

**BROWARD COUNTY BLASTING MONITORING DATA
FOR CITY OF MIRAMAR
BLASTING OCCURRING IN MIAMI-DADE COUNTY
MARCH 2018**

LOCATION #1: Riviera Isles (NE)

LOCATION #2: Riviera Isles (SW)

LOCATION #3: Hungtinton South

DATE	STATION LOCATION	TIME	READING (PPV)*
01/08/2018	LOCATION #1	1:16 PM	0.138
01/08/2018	LOCATION #2	1:18 PM	0.053
01/08/2018	LOCATION #3	1:16 PM	0.050
01/10/2018	LOCATION #1	1:48 PM	0.208
01/10/2018	LOCATION #2	1:50 PM	0.053
01/10/2018	LOCATION #3	1:47 PM	0.053
01/11/2018	LOCATION #1	1:20 PM	0.048
01/12/2018	LOCATION #1	1:15 PM	0.103
01/12/2018	LOCATION #3	1:14 PM	0.048
01/16/2018	LOCATION #1	1:45 PM	0.118
01/16/2018	LOCATION #2	1:47 PM	0.070
01/16/2018	LOCATION #3	1:45 PM	0.093
01/17/2018	LOCATION #1	2:00 PM	0.138
01/17/2018	LOCATION #2	2:02 PM	0.113
01/17/2018	LOCATION #3	1:59 PM	0.073
01/17/2018	LOCATION #3	3:02 PM	0.098
01/18/2018	LOCATION #1	11:30 AM	0.068
01/18/2018	LOCATION #2	11:32 AM	0.033
01/19/2018	LOCATION #1	1:16 PM	0.103
01/19/2018	LOCATION #2	1:18 PM	0.065
01/19/2018	LOCATION #3	1:16 PM	0.128
01/23/2018	LOCATION #1	1:20 PM	0.065
01/24/2018	LOCATION #1	2:00 PM	0.078
01/24/2018	LOCATION #2	2:02 PM	0.055
01/24/2018	LOCATION #3	2:00 PM	0.115
01/26/2018	LOCATION #1	1:49 PM	0.063

**BROWARD COUNTY BLASTING MONITORING DATA
 FOR CITY OF MIRAMAR
 BLASTING OCCURRING IN MIAMI-DADE COUNTY
 MARCH 2018**

LOCATION #1: Riviera Isles (NE)

LOCATION #2: Riviera Isles (SW)

LOCATION #3: Hungtinton South

DATE	STATION LOCATION	TIME	READING (PPV)*
01/31/2018	LOCATION #1	1:16 PM	0.060
02/02/2018	LOCATION #1	1:16 PM	0.155
02/02/2018	LOCATION #2	1:18 PM	0.058
02/02/2018	LOCATION #3	1:15 PM	0.068
02/09/2018	LOCATION #2	2:06 PM	0.055
02/09/2018	LOCATION #3	2:03 PM	0.083

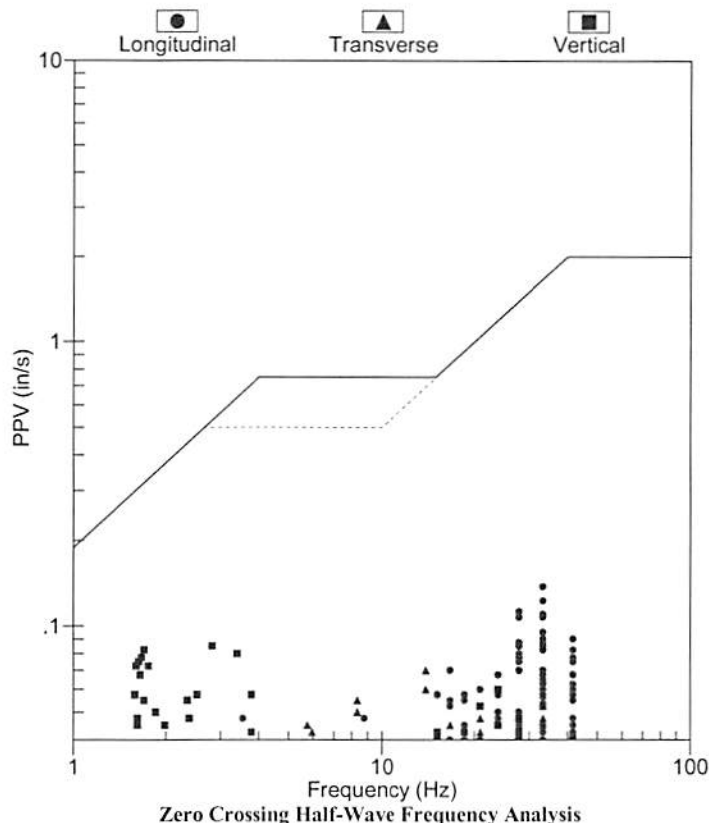
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/08/2018 13:16:04
Event No: 1
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 1



	Summary Data		
	L	T	V
PPV (in/s)	0.138	0.070	0.085
FREQ (Hz)	33.3	13.9	2.8
PD (.001")	2.15	1.64	7.55
PPA (g)	0.078	0.039	0.026
Peak Vector Sum :	0.143 in/s		
Peak Air Pressure:	113 db		
	0.00146 PSI @ 4.9 Hz		

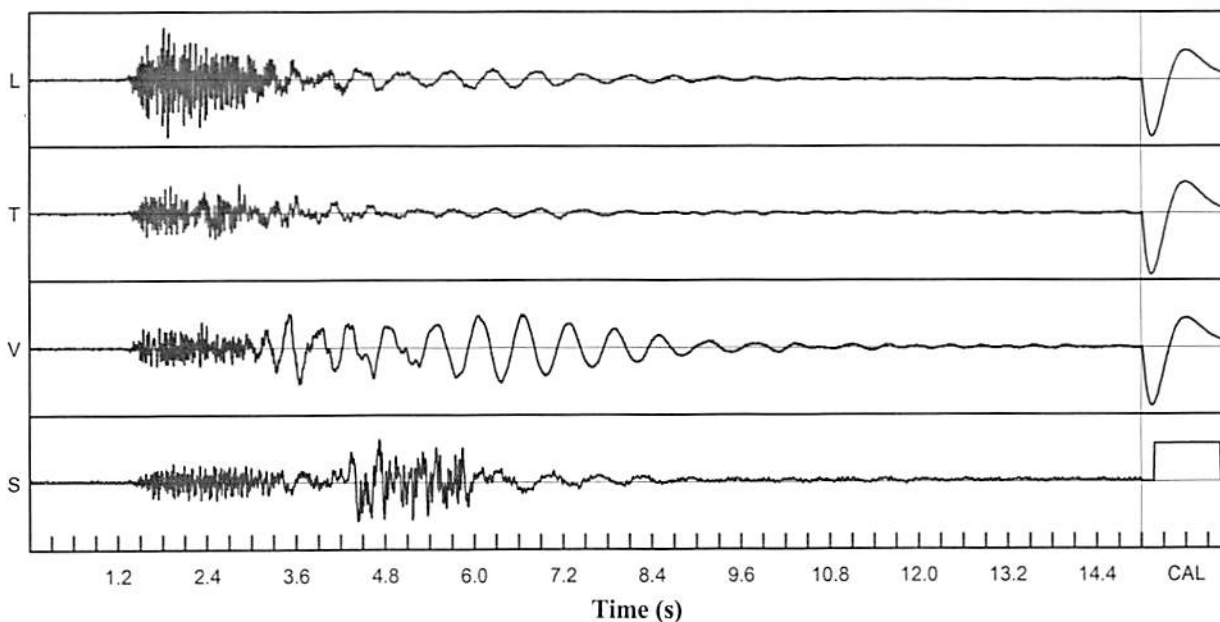
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5148 Event: 1



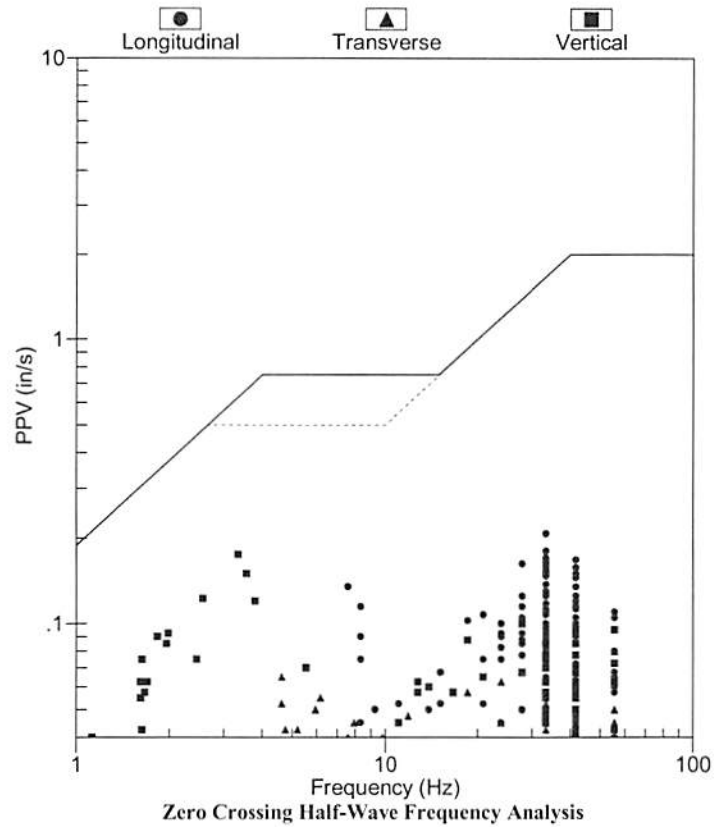
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/10/2018 13:47:42
Event No: 2
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 2



	Summary Data		
	L	T	V
PPV (in/s)	0.208	0.088	0.175
FREQ (Hz)	33.3	27.8	3.3
PD (.001")	3.40	2.02	7.55
PPA (g)	0.111	0.052	0.072
Peak Vector Sum :	0.223 in/s		
Peak Air Pressure:	117 db		
	0.00214 PSI @ 6.9 Hz		

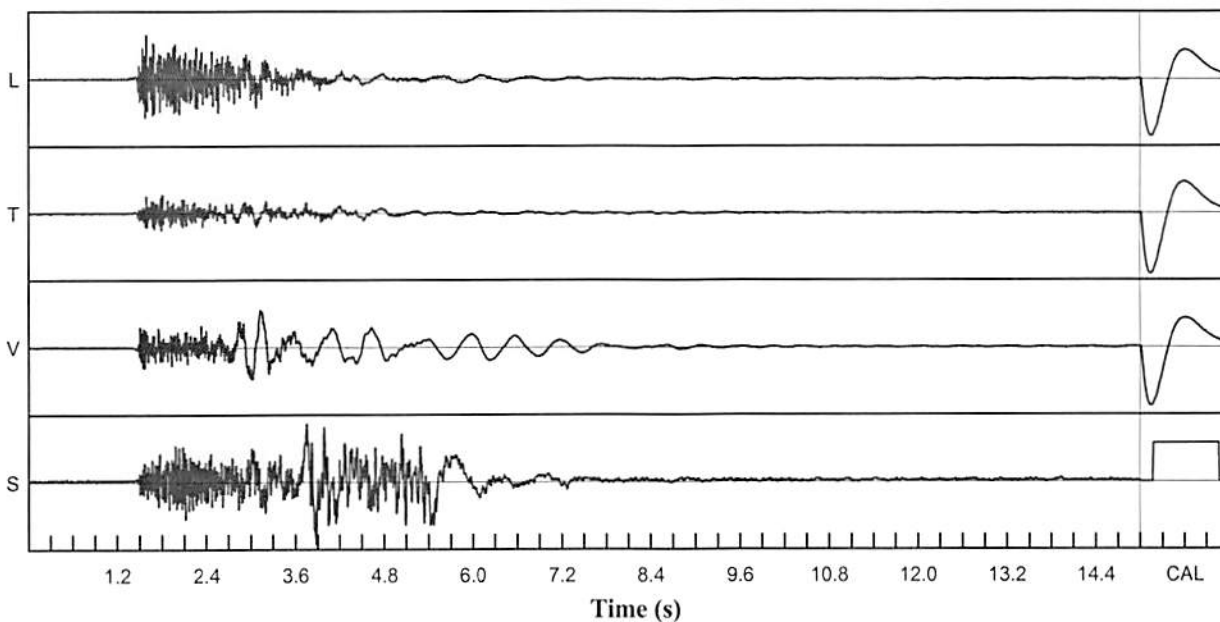
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.320 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5148 Event: 2



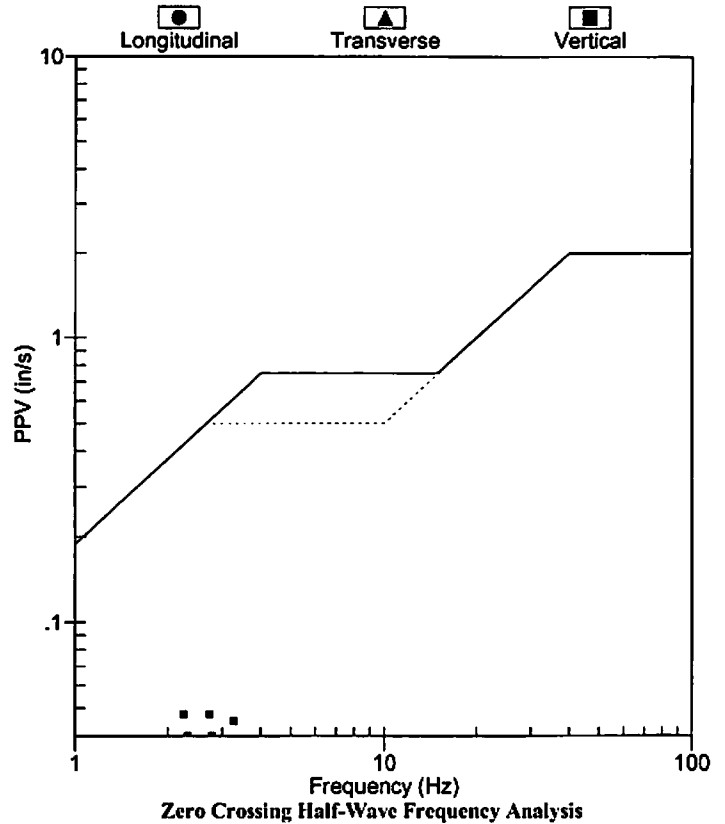
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/11/2018 13:19:52
Event No: 3
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 3



	Summary Data		
	L	T	V
PPV (in/s)	0.015	0.020	0.048
FREQ (Hz)	27.8	3.1	2.7
PD (.001")	1.05	1.49	3.13
PPA (g)	0.007	0.007	0.007
Peak Vector Sum :	0.048 in/s		
Peak Air Pressure:	111 db		
	0.00121 PSI @ 3.3 Hz		

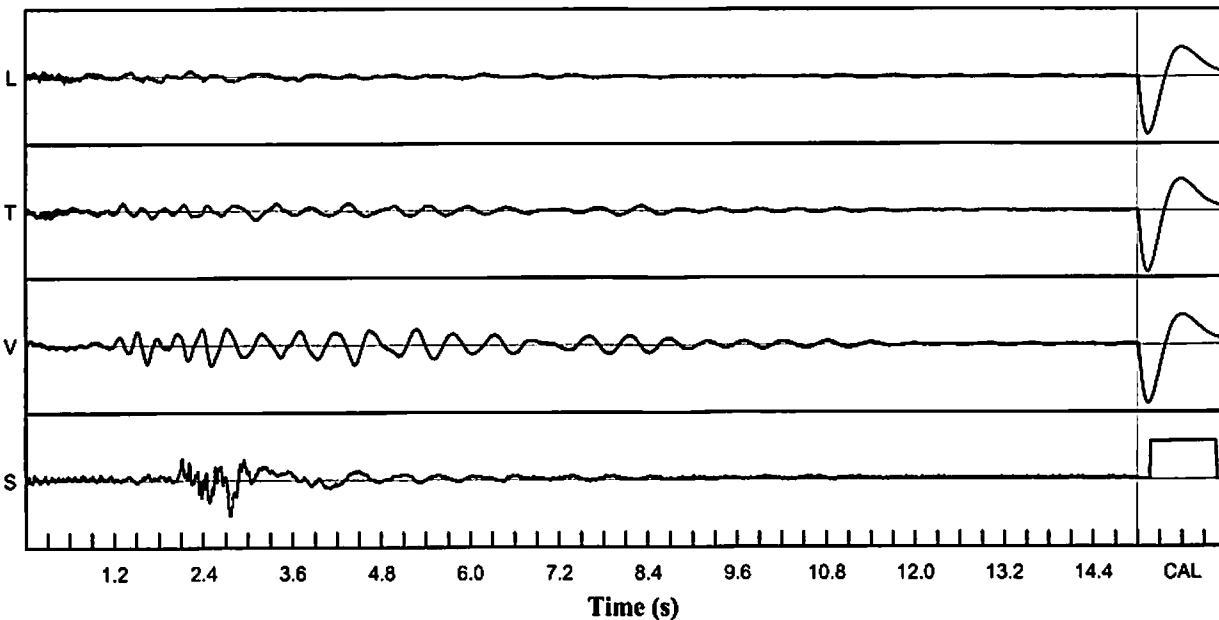
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5148 Event: 3



Seismic Analysis

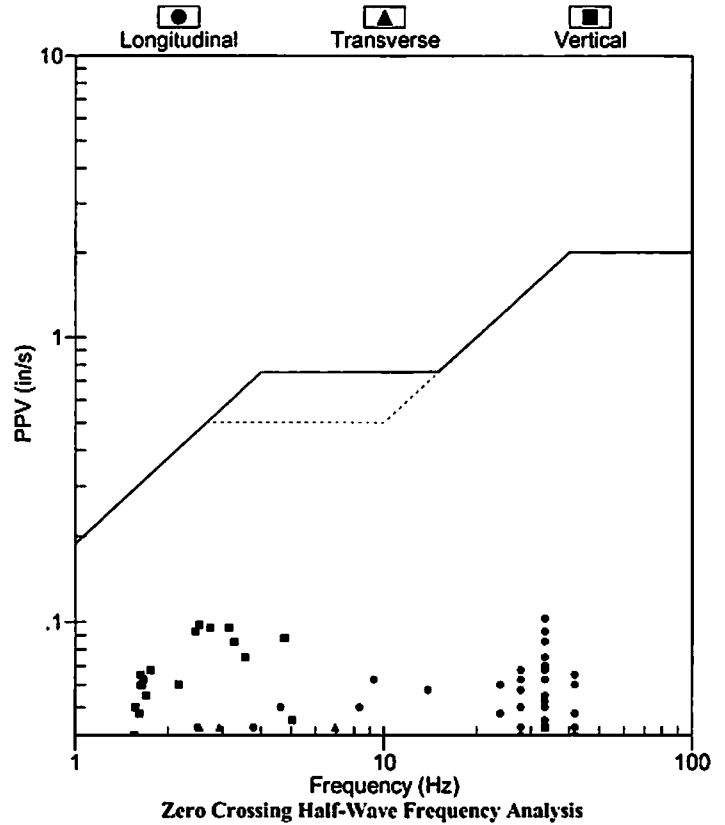
Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/12/2018 13:14:38
Event No: 4
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 4

	Summary Data		
	L	T	V
PPV (in/s)	0.103	0.043	0.098
FREQ (Hz)	33.3	6.9	2.5
PD (.001")	2.13	1.92	6.53
PPA (g)	0.052	0.020	0.020
Peak Vector Sum :	0.103 in/s		
Peak Air Pressure:	119 db		
	0.00281 PSI @ 1.5 Hz		



