



**COLORADO**  
Division of Reclamation,  
Mining and Safety  
Department of Natural Resources

1313 Sherman Street, Room 215  
Denver, CO 80203

August 17, 2018

Mr. David Mosch  
Mosch Exploration & Mining, LLC  
P.O. Box 1484  
Idaho Springs, CO 80452

Re: Poorman Mine, Permit No. M-1982-058, Financial Warranty Increase, Revision No. SI-1

Dear Mr. Mosch:

On August 17, 2018 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$4,803.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of \$4,703.00.

The Division ordered amendment of the current Financial Warranty, or submittal of a new Financial Warranty reflecting the increase, within 60 days from the date of this letter. If you wish to submit a different type of Financial Warranty, please contact me such that I may send you the applicable form.

If you have any questions, please contact me at (303)866-3567 x8116.

Sincerely,

Michael A. Cunningham  
Senior Environmental Protection Specialist

Enclosure: 2018 Bond Calculation



## COST SUMMARY WORK

Task description: \_\_\_\_\_

Site: Poorman Mine

Permit Action: 2018 Bond Calculation

Permit/Job#: M1982058

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 8/16/2018

County: Clear Creek

Filename: M058-000

User: MAC

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Structure Demolition and Removal	DEMOLISH	1	0.00	\$2,464.71
002	Grading/Scarification of Waste Rock Pile	EXCAVATE	1	2.81	\$238.00
002A	Replace Topsoil	EXCAVATE	1	2.14	\$181.00
003	Revegetation of Affected Areas	REVEGE	1	8.00	\$231.00
004	Equipment Mobilization	MOBILIZE	1	4.12	\$930.00
<b><u>SUBTOTALS:</u></b>				<b>17.07</b>	<b>\$4,045</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$81.71

Performance bond: 1.05

Total = \$42.47

Job superintendent: 0.00

Total = \$0.00

Profit: 10.00

Total = \$404.50

TOTAL O & P = \$528.68

CONTRACT AMOUNT (direct + O & P) = \$4,573.68

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 5.00

\$228.68

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$757.36

**TOTAL BOND AMOUNT (direct + indirect) = \$4,802.36**

**TOTAL BOND AMOUNT (rounded up) = \$4,803.00**

## DEMOLITION WORK

Task description: Structure Demolition and Removal

Site: Poorman Mine

Permit Action: 2018 Bond Calculation

Permit/Job#: M1982058

### PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 8/16/2018

County: Clear Creek

Filename: M058-001

User: MAC

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 101.20 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Metal Shed	8' x 10' x 8'	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 60 mile haul	640.00	CF	\$0.57	\$363.52
Rail line	84'	Railroad track - Ties and track	84.00	LF	\$9.19	\$771.96
School Bus	8' x 23'	Excavate and load tank onto trailer, non-leaking - 9,000 gal. to 12,000 gal.	1.00	EA	\$1,300.00	\$1,300.00

Job Hours: 0.00

Subtotal  
(unadjusted): \$2,435.48

Total Cost  
(adjusted for location): \$2,464.71

## HYDRAULIC EXCAVATOR WORK

Task description: Grading/Scarification of Waste Rock Pile

Site: Poorman Mine

Permit Action: 2018 Bond Calculation

Permit/Job#: M1982058

### PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None  
Date: 8/16/2018 County: Clear Creek Filename: M82058  
User: MAC

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 311D LRR 8'-6" Stick Horsepower: 80  
Attachment 1: ROPS Cab Weight (MT): 12.74  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$25.09</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$21.59</u>	<u>100</u>
Operator Cost/Hour:	<u>\$37.79</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$84.46</u>	
Total Fleet Cost/Hour:	<u>\$84.46</u>	

### MATERIAL QUANTITIES

Initial volume: 300 CCY Swell factor: 1.000  
Loose volume: 300 LCY

Source of estimated volume: Division of Reclamation, Mining & Safety  
Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: AVERAGE  
Secondary Job Condition within Basic Description: AVERAGE  
Cycle Time Value: 0.242 minutes

#### Load Bucket Capacity

Rated Capacity: 0.68 LCY (heaped) Bucket Size Class: Medium  
Bucket Fill Factor: 0.875 Blasted rock - well blasted (80 - 95%) 0.875  
Adjusted Capacity: 0.60 LCY

#### Job Condition Correction Factors

Site Altitude: 10100 feet

		Source
Altitude Adj:	<u>0.87</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.72</u>	<u>multiplier</u>

Unadjusted Hourly Unit Production: 147.52 LCY/Hour  
Adjusted Hourly Unit Production: 106.52 LCY/Hour  
Adjusted Hourly Fleet Production: 106.52 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 2.82 Hours  
Unit cost: \$0.793 /LCY Total job cost: \$238

## HYDRAULIC EXCAVATOR WORK

Task description: Replace Topsoil

Site: Poorman Mine

Permit Action: 2018 Bond Calculation

Permit/Job#: M1982058

### PROJECT IDENTIFICATION

Task #:	<u>002A</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>8/16/2018</u>	County:	<u>Clear Creek</u>	Filename:	<u>M058-002A</u>
User:	<u>MAC</u>				

