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:** Perrino Pit | **MINE/PROSPECTING ID#:** M-2017-007 | **MINERAL:** Sand and gravel | **COUNTY:** Huerfano |
| **INSPECTION TYPE:** Monitoring | **WEATHER:** Cloudy | **INSP. DATE:** June 11, 2025 | **INSP. TIME:** 13:35 |
| **OPERATOR:** Colorado Crushing, Inc. | **OPERATOR REPRESENTATIVE:** Rocky Ryan | **TYPE OF OPERATION:** 112c - Construction Regular Operation | |
| **REASON FOR INSPECTION:** Normal I&E Program | **BOND CALCULATION TYPE:** Complete Bond | **BOND AMOUNT:** $92,100.00 | |
| **DATE OF COMPLAINT:** NA | **POST INSP. CONTACTS:** None | **JOINT INSP. AGENCY:** None | |
| **INSPECTOR(S):** Amber M. Gibson | **INSPECTOR'S SIGNATURE:**  | **SIGNATURE DATE:** June 27, 2025 | |

**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:** Availability of Records
**PROBLEM:** The Division has determined that the recently submitted annual report maps are inadequate. This is a problem for failure to include all of the information required by C.R.S. 34-32.5-116 as listed on the Annual Report Form.
**CORRECTIVE ACTIONS:** The Operator shall either re-submit the 2024-2025 annual report map with the required information or ensure that the 2025-2026 annual report map includes all of the required information, by the corrective action date.
**CORRECTIVE ACTION DUE DATE:** 6/16/26

**INSPECTION TOPIC:** Roads
**PROBLEM:** The current Reclamation Plan Map may either need to be updated, or needs to be clarified, pursuant to C.R.S. 34-32.5-116 (1). The Operator must follow the approved reclamation plan or provide sufficient information to describe or identify how the Operator intends to conduct reclamation.
**CORRECTIVE ACTIONS:** The Operator shall clarify whether the current access road will be reclaimed, or submit a Technical Revision to revise the maps with the required $216 revision fee, to update and clarify the current approved reclamation plan map to reflect existing and proposed activities by the corrective action date.
**CORRECTIVE ACTION DUE DATE:** 6/16/26

## OBSERVATIONS

The Perrino Pit was inspected by Amber Gibson with the Division of Reclamation, Mining and Safety (Division/DRMS). The inspection was completed as part of the Division's routine monitoring inspection program. The site was previously inspected by the Division on July 28, 2021 as a routine monitoring inspection. Rocky Ryan (representing the Operator/Permittee Colorado Crushing, Inc.) accompanied me during the inspection. The weather was warm and the sky was partly cloudy.

The Perrino Pit is located in Huerfano County approximately 17 miles northwest of Walsenburg and 1 mile north of the intersection of County Road 615 and CO-69. The entrance to the site is along CR 615, at the southwest corner of the permit area. The mine is a 112c construction materials permit for 81.4 acres. The primary commodity mined at the site is gravel. The approved post-mining land use is rangeland and the land surrounding the pit is rangeland and rural residential.

Availability of Records:
The annual report, map, and fee are paid and current through June 16, 2026.

In the Division's 2021 inspection report, the Division stated that the annual report map submitted had been the same map submitted for the prior years and instructed the Permittee to update the map and include all of the required information. Upon reviewing the recently submitted 2024-2025 annual report map after the 2025 inspection, the Division found that the annual report map has not been updated and is therefore inadequate. **This has been cited as a problem above.** To abate this problem citation, the Operator shall either re-submit the 2024-2025 annual map with the required information (see below) or ensure the 2025-2026 annual map includes all of the required information by the corrective action date.

1. For annual report map submissions please refer to the Annual Report Form. The Annual Report Form states that as required by the Colorado Land Reclamation Act for the Extraction of Construction Materials (C.R.S. 34-32.5-116), the Permittee shall attach a map to the report that accurately depicts:

   i. the permit boundary,
   ii. the current affected area boundary and;
   iii. the location of the acreages specified in Items no. 8-12 and 15.

   *Items 8-12 and 15 on the Annual Report Form are listed below.*
   #8. Number of acres currently affected (mining + incomplete and or unreleased reclamation).
   #9. Number of acres that were newly affected during the current report year.
   #10. Number of acres that were reclaimed during the current report year.
   #11. Estimated new acreage to be affected in the next report year.
   #12. Estimated acres to be reclaimed in the next report year.
   #15. Is adequate topsoil reserved for reclamation, based on your approved permit?

2. Preferably, the Operator shall also include the following features:
   - A google earth background image
   - A north arrow and scale
   - A legend indicating the polygons and/or lines for the features identified in items 8-12 and 15 on the form OR include clear labels for each feature.

