51 East 400 North, Suite 4-B
P.O. Box 987
Cedar City, UT 84721-0987
License # 97-344280-5501

3-RIVERS
DRILLING & BLASTING

Phone: (435) 865-6980
Fax: (435) 865-1190
e-mail: 3rivers@infowest.com
Web Site: 3riversdrillingandblasting.com

Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	**Unit Number**	N\A	**Wind Direction**	South
Job Name/Location	Emery	**Date Calibrated**	N\A	**Wind Conditions**	0-5
Blaster in Charge	Steve Gurney	**Distance From Shot**	N/A	**Weather**	Cloudy
Bulk Truck Operator	N\A	**Peak Particle Velocity**	N/A	**Type of Rock**	Sandstone
Date of Shot	03/29/17	**Peak Sound Pressure**	N/A	**Temperature**	52
Blast Time	4:35 PM				
Shot Number	20				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	53.00				
Decks Per Hole	1.00				
Hole Diameter	3.00				
Stemming	5.00				
Burden	8.00				
Spacing	8.00				
Avg Hole Dpth	11.00				**Totals**
Total BCY's	1,381.93	0.00	0.00	0.00	1,381.93
Drill Footage	583.00	0.00	0.00	0.00	583.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
				Nonel EZ Det 30'	53.00	02JA17W1
Dyno Spartan 350	**0.75**	**37.00**	**05FE17J2**			
Brown Cap Boosters	**0.50**	**16.00**	**24JA17E3**			
Total LBS		**35.75**				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	**1.00**		**NA**	**Nonel EZTL 30' 42MS**	4	21JY14X1
DIESEL FUEL	**7.00**		**NA**	**Lead Line**	1000.00	13FE17W1
ANFO BAGS - 50 lb	**50.00**	17.50	20MA17LE			
Total LBS		**875.00**				

Wet Hole Product	lbs each	Number Used	Date Code
Total LBS			

Totals

Total BCY's	**1,381.93**	**Total Dets**	**53.00**
Powder Factor	**0.66**	**Total Pounds in Shot**	**910.75**
Secondary Yardage		**Max. Holes per Delay**	**1.00**
Gross Cubic Yards	**1,381.93**	**Max Charge per 8 ms Delay in Lbs**	**48.00**

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead, Augo Iturro

Blaster's Signature Steve Gurney

Date of Report: **03/29/17**

This shot was across the east bench.

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Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	Unit Number	N\A	Wind Direction	South
Job Name/Location	Emery	Date Calibrated	N\A	Wind Conditions	0-5
Blaster in Charge	Steve Gurney	Distance From Shot	N/A	Weather	Cloudy
Bulk Truck Operator	N\A	Peak Particle Velocity	N/A	Type of Rock	Sandstone
Date of Shot	03/30/17	Peak Sound Pressure	N/A	Temperature	52
Blast Time	4:35 PM				
Shot Number	21				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	59.00	7.00			
Decks Per Hole	1.00	1.00			
Hole Diameter	3.00	3.00			
Stemming	5.00	3.00			
Burden	8.00	8.00			
Spacing	8.00	4.00			
Avg Hole Dpth	11.00	8.00			Totals
Total BCY's	1,538.37	66.37	0.00	0.00	1,604.74
Drill Footage	649.00	56.00	0.00	0.00	705.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
				Nonel EZ Det 30'	66.00	02JA17W1
Dyno Spartan 350	0.75	59.00	05FE17J2			
Green Cap Boosters	0.35	7.00	23AU16E1			
Total LBS		46.70				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	1.00		NA	Nonel EZTL 30' 42MS	4	21JY14X1
DIESEL FUEL	7.00		NA	Lead Line	2000.00	13FE17W1
ANFO BAGS - 50 lb	50.00	28.00	27FE17N1	Nonel EZTL 30' 42MS	1.00	06FE17X1
Total LBS		1,400.00				

Wet Hole Product	lbs each	Number Used	Date Code
Total LBS			

Totals

Total BCY's	1,604.74	Total Dets	66.00
Powder Factor	0.90	Total Pounds in Shot	1,446.70
Secondary Yardage		Max. Holes per Delay	1.00
Gross Cubic Yards	1,604.74	Max Charge per 8 ms Delay in Lbs	48.00