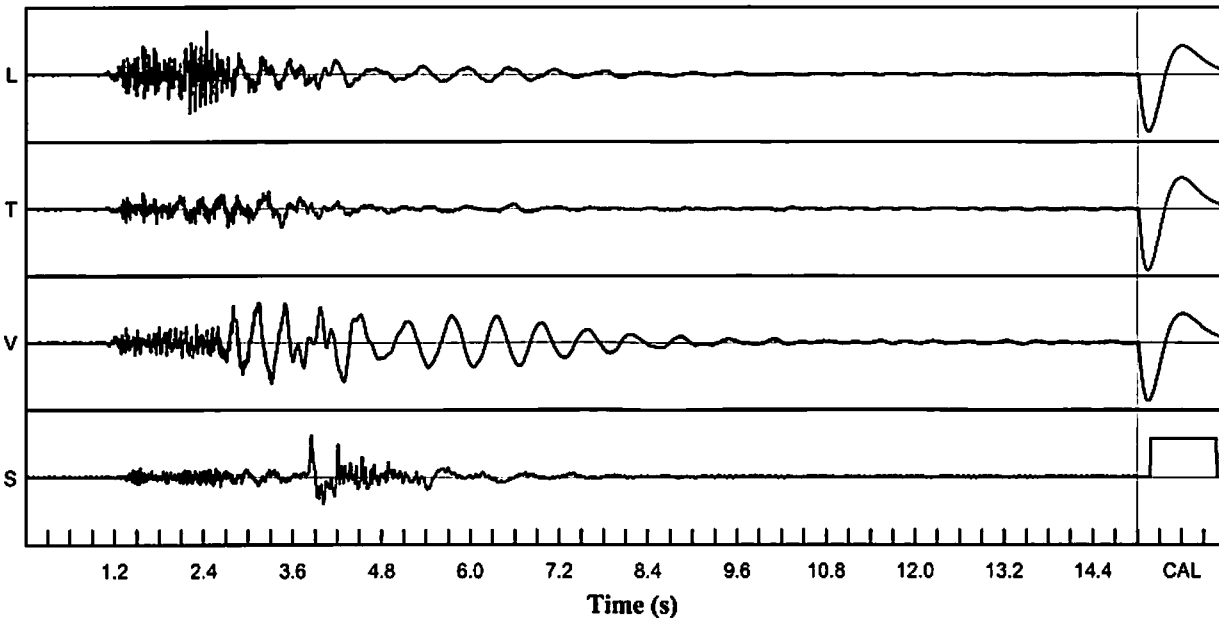
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0045 PSI

Velocity Waveform

SN: 5148 Event: 4



Seismic Analysis

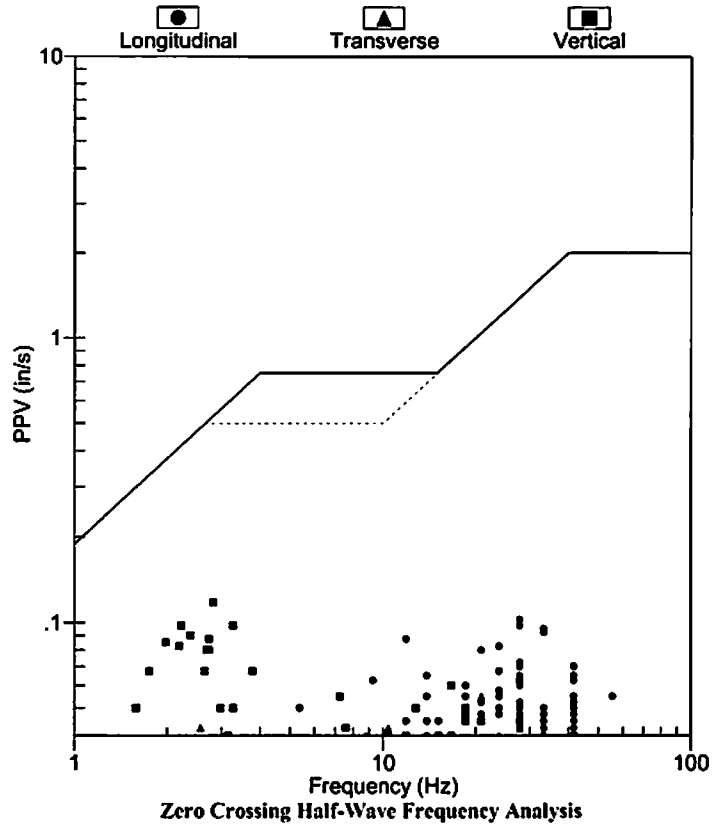
Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/16/2018 13:45:16
Event No: 5
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 5

	Summary Data		
	L	T	V
PPV (in/s)	0.103	0.055	0.118
FREQ (Hz)	27.8	20.8	2.8
PD (.001")	1.89	1.88	6.65
PPA (g)	0.046	0.026	0.033
Peak Vector Sum :	0.118 in/s		
Peak Air Pressure:	115 db		
	0.00164 PSI @ 3.9 Hz		



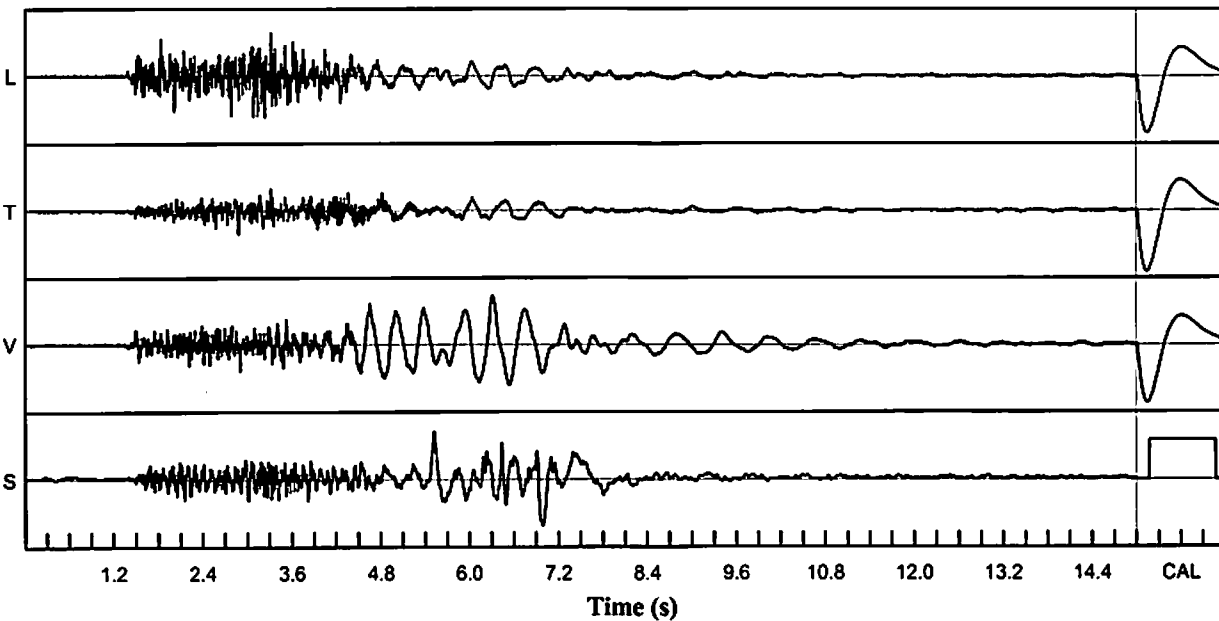
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5148 Event: 5



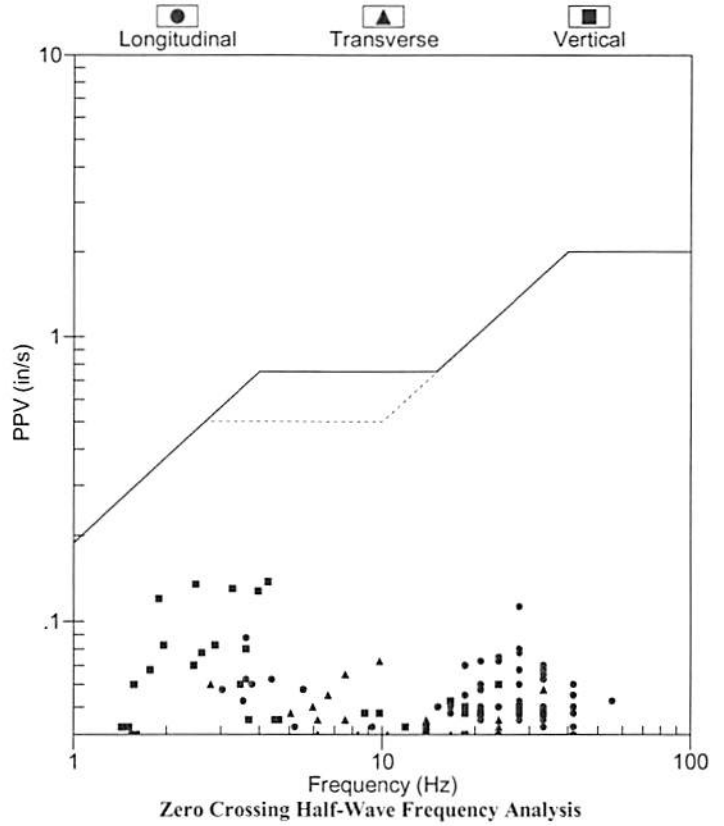
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/17/2018 13:59:44
Event No: 6
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 6



	Summary Data		
	L	T	V
PPV (in/s)	0.113	0.073	0.138
FREQ (Hz)	27.8	9.8	4.3
PD (.001")	3.29	2.49	8.13
PPA (g)	0.046	0.033	0.033
Peak Vector Sum :	0.138 in/s		
Peak Air Pressure:	116 db		
	0.00185 PSI @ 4.9 Hz		

Additional Info:

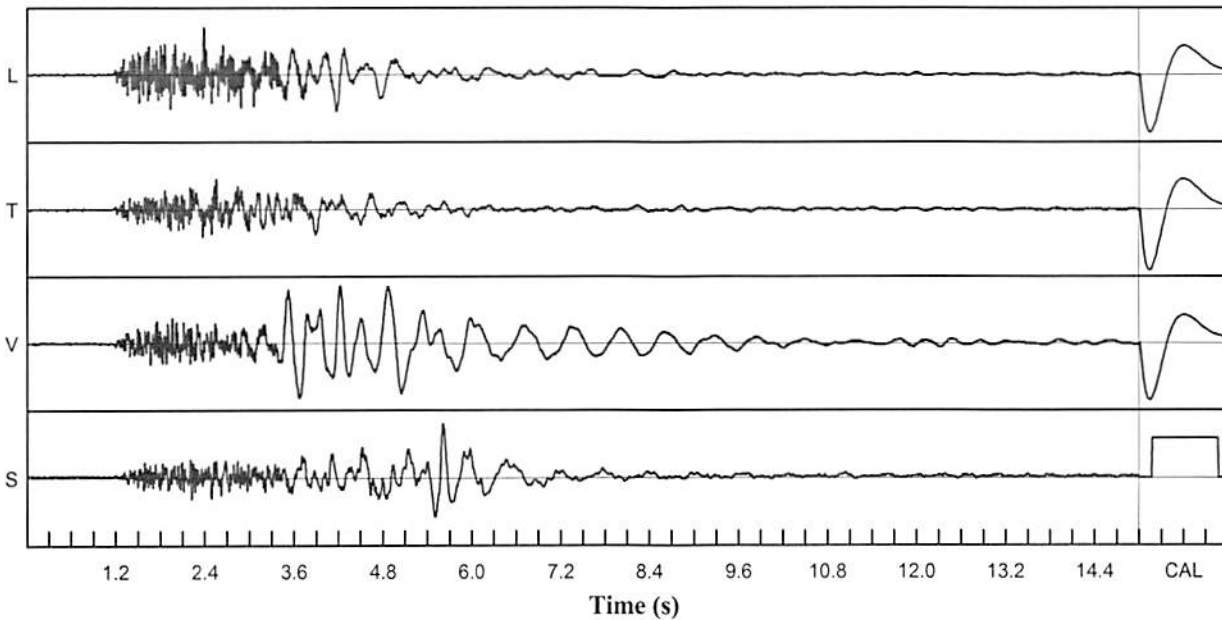
Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale

Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5148 Event: 6



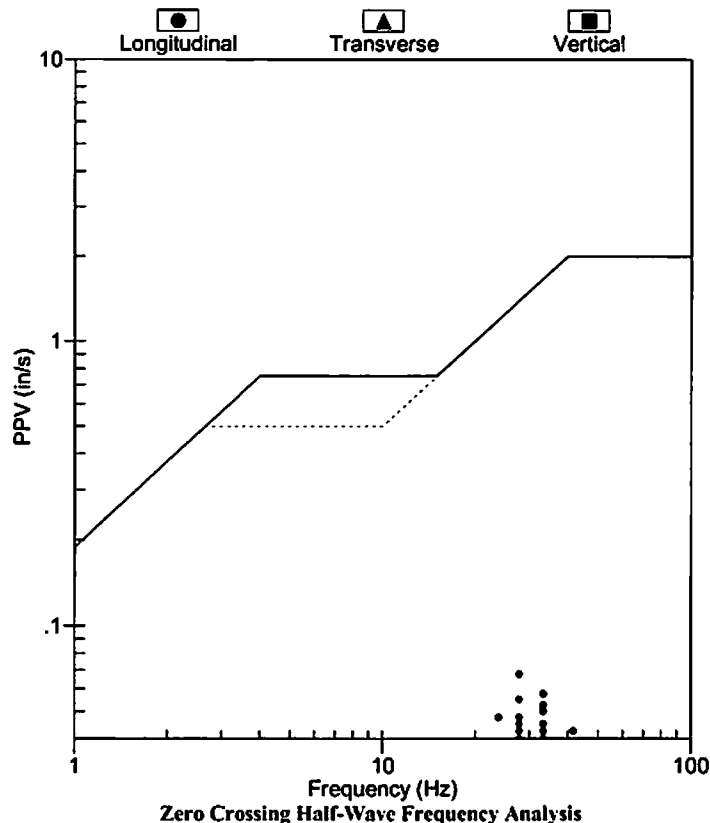
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/18/2018 11:30:13
Event No: 7
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 7



	Summary Data		
	L	T	V
PPV (in/s)	0.068	0.033	0.035
FREQ (Hz)	27.8	33.3	2.3
PD (.001")	0.84	0.79	2.34
PPA (g)	0.033	0.013	0.020
Peak Vector Sum :	0.078 in/s		
Peak Air Pressure:	109 db		
	0.00093 PSI @ 1.0 Hz		

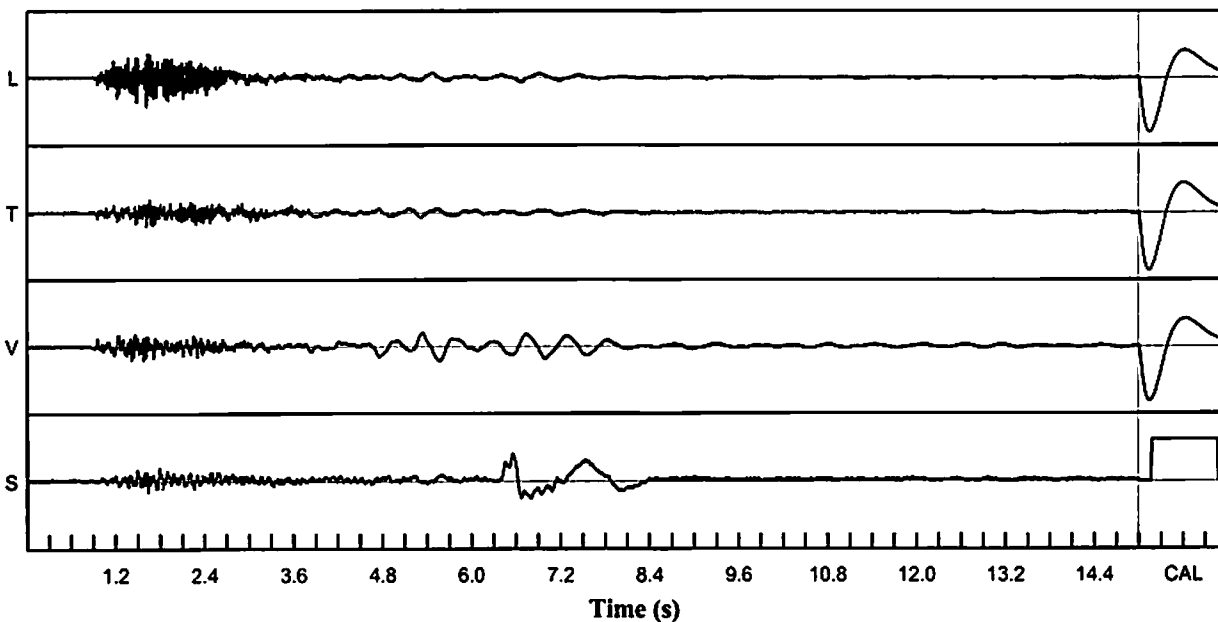
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5148 Event: 7



Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/19/2018 13:15:58
Event No: 8
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

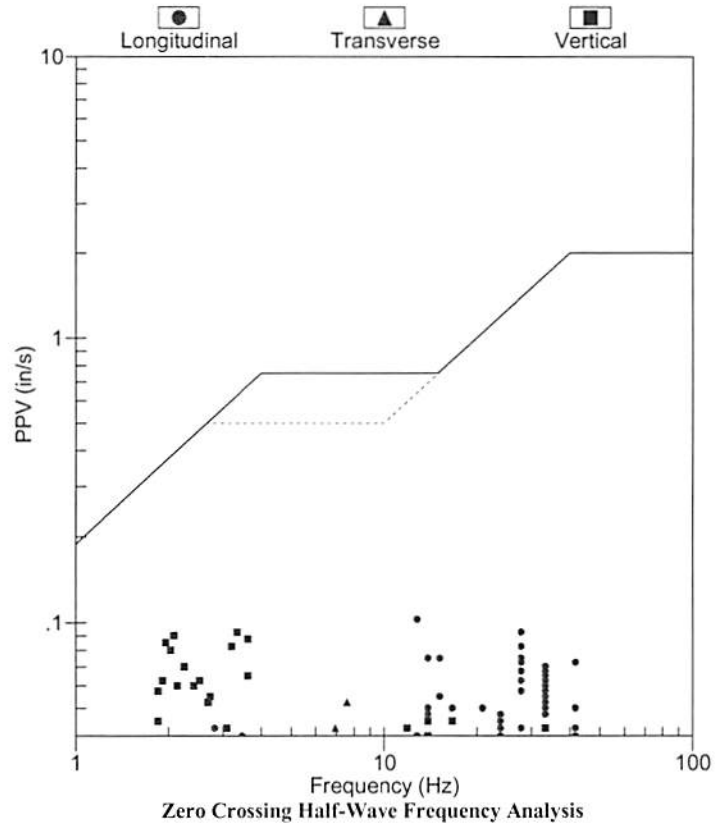
SN: 5148 Event: 8

	Summary Data		
	L	T	V
PPV (in/s)	0.103	0.053	0.093
FREQ (Hz)	12.8	7.6	3.3
PD (.001")	2.04	1.52	6.72
PPA (g)	0.052	0.020	0.020
Peak Vector Sum :	0.103 in/s		
Peak Air Pressure:	119 db		
	0.00267 PSI @ 1.9 Hz		

Additional Info:

