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

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: Reynolds Pit	**MINE/PROSPECTING ID#:** M-2006-028	**MINERAL:** Sand and gravel	**COUNTY:** Delta
INSPECTION TYPE: Monitoring	**WEATHER:** Clear	**INSP. DATE:** November 14, 2024	**INSP. TIME:** 13:00
OPERATOR: Cornerstone Materials LLC	**OPERATOR REPRESENTATIVE:** Zane Luttrell	**TYPE OF OPERATION:** 112c - Construction Regular Operation	

REASON FOR INSPECTION: Normal I&E Program	**BOND CALCULATION TYPE:** Complete Bond	**BOND AMOUNT:** $74,440.52
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None
INSPECTOR(S): Robert Zuber, P.E.	**INSPECTOR'S SIGNATURE:** Robert D. Zuber	**SIGNATURE DATE:** November 27, 2024

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: Hydrologic Balance
PROBLEM #1: The site is impounding water and using it for dust control. However, it appears that there is no documentation of water rights for this use in the DRMS permit files.
CORRECTIVE ACTIONS: Submit documentation from the State Engineer's Office (Division of Water Resources) demonstrating that the impoundment of water in this pit is authorized by that office.
CORRECTIVE ACTION DUE DATE: 1/31/25

INSPECTION TOPIC: Signs & Markers
PROBLEM #2: The mine identification sign and affected area boundary markers were not sufficient per the requirements of Rule 3.1.12. The identification sign is not at the entrance of the mine site. Furthermore, the sign does not include a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board. Finally, the company name on the sign should be Cornerstone Materials LLC. Regarding the markers for the affected area, markers are missing on the west side and a portion of the north side.
CORRECTIVE ACTIONS: The operator must post a sign at the entrance to the mine site which shall be clearly visible from the access road and include 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. The boundaries of the affected area must be marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries.
CORRECTIVE ACTION DUE DATE: 1/10/25

INSPECTION TOPIC: Financial Warranty
PROBLEM #3: The financial warranty is not adequate to reclaim the site in accordance with the approved reclamation plan. This is a failure to maintain the proper financial warranty amount to complete reclamation of the affected lands pursuant to C.R.S. 34-32.5-117(4)(b) of the Act.
CORRECTIVE ACTIONS: The operator shall review the enclosed reclamation cost estimate and provide any comments by the corrective action deadline. If, by the corrective action deadline, no comments have been received, the Division will send a separate surety increase notice to the operator regarding the increase of the financial warranty. The operator will have 60 days from the date on the surety increase notice to post the additional financial warranty.
CORRECTIVE ACTION DUE DATE: 1/10/25

INTRODUCTION AND BACKGROUND

The Reynolds Pit is operated by Cornerstone Materials, LLC (Cornerstone). Cornerstone holds a permit for this pit with the Division of Reclamation, Mining and Safety (DRMS), file No. M-2006-028. It is a 112c mining operation located approximately 1.5 miles west of Delta, on Townsend Road. The total permit area is 34.01 acres, and the approved maximum amount of disturbance that has not been reclaimed is 18 acres.

Per recent Annual Reports and conversations with the Operator, the following items describe current conditions at the site:

- No additional mining activity is planned for the northern half of the site.
- The northeastern portion of the site (approximately six acres) has been reclaimed.
- The northwestern portion of the site is currently being used for processing and product storage, and includes a drainage ditch and a small, reclaimed area (approximately two acres in the northwest corner of the site).
- In the center of the site, current mining activity occupies a 100-foot strip (approximate) measured in the north-south direction. Mining is progressing from west to east.
- The southern part of the site (approximately 12 acres) has not been disturbed by mining activity.

Please see **Figure 1**, which illustrates the current conditions at the site.

The current Reclamation Plan, including the map in Exhibit F, shows the entire interior of the mine site being a flat area draining to the north, and at a similar elevation as the adjacent land north of the permit boundary. However, Mr. Luttrell stated that a portion of the site, including the area where the scale, scale house, and entrance road are now located, may not be mined and may remain a "peninsula" of land that remains at a higher elevation than the rest of the reclaimed site. This agrees with the plan of the scale house remaining as a permanent structure (it houses an irrigation pump). If Cornerstone Materials decides to not mine this "peninsula," an amendment should be submitted to the Division.

