



STATE OF
COLORADO

Simmons - DNR, Leigh <leigh.simmons@state.co.us>

M1999042, White Banks Mine, Inspection Report and Reclamation Cost Estimate

Simmons - DNR, Leigh <leigh.simmons@state.co.us>

Mon, Jun 13, 2022 at 3:02 PM

To: rockcreek2009@gmail.com, "Garcia, Olivia -FS" <olivia.garcia@usda.gov>, "Warner, Kevin -FS" <kevin.warner@usda.gov>

Apologies, I had the permit number wrong in the subject line of my email.

Leigh Simmons
Environmental Protection Specialist



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

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1313 Sherman Street, Room 215, Denver, CO 80203

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On Mon, Jun 13, 2022 at 2:46 PM Simmons - DNR, Leigh <leigh.simmons@state.co.us> wrote:

All,

Please find attached the report from the April 19th inspection of the White Banks Mine.

Thanks for your patience.

Please contact me if you have any questions or concerns with either the report or the appended reclamation cost estimate.

Leigh Simmons
Environmental Protection Specialist



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MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: White Banks Mine	MINE/PROSPECTING ID#: M-1999-042	MINERAL: Anhydrite, gypsum, and quartz (quartzite/quartz sandstone)	COUNTY: Pitkin
INSPECTION TYPE: Surety-Related Inspection	INSPECTOR(S): Leigh Simmons	INSP. DATE: April 19, 2022	INSP. TIME: 09:30
OPERATOR: Avalanche Creek Marble & Alabaster LLC	OPERATOR REPRESENTATIVE: Robert Congdon	TYPE OF OPERATION: 110c - Construction Limited Impact	

REASON FOR INSPECTION: Other Agency Request	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$41,927.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: U.S.Forest Service
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: June 10, 2022

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Signs & Markers

PROBLEM/POSSIBLE VIOLATION: Problem: Several of the affected area boundary markers are missing or incorrectly placed. This is a problem for failure to maintain boundary markers around the affected area as required by Section 3.1.12(2) of the rule.

CORRECTIVE ACTIONS: The operator shall conduct a survey and replace the boundary markers in the correct location(s). The operator shall provide proof to the Division that this has been done by the corrective action date.

CORRECTIVE ACTION DUE DATE: 7/05/22

INSPECTION TOPIC: Signs & Markers

PROBLEM/POSSIBLE VIOLATION: Problem: The mine identification sign was not posted at the entrance of the mine site (i.e. at the gate on the access road). This is a problem for failure to post a mine identification sign as required by Section 3.1.12(1) of the rule. The Operator shall, at the entrance of the mine site post a sign, which shall be clearly visible from the access road, with a minimum size equaling one hundred and eighty-seven (187) square inches, such as eleven (11) inches in height and seventeen (17) inches in width, with appropriate font size, with the following: the name of the Operator, a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and the permit number.

CORRECTIVE ACTIONS: The operator shall, at the entrance of the mine site, post a sign which shall be clearly visible from the access road with the following: the name of the operator (Avalanche Creek Marble & Alabaster, LLC), a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and the permit number (M-1999-042). The operator shall submit photo documentation that a proper sign has been posted by the corrective action date.

CORRECTIVE ACTION DUE DATE: 7/05/22

OBSERVATIONS

This inspection was conducted by Leigh Simmons of the Division of Reclamation, Mining and Safety (Division). It was accompanied by Robert Congdon of Avalanche Creek Marble & Alabaster LLC (permittee and operator); and Kevin Warner, Jason Gross and Doug Leyva of the United States Forest Service (USFS, land manager). The inspection was scheduled at the request of the USFS, with the goal of recalculating the required financial warranty following the recent submission to the USFS of an updated Mine Plan of Operations (MPOO).

The White Banks Mine is an underground alabaster mine located in Pitkin County, ten miles south of Carbondale, on Avalanche Creek Road. The permitted area is 3.5 acres.

