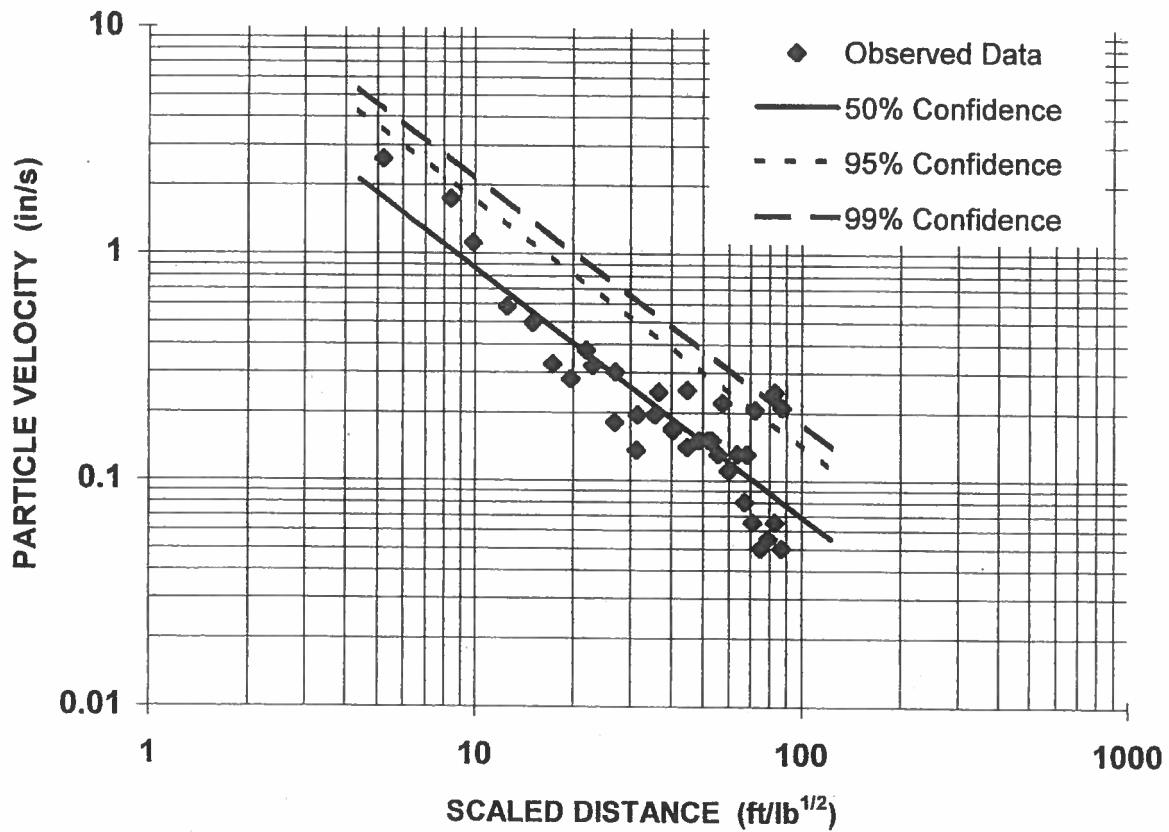
Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00200 psi(L)/div
 Trigger =

APPENDIX V

**C-LINE
GROUND MOTION ATTENUATION STUDY,
SCALED DISTANCE, CHARGE WEIGHT,
& PPV TABLES,
VIBRATION RECORDINGS**

C-Line Regression Analysis

February 25, 2004



Cripple Creek Regression Analysis Statistics

Data Points	Max SD	Min SD	Max PV	Min PV
36	87.52	5.22	2.59	0.05

Sum of SD	Sum of PV	Sum of SD²	Sum of PV²	Sum of SD x PV
130.7	-57.6	492.8	120.1	-229.3

Sum SD x Sum PV	Sum of (SD)²	Sum of (PV)²
-7535.0	17084.2	3323.3

SSX	SSY	SSXY	Xbar	Ybar
18.225	27.799	-19.975	3.631	-1.601

S	Se	R	R²
0.417	5.90	-0.887	0.788

Slope	Intercept
-1.096	2.378

Regression Line Equation 50%	
PV=	X (SD) ^{-1.096}
2.38	

95% Confidence Equation	
PV=	X (SD) ^{-1.096}
21.89	

K Values		Z
10.78	K ₅₀	
19.54	K ₉₀	1.645
21.89	K ₉₅	1.96
24.98	K ₉₈	2.326
27.34	K ₉₉	2.576
35.40	K _{99.9}	3.291
43.97	K _{99.99}	3.891

Z values from Basic Statistical Methods for Engineers and Scientists
Neville and Kennedy 1964 , Table 10-1 p. 111

Matheson Mining Consultants, Inc. 2004

Matheson Mining Consultants, Inc. 3/5/04

Explanation of Regression Analysis

Data Statistics

Data Points is the number of data points used in the analysis.

Max PPV is the maximum peak particle velocity measured in inches per second used in the analysis.

Min PPV is the minimum peak particle velocity, measured in inches per second used in the data analysis.

Max SD is the maximum scaled distance ($SD = D/(W^{1/2})$) used in the analysis.

Min SD is the minimum scaled distance used in the analysis.

Calculated Sums

Sum of SD is the sum of the natural log (ln) of the Scaled Distance values

Sum of PPV is the sum of the ln of the Peak Particle Velocity values

Sum of SD^2 is the sum of the squares of the ln of the Scaled Distance values.

Sum of PPV^2 is the sum of the squares of the ln of the Peak Particle Velocity values.

Sum of SD x PPV is the sum of the ln of the SD values times the log of the PPV values.

Sums of Squares

SSX is the sum of the ln of the SD values squared minus the (Sum of SD)² divided by the Number of Data Points or: $SSX = \text{Sum of } SD^2 - (\text{Sum of } SD^2 / \text{Number of Data Points})$

SSY is the sum of the ln of the PPV values squared minus the (Sum of PPV)² divided by the Number of Data Points or: $SSY = \text{Sum of } PPV^2 - (\text{Sum of } PPV^2 / \text{Number of Data Points})$

SSXY = Sum of SD x PPV - ((Sum of SD*Sum of PPV)/Number of Data Points)

Sum of SD x Sum of PPV is the product of the sum of the ln of the SD's and the ln of the PPV's.

(Sum of SD)² is the square of the sum of the ln of the SD's.

Calculated Means & Calculated Coefficients

Xbar is the sum of the ln of the SD's divided by the Number of Data Points.

Ybar is the sum of the ln of the PPV's divided by the Number of Data Points.

Intercept is the value of Particle Velocity at Scaled Distance=1

K50 is the value of the Particle Velocity (Y) intercept of the mean line or e^a .

K95 is the value of the Particle Velocity (Y) intercept of the second standard deviation line.

K99 is the value of the Particle Velocity (Y) intercept of the third standard deviation line.

Slope is the value of the slope of the mean line and the value of the slope of confidence lines

Sample Standard Deviation & Coefficient of Correlation

S is the standard deviation.

Se_2 is the variance.

R is the correlation coefficient

R^2 is the multiple correlation coefficient or the "goodness of fit".

The 95% Confidence Level Equation – the equation of the second standard deviation from the mean line or $Y = K95 * X^{(B)}$

Where: Y is the PPV

X is the Scaled Distance

Charge Weight per Delay
Calculated From Given Distances for Particle Velocity
0.5 ips

Distance (feet)	Charge Weight (pounds)	Distance (feet)	Charge Weight (pounds)
100	10	3600	13114
200	40	3700	13852
300	91	3800	14611
400	162	3900	15390
500	253	4000	16190
600	364	4100	17009
700	496	4200	17849
800	648	4300	18709
900	820	4400	19589
1000	1012	4500	20490
1100	1224	4600	21411
1200	1457	4700	22352
1300	1710	4800	23313
1400	1983	4900	24295
1500	2277	5000	25296
1600	2590	5100	26318
1700	2924	5200	27360
1800	3278	5300	28423
1900	3653	5400	29506
2000	4047	5500	30608
2100	4462	5600	31732
2200	4897	5700	32875
2300	5353	5800	34039
2400	5828	5900	35223
2500	6324	6000	36427
2600	6840	6100	37651
2700	7376	6200	38896
2800	7933	6300	40160
2900	8510	6400	41445
3000	9107	6500	42751
3100	9724	6600	44076
3200	10361	6700	45422
3300	11019	6800	46788
3400	11697	6900	48174
3500	12395	7000	49581



REGRESSION ANALYSIS

95% CONFIDENCE LEVEL
SCALED DISTANCE TABLE

Scaled Distance	Particle Velocity	Scaled Distance	Particle Velocity
1	21.89	125	0.11
5	3.75	130	0.11
10	1.75	135	0.10
15	1.13	140	0.10
20	0.82	145	0.09
25	0.64	150	0.09
30	0.53	155	0.09
35	0.44	160	0.08
40	0.38	165	0.08
45	0.34	170	0.08
50	0.30	175	0.08
55	0.27	180	0.07
60	0.25	185	0.07
65	0.23	190	0.07
70	0.21	195	0.07
75	0.19	200	0.07
80	0.18	205	0.06
85	0.17	210	0.06
90	0.16	215	0.06
95	0.15	220	0.06
100	0.14	225	0.06
105	0.13	230	0.06
110	0.13	235	0.06
115	0.12	240	0.05
120	0.12	245	0.05

CRIPPLE CREEK & VICTOR GOLD MINING COMPANY, INC.
Ground Motion Attenuation Study Data Set
February 25, 2004

Shot Number	Recording Station	Charge Weight (pounds)	Instrument Number	Distance (feet)	Scaled Distance (ft/lb ²)	Peak Particle Velocity (inches per second)
1	C-1	100	BC6248	84.543	8.5	1.74
1	C-2	100	BC5826	230.199	23.0	0.32
1	C-3	100	BE9050	367.157	36.7	0.245
1	C-4	100	BC8054	520.978	52.1	0.15
1	C-5	100	BE9048	674.324	67.4	0.08
1	C-6	100	BE6723	833.979	83.4	0.065
2	C-1	100	BC6248	126.069	12.6	0.580
2	C-2	100	BC5826	269.141	26.9	0.18
2	C-3	100	BE9050	405.418	40.5	0.17
2	C-4	100	BC8054	558.653	55.9	0.13
2	C-5	100	BE9048	711.483	71.1	0.065
2	C-6	100	BE6723	871.013	87.1	0.05
3	C-1	100	BC6248	174.355	17.4	0.325
3	C-2	100	BC5826	313.736	31.4	0.135
3	C-3	100	BE9050	448.567	44.9	0.14
3	C-4	100	BC8054	600.743	60.1	0.11
3	C-5	100	BE9048	752.771	75.3	0.05
3	C-7	100	BE6723	52.230	5.2	2.59
4	C-1	100	BC6248	219.892	22.0	0.375
4	C-2	100	BC5826	356.354	35.6	0.195
4	C-3	100	BE9050	489.683	49.0	0.15
4	C-4	100	BC8054	640.709	64.1	0.13
4	C-5	100	BE9048	791.866	79.2	0.055
4	C-7	100	BE6723	99.177	9.9	1.110
5	C-1	100	BC6248	270.569	27.1	0.300
5	C-2	100	BC5826	403.938	40.4	0.165
5	C-3	100	BE9050	535.414	53.5	0.15
5	C-4	100	BC8054	684.948	68.5	0.13
5	C-5	100	BE9048	834.960	83.5	0.245
5	C-7	100	BE6723	151.415	15.1	0.495
6	C-1	100	BC6248	316.456	31.6	0.195
6	C-2	100	BC5826	447.8711	44.8	0.25
6	C-3	100	BE9050	577.9255	57.8	0.22
6	C-4	100	BC8054	726.2217	72.6	0.205
6	C-5	100	BE9048	875.2452	87.5	0.21
6	C-7	100	BE6723	197.8528	19.8	0.28

Event Report

Date/Time Vert at 11:31:18 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6248 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration May 1, 2003 by InstanTel Inc.
 File Name H2489ZSQ.O60

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

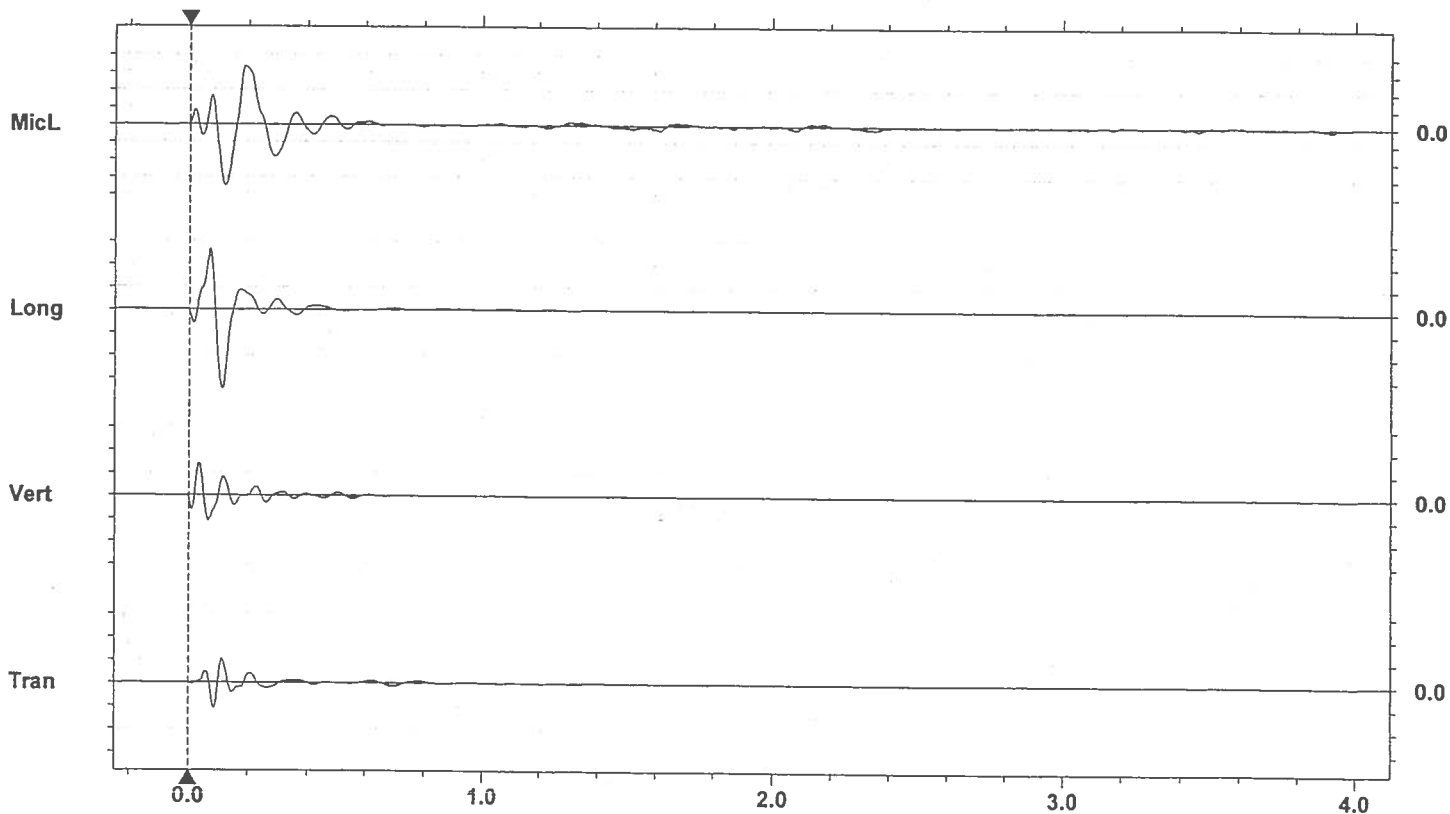
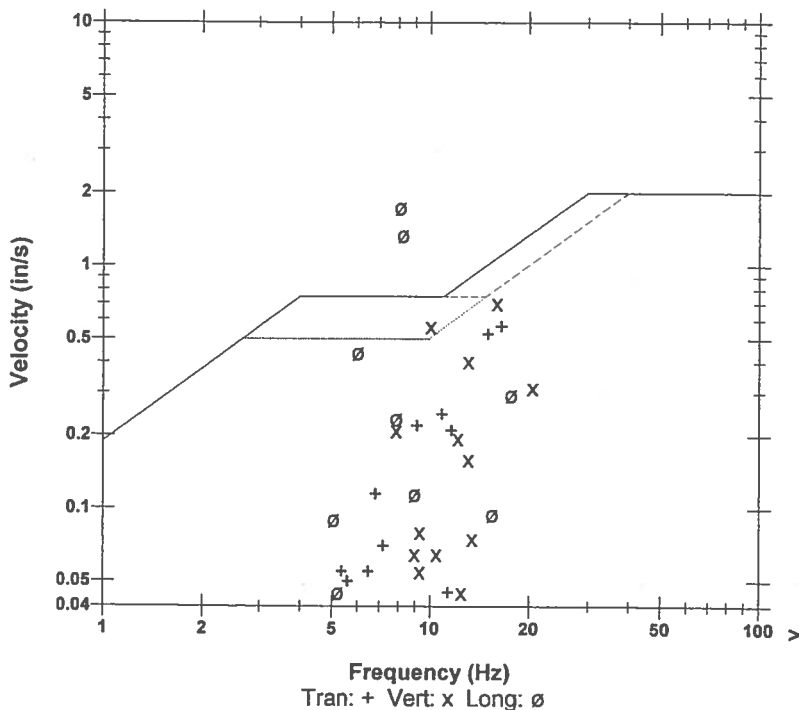
Blast 1 Location C-1

Microphone Linear Weighting
 PSPL 121.7 dB(L) at 0.120 sec
 ZC Freq 7.4 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 625 mv)

	Tran	Vert	Long	
PPV	0.565	0.705	1.74	in/s
ZC Freq	17	16	8.1	Hz
Time (Rel. to Trig)	0.085	0.034	0.112	sec
Peak Acceleration	0.159	0.186	0.331	g
Peak Displacement	0.00525	0.00814	0.0291	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 1.86 in/s at 0.114 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.500 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 11:37:23 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6248 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration May 1, 2003 by InstanTel Inc.
 File Name H2489ZSQ.YB0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

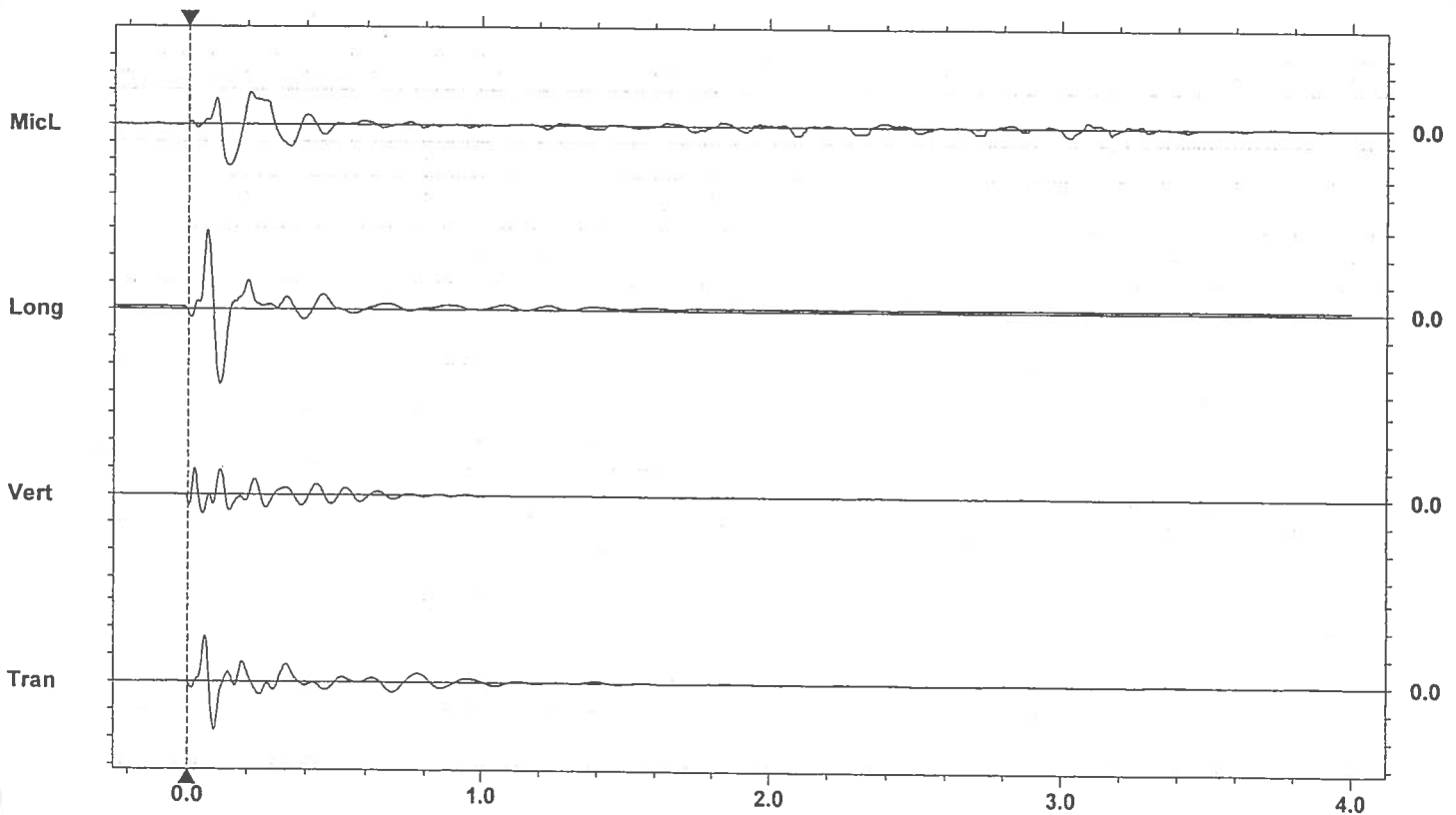
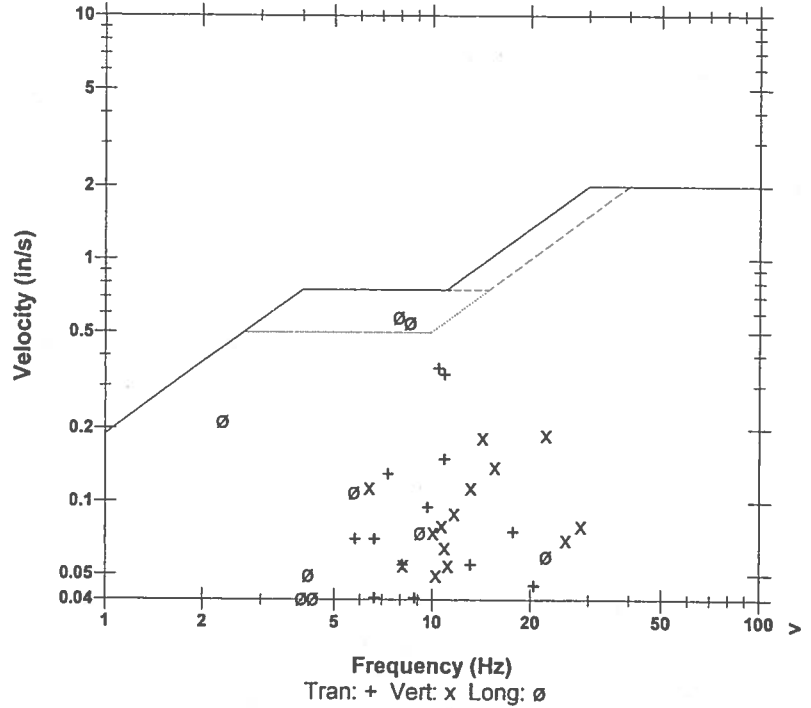
Post Event Notes
 Blast 2 Location C-1

Microphone Linear Weighting
 PSPL 118.3 dB(L) at 0.137 sec
 ZC Freq 6.6 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 625 mv)

	Tran	Vert	Long	
PPV	0.355	0.190	0.580	in/s
ZC Freq	10	22	7.9	Hz
Time (Rel. to Trig)	0.088	0.021	0.063	sec
Peak Acceleration	0.106	0.0663	0.119	g
Peak Displacement	0.00441	0.00207	0.0100	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.650 in/s at 0.062 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.200 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 12:32:03 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6248 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration May 1, 2003 by InstanTel Inc.
 File Name H2489ZST.HF0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

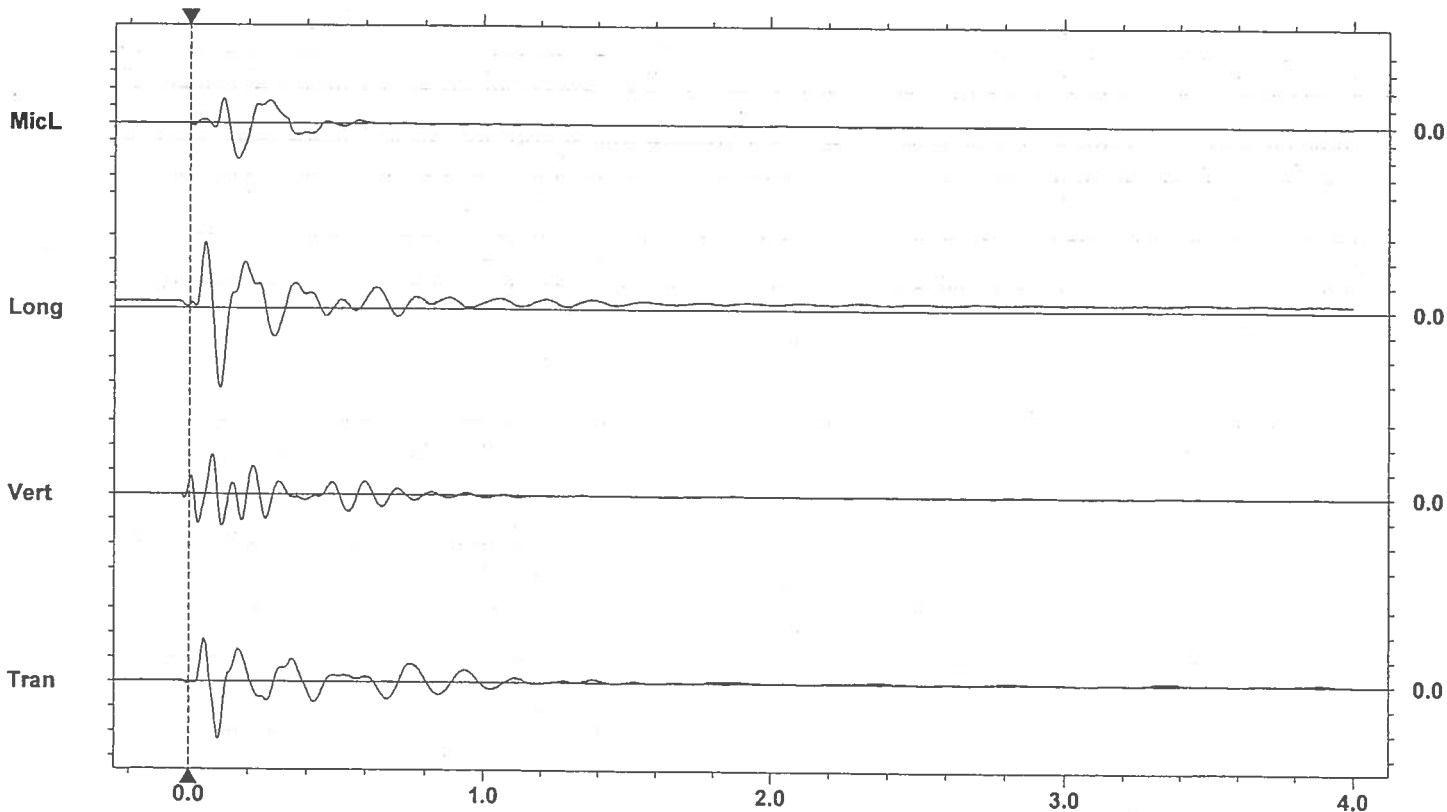
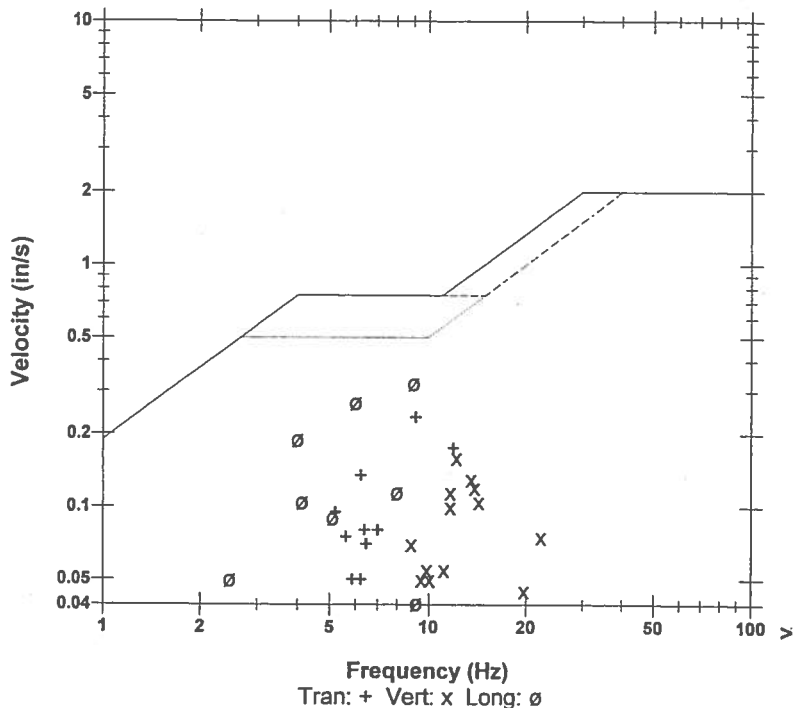
Blast 3 Location C-1

