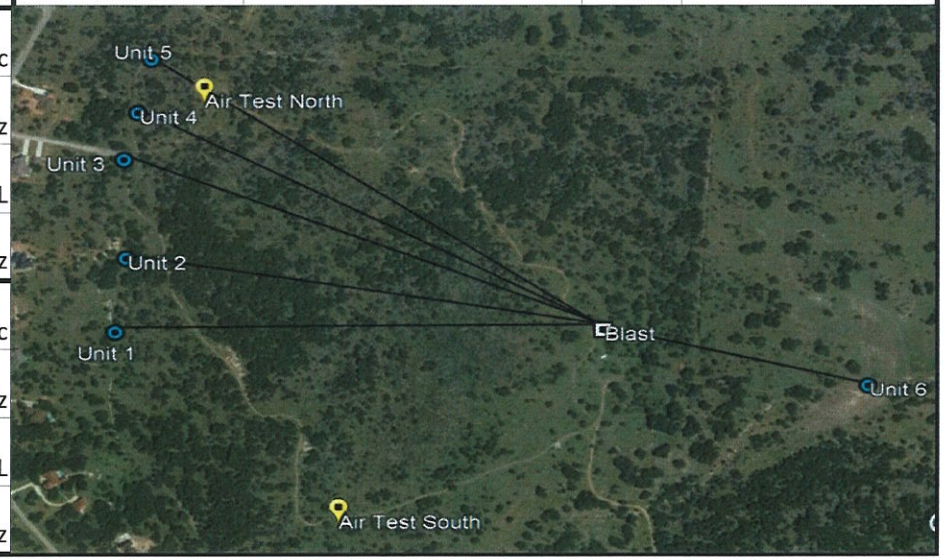
	Client: Spicewood Crushed Stone	**Date:** 08/19/2021	
	Project: Double Horn, Tx Quarry	**Technician:** Cody Fletcher	
	Location: Double Horn, Texas	**Dept Office:** 8:00 am	**Arrive Site:** 8:55 am
	Blast GPS: 30°29'44.50", -98°12'34.74"	**Dept Site:** 11:10 am	**Arrive Office:** 3:00 pm

Seismograph Monitoring Parameters

Record Mode:	Waveform	**Trigger Level:**	0.02 in/sec	**Trigger Source:**	Geo / Mic	**Record Time:**	6 Seconds
Notes:	Partly Cloudy skies, 80 deg. Wind SE 5 mph. Josh Cates blaster-in-charge. Blast time 10:20 AM.						

Vibration Event Results

Location ID:	Unit 1	**PPV:**	.2684 in/sec	**Location ID:**	Unit 4	**PPV:**	.1278 in/sec
Seismo S/N:	UM8828 Cal: 07/20/21	**Freq:**	85.3 Hz	**Seismo S/N:**	UM11609 Cal: 01/20/21	**Freq:**	78.8 Hz
GPS:	30°29'43.19", -98°12'56.77"	**AO:**	106.8 dBL	**GPS:**	30°29'53.95", -98°12'56.70"	**AO:**	107.1 dBL
Dist to Blast:	1,926 ft.	**Freq:**	6.3 Hz	**Dist to Blast:**	2,147 ft.	**Freq:**	5.9 Hz
Location ID:	Unit 2	**PPV:**	.1275 in/sec				
Seismo S/N:	UM6221 Cal: 07/09/2021	**Freq:**	97.5 Hz				
GPS:	30°29'46.79", -98°12'56.52"	**AO:**	113.4 dBL				
Dist to Blast:	1,927 ft.	**Freq:**	5.1 Hz				
Location ID:	Unit 3	**PPV:**	.1257 in/sec				
Seismo S/N:	UM7111 Cal: 06/21/21	**Freq:**	>100 Hz				
GPS:	30°29'51.58", -98°12'57.02"	**AO:**	109.7 dBL				
Dist to Blast:	2,086 ft.	**Freq:**	5.4 Hz				



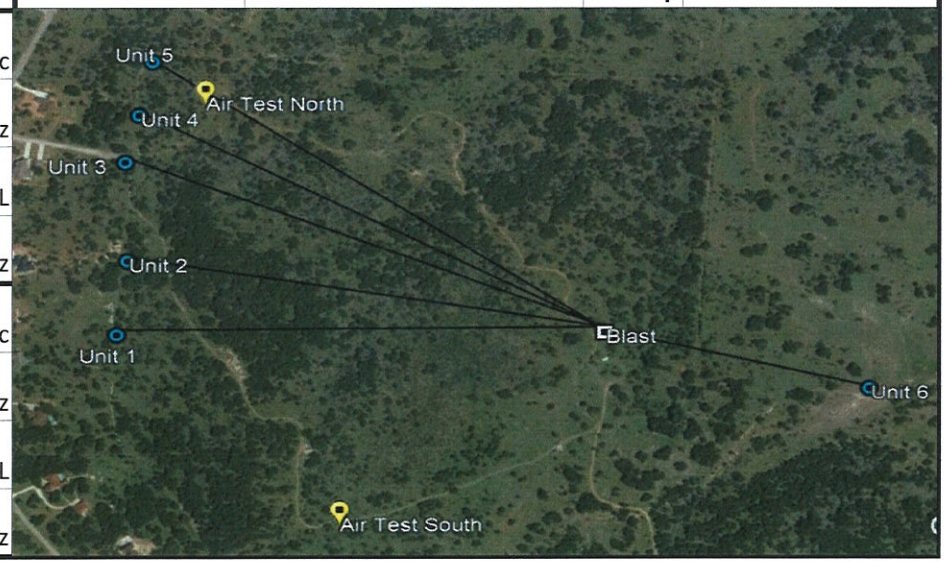
	Client: Spicewood Crushed Stone	**Date:** 08/19/2021	
	Project: Double Horn, Tx Quarry	**Technician:** Cody Fletcher	
	Location: Double Horn, Texas	**Dept Office:** 8:00 am	**Arrive Site:** 8:55 am
	Blast GPS: 30°29'44.50", -98°12'34.74"	**Dept Site:** 11:10 am	**Arrive Office:** 3:00 pm

Seismograph Monitoring Parameters

Record Mode:	Waveform	**Trigger Level:**	0.02 in/sec	**Trigger Source:**	Geo / Mic	**Record Time:**	6 Seconds
Notes:	Partly Cloudy skies, 80 deg. Wind SE 5 mph. Josh Cates blaster-in-charge. Blast time 10:20 AM.						

