



STATE OF  
COLORADO

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

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## C1980007, West Elk Mine, Mid-Term Review No. (MT9), Findings and Cost Estimate

1 message

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**Simmons - DNR, Leigh** <leigh.simmons@state.co.us>  
To: "Wilczek, Jessica A." <JessicaWilczek@coreresources.com>

Wed, Feb 5, 2025 at 3:17 PM

Jessica,

A copy of the Division's Mid-Term Review of the West Elk Mine permit is attached. Please let me know if you would like a hard copy to be mailed to you.

There are a couple of items I'd like to highlight for your attention:

- Section VI will require a response from MCC
- Section VII gives a summary of the reclamation liability. This will be the new minimum required surety. You'll see that it's a significant increase; this is mainly due to increased unit costs. No new bond is required at this time.

Please let me know if you have any questions, or if you'd like to meet to talk through the review or the updated cost estimate.

Leigh Simmons  
Environmental Protection Specialist



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

MIDTERM PERMIT REVIEW (MT- 9)  
For Mountain Coal Company, LLC

**West Elk Mine**  
Permit No. C-1980-007



February 5, 2025  
Michael A. Cunningham, Director

Prepared by Leigh D. Simmons  
In Fulfillment of C.R.S. 34-33-115 and the following  
Regulations of the Colorado Mined Land Reclamation Board for Coal Mining:  
Rules 2.08.3, 2.06.2, 2.06.3, 2.06.5, 2.06.7 and 3.02.2

### Introduction

This document presents the results of the Midterm Review (MT-9) of the West Elk Mine permit, conducted by the Colorado Division of Reclamation, Mining and Safety (Division). The West Elk Mine is owned and operated by Mountain Coal Company, LLC (MCC). This Midterm Review was conducted to fulfill the requirements of the Colorado Surface Coal Mining Reclamation Act (Act), and Rules 2.08.3, 2.06.2(9), 2.06.3(4), 2.06.5(3), 2.06.7(5), and 3.02.2(4) of the Rules and Regulations of the Colorado Mined Land Reclamation Board for Coal Mining (Rules), which were promulgated to implement the Act.

Rule 2.08.3 requires that the Division conduct a review of each permit issued not later than the middle of the permit term. Based on this review, for good cause shown, the Division may require reasonable revisions to, or modifications of, the permit provisions to ensure compliance with the Act and Regulations.

Rules 2.06.2, 2.06.3, 2.06.5, and 2.06.7 require that during the midterm review, where applicable, experimental practices, mountaintop removal variances, variances from approximate original contour (AOC), and variances from contemporaneous reclamation, respectively, be reviewed by the Division.

Rule 3.02.2(4) requires that the Division review the amount of performance bond liability and the terms of acceptance of the bond every 2½ years.

This Midterm Review consisted of a detailed review of the West Elk Mine permit application package and previous Division findings of compliance to ensure that the proposed operation is in compliance with the Rules and Act. The Division also reviewed all subsequent revisions and stipulation responses to ensure that all permit commitments and conditions were being followed. Problems and observations described in past Division inspection reports were also considered.

This document comprises seven sections:

- Section I contains a brief description of the mine history and the surrounding environment.
- Section II contains a summary of permit actions since the last Permit Renewal.
- Section III is a summary of the Division's review of the active stipulations attached to the permit.
- Section IV is a summary of the review of any previously approved experimental practices, mountaintop removal variances, variances from approximate original contour (AOC), and variances from contemporaneous reclamation.
- Section V summarizes any enforcement actions issued since the permit was last renewed, and the current status of any actions that were issued.
- Section VI is a summary of the review, and a discussion of any problems identified as a result of this review that are required to be resolved.
- Section VII is a summary of the review of the reclamation cost estimate and the performance bond(s) held by the Division.

## Section I - Mine History and the Environment

### Mine Status and History

The West Elk Mine is an active underground coal mine, encompassing approximately 19,854.9 acres of Gunnison and Delta counties, with workings in three seams of the Mesaverde Formation. Mining of the West Elk Mine began in 1982.

### Description of the Environment

The West Elk Mine is located approximately one mile east of the town of Somerset on Colorado State Highway No. 133. The western permit boundary extends to the outer slopes of Jumbo Mountain. Permit Revision 11 extended the eastern permit boundary into the Raven Gulch and Deep Creek watersheds. The northern extremity of the permit area lies just north of the North Fork of the Gunnison River. Permit Revision 10 extended the southern boundary of the permit area south of Minnesota Reservoir into the drainage basins of Minnesota Creek, Dry Fork, Lick Creek, Poison Gulch, and Deep Creek. Permit Revision 12 extended the permit area to the southeast with the addition of the Dry Fork lease. Permit Revision 15 extended the southern boundary of the permit area, to include the South Prong and Horse Creek watersheds. (See Figure 1).

The active Elk Creek Mine is located just northwest of the West Elk Mine facilities, north of the North Fork of the Gunnison River. The reclaimed Bear Mine is adjacent to the West Elk Mine on the west. Several historic mines, including the Hawks Nest, Black Beauty, Edwards and Oliver Mines, are situated within or near the northeast portion of the West Elk Mine permit area.

The West Elk Mine is on the western flank of the West Elk Mountains in the drainage basin of the North Fork of the Gunnison River. The climate is semi-arid. Topography is characterized by steeply sloping mountains covered primarily with tall shrub vegetation, particularly Gambel oak and Saskatoon serviceberry. The general area where the mine is located is currently used for grazing domestic livestock (cattle and sheep) and wildlife (deer and elk). Recreational activities such as big game hunting also occur here.

Slopes range from 0 to 60 percent on the permit area, and elevations range from 5,900 feet at Somerset in the valley of the North Fork, to above 9,800 feet in the southeast corner of the permit area. The steep slopes of the stream valleys and the instability of the rock strata in the North Fork drainage basin have contributed to numerous landslides, mud flows and rock falls. These mass wasting features have been mapped by W.R. Junge of the Colorado Geological Survey and published as an open file report, entitled "Geologic Hazards, North Fork Gunnison River Valley, Delta and Gunnison Counties, Colorado" (Junge, 1978).

The primary land uses within the permit area are characterized as rangeland and woodland, supporting big game (deer and elk) and livestock (cattle and sheep). Portions of the permit area are within the boundaries of Grand Mesa, Uncompahgre and Gunnison National Forests.

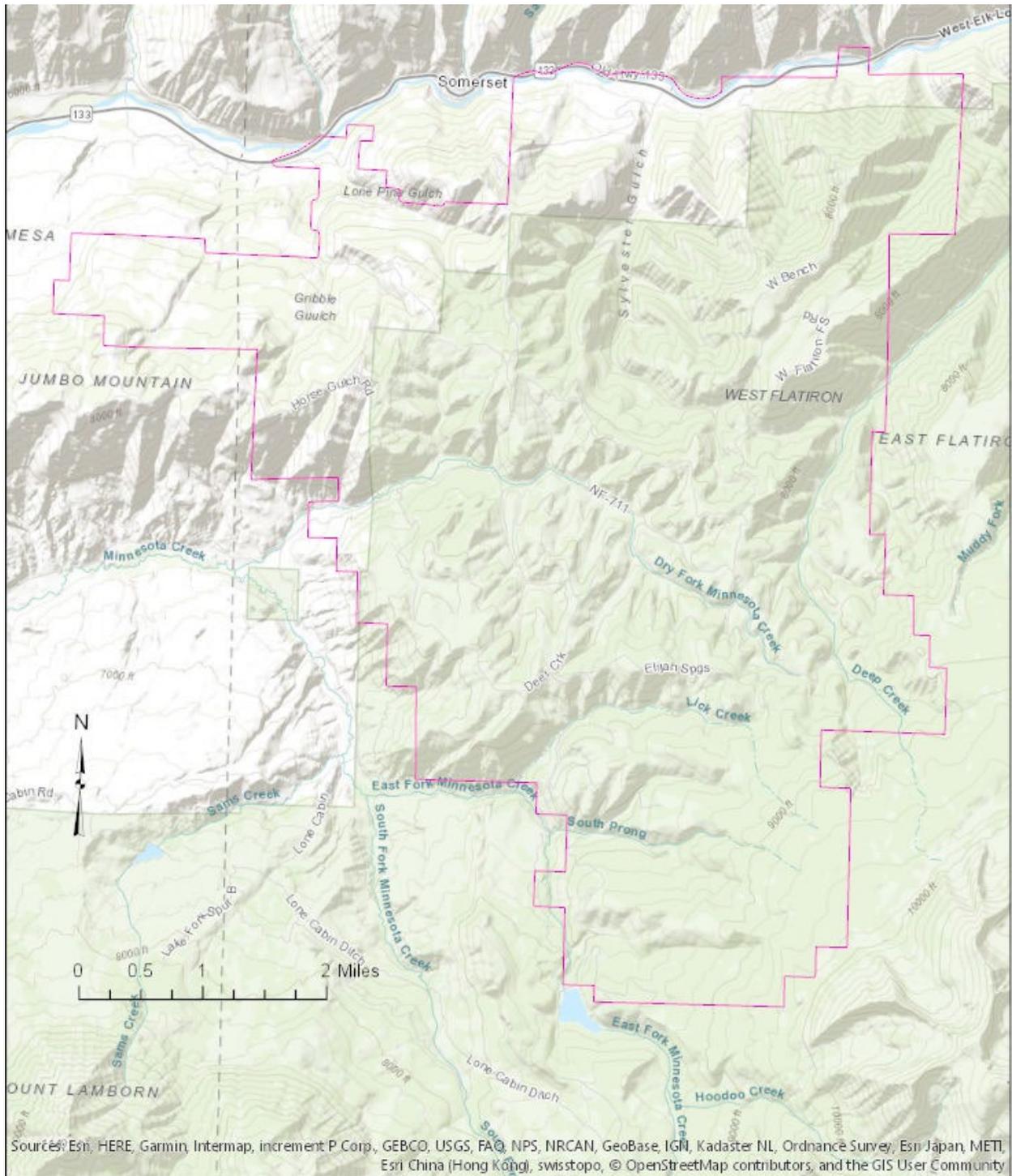


Figure 1: Approximate location of the West Elk Mine permit area

The permit area lies on the southeast margin of the Piceance Basin and just south of Grand Mesa. The general geology of this area consists of gently (three to five degrees) north-northeast dipping beds of

sandstone, shale, and coal of upper Cretaceous and early Tertiary age. The geologic formations exposed in the North Fork Drainage Basin consist of Late Cretaceous to Early Tertiary Age sedimentary strata, Tertiary Age igneous intrusives, and Quaternary Age alluvial and colluvial deposits. The units are described below in ascending order:

- The Mancos Shale is the oldest stratum exposed in the region and is of Late Cretaceous Age. This unit is composed of over 4,000 feet of gray marine shales and minor interbedded buff sandstones. This unit is highly erodible and unstable. Erosion and oversteepening of slopes in this formation produce the numerous rock falls and landslides observed in the lower North Fork Drainage Basin (Junge, 1978).
- The Mesaverde Formation is of Late Cretaceous Age and conformably overlies the Mancos Shale. This formation consists of approximately 2,300 feet of marine and terrestrial sedimentary rocks. The Mesaverde Formation is the coal bearing formation in the region and is divided into five main members: the Rollins Sandstone, the Lower Coal Bearing (Bowie) Member, the Upper Coal Bearing (Paonia) Member, the Barren (Undifferentiated) Member (Johnson, 1948), and the Ohio Creek Member.
  - The Rollins Sandstone is a white to buff colored, well sorted, medium to fine grained sandstone, ranging from 150 feet to 300 feet thick. This sandstone is regionally extensive and resistant in outcrop and forms prominent cliffs.
  - The Lower Coal Bearing (Bowie) Member consists of 260 to 350 feet of interbedded gray shales, thin to thick lenticular beds of buff colored, fine to medium grained sandstones, and coals. Three coal horizons exist in this member: the A (Old King) horizon, the B (Somerset) horizon, and the C (Bear) horizon. The A horizon is immediately above the Rollins Sandstone and is not currently mined at any operation in the vicinity. The B horizon contains two coal seams and occurs about 20 to 120 feet above the Rollins Sandstone and has been mined by MCC. This horizon has also been mined at the Elk Creek and Bowie #2 Mines. The C horizon contains one coal seam that occurs 50 to 100 feet above the B horizon. This horizon has been mined at the Elk Creek Mine and was mined at the Bear No. 1 and 2 Mines. The top of the member is usually capped by a massive buff colored sandstone up to 90 feet in thickness. This sandstone, however, appears not to be a single persistent bed, but is actually several thick lenticular sandstones occurring at progressively lower stratigraphic horizons from east to west.
  - The Upper Coal Bearing (Paonia) Member consists of 200 to 500 feet of gray shales, interbedded, buff colored, lenticular sandstones, and coals. The top of this member is generally considered to be capped by a massive, cliff forming sandstone. Three coal horizons have been identified in the Upper Coal Member: The D (Oliver) horizon, the E (Hawk's Nest) horizon, and the F horizon. The D horizon occurs directly above the massive sandstone of the Lower Coal Bearing Member and contains three seams. This horizon was mined in the Bowie #1 and #2 Mines. The E horizon occurs about 130 feet

above the D horizon and contains two coal seams. This horizon has been mined at the Hawk's Nest Mine and was mined at the Blue Ribbon Mine. The West Elk Mine is mining the E Seam but did not mine the E seam on Jumbo Mountain because this seam is split and comprised of several thin (< 5 ft.) coal benches which are separated by rock partings. The F horizon contains two coal seams and has been mined at the West Elk Mine. At the mine site, the coal is immediately overlain and underlain by shale. Coal seams of the F horizon do not exist to the north of the North Fork of the Gunnison River in thicknesses sufficient for mining. In the Jumbo Mountain area, the F Seam thins to less than five feet in thickness and is of limited aerial extent. Therefore, MCC does not plan to mine this seam in Jumbo Mountain.