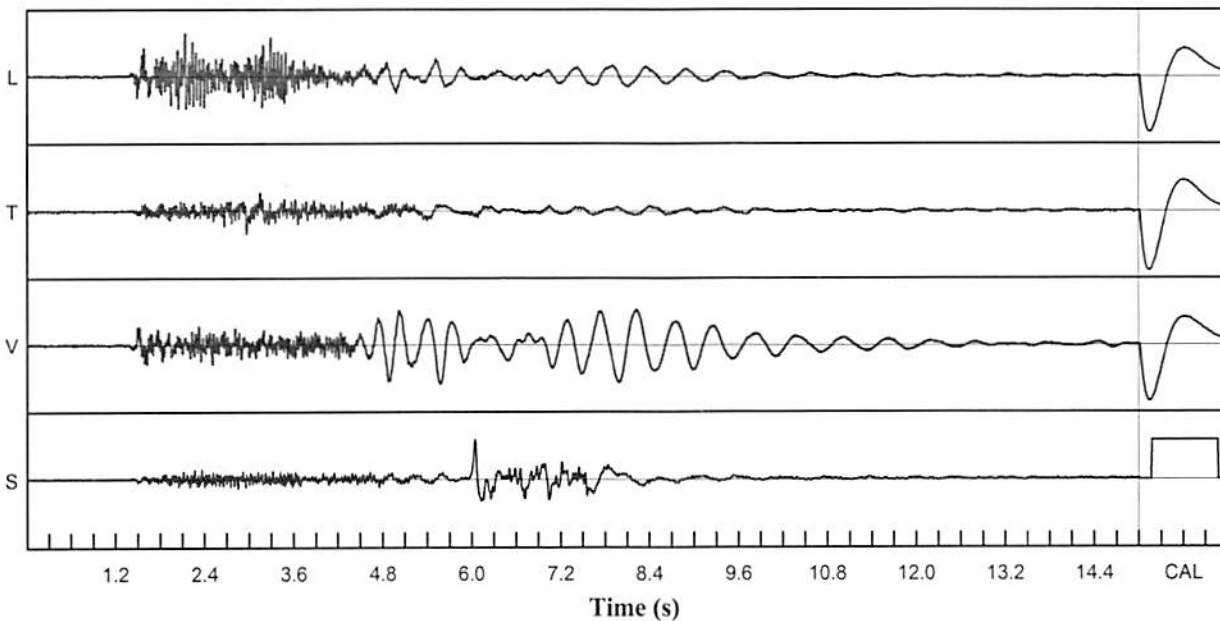
Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0045 PSI



Velocity Waveform

SN: 5148 Event: 8



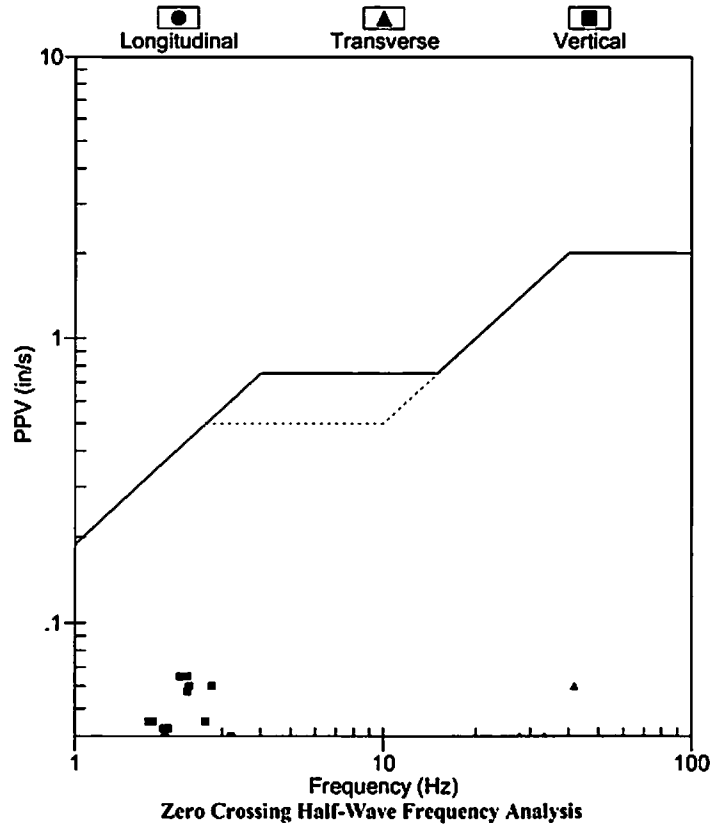
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/23/2018 13:20:27
Event No: 9
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 9



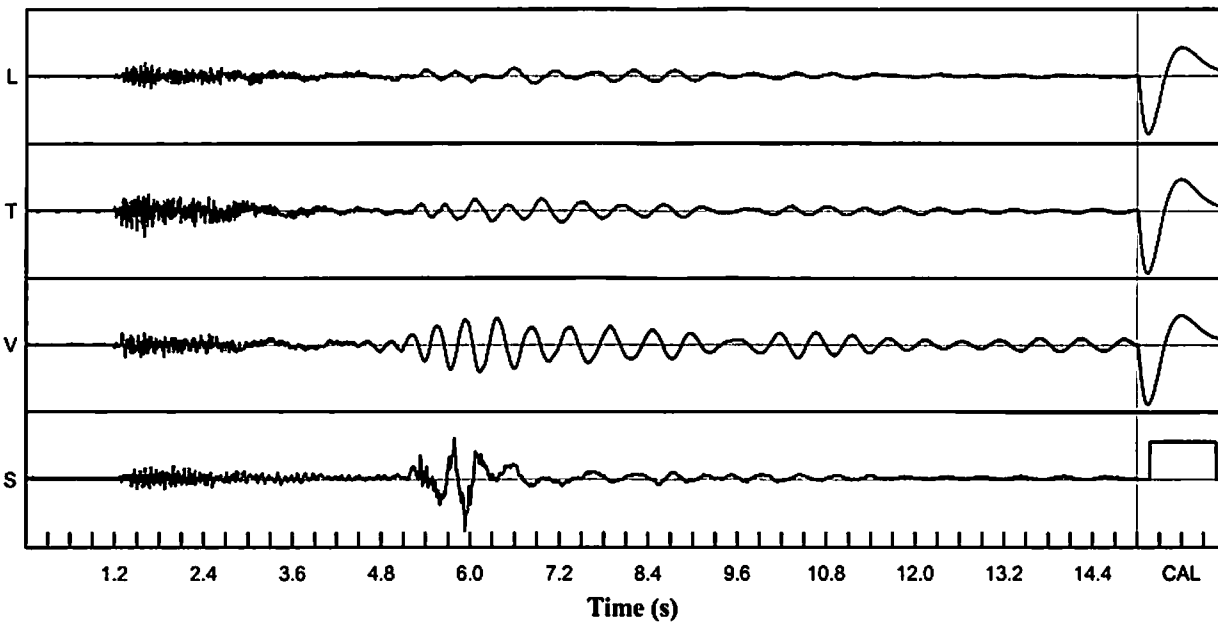
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5148 Event: 9



Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/24/2018 14:00:07
Event No: 10
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

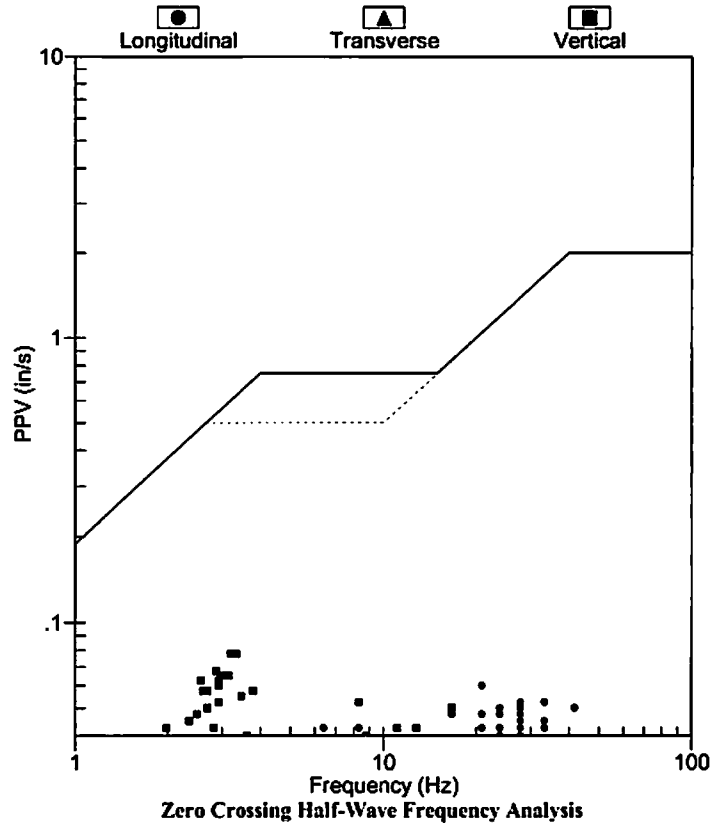
SN: 5148 Event: 10

	Summary Data		
	L	T	V
PPV (in/s)	0.060	0.033	0.078
FREQ (Hz)	20.8	15.2	3.3
PD (.001")	1.38	1.22	4.00
PPA (g)	0.026	0.013	0.020
Peak Vector Sum :	0.080 in/s		
Peak Air Pressure:	117 db		
	0.00210 PSI @ 3.6 Hz		

Additional Info:

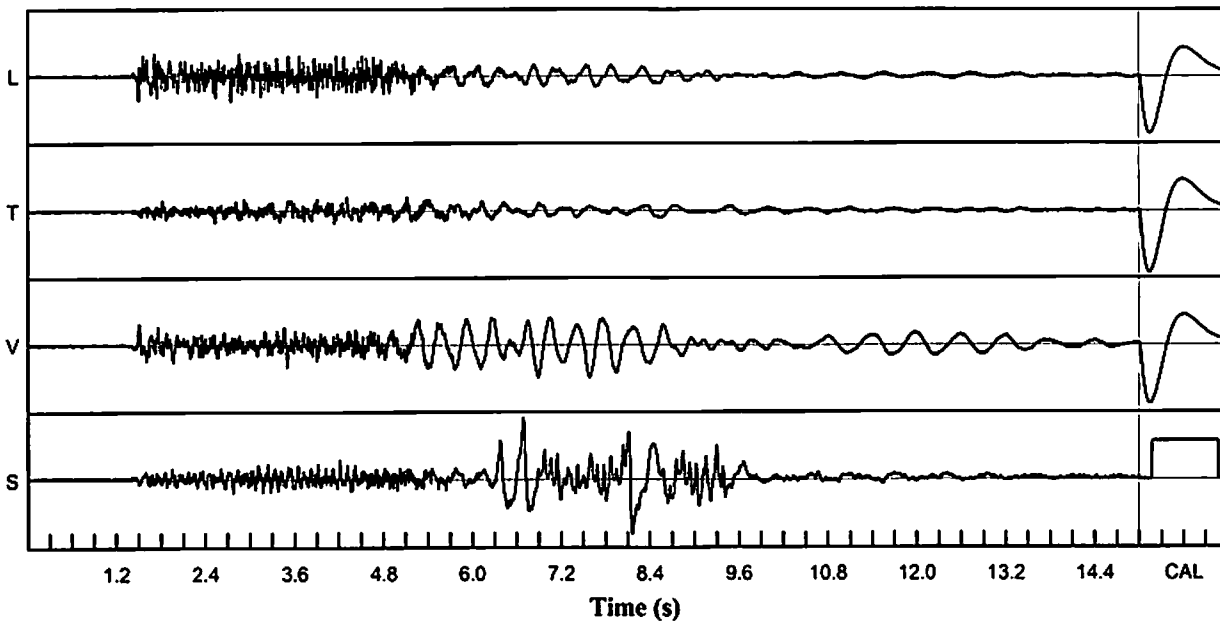
Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI



Velocity Waveform

SN: 5148 Event: 10



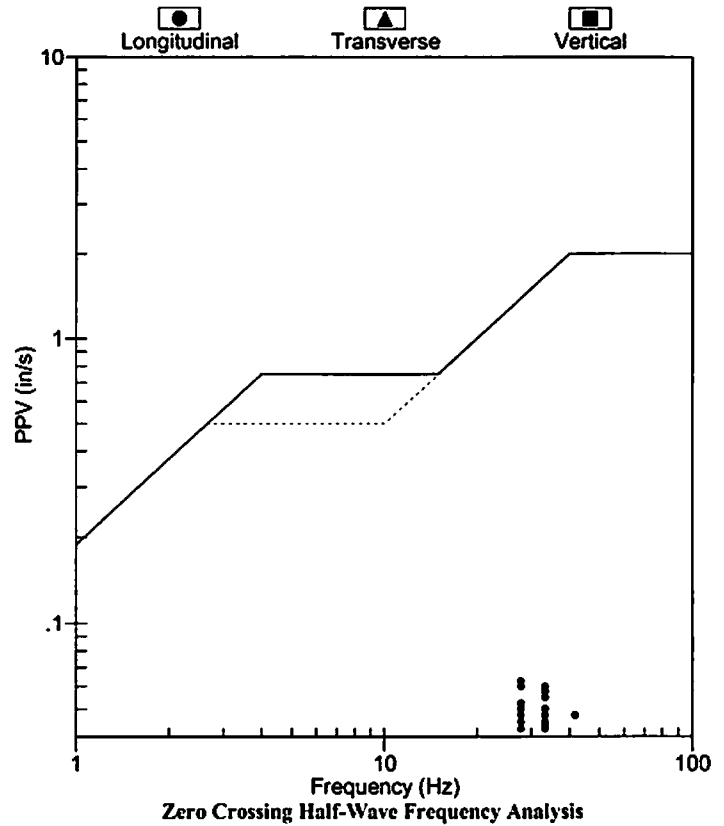
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/26/2018 13:49:02
Event No: 11
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 11



	Summary Data		
	L	T	V
PPV (in/s)	0.063	0.045	0.028
FREQ (Hz)	27.8	33.3	27.8
PD (.001")	0.80	0.86	2.12
PPA (g)	0.033	0.020	0.013
Peak Vector Sum :	0.068 in/s		
Peak Air Pressure:	108 db		
	0.00078 PSI @ 1.0 Hz		

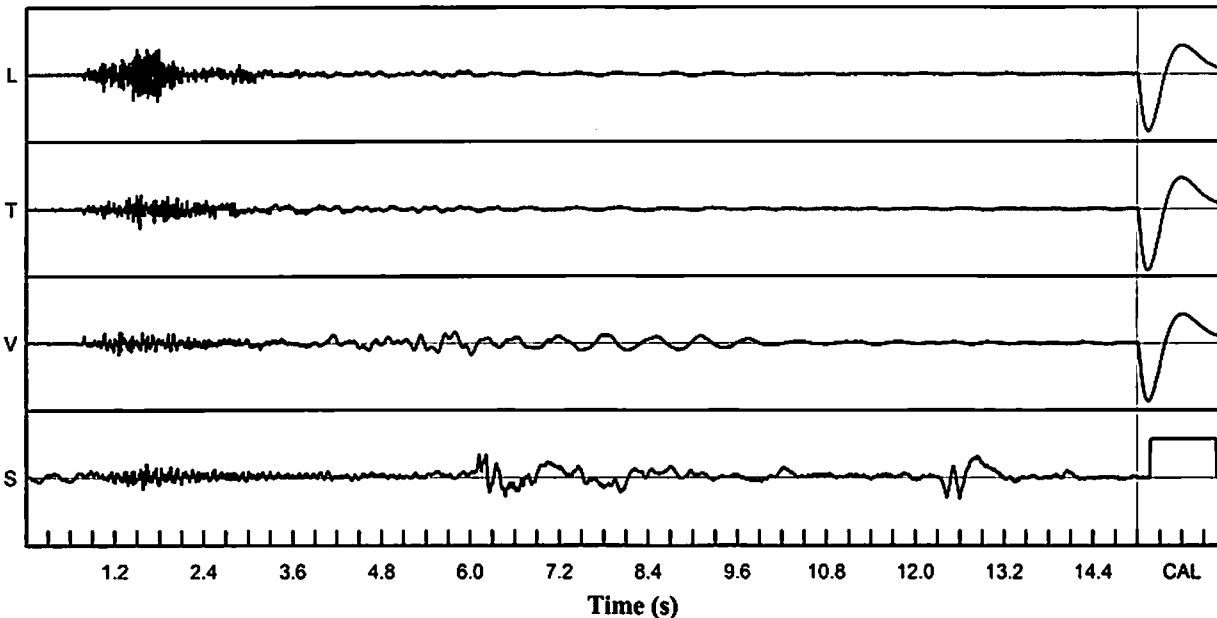
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5148 Event: 11



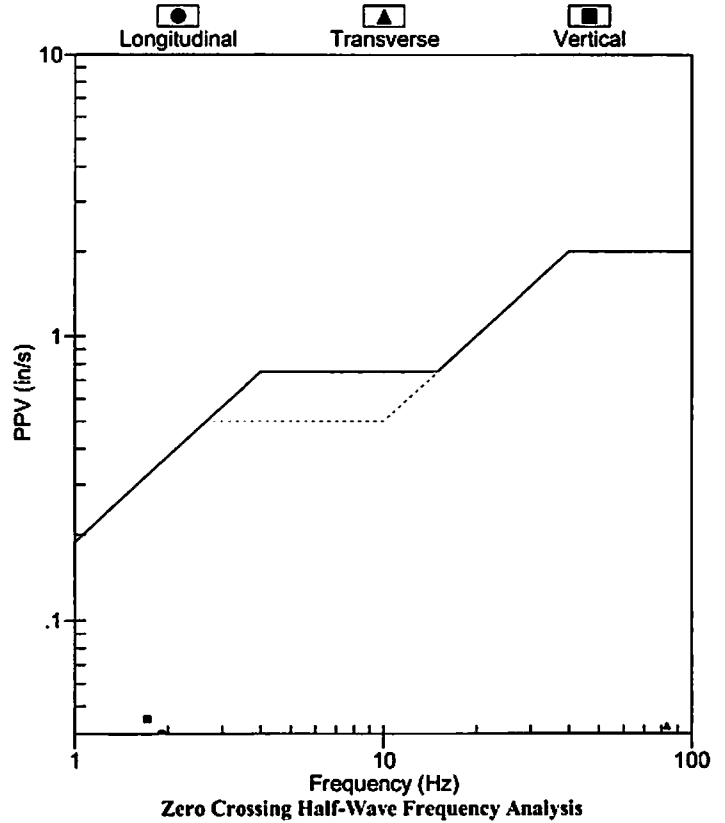
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 01/31/2018 13:15:49
Event No: 12
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 12



	Summary Data		
	L	T	V
PPV (in/s)	0.028	0.060	0.045
FREQ (Hz)	33.3	23.8	1.7
PD (.001")	1.43	1.86	3.92
PPA (g)	0.013	0.033	0.013
Peak Vector Sum :	0.063 in/s		
Peak Air Pressure:	108 db		
	0.00078 PSI @ 2.0 Hz		

