



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

January 13, 2025

George Glasier
Pinon Ridge Mining LLC
P O Box 825
31161 Highway 90
Nucla, CO 81424

Re: St Jude Mine - File No. M-1978-039-HR
Pinon Ridge Mining LLC
Surety Increase (SI-4)
Surety Increase

Dear George Glasier:

On January 13, 2025 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$108,830.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of \$39,002.00.

Regular Surety Increase based on Inspection and inflationary increases.

Please see the November 13, 2024 inspection report for details regarding why this surety increase is required.

On January 13, 2025, the Division ordered amendment of the current Financial Warranty or submittal of a new Financial Warranty reflecting the increase, within 60 days.

Please make arrangements with Sara M. Stevenson-Benn at the Division's Denver office for submittal of the financial warranty. Any other questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Sara M. Stevenson-Benn by telephone at (303) 866-3567, or by email at Sara.stevenson-benn@state.co.us.

The Permittee for this site may be scheduled for a Formal Board Hearing for possible revocation of the permit if the amount of any increased Financial Warranty has not been provided by March 14, 2025.

Bond Held:	\$69,828.00
Prior Liability:	\$69,828.00



Change in Liability:	\$39,002.00
Revised Liability:	\$108,830.00
Prior Permit Acreage:	9.80
Change in Permit Acreage:	0.00
Revised Permit Acreage:	9.80
Prior Affected Acreage:	9.80
Change in Affected Acreage:	0.00
Revised Affected Acreage:	9.80

If you have any questions, please contact me by telephone at (303) 919-2997, or by email at Lucas.west@state.co.us.

Sincerely,



Lucas J. West
Environmental Protection Specialist

COST SUMMARY WORK

Task description: _____

Site: St Jude Mine

Permit Action: 2024 Update

Permit/Job#: M1978039HR

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 11/26/2024

County: San Miguel

Filename: M039-000

User: LJW

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Demolish onsite structures; underground or surface disposal	DEMOLISH	1	40.00	\$11,833
002a	Remove Operational Soils from lined ore pad, fold up liner	EXCAVATE	1	0.75	\$389
002b	Load and Carry liner underground for disposal	TRUCK1	1	0.74	\$431
002c	Grade out material from deconstructed Ore Pad	DOZER	1	0.38	\$180
003a	Demo Vent Fan SJ-1	DEMOLISH	1	36.00	\$1,366
003b	Vent Shaft Closure SJ-1	MINESEAL	1	16.00	\$4,218
004	Portal closure (backfill and recontour)	MINESEAL	1	24.00	\$13,606
005	Grade waste dump (DRA), pad and portal areas	DOZER	1	21.39	\$10,157
006	Rip compaction on pad and Roads	RIPPER	1	5.63	\$2,732
007	Carry topsoil to pad for spreading	LOADER	1	11.57	\$1,016
008	Spread topsoil on pad areas	DOZER	1	2.84	\$1,347
009	Grade access road	DOZER	1	0.52	\$247
010	Revegetate disturbed areas	REVEGE	1	24.00	\$25,377
011	Haul reclamation equipment to and from site	MOBILIZE	1	10.00	\$11,974
<u>SUBTOTALS:</u>				193.82	\$84,873