- Overlying the Upper Coal Member is the Barren Member of the Mesaverde Formation. This unit consists of interbedded sandstones, siltstones, shales, and coals. The unit is not thought to be of marine origin and, as a result, the sandstones and the coals are highly lenticular, discontinuous, and of limited lateral extent in outcrop. This unit ranges up to 1,500 feet thick and outcrops throughout most of the permit area.
  - The Ohio Creek Member is the uppermost member of the Mesaverde Group. This unit is approximately 700 feet thick and consists primarily of interbedded sandstone, mudstone, and shale. The sandstones range from a few feet to more than 100 feet in thickness and are generally lenticular in nature. Although typically fine to coarse grained, the sandstones may locally be conglomeratic.
- The Mesaverde Formation is unconformably overlain by the Tertiary Age Rudy or Wasatch Formation. This formation consists of red to buff-colored shales, red sandstones, and red to gray conglomerates. The sediments of this formation are weathered volcanic rocks.
  - Immediately southeast of the permit boundary, igneous intrusives of Tertiary age form the laccolith of Mt. Gunnison.
  - The alluvium of the North Fork of the Gunnison River consists of Quaternary Age deposits of mixed coarse sand, cobbles and boulders. These coarse sediments are composed primarily of igneous and metamorphic rock types and have their source area in the headwaters and upper reaches of the North Fork. This coarse alluvium is capped by finer sands and silts. The North Fork alluvium in the area of the Hawk's Nest, Bear, West Elk and Elk Creek Mines is fairly narrow in width and is between 50 and 70 feet thick. About a mile below the town of Somerset, Colorado, the width of alluvium increases while the thickness of alluvium decreases to about 35 feet.

Since the three main minable seams (B, E, and F) within the West Elk Mine's permit boundary directly overlie one another, their structural characteristics are virtually identical. The F Seam strikes north 60 degrees west and dips three to five degrees northeast across the lease blocks. In the Jumbo Mountain area, the B Seam has an average dip of 4.6 degrees in a north 25 degrees east direction. The major cleat orientation within the F and B Seams is north 70 degrees east. This face cleat is

prominent and consistent throughout the existing F and B Seam workings. Fracture sets and cleat orientations of the E Seam are also the same. The major cleat direction in the nearby Bear and Elk Creek mines is from North 70 to 75 degrees east and is probably representative of the face cleat direction in the Jumbo Mountain area.

There are seven categories of potential aquifers that occur in the Somerset Coal Field. These are: 1) the alluvial and terrace deposits associated with the North Fork of the Gunnison River; 2) the localized, shallow alluvium along creeks tributary to the North Fork; 3) the discontinuous, lenticular and laminar sandstones of the Mesaverde Formation; 4) the Rollins Sandstone; 5) the coal seams; 6) shallow colluvial surficial deposits; and 7) fracture zones in the bedrock.

Significant hydrogeologic units present within the West Elk Mine permit boundary include (in ascending order) the Mancos shale, the Mesaverde Formation (including the Rollins Sandstone, Lower Coal Member, Upper Coal Member, and the Barren Member) and the colluvium and alluvium along the drainage side slopes and valley bottoms. With the exception of the Mancos shale (which has an extremely low permeability and acts as an aquitard), groundwater is generally localized and of limited areal extent within these hydrogeologic units. The Mesaverde Formation is typically 2,500 feet thick at the mine and consists of sandstone, shale, clay, and interbedded coal. Within the members of the Mesaverde Formation, locally continuous permeable sands may contain groundwater which generally is recharged from the downward percolation of meteoric waters.

The most continuous sandstone of any significance in the region is the Rollins Sandstone of the Mesaverde Formation. The Lower Coal Member of the Mesaverde Formation contains the Upper and Lower Marine Sandstones which may locally produce significant quantities of water. The colluvium which overlies the Barren Member of the Mesaverde Formation consists of discrete, localized units which generally follow topography. The colluvial units recharge and discharge on a seasonal basis in response to snowmelt and precipitation events. The alluvium of the North Fork consists of mixed sand, cobbles, and boulders capped by finer sands and silts. The quantity of groundwater produced from the alluvial deposits is dependent upon the thickness and extent of the deposit. Evidence shows that groundwater movement is controlled largely by fractures and topography. The West Elk Mine's experience in mining the F and B Seams indicates that groundwater inflows are associated with fractures and are seasonal.

Groundwater use in the general area around the West Elk Mine is confined to shallow wells in the alluvium of the North Fork of the Gunnison River and its tributaries. No private, commercial, or industrial wells are presently located within or immediately down-gradient of the permit area, other than the infiltration gallery which supplies domestic water for the town of Somerset and the Elk Creek Mine.

All of the streams draining the West Elk Mine permit area are tributaries to the North Fork of the Gunnison River. Lone Pine Gulch and Gribble Gulch are ephemeral streams draining the northern portion of the permit area. Sylvester Gulch has perennial flows in its lower reaches through the mine area. Minnesota Creek and its tributaries, Horse Creek, South Prong, Lick Creek, Dry Fork, and East

Fork, drain the southern portion of the permit area. Deep Creek drains the eastern portion of the permit area. Minnesota Creek enters the North Fork of the Gunnison River near Paonia. The overall drainage exhibits a dendritic drainage pattern with steep channels. Horse Creek, South Prong of the East Fork, and Deep Creek are perennial streams. Lick Creek, Upper Dry Fork, upper Sylvester Gulch and Gribble Gulch are ephemeral streams. Minnesota Reservoir controls much of the flow in the lower Dry Fork of Minnesota Creek, and Beaver Reservoir controls the flow in the East Fork of Minnesota Creek. Lone Pine Gulch has no evidence of recent flow; therefore, no gaging station has been constructed. Even when all of the six gaged watersheds were found to be flowing, Lone Pine Gulch showed no flow or evidence of flow. Raven Creek flows through the extreme northeast corner of the permit area, but a stipulation of federal coal lease COC-67011 expressly forbids mining activities to expand the affected area into the riparian zone of the creek.

There are three different types of springs within the permit area: alluvial, colluvial, and bedrock springs. A study of the groundwater system at the West Elk Mine by Mayo & Associates found 83 different springs within the existing permit area in 1999. From the identified springs, 65% of the cumulative discharge volume comes from superficial springs in alluvium and/or colluvium. Only 5% of the discharge comes from units of the Upper and Lower Coal member. The flow rates of these springs are highly seasonal with peak flows occurring during wet weather conditions.

Reservoirs and stock ponds also occur within or near the permit area. Minnesota Reservoir, on the Dry Fork of Minnesota Creek, is centrally located within the coal permit area. Beaver Reservoir, on the East Fork of Minnesota Creek, is located near the southwestern boundary of the permit area.

In addition to the storage reservoirs in the area of the West Elk Mine, a total of 61 stock water impoundments have been identified in or adjacent to the permit area as of 2006. Map 37 of the permit application packet (PAP) shows the locations of the known stock water ponds. These ponds generally do not represent adjudicated water rights or perennial flows. Within the Gunnison National Forest, the ponds are managed for seasonal use by the U.S. Forest Service.

Exhibit 32B of the PAP describes wetlands and riparian areas in the permit area. There are estimated to be approximately 77 acres of wetlands (as defined by the U.S. Army Corps of Engineers) in the permit area. Most of the wetlands are found in drainage channels, although there are small, isolated wetlands on the hillsides where springs and seeps locally emerge as a result of landslides/sumps. There are an estimated 104 acres of riparian areas in the permit area.

### Description of the Operation and Reclamation Plan

The West Elk Mine leasehold consists of mineable coal reserves in seven Federal coal leases, one private lease and other fee coal properties. Coal production of 3-6 million tons was projected annually from 2018 through 2023. Total production of 3,419,612 tons was reported in 2023, and 3,702,937 tons was reported in 2024. The majority of coal is produced using the longwall mining method, but some coal is produced through the development of mains and gate roads. In 2024,

additional coal was produced by extractive 'pillaring' of development workings in the E-seam not required to be left open for access or ventilation.

Six major coal seams exist within the West Elk Mine permit boundary. The seams are identified by the letters A through F, in ascending stratigraphic order. The seams are separated by shale, siltstone, and sandstone beds that vary in thickness from 15 feet to more than 250 feet. MCC's leasehold has economically minable coal reserves in two of the seams, the B-seam and the E-seam. Mining was by room-and-pillar methods until 1992, when longwall mining began in the northern B-seam. A new longwall was acquired in 2008 for mining in the E-seam, and is intended to be used for future mining in the southern B-seam.

MCC mined in the F-seam from 1982 to 1991 in leases D-004569 and C-0117192. This mining was only marginally successful. Poor mine roof conditions, sandstone channels, low coal areas, poor coal quality areas, and other unfavorable conditions have negatively affected mining and rendered the F-seam uneconomic under past and present market conditions. Mining in the F-seam has been discontinued, pending improved economics for this seam.

Mining has been completed in the northern B-seam reserves (in leases D-044569, CO-117192, COC54558 and COC-67011), but recoverable reserves totaling an estimated 31.4 million tons remain in leases COC-56447, COC-67232 and C-1362. Since recoverable reserves in the E-seam overlie the projected B-seam panels, it is intended that most of the remaining E-seam reserves be mined out before returning to the southern B-seam reserves by new rock slope entries from the E-seam workings.

Power to the mine is supplied via existing lines of the Delta-Montrose Electric Association. Power is stepped down at a substation in the main mine facilities area for powering underground operations and the surface facilities.

Ventilation in the mine is provided by a fan in Sylvester Gulch and a vent shaft in Deer Creek, just to the east of Minnesota Reservoir, as well as numerous Mine Ventilation Boreholes (MVBs) which were constructed in advance of mining and operated so as to control the partial pressure of methane in the air inside the mine. In 2024, a new shaft was constructed between the B- and E-seams (adjacent to the existing Deer Creek shaft), to allow the continued ventilation of the mine using existing surface facilities (i.e., without the construction any new MVBs).

The West Elk Mine portals are located at an approximate elevation of 6,450 feet. Run-of-mine coal is transported from the production panels to the various surface facilities by a system of belt conveyors. A conveyor carries coal from inside the mine portal to the stacking tubes. From the stacking tubes, an underground conveyor reclaim system transports the coal to the two crushers. A conveyor then moves the coal from the crushers to the two storage silos. A stack-tube located to the east of the silos provides additional storage for product coal. A loadout conveyor carries coal from the storage silos to the over-the-track loadout. A portion of this conveyor is completely enclosed where it crosses

the North Fork of the Gunnison River and Highway 133. Coal is shipped from the West Elk Mine by rail.

Coal mine waste at the mine is generated during underground construction activities and mining. Other sources of coal mine waste are contaminated coal spillage, material cleaned out of sediment ponds, and soils contaminated with non-hazardous materials. These other sources of waste comprise only a small portion of the coal mine waste produced at the mine. Coal mine waste is currently being processed in a plant that MCC constructed on the Lower Refuse Pile (LRP). The processing plant and an adjacent coal stockpile and laboratory were approved in TR-118. The refuse generated by the processing plant was initially disposed of in a permanent coal mine waste pile called the Refuse Pile Expansion area (RPE). This is a 20 acre site to the east of the LRP, and is east of Sylvester Gulch. The level area on top of the RPE is used as an equipment lay down area and a temporary stockpile area, and the slopes have been topsoiled and seeded. As the RPE neared its design capacity, a new refuse pile, the Refuse Pile Expansion East (RPEE) was constructed in the drainage immediately east of the RPE. Material is transported to and from the RPEE by haul truck. An Upper Refuse Disposal Area has also been approved for construction, but has not been built. Although MCC has verbally indicated this pile will not be needed, Stipulation #7 requires MCC to complete a geotechnical investigation prior to constructing the pile.

Topsoil and subsoil storage areas are located around the disturbed areas. The main topsoil stockpile is to the south of the run-of-mine coal stack pad, and will be used during reclamation to cover the majority of the disturbance to a depth of 12 to 18 inches. Other significant topsoil and subsoil piles are located north of Highway 133 in the North Soil Storage Area (NSSA), south of the potable water tank, south of the Materials Storage Bench (MSB), adjacent to the Sylvester Gulch haul road, and adjacent to the RPEE haul road.