Zane Luttrell, the operator and permittee, noted that water is used onsite for dust control, and he noted that Cornerstone has sufficient water rights for this use. However, it appears that there is no documentation of this in the DRMS permit files for this site. Cornerstone needs to obtain a letter from the Colorado Division of Water Resources stating that Cornerstone holds sufficient water rights for consumptive uses at the site. This letter must be forwarded to the Division to illustrate how the operation is in compliance with Rule 3.1.6(1)(a). Also, Exhibit G should be updated to reference this documentation. **A problem is cited for this issue; see Problem #1 in this report for the required corrective actions.**

Note that citations of rules in this report are in reference to the "Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials," effective July 15, 2019.

OBSERVATIONS

This site was inspected as part of the Division of Reclamation, Mining and Safety's (Division's) normal monitoring program. The weather was clear and warm for November. The ground was mostly dry. Zane Luttrell was present during this inspection. Photographs are included with this report to illustrate some of the conditions observed.

Activity onsite included a loader and three haul trucks moving material. No processing of material occurred during the inspection. Several product piles were in the storage area in the northwestern part of the permit.

The Mine Identification sign was not at the entrance to the mine site as required by Rule 3.1.12 (1). Furthermore, it does not include all the necessary information listed in that rule. The sign must include a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board. Also, the company name should be Cornerstone Materials LLC. The affected area boundary is delineated by fencing on the east and south sides. On the north side, a ditch marks the boundary, except near the west corner where markers are needed. Markers are also needed on the west side of the site, per Rule 3.1.12(2). **A problem is cited for these issues; see Problem #2 in this report for the required corrective actions.**

The scale and Scale house appeared to be in good condition. Per Mr. Luttrell, the building contains an irrigation pump and is permanent. The slab under the scale is six inches thick.

Two fuel tanks were seen by the scale. One is a 1,000-gallon capacity tank, and the other is a 2,000-gallon capacity tank. They are double walled, per Mr. Luttrell, and there is a dirt berm around them for containments. The Division recommends that the bermed area be lined.

The current disturbance that has not been reclaimed is approximately 13 acres in size (as estimated by the Division using Google Earth). As noted above, the maximum allowable disturbed acreage is 18 acres, not counting reclaimed areas.

The pit area has a highwall that is approximately 800 feet long and 25 feet high along the southern end of the disturbed area. It appears to be stable. Per Exhibit D, the highwall is at or near the maximum allowable dimensions (length and height). East of the highwall is an area that has been disturbed but is not yet part of the pit.

Significant water was seen in the pit. This is irrigation tail water, per Mr. Luttrell. At the west end of the pit is a sediment pond, which is the "clean water" pond, per Mr. Luttrell. The water from this pond drains through a channel to the discharge point (Colorado Discharge Permit System outfall) at the north side of the permit area.

Topsoil has been stockpiled in three locations, as seen on **Figure 1**.

Grading and seeding have been completed in the northeastern portion of the permit area as well as the northwest corner. The side slope is approximately 3:1, or flatter in some areas. The soil in these areas is mostly bare.

After conducting the inspection, the Division recalculated the required financial warranty for reclaiming the site in accordance with the approved reclamation plan (see enclosed reclamation cost estimate). The Division estimates the required financial warranty to be $110,726.00, which is $36,285.48 more than the currently held amount of $74,440.52. **A problem is cited for this issue; please see Problem #3 in this report for the required corrective actions**. The operator will have a chance to review the Division's reclamation cost estimate, ask questions of Division staff, and provide any comments prior to a Surety Increase being issued for the site. If a Surety Increase is issued, the operator will have 60 days to submit the additional required financial warranty.

Responses to this inspection report should be directed to Rob Zuber at the Division, via email (rob.zuber@state.co.us) or telephone (720.601.2276).

PHOTOGRAPHS

Entrance sign on scale house

Processing area, taken from road by scale house
Note topsoil stockpile in middle of photo and product piles in background