Vibration Event Results

Location ID:	Unit 5	**PPV:**	.1372 in/sec	**Location ID:**		**PPV:**	in/sec
Seismo S/N:	UM13921 Cal: 06/30/21	**Freq:**	89 Hz	**Seismo S/N:**		**Freq:**	Hz
GPS:	30°29'56.62", -98°12'56.27"	**AO:**	111.5 dBL	**GPS:**		**AO:**	dBL
Dist to Blast:	2,148 ft.	**Freq:**	6.5 Hz	**Dist to Blast:**		**Freq:**	Hz
Location ID:	Unit 6	**PPV:**	.1617 in/sec				
Seismo S/N:	UM13923 Cal: 06/21/21	**Freq:**	64 Hz				
GPS:	30°29'42.54", -98°12'21.10"	**AO:**	114.7 dBL				
Dist to Blast:	1,211 ft.	**Freq:**	5.2 Hz				
Location ID:		**PPV:**	in/sec				
Seismo S/N:		**Freq:**	Hz				
GPS:		**AO:**	dBL				
Dist to Blast:		**Freq:**	Hz				



Instantel

INTEGRATED GEOTECHNICAL SOLUTIONS, INC.

Waveform Trigger Source	Vert at August 19, 2021 10:17:11	**Serial Number**	UM8828
Trigger Level(s)	Geo 0.0200 in/s,Mic 0.01029 psi	**Model Number**	Micromate ISEE 10.90FB
Pre-Trigger/Record Time	0.25 sec/6.0 sec (Fixed)	**Battery Level**	3.8 volts
Sample Rate	1024 sps	**Unit Calibration**	July 20, 2021 by Instantel
Setup File Name	Dalrymple - Spicewood Loc 1.MMB	**Event File Name**	UM8828_20210819101711.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

Notes

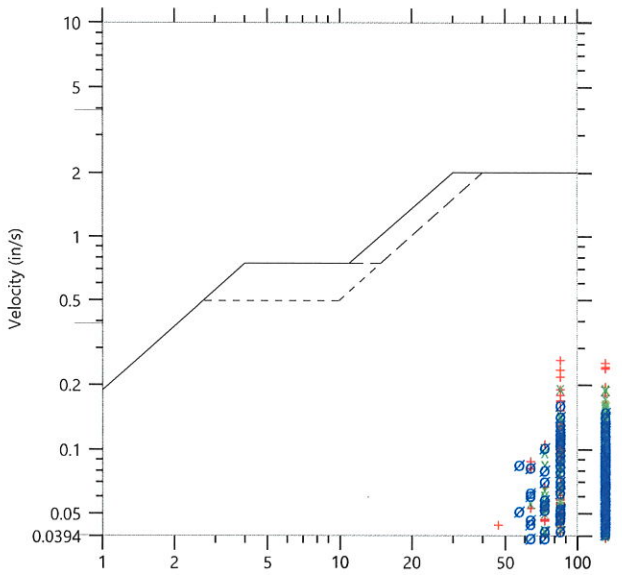
Location	Unit 1
Client	Spicewood Crushed Stone
Company	Double Horn, Texas
General Notes	IGS, Inc.

Post Event Notes No text to be displayed.

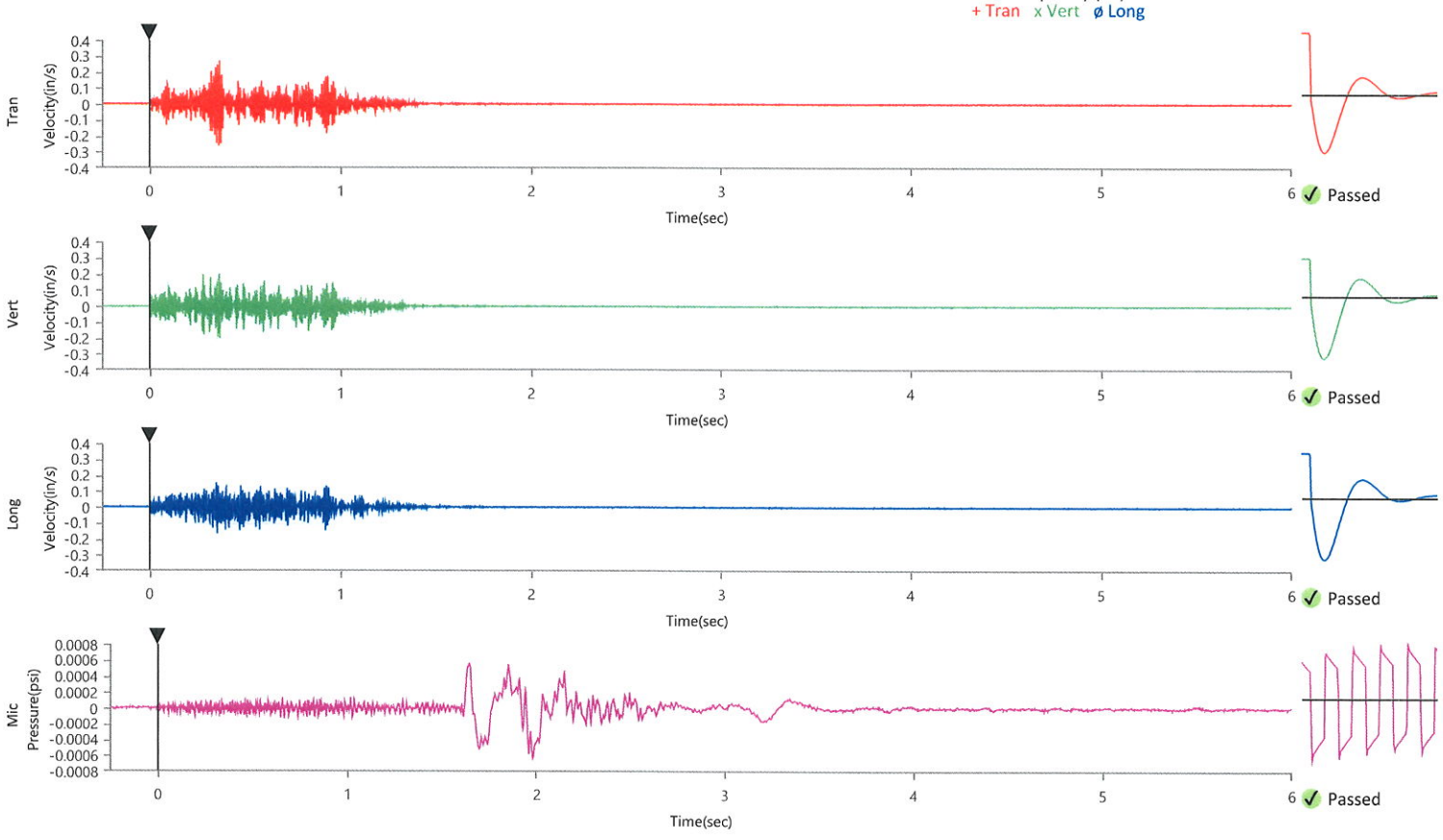
Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	0.2684 in/s	0.1998 in/s	0.1660 in/s
Zero Crossing Frequency	85.3 Hz	85.3 Hz	85.3 Hz
Time (Relative to Trigger)	0.367 sec	0.363 sec	0.354 sec
Peak Acceleration	0.421 g	0.384 g	0.253 g
Peak Displacement	0.000 in	0.000 in	0.000 in
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.5 Hz	7.7 Hz	7.5 Hz
Overswing Ratio	3.3	3.4	3.3
Peak Vector Sum	0.3364 in/s at 0.367 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	0.000632 psi
Peak Sound Pressure Level	106.8 dB(L)
Time (Relative to Trigger)	1.981 sec
Zero Crossing Frequency	6.3 Hz
Sensor Check	✓ Passed
Frequency	19.7 Hz
Test Amplitude	1217 mv