The mine affects less than 10 acres making it a "Limited Impact Operation", and alabaster is considered a construction material, so the 110c type permit is appropriate. The mine has been in Temporary Cessation since 2013 (the initial TC request was received on 11/15/2013 and granted on 11/21/2013; a second term of TC was requested at the March 2020 Mined Land Reclamation Board hearing, retroactively applied to a start date of 11/21/2018). Per Rule 1.13.9, TC may not be continued past 11/21/2023 without terminating the mining operation and fully complying with the reclamation plan. No recent activity had taken place.

The Division currently holds a financial warranty of \$41,927 for the reclamation of the site, based on a calculation made in 2013 of the estimated cost to complete the reclamation plan. The required financial warranty was recalculated following the inspection as is discussed below.

The weather during the inspection was clear and dry. Access to the site was through a gate on Avalanche Creek Road (FS-310). The gate is locked seasonally, but open to the public during the summer. Several signs were posted at the gate, but the Mine ID sign was not among them.

For a 110c operation the permit boundary and affected area boundary are considered equivalent. Most of the boundary of the site was marked with a fence or with t-posts, however boundary markers on the high ground at the eastern edge of the site were missing. The area enclosed by the boundary markers was measured at 4.59 acres using the internal GNSS receiver of a Samsung Galaxy S10e cell phone running the Esri Field Maps app.

Financial Warranty:

Since the reclamation plan has not changed since 2013, the financial warranty calculation was updated with new unit costs, but the nature of the tasks included was not changed for the most part. It was assumed that most of the equipment and materials stored at the site are of value (i.e. they are not junk), so the cost of their removal was not included, however a task to remove a single 18cy load of miscellaneous "junk" was added. The calculation is appended to this inspection report (Appendix A: 2022-04-19 - Financial warranty calculation). The Division proposes that the financial warranty be increased to \$62,082 to cover the costs of reclaiming the existing disturbance. The operator is invited to comment before the Division initiates a formal Surety Increase.

A supplement to the financial warranty calculation is provided to reflect new disturbance proposed with the updated MPOO at the request of the USFS (Appendix B: 2022-04-19_Extras - Supplementary financial warranty estimate). **Note that the activities proposed with the MPOO have not been approved by the Division, and**

are not included in the approved operation/reclamation plan – revisions to the permit will be required before any associated work begins. A brief description of the assumptions underlying the cost estimate follows:

- Re-route of FS-310
If the road is to be re-routed an amendment would need to be submitted to incorporate the existing road into the permit area, and to plan for its reclamation. It is assumed that topsoil from the new road would be stripped and stockpiled, and could be used for reclamation of the existing road (700' length x 25' width = 0.4 acres) at a depth of 6".
- Mobile shipping/security office
It is assumed that the structure can be hauled offsite without loading.
- Well
Depth and diameter is assumed to be 100' and 4".
- 500 gallon diesel tank
No details are given, it is assumed that the tank would not need to be excavated. A generic tank haulage task is included.
- Crane
No details are given. A generic steel structure removal task is included, based on a 20' x 10' x 4' structure.
- Secondary escapeway
No detail is given in the MPOO, it is assumed that the escapeway could be sealed with a 4' x 4' x 1' concrete cap, poured in place.
- Indirect costs for job superintendent and profit are included, but other indirect costs are assumed to be included in existing estimate.

Gen. Compliance With Mine Plan:

The various maps of the site (from Exhibit A and Exhibit E of the Permit Application Packet (PAP), and included with the proposed MPOO) are simple sketches which make it challenging to precisely define the approved permit boundary and to reconcile the difference between the permit area described in Exhibit B of the PAP (3.5 acres) and that enclosed by the boundary markers (4.59 acres) The maps minimally satisfy the requirements of the rules.

Access to the portal was blocked by locked a steel door. The underground workings were not inspected. Mr Congdon stated that 4 large pieces of equipment were stored underground, including a 915 Eimco loader, a Cummins diesel generator set, an Anderson Mavor longwall miner, and a wire saw. Other equipment stored underground includes water pipes, vent pipe, drill steels, jack legs and hand tools. Various pieces of equipment and materials were stored on the surface of the site, mainly in the equipment storage area, as is shown in the photographs.

