

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

**LOCATION #1: Riviera Isles (NE)  
LOCATION #2: Riviera Isles (SW)  
LOCATION #3: Hungtinton South**

| <b>DATE</b> | <b>STATION LOCATION</b> | <b>TIME</b> | <b>READING (PPV)*</b> |
|-------------|-------------------------|-------------|-----------------------|
| 05/01/2018  | LOCATION #1             | 1:32 PM     | 0.170                 |
| 05/01/2018  | LOCATION #2             | 1:32 PM     | 0.090                 |
| 05/01/2018  | LOCATION #3             | 1:31 PM     | 0.058                 |
|             |                         |             |                       |
| 05/02/2018  | LOCATION #1             | 2:32 PM     | 0.060                 |
|             |                         |             |                       |
| 05/03/2018  | LOCATION #1             | 1:17 PM     | 0.175                 |
| 05/03/2018  | LOCATION #2             | 1:17 PM     | 0.045                 |
| 05/03/2018  | LOCATION #3             | 1:16 PM     | 0.055                 |
|             |                         |             |                       |
| 05/07/2018  | LOCATION #1             | 2:52 PM     | 0.060                 |
|             |                         |             |                       |
| 05/08/2018  | LOCATION #1             | 1:33 PM     | 0.143                 |
| 05/08/2018  | LOCATION #2             | 1:33 PM     | 0.095                 |
| 05/08/2018  | LOCATION #3             | 1:32 PM     | 0.065                 |
|             |                         |             |                       |
| 05/09/2018  | LOCATION #1             | 11:42 AM    | 0.058                 |
| 05/09/2018  | LOCATION #2             | 11:43 AM    | 0.043                 |
|             |                         |             |                       |
| 05/10/2018  | LOCATION #1             | 3:02 PM     | 0.078                 |
| 05/10/2018  | LOCATION #2             | 3:02 PM     | 0.055                 |
| 05/10/2018  | LOCATION #3             | 3:01 PM     | 0.095                 |
|             |                         |             |                       |
| 05/11/2018  | LOCATION #1             | 10:32 AM    | 0.060                 |
| 05/11/2018  | LOCATION #3             | 9:38 AM     | 0.190                 |
|             |                         |             |                       |
| 05/15/2018  | LOCATION #1             | 2:03 PM     | 0.090                 |
| 05/15/2018  | LOCATION #2             | 2:03 PM     | 0.110                 |
| 05/15/2018  | LOCATION #3             | 2:02 PM     | 0.048                 |
|             |                         |             |                       |
| 05/16/2018  | LOCATION #1             | 10:48 AM    | 0.058                 |
|             |                         |             |                       |
| 05/18/2018  | LOCATION #1             | 1:48 PM     | 0.060                 |
|             |                         |             |                       |
| 05/21/2018  | LOCATION #1             | 1:33 PM     | 0.075                 |
| 05/21/2018  | LOCATION #2             | 1:33 PM     | 0.035                 |
| 05/21/2018  | LOCATION #3             | 1:32 PM     | 0.033                 |

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

**LOCATION #1: Riviera Isles (NE)  
LOCATION #2: Riviera Isles (SW)  
LOCATION #3: Hungtinton South**

| DATE       | STATION LOCATION | TIME     | READING (PPV)* |
|------------|------------------|----------|----------------|
| 05/22/2018 | LOCATION #1      | 1:17 PM  | 0.213          |
| 05/22/2018 | LOCATION #2      | 1:17 PM  | 0.060          |
| 05/22/2018 | LOCATION #3      | 1:16 PM  | 0.085          |
| 05/23/2018 | LOCATION #1      | 1:19 PM  | 0.043          |
| 05/23/2018 | LOCATION #2      | 1:20 PM  | 0.033          |
| 05/23/2018 | LOCATION #3      | 1:18 PM  | 0.040          |
| 05/24/2018 | LOCATION #1      | 2:33 PM  | 0.095          |
| 05/24/2018 | LOCATION #3      | 2:32 PM  | 0.068          |
| 05/30/2018 | LOCATION #1      | 2:51 PM  | 0.053          |
| 05/30/2018 | LOCATION #3      | 2:50 PM  | 0.043          |
| 05/31/2018 | LOCATION #1      | 1:17 PM  | 0.090          |
| 05/31/2018 | LOCATION #2      | 1:18 PM  | 0.065          |
| 05/31/2018 | LOCATION #3      | 1:16 PM  | 0.078          |
| 06/01/2018 | LOCATION #2      | 11:18 AM | 0.115          |
| 06/04/2018 | LOCATION #1      | 12:50 PM | 0.035          |
| 06/04/2018 | LOCATION #2      | 12:51 PM | 0.033          |
| 06/05/2018 | LOCATION #1      | 1:21 PM  | 0.098          |
| 06/05/2018 | LOCATION #2      | 1:21 PM  | 0.063          |
| 06/05/2018 | LOCATION #3      | 1:20 PM  | 0.120          |
| 06/06/2018 | LOCATION #1      | 11:34 AM | 0.040          |
| 06/07/2018 | LOCATION #3      | 9:23 AM  | 0.085          |
| 06/07/2018 | LOCATION #3      | 9:28 AM  | 0.070          |
| 06/07/2018 | LOCATION #3      | 9:33 AM  | 0.043          |
| 06/11/2018 | LOCATION #1      | 1:19 PM  | 0.090          |
| 06/11/2018 | LOCATION #2      | 1:20 PM  | 0.065          |
| 06/11/2018 | LOCATION #3      | 1:18 PM  | 0.073          |

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

**LOCATION #1: Riviera Isles (NE)  
 LOCATION #2: Riviera Isles (SW)  
 LOCATION #3: Hungtinton South**

| <b>DATE</b> | <b>STATION LOCATION</b> | <b>TIME</b> | <b>READING (PPV)*</b> |
|-------------|-------------------------|-------------|-----------------------|
| 06/12/2018  | LOCATION #1             | 11:34 AM    | 0.055                 |
| 06/13/2018  | LOCATION #1             | 10:35 AM    | 0.068                 |
| 06/13/2018  | LOCATION #2             | 10:36 AM    | 0.030                 |
| 06/13/2018  | LOCATION #3             | 10:34 AM    | 0.030                 |
| 06/14/2018  | LOCATION #1             | 1:19 PM     | 0.085                 |
| 06/14/2018  | LOCATION #2             | 1:20 PM     | 0.055                 |
| 06/14/2018  | LOCATION #3             | 1:18 PM     | 0.110                 |
| 06/15/2018  | LOCATION #1             | 10:34 AM    | 0.095                 |
| 06/16/2018  | LOCATION #3             | 11:42 AM    | 0.305                 |
| 06/18/2018  | LOCATION #1             | 10:34 AM    | 0.053                 |
| 06/19/2018  | LOCATION #1             | 1:19 PM     | 0.093                 |
| 06/19/2018  | LOCATION #3             | 1:18 PM     | 0.100                 |
| 06/20/2018  | LOCATION #1             | 1:36 PM     | 0.068                 |
| 06/20/2018  | LOCATION #3             | 1:34 PM     | 0.078                 |
| 06/21/2018  | LOCATION #3             | 12:00 PM    | 0.188                 |

# Seismic Analysis

## USBM/Velocity Waveform Report

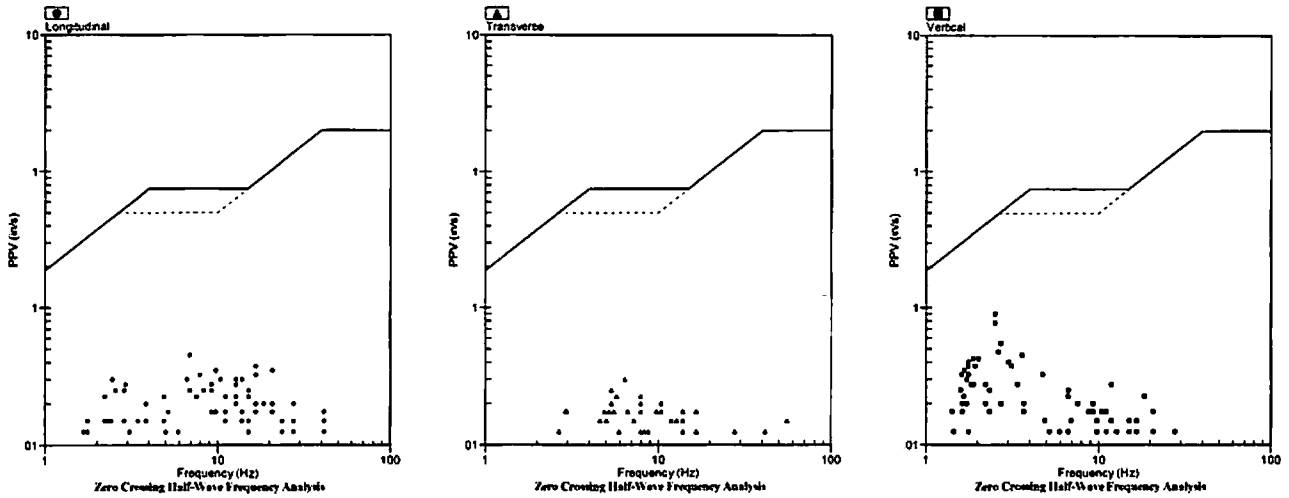
**Serial No:** 5149 v3.67  
**Date:** 05/01/2018 13:31:34  
**Event No:** 1  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 16171 SW 49 Ct  
**Distance:**  
**Operator:** Pedro V.  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.045                | 0.030 | 0.090 |
| <b>FREQ (Hz)</b>          | 6.9                  | 6.4   | 2.5   |
| <b>PD (.001")</b>         | 1.83                 | 1.13  | 4.75  |
| <b>PPA (g)</b>            | 0.020                | 0.013 | 0.007 |
| <b>Peak Vector Sum:</b>   | 0.090 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 101 db               |       |       |
|                           | 0.00036 PSI @ 3.5 Hz |       |       |

**Additional Info:**

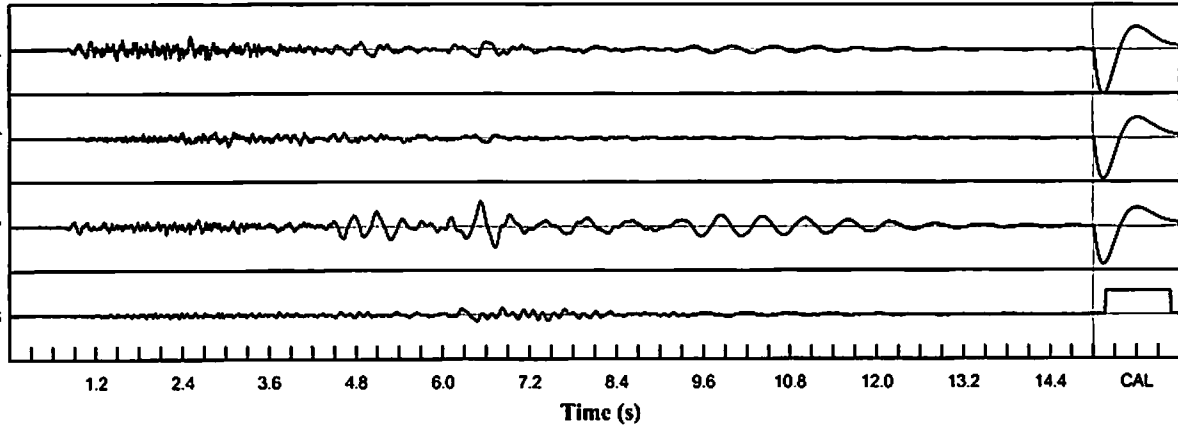
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 1



**Velocity Waveform Graph Scale**

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 05/03/2018 13:16:39  
**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

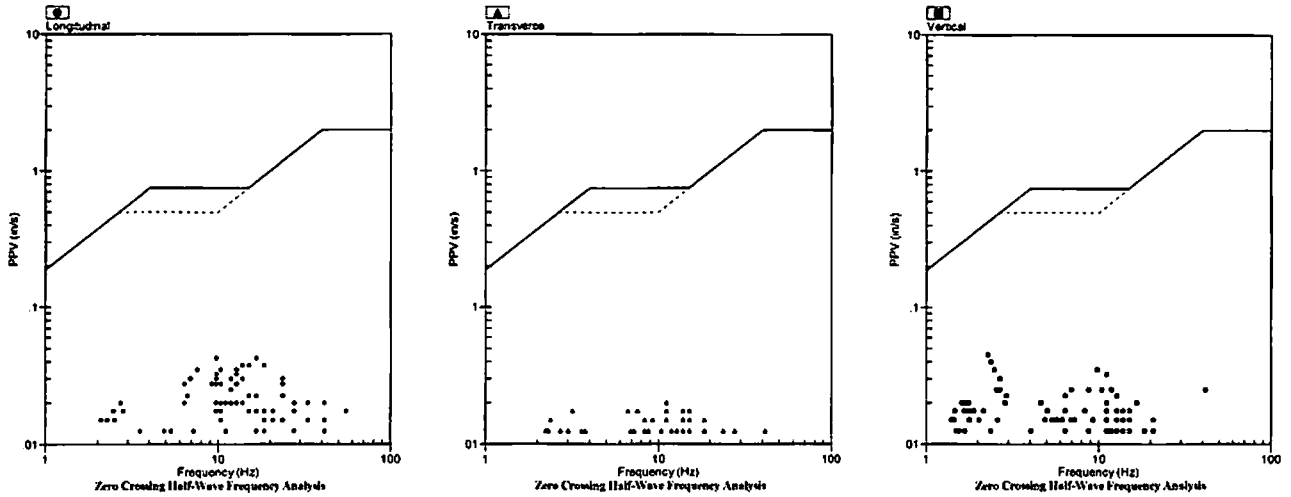
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.043                | 0.020 | 0.045 |
| FREQ (Hz)          | 16.7                 | 11.1  | 2.3   |
| PD (.001")         | 1.30                 | 1.03  | 2.88  |
| PPA (g)            | 0.020                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.050 in/s           |       |       |
| Peak Air Pressure: | 104 db               |       |       |
|                    | 0.00055 PSI @ 2.1 Hz |       |       |

### Additional Info:

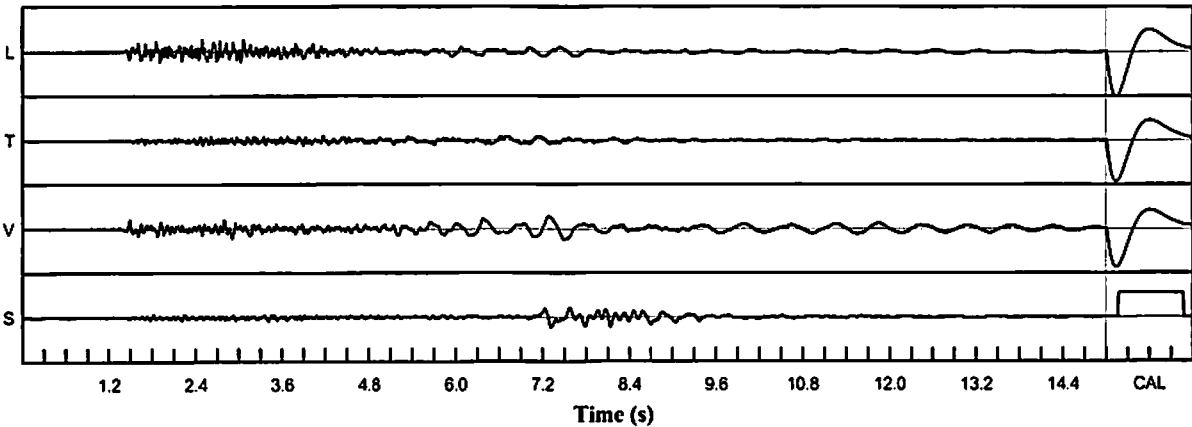
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 2



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 05/08/2018 13:33:11  
**Event No:** 3  
**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

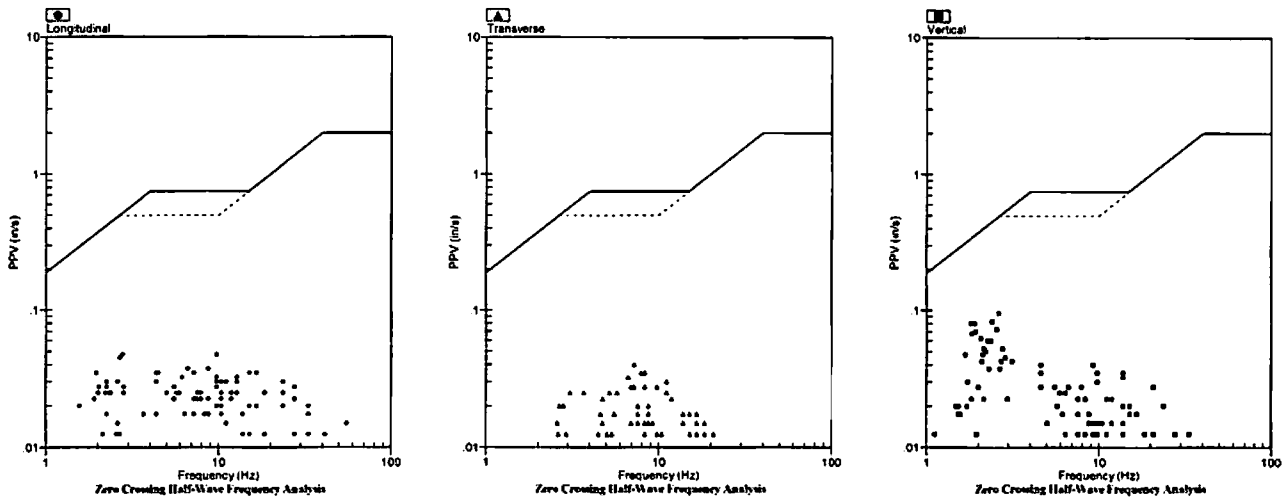
### Summary Data

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.048                | 0.040 | 0.095 |
| <b>FREQ (Hz)</b>          | 9.8                  | 7.2   | 2.6   |
| <b>PD (.001")</b>         | 2.35                 | 1.27  | 6.70  |
| <b>PPA (g)</b>            | 0.013                | 0.007 | 0.013 |
| <b>Peak Vector Sum:</b>   | 0.098 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 106 db               |       |       |
|                           | 0.00062 PSI @ 2.9 Hz |       |       |

### Additional Info:

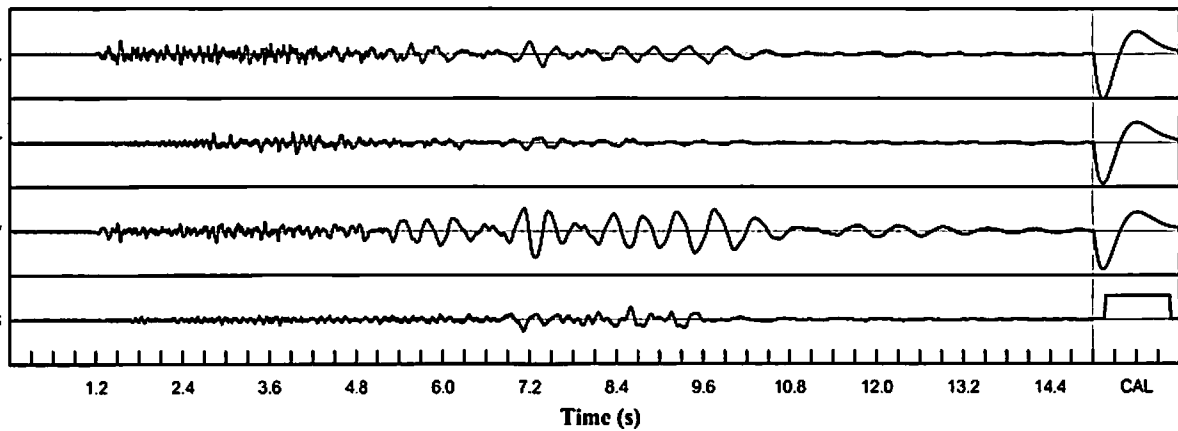
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 3



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 05/09/2018 11:42:31  
**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

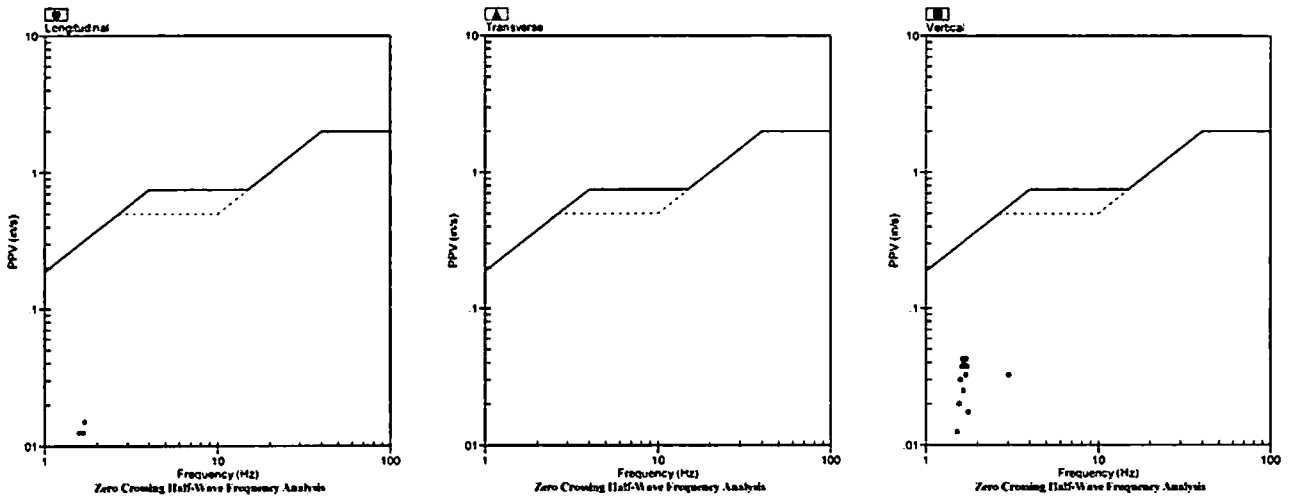
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.015                | 0.008 | 0.043 |
| FREQ (Hz)          | 1.7                  | 2.8   | 1.7   |
| PD (.001")         | 1.13                 | 0.45  | 4.11  |
| PPA (g)            | 0.007                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.043 in/s           |       |       |
| Peak Air Pressure: | 84 db                |       |       |
|                    | 0.00011 PSI @ 1.0 Hz |       |       |

### Additional Info:

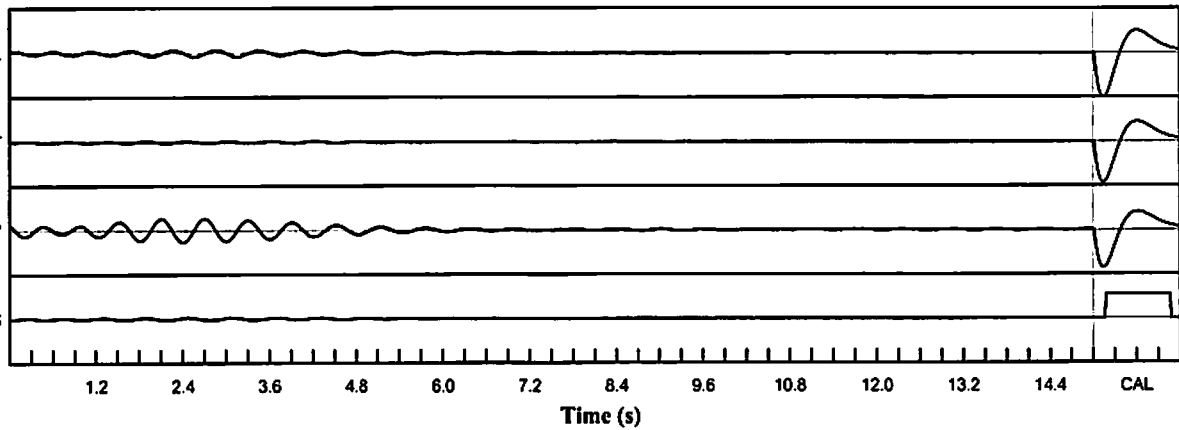
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 4



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 05/10/2018 15:02:11  
**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

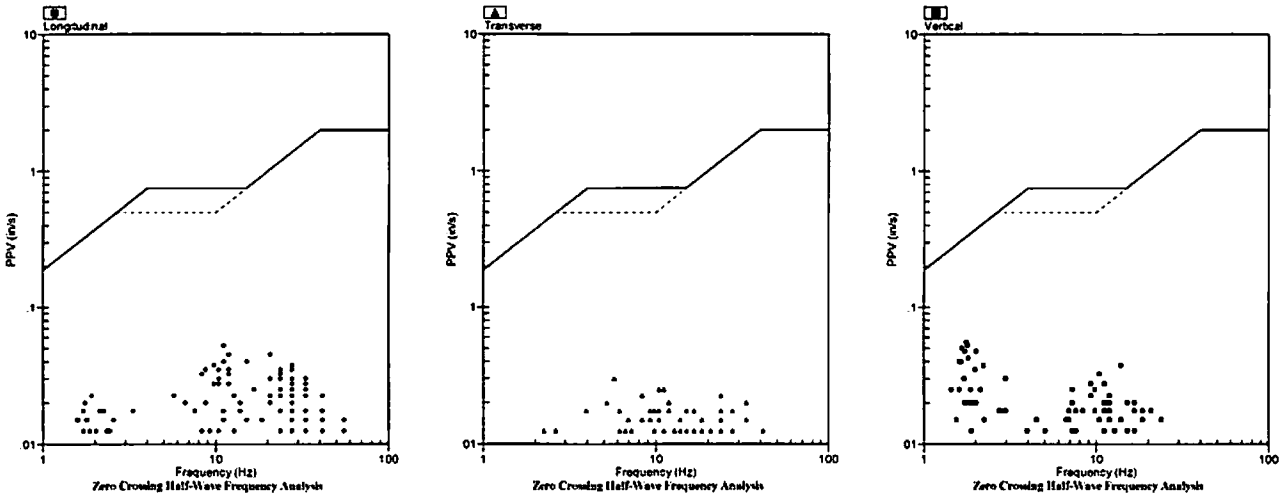
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.053                | 0.030 | 0.055 |
| FREQ (Hz)          | 11.1                 | 5.7   | 1.8   |
| PD (.001")         | 1.47                 | 0.89  | 4.81  |
| PPA (g)            | 0.020                | 0.013 | 0.007 |
| Peak Vector Sum:   | 0.055 in/s           |       |       |
| Peak Air Pressure: | 103 db               |       |       |
|                    | 0.00046 PSI @ 6.4 Hz |       |       |

### Additional Info:

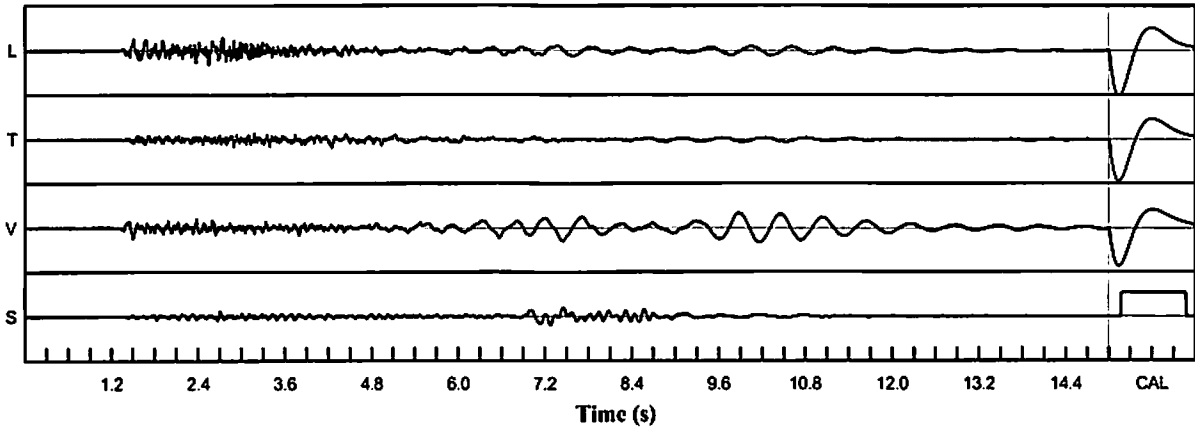
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 5



### Velocity Waveform Graph Scale

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



# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 05/15/2018 14:02:57  
**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

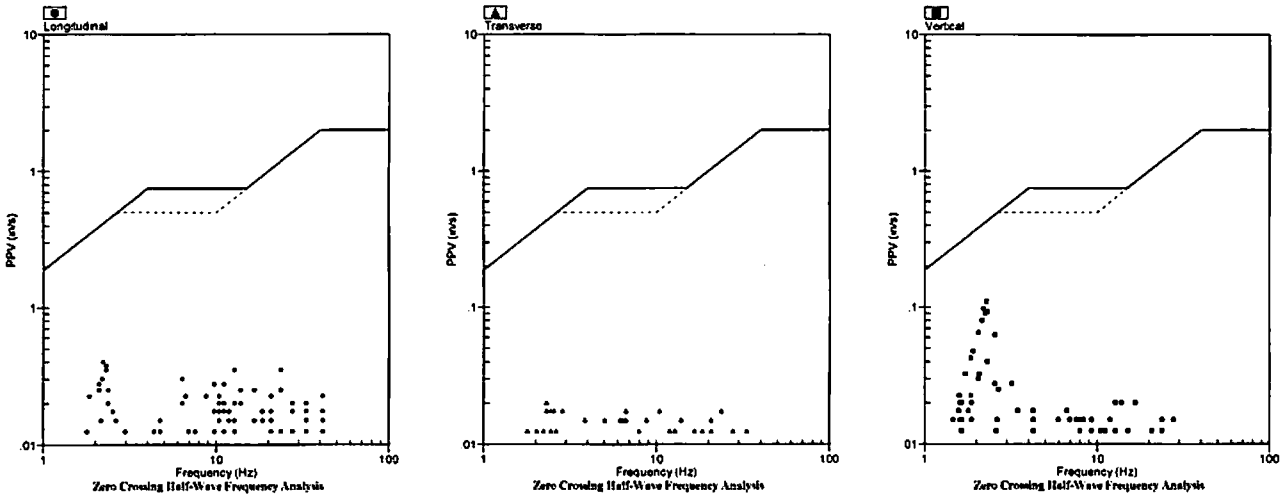
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.040                | 0.020 | 0.110 |
| FREQ (Hz)          | 2.2                  | 2.3   | 2.3   |
| PD (.001")         | 2.77                 | 1.16  | 7.47  |
| PPA (g)            | 0.013                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.110 in/s           |       |       |
| Peak Air Pressure: | 108 db               |       |       |
|                    | 0.00075 PSI @ 4.3 Hz |       |       |

### Additional Info:

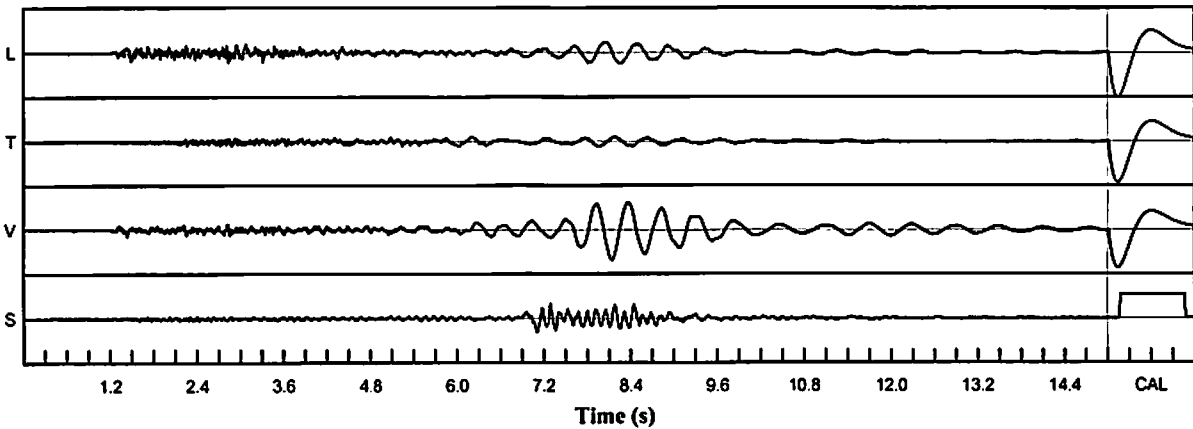
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 6



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 05/21/2018 13:33:21  
**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

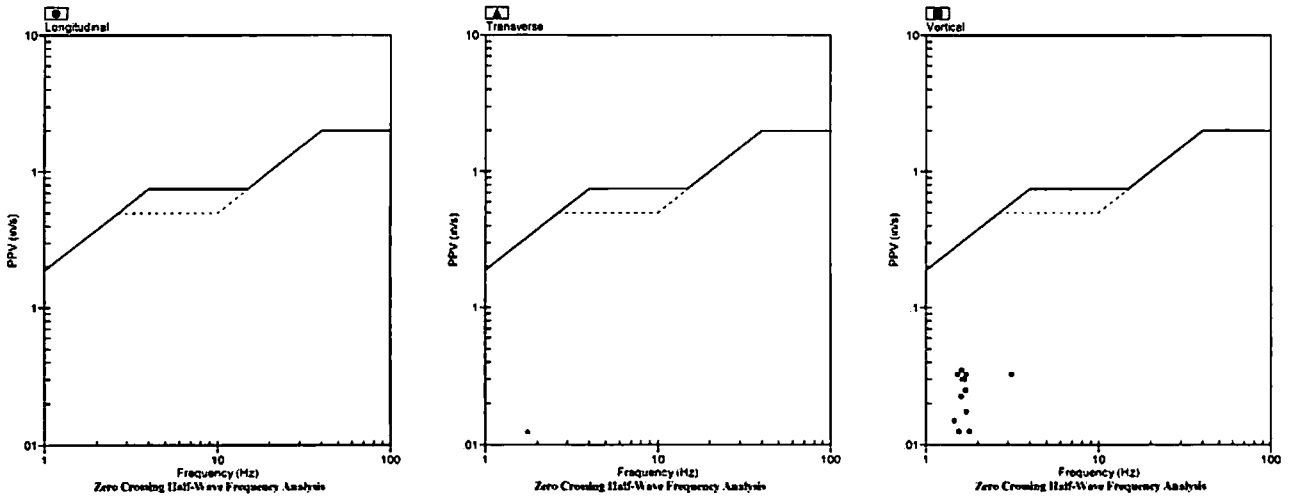
### Summary Data

|                    | L                     | T     | V     |
|--------------------|-----------------------|-------|-------|
| PPV (in/s)         | 0.010                 | 0.013 | 0.035 |
| FREQ (Hz)          | 1.8                   | 1.9   | 1.6   |
| PD (.001")         | 0.75                  | 1.01  | 3.10  |
| PPA (g)            | 0.007                 | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.035 in/s            |       |       |
| Peak Air Pressure: | 84 db                 |       |       |
|                    | 0.00011 PSI @ 33.3 Hz |       |       |

### Additional Info:

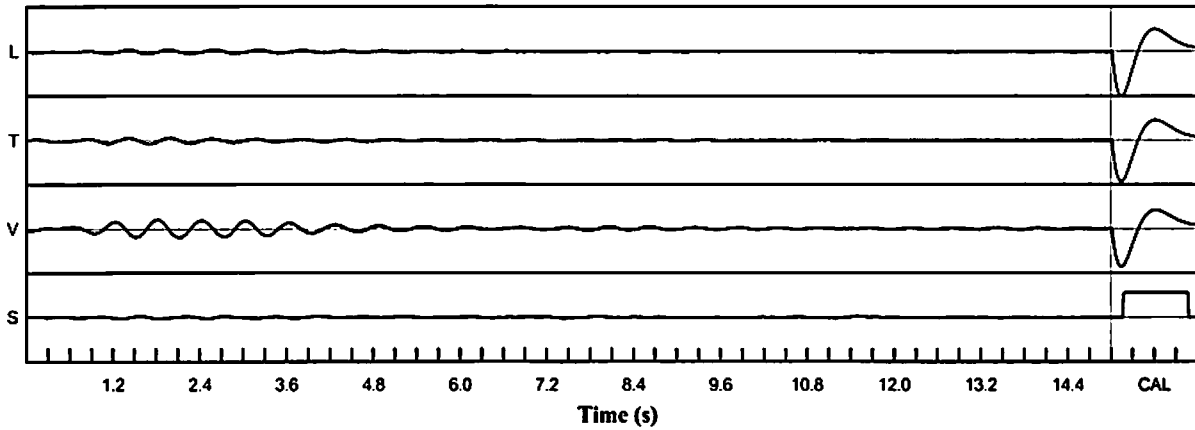
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 7



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 05/22/2018 13:17:30  
**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

