SAN RAFAEL ROCK QUARRY VIBRATION REPORT

<table>
<thead>
<tr>
<th>Location</th>
<th>PB-7</th>
<th>Max. Charge Weight</th>
<th>90</th>
<th>Date of Blast</th>
<th>9.13.11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northing</td>
<td>37°59'13&quot; N</td>
<td></td>
<td></td>
<td>Time of Blast</td>
<td>11:31</td>
</tr>
<tr>
<td>Easting</td>
<td>122°27'10&quot; W</td>
<td>Blast Duration</td>
<td>0:54:11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seismograph Information</th>
<th>Seismograph Model</th>
<th>Serial Number</th>
<th>Last Calibration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2481</td>
<td>4550</td>
<td>4567</td>
</tr>
<tr>
<td></td>
<td>5.26</td>
<td>5.26</td>
<td>5.26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location Information</th>
<th>Location</th>
<th>Northing</th>
<th>Easting</th>
<th>Distance from Blast</th>
<th>Scaled Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Marin</td>
<td>37°59'19&quot; N</td>
<td>122°27'19&quot; W</td>
<td>12.14</td>
<td>127</td>
</tr>
<tr>
<td></td>
<td>Via Motosello</td>
<td>37°59'19&quot; N</td>
<td>122°27'19&quot; W</td>
<td>35.37</td>
<td>372</td>
</tr>
<tr>
<td></td>
<td>San Marino</td>
<td>37°59'31&quot; N</td>
<td>122°27'30&quot; W</td>
<td>24.51</td>
<td>258</td>
</tr>
<tr>
<td></td>
<td>McNear Park</td>
<td>37°59'30&quot; N</td>
<td>122°27'16&quot; W</td>
<td>17.95</td>
<td>189</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vibration Information</th>
<th>Longitudinal Peak Particle Velocity (ips)</th>
<th>Transverse Peak Particle Velocity (ips)</th>
<th>Vertical Peak Particle Velocity (ips)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vibration Information</th>
<th>Longitudinal Peak Frequency (Hz)</th>
<th>Transverse Peak Frequency (Hz)</th>
<th>Vertical Peak Frequency (Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vibration Information</th>
<th>Peak Vector Sum (ips)</th>
<th>Peak Air Overpressure (db)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Seismograph Operator: Deron Lopes

Signature: [Signature]
**SAN RAFAEL ROCK QUARRY BLAST REPORT**

**BASE DATA:**
- Location: PB-2
- Designed Bench Height (ft): 18
- Rock Density (lb/ft³): 2.7
- Date: 9/13/81
- Time: 11:31

**DESIGN DATA:**
- Number of Holes Shot: 35
- Hole Dia. (in): 2
- Stemming (ft): 15
- Loading Time Required (min hrs): 5
- Deck Type: 
- Ave. Hole Depth (ft): 1
- Burden (ft): 1
- Stein Typ.: 1
- Staggered Pattern (y or n): N
- Length (ft): 
- Relative Confinement: 
- Spacing (ft): 1
- Subdirl (ft): 3
- Number of Lost Holes: 0
- Tons Shot: 101.19

**EXPLOSIVES DATA:**

<table>
<thead>
<tr>
<th>Bulk Explosive Weight</th>
<th>Boosters Units</th>
<th>Delays Units</th>
<th>Misc. Units</th>
<th>Max (lb/hole)</th>
<th>Blast Duration (sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000</td>
<td>300</td>
<td>15</td>
<td>50</td>
<td>35</td>
<td>90</td>
</tr>
</tbody>
</table>

**VIBRATION DATA:**
- Nearest Structure: 
- Seismograph Loc.: 
- Temperature: 75°
- Max. Chrg. (lb/8ms): 
- Northing: 37431 911
- Northing: 
- Sky Condition: C
e  
- RPPV: 
- Easting: 16973 125
- Easting: 
- Wind Direction: 
- Frequency: 
- Distance Away: 
- Distance Away: 
- Wind Speed: 3
- Airblast: 

**PERFORMANCE DATA:**
- Powder Factor (lb/ton): 
- Lb/yard³: 
- Vibration: 
- Fragmentation: 
- Displacement: 
- Crushability: 
- Fines: 
- Digability: 

**Comments:**

Blaster in Charge: 

Signed: [Signature]
9.13.11
PB-7
*1556

35-Holes
35: 50 E2 det
12: 42ms E2 TL
2: 17ms
35: 450 geom.

5960 ft.

Depth: 21

Main 12.14
Via 3532

119 ft.
3461
M 1795

122° 57' 10" W
GeoSonics Inc. Seismic Analysis
Stop Event Report

Serial No: 7155 v3.23
Client: COUNTY OF MARIN
Operation: SAN RAFAEL ROCK QUARRY
Location: 16 MARIN BAY PARK CT.
Distance: 
Operator: VIBRA-TECH GSM
Comment: WILLIAM HOSKEN RESIDENC

Begin Date: 09/13/2011 07:00:50 (UTC-7)
End Date: 09/13/2011 20:00:00 (UTC-7)
Events over Trigger: 0 (6-8)
Record Time: 5.0 s
Seismic Trigger: 0.030 in/s
Sound Trigger: N/A
Battery Level: 8.8

Shaketable Calibrated: 01/26/2011
By: Vibra-Tech, Inc.
2700 Holloway Road - Suite 113
Louisville, KY 40299 U.S.A.
TEL: 502.240.9900 FAX: 502.240.9902

Dynamic Calibration Graph:

Cal Test Results:
Longitudinal: Pass
Transverse: Pass
Vertical: Pass
Sound: Pass

The seismograph located across the street from 16 Marin Bay Park Court (S/N 7155) did not trigger during the blast on September 13, 2011 at approximately 11:31 indicating the ground vibrations produced were below the ground trigger level of 0.030 in/sec.
The seismograph on Quarry Property (S/N 9856) did not trigger during the shot on September 13, 2011 at approximately 11:31 indicating the ground vibrations produced were below the ground trigger level of 0.030 in/sec.
The seismograph at 114 San Marino Drive (S/N 9669) did not trigger during the shot on September 13, 2011 at approximately 11:31 indicating the ground vibrations produced were below the ground trigger level of 0.030 in/sec.