Signs and Markers:
Mine signs, in compliance with Rule 3.1.12(1), were located both at the site's current southwest entrance and at the old northwest entrance. White PVC, atop t-posts, mark the permit boundary. The permit boundary appeared to be accurately marked and in compliance with Rule 3.1.12(2). The fence line on the west side of the permit is located inside the permit boundary, on the south side it is located outside of the permit boundary, and on the east side it follows the permit boundary. The white PVC-topped t-posts indicate these relationships along the boundary. The Operator stated that they do not plan to extend the disturbance any further to the east, and will remain within the eastern fenceline.

General Compliance with the Mine Plan:
The site was active at the time of the inspection. The Operator stated that excavation and crushing at the site last took place about six months ago. There is a significant amount of product separated into designated stockpiles that will be hauled off-site throughout the year. Excavating and crushing will resume once stockpiles are depleted, which the Operator believes will be later this year. Product is primarily stockpiled along the south side of the disturbed area, located within the southeast side of the permit boundary. A small amount of product is also stockpiled on the north side of the disturbance.

Mining began on the southeast side of the permit area and has progressed to the north and to the west. The pit is approximately 30 feet deep. As excavation progresses along the working face, processing fines are used to backslope mined out slopes to at least a 2H:1V configuration, with some slopes on portions of the south and west sides at nearly 3H:1V configurations. Highwalls within the pit are benched, so that the vertical sections above are between 12-15 feet deep and the lower portions of the benches are back-sloped to a 2H:1V slope. Along the east side of the pit, there is a mining setback for vehicle traffic and for the Operator to conduct final backfilling and grading to a 3H:1V slope using the cut/fill method.

On the north side of the site, there is a temporary truck scale, an office trailer, some refuse piles, and a fuel tank. The Operator stated that the office trailer and the refuse piles belong to CDOT, who are working on a nearby project and were given permission by the Operator to temporarily operate onsite. The Operator stated that they will soon remove the refuse, and their trailer, when their project finishes. The fuel storage onsite was contained within a double-walled tank and was inside an additional containment berm. The truck scale is approved to eventually move to the southwest side of the site via the approval of technical revision no. 1 (TR1) in 2021.

Topsoil:
Topsoil is stockpiled in the northwest corner of the disturbed area, out of the way of ongoing mining operations, in compliance with Rule 3.1.9(3). The topsoil pile has been shaped into a stable configuration and has also been seeded.

Hydrologic Balance and Sediment Control:
The area had recently experienced frequent rainfall, and more rain was expected following the inspection. Because of this, some instances of standing water were observed during the inspection. The Operator stated that rainfall onsite will infiltrate into the ground and/or evaporate within 72 hours once there's respite between rainstorms. All the sediment onsite either flows towards the pit or is contained onsite through the use of stormwater perimeter berms. No evidence of excessive erosion, or run-off sediment leaving the site, was observed during the inspection.

Roads:
The haul road leading from the entrance gate to the main pit area is well maintained. Along the east side of the pre-existing private road, near the entrance to the permit boundary, a small pile of black stockpiled material was observed. The Operator stated that the material was placed there by the Landowner for use on their private road.

The Operator is approved to disturb up to 35 acres at any-one-time as of the approval of TR1. When TR1 was requested, the Division estimated that there was approximately 28.6 acres of disturbance at the site. As part of the June 2025 post-inspection review, it appears that approximately 31.5 acres are disturbed onsite at this time. This updated estimate includes the access/haul road (see Map 1). The approved reclamation plan states that roads will remain on the site post-reclamation, and that no revegetation will take place on access roads. However, the approved Reclamation Plan Maps include the old access road, coming in from the northeast side of the permit instead of the new entrance on the southwest side. The bond map included with the TR1 submission indicates that the current access road leading into the site is temporary. Due to this discrepancy, **this has been cited as a problem above.**

By the corrective action date, the Operator shall clarify whether the road leading from the southwest entrance into the disturbed area is planned to stay. If the road is to remain post-reclamation, the Operator shall submit a Technical Revision to update the Reclamation Plan Map to include the presence of the road post reclamation. If the road will instead be reclaimed, it must be included within the 35 maximum disturbance acres, or a TR must be submitted to request an increased maximum disturbance acreage to include the road.

Reclamation Success:
Beyond temporarily sloping the slopes within the pit that are not the working face, no additional reclamation activities have yet occurred on site.

Financial Warranty:
The Division currently holds a reclamation bond in the amount of $92,100 for this site. The Division has updated the estimate for the reclamation liability and found it to be $104,589 -- a difference of $12,489 from the bond currently held. The Division's cost estimate is enclosed with this report. The Operator will have 14 days (until July 11, 2025), from the issuance of this report to submit any questions on the cost estimate. If no questions are received, the Division may issue a surety increase notice for the difference. The Operator will have 60 days from the date of the notice to submit and obtain acceptance of the increase in financial warranty from the Division in accordance with Rule 4.2.1(2).