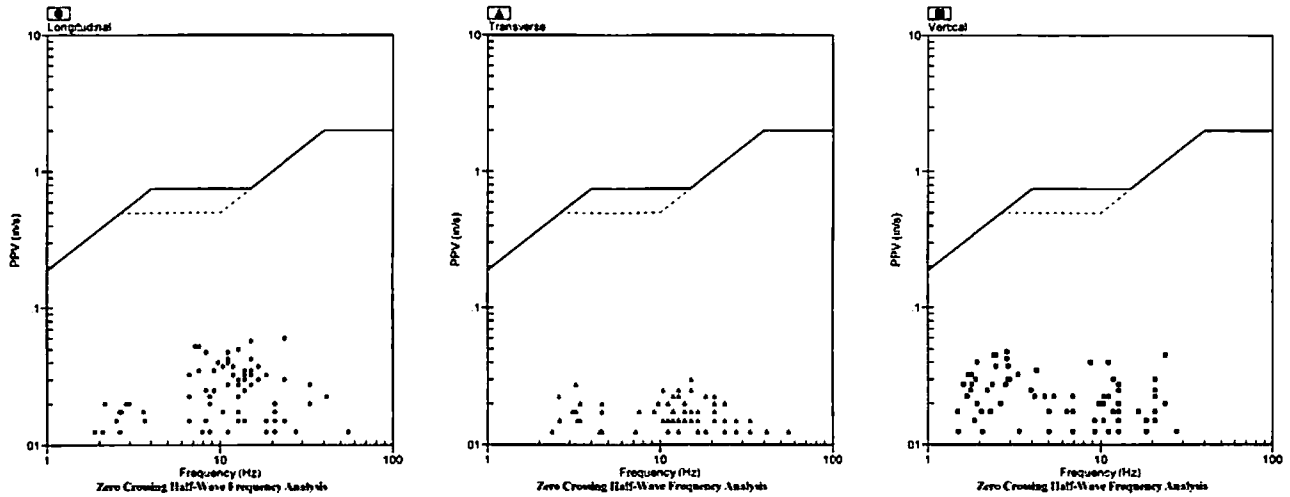
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.060                | 0.030 | 0.048 |
| FREQ (Hz)          | 11.1                 | 15.2  | 2.9   |
| PD (.001")         | 1.31                 | 1.24  | 3.02  |
| PPA (g)            | 0.020                | 0.013 | 0.013 |
| Peak Vector Sum:   | 0.073 in/s           |       |       |
| Peak Air Pressure: | 108 db               |       |       |
|                    | 0.00077 PSI @ 4.6 Hz |       |       |

### Additional Info:

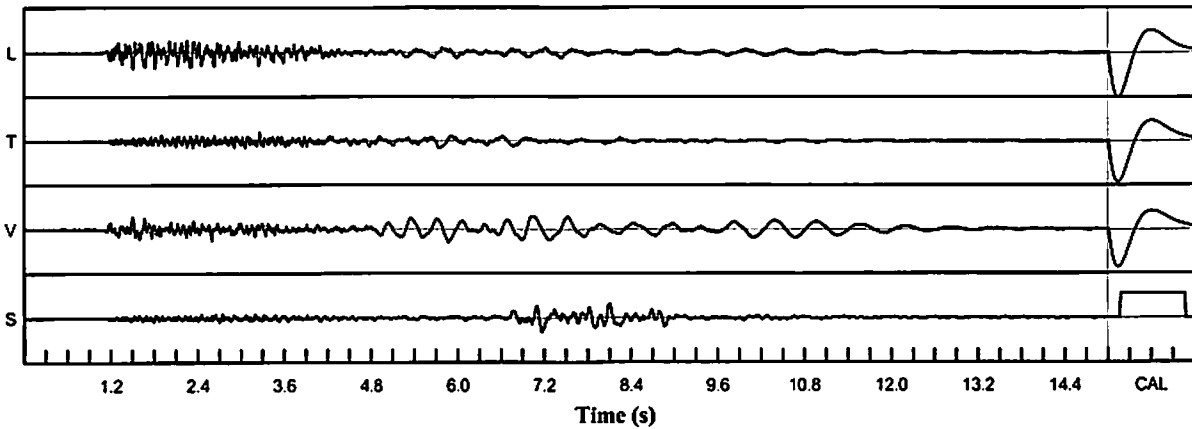
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 8



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 05/23/2018 13:19:55  
**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

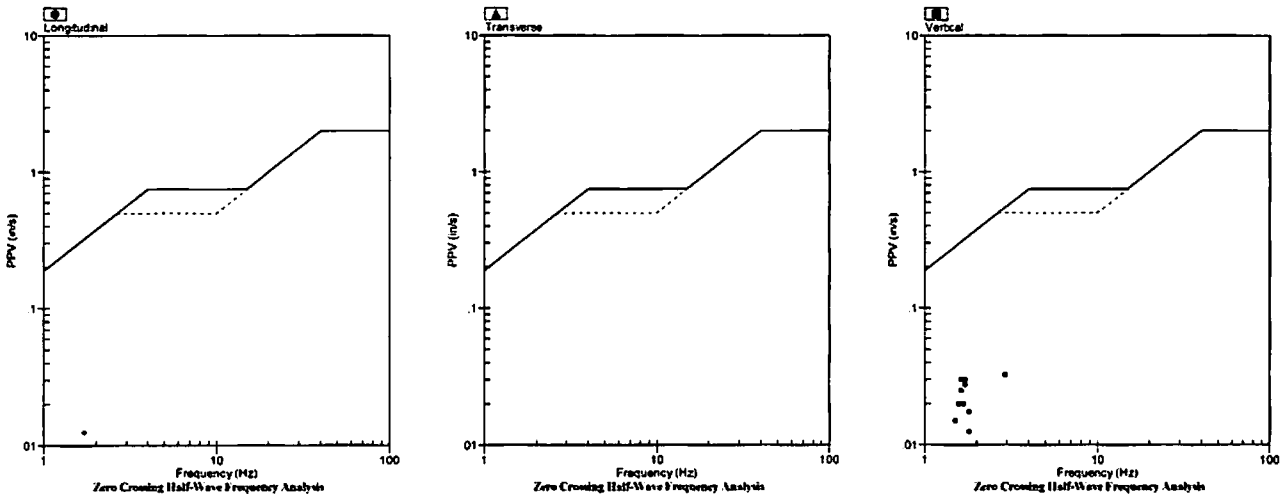
### Summary Data

|                    | L                     | T     | V     |
|--------------------|-----------------------|-------|-------|
| PPV (in/s)         | 0.013                 | 0.005 | 0.033 |
| FREQ (Hz)          | 1.7                   | 9.8   | 1.7   |
| PD (.001")         | 0.84                  | 0.42  | 2.93  |
| PPA (g)            | 0.007                 | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.033 in/s            |       |       |
| Peak Air Pressure: | 82 db                 |       |       |
|                    | 0.00009 PSI @ 55.6 Hz |       |       |

### Additional Info:

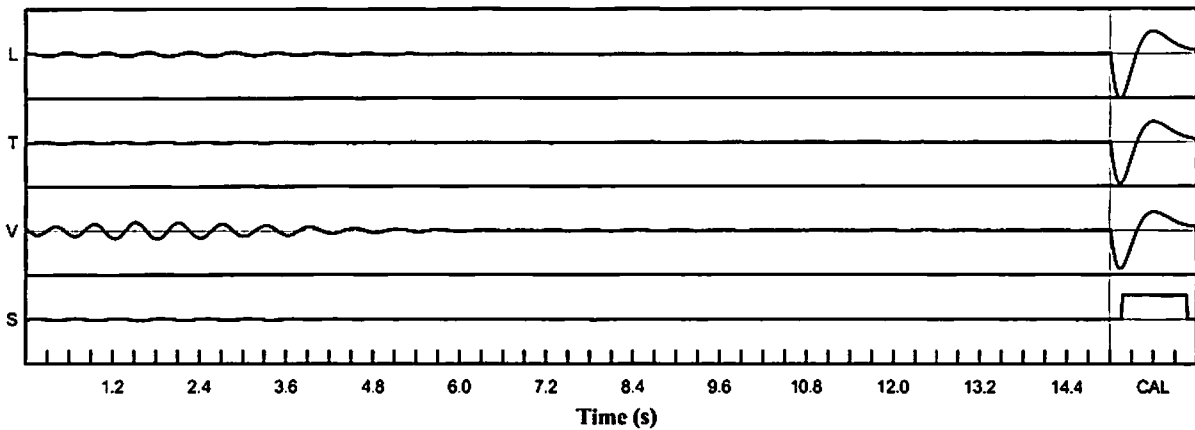
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 9



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 05/31/2018 13:17:43  
**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

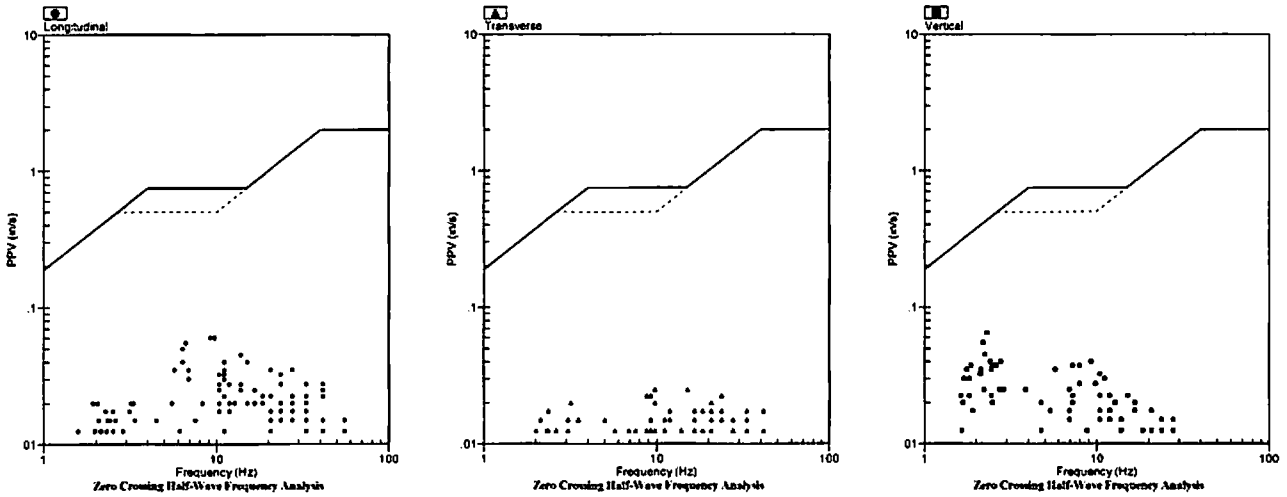
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.060                | 0.025 | 0.065 |
| FREQ (Hz)          | 9.3                  | 15.2  | 2.3   |
| PD (.001")         | 1.33                 | 1.08  | 4.04  |
| PPA (g)            | 0.020                | 0.013 | 0.013 |
| Peak Vector Sum:   | 0.065 in/s           |       |       |
| Peak Air Pressure: | 105 db               |       |       |
|                    | 0.00057 PSI @ 5.7 Hz |       |       |

### Additional Info:

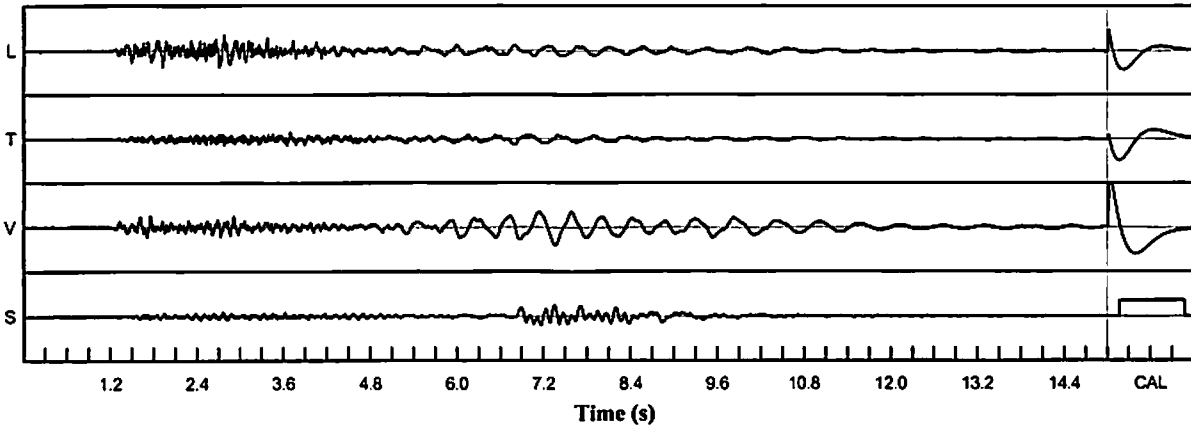
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 10



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 06/01/2018 11:17:51  
**Event No:** 11  
**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

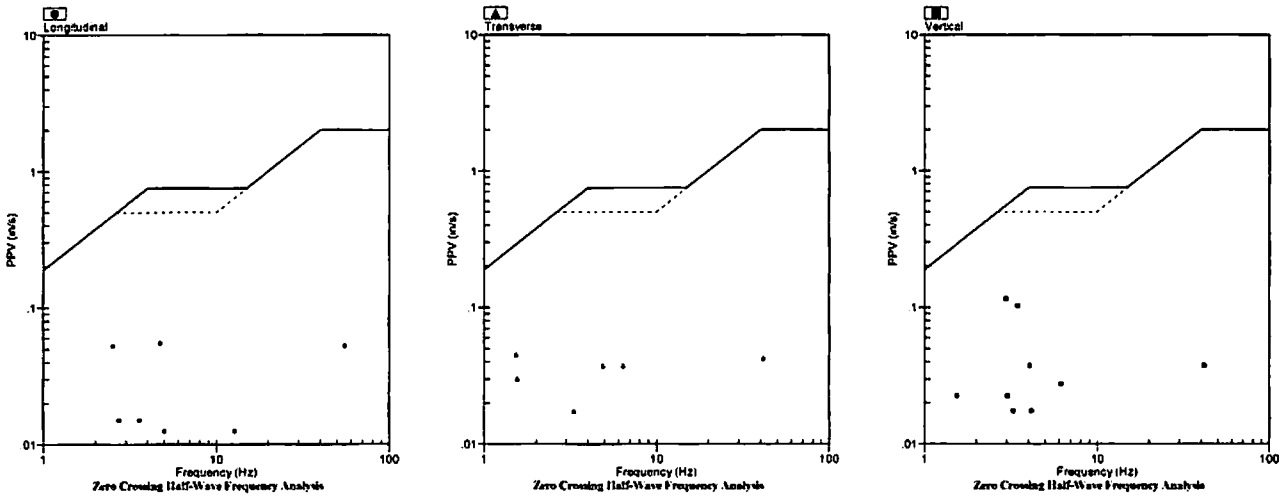
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.055                | 0.045 | 0.115 |
| FREQ (Hz)          | 4.8                  | 1.5   | 3.0   |
| PD (.001")         | 1.94                 | 4.26  | 4.75  |
| PPA (g)            | 0.026                | 0.020 | 0.020 |
| Peak Vector Sum:   | 0.123 in/s           |       |       |
| Peak Air Pressure: | 78 db                |       |       |
|                    | 0.00004 PSI @ 1.0 Hz |       |       |

### Additional Info:

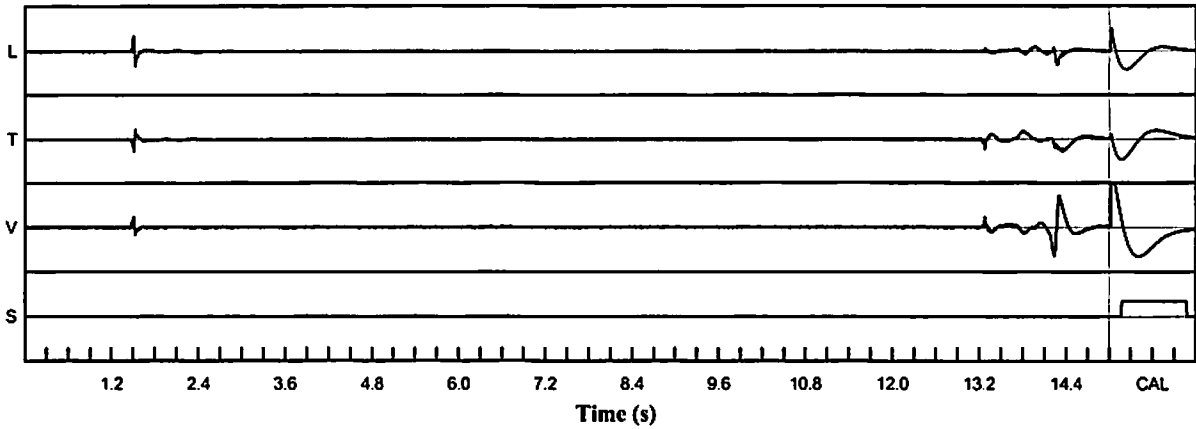
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 11



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 06/04/2018 12:50:36  
**Event No:** 12  
**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

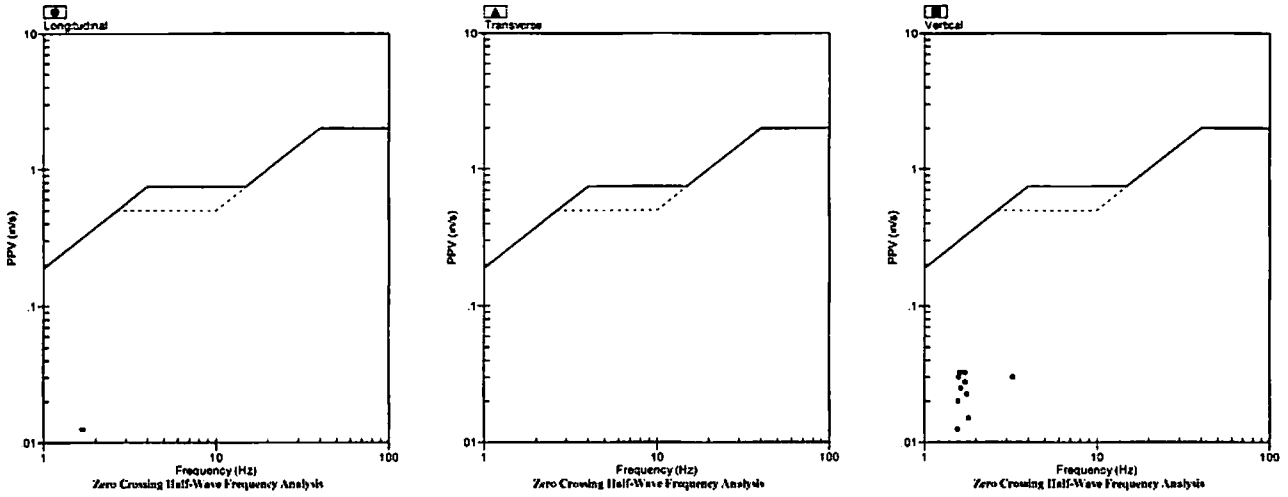
### Summary Data

|                    | L                      | T     | V     |
|--------------------|------------------------|-------|-------|
| PPV (in/s)         | 0.013                  | 0.005 | 0.033 |
| FREQ (Hz)          | 1.7                    | 12.8  | 1.7   |
| PD (.001")         | 0.88                   | 0.28  | 3.09  |
| PPA (g)            | 0.007                  | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.033 in/s             |       |       |
| Peak Air Pressure: | 84 db                  |       |       |
|                    | 0.00011 PSI @ 166.7 Hz |       |       |

### Additional Info:

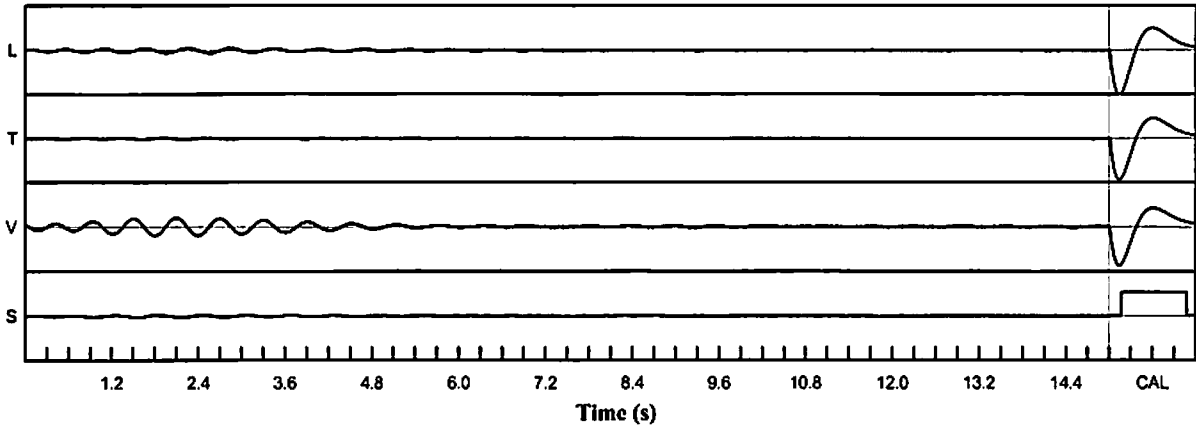
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 12



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 06/05/2018 13:21:20  
**Event No:** 13  
**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

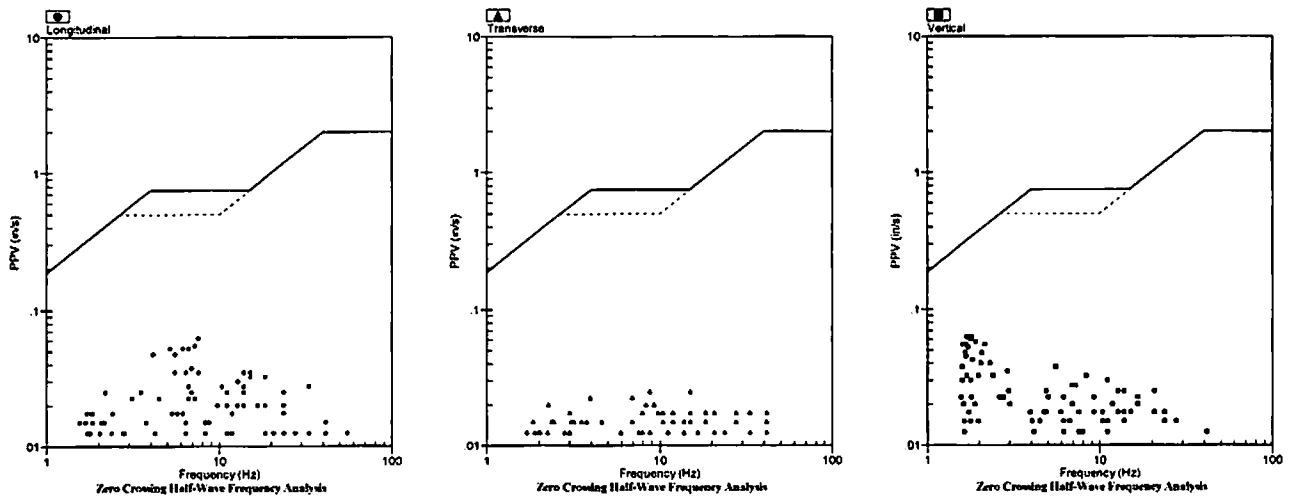
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.063                | 0.025 | 0.063 |
| FREQ (Hz)          | 7.6                  | 15.2  | 1.8   |
| PD (.001")         | 1.52                 | 1.07  | 5.44  |
| PPA (g)            | 0.020                | 0.013 | 0.007 |
| Peak Vector Sum:   | 0.065 in/s           |       |       |
| Peak Air Pressure: | 105 db               |       |       |
|                    | 0.00059 PSI @ 2.5 Hz |       |       |

### Additional Info:

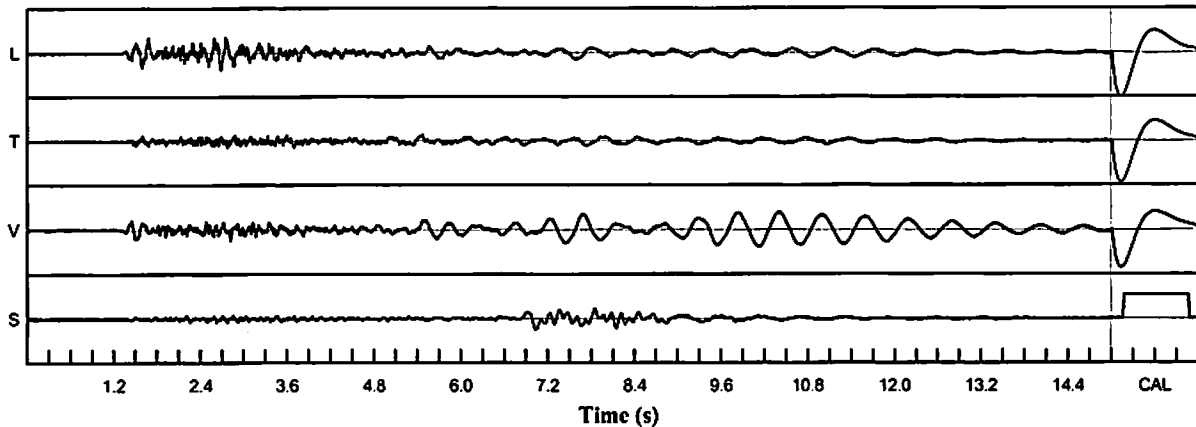
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
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### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 13



### Velocity Waveform Graph Scale

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



# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 06/11/2018 13:19:59  
**Event No:** 14  
**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

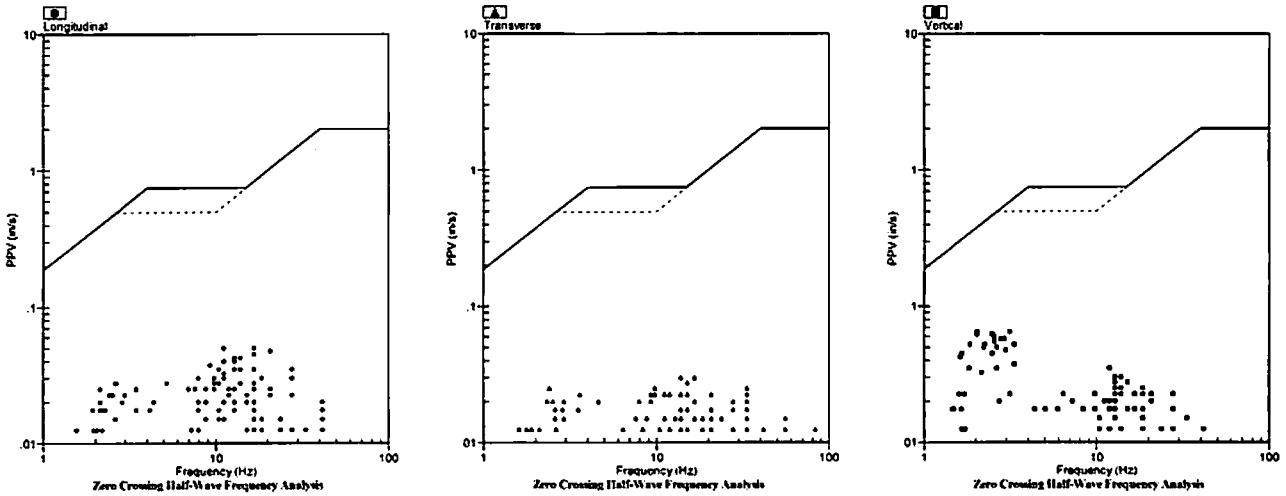
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.050                | 0.030 | 0.065 |
| FREQ (Hz)          | 11.1                 | 13.9  | 3.1   |
| PD (.001")         | 1.55                 | 1.46  | 4.78  |
| PPA (g)            | 0.020                | 0.013 | 0.013 |
| Peak Vector Sum:   | 0.065 in/s           |       |       |
| Peak Air Pressure: | 106 db               |       |       |
|                    | 0.00066 PSI @ 5.1 Hz |       |       |

### Additional Info:

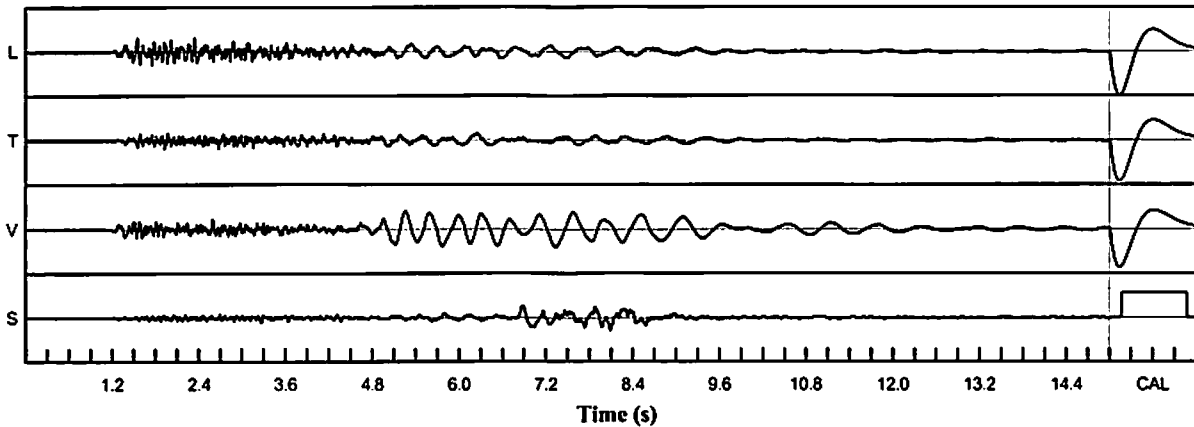
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
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### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 14



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 06/13/2018 10:35:39  
**Event No:** 15  
**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

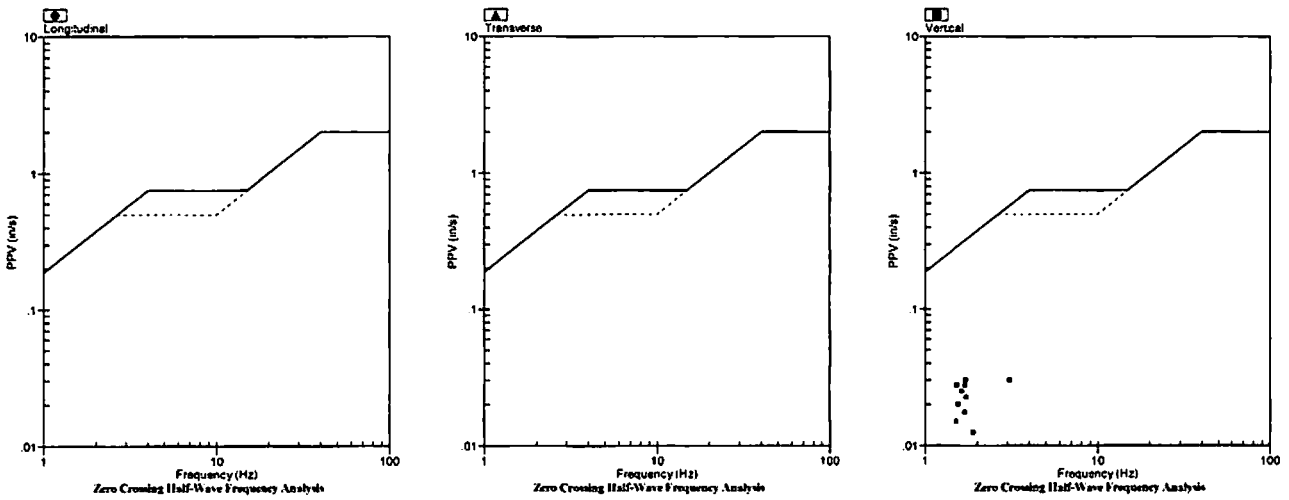
### Summary Data

|                    | L                      | T     | V     |
|--------------------|------------------------|-------|-------|
| PPV (in/s)         | 0.010                  | 0.013 | 0.030 |
| FREQ (Hz)          | 1.8                    | 1.9   | 1.6   |
| PD (.001")         | 0.68                   | 0.93  | 2.80  |
| PPA (g)            | 0.007                  | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.033 in/s             |       |       |
| Peak Air Pressure: | 86 db                  |       |       |
|                    | 0.00012 PSI @ 166.7 Hz |       |       |

### Additional Info:

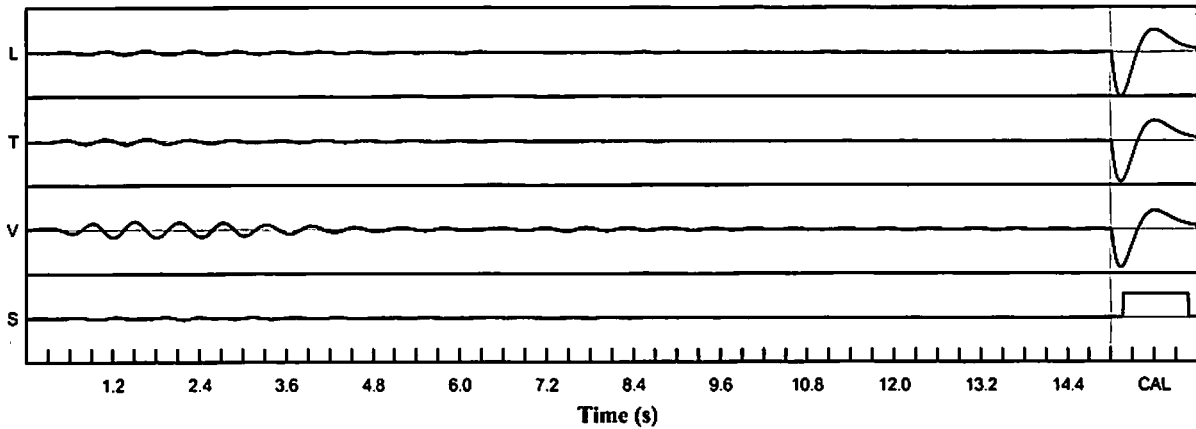
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 15



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5149 v3.67  
**Date:** 06/14/2018 13:19:41  
**Event No:** 16  
**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

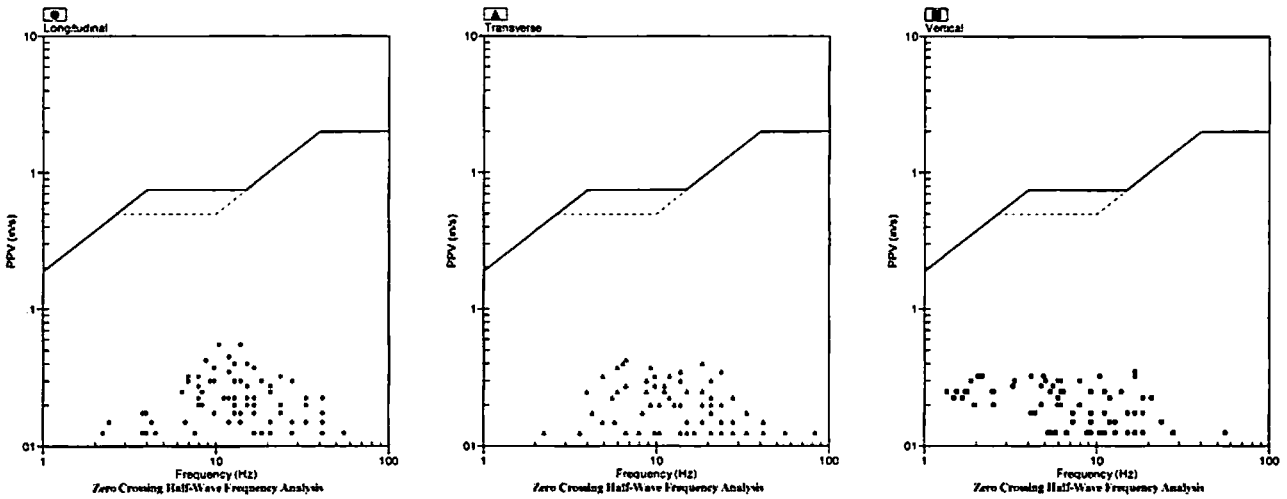
### Summary Data

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.055                | 0.043 | 0.040 |
| <b>FREQ (Hz)</b>          | 10.4                 | 6.7   | 7.6   |
| <b>PD (.001")</b>         | 1.29                 | 1.25  | 2.39  |
| <b>PPA (g)</b>            | 0.020                | 0.020 | 0.013 |
| <b>Peak Vector Sum:</b>   | 0.065 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 107 db               |       |       |
|                           | 0.00073 PSI @ 5.6 Hz |       |       |

### Additional Info:

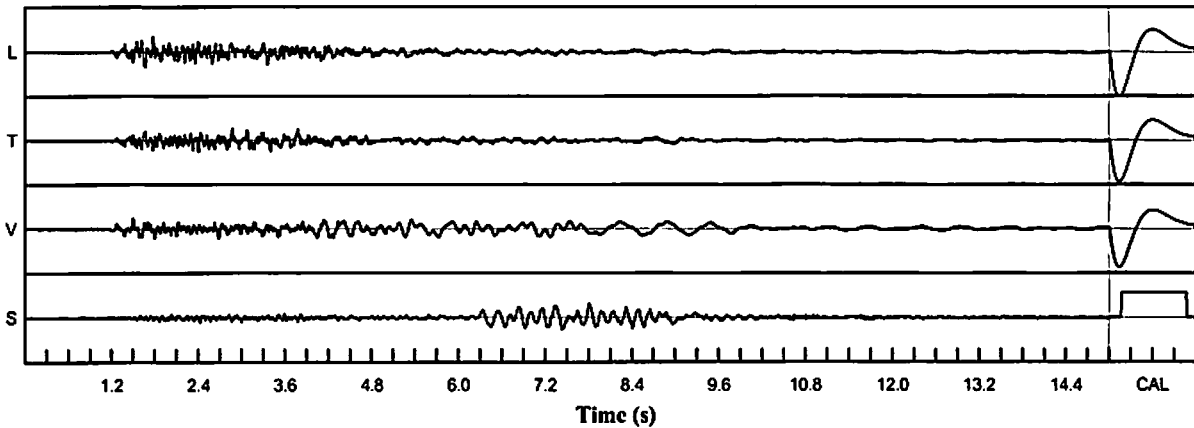
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5149 Event: 16



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 04/30/2018 15:01:35  
**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