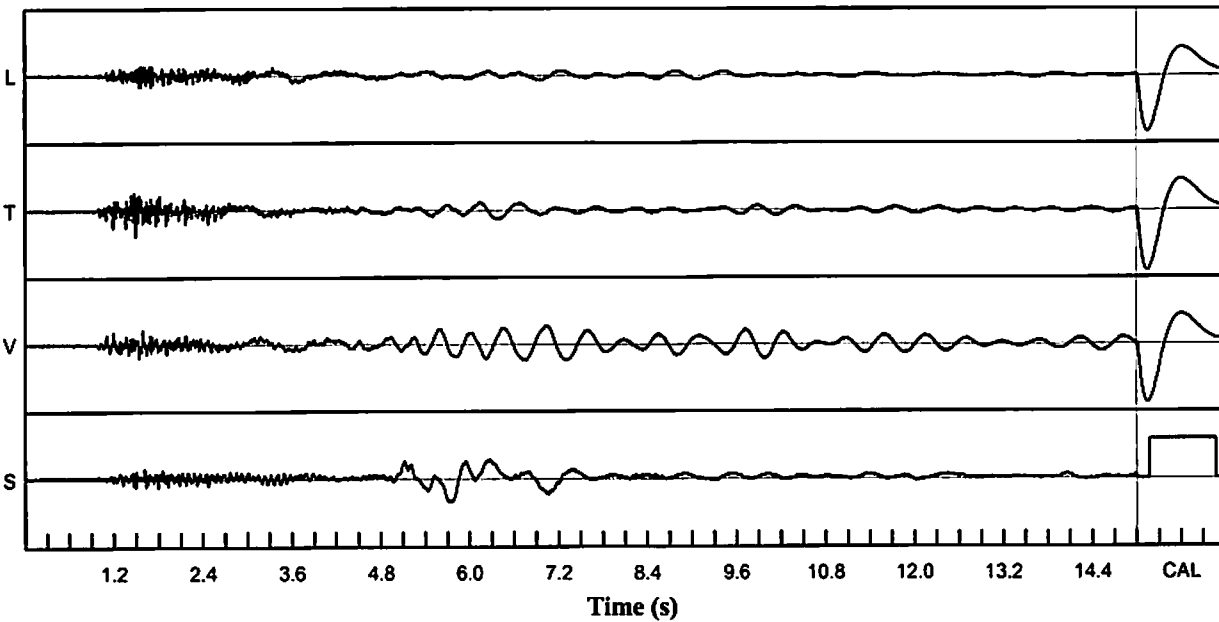
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5148 Event: 12



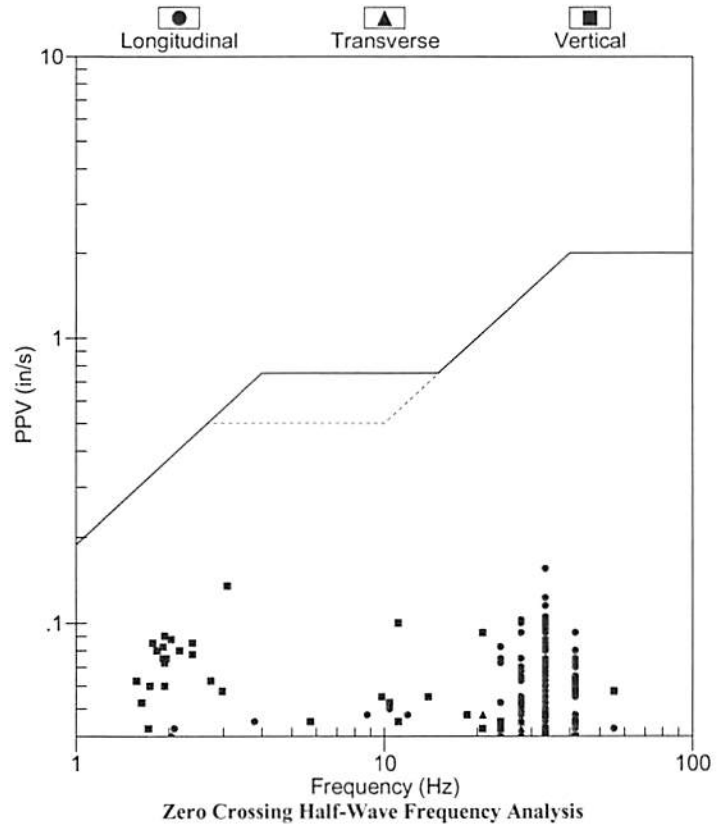
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5148 v3.67
Date: 02/02/2018 13:15:40
Event No: 13
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 17040 SW 53 Ct
Distance:
Operator: Pedro V.
Comment: In Ground
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5148 Event: 13



	Summary Data		
	L	T	V
PPV (in/s)	0.155	0.065	0.135
FREQ (Hz)	33.3	27.8	3.1
PD (.001")	2.17	2.06	7.14
PPA (g)	0.078	0.033	0.039
Peak Vector Sum :	0.163 in/s		
Peak Air Pressure:	119 db		
	0.00278 PSI @ 5.7 Hz		

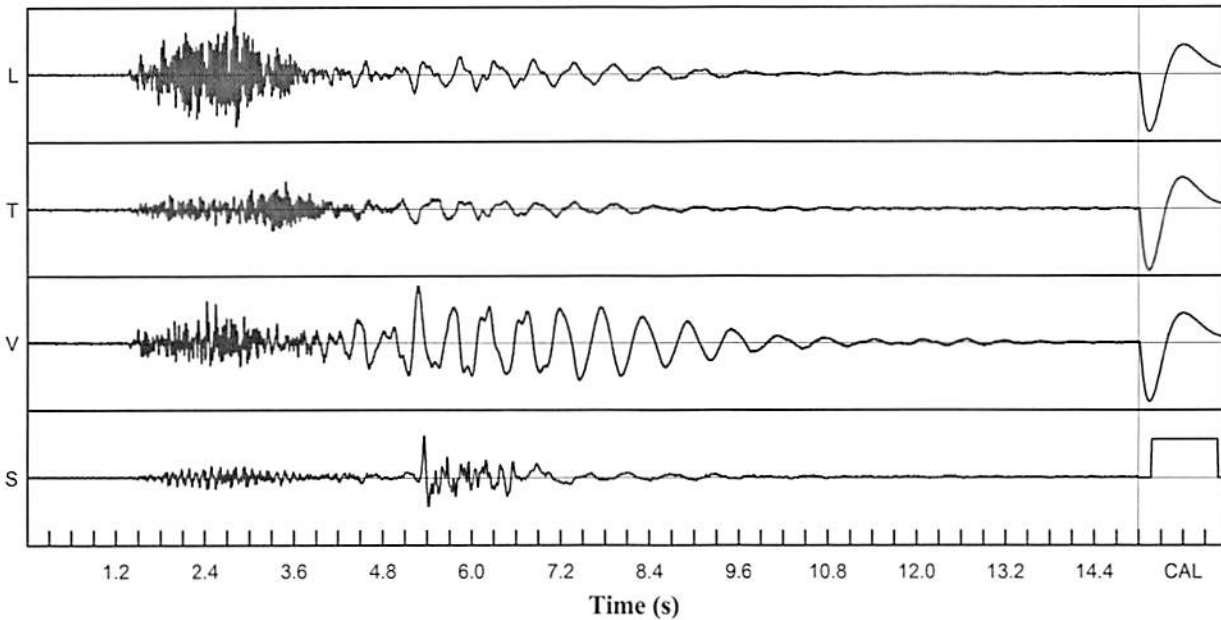
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0045 PSI

Velocity Waveform

SN: 5148 Event: 13



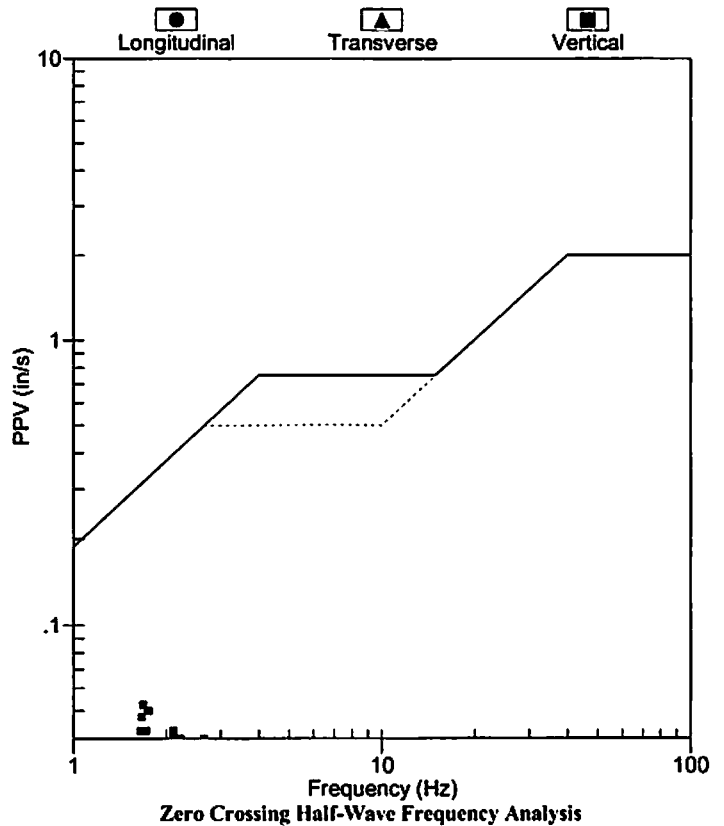
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5149 v3.67
Date: 01/08/2018 13:18:00
Event No: 1
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 16171 SW 49 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5149 Event: 1



	Summary Data		
	L	T	V
PPV (in/s)	0.023	0.020	0.053
FREQ (Hz)	2.4	7.6	1.7
PD (.001")	1.46	0.89	4.77
PPA (g)	0.007	0.007	0.007
Peak Vector Sum :	0.055 in/s		
Peak Air Pressure:	90 db		
	0.00018 PSI @ 2.7 Hz		

Additional Info:

Shaketable Calibrated: 03/21/2017

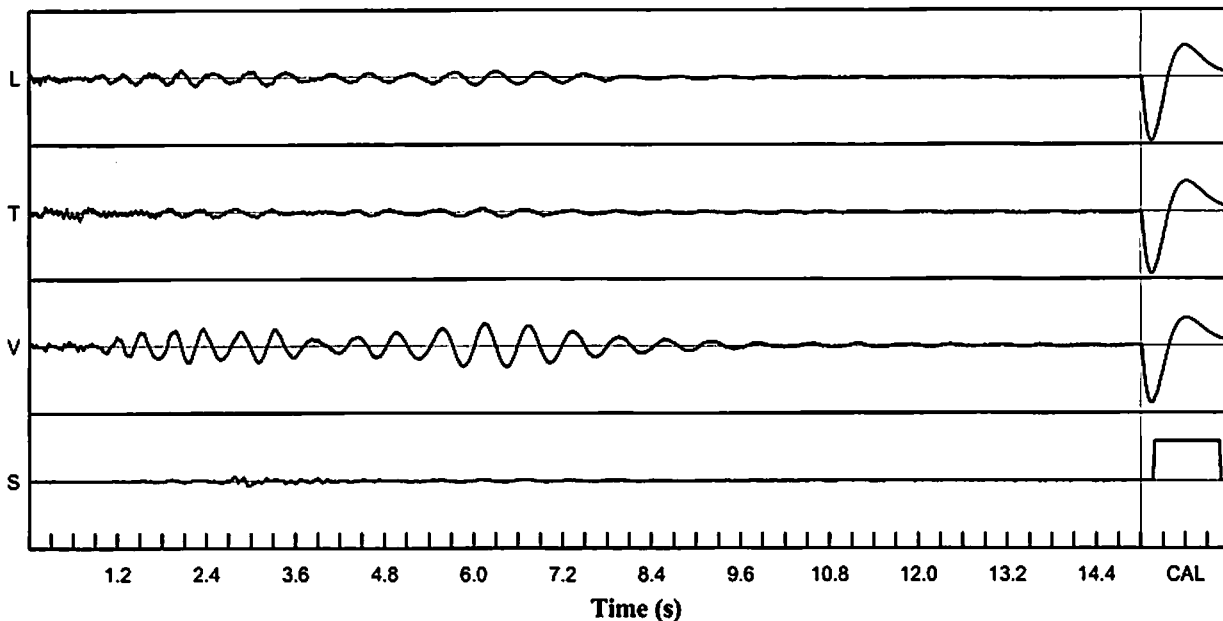
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale

Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5149 Event: 1



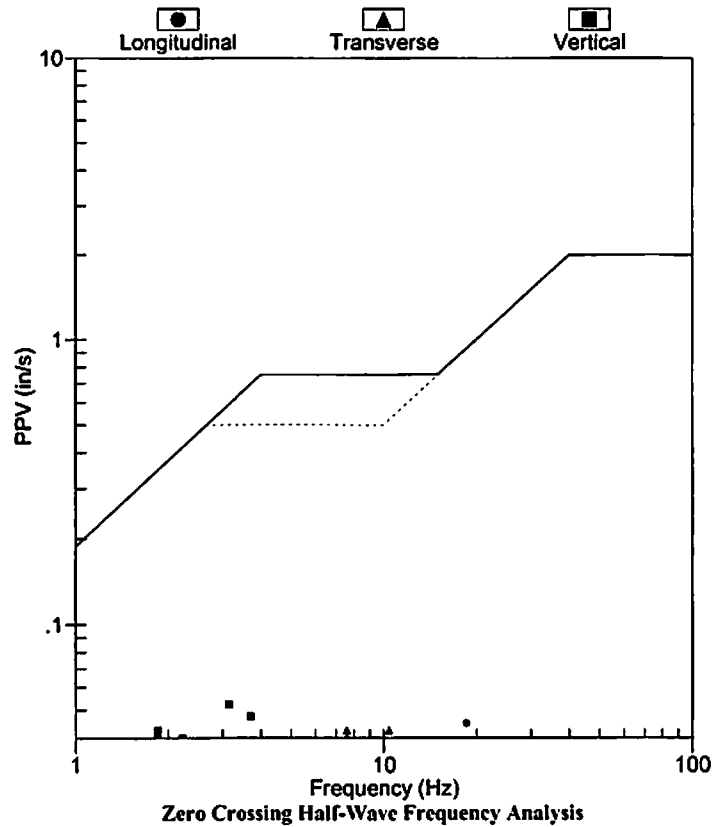
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5149 v3.67
Date: 01/10/2018 13:49:37
Event No: 2
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 16171 SW 49 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5149 Event: 2



	L	T	V
PPV (in/s)	0.055	0.043	0.053
FREQ (Hz)	41.7	5.7	3.1
PD (.001")	1.33	1.56	3.85
PPA (g)	0.033	0.020	0.020
Peak Vector Sum :	0.055 in/s		
Peak Air Pressure:	90 db		
	0.00018 PSI @ 4.9 Hz		

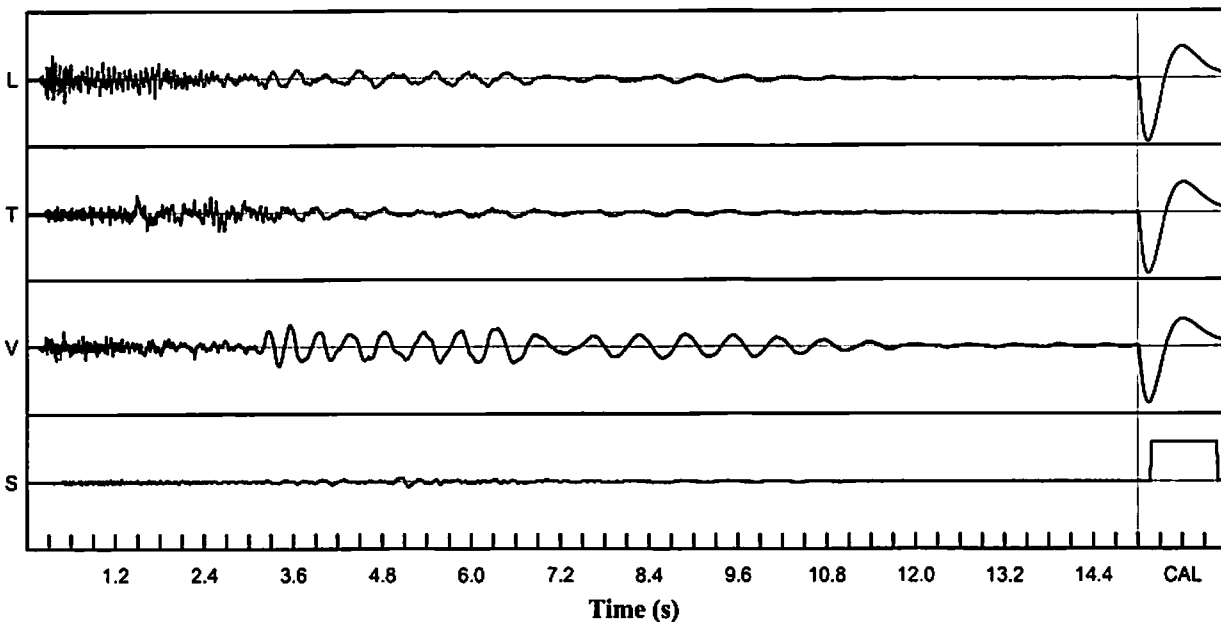
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5149 Event: 2



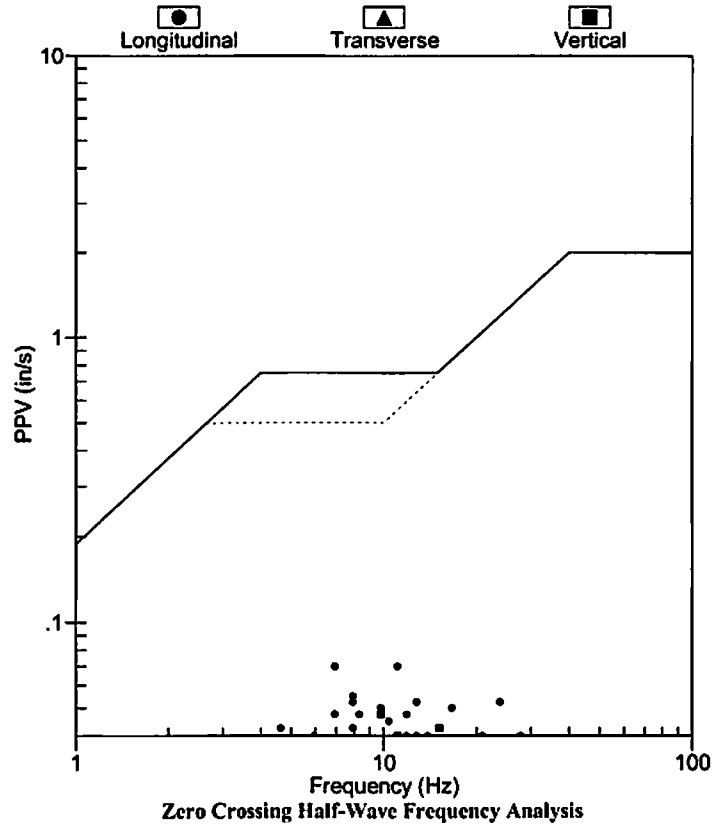
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5149 v3.67
Date: 01/16/2018 13:47:16
Event No: 4
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 16171 SW 49 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5149 Event: 4



	Summary Data		
	L	T	V
PPV (in/s)	0.070	0.033	0.048
FREQ (Hz)	11.1	11.1	9.8
PD (.001")	1.62	1.16	2.40
PPA (g)	0.026	0.013	0.020
Peak Vector Sum :	0.080 in/s		
Peak Air Pressure:	89 db		
	0.00016 PSI @ 3.0 Hz		

