



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

June 22, 2022

Mary Vasquez
Perdue Site
750 Crisman Dr.
Longmont, CO 80501

RE: Division's Financial Warranty Cost Estimates for Perdue (M2000-089)

Dear Mary Vasquez,

On June 9, 2022 the Division performed an inspection, as part of the Division's Routine Monitoring Program, of the Perdue mine site. As part of the inspection the financial warranty for the mine was calculated. The Division used observations made during the inspection and information submitted as part of the permit application process to perform the cost estimate calculations.

A copy of the mine's estimate is attached for your review. The Division will allow 14 days to review and comment on the bond estimate prior to issuing a surety increase notice for the Perdue site. 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 at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at **303-866-3567 x8114**, or by email at patrick.lennberg@state.co.us.

Sincerely,

Patrick Lennberg
Environmental Protection Specialist

cc: Jared Ebert, DRMS

ec: Mary Vasquez, ov59501@gmail.com



Attachments

COST SUMMARY WORK

Task description: Cost Summary

Site: Perdue Permit Action: 2022 Insp Permit/Job#: M2000089

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 6/21/2022 County: Boulder Filename: M089-000
User: JPL

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfilling sandstone rubble	DOZER	2	16.84	\$7,918
002	Replacing topsoil	DOZER	2	0.81	\$380
003	Revegetation of disturbed areas	REVEGE	1	8.00	\$1,294
004	Equipment Mobilization/Demobilization	MOBILIZE	1	2.40	\$2,165
<u>SUBTOTALS:</u>				28.05	\$11,757

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$237
Performance bond:	1.05	Total =	\$123
Job superintendent:	9.52	Total =	\$686
Profit:	10.00	Total =	\$1,176

TOTAL O & P = \$2,222

CONTRACT AMOUNT (direct + O & P) = \$13,979

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.25	Total =	\$594
Reclamation management and/or administration:	5.00		\$699

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$4,015

TOTAL BOND AMOUNT (direct + indirect) = \$15,772

BULLDOZER WORKTask description: **Backfilling sandstone rubble**Site: **Perdue** Permit Action: **2022 Insp** Permit/Job#: **M2000089****PROJECT IDENTIFICATION**

Task #: **001** State: **Colorado** Abbreviation: **None**
 Date: **6/21/2022** County: **Boulder** Filename: **001**
 User: **JPL**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$97.46	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$40.04	NA
Total unit Cost/Hour:	\$235.13	
Total Fleet Cost/Hour:	\$470.25	

MATERIAL QUANTITIES

Initial Volume: **27,000**
 Swell factor: **1.000**
 Loose volume: **27,000 LCY**

Source of estimated volume: **Original Permit Application Operator Provided Qty.**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **50 feet**
 Unadjusted hourly production: **1,400.0 LCY/hr**

Materials consistency description: **Partly consolidated stockpile 1.1**

Average push gradient: **0 %**
 Average site altitude: **6,100 feet**

Material weight: **3,300 lbs/LCY**Weight description: **Decomposed rock - 75% Rock, 25% Earth**

Job Condition Correction Factor
 Operator Skill: **0.750** Source (AVG.)

Material consistency:	1.100	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5727

Adjusted unit
production: 801.78 LCY/hr
Adjusted fleet
production: **1603.56** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.293/LCY

Total job time: **16.84** Hours
Total job cost: **\$7,918**

BULLDOZER WORKTask description: **Replacing topsoil**Site: **Perdue** Permit Action: **2022 Insp** Permit/Job#: **M2000089****PROJECT IDENTIFICATION**

Task #: **002** State: **Colorado** Abbreviation: **None**
 Date: **6/21/2022** County: **Boulder** Filename: **002**
 User: **JPL**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$97.46	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$40.04	NA
Total unit Cost/Hour:	\$235.13	
Total Fleet Cost/Hour:	\$470.25	

MATERIAL QUANTITIES

Initial Volume: **400**
 Swell factor: **1.000**
 Loose volume: **400 LCY**

Source of estimated volume: **DRMS Estimate Original Permit Application**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **150 feet**
 Unadjusted hourly production: **634.3 LCY/hr**

Materials consistency description: **Consolidated stockpile 1.0**

Average push gradient: **20 %**
 Average site altitude: **6,100 feet**

Material weight: **1,600 lbs/LCY**Weight description: **Top Soil**

Job Condition Correction Factor
 Operator Skill: **0.750** Source (AVG.)

Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.545	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3903

Adjusted unit
production: 247.57 LCY/hr

Adjusted fleet
production: **495.14** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.950/LCY

Total job time: **0.81** Hours

Total job cost: **\$380**

REVEGETATION WORKTask description: Revegetation of disturbed areasSite: PerduePermit Action: 2022 InspPermit/Job#: M2000089**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 6/21/2022County: BoulderFilename: 003User: JPLAgency or organization name: DRMS**FERTILIZING****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
Chisel plowing {DMG}	\$96.50
Total Tilling Cost/Acre	\$96.50

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	1.00	11.48	\$9.25
Rye, Perennial Tetraploid - Aubisque	2.00	11.34	\$3.60
Blue Grama - Native	1.00	16.32	\$13.73
Little Bluestem - Native	4.00	23.88	\$54.27
Sheep Fescue - Bighorn	1.00	15.61	\$4.40
Slender Wheatgrass - Native	3.00	10.95	\$13.88
Totals Seed Mix	12.00	89.58	\$99.12

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:	2.5	Cost /Acre:	\$462.84
Estimated Failure Rate:	15%	Cost /Acre*:	\$366.34
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$1,157.10
Reseeding Job Cost:	\$137.38
Total Job Cost:	\$1,294
Job Hours:	8.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Equipment Mobilization/DemobilizationSite: PerduePermit Action: 2022 InspPermit/Job#: M2000089**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 6/21/2022County: BoulderFilename: 004User: JPLAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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:	\$21.28	\$37.94	\$47.67
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

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 D8T - 8SU	47.71	\$97.46	\$132.49	2	\$459.90	\$264.98	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$7.98	\$68.37	1	\$76.35	\$68.37	\$250.00

Subtotals: **\$536.25** **\$333.35** **\$500.00****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>LONGMONT</u>	
Total one-way travel distance:	<u>15.00</u>	miles
Average Travel Speed:	<u>50.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$2,165.26</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>0.30</u>	<u>0.30</u>
Return Time (Hours):	<u>0.30</u>	<u>0.30</u>
Loading Time (Hours):	<u>0.30</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.30</u>	<u>NA</u>
Subtotals:	<u>1.20</u>	<u>0.60</u>

JOB TIME AND COST

Total job time:	<u>2.40</u>	Hours
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Total job cost:	<u>\$2,165</u>
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