Microphone Linear Weighting
 PSPL 117.1 dB(L) at 0.164 sec
 ZC Freq 6.6 Hz
 Channel Test Passed (Freq = 19.3 Hz Amp = 674 mv)

	Tran	Vert	Long	
PPV	0.235	0.160	0.325	in/s
ZC Freq	9.1	12	9.0	Hz
Time (Rel. to Trig)	0.099	0.075	0.103	sec
Peak Acceleration	0.0398	0.0530	0.0530	g
Peak Displacement	0.00363	0.00199	0.00656	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.403 in/s at 0.103 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 12:35:46 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6248 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration May 1, 2003 by Instantel Inc.
 File Name H2489ZST.NM0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

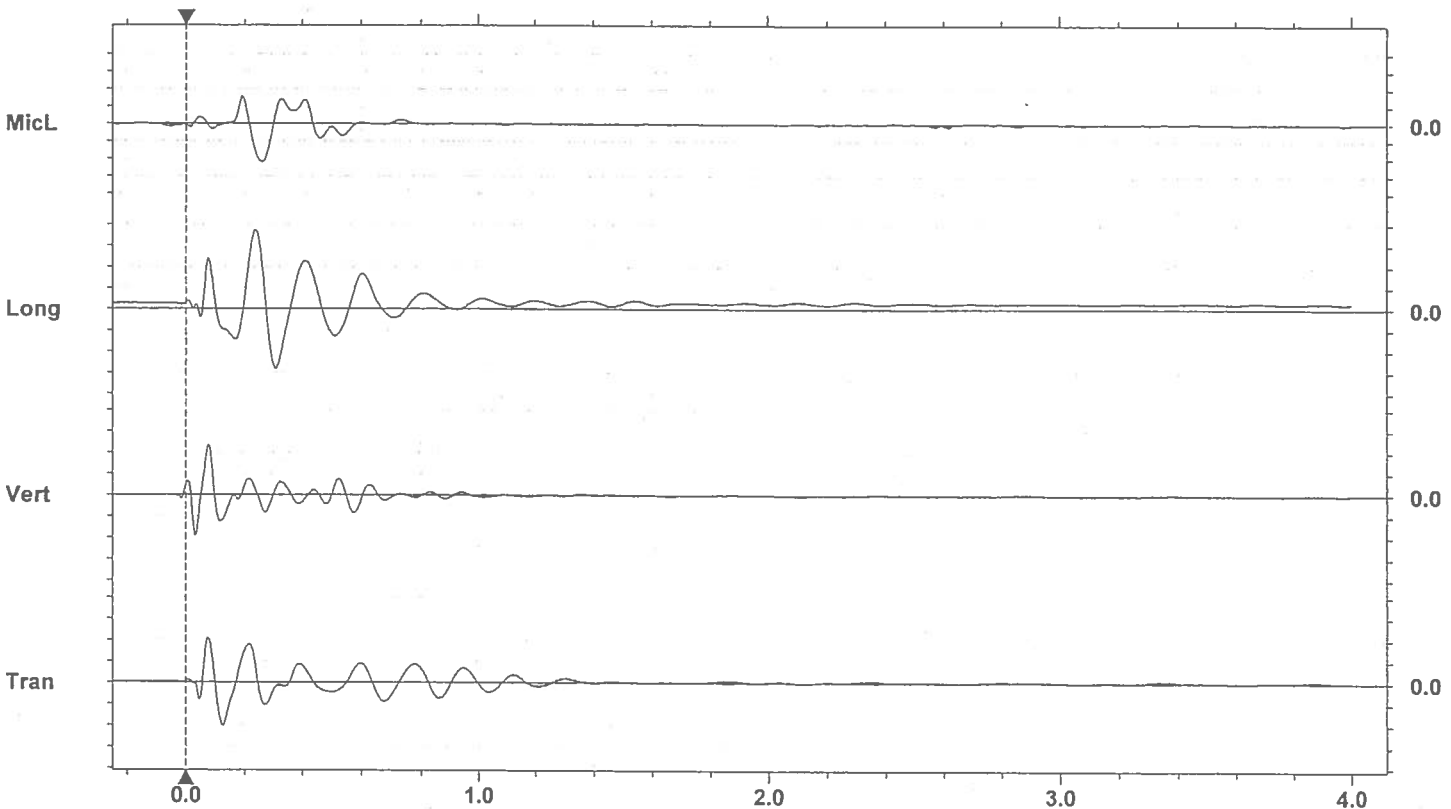
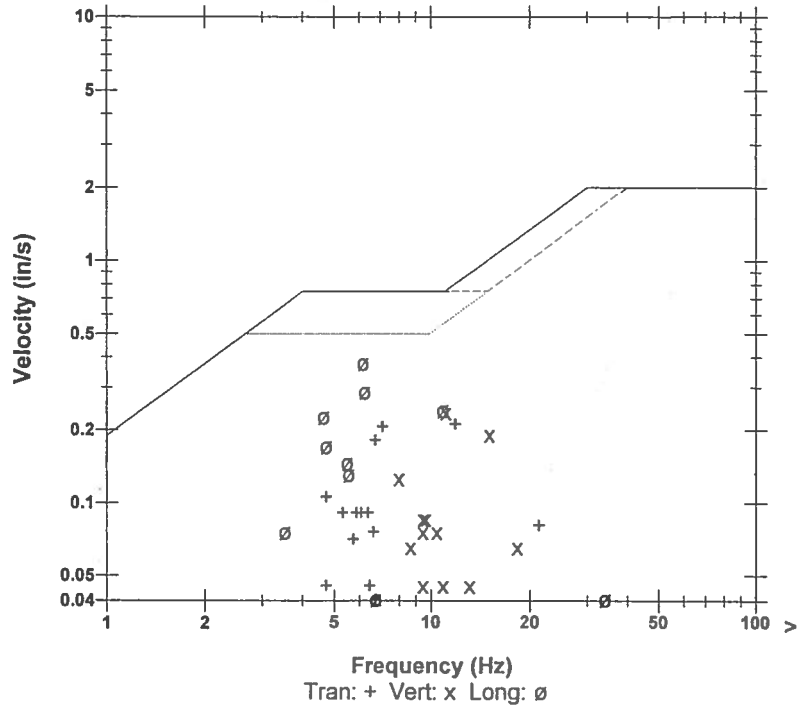
Post Event Notes
 Blast 4 Location C-1

Microphone Linear Weighting
 PSPL 117.6 dB(L) at 0.261 sec
 ZC Freq 5.8 Hz
 Channel Test Passed (Freq = 19.3 Hz Amp = 674 mv)

	Tran	Vert	Long	
PPV	0.210	0.235	0.375	in/s
ZC Freq	12	11	6.2	Hz
Time (Rel. to Trig)	0.075	0.077	0.238	sec
Peak Acceleration	0.0530	0.0530	0.0530	g
Peak Displacement	0.00429	0.00306	0.00940	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.393 in/s at 0.076 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 12:45:19 February 25, 2004
Trigger Source Geo: 0.0500 in/s
Range Geo: 10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BC6248 V 4.37-4.35 MiniMate Plus
Battery Level 6.3 Volts
Calibration May 1, 2003 by Instatel Inc.
File Name H2489ZSU.3J0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

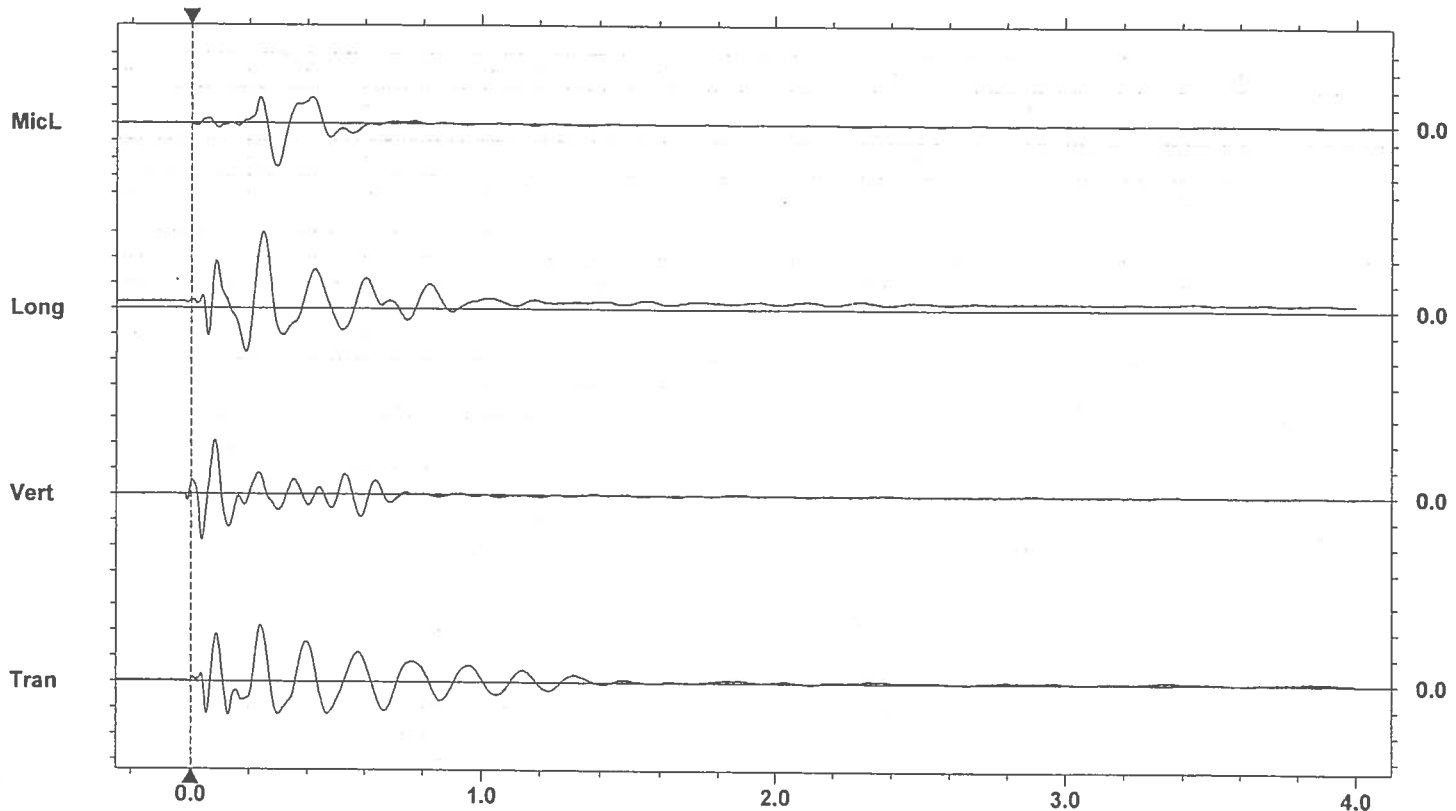
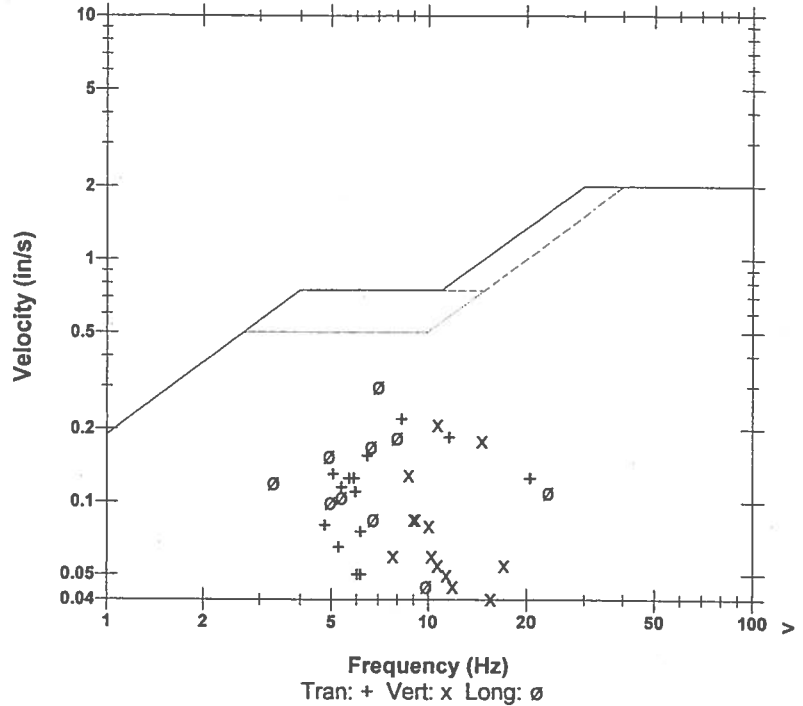
Blast 5 Location C-1

Microphone Linear Weighting
PSPL 118.6 dB(L) at 0.290 sec
ZC Freq 6.7 Hz
Channel Test Passed (Freq = 19.3 Hz Amp = 674 mv)

	Tran	Vert	Long	
PPV	0.220	0.210	0.300	in/s
ZC Freq	8.3	11	7.0	Hz
Time (Rel. to Trig)	0.237	0.081	0.246	sec
Peak Acceleration	0.0398	0.0530	0.0530	g
Peak Displacement	0.00399	0.00292	0.00658	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.368 in/s at 0.243 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
Trigger =

Event Report

Date/Time Vert at 13:08:52 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC6248 V 4.37-4.35 MiniMate Plus
 Battery Level 6.4 Volts
 Calibration May 1, 2003 by Instantel Inc.
 File Name H2489ZSV.6S0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

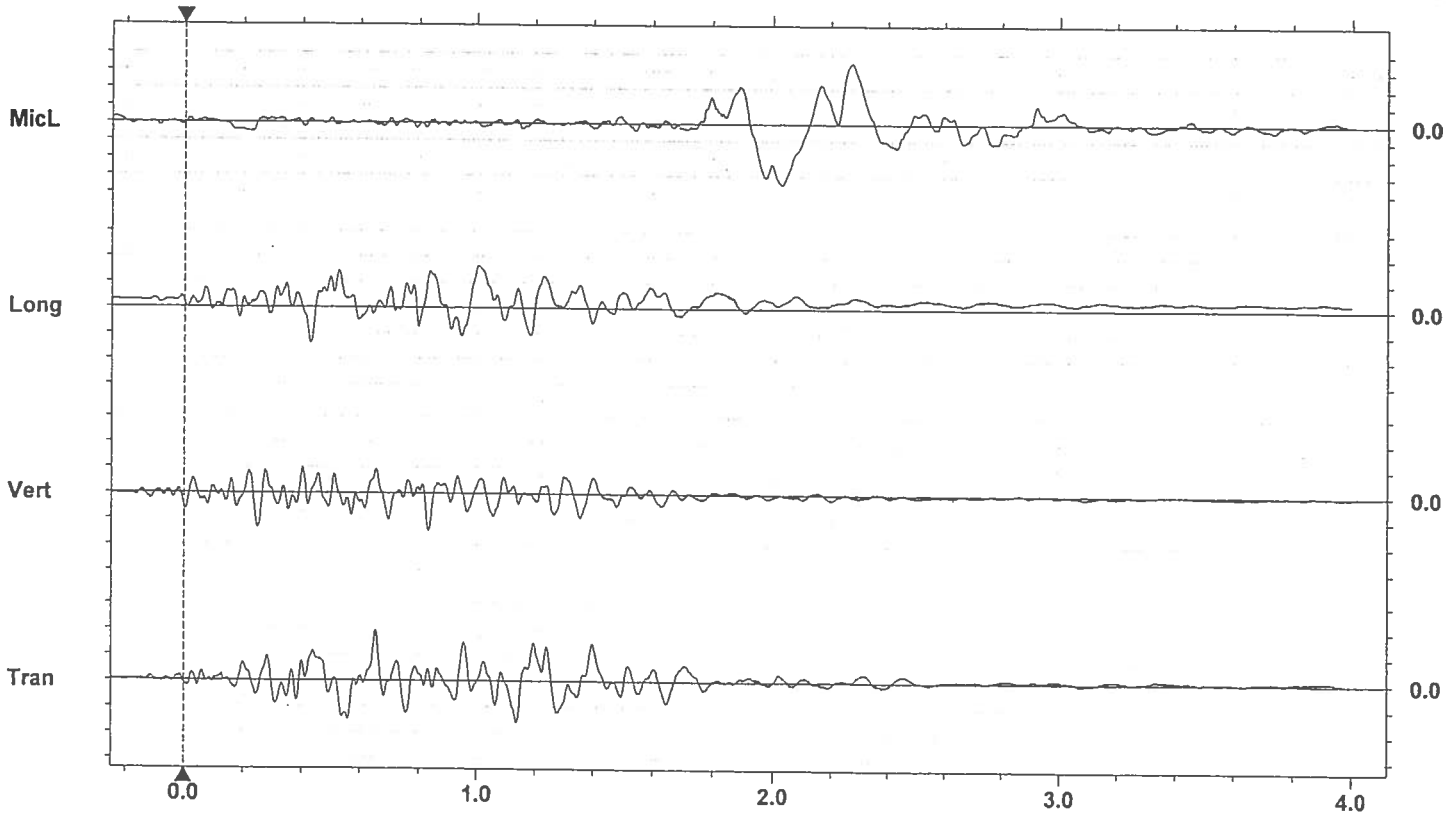
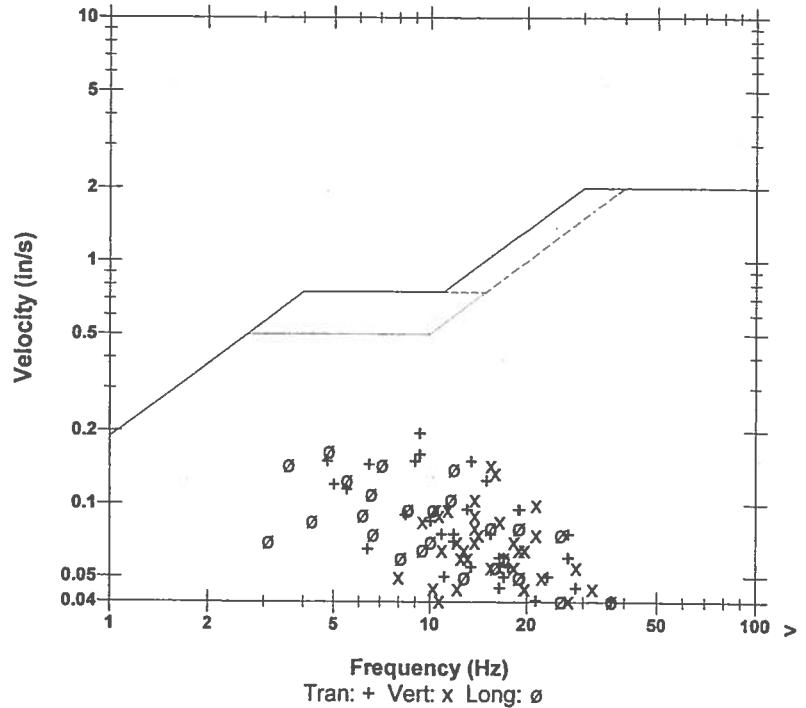
Post Event Notes
 Blast 6 Location C-1

Microphone Linear Weighting
 PSPL 121.8 dB(L) at 2.271 sec
 ZC Freq 2.2 Hz
 Channel Test Passed (Freq = 19.3 Hz Amp = 674 mv)

	Tran	Vert	Long	
PPV	0.195	0.145	0.165	in/s
ZC Freq	9.3	16	4.8	Hz
Time (Rel. to Trig)	0.654	0.833	1.004	sec
Peak Acceleration	0.0398	0.0530	0.0530	g
Peak Displacement	0.00402	0.00143	0.00483	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.217 in/s at 0.656 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger = >----->

Event Report

Date/Time Vert at 11:31:17 February 25, 2004
Trigger Source Geo: 0.0500 in/s
Range Geo :10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BC5826 V 4.37-4.32 MiniMate Plus
Battery Level 6.5 Volts
Calibration April 30, 2003 by InstanTel Inc.
File Name G8269ZSQ.050

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

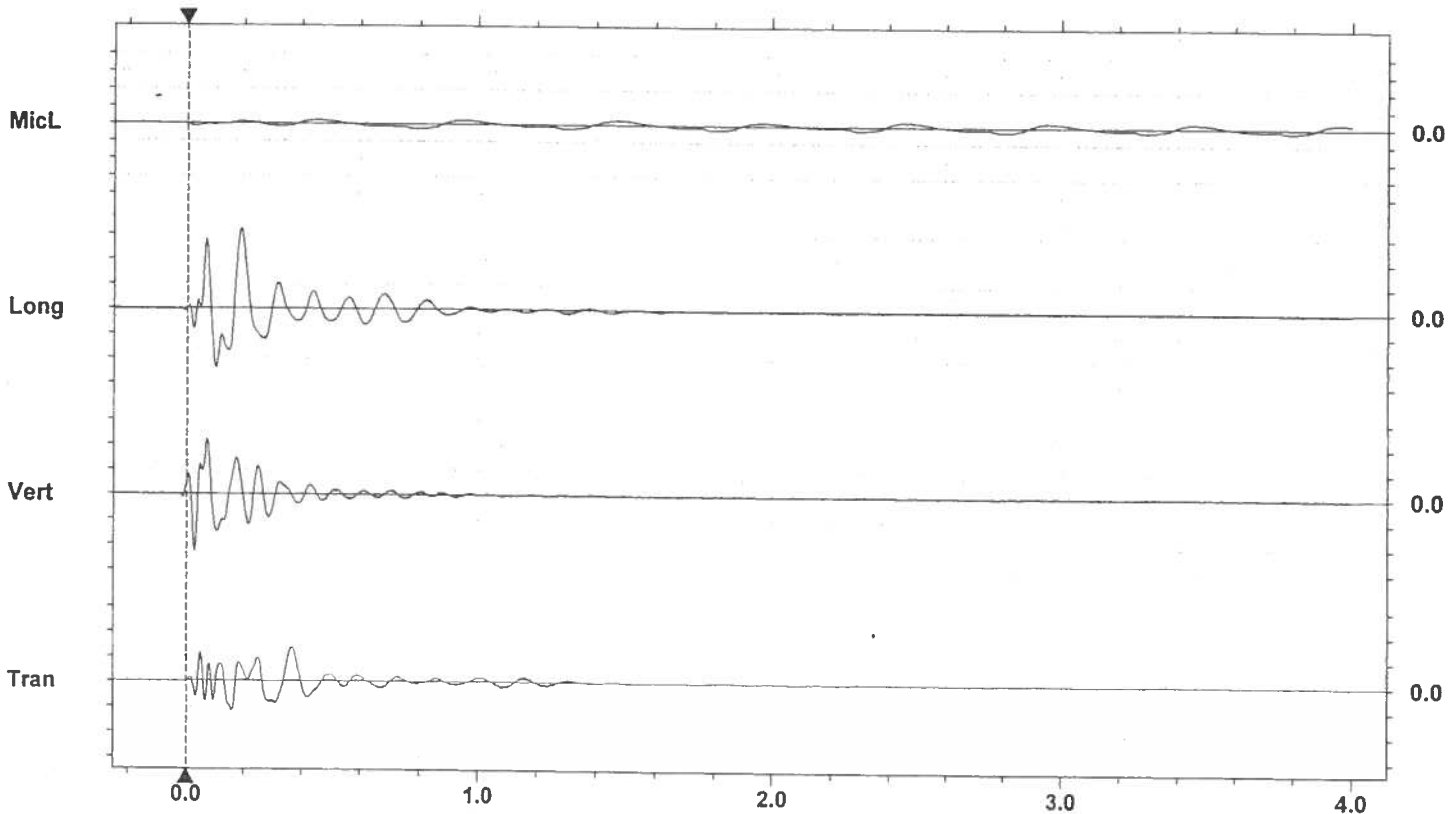
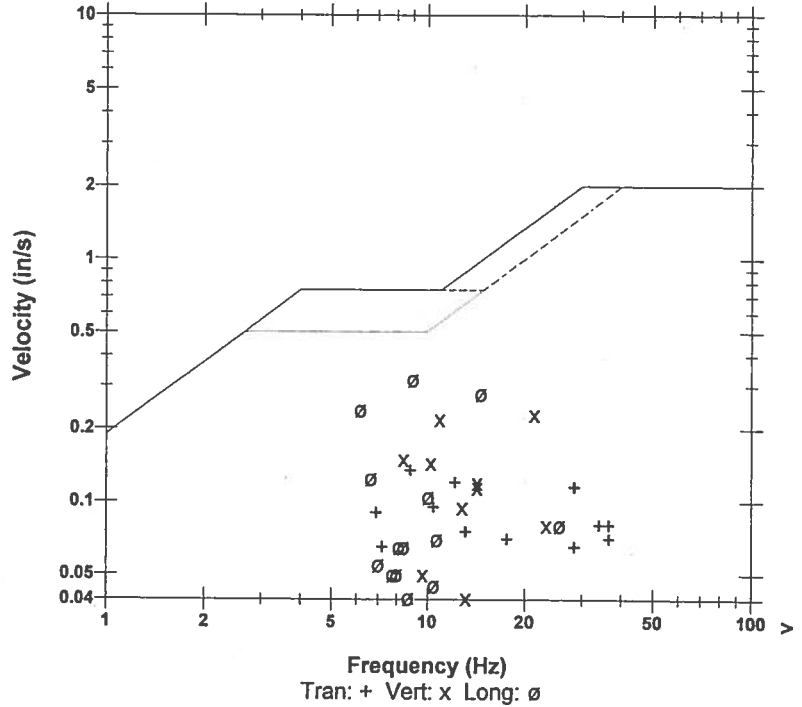
Post Event Notes
 Blast 1 Location C-2

Microphone Linear Weighting
PSPL 101.0 dB(L) at 1.470 sec
ZC Freq 2.7 Hz
Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	0.135	0.230	0.320	in/s
ZC Freq	8.8	21	9.0	Hz
Time (Rel. to Trig)	0.364	0.028	0.188	sec
Peak Acceleration	0.0663	0.0795	0.0795	g
Peak Displacement	0.00238	0.00301	0.00596	in
Sensorcheck	Check	Passed	Passed	

Peak Vector Sum 0.353 in/s at 0.067 sec

USBM RI8507 And OSMRE



Event Report

Date/Time Vert at 11:37:22 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC5826 V 4.37-4.32 MiniMate Plus
 Battery Level 6.5 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name G8269ZSQ.YA0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

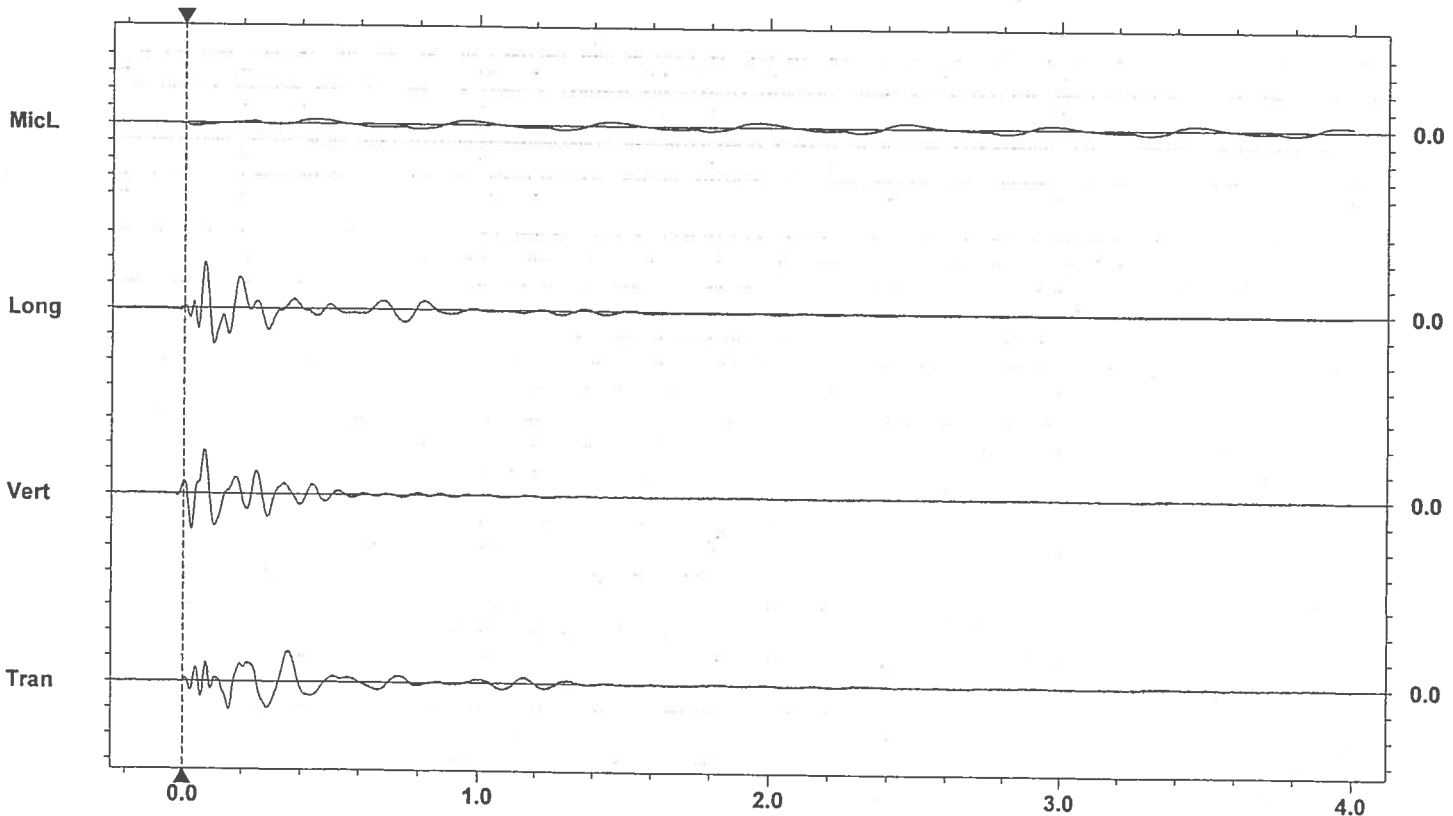
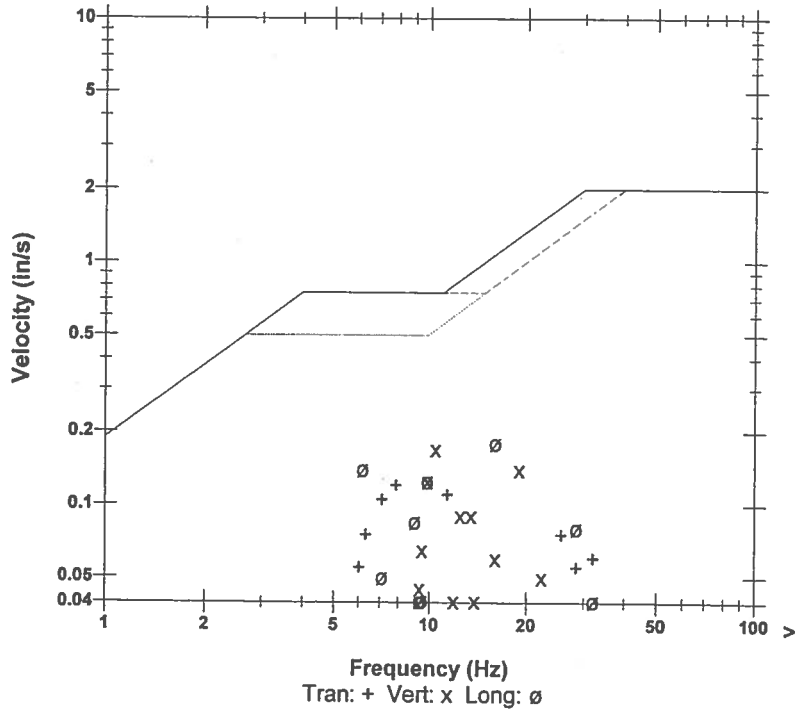
Blast 2 Location C-2

