



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

June 9, 2023

Gary Kay
Colorado Rose Red Inc.
7201 Worley Dr.
Denver, CO 80221

RE: Division's Financial Warranty Cost Estimate for Colorado Rose Red Pit (M1978-332)

Dear Mr. Kay,

On June 6, 2023 the Division performed an inspection as part of the Division's Routine Monitoring Program of the Colorado Rose Red Pit. As part of the inspection the financial warranty for the mine was calculated. The Division used observations made during the inspection, and permit file information during the cost estimate calculations.

A copy of the mine's reclamation cost estimate is attached for your review. The Division will allow 14 days or until **June 23, 2023** to review and comment on the reclamation cost estimate prior to issuing a surety increase notice for the Colorado Rose Red Pit. Once the surety increase is issued by the Division, the Operator will have 60 days to provide the additional financial warranty.

If you need additional information or have any questions, please contact me by telephone at **303-866-3567 x8114**, or by email at patrick.lennberg@state.co.us.

Sincerely,

Patrick Lennberg
Environmental Protection Specialist

Attachment: Reclamation Cost Estimate

cc: Jared Ebert, DRMS

ec: Gary Kay, Colorado Rose Red, Inc., garykaytile@yahoo.com



Attachments

COST SUMMARY WORK

Task description: _____

Site: Colorado Rose Red Pit

Permit Action: Insp 2023

Permit/Job#: M1978332

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 6/8/2023

County: Larimer

Filename: M332-000

User: JPL

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill Room #1 and #2 Opening	MINESEAL	1	40.00	\$8,091
002	Grade and shape parking areas	LOADER	1	2.34	\$300
003	Spread Soil Over Bench Areas	LOADER	1	6.57	\$842
004	Revegetation	REVEGE	1	2.00	\$1,253
005	Mobilization	MOBILIZE	1	4.36	\$1,298
<u>SUBTOTALS:</u>				55.27	\$11,784

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$238

Performance bond: 1.05

Total = \$124

Job superintendent: 27.63

Total = \$2,076

Profit: 10.00

Total = \$1,178

TOTAL O & P = \$3,616

CONTRACT AMOUNT (direct + O & P) = \$15,400

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$655

Reclamation management and/or administration: 5.00

\$770

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$5,541

TOTAL BOND AMOUNT (direct + indirect) = \$17,325

SAFEGUARDING UNDERGROUND OPENINGS

Task description: Backfill Room #1 and #2 Opening

Site: Colorado Rose Red Pit Permit Action: Insp 2023 Permit/Job#: M1978332

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 6/8/2023 County: Larimer Filename: 001
User: JPL

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Room #1, backfill	15'x13'x51'	USER PROVIDED ITEM	1.00	EA	\$3,508.90	\$3,508.90
Room #2, backfill	15'x15'x51	USER PROVIDED ITEM	1.00	EA	\$4,582.40	\$4,582.40

Job Hours: 40.00

Total Cost: \$8,091.30

WHEEL LOADER – LOAD AND CARRY WORKTask description: Grade and shape parking areasSite: Colorado Rose Red PitPermit Action: Insp 2023Permit/Job#: M1978332**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 6/8/2023County: LarimerFilename: 002User: JPLAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 966HAttachment 1: ROPS CabHorsepower: 262Shift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$49.15	NA
Operating Cost/Hour:	\$43.04	100
Operator Cost/Hour:	\$35.97	NA
Total Unit Cost/Hour:	\$128.16	
Total Fleet Cost/Hour:	\$128.16	

MATERIAL QUANTITIESInitial volume: 1,120

CCY

Swell factor: 1.000Loose volume: 1,120

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Loader Cycle Time:**Unadjusted Basic Cycle Time (load, dump,
maneuver):

0.500

minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Basic Cycle Time:		0.440	minutes

Rolling Resistance – Road ConditionsHaul: Very hard, smooth, asphalt or concrete, no tire penetration 1.2Return: Very hard, smooth, asphalt or concrete, no tire penetration 1.2**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
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Haul Route:	60	0.00	1.20	1.20	0.0429	(Cat HB)
Return Route:	60	0.00	1.20	1.20	0.0416	(Cat HB)

Total Travel Time: 0.0845 minutes
Total Cycle Time: 0.5245 minutes

Load Bucket Capacity

Rated Capacity: 5.00 LCY (heaped)
Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity: 5.50 LCY

