

**STATE OF
COLORADO****Reilley - DNR, Robin** <robin.reilley@state.co.us>

DRMS Cost Estimate MR229

1 message

Reilley - DNR, Robin <robin.reilley@state.co.us>

Fri, Nov 17, 2023 at 9:30 AM

To: Graham Roberts <graham.roberts@trappermine.com>, Robin Reilley - DNR <robin.reilley@state.co.us>

Good Morning Graham,

Please find DRMS's cost estimate for permitting action MR229. Unless you have questions, DRMS is prepared to issue the decision, so please let me know. No adequacy items were identified in DRMS's review of the submission.

Current required surety is \$42,280,438 and additional reclamation costs of \$62,261 brings the required surety to \$42,342,699; well below the \$45,100,000 bond currently held by DRMS.

Thank you

Robin Reilley, M.S. GISP
Environmental Protection Specialist II



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

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robin.reilley@state.co.us | <http://mining.state.co.us>**CostEstimate_MR229.pdf**

216K

COST SUMMARY WORK

Task description: _____

Site: Trapper Mine

Permit Action: MR229

Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 11/15/2023

County: Moffat

Filename: C010-000

User: RAR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
098	Re-topsoil aJ23-1 to J Pit	SCRAPER1	1	8.24	\$45,182
N21A	Seed J Pits no shrubs (Range C)	REVEGE	1	31.00	\$4,578
<u>SUBTOTALS:</u>				39.24	\$49,760

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,005

Performance bond: 1.05

Total = \$522

Job superintendent: 4.12

Total = \$268

Profit: 10.00

Total = \$4,976

TOTAL O & P = \$6,772

CONTRACT AMOUNT (direct + O & P) = \$56,532

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$2,403

Reclamation management and/or administration: 5.00

\$2,827

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$12,501

TOTAL BOND AMOUNT (direct + indirect) = \$62,261

SCRAPER TEAM WORKTask description: Re-topsoil aJ23-1 to J PitSite: Trapper MinePermit Action: MR229Permit/Job#: C1981010**PROJECT IDENTIFICATION**Task #: 098State: ColoradoAbbreviation: NoneDate: 11/15/2023County: MoffatFilename: MR119User: RARAgency or organization name: DRMS**HOURLY EQUIPMENT**COST Shift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$255.23	NA	\$178.69	\$178.69	\$212.21	\$11.35
Operating cost/hour:	\$280.59	NA	\$80.11	\$80.11	\$62.44	\$13.75
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$566.72	NA	\$300.10	\$300.10	\$303.21	\$46.23
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$4,533.76	Support:	\$600.20	Maint:	\$349.44

Total work team cost/hour: \$5,483.40**MATERIAL QUANTITIES**Initial volume: 29,657

CCY

Swell factor: 1.000Loose volume: 29,657

LCY

Source of estimated volume: Division EstimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: 1,600 lbs/LCY
 Material description: Top Soil
 Rated Payload: 81,600 pounds
 Payload Capacity: 51.00 LCY

Struck Volume: 24.00 LCY
 Heaped Volume: 34.00 LCY
 Average Volume: 29.00 LCY
 Adjusted Capacity: 29.00 LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6400 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	950.00	7.80	3.00	10.80	786	1.22

Haul Time: 1.22 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	950.00	-7.80	3.00	-4.80	2972	0.39

Return Time: 0.39 minutesTotal Scraper team cycle time: 3.21 minutesAdjusted for job conditions: 899.81 LCY/HourSelected Number of Scrapers: 8 Scraper(s)Adjusted single scraper team (unit) hourly production: 3,599.25 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 3,599.25 LCY/HourUnadjusted unit production/hour: 1,084.11 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: 8.24 HoursUnit cost: \$1.523 /LCY Total job cost: \$45,182

REVEGETATION WORKTask description: Seed J Pits no shrubs (Range C)Site: Trapper MinePermit Action: MR229Permit/Job#: C1981010PROJECT IDENTIFICATIONTask #: N21AState: ColoradoAbbreviation: NoneDate: 11/16/2023County: MoffatFilename: C010-N21AUser: RARAgency or organization name: DRMSFERTILIZING**Materials**

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

Application

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

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$28.08
Beardless Wheatgrass - Whitmar	0.31	1.01	\$3.63
Mountain Brome - Bromar	0.72	1.16	\$2.74
Great Basin Wildrye - Magnar	0.92	3.74	\$10.63
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.19
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.26
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.00
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.46

Slender Wheatgrass - San Luis	0.28	1.02	\$1.19
Streambank Wheatgrass - Sodar	0.26	0.85	\$1.48
Thickspike Wheatgrass - Critana	0.28	0.99	\$1.93
Western Wheatgrass - Arriba	0.38	0.96	\$2.47
Needlegrass, Green - Lodorm	0.24	1.00	\$2.83
Flax, Lewis Blue	0.30	1.99	\$4.95
Red Top	0.02	2.29	\$0.16
Penstemon, Rocky Mountain	0.14	2.19	\$4.13
Yarrow, Western	0.07	4.26	\$2.93
Globemallow, Munro	0.08	0.91	\$7.00
Aster, Pacific	0.02	0.35	\$2.39
Goldeneye - Showy	0.08	0.92	\$4.80
Totals Seed Mix	5.51	31.41	\$86.15

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

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:	<u>12.3</u>	Cost /Acre:	<u>\$318.15</u>
Estimated Failure Rate:	<u>17%</u>	Cost /Acre*:	<u>\$318.15</u>
*Selected Replanting Work Items:	<u>TILLING,SEEDING</u>		
Initial Job Cost:	<u>\$3,913.25</u>		
Reseeding Job Cost:	<u>\$665.25</u>		
Total Job Cost:	<u>\$4,578</u>		
Job Hours:	<u>31.00</u>		