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,714

Performance bond: 1.05

Total = \$891

Job superintendent: 96.91

Total = \$7,682

Profit: 10.00

Total = \$8,487

TOTAL O & P = \$18,775

CONTRACT AMOUNT (direct + O & P) = \$103,648

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0

Total = \$0

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$5,182

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$23,957

TOTAL BOND AMOUNT (direct + indirect) = \$108,830

DEMOLITION WORK

Task description: Demolish onsite structures; underground or surface disposal

Site: St Jude Mine

Permit Action: 2024 Update

Permit/Job#: M1978039HR

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 11/26/2024

County: San Miguel

Filename: 039-01

User: LJW

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 96.90 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Shop/dry/office metal bldg.	40x50x15	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	30,000.00	CF	\$0.24	\$7,086.00
Shop/dry/office bldg. concrete slab	40x50	Demo. and on-site disposal in existing pit, 4 in. thick - Max. 200 ft. push	2,000.00	SF	\$0.79	\$1,584.40
Denison-owned powerlines	630 LF	Disposal of utility pole cross arms and hardware surplus material	630.00	LF	\$0.01	\$6.30
Electric substation, fenced	10x15x6	Fencing, chain link, including posts and fabric - to 6 ft. high	50.00	LF	\$3.02	\$151.00
Electric transformers, non-PCB	20x36 in	Hazardous waste removal - Drum solids/liquids, per drum, (1-6 drum job)	2.00	DRUM	\$492.56	\$985.13
Wood-cribbed loadouts	40x15x5	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 50 ft. push	3,000.00	CF	\$0.22	\$646.80
Misc parts and debris	20x20x10 mass	Push demolished materials/rubble/debris into pit - Max. 100 ft. push	150.00	CY	\$1.92	\$287.55
Remove Compressor Structure and contents	8x8x4	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	6,000.00	CF	\$0.24	\$1,417.20
Remove Compressor building slab	20x 30 x 4"	Demo. and on-site disposal in existing pit, 4 in. thick - Max. 200 ft. push	60.00	SF	\$0.79	\$47.53

Job Hours: 40.00

Subtotal
(unadjusted): \$12,211.91

Total Cost
(adjusted for location): \$11,833.34

HYDRAULIC EXCAVATOR WORK

Task description: Remove Operational Soils from lined ore pad, fold up liner

Site: St Jude Mine

Permit Action: 2024 Update

Permit/Job#: M1978039HR

PROJECT IDENTIFICATION

Task #: 002A

State: Colorado

Abbreviation: None

Date: 11/26/2024

County: San Miguel

Filename: M039-02a

User: LJW

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat 324D L 9'-8" Stick

Horsepower: 194

Attachment 1: ROPS Cab

Weight (MT): 24.85

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$281.20</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$202.68</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$517.75</u>	
Total Fleet Cost/Hour:	<u>\$517.75</u>	

MATERIAL QUANTITIES

Initial volume: 200

CCY

Swell factor: 1.335

Loose volume: 267

LCY

Source of estimated volume: 60' x 60' ore pad, 1.5' deep / 27 = 200 CY

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: 0.293 minutes

Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 0.925 Loose material - 1/8" to 3/8" (90 - 95%) 0.925

Adjusted Capacity: 2.09 LCY

Job Condition Correction Factors

Site Altitude: 5800 feet

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

Unadjusted Hourly Unit Production: 428.09 LCY/Hour

Adjusted Hourly Unit Production: 355.31 LCY/Hour

Adjusted Hourly Fleet Production: 355.31 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 0.75 Hours

Unit cost: \$1.457 /LCY Total job cost: \$389

TRUCK/LOADER TEAM WORKTask description: Load and Carry liner underground for disposalSite: St Jude MinePermit Action: 2024 UpdatePermit/Job#: M1978039HR**PROJECT IDENTIFICATION**Task #: 002BState: ColoradoAbbreviation: NoneDate: 11/26/2024County: San MiguelFilename: M039-002bUser: LJWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Generic 2-4 cy, 4x2
-Loader:	Cat 324D L 9'-8" Stick
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	NA	NA
Ownership cost/hour:	\$11.22	\$281.20	NA	NA	NA	NA
Operating cost/hour:	\$29.74	\$202.68	NA	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$25.24	\$33.87	NA	NA	NA	NA
Unit Subtotals:	\$66.20	\$517.75	NA	NA	NA	NA
Number of Units:	1	1	0	0	0	0
Group Subtotals:	Work: \$583.95		Support: \$0.00		Maint: \$0.00	

Total work team cost/hour: \$583.95**MATERIAL QUANTITIES**Initial volume: 75

CCY

Swell factor: 1.000Loose volume: 75

LCY

Source of estimated volume: Rolled and folded 30 Mil PVC LinerSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 1