Right of Entry:

Right of Entry has been an issue at the White Banks Mine for several years, and remains the subject of ongoing litigation. At the time of publication of this inspection report the operator has not demonstrated to the Division a legal right of entry. Before undertaking any activity related to mining or reclamation at the site the operator must update Exhibit G of the PAP with documents that show a legal right to enter the surface and a legal right to extract material from the underground workings.

PHOTOGRAPHS

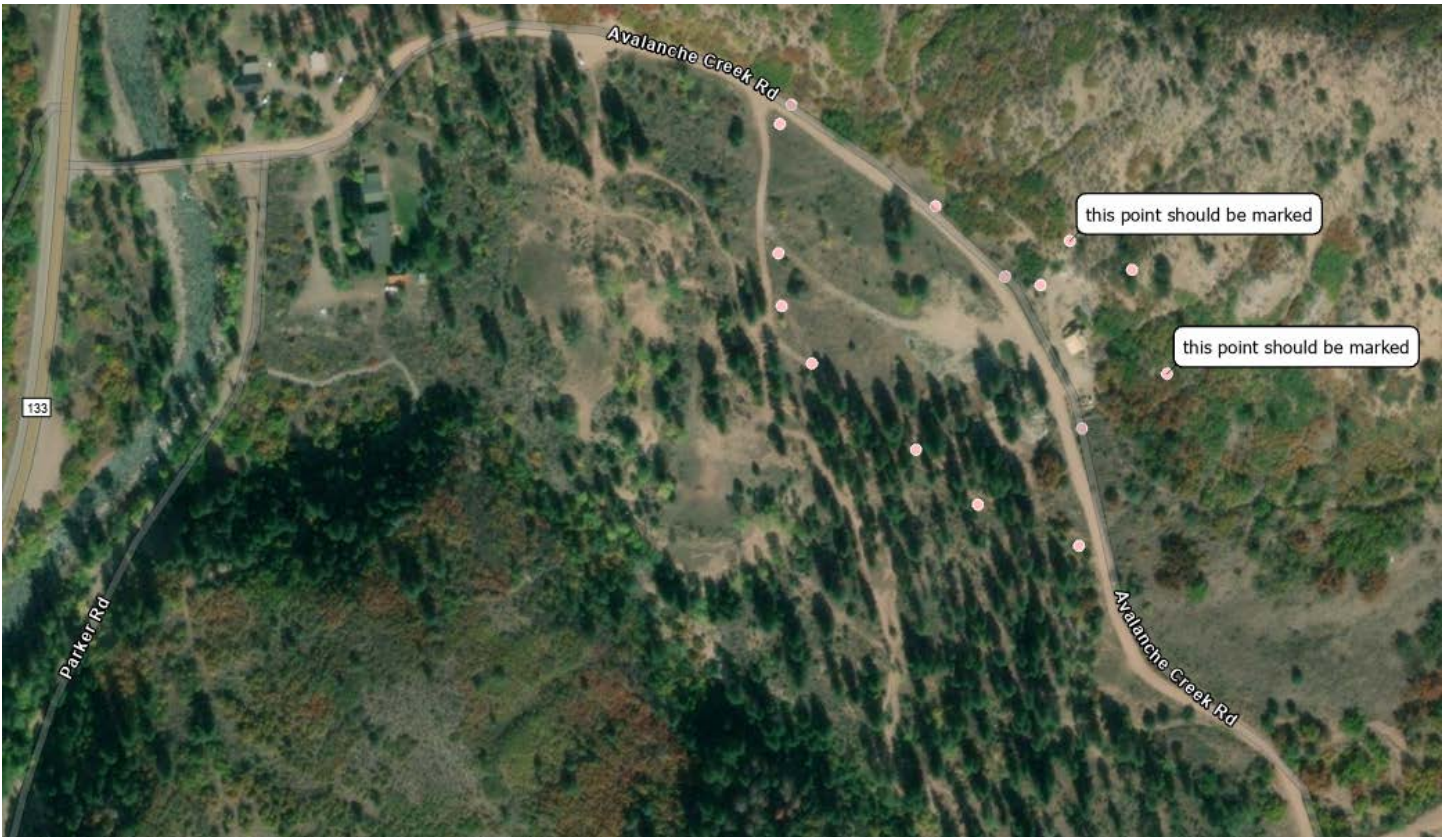


Figure 1: Location of boundary markers overlain on aerial image



Figure 2: Gate at entrance to mine site



Figure 3: Overview of site, looking W



Figure 4: Overview of site, looking SW



Figure 5: Overview of site, looking S



Figure 6: Equipment storage area and mine office from southern gate on FS-310



Figure 7: Mine ID sign on office building, does not show the current mine name or operator name



Figure 8: Mine portal

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>Y</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>NA</u>	(SF) PROCESSING FACILITIES----- <u>Y</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>Y</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>PB</u>	(SP) STORM WATER MGT PLAN---- <u>NA</u>	(RS) RECL PLAN/COMP-- <u>NA</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>Y</u>	(OD) OFF-SITE DAMAGE----- <u>Y</u>	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