Conclusion:
This concludes the Division's Inspection Report; a map displaying topics discussed during the inspection, and a subset of corresponding photographs that were taken during the time of the inspection, are included below. If you need additional information or have any questions, please contact me by email at amber.gibson@state.co.us or by telephone at (720) 836-0967.

**Inspection Contact Address**
Rocky Ryan
Colorado Crushing, Inc.
7707 3R Road
Beulah, CO 81023

*Enclosure: 2025 Reclamation Cost Estimate*

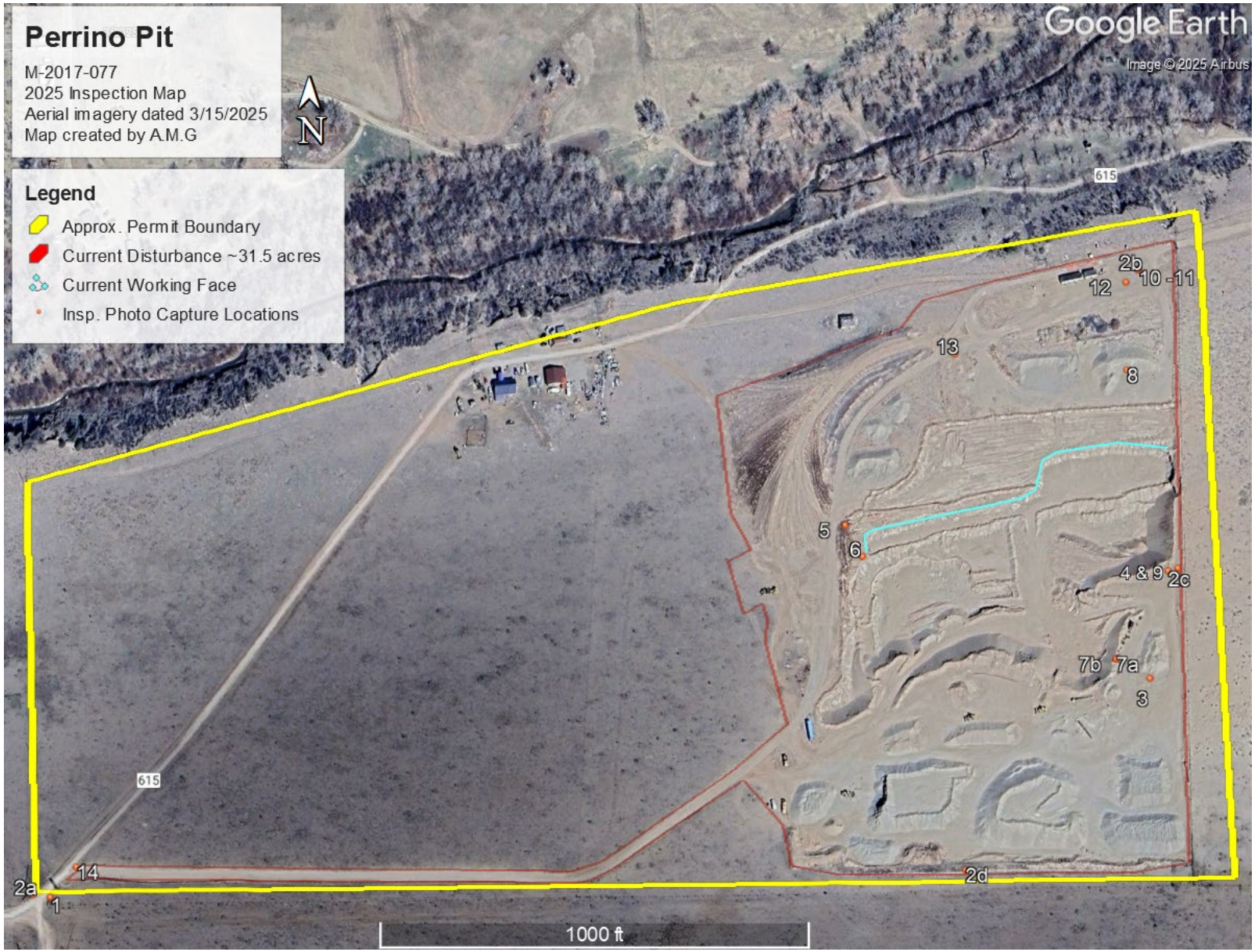
CC: Jared Ebert, DRMS

## GENERAL INSPECTION TOPICS

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

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

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




**Map 1:** 2025 Inspection Report map of the Perrino Pit, inspected on June 11, 2025. Map 1 was generated using Google Earth Pro. The numbers associated with the locations where the photos within this inspection report were taken correspond with the photo captions below.