Microphone Linear Weighting
 PSPL 101.0 dB(L) at 1.940 sec
 ZC Freq 2.8 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	0.120	0.170	0.180	in/s
ZC Freq	7.9	10	16	Hz
Time (Rel. to Trig)	0.359	0.068	0.068	sec
Peak Acceleration	0.0398	0.0530	0.0530	g
Peak Displacement	0.00233	0.00213	0.00309	in
Sensorcheck	Check	Passed	Passed	

Peak Vector Sum 0.249 in/s at 0.070 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 12:32:02 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC5826 V 4.37-4.32 MiniMate Plus
 Battery Level 6.6 Volts
 Calibration April 30, 2003 by Instantel Inc.
 File Name G8269ZST.HE0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

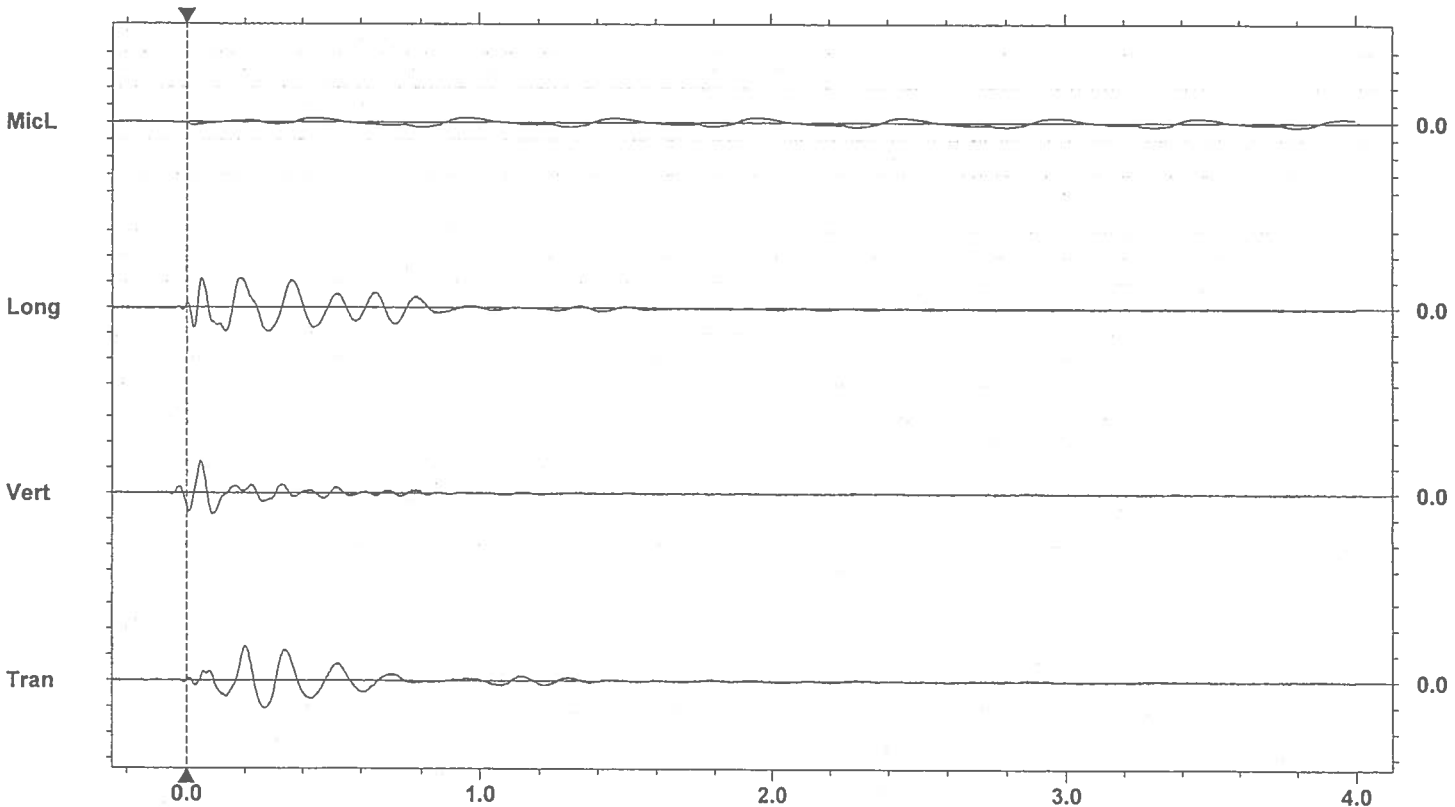
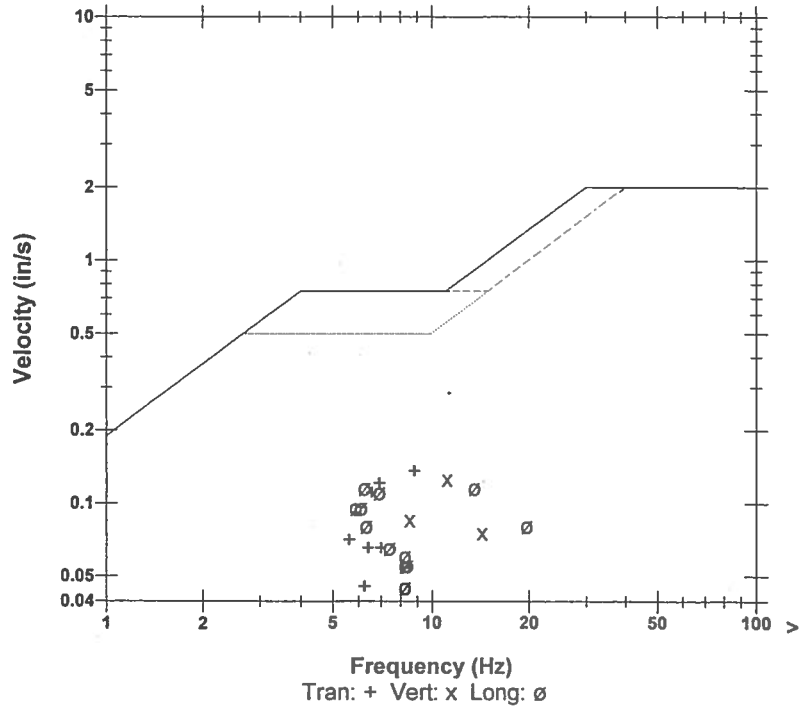
Blast 3 Location C-2

Microphone Linear Weighting
 PSPL 101.0 dB(L) at 1.935 sec
 ZC Freq 2.8 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	0.135	0.125	0.115	in/s
ZC Freq	8.8	11	13	Hz
Time (Rel. to Trig)	0.200	0.047	0.051	sec
Peak Acceleration	0.0398	0.0398	0.0398	g
Peak Displacement	0.00284	0.00162	0.00271	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.168 in/s at 0.200 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger = >----->

Event Report

Date/Time Vert at 12:35:45 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC5826 V 4.37-4.32 MiniMate Plus
 Battery Level 6.6 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name G8269ZST.NL0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

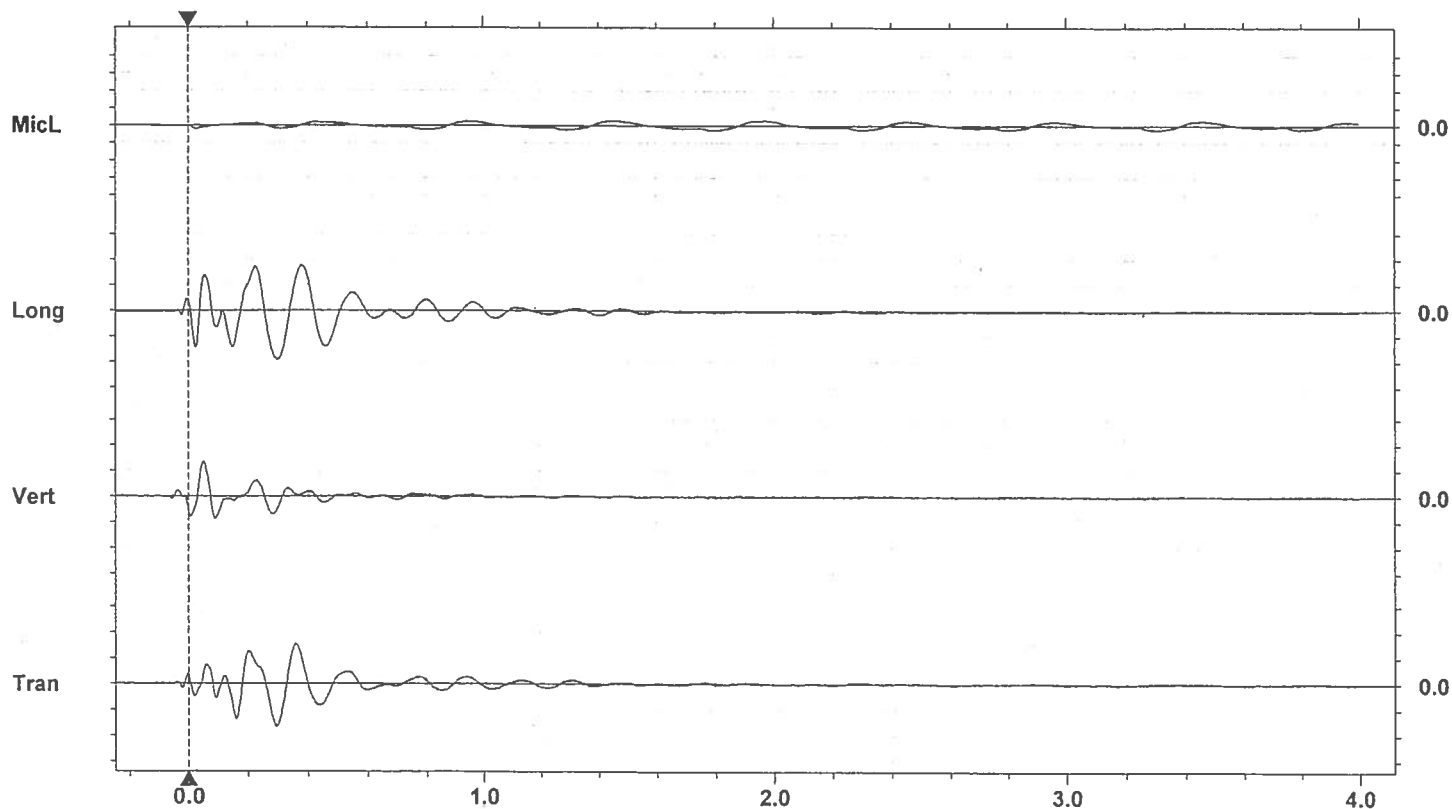
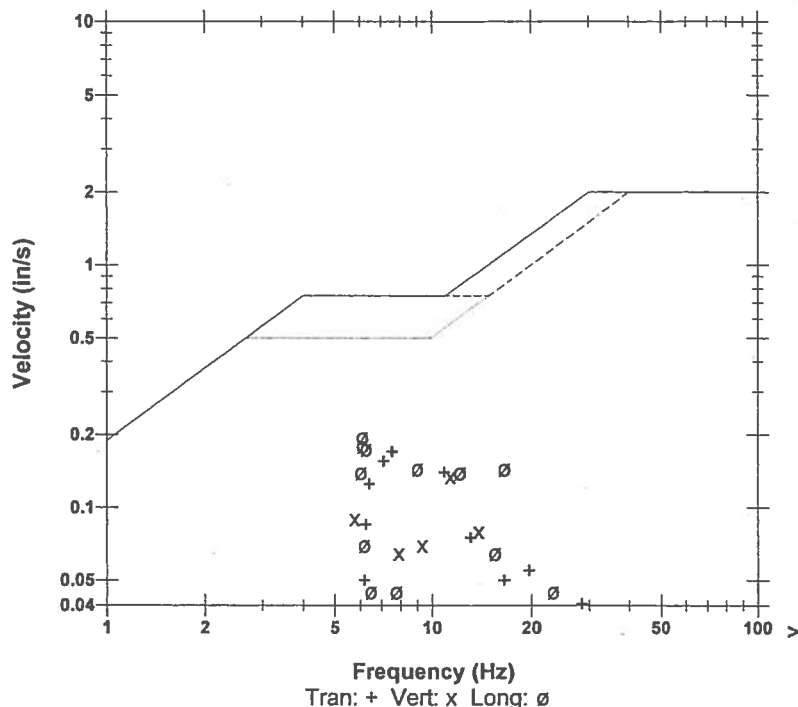
Post Event Notes
 Blast 4 Location C-2

Microphone Linear Weighting
 PSPL 101.0 dB(L) at 1.444 sec
 ZC Freq 2.8 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	0.170	0.135	0.195	in/s
ZC Freq	7.5	11	6.1	Hz
Time (Rel. to Trig)	0.293	0.047	0.297	sec
Peak Acceleration	0.0398	0.0398	0.0530	g
Peak Displacement	0.00342	0.00185	0.00515	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.261 in/s at 0.297 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger = >-----<

Event Report

Date/Time Long at 12:45:18 February 25, 2004
Trigger Source Geo: 0.0500 in/s
Range Geo :10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BC5826 V 4.37-4.32 MiniMate Plus
Battery Level 6.5 Volts
Calibration April 30, 2003 by InstanTel Inc.
File Name G8269ZSU.310

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

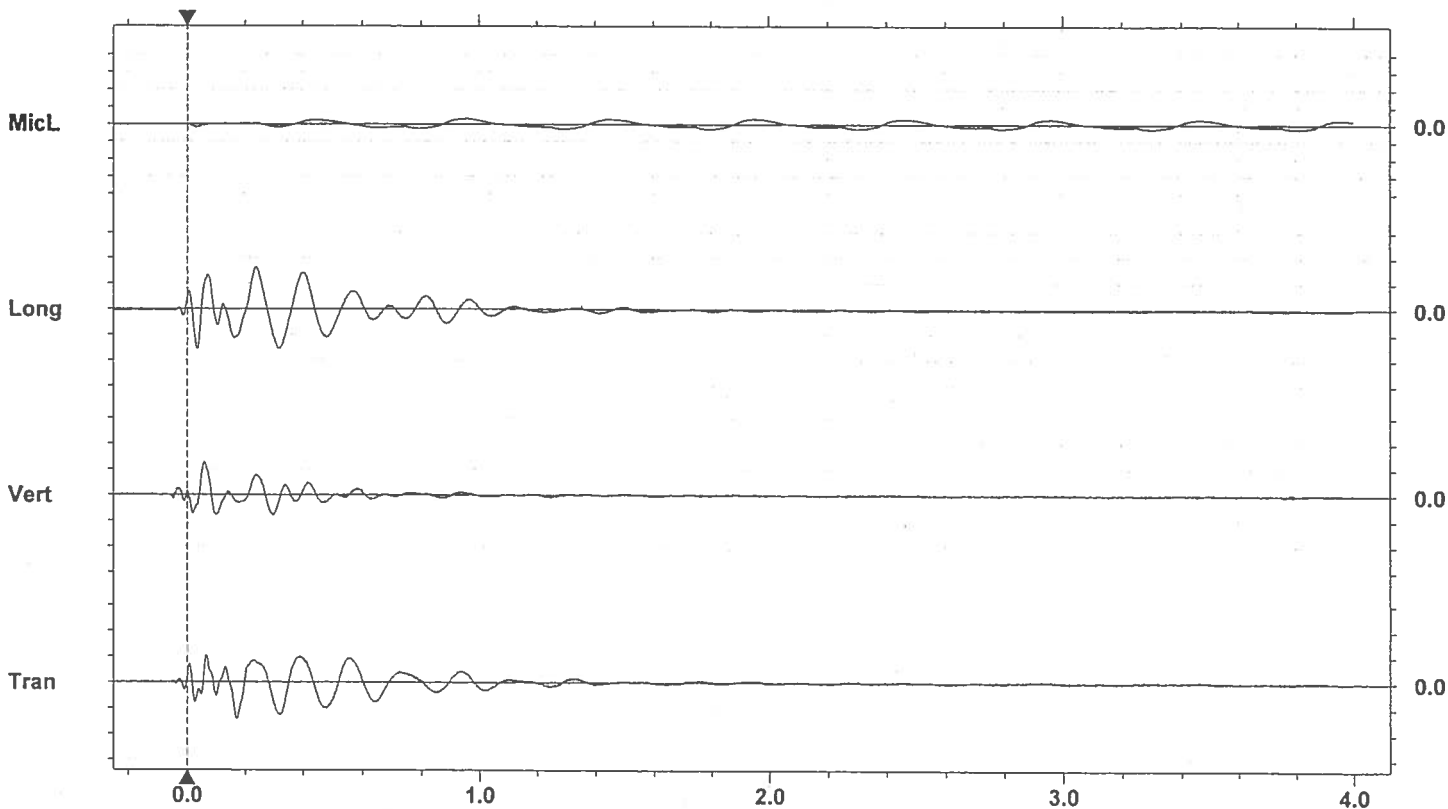
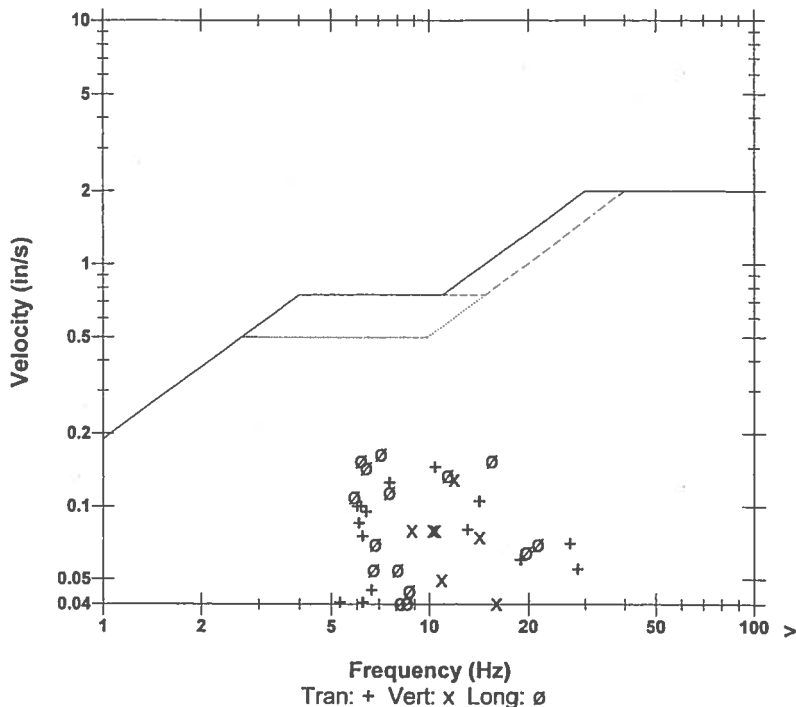
Blast 5 Location C-2

Microphone Linear Weighting
PSPL 101.9 dB(L) at 0.947 sec
ZC Freq 3.0 Hz
Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	0.145	0.130	0.165	in/s
ZC Freq	10	12	7.1	Hz
Time (Rel. to Trig)	0.172	0.061	0.237	sec
Peak Acceleration	0.0398	0.0398	0.0530	g
Peak Displacement	0.00282	0.00170	0.00386	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.201 in/s at 0.316 sec

USBM RI8507 And OSMRE



Event Report

Date/Time Vert at 13:08:51 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC5826 V 4.37-4.32 MiniMate Plus
 Battery Level 6.6 Volts
 Calibration April 30, 2003 by InstanTel Inc.
 File Name G8269ZSV.6R0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

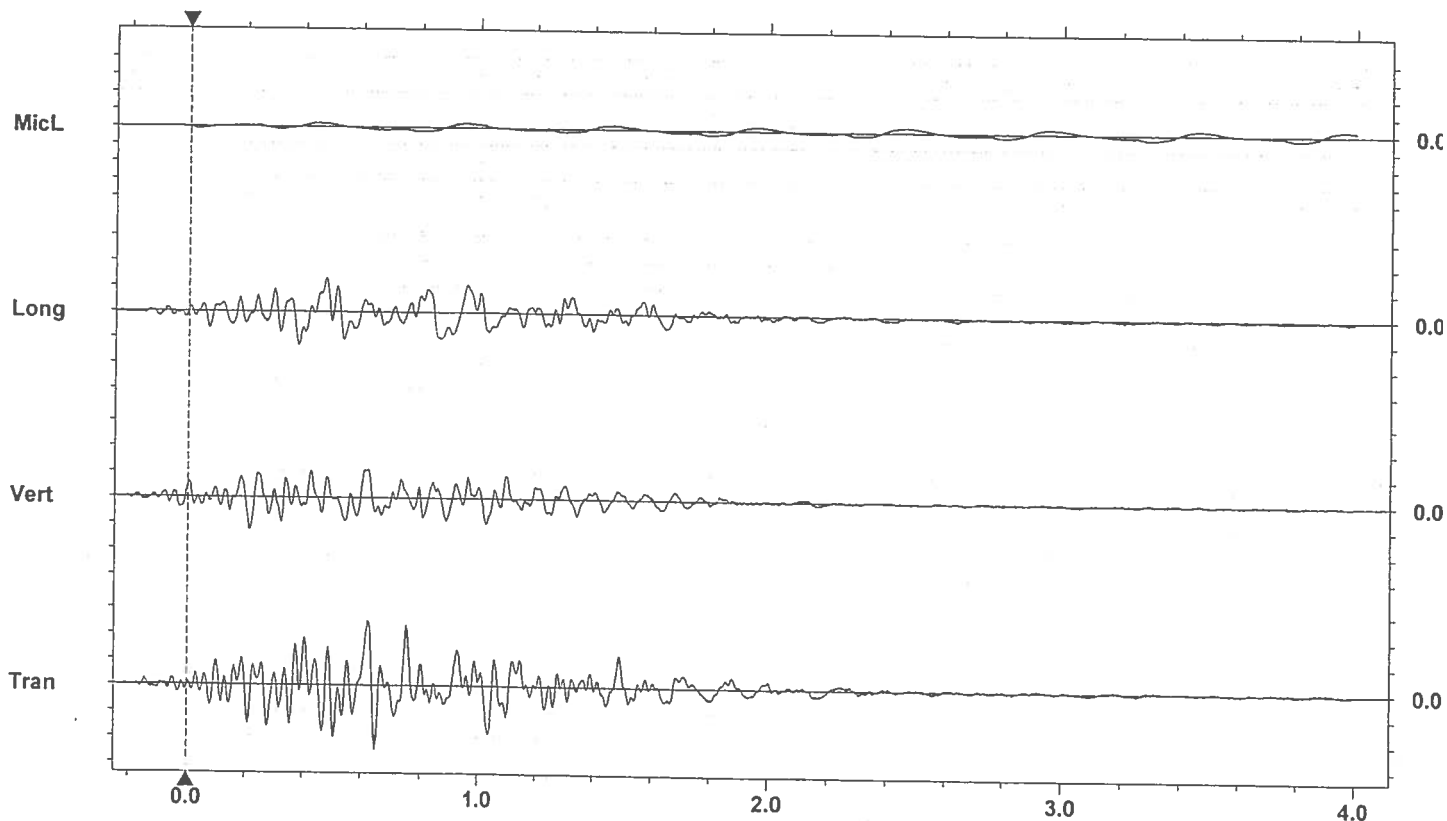
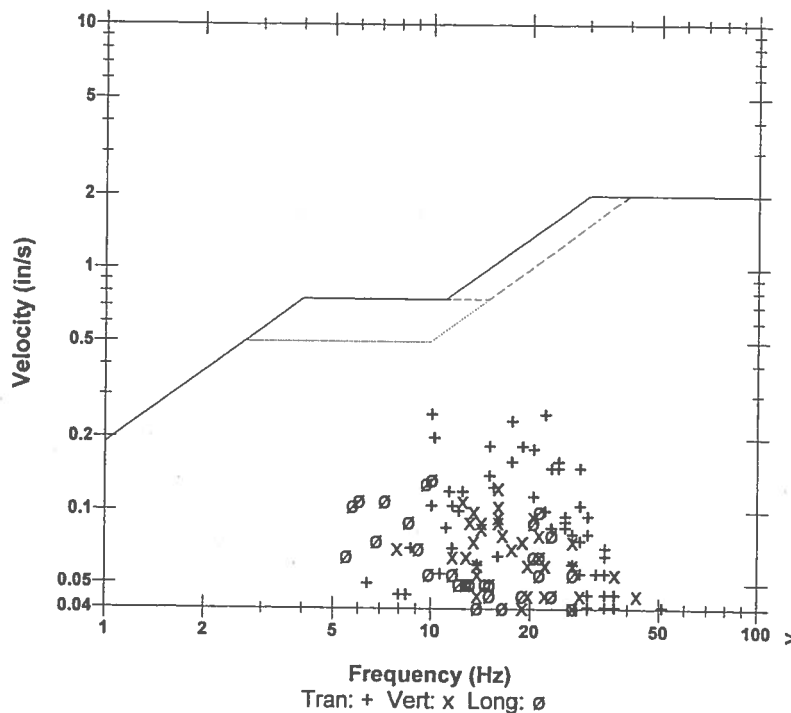
Blast 6 Location C-2

Microphone Linear Weighting
 PSPL 101.0 dB(L) at 2.442 sec
 ZC Freq 2.9 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	0.250	0.125	0.135	in/s
ZC Freq	10	16	10	Hz
Time (Rel. to Trig)	0.625	0.214	0.475	sec
Peak Acceleration	0.0928	0.0530	0.0398	g
Peak Displacement	0.00310	0.00159	0.00309	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.275 in/s at 0.625 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 11:31:13 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE9050 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration October 9, 2003 by Instanetel Inc.
 File Name K0509ZSQ.O10