Inspection Contact Address

Robert Congdon
Avalanche Creek Marble & Alabaster LLC
801 Colorado Avenue
Glenwood Springs, CO 81601

Enclosures:

Appendix A: 2022-04-19 - Financial warranty calculation
Appendix B: 2022-04-19_Extras - Supplementary financial warranty estimate

CC:
Olivia Garcia, USFS
Kevin Warner, USFS

Appendix A: 2022-04-19 - Financial warranty calculation

COST SUMMARY WORK

Task description: RCE update, including existing disturbance and proposed MPOO

Site: White Banks Mine

Permit Action: 2022-04-19

Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 6/2/2022

County: Pitkin

Filename: 99-042

User: LDS

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Remove structures and equipment from site	DEMOLISH	1	32.00	\$10,730
002	Seal mine portal	MINESEAL	1	8.00	\$19,207
003	Grade portal bench	DOZER	1	17.88	\$3,045
004	Rip parking area prior to topsoiling	RIPPER	1	0.54	\$98
005	Replace topsoil over disturbed areas	DOZER	1	2.32	\$395
006	Revegetate disturbed area	REVEGE	1	5.00	\$8,968
007	Mobilize reclamation crew and equipment	MOBILIZE	1	3.06	\$3,197
<u>SUBTOTALS:</u>				68.8	\$45,640