## PHOTOGRAPHS


**Photo 1:** Looking east at the mine sign posted at the currently used southwest corner of the permit boundary.

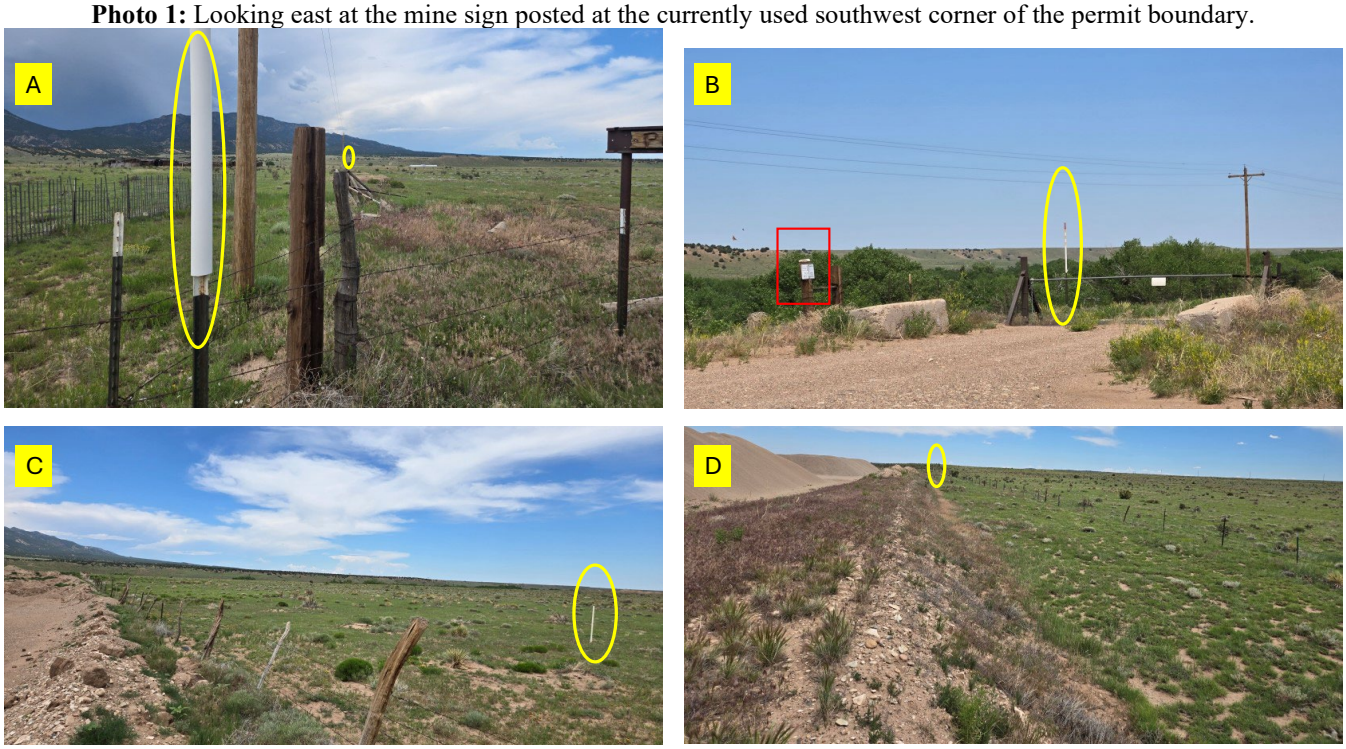



**Photo 2:** Examples of the white PVC pipe-topped t-posts serving as permit boundary markers around the site (circled in yellow). (A) Markers along the fence running north to south along the west permit boundary. (B) The red square highlights the mine sign located at the old northeast entrance. (C) Looking past the north-south fence line on the east side of the permit to where the permit boundary is located beyond. (D) Looking east along the stormwater berm lining the southside of the disturbance. Circled is a permit boundary marker, located inside of the fence that runs east-west below the southern permit boundary.

**Photo 3:** Looking east at the various sorted product stockpiles onsite. Loaders were onsite and hauling material offsite during the inspection.

**Photo 4:** Looking northwest at the main working face. Along the bottom of the photo shows areas where reject fines have been used to backslope to a 3H:1V. Within the pit, slopes that have been back-sloped to at least a 2H:1V are seen.

**Photo 5:** Looking east along the northern working face. At the base of the working face is the benched area. Below the benched area the slopes are backsloped to at least a 2H:1V.