Of the 19,854.9 acres in the permit area, 547.37 acres are approved to be disturbed, which primarily includes long-term surface facilities, and MVB pads and roads. Upon cessation of mining at the West Elk Mine, reclamation will return the disturbed land to rangeland and wildlife habitat land use. Some reclamation activities (particularly of MVB pads and roads) will occur during the life of the mine as areas cease to be used for mining activities. Final reclamation includes sealing the mine portals, removing the surface facilities, and returning all disturbed areas to the approximate original contour. The waste pile will be shaped to blend into adjacent topography. The mine area will be smooth-graded, and compacted areas will be ripped or scarified to eliminate slippage surfaces, establishing a suitable bond for the overlying seedbed material. Topsoil, which has been salvaged during construction of the surface facilities, will be redistributed over the disturbed area. Drainage control will be retained until the revegetation operation is underway and erosion is under control. Following the distribution of topsoil and final grading, the newly shaped surface will be prepared for planting. Surface preparation will include loosening and roughening the surface by disking, harrowing, or dragging. Various conditioners and neutralizers may be used to modify the seedbed conditions to ensure successful establishment of a vegetative cover. The site will then be planted using West Elk Mine's Permanent and Riparian Seeding mix.

Section II - Revisions to the Permit

Revision	Revision Short Description	Approval Date	Change to Required Financial Warranty
MR-462	MR-462 Permit Text Update	6/13/2022	
MR-463	MR-463 Update Exhibit 1: Officers and Directors	6/1/2022	
MR-464	MR-464 Addition of Fire Breaks	6/6/2022	
MR-465	MR-465 Update Exhibit 3 and Map 2	6/29/2022	
MR-466	MR-466 Rock Dust Tank at Sylvester Gulch, Shaft #1	6/24/2022	\$5,001.00
MR-467	MR-467 Additional Concrete Piers for C-1	6/30/2022	
MR-468	MR-468 Bear Mine Access Road	6/24/2022	
MR-469	MR-469 Gas Characterization Holes	9/23/2022	\$28,807.00
MR-470	MR-470 Additional Coal Storage on LRP and RPE	10/4/2022	
MR-471	MR-471 Deer Creek Shaft Fence Expansion	11/22/2022	\$5,364.00
MR-472	Update Exhibit 12 - Completion and P&A Reports	12/19/2022	
MR-473	Monument Dam Survey Station Security Fence	5/12/2023	\$926.00
MR-474	Box Canyon North Water Storage Access Hole	8/18/2023	\$27,832.00
MR-475	Geological Hole at Deer Creek Shaft	8/8/2023	\$5,628.00
MR-476	MR-476 Fire Mitigation with Lazy H Ranch	9/1/2023	
MR-477	Concrete blocks at old highway access gate	10/10/2023	\$595.00
MR-478	Box Canyon North Monitoring Hole	10/12/2023	\$3,617.00
MR-479	MR-479 BCN Waterline	11/21/2023	\$3,627.00
MR-480	MR-480 - BCN Well Pumphouse Foundation	3/12/2024	\$2,462.00
MR-481	MR-481 Booster Pump Relocation	5/14/2024	
MR-482	MR-482 Update Officers & Directors	5/17/2024	
MR-483	MR-483 Temporary Concrete Pad	8/29/2024	\$401.00
MR-484	Sunset Mains Crosscuts 13-16	9/5/2024	
SL-15	Partial Phase I Bond Release	9/26/2022	(\$143,551.21)
SL-16	Partial Phase II Bond Release	1/10/2024	(\$23,120.36)
SL-17	Partial Phase III Bond Release	7/15/2024	(\$29,411.89)
TR-147	Construction of 81 B-Seam Mine Ventilation Boreholes	5/22/2023 (withdrawn)	
TR-150	Revision to layout of E-seam panels	9/29/2022	
TR-151	Extend longwall panel LWE12	11/1/2023	
TR-152	TR-152 Sunset South Pillaring	1/22/2024	
TR-153	TR-153 - B to E Seam Vent Shaft	5/3/2024	\$21,061.00
TR-154	TR-154 - Sunset Mains Pillaring	6/25/2024	
TR-155	Repairs to Silo 2	7/25/2024	\$17,894.00
TR-156	Stormwater project, Train Loadout	8/29/2024	\$12,293.00

Table 1: Summary of revisions finalized since the approval of the last Permit Renewal (RN-8) on 6/1/2022.

### Section III - Status of Stipulations

The stipulation history for the West Elk Mine was reviewed as part of the midterm review. The review included an investigation of any stipulations imposed since the last permit renewal, and any responses to existing stipulations received since the last permit renewal. Any stipulations associated with this permit and issued over the life of this operation which are not discussed in this midterm review have been complied with or terminated.

Three outstanding stipulations remain attached to permit number C-1980-007 and are listed below:

#### Stipulation No. 3

THE OPERATOR SHALL, UPON CLOSURE, INSTALL WATER-TIGHT SEALS WITHIN THE MINE TO PREVENT GRAVITY DISCHARGE. THIS REQUIREMENT MAY BE WAIVED UPON THE DIVISION'S APPROVAL OF A PLAN SUBMITTED BY THE OPERATOR. THIS PLAN SHALL INCLUDE A DEMONSTRATION THAT THE WATER QUALITY OF THE DISCHARGE FROM THE MINE WORKINGS WILL BE OF ACCEPTABLE QUALITY AND WILL REMAIN ACCEPTABLE AFTER MINE CLOSURE. THIS SHALL INCLUDE CHEMICAL ANALYSIS AND A PREDICTIVE MODEL THAT USES OXIDATION AND REDUCTION POTENTIAL TO DETERMINE LONG-TERM WATER QUALITY OF MINE WATERS. ALSO, THE PLAN SHALL INCLUDE THE CONSTRUCTION OF A SUITABLE CHANNEL FOR MINE DISCHARGE.

STATUS: FUTURE

#### Stipulation No. 7

THE DIVISION DIRECTS MOUNTAIN COAL COMPANY, PRIOR TO ANY DISTURBANCE AT THE UPPER WASTE SITE, TO INSTALL SEVERAL ELECTRONIC TILT METER TUBES DOWNSLOPE FROM THE TOE OF THE PROPOSED WASTE STRUCTURE. THESE TILT METER INSTALLATIONS SHALL BE INSTALLED AS SPECIFIED IN MCC'S AUGUST 15, 1985 SUBMITTAL. ONE INDICATOR SHALL BE INSTALLED WITHIN 160 FEET OF THE TOE OF THE WASTE PILE CURRENTLY HALF WAY BETWEEN MONUMENTS 51 AND 54. THE SECOND SHALL BE INSTALLED APPROPRIATELY 100 FEET NORTHEAST OF MONUMENT S2, 160 FEET NORTH OF THE TOE OF THE WASTE PILE, AS INDICATED ON DRAWING NO. MG-R C-001, INCLUDED IN THE PERMIT REVISION NO. 6 APPLICATION. DURING THE INSTALLATION OF THESE TILT METER TUBES, THE OPERATOR SHALL AUGER AND LOG THE SURFICIAL AND BEDROCK STRATIGRAPHY ENCOUNTERED. AUGERING SHALL CONTINUE UNTIL THE OPERATOR HAS ESTABLISHED INTACT BEDROCK OCCURRENCE. IF ANY EVIDENCE OF EXISTING LANDSLIDE DEPOSITS IS ENCOUNTERED, THE OPERATOR SHALL DEFINE THE NATURE AND EXTENT OF THE PRE-EXISTING SLOPE INSTABILITY. IF SUCH LANDSLIDE ACTIVITY IS DISCERNED, THE OPERATOR WILL BE REQUIRED TO APPROPRIATELY RECONFIGURE THE PILE DESIGN, PRIOR TO INITIATION OF ANY CONSTRUCTION ACTIVITY.

STATUS: FUTURE.

Stipulation No. 76

MOUNTAIN COAL COMPANY WILL INFORM THE MONTROSE OFFICE OF THE COLORADO DIVISION OF WATER RESOURCES OF PLACEMENT OF ALL NEW SURVEY MONUMENTS. MOUNTAIN COAL COMPANY WILL COPY THE MONTROSE OFFICE OF THE COLORADO DIVISION OF WATER RESOURCES ON ALL SURVEY, PIEZOMETER, AND ACCELEROMETER/SEISMOMETER MONITORING IN AND AROUND MONUMENT DAM. MOUNTAIN COAL COMPANY WILL NOTIFY THE MONTROSE OFFICE OF THE COLORADO DIVISION OF WATER RESOURCES WHENEVER THE PEAK GROUND ACCELERATION (PGA) THRESHOLD IS EXCEEDED DURING THE MONITORING PERIOD, WHETHER MINE-INDUCED OR NATURALLY-OCCURRING.

STATUS: FUTURE.

Section IV – Permit Variances and Specific Approvals

The Division previously approved underground mining activities within 100 feet of the North Fork of the Gunnison River, which is a perennial stream with a biological community. This decision was based on a finding that the original stream channel will not be disturbed, water quality and quantity shall not be adversely affected, and appropriate riparian vegetation will be reestablished. The buffer zone variance was granted for the water intake gallery, sediment pond and associated spillways and ditches, a railroad siding, the railroad loadout facility, a light-use road and a portion of the old Bear No. 1 and 2 Mines site. These facilities are located on the north and south banks of the North Fork of the Gunnison River. Figure 12 in the PAP shows the disturbed areas within the buffer zone. The Division approved this variance on August 6, 1981, according to Rule 4.05.18(1). This variance was amended and clarified as a result of MR-111, approved December 16, 1993.

The Division approved underground mining, construction of haul/access roads, and installation of a sediment pond (SG-1) and road embankment within 100 feet of Sylvester Gulch. Sylvester Gulch is a stream with a biological community as defined by Rule 4.05.18(3). A map of the Sylvester Gulch Facilities Area, which delineates the area within 100 feet of Sylvester Gulch, is incorporated into Exhibit 69 of the PAP. The Division approved this stream buffer zone variance in accordance with Rule 4.05.18(1) based on a finding that the original stream channel will not be disturbed, water quality and quantity will not be adversely affected, and appropriate riparian vegetation will be reestablished. These conditions will be met by the effective use of slope stabilization methods including Best Management Practices, appropriate use of sediment control structures during construction, revegetation, and mechanically stabilized earth (MSE) walls.

Section V - Enforcement Actions

No enforcement actions have been issued since the last Permit Renewal (RN-8).

## Section VI - Identified Issues and Required Revisions

The Division requests responses to the following items in the form of a minor revision or technical revision, as appropriate, no later than March 5, 2025:

- 1) Please review and update the Ownership and Control information for MCC, per Rule 2.03.4.
- 2) Please review and update the list of Threatened and Endangered Species, per Rule 2.05.6(2). If there are any new listed species, a new on the ground survey will be required.

## Section VII – Reclamation Liability and Performance Bonding

The site-wide reclamation cost estimate was re-evaluated using current unit costs. The tasks included are the same as the last site-wide estimate (completed with the last permit renewal, RN-8), except where new tasks were included to account for liability increases permitted with MR-466, MR-469, MR-471, MR-473, MR-474, MR-475, MR-477, MR-478, MR-479, MR-480, MR-483, TR-153, TR-155 and TR-156; and liability released with SL-15, SL-16 and SL-17.

The Division estimates the reclamation liability for mining operations to be \$14,436,569. The Division currently holds a Corporate Surety in the amount of \$15,000,000.00 for the West Elk Mine. No additional surety is required at this time.

This concludes the Midterm Review (MT-9) of the West Elk Mine.

A copy of the updated site-wide reclamation cost estimate is attached.