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$922

Performance bond: 1.05

Total = \$479

Job superintendent: 34.40

Total = \$2,478

Profit: 10.00

Total = \$4,564

TOTAL O & P = \$8,443

CONTRACT AMOUNT (direct + O & P) = \$54,083

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$0

Engineering work and/or contract/bid preparation: 8.59

Total = \$4,646

Reclamation management and/or administration: 6.20

\$3,353

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$16,442

TOTAL BOND AMOUNT (direct + indirect) = \$62,082

DEMOLITION WORK

Task description: Remove structures and equipment from site

Site: White Banks Mine

Permit Action: 2022-04-19

Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 6/2/2022

County: Pitkin

Filename: M042-001

User: LDS

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 98.50 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Cabin on north side of FR 310	25'L x 15'W x 20xH	Bldg. (MN) demo./off-site disposal in approved landfill - Max. 30 mile haul	7,500.00	CF	\$0.45	\$3,375.00
Fencing around property on south side of FR310	1,600 lf	Fencing, barbed wire, - 3 strand	1,600.00	LF	\$1.65	\$2,640.00
Fence on north side of FR 310	40 lf	Fencing, wood, all types - 4 ft. to 6 ft. high	40.00	LF	\$1.64	\$65.60
Portal door and vent fan house	15' x 8' x 8'	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 30 mile haul	960.00	CF	\$0.43	\$408.96
Powerpole	2 poles	Utility Poles, Wood 35' - 45' high (each pole)	2.00	EA	\$292.00	\$584.00
Utility box	2 boxes	Powerline or utility line - Structural Steel Box Type Frame Structure Dismantle and Dispose	2.00	EA	\$1,855.00	\$3,710.00
Overhead powerline	400lf	Disposal of utility pole and hardware surplus material	400.00	LF	\$0.02	\$8.00
Load water tanks, vent pipe, miscellaneous material	18cy	Loading only, open areas (unconfined) - Track loader	18.00	CY	\$0.60	\$10.80
Haul water tanks, vent pipe, miscellaneous material	18cy	Hauling only, per mile, 12-18 CY truck - 30 mph average speed	12.00	MI	\$7.61	\$91.32

Job Hours: 32.00

Subtotal
(unadjusted): \$10,893.68

Total Cost
(adjusted for location): \$10,730.27

SAFEGUARDING UNDERGROUND OPENINGS

Task description: Seal mine portal

Site: White Banks Mine

Permit Action: 2022-04-19

Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 002

State: Colorado

Abbreviation: None

Date: 6/9/2022

County: Pitkin

Filename: M042-002

User: LDS

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Portal closure	10' x 10'	Aduit closure - bulkhead seal, >= 36 sq. ft. (per sq. ft.)	100.00	SF	\$192.07	\$19,207.00

Job Hours: 8.00

Total Cost: \$19,207.00

BULLDOZER WORKTask description: **Grade portal bench**Site: **White Banks Mine** Permit Action: **2022-04-19** Permit/Job#: **M1999042****PROJECT IDENTIFICATION**

Task #: **003** State: **Colorado** Abbreviation: **None**
 Date: **6/9/2022** County: **Pitkin** Filename: **M042-003**
 User: **LDS**

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

Basic Machine: **Cat D6T XL**
 Horsepower: **185**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$64.38	NA
Operating Cost/Hour:	\$64.62	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$170.30**
 Total Fleet Cost/Hour: **\$170.30**

MATERIAL QUANTITIES

Initial Volume: **740**
 Swell factor: **1.000**
 Loose volume: **740 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: **30 %**
 Average site altitude: **6,800 feet**

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

		<u>Source</u>
Operator Skill:	0.750	(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:	0.800	(FND-RF)
Push gradient:	0.298	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.0931

Adjusted unit production: 41.39 LCY/hr

Adjusted fleet production: **41.39** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$4.115/LCY

Total job time: **17.88** Hours

Total job cost: **\$3,045**

BULLDOZER RIPPING WORK

Task description: Rip parking area prior to topsoiling

Site: White Banks Mine Permit Action: 2022-04-19 Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 6/9/2022 County: Pitkin Filename: M042-004
User: LDS

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D6T XL Horsepower: 185
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$64.38	NA
Operating Cost/Hour:	\$64.62	100
Ripper Ownership Cost/Hour:	\$5.99	NA
Ripper Operating Cost/Hour:	\$4.30	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$180.59	
Total Fleet Cost/Hour:	\$180.59	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 0.25 acres Rip Depth (ft): 2.00 Volume: 807 BCY or CCY

Source of estimated quantity: Based on current site conditions

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 1.64 feet/pass
Average Ripping Width: 6.58 feet/pass
Average Ripping Length: 50.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.554 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.554 Acres/hr
Site Altitude: 6,800 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.46 Acres/hr
Adjusted Hourly Fleet Production: **0.46** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **0.54** Hours

Unit cost: \$392.831 Per acre Total job cost: **\$98**

BULLDOZER WORKTask description: **Replace topsoil over disturbed areas**Site: **White Banks Mine**Permit Action: **2022-04-19**Permit/Job#: **M1999042****PROJECT IDENTIFICATION**Task #: **005**State: **Colorado**Abbreviation: **None**Date: **6/9/2022**County: **Pitkin**Filename: **M042-005**User: **LDS**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D6T XL**Horsepower: **185**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$64.38	NA
Operating Cost/Hour:	\$64.62	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$170.30**Total Fleet Cost/Hour: **\$170.30****MATERIAL QUANTITIES**Initial Volume: **605**Swell factor: **1.000**Loose volume: **605 LCY**Source of estimated volume: **Current site conditions**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**Unadjusted hourly production: **303.3 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **6,800 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 260.63 LCY/hr