**Photo 6:** Looking south along the west portion of the working face. Areas where the mined-out southern face has been at least partially backsloped are located in the center of the photo, with the southern stockpile/processing area in the background.

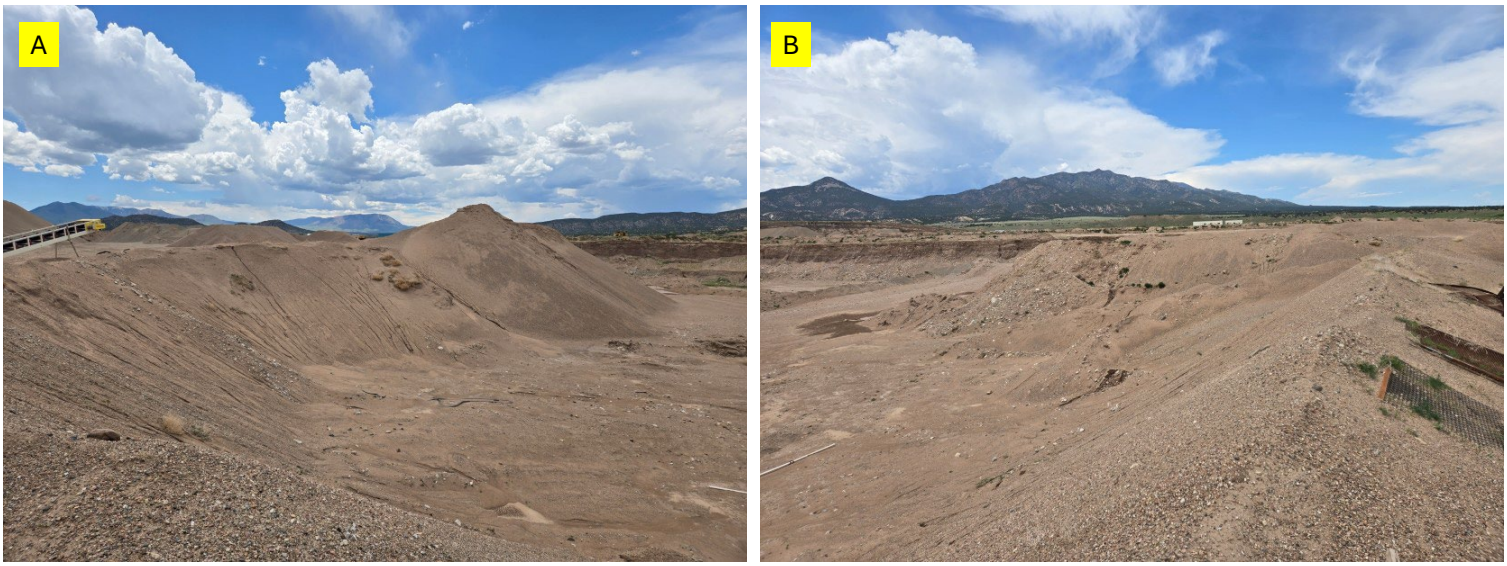



**Photo 7:** (A) Looking at some 2-3H:1V back-sloped slopes along the south side of the pit. (B) Looking at some 2-3H:1V back-sloped slopes along the east side of the pit.

**Photo 8:** Looking at some 2-3H:1V back-sloped slopes along the east and south sides of the pit.

**Photo 9:** Looking north along the eastern fence line where room has been left for vehicle traffic and for final backfilling and grading.

**Photo 10:** Looking at the refuse material brought into the site from CDOT that will be removed once CDOT's project is complete.

**Photo 11:** Trailer and vehicles onsite belonging to CDOT. The truck scale is temporarily located on the north side of the trailer.

**Photo 12:** Fuel tank storage onsite.

**Photo 13:** Looking southwest at the large topsoil pile located in the northwest portion of the disturbed area.

**Photo 14:** Material located along the Landowner's private drive, placed there from the Landowner for use on their private drive.

# COST SUMMARY WORK

Task description: **2025 Reclamation Cost Update Summary**

Site: **Perrino Pit** Permit Action: 2025 Inspection Permit/Job#: M2017007

## PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 6/26/2025 County: Huerfano Filename: M007-000
User: AMG

Agency or organization name: DRMS

## TASK LIST (DIRECT COSTS)

| Task | Description | Form Used | Fleet Size | Task Hours | Cost |
|---|---|---|---|---|---|
| 001 | Grade Highwall 1:1 to 3H:1V 1000' x 25' | DOZER | 1 | 11.81 | $4,003 |
| 002 | Grade 2H:1V to 3H:1V 1000' x 25' | DOZER | 1 | 2.55 | $863 |
| 003 | Grade Shape 35 acres | GRADER | 1 | 21.38 | $3,463 |
| 004 | Replace Topsoil 3" over 32.9 acres | SCRAPER1 | 1 | 26.52 | $19,713 |
| 005 | Revegetate 35 acres | REVEGE | 1 | 35.00 | $43,480 |
| 006 | Mob/De-Mob | MOBILIZE | 1 | 6.70 | $9,097 |
| | | **SUBTOTALS:** | | **103.96** | **$80,619** |