USBM RI8507 And OSMRE
Velocity versus Frequency (Zero Crossing)



Sensor Check



Instantel

INTEGRATED GEOTECHNICAL SOLUTIONS, INC.

Waveform Trigger Source	Vert at August 19, 2021 10:17:11	**Serial Number**	UM6221
Trigger Level(s)	Geo 0.0200 in/s,Mic 0.01029 psi	**Model Number**	Micromate ISEE 10.90FB
Pre-Trigger/Record Time	1.00 sec/6.0 sec (Fixed)	**Battery Level**	3.7 volts
Sample Rate	4096 sps	**Unit Calibration**	July 9, 2021 by Instantel
Setup File Name	Dalrymple - Spicewood Loc 2.mmb	**Event File Name**	UM6221_20210819101711.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

Notes

Location	Unit 2
Client	Spicewood Crushed Stone
Company	Double Horn, Texas
General Notes	IGS, Inc.

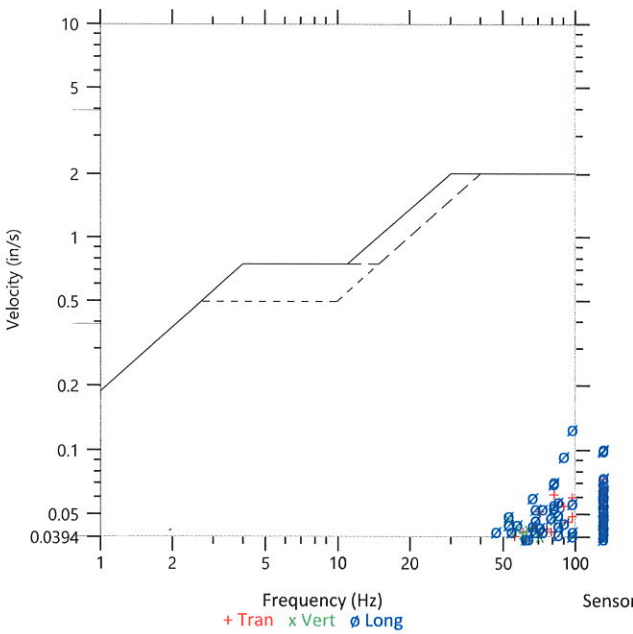
Extended Note

Post Event Notes No text to be displayed.

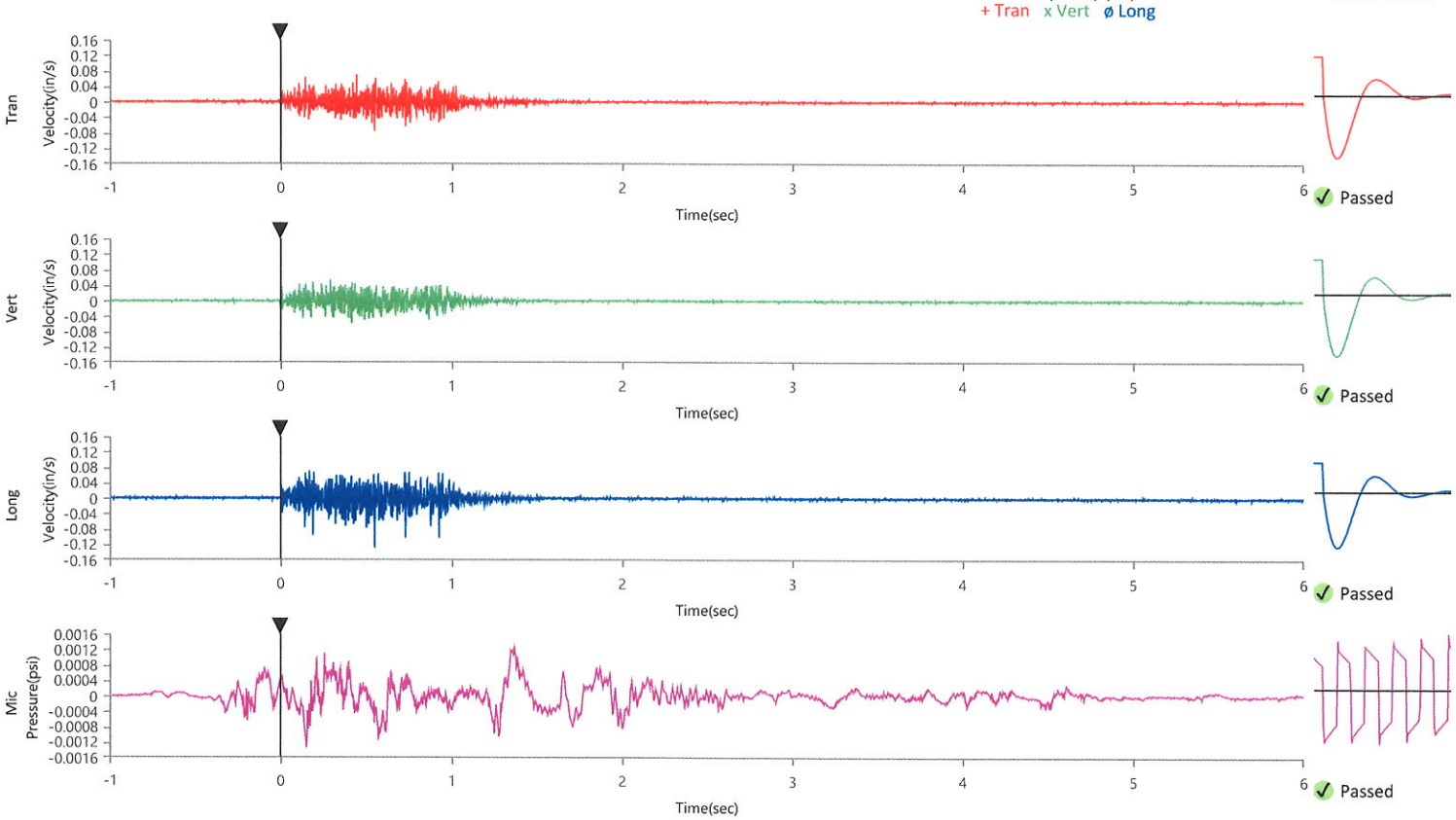
Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	0.0751 in/s	0.0590 in/s	0.1275 in/s
Zero Crossing Frequency	>100 Hz	>100 Hz	97.5 Hz
Time (Relative to Trigger)	0.549 sec	0.415 sec	0.550 sec
Peak Acceleration	0.138 g	0.145 g	0.188 g
Peak Displacement	0.000 in	0.000 in	0.000 in
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.3 Hz	7.5 Hz	7.3 Hz
Overswing Ratio	3.8	3.6	3.4
Peak Vector Sum	0.1387 in/s at 0.550 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	0.001361 psi
Peak Sound Pressure Level	113.4 dB(L)
Time (Relative to Trigger)	0.152 sec
Zero Crossing Frequency	5.1 Hz
Sensor Check	✓ Passed
Frequency	20.5 Hz
Test Amplitude	1297 mv