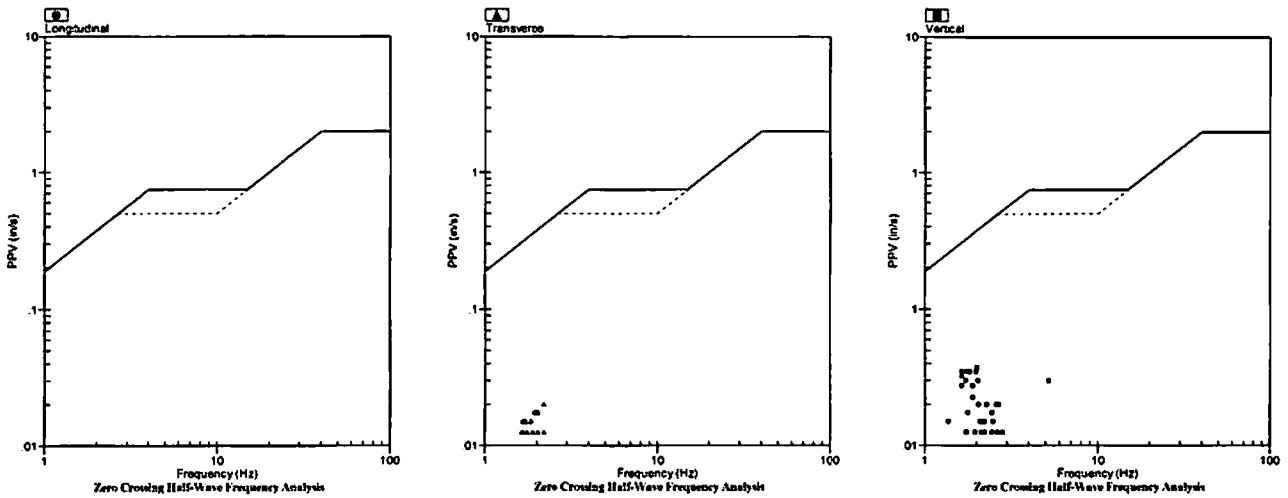
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.020                | 0.020 | 0.038 |
| FREQ (Hz)          | 1.7                  | 2.2   | 2.0   |
| PD (.001")         | 1.35                 | 1.47  | 3.30  |
| PPA (g)            | 0.007                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.040 in/s           |       |       |
| Peak Air Pressure: | 95 db                |       |       |
|                    | 0.00032 PSI @ 2.4 Hz |       |       |

### Additional Info:

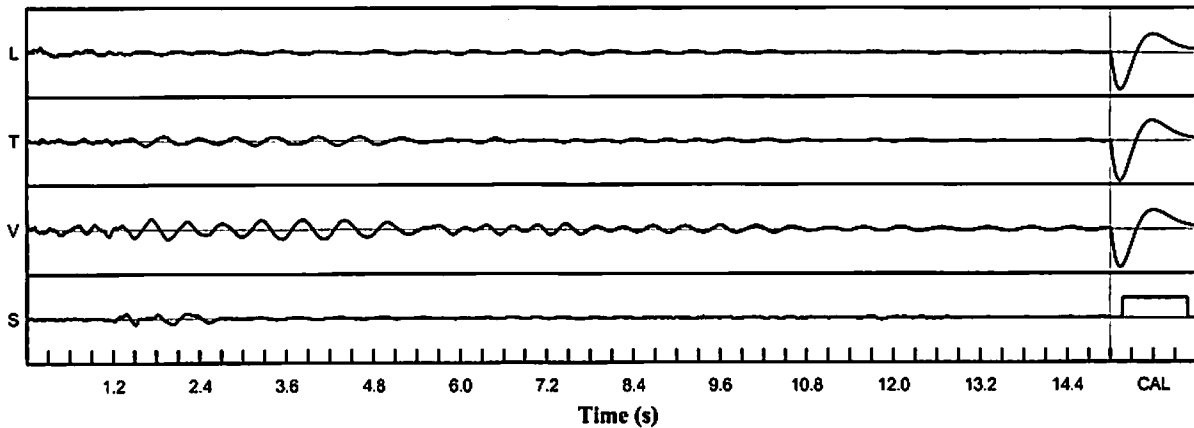
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 1



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/01/2018 13:31:30  
**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

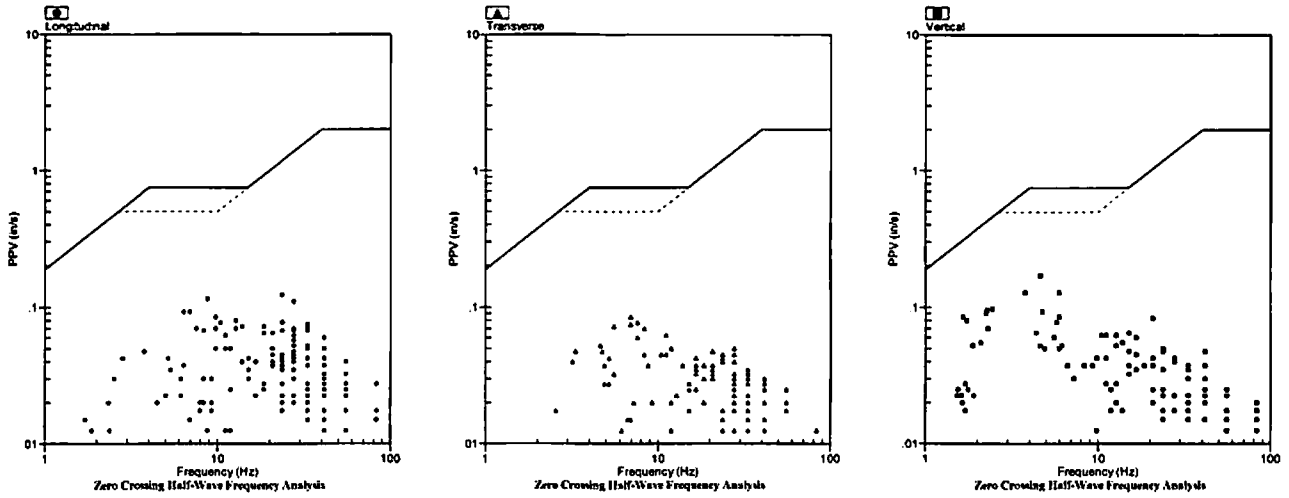
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.123                | 0.085 | 0.170 |
| FREQ (Hz)          | 23.8                 | 6.9   | 4.6   |
| PD (.001")         | 2.50                 | 2.22  | 5.63  |
| PPA (g)            | 0.052                | 0.026 | 0.033 |
| Peak Vector Sum:   | 0.180 in/s           |       |       |
| Peak Air Pressure: | 113 db               |       |       |
|                    | 0.00150 PSI @ 6.2 Hz |       |       |

### Additional Info:

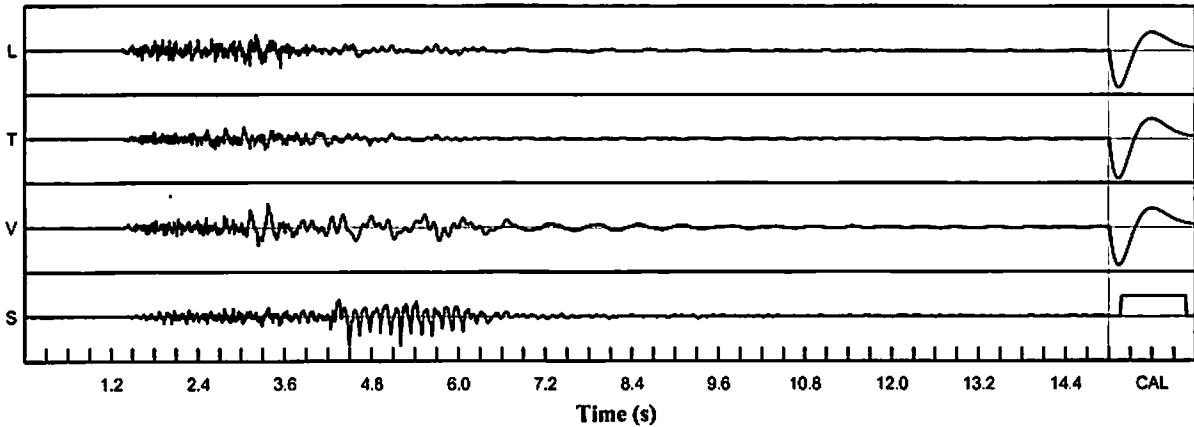
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 2



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.320 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/02/2018 14:31:48  
**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

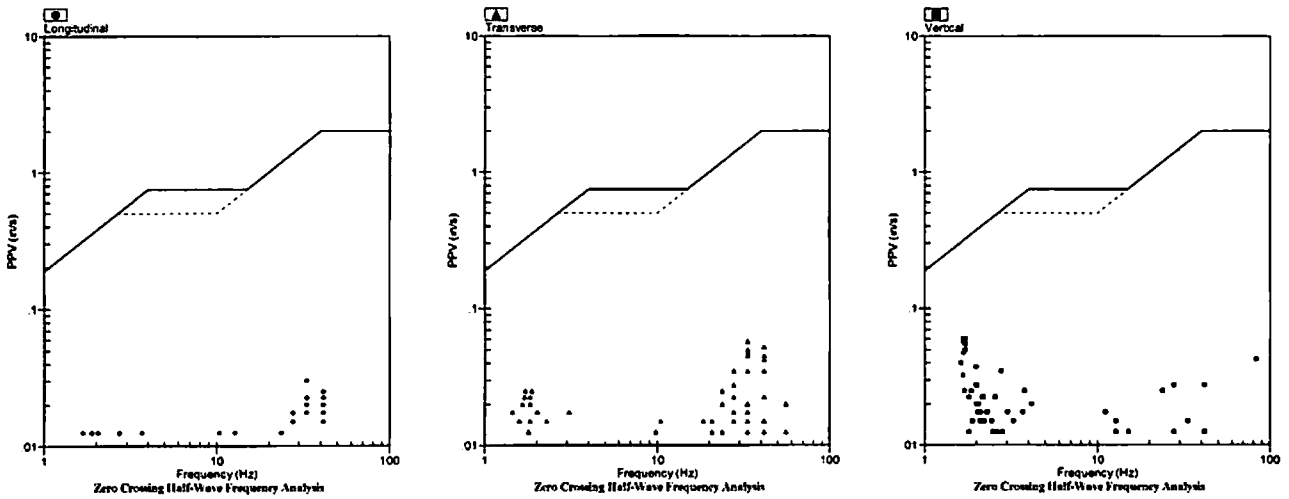
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.030                | 0.058 | 0.060 |
| FREQ (Hz)          | 33.3                 | 33.3  | 1.7   |
| PD (.001")         | 1.03                 | 2.16  | 5.51  |
| PPA (g)            | 0.020                | 0.039 | 0.020 |
| Peak Vector Sum:   | 0.065 in/s           |       |       |
| Peak Air Pressure: | 106 db               |       |       |
|                    | 0.00057 PSI @ 2.2 Hz |       |       |

### Additional Info:

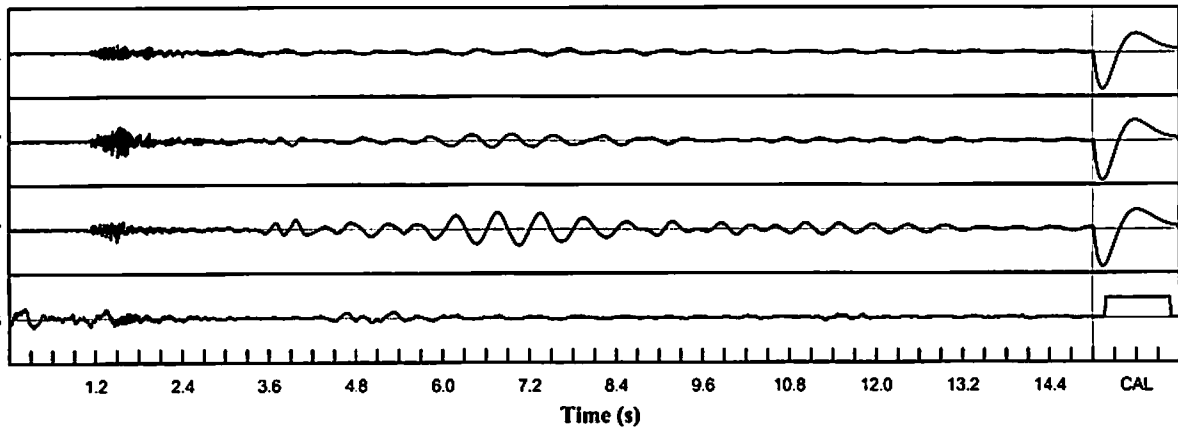
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 3



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/03/2018 13:16:34  
**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

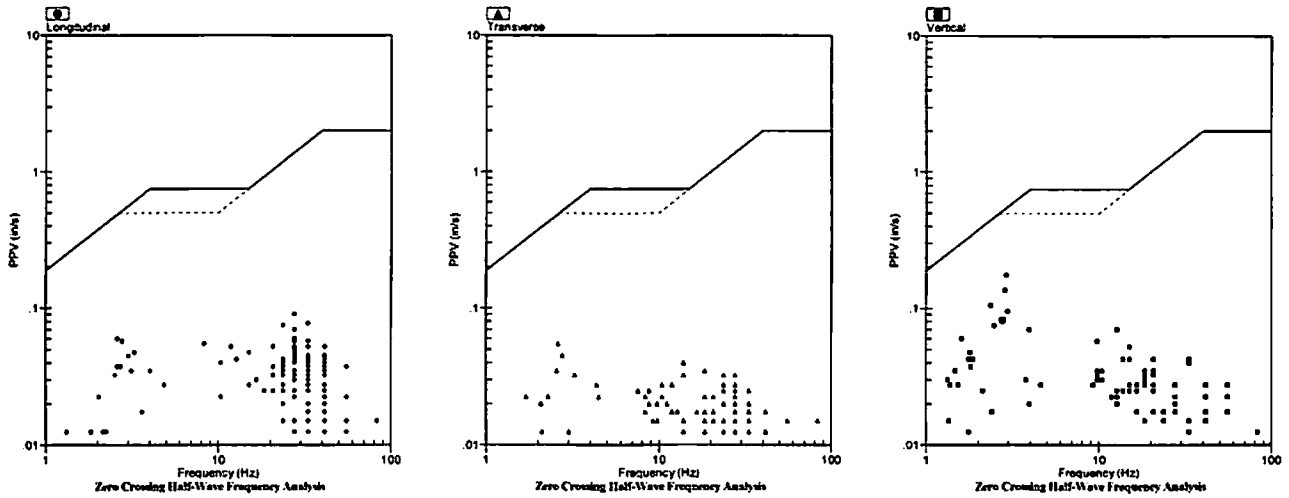
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.090                | 0.055 | 0.175 |
| FREQ (Hz)          | 27.8                 | 2.6   | 2.9   |
| PD (.001")         | 3.29                 | 2.68  | 9.65  |
| PPA (g)            | 0.039                | 0.020 | 0.020 |
| Peak Vector Sum:   | 0.178 in/s           |       |       |
| Peak Air Pressure: | 111 db               |       |       |
|                    | 0.00121 PSI @ 6.7 Hz |       |       |

### Additional Info:

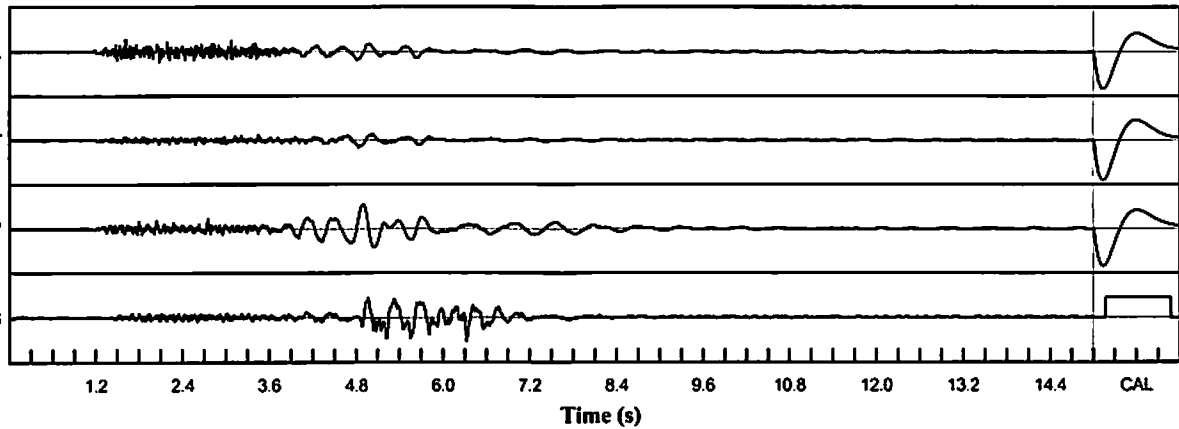
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 4



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.320 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

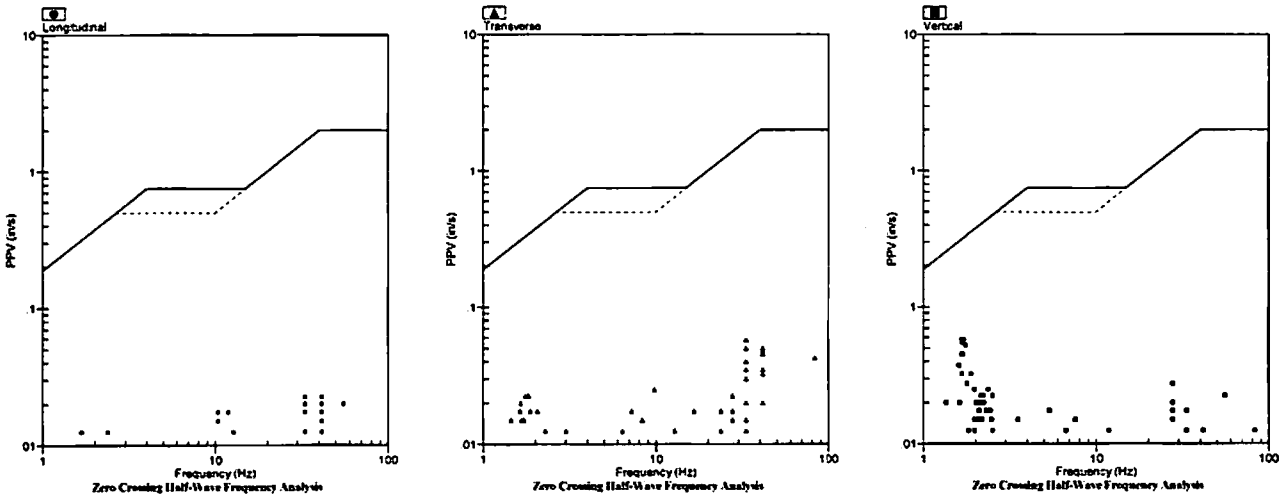
**Serial No:** 5148 v3.67  
**Date:** 05/07/2018 14:52:08  
**Event No:** 5  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Pedro V.  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.025                | 0.060 | 0.058 |
| <b>FREQ (Hz)</b>          | 33.3                 | 27.8  | 1.7   |
| <b>PD (.001")</b>         | 0.97                 | 2.05  | 5.28  |
| <b>PPA (g)</b>            | 0.013                | 0.033 | 0.020 |
| <b>Peak Vector Sum:</b>   | 0.065 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 98 db                |       |       |
|                           | 0.00039 PSI @ 1.8 Hz |       |       |

**Additional Info:**

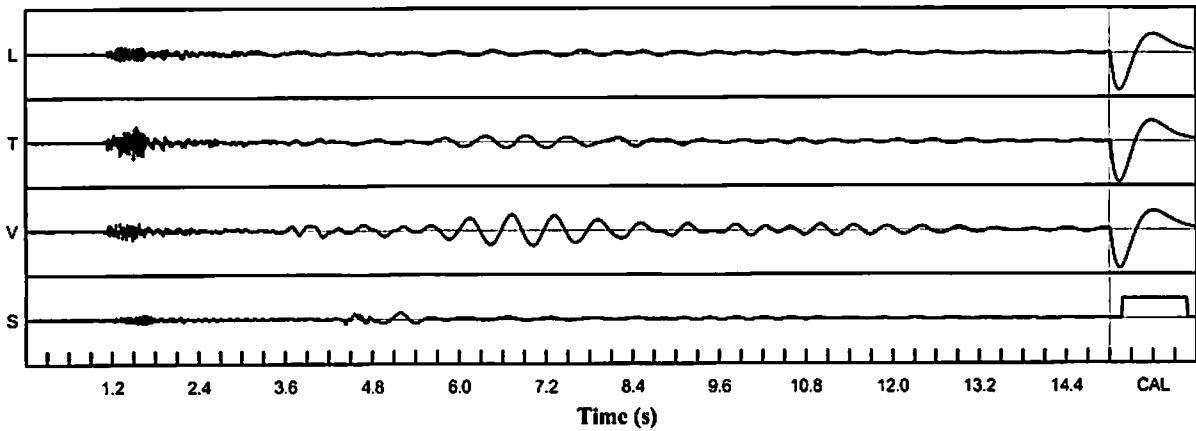
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
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### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 5



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



# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/08/2018 13:33:01  
**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

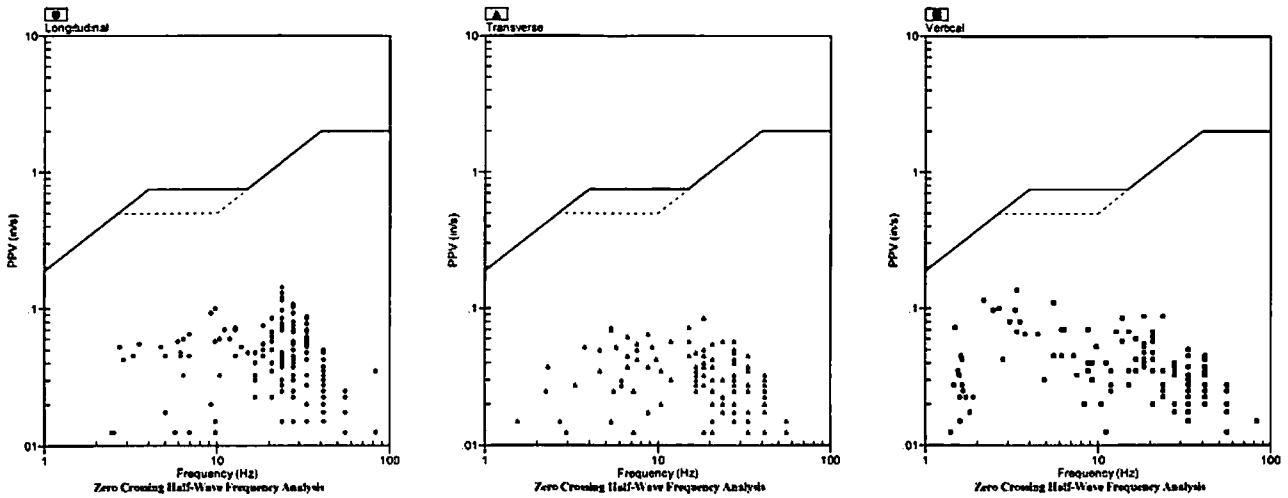
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.143                | 0.085 | 0.135 |
| FREQ (Hz)          | 23.8                 | 18.5  | 3.4   |
| PD (.001")         | 2.44                 | 2.77  | 8.19  |
| PPA (g)            | 0.052                | 0.039 | 0.046 |
| Peak Vector Sum:   | 0.143 in/s           |       |       |
| Peak Air Pressure: | 110 db               |       |       |
|                    | 0.00103 PSI @ 6.7 Hz |       |       |

### Additional Info:

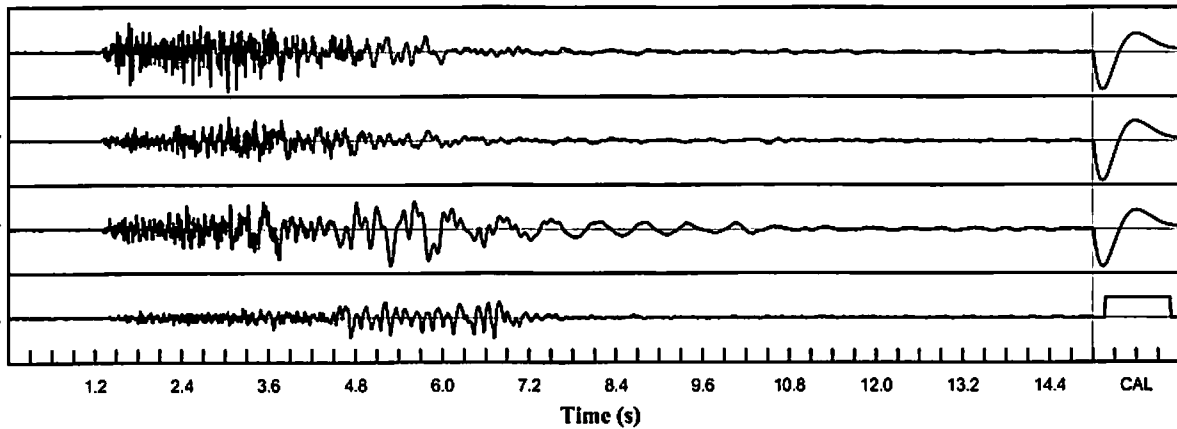
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 6



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/09/2018 11:42:12  
**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

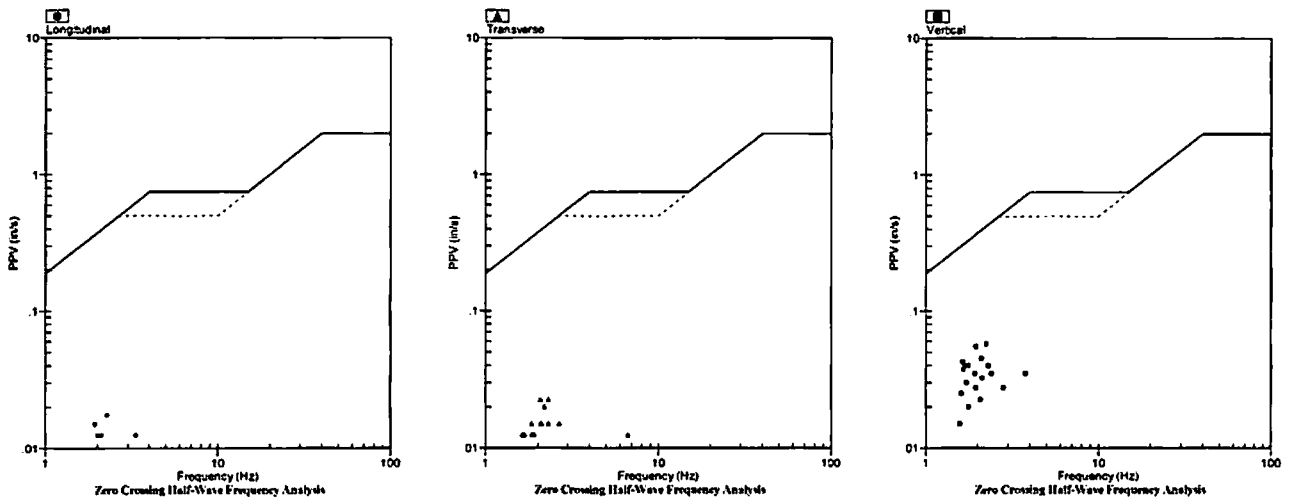
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.018                | 0.023 | 0.058 |
| FREQ (Hz)          | 2.3                  | 2.3   | 2.3   |
| PD (.001")         | 1.12                 | 1.40  | 4.17  |
| PPA (g)            | 0.007                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.060 in/s           |       |       |
| Peak Air Pressure: | 101 db               |       |       |
|                    | 0.00046 PSI @ 2.6 Hz |       |       |

### Additional Info:

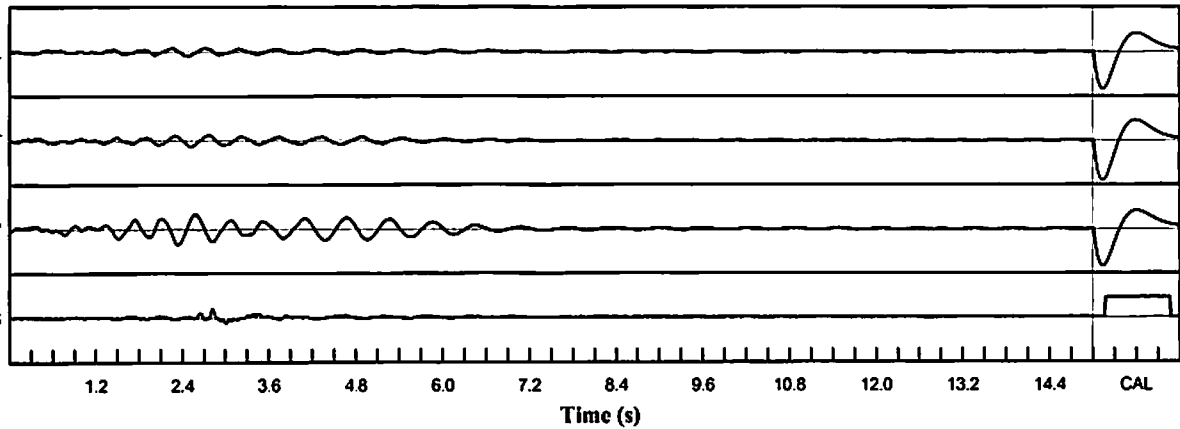
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 7



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/10/2018 15:01:58  
**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

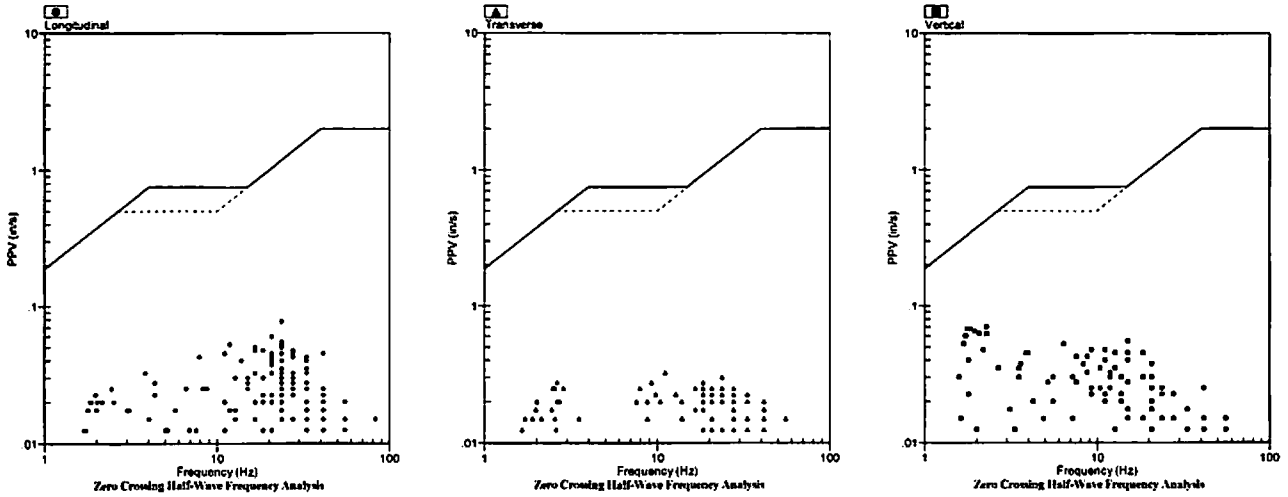
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.078                | 0.033 | 0.070 |
| FREQ (Hz)          | 23.8                 | 11.1  | 2.3   |
| PD (.001")         | 1.62                 | 1.42  | 5.90  |
| PPA (g)            | 0.039                | 0.013 | 0.020 |
| Peak Vector Sum:   | 0.083 in/s           |       |       |
| Peak Air Pressure: | 107 db               |       |       |
|                    | 0.00071 PSI @ 7.9 Hz |       |       |

### Additional Info:

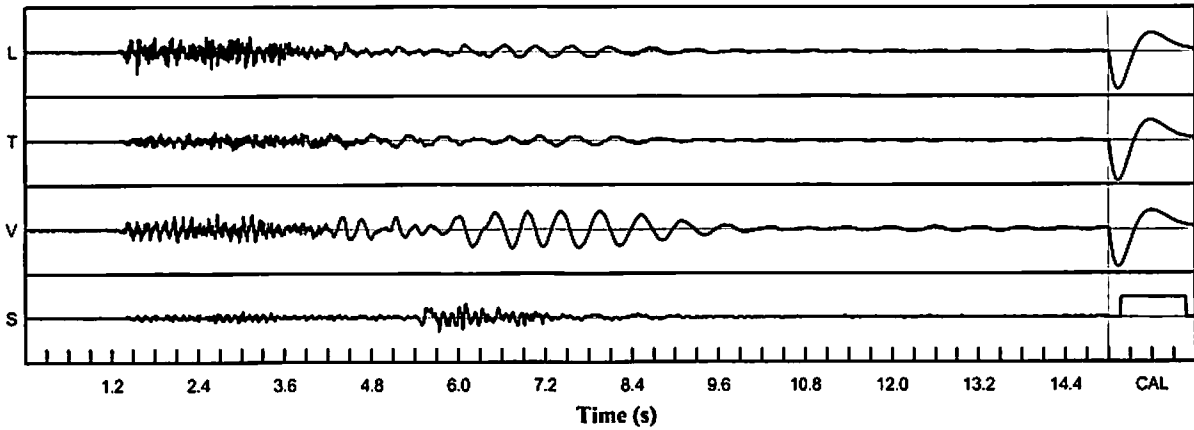
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 8



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/11/2018 10:32:15  
**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

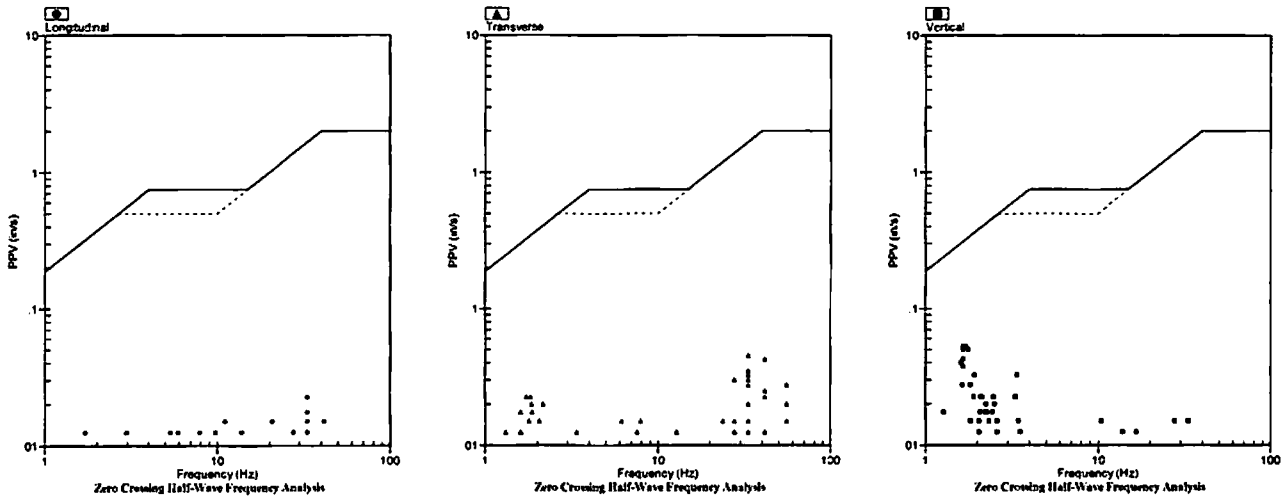
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.030                | 0.060 | 0.053 |
| FREQ (Hz)          | 33.3                 | 27.8  | 1.7   |
| PD (.001")         | 0.98                 | 1.94  | 4.93  |
| PPA (g)            | 0.020                | 0.026 | 0.013 |
| Peak Vector Sum:   | 0.065 in/s           |       |       |
| Peak Air Pressure: | 95 db                |       |       |
|                    | 0.00032 PSI @ 1.2 Hz |       |       |

### Additional Info:

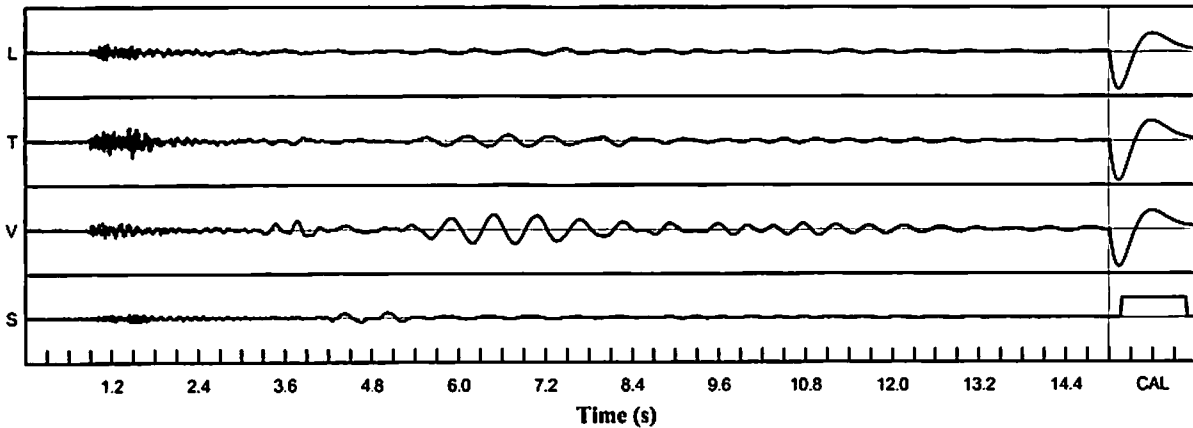
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 9



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/15/2018 14:02:40  
**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