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

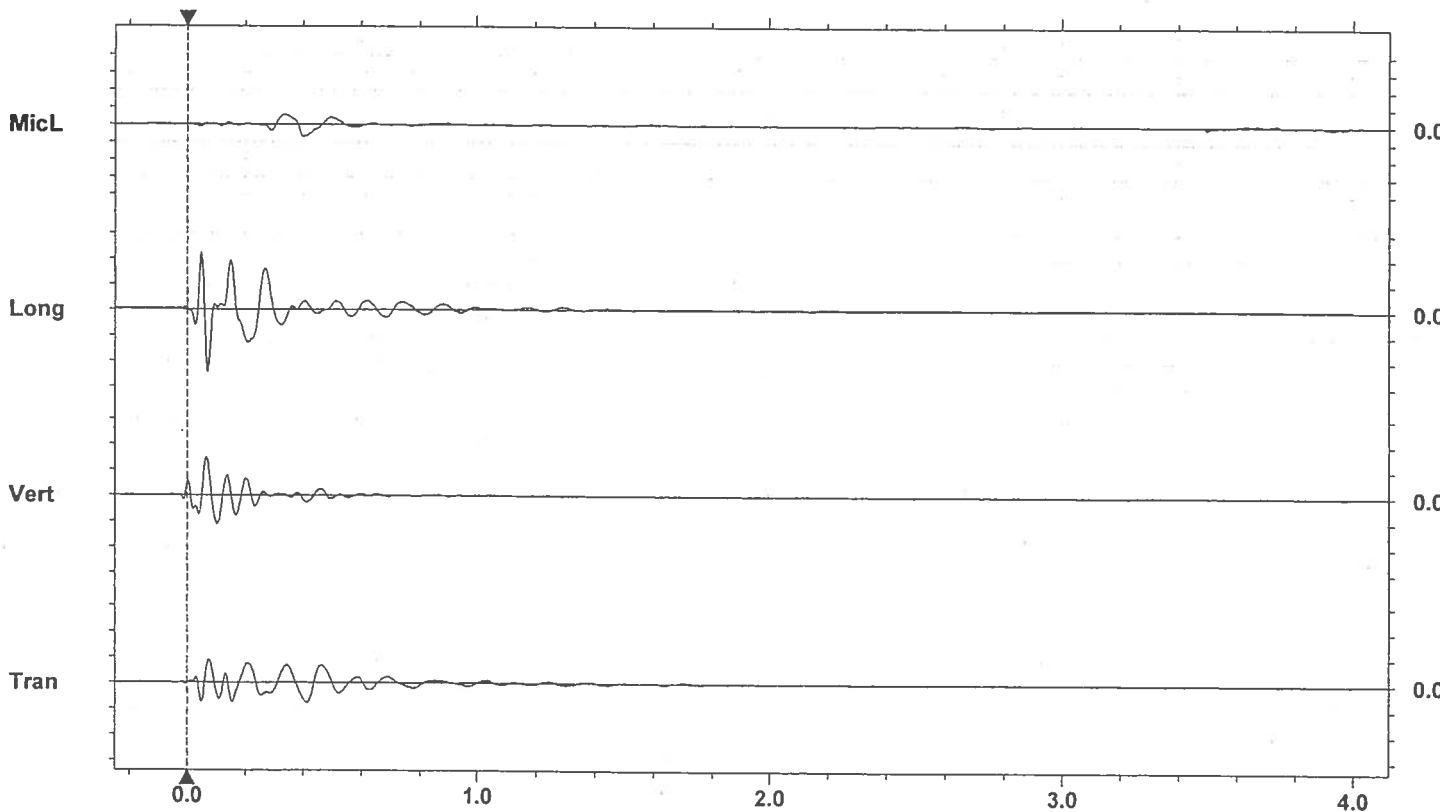
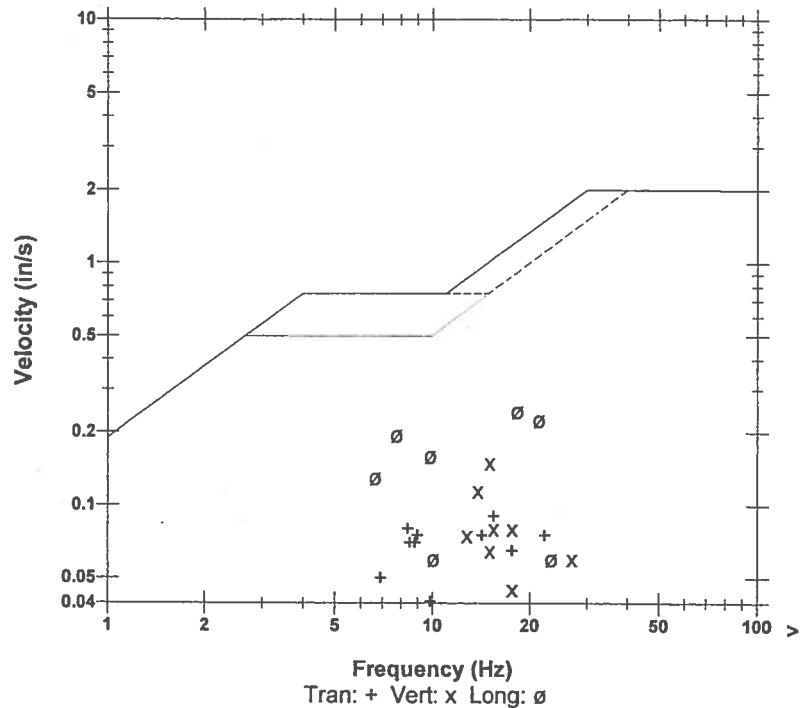
Blast 1 Location C-3

Microphone Linear Weighting
 PSPL 108.0 dB(L) at 0.398 sec
 ZC Freq 6.3 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 722 mv)

	Tran	Vert	Long	
PPV	0.0900	0.150	0.245	in/s
ZC Freq	16	15	18	Hz
Time (Rel. to Trig)	0.075	0.067	0.071	sec
Peak Acceleration	0.0398	0.0398	0.0928	g
Peak Displacement	0.00150	0.00154	0.00323	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.290 in/s at 0.071 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 11:37:17 February 25, 2004
Trigger Source Geo: 0.0500 in/s
Range Geo :10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BE9050 V 4.37-4.35 MiniMate Plus
Battery Level 6.3 Volts
Calibration October 9, 2003 by Instatel Inc.
File Name K0509ZSQ.Y50

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

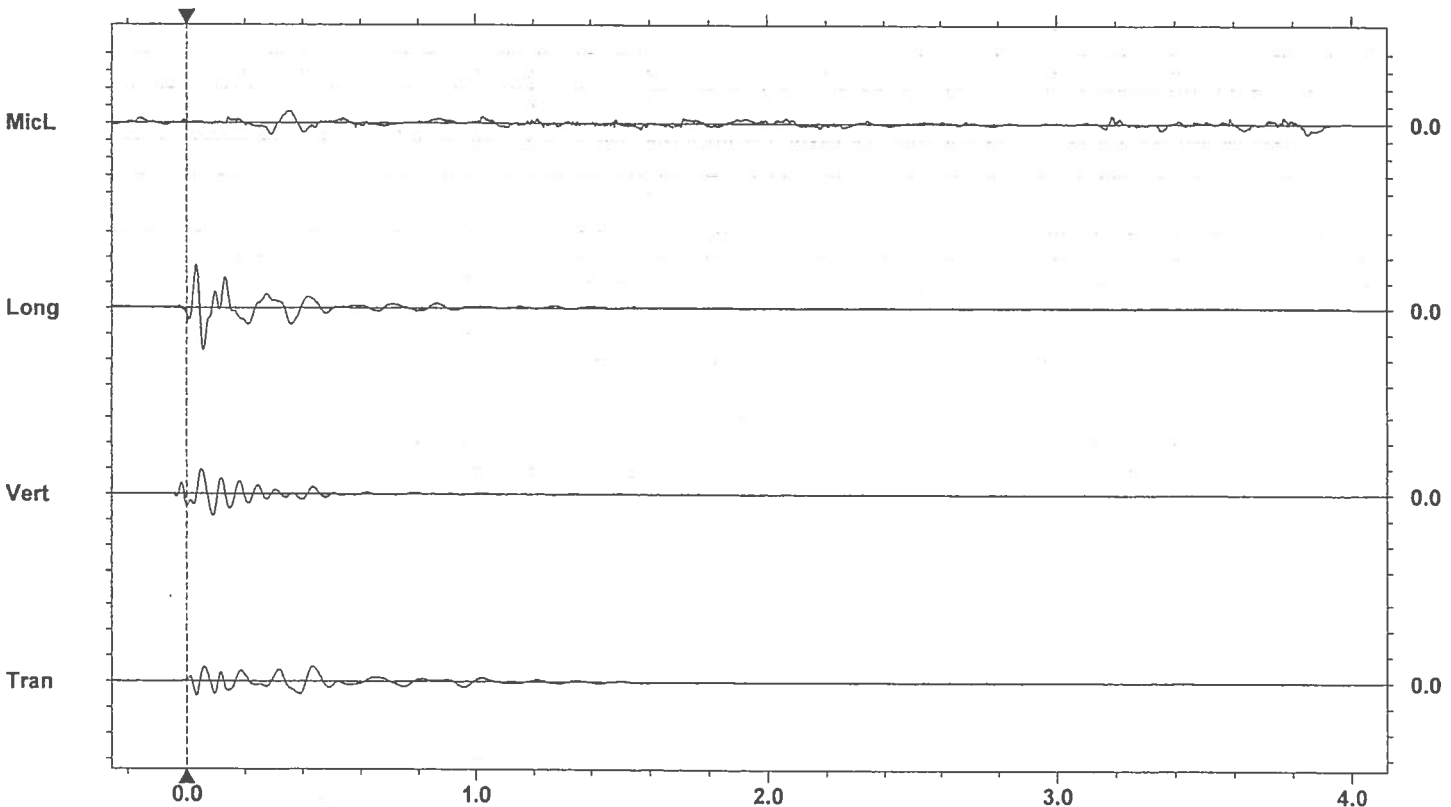
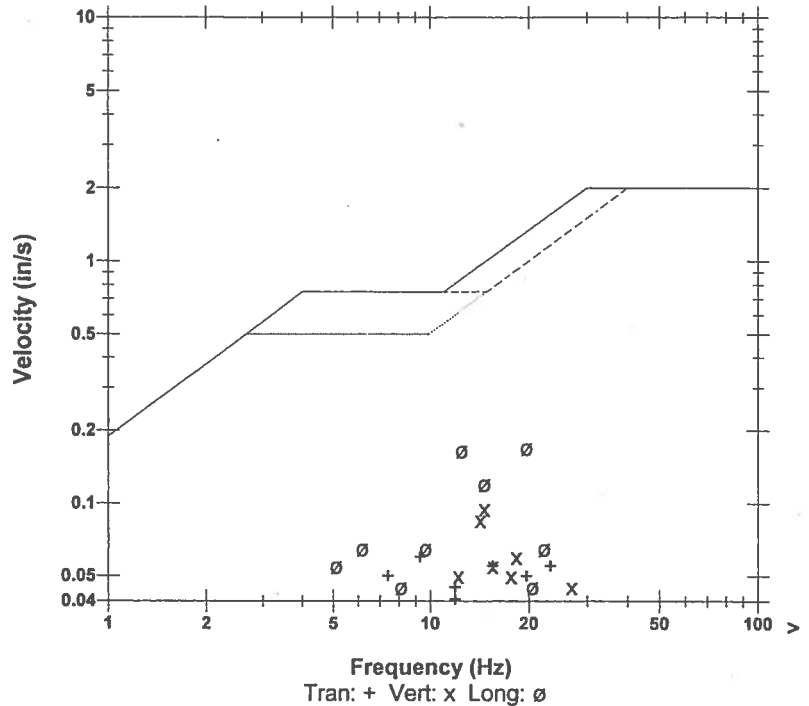
Post Event Notes
 Blast 2 Location C-3

Microphone Linear Weighting
PSPL 107.5 dB(L) at 0.292 sec
ZC Freq 5.3 Hz
Channel Test Passed (Freq = 20.5 Hz Amp = 722 mv)

	Tran	Vert	Long	
PPV	0.0600	0.0950	0.170	in/s
ZC Freq	9.3	15	20	Hz
Time (Rel. to Trig)	0.436	0.046	0.032	sec
Peak Acceleration	0.0265	0.0265	0.0663	g
Peak Displacement	0.00108	0.00104	0.00167	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.194 in/s at 0.054 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
Trigger =

Event Report

Date/Time Long at 12:31:58 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE9050 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration October 9, 2003 by Instatel Inc.
 File Name K0509ZST.HA0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

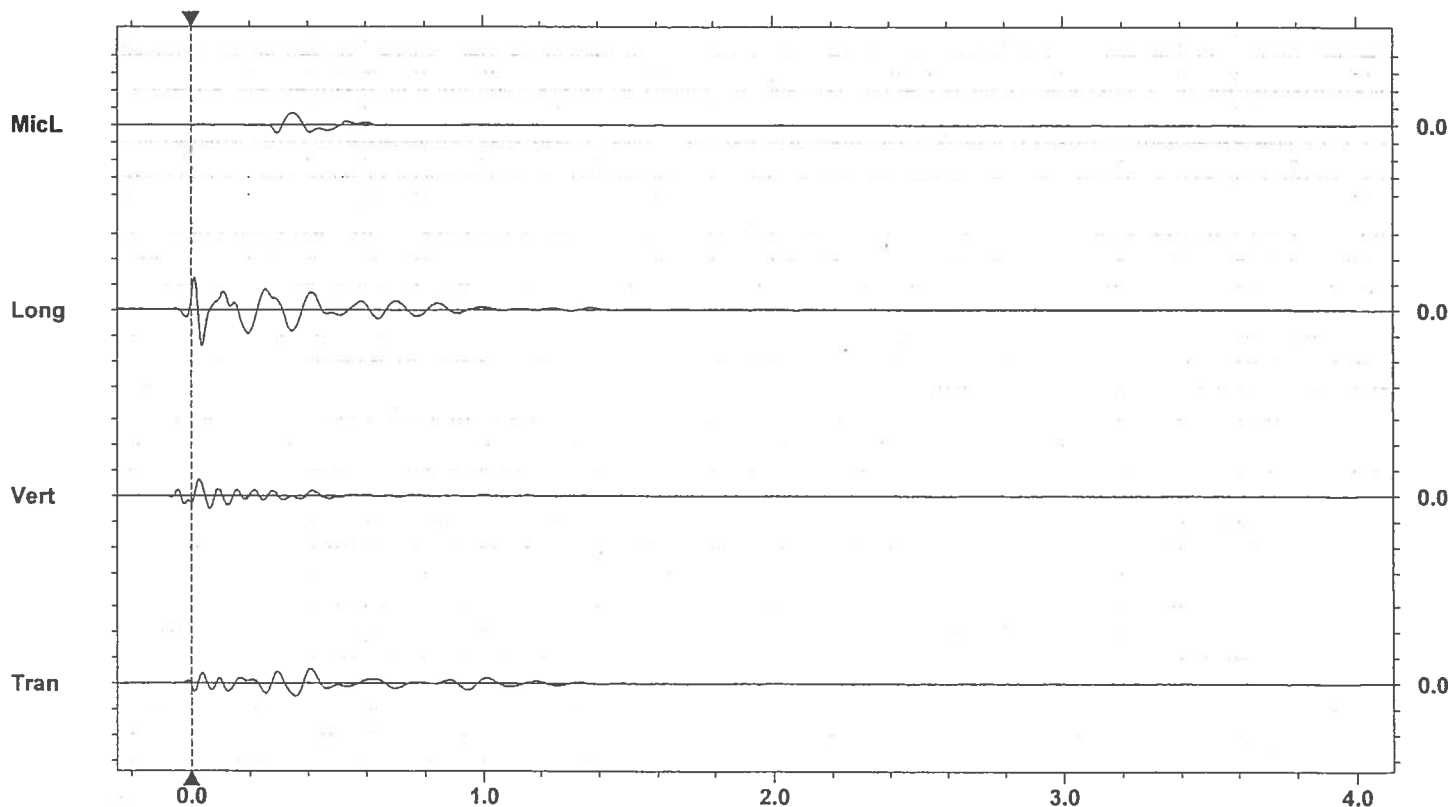
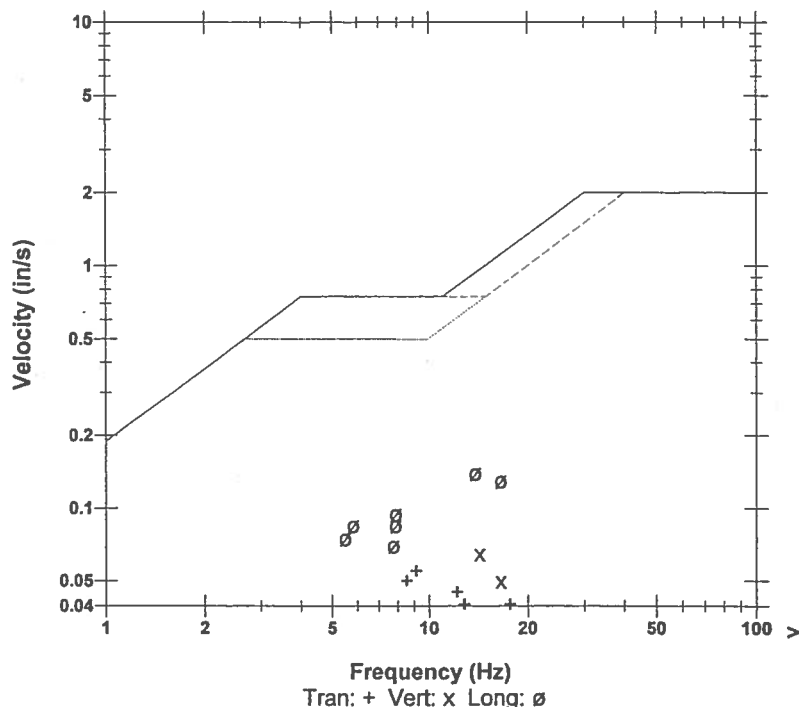
Post Event Notes
 Blast 3 Location C-3

Microphone Linear Weighting
 PSPL 107.5 dB(L) at 0.344 sec
 ZC Freq 7.1 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 591 mv)

	Tran	Vert	Long	
PPV	0.0550	0.0650	0.140	in/s
ZC Freq	9.1	14	14	Hz
Time (Rel. to Trig)	0.402	0.026	0.036	sec
Peak Acceleration	0.0265	0.0133	0.0530	g
Peak Displacement	0.00099	0.00072	0.00212	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.153 in/s at 0.036 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:35:41 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo :10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE9050 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration October 9, 2003 by Instatel Inc.
 File Name K0509ZST.NH0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

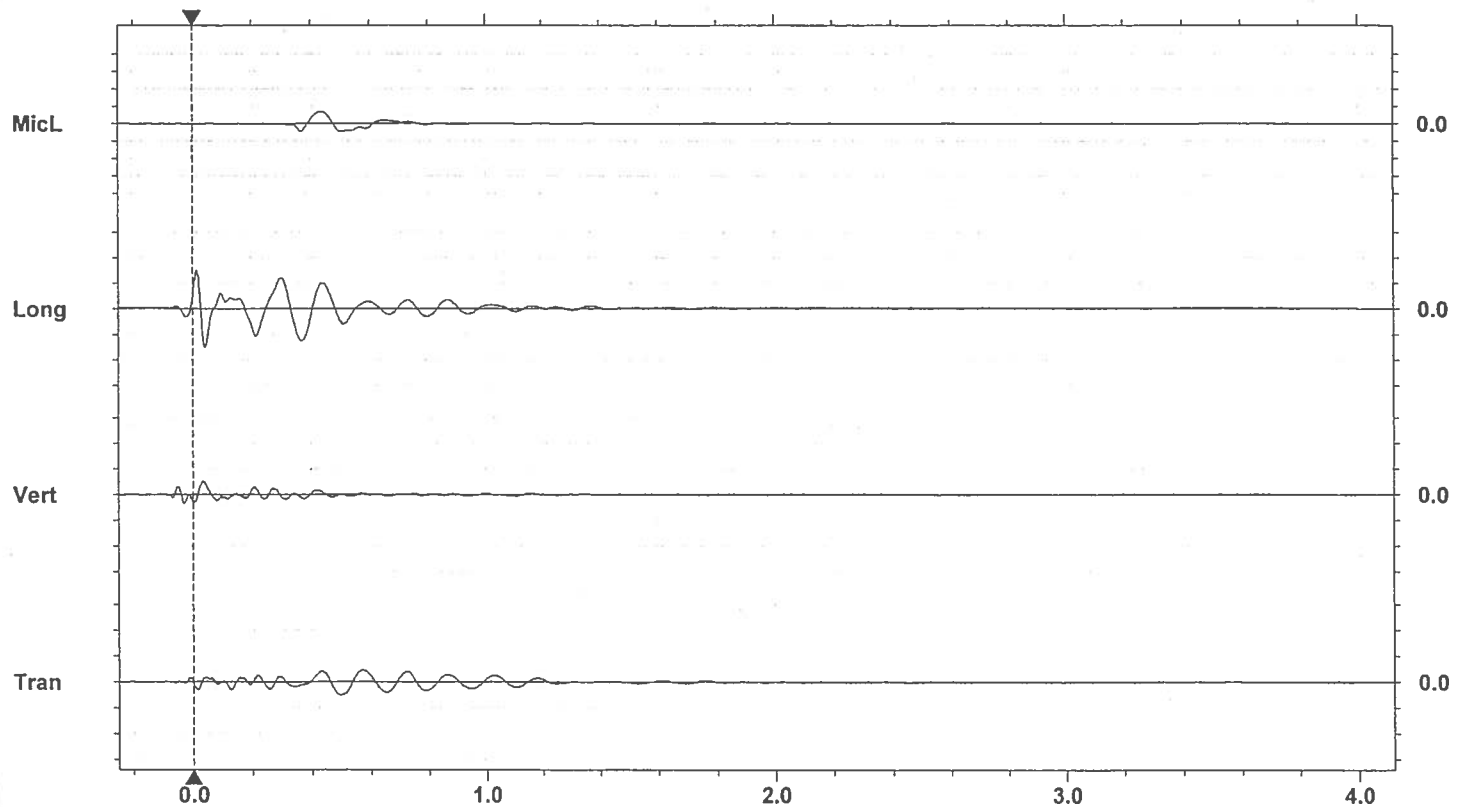
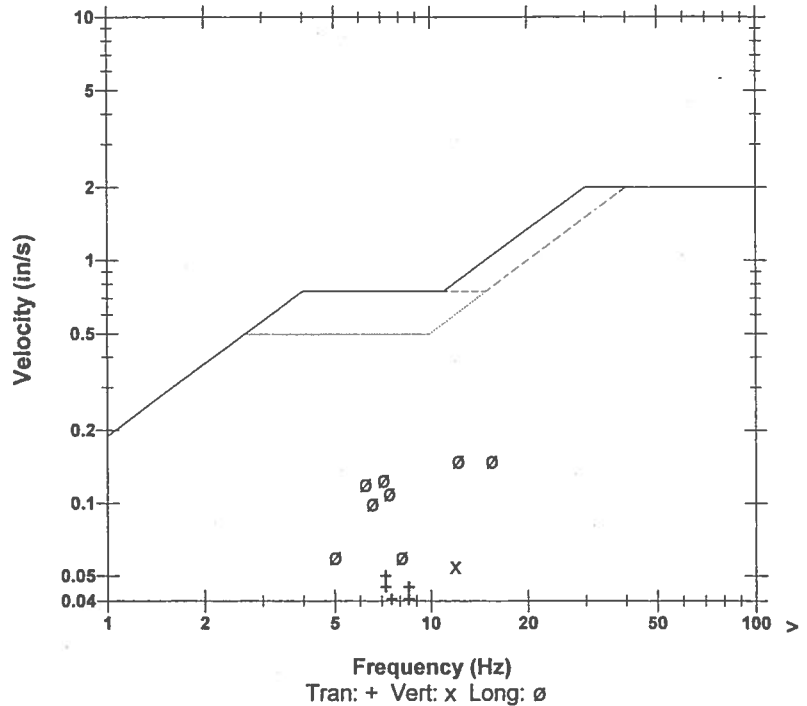
Post Event Notes
 Blast 4 Location C-3

Microphone Linear Weighting
 PSPL 107.5 dB(L) at 0.430 sec
 ZC Freq 5.8 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 591 mv)

	Tran	Vert	Long	
PPV	0.0500	0.0550	0.150	in/s
ZC Freq	7.2	12	16	Hz
Time (Rel. to Trig)	0.491	0.033	0.012	sec
Peak Acceleration	0.0133	0.0265	0.0530	g
Peak Displacement	0.00123	0.00068	0.00289	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.157 in/s at 0.039 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:45:14 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE9050 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration October 9, 2003 by InstanTel Inc.
 File Name K0509ZSU.3E0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

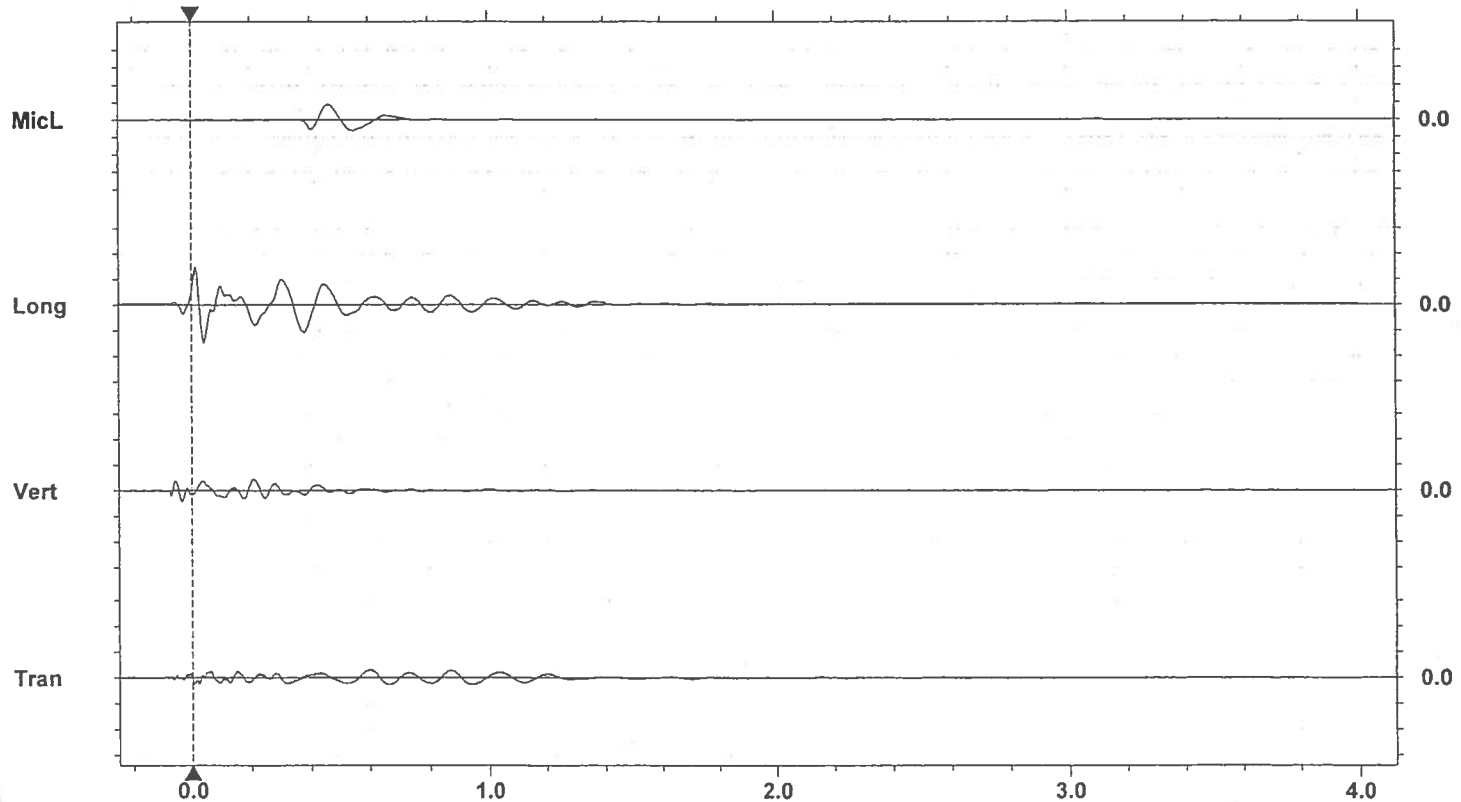
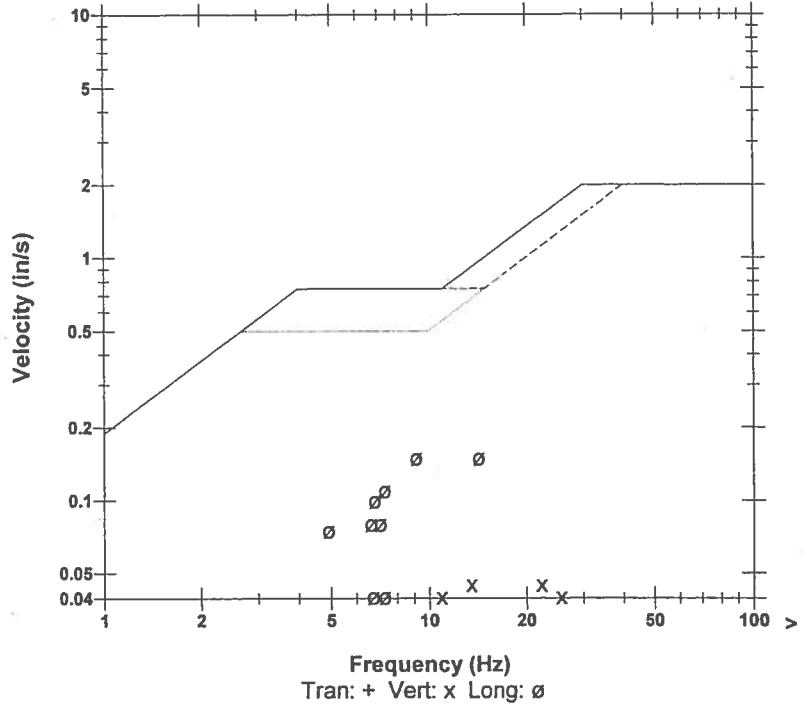
Blast 5 Location C-3

Microphone Linear Weighting
 PSPL 109.9 dB(L) at 0.463 sec
 ZC Freq 6.6 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 591 mv)

	Tran	Vert	Long	
PPV	0.0300	0.0450	0.150	in/s
ZC Freq	8.7	22	14	Hz
Time (Rel. to Trig)	0.593	-0.032	0.014	sec
Peak Acceleration	0.0133	0.0265	0.0530	g
Peak Displacement	0.00064	0.00054	0.00226	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.154 in/s at 0.041 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 13:08:47 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE9050 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration October 9, 2003 by Instancel Inc.
 File Name K0509ZSV.6N0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

