



## COLORADO

Division of Reclamation,  
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215  
Denver, CO 80203

October 1, 2014

Mr. Randy McClure  
Rio Grande Silver, Inc.  
PO Box 610  
Creede, CO 81130

**Re: Bulldog Mine Operation, Permit No. M-1977-215, Technical Revision Approval, Revision No. TR-23**

Dear Mr. McClure,

On October 1, 2014 the Division of Reclamation, Mining and Safety approved the Technical Revision application submitted to the Division on September 11, 2014, addressing the following:

*Core storage area near TP-2*

The terms of the TR-23 approved by the Division are hereby incorporated into Permit No. M-1977-215. All other conditions and requirements of Permit No. M-1977-215 remain in full force and effect.

The existing financial warranty held by the Division is \$159,250.72. The additional reclamation costs of the area to be affected under this revision are estimated to be \$3,977.41, which increases the total amount of reclamation costs to \$163,228.13. If you have not already done so, please submit additional bond in the amount of \$3,977.41. The revision will not be final until the bond is approved by the Division.

Financial warranty forms are available on the Division's website: <http://mining.state.co.us>. Please submit all warranty forms to Ms. Barbara Coria at the Division's Denver Office (see address at bottom of page).

If you have any questions about the figures in this estimate, please contact me.

Sincerely,

Bob Oswald  
Environmental Protection Specialist

Enclosure: TR-23 bond estimate  
EC(w/o Encl): Russ Means, DRMS Grand Junction  
Barbara Coria, DRMS Denver

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## COST SUMMARY WORK

Task description: Cost summary

Site: Bulldog Mine Operation Permit Action: TR-23 Permit/Job#: M1977215

### PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None  
Date: 10/1/2014 County: Mineral Filename: M215-000  
User: RCO

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Rip compaction on Area 1 and Area 2	RIPPER	1	1.84	\$253.00
002	Recontour road	DOZER	1	10.72	\$1,470.00
003	Respread topsoil, all TR-23 areas	DOZER	1	0.87	\$120.00
004	Revegetate disturbed areas	REVEGE	1	8.00	\$1,086.00
<b><u>SUBTOTALS:</u></b>				<b>21.43</b>	<b>\$2,929</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	\$59.17
Performance bond:	1.05%	Total =	\$30.75
Job superintendent:	0.00 hrs	Total =	\$0.00
Profit:	10.00%	Total =	\$292.90
		TOTAL O & P =	\$382.82
		CONTRACT AMOUNT (direct + O & P) =	\$3,311.82

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>500.00</u>	Total =	<u>500.00</u>
Engineering work and/or contract/bid preparation:	<u>0.00%</u>	Total =	<u>\$0.00</u>
Reclamation management and/or administration:	<u>5.00%</u>		<u>\$165.59</u>
CONTINGENCY: 0.00		Total =	<u>\$0.00</u>

TOTAL INDIRECT COST = \$1,048.41

**TOTAL BOND AMOUNT (direct + indirect) = \$3,977.41**

#### Notes:

Equipment mobilization costs are not included in this since they are already part of the overall reclamation bond.  
No clean-up costs are included, since no contaminants and no hydrocarbons are to be stored in Area 1 or Area 2.  
Removal costs of modular storage containers are not included.  
Removal and disposal costs of palletized cores are not included in this estimate at this time.

## BULLDOZER RIPPING WORK

Task description: Rip compaction on Area 1 and Area 2

Site: Bulldog Mine Operation

Permit Action: TR-23

Permit/Job#: M1977215

### PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 10/1/2014

County: Mineral

Filename: M215-001

User: RCO

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D6T XL

Horsepower: 200

Ripper Attachment: 3-Shank Ripper

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$34.93	NA
Operating Cost/Hour:	\$64.17	100
Ripper Operating Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.01	NA
Total Unit Cost/Hour:	\$137.10	
Total Fleet Cost/Hour:	\$137.10	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA

Bank Volume: NA

BCY

NA

Area: 1.00 acres

Rip Depth (ft): 1.00

Volume: 1,613

BCY or CCY

Source of estimated quantity: TR-23 application

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth:	<u>1.64</u>	mph
Average Ripping Width:	<u>6.58</u>	degrees
Average Ripping Length:	<u>100.00</u>	feet
Average Dozer Speed:	<u>88.00</u>	feet
Average Maneuver Time:	<u>0.25</u>	feet
Production per unit area:	<u>0.654</u>	acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.654 Acres/hr

Site Altitude: 9,000 feet

Altitude Adj: 1.00 (CAT HB)