## COST SUMMARY WORK

Task description: Compilation of parts A-E, with indirect costs

Site: West Elk Mine

Permit Action: MT9 - Total

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 09T

State: Colorado

Abbreviation: None

Date: 1/27/2025

County: Delta

Filename: C007-09T

User: LDS

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
09A	Part A: Main Facilities, Loadout, Bear #1	NA	1	2,603.24	\$5,324,948
09B	Part B: RPE, RPEE, NSSA	NA	1	519.12	\$735,480
09C	Part C: Sylvester Gulch	NA	1	2,411.87	\$3,859,647
09D	Part D: Boreholes plus associated pads and roads	NA	1	2,367.13	\$1,504,053
09E	Part E: Deer Creek, Minnesota Creek	NA	1	140.42	\$211,625
<b><u>SUBTOTALS:</u></b>				<b>8041.78</b>	<b>\$11,635,753</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$235,042

Performance bond: 1.05

Total = \$122,175

Job superintendent: 4,020.89

Total = \$318,736

Profit: 10.00

Total = \$1,163,575

TOTAL O & P = \$1,839,529

CONTRACT AMOUNT (direct + O & P) = \$13,475,282

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 4.00

Total = \$539,011

Reclamation management and/or administration: 3.13

\$421,776

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$2,800,816

**TOTAL BOND AMOUNT (direct + indirect) = \$14,436,569**

## COST SUMMARY WORK

Task description: Part A: Main Facilities, Loadout, Bear #1

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 09A

State: Colorado

Abbreviation: None

Date: 1/27/2025

County: Delta

Filename: C007-09A

User: LDS

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Demo structures in Main Surface Facilities Area	DEMOLISH	1	1,485.50	\$3,344,951
002	Rip drill pad for water tank boreholes-Main Facilities Area	RIPPER	4	0.12	\$237
003	Rip drill pad for water tank boreholes	RIPPER	4	0.17	\$348
004	Regrade 1.2 million gallon water tank pad	DOZER	4	0.80	\$1,462
005	Distribute topsoil at 1.2 million gallon water tank pad	DOZER	4	0.46	\$841
006	Regrade topsoil 1.2 million gallon water tank pad	DOZER	4	0.46	\$841
008	Replace topsoil from stockpile #5	TRUCK1	1	0.31	\$414
011	Haul fill from SubsoilPile#1 to TrainLO Pond MB-4 & Sed Trap	TRUCK1	1	0.59	\$875
012	Backfill/regrade Pond MB-4 (Loadout Pond)	EXCAVATE	1	0.61	\$307
013	Regrade ramp from Hwy 133 to Loadout	EXCAVATE	1	2.56	\$1,274
018	Rip stockpile at stacker tube and reclaim system	RIPPER	4	2.33	\$4,529
019	Regrade ROM expansion area	DOZER	4	61.71	\$119,563
020	Compact backfill at ROM pile expansion	COMPACT	2	10.98	\$7,720
021	Regrade ditch DCW-7	DOZER	4	0.16	\$309
022	Regrade Stacker Tube Access Road	EXCAVATE	1	13.67	\$6,793
023	Replace topsoil from stockpile to ROM pad expansion	SCRAPER1	1	15.48	\$19,548
024	Finish-grade ROM Pile Expansion	GRADER	1	1.60	\$411
028	Cover refuse pile with subsoil	TRUCK1	1	64.51	\$85,193
029	Replace topsoil from water tank stockpile to LRP	TRUCK1	1	38.77	\$57,632
030	Backfill/regrade powder magazine	DOZER	4	0.44	\$854
031	Backfill/grade substation	DOZER	4	0.63	\$1,217
036	Regrade light use roads for water tank topsoil pile	DOZER	4	0.67	\$1,296
037	Backfill/grade water storage tank and road	DOZER	4	0.37	\$715
038	Backfill portal bench to final contours	TRUCK1	1	64.11	\$95,298
039	Backfill and grade storage bench	SCRAPER1	1	165.86	\$209,507
040	Push cut material from west fill on to bench	DOZER	4	39.07	\$75,693
041	Push west fill to base of cut slope bench	DOZER	4	44.41	\$86,044
042	Push fill material back on to cut slope	DOZER	4	36.76	\$71,213
043	Move fill material from portal storage bench to base of cut	DOZER	4	19.13	\$37,066
044	Move portal storage bench material on to cut slope	DOZER	4	7.42	\$14,380
045	Compact fill replaced material at MSB excavation site	COMPACT	2	11.71	\$8,235
046	Rip storage bench access road	RIPPER	4	0.16	\$327
048	Rip portal access road (east of portals)	RIPPER	4	0.21	\$418

050	Rip Materials Storage Bench	RIPPER	4	1.31	\$2,543
051	Replace topsoil from stockpile to Materials Storage Bench	SCRAPER1	1	30.87	\$38,989
052	Replace topsoil from stockpile #5 to MSB cutslope	SCRAPER1	1	7.88	\$9,949
053	Replace topsoil from stockpile #5 to west fill area	SCRAPER1	1	2.72	\$3,433
054	Rip Truck Pull-out Lane	RIPPER	4	0.03	\$70
055	Regrade mine access road from office to portals	EXCAVATE	1	26.54	\$13,185
056	Rip Main Surface Facilities Area	RIPPER	4	4.67	\$9,058
057	Backfill/grade shop and warehouse area	DOZER	4	3.60	\$6,981
058	Backfill/grade office/bathhouse area	DOZER	4	7.11	\$13,785
059	Backfill/grade parking lot	DOZER	4	10.88	\$21,086
061	Backfill Ponds MB-1 and FW-1	DOZER	4	1.02	\$1,974
062	Regrade Pond MB-1	DOZER	4	33.43	\$64,771
063	Regrade freshwater pond FW-1	DOZER	4	16.59	\$32,140
067	Regrade Pond MB-3	DOZER	4	2.48	\$4,796
070	Regrade diversion ditches DCW-1A, DCW-1B, and D1-6	EXCAVATE	1	13.17	\$6,546
071	Regrade all sediment ditches	EXCAVATE	1	1.29	\$644
072	Rip new light use and access roads	RIPPER	4	0.43	\$843
073	Regrade Middle Mine Facilities Road	EXCAVATE	1	10.77	\$5,350
074	Distribute Main Topsoil Stockpile	SCRAPER1	1	132.44	\$167,297
075	Spread topsoil on parking lot expansion, approved MR-317	DOZER	4	0.82	\$1,588
076	Finish grade backfilled areas	DOZER	4	19.37	\$37,527
077	Rip expanded mine entrance area	RIPPER	4	0.14	\$279
078	Regrade mine entrance expansion area	DOZER	4	1.15	\$2,231
079	Replace topsoil f/stockpile to add'l disturb. at mine entran	TRUCK1	1	1.68	\$2,503
080	Rip Bear #1 Mine area (Pond MB-5E)	RIPPER	4	1.79	\$3,484
081	Haul Bear Mine area riprap stockpile to base of fill	TRUCK1	1	4.26	\$6,335
083	Regrade access road from Sylvester Gulch Rd to office	EXCAVATE	1	19.98	\$9,928
084	Rip access road from Hwy 133 to Sylvester Gulch Road	RIPPER	4	0.21	\$418
085	Regrade haul/access road from Hwy 133 to Syl. Gulch Fan Rd.	DOZER	4	8.20	\$15,895
087	Regrade P-2 conveyor bench	DOZER	4	4.30	\$8,332
088	Regrade Pond MB-5E	DOZER	4	11.86	\$22,987
089	Regrade HR/AR from Sylvester Gulch Rd to office	EXCAVATE	1	14.58	\$7,244
090	Seal all Mine portals (formerly task 702)	MINESEAL	1	99.93	\$500,427
091	Mobilize/demobilize equipment for updated parts A-E	MOBILIZE	1	12.00	\$46,385
095	Remove skid mounted shed to Delta (MR-447)	MISCTRUK	1	4.00	\$434
<b><u>SUBTOTALS:</u></b>				<b>2603.24</b>	<b>\$5,324,948</b>

## DEMOLITION WORK

Task description: Demo structures in Main Surface Facilities Area

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 1/27/2025

County: Gunnison

Filename: 09A-001

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 91.30 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Warehouse - Superstructure	80 ft X 60 ft X 28ft	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	134,000.00	CF	\$0.24	\$32,615.60
-Floor	80 ft X 60 ft X 8 in	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	4,800.00	SF	\$1.65	\$7,934.40
-Footings	1 ft X 2 ft X 280 lf	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	280.00	LF	\$4.96	\$1,388.52
Warehouse/office addition - Superstructure	80 ft X 18 ft X 12ft	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	17,280.00	CF	\$0.24	\$4,205.95
-Floor	80 ft X 18 ft X 10 in	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	1,440.00	SF	\$2.07	\$2,975.33
-Footings	1.5 ft X 2 ft X 38 lf	Demo. and on-site disposal in excavated pit, 1.5 ft. x 2 ft. - Max. 200 ft. push	38.00	LF	\$7.44	\$282.66
Three-sided warehouse - Superstructure	125 ft X 25 ft X 15ft	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	46,875.00	CF	\$0.24	\$11,409.38
-Floor	125 ft X 25 ft X 18 in	Floor, concrete, demolition only, 10 in. thick - Rod reinforcing	3,125.00	SF	\$6.15	\$19,218.75
-Footings	1 ft X 2ft X 300 ft	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	600.00	LF	\$4.75	\$2,852.10
Office and bathhouse - Superstructure	122 ft X 115 ft X 28ft	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	392,840.00	CF	\$0.24	\$95,617.26
-Floor	122 ft X 115 ft X 6 in	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 200 ft. push	14,030.00	SF	\$1.19	\$16,673.25
-Footings	2 ft X 3 ft X 434 lf	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	434.00	LF	\$14.26	\$6,189.01
Garage -	57 ft X 33 ft X	Bldg. (SN) demo./on-site	26,334.00	CF	\$0.24	\$6,409.70

Superstructure	14ft	disposal in excavated pit - Max. 10,000 ft. haul				
-Floor	57 ft X 33 ft	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	1,881.00	SF	\$1.24	\$2,331.88
Loading/unloading dock - Floor	5 ft X 10 ft X 8 in	Floor, concrete, demolition only, 8 in. thick - No reinforcing	500.00	SF	\$2.36	\$1,180.00
-Walls	20 ft X 8 ft	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	360.00	SF	\$1.73	\$621.00
Bulk fuel storage building - Superstructure	73 ft X 39 ft X 23ft	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	65,841.00	CF	\$0.24	\$16,025.70
-Floor	73 ft X 39 ft X 15 in	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	2,847.00	SF	\$1.24	\$3,529.43
-Containment wall	10 ft X 437 ft X 6 in	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	4,370.00	SF	\$1.29	\$5,653.47
Maintenance shop - Superstructure	181 ft X 61 ft X 30ft	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	331,230.00	CF	\$0.24	\$80,621.38
-Stem walls	464 ft X 8 ft X 8 in	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	3,712.00	SF	\$1.73	\$6,403.20
-Footings	3 ft X 2 ft	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	316.00	LF	\$14.88	\$4,701.10
Barrel storage yard - floor	25 ft X 25 ft X 6 in	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	625.00	SF	\$1.24	\$774.81
-Walls	75 ft X 6 in H	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	38.00	SF	\$1.29	\$49.16
-Fence	75 ft L X 8 ft H	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	75.00	LF	\$3.53	\$264.75
Heated storage - Walls	56 ft X 8 in H	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	38.00	SF	\$1.29	\$49.16
Rock dust bin - Superstructure	20 ft X 16 ft X 12 ft	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	3,840.00	CF	\$0.24	\$934.66
-Floor	20 ft X 16 ft X 4 in	Demo. and on-site disposal in excavated pit, 4 in. thick - Max. 200 ft. push	320.00	SF	\$0.83	\$264.48
-Footings	1 ft X 2 ft X 96 ft	Demo. and on-site disposal in excavated pit,	96.00	LF	\$4.96	\$476.06

		1.0 ft. x 2 ft. - Max. 200 ft. push				
Rock dust bin - Superstructure	12 X 18 X 10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	2,160.00	CF	\$0.24	\$525.74
-Floor	12 X 8 X 0.33	Demo. and on-site disposal in excavated pit, 4 in. thick - Max. 200 ft. push	96.00	SF	\$0.83	\$79.34
-Footings	1 X 2 X 96	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	96.00	LF	\$4.96	\$476.06
Water treatment plant - Superstructure	30 X 24 X 16	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	11,520.00	CF	\$0.26	\$2,939.90
-Floor	36 X 24 X 6 in	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	864.00	SF	\$1.24	\$1,071.10
-Footings	2 X 3 X 34	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	34.00	LF	\$14.88	\$505.81
Water intake building - Superstructure	14 X 14 X 12	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,352.00	CF	\$0.24	\$572.48
-Floor	14 X 14 X 6 in	Floor, concrete, demolition only, 4 in. thick - No reinforcing	196.00	SF	\$1.18	\$231.28
-Footings	1X2X56	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	56.00	LF	\$4.96	\$277.70
Waster water treatment plant- Superstructure	55X20X12	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	13,200.00	CF	\$0.24	\$3,212.88
-Floor	55X20X12in	Floor, concrete, demolition only, 12 in. thick - Mesh reinforcing	1,100.00	SF	\$4.04	\$4,444.00
-Footings	1X3X15LF	Demo. and on-site disposal in excavated pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	150.00	LF	\$11.16	\$1,673.66
Water storage tank - Superstructure	24X36	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	24,238.00	CF	\$0.24	\$5,899.53
-Floor	24X36	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	1,018.00	SF	\$1.65	\$1,682.75
-Footings	3X36	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	113.00	LF	\$4.96	\$560.37
Surface shop - Superstructure	150X50X17.5	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	131,250.00	CF	\$0.24	\$31,946.25
-Floor	150X50	Demo. and on-site	7,500.00	SF	\$0.83	\$6,198.75

		disposal in excavated pit, 4 in. thick - Max. 200 ft. push				
-Footings	1X2X49	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	400.00	LF	\$4.96	\$1,983.60
Fire building north - Superstructure	14X10.5X8	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	1,176.00	CF	\$0.24	\$286.24
-Floor	14X10.5	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	147.00	SF	\$1.24	\$182.24
-Footings	1X2	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	40.00	LF	\$4.96	\$198.36
MCC-5 - Superstructure	15X10X8	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	1,200.00	CF	\$0.24	\$292.08
-Floor	15X10	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	150.00	SF	\$1.24	\$185.96
-Footings	1X2	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	50.00	LF	\$4.96	\$247.95
MCC-2	12X8X8	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	768.00	CF	\$0.24	\$186.93
-Floor	12X8	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	96.00	SF	\$1.24	\$119.01
-Footings	1X2	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	80.00	LF	\$4.96	\$396.72
Gaurd shack - Superstructure	12X12X10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	1,440.00	CF	\$0.24	\$350.50
Substation - Superstructure	80X50X20	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	80,000.00	CF	\$0.24	\$19,472.00
-Floor	80X50	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	4,000.00	SF	\$1.65	\$6,612.00
-Footings	1.5X3	Demo. and on-site disposal in excavated pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	260.00	LF	\$11.16	\$2,901.00
Takeup tower - Superstructure	25x21	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	12,075.00	CF	\$0.24	\$2,939.06
-Floor	25x21	Demo. and on-site disposal in excavated pit,	525.00	SF	\$2.48	\$1,301.74