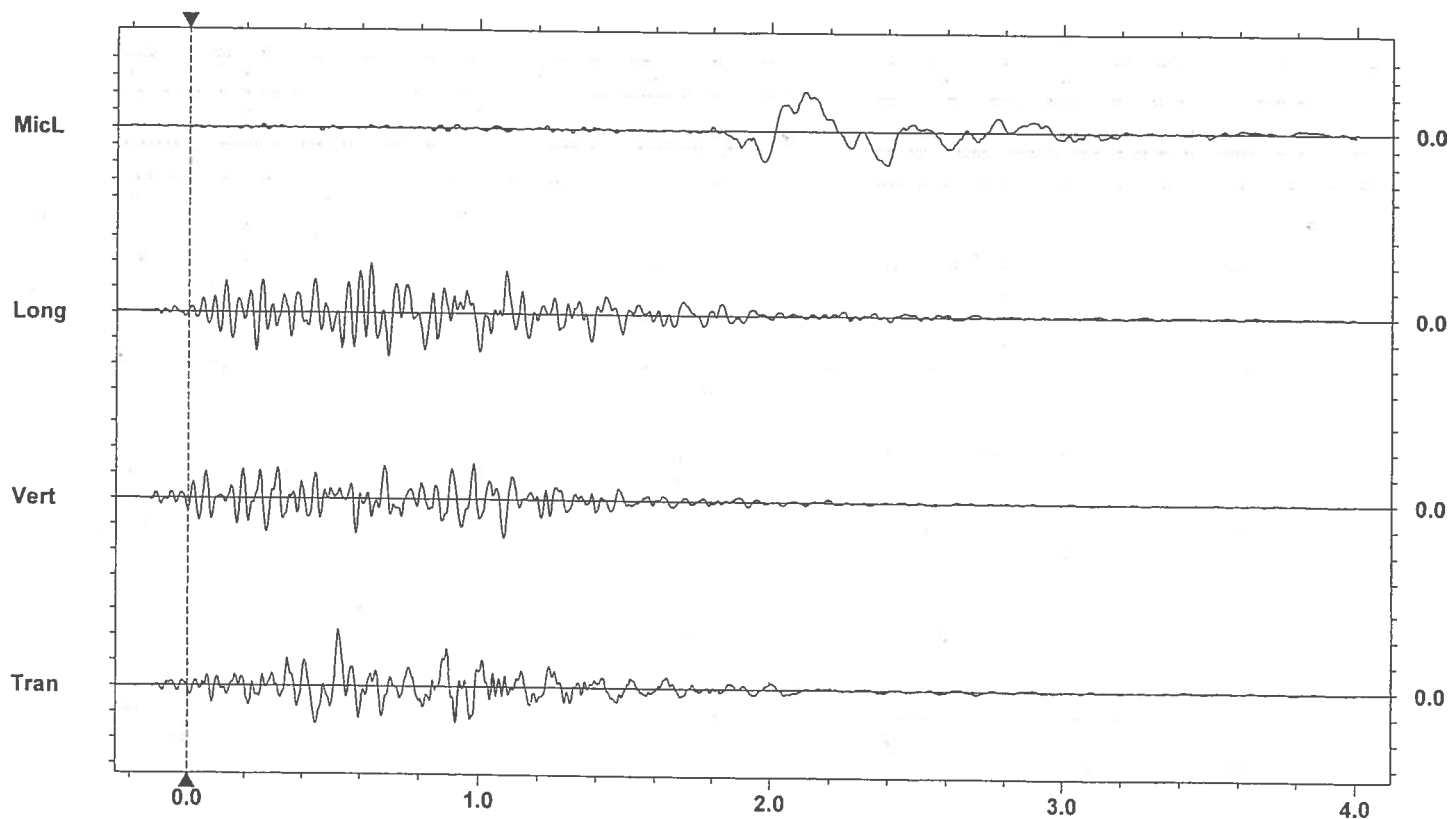
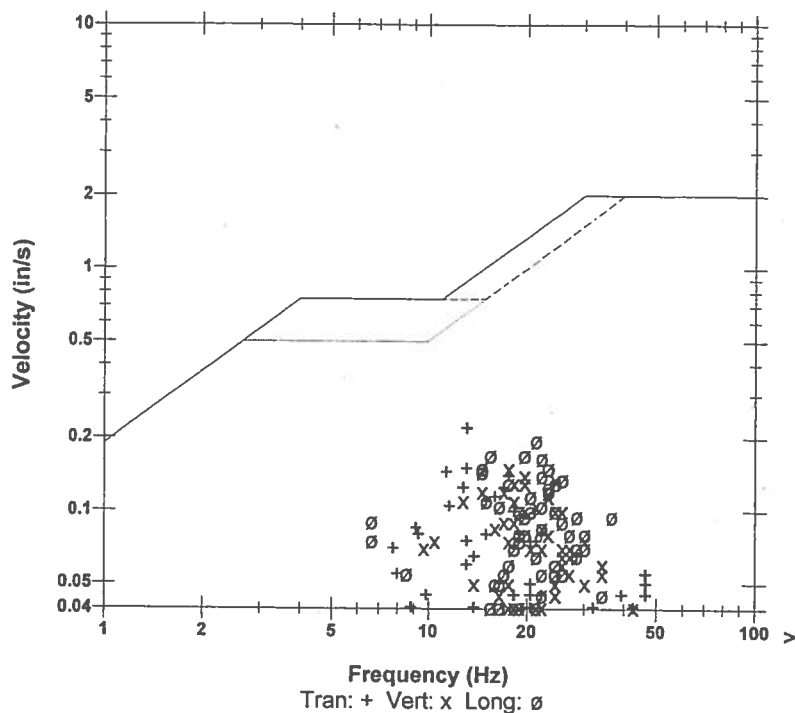
Post Event Notes
 Blast 6 Location C-3

Microphone Linear Weighting
 PSPL 117.9 dB(L) at 2.113 sec
 ZC Freq 2.3 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 591 mv)

	Tran	Vert	Long	
PPV	0.220	0.150	0.195	in/s
ZC Freq	13	18	21	Hz
Time (Rel. to Trig)	0.525	1.085	0.635	sec
Peak Acceleration	0.0663	0.0530	0.0663	g
Peak Displacement	0.00227	0.00135	0.00153	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.227 in/s at 0.526 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 11:31:12 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC8054 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration December 23, 2003 by InstanTel Inc.
 File Name J0549ZSQ.000

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

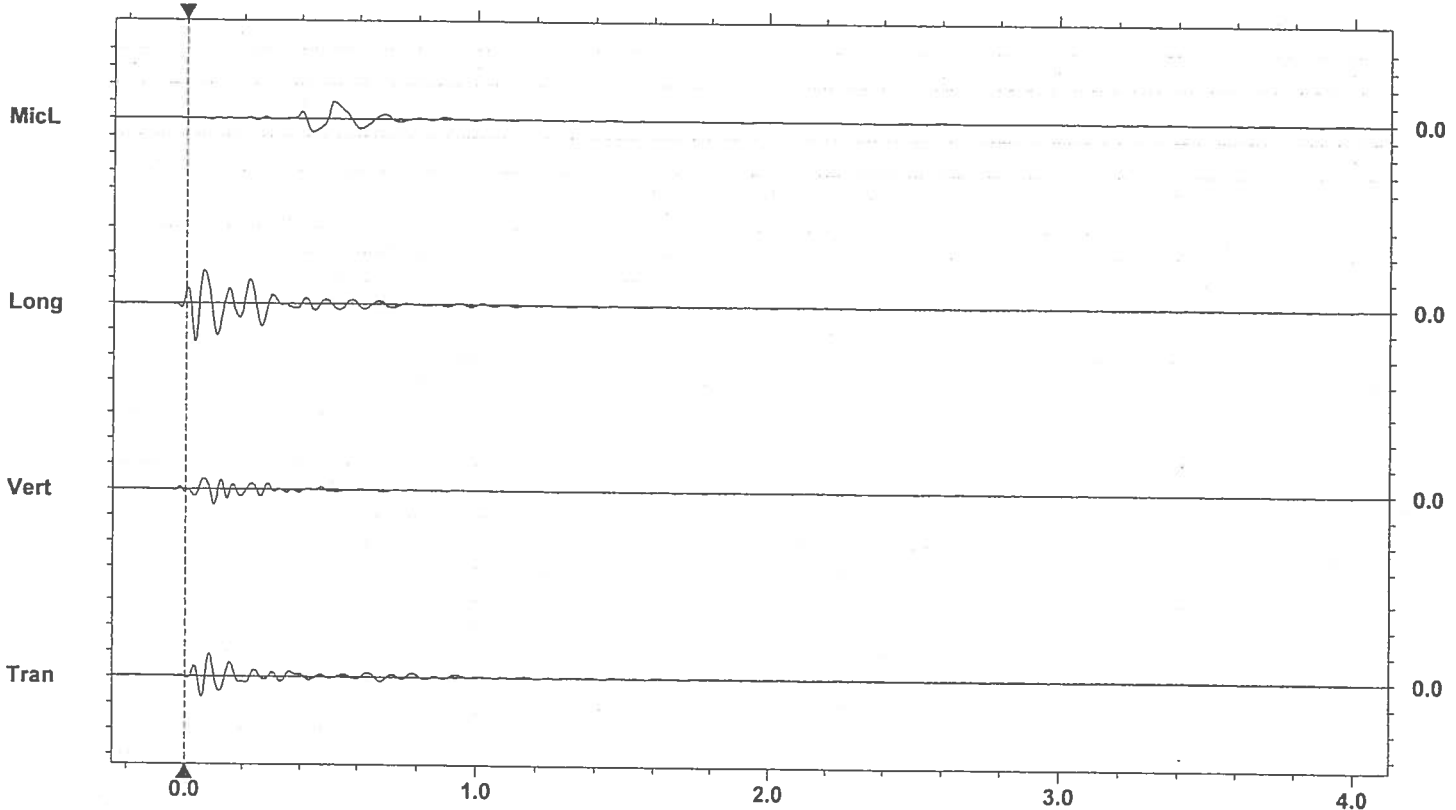
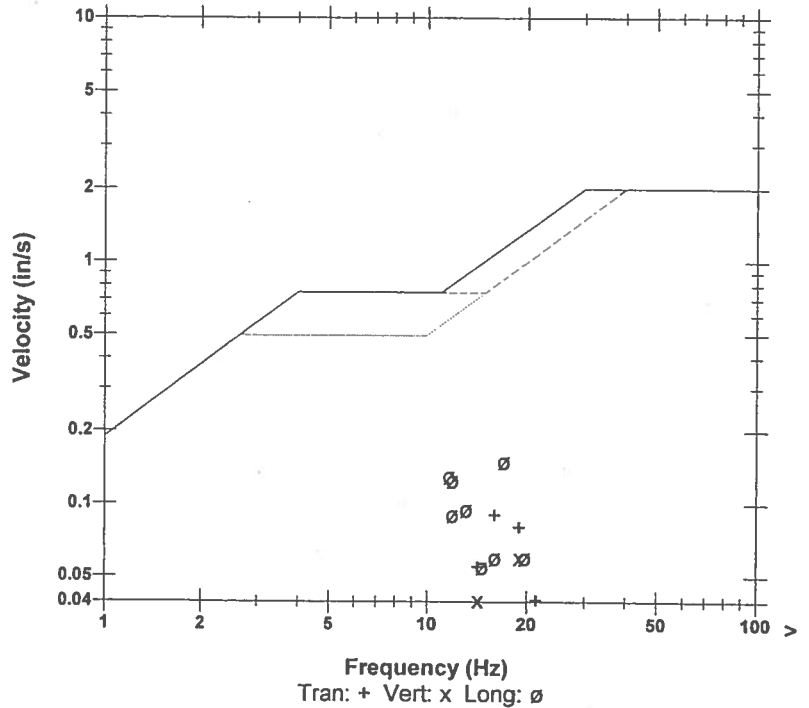
Post Event Notes
 Blast 1 Location C-4

Microphone Linear Weighting
 PSPL 110.9 dB(L) at 0.510 sec
 ZC Freq 6.2 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 720 mv)

	Tran	Vert	Long	
PPV	0.0900	0.0600	0.150	in/s
ZC Freq	16	19	17	Hz
Time (Rel. to Trig)	0.084	0.099	0.032	sec
Peak Acceleration	0.0398	0.0265	0.0530	g
Peak Displacement	0.00087	0.00051	0.00181	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.157 in/s at 0.032 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 11:37:17 February 25, 2004
Trigger Source Geo: 0.0500 in/s
Range Geo: 10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BC8054 V 4.37-4.35 MiniMate Plus
Battery Level 6.3 Volts
Calibration December 23, 2003 by InstanTel Inc.
File Name J0549ZSQ.Y50

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

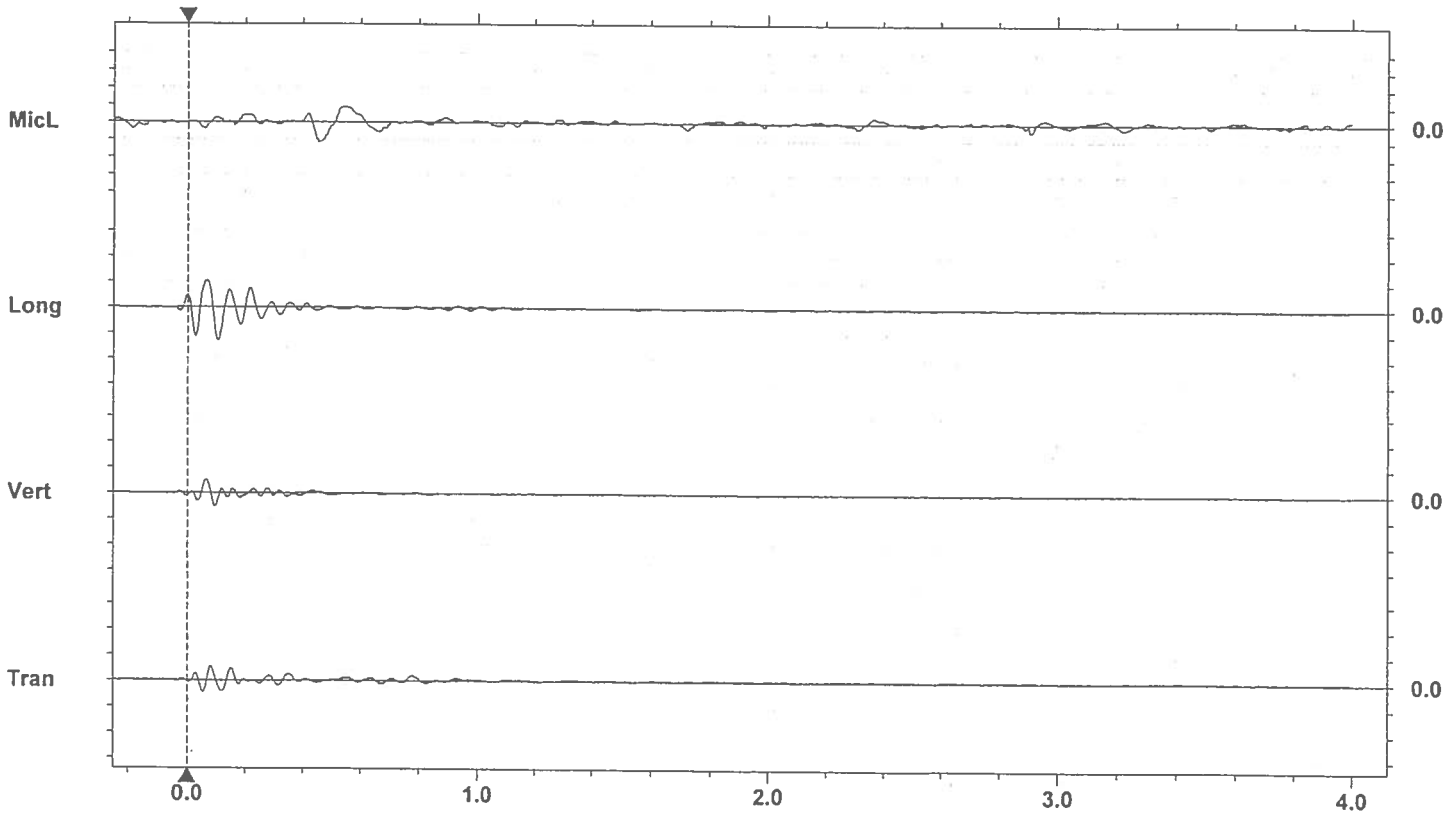
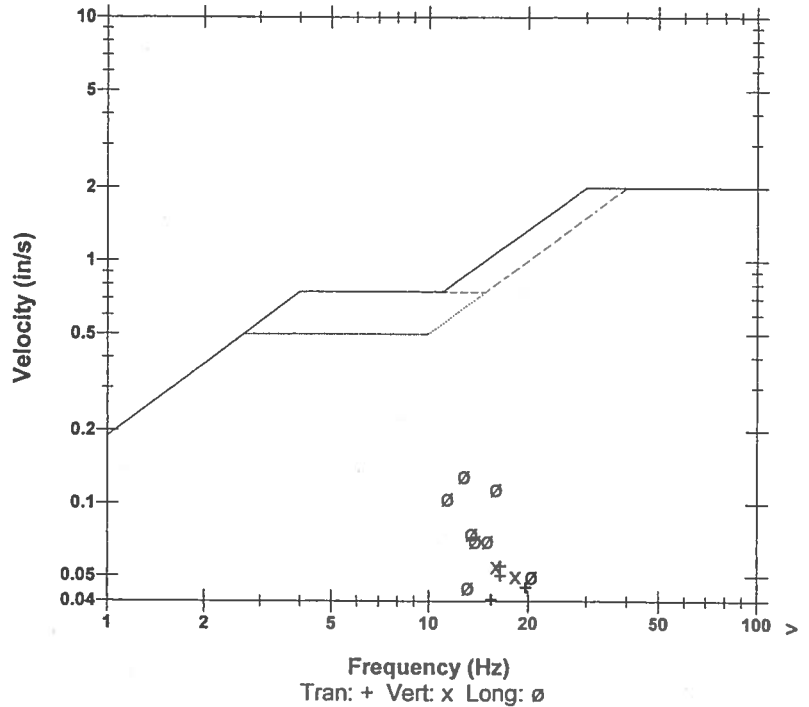
Blast 2 Location C-4

Microphone Linear Weighting
PSPL 112.0 dB(L) at 0.455 sec
ZC Freq 6.6 Hz
Channel Test Passed (Freq = 20.5 Hz Amp = 720 mv)

	Tran	Vert	Long	
PPV	0.0550	0.0550	0.130	in/s
ZC Freq	17	16	13	Hz
Time (Rel. to Trig)	0.080	0.065	0.104	sec
Peak Acceleration	0.0265	0.0133	0.0398	g
Peak Displacement	0.00053	0.00054	0.00160	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.135 in/s at 0.104 sec

USBM R18507 And OSMRE



Event Report

Date/Time Long at 12:31:57 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC8054 V 4.37-4.35 MiniMate Plus
 Battery Level 6.2 Volts
 Calibration December 23, 2003 by InstanTel Inc.
 File Name J0549ZST.H90

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

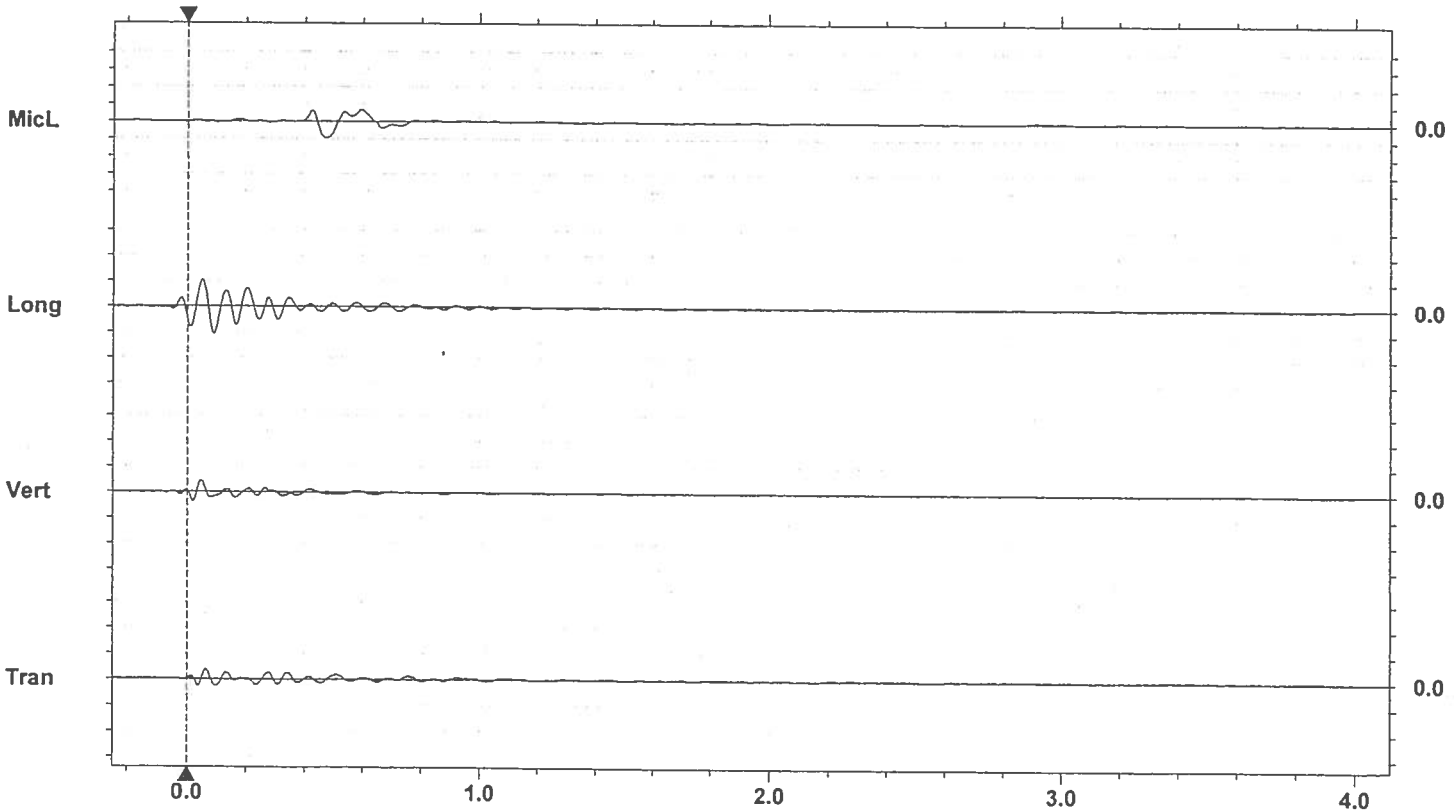
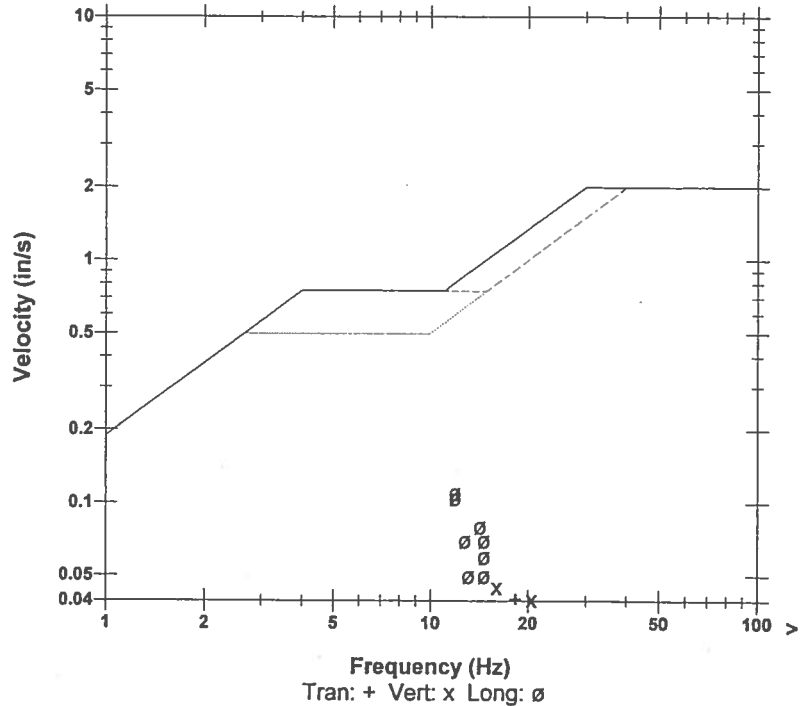
Blast 3 Location C-4

Microphone Linear Weighting
 PSPL 110.2 dB(L) at 0.467 sec
 ZC Freq 7.2 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 653 mv)

	Tran	Vert	Long	
PPV	0.0400	0.0450	0.110	in/s
ZC Freq	18	16	12	Hz
Time (Rel. to Trig)	0.063	0.046	0.090	sec
Peak Acceleration	0.0133	0.0265	0.0398	g
Peak Displacement	0.00035	0.00045	0.00143	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.114 in/s at 0.051 sec

USBM R18507 And OSMRE



Event Report

Date/Time Long at 12:35:40 February 25, 2004
Trigger Source Geo: 0.0500 in/s
Range Geo :10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BC8054 V 4.37-4.35 MiniMate Plus
Battery Level 6.2 Volts
Calibration December 23, 2003 by InstanTel Inc.
File Name J0549ZST.NG0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

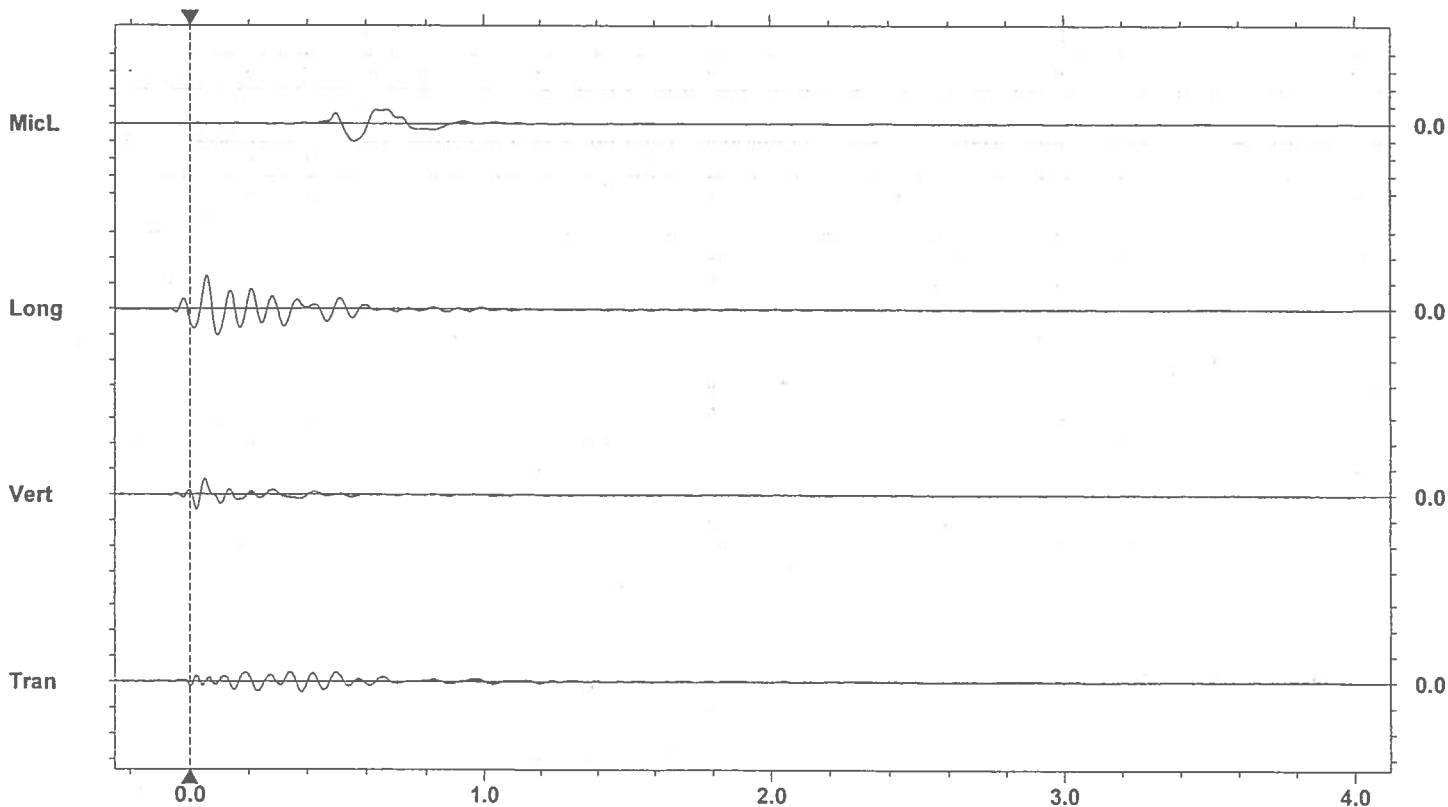
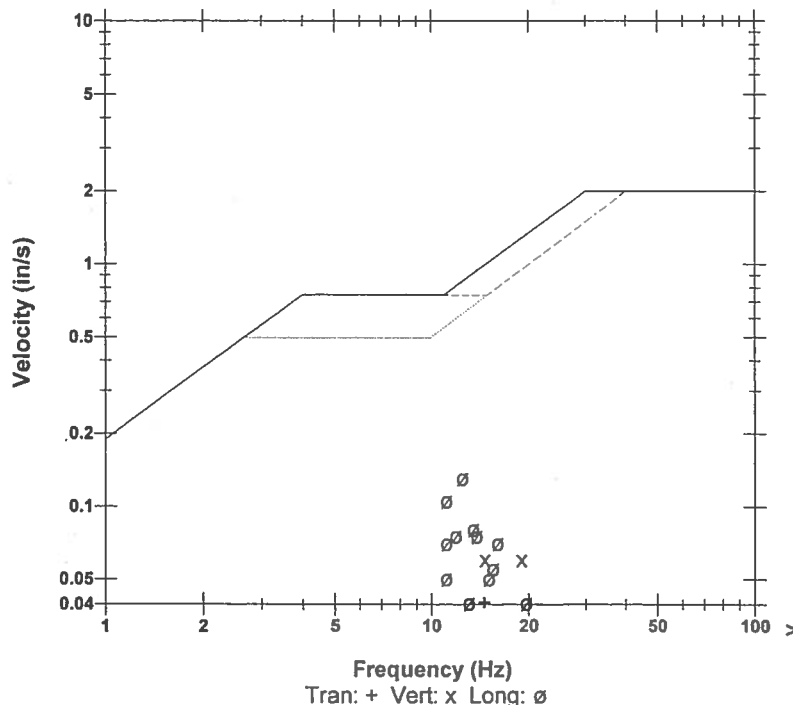
Blast 4 Location C-4

