Event Report

Date/Time: Long at 15:06:20 January 14, 2019
Trigger Source: Geo: 1,000 mm/s, Mic: 500.0 pa (L)
Range: Geo: 31.75 mm/s
Record Time: 2.0 sec at 1024 sps
Job Number: 1

Serial Number: BE17407 V 10.72-1.1 Minimate Blaster
Battery Level: 6.1 Volts
Unit Calibration: January 19, 2018 by CIMFR Dhanbad
File Name: S407HHRU_AK0
Scaled Distance: 22.4 (100.0 m, 20.0 kg)

Notes:
Location: Pit-C
Client: Kathautia Open Cast Coal Mines, Hil
User Name: Nishikant Kumar
General: Coal Mine

Microphone: Linear Weighting
PSPL: 9.250 pa (L) at 0.437 sec
ZC Freq: 27 Hz
Channel Test: Passed (Freq = 19.7 Hz Amp = 451 mv)

PPV
Tran  Vert  Long
1.349  1.699  2.064 mm/s

ZC Freq
47  16  14 Hz

Time (Rel. to Trig)
0.234  0.310  0.196 sec

Peak Acceleration
0.043  0.027  0.053 g

Peak Displacement
0.007  0.017  0.018 mm

Sensor Check
Passed  Passed  Passed
Frequency
7.5  7.6  7.6 Hz

Overswing Ratio
3.7  3.4  3.5

Peak Vector Sum: 2.242 mm/s at 0.196 sec

Frequency (Hz)
Tran:  Vert:  Long: 0

Time Scale: 0.20 sec/div
Amplitude Scale: Geo: 0.500 mm/s/div Mic: 10.000 pa (L)/div
Trigger =

Sensor Check

Printed: January 15, 2019 (V 10.72 - 10.72)
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Event Report

Date/Time: Vert at 15:24:04 January 12, 2019
Trigger Source: Geo: 1.000 mm/s, Mic: 500.0 pa.(L)
Range: Geo: 31.75 mm/s
Record Time: 2.0 sec at 1024 sps
Job Number: 1

Notes:
Location: Pit-C
Client: Kathautia Open Cast Coal Mines, HIL
User Name: Nishikant Kumar
General: Coal Mine

Microphone: Linear Weighting
PSPL: 10.25 pa.(L) at 0.544 sec
ZC Freq: 26 Hz
Channel Test: Passed (Freq = 19.7 Hz Amp = 458 mv )

PPV
Tran 1.222 1.937 1.889 mm/s
ZC Freq 11 11 8.1 Hz
Time (Rel. to Trig) 0.242 0.057 0.245 sec
Peak Acceleration 0.015 0.018 0.017 g
Peak Displacement 0.019 0.024 0.030 mm
Sensor Check: Passed Passed Passed
Frequency: 7.7 7.5 7.7 Hz
Overswing Ratio: 3.6 3.4 3.6

Peak Vector Sum: 2.740 mm/s at 0.245 sec

USBM RI8507 And OSMRE

Frequency (Hz)
Tran: + Vert: = Long: o

MicL
Long
Vert
Tran

Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.500 mm/s/div Mic: 10.000 pa.(L)/div

Serial Number: BE17407 V 10.72-1.1 Minimate Blaster
Battery Level: 6.1 Volts
Unit Calibration: January 19, 2018 by CIMFR Dhanbad
File Name: S407HRDU S40
Scaled Distance: 22.4 (100.0 m, 20.0 kg)
Event Report

Date/Time: Tran at 16:35:16 January 11, 2019
Trigger Source: Geo: 1.000 mm/s, Mic: 500.0 pa.(L)
Range: Geo: 31.75 mm/s
Record Time: 2.0 sec at 1024 sps
Job Number: 1

Notes
Location: Pit-C
Client: Kathautia Open Cast Coal Mines, HIL
User Name: Nishikant Kumar
General: Coal Mine

Microphone: Linear Weighting
PSPL: 5.000 pa.(L) at 0.301 sec
ZC Freq: 39 Hz
Channel Test: Passed (Freq = 19.7 Hz Amp = 494 mv )