		12 in. thick - Max. 200 ft. push				
-Footings	2x3	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	92.00	LF	\$14.26	\$1,311.96
Screening facility - Superstructure	62x52x36	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	116,064.00	CF	\$0.24	\$28,249.98
-Floor	52x36	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	1,872.00	SF	\$1.24	\$2,320.72
-Footings	1.5x2	Demo. and on-site disposal in excavated pit, 1.5 ft. x 2 ft. - Max. 200 ft. push	2,389.00	LF	\$7.44	\$17,770.58
Crusher building - Superstructure	25x20x42	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	21,000.00	CF	\$0.24	\$5,111.40
-Floor	25x20	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	500.00	SF	\$1.24	\$619.85
-Footings	3x2	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	366.00	LF	\$14.88	\$5,444.95
Reclaim tunnel - Roof	16x400x1	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	6,400.00	CF	\$0.24	\$1,557.76
-Walls	12x400x3	Wall, concrete, demolition only, average reinforcing - 24 in. thick	6,400.00	SF	\$3.50	\$22,387.20
-Floor	16x400x3	Demo. and on-site disposal in excavated pit, 4 in. thick - Max. 200 ft. push	711.00	SF	\$0.83	\$587.64
Escapeway tunnel	6	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	6.00	LF	\$24.52	\$147.14
Feed conveyor drive tower- Superstructure	21x19x60	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	23,940.00	CF	\$0.24	\$5,827.00
-Floor	19x13.5	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	257.00	SF	\$1.24	\$318.60
-Footings	2x3	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	967.00	LF	\$14.88	\$14,385.96
Transfer structures - Superstructures (3)	57x13x38	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	28,158.00	CF	\$0.24	\$6,853.66
-Floor	39x10	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	390.00	SF	\$1.24	\$483.48

Stacking tube 1	94x12x12 in diam	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	10,630.00	CF	\$0.24	\$2,587.34
Stacking tube 2	93x12x 12 in diam	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	10,517.00	CF	\$0.24	\$2,559.84
Stacking tube 3	91x12x 12 in diam	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	10,291.00	CF	\$0.24	\$2,504.83
Tunnel - Floor	505x12 x 36 in th	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	36.00	CY	\$151.50	\$5,454.00
-Roof	505x12x 36 in th	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	36.00	CY	\$151.50	\$5,454.00
-Walls	505x12x3	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	36.00	CY	\$151.50	\$5,454.00
Run-of-mine conveyor	1100 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	88,000.00	CF	\$0.46	\$40,480.00
Transfer conveyor	100 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	8,000.00	CF	\$0.46	\$3,680.00
Silo-to-silo conveyor	150 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	12,000.00	CF	\$0.46	\$5,520.00
Breaker-to-silo conveyor	800 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	64,000.00	CF	\$0.46	\$29,440.00
Silo-to-loadout conveyor	500 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	40,000.00	CF	\$0.46	\$18,400.00
Overhead conveyor	225 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	18,000.00	CF	\$0.46	\$8,280.00
Reclaim conveyor	555 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	44,400.00	CF	\$0.46	\$20,424.00
Overhead conveyor	225 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	18,000.00	CF	\$0.46	\$8,280.00
Reclaim conveyor	555 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	44,400.00	CF	\$0.46	\$20,424.00
Topside discharge structure	15x15x33	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	7,425.00	CF	\$0.24	\$1,807.25
Dozer trap push wall	4x20x10	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	800.00	SF	\$1.29	\$1,034.96
Escape tunnel	180	Pipe, reinforced concrete (RCP) - 48 in. diameter pipe	180.00	LF	\$79.73	\$14,350.84
Stacking tube 4 - Superstructure	106x1x12	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	11,989.00	CF	\$0.24	\$2,918.12
-Footings	2x3	Demo. and on-site	38.00	LF	\$14.88	\$565.32

		disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push				
Overhead conveyor	555 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	44,400.00	CF	\$0.46	\$20,424.00
Reclaim conveyor	555 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	44,400.00	CF	\$0.46	\$20,424.00
Topside discharge structure	15x15x33	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	7,425.00	CF	\$0.24	\$1,807.25
Dozer trap push wall - Superstructure	2x3x10	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	800.00	SF	\$2.59	\$2,070.00
-Footings	2x3	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	80.00	LF	\$14.88	\$1,190.15
Escape tunnel	180	Pipe, reinforced concrete (RCP) - 48 in. diameter pipe	180.00	LF	\$79.73	\$14,350.84
Silo #1 - Superstructure	145x60	Bldg. (MN) demo./on- site disposal in excavated pit - Max. 10,000 ft. haul	409,995.00	CF	\$0.35	\$142,514.26
-Topside transfer building	20x20x30	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	12,000.00	CF	\$0.24	\$2,920.80
-Floor	60	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	3,100.00	SF	\$2.48	\$7,686.45
-Footings	2x3	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	189.00	LF	\$14.88	\$2,811.73
Silo #2 - Superstructure	175x80	Bldg. (MN) demo./on- site disposal in excavated pit - Max. 10,000 ft. haul	879,952.00	CF	\$0.35	\$305,871.32
-Topside transfer building	20x20x30	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	12,000.00	CF	\$0.24	\$2,920.80
-Floor	80	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	5,530.00	SF	\$2.48	\$13,711.64
-Footings	2x3x25	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	150.00	LF	\$14.88	\$2,231.54
Silo pad wall - Superstructure	N/A	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	70,558.00	CF	\$0.24	\$17,173.82
-Foundation	N/A	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	459.00	SF	\$2.48	\$1,138.09
Old Portal B Fan -	40x25	Bldg. (SN) demo./on-site	1,000.00	CF	\$0.24	\$243.40

Floor		disposal in excavated pit - Max. 10,000 ft. haul				
-Footings	2x3	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	130.00	LF	\$14.88	\$1,934.00
Breaker Facility - Superstructure	20x18x40	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	14,400.00	CF	\$0.24	\$3,504.96
-Floor	20x18	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	360.00	SF	\$2.07	\$743.83
-Footings	2x3	Demo. and on-site disposal in excavated pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	76.00	LF	\$11.16	\$847.99
Explosives magazine	5x5x4	Bldg. (SC) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	100.00	CF	\$0.31	\$30.67
Cap magazine	5x5x4	Bldg. (SC) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	100.00	CF	\$0.31	\$30.67
Miscellaneous 6" piping (water line)	6174 lf	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	6,174.00	LF	\$4.51	\$27,824.98
-Railroad - Segments 1, 3, and 6	22 x 370	Metal bin retaining wall, 10' wide, 16-28' high	8,140.00	SF	\$5.33	\$43,386.20
-Railroad - Segments 2 and 7	18 x 410	Metal bin retaining wall, 10' wide, 16-28' high	7,380.00	SF	\$5.33	\$39,335.40
-Railroad - Segments 4 and 5	28 x 180	Metal bin retaining wall, 10' wide, 16-28' high	5,040.00	SF	\$5.33	\$26,863.20
-Loadout pond - Segment 1	4 x 10	Metal bin retaining wall, 10' wide, 4-12' high	40.00	SF	\$4.44	\$177.60
-Loadout pond - Segment 2	8 x 100	Metal bin retaining wall, 10' wide, 4-12' high	800.00	SF	\$4.44	\$3,552.00
-Substation pad and access road	14 x 573	Metal bin retaining wall, 10' wide, 16-28' high	8,022.00	SF	\$5.33	\$42,757.26
-Water storage tank access road	12 x 210	Metal bin retaining wall, 10' wide, 4-12' high	2,520.00	SF	\$4.44	\$11,188.80
-Shop/warehouse pad	12 x 145	Metal bin retaining wall, 10' wide, 4-12' high	1,740.00	SF	\$4.44	\$7,725.60
-Portal bench and access road cut slope	24 x 635	Metal bin retaining wall, 10' wide, 16-28' high	15,240.00	SF	\$5.33	\$81,229.20
-Portal bench and access road fill slope	12 x 1289	Metal bin retaining wall, 10' wide, 4-12' high	15,468.00	SF	\$4.44	\$68,677.92
-Original access road fill (Design A)	4 x 248	Metal bin retaining wall, 10' wide, 4-12' high	992.00	SF	\$4.44	\$4,404.48
-Original access road fill (Design B)	12 x 2050	Metal bin retaining wall, 10' wide, 4-12' high	24,600.00	SF	\$4.44	\$109,224.00
Pond FW-3 (formerly MB-1)- Control Tower	8.7x6.7x22	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	308.00	SF	\$2.48	\$763.69
-Outlet structure	8.1x5.8x10	Demo. and on-site disposal in excavated pit,	227.00	SF	\$1.65	\$375.23

		8 in. thick - Max. 200 ft. push					
-Catwlk	24x4.7x5	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	508.00	CF	\$0.24	\$123.65	
-Spillway cut-off wall	60x10.8	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	308.00	SF	\$2.16	\$664.11	
-Energy dissipator	4.3x54.5	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	234.00	SF	\$1.65	\$386.80	
-Energy dissipator	8.6x54.5	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	469.00	SF	\$1.65	\$775.26	
Pond MB-2R - Bridge	50x30x4	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	6,000.00	CF	\$0.24	\$1,460.40	
-Inlet sediment trap floors/walls	36.7x7	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	257.00	SF	\$2.48	\$637.23	
-Inlet sediment trap floors/walls	36.7x14	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	514.00	SF	\$2.48	\$1,274.46	
-Inlet sediment trap floors/walls	36.7x14	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	514.00	SF	\$2.48	\$1,274.46	
-Weir box	133	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	133.00	SF	\$1.24	\$164.88	
Pond MB-3 - Bridge	50x30x3	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	4,500.00	CF	\$0.24	\$1,095.30	
-Inlet sediment trap floors/walls (1)	36.7x7	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	606.00	SF	\$2.48	\$1,502.58	
-Inlet sediment trap floors/walls (2)	36.7x14	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	1,000.00	SF	\$2.48	\$2,479.50	
Pond FW-1 - Control tower	7.5x6.7x22	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	1,106.00	CF	\$0.24	\$269.20	
-Outlet structure	34 sf	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	34.00	SF	\$1.24	\$42.15	
-Catwalk	5.3x4.7x5	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	112.00	CF	\$0.24	\$27.26	