USBM RI8507 And OSMRE
Velocity versus Frequency (Zero Crossing)



Sensor Check



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INTEGRATED GEOTECHNICAL SOLUTIONS, INC.

Waveform Trigger Source	Long at August 19, 2021 10:17:10	**Serial Number**	UM7111
Trigger Level(s)	Geo 0.0200 in/s,Mic 0.01029 psi	**Model Number**	Micromate ISEE 10.90FB
Pre-Trigger/Record Time	1.00 sec/6.0 sec (Fixed)	**Battery Level**	3.8 volts
Sample Rate	4096 sps	**Unit Calibration**	June 21, 2021 by Instantel
Setup File Name	UM7111.mmb	**Event File Name**	UM7111_20210819101710.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

Notes

Location	Unit 3
Client	Spicewood Crushed Stone
Company	Double Horn, Texas
General Notes	IGS, Inc.

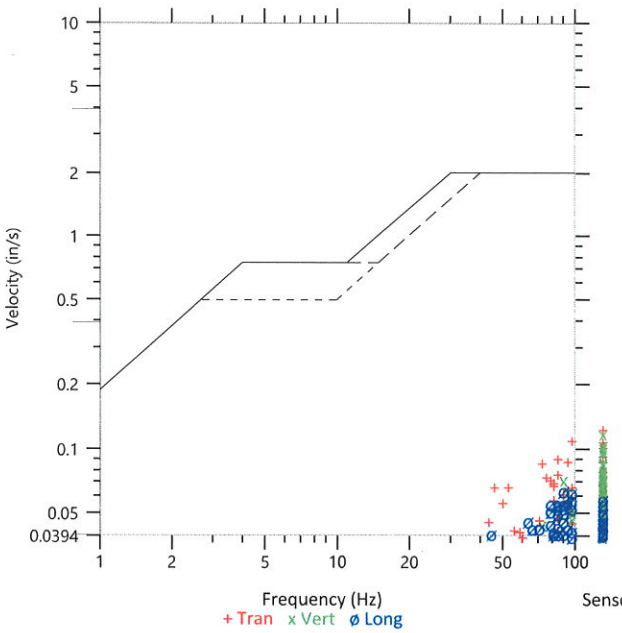
Extended Note

Post Event Notes No text to be displayed.

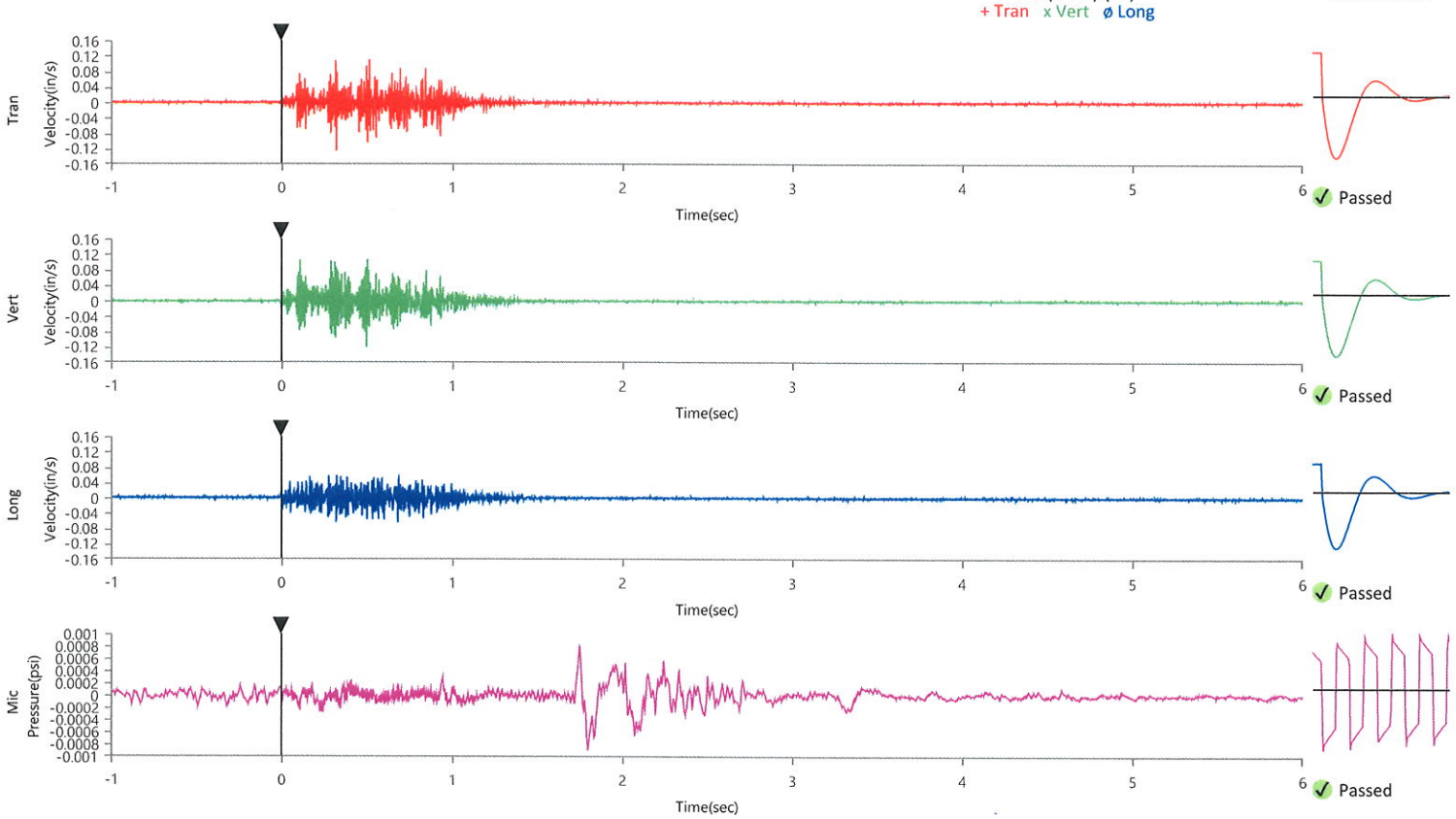
Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	0.1257 in/s	0.1204 in/s	0.0639 in/s
Zero Crossing Frequency	>100 Hz	>100 Hz	89.0 Hz
Time (Relative to Trigger)	0.321 sec	0.498 sec	0.681 sec
Peak Acceleration	0.224 g	0.217 g	0.109 g
Peak Displacement	0.000 in	0.000 in	0.000 in
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.1 Hz	7.1 Hz	7.3 Hz
Overswing Ratio	3.9	4.1	3.6
Peak Vector Sum	0.1588 in/s at 0.321 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	0.000887 psi
Peak Sound Pressure Level	109.7 dB(L)
Time (Relative to Trigger)	1.796 sec
Zero Crossing Frequency	5.4 Hz
Sensor Check	✓ Passed
Frequency	19.7 Hz
Test Amplitude	1221 mv