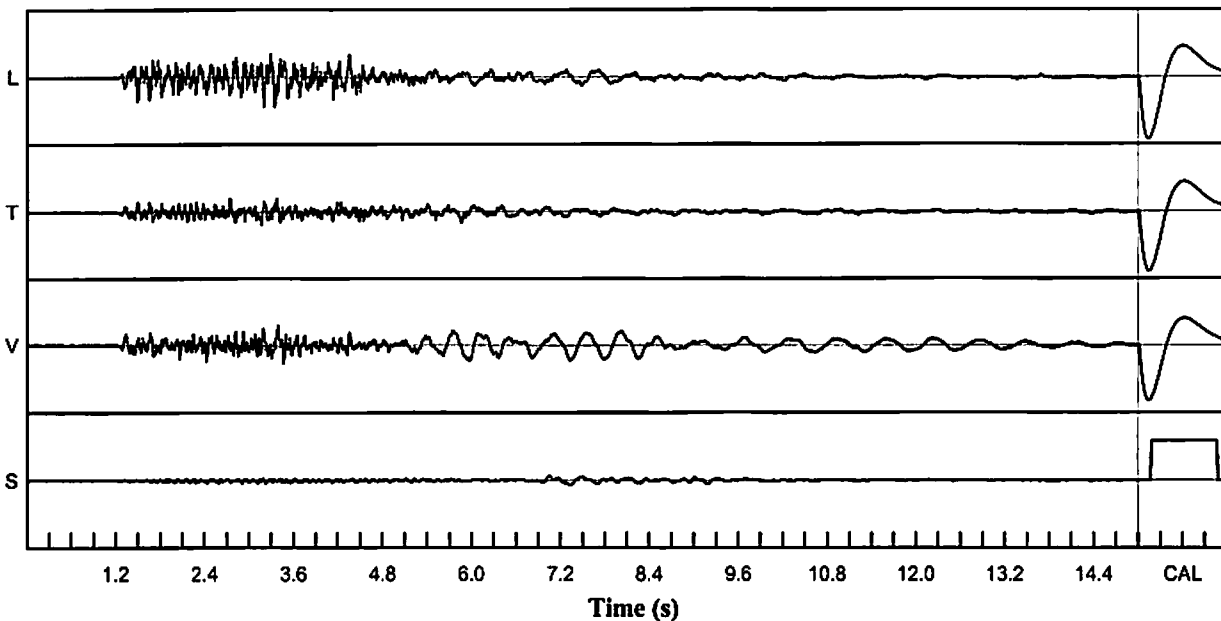
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5149 Event: 4



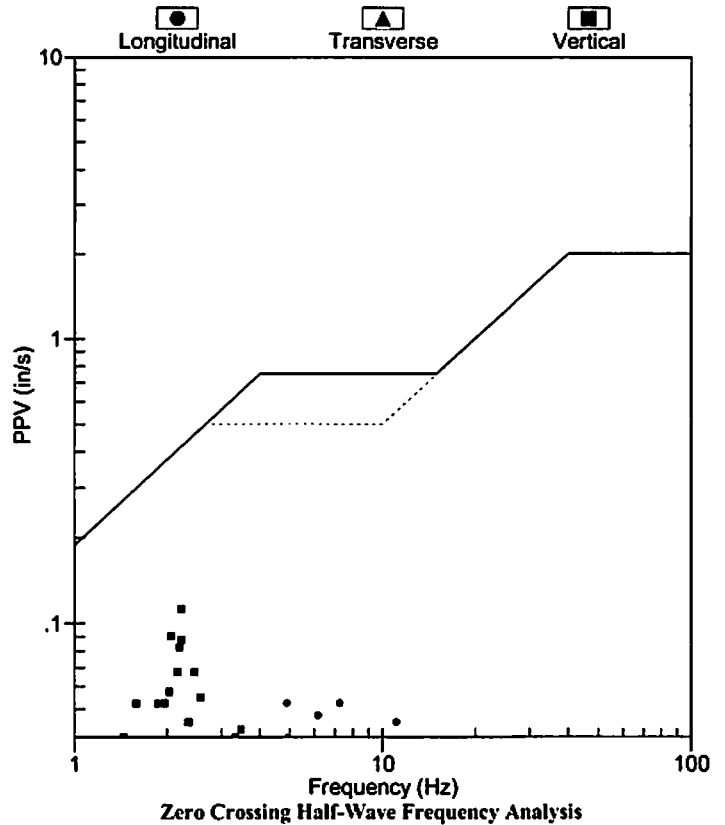
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5149 v3.67
Date: 01/17/2018 14:01:46
Event No: 5
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 16171 SW 49 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5149 Event: 5



	Summary Data		
	L	T	V
PPV (in/s)	0.053	0.040	0.113
FREQ (Hz)	4.9	4.9	2.2
PD (.001")	2.85	1.54	7.51
PPA (g)	0.020	0.007	0.007
Peak Vector Sum :	0.115 in/s		
Peak Air Pressure:	92 db		
	0.00020 PSI @ 3.5 Hz		

Additional Info:

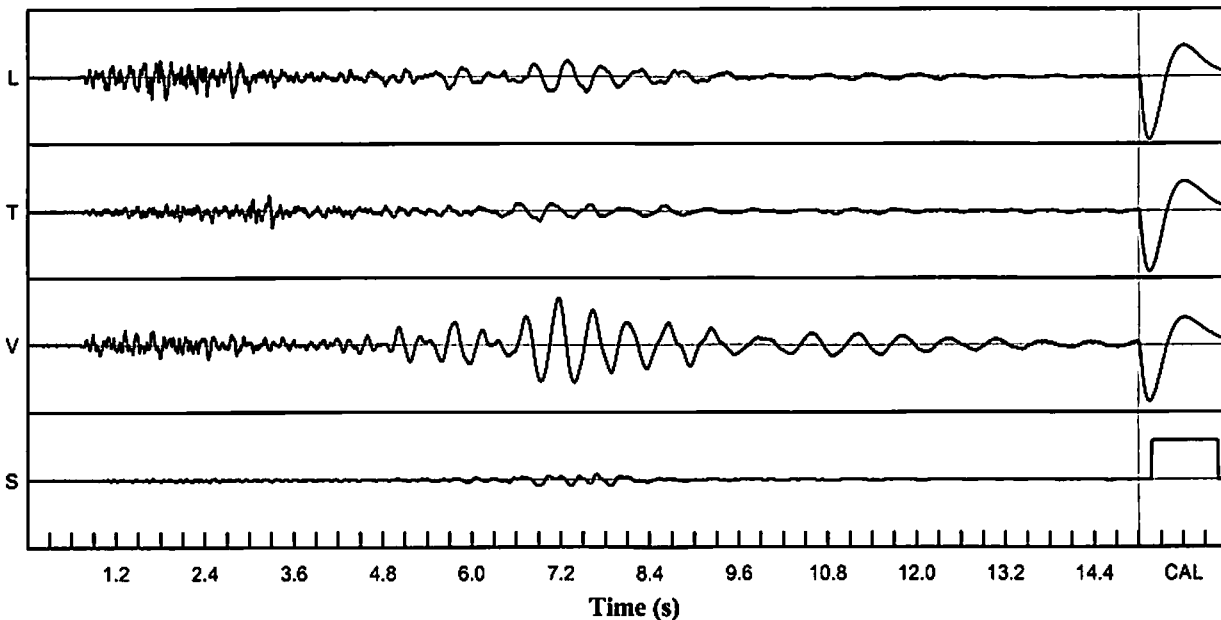
Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale

Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5149 Event: 5



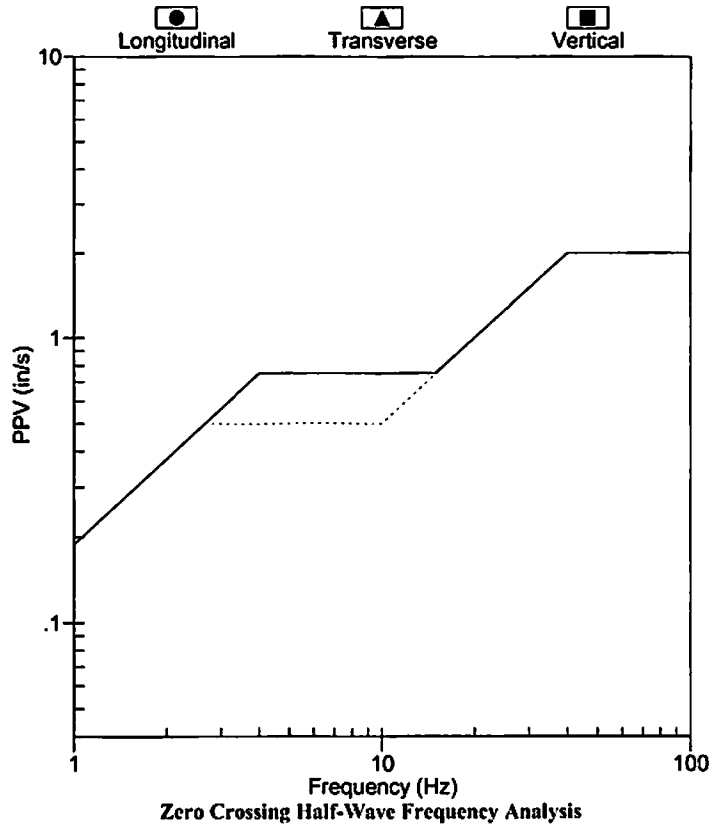
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5149 v3.67
Date: 01/18/2018 11:32:23
Event No: 6
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 16171 SW 49 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5149 Event: 6



	Summary Data		
	L	T	V
PPV (in/s)	0.015	0.010	0.033
FREQ (Hz)	2.2	2.2	1.9
PD (.001")	0.93	0.75	2.65
PPA (g)	0.007	0.007	0.007
Peak Vector Sum :	0.035 in/s		
Peak Air Pressure:	81 db		
	0.00007 PSI @ 1.0 Hz		

Additional Info:

Shaketable Calibrated: 03/21/2017

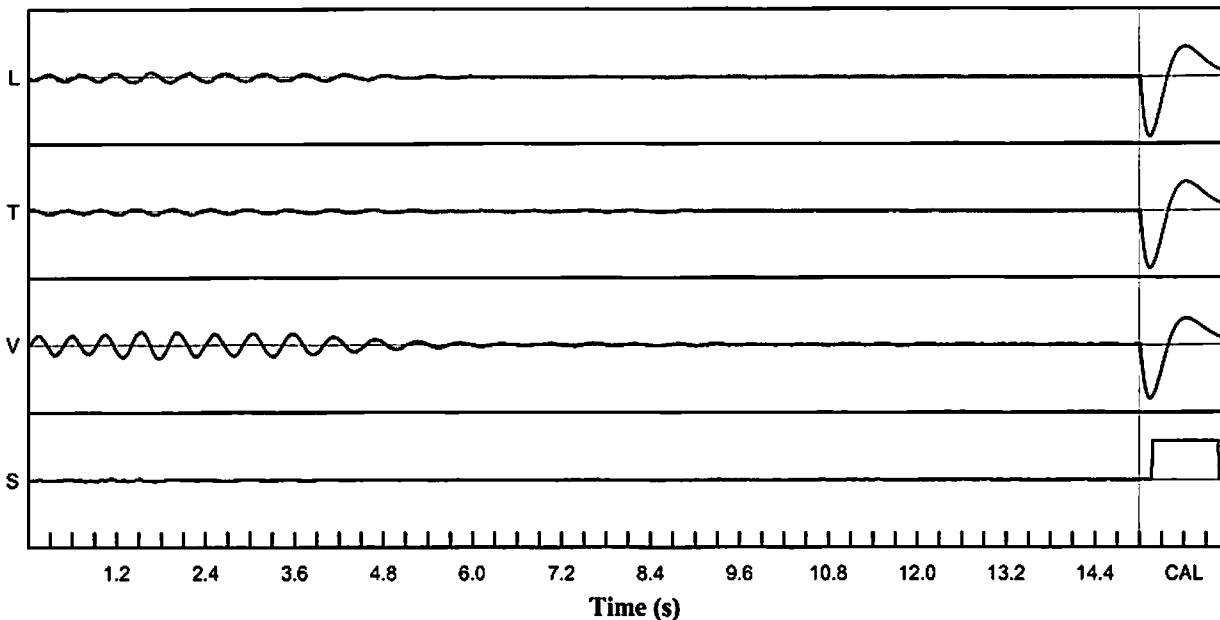
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale

Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5149 Event: 6



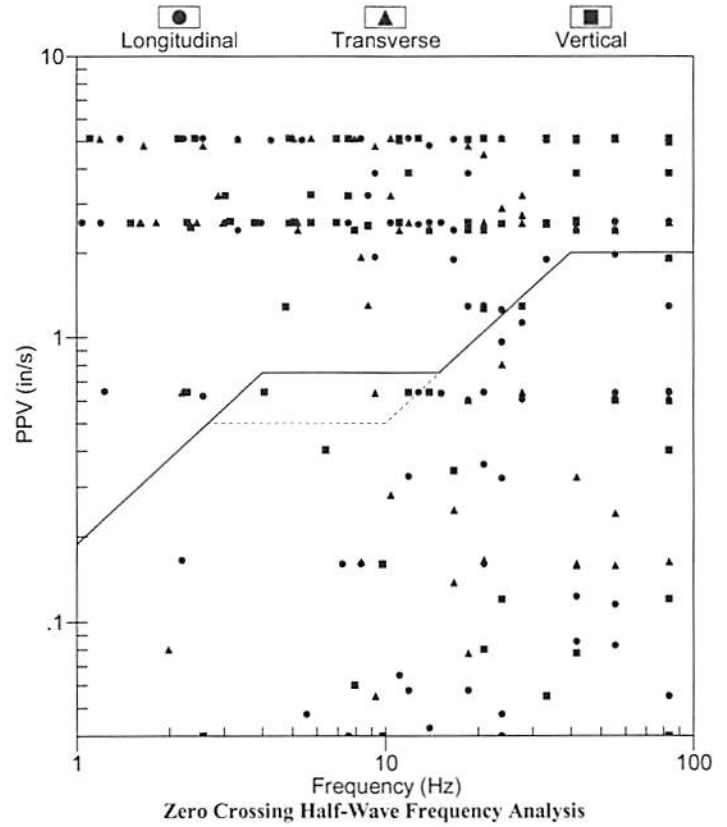
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5149 v3.67
 Date: 01/19/2018 13:18:01
 Event No: 7
 Record Time: 15.0 s
 Client: City of Miramar
 Operation: White Rock Quarries
 Location: 16171 SW 49 Ct
 Distance:
 Operator: Pedro V.
 Comment: In Ground.
 Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5149 Event: 7



	Summary Data		
	L	T	V
PPV (in/s)	0.065	0.043	0.050
FREQ (Hz)	11.1	20.8	2.2
PD (.001")	1.72	1.41	3.64
PPA (g)	0.026	0.020	0.013
Peak Vector Sum :	0.070 in/s		
Peak Air Pressure:	101 db		
	0.00036 PSI @ 166.7 Hz		

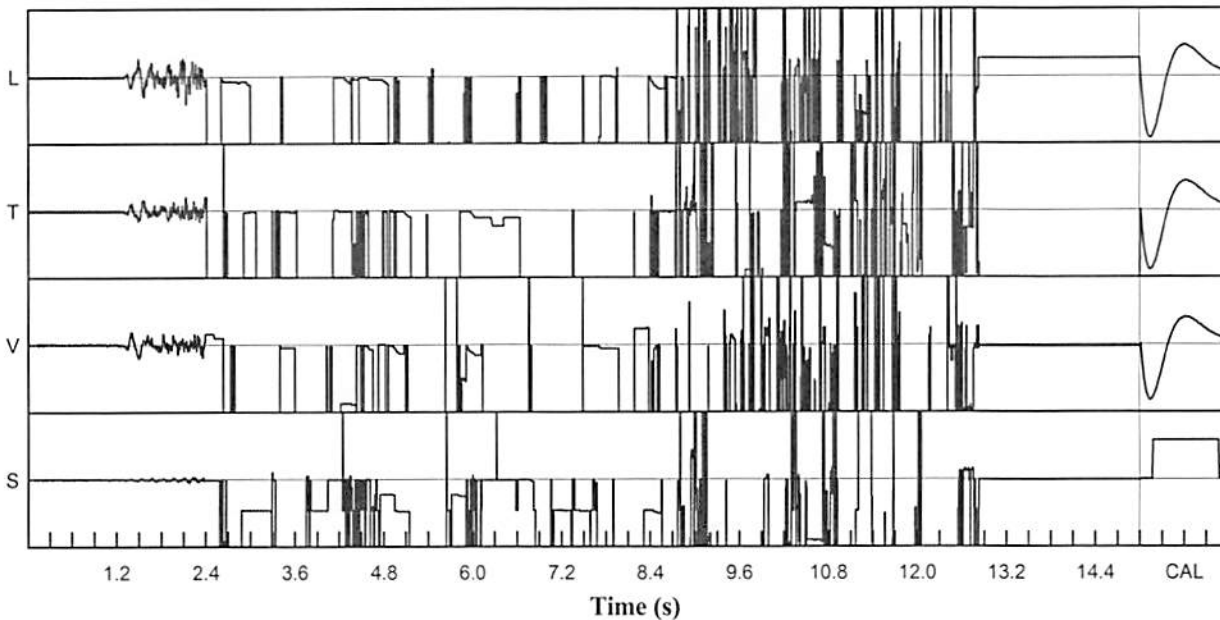
Additional Info:

Shaketable Calibrated: 03/21/2017
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
 Time Scale: 0.300 s
 Seismic Scale: +/- 0.160 in/s
 Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5149 Event: 7



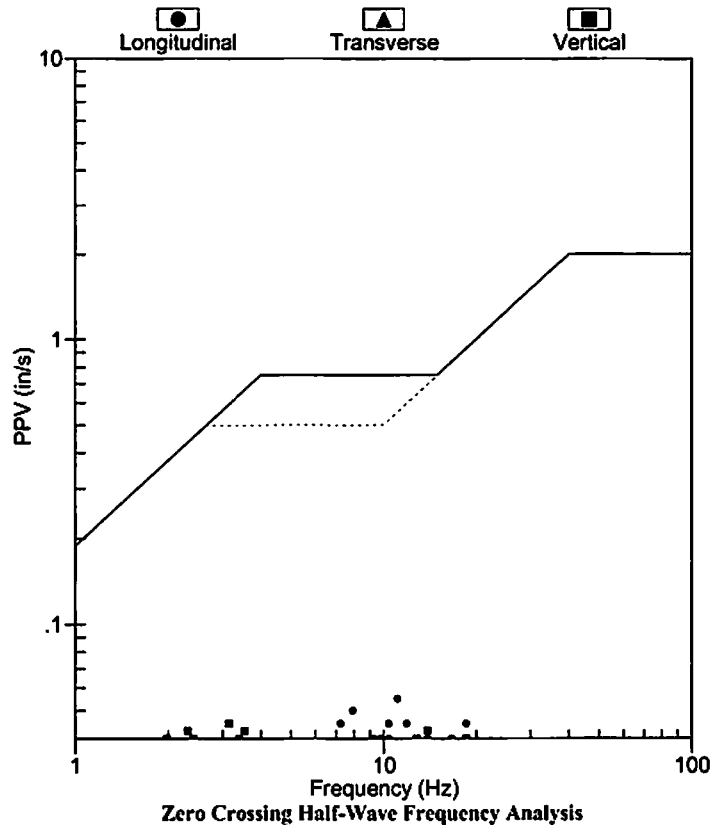
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5149 v3.67
Date: 01/24/2018 14:02:15
Event No: 8
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 16171 SW 49 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5149 Event: 8



	Summary Data		
	L	T	V
PPV (in/s)	0.055	0.040	0.045
FREQ (Hz)	11.1	13.9	3.1
PD (.001")	1.70	1.23	3.13
PPA (g)	0.020	0.020	0.013
Peak Vector Sum :	0.063 in/s		
Peak Air Pressure:	101 db		
	0.00036 PSI @ 3.6 Hz		