-Spillway cut-off wall	40x10	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	400.00	SF	\$2.16	\$862.48
-Principal spillway	60 lf	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	60.00	LF	\$4.51	\$270.41
Train loadout - Superstructure	39x22x24	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	20,592.00	CF	\$0.35	\$7,157.78
-Floor	39x29	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	1,131.00	SF	\$2.48	\$2,804.31
-Footer	2x3	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	122.00	LF	\$14.88	\$1,814.98
Railroad track	4,100 lf	Railroad track - Ties and track	4,100.00	LF	\$16.15	\$66,215.00
-Railroad track ballast	7,175 cyds	Railroad track - Ballast	7,175.00	CY	\$5.52	\$39,606.00
Road retaining wall	10x451	Wall, concrete, demolition only, average reinforcing - 12 in. thick	4,510.00	SF	\$1.75	\$7,887.99
Trash dumpster walls and floor	511 sf	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	511.00	SF	\$1.65	\$844.68
Gravel bunkers walls and floor	2,466 sf	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	2,466.00	SF	\$2.59	\$6,380.78
Chain-link fence	7200 lf	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	7,200.00	LF	\$3.53	\$25,416.00
Barbed wire fence - 2 strand	2,700 lf	Fencing, barbed wire, - 3 strand	2,700.00	LF	\$1.82	\$4,914.00
Exterior stairway - Stairway floor	6x11	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	66.00	SF	\$2.07	\$136.37
-Stairway floor	6x11	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	66.00	SF	\$2.07	\$136.37
-Stairway supports	9.5x4x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	380.00	CF	\$0.24	\$92.49
-Stairway supports	4x4x18	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	288.00	CF	\$0.24	\$70.10
-Structure	50x4x9	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	1,800.00	CF	\$0.24	\$438.12
Road pavement	10369x20	Pavement, bituminous, demolition only - 4 in. to 6 in. thick	23,042.00	SY	\$8.66	\$199,543.72
Office/bathouse	200x100	Pavement, bituminous,	741.00	SY	\$8.66	\$6,417.06

parking lot		demolition only - 4 in. to 6 in. thick				
Tanks - 2	8,000 gal	Excavate and load tank onto trailer, non-leaking - 6,000 gal. to 8,000 gal.	2.00	EA	\$1,095.00	\$2,190.00
Tanks - 3	12,000 gal	Excavate and load tank onto trailer, non-leaking - 9,000 gal. to 12,000 gal.	3.00	EA	\$1,645.00	\$4,935.00
Tank -antifreeze	9,000 gal	Comprehensive storage tank removal, non-leaking - 9,000 to 12,000 gal. tank	1.00	EA	\$7,978.93	\$7,978.93
Tank - antifreeze	3,000 gal	Comprehensive storage tank removal, non-leaking - 3,000 to 5,000 gal. tank	1.00	EA	\$3,550.90	\$3,550.90
Remove sludge from all tank bottoms	7 tanks	Remove sludge, water, and rem. product from tank - 9,000 to 12,000 gal.	7.00	EA	\$432.00	\$3,024.00
Dispose sludge off-site	7000 gal	Dispose of tank sludge off-site - Average	7,000.00	GAL	\$6.80	\$47,600.00
Clean tanks	960 lbs	Insert dry ice (CO2) into tank to produce inert gas - 1.5 lbs./100 gal.	960.00	LB	\$2.11	\$2,025.60
Transport 3,000 gal tank	1	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	1.00	EA	\$760.00	\$760.00
Transport 2 - 8,000 gal tanks	2	Haul tank to certified salvage dump - 6,000 to 8,000 gal. tank	2.00	EA	\$880.00	\$1,760.00
Transport 4 - 9-12,000 gal tanks	4	Haul tank to certified salvage dump - 9,000 to 12,000 gal. tank	4.00	EA	\$1,050.00	\$4,200.00
Waste oil tank walls and floor	412	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	412.00	SF	\$2.07	\$851.27
Hazardous waste pick-up	20	Hazardous waste removal - Drum solids/liquids, per drum, (7+ drum job)	20.00	DRUM	\$360.98	\$7,219.57
Hazardous waste sampling	20	Hazardous waste sampling and analysis, per sample	20.00	EA	\$224.65	\$4,493.00
Hazardous waste transportation	20	Solid transport, large truck (max. 80 drums, 25 cy, or 18 tons) - Average	300.00	MI	\$5.60	\$1,680.00
Hazardous waste disposal	5	Dumpsite disposal charge - Average	5.00	TON	\$277.50	\$1,387.50
Barrel storage area (expansion)-structure	46x39x16	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	28,704.00	CF	\$0.24	\$6,986.55
-Floor	46X39	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	1,794.00	SF	\$1.24	\$2,224.02
-Footers	1.5x3	Demo. and on-site	18.00	LF	\$11.16	\$200.84

		disposal in excavated pit, 1.5 ft. x 3 ft. - Max. 200 ft. push				
-Curbs, ramps, sump wall and sump pad	13x13 (2)	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	338.00	SF	\$1.29	\$437.27
-Fence	124 lf	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	124.00	LF	\$3.53	\$437.72
Hydraulic compressor building- Structure	18x25x45	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	6,300.00	CF	\$0.24	\$1,533.42
-Floor	18x25	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	450.00	SF	\$1.65	\$743.85
-Footings	1	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	86.00	LF	\$4.96	\$426.47
Containment structure-walls, floor, curb	34x4	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	136.00	SF	\$1.73	\$234.60
Water tank- Superstructure	28x86	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	162,637.00	CF	\$0.24	\$39,585.85
-Steel ring for foundation	270 cf	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	270.00	CF	\$0.24	\$65.72
Shower trailer	12x40x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	4,800.00	CF	\$0.24	\$1,168.32
Shower trailer	12x40x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	4,800.00	CF	\$0.24	\$1,168.32
Materials storage building- Superstructure	130x30x17	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	64,350.00	CF	\$0.24	\$15,662.79
-Floor	130x30	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	1,300.00	SF	\$1.65	\$2,148.90
-Footings	130x10	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	266.00	LF	\$14.88	\$3,957.26
-Apron	130x10	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	1,300.00	SF	\$1.65	\$2,148.90
Office/bathhouse parking lot expansion	1,460 sq yds	Pavement, bituminous, demolition only - 4 in. to 6 in. thick	1,460.00	SY	\$8.66	\$12,643.60
Warehouse - Superstructure	33x30x11	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	10,890.00	CF	\$0.24	\$2,650.63
-Floor	33x30	Demo. and on-site	990.00	SF	\$1.65	\$1,636.47

		disposal in excavated pit, 8 in. thick - Max. 200 ft. push				
-Footer	126 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	126.00	LF	\$14.88	\$1,874.49
-Wall	(33+30)x2	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	126.00	SF	\$1.29	\$163.01
Concrete barriers for benches and roads	10x2 (120)	Railing, roadside guiderail posts only	120.00	EA	\$6.56	\$787.20
TLO conveyor/pulley - Enclosures	23x54x17	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	21,114.00	CF	\$0.24	\$5,139.15
-Floor site 1	23x54	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	1,242.00	SF	\$1.65	\$2,053.03
-Floor site 2	18x6	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	108.00	SF	\$1.65	\$178.52
Site 1 headhouse extension	8,044 cf	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	8,044.00	CF	\$0.24	\$1,957.91
Site 2 headhouse extension	34x15x15	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	7,650.00	CF	\$0.24	\$1,862.01
Guardrails at mine entrance and RPE road	750 lf	Railing, roadside guiderail and posts (posts on 20 ft. centers)	750.00	LF	\$18.79	\$14,092.50
Mine entrance gate 1	4x30	Fencing, chain link, including posts and fabric - to 6 ft. high	30.00	LF	\$3.02	\$90.60
Mine entrance gate 2	4x30	Fencing, chain link, including posts and fabric - to 6 ft. high	30.00	LF	\$3.02	\$90.60
Fence at NSS (3- strand)	2,100 lf	Fencing, barbed wire, - 3 strand	2,100.00	LF	\$1.82	\$3,822.00
Remove additional entrance road pavement	1936 sy	Pavement, bituminous, demolition only - 3 in. thick	1,936.00	SY	\$5.28	\$10,222.08
Dozer service facility - Superstructure	30x42.6x50	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	63,900.00	CF	\$0.24	\$15,553.26
-Floor	42.6x50	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	2,130.00	SF	\$1.24	\$2,640.56
-Footings	2x3	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	73.00	LF	\$14.26	\$1,041.01
-Retaining walls	8x25	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200	200.00	SF	\$2.59	\$517.50

		ft. push				
-Retaining walls	12x72	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	864.00	SF	\$2.59	\$2,235.60
-Apron	8x12 (24 in thick)	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	4.00	CY	\$151.50	\$606.00
-Apron	8x12 (24 in thick)	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	5.00	CY	\$151.50	\$757.50
Materials storage bench-Concrete ditches	1,626 sf	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	1,626.00	SF	\$1.65	\$2,687.78
-Surface area asphalt	14,520 syds	Pavement, bituminous, demolition only - 4 in. to 6 in. thick	14,250.00	SY	\$8.66	\$123,405.00
-Building walls	320 sf	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	320.00	SF	\$2.16	\$689.98
Locker room addition - Superstructure	10x61	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	51,240.00	CF	\$0.24	\$12,471.82
-Floor	10x84	Demo. and on-site disposal in excavated pit, 4 in. thick - Max. 200 ft. push	840.00	SF	\$0.83	\$694.26
-Footings	1x2	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	188.00	LF	\$4.96	\$932.29
-Curb	188 lf	Curbing, concrete, demolition only - Reinforced	188.00	LF	\$5.71	\$1,073.48
Culverts	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	1,699.00	LF	\$5.91	\$10,038.71
Culverts	14"	Pipe, corrugated metal (CMP) - 15 in. diameter pipe	144.00	LF	\$6.97	\$1,003.32
Culverts	16"	Pipe, corrugated metal (CMP) - 15 in. diameter pipe	40.00	LF	\$6.97	\$278.70
Culverts	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	1,120.00	LF	\$8.10	\$9,068.86
Culverts	20"	Pipe, corrugated metal (CMP) - 21 in. diameter pipe	60.00	LF	\$9.28	\$556.54
Culverts	21"	Pipe, corrugated metal (CMP) - 21 in. diameter pipe	935.00	LF	\$9.28	\$8,672.78
Culverts	30"	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	975.00	LF	\$13.98	\$13,630.21
Culverts	36"	Pipe, corrugated metal (CMP) - 36 in. diameter	870.00	LF	\$16.96	\$14,755.46

		pipe				
Culverts	42"	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	359.00	LF	\$24.52	\$8,803.61
Culverts	48"	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	1,428.00	LF	\$24.52	\$35,018.27
Culverts	54"	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	2,230.00	LF	\$33.06	\$73,729.60
Culverts	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	1,266.00	LF	\$10.60	\$13,413.40
Scalping sta. oversize mat. concr. pit	60x8	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	480.00	SF	\$2.48	\$1,190.16
Stack tube #5 (ST-5)	12x12x109	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	15,696.00	CF	\$0.35	\$5,455.93
ST-5 head house	20x14x40	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	11,200.00	CF	\$0.24	\$2,726.08
PR-4 conveyor	350 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	28,000.00	CF	\$0.46	\$12,880.00
TC-1/PR-2 transfer tower & scalping sta.	40xx20x50	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	40,000.00	CF	\$0.35	\$13,904.00
-Foundation	40x20x1	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	800.00	SF	\$2.48	\$1,983.60
R-5 conveyor extension in reclaim tunnel	200 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	16,000.00	CF	\$0.46	\$7,360.00
P3/P5 conveyor	950 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	76,000.00	CF	\$0.46	\$34,960.00
-Bent foundations	45x2x4	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	360.00	SF	\$2.48	\$892.62
R-5 conveyor reclaim tunnel walls	600x10x1.5	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	333.00	CY	\$151.50	\$50,449.50
-Floor and roof	600x20x2	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	889.00	CY	\$151.50	\$134,683.50
Coal prep. plant - Structure	109x40x148	Plant (3S) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	645,280.00	CF	\$0.50	\$324,446.78
-Floor	84x112x2	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	9,408.00	SF	\$2.48	\$23,327.14
-Footers	1x2x308 lf	Demo. and on-site disposal in excavated pit,	616.00	LF	\$4.96	\$3,054.74

		1.0 ft. x 2 ft. - Max. 200 ft. push				
-Water supply line	2300x 8 in	Pipe, sewer/water - 12 in. diameter pipe	2,300.00	LF	\$5.24	\$12,052.00
-Water discharge line	300x 12 in diam	Pipe, sewer/water - 12 in. diameter pipe	300.00	LF	\$5.24	\$1,572.00
Control/lab building - Superstructure	50x40x30	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	60,000.00	CF	\$0.24	\$14,604.00
-Floor	42x52x12 in	Floor, concrete, demolition only, average reinforcing - 12 in. thick	2,184.00	SF	\$2.21	\$4,816.16
-Footers	1x2x308 lf	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	308.00	LF	\$4.96	\$1,527.37
TC-1 conveyor	350 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	28,000.00	CF	\$0.46	\$12,880.00
-Bent foundation	8x2x4	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	64.00	SF	\$2.48	\$158.69
PR-2 conveyor - Superstructure	2000 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	160,000.00	CF	\$0.46	\$73,600.00
-Bent foundations	160x6x4	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	3,840.00	SF	\$2.48	\$9,521.28
-Micro piles	240x2x2	Demo. and on-site disposal in excavated pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	960.00	LF	\$11.16	\$10,711.39
-Take-up tower	24x20x80	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	38,400.00	CF	\$0.35	\$13,347.84
TC-1/PR-2 transfer structure	20x20x40	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	16,000.00	CF	\$0.35	\$5,561.60
-Foundation	20x20x 12 in	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	400.00	SF	\$2.48	\$991.80
P-6 conveyor	200 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	16,000.00	CF	\$0.46	\$7,360.00
PP-4 conveyor	550 x 8 x 10	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	44,000.00	CF	\$0.46	\$20,240.00
-Bent foundations	10x2x4	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	80.00	SF	\$2.48	\$198.36
Shaft 3 exhaust fan (MR-337)- Superstructure	120x20x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	24,000.00	CF	\$0.24	\$5,841.60
-Floor	130x31x8 in	Demo. and on-site	4,030.00	SF	\$1.65	\$6,661.59