Reclaimed area at northeast portion of site, looking northeast

Reclaimed area at northeast portion of site, looking north

Active pit with highwall on left and detained water, looking west

Product piles and drainage channel, taken from northwest corner of site

GENERAL INSPECTION TOPICS

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

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

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

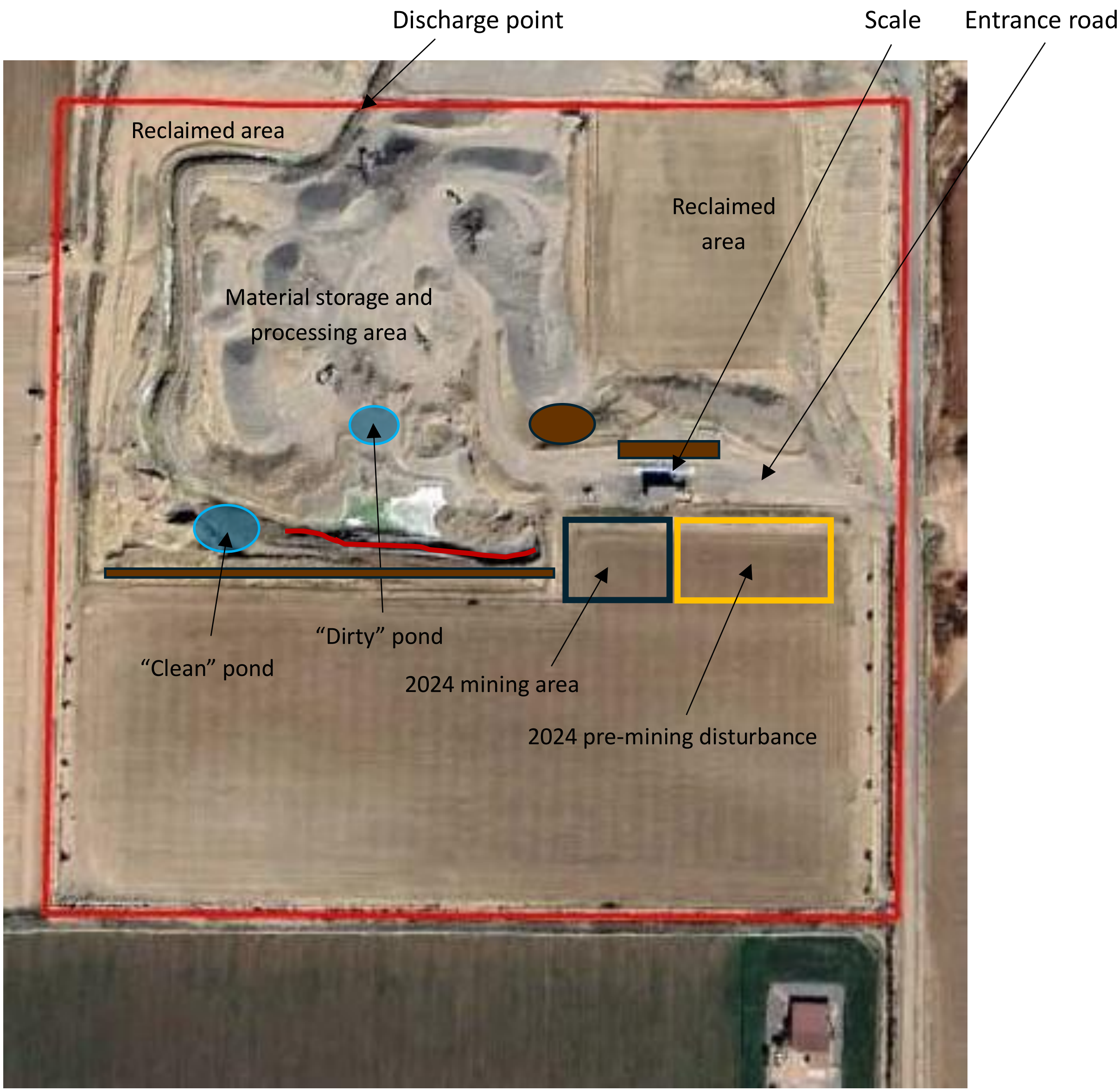
Inspection Contact Address
Zane Luttrell
Cornerstone Materials LLC
23625 Uncompahgre Road
Montrose, CO 81403

Enclosures: Figure 1
Reclamation cost estimate

CC: Amy Eschberger, DRMS

Figure 1. Reynolds Pit Features

(All locations and sizes are estimates. Aerial photograph taken prior to mining in 2024.)