Microphone Linear Weighting
PSPL 110.9 dB(L) at 0.557 sec
ZC Freq 5.7 Hz
Channel Test Passed (Freq = 20.5 Hz Amp = 653 mv)

	Tran	Vert	Long	
PPV	0.0400	0.0600	0.130	in/s
ZC Freq	15	19	12	Hz
Time (Rel. to Trig)	0.377	0.021	0.055	sec
Peak Acceleration	0.0133	0.0265	0.0265	g
Peak Displacement	0.00052	0.00062	0.00161	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.141 in/s at 0.055 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
Trigger =

Event Report

Date/Time Long at 12:45:14 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC8054 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration December 23, 2003 by InstanTel Inc.
 File Name J0549ZSU.3E0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

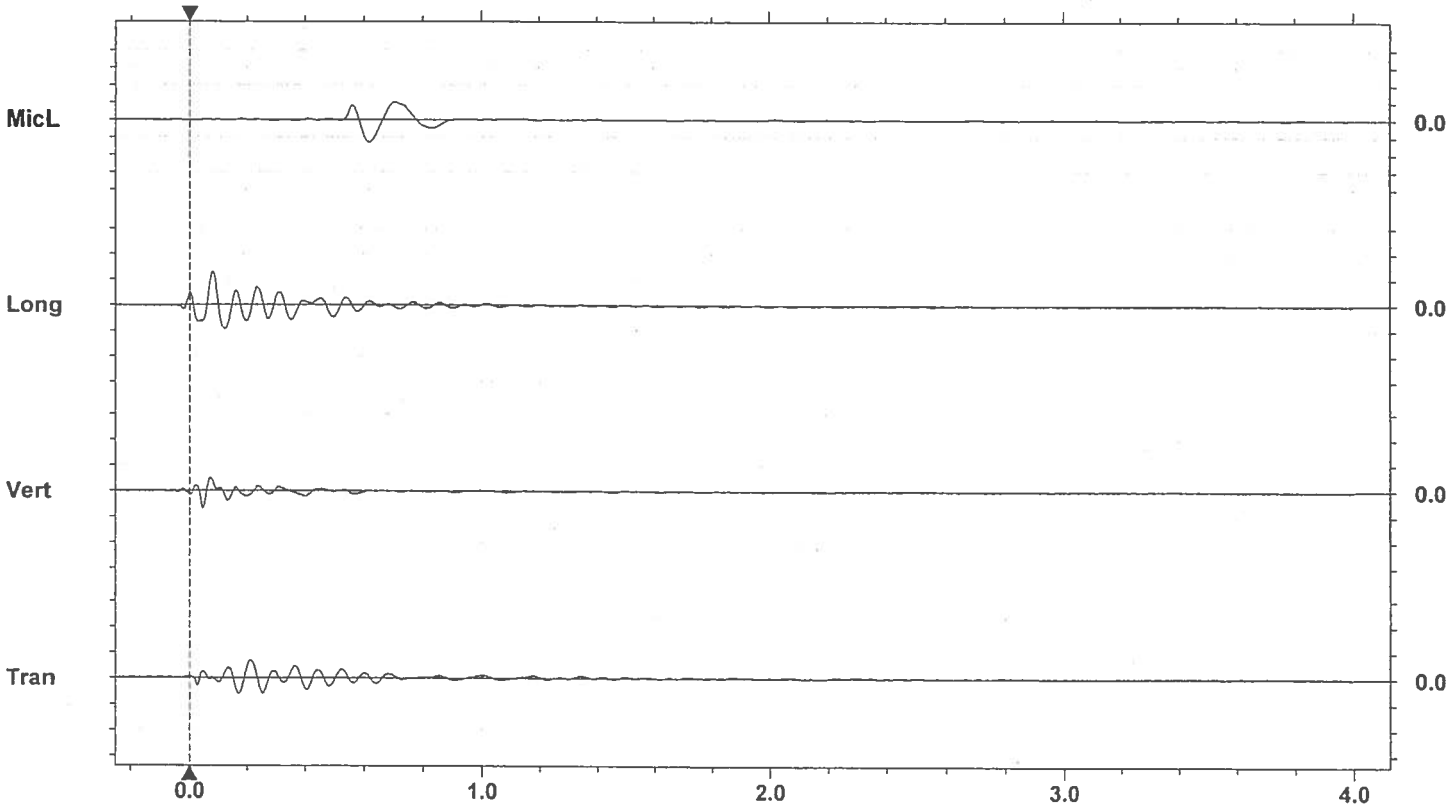
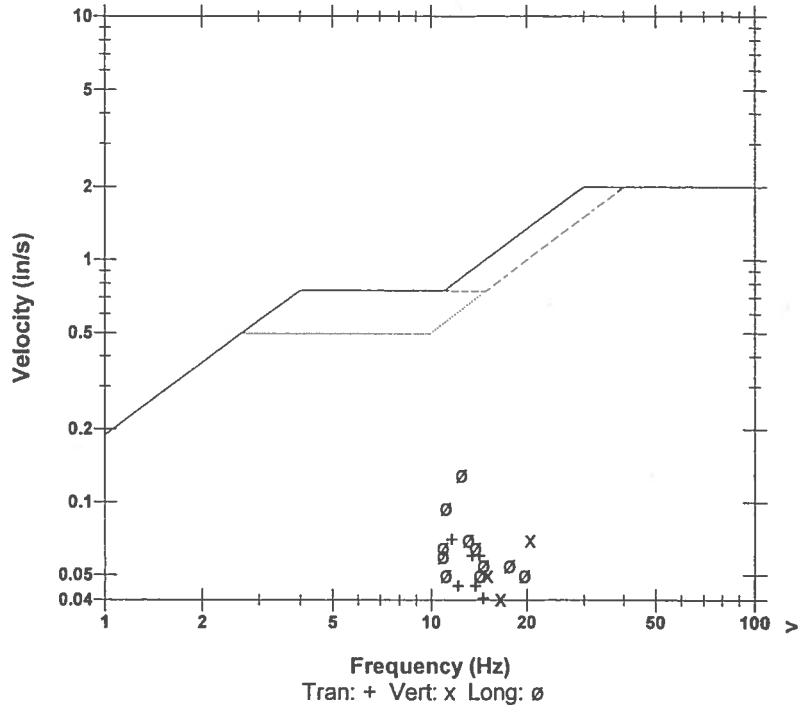
Post Event Notes
 Blast 5 Location C-4

Microphone Linear Weighting
 PSPL 113.1 dB(L) at 0.616 sec
 ZC Freq 6.2 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 653 mv)

	Tran	Vert	Long	
PPV	0.0700	0.0700	0.130	in/s
ZC Freq	12	20	12	Hz
Time (Rel. to Trig)	0.210	0.047	0.079	sec
Peak Acceleration	0.0265	0.0265	0.0265	g
Peak Displacement	0.00095	0.00052	0.00163	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.138 in/s at 0.079 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 13:08:47 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BC8054 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration December 23, 2003 by Instantel Inc.
 File Name J0549ZSV.6N0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

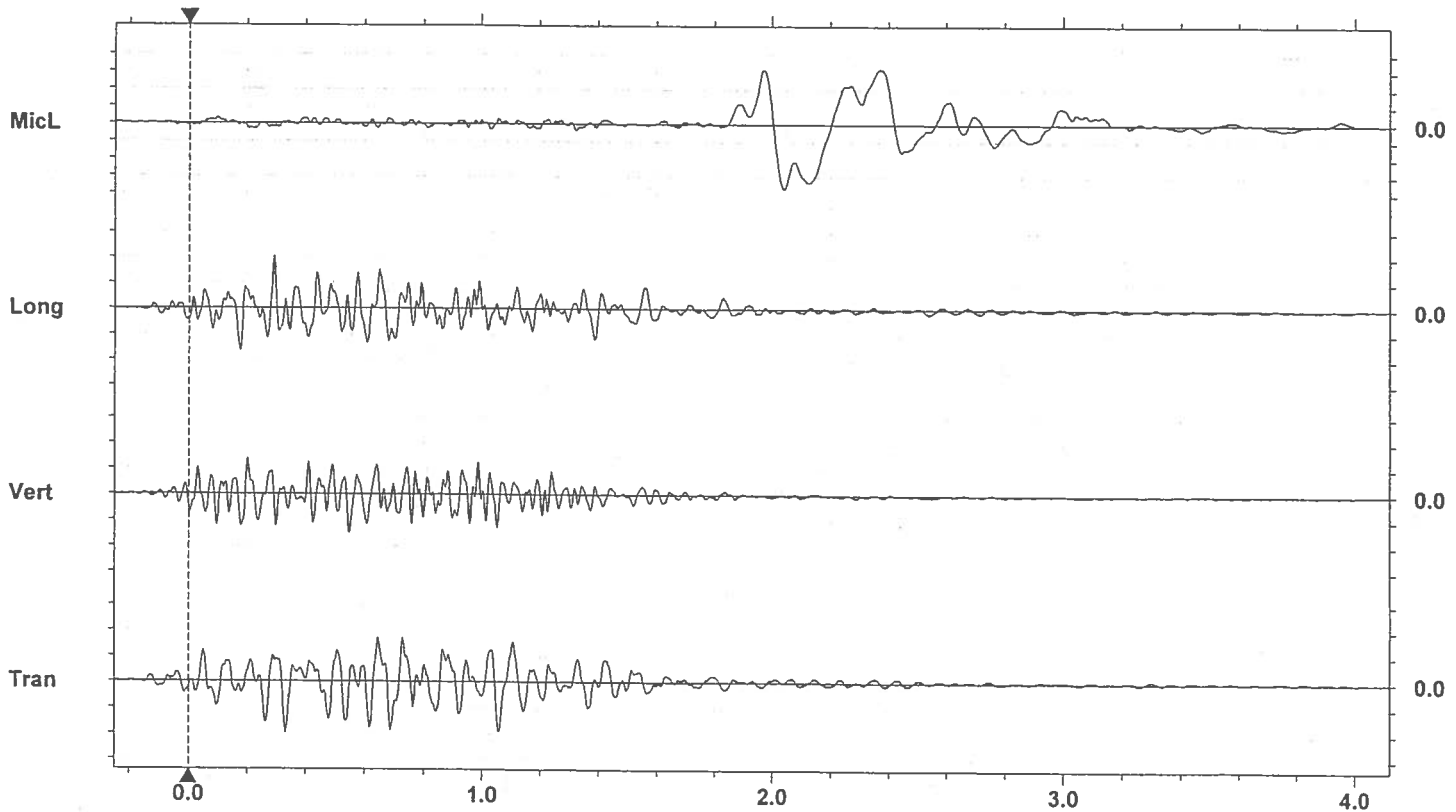
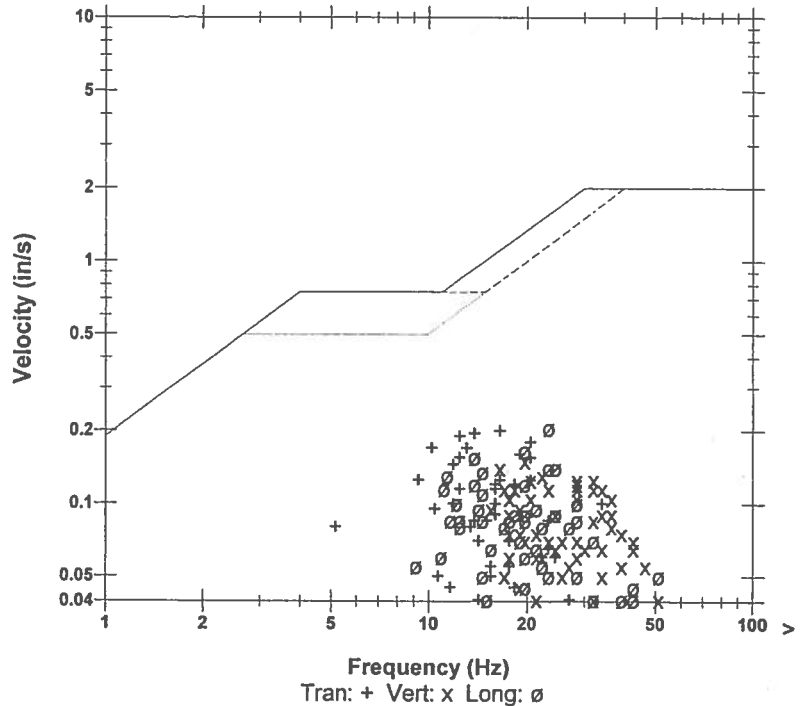
Blast 6 Location C-4

Microphone Linear Weighting
 PSPL 122.2 dB(L) at 2.041 sec
 ZC Freq 2.5 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 653 mv)

	Tran	Vert	Long	
PPV	0.200	0.150	0.205	in/s
ZC Freq	17	20	23	Hz
Time (Rel. to Trig)	0.332	0.547	0.291	sec
Peak Acceleration	0.0663	0.0663	0.0795	g
Peak Displacement	0.00218	0.00108	0.00200	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.229 in/s at 0.292 sec

USBM RI8507 And OSMRE



Event Report

Date/Time Long at 11:31:14 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE9048 V 4.37-4.35 MiniMate Plus
 Battery Level 6.2 Volts
 Calibration October 9, 2003 by InstanTel Inc.
 File Name K0489ZSQ.020

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

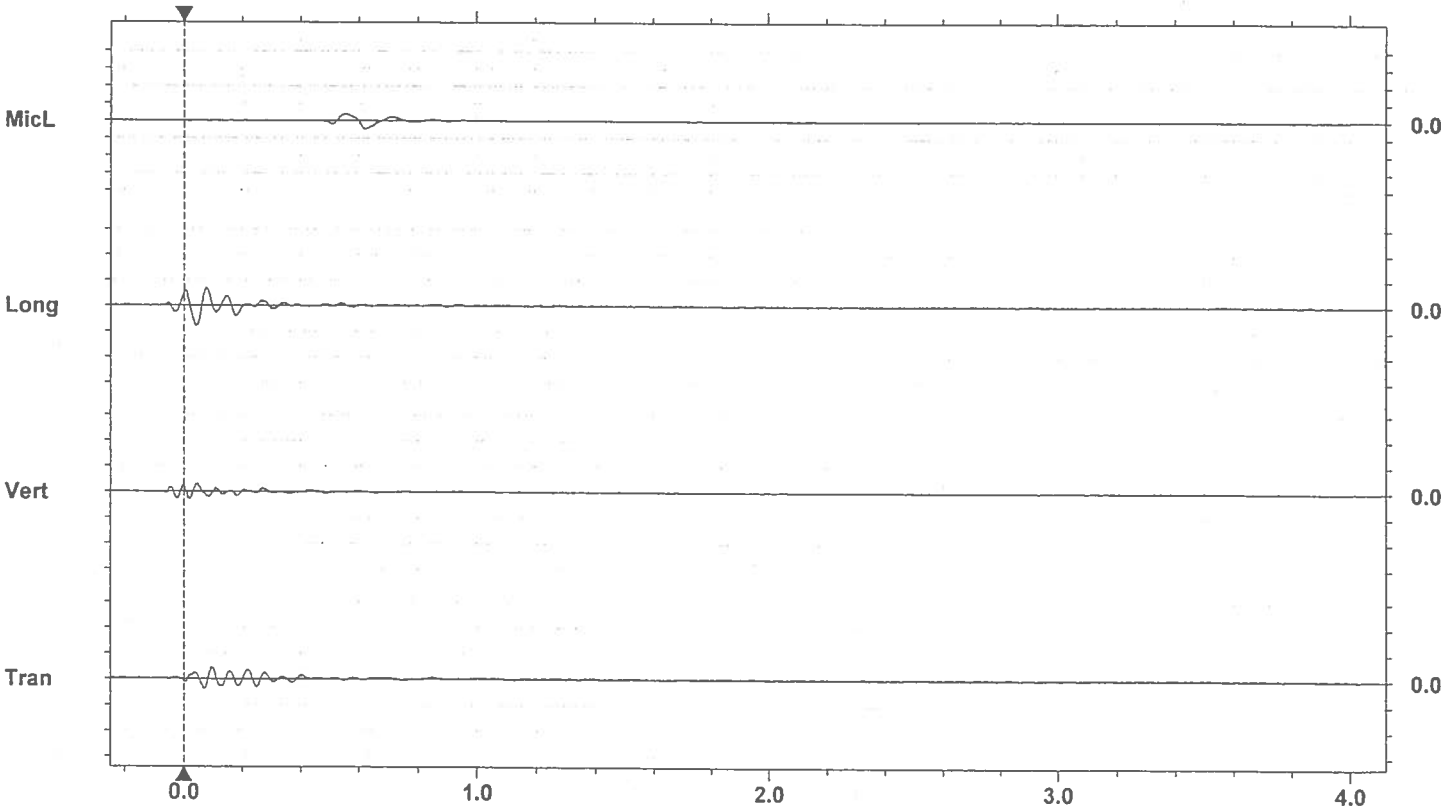
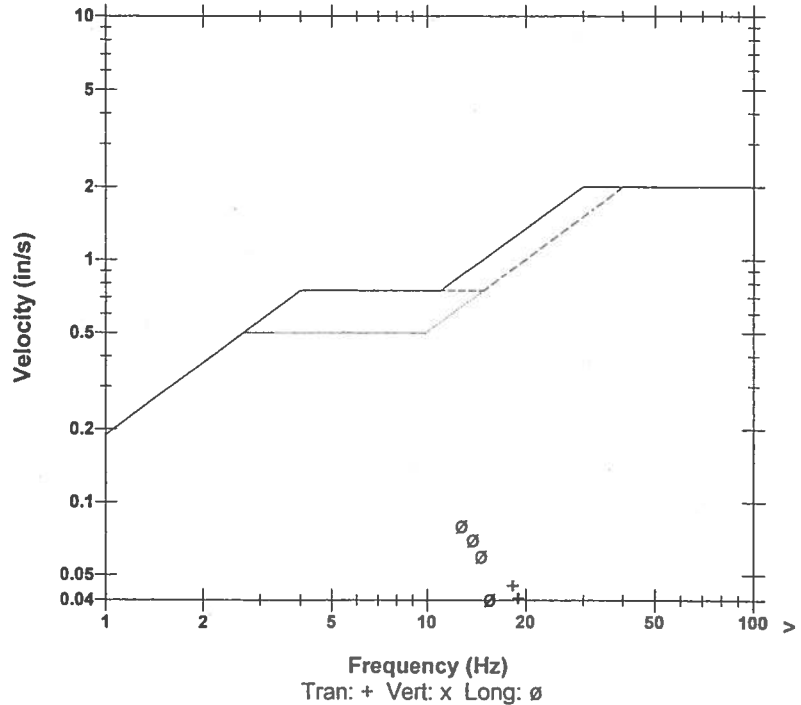
Blast 1 Location C-5

Microphone Linear Weighting
 PSPL 104.9 dB(L) at 0.619 sec
 ZC Freq 6.9 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 666 mv)

	Tran	Vert	Long	
PPV	0.0450	0.0300	0.0800	in/s
ZC Freq	18	27	13	Hz
Time (Rel. to Trig)	0.095	0.020	0.041	sec
Peak Acceleration	0.0133	0.0133	0.0265	g
Peak Displacement	0.00041	0.00026	0.00099	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.0877 in/s at 0.042 sec

USBM RI8507 And OSMRE



Event Report

Date/Time Long at 11:37:18 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE9048 V 4.37-4.35 MiniMate Plus
 Battery Level 6.2 Volts
 Calibration October 9, 2003 by InstanTel Inc.
 File Name K0489ZSQ.Y60

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

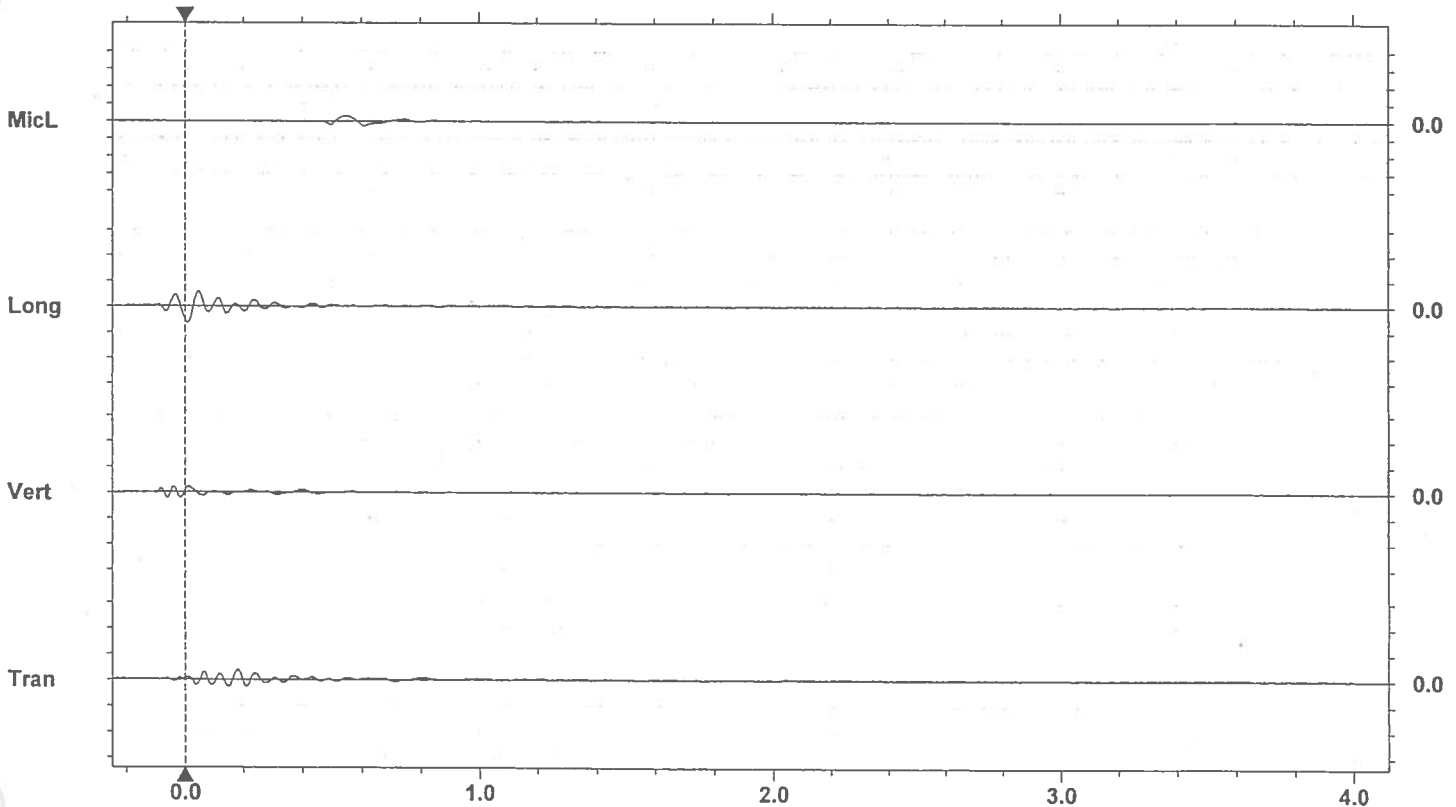
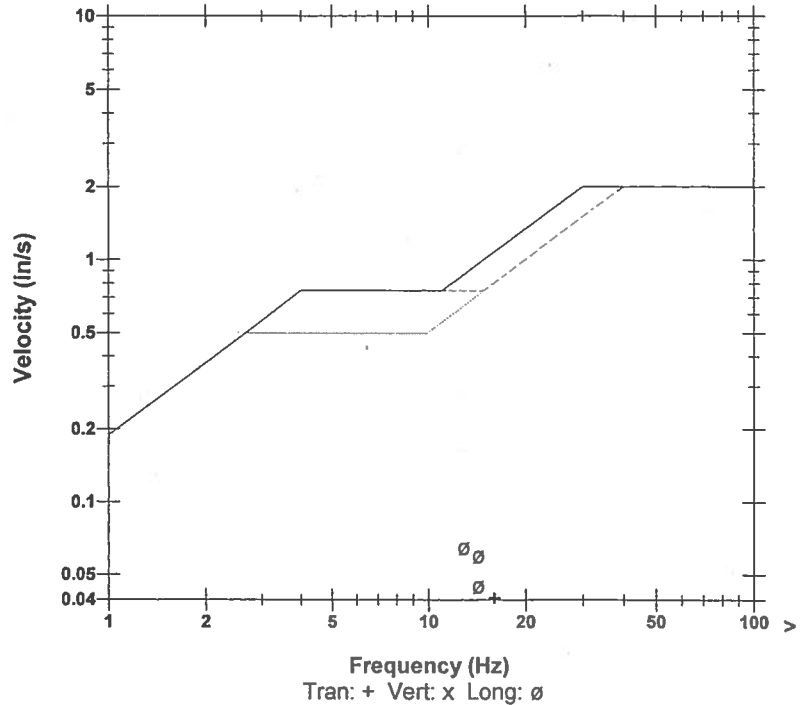
Blast 2 Location C-5

Microphone Linear Weighting
 PSPL 101.0 dB(L) at 0.545 sec
 ZC Freq 7.4 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 666 mv)

	Tran	Vert	Long	
PPV	0.0400	0.0250	0.0650	in/s
ZC Freq	16	27	13	Hz
Time (Rel. to Trig)	0.179	-0.061	0.007	sec
Peak Acceleration	0.0133	0.0265	0.0265	g
Peak Displacement	0.00041	0.00023	0.00083	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.0687 in/s at 0.007 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:31:59 February 25, 2004
Trigger Source Geo: 0.0200 in/s
Range Geo: 10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BE9048 V 4.37-4.35 MiniMate Plus
Battery Level 6.2 Volts
Calibration October 9, 2003 by Instantel Inc.
File Name K0489ZST.HB0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

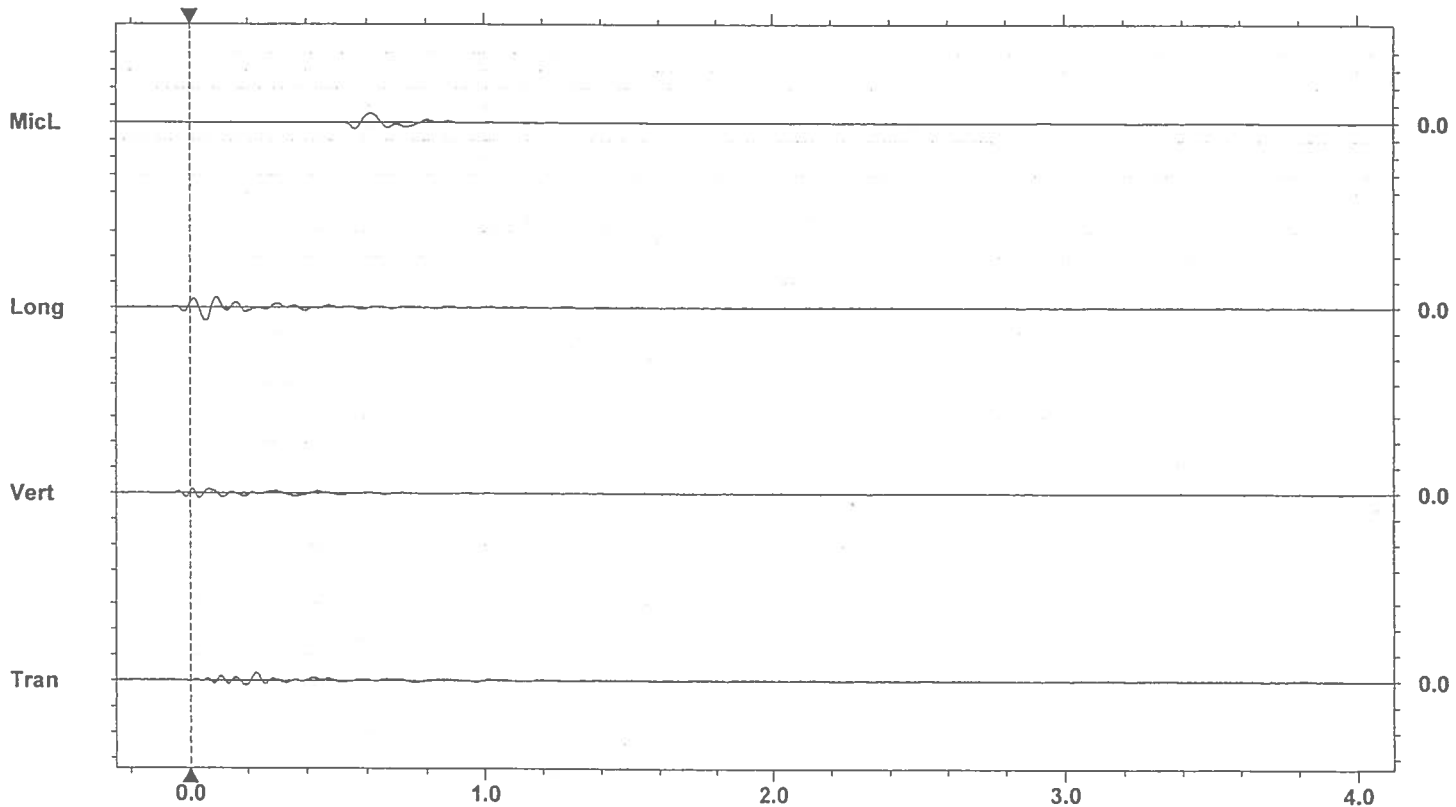
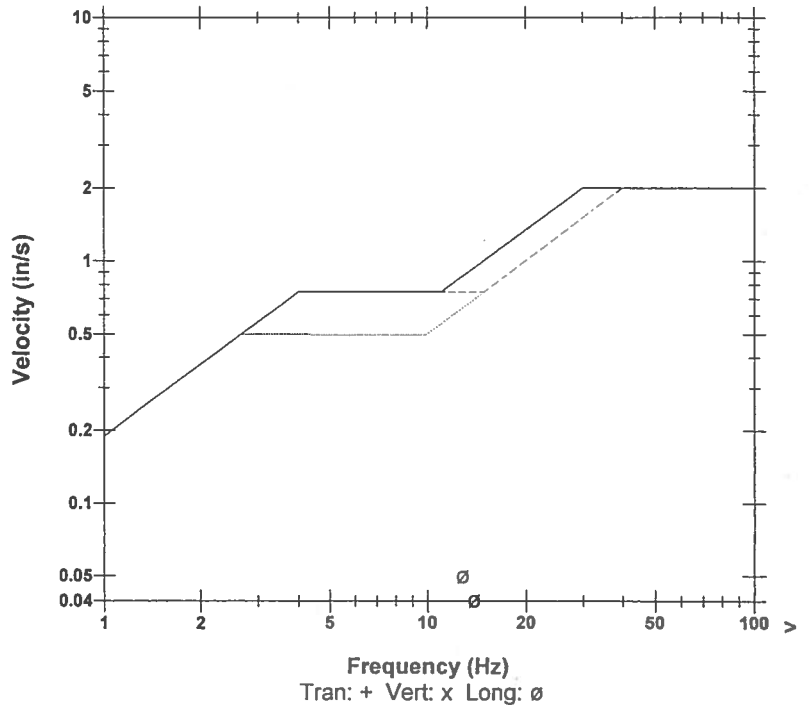
Blast 3 Location C-5