		disposal in excavated pit, 8 in. thick - Max. 200 ft. push				
-Footings	2x3	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	280.00	LF	\$14.88	\$4,165.53
FW-2 pond HDPE pipe (MR-371)	830 ft X 8" diam	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	830.00	LF	\$4.51	\$3,740.64
-Walkway extension (MR-371)	4x12x12	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 200 ft. push	576.00	CF	\$0.36	\$207.01
Helipad @ LRP, Map 53	60' x40'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 200 ft. push	2,400.00	SF	\$1.19	\$2,852.16
Powerlines around MB-5E pond to loadout	1802 ft, 11 poles, Map 53	Utility Poles, Wood 35' - 45' high (each pole)	11.00	EA	\$325.00	\$3,575.00
Powerlines around MB-5E pond to loadout	1802 ft	Disposal of utility pole and hardware surplus material	1,802.00	LF	\$0.02	\$36.04
Powerlines around stockpile pad	687 ft, 5 poles, Map 53	Utility Poles, Wood 35' - 45' high (each pole)	5.00	EA	\$325.00	\$1,625.00
Powerlines around stockpile pad	687 ft	Disposal of utility pole and hardware surplus material	687.00	LF	\$0.02	\$13.74
12.47KV Powerline from Portals to Warehouse	2078 ft, 9 poles, Map 53	Utility Poles, Wood 35' - 45' high (each pole)	9.00	EA	\$325.00	\$2,925.00
12.47KV Powerline from Portals to Warehouse	2078 ft	Disposal of utility pole and hardware surplus material	2,078.00	LF	\$0.02	\$41.56
Powerline to Prep Plant	1668 ft, 9 poles, Map 53	Utility Poles, Wood 35' - 45' high (each pole)	9.00	EA	\$325.00	\$2,925.00
Powerline to Prep Plant	1668 ft	Disposal of utility pole and hardware surplus material	1,668.00	LF	\$0.02	\$33.36
Sylvester Gulch 46KV Tap Line (DMEA)	3832 ft, 9 poles, Map53B	Utility Poles, Wood 35' - 45' high (each pole)	9.00	EA	\$325.00	\$2,925.00
Sylvester Gulch 46KV Tap Line (DMEA)	3832 ft	Disposal of utility pole and hardware surplus material	3,832.00	LF	\$0.02	\$76.64
Sylvester Gulch Fan 12.47KV Distribution Line	1296 ft, 7 poles, Map 53B	Utility Poles, Wood 35' - 45' high (each pole)	7.00	EA	\$325.00	\$2,275.00
Sylvester Gulch Fan 12.47KV Distribution Line	1296 ft	Disposal of utility pole and hardware surplus material	1,296.00	LF	\$0.02	\$25.92
12.47KV Powerline from fan to portals	4984 ft, 17 poles, Map 53	Utility Poles, Wood 35' - 45' high (each pole)	17.00	EA	\$325.00	\$5,525.00
12.47KV Powerline from fan to portals	4984 ft	Disposal of utility pole and hardware surplus material	4,984.00	LF	\$0.02	\$99.68
Shaft site 12.47KV Distribution Line	3631 ft, 15 poles, Map53B	Utility Poles, Wood 35' - 45' high (each pole)	15.00	EA	\$325.00	\$4,875.00

Shaft site 12.47KV Distribution Line	3631 ft	Disposal of utility pole and hardware surplus material	3,631.00	LF	\$0.02	\$72.62
Electric Borehole 12.47KV Distribution Line	2398 ft, 12 poles, Map53B	Utility Poles, Wood 35' - 45' high (each pole)	12.00	EA	\$325.00	\$3,900.00
Electric Borehole 12.47KV Distribution Line	2398 ft	Disposal of utility pole and hardware surplus material	2,398.00	LF	\$0.02	\$47.96
Assorted power/utility poles around main facilities (see Map 53 for	37 poles	Utility Poles, Wood 35' - 45' high (each pole)	37.00	EA	\$325.00	\$12,025.00
Chlorine Meter Shed (MR-390)	8' x 8' x 8'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 50 ft. push	512.00	CF	\$0.22	\$110.39
Remove 1,500 Gallon Septic Tank (MR-387)	1,500 Gallon	Excavate and load tank onto trailer, non-leaking - 3,000 gal. to 5,000 gal.	1.00	EA	\$692.50	\$692.50
-Haul Septic Tank offsite	1,500 Gallon Poly Tank	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	1.00	EA	\$760.00	\$760.00
-Remove sludge from tank	10% of tank volume	Remove sludge, water, and rem. product from tank - 3,000 to 5,000 gal.	0.50	EA	\$259.50	\$129.75
Office propane tank (MR-430)	3000 gallon	Excavate and load tank onto trailer, non-leaking - 3,000 gal. to 5,000 gal.	1.00	EA	\$692.50	\$692.50
-Haul propane tank offsite	3000 gallon	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	1.00	EA	\$760.00	\$760.00
-Demo propane tank support bases	2 @ 3' x 7' x 1'	Footing, concrete, average reinforcing - 1.0 ft. x 2 ft.	21.00	LF	\$4.41	\$92.62
MB-5E pump building demo (MR-437)	15' x 15' x 15'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	33,750.00	CF	\$0.24	\$8,214.75
-MB-5E pump building 6" concrete slab	15' x 15' x 6"	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	225.00	SF	\$1.16	\$260.21
Remove 31 concrete barriers (MR-477)	2'x2'x6'	Loading and 5 mile haul, salvage allowed - Concrete frame structures	31.00	CY	\$16.20	\$502.20
Booster pump building (MR-479)	20'x30'x12'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	7,200.00	CF	\$0.24	\$1,700.64
-Booster pump building pad	20'x30'x1'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push	600.00	SF	\$2.38	\$1,426.02
Silo 2 reinforcing liner (TR-155)	131'x78'x14"	Bldg. (MC) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	37,451.00	CF	\$0.43	\$16,283.69
SW diversion TLO	1500 gallon	Comprehensive storage	1.00	EA	\$3,550.90	\$3,550.90

to MB3, Interceptor tank (TR-156)		tank removal, non-leaking - 3,000 to 5,000 gal. tank				
-Staging tank	1500 gallon	Comprehensive storage tank removal, non-leaking - 3,000 to 5,000 gal. tank	1.00	EA	\$3,550.90	\$3,550.90
-8"hdpe pipe, buried	75'	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	75.00	LF	\$4.51	\$338.01
-4"hdpe pipe, buried	260'	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	130.00	LF	\$4.51	\$585.88
-3"hdpe pipe, buried	250'	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	80.00	LF	\$4.51	\$360.54
-On-site disposal of all pipe	8 cy	Load/haul/dump demolished materials/debris into pit - Max. 1,000 ft. haul	8.00	CY	\$1.06	\$8.50
-Remove trench drain pipe	12"x50'	Pipe, reinforced concrete (RCP) - 12 in. diameter pipe	50.00	LF	\$11.79	\$589.63
BCN Well booster pumphouse building (MR-480)	25'x15'x12'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	4,500.00	CF	\$0.24	\$1,062.90
-BCN Well booster pumphouse pad	25'x15'x1'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push	375.00	SF	\$2.38	\$891.26

**Total Cost (adjusted for location):**           \$3,344,951.18          

**Job Hours:**           1,485.50                **Subtotal (unadjusted):**           \$3,663,692.42

**BULLDOZER RIPPING WORK**

Task description: Rip drill pad for water tank boreholes-Main Facilities Area

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 002 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-002  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.34 acres Rip Depth (ft): 2.00 Volume: 1,097 BCY or CCY

Source of estimated quantity: MR-126

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier  
Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 0.12 Hours  
Unit cost: \$696.756 Per acre Total job cost: \$237

**BULLDOZER RIPPING WORK**

Task description: Rip drill pad for water tank boreholes

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 003 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-003  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.50 acres Rip Depth (ft): 2.00 Volume: 1,613 BCY or CCY

Source of estimated quantity: TR-70

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 0.18 Hours

Unit cost: \$696.756 Per acre Total job cost: \$348

**BULLDOZER WORK**

Task description: Regrade 1.2 million gallon water tank pad

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 004 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-004  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

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

Total unit Cost/Hour: \$456.10  
 Total Fleet Cost/Hour: \$1,824.38

**MATERIAL QUANTITIES**

Initial Volume: 1,032  
 Swell factor: 1.165  
 Loose volume: 1,202 LCY

Source of estimated volume: TR-70  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 1,055.6 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 7,380 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 375.16 LCY/hr

Adjusted fleet production: **1500.64 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.216/LCY

Total job time: **0.80 Hours**

Total job cost: **\$1,462**

**BULLDOZER WORK**

Task description: Distribute topsoil at 1.2 million gallon water tank pad

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 005 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-005  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

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

Total unit Cost/Hour: \$456.10  
 Total Fleet Cost/Hour: \$1,824.38

**MATERIAL QUANTITIES**

Initial Volume: 1,032  
 Swell factor: 1.215  
 Loose volume: 1,254 LCY

Source of estimated volume: TR-70  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 1,055.6 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 7,380 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:	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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6445

Adjusted unit production: 680.33 LCY/hr

Adjusted fleet production: **2721.32** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.670/LCY

Total job time: **0.46** Hours

Total job cost: **\$841**

**BULLDOZER WORK**

Task description: Regrade topsoil 1.2 million gallon water tank pad

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 006 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-006  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

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

Total unit Cost/Hour: \$456.10  
 Total Fleet Cost/Hour: \$1,824.38

**MATERIAL QUANTITIES**

Initial Volume: 1,032  
 Swell factor: 1.215  
 Loose volume: 1,254 LCY

Source of estimated volume: TR-70  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 1,055.6 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 7,380 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:	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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6445

Adjusted unit production: 680.33 LCY/hr

Adjusted fleet production: **2721.32** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.670/LCY

Total job time: **0.46** Hours

Total job cost: **\$841**

TRUCK/LOADER TEAM WORKTask description: Replace topsoil from stockpile #5Site: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 008State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-008User: LDSAgency or organization name: DRMSHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	3	1	1	1	0	0
Group Subtotals:	Work: \$389.52		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,320.68MATERIAL QUANTITIESInitial volume: 120

CCY

Swell factor: 1.125Loose volume: 135

LCY

Source of estimated volume: Page 2.05-53Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,550

Pounds/LCY

Description: Earth - Dry packedRated Payload: 35,400

Pounds

Payload Capacity: 13.88

LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) <u>0.900</u>
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	8.30	3.00	11.30	1018	0.602

Haul Time: 0.602 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-8.30	3.00	-5.30	2938	0.265

Return Time: 0.265 minutes

Total Truck Cycle Time: 2.807 minutes

Loading Tool unit  
 Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production  
192.38 LCY/Hour      Adjusted for job efficiency: 159.67 LCY/Hour  
 Optimal No. of Trucks: 3 Truck(s)      Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 479.02 LCY/Hour  
 Adjusted single truck/loader team production: 430.96 LCY/Hour  
 Adjusted multiple truck/loader team production: 430.96 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 0.31 Hours  
 Unit cost: \$3.064 /LCY      Total job cost: \$414

**TRUCK/LOADER TEAM WORK**

Task description: Haul fill from SubsoilPile#1 to TrainLO Pond MB-4 & Sed Trap

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 011 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-011  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

**Cost Breakdown:**

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	5	1	1	1	0	0
Group Subtotals:	Work: \$555.28		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,486.44

**MATERIAL QUANTITIES**

Initial volume: 215 CCY Swell factor: 1.125  
 Loose volume: 242 LCY

Source of estimated volume: TR-82, Drawing 3  
 Source of estimated swell factor: Cat Handbook  
 Material Purchase Cost: \$0.00  
 Total Cost: \$0.00

**HOURLY PRODUCTION**

**Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 2,550 Pounds/LCY  
 Description: Earth - Dry packed  
 Rated Payload: 35,400 Pounds  
 Payload Capacity: 13.88 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.080</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.420</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.520</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.520</u>	Minutes	Adjusted for site altitude:	<u>0.520</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	-9.00	3.00	-6.00	2938	0.601
2	2200.00	-4.50	3.00	-1.50	2938	0.798

Haul Time: 1.399 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2200.00	4.50	3.00	7.50	2202	1.015
2	1600.00	9.00	3.00	12.00	1440	1.118

Return Time: 2.133 minutes

Total Truck Cycle Time: 5.452 minutes

Loading Tool unit

Production 529.41 LCY/Hour Adjusted for job efficiency: 439.41 LCY/Hour

Truck Unit Production 99.05 LCY/Hour Adjusted for job efficiency: 82.21 LCY/Hour

Optimal No. of Trucks: 5 Truck(s) Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 411.04 LCY/Hour  
 Adjusted single truck/loader team production: 411.04 LCY/Hour  
 Adjusted multiple truck/loader team production: 411.04 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 0.59 Hours

Unit cost: \$3.616 /LCY Total job cost: \$875

## HYDRAULIC EXCAVATOR WORK

Task description: Backfill/regrade Pond MB-4 (Loadout Pond)

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 012

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-012

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick

Horsepower: 268

Attachment 1: ROPS Cab

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 130

CCY

Swell factor: 1.165

Loose volume: 151

LCY

Source of estimated volume: Permit Volume 8A, Exhibit 66

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.390 minutes

#### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850

Adjusted Capacity: 1.92 LCY

#### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 295.54 LCY/Hour

Adjusted Hourly Unit Production: 245.30 LCY/Hour

Adjusted Hourly Fleet Production: 245.30 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 0.62 Hours