Pounds/LCY

Description: User ProvidedRated Payload: 12,420

Pounds

Payload Capacity: 12,420.00 LCY

Truck Bed (volume) Basis:

Struck Volume: 2.00 LCY
 Heaped Volume: 4.00 LCY
 Average Volume: 3.00 LCY
 Adjusted Volume: 4.00 LCY

Final Truck Volume Based on Number of Loader Passes: 4.07 LCY

Loading Tool Capacity

Bucket Size Class: Medium

Rated Capacity:	<u>2.260</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - cemented materials (85 - 95%) <u>0.900</u>
Adjusted Capacity:	<u>2.034</u>	LCY

Job Condition Corrections:

Site Altitude (ft.): 5800 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Loading Tool Cycle Time:

Number of Loading Tool Passes Required to Fill Truck: 2 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: ABOVE AVERAGE
 Selected Value within this Basic Rating: AVERAGE

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

Cycle Time Factors		Factor (min.)	Source
Material:	NA	NA	(Cat HB)
Stockpile:	NA	NA	(Cat HB)
Truck Ownership:	NA	NA	(Cat HB)
Operation:	NA	NA	(Cat HB)
Dump Target:	NA	NA	(Cat HB)
Net Cycle Time Adjustment:		NA	minutes
Adjusted Loader Cycle Time:		0.239	minutes
Net Load Time per Truck:		0.339	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.339</u>	Minutes	Adjusted for site altitude:	<u>0.339</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes

Truck Travel (Haul & Return) Time: penetration 4.0

Road Condition: Rutted dirt, little maintenance, no water, 1" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	350.00	0.00	4.00	4.00	2665	0.204

Haul Time: **0.204** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	350.00	0.00	4.00	4.00	2849	0.150

Return Time: **0.150** minutesTotal Truck Cycle Time: **1.993** minutes

Loading Tool unit

Production 290.92 LCY/HourAdjusted for job efficiency: 241.46 LCY/Hour

Truck Unit Production

122.47 LCY/HourAdjusted for job efficiency: 101.65 LCY/HourOptimal No. of Trucks: 2 Truck(s)Selected Number of Trucks: 1 Truck(s)Adjusted hourly truck team production: 101.65 LCY/HourAdjusted single truck/loader team production: 101.65 LCY/HourAdjusted multiple truck/loader team production: **101.65** LCY/Hour**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: **0.74** HoursUnit cost: \$5.745 /LCYTotal job cost: **\$431**

BULLDOZER WORKTask description: **Grade out material from deconstructed Ore Pad**Site: **St Jude Mine** Permit Action: **2024 Update** Permit/Job#: **M1978039HR****PROJECT IDENTIFICATION**

Task #: 002C State: Colorado Abbreviation: None
Date: 11/26/2024 County: San Miguel Filename: M039-002c
User: LJW

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

Basic Machine: Cat D9T - 9SU
Horsepower: 405
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>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper own.		
Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$474.89</u>	
Total Fleet Cost/Hour:	<u>\$474.89</u>	

MATERIAL QUANTITIES

Initial Volume: 200
Swell factor: 1.335
Loose volume: **267 LCY**

Source of estimated volume: Ore Pad underlayment and Operational Soils
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 50 feet
Unadjusted hourly production: 2,110.5 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %
Average site altitude: 5,800 feet

Material weight: 2,700 lbs/LCYWeight description: Stone - crushed

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

Material consistency:	0.900	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.852	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3341

Adjusted unit
production: 705.12 LCY/hr

Adjusted fleet
production: **705.12** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.673/LCY