Microphone Linear Weighting
PSPL 105.5 dB(L) at 0.611 sec
ZC Freq 7.6 Hz
Channel Test Passed (Freq = 20.5 Hz Amp = 537 mv)

	Tran	Vert	Long	
PPV	0.0300	0.0200	0.0500	in/s
ZC Freq	16	24	13	Hz
Time (Rel. to Trig)	0.224	0.032	0.050	sec
Peak Acceleration	0.0133	0.0133	0.0265	g
Peak Displacement	0.00034	0.00022	0.00070	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.0532 in/s at 0.060 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:35:42 February 25, 2004
Trigger Source Geo: 0.0200 in/s
Range Geo: 10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BE9048 V 4.37-4.35 MiniMate Plus
Battery Level 6.2 Volts
Calibration October 9, 2003 by InstanTel Inc.
File Name K0489ZST.N10

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

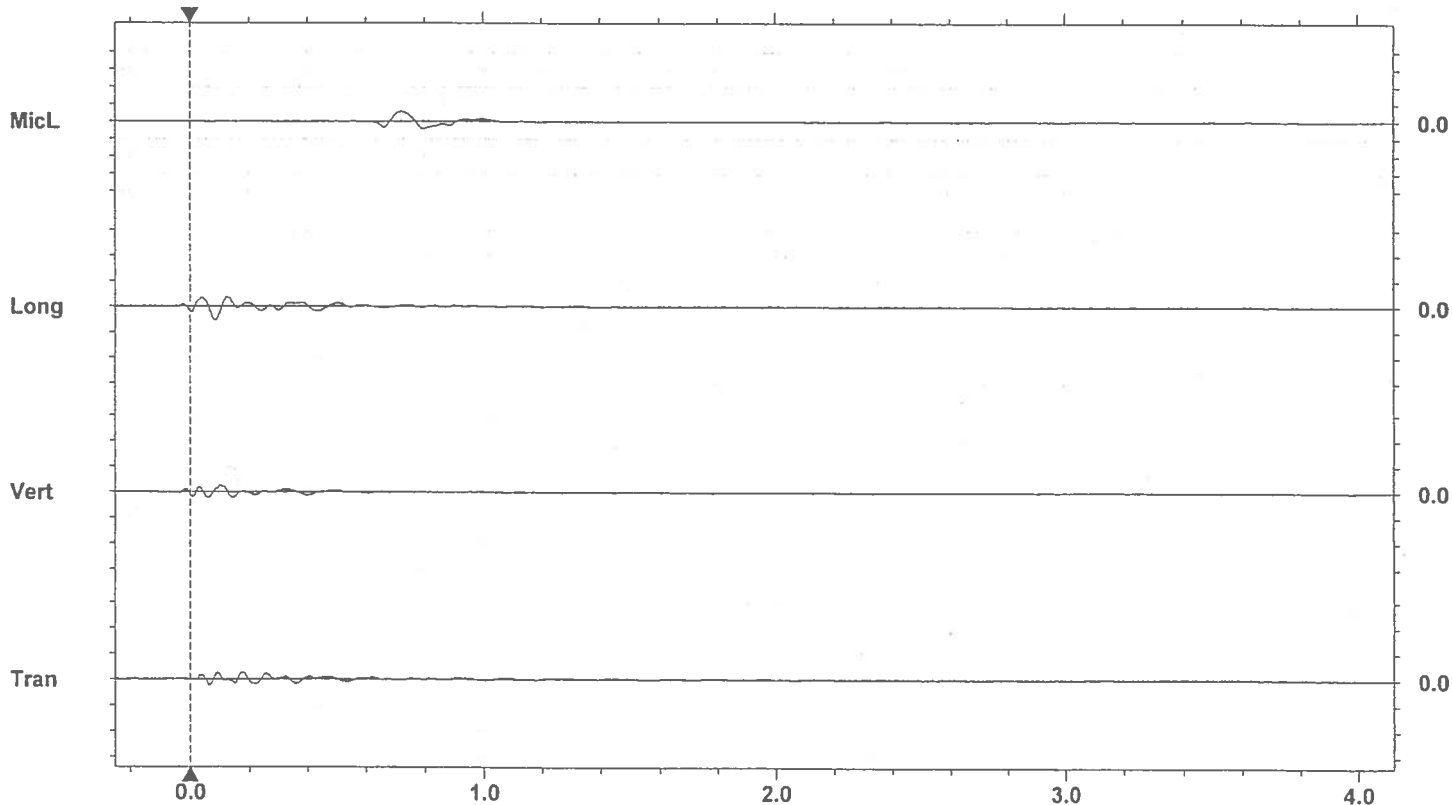
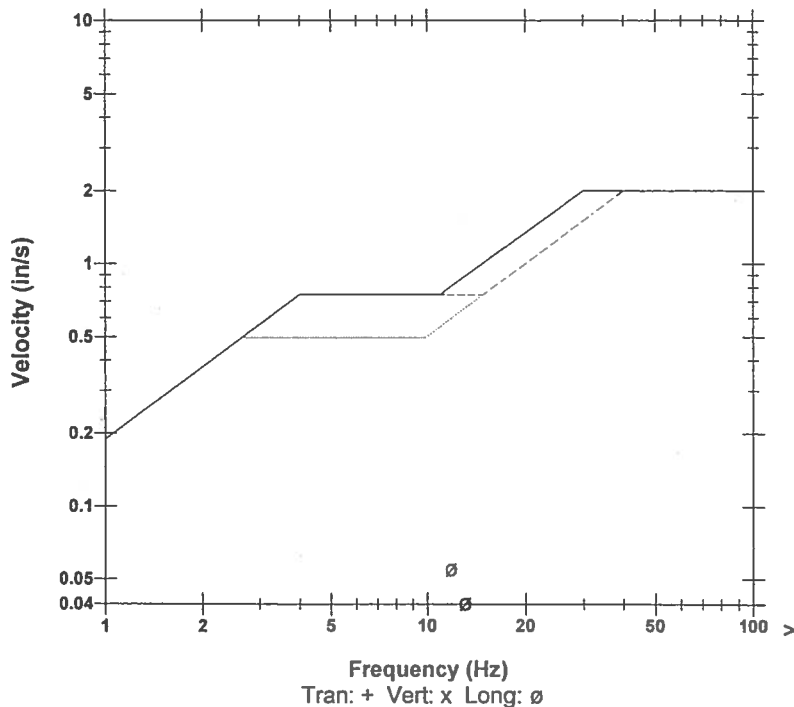
Blast 4 Location C-5

Microphone Linear Weighting
PSPL 106.0 dB(L) at 0.720 sec
ZC Freq 6.0 Hz
Channel Test Passed (Freq = 20.5 Hz Amp = 537 mv)

	Tran	Vert	Long	
PPV	0.0300	0.0250	0.0550	in/s
ZC Freq	18	12	12	Hz
Time (Rel. to Trig)	0.179	0.100	0.085	sec
Peak Acceleration	0.0133	0.0133	0.0133	g
Peak Displacement	0.00028	0.00036	0.00075	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.0604 in/s at 0.089 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
Trigger =

Event Report

Date/Time Vert at 12:45:15 February 25, 2004
 Trigger Source Geo: 0.0200 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE9048 V 4.37-4.35 MiniMate Plus
 Battery Level 6.2 Volts
 Calibration October 9, 2003 by Instantel Inc.
 File Name K0489ZSU.3F0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

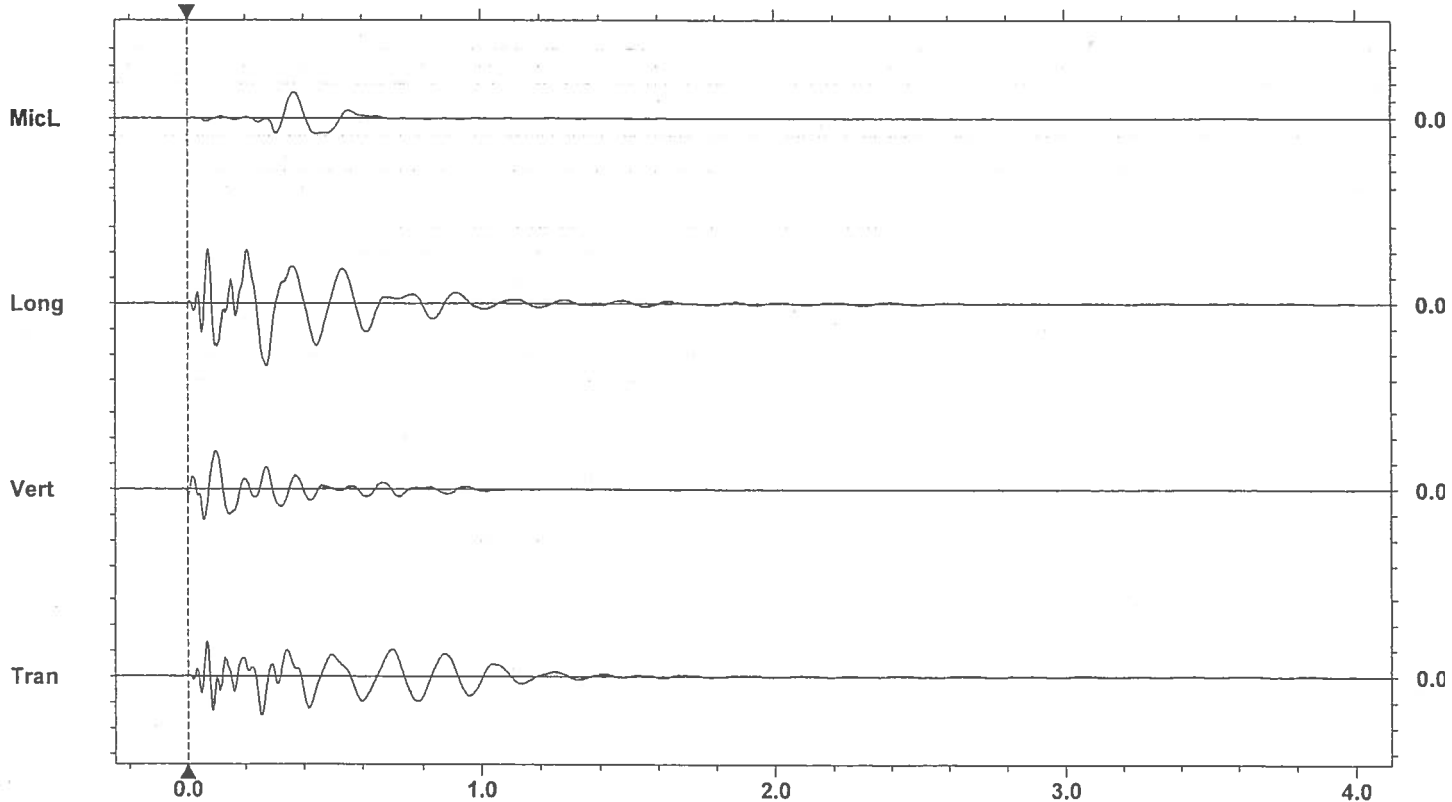
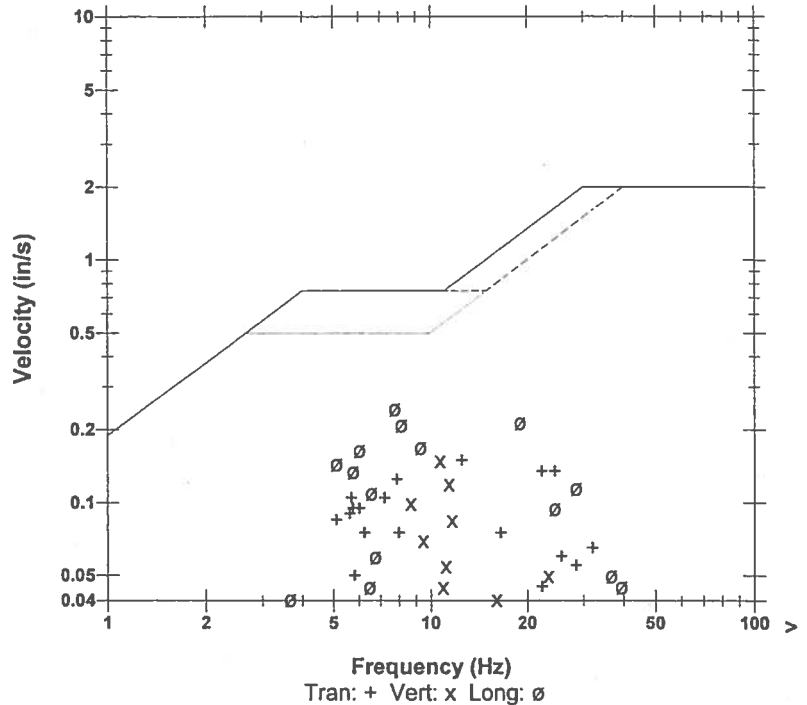
Blast 5 Location C-5

Microphone Linear Weighting
 PSPL 114.4 dB(L) at 0.368 sec
 ZC Freq 6.5 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 706 mv)

	Tran	Vert	Long	
PPV	0.150	0.150	0.245	in/s
ZC Freq	12	11	7.8	Hz
Time (Rel. to Trig)	0.254	0.098	0.271	sec
Peak Acceleration	0.0663	0.0398	0.0795	g
Peak Displacement	0.00287	0.00227	0.00493	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.265 in/s at 0.269 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger = >-----<

Event Report

Date/Time Tran at 13:08:48 February 25, 2004
Trigger Source Geo: 0.0200 in/s
Range Geo: 10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BE9048 V 4.37-4.35 MiniMate Plus
Battery Level 6.2 Volts
Calibration October 9, 2003 by Instantel Inc.
File Name K0489ZSV.600

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

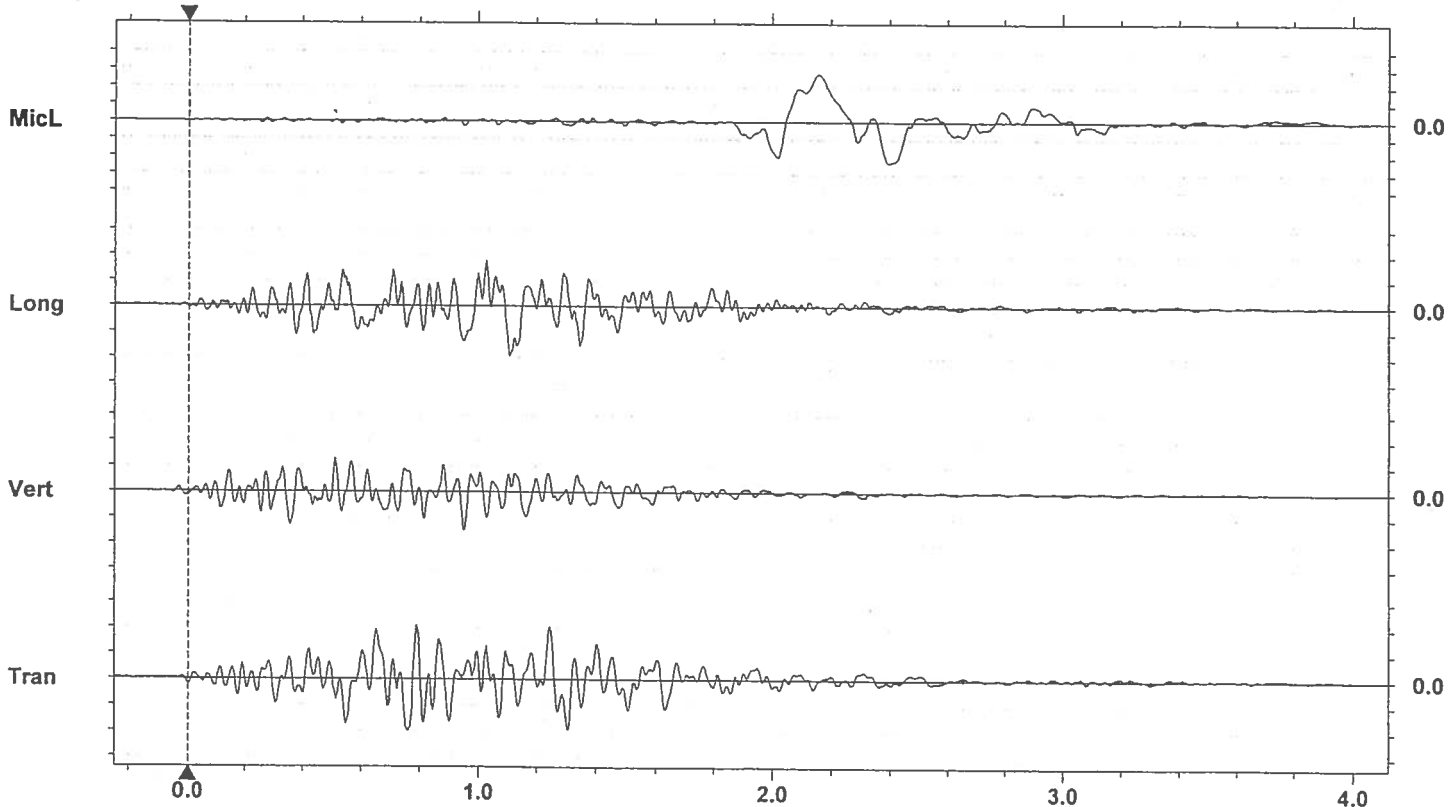
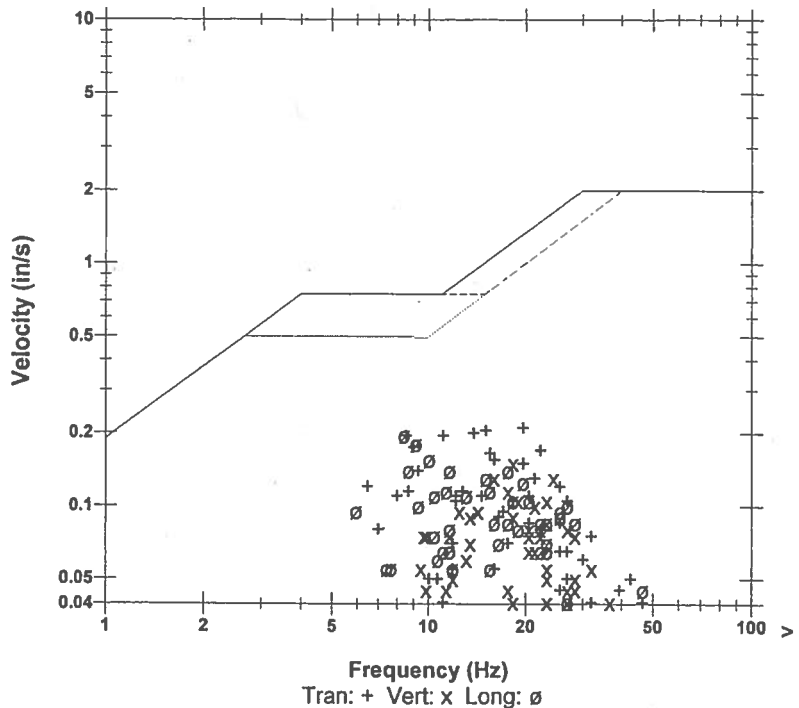
Blast 6 Location C-5

Microphone Linear Weighting
PSPL 119.6 dB(L) at 2.155 sec
ZC Freq 2.3 Hz
Channel Test Passed (Freq = 20.1 Hz Amp = 706 mv)

	Tran	Vert	Long	
PPV	0.210	0.150	0.195	in/s
ZC Freq	20	18	8.4	Hz
Time (Rel. to Trig)	0.791	0.950	1.106	sec
Peak Acceleration	0.146	0.0530	0.0530	g
Peak Displacement	0.00313	0.00127	0.00388	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.242 in/s at 1.028 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
Trigger =

Event Report

Date/Time Long at 11:31:13 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo :10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE6723 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration October 30, 2003 by Instantel Inc.
 File Name H7239ZSQ.O10

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

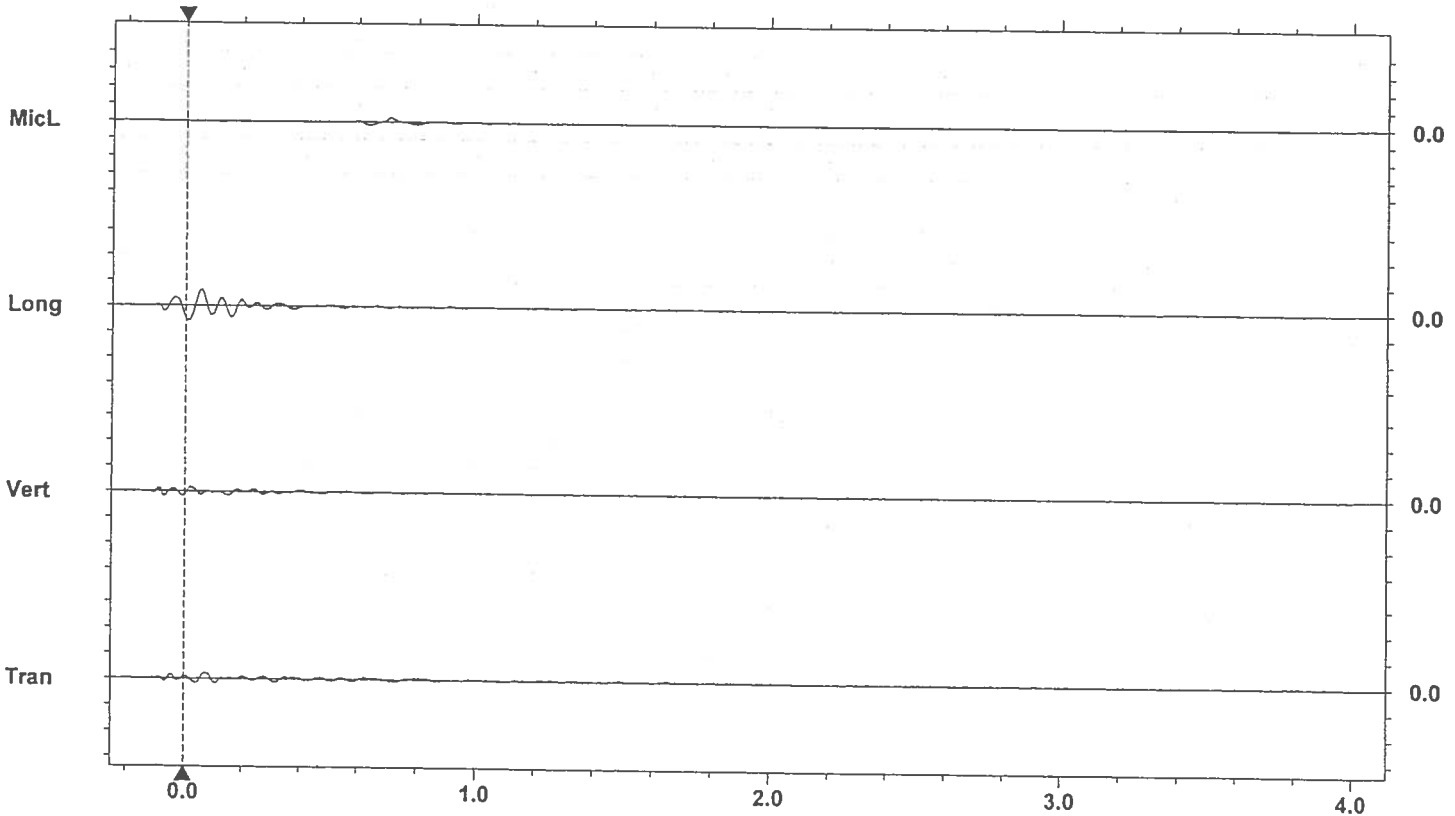
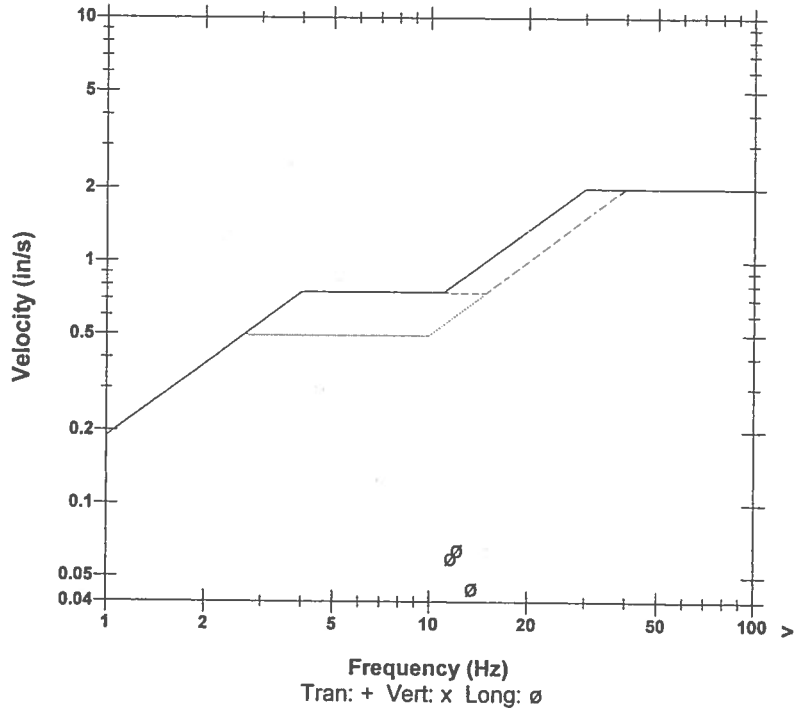
Post Event Notes
 Blast 1 Location C-6

Microphone Linear Weighting
 PSPL 98.8 dB(L) at 0.701 sec
 ZC Freq 9.8 Hz
 Channel Test Passed (Freq = 20.9 Hz Amp = 756 mv)

	Tran	Vert	Long	
PPV	0.0250	0.0200	0.0650	in/s
ZC Freq	16	28	12	Hz
Time (Rel. to Trig)	0.073	-0.071	0.057	sec
Peak Acceleration	0.0133	0.0133	0.0265	g
Peak Displacement	0.00028	0.00016	0.00085	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.0667 in/s at 0.057 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 11:37:18 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo :10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE6723 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration October 30, 2003 by InstanTel Inc.
 File Name H7239ZSQ.Y60