Adjusted fleet production: **260.63** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.653/LCY

Total job time: **2.32** Hours

Total job cost: **\$395**

REVEGETATION WORKTask description: Revegetate disturbed areaSite: White Banks MinePermit Action: 2022-04-19Permit/Job#: M1999042**PROJECT IDENTIFICATION**Task #: 006State: ColoradoAbbreviation: NoneDate: 6/9/2022County: PitkinFilename: M042-006User: LDSAgency 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
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$386.90

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Mountain Brome - Bromar	3.00	4.82	\$11.40
Sheep Fescue - Bighorn	2.00	31.22	\$8.80
Slender Wheatgrass - Native	2.00	7.30	\$9.25
Mahogany, Mountain	8.00	10.84	\$294.44
Oak, Gambel's	7.00	0.05	\$255.50
Western Wheatgrass - Native	2.00	5.05	\$12.00
Serviceberry, Utah	5.00	9.41	\$337.50
Snowberry, Western	5.00	8.61	\$317.50

Totals Seed Mix	34.00	77.30	\$1,246.39
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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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$71.57
Power mulcher (MEANS 32 91 13.16 0350)	\$106.29
Total Mulch Application Cost/Acre	\$177.86

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>2.7</u>	Cost /Acre:	<u>\$2,657.19</u>
Estimated Failure Rate:	<u>25%</u>	Cost /Acre*:	<u>\$2,657.19</u>
*Selected Replanting Work Items:	<u>TILLING,SEEDING,MULCHING</u>		
Initial Job Cost:	<u>\$7,174.41</u>		
Reseeding Job Cost:	<u>\$1,793.60</u>		
Total Job Cost:	<u>\$8,968</u>		
Job Hours:	5.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilize reclamation crew and equipment**Site: **White Banks Mine**Permit Action: **2022-04-19**Permit/Job#: **M1999042****PROJECT IDENTIFICATION**Task #: **007**State: **Colorado**Abbreviation: **None**Date: **6/9/2022**County: **Pitkin**Filename: **M042-007**User: **LDS**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:	\$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 D6T XL	23.25	\$64.38	\$68.37	1	\$132.75	\$68.37	\$250.00
Cat 315D L 8'-6" Stick	19.05	\$51.47	\$68.37	1	\$119.84	\$68.37	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$7.98	\$68.37	1	\$76.35	\$68.37	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$14.98	\$68.37	1	\$83.35	\$68.37	\$250.00

Subtotals: **\$412.29** **\$273.48** **\$1,000.00****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.	\$12.93	1	\$12.93	\$12.93

Subtotals: **\$12.93** **\$12.93**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: CARBONDALE
 Total one-way travel distance: 12.00 miles
 Average Travel Speed: 45.00 mph

Total Non-Roadable Mob/Demob Cost * \$3,190.32
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$6.90
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.27</u>	<u>0.27</u>
Return Time (Hours):	<u>0.27</u>	<u>0.27</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.53</u>	<u>0.53</u>

JOB TIME AND COST

Total job time: 3.07 Hours

Total job cost: \$3,197

Appendix B: 2022-04-19_Extras - Supplementary financial warranty estimate

COST SUMMARY WORK

Task description: Direct costs for tasks associated with proposed MPOO

Site: White Banks Mine Permit Action: 2022-04-19_Extras Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 6/10/2022 County: Pitkin Filename: 99-042_Extras
User: LDS