Total job time: **0.38** Hours

Total job cost: **\$180**

DEMOLITION WORK

Task description: **Demo Vent Fan SJ-1**

Site: **St Jude Mine**

Permit Action: 2024 Update

Permit/Job#: M1978039HR

PROJECT IDENTIFICATION

Task #: 003A

State: Colorado

Abbreviation: None

Date: 11/26/2024

County: San Miguel

Filename: M039-003a

User: LJW

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 86.60 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Remove Steel Fan/ Diffuser	6x6x4	USER PROVIDED ITEM	5.00	CY	\$50.00	\$250.00
Break Concrete Collor, downshaft disp	12x12x1	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 50 ft. push	144.00	SF	\$2.27	\$326.23
Cut off Casing	6 ft Diam x 3'	USER PROVIDED ITEM	1.00	EA	\$1,001.70	\$1,001.70

Job Hours: 36.00

Subtotal
(unadjusted): \$1,577.93

Total Cost
(adjusted for
location): \$1,366.49

SAFEGUARDING UNDERGROUND OPENINGS

Task description: **Vent Shaft Closure SJ-1**

Site: **St Jude Mine** Permit Action: 2024 Update Permit/Job#: M1978039HR

PROJECT IDENTIFICATION

Task #: 003B State: Colorado Abbreviation: None
Date: 11/26/2024 County: San Miguel Filename: M039-003b
User: LJW

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Shaft Closure	6x6x6"	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	216.00	CF	\$19.53	\$4,218.48

Job Hours: 16.00

Total Cost: \$4,218.48

SAFEGUARDING UNDERGROUND OPENINGS

Task description: **Portal closure (backfill and recontour)**

Site: **St Jude Mine** Permit Action: 2024 Update Permit/Job#: M1978039HR

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 11/26/2024 County: San Miguel Filename: M039-004
User: LJW

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Backfill inert debris/rock in adit	10x10	Adit closure - backfilling (per cu. yd.)	200.00	CY	\$43.75	\$8,750.00
Backfill earth and recontour portal	10x10	Adit closure - backfilling (per cu. yd.)	111.00	CY	\$43.75	\$4,856.25

Job Hours: 24.00 Total Cost: \$13,606.25

BULLDOZER WORKTask description: Grade waste dump (DRA), pad and portal areasSite: St Jude MinePermit Action: 2024 UpdatePermit/Job#: M1978039HR**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 11/26/2024County: San MiguelFilename: M039-005User: LJWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA
Total unit Cost/Hour:	\$474.89	
Total Fleet Cost/Hour:	\$474.89	

MATERIAL QUANTITIESInitial Volume: 12,000Swell factor: 1.335Loose volume: **16,020 LCY**Source of estimated volume: Division of Reclamation, Mining & Safety

Source of estimated swell

factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly
production: 2,110.5 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push
gradient: 5 %Average site altitude: 5,800 feetMaterial weight: 2,550 lbs/LCYWeight description: SandstoneJob Condition Correction FactorOperator Skill: 0.750Source(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:	0.700	(FND-MF)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3549

Adjusted unit
production: 749.02 LCY/hr

Adjusted fleet
production: **749.02** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.634/LCY

Total job time: **21.39** Hours

Total job cost: **\$10,157**

BULLDOZER RIPPING WORK

Task description: Rip compaction on pad and Roads

Site: St Jude Mine

Permit Action: 2024 Update

Permit/Job#: M1978039HR

PROJECT IDENTIFICATION

Task #: 006

State: Colorado

Abbreviation: None

Date: 11/26/2024

County: San Miguel

Filename: M039-006

User: LJW

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU

Horsepower: 405

Ripper Attachment: 3-Shank Ripper

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	\$484.37	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA

Bank Volume: NA

BCY NA

Area: 4.00 acres

Rip Depth (ft): 1.00

Volume: 6,453

BCY or CCY

Source of estimated quantity: AM-1 maps

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.63</u>	feet/pass
Average Ripping Width:	<u>7.67</u>	feet/pass
Average Ripping Length:	<u>250.00</u>	feet/pass
Average Dozer Speed:	<u>88.00</u>	feet/minute
Average Maneuver Time:	<u>0.25</u>	minutes/pass
Production per unit area:	<u>0.855</u>	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.855 Acres/hr