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead, Augo Iturro

Blaster's Signature: Steve Gurney

Date of Report: 03/30/17

2 Shots, first was production, 2nd was boulder busting. 2 date codes of anfo 27FE17N1 used 19.5 and 20MA17LE used 8.5.

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Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	**Unit Number**	N\A	**Wind Direction**	South
Job Name/Location	Emery	**Date Calibrated**	N\A	**Wind Conditions**	0-10
Blaster in Charge	Steve Gurney	**Distance From Shot**	N/A	**Weather**	Cloudy
Bulk Truck Operator	N\A	**Peak Particle Velocity**	N/A	**Type of Rock**	Sandstone
Date of Shot	03/31/17	**Peak Sound Pressure**	N/A	**Temperature**	45
Blast Time	4:35 PM				
Shot Number	22				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	59.00	7.00			
Decks Per Hole	1.00	1.00			
Hole Diameter	3.00	3.00			
Stemming	5.00	3.00			
Burden	8.00	8.00			
Spacing	8.00	4.00			
Avg Hole Dpth	11.00	8.00			**Totals**
Total BCY's	1,538.37	66.37	0.00	0.00	1,604.74
Drill Footage	649.00	56.00	0.00	0.00	705.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
				Nonel EZ Det 30'	37.00	02JA17W1
				Nonel EZ Det 50'	30.00	28NO16X1
Green Cap Boosters	**0.35**	**67.00**	**23AU16E1**			
Total LBS		**23.45**				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	**1.00**		**NA**			
DIESEL FUEL	**7.00**		**NA**	**Lead Line**	3500.00	13FE17W1
ANFO BAGS - 50 lb	**50.00**	25.00	27FE17N1	Nonel EZTL 30' 42MS	7.00	06FE17X1
Total LBS		**1,250.00**				

Wet Hole Product	lbs each	Number Used	Date Code
Total LBS			

Totals

Total BCY's	**1,604.74**	**Total Dets**	**67.00**
Powder Factor	**0.79**	**Total Pounds in Shot**	**1,273.45**
Secondary Yardage		**Max. Holes per Delay**	**1.00**
Gross Cubic Yards	**1,604.74**	**Max Charge per 8 ms Delay in Lbs**	**48.00**

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead, Augo Iturro

Blaster's Signature Steve Gurney

Date of Report: **03/31/17**

2 Shots, 2nd was production, 1rst was boulder busting.

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Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	**Unit Number**	N\A	**Wind Direction**	South
Job Name/Location	Emery	**Date Calibrated**	N\A	**Wind Conditions**	0-10
Blaster in Charge	Steve Gurney	**Distance From Shot**	N/A	**Weather**	Cloudy
Bulk Truck Operator	N\A	**Peak Particle Velocity**	N/A	**Type of Rock**	Sandstone
Date of Shot	04/01/17	**Peak Sound Pressure**	N/A	**Temperature**	35
Blast Time	12:35 PM				
Shot Number	23				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	27.00				
Decks Per Hole	1.00				
Hole Diameter	3.00				
Stemming	5.00				
Burden	8.00				
Spacing	8.00				
Avg Hole Dpth	11.00				**Totals**
Total BCY's	704.00	0.00	0.00	0.00	704.00
Drill Footage	297.00	0.00	0.00	0.00	297.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
				Nonel EZ Det 30'	27.00	02JA17W1
Green Cap Boosters	**0.35**	**27.00**	**23AU16E1**			
Total LBS		**9.45**				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	**1.00**		**NA**			
DIESEL FUEL	**7.00**		**NA**	**Lead Line**	500.00	13FE17W1
ANFO BAGS - 50 lb	**50.00**	8.50	27FE17N1	Nonel EZTL 30' 42MS	4.00	06FE17X1
Total LBS		**425.00**				

Wet Hole Product	lbs each	Number Used	Date Code
Total LBS			

Totals

Total BCY's	**704.00**	**Total Dets**	**27.00**
Powder Factor	**0.62**	**Total Pounds in Shot**	**434.45**
Secondary Yardage		**Max. Holes per Delay**	**1.00**
Gross Cubic Yards	**704.00**	**Max Charge per 8 ms Delay in Lbs**	**48.00**