LEGEND:

Topsoil stockpiles – brown polygons

Highwall prior to 2024 – red line

COST SUMMARY WORK

Task description: **Cost Summary**

Site: **Reynolds Pit** Permit Action: 2024 Inspection Permit/Job#: M2006028

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 11/26/2024 County: Delta Filename: M028-000
User: RDZ

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Cut and fill high wall to 3H:1V slope	DOZER	1	16.58	$3,445
02a	Rip 18 acres max. disturbance prior to topsoiling	GRADER	1	11.53	$2,845
03a	Replace overburden on 17 acres	SCRAPER1	1	15.56	$19,745
04a	Replace topsoil on 17 acres	SCRAPER1	1	15.34	$19,467
07a	Smooth grade site after topsoil placement	GRADER	1	11.53	$2,845
08a	Revegetate 18 acres disturbance	REVEGE	1	16.00	$35,137
09a	Mobilization	MOBILIZE	1	2.66	$6,232
			SUBTOTALS:	**89.2**	**$89,716**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$1,812
Performance bond:	1.05	Total =	$942
Job superintendent:	44.60	Total =	$3,535
Profit:	10.00	Total =	$8,972
		TOTAL O & P =	$15,261
		CONTRACT AMOUNT (direct + O & P) =	$104,977

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$500	Total =	$500
Engineering work and/or contract/bid preparation:	0.00	Total =	$0
Reclamation management and/or administration:	5.00		$5,249
CONTINGENCY:	0.00	Total =	$0
		TOTAL INDIRECT COST =	$21,010
		TOTAL BOND AMOUNT (direct + indirect) =	**$110,726**

BULLDOZER WORK

Task description: **Cut and fill high wall to 3H:1V slope**

Site: **Reynolds Pit** Permit Action: 2024 Inspection Permit/Job#: M2006028

PROJECT IDENTIFICATION

Task #: 01A State: Colorado Abbreviation: None
Date: 11/26/2024 County: Delta Filename: M028-01a
User: RDZ

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS Series II LGP
Horsepower: 240
Blade Type: Straight
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$90.24	NA
Operating Cost/Hour:	$78.95	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$38.59	NA

Total unit Cost/Hour: $207.78
Total Fleet Cost/Hour: **$207.78**

MATERIAL QUANTITIES

Initial Volume: 6,944
Swell factor: 1.090
Loose volume: **7,569** 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: 800.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -15 %
Average site altitude: 5,000 feet

Material weight: 2,400 lbs/LCY

Weight description: Clay and gravel - Dry

Job Condition Correction Factor		Source
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:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5706

Adjusted unit production: 456.48 LCY/hr
Adjusted fleet production: **456.48** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.455/LCY

Total job time: **16.58** Hours
Total job cost: **$3,445**

MOTOR GRADER WORK

Task description: **Rip 18 acres max. disturbance prior to topsoiling**

Site: **Reynolds Pit** Permit Action: 2024 Inspection Permit/Job#: M2006028

PROJECT IDENTIFICATION

Task #: 02A State: Colorado Abbreviation: None
Date: 11/26/2024 County: Delta Filename: M028-02a
User: RDZ

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 14M Horsepower: 259
Ripper Attachment: Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$129.81	NA
Operating Cost/Hour:	$89.13	100
Ripper Ownership Cost/Hour:	$0.00	NA
Ripper Operating Cost/Hour:	$0.00	
Operator Cost/Hour:	$27.76	NA
Total Unit Cost/Hour:	$246.70	
Total Fleet Cost/Hour:	**$246.70**	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 18.00 acres

Source of estimated acreage: Mine Plan

HOURLY PRODUCTION

Average Grader Speed:	1.50	mph
Selected Application:	Ripping (0-3 mph) - 1.50	
Selected Blade Angle:	30	degrees
Effective Blade Length:	12.10	feet
Width of blade overlap per pass:	2.00	feet
Net grading or ripping width per pass:	10.10	feet
Unadjusted Hourly Unit Production:	1.8364	acres/hour

Job Condition Correction Factors Site Altitude: 5000 feet

		Source
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.85	(1sh/d, mod.)
Net Correction:	0.8500	multiplier

Adjusted Hourly Unit Production: 1.5609 acres/Hour
Adjusted Hourly Fleet Production: **1.5609** acres/Hour

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **11.53** Hours

Unit cost: $158.05 per acre Total job cost: **$2,845**

SCRAPER TEAM WORK

Task description: **Replace overburden on 17 acres**

Site: **Reynolds Pit** Permit Action: 2024 Inspection Permit/Job#: M2006028

PROJECT IDENTIFICATION

Task #: 03A State: Colorado Abbreviation: None
Date: 11/26/2024 County: Delta Filename: M028-03a
User: RDZ