Site Altitude: 5,800 feet

Altitude Adj: 1.00 (CAT HB)

Job Efficiency: 0.83 (1 shift/day)

Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.71 Acres/hr

Adjusted Hourly Fleet Production: 0.71 Acres/hr

JOB TIME AND COST

Fleet size: 1

Grader(s)

Total job time: 5.64 Hours

Unit cost: \$682.946

Per acre

Total job cost: \$2,732

WHEEL LOADER – LOAD AND CARRY WORKTask description: Carry topsoil to pad for spreadingSite: St Jude MinePermit Action: 2024 UpdatePermit/Job#: M1978039HR**PROJECT IDENTIFICATION**Task #: 007State: ColoradoAbbreviation: NoneDate: 11/26/2024County: San MiguelFilename: M039-007User: LJWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 924HAttachment 1: ROPS CabHorsepower: 128Shift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$26.01	NA
Operating Cost/Hour:	\$24.90	100
Operator Cost/Hour:	\$36.85	NA
Total Unit Cost/Hour:	\$87.76	
Total Fleet Cost/Hour:	\$87.76	

MATERIAL QUANTITIESInitial volume: 1,500

CCY

Swell factor: 1.000Loose volume: 1,500

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):

0.475

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:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.020	minutes
Adjusted Basic Cycle Time:		0.455	minutes

Rolling Resistance – Road ConditionsHaul: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Return: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	500	0.00	4.00	4.00	0.3174	(Cat HB)

Return Route:	500	0.00	4.00	4.00	0.3174	(Cat HB)
---------------	-----	------	------	------	--------	----------

Total Travel Time: 0.6347 minutes
Total Cycle Time: 1.0897 minutes

Load Bucket Capacity

Rated Capacity: 2.70 LCY (heaped)
Bucket Fill Factor: 1.050 Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity: 2.84 LCY

Job Condition Correction Factors

Site Altitude: 5800 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: 156.10 LCY/Hour
Adjusted Hourly Unit Production: 129.56 LCY/Hour
Adjusted Hourly Fleet Production: 129.56 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 11.58 Hours
Unit cost: \$0.677 /LCY Total job cost: \$1,016

BULLDOZER WORKTask description: Spread topsoil on pad areasSite: St Jude Mine Permit Action: 2024 Update Permit/Job#: M1978039HR**PROJECT IDENTIFICATION**

Task #: 008 State: Colorado Abbreviation: None
Date: 11/26/2024 County: San Miguel Filename: M039-008
User: LJW

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

Basic Machine: Cat D9T - 9SU
Horsepower: 405
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>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper own.		
Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$474.89</u>	
Total Fleet Cost/Hour:	<u>\$474.89</u>	

MATERIAL QUANTITIES

Initial Volume: 1,500
Swell factor: 1.125
Loose volume: 1,688 LCY

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

HOURLY PRODUCTION

Average push distance: 75 feet
Unadjusted hourly production: 1,514.3 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: 0 %
Average site altitude: 5,800 feet

Material weight: 2,550 lbs/LCYWeight description: Earth - Dry packed

Job Condition Correction Factor Source
Operator Skill: 0.750 (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:	0.700	(FND-MF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3930

Adjusted unit
production: 595.12 LCY/hr

Adjusted fleet
production: **595.12** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.798/LCY

Total job time: **2.84** Hours

Total job cost: **\$1,347**

BULLDOZER WORKTask description: **Grade access road**Site: **St Jude Mine** Permit Action: **2024 Update** Permit/Job#: **M1978039HR****PROJECT IDENTIFICATION**

Task #: **009** State: **Colorado** Abbreviation: **None**
Date: **11/26/2024** County: **San Miguel** Filename: **M039-009**
User: **LJW**

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

Basic Machine: **Cat D9T - 9SU**
Horsepower: **405**
Blade Type: **Semi-Universal**
Attachment: **3-shank ripper**
Shift Basis: **1 per day**
Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA
Total unit Cost/Hour:	\$474.89	
Total Fleet Cost/Hour:	\$474.89	