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
008	Rip existing FS-310 prior to topsoiling	RIPPER	1	0.62	\$113
009	Replace topsoil over reclaimed FS-310	DOZER	1	1.58	\$270
010	Revegetate reclaimed FS-310	REVEGE	1	5.00	\$1,329
011	Haul Mobile shipping/security office offsite	MISCTRUK	1	4.00	\$365
012	Plug and abandon water well	BOREHOLE	1	4.00	\$630
013	Remove 500 gallon diesel tank	DEMOLISH	1	4.00	\$749
014	Remove crane	DEMOLISH	1	4.00	\$518
015	Seal secondary escapeway	MINESEAL	1	8.00	\$222
<u>SUBTOTALS:</u>				31.2	\$4,197

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	0.00	Total =	\$0
Performance bond:	0.00	Total =	\$0
Job superintendent:	15.60	Total =	\$1,124
Profit:	10.00	Total =	\$420
		TOTAL O & P =	\$1,543
		CONTRACT AMOUNT (direct + O & P) =	\$5,740

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:	0.00		\$0

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$1,543

TOTAL BOND AMOUNT (direct + indirect) = \$5,740

BULLDOZER RIPPING WORK

Task description: Rip existing FS-310 prior to topsoiling

Site: White Banks Mine

Permit Action: 2022-04-19_Extras

Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 008

State: Colorado

Abbreviation: None

Date: 6/10/2022

County: Pitkin

Filename: M042-008

User: LDS

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D6T XL
Ripper Attachment: 3-Shank Ripper

Horsepower: 185
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$64.38	NA
Operating Cost/Hour:	\$64.62	100
Ripper Ownership Cost/Hour:	\$5.99	NA
Ripper Operating Cost/Hour:	\$4.30	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$180.59	
Total Fleet Cost/Hour:	\$180.59	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 0.40 acres Rip Depth (ft): 2.00 Volume: 1,291 BCY or CCY

Source of estimated quantity: Based on current site conditions

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 1.64 feet/pass
Average Ripping Width: 6.58 feet/pass
Average Ripping Length: 700.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.773 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.773 Acres/hr
Site Altitude: 6,800 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.64 Acres/hr
Adjusted Hourly Fleet Production: **0.64** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **0.62** Hours

Unit cost: \$281.373 Per acre Total job cost: **\$113**

BULLDOZER WORKTask description: **Replace topsoil over reclaimed FS-310**Site: **White Banks Mine** Permit Action: **2022-04-19_Extras** Permit/Job#: **M1999042****PROJECT IDENTIFICATION**

Task #: **009** State: **Colorado** Abbreviation: **None**
 Date: **6/10/2022** County: **Pitkin** Filename: **M042-009**
 User: **LDS**

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

Basic Machine: **Cat D6T XL**
 Horsepower: **185**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$64.38	NA
Operating Cost/Hour:	\$64.62	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$170.30**
 Total Fleet Cost/Hour: **\$170.30**

MATERIAL QUANTITIES

Initial Volume: **324**
 Swell factor: **1.000**
 Loose volume: **324 LCY**

Source of estimated volume: **Current site conditions**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **135 feet**
 Unadjusted hourly production: **238.2 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **6,800 feet**

Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 204.69 LCY/hr

Adjusted fleet production: **204.69** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.832/LCY

Total job time: **1.58** Hours

Total job cost: **\$270**

REVEGETATION WORKTask description: **Revegetate reclaimed FS-310**Site: **White Banks Mine**Permit Action: 2022-04-19_ExtrasPermit/Job#: M1999042**PROJECT IDENTIFICATION**Task #: 010State: ColoradoAbbreviation: NoneDate: 6/10/2022County: PitkinFilename: M042-010User: LDSAgency 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
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$386.90

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Mountain Brome - Bromar	3.00	4.82	\$11.40
Sheep Fescue - Bighorn	2.00	31.22	\$8.80
Slender Wheatgrass - Native	2.00	7.30	\$9.25
Mahogany, Mountain	8.00	10.84	\$294.44
Oak, Gambel's	7.00	0.05	\$255.50
Western Wheatgrass - Native	2.00	5.05	\$12.00
Serviceberry, Utah	5.00	9.41	\$337.50
Snowberry, Western	5.00	8.61	\$317.50