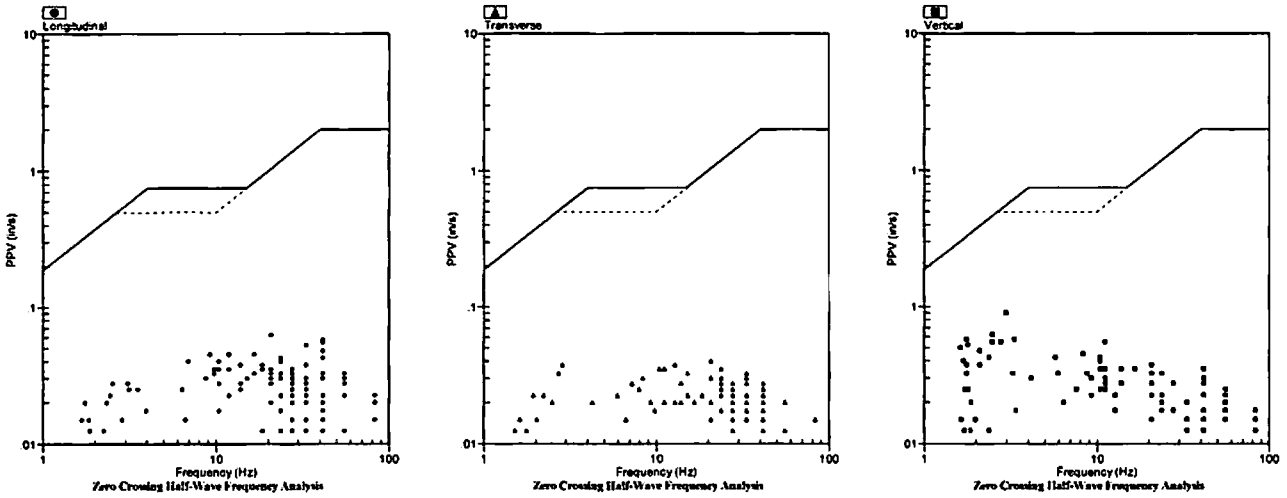
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.063                | 0.040 | 0.090 |
| FREQ (Hz)          | 20.8                 | 20.8  | 3.0   |
| PD (.001")         | 1.40                 | 1.68  | 4.54  |
| PPA (g)            | 0.039                | 0.026 | 0.026 |
| Peak Vector Sum:   | 0.093 in/s           |       |       |
| Peak Air Pressure: | 110 db               |       |       |
|                    | 0.00107 PSI @ 5.6 Hz |       |       |

### Additional Info:

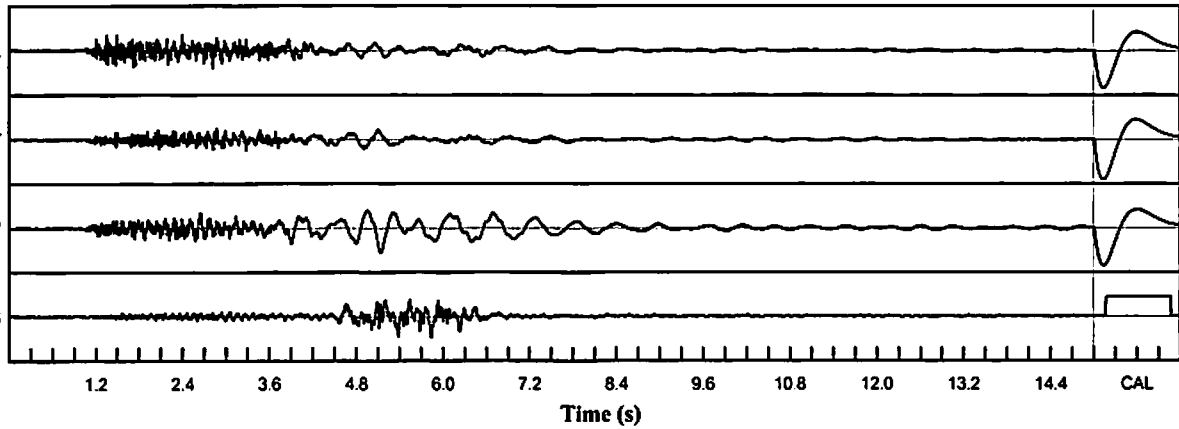
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 10



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/16/2018 10:47:51  
**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

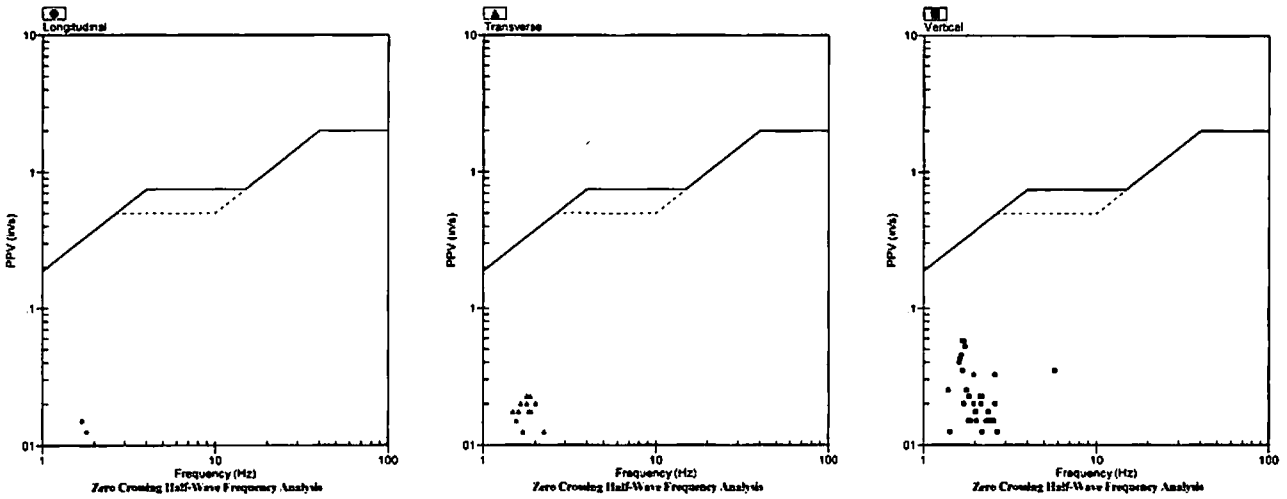
### Summary Data

|                    | L                     | T     | V     |
|--------------------|-----------------------|-------|-------|
| PPV (in/s)         | 0.015                 | 0.023 | 0.058 |
| FREQ (Hz)          | 7.2                   | 1.9   | 1.7   |
| PD (.001")         | 1.11                  | 2.03  | 5.34  |
| PPA (g)            | 0.007                 | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.060 in/s            |       |       |
| Peak Air Pressure: | 98 db                 |       |       |
|                    | 0.00039 PSI @ 12.8 Hz |       |       |

### Additional Info:

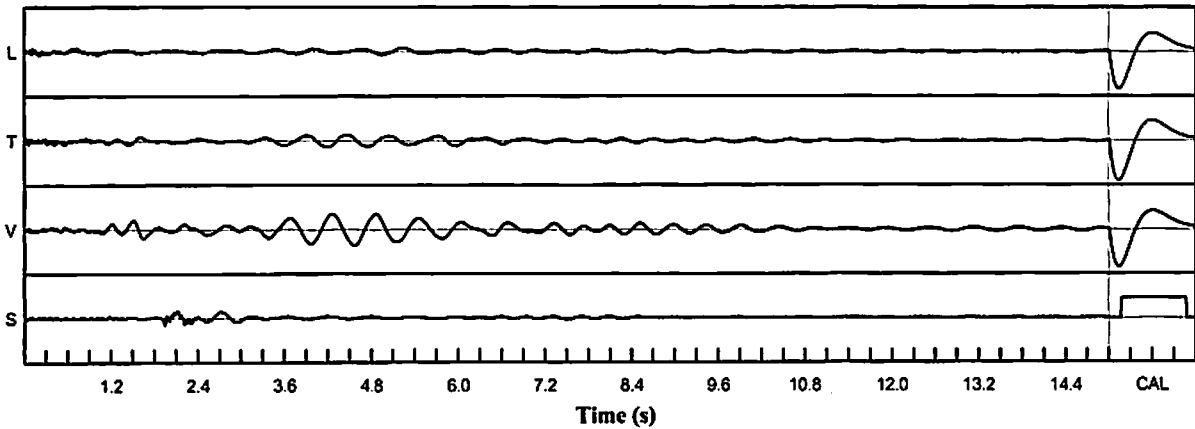
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 11



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/18/2018 13:48:09  
**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

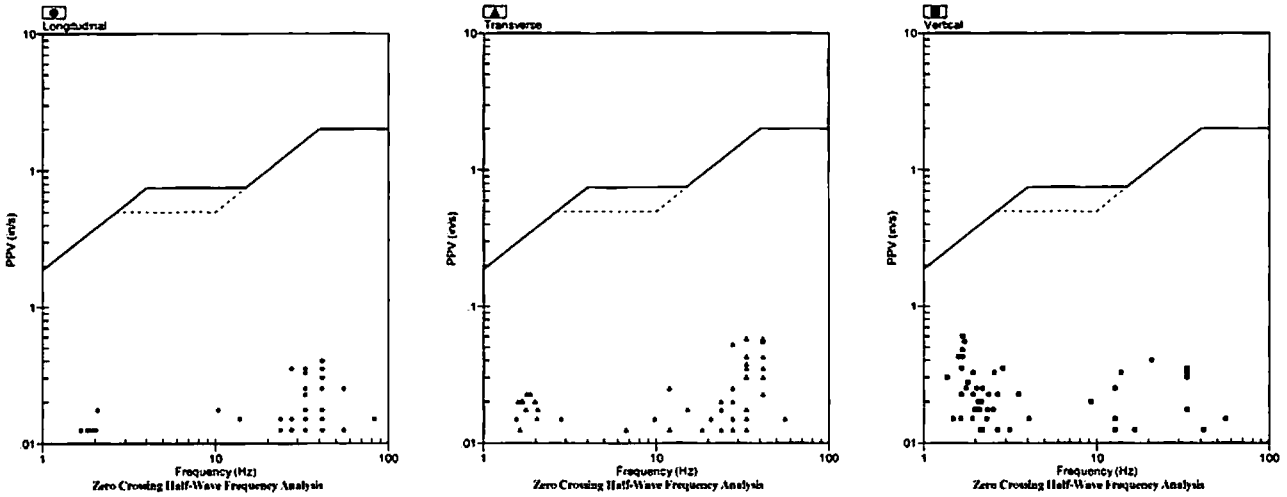
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.040                | 0.058 | 0.060 |
| FREQ (Hz)          | 41.7                 | 33.3  | 1.7   |
| PD (.001")         | 1.12                 | 2.07  | 5.57  |
| PPA (g)            | 0.020                | 0.033 | 0.020 |
| Peak Vector Sum:   | 0.070 in/s           |       |       |
| Peak Air Pressure: | 99 db                |       |       |
|                    | 0.00043 PSI @ 3.2 Hz |       |       |

### Additional Info:

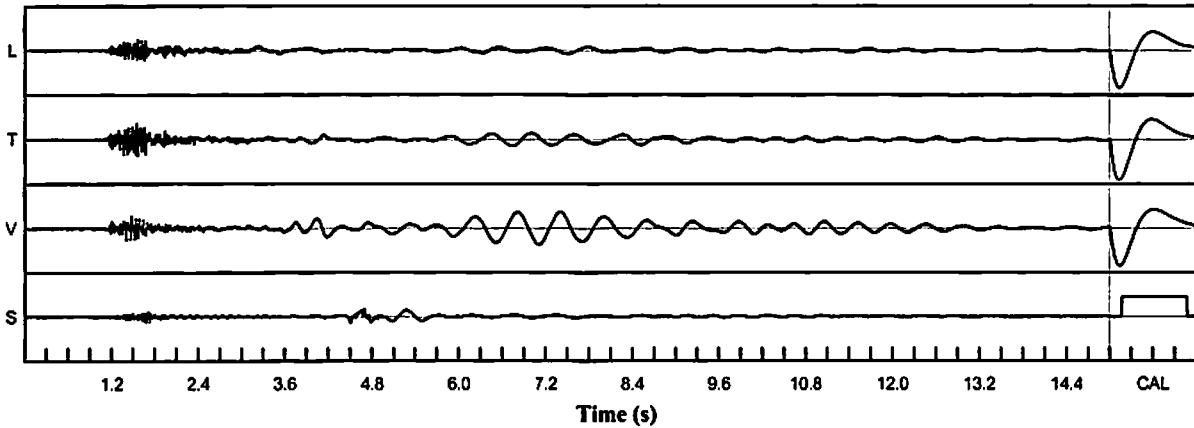
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 12



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/21/2018 13:32:46  
**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

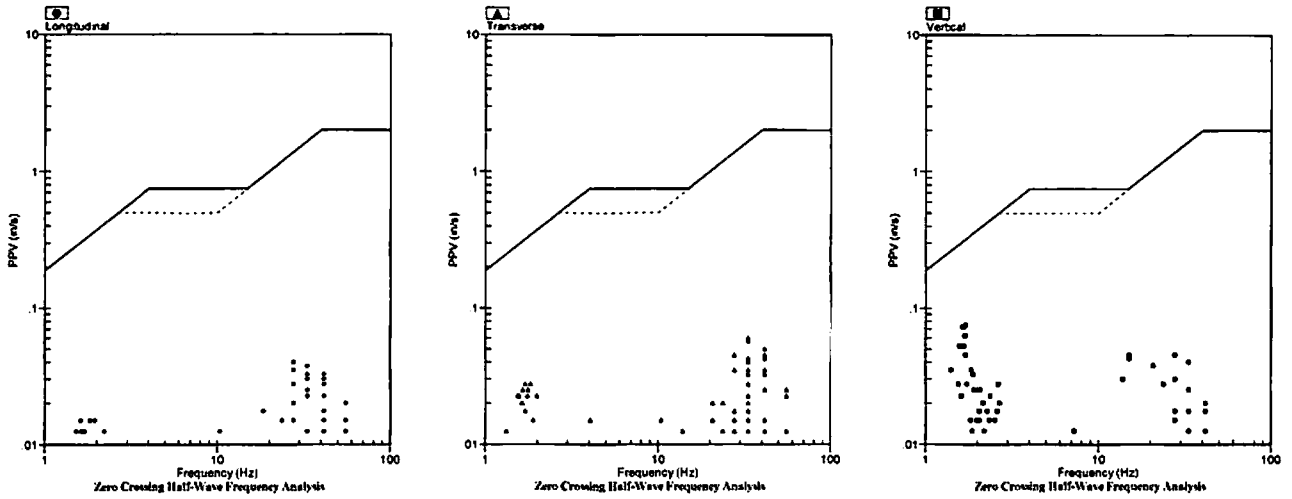
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.040                | 0.060 | 0.075 |
| FREQ (Hz)          | 27.8                 | 33.3  | 1.7   |
| PD (.001")         | 1.30                 | 2.47  | 6.96  |
| PPA (g)            | 0.026                | 0.033 | 0.026 |
| Peak Vector Sum:   | 0.078 in/s           |       |       |
| Peak Air Pressure: | 93 db                |       |       |
|                    | 0.00028 PSI @ 1.6 Hz |       |       |

### Additional Info:

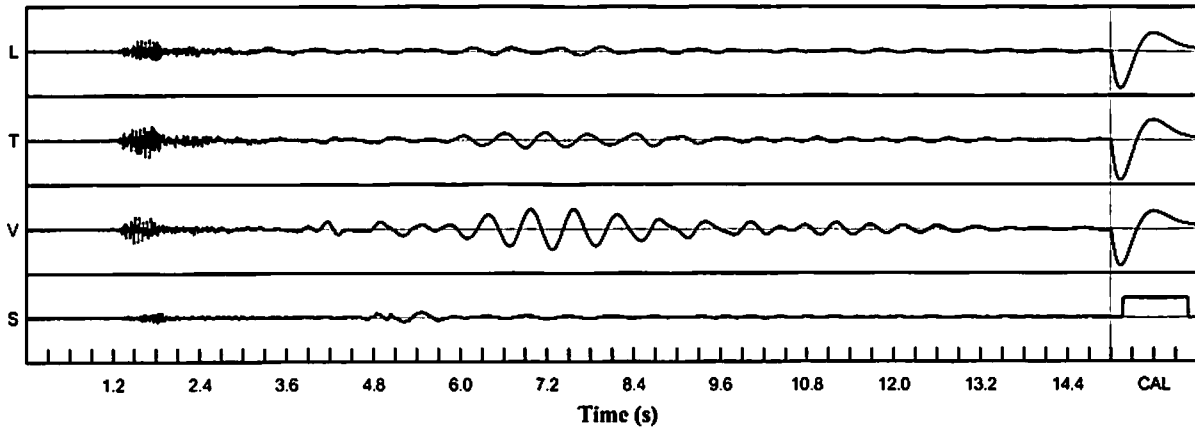
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 13



### Velocity Waveform Graph Scale

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



# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/22/2018 13:17:05  
**Event No:** 14  
**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

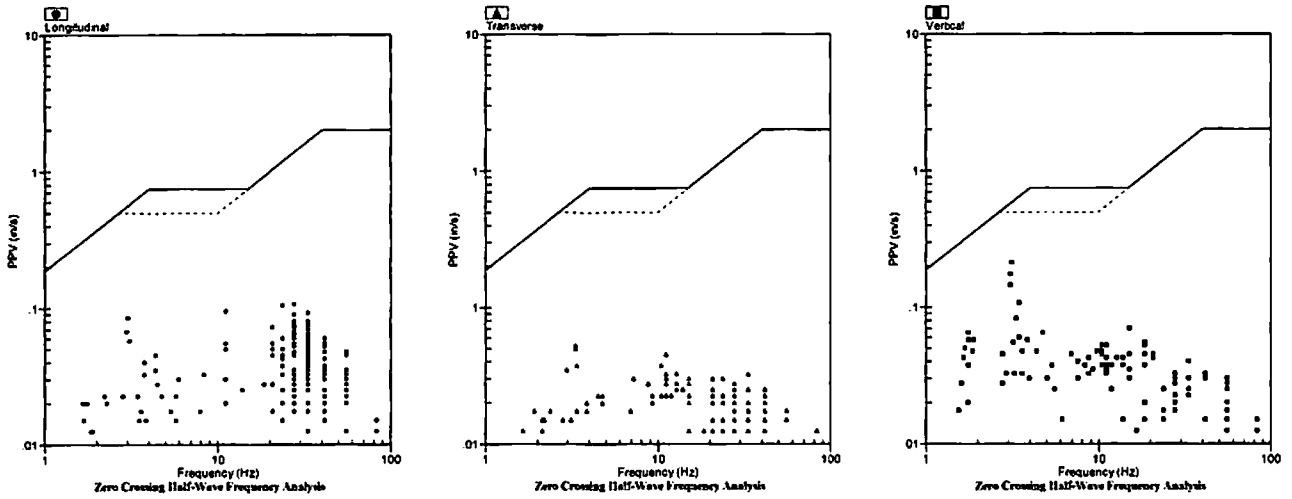
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.108                | 0.053 | 0.213 |
| FREQ (Hz)          | 27.8                 | 3.3   | 3.1   |
| PD (.001")         | 4.03                 | 2.37  | 10.60 |
| PPA (g)            | 0.052                | 0.020 | 0.033 |
| Peak Vector Sum:   | 0.218 in/s           |       |       |
| Peak Air Pressure: | 114 db               |       |       |
|                    | 0.00153 PSI @ 6.0 Hz |       |       |

### Additional Info:

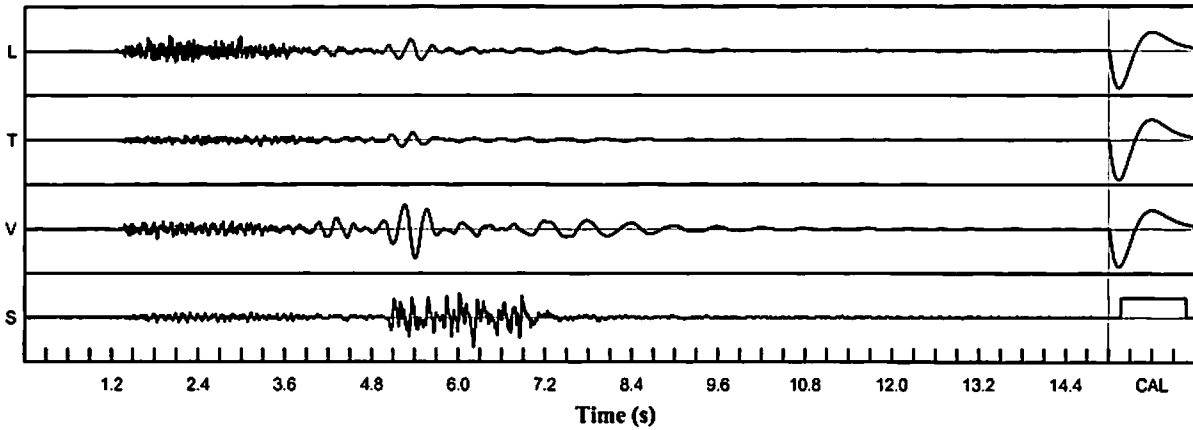
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 14



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.320 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/23/2018 13:19:21  
**Event No:** 15  
**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

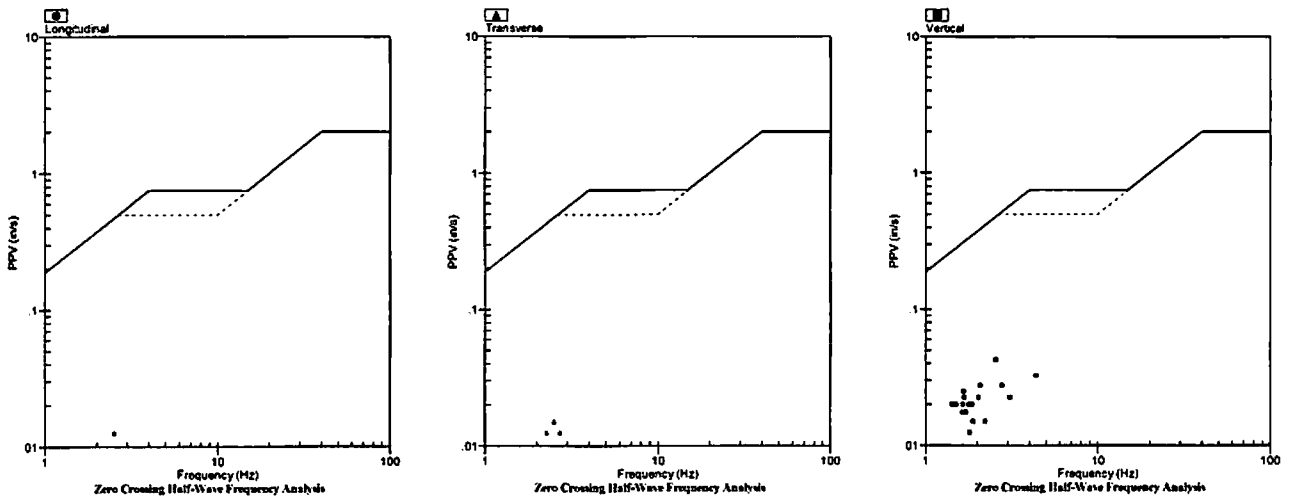
### Summary Data

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.013                | 0.015 | 0.043 |
| <b>FREQ (Hz)</b>          | 2.5                  | 2.4   | 2.6   |
| <b>PD (.001")</b>         | 0.71                 | 0.85  | 2.69  |
| <b>PPA (g)</b>            | 0.007                | 0.007 | 0.007 |
| <b>Peak Vector Sum:</b>   | 0.043 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 95 db                |       |       |
|                           | 0.00032 PSI @ 6.4 Hz |       |       |

### Additional Info:

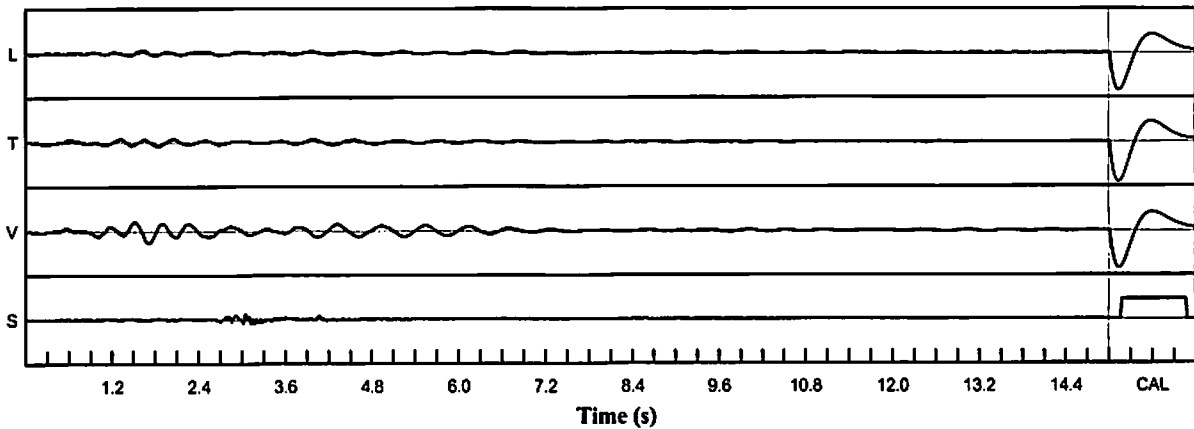
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 15



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/24/2018 14:33:02  
**Event No:** 16  
**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

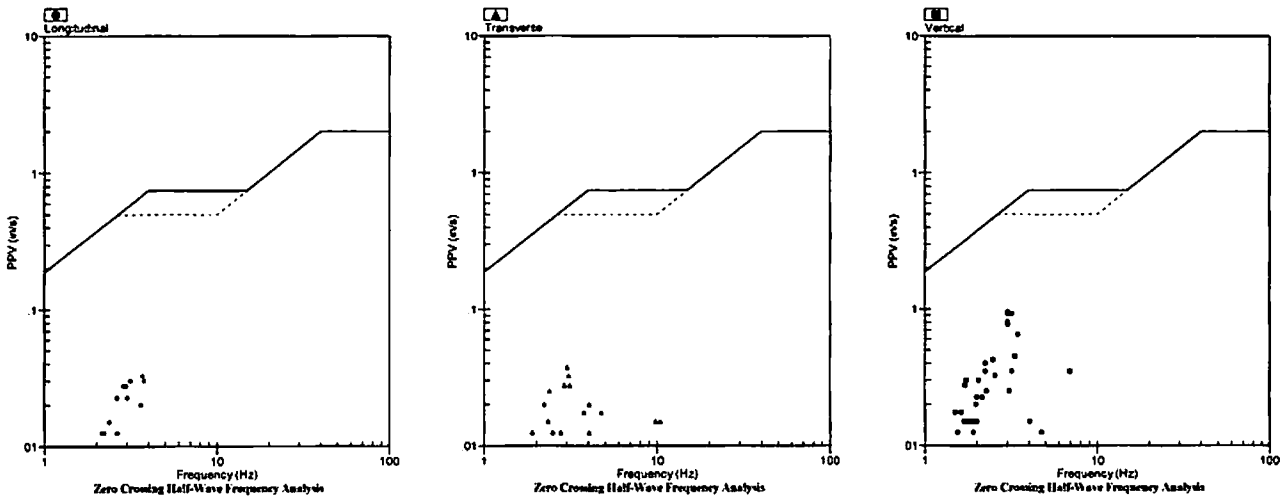
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.033                | 0.038 | 0.095 |
| FREQ (Hz)          | 3.7                  | 3.0   | 3.0   |
| PD (.001")         | 1.44                 | 1.80  | 4.85  |
| PPA (g)            | 0.013                | 0.007 | 0.013 |
| Peak Vector Sum:   | 0.098 in/s           |       |       |
| Peak Air Pressure: | 104 db               |       |       |
|                    | 0.00053 PSI @ 4.6 Hz |       |       |

### Additional Info:

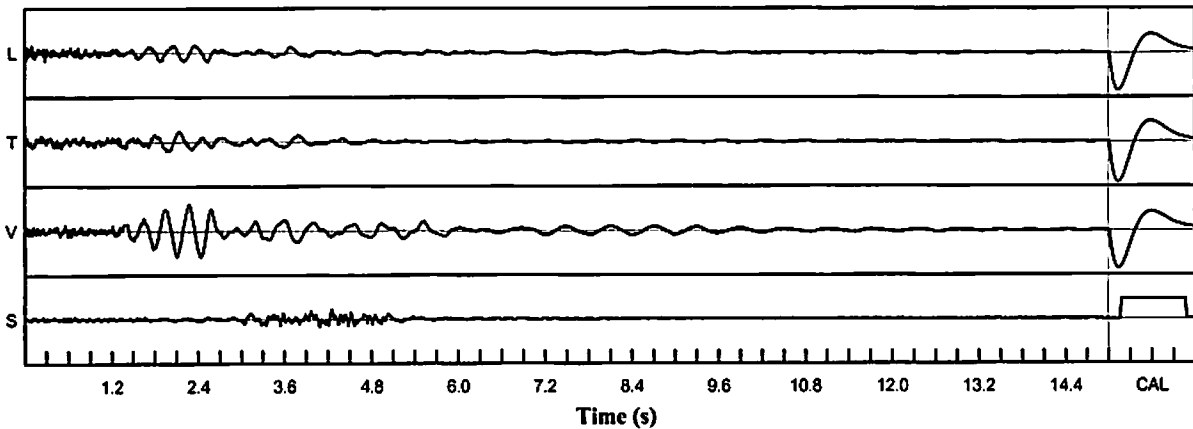
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 16



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 05/30/2018 14:51:00  
**Event No:** 17  
**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

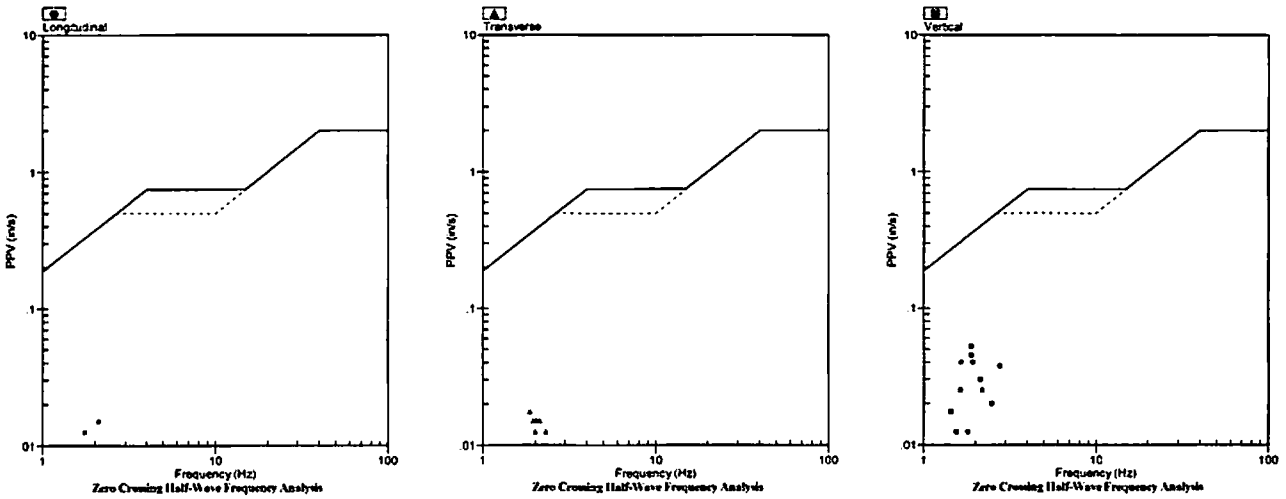
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.015                | 0.018 | 0.053 |
| FREQ (Hz)          | 2.1                  | 1.9   | 1.9   |
| PD (.001")         | 1.04                 | 1.38  | 4.21  |
| PPA (g)            | 0.007                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.053 in/s           |       |       |
| Peak Air Pressure: | 90 db                |       |       |
|                    | 0.00021 PSI @ 1.7 Hz |       |       |

### Additional Info:

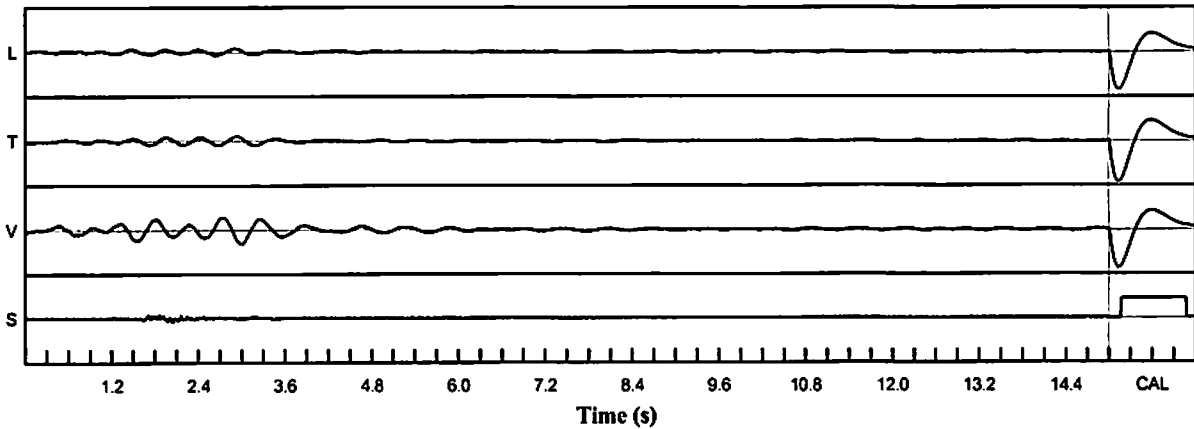
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 17



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

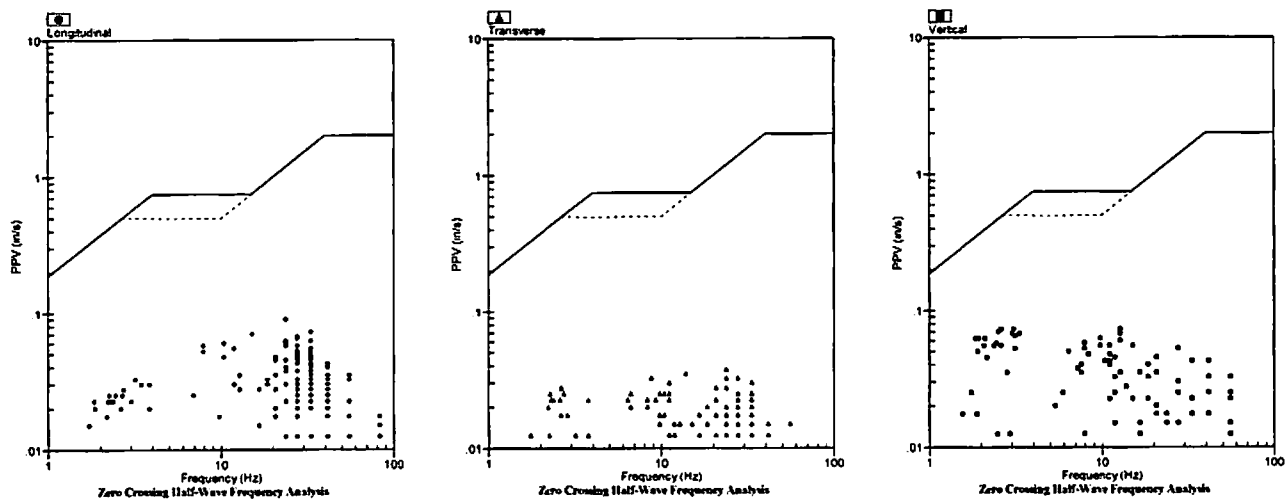
**Serial No:** 5148 v3.67  
**Date:** 05/31/2018 13:17:10  
**Event No:** 18  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Pedro V.  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

|                           | L                     | T     | V     |
|---------------------------|-----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.090                 | 0.038 | 0.073 |
| <b>FREQ (Hz)</b>          | 23.8                  | 23.8  | 12.8  |
| <b>PD (.001")</b>         | 1.62                  | 1.70  | 4.95  |
| <b>PPA (g)</b>            | 0.039                 | 0.020 | 0.033 |
| <b>Peak Vector Sum:</b>   | 0.108 in/s            |       |       |
| <b>Peak Air Pressure:</b> | 108 db                |       |       |
|                           | 0.00085 PSI @ 33.3 Hz |       |       |

**Additional Info:**

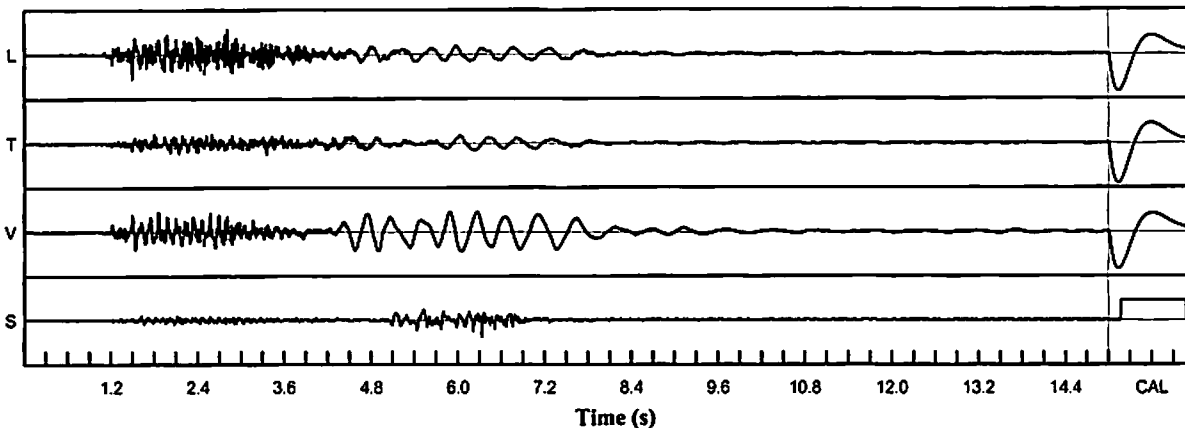
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 18



**Velocity Waveform Graph Scale**

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 06/04/2018 12:49:49  
**Event No:** 19  
**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