USBM RI8507 And OSMRE
Velocity versus Frequency (Zero Crossing)



Sensor Check



✓ Passed

✓ Passed

✓ Passed

✓ Passed

Waveform Trigger Source	Vert at August 19, 2021 10:17:11	**Serial Number**	UM11609
Trigger Level(s)	Geo 0.0200 in/s,Mic 0.01029 psi	**Model Number**	Micromate ISEE 10.90
Pre-Trigger/Record Time	1.00 sec/6.0 sec (Fixed)	**Battery Level**	3.8 volts
Sample Rate	4096 sps	**Unit Calibration**	January 20, 2021 by Instantel
Setup File Name	RPM BOX TEST.mmb	**Event File Name**	UM11609_20210819101711.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

Notes

Location	Unit 4
Client	Spicewood Crushed Stone
Company	Double Horn, Texas
General Notes	IGS, Inc.

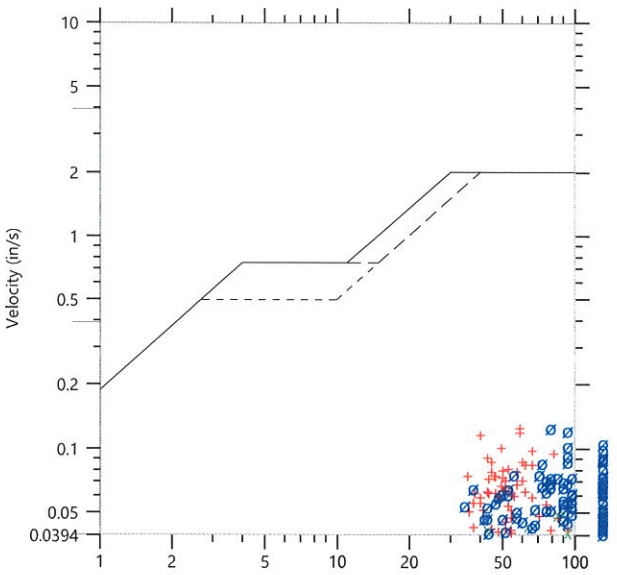
Extended Note

Post Event Notes No text to be displayed.

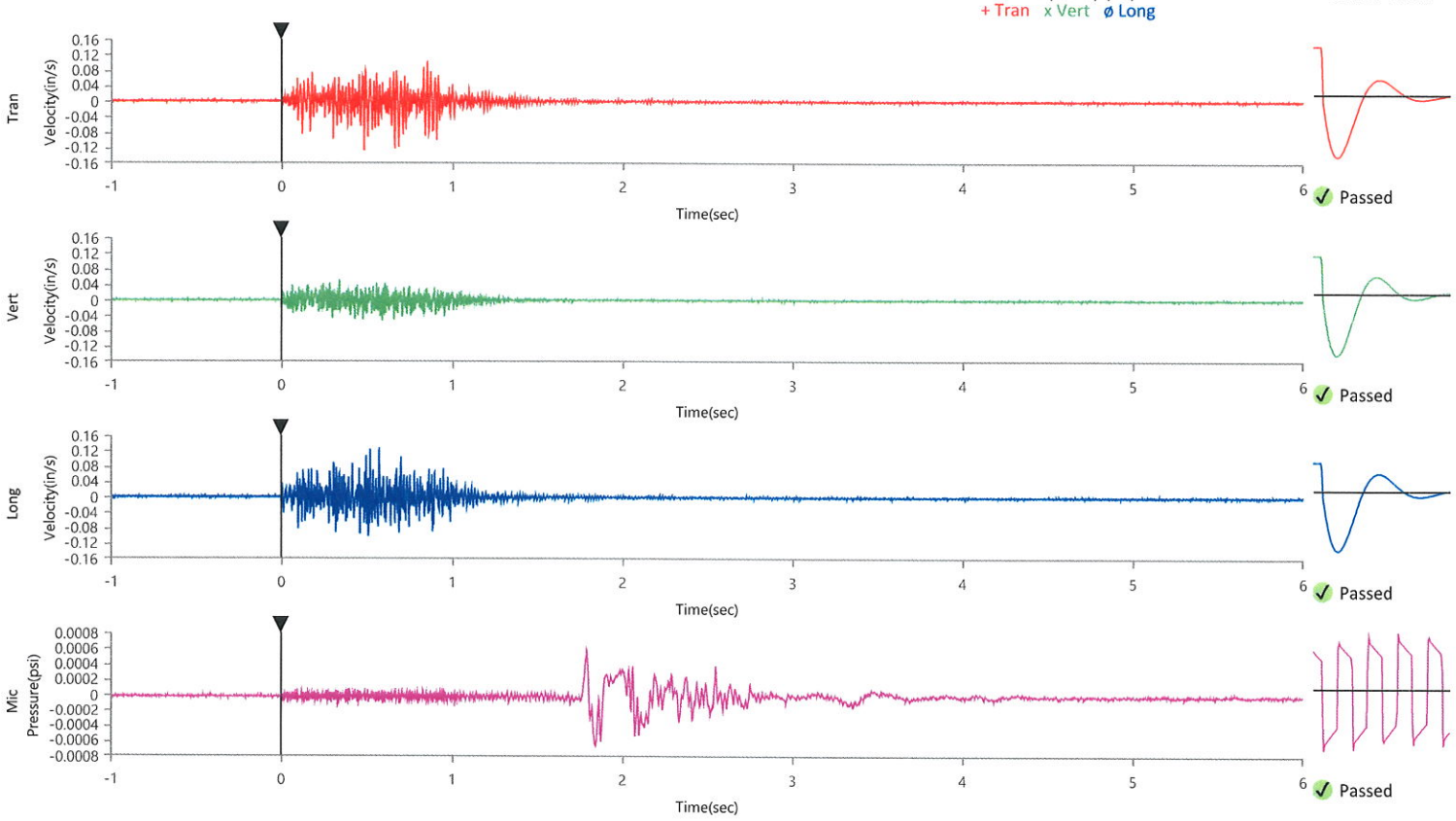
Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	0.1269 in/s	0.0546 in/s	0.1278 in/s
Zero Crossing Frequency	58.5 Hz	>100 Hz	78.8 Hz
Time (Relative to Trigger)	0.482 sec	0.590 sec	0.572 sec
Peak Acceleration	0.158 g	0.105 g	0.191 g
Peak Displacement	0.000 in	0.000 in	0.000 in
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	6.7 Hz	7.1 Hz	6.7 Hz
Overswing Ratio	4.1	3.6	3.4
Peak Vector Sum	0.1336 in/s at 0.663 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	0.000659 psi
Peak Sound Pressure Level	107.1 dB(L)
Time (Relative to Trigger)	1.843 sec
Zero Crossing Frequency	5.9 Hz
Sensor Check	✓ Passed
Frequency	18.3 Hz
Test Amplitude	1207 mv