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 627G w/push-pull
-Dozer:	Cat D7R DS Series II LGP
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	NA	NA
Ownership cost/hour:	$234.09	$90.24	NA	NA	NA	NA
Operating cost/hour:	$265.71	$78.95	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	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:	$30.90	$38.59	NA	NA	NA	NA
Unit Subtotals:	$530.70	$207.78	NA	NA	NA	NA
Number of Units:	2	1	0	0	0	0
Group Subtotals:	Work:	$1,269.18	Support:	$0.00	Maint:	$0.00

Total work team cost/hour: **$1,269.18**

MATERIAL QUANTITIES

Initial volume: 13,713 CCY Swell factor: 1.000
Loose volume: **13,713** LCY

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

HOURLY PRODUCTION

		Scraper Bowl (volume) Basis:	
Material weight:	2,400 lbs/LCY	Struck Volume:	15.70 LCY
Material description:	Clay and gravel - Dry	Heaped Volume:	22.00 LCY
Rated Payload:	52,800 pounds	Average Volume:	18.85 LCY
Payload Capacity:	22.00 LCY	Adjusted Capacity:	**18.85** LCY

Cycle Time:

Scraper Loading Time: 0.90 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 5000 feet

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

Travel Time:
Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	0.00	5.00	5.00	2218	0.34

Haul Time: **0.34** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	0.00	5.00	5.00	2814	0.29

Return Time: **0.29** minutes

Total Scraper team cycle time: **2.13** minutes
Adjusted for job conditions: 881.44 LCY/Hour
Selected Number of Scrapers: 2 Scraper(s)
Adjusted single scraper team (unit) hourly production: 881.44 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **881.44** LCY/Hour

Unadjusted unit production/hour: 1,061.97 LCY/Hour
Optimal Number of Scrapers per push dozer: ____

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **15.56** Hours

Unit cost: $1.440 /LCY Total job cost: **$19,745**

SCRAPER TEAM WORK

Task description: **Replace topsoil on 17 acres**

Site: **Reynolds Pit** Permit Action: 2024 Inspection Permit/Job#: M2006028

PROJECT IDENTIFICATION

Task #: 04A State: Colorado Abbreviation: None
Date: 11/26/2024 County: Delta Filename: M028-04a
User: RDZ

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 627G w/push-pull
-Dozer:	Cat D7R DS Series II LGP
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	NA	NA
Ownership cost/hour:	$234.09	$90.24	NA	NA	NA	NA
Operating cost/hour:	$265.71	$78.95	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	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:	$30.90	$38.59	NA	NA	NA	NA
Unit Subtotals:	$530.70	$207.78	NA	NA	NA	NA
Number of Units:	2	1	0	0	0	0
Group Subtotals:	Work:	$1,269.18	Support:	$0.00	Maint:	$0.00

Total work team cost/hour: **$1,269.18**

MATERIAL QUANTITIES

Initial volume: 13,713 CCY Swell factor: 1.000
Loose volume: **13,713** LCY

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

HOURLY PRODUCTION

Material weight: 1,600 lbs/LCY
Material description: Top Soil
Rated Payload: 52,800 pounds
Payload Capacity: 33.00 LCY

Scraper Bowl (volume) Basis:

Struck Volume: 15.70 LCY
Heaped Volume: 22.00 LCY
Average Volume: 18.85 LCY
Adjusted Capacity: **18.85** LCY

Cycle Time:

Scraper Loading Time: 0.90 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 5000 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	0.00	5.00	5.00	2218	0.31

Haul Time: **0.31** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	0.00	5.00	5.00	2814	0.29

Return Time: **0.29** minutes

Total Scraper team cycle time: **2.10** minutes
Adjusted for job conditions: 894.03 LCY/Hour
Selected Number of Scrapers: 2 Scraper(s)
Adjusted single scraper team (unit) hourly production: 894.03 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **894.03** LCY/Hour

Unadjusted unit production/hour: 1,077.14 LCY/Hour
Optimal Number of Scrapers per push dozer: ____