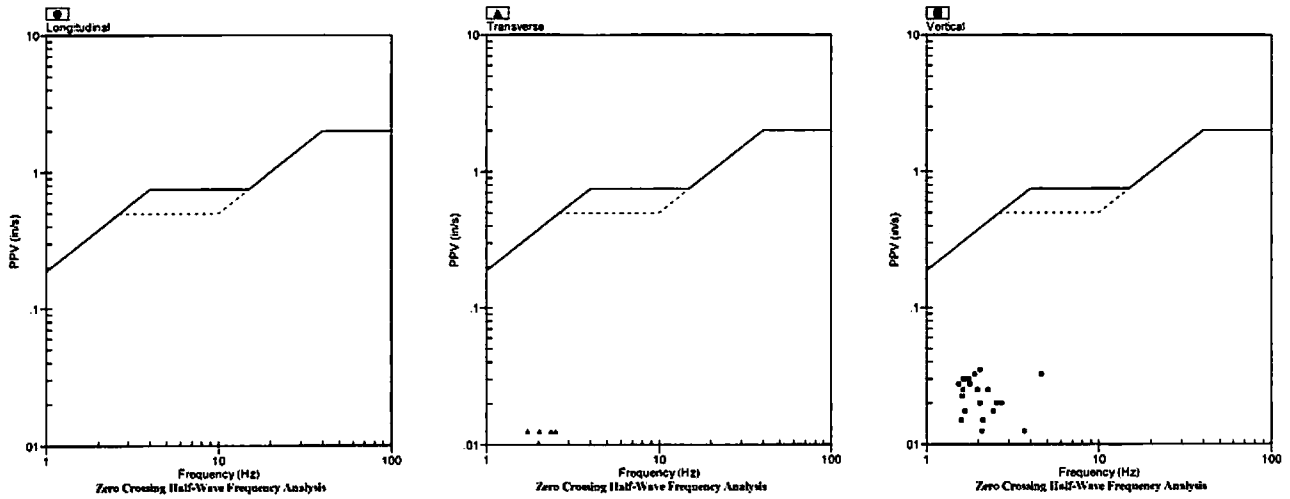
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.013                | 0.013 | 0.035 |
| FREQ (Hz)          | 3.7                  | 2.4   | 2.1   |
| PD (.001")         | 0.89                 | 1.09  | 2.86  |
| PPA (g)            | 0.007                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.038 in/s           |       |       |
| Peak Air Pressure: | 88 db                |       |       |
|                    | 0.00018 PSI @ 1.0 Hz |       |       |

### Additional Info:

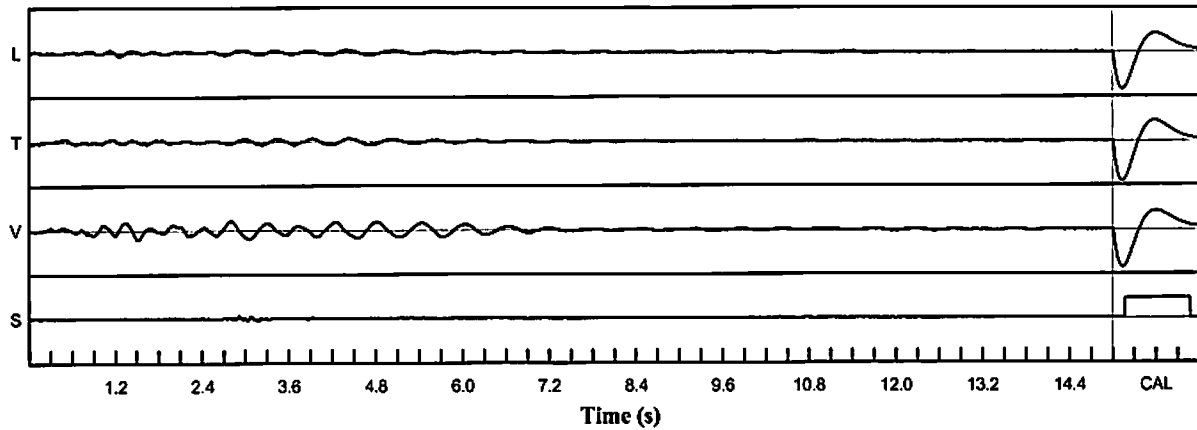
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 19



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

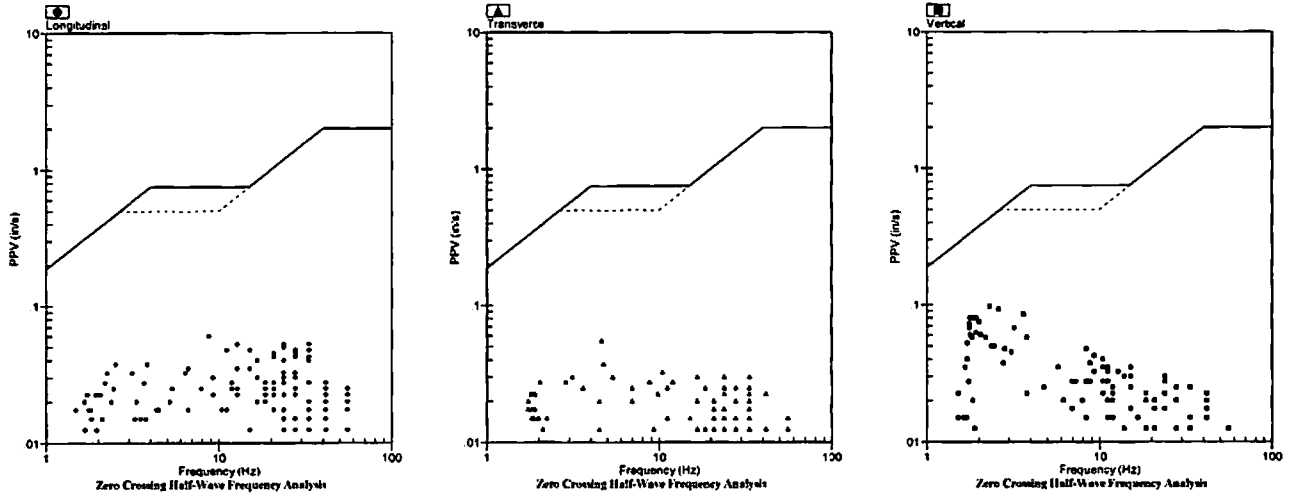
**Serial No:** 5148 v3.67  
**Date:** 06/05/2018 13:20:41  
**Event No:** 20  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Pedro V.  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.060                | 0.055 | 0.098 |
| FREQ (Hz)          | 8.8                  | 4.6   | 2.3   |
| PD (.001")         | 2.35                 | 2.05  | 6.70  |
| PPA (g)            | 0.026                | 0.020 | 0.020 |
| Peak Vector Sum:   | 0.098 in/s           |       |       |
| Peak Air Pressure: | 91 db                |       |       |
|                    | 0.00025 PSI @ 2.8 Hz |       |       |

**Additional Info:**

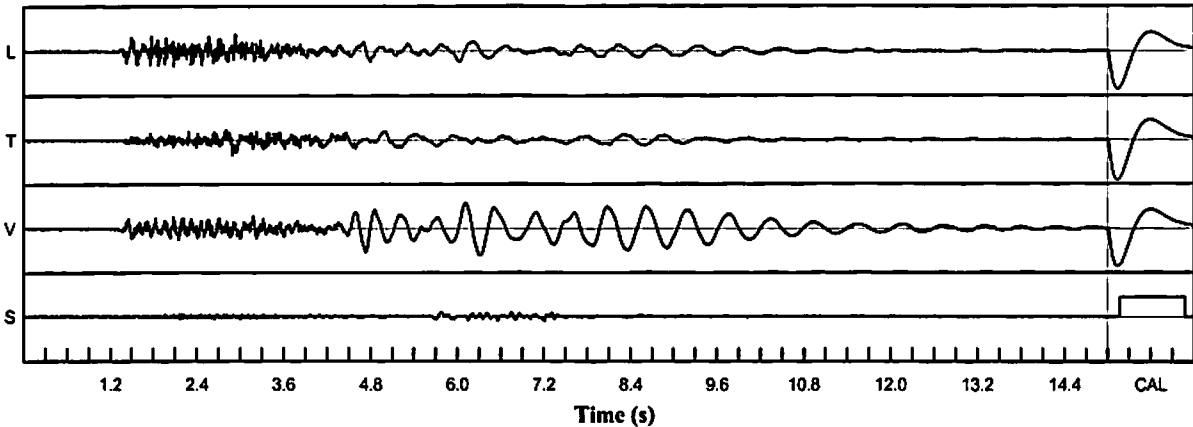
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
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### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 20



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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 06/06/2018 11:33:59  
**Event No:** 21  
**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

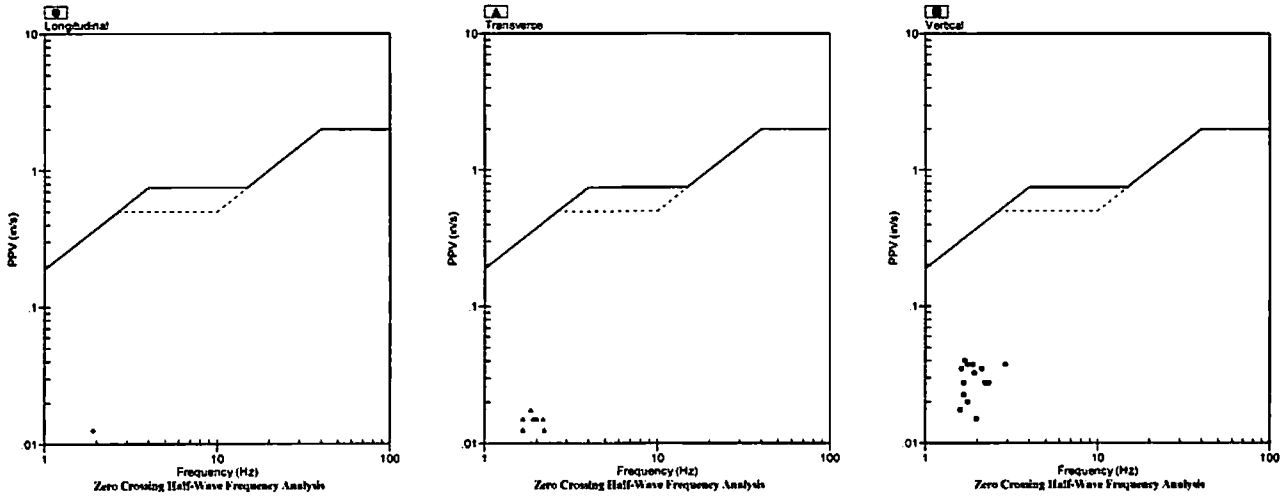
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.013                | 0.018 | 0.040 |
| FREQ (Hz)          | 2.5                  | 1.9   | 1.7   |
| PD (.001")         | 0.92                 | 1.28  | 3.50  |
| PPA (g)            | 0.007                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.043 in/s           |       |       |
| Peak Air Pressure: | 88 db                |       |       |
|                    | 0.00018 PSI @ 4.2 Hz |       |       |

### Additional Info:

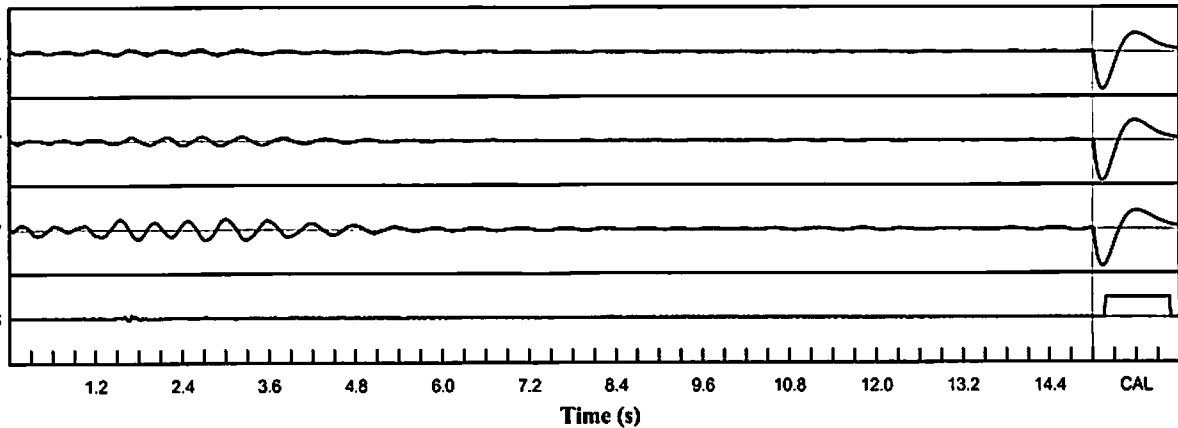
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 21



### Velocity Waveform Graph Scale

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



# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 06/11/2018 13:19:13  
**Event No:** 22  
**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

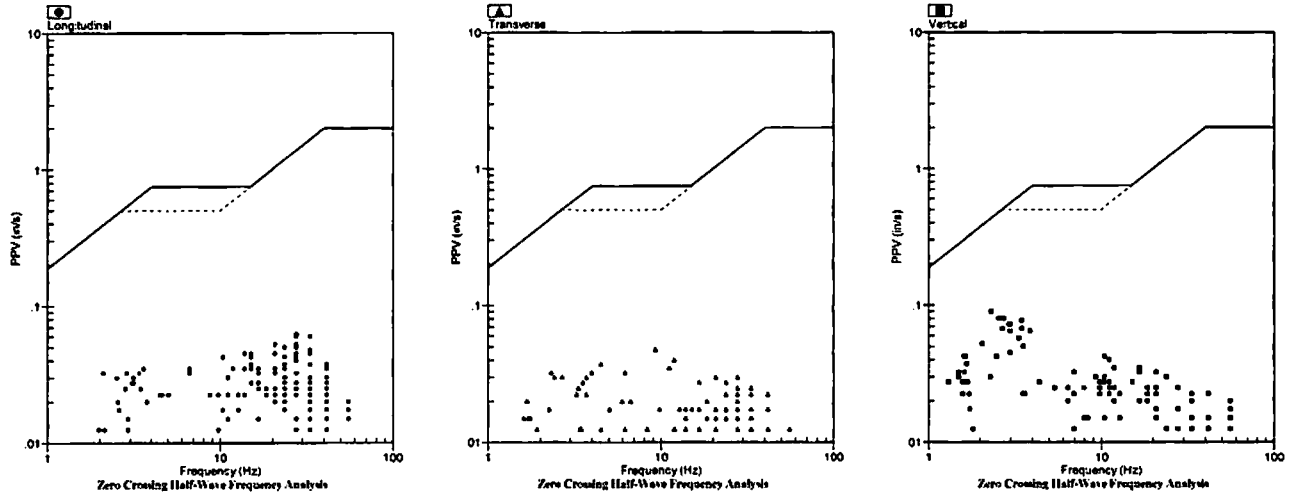
### Summary Data

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.063                | 0.048 | 0.090 |
| <b>FREQ (Hz)</b>          | 27.8                 | 9.3   | 2.3   |
| <b>PD (.001")</b>         | 2.04                 | 2.07  | 6.12  |
| <b>PPA (g)</b>            | 0.033                | 0.020 | 0.020 |
| <b>Peak Vector Sum:</b>   | 0.095 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 109 db               |       |       |
|                           | 0.00093 PSI @ 4.4 Hz |       |       |

### Additional Info:

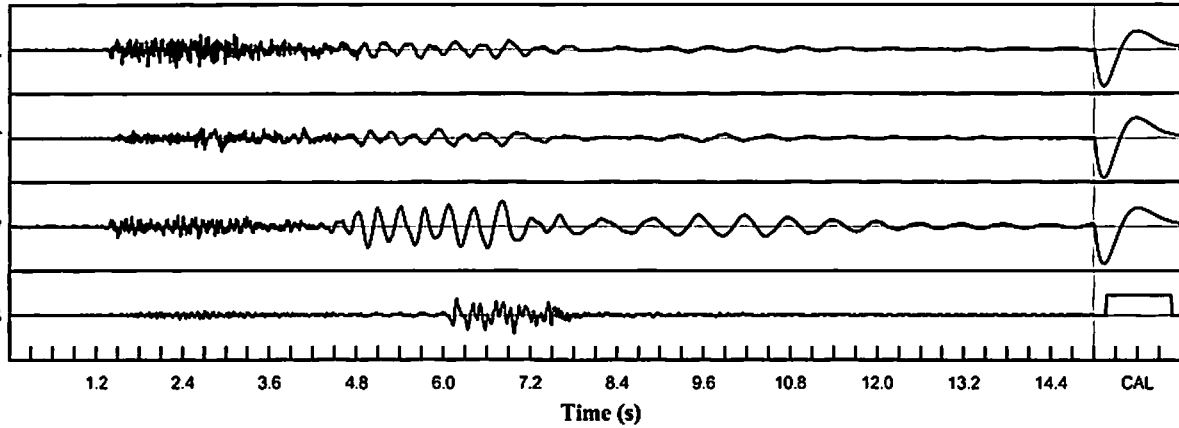
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 22



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 06/12/2018 11:34:00  
**Event No:** 23  
**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

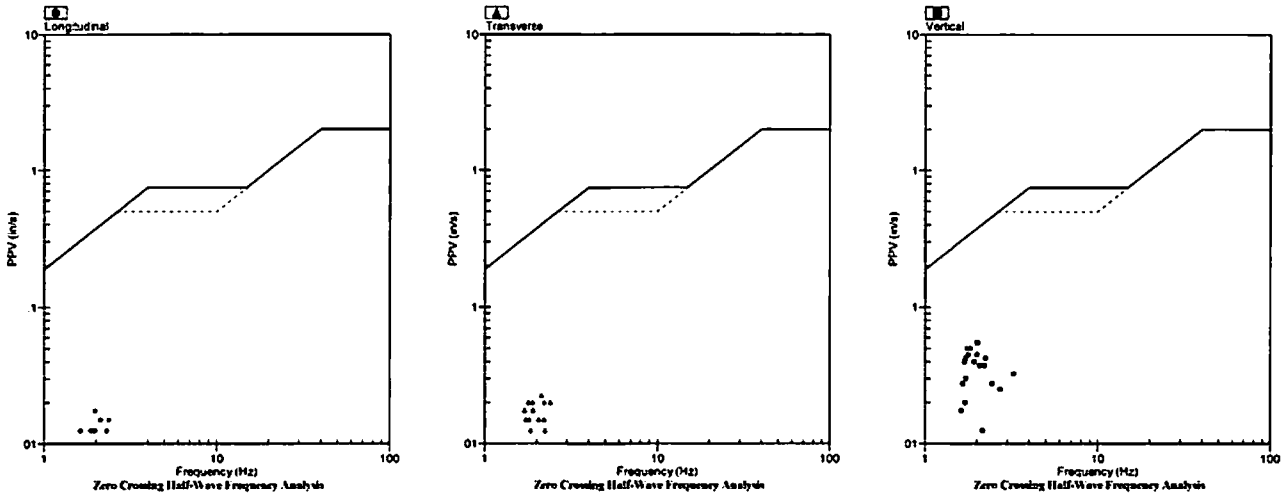
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.018                | 0.023 | 0.055 |
| FREQ (Hz)          | 2.0                  | 2.1   | 2.0   |
| PD (.001")         | 1.24                 | 1.66  | 4.67  |
| PPA (g)            | 0.007                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.058 in/s           |       |       |
| Peak Air Pressure: | 88 db                |       |       |
|                    | 0.00018 PSI @ 1.0 Hz |       |       |

### Additional Info:

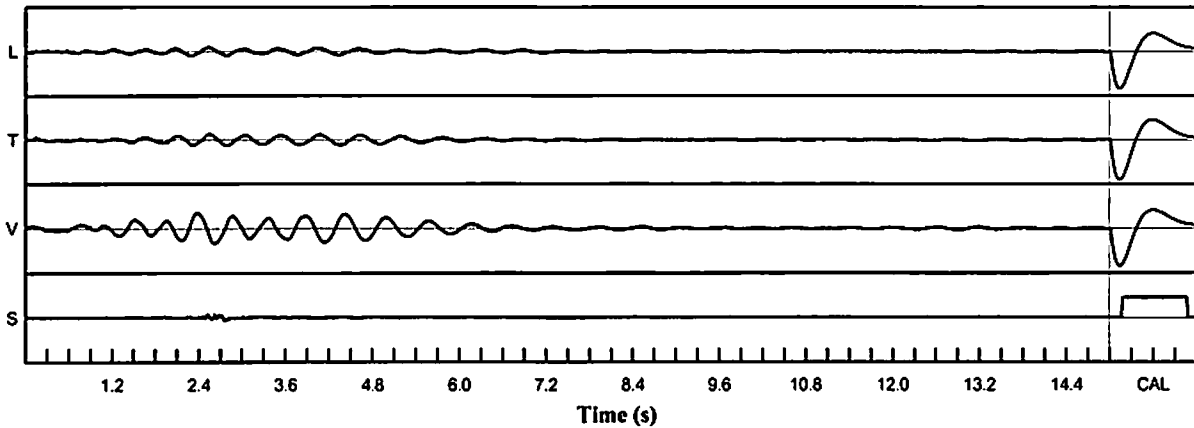
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 23



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 06/13/2018 10:34:40  
**Event No:** 24  
**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

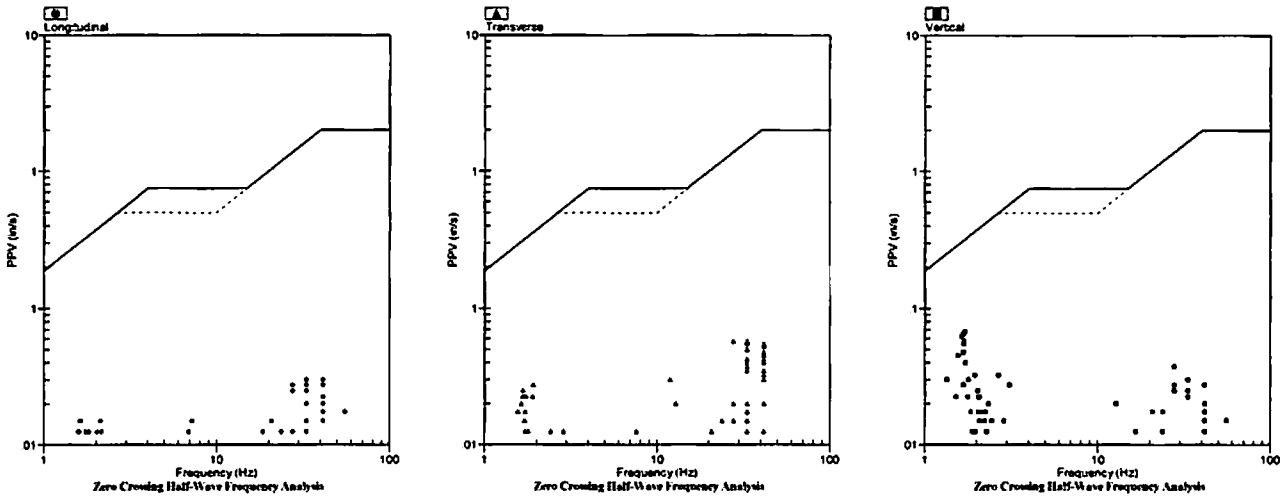
### Summary Data

|                    | L                     | T     | V     |
|--------------------|-----------------------|-------|-------|
| PPV (in/s)         | 0.030                 | 0.058 | 0.068 |
| FREQ (Hz)          | 33.3                  | 27.8  | 1.7   |
| PD (.001")         | 1.19                  | 2.21  | 6.13  |
| PPA (g)            | 0.020                 | 0.033 | 0.020 |
| Peak Vector Sum:   | 0.070 in/s            |       |       |
| Peak Air Pressure: | 93 db                 |       |       |
|                    | 0.00028 PSI @ 33.3 Hz |       |       |

### Additional Info:

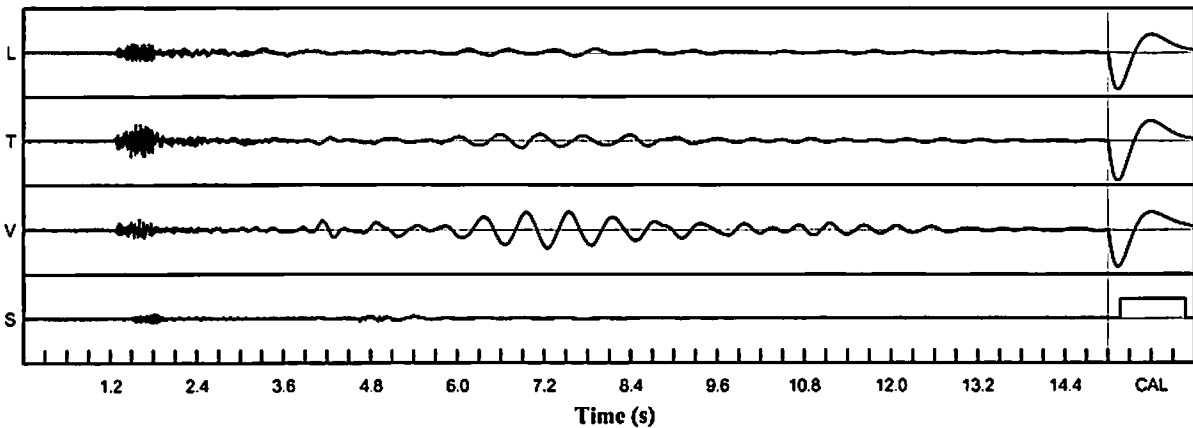
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 24



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 06/14/2018 13:18:52  
**Event No:** 25  
**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

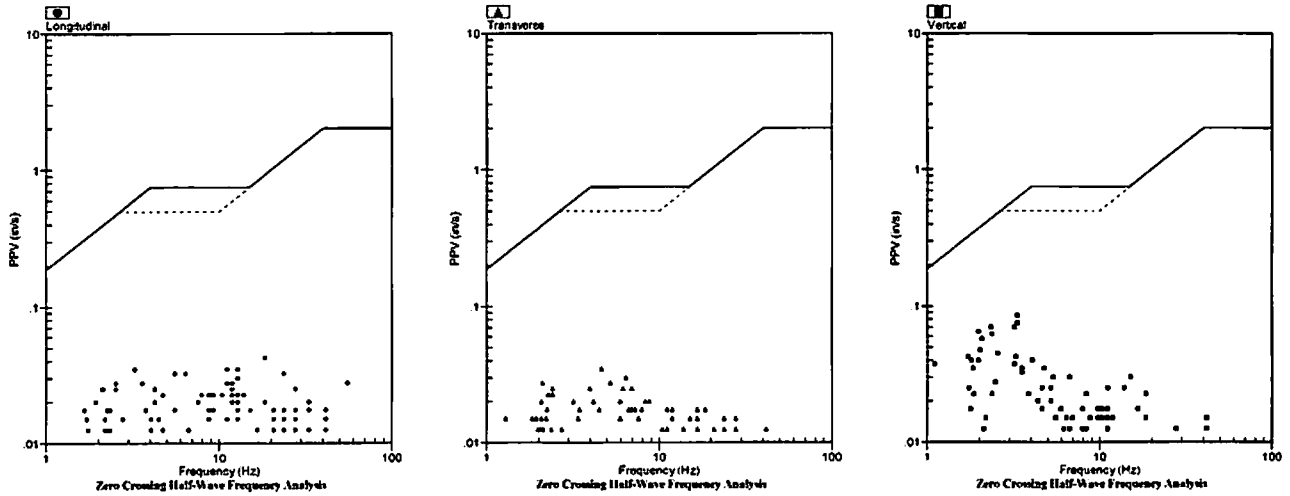
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.043                | 0.035 | 0.085 |
| FREQ (Hz)          | 7.9                  | 4.6   | 3.3   |
| PD (.001")         | 1.68                 | 2.14  | 5.13  |
| PPA (g)            | 0.020                | 0.007 | 0.013 |
| Peak Vector Sum:   | 0.085 in/s           |       |       |
| Peak Air Pressure: | 111 db               |       |       |
|                    | 0.00121 PSI @ 7.6 Hz |       |       |

### Additional Info:

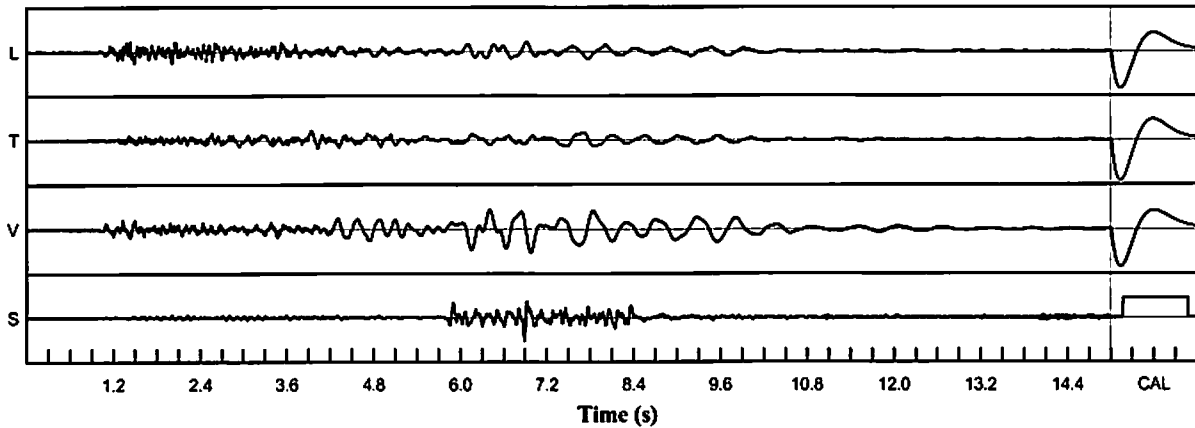
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 25



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

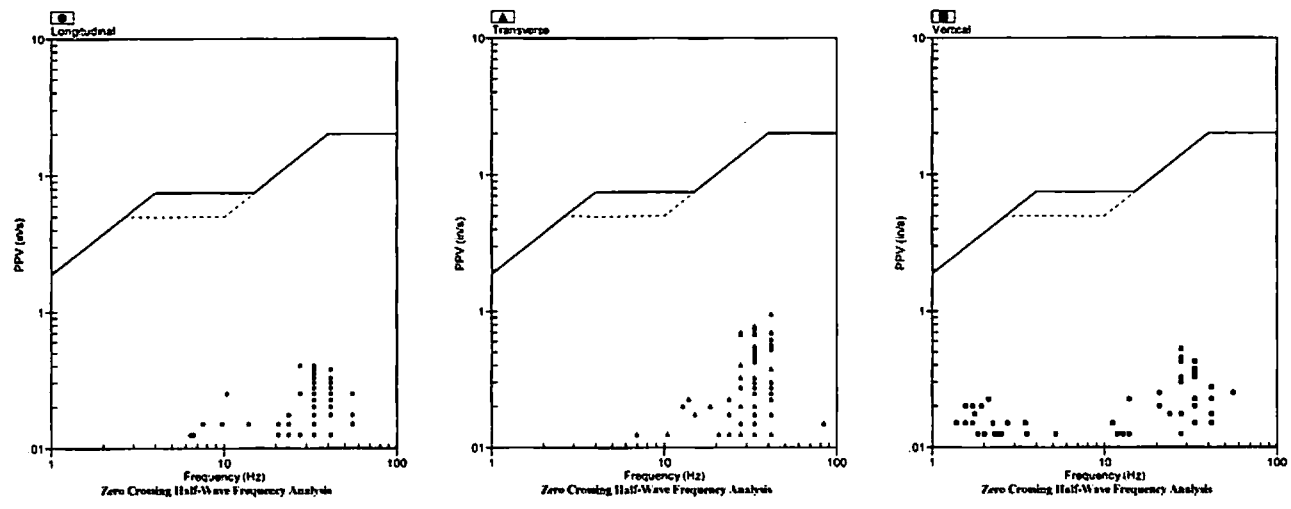
**Serial No:** 5148 v3.67  
**Date:** 06/15/2018 10:33:58  
**Event No:** 26  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Pedro V.  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

|                           | L                     | T     | V     |
|---------------------------|-----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.040                 | 0.095 | 0.053 |
| <b>FREQ (Hz)</b>          | 33.3                  | 41.7  | 27.8  |
| <b>PD (.001")</b>         | 0.56                  | 0.68  | 1.67  |
| <b>PPA (g)</b>            | 0.026                 | 0.059 | 0.026 |
| <b>Peak Vector Sum:</b>   | 0.113 in/s            |       |       |
| <b>Peak Air Pressure:</b> | 91 db                 |       |       |
|                           | 0.00025 PSI @ 33.3 Hz |       |       |

**Additional Info:**

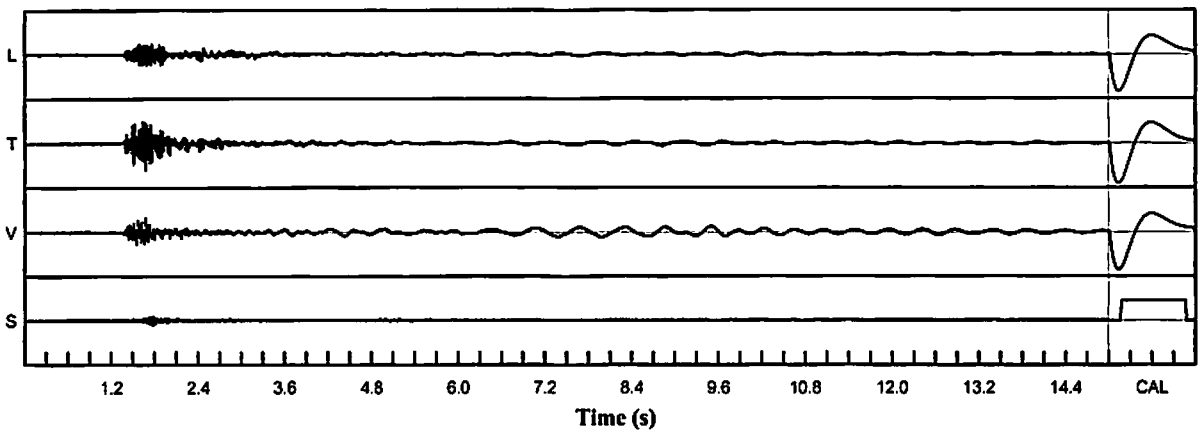
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 26



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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 06/18/2018 10:34:21  
**Event No:** 27  
**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

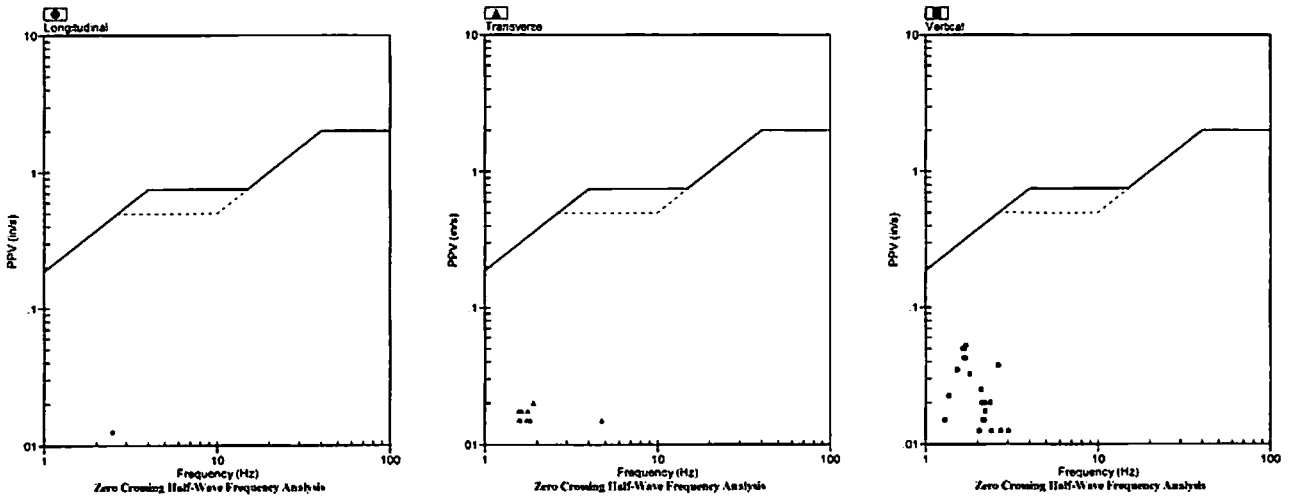
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.013                | 0.020 | 0.053 |
| FREQ (Hz)          | 2.5                  | 1.9   | 1.7   |
| PD (.001")         | 0.92                 | 1.66  | 4.80  |
| PPA (g)            | 0.007                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.055 in/s           |       |       |
| Peak Air Pressure: | 88 db                |       |       |
|                    | 0.00018 PSI @ 1.9 Hz |       |       |

### Additional Info:

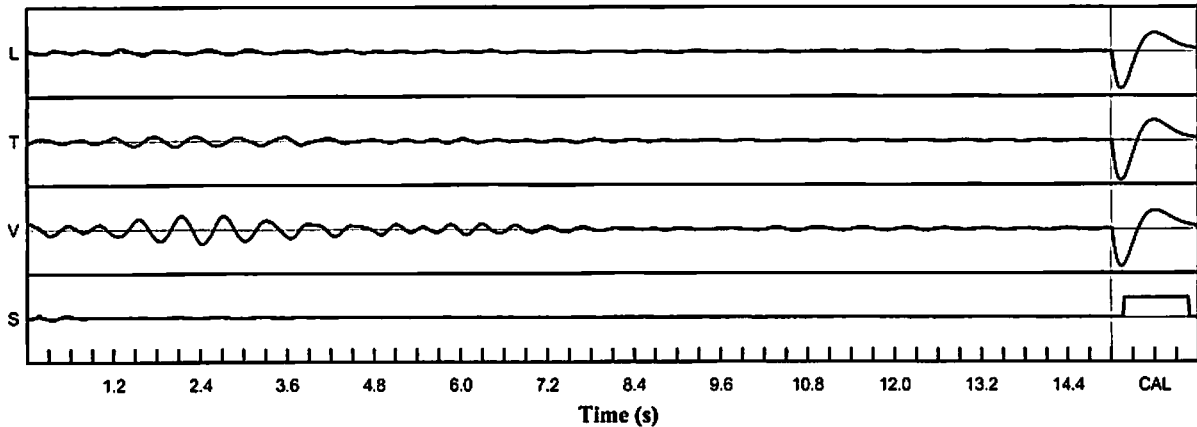
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 27