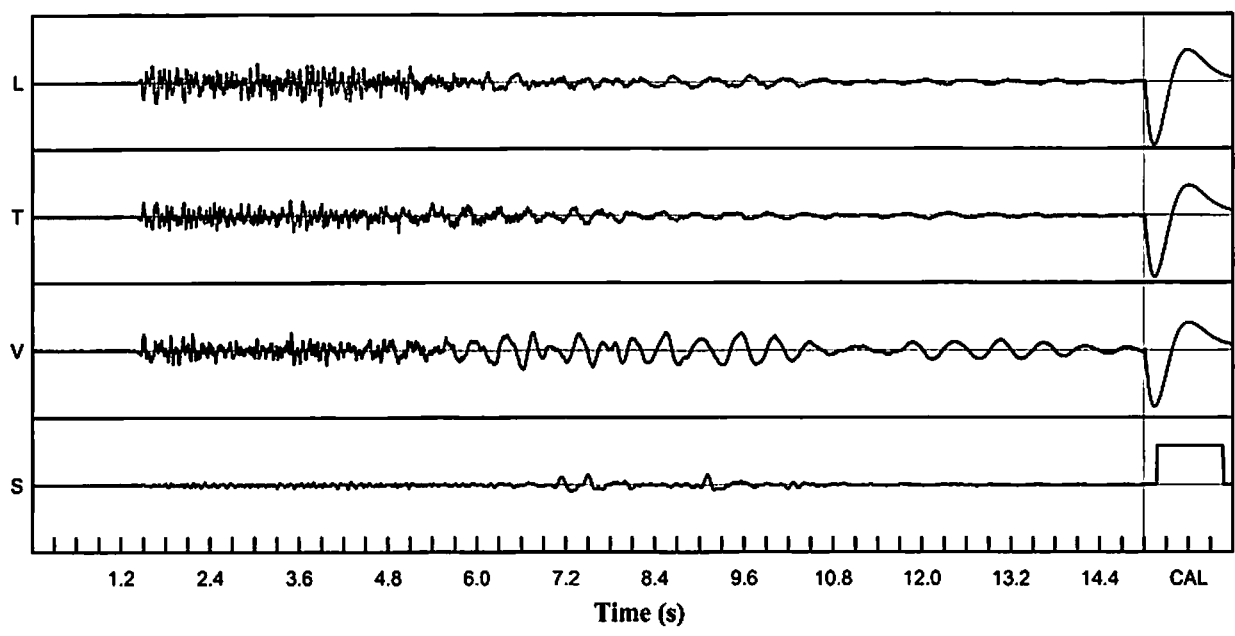
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5149 Event: 8



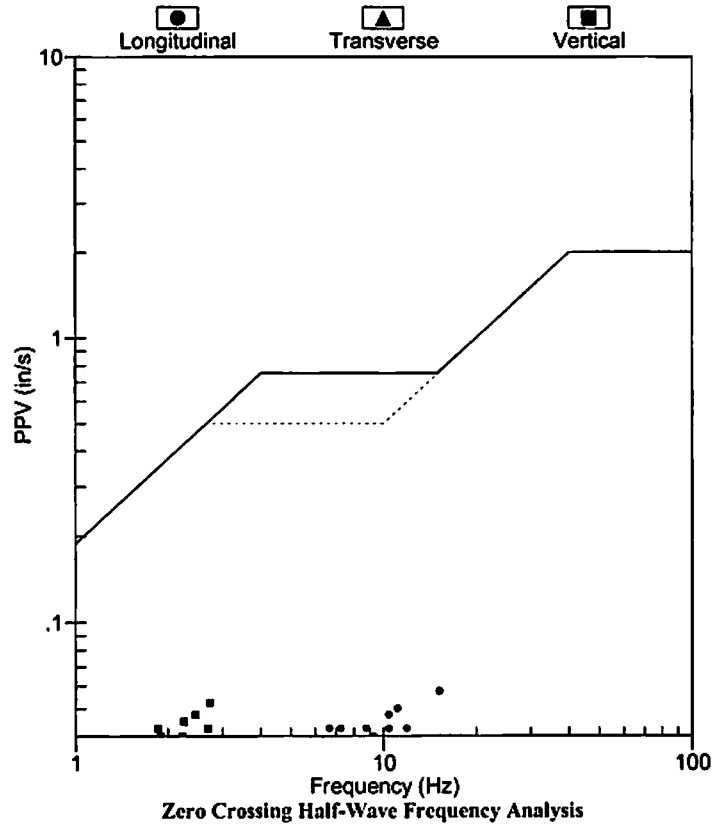
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5149 v3.67
Date: 02/02/2018 13:17:58
Event No: 9
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 16171 SW 49 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5149 Event: 9



	Summary Data		
	L	T	V
PPV (in/s)	0.058	0.030	0.053
FREQ (Hz)	15.2	23.8	2.7
PD (.001")	1.42	1.27	3.43
PPA (g)	0.020	0.013	0.013
Peak Vector Sum :	0.060 in/s		
Peak Air Pressure:	101 db		
	0.00032 PSI @ 5.2 Hz		

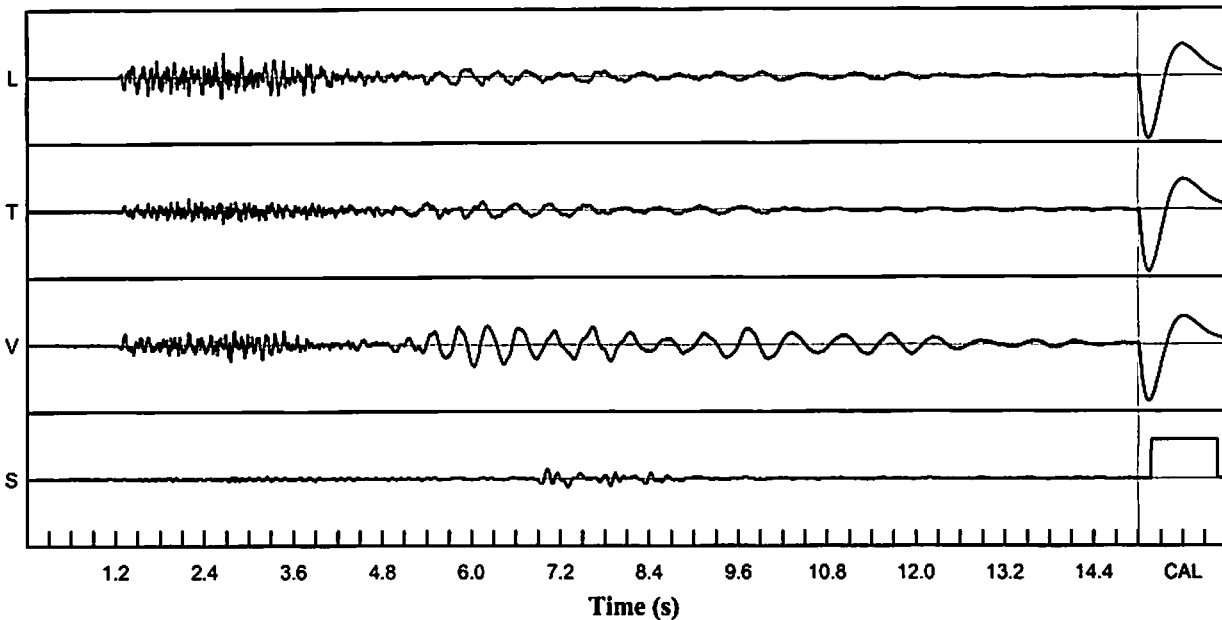
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5149 Event: 9



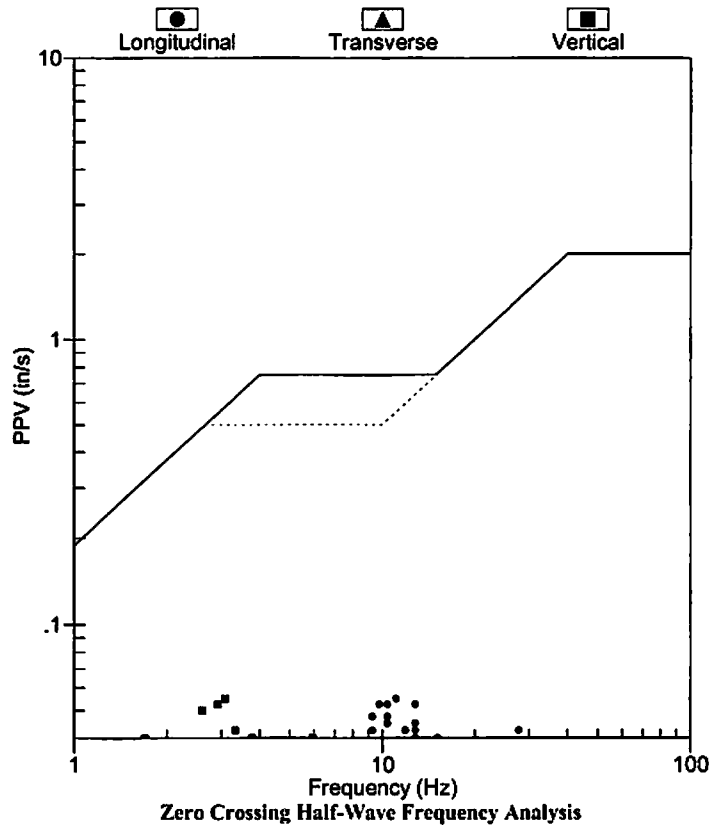
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5149 v3.67
Date: 02/09/2018 14:06:24
Event No: 10
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 16171 SW 49 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5149 Event: 10



	Summary Data		
	L	T	V
PPV (in/s)	0.055	0.030	0.055
FREQ (Hz)	11.1	7.2	3.1
PD (.001")	1.35	1.46	3.25
PPA (g)	0.020	0.013	0.007
Peak Vector Sum :	0.065 in/s		
Peak Air Pressure:	101 db		
	0.00036 PSI @ 5.2 Hz		

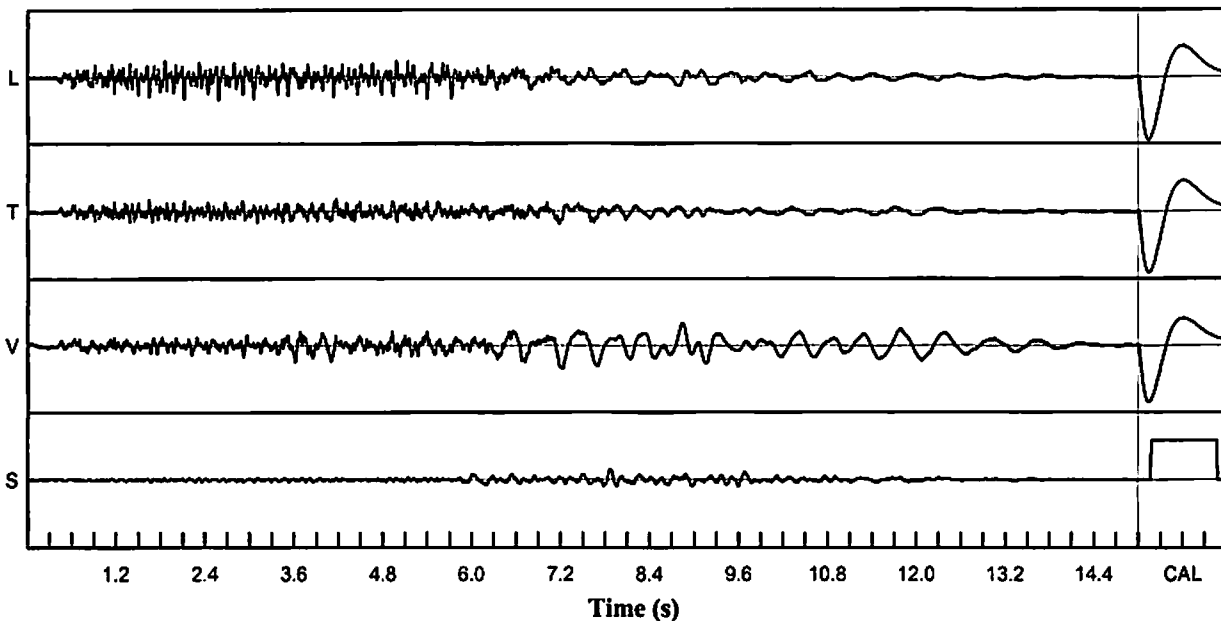
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5149 Event: 10



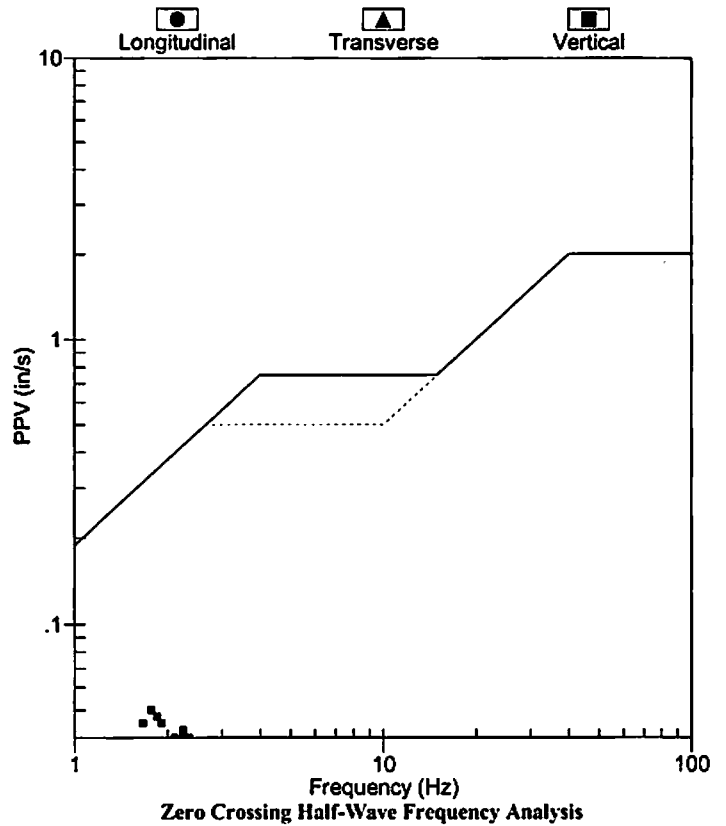
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5150 v3.67
Date: 01/08/2018 13:15:53
Event No: 1
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 5276 SW 152 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5150 Event: 1



	Summary Data		
	L	T	V
PPV (in/s)	0.030	0.035	0.050
FREQ (Hz)	12.8	13.9	1.8
PD (.001")	1.55	1.20	4.20
PPA (g)	0.013	0.013	0.007
Peak Vector Sum :	0.050 in/s		
Peak Air Pressure:	103 db		
	0.00048 PSI @ 1.9 Hz		

Additional Info:

Shaketable Calibrated: 03/21/2017

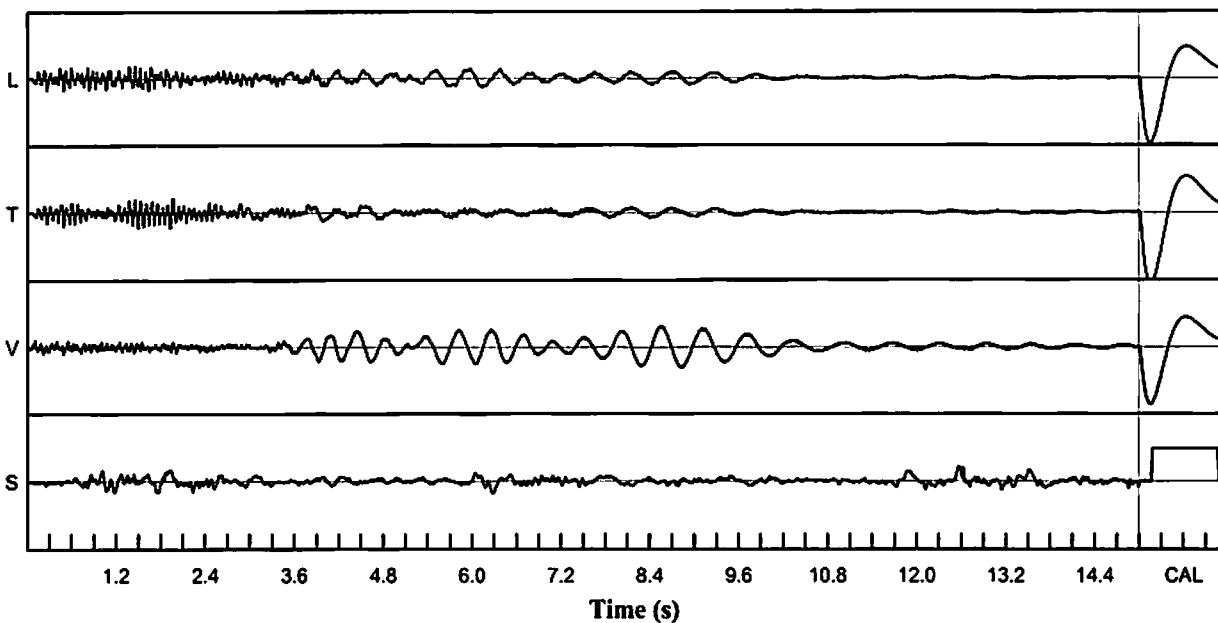
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale

Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5150 Event: 1



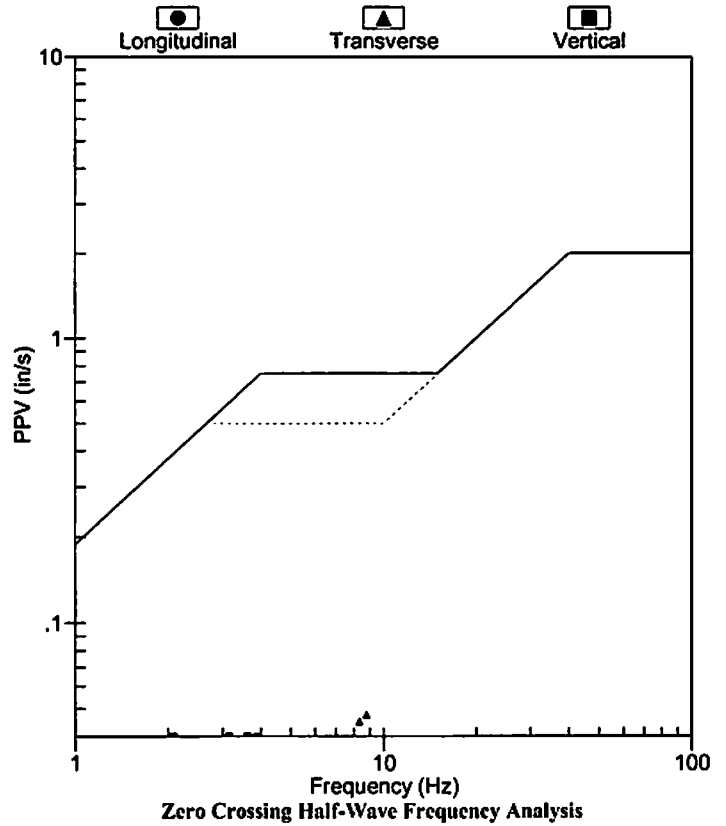
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5150 v3.67
Date: 01/10/2018 13:47:28
Event No: 2
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 5276 SW 152 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5150 Event: 2



	Summary Data		
	L	T	V
PPV (in/s)	0.053	0.048	0.040
FREQ (Hz)	20.8	8.8	3.1
PD (.001")	1.29	1.35	3.04
PPA (g)	0.020	0.013	0.013
Peak Vector Sum :	0.068 in/s		
Peak Air Pressure:	103 db		
	0.00046 PSI @ 6.4 Hz		