<table>
<thead>
<tr>
<th></th>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPV</td>
<td>1.206</td>
<td>0.841</td>
<td>1.254</td>
</tr>
<tr>
<td>ZC Freq</td>
<td>14</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Time (Rel. to Trig)</td>
<td>0.175</td>
<td>0.040</td>
<td>0.191</td>
</tr>
<tr>
<td>Peak Acceleration</td>
<td>0.025</td>
<td>0.020</td>
<td>0.025</td>
</tr>
<tr>
<td>Peak Displacement</td>
<td>0.013</td>
<td>0.009</td>
<td>0.009</td>
</tr>
<tr>
<td>Sensor Check</td>
<td>Passed</td>
<td>Passed</td>
<td>Passed</td>
</tr>
<tr>
<td>Frequency</td>
<td>7.6</td>
<td>7.6</td>
<td>7.7</td>
</tr>
<tr>
<td>Overswing Ratio</td>
<td>3.7</td>
<td>3.4</td>
<td>3.6</td>
</tr>
<tr>
<td>Peak Vector Sum</td>
<td>1.413 mm/s at 0.118 sec</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

USBM RI8507 And OSMRE

Frequency (Hz)
Tran: + Vert: > Long: o

MicL
Long
Vert
Tran

Time Scale: 0.20 sec/div
Amplitude Scale: Geo: 0.500 mm/s/div Mic: 10.000 pa.(L)/div
Trigger =

Sensor Check

Printed: January 15, 2019 (V 10.72 - 10.72)
Format © 1996-2014 Xmark Corporation
Date/Time: Long at 15:45:00 January 9, 2019
Trigger Source: Geo: 1.000 mm/s, Mic: 500.0 pa (L)
Range: Geo: 31.75 mm/s
Record Time: 2.0 sec at 1024 sps
Job Number: 1

Serial Number: BE17407 V 10.72-1.1 Minimate Blaster
Battery Level: 6.1 Volts
Unit Calibration: January 19, 2018 by CIMFR Dhanbad
File Name: S407HR8B.R00
Scaled Distance: 22.4 (100.0 m, 20.0 kg)

Notes:
Location: Pit-C
Client: Kathautia Open Cast Coal Mines, HIL
User Name: Nishikant Kumar
General: Coal Mine

Microphone: Linear Weighting
PSPL: 4.000 pa (L) at 0.653 sec
ZC Freq: 15 Hz
Channel Test: Passed (Freq = 19.7 Hz Amp = 467 mV)

<table>
<thead>
<tr>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.762</td>
<td>1.556</td>
<td>1.413 mm/s</td>
</tr>
</tbody>
</table>

PPV: 43 28 39 Hz
Time (Rel. to Trig): 0.051 0.109 0.012 sec
Peak Acceleration: 0.027 0.033 0.038 g
Peak Displacement: 0.007 0.009 0.008 mm
Sensor Check: Passed Passed Passed
Frequency: 7.7 7.5 7.7 Hz
Overswing Ratio: 3.6 3.4 3.6
Peak Vector Sum: 2.039 mm/s at 0.109 sec

Printed: January 19, 2019 (V 10.72 - 10.72)  
Format © 1996-2014 Xmark Corporation
**Event Report**

**Date/Time**
Tran at 15:21:00 January 8, 2019

**Trigger Source**
Gec: 1.000 mm/s, Mic: 500.0 pa (L)

**Range**
Geo: 31.75 mm/s

**Record Time**
2.0 sec at 1024 sps

**Job Number**
1

**Notes**
Location: Pit-C
Client: Kathautia Open Cast Coal Mines, HIL
User Name: Nishikant Kumar
General: Coal Mine

**Microphone**
Linear Weighting

**PSPL**
4.250 pa (L) at 0.623 sec

**ZC Freq**
12 Hz

**Channel Test**
Passed (Freq = 20.1 Hz Amp = 506 mv)

<table>
<thead>
<tr>
<th>PPV</th>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.254</td>
<td>0.921</td>
<td>1.635</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ZC Freq</th>
<th>32</th>
<th>30</th>
<th>39</th>
</tr>
</thead>
</table>

| Time (Rel. to Trig) | 0.308 | 0.212 | 0.388 |
| Peak Acceleration   | 0.030 | 0.025 | 0.045 |
| Peak Displacement   | 0.007 | 0.006 | 0.012 |