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

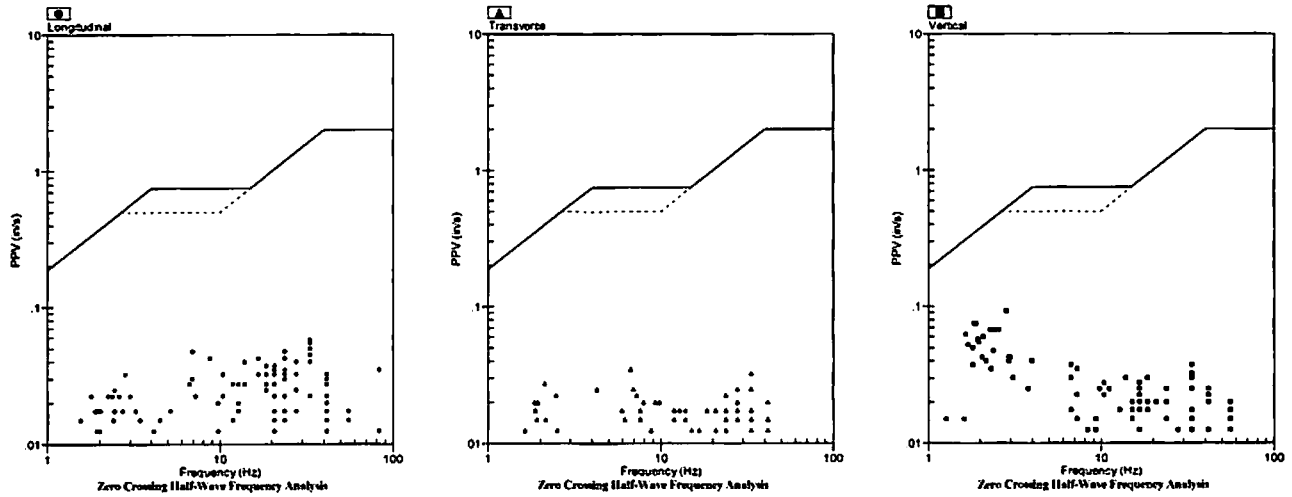
**Serial No:** 5148 v3.67  
**Date:** 06/19/2018 13:19:05  
**Event No:** 28  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 17040 SW 53 Ct  
**Distance:**  
**Operator:** Pedro V.  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.058                | 0.035 | 0.093 |
| FREQ (Hz)          | 33.3                 | 6.7   | 2.8   |
| PD (.001")         | 1.80                 | 1.56  | 6.23  |
| PPA (g)            | 0.033                | 0.020 | 0.020 |
| Peak Vector Sum:   | 0.093 in/s           |       |       |
| Peak Air Pressure: | 93 db                |       |       |
|                    | 0.00028 PSI @ 4.9 Hz |       |       |

**Additional Info:**

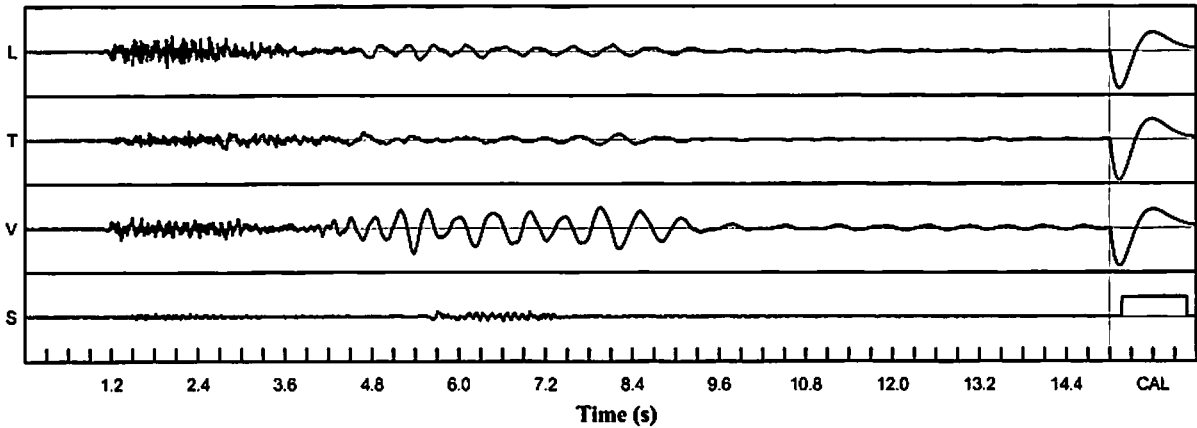
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 28



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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5148 v3.67  
**Date:** 06/20/2018 13:35:34  
**Event No:** 29  
**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

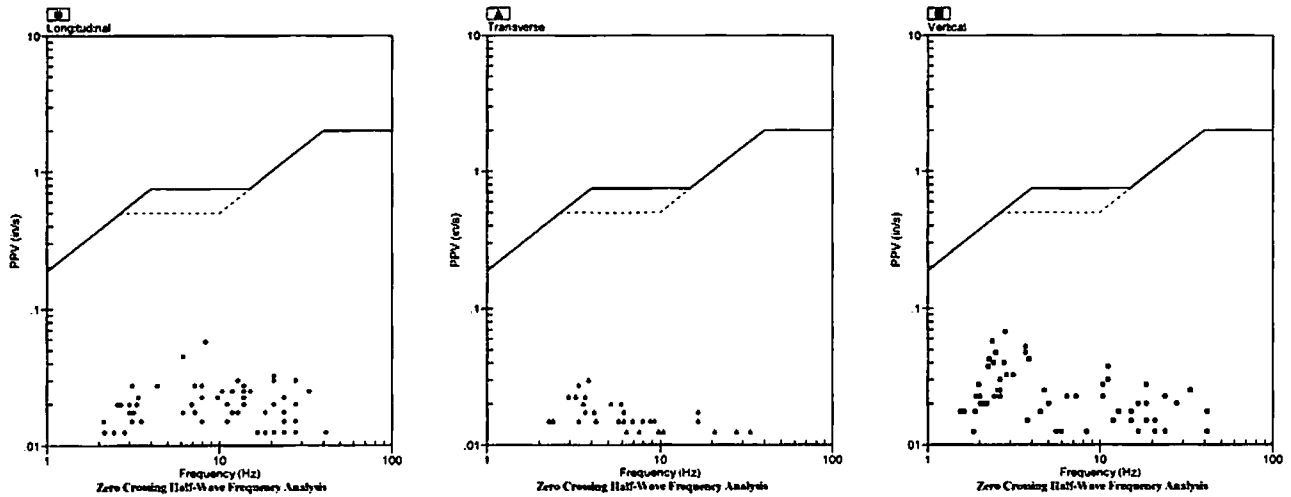
### Summary Data

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.058                | 0.030 | 0.068 |
| <b>FREQ (Hz)</b>          | 8.3                  | 3.9   | 2.8   |
| <b>PD (.001")</b>         | 1.42                 | 1.28  | 3.53  |
| <b>PPA (g)</b>            | 0.013                | 0.007 | 0.013 |
| <b>Peak Vector Sum:</b>   | 0.073 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 101 db               |       |       |
|                           | 0.00046 PSI @ 4.3 Hz |       |       |

### Additional Info:

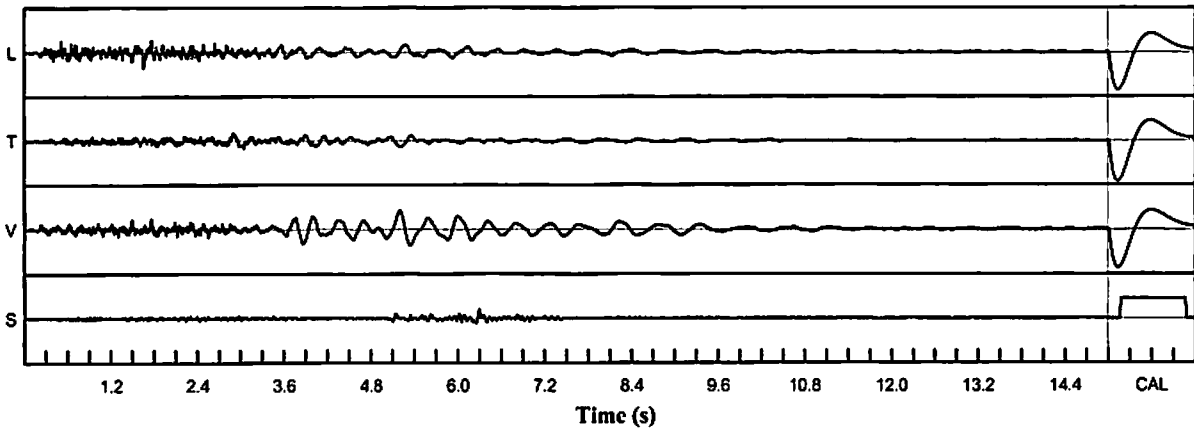
**Shaketable Calibrated:** 04/12/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5148 Event: 29



### Velocity Waveform Graph Scale

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



# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 04/30/2018 11:44:55  
**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

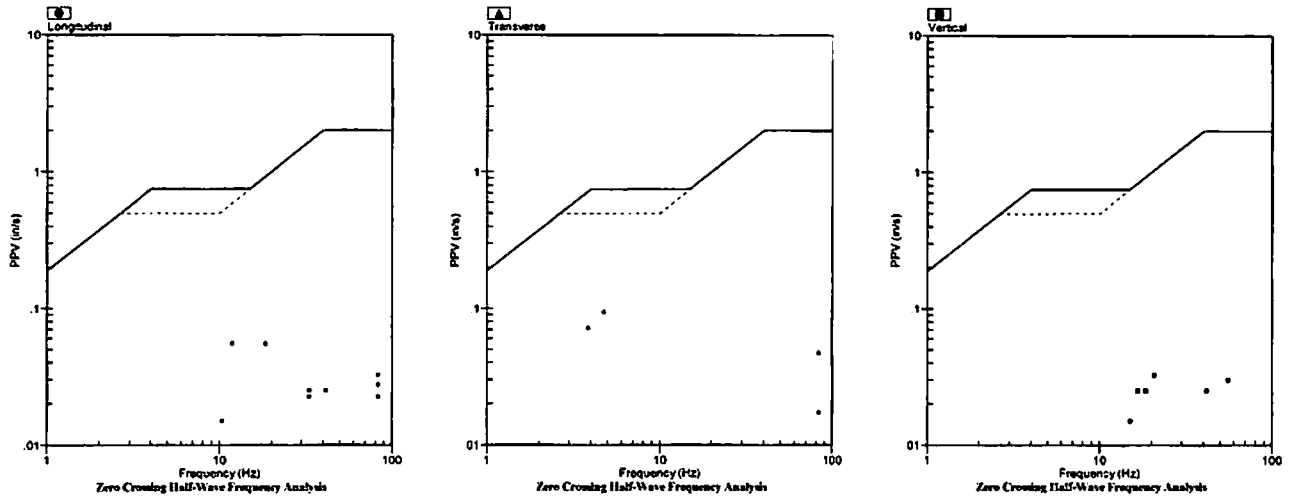
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.058                | 0.200 | 0.158 |
| FREQ (Hz)          | 10.4                 | 166.7 | 20.8  |
| PD (.001")         | 0.64                 | 4.96  | 0.43  |
| PPA (g)            | 0.098                | 0.260 | 0.163 |
| Peak Vector Sum:   | 0.258 in/s           |       |       |
| Peak Air Pressure: | 102 db               |       |       |
|                    | 0.00039 PSI @ 1.5 Hz |       |       |

### Additional Info:

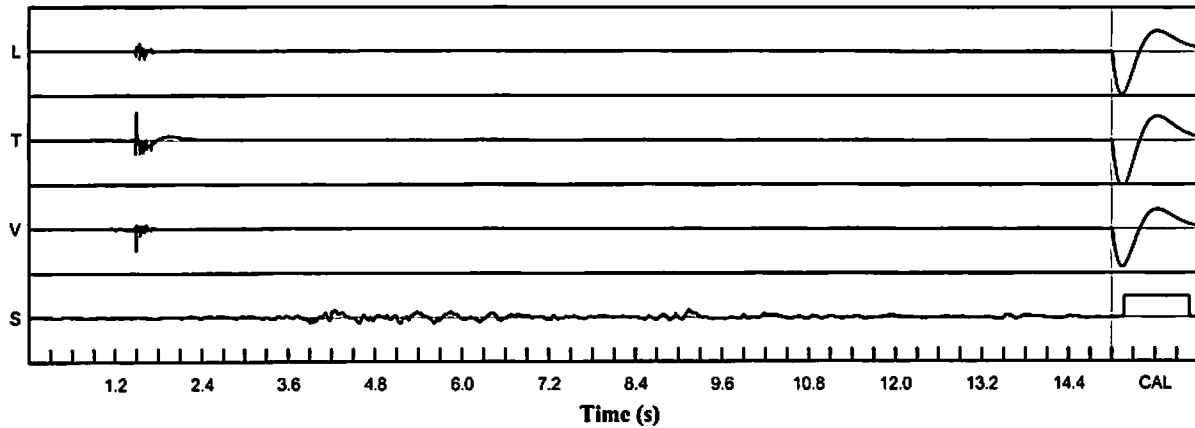
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 1



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.320 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/01/2018 13:31:04  
**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

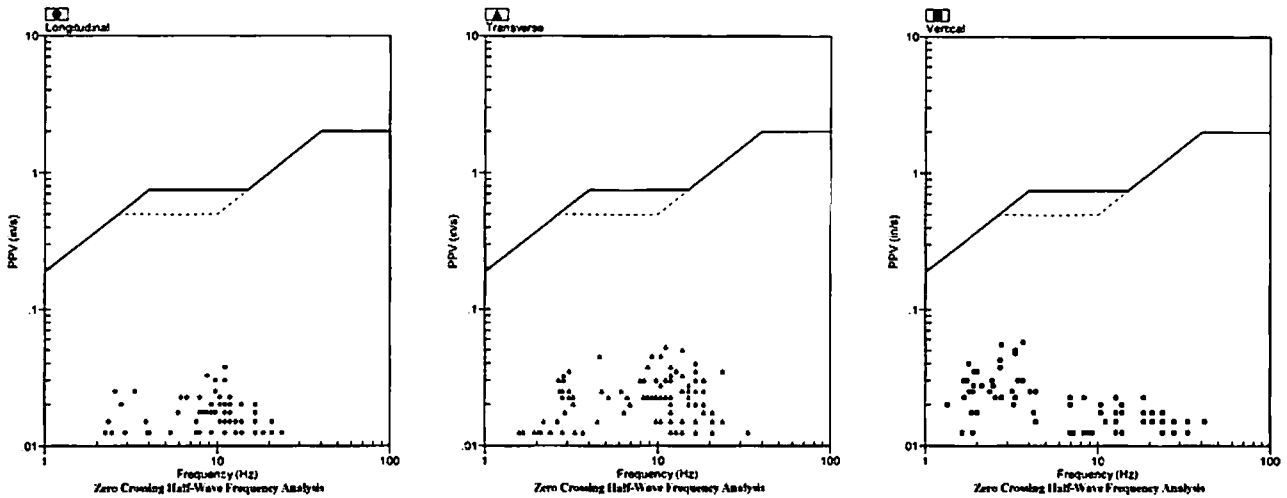
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.038                | 0.053 | 0.058 |
| FREQ (Hz)          | 11.1                 | 11.1  | 3.7   |
| PD (.001")         | 1.03                 | 1.69  | 3.10  |
| PPA (g)            | 0.007                | 0.013 | 0.007 |
| Peak Vector Sum:   | 0.060 in/s           |       |       |
| Peak Air Pressure: | 101 db               |       |       |
|                    | 0.00036 PSI @ 4.0 Hz |       |       |

### Additional Info:

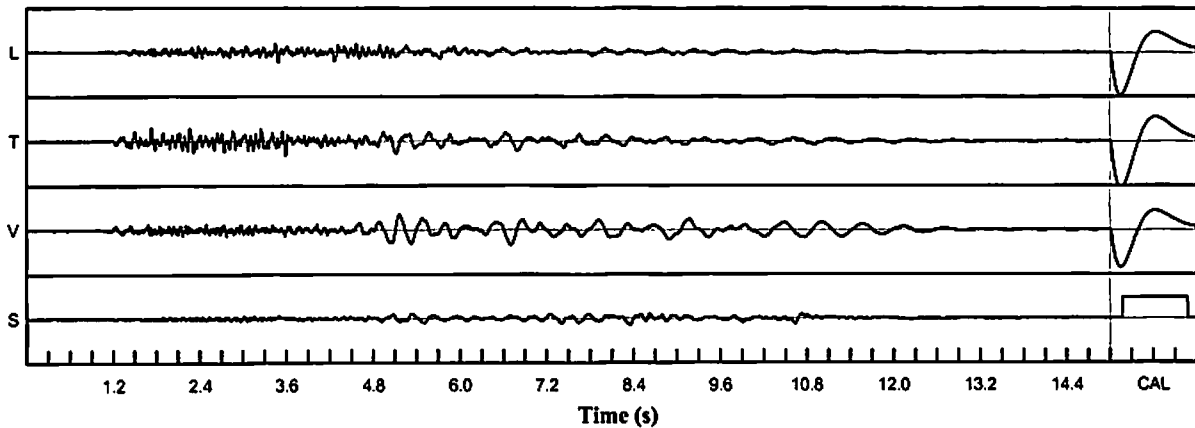
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 2



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/03/2018 13:16:06  
**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

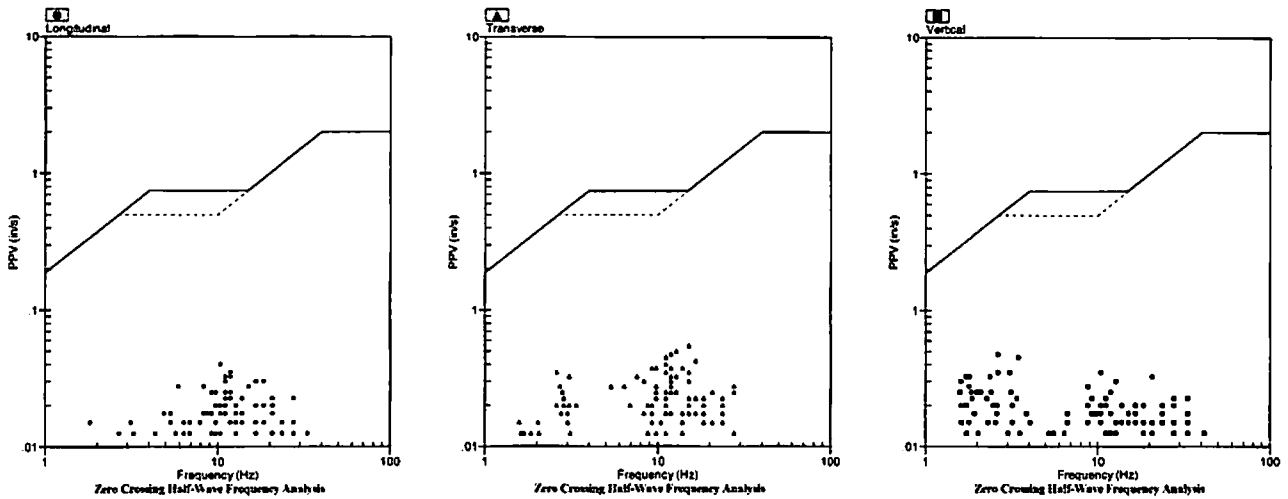
### Summary Data

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.040                | 0.055 | 0.048 |
| <b>FREQ (Hz)</b>          | 10.4                 | 15.2  | 2.6   |
| <b>PD (.001")</b>         | 0.86                 | 1.72  | 3.02  |
| <b>PPA (g)</b>            | 0.013                | 0.013 | 0.013 |
| <b>Peak Vector Sum:</b>   | 0.063 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 106 db               |       |       |
|                           | 0.00066 PSI @ 4.4 Hz |       |       |

### Additional Info:

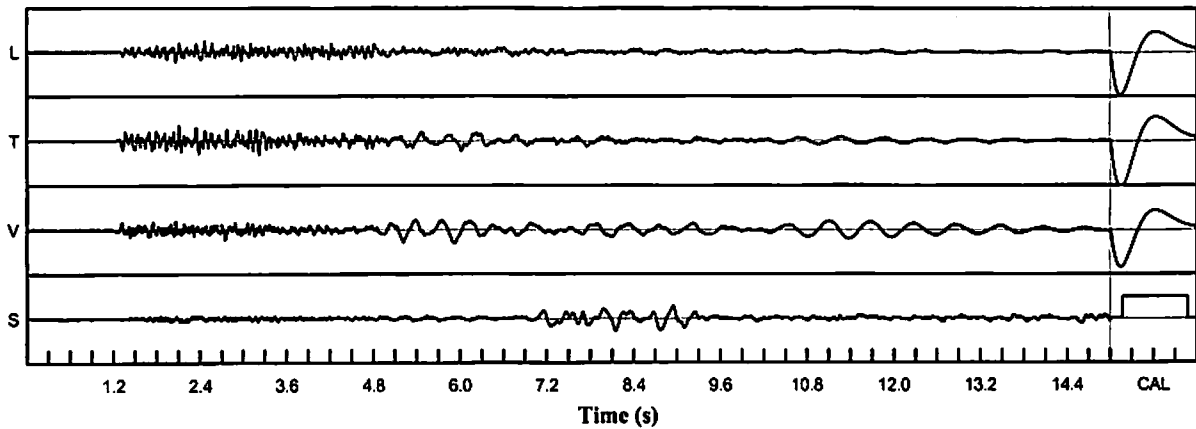
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 3



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/08/2018 13:32:28  
**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

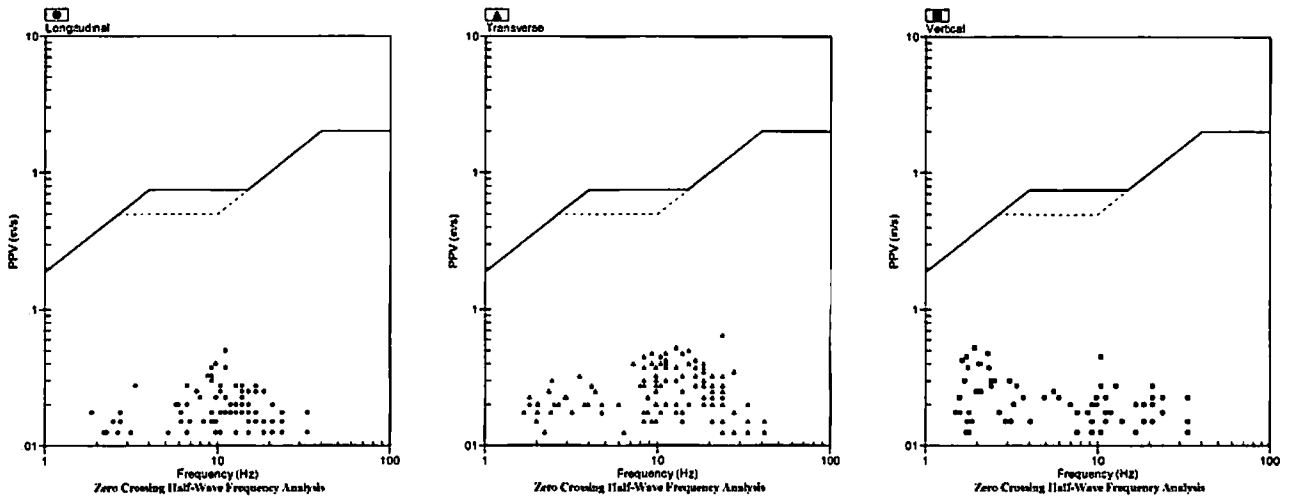
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.050                | 0.065 | 0.053 |
| FREQ (Hz)          | 11.1                 | 11.1  | 1.9   |
| PD (.001")         | 1.15                 | 1.85  | 4.24  |
| PPA (g)            | 0.013                | 0.020 | 0.013 |
| Peak Vector Sum:   | 0.068 in/s           |       |       |
| Peak Air Pressure: | 101 db               |       |       |
|                    | 0.00036 PSI @ 4.3 Hz |       |       |

### Additional Info:

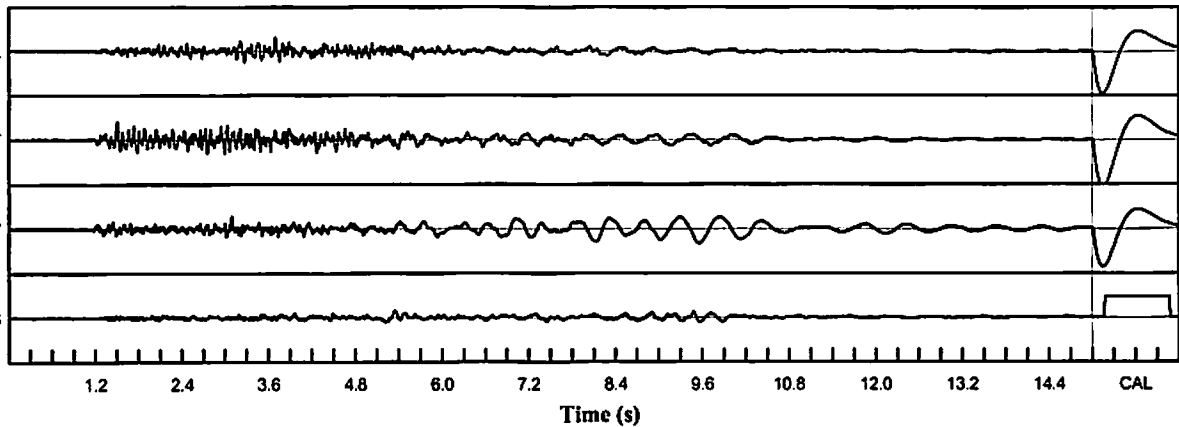
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 4



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/10/2018 15:01:23  
**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

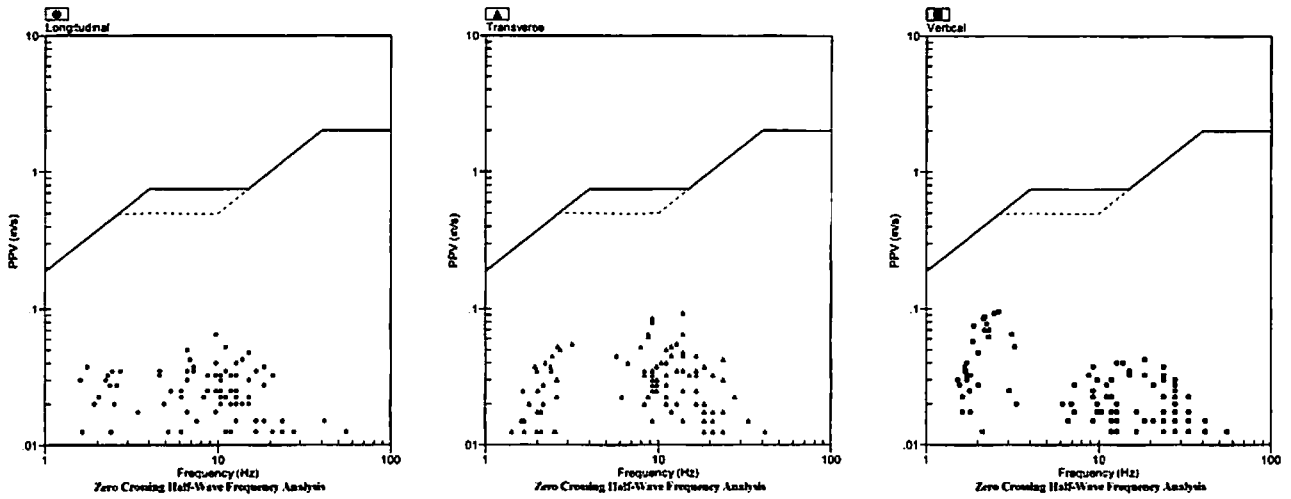
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.065                | 0.093 | 0.095 |
| FREQ (Hz)          | 9.8                  | 13.9  | 2.6   |
| PD (.001")         | 2.13                 | 2.78  | 6.34  |
| PPA (g)            | 0.013                | 0.020 | 0.020 |
| Peak Vector Sum:   | 0.110 in/s           |       |       |
| Peak Air Pressure: | 103 db               |       |       |
|                    | 0.00046 PSI @ 6.0 Hz |       |       |

### Additional Info:

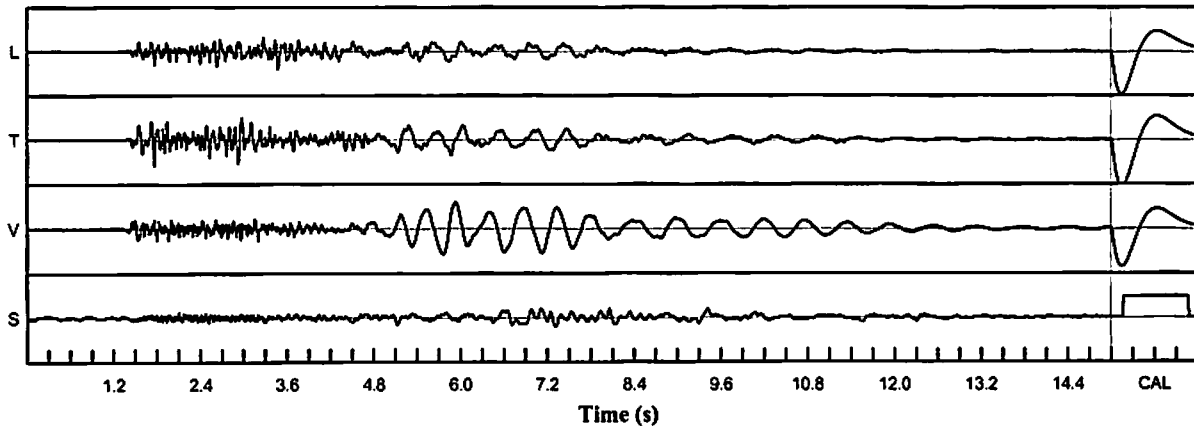
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 5



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/11/2018 09:38:04  
**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

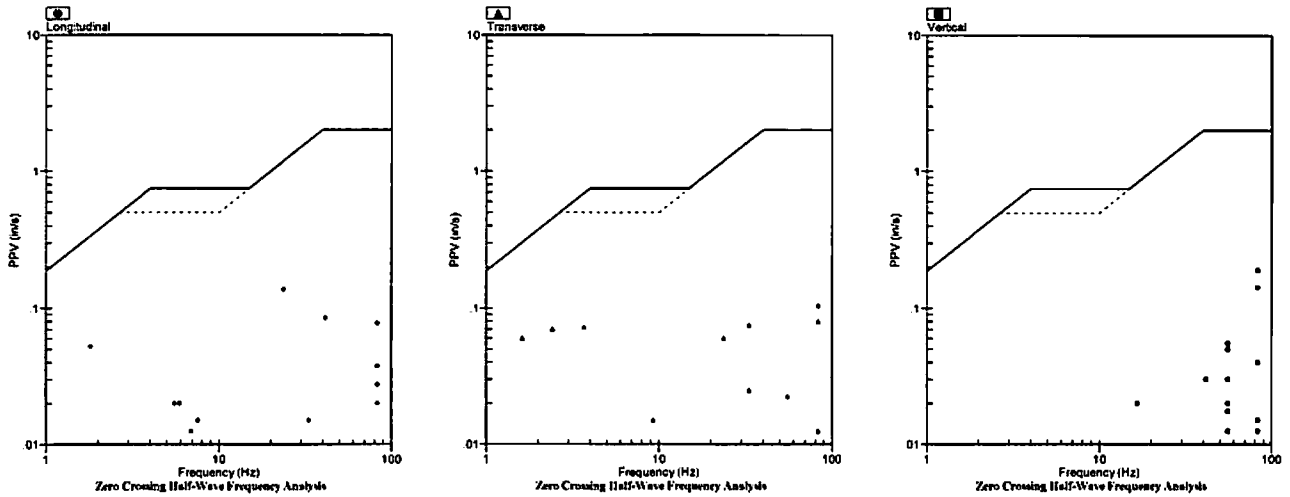
### Summary Data

|                    | L                     | T     | V     |
|--------------------|-----------------------|-------|-------|
| PPV (in/s)         | 0.138                 | 0.120 | 0.190 |
| FREQ (Hz)          | 166.7                 | 166.7 | 83.3  |
| PD (.001")         | 2.27                  | 6.99  | 0.52  |
| PPA (g)            | 0.169                 | 0.176 | 0.286 |
| Peak Vector Sum:   | 0.208 in/s            |       |       |
| Peak Air Pressure: | 90 db                 |       |       |
|                    | 0.00018 PSI @ 83.3 Hz |       |       |

### Additional Info:

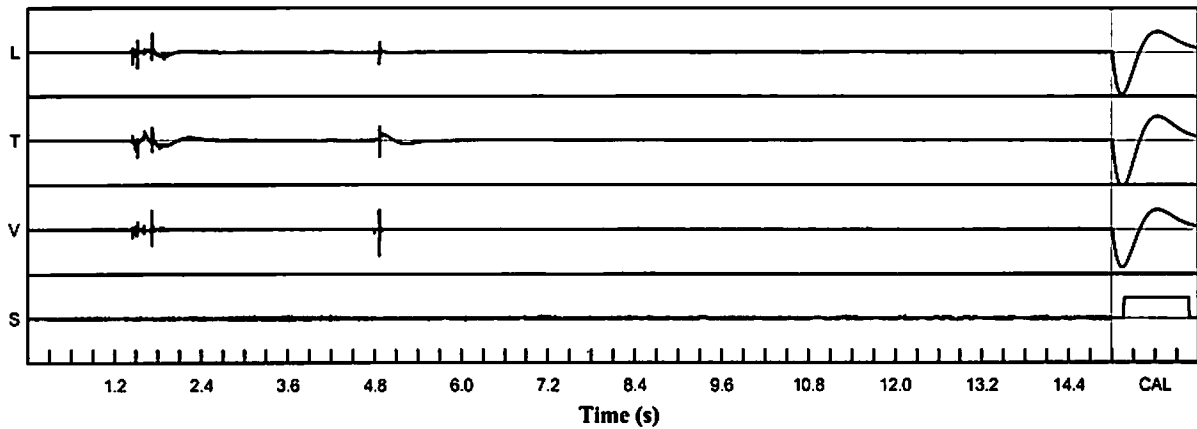
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 6



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.320 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

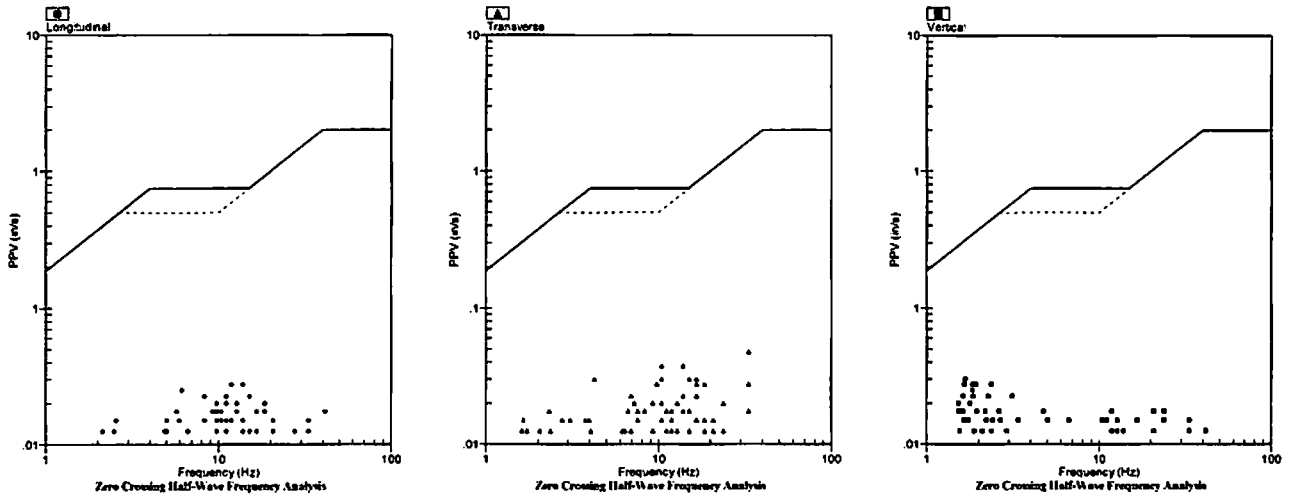
**Serial No:** 5150 v3.67  
**Date:** 05/15/2018 14:02:00  
**Event No:** 7  
**Record Time:** 15.0 s  
**Client:** City of Miramar  
**Operation:** White Rock Quarries  
**Location:** 5276 SW 152 Ct  
**Distance:**  
**Operator:** Pedro V.  
**Comment:** In Ground  
**Seismic Trigger:** 0.030 in/s

| Summary Data       |                      |       |       |
|--------------------|----------------------|-------|-------|
|                    | L                    | T     | V     |
| PPV (in/s)         | 0.028                | 0.048 | 0.030 |
| FREQ (Hz)          | 13.9                 | 9.8   | 1.7   |
| PD (.001")         | 0.84                 | 1.15  | 2.50  |
| PPA (g)            | 0.007                | 0.013 | 0.013 |
| Peak Vector Sum:   | 0.053 in/s           |       |       |
| Peak Air Pressure: | 109 db               |       |       |
|                    | 0.00086 PSI @ 7.2 Hz |       |       |