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **15.34** Hours

Unit cost: $1.420 /LCY Total job cost: **$19,467**

MOTOR GRADER WORK

Task description: **Smooth grade site after topsoil placement**

Site: **Reynolds Pit** Permit Action: 2024 Inspection Permit/Job#: M2006028

PROJECT IDENTIFICATION

Task #:	07A	State:	Colorado	Abbreviation:	None
Date:	11/26/2024	County:	Delta	Filename:	M028-07a
User:	RDZ				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine:	CAT 14M	Horsepower:	259
Ripper Attachment:		Shift Basis:	1 per day
		Data Source:	(CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$129.81	NA
Operating Cost/Hour:	$89.13	100
Ripper Ownership Cost/Hour:	$0.00	NA
Ripper Operating Cost/Hour:	$0.00	
Operator Cost/Hour:	$27.76	NA
Total Unit Cost/Hour:	$246.70	
Total Fleet Cost/Hour:	**$246.70**	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 18.00 acres

Source of estimated acreage: Mine Plan

HOURLY PRODUCTION

Average Grader Speed:	1.50	mph
Selected Application:	Finish grading (0-2.5 mph) - 1.5	
Selected Blade Angle:	30	degrees
Effective Blade Length:	12.10	feet
Width of blade overlap per pass:	2.00	feet
Net grading or ripping width per pass:	10.10	feet
Unadjusted Hourly Unit Production:	1.8364	acres/hour

Job Condition Correction Factors

Site Altitude: 5000 feet

		Source
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.85	(1sh/d, mod.)
Net Correction:	0.8500	multiplier

Adjusted Hourly Unit Production:	1.5609	acres/Hour
Adjusted Hourly Fleet Production:	**1.5609**	acres/Hour

JOB TIME AND COST

Fleet size:	1	Grader(s)	Total job time:	**11.53**	Hours
Unit cost:	$158.05	per acre	Total job cost:	**$2,845**	

REVEGETATION WORK

Task description: **Revegetate 18 acres disturbance**

Site: **Reynolds Pit** Permit Action: 2024 Inspection Permit/Job#: M2006028

PROJECT IDENTIFICATION

Task #: 08A State: Colorado Abbreviation: None
Date: 11/26/2024 County: Delta Filename: M028-08a
User: RDZ

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	200.00	pound	$0.51	$102.32
			Total Fertilizer Materials Cost/Acre	**$102.32**

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	$43.12
Total Fertilizer Application Cost/Acre	**$43.12**

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	$102.41
Total Tilling Cost/Acre	**$102.41**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Orchardgrass - Paiute	1.61	19.96	$7.38
Crested Wheatgrass - Hy-Crest	1.69	7.76	$8.53
Smooth Brome - Lincoln	2.10	6.99	$10.20
Intermediate Wheatgrass - Oahe	1.66	3.54	$7.71
Ryegrass, Perennial - Linn	1.71	9.70	$3.83
Slender Wheatgrass - Native	1.13	4.12	$7.98
Streambank Wheatgrass - Sodar	1.13	3.68	$9.38
Totals Seed Mix	11.03	55.76	**$55.02**

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	$236.64
Total Seed Application Cost/Acre	**$236.64**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	$36.14	$36.14
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	$492.78	$492.78
Total Mulch Materials Cost/Acre				**$528.92**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$85.37
	$
Total Mulch Application Cost/Acre	**$**

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: 18
Cost /Acre: $1,394.32
Estimated Failure Rate: 40%
Cost /Acre*: $1,394.32
*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MULCHING

Initial Job Cost: **$25,097.76**
Reseeding Job Cost: **$10,039.10**
Total Job Cost: **$35,137**
Job Hours: **16.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mobilization**

Site: **Reynolds Pit** Permit Action: 2024 Inspection Permit/Job#: M2006028

PROJECT IDENTIFICATION

Task #: 09A State: Colorado Abbreviation: None
Date: 11/26/2024 County: Delta Filename: M028-09a
User: RDZ

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:	$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 D7R DS Series II LGP	34.57	$90.24	$122.78	1	$213.02	$122.78	$250.00
CAT 14M	23.57	$129.81	$59.44	1	$189.25	$59.44	$250.00
Cat 627G w/push-pull	43.48	$234.09	$122.78	2	$713.74	$245.56	$500.00
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
				Subtotals:	**$1,303.12**	**$546.66**	**$1,500.00**

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	2	$27.54	$27.54
		Subtotals:	**$27.54**	**$27.54**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	DELTA	
Total one-way travel distance:	5.00	miles
Average Travel Speed:	30.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$6,222.83	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$9.18	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.17	0.17
Return Time (Hours):	0.17	0.17
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.33	0.33

JOB TIME AND COST

Total job time: **2.67** Hours

Total job cost: **$6,232**