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead,

Blaster's Signature Steve Gurney

Date of Report: **04/01/17**

shot road and boulders on the east side

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Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	Unit Number	N\A	Wind Direction	South
Job Name/Location	Emery	Date Calibrated	N\A	Wind Conditions	0-10
Blaster in Charge	Steve Gurney	Distance From Shot	N/A	Weather	Cloudy
Bulk Truck Operator	N\A	Peak Particle Velocity	N/A	Type of Rock	Sandstone
Date of Shot	04/01/17	Peak Sound Pressure	N/A	Temperature	35
Blast Time	5:15 PM				
Shot Number	24				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	101.00				
Decks Per Hole	1.00				
Hole Diameter	3.50				
Stemming	6.50				
Burden	10.00				
Spacing	10.00				
Avg Hole Dpth	11.00				Totals
Total BCY's	4,114.81	0.00	0.00	0.00	4,114.81
Drill Footage	1,111.00	0.00	0.00	0.00	1,111.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
Sparton 200	0.50	38.00	07MA17J2	Nonel EZ Det 30'	102.00	27FE17W1
Green Cap Boosters	0.35	63.00	23AU16E1			
Total LBS		41.05				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	1.00		NA			
DIESEL FUEL	7.00		NA	Lead Line	1000.00	13MA17W1
ANFO BAGS - 50 lb	50.00	50.50	27FE17N1	Nonel EZTL 30' 42MS	7.00	06FE17X1
Total LBS		2,525.00				
Wet Hole Product	lbs each	Number Used	Date Code			
Total LBS						

Totals

Total BCY's	4,114.81	Total Dets	102.00
Powder Factor	0.62	Total Pounds in Shot	2,566.05
Secondary Yardage		Max. Holes per Delay	1.00
Gross Cubic Yards	4,114.81	Max Charge per 8 ms Delay in Lbs	17.70

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead, Augo Iturro

Blaster's Signature	Steve Gurney
Date of Report:	04/03/17

shot road on the east side. The rock broke very well. Went to a 3.5 bit and a 10 x10 pattern. Used an extra cap to jump a hole.

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Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	Unit Number	N\A	Wind Direction	North
Job Name/Location	Emery	Date Calibrated	N\A	Wind Conditions	0-5
Blaster in Charge	Steve Gurney	Distance From Shot	N/A	Weather	Partly cloudy
Bulk Truck Operator	N\A	Peak Particle Velocity	N/A	Type of Rock	Sandstone
Date of Shot	03/20/17	Peak Sound Pressure	N/A	Temperature	50
Blast Time	5:15 PM				
Shot Number	15				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	95.00				
Decks Per Hole	1.00				
Hole Diameter	3.00				
Stemming	4.50				
Burden	8.00				
Spacing	8.00				
Avg Hole Dpth	12.00				Totals
Total BCY's	2,702.22	0.00	0.00	0.00	2,702.22
Drill Footage	1,140.00	0.00	0.00	0.00	1,140.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
				Nonel EZ Det 30'	98.00	31OC16W1
Dyno AP 2x16 Sticks	2.10	95.00	05OC16J1			
Total LBS		199.50				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	1.00		NA	Nonel EZTL 30'	6	21JY14X1
DIESEL FUEL	7.00		NA	Lead Line	1000.00	13FE17W1
ANFO BAGS - 50 lb	50.00	31.00	20MA17LE			
Total LBS		1,550.00				

Wet Hole Product	lbs each	Number Used	Date Code
Total LBS			

Totals

Total BCY's	2,702.22	Total Dets	98.00
Powder Factor	0.65	Total Pounds in Shot	1,749.50
Secondary Yardage		Max. Holes per Delay	1.00
Gross Cubic Yards	2,702.22	Max Charge per 8 ms Delay in Lbs	57.50

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead, Augo Iturro

Blaster's Signature: Steve Gurney

Date of Report: 03/20/17

Put timing into the shot and it broke very well.