## INDIRECT COSTS

OVERHEAD AND PROFIT:

| | | | |
|---|---|---|---|
| Liability insurance: | 2.02 | Total = | $1,629 |
| Performance bond: | 1.05 | Total = | $846 |
| Job superintendent: | 51.98 | Total = | $4,120 |
| Profit: | 10.00 | Total = | $8,062 |
| | | TOTAL O & P = | $14,657 |
| | | CONTRACT AMOUNT (direct + O & P) = | $95,276 |

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

| | | | |
|---|---|---|---|
| Financial warranty processing (legal/related costs): | $500 | Total = | $500 |
| Engineering work and/or contract/bid preparation: | 4.25 | Total = | $4,049 |
| Reclamation management and/or administration: | 5.00 | | $4,764 |
| CONTINGENCY: | 0.00 | Total = | $0 |
| | | TOTAL INDIRECT COST = | $23,970 |
| | | **TOTAL BOND AMOUNT (direct + indirect) =** | **$104,589** |

# BULLDOZER WORK

Task description: **Grade Highwall 1:1 to 3H:1V 1000' x 25'**

Site: **Perrino Pit** Permit Action: 2025 Inspection Permit/Job#: M2017007

## PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 6/26/2025 County: Huerfano Filename: 1
User: AMG

Agency or organization name: DRMS

## HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU
Horsepower: 310
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

| | | Utilization % |
|---|---|---|
| Ownership Cost/Hour: | $173.32 | NA |
| Operating Cost/Hour: | $109.71 | 100 |
| Ripper own. Cost/Hour: | $14.53 | NA |
| Ripper op. Cost/Hour: | $2.78 | 35 |
| Operator Cost/Hour: | $38.59 | NA |

Total unit Cost/Hour: $338.93
Total Fleet Cost/Hour: **$338.93**

## MATERIAL QUANTITIES

Initial Volume: 6,110
Swell factor: 1.215
Loose volume: **7,424** LCY

Source of estimated volume: DRMS Calculated Compared to Operator Provided
Source of estimated swell factor: Cat Handbook

## HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 984.2 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: -5 %
Average site altitude: 6,350 feet

Material weight: 3,300 lbs/LCY

Weight description: Decomposed rock - 75% Rock, 25% Earth

Job Condition Correction Factor Source

| | | |
|---|---|---|
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 1.100 | (CAT HB) |
| Dozing method: | 1.200 | (SLOT) |
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 1.000 | (DOZ-OC) |
| Push gradient: | 1.115 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.697 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.6386

Adjusted unit production: 628.51 LCY/hr

Adjusted fleet production: **628.51** LCY/hr

## JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.539/LCY

Total job time: **11.81** Hours
Total job cost: **$4,003**

# BULLDOZER WORK

Task description: **Grade 2H:1V to 3H:1V 1000' x 25'**

Site: **Perrino Pit** Permit Action: 2025 Inspection Permit/Job#: M2017007

## PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 6/26/2025 County: Huerfano Filename: 2
User: AMG

Agency or organization name: DRMS

## HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU
Horsepower: 310
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

| | | Utilization % |
|---|---|---|
| Ownership Cost/Hour: | $173.32 | NA |
| Operating Cost/Hour: | $109.71 | 100 |
| Ripper own. Cost/Hour: | $14.53 | NA |
| Ripper op. Cost/Hour: | $2.78 | 35 |
| Operator Cost/Hour: | $38.59 | NA |

Total unit Cost/Hour: $338.93
Total Fleet Cost/Hour: **$338.93**

## MATERIAL QUANTITIES

Initial Volume: 1,600
Swell factor: 1.000
Loose volume: **1,600** LCY

Source of estimated volume: DRMS Calculation Compared to Operator Supplied
Source of estimated swell factor: Cat Handbook

## HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 984.2 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: -5 %
Average site altitude: 6,350 feet

Material weight: 3,300 lbs/LCY

Weight description: Decomposed rock - 75% Rock, 25% Earth

| Job Condition Correction Factor | | Source |
|---|---|---|
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 1.100 | (CAT HB) |
| Dozing method: | 1.200 | (SLOT) |
| Visibility: | 1.000 | (AVG.) |

| | | |
|---|---|---|
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 1.000 | (DOZ-OC) |
| Push gradient: | 1.115 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.697 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.6386