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

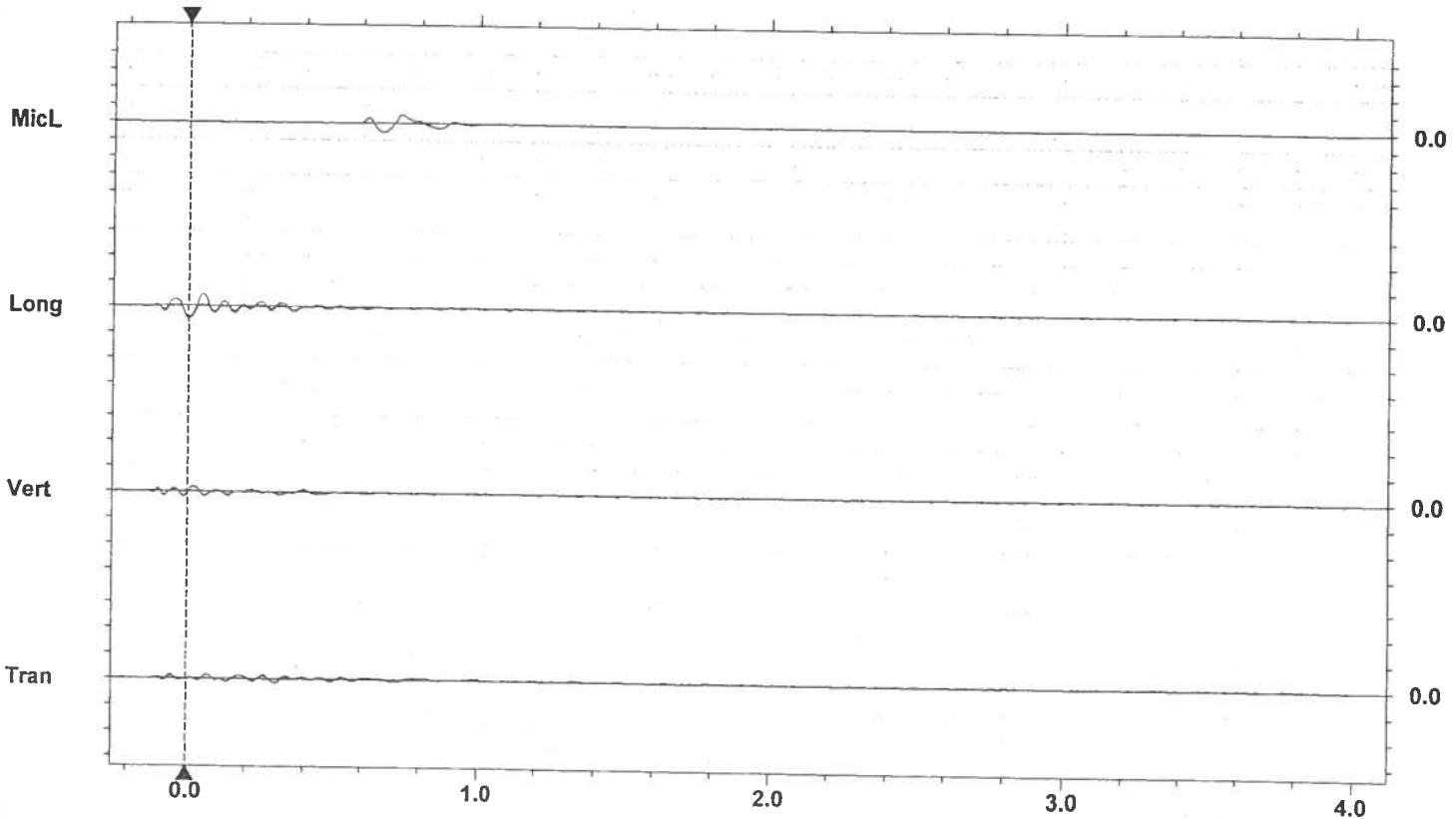
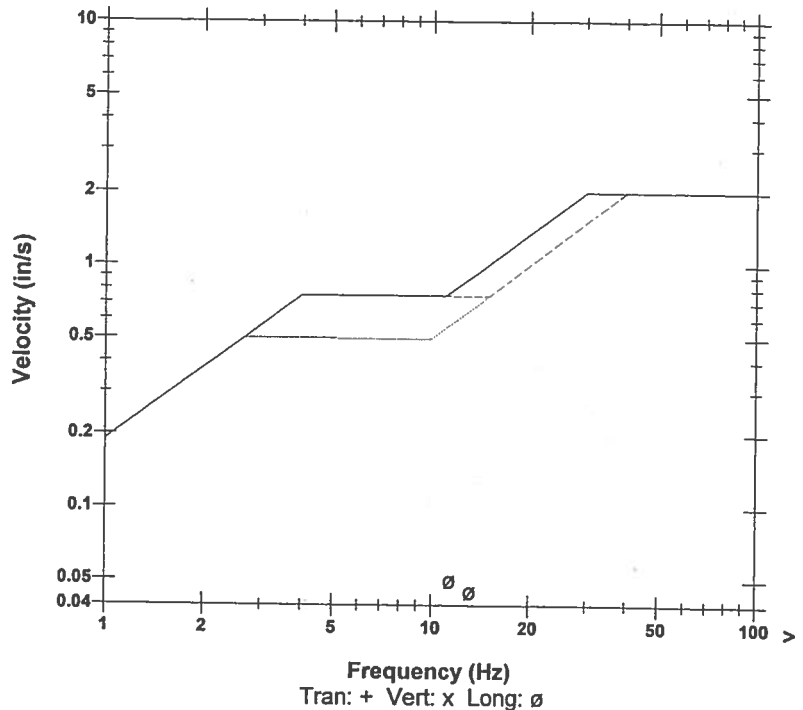
Blast 2 Location C-6

Microphone Linear Weighting
 PSPL 105.5 dB(L) at 0.666 sec
 ZC Freq 7.2 Hz
 Channel Test Passed (Freq = 20.9 Hz Amp = 756 mv)

	Tran	Vert	Long	
PPV	0.0150	0.0200	0.0500	in/s
ZC Freq	27	21	11	Hz
Time (Rel. to Trig)	-0.051	-0.015	0.000	sec
Peak Acceleration	0.0133	0.0133	0.0265	g
Peak Displacement	0.00016	0.00021	0.00073	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.0510 in/s at 0.000 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:31:58 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo : 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE6723 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration October 30, 2003 by InstanTel Inc.
 File Name H7239ZST.HA0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

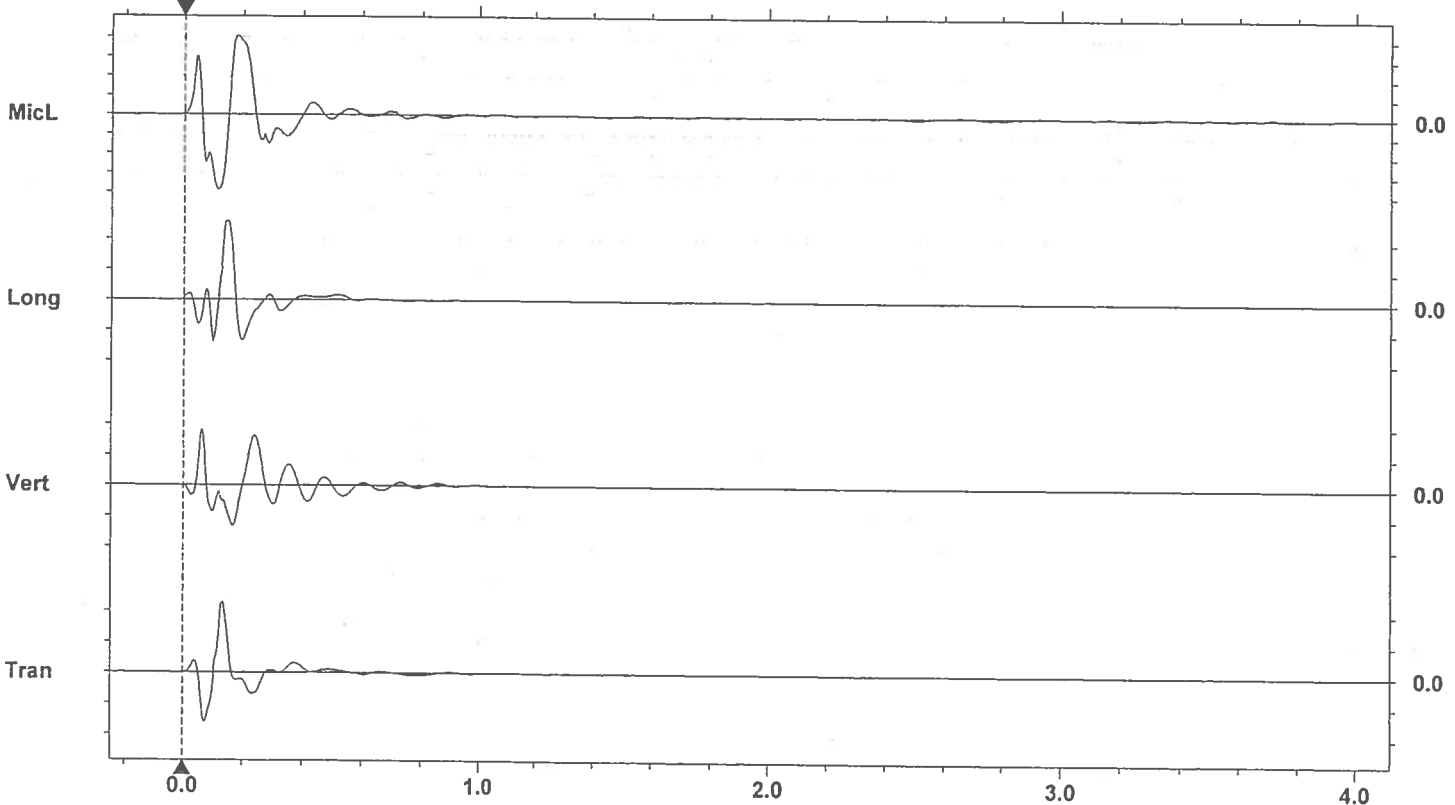
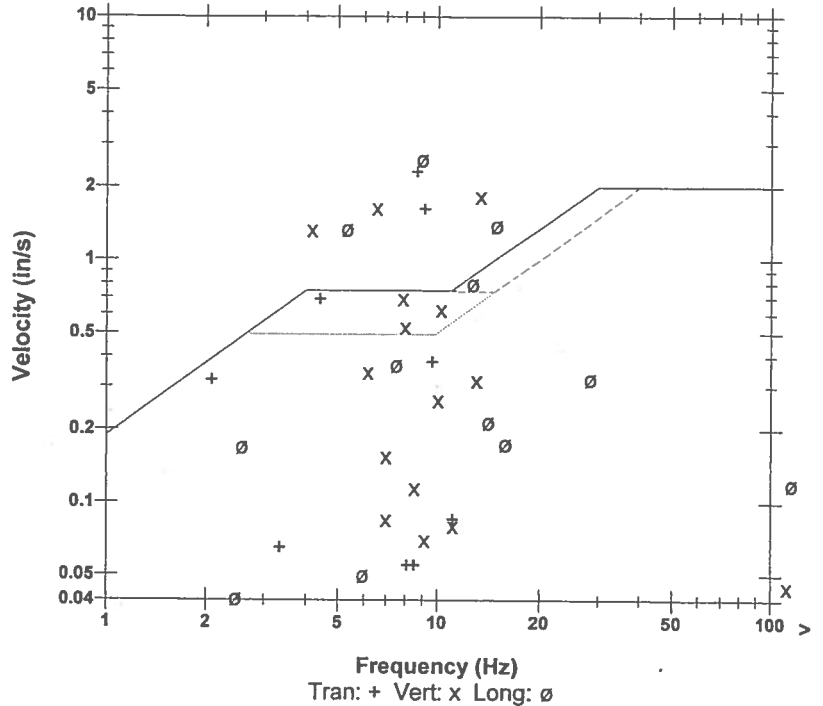
Post Event Notes
 Blast 3 Location C-7

Microphone Linear Weighting
 PSPL 129.0 dB(L) at 0.180 sec
 ZC Freq 5.5 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 716 mv)

	Tran	Vert	Long	
PPV	2.30	1.83	2.59	in/s
ZC Freq	8.7	13	9.0	Hz
Time (Rel. to Trig)	0.136	0.063	0.149	sec
Peak Acceleration	0.729	0.411	0.477	g
Peak Displacement	0.0345	0.0423	0.0462	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 3.35 in/s at 0.140 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 1.000 in/s/div Mic: 0.00200 psi(L)/div
 Trigger =

Event Report

Date/Time Long at 12:35:41 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE6723 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration October 30, 2003 by Instanetel Inc.
 File Name H7239ZST.NH0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

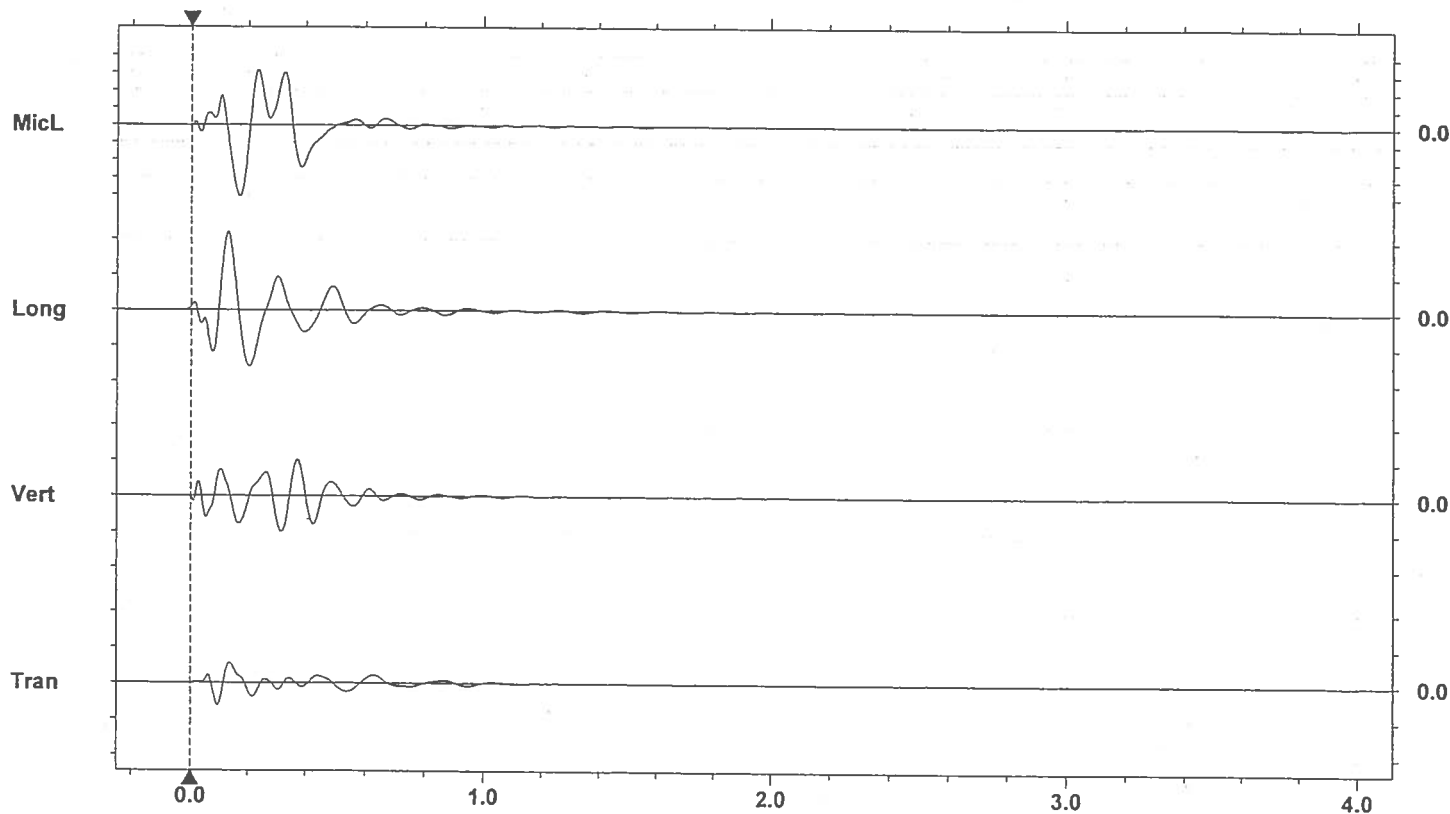
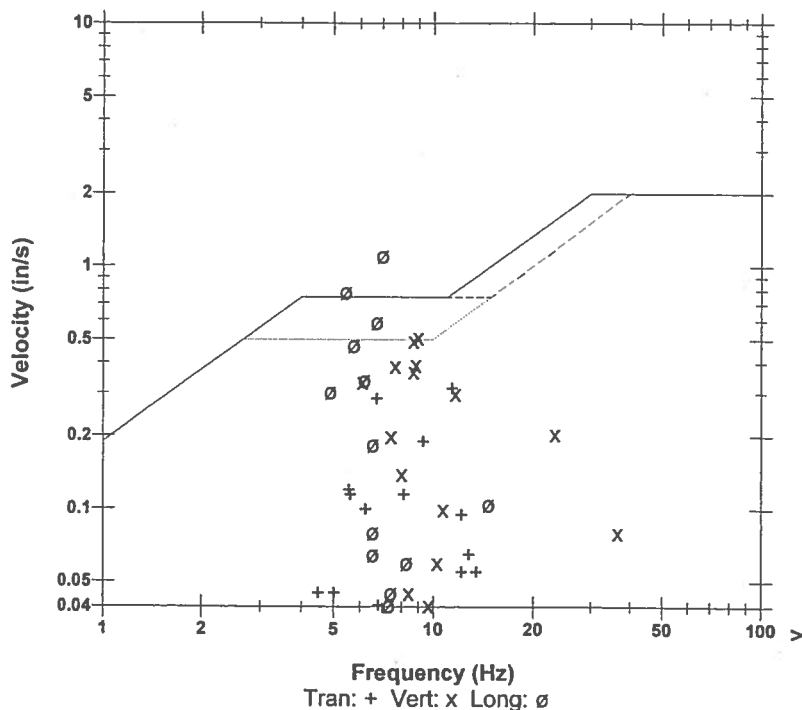
Blast 4 Location C-7

Microphone Linear Weighting
 PSPL 123.0 dB(L) at 0.169 sec
 ZC Freq 6.2 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 716 mv)

	Tran	Vert	Long	
PPV	0.315	0.510	1.11	in/s
ZC Freq	11	9.0	7.0	Hz
Time (Rel. to Trig)	0.093	0.371	0.129	sec
Peak Acceleration	0.0663	0.0928	0.133	g
Peak Displacement	0.00588	0.00931	0.0239	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 1.15 in/s at 0.131 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.500 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 12:45:14 February 25, 2004
 Trigger Source Geo: 0.0500 in/s
 Range Geo: 10.00 in/s
 Record Time 4.0 sec at 1024 sps

Serial Number BE6723 V 4.37-4.35 MiniMate Plus
 Battery Level 6.3 Volts
 Calibration October 30, 2003 by InstanTel Inc.
 File Name H7239ZSU.3E0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
 Project: East Cresson Attenuation Study
 User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

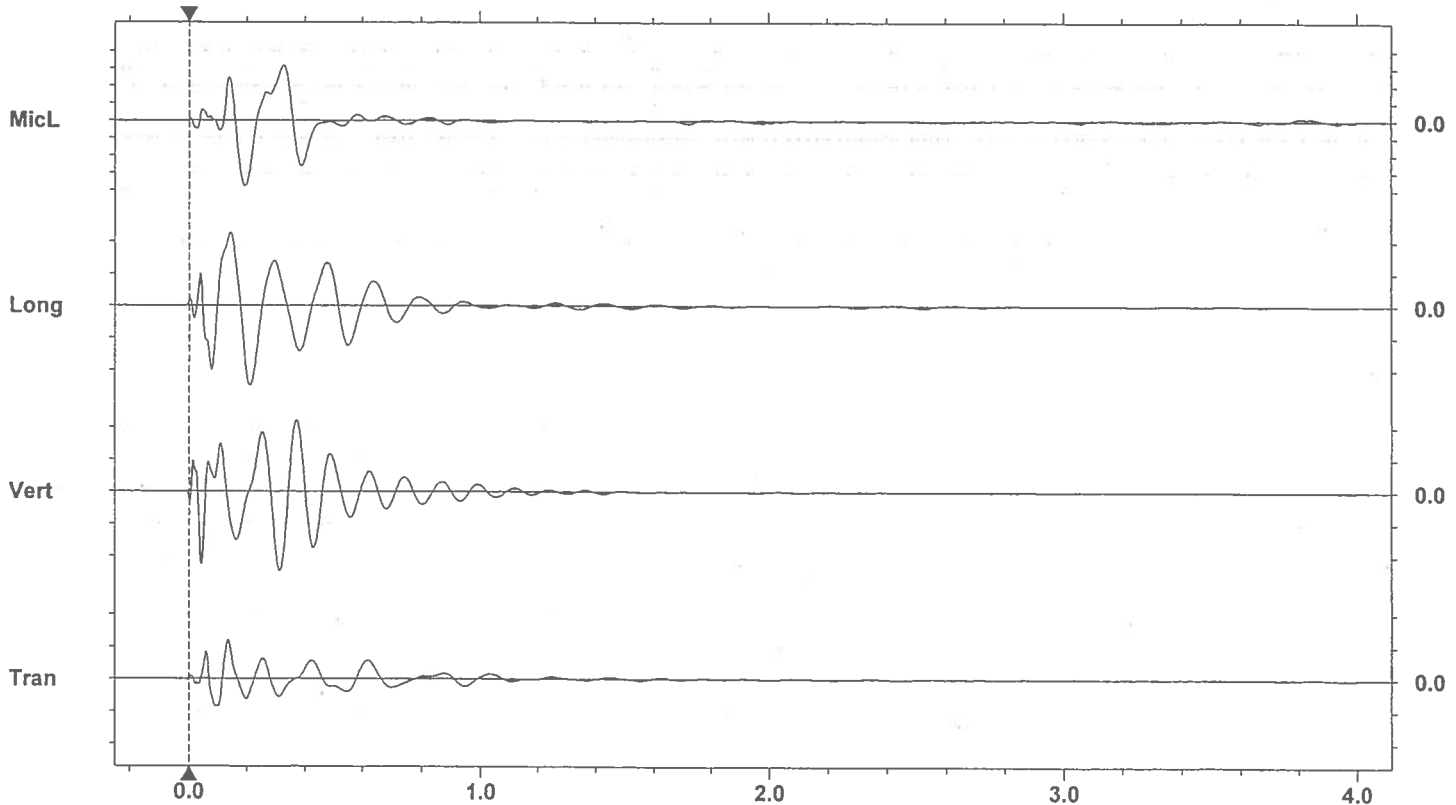
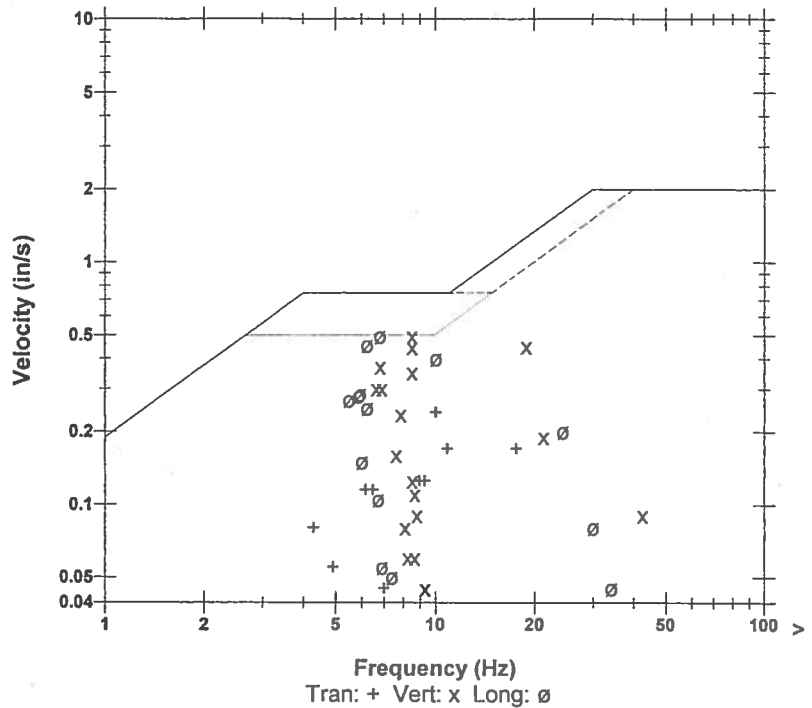
Blast 5 Location C-7

Microphone Linear Weighting
 PSPL 122.3 dB(L) at 0.191 sec
 ZC Freq 6.9 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 716 mv)

	Tran	Vert	Long	
PPV	0.240	0.495	0.495	in/s
ZC Freq	10	8.5	6.8	Hz
Time (Rel. to Trig)	0.136	0.313	0.210	sec
Peak Acceleration	0.0795	0.146	0.0928	g
Peak Displacement	0.00321	0.00919	0.0117	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.545 in/s at 0.313 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.200 in/s/div Mic: 0.00100 psi(L)/div
 Trigger =

Event Report

Date/Time Vert at 13:08:47 February 25, 2004
Trigger Source Geo: 0.0500 in/s
Range Geo: 10.00 in/s
Record Time 4.0 sec at 1024 sps

Serial Number BE6723 V 4.37-4.35 MiniMate Plus
Battery Level 6.3 Volts
Calibration October 30, 2003 by Instatel Inc.
File Name H7239ZSV.6N0

Notes

Client: Cripple Creek & Victor Gold Mining Co.
Project: East Cresson Attenuation Study
User: Matheson Mining Consultants, Inc.

Extended Notes

Post Event Notes

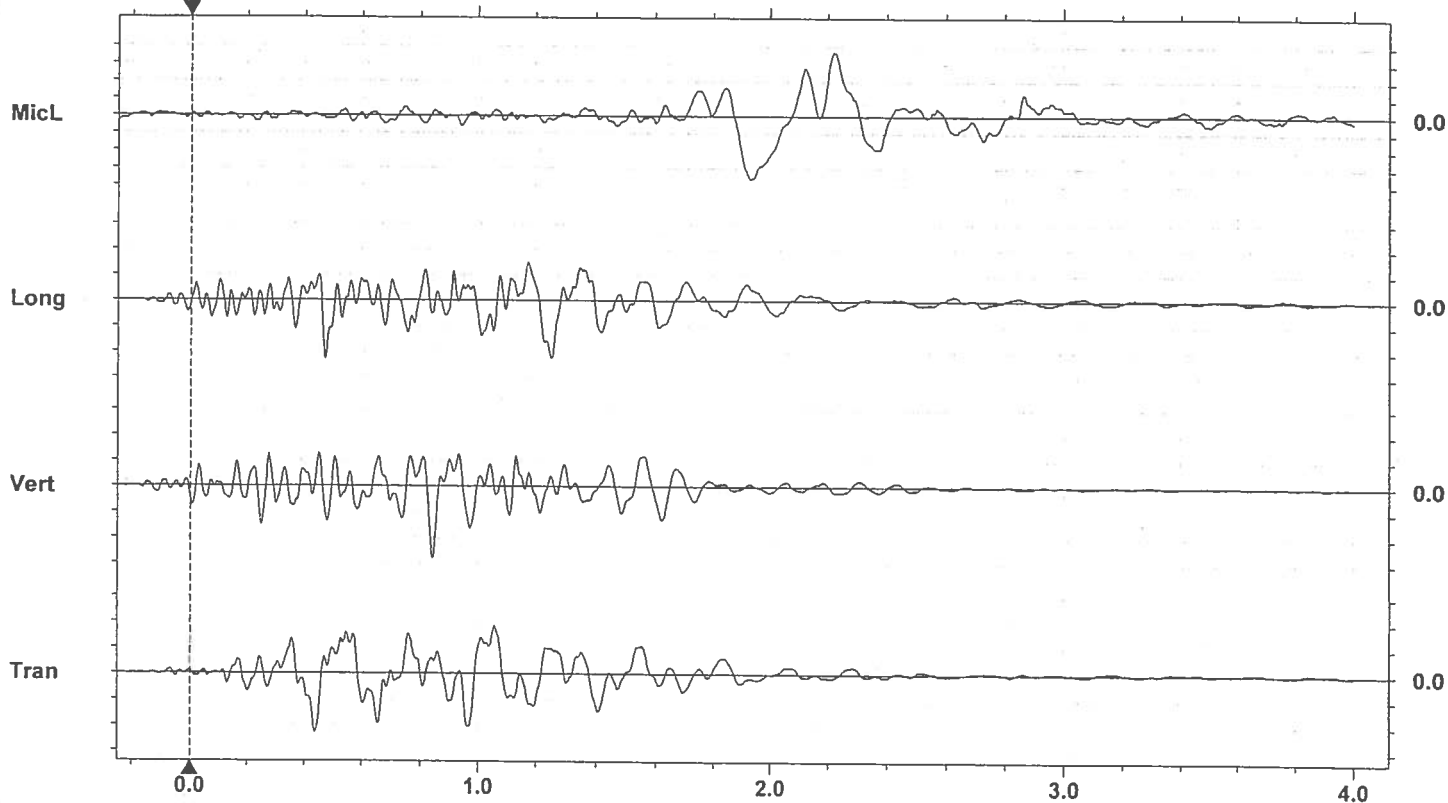
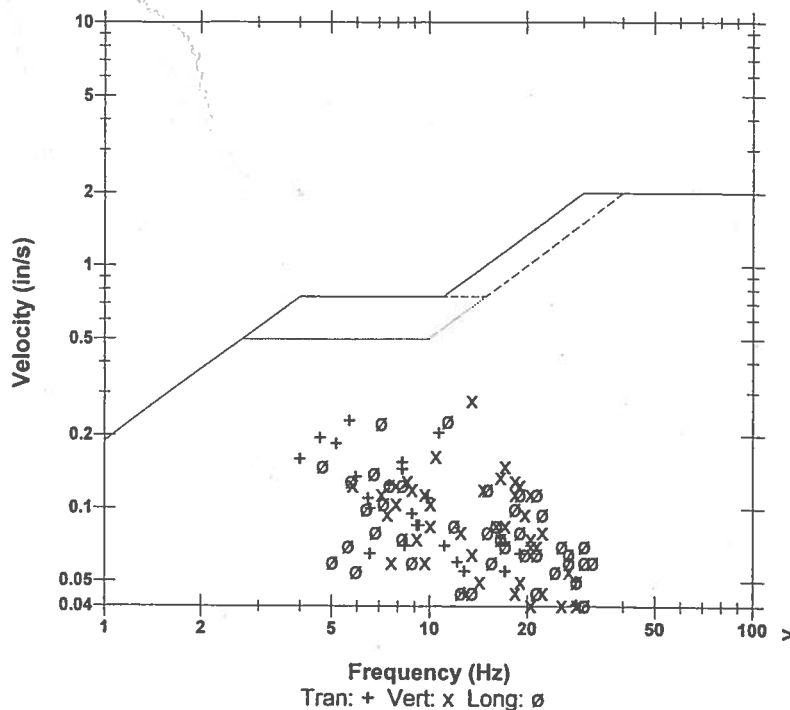
Blast 6 Location C-7

Microphone Linear Weighting
PSPL 122.1 dB(L) at 2.218 sec
ZC Freq 3.9 Hz
Channel Test Passed (Freq = 20.5 Hz Amp = 716 mv)

	Tran	Vert	Long	
PPV	0.230	0.280	0.230	in/s
ZC Freq	5.7	13	11	Hz
Time (Rel. to Trig)	0.438	0.839	0.472	sec
Peak Acceleration	0.0530	0.0530	0.0795	g
Peak Displacement	0.00599	0.00302	0.00471	in
Sensorcheck	Passed	Passed	Passed	

Peak Vector Sum 0.291 in/s at 0.840 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 0.100 in/s/div Mic: 0.00100 psi(L)/div
Trigger =