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Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	**Unit Number**	N\A	**Wind Direction**	North East
Job Name/Location	Emery	**Date Calibrated**	N\A	**Wind Conditions**	0-5
Blaster in Charge	Steve Gurney	**Distance From Shot**	N/A	**Weather**	Cloudy
Bulk Truck Operator	N\A	**Peak Particle Velocity**	N/A	**Type of Rock**	Sandstone
Date of Shot	03/21/17	**Peak Sound Pressure**	N/A	**Temperature**	60
Blast Time	3:10 AM				
Shot Number	16				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	107.00	11.00			
Decks Per Hole	1.00	1.00			
Hole Diameter	3.62	3.00			
Stemming	5.00	2.50			
Burden	8.00	NA			
Spacing	8.00	NA			
Avg Hole Dpth	10.41	3.00			**Totals**
Total BCY's	2,640.28	#VALUE!	0.00	0.00	#VALUE!
Drill Footage	1,113.87	33.00	0.00	0.00	1,146.87
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
				Nonel EZ Det 30'	107.00	21JY14X1
Primacord 4Y 18 Gr	**0.0036**	**100.00**	**07NO16G1**			
Dyno AP 2x16 Sticks	**2.10**	**107.00**	**05OC16J1**	Nonel MS 40'	13.00	06FE17W1
Dyno Spartam 350	**0.75**	**11.00**	**05FE17J2**			
Total LBS		**233.31**				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	**1.00**		**NA**	**Nonel EZTL 30' 42MS**	8	21JY14X1
DIESEL FUEL	**7.00**		**NA**	**Lead Line**	1500.00	13FE17W1
ANFO BAGS - 50 lb	**50.00**	39.00	20MA17LE			
Total LBS		**1,950.00**				

Wet Hole Product	lbs each	Number Used	Date Code
Total LBS			

Totals

Total BCY's	**#VALUE!**	**Total Dets**	**120.00**
Powder Factor	**#VALUE!**	**Total Pounds in Shot**	**2,183.30**
Secondary Yardage		**Max. Holes per Delay**	**1.00**
Gross Cubic Yards	**#VALUE!**	**Max Charge per 8 ms Delay in Lbs**	**58.00**

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead,

Blaster's Signature Steve Gurney

Date of Report: **03/21/17**

Shot well,Started drilling on east side of drainage. The 11 holes were boulder busting

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Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	**Unit Number**	N\A	**Wind Direction**	North East
Job Name/Location	Emery	**Date Calibrated**	N\A	**Wind Conditions**	0-5
Blaster in Charge	Steve Gurney	**Distance From Shot**	N/A	**Weather**	Cloudy
Bulk Truck Operator	N\A	**Peak Particle Velocity**	N/A	**Type of Rock**	Sandstone
Date of Shot	03/22/17	**Peak Sound Pressure**	N/A	**Temperature**	60
Blast Time	5:35 PM				
Shot Number	17				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	52.00	13.00			
Decks Per Hole	1.00	1.00			
Hole Diameter	3.00	3.00			
Stemming	5.00	2.50			
Burden	8.00	NA			
Spacing	8.00	NA			
Avg Hole Dpth	12.00	4.00			**Totals**
Total BCY's	1,479.11	#VALUE!	0.00	0.00	#VALUE!
Drill Footage	624.00	52.00	0.00	0.00	676.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
				Nonel EZ Det 30'	52.00	31OC16W1
Primacord 4Y 18 Gr	**0.0036**	**100.00**	**07NO16G1**			
Dyno AP 2x16 Sticks	**2.10**	**13.00**	**05OC16J1**	Nonel MS 40'	13.00	06FE17W1
Brown Cap Boosters	**0.50**	**52.00**	**24JA17E3**			
Total LBS		**53.66**				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	**1.00**		**NA**	**Nonel EZTL 30' 42MS**	8	21JY14X1
DIESEL FUEL	**7.00**		**NA**	**Lead Line**	2500.00	13FE17W1
ANFO BAGS - 50 lb	**50.00**	18.75	20MA17LE			
Total LBS		**937.50**				
Wet Hole Product	**lbs each**	**Number Used**	**Date Code**			
Total LBS						

Totals

Total BCY's	**#VALUE!**	**Total Dets**	**65.00**
Powder Factor	**#VALUE!**	**Total Pounds in Shot**	**991.16**
Secondary Yardage		**Max. Holes per Delay**	**1.00**
Gross Cubic Yards	**#VALUE!**	**Max Charge per 8 ms Delay in Lbs**	**57.26**

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead,

Blaster's Signature Steve Gurney

Date of Report: **03/23/17**

Anfo date codes 20MA17LE 7 bags; 22MA17LE 11.75 bags. Shot 3 times today. 2 boulder shot on the east side and 1 production.Shot well. The 13 holes were boulder busting

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Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	Unit Number	N\A	Wind Direction	North East
Job Name/Location	Emery	Date Calibrated	N\A	Wind Conditions	0-5
Blaster in Charge	Steve Gurney	Distance From Shot	N/A	Weather	Clear
Bulk Truck Operator	N\A	Peak Particle Velocity	N/A	Type of Rock	Sandstone
Date of Shot	03/13/17	Peak Sound Pressure	N/A	Temperature	55
Blast Time	12:50 AM				
Shot Number	10				