MATERIAL QUANTITIES

Initial Volume: **325**
Swell factor: **1.165**
Loose volume: **379 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: **2,110.5 LCY/hr**

Materials consistency description: **Consolidated stockpile 1.0**

Average push gradient: **0 %**
Average site altitude: **5,800 feet**

Material weight: **2,900 lbs/LCY**Weight description: **Decomposed rock - 50% Rock, 50% Earth**

<u>Job Condition Correction Factor</u>	<u>Source</u>
Operator Skill: 0.750	(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:	0.700	(FND-MF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3455

Adjusted unit
production: 729.18 LCY/hr

Adjusted fleet
production: **729.18** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.651/LCY

Total job time: **0.52** Hours

Total job cost: **\$247**

REVEGETATION WORKTask description: Revegetate disturbed areasSite: St Jude MinePermit Action: 2024 UpdatePermit/Job#: M1978039HR**PROJECT IDENTIFICATION**Task #: 010State: ColoradoAbbreviation: NoneDate: 11/26/2024County: San MiguelFilename: M039-010User: LJWAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	0.96	15.67	\$20.47
Indian Ricegrass - Native	7.42	24.02	\$128.31
Sand Dropseed	0.14	16.71	\$1.82
Bottlebrush Squirreltail	4.08	17.98	\$103.65
Galleta	4.94	18.03	\$273.86
Muttongrass	0.20	4.13	\$9.53
Sagebrush, Mountain or Big	0.20	10.56	\$16.54
Saltbush, Four Wing	0.50	0.69	\$9.94
Winter Fat	0.50	1.27	\$23.36

Totals Seed Mix	18.94	109.07	\$587.48
------------------------	-------	--------	-----------------

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$272.56
Total Seed Application Cost/Acre	\$272.56

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Herbicide - 2,4D @ 1.0 pt/ac	9.00	ACRE	\$4.13	\$37.14
Total Mulch Materials Cost/Acre				\$1,022.70

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Weed spray, truck, non-aquatic area, nox. [DMG]	\$83.26
Total Mulch Application Cost/Acre	\$168.64

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:	9	Cost /Acre:	\$2,168.99
Estimated Failure Rate:	30%	Cost /Acre*:	\$2,168.99
*Selected Replanting Work Items:	TILLING,SEEDING,MULCHING		
Initial Job Cost:	\$19,520.91		
Reseeding Job Cost:	\$5,856.27		
Total Job Cost:	\$25,377		
Job Hours:	24.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Haul reclamation equipment to and from siteSite: St Jude MinePermit Action: 2024 UpdatePermit/Job#: M1978039HR**PROJECT IDENTIFICATION**Task #: 011State: ColoradoAbbreviation: NoneDate: 11/26/2024County: San MiguelFilename: M039-011User: LJWAgency 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:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

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 D9T - 9SU	66.13	\$271.95	\$125.64	1	\$397.59	\$125.64	\$250.00
CAT 924H	12.69	\$26.01	\$59.44	1	\$85.45	\$59.44	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$27.21	\$59.44	1	\$86.65	\$59.44	\$250.00
Cat 324D L 9'-8" Stick	27.33	\$281.20	\$122.78	1	\$403.98	\$122.78	\$250.00

Subtotals: **\$1,074.13** **\$426.74** **\$1,250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$13.77	1	\$13.77	\$13.77

Subtotals: **\$13.77** **\$13.77**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	NATURITA	
Total one-way travel distance:	40.00	miles
Average Travel Speed:	40.00	mph

Total Non-Roadable Mob/Demob Cost *	\$11,946.52
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$27.54
** 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):	1.50	NA
Unloading Time (Hours):	1.50	NA
Subtotals:	5.00	2.00

JOB TIME AND COST

Total job time:	10.00	Hours
-----------------	-------	-------

Total job cost:	\$11,974
-----------------	----------