Totals Seed Mix	34.00	77.30	\$1,246.39
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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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$71.57
Power mulcher (MEANS 32 91 13.16 0350)	\$106.29
Total Mulch Application Cost/Acre	\$177.86

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: 0.4 Cost /Acre: \$2,657.19
 Estimated Failure Rate: 25% Cost /Acre*: \$2,657.19
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$1,062.88**
 Reseeding Job Cost: **\$265.72**
 Total Job Cost: **\$1,329**
 Job Hours: **5.00**

MISCELLANEOUS TRUCK WORK

Task description: Haul Mobile shipping/security office offsite

Site: White Banks Mine

Permit Action: 2022-04-19_Extras

Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 011

State: Colorado

Abbreviation: None

Date: 6/10/2022

County: Pitkin

Filename: M042-011

User: LDS

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Make and Model: Truck Tractor, 6x4, 50K GVW

Horsepower: 310

Attachment 1: _____

Shift Basis: 1 per day

Attachment 2: _____

Weight: 9.50

Labor Unit 1: Transport Rig Driver

(US Tons)

Labor Unit 2: _____

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$23.19</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$40.89</u>	<u>100</u>
Operator Cost/Hour:	<u>\$27.18</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$91.26</u>	
Total Fleet Cost/Hour:	<u>\$91.26</u>	

JOB TIME AND COST

Fleet size: 1 Truck(s)

Total job time: 4.00 Hours

Unit cost: \$91.26 /Hour

Total job cost: \$365

BOREHOLE SEALING WORK

Task description: Plug and abandon water well

Site: White Banks Mine

Permit Action: 2022-04-19_Extras

Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 012
Date: 6/10/2022
User: LDS

State: Colorado
County: Pitkin

Abbreviation: None
Filename: M042-012

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Plug well	PVC plug - 4 in. diameter borehole	4 in	NA	1.00	EA	\$33.98	\$33.98
Seal well	Portland cement grout - 4 in. (labor, equip, materials)	4 in	100 lf	100.00	LF	\$5.55	\$555.00
Cut exposed casing	Exposed casing removal - Calculate Circumference in Linear Feet	4 in	NA	1.00	LF	\$3.26	\$3.26
Borehole marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$37.50	\$37.50

Job Hours: 4.00

Total Cost: \$630.00

DEMOLITION WORK

Task description: Remove 500 gallon diesel tank

Site: White Banks Mine

Permit Action: 2022-04-19_Extras

Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 013

State: Colorado

Abbreviation: None

Date: 6/10/2022

County: Pitkin

Filename: M042-013

User: LDS

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 98.50 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
500 gallon diesel tank	500 gal	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	1.00	EA	\$760.00	\$760.00

Job Hours: 4.00

Subtotal
(unadjusted): \$760.00

Total Cost
(adjusted for location): \$748.60

DEMOLITION WORK

Task description: Remove crane

Site: White Banks Mine

Permit Action: 2022-04-19_Extras

Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 014

State: Colorado

Abbreviation: None

Date: 6/10/2022

County: Pitkin

Filename: M042-014

User: LDS

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 98.50 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Crane	20' x 10' x 4'	Plant (1S) demo./off-site disposal in approved landfill - Max. 15 mile haul	800.00	CF	\$0.66	\$526.40

Job Hours: 4.00

Subtotal
(unadjusted): \$526.40

Total Cost
(adjusted for location): \$518.50

SAFEGUARDING UNDERGROUND OPENINGS

Task description: Seal secondary escapeway

Site: White Banks Mine

Permit Action: 2022-04-19_Extras

Permit/Job#: M1999042

PROJECT IDENTIFICATION

Task #: 015

State: Colorado

Abbreviation: None

Date: 6/10/2022

County: Pitkin

Filename: M042-015

User: LDS

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Secondary escapeway	4' x 4' x 1'	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	16.00	CF	\$13.89	\$222.24

Job Hours: 8.00

Total Cost: \$222.24