BLASTERS TRAINING SEMINAR PROGRAM

Day 1 – Wednesday, January 4, 2017

7:30 – 8:00 am  Registration

8:00 – 8:15 am  Introduction  
Paul Worsey,
Missouri S&T

8:15 – 9:00 am  Overview of Blasting and Explosive Types  
Doc Holiday,  
Austin Powder

9:00 – 10:00 am  Selection of Explosives  
Doc Holiday,  
Austin Powder

10:00 – 10:15 am  Break

10:15 – 12:00 pm  Initiation Sys. & Blasting Mach.  
Mark Acree,  
Orica

12:00 – 1:00 pm  Lunch Break

1:00 – 2:00 pm  Design of a Blast Hole  
Paul Worsey,  
Missouri S&T

2:00 – 3:00 pm  Blast Design  
Paul Worsey,  
Missouri S&T

3:00 – 3:15 pm  Break

3:15 – 4:15 pm  Delay Design/Pattern Timing  
Paul Worsey,  
Missouri S&T

4:15 – 4:45 am  Trouble Shooting Oversize  
Paul Worsey,  
Missouri S&T

4:45 – 5:00 pm  Specialist & Secondary Blasting  
Paul Worsey,  
Missouri S&T
Day 2 – Thursday, January 5, 2017

8:00 - 9:00 am  Blast Design Cont.                  Keith Henderson,  
                 Geologic Considerations          Buckley Powder  
9:00 – 10:00 am Loading Blast Holes      Keith Henderson,  
                                                Buckley Powder  
10:00 – 10:15 am Break                        
10:15 – 11:00 pm Construction Blasting     Greg Jones,  
                                                Orica  
11:00 – 12:00 pm Safety                      Paul Worsley,  
                        Signs, Warning Signals &     Missouri S&T  
                        Site Control               
                        Flyrock                   
12:00 – 1:00 pm Lunch Break                   
1:00 – 2:00 pm Unpredictable Hazards        Greg Jones,  
                                               Orica  
                                               Lightning  
                                               Stray Currents  
                                               Radio Waves  
                                               Misfires  
2:00 – 3:00 pm Federal & State Laws & Regs  Paul Worsley,  
                                               MSHA, ATF,  
                                               Missouri S&T  
3:00 – 3:15 pm Break                          
3:15 – 3:40 pm State Regs                   Paul or Gillian Worsley,  
                                                Missouri S&T  
3:40 – 5:00 pm Federal & State Laws Cont..  Paul or Gillian Worsley,  
                                                Missouri S&T  
                                                DOT  
                                                OSM  
                                                Blast Plan Requir. & Sch.  
                                                EPA, DNR
## Day 3 – Friday, January 6, 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>8:00 – 10:00 am</td>
<td>Environment Effects</td>
<td>Lee Frea, Vibra-Tech</td>
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<td>Ground Vibrations</td>
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<td>Air Blast</td>
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<td>10:00 – 10:15 am</td>
<td>Break</td>
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<tr>
<td>10:15 – 11:30 am</td>
<td>Blast Vibration Monitoring</td>
<td>Lee Frea, Vibra-Tech</td>
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<td>Seismographs</td>
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<td>Records</td>
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<td>Pre-Blast Surveys</td>
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<td>Effects of Timing</td>
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<td>11:30 – 12:00 am</td>
<td>State Exam Review</td>
<td>Paul Worsey, Missouri S&amp;T</td>
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<td>12:00 – 1:00 pm</td>
<td>Lunch Break</td>
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<td><strong>Afternoon - Advanced Topics</strong></td>
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<td>1:00 – 2:00 pm</td>
<td>Basics of Advanced Blast Design</td>
<td>Paul Worsey, Missouri S&amp;T</td>
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<td>2:00 – 3:00 pm</td>
<td><strong>Blasting Cap Accuracy</strong></td>
<td>Paul Worsey, Missouri S&amp;T</td>
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<td>2:00 – 3:00 pm</td>
<td><strong>Underground Blasting</strong></td>
<td>Mark Acree, Orica</td>
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<td>3:00 – 3:15 pm</td>
<td>Break</td>
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<td>3:15 – 4:15 pm</td>
<td>Dead Pressing &amp; Sympathetic Detonation using newer explosives</td>
<td>Paul Worsey, Missouri S&amp;T</td>
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<td>4:15 – 5:00 pm</td>
<td>Perimeter Blasting</td>
<td>Paul Worsey, Missouri S&amp;T</td>
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