USBM RI8507 And OSMRE
Velocity versus Frequency (Zero Crossing)



Sensor Check



✓ Passed
✓ Passed
✓ Passed
✓ Passed

Waveform Trigger Source	Long at August 19, 2021 10:17:10	**Serial Number**	UM13921
Trigger Level(s)	Geo 0.0200 in/s,Mic 0.01029 psi	**Model Number**	Micromate ISEE 10.90FB
Pre-Trigger/Record Time	1.00 sec/6.0 sec (Fixed)	**Battery Level**	3.8 volts
Sample Rate	4096 sps	**Unit Calibration**	June 30, 2021 by Instantel
Setup File Name	UM13921_1.mmb	**Event File Name**	UM13921_20210819101710.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

Notes

Location	Unit 5
Client	Spicewood Crushed Stone
Company	Double Horn, Texas
General Notes	IGS, Inc.

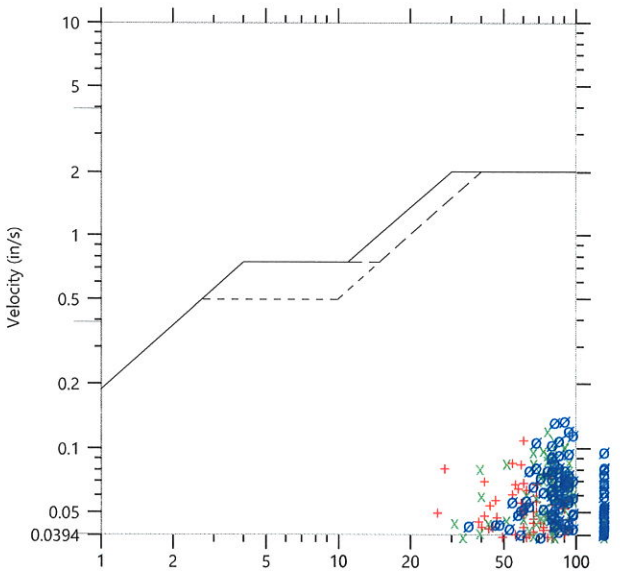
Extended Note

Post Event Notes No text to be displayed.

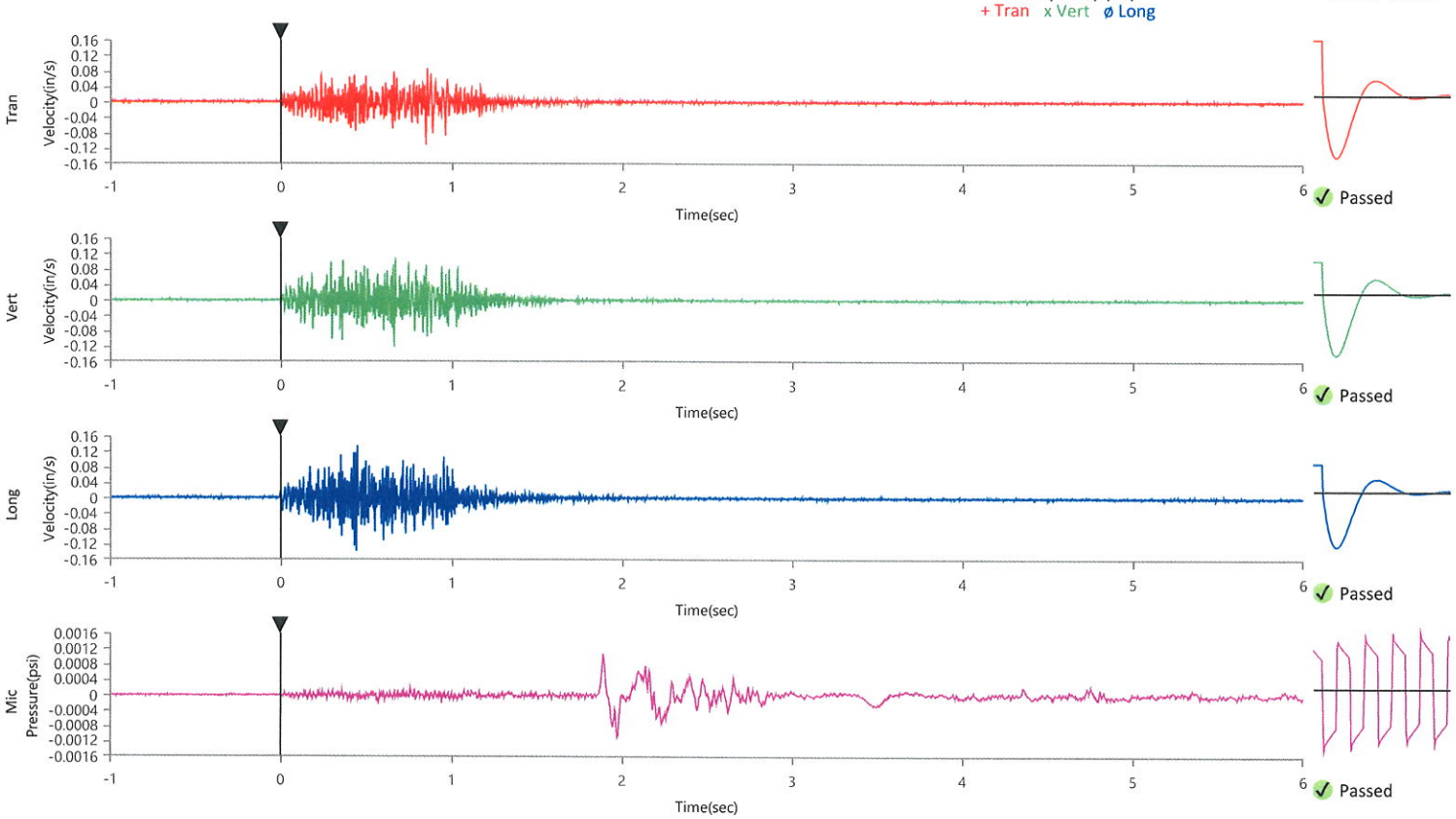
Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	0.1114 in/s	0.1229 in/s	0.1372 in/s
Zero Crossing Frequency	60.2 Hz	75.9 Hz	89.0 Hz
Time (Relative to Trigger)	0.848 sec	0.663 sec	0.442 sec
Peak Acceleration	0.109 g	0.161 g	0.211 g
Peak Displacement	0.000 in	0.000 in	0.000 in
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.3 Hz	7.3 Hz	7.1 Hz
Overswing Ratio	4.0	4.3	4.5
Peak Vector Sum	0.1450 in/s at 0.437 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	0.001096 psi
Peak Sound Pressure Level	111.5 dB(L)
Time (Relative to Trigger)	1.971 sec
Zero Crossing Frequency	6.5 Hz
Sensor Check	✓ Passed
Frequency	19.7 Hz
Test Amplitude	1252 mv