**Sensor Check**
Passed Passed Check

**Frequency**
7.5 7.5 8.6 Hz

**Overswing Ratio**
3.7 3.4 3.4

**Peak Vector Sum**
1.753 mm/s at 0.003 sec

**Serial Number**
BE17407 V 10.72-1.1 Minimate Blaster

**Battery Level**
6.1 Volts

**Unit Calibration**
January 19, 2018 by CIMFR Dhanbad

**File Name**
S407HR6F.200

**Scaled Distance**
22.4 (100.0 m, 20.0 kg)

**Graphs**
- **USBM RI8507 And OSMRE**
- Time Scale: 0.20 sec/div, Amplitude Scale: Geo: 0.500 mm/s/div Mic: 10.000 pa (L)/div

**Comments**

---

Printed: January 15, 2019 12:43:23
Generated: 2018-08-20 14:54:03
Date/Time: Vert at 13:41:09 January 5, 2019
Trigger Source: Geo: 1.000 mm/s, Mic: 500.0 pa.(L)
Range: Geo: 31.75 mm/s
Record Time: 2.0 sec at 1024 sps
Job Number: 1

Serial Number: BE17407 V 10.72-1.1 Minimate Blaster
Battery Level: 6.1 Volts
Unit Calibration: January 19, 2018 by CIMFR Dhanbad
File Name: S407HR0R.CLO
Scaled Distance: 22.4 (100.0 m, 20.0 kg)

Notes:
Location: Pit-C
Client: Kathautia Open Cast Coal Mines, HIL
User Name: Nishikant Kumar
General: Coal Mine

Microphone: Linear Weighting
PSPL: 5.500 pa (L) at 0.832 sec
ZC Freq: 23 Hz
Channel Test: Passed (Freq = 20.1 Hz Amp = 502 mv)

PPV
<table>
<thead>
<tr>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.540</td>
<td>2.349</td>
<td>1.492</td>
</tr>
</tbody>
</table>

ZC Freq
<table>
<thead>
<tr>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>18</td>
<td>20</td>
</tr>
</tbody>
</table>

Time (Rel. to Trig)
<table>
<thead>
<tr>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.022</td>
<td>0.085</td>
<td>0.065</td>
</tr>
</tbody>
</table>

Peak Acceleration
<table>
<thead>
<tr>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.041</td>
<td>0.038</td>
<td>0.036</td>
</tr>
</tbody>
</table>

Peak Displacement
<table>
<thead>
<tr>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.011</td>
<td>0.024</td>
<td>0.014</td>
</tr>
</tbody>
</table>

Sensor Check: Passed Passed Passed

Frequency
<table>
<thead>
<tr>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.4</td>
<td>7.6</td>
<td>7.8</td>
</tr>
</tbody>
</table>

Overswing Ratio
<table>
<thead>
<tr>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7</td>
<td>3.3</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Peak Vector Sum: 2.707 mm/s at 0.006 sec

Graphs showing seismic data with various measurements and plots.
Date/Time: Vert at 13:32:46 January 5, 2019
Trigger Source: Geo: 1.000 mm/s, Mic: 500.0 pa.(L)
Range: Geo: 31.75 mm/s
Record Time: 2.0 sec at 1024 sps
Job Number: 1

Notes:
Location: Pit-C
Client: Kathautia Open Cast Coal Mines, HIL
User Name: Nishikant Kumar
General: Coal Mine

Microphone: Linear Weighting
PSPL: 3.250 pa.(L) at 1.873 sec
ZC Freq: 16 Hz
Channel Test: Passed (Freq = 20.1 Hz Amp = 497 mv)

<table>
<thead>
<tr>
<th></th>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPV</td>
<td>0.349</td>
<td>2.826</td>
<td>2.302</td>
</tr>
<tr>
<td>ZC Freq</td>
<td>&gt;100</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Time (Rel to Trig)</td>
<td>0.787</td>
<td>0.002</td>
<td>-0.007</td>
</tr>
<tr>
<td>Peak Acceleration</td>
<td>0.028</td>
<td>0.035</td>
<td>0.041</td>
</tr>
<tr>
<td>Peak Displacement</td>
<td>0.030</td>
<td>0.199</td>
<td>0.064</td>
</tr>
<tr>
<td>Sensor Check</td>
<td>Passed</td>
<td>Passed</td>
<td>Passed</td>
</tr>
<tr>
<td>Frequency</td>
<td>7.6</td>
<td>7.5</td>
<td>7.8</td>
</tr>
<tr>
<td>Overswing Ratio</td>
<td>3.6</td>
<td>3.4</td>
<td>3.5</td>
</tr>
<tr>
<td>Peak Vector Sum</td>
<td>3.616 mm/s at -0.007 sec</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A: Not Applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graphs showing velocity and frequency data.