**Additional Info:**

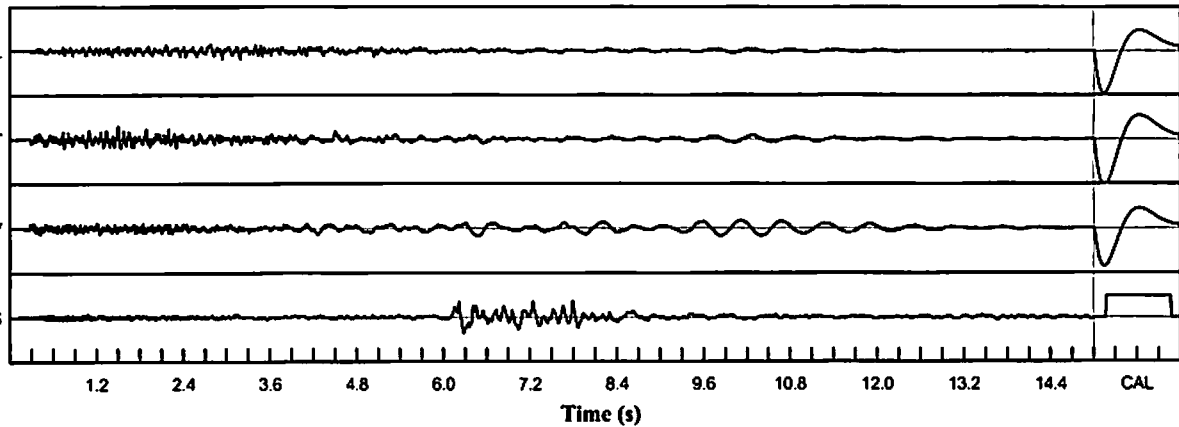
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 7



**Velocity Waveform Graph Scale**

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/21/2018 13:32:13  
**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

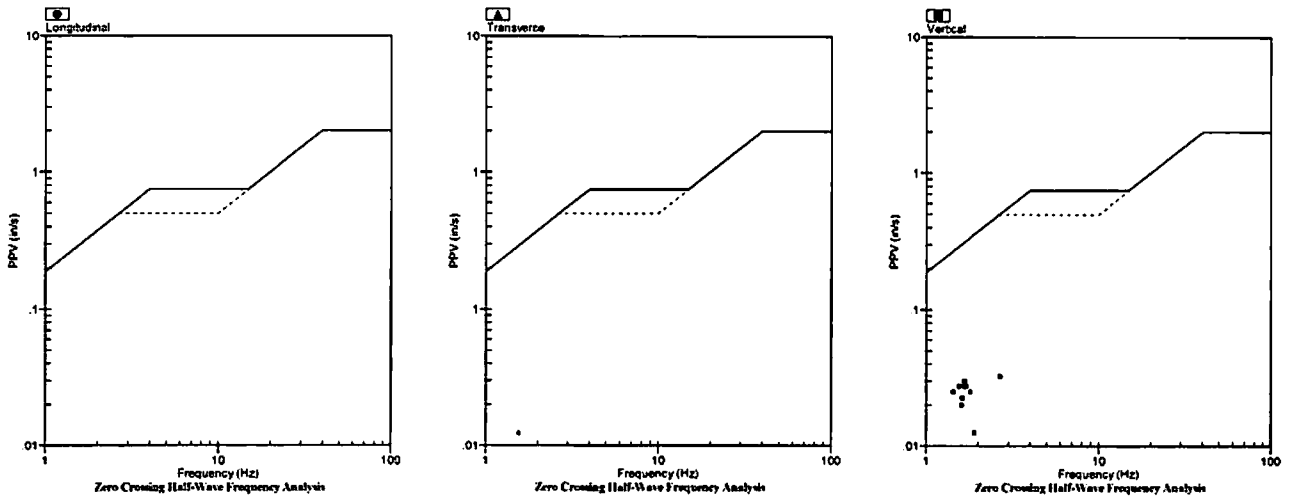
### Summary Data

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.008                | 0.013 | 0.033 |
| <b>FREQ (Hz)</b>          | 1.5                  | 1.6   | 1.6   |
| <b>PD (.001")</b>         | 0.47                 | 0.97  | 2.86  |
| <b>PPA (g)</b>            | 0.007                | 0.007 | 0.007 |
| <b>Peak Vector Sum:</b>   | 0.033 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 95 db                |       |       |
|                           | 0.00023 PSI @ 6.0 Hz |       |       |

### Additional Info:

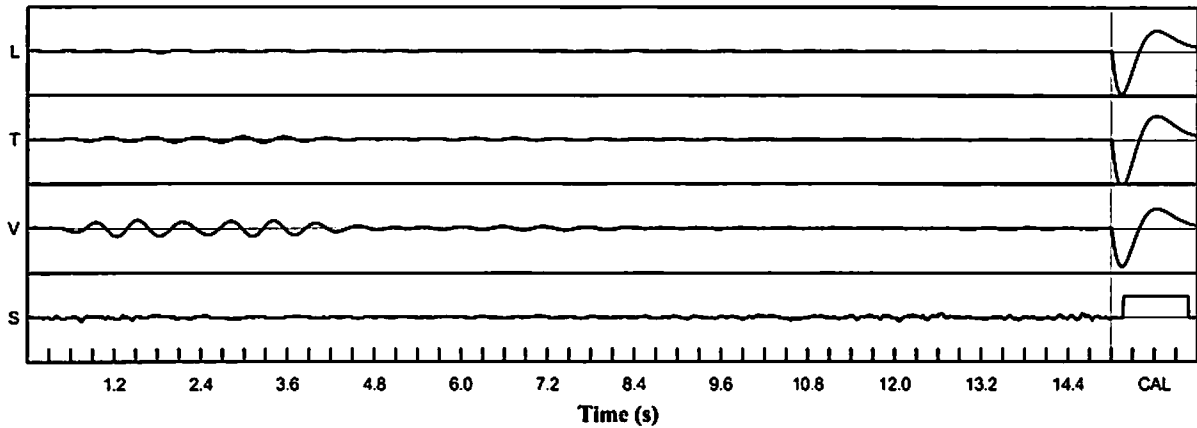
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 8



### Velocity Waveform Graph Scale

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



# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/22/2018 13:16:17  
**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

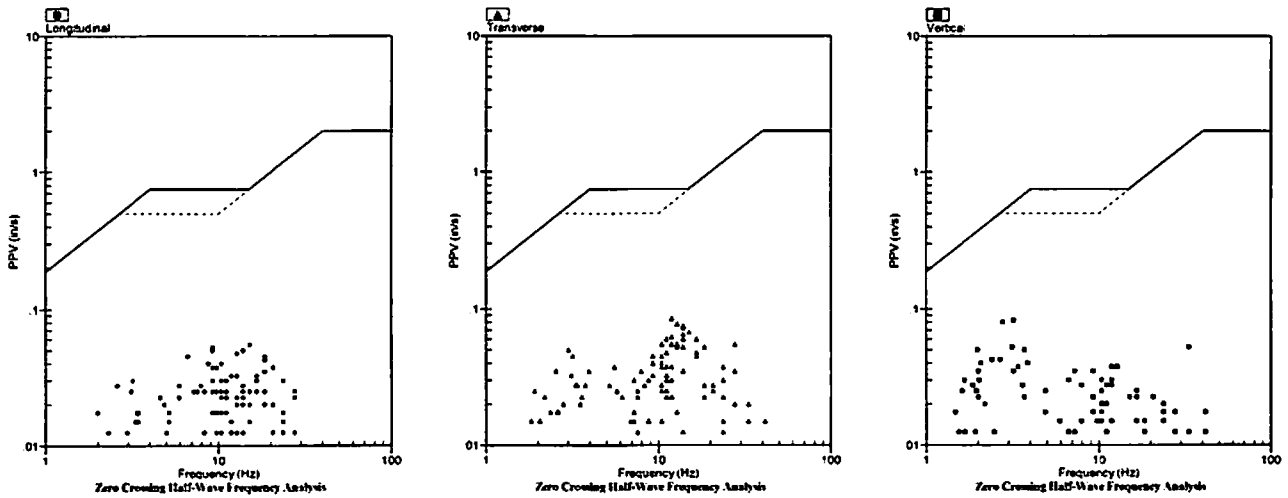
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.055                | 0.085 | 0.083 |
| FREQ (Hz)          | 15.2                 | 11.9  | 3.2   |
| PD (.001")         | 1.74                 | 2.38  | 4.23  |
| PPA (g)            | 0.013                | 0.033 | 0.020 |
| Peak Vector Sum:   | 0.093 in/s           |       |       |
| Peak Air Pressure: | 111 db               |       |       |
|                    | 0.00103 PSI @ 6.7 Hz |       |       |

### Additional Info:

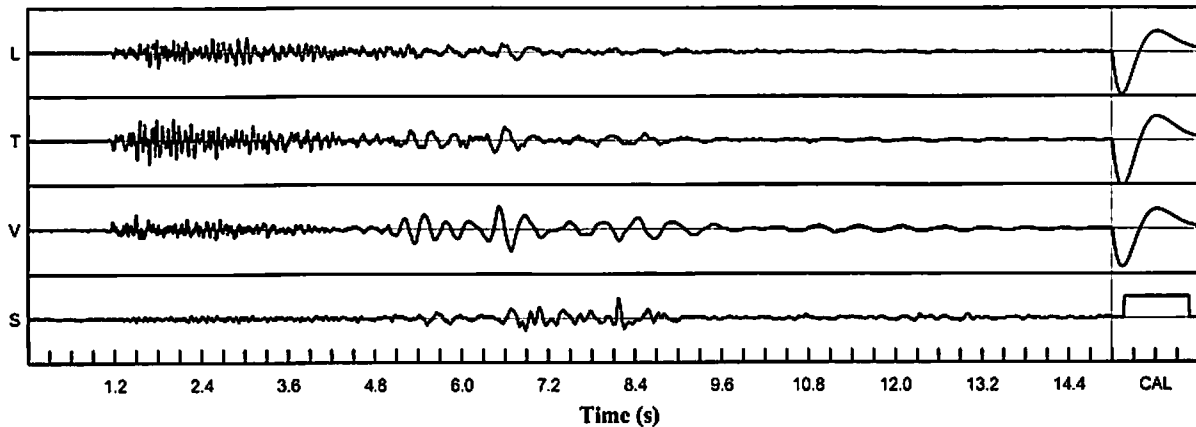
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 9



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/23/2018 13:18:28  
**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

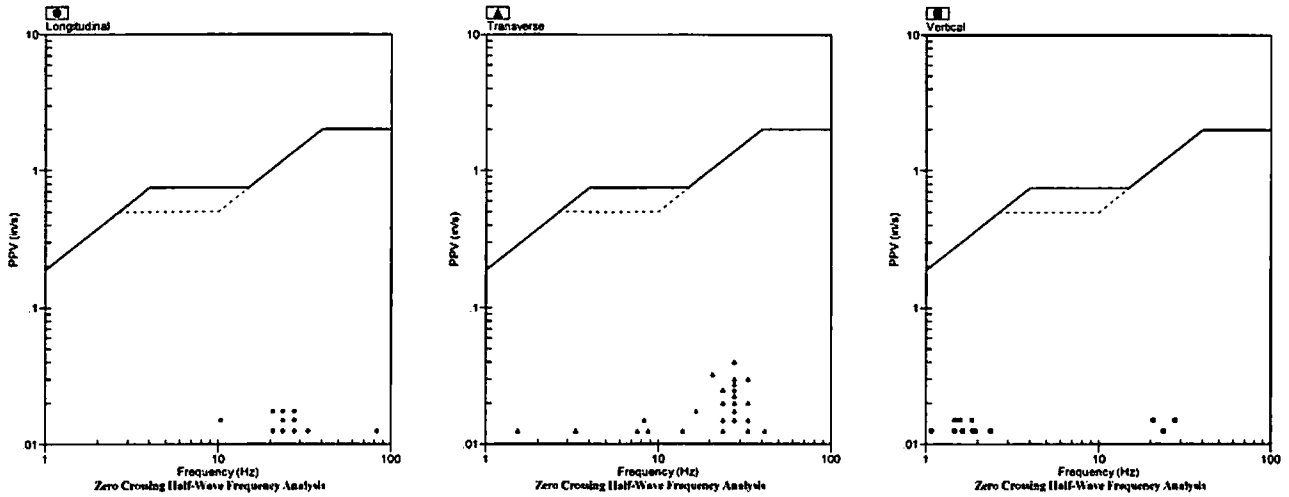
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.020                | 0.040 | 0.015 |
| FREQ (Hz)          | 23.8                 | 23.8  | 27.8  |
| PD (.001")         | 0.85                 | 0.89  | 1.29  |
| PPA (g)            | 0.007                | 0.020 | 0.007 |
| Peak Vector Sum:   | 0.045 in/s           |       |       |
| Peak Air Pressure: | 103 db               |       |       |
|                    | 0.00046 PSI @ 1.4 Hz |       |       |

### Additional Info:

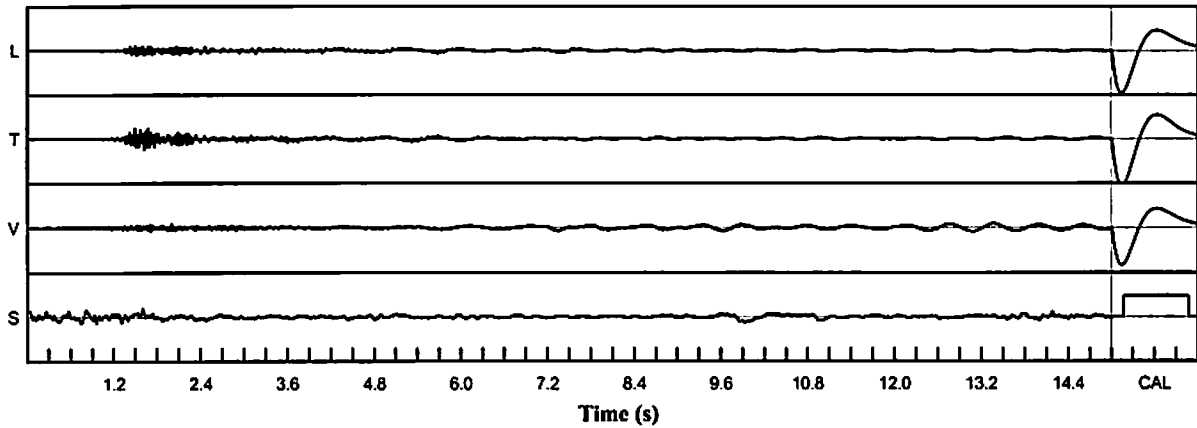
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 10



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/24/2018 14:32:09  
**Event No:** 11  
**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

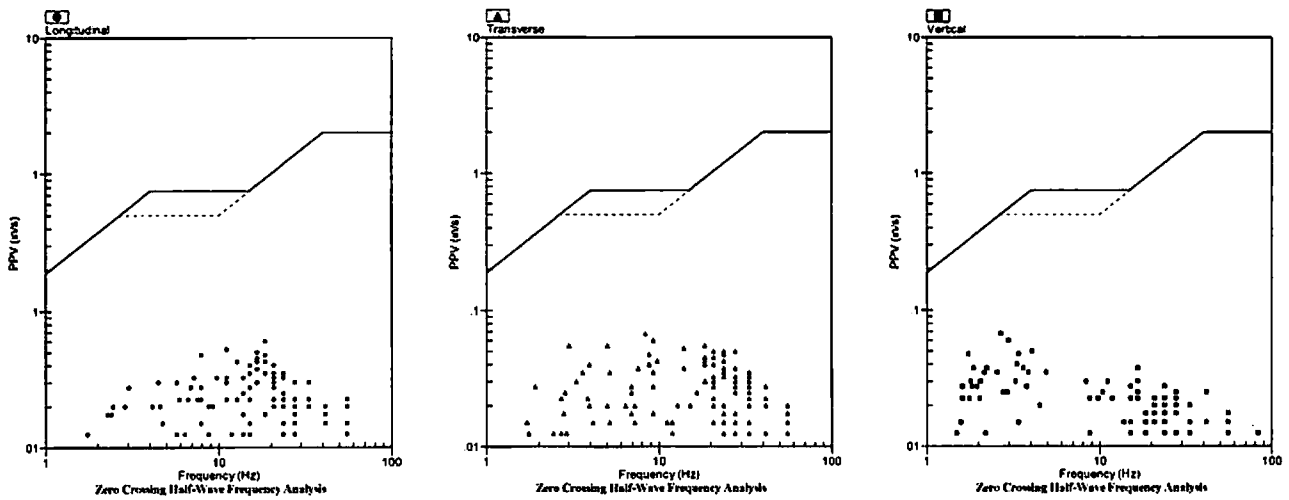
### Summary Data

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.060                | 0.068 | 0.068 |
| <b>FREQ (Hz)</b>          | 18.5                 | 8.3   | 2.7   |
| <b>PD (.001")</b>         | 1.10                 | 1.80  | 3.77  |
| <b>PPA (g)</b>            | 0.020                | 0.026 | 0.020 |
| <b>Peak Vector Sum:</b>   | 0.080 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 106 db               |       |       |
|                           | 0.00068 PSI @ 4.4 Hz |       |       |

### Additional Info:

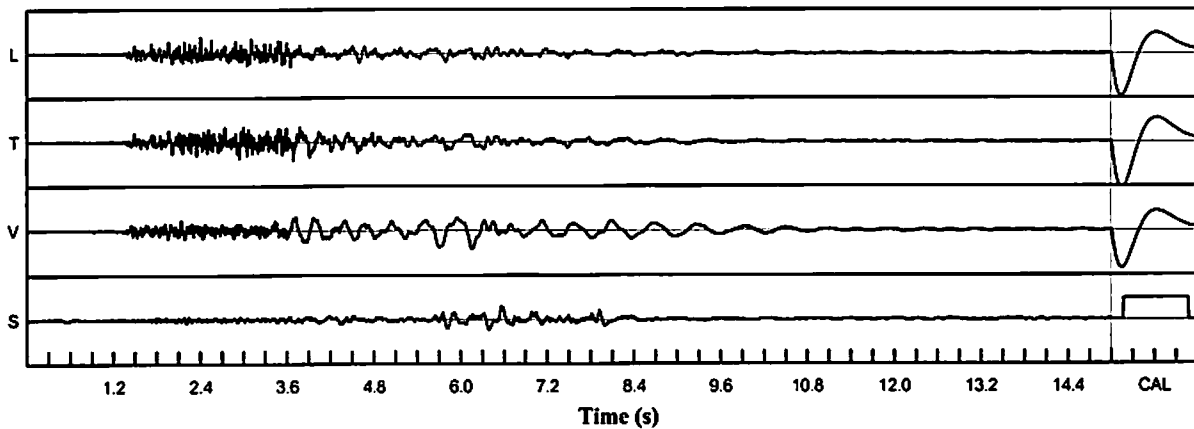
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 11



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/30/2018 14:50:00  
**Event No:** 12  
**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

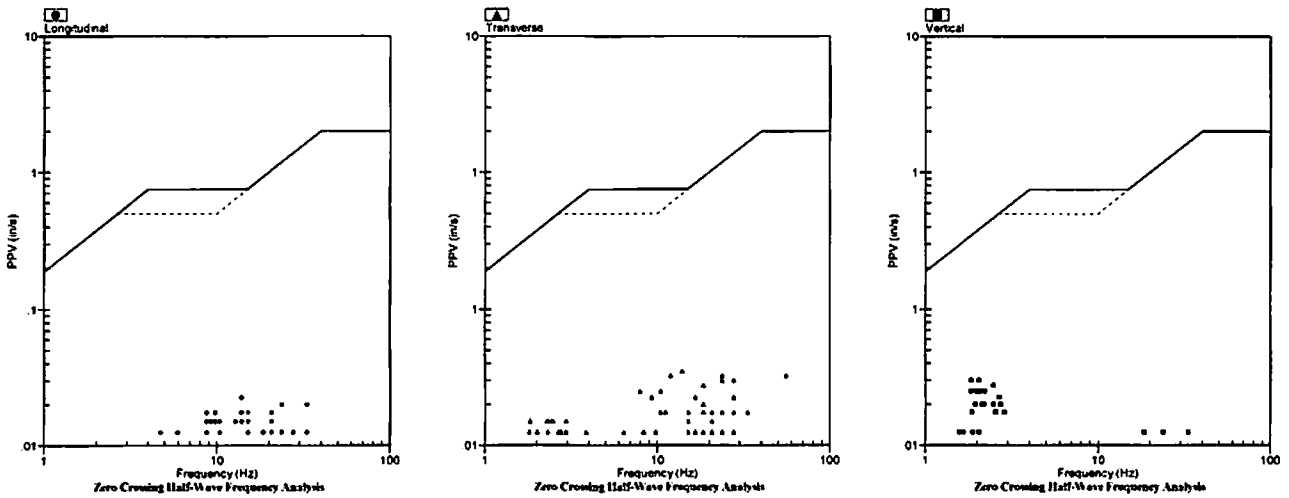
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.023                | 0.043 | 0.030 |
| FREQ (Hz)          | 13.9                 | 12.8  | 2.1   |
| PD (.001")         | 0.85                 | 1.05  | 2.49  |
| PPA (g)            | 0.007                | 0.013 | 0.007 |
| Peak Vector Sum:   | 0.045 in/s           |       |       |
| Peak Air Pressure: | 101 db               |       |       |
|                    | 0.00032 PSI @ 3.7 Hz |       |       |

### Additional Info:

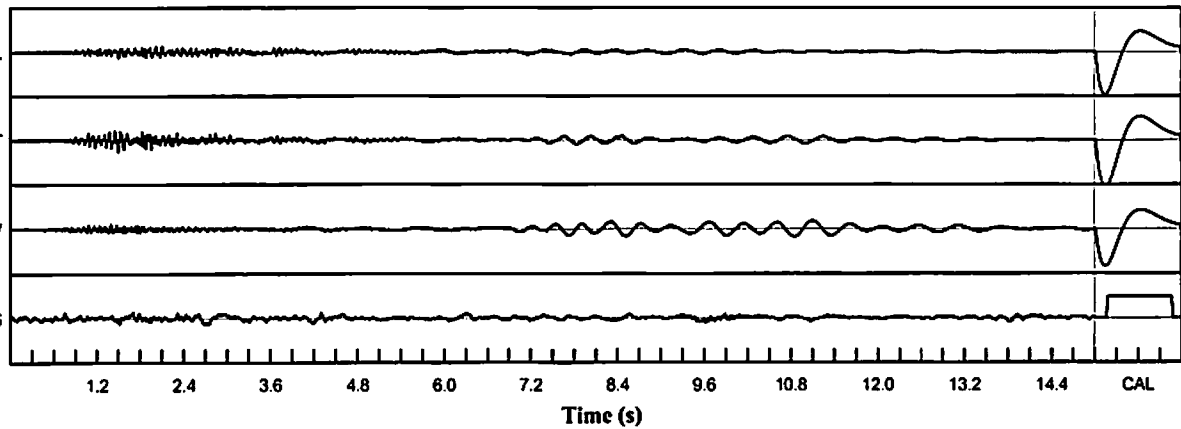
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 12



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 05/31/2018 13:16:13  
**Event No:** 13  
**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

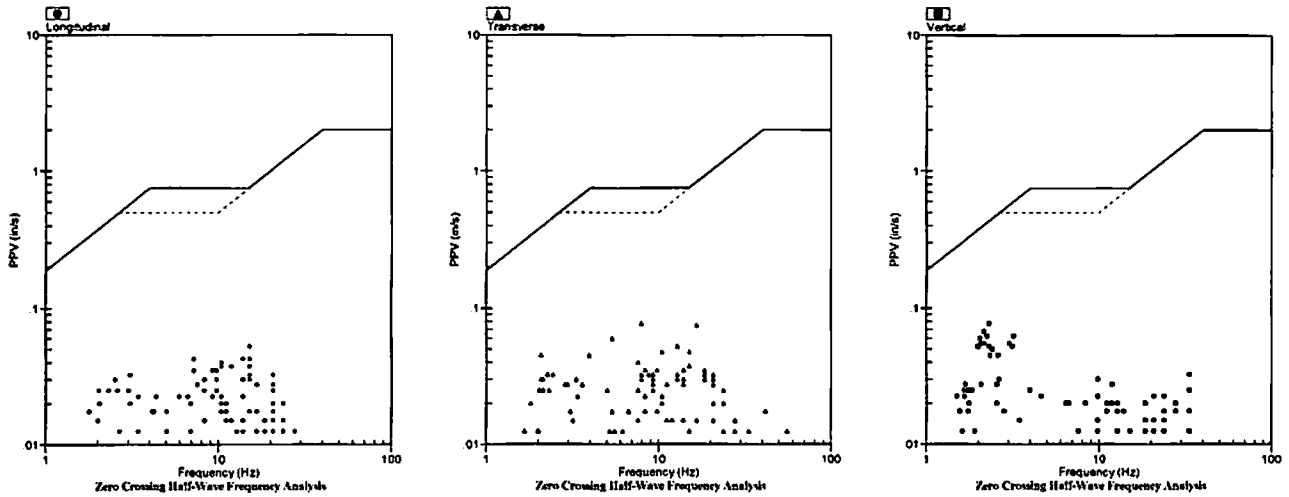
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.053                | 0.078 | 0.078 |
| FREQ (Hz)          | 15.2                 | 7.9   | 2.3   |
| PD (.001")         | 1.70                 | 2.41  | 5.14  |
| PPA (g)            | 0.013                | 0.020 | 0.013 |
| Peak Vector Sum:   | 0.088 in/s           |       |       |
| Peak Air Pressure: | 107 db               |       |       |
|                    | 0.00071 PSI @ 5.7 Hz |       |       |

### Additional Info:

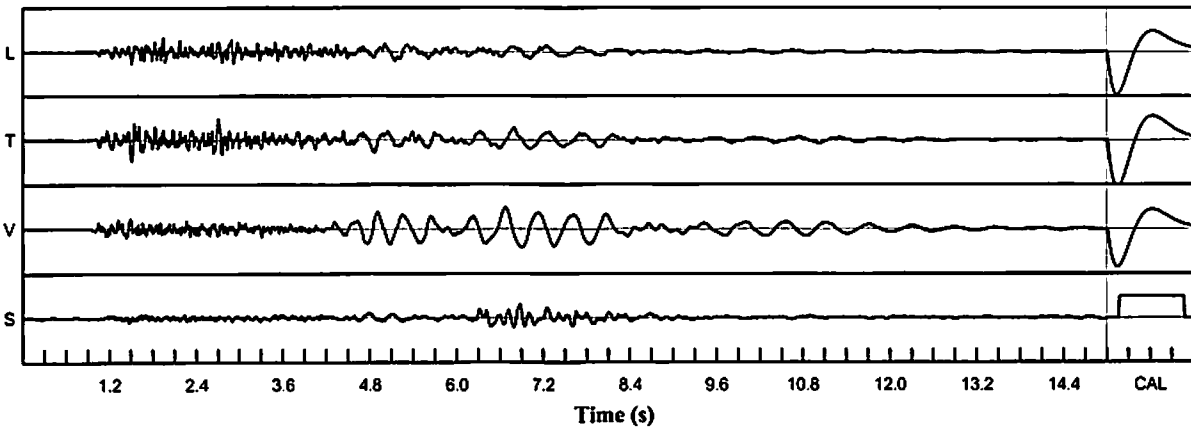
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 13



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/05/2018 13:19:39  
**Event No:** 14  
**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

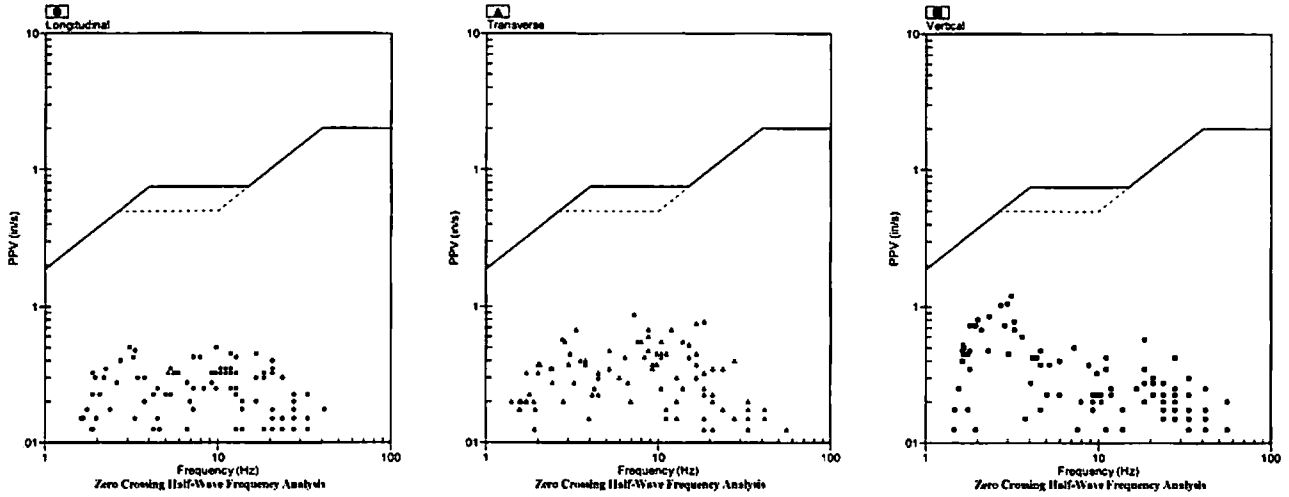
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.050                | 0.088 | 0.120 |
| FREQ (Hz)          | 9.8                  | 7.2   | 3.1   |
| PD (.001")         | 2.68                 | 3.11  | 6.22  |
| PPA (g)            | 0.013                | 0.026 | 0.020 |
| Peak Vector Sum:   | 0.130 in/s           |       |       |
| Peak Air Pressure: | 111 db               |       |       |
|                    | 0.00100 PSI @ 3.3 Hz |       |       |

### Additional Info:

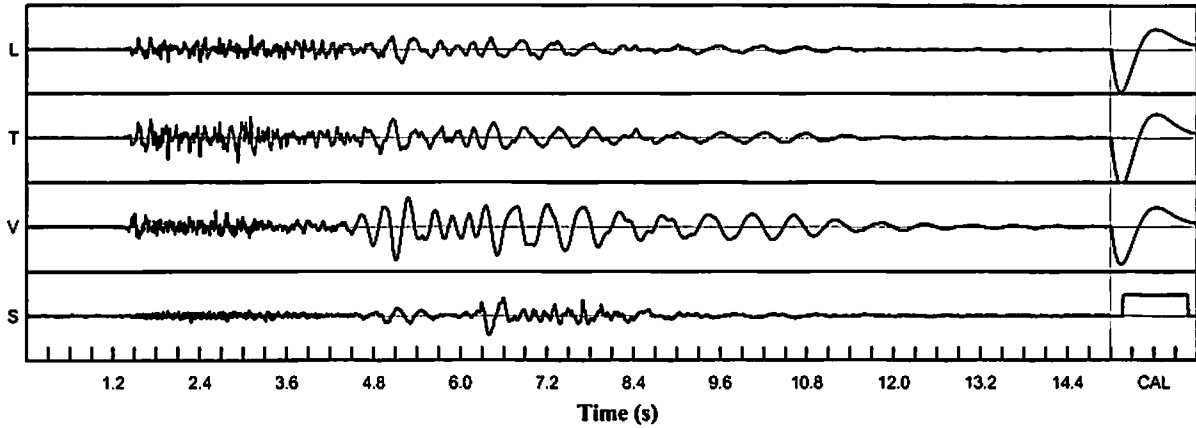
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 14



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/07/2018 09:22:59  
**Event No:** 15  
**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

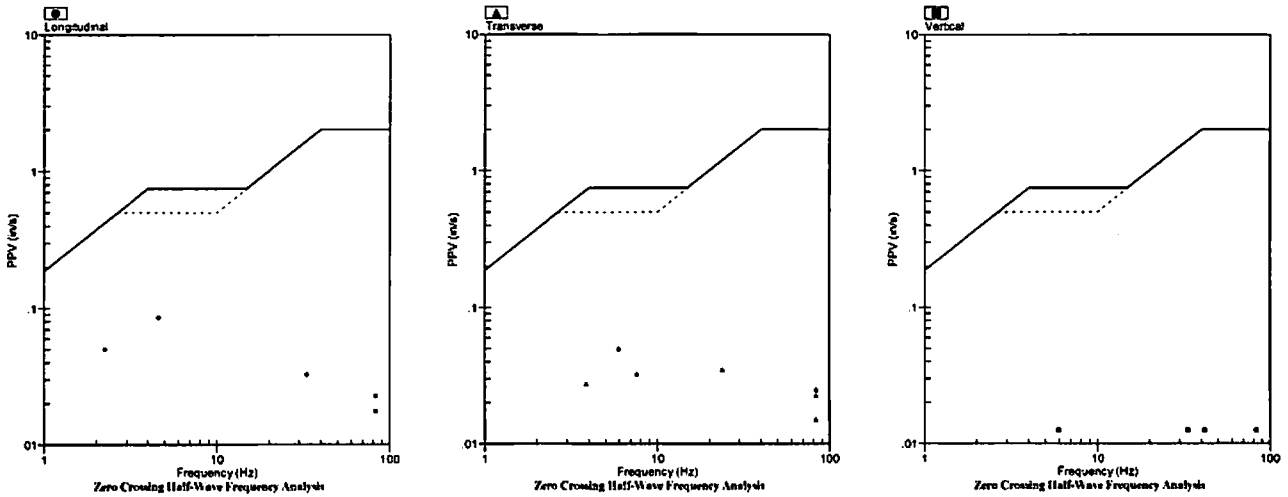
### Summary Data

|                    | L                      | T     | V     |
|--------------------|------------------------|-------|-------|
| PPV (in/s)         | 0.085                  | 0.050 | 0.018 |
| FREQ (Hz)          | 4.6                    | 6.0   | 83.3  |
| PD (.001")         | 2.47                   | 1.37  | 0.31  |
| PPA (g)            | 0.033                  | 0.026 | 0.026 |
| Peak Vector Sum:   | 0.085 in/s             |       |       |
| Peak Air Pressure: | 115 db                 |       |       |
|                    | 0.00171 PSI @ 166.7 Hz |       |       |

### Additional Info:

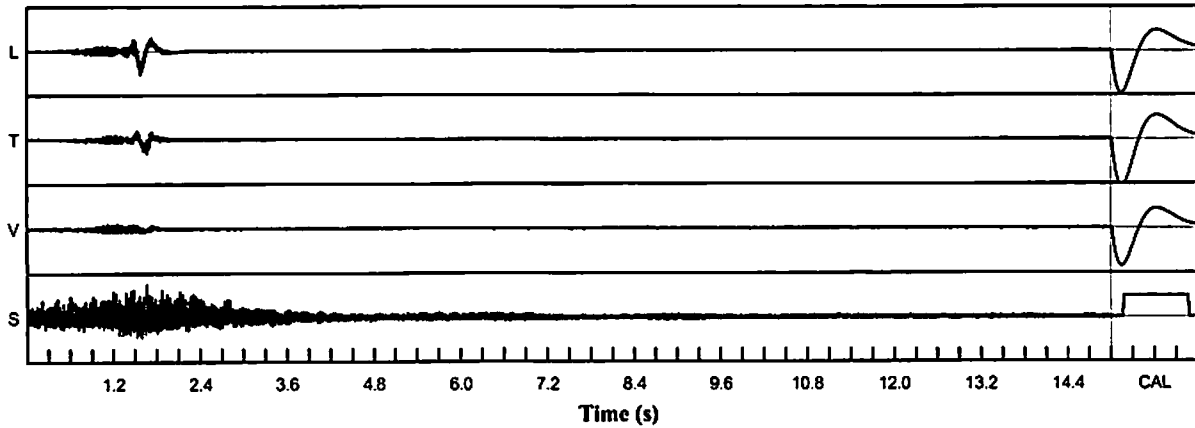
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 15



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/07/2018 09:28:04  
**Event No:** 16  
**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

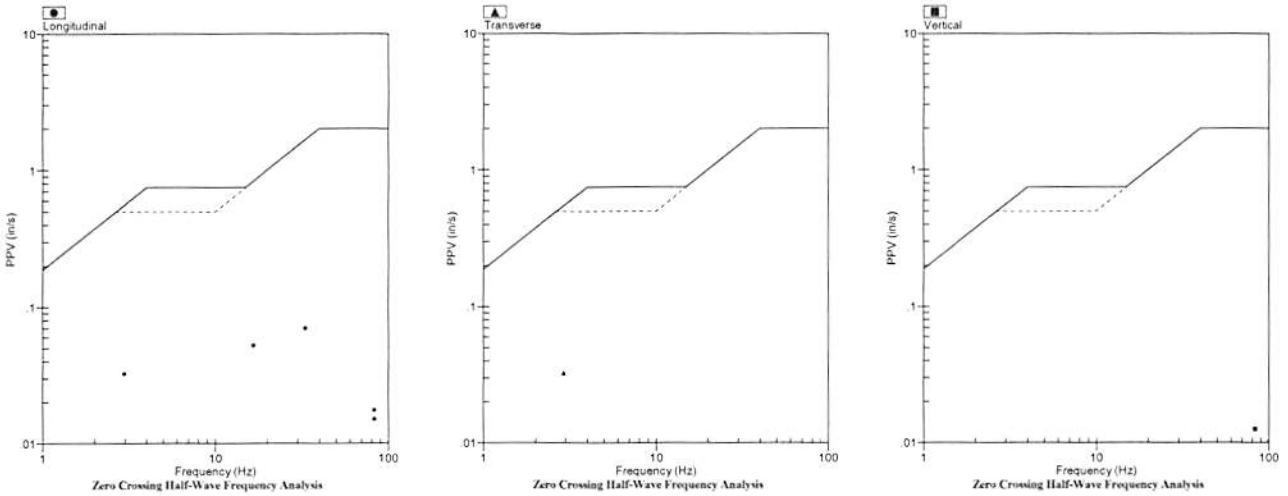
### Summary Data

|                    | L                      | T     | V     |
|--------------------|------------------------|-------|-------|
| PPV (in/s)         | 0.070                  | 0.055 | 0.045 |
| FREQ (Hz)          | 15.2                   | 6.4   | 166.7 |
| PD (.001")         | 1.63                   | 1.25  | 0.35  |
| PPA (g)            | 0.052                  | 0.052 | 0.065 |
| Peak Vector Sum:   | 0.070 in/s             |       |       |
| Peak Air Pressure: | 114 db                 |       |       |
|                    | 0.00151 PSI @ 166.7 Hz |       |       |