Adjusted unit production: 628.51 LCY/hr
Adjusted fleet production: **628.51** LCY/hr

## JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.539/LCY

Total job time: **2.55** Hours
Total job cost: **$863**

# MOTOR GRADER WORK

Task description: **Grade Shape 35 acres**

Site: **Perrino Pit** Permit Action: 2025 Inspection Permit/Job#: M2017007

## PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 6/26/2025 County: Huerfano Filename: 3
User: AMG

Agency or organization name: DRMS

## HOURLY EQUIPMENT COST

Basic Machine: CAT 140M Horsepower: 183
Ripper Attachment: Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

| | | Utilization % |
|---|---|---|
| Ownership Cost/Hour: | $77.29 | NA |
| Operating Cost/Hour: | $56.87 | 100 |
| Ripper Ownership Cost/Hour: | $0.00 | NA |
| Ripper Operating Cost/Hour: | $0.00 | |
| Operator Cost/Hour: | $27.76 | NA |
| Total Unit Cost/Hour: | $161.92 | |
| Total Fleet Cost/Hour: | **$161.92** | |

## MATERIAL QUANTITIES

Total Area to be graded or ripped: 35.00 acres

Source of estimated acreage: Operator Provided

## HOURLY PRODUCTION

Average Grader Speed: 1.50 mph
Selected Application: Finish grading (0-2.5 mph) - 1.5
Selected Blade Angle: 0 degrees
Effective Blade Length: 12.00 feet
Width of blade overlap per pass: 2.00 feet
Net grading or ripping width per pass: 10.00 feet
Unadjusted Hourly Unit Production: 1.8182 acres/hour

Job Condition Correction Factors Site Altitude: 6400 feet

| | | Source |
|---|---|---|
| Altitude Adj: | 1.00 | (CAT HB) |
| Job Efficiency: | 0.90 | (1sh/d, fav.) |
| Net Correction: | 0.9000 | multiplier |

Adjusted Hourly Unit Production: 1.6364 acres/Hour
Adjusted Hourly Fleet Production: **1.6364** acres/Hour

## JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **21.39** Hours

Unit cost: $98.95 per acre Total job cost: **$3,463**

# SCRAPER TEAM WORK

Task description: **Replace Topsoil 3" over 32.9 acres**

Site: **Perrino Pit** Permit Action: 2025 Inspection Permit/Job#: M2017007

## PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 6/26/2025 County: Huerfano Filename: 4
User: AMG

Agency or organization name: DRMS

## HOURLY EQUIPMENT

COSTShift basis: 1 per day

| | Equipment Description |
|---|---|
| -Scraper: | Cat 631G |
| -Dozer: | NA |
| Support Equipment -Load Area: | NA |
| -Dump Area: | NA |
| Road Maintenance –Motor Grader: | NA |
| -Water Truck: | Water Tanker, 2,500 Gal. |

**Cost Breakdown:**

| | Scraper Work Team | | Support Equipment | | Maintenance Equipment | |
|---|---|---|---|---|---|---|
| | Scraper | Dozer | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | NA | NA | NA | NA | 25 |
| Ownership cost/hour: | $442.19 | NA | NA | NA | NA | $11.65 |
| Operating cost/hour: | $252.89 | NA | NA | NA | NA | $5.61 |
| %Utilization-ripper: | NA | NA | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | NA | NA | NA | NA | $0.00 |
| Ripper op. cost/hour: | NA | NA | NA | NA | NA | $0.00 |
| Operator cost/hour: | $30.90 | NA | NA | NA | NA | $0.00 |
| Unit Subtotals: | $725.98 | NA | NA | NA | NA | $17.26 |
| Number of Units: | 1 | 0 | 0 | 0 | 0 | 1 |
| Group Subtotals: | Work: | $725.98 | Support: | $0.00 | Maint: | $17.26 |

Total work team cost/hour: **$743.24**

## MATERIAL QUANTITIES

Initial volume: 13,300 CCY Swell factor: 1.000
Loose volume: **13,300** LCY

Source of estimated volume: 32.9 acres covered with 3-inches of topsoil
Source of estimated swell factor: Cat Handbook

## HOURLY PRODUCTION

Material weight: 1,600 lbs/LCY
Material description: Top Soil
Rated Payload: 81,600 pounds
Payload Capacity: 51.00 LCY

Scraper Bowl (volume) Basis:

Struck Volume: 24.00 LCY
Heaped Volume: 34.00 LCY
Average Volume: 29.00 LCY
Adjusted Capacity: **29.00** LCY

Cycle Time:

Scraper Loading Time: 0.80 Minutes
Maneuver and Spread Time: 0.70 Minutes

Job Condition Correction: Site Altitude: 6350 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|---|---|---|---|---|---|---|
| 1 | 900.00 | 2.00 | 4.00 | 6.00 | 1069 | 0.88 |