Loading Information

	Area 1 12:50 AM	Area 2 4:30 PM	Area 3	Area 4	
Number of Holes	87.00	12.00			
Decks Per Hole	1.00	1.00			
Hole Diameter	3.00	3.00			
Stemming	5.50	5.50			
Burden					
Spacing	7.00	7.00			
Avg Hole Dpth	10.00	9.00			Totals
Total BCY's	0.00	0.00	0.00	0.00	0.00
Drill Footage	870.00	108.00	0.00	0.00	978.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
Dynomax Pro 2x16	2.60	45.00	18JA17J1	Nonel MS 20'	7.00	28AP14W1
Primacord 4Y 18 Gr	0.0036	1250.00	07NO16G1	Nonel MS 20'	60.00	27JA14W1
Dyno AP 2x16 Sticks	2.10	8.00	05OC16J1	Nonel MS 40'	22.00	06FE17W1
Dyno Spartam 350	0.75	34.00	05FE17J2			
Total LBS		163.77				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	1.00		NA			
DIESEL FUEL	7.00		NA	Lead Line	1750.00	19SE16W1
ANFO BAGS - 50 lb	50.00	6.75	04AP16N1			
Total LBS		337.50				
Wet Hole Product	lbs each	Number Used	Date Code			
Total LBS						

Totals

Total BCY's	0.00	Total Dets	89.00
Powder Factor	#DIV/0!	Total Pounds in Shot	501.30
Secondary Yardage		Max. Holes per Delay	1.00
Gross Cubic Yards	0.00	Max Charge per 8 ms Delay in Lbs	501.30

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead, Augo Iturro

Blaster's Signature: Steve Gurney

Date of Report: 03/13/17

Drilled holes with John Henery. Shot various boulders that scamp pointed out. Shot 2 times today first shot was 12:50 Am and second at 3:40 Pm.Used det cord for istatanious combustion.

51 East 400 North, Suite 4-B
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3-RIVERS
DRILLING & BLASTING

Phone: (435) 865-6980
Fax: (435) 865-1190
e-mail: 3rivers@infowest.com
Web Site: 3riversdrillingandblasting.com

Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	Unit Number	N\A	Wind Direction	North East
Job Name/Location	Emery	Date Calibrated	N\A	Wind Conditions	0-5
Blaster in Charge	Steve Gurney	Distance From Shot	N/A	Weather	Clear
Bulk Truck Operator	N\A	Peak Particle Velocity	N/A	Type of Rock	Sandstone
Date of Shot	03/14/17	Peak Sound Pressure	N/A	Temperature	60
Blast Time	4:30 PM				
Shot Number	11				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	90.00				
Decks Per Hole	1.00				
Hole Diameter	3.00				
Stemming	5.50				
Burden					
Spacing	7.00				
Avg Hole Dpth	14.00				Totals
Total BCY's	0.00	0.00	0.00	0.00	0.00
Drill Footage	1,260.00	0.00	0.00	0.00	1,260.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
				Nonel MS 20'	82.00	28AP14W1
Primacord 4Y 18 Gr	0.0036	750.00	07NO16G1			
Dyno AP 2x16 Sticks	2.10	74.00	05OC16J1	Nonel MS 40'	9.00	06FE17W1
Dyno Spartam 350	0.75	16.00	05FE17J2			
Total LBS		170.08				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	1.00		NA			
DIESEL FUEL	7.00		NA	Lead Line	500.00	13FE17W1
ANFO BAGS - 50 lb	50.00	14.25	04AP16N1			
Total LBS		712.50				

Wet Hole Product	lbs each	Number Used	Date Code
Total LBS			

Totals

Total BCY's	0.00	Total Dets	91.00
Powder Factor	#DIV/0!	Total Pounds in Shot	882.60
Secondary Yardage		Max. Holes per Delay	1.00
Gross Cubic Yards	0.00	Max Charge per 8 ms Delay in Lbs	882.60

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead, Augo Iturro

Blaster's Signature: Steve Gurney

Date of Report: 03/14/17

Anfo 10 bags of date code 23FE17LE.