### Additional Info:

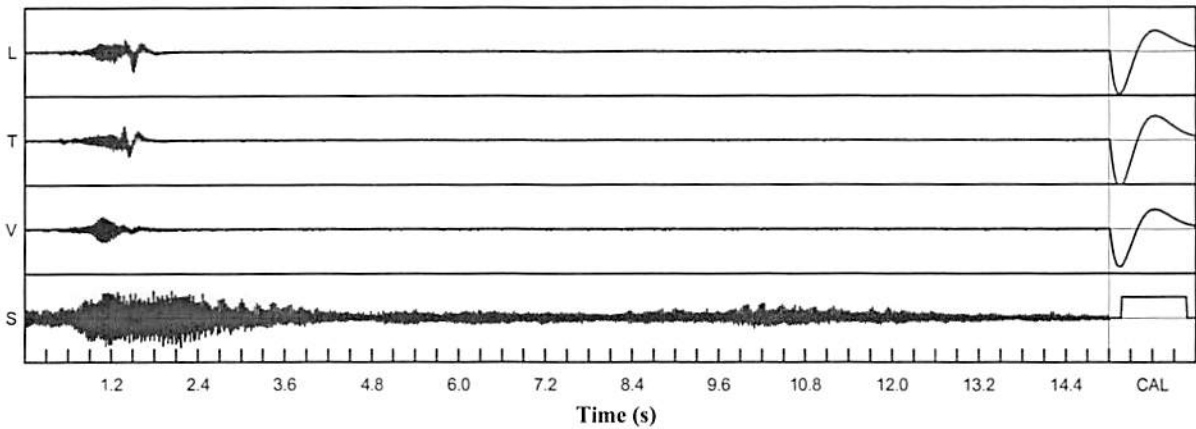
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 16



### Velocity Waveform Graph Scale

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



# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/07/2018 09:33:02  
**Event No:** 17  
**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

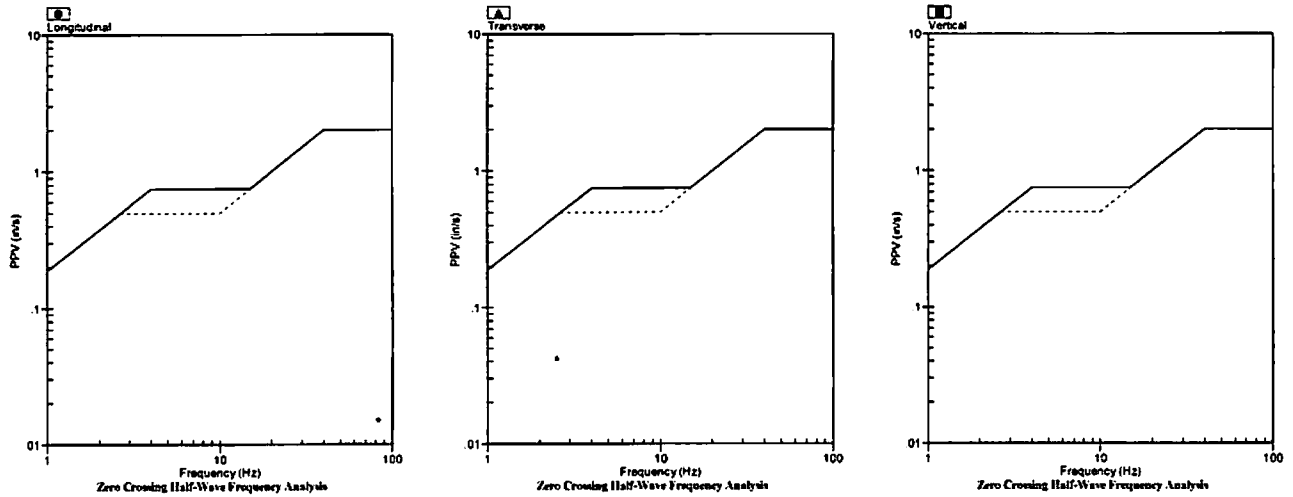
### Summary Data

|                    | L                     | T     | V     |
|--------------------|-----------------------|-------|-------|
| PPV (in/s)         | 0.023                 | 0.043 | 0.028 |
| FREQ (Hz)          | 83.3                  | 2.0   | 83.3  |
| PD (.001")         | 0.17                  | 3.65  | 0.15  |
| PPA (g)            | 0.026                 | 0.039 | 0.046 |
| Peak Vector Sum:   | 0.043 in/s            |       |       |
| Peak Air Pressure: | 94 db                 |       |       |
|                    | 0.00021 PSI @ 11.9 Hz |       |       |

### Additional Info:

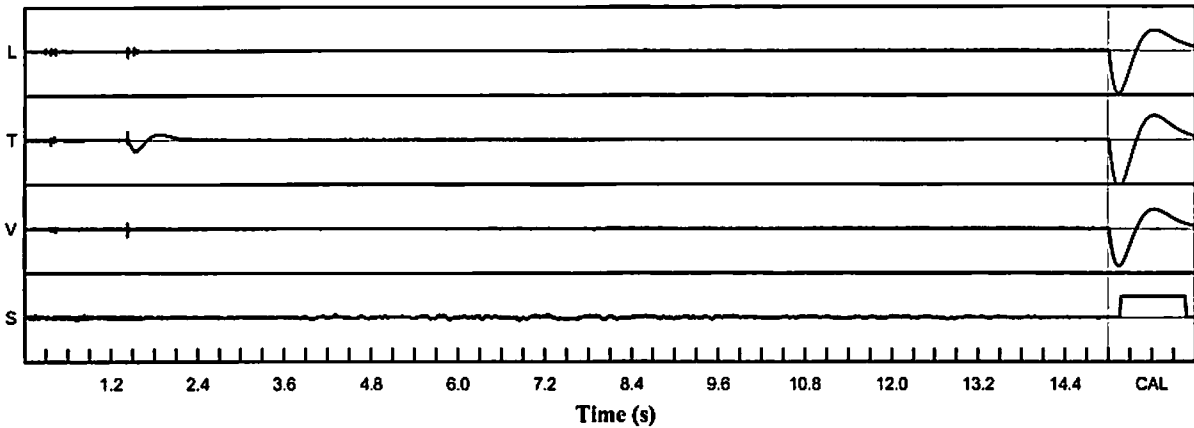
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
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### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 17



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/11/2018 13:18:06  
**Event No:** 18  
**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

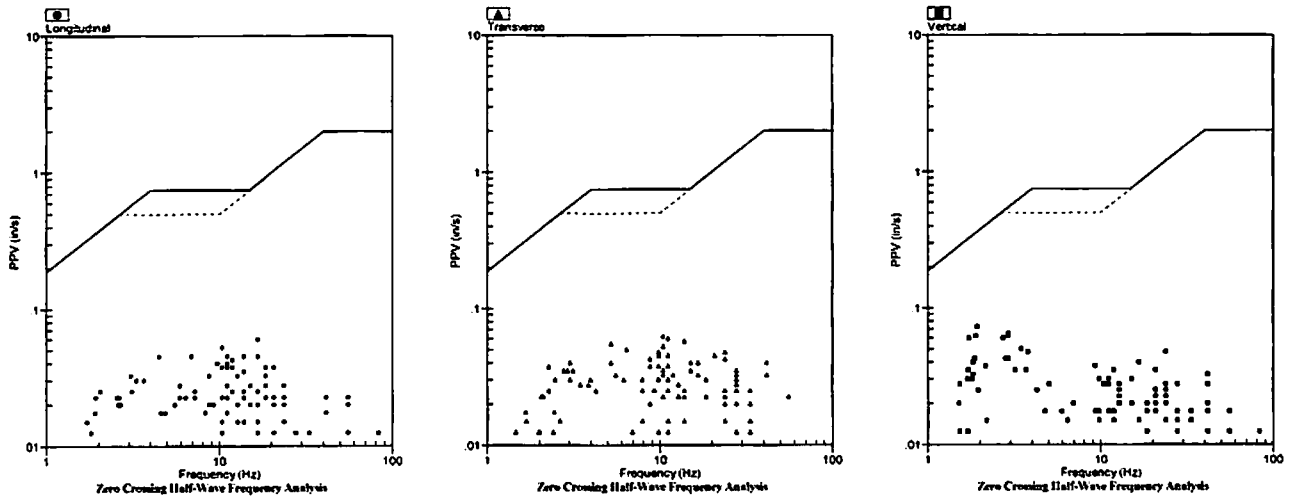
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.060                | 0.063 | 0.073 |
| FREQ (Hz)          | 16.7                 | 10.4  | 1.9   |
| PD (.001")         | 1.75                 | 2.01  | 5.67  |
| PPA (g)            | 0.020                | 0.020 | 0.026 |
| Peak Vector Sum:   | 0.073 in/s           |       |       |
| Peak Air Pressure: | 103 db               |       |       |
|                    | 0.00045 PSI @ 2.8 Hz |       |       |

### Additional Info:

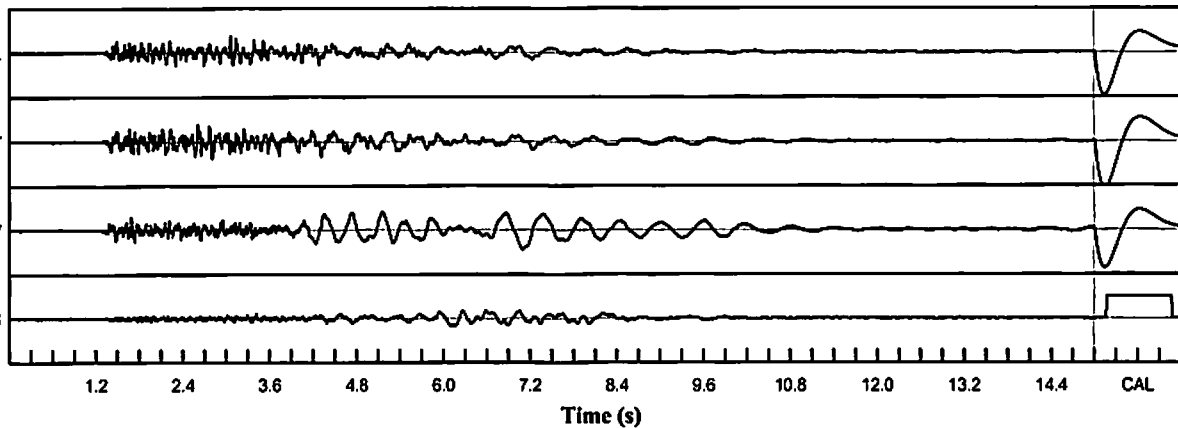
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
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### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 18



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/13/2018 10:33:44  
**Event No:** 19  
**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

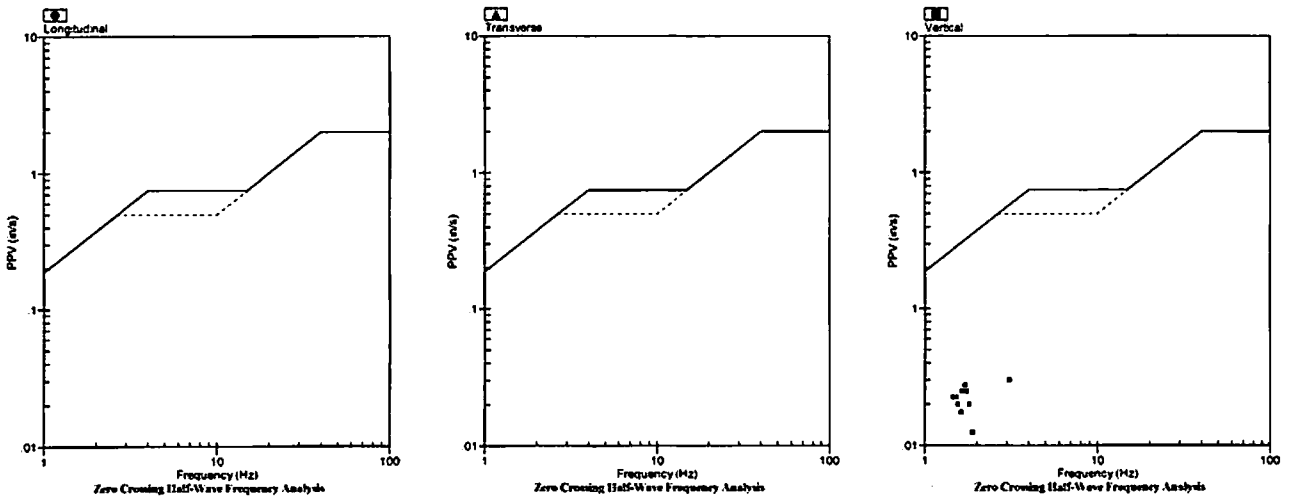
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.005                | 0.010 | 0.030 |
| FREQ (Hz)          | 1.3                  | 1.6   | 1.6   |
| PD (.001")         | 0.38                 | 0.86  | 2.70  |
| PPA (g)            | 0.007                | 0.007 | 0.007 |
| Peak Vector Sum:   | 0.030 in/s           |       |       |
| Peak Air Pressure: | 82 db                |       |       |
|                    | 0.00009 PSI @ 1.0 Hz |       |       |

### Additional Info:

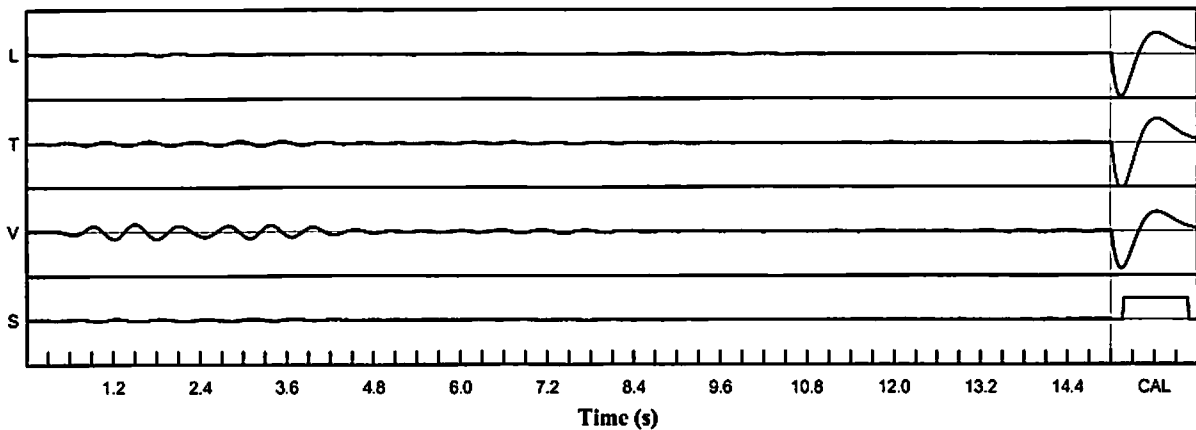
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 19



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/14/2018 13:17:41  
**Event No:** 20  
**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

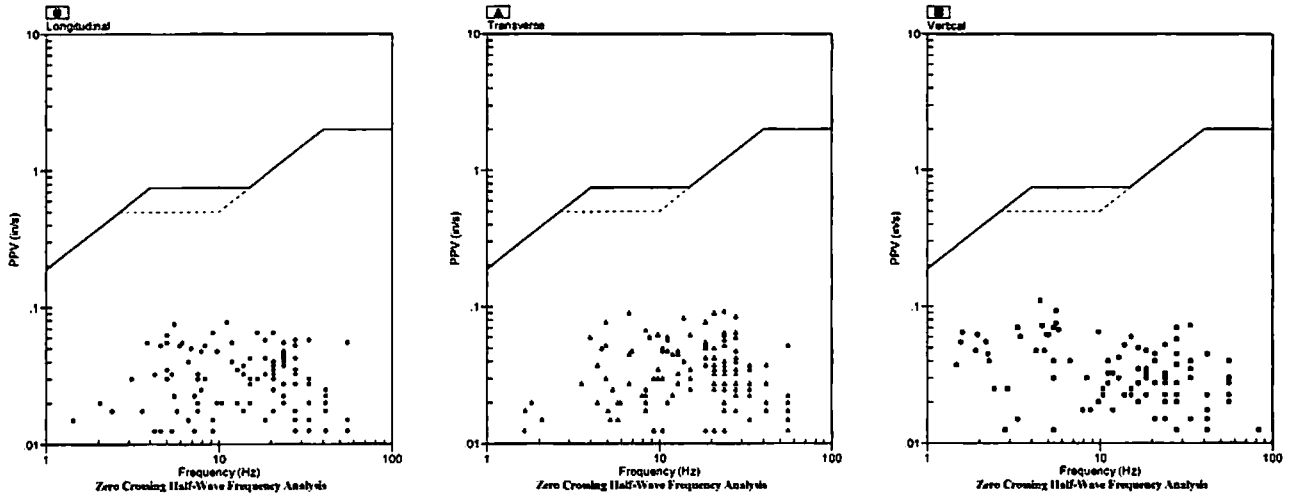
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.078                | 0.093 | 0.110 |
| FREQ (Hz)          | 11.1                 | 23.8  | 4.5   |
| PD (.001")         | 1.86                 | 2.45  | 4.55  |
| PPA (g)            | 0.033                | 0.033 | 0.039 |
| Peak Vector Sum:   | 0.115 in/s           |       |       |
| Peak Air Pressure: | 110 db               |       |       |
|                    | 0.00093 PSI @ 4.2 Hz |       |       |

### Additional Info:

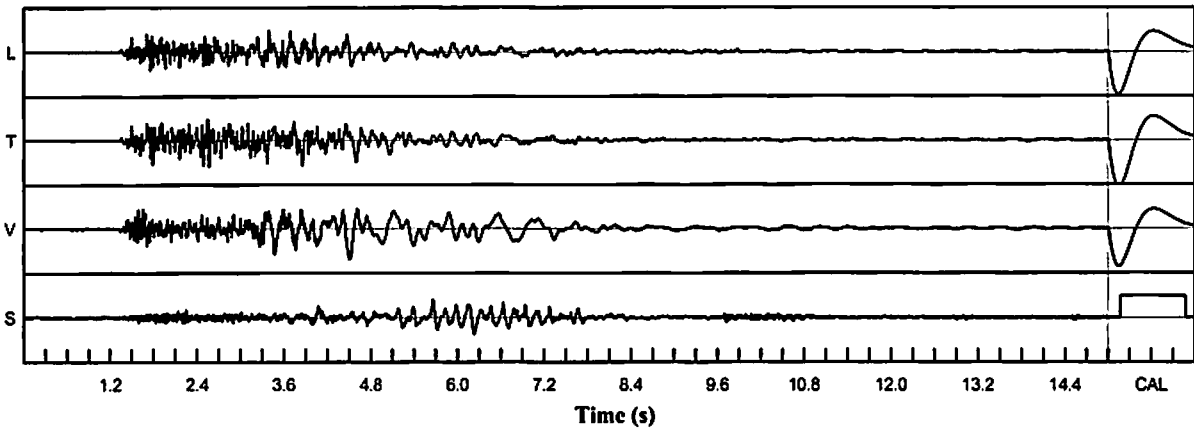
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 20



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/16/2018 11:41:38  
**Event No:** 21  
**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

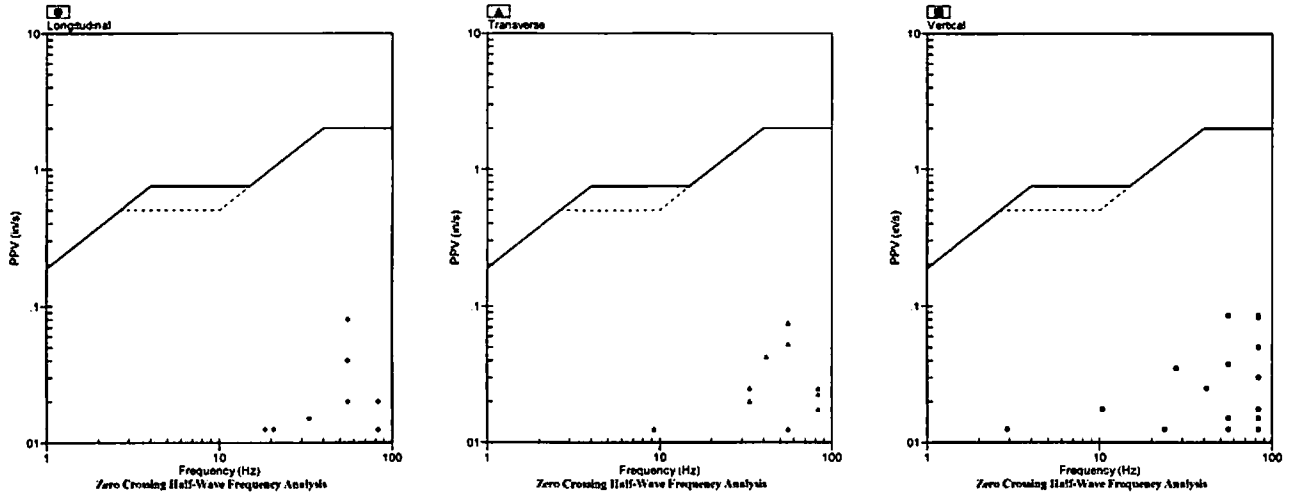
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.095                | 0.075 | 0.305 |
| FREQ (Hz)          | 83.3                 | 55.6  | 83.3  |
| PD (.001")         | 0.38                 | 0.31  | 0.54  |
| PPA (g)            | 0.143                | 0.072 | 0.332 |
| Peak Vector Sum:   | 0.315 in/s           |       |       |
| Peak Air Pressure: | 81 db                |       |       |
|                    | 0.00007 PSI @ 1.0 Hz |       |       |

### Additional Info:

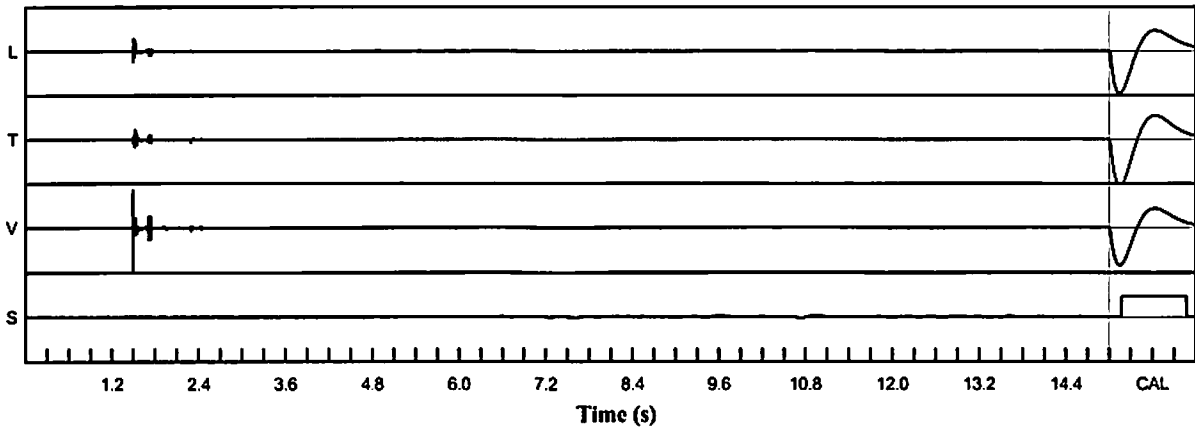
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 21



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.320 in/s  
**Sound Scale:** +/- 0.0023 PSI

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/19/2018 13:17:49  
**Event No:** 22  
**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

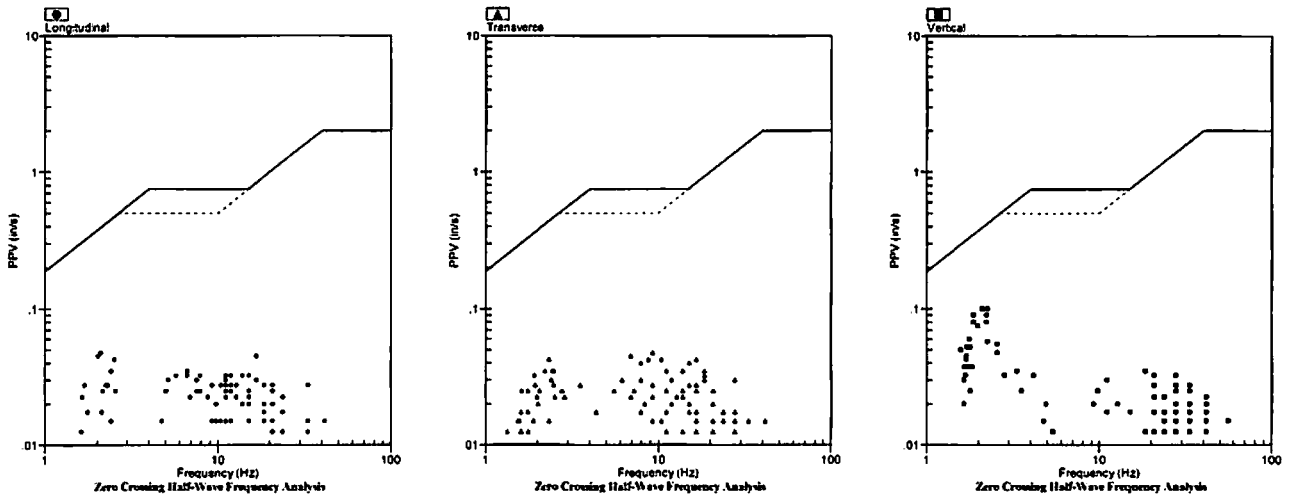
### Summary Data

|                           | L                    | T     | V     |
|---------------------------|----------------------|-------|-------|
| <b>PPV (in/s)</b>         | 0.048                | 0.048 | 0.100 |
| <b>FREQ (Hz)</b>          | 2.1                  | 9.3   | 2.3   |
| <b>PD (.001")</b>         | 3.11                 | 2.31  | 7.67  |
| <b>PPA (g)</b>            | 0.013                | 0.020 | 0.013 |
| <b>Peak Vector Sum:</b>   | 0.103 in/s           |       |       |
| <b>Peak Air Pressure:</b> | 106 db               |       |       |
|                           | 0.00066 PSI @ 3.1 Hz |       |       |

### Additional Info:

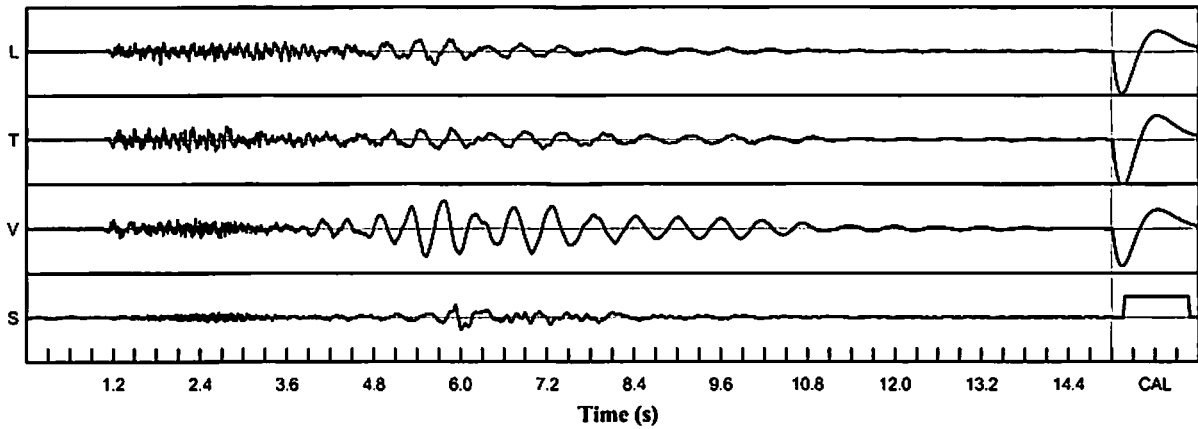
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 22



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/20/2018 13:34:16  
**Event No:** 23  
**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

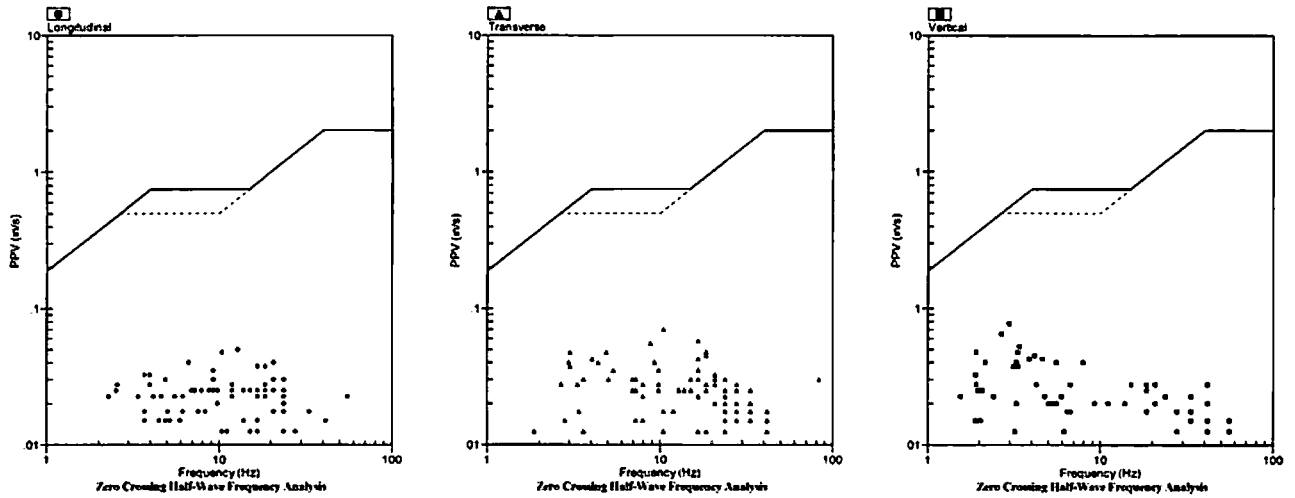
### Summary Data

|                    | L                    | T     | V     |
|--------------------|----------------------|-------|-------|
| PPV (in/s)         | 0.050                | 0.070 | 0.078 |
| FREQ (Hz)          | 12.8                 | 10.4  | 3.0   |
| PD (.001")         | 1.32                 | 2.15  | 3.91  |
| PPA (g)            | 0.020                | 0.020 | 0.020 |
| Peak Vector Sum:   | 0.083 in/s           |       |       |
| Peak Air Pressure: | 110 db               |       |       |
|                    | 0.00089 PSI @ 3.8 Hz |       |       |

### Additional Info:

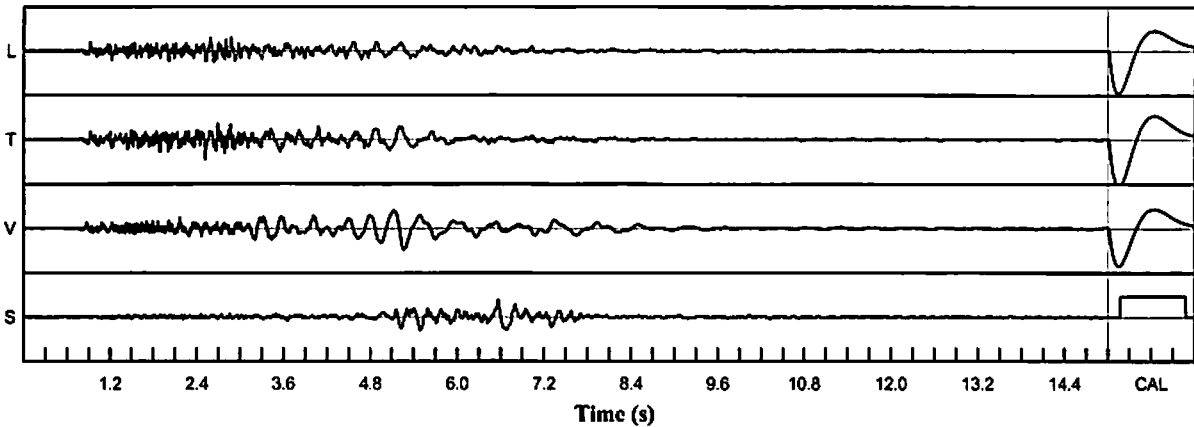
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 23



### Velocity Waveform Graph Scale

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

# Seismic Analysis

## USBM/Velocity Waveform Report

**Serial No:** 5150 v3.67  
**Date:** 06/21/2018 11:59:40  
**Event No:** 24  
**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

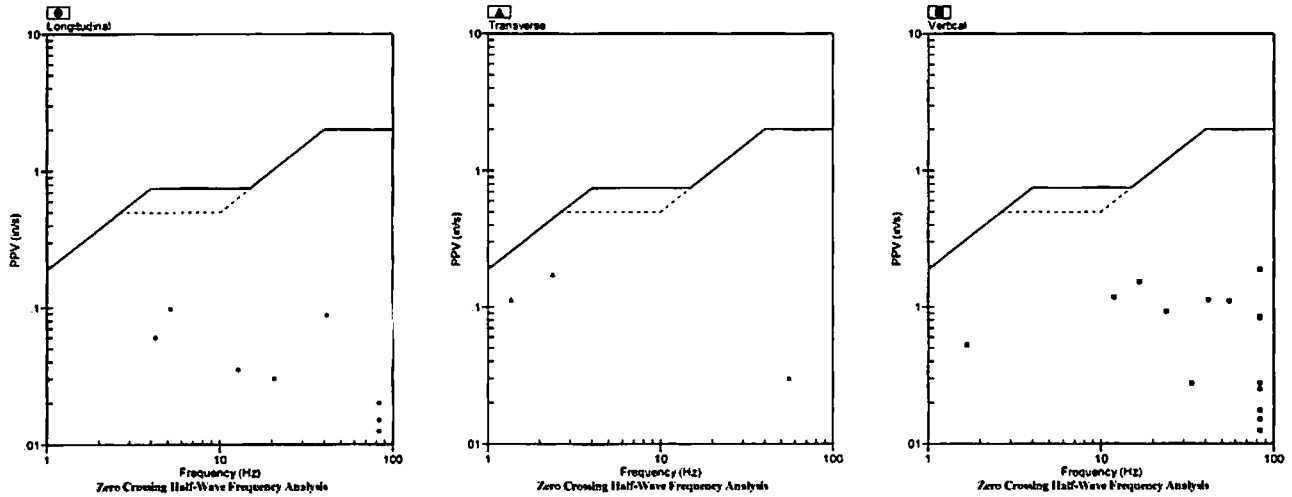
### Summary Data

|                    | L                     | T     | V     |
|--------------------|-----------------------|-------|-------|
| PPV (in/s)         | 0.133                 | 0.173 | 0.188 |
| FREQ (Hz)          | 166.7                 | 2.4   | 83.3  |
| PD (.001")         | 4.89                  | 12.23 | 2.50  |
| PPA (g)            | 0.189                 | 0.078 | 0.247 |
| Peak Vector Sum:   | 0.240 in/s            |       |       |
| Peak Air Pressure: | 106 db                |       |       |
|                    | 0.00064 PSI @ 83.3 Hz |       |       |

### Additional Info:

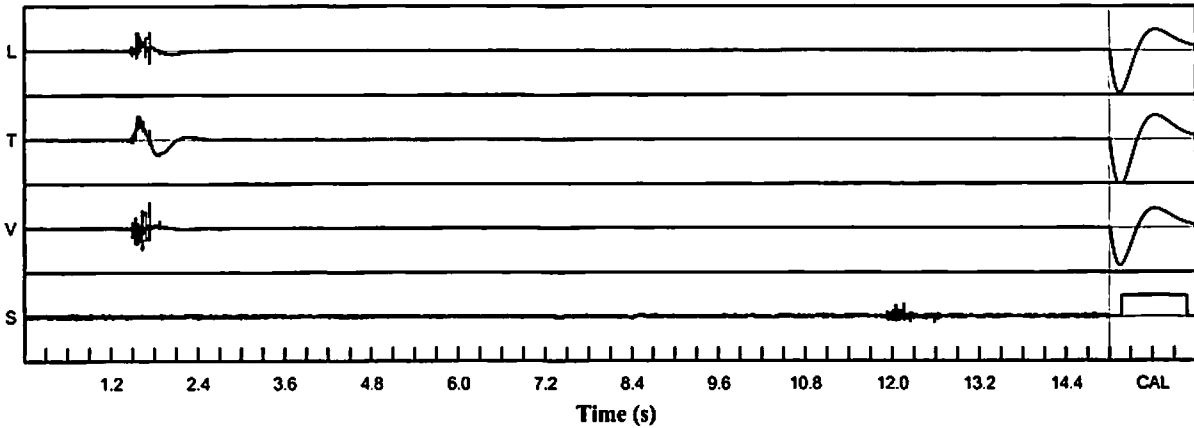
**Shaketable Calibrated:** 04/19/2018  
**By:** GeoSonics Inc.  
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 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

### USBM Safe Blasting Levels



### Velocity Waveform

SN: 5150 Event: 24



### Velocity Waveform Graph Scale

**Time Scale:** 0.300 s  
**Seismic Scale:** +/- 0.320 in/s  
**Sound Scale:** +/- 0.0023 PSI