USBM RI8507 And OSMRE
No velocity above 1.00 mm/s

Frequency (Hz)
Tran: ▲ Vert: ▼ Long: □

Printed: January 13, 2019 01:10:73 10:31
Format: 4295 2014 Kruse Corporation
Event Report

Date/Time: Vert at 12:56:17 January 4, 2019
Trigger Source: Geo: 1.000 mm/s, Mic 500.0 pa(L)
Range: Geo: 31.75 mm/s
Record Time: 2.0 sec at 1024 sps
Job Number: 1

Serial Number: BE17407 V 10.72-1.1 Minimate Blaster
Battery Level: 6.0 Volts
Unit Calibration: January 19, 2018 by CIMFR Dhanbad
File Name: S407HQYY LTO
Scaled Distance: 22.4 (100.0 m, 20.0 kg)

Notes:
Location: Pit-C
Client: Kathautia Open Cast Coal Mines, HIL
UserName: Nishkant Kumar
General: Coal Mine

Microphone: Linear Weighting
PSPL: 3.500 pa(L) at 0.554 sec
ZC Freq: 8.7 Hz
Channel Test: Passed (Freq = 20.1 Hz Amp = 539 mv)

<table>
<thead>
<tr>
<th></th>
<th>Tran</th>
<th>Vert</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPV</td>
<td>3.429</td>
<td>2.969</td>
<td>3.238</td>
</tr>
<tr>
<td>ZC Freq</td>
<td>27</td>
<td>21</td>
<td>30</td>
</tr>
</tbody>
</table>
| Time (Rel. to Trig) | 0.177 | 0.118 | 0.140 | sec
| Peak Acceleration | 0.080 | 0.058 | 0.068 | g
| Peak Displacement | 0.019 | 0.021 | 0.020 | mm
| Sensor Check   | Passed| Passed| Passed|
| Frequency      | 7.7  | 7.6  | 7.7  |
| Overswing Ratio| 3.7  | 3.5  | 3.6  |

Peak Vector Sum: 4.558 mm/s at 0.121 sec

Monitor Log:

USBM R18507 And OSMRE

Frequency (Hz)
Tran. + Vert. + Long. φ

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Time Scale: 0.20 sec/div  Amplitude Scale: Geo: 1.000 mm/s/div Mic: 10.000 pa(L)/div
Trigger →
Event Report

Date/Time: Long at 12:55:49 January 3, 2019
Trigger Source: Geo: 1.000 mm/s, Mic: 500.0 pa (L)
Range: Geo: 31.75 mm/s
Record Time: 2.0 sec at 1024 sps
Job Number: 1

Notes:
Location: Pit-C
Client: Rathnaphi Open Cast Coal Mines, HIL
User Name: Nishant Kumar
General: Coal Mine

Microphone: Linear Weighting
PSPL: 17.00 pa (L) at 0.472 sec
ZC Freq: 15 Hz
Channel Test: Passed (Freq = 20.1 Hz Amp = 538 mv)

PPV: 1.619 1.175 1.381 mm/s
ZC Freq: 51 34 73 Hz
Time (Rel. to Trig): 0.455 0.576 0.482 sec
Peak Acceleration: 0.056 0.053 0.073 g
Peak Displacement: 0.008 0.008 0.004 mm
Sensor Check: Passed Passed Passed
Frequency: 7.5 7.5 7.6 Hz
Overswing Ratio: 3.8 3.5 3.6
Peak Vector Sum: 1.833 mm/s at 0.454 sec

Serial Number: BE17407 V 10.72-1.1 Minimate Blaster
Battery Level: 6.1 Volts
Unit Calibration: January 19, 2018 by CIMFR Dhanbad
File Name: S407HQWZ.X10
Scaled Distance: 22.4 (100.0 m, 20.0 kg)

USBM R1507 And OSMRE

Printed: January 10, 2019 (V 10.72 - 10.72)
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