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Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	Unit Number	N\A	Wind Direction	North East
Job Name/Location	Emery	Date Calibrated	N\A	Wind Conditions	0-5
Blaster in Charge	Steve Gurney	Distance From Shot	N/A	Weather	Clear
Bulk Truck Operator	N\A	Peak Particle Velocity	N/A	Type of Rock	Sandstone
Date of Shot	03/15/17	Peak Sound Pressure	N/A	Temperature	60
Blast Time	6:30 PM				
Shot Number	12				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	70.00				
Decks Per Hole	1.00				
Hole Diameter	3.00				
Stemming	5.50				
Burden					
Spacing	7.00				
Avg Hole Dpth	14.00				Totals
Total BCY's	0.00	0.00	0.00	0.00	0.00
Drill Footage	980.00	0.00	0.00	0.00	980.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
				Nonel MS 20'	71.00	28AP14W1
Primacord 4Y 18 Gr	0.0036	250.00	07NO16G1			
Dyno AP 2x16 Sticks	2.10	70.00	05OC16J1			
Total LBS		147.89				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	1.00		NA			
DIESEL FUEL	7.00		NA	Lead Line	1000.00	13FE17W1
ANFO BAGS - 50 lb	50.00	13.00	23FE17LE			
Total LBS		650.00				
Wet Hole Product	lbs each	Number Used	Date Code			
Total LBS						

Totals

Total BCY's	0.00	Total Dets	71.00
Powder Factor	#DIV/0!	Total Pounds in Shot	797.90
Secondary Yardage		Max. Holes per Delay	1.00
Gross Cubic Yards	0.00	Max Charge per 8 ms Delay in Lbs	797.90

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead, Augo Iturro

Blaster's Signature: Steve Gurney

Date of Report: 03/16/17

Drilling was difficult today. Surface didn't get grubbed very well. Holes kept caving in.

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Customer		Seismograph MiniMate Plus		Conditions	
Company Name	Bronco Mine	**Unit Number**	N\A	**Wind Direction**	North East
Job Name/Location	Emery	**Date Calibrated**	N\A	**Wind Conditions**	0-5
Blaster in Charge	Steve Gurney	**Distance From Shot**	N/A	**Weather**	Clear
Bulk Truck Operator	N\A	**Peak Particle Velocity**	N/A	**Type of Rock**	Sandstone
Date of Shot	03/16/17	**Peak Sound Pressure**	N/A	**Temperature**	60
Blast Time	4:00 PM				
Shot Number	13				

Loading Information

	Area 1	Area 2	Area 3	Area 4	
Number of Holes	61.00				
Decks Per Hole	1.00				
Hole Diameter	3.00				
Stemming	5.50				
Burden					
Spacing	7.00				
Avg Hole Dpth	14.00				**Totals**
Total BCY's	0.00	0.00	0.00	0.00	0.00
Drill Footage	854.00	0.00	0.00	0.00	854.00
Trench Footage					0.00

Explosives

Primers - (Each)	lbs each	Number Used	Date Code	Detonators and Caps	Number Used	Date Code
				Nonel MS 20'	22.00	28AP14W1
Primacord 4Y 18 Gr	**0.0036**	**750.00**	**07NO16G1**			
Dyno AP 2x16 Sticks	**2.10**	**45.00**	**05OC16J1**	Nonel MS 40'	41.00	06FE17W1
Dyno Spartam 350	**0.75**	**16.00**	**05FE17J2**			
Total LBS		**109.18**				

Blasting Agent or Explosives	lbs each	Number Used	Date Code	Surface Delays	Number Used	Date Code
AN	**1.00**		**NA**			
DIESEL FUEL	**7.00**		**NA**	**Lead Line**	1500.00	13FE17W1
ANFO BAGS - 50 lb	**50.00**	11.25	23FE17LE			
Total LBS		**562.50**				

Wet Hole Product	lbs each	Number Used	Date Code
Total LBS			

Totals

Total BCY's	**0.00**	**Total Dets**	**63.00**
Powder Factor	**#DIV/0!**	**Total Pounds in Shot**	**671.70**
Secondary Yardage		**Max. Holes per Delay**	**1.00**
Gross Cubic Yards	**0.00**	**Max Charge per 8 ms Delay in Lbs**	**671.70**

Distance and direction from nearest hole to closest structure:

Crew including Blaster in Charge: Steve Gurney,Mike Weaver, Shane Beckstead,

Blaster's Signature Steve Gurney

Date of Report: **03/16/17**

Shot well. Areas were grubbed much better and drilling was a lot better. John henery broke while drilling second shot. Installed new starter.