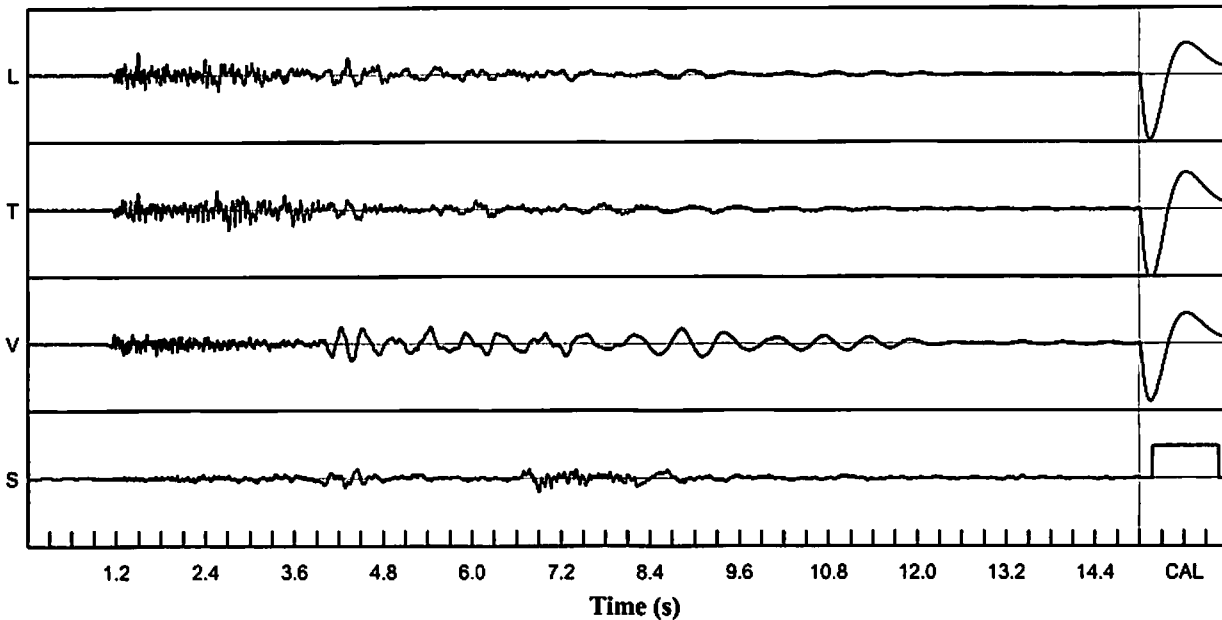
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5150 Event: 2



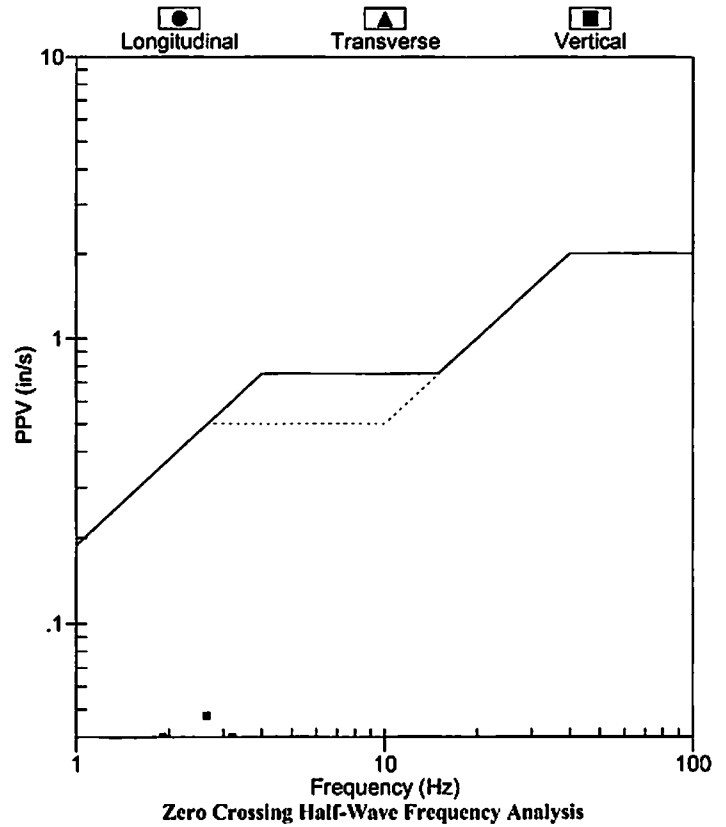
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5150 v3.67
Date: 01/12/2018 13:14:25
Event No: 3
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 5276 SW 152 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5150 Event: 3



	Summary Data		
	L	T	V
PPV (in/s)	0.023	0.025	0.048
FREQ (Hz)	2.3	15.2	2.6
PD (.001")	1.23	1.16	3.07
PPA (g)	0.007	0.007	0.007
Peak Vector Sum :	0.050 in/s		
Peak Air Pressure:	102 db		
	0.00043 PSI @ 5.6 Hz		

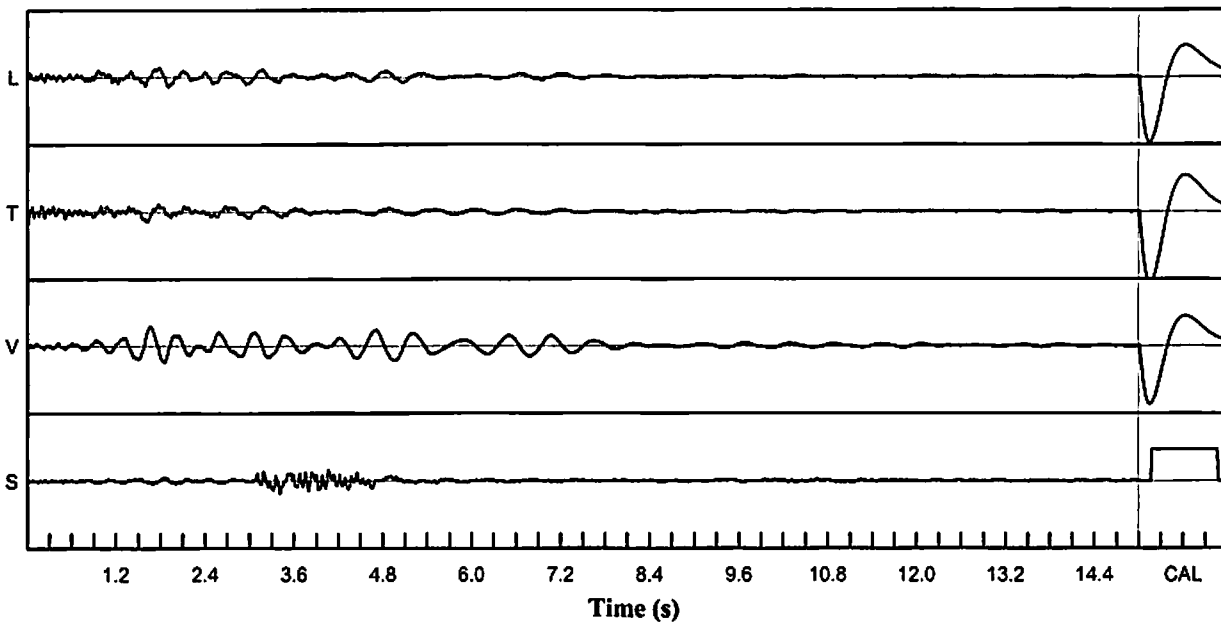
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5150 Event: 3



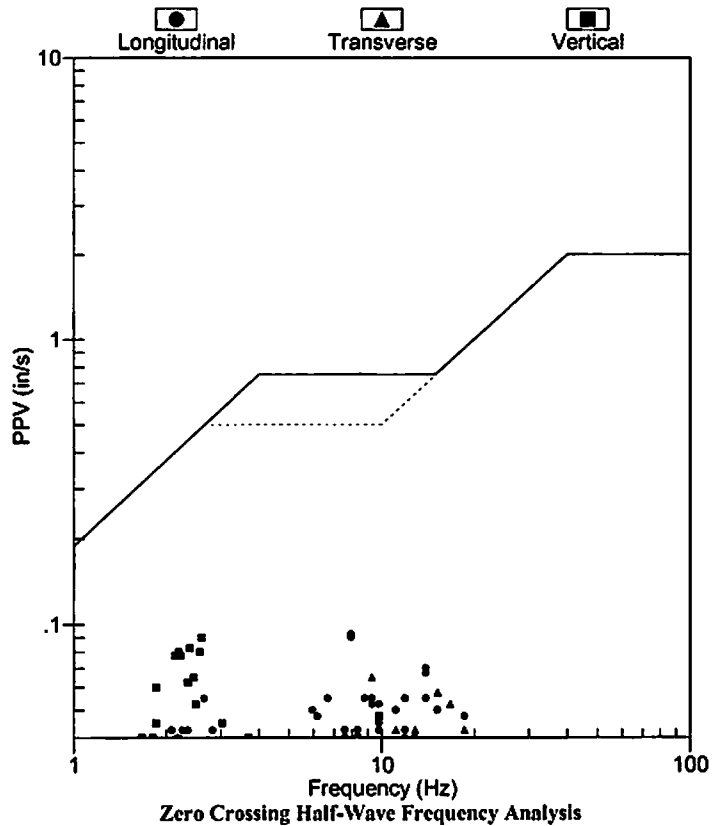
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5150 v3.67
Date: 01/16/2018 13:44:55
Event No: 4
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 5276 SW 152 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5150 Event: 4



	Summary Data		
	L	T	V
PPV (in/s)	0.093	0.065	0.090
FREQ (Hz)	7.9	9.3	2.6
PD (.001")	2.69	1.33	5.73
PPA (g)	0.026	0.020	0.013
Peak Vector Sum :	0.113 in/s		
Peak Air Pressure:	102 db		
	0.00041 PSI @ 3.0 Hz		

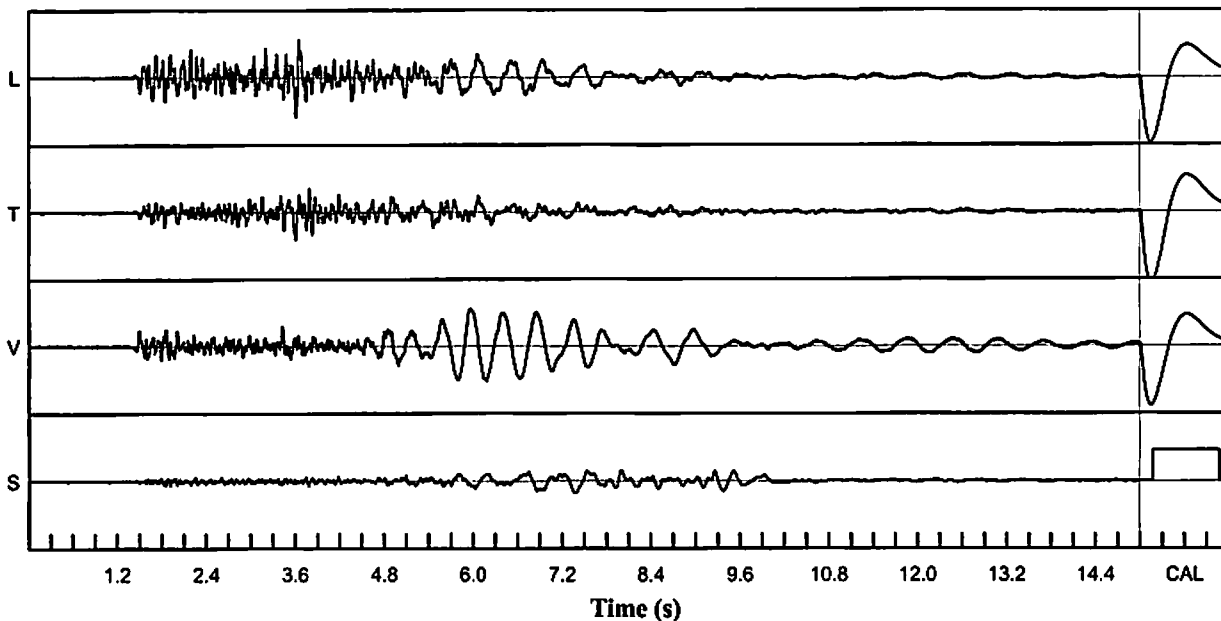
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5150 Event: 4



Seismic Analysis

Velocity Waveform Analysis

Serial No: 5150 v3.67
Date: 01/17/2018 13:59:23
Event No: 5
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 5276 SW 152 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5150 Event: 5

	Summary Data		
	L	T	V
PPV (in/s)	0.073	0.048	0.058
FREQ (Hz)	7.9	7.2	1.9
PD (.001")	1.52	1.49	4.28
PPA (g)	0.013	0.013	0.007
Peak Vector Sum :	0.085 in/s		
Peak Air Pressure:	103 db		
	0.00048 PSI @ 3.0 Hz		

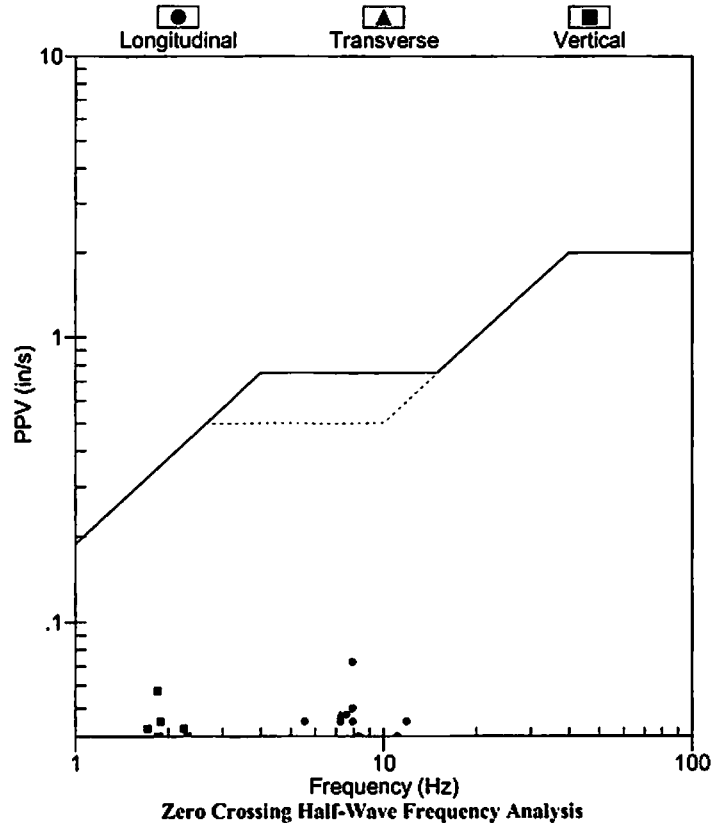
Additional Info:

Shaketable Calibrated: 03/21/2017

By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

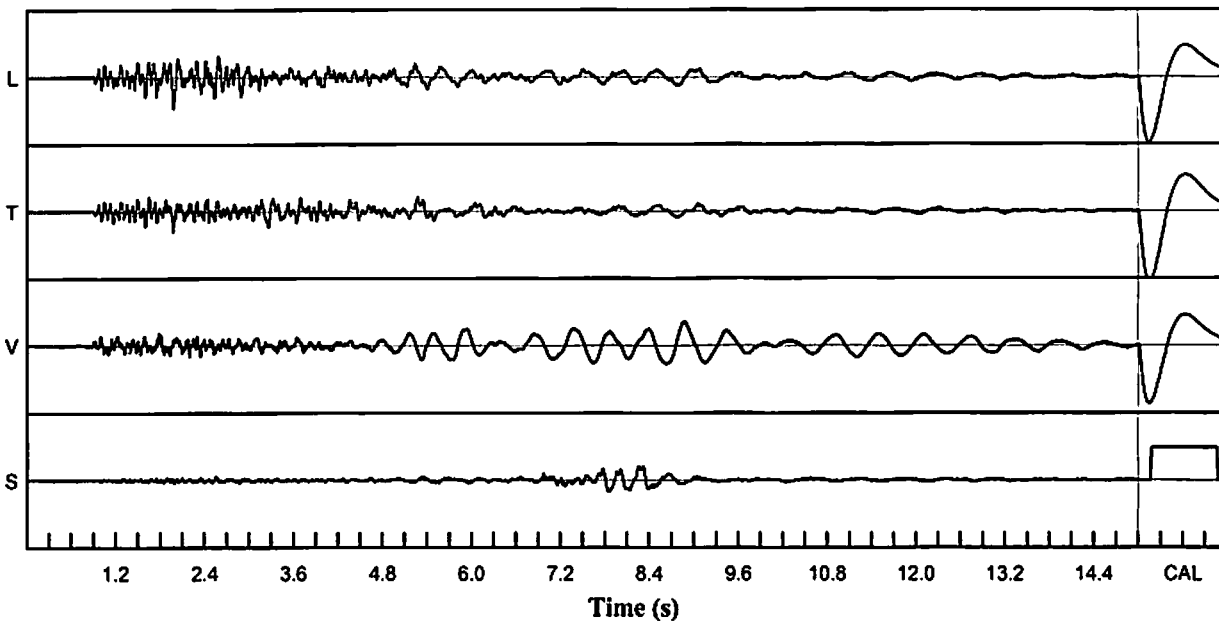
Velocity Waveform Graph Scale

Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI



Velocity Waveform

SN: 5150 Event: 5



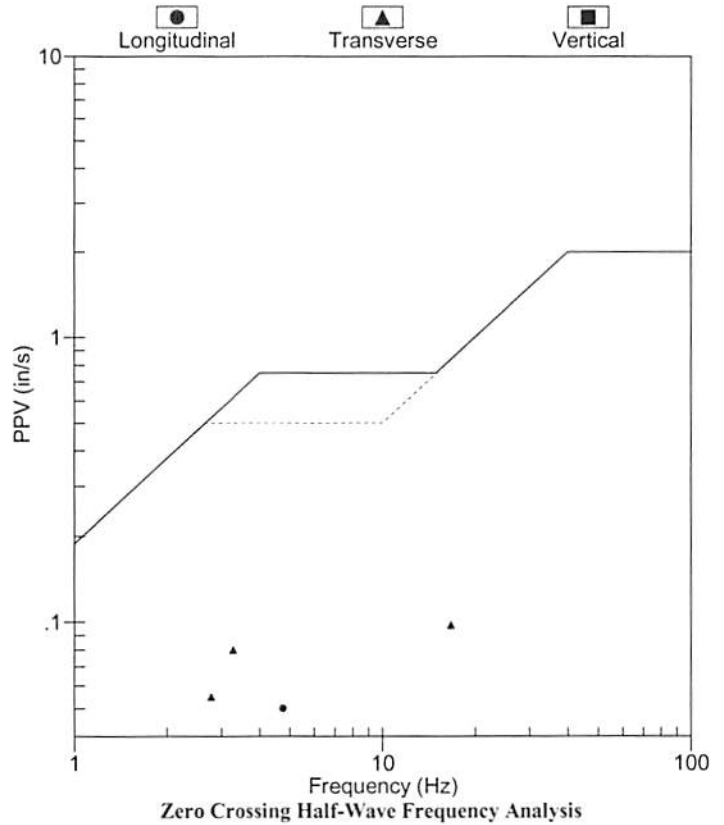
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5150 v3.67
 Date: 01/17/2018 15:01:31
 Event No: 6
 Record Time: 15.0 s
 Client: City of Miramar
 Operation: White Rock Quarries
 Location: 5276 SW 152 Ct
 Distance:
 Operator: Pedro V.
 Comment: In Ground.
 Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5150 Event: 6