Haul Time: **0.88** minutes

Return Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|---|---|---|---|---|---|---|
| 1 | 900.00 | -2.00 | 4.00 | 2.00 | 2914 | 0.50 |

Return Time: **0.50** minutes

Total Scraper team cycle time: **2.88** minutes
Adjusted for job conditions: 501.46 LCY/Hour
Selected Number of Scrapers: 1 Scraper(s)
Adjusted single scraper team (unit) hourly production: 501.46 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **501.46** LCY/Hour

Unadjusted unit production/hour: 604.17 LCY/Hour
Optimal Number of Scrapers per push dozer:

## JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **26.52** Hours

Unit cost: $1.482 /LCY Total job cost: **$19,713**

# REVEGETATION WORK

Task description: **Revegetate 35 acres**

Site: **Perrino Pit** Permit Action: 2025 Inspection Permit/Job#: M2017007

## PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None
Date: 6/26/2025 County: Huerfano Filename: 5
User: AMG

Agency or organization name: DRMS

## FERTILIZING

**Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|---|---|---|---|
| Mono-Ammonium Phosphate, 11-50-0 | 40.00 | pound | $0.31 | $12.36 |
| | | | **Total Fertilizer Materials Cost/Acre** | **$12.36** |

**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 |
| Weed control spraying (MEANS 31 31 16.13 3100) | $338.80 |
| **Total Tilling Cost/Acre** | **$441.21** |

## SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|---|---|---|---|
| Blue Grama - Lovington | 0.50 | 8.16 | $13.88 |
| Sideoats Grama - Vaughn | 6.50 | 21.34 | $159.84 |
| Western Wheatgrass - Arriba | 10.00 | 25.25 | $90.34 |
| Wheat, Winter - Tam 107 | 25.00 | 22.96 | $13.51 |
| **Totals Seed Mix** | 42.00 | 77.71 | **$277.57** |

**Application**

| Description | Cost /Acre |
|---|---|

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

## JOB TIME AND COST

| | | | |
|---|---|---|---|
| No. of Acres: | 35 | Cost /Acre: | $1,010.90 |
| Estimated Failure Rate: | 45% | Cost /Acre*: | $514.21 |
| *Selected Replanting Work Items: | SEEDING | | |

| | |
|---|---|
| Initial Job Cost: | **$35,381.50** |
| Reseeding Job Cost: | **$8,098.81** |
| Total Job Cost: | **$43,480** |
| Job Hours: | **35.00** |

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mob/De-Mob**

Site: **Perrino Pit** Permit Action: 2025 Inspection Permit/Job#: M2017007

## PROJECT IDENTIFICATION

Task #: 006 State: Colorado Abbreviation: None
Date: 6/26/2025 County: Huerfano Filename: 6
User: AMG

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 D8T - 8SU | 53.08 | $187.85 | $125.64 | 1 | $313.49 | $125.64 | $250.00 |
| Cat 631G | 52.50 | $442.19 | $125.64 | 1 | $567.83 | $125.64 | $250.00 |
| CAT 140M | 16.68 | $77.29 | $59.44 | 1 | $136.73 | $59.44 | $250.00 |
| Drill/Broadcast Seeder with Tractor | 25.00 | $41.02 | $59.44 | 2 | $200.92 | $118.88 | $250.00 |
| Subtotals: | | | | | **$1,218.97** | **$429.60** | **$1,000.00** |

## ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|---|---|---|---|---|
| Water Tanker, 2,500 Gal. | $34.10 | 1 | $34.10 | $34.10 |
| Light Duty Pickup, 4x4, 3/4 T. | $119.71 | 1 | $119.71 | $119.71 |
| Subtotals: | | | **$153.81** | **$153.81** |

## EQUIPMENT HAUL DISTANCE and Time

| | | |
|---|---|---|
| Nearest Major City or Town within project area region: | PUEBLO | |
| Total one-way travel distance: | 55.00 | miles |
| Average Travel Speed: | 65.00 | mph |

| | |
|---|---|
| Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig: | $8,836.87 |
| Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig: | $260.29 |

Transportation Cycle Time:

| | Non-Roadable Equipment | Roadable Equipment |
|---|---|---|
| Haul Time (Hours): | 0.85 | 0.85 |
| Return Time (Hours): | 0.85 | 0.85 |
| Loading Time (Hours): | 0.83 | NA |
| Unloading Time (Hours): | 0.83 | NA |
| Subtotals: | 3.35 | 1.69 |

## JOB TIME AND COST

| | | |
|---|---|---|
| Total job time: | **6.70** | Hours |
| Total job cost: | **$9,097** | |