USBM RI8507 And OSMRE
Velocity versus Frequency (Zero Crossing)



Sensor Check



✓ Passed
✓ Passed
✓ Passed
✓ Passed

Instantel

INTEGRATED GEOTECHNICAL SOLUTIONS, INC.

Waveform Trigger Source	Vert at August 19, 2021 10:17:10	**Serial Number**	UM13923
Trigger Level(s)	Geo 0.0200 in/s,Mic 0.01029 psi	**Model Number**	Micromate ISEE 10.90FB
Pre-Trigger/Record Time	1.00 sec/6.0 sec (Fixed)	**Battery Level**	3.8 volts
Sample Rate	4096 sps	**Unit Calibration**	June 21, 2021 by Instantel
Setup File Name	UM13923.mmb	**Event File Name**	UM13923_20210819101710.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

Notes

Location	Unit 6
Client	Spicewood Crushed Stone
Company	Double Horn, Texas
General Notes	IGS, Inc.

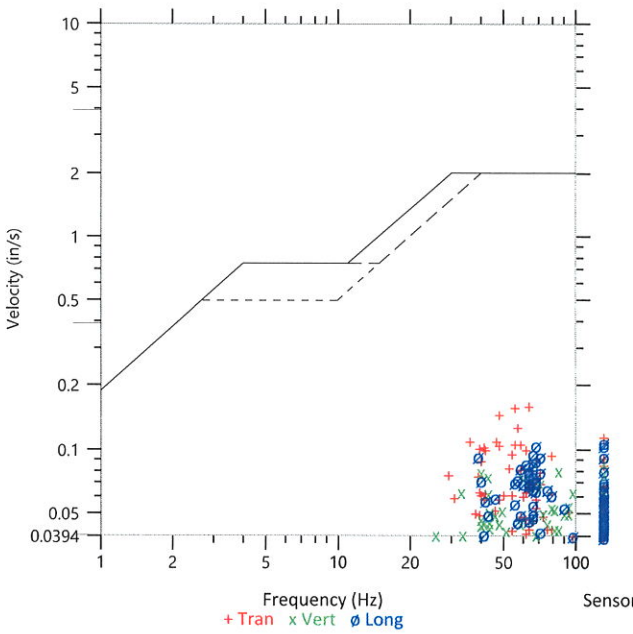
Extended Note

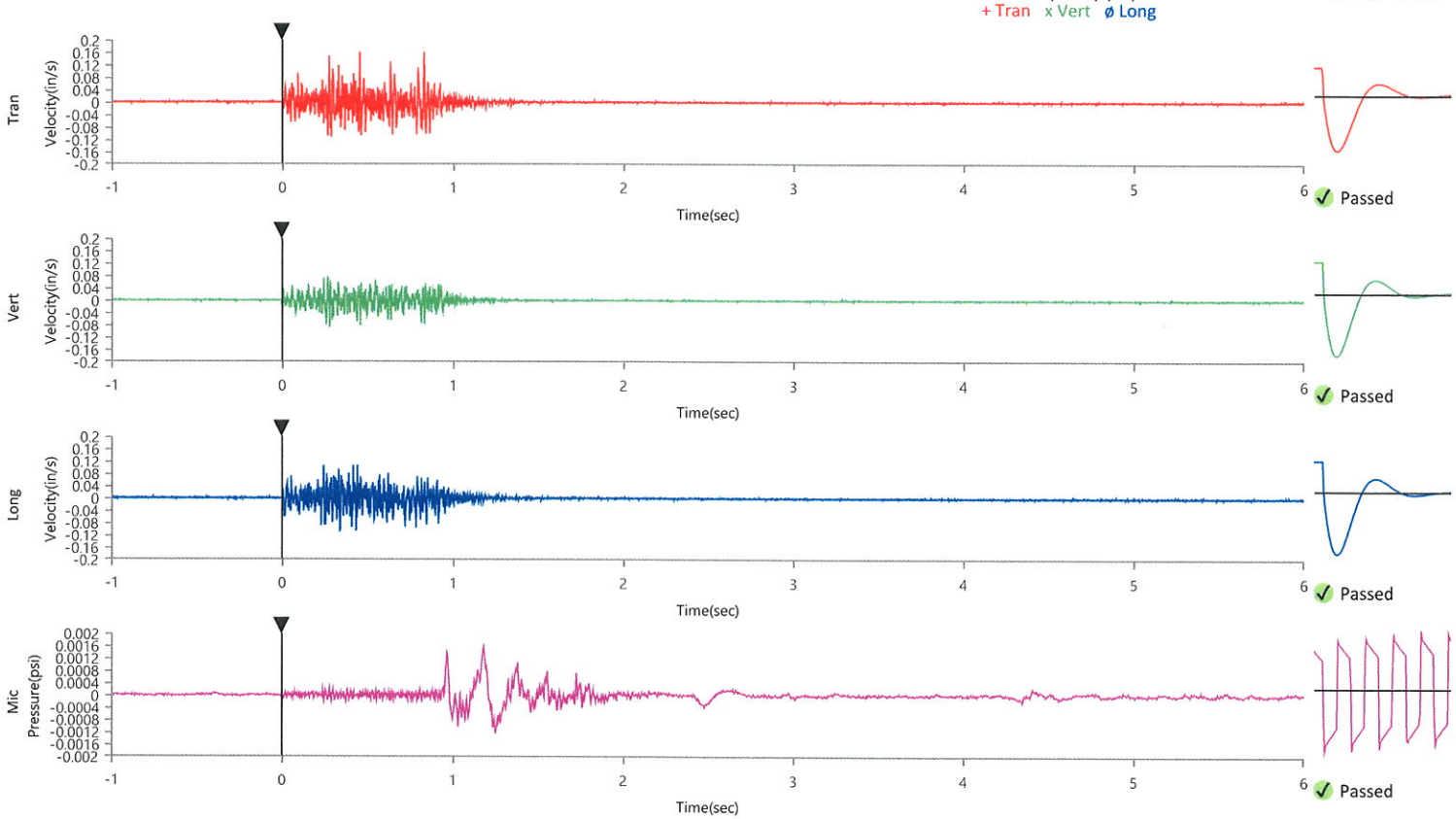
Post Event Notes No text to be displayed.

Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	0.1617 in/s	0.0887 in/s	0.1095 in/s
Zero Crossing Frequency	64.0 Hz	>100 Hz	>100 Hz
Time (Relative to Trigger)	0.453 sec	0.278 sec	0.339 sec
Peak Acceleration	0.217 g	0.191 g	0.260 g
Peak Displacement	0.000 in	0.000 in	0.000 in
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	6.9 Hz	7.3 Hz	7.1 Hz
Overswing Ratio	4.6	4.5	4.6
Peak Vector Sum	0.1634 in/s at 0.453 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	0.001571 psi
Peak Sound Pressure Level	114.7 dB(L)
Time (Relative to Trigger)	1.180 sec
Zero Crossing Frequency	5.2 Hz
Sensor Check	✓ Passed
Frequency	19.7 Hz
Test Amplitude	1230 mv

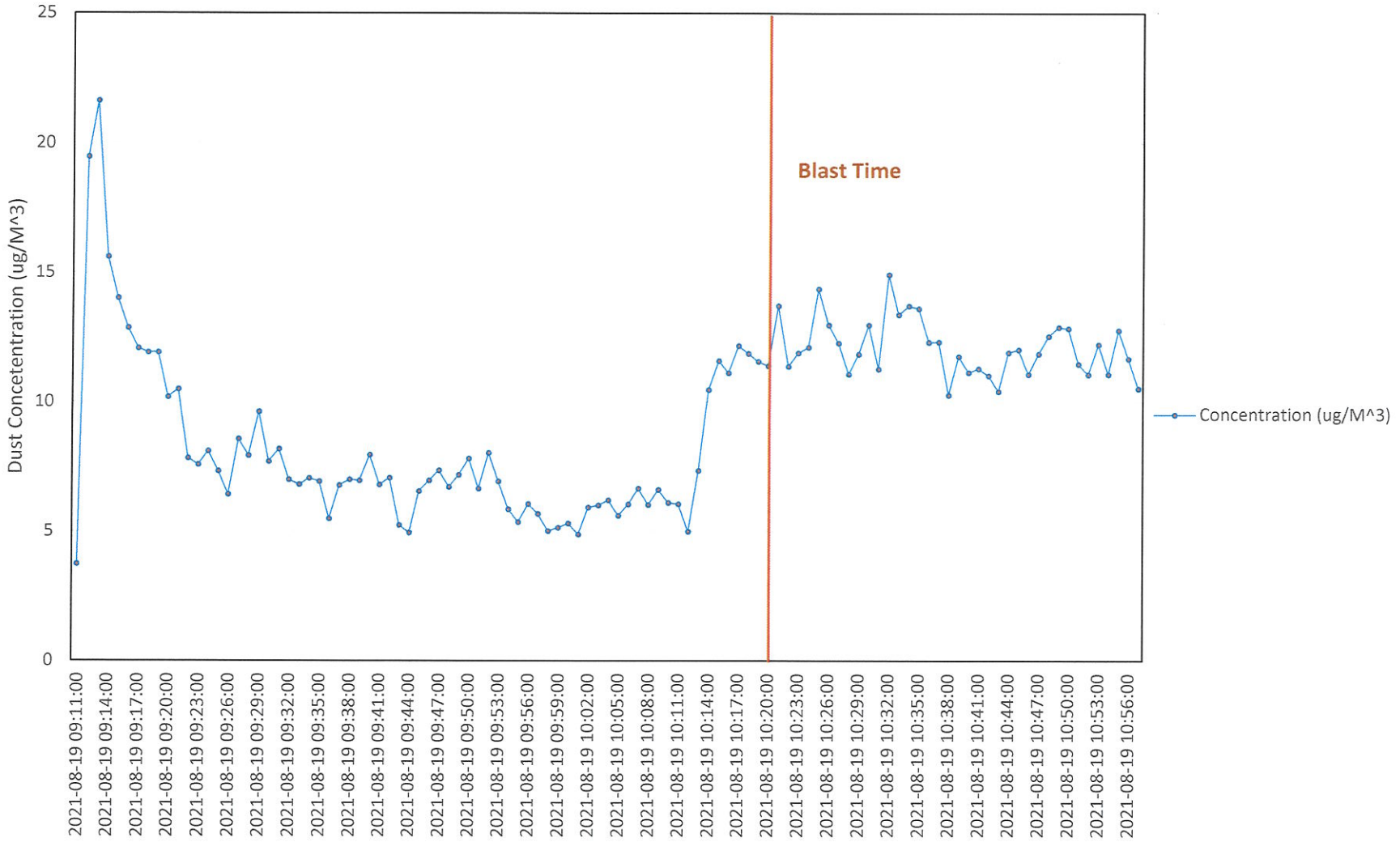
USBM RI8507 And OSMRE
Velocity versus Frequency (Zero Crossing)





INTEGRATED GEOTECHNICAL SOLUTIONS, INC.

Spicewood Crushed Stone
North Dust Monitor
Blast: August 19, 2021 10:20 am
Concentration (ug/M^3)



INTEGRATED GEOTECHNICAL SOLUTIONS, INC.

Spicewood Crushed Stone
South Dust Monitor
Blast: August 19, 2021 10:20 am
Concentration (ug/M^3)