Job Condition Correction Factors

Site Altitude: 7040 feet

Altitude Adj:	<u>1.00</u>	Source (CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 629.14 LCY/Hour
Adjusted Hourly Unit Production: 522.19 LCY/Hour
Adjusted Hourly Fleet Production: 522.19 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 2.14 Hours
Unit cost: \$0.245 /LCY Total job cost: \$275

WHEEL LOADER – LOAD AND CARRY WORKTask description: Spread Soil Over Bench AreasSite: Colorado Rose Red PitPermit Action: Insp 2023Permit/Job#: M1978332**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 6/8/2023County: LarimerFilename: 003User: JPLAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 966HAttachment 1: ROPS CabHorsepower: 262Shift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$49.15	NA
Operating Cost/Hour:	\$43.04	100
Operator Cost/Hour:	\$35.97	NA
Total Unit Cost/Hour:	\$128.16	
Total Fleet Cost/Hour:	\$128.16	

MATERIAL QUANTITIESInitial volume: 2,237

CCY

Swell factor: 1.000Loose volume: 2,237

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Loader Cycle Time:**Unadjusted Basic Cycle Time (load, dump,
maneuver):

0.500

minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Basic Cycle Time:		0.440	minutes

Rolling Resistance – Road ConditionsHaul: Very hard, smooth, asphalt or concrete, no tire penetration 1.2Return: Very hard, smooth, asphalt or concrete, no tire penetration 1.2**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
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Haul Route:	300	0.00	1.20	1.20	0.2145	(Cat HB)
Return Route:	300	0.00	1.20	1.20	0.2081	(Cat HB)

Total Travel Time: 0.4226 minutes
Total Cycle Time: **0.8626** minutes

Load Bucket Capacity

Rated Capacity: 5.00 LCY (heaped)
Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity: **5.50** LCY

Job Condition Correction Factors

Site Altitude: 7040 feet

Altitude Adj:	<u>1.00</u>	Source (CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 382.56 LCY/Hour
Adjusted Hourly Unit Production: 317.52 LCY/Hour
Adjusted Hourly Fleet Production: **317.52** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: **7.05** Hours
Unit cost: \$0.404 /LCY Total job cost: **\$903**

REVEGETATION WORKTask description: RevegetationSite: Colorado Rose Red PitPermit Action: Insp 2023Permit/Job#: M1978332PROJECT IDENTIFICATIONTask #: 004State: ColoradoAbbreviation: NoneDate: 6/8/2023County: LarimerFilename: 004User: JPLAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
Total Tilling Cost/Acre	\$117.18

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	1.00	16.32	\$15.98
Beardless Wheatgrass - Whitmar	7.20	23.47	\$84.42
Indian Ricegrass - Paloma	0.80	2.59	\$8.90
Sheep Fescue - Covar	1.00	15.61	\$6.10
Streambank Wheatgrass - Sodar	4.40	14.34	\$25.08
Needlegrass, Green - Lodorm	3.00	12.47	\$35.33
Totals Seed Mix	17.40	84.80	\$175.80

Application

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

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:	2	Cost /Acre:	\$560.20
Estimated Failure Rate:	15%	Cost /Acre*:	\$443.02
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$1,120.40
Reseeding Job Cost:	\$132.91
Total Job Cost:	\$1,253
Job Hours:	2.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilization**Site: **Colorado Rose Red Pit**Permit Action: **Insp 2023**Permit/Job#: **M1978332****PROJECT IDENTIFICATION**Task #: **005**State: **Colorado**Abbreviation: **None**Date: **6/8/2023**County: **Larimer**Filename: **005**User: **JPL**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:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

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 966H	25.80	\$49.15	\$68.22	1	\$117.37	\$68.22	\$250.00
Subtotals:					\$117.37	\$68.22	\$250.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$52.53	2	\$105.06	\$105.06
Fuel Tanker, 6x4, 210 HP	\$87.21	1	\$87.21	\$87.21
Subtotals:			\$192.27	\$192.27

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: LYONS
 Total one-way travel distance: 8.00 miles
 Average Travel Speed: 8.00 mph

Total Non-Roadable Mob/Demob Cost * \$913.43
 ** two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$384.54
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.00	1.00
Return Time (Hours):	1.00	1.00
Loading Time (Hours):	0.09	NA
Unloading Time (Hours):	0.09	NA
Subtotals:	2.18	2.00

JOB TIME AND COST

Total job time: 4.36 Hours

Total job cost: \$1,298