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine:	<u>Cat 311D LRR 8'-6" Stick</u>	Horsepower:	<u>80</u>
Attachment 1:	<u>ROPS Cab</u>	Weight (MT):	<u>12.74</u>
		Shift Basis:	<u>1 per day</u>
		Data Source:	<u>(CRG)</u>

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$25.09</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$21.59</u>	<u>100</u>
Operator Cost/Hour:	<u>\$37.79</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$84.46</u>	
Total Fleet Cost/Hour:	<u>\$84.46</u>	

### MATERIAL QUANTITIES

Initial volume:	<u>268</u>	CCY	Swell factor:	<u>1.000</u>
Loose volume:	<u>268</u>	LCY		

Source of estimated volume: Division of Reclamation, Mining & Safety

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description:	<u>AVERAGE</u>
Secondary Job Condition within Basic Description:	<u>AVERAGE</u>
Cycle Time Value:	<u>0.242</u> minutes

#### Load Bucket Capacity

Rated Capacity:	<u>0.68</u>	LCY (heaped)	Bucket Size Class:	<u>Medium</u>
Bucket Fill Factor:	<u>1.025</u>	Rock - Earth Mixture (100%-105%)		
Adjusted Capacity:	<u>0.70</u>	LCY		

#### Job Condition Correction Factors

Site Altitude: 10100 feet

		Source
Altitude Adj:	<u>0.87</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.72</u>	multiplier

Unadjusted Hourly Unit Production:	<u>172.81</u>	LCY/Hour
Adjusted Hourly Unit Production:	<u>124.79</u>	LCY/Hour
Adjusted Hourly Fleet Production:	<u>124.79</u>	LCY/Hour

### JOB TIME AND COST

Fleet size:	<u>1</u>	Excavator	Total job time:	<u>2.15</u>	Hours
Unit cost:	<u>\$0.677</u>	/LCY	Total job cost:	<u>\$181</u>	

**REVEGETATION WORK**Task description: **Revegetation of Affected Areas**Site: **Poorman Mine**Permit Action: **2018 Bond Calculation**Permit/Job#: **M1982058****PROJECT IDENTIFICATION**Task #: **003**State: **Colorado**Abbreviation: **None**Date: **8/16/2018**County: **Clear Creek**Filename: **M058-003**User: **MAC**Agency or organization name: **DRMS****FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alsike Clover	0.75	11.71	\$2.94
Orchardgrass - Elsie	1.50	18.60	\$5.22
Rye, Perennial Tetraploid - Aubisque	3.00	17.01	\$5.16
Mountain Brome - Bromar	2.25	3.62	\$10.01
Kentucky Bluegrass - Ginger	2.25	111.05	\$6.05
Rye, Winter - VNS	3.00	1.24	\$1.11
<b>Totals Seed Mix</b>	<b>12.75</b>	<b>163.22</b>	<b>\$30.50</b>

**Application**

Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
<b>Total Seed Application Cost/Acre</b>	<b>\$267.22</b>

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
<b>Total Mulch Materials Cost/Acre</b>				<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Aspen	40	Tubling, 3 cu. in. container (MEANS)	\$1.07	\$0.00	\$42.80
Pine, Lodgepole	40	Tubling, 3 cu. in. container (MEANS)	\$1.17	\$0.00	\$46.80
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$89.60</b>

**JOB TIME AND COST**

No. of Acres:	0.5	Cost /Acre:	\$387.32
Estimated Failure Rate:	25%	Cost /Acre*:	\$297.72
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	<b>\$193.66</b>
Reseeding Job Cost:	<b>\$37.22</b>
Total Job Cost:	<b>\$231</b>
Job Hours:	<b>8.00</b>

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Equipment Mobilization**Site: **Poorman Mine**Permit Action: **2018 Bond Calculation**Permit/Job#: **M1982058****PROJECT IDENTIFICATION**Task #: **004**State: **Colorado**Abbreviation: **None**Date: **8/16/2018**County: **Clear Creek**Filename: **M058-004**User: **MAC**Agency or organization name: **DRMS****EQUIPMENT TRANSPORT RIG COST**Shift basis: **1 per day**Cost Data Source: **CRG Data**Truck Tractor Description: **GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,  
400 HP (2ND HALF, 2006)**Truck Trailer Description: **GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT  
TRAILER (25T, 50T, AND 100T)****Cost Breakdown:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
Ownership Cost/Hour:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

**NON ROADABLE EQUIPMENT:**

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat 311D LRR 8'-6"Stick	14.01	\$25.09	\$88.67	1	\$113.76	\$88.67	\$250.00

Subtotals: **\$113.76** **\$88.67** **\$250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
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Subtotals: **\$0.00** **\$0.00**



**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>DENVER</u>	
Total one-way travel distance:	<u>39.00</u>	miles
Average Travel Speed:	<u>50.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$929.55</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$0.00</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.78</u>	<u>0.78</u>
Return Time (Hours):	<u>0.78</u>	<u>0.78</u>
Loading Time (Hours):	<u>0.25</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.25</u>	<u>NA</u>
Subtotals:	<u>2.06</u>	<u>1.56</u>

**JOB TIME AND COST**

Total job time:	<u>4.12</u>	Hours
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Total job cost:	<u>\$930</u>
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