Job Efficiency: 0.83 (1 shift/day)

Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.54 Acres/hr

Adjusted Hourly Fleet Production: 0.54 Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s)

Total job time: 1.84 Hours

Unit cost: \$252.666 Per acre

Total job cost: \$253

**BULLDOZER WORK**Task description: Recontour roadSite: Bulldog Mine OperationPermit Action: TR-23Permit/Job#: M1977215**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 10/1/2014County: MineralFilename: M215-002User: RCOAgency or organization name: DRMS**HOURLY EQUIPMENT COST**

Basic Machine: Cat D6T XL  
 Horsepower: 200  
 Blade Type: Semi-Universal  
 Attachment: 3-shank ripper  
 Shift Basis: 1 per day  
 Data Source: (CRG)

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$34.93</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$64.17</u>	<u>100</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.01</u>	<u>NA</u>

Total unit Cost/Hour: 0  
 Total Fleet Cost/Hour: \$137.10

**MATERIAL QUANTITIES**

Initial Volume: 1,000  
 Swell factor: 1.165  
 Loose volume: 1,165 LCY

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

**HOURLY PRODUCTION**

Average push distance: 50 feet  
 Unadjusted hourly production: 444.6 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 9,000 feet

Material weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2444

Adjusted unit production: 108.66 LCY/hr  
Adjusted fleet production: 108.66 LCY/hr

### JOB TIME AND COST

Fleet size: 1 Dozer(s)  
Unit cost: \$1,262/LCY  
  
Total job time: 10.72 Hours  
Total job cost: \$1,470

Note: Dozer will rip compacted fill during recontouring operation.

BULLDOZER WORKTask description: Respread topsoil, all TR-23 areasSite: Bulldog Mine OperationPermit Action: TR-23Permit/Job#: M1977215PROJECT IDENTIFICATIONTask #: 003State: ColoradoAbbreviation: NoneDate: 10/1/2014County: MineralFilename: M215-003User: RCOAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D6T XLHorsepower: 200Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$34.93	NA
Operating Cost/Hour:	\$64.17	100
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: 0Total Fleet Cost/Hour: \$137.10MATERIAL QUANTITIESInitial Volume: 270Swell factor: 1.215Loose volume: 328 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookHOURLY PRODUCTIONAverage push distance: 50 feetUnadjusted hourly production: 444.6 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: -10 %Average site altitude: 9,000 feetMaterial weight: 1,600 lbs/LCYWeight description: Top SoilJob Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8444

Adjusted unit production: 375.42 LCY/hr

Adjusted fleet production: 375.42 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)  
Unit cost: \$0.365/LCY

Total job time: 0.87 Hours  
Total job cost: \$120

Note: No topsoil present in Area 1 to be respread. Assume 6 inches average depth of available topsoil.

REVEGETATION WORKTask description: Revegetate disturbed areasSite: Bulldog Mine OperationPermit Action: TR-23Permit/Job#: M1977215PROJECT IDENTIFICATIONTask #: 004State: ColoradoAbbreviation: NoneDate: 10/1/2014County: MineralFilename: M215-004User: RCOAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	200.00	pound	\$0.33	\$65.40
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$65.40</b>

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$52.71
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$52.71</b>

TILLING

Description	Cost /Acre
Weed control spraying (MEANS 31 31 16.13 3100)	\$145.20
<b>Total Tilling Cost/Acre</b>	<b>\$145.20</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	1.00	11.48	\$11.03
Slender Wheatgrass - Native	9.00	32.85	\$20.25
Western Wheatgrass - Native	13.00	32.83	\$39.52
Flax, Lewis Blue	1.00	6.63	\$16.52
Penstemon, Rocky Mountain	2.00	31.35	\$67.42
<b>Totals Seed Mix</b>	<b>26.00</b>	<b>115.14</b>	<b>\$154.74</b>

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$261.28



Total Seed Application Cost/Acre	\$261.28
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**MULCHING and MISCELLANEOUS****Materials**

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

**Application**

Description	Cost /Acre
	\$
Total Mulch Application Cost/Acre	\$0.00

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

**JOB TIME AND COST**

No. of Acres:	1.23	Cost /Acre:	\$679.33
Estimated Failure Rate:	30%	Cost /Acre*:	\$679.33
*Selected Replanting Work Items: FERTILIZING, TILLING, SEEDING			
Initial Job Cost:	\$835.58		
Reseeding Job Cost:	\$250.67		
Total Job Cost:	\$1,086		
Job Hours:	8.00		