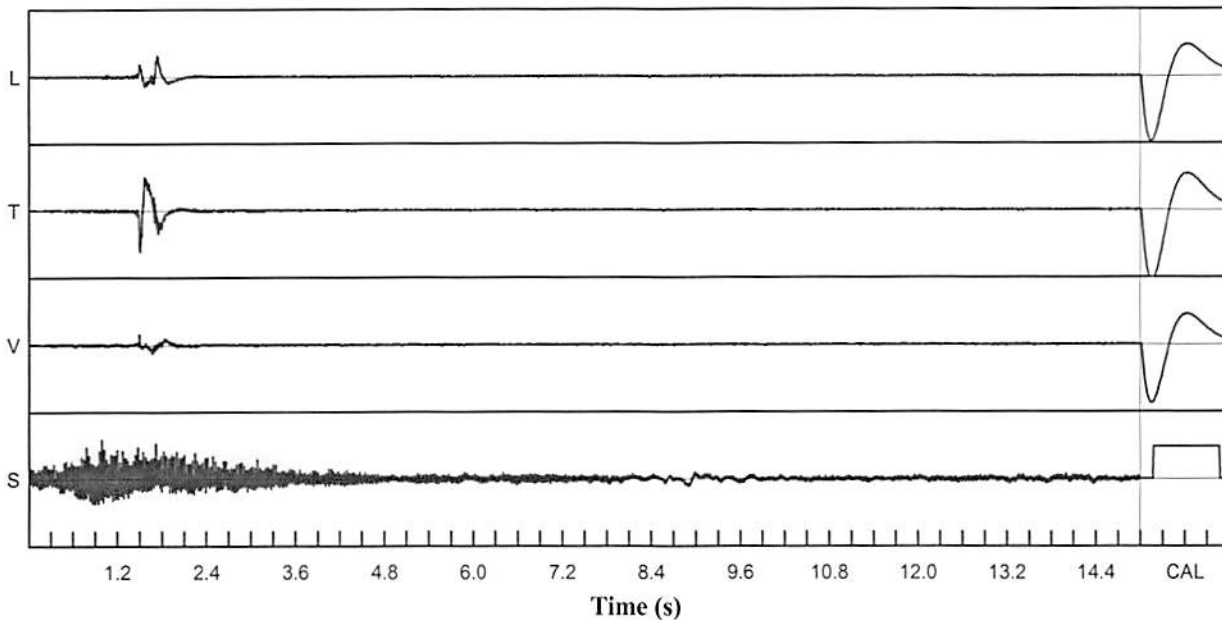
Additional Info:

Shaketable Calibrated: 03/21/2017
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
 Time Scale: 0.300 s
 Seismic Scale: +/- 0.160 in/s
 Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5150 Event: 6



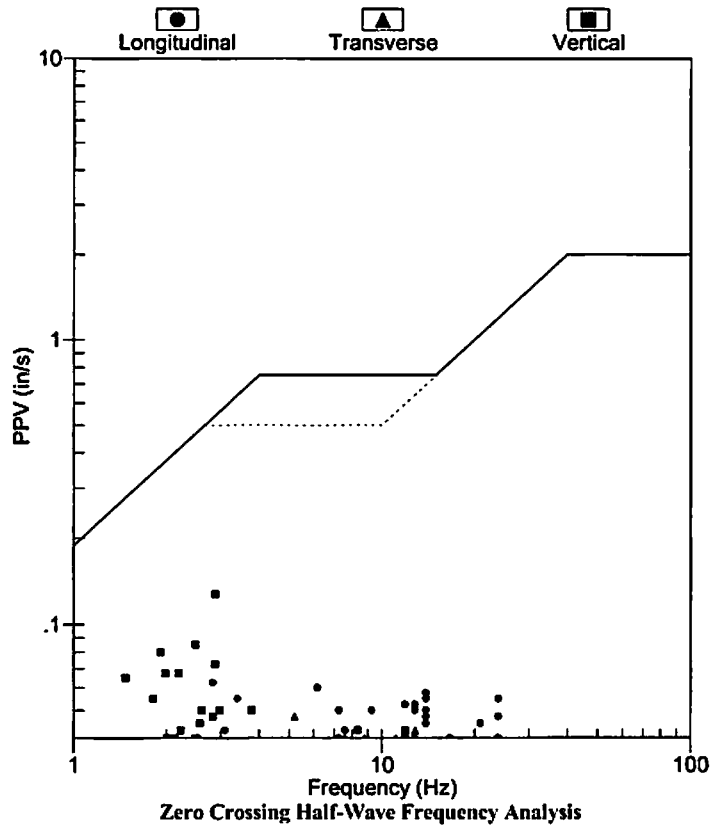
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5150 v3.67
Date: 01/19/2018 13:15:33
Event No: 7
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 5276 SW 152 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5150 Event: 7



	Summary Data		
	L	T	V
PPV (in/s)	0.063	0.048	0.128
FREQ (Hz)	2.8	5.2	2.9
PD (.001")	2.82	1.22	6.53
PPA (g)	0.020	0.020	0.020
Peak Vector Sum :	0.130 in/s		
Peak Air Pressure:	106 db		
	0.00066 PSI @ 3.2 Hz		

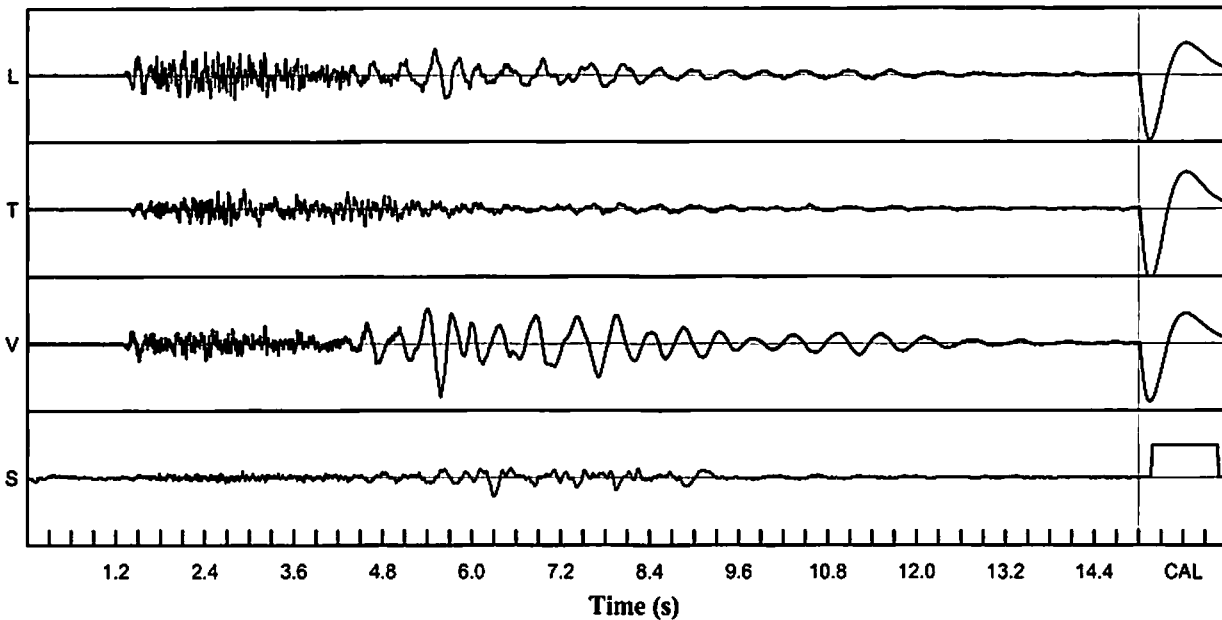
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5150 Event: 7



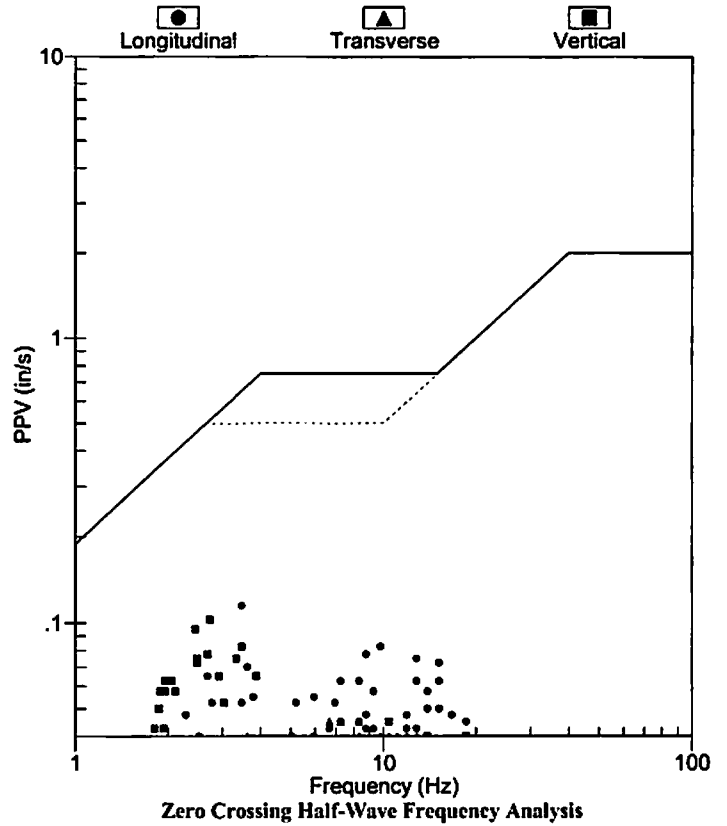
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5150 v3.67
Date: 01/24/2018 13:59:37
Event No: 8
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 5276 SW 152 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5150 Event: 8



	Summary Data		
	L	T	V
PPV (in/s)	0.115	0.045	0.103
FREQ (Hz)	3.5	6.7	2.7
PD (.001")	2.81	1.67	5.19
PPA (g)	0.020	0.013	0.020
Peak Vector Sum :	0.120 in/s		
Peak Air Pressure:	106 db		
	0.00064 PSI @ 3.3 Hz		

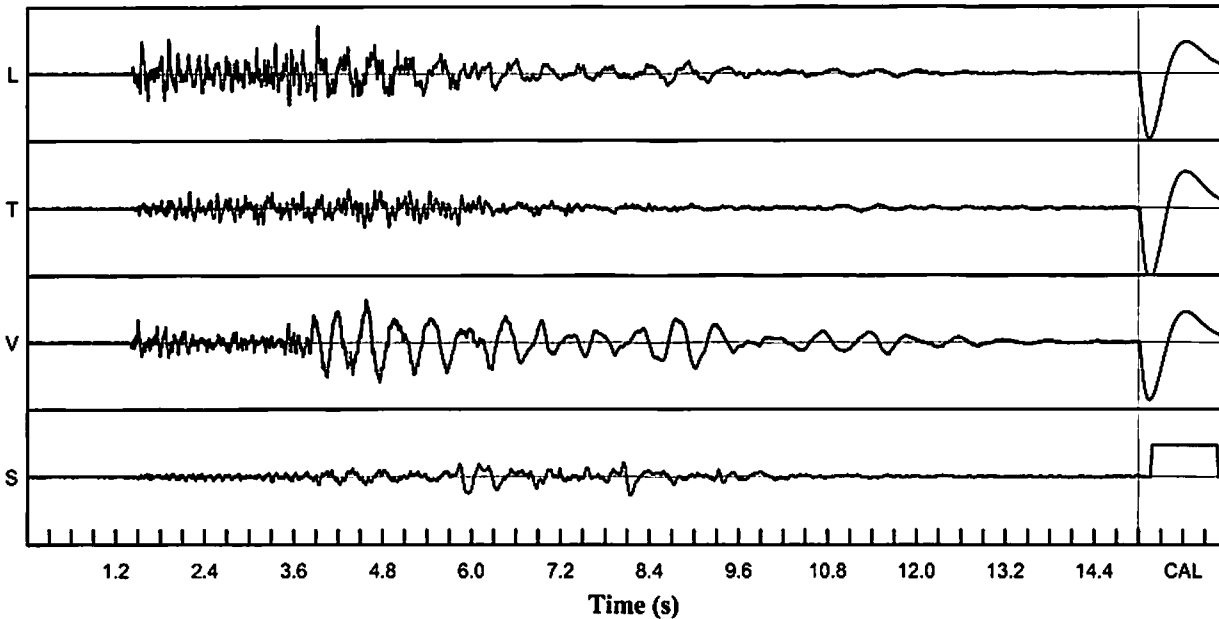
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5150 Event: 8



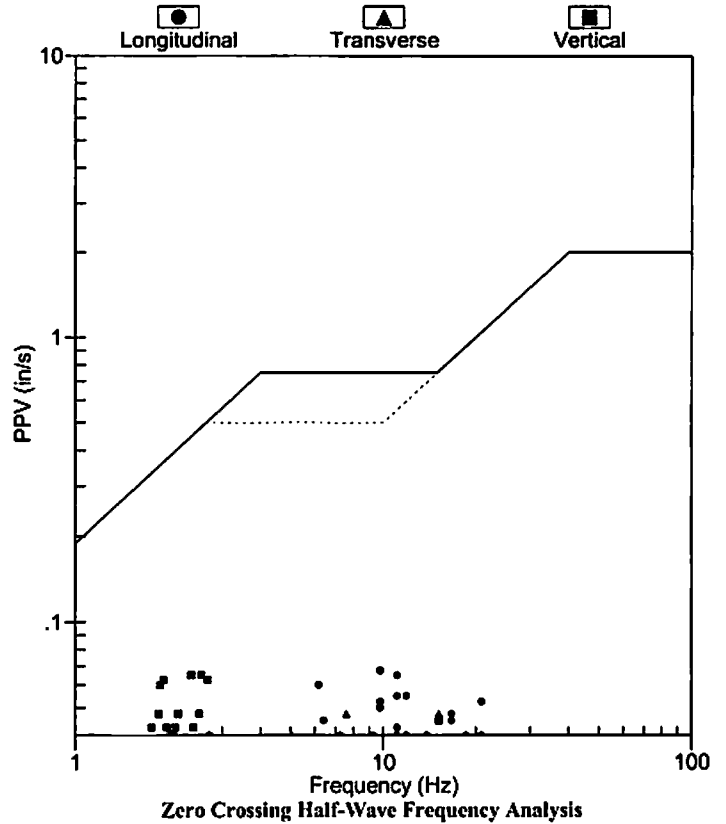
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5150 v3.67
Date: 02/02/2018 13:15:00
Event No: 9
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 5276 SW 152 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5150 Event: 9



	L	T	V
PPV (in/s)	0.068	0.048	0.065
FREQ (Hz)	9.8	15.2	2.6
PD (.001")	1.90	1.88	4.93
PPA (g)	0.020	0.013	0.020
Peak Vector Sum :	0.073 in/s		
Peak Air Pressure:	106 db		
	0.00064 PSI @ 2.2 Hz		

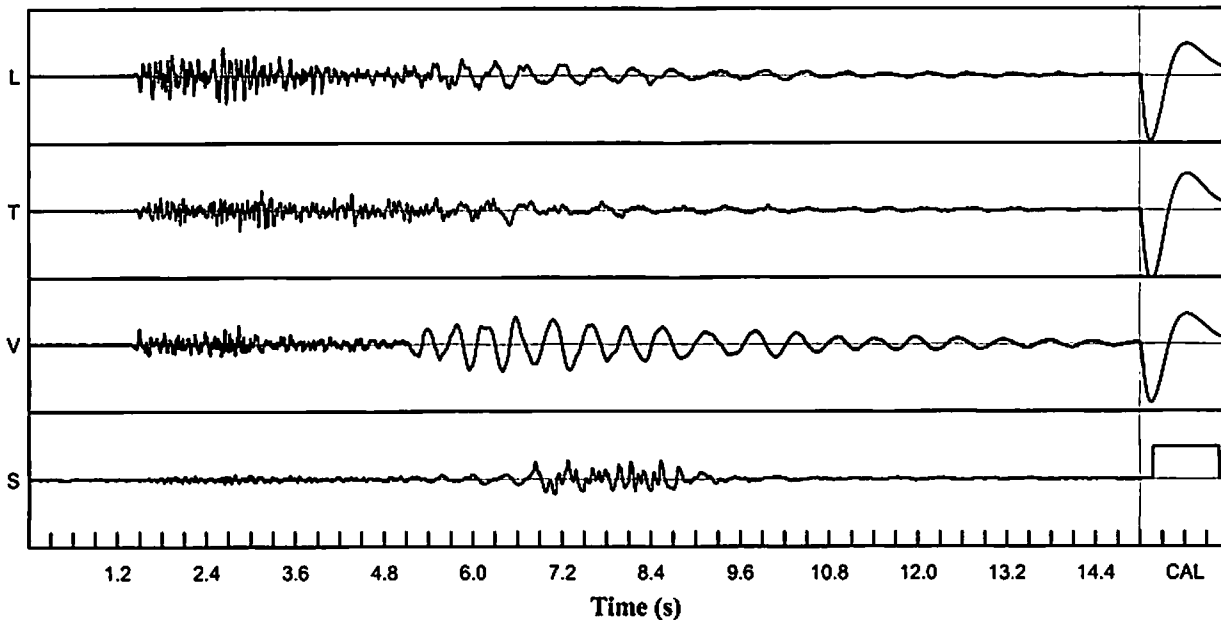
Additional Info:

Shaketable Calibrated: 03/21/2017
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

Velocity Waveform Graph Scale
Time Scale: 0.300 s
Seismic Scale: +/- 0.160 in/s
Sound Scale: +/- 0.0023 PSI

Velocity Waveform

SN: 5150 Event: 9



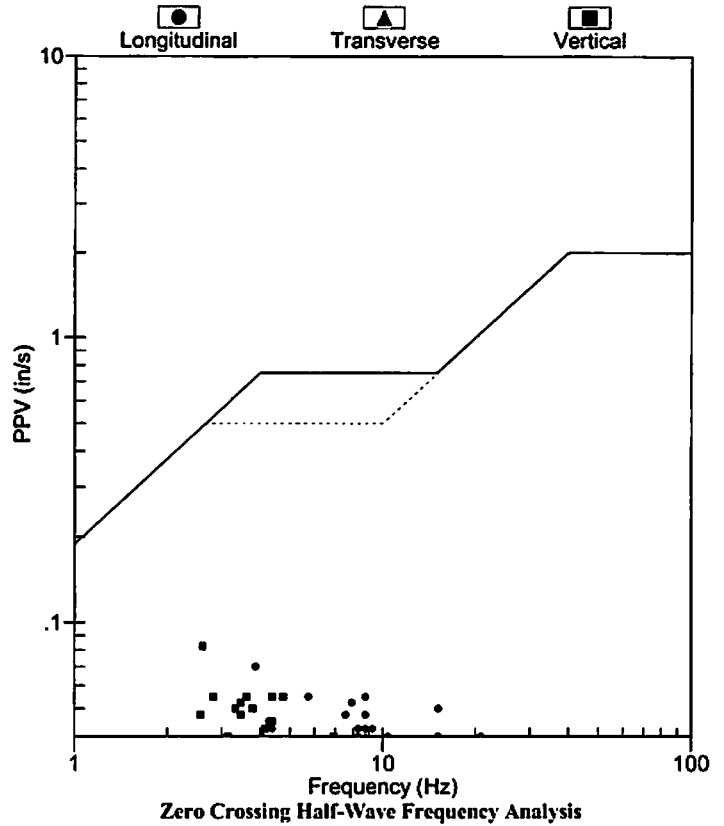
Seismic Analysis

Velocity Waveform Analysis

Serial No: 5150 v3.67
Date: 02/09/2018 14:03:02
Event No: 10
Record Time: 15.0 s
Client: City of Miramar
Operation: White Rock Quarries
Location: 5276 SW 152 Ct
Distance:
Operator: Pedro V.
Comment: In Ground.
Seismic Trigger: 0.030 in/s

USBM Safe Blasting Levels

SN: 5150 Event: 10



Velocity Waveform

SN: 5150 Event: 10