Unit cost: \$2.025 /LCY Total job cost: \$307

## HYDRAULIC EXCAVATOR WORK

Task description: Regrade ramp from Hwy 133 to Loadout

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 013

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-013

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick

Horsepower: 268

Attachment 1: ROPS Cab

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 540

CCY

Swell factor: 1.165

Loose volume: 629

LCY

Source of estimated volume: Map 53

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.390 minutes

#### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850

Adjusted Capacity: 1.92 LCY

#### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 295.54 LCY/Hour

Adjusted Hourly Unit Production: 245.30 LCY/Hour

Adjusted Hourly Fleet Production: 245.30 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 2.56 Hours

Unit cost: \$2.025 /LCY Total job cost: \$1,274

**BULLDOZER RIPPING WORK**

Task description: Rip stockpile at stacker tube and reclaim system

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 018 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-018  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 6.50 acres Rip Depth (ft): 2.00 Volume: 20,973 BCY or CCY

Source of estimated quantity: TR-58

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 2.34 Hours

Unit cost: \$696.756 Per acre Total job cost: \$4,529

**BULLDOZER WORK**

Task description: Regrade ROM expansion area

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 019 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-019  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 15,000  
 Swell factor: 1.330  
 Loose volume: 19,950 LCY

Source of estimated volume: MR-240  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 185 feet  
 Unadjusted hourly production: 763.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 30 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.1059

Adjusted unit production: 80.82 LCY/hr

Adjusted fleet production: 323.28 LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$5.993/LCY

Total job time: 61.71 Hours

Total job cost: \$119,563

## COMPACTION WORK

Task description: Compact backfill at ROM pile expansion

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 020 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-020  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H Horsepower: 354  
Compactor Type: Soil - tamping foot Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 19,950 LCY Shrinkage factor: 0.875  
Compacted volume: 17,456 CCY

Source of estimated volume: MR-240  
Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production = (W x S x L x C) / P

Compacted width per pass (W): 7.34 feet  
Average Compactor Speed (S): 4.00 mph  
Compacted thickness of each lift (L): 10.00 inches  
Conversion Constant (C): 16.3 (5,280ft./12in./27cu.ft.)  
Required number of machine passes (P): 5 passes  
Unadjusted Hourly Unit Production: 957.14 CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.8300</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 794.42 CCY/Hour  
Adjusted Hourly Fleet Production: 1,588.85 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s) Total job time: 10.99 Hours

Unit cost: \$0.442 per CCY Total job cost: \$7,720

**BULLDOZER WORK**

Task description: Regrade ditch DCW-7

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 021 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-021  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 50  
 Swell factor: 1.330  
 Loose volume: 67 LCY

Source of estimated volume: Maps 54 and 97010-104  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 400 feet  
 Unadjusted hourly production: 305.6 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.600	(POOR)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3412

Adjusted unit production: 104.27 LCY/hr

Adjusted fleet production: **417.08** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$4.645/LCY

Total job time: **0.16** Hours

Total job cost: **\$309**

## HYDRAULIC EXCAVATOR WORK

Task description: Regrade Stacker Tube Access Road

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 022

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-022

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick

Horsepower: 268

Attachment 1: ROPS Cab

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 2,880

CCY

Swell factor: 1.165

Loose volume: 3,355

LCY

Source of estimated volume: Map 53

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.390 minutes

### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850

Adjusted Capacity: 1.92 LCY

### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 295.54 LCY/Hour

Adjusted Hourly Unit Production: 245.30 LCY/Hour

Adjusted Hourly Fleet Production: 245.30 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 13.68 Hours

Unit cost: \$2.025 /LCY Total job cost: \$6,793

**SCRAPER TEAM WORK**

Task description: Replace topsoil from stockpile to ROM pad expansion

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 023 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-023  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 6,000 CCY Swell factor: 1.250  
 Loose volume: 7,500 LCY  
 Source of estimated volume: MR-240  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		<u>Scraper Bowl (volume) Basis:</u>	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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	4200.00	-6.40	4.00	-2.40	2972	1.46

Haul Time: 1.46 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4200.00	6.40	4.00	10.40	1476	2.90

Return Time: 2.90 minutes

Total Scraper team cycle time: 5.96 minutes  
 Adjusted for job conditions: 484.63 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 484.63 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 484.63 LCY/Hour

Unadjusted unit production/hour: 583.89 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 15.48 Hours  
 Unit cost: \$2.606 /LCY Total job cost: \$19,548

## MOTOR GRADER WORK

Task description: Finish-grade ROM Pile Expansion

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 024

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-024

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 14M

Horsepower: 259

Ripper Attachment: Multi-Shank Ripper

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:	\$5.75	NA
Ripper Operating Cost/Hour:	\$4.18	100
Operator Cost/Hour:	\$27.76	NA
Total Unit Cost/Hour:	\$256.63	
Total Fleet Cost/Hour:	<b>\$256.63</b>	

### MATERIAL QUANTITIES

Total Area to be graded or ripped: 2.50 acres

Source of estimated acreage: Map 53

### 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: 6300 feet

Altitude Adj:	<u>1.00</u>	Source
Job Efficiency:	<u>0.85</u>	(CAT HB)
Net Correction:	<u>0.8500</u>	(1sh/d, mod.)
		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: 1.60 Hours

Unit cost: \$164.41 per acre Total job cost: \$411

TRUCK/LOADER TEAM WORKTask description: Cover refuse pile with subsoilSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 028State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-028User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description	
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4	
-Loader:		CAT 966H	
Support Equipment -Load Area:		Cat D9T - 9SU	
-Dump Area:		Cat D9T - 9SU	
Road Maintenance -Motor Grader:		NA	
-Water Truck:		NA	

Cost Breakdown:

## Truck/Loader Team

## Support Equipment

## Maintenance Equipment

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	3	1	1	1	0	0
Group Subtotals:	Work: \$389.52		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,320.68MATERIAL QUANTITIESInitial volume: 27,800

CCY

Swell factor: 1.000Loose volume: 27,800

LCY

Source of estimated volume: Permit volume 1, Map 51, Table 47, MR-110Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,550

Pounds/LCY

Description: Earth - Dry packedRated Payload: 35,400

Pounds

Payload Capacity: 13.88

LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) <u>0.900</u>
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) 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	1000.00	-5.00	5.00	0.00	2938	0.426

Haul Time: 0.426 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	5.00	5.00	10.00	1768	0.575

Return Time: 0.575 minutes

Total Truck Cycle Time: 2.941 minutes

Loading Tool unit Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production 183.61 LCY/Hour      Adjusted for job efficiency: 152.40 LCY/Hour  
 Optimal No. of Trucks: 3 Truck(s)      Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 457.19 LCY/Hour  
 Adjusted single truck/loader team production: 430.96 LCY/Hour  
 Adjusted multiple truck/loader team production: 430.96 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 64.51 Hours  
 Unit cost: \$3.064 /LCY      Total job cost: \$85,193

**TRUCK/LOADER TEAM WORK**

Task description: CTaskDescription

Site: CSite Permit Action: CJobAction Permit/Job#: CPermitID

**PROJECT IDENTIFICATION**

Task #: TTT State: CState Abbreviation: CAbbreviation  
 Date: mmddyyyy County: CCounty Filename: CFilename  
 User: UUU

Agency or organization name: CAgencyName

**HOURLY EQUIPMENT COST**

Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

**Cost Breakdown:**

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	5	1	1	1	0	0
Group Subtotals:	Work:	\$555.28	Support:	\$931.16	Maint:	\$0.00

Total work team cost/hour: \$1,486.44

**MATERIAL QUANTITIES**

Initial volume: 11,500 CCY Swell factor: 1.125  
 Loose volume: 12,938 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook  
 Material Purchase Cost: \$0.00  
 Total Cost: \$0.00

**HOURLY PRODUCTION**

**Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 2,550 Pounds/LCY  
 Description: Earth - Dry packed  
 Rated Payload: 35,400 Pounds  
 Payload Capacity: 13.88 LCY

**Truck Bed (volume) Basis:**

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

**Loading Tool Capacity**

Bucket Size Class: NA  
 Rated Capacity: 5.000 LCY (heaped)  
 Bucket Fill Factor: 0.900 Other - soil, boulders, roots (80 -100%) 0.900  
 Adjusted Capacity: 4.500 LCY

**Job Condition Corrections:**

Site Altitude (ft.): 6300 feet

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

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

**Excavators and Front Shovels:**

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

Track Loaders – Material Description: \_\_\_\_\_

**Cycle Time Elements (min.):**

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b>0.440</b>	minutes
	Net Load Time per Truck:	<b>0.540</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time: 0.50 Minutes Adjusted for site altitude: 0.500 Minutes  
 Truck Load Time: 0.540 Minutes Adjusted for site altitude: 0.540 Minutes  
 Truck Maneuver and Dump Time: 0.90 Minutes Adjusted for site altitude: 0.900 Minutes

**Truck Travel (Haul & Return) Time:** Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5200.00	-7.20	3.00	-4.20	2938	1.825

Haul Time: 1.825 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5200.00	7.20	3.00	10.20	1768	2.951

Return Time: 2.951 minutes

Total Truck Cycle Time: 6.716 minutes

Loading Tool unit  
 Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production  
80.41 LCY/Hour      Adjusted for job efficiency: 66.74 LCY/Hour  
 Optimal No. of Trucks: 6 Truck(s)      Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 333.68 LCY/Hour  
 Adjusted single truck/loader team production: 333.68 LCY/Hour  
 Adjusted multiple truck/loader team production: 333.68 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 38.77 Hours  
 Unit cost: \$4.455 /LCY      Total job cost: \$57,632

**BULLDOZER WORK**

Task description: Backfill/regrade powder magazine

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 030 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-030  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 1,028  
 Swell factor: 1.165  
 Loose volume: 1,198 LCY

Source of estimated volume: Permit Volume 7, Exhibit 43  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3218

Adjusted unit production: 679.16 LCY/hr

Adjusted fleet production: **2716.64** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.713/LCY

Total job time: **0.44** Hours

Total job cost: **\$854**

**BULLDOZER WORK**

Task description: Backfill/grade substation

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 031 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-031  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 635  
 Swell factor: 1.165  
 Loose volume: 740 LCY

Source of estimated volume: Permit volume 7, Exhibit 43  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 85 feet  
 Unadjusted hourly production: 1,405.9 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.600	(FND-SF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2095

Adjusted unit production: 294.54 LCY/hr

Adjusted fleet production: **1178.16** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.644/LCY

Total job time: **0.63** Hours

Total job cost: **\$1,217**

**BULLDOZER WORK**

Task description: Regrade light use roads for water tank topsoil pile

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 036 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-036  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 889  
 Swell factor: 1.330  
 Loose volume: 1,182 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 441.83 LCY/hr

Adjusted fleet production: **1767.32** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.096/LCY

Total job time: **0.67** Hours

Total job cost: **\$1,296**

**BULLDOZER WORK**

Task description: Backfill/grade water storage tank and road

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 037 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-037  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 401  
 Swell factor: 1.165  
 Loose volume: 467 LCY

Source of estimated volume: Permit volume 7, Exhibit 43  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 25 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.422	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.1500

Adjusted unit production: 316.58 LCY/hr

Adjusted fleet production: **1266.32** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.530/LCY

Total job time: **0.37** Hours

Total job cost: **\$715**

TRUCK/LOADER TEAM WORKTask description: Backfill portal bench to final contoursSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 038State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-038User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description	
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4	
-Loader:		CAT 966H	
Support Equipment -Load Area:		Cat D9T - 9SU	
-Dump Area:		Cat D9T - 9SU	
Road Maintenance -Motor Grader:		NA	
-Water Truck:		NA	

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	5	1	1	1	0	0
Group Subtotals:	Work: \$555.28		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,486.44MATERIAL QUANTITIESInitial volume: 8,723

CCY

Swell factor: 1.330Loose volume: 11,602

LCY

Source of estimated volume: Permit volume 3, Exhibit 14; Permit volume 11, Exhibit 54Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,900 Pounds/LCYDescription: Decomposed rock - 50% Rock, 50% EarthRated Payload: 35,400 PoundsPayload Capacity: 12.21 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) 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	8150.00	5.00	5.00	10.00	1068	7.645

Haul Time: 7.645 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8150.00	-5.00	5.00	0.00	2938	2.799

Return Time: 2.799 minutes

Total Truck Cycle Time: 12.384 minutes

Loading Tool unit Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production 43.60 LCY/Hour      Adjusted for job efficiency: 36.19 LCY/Hour  
 Optimal No. of Trucks: 12 Truck(s)      Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 180.96 LCY/Hour  
 Adjusted single truck/loader team production: 180.96 LCY/Hour  
 Adjusted multiple truck/loader team production: 180.96 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 64.11 Hours  
 Unit cost: \$8.214 /LCY      Total job cost: \$95,298

**SCRAPER TEAM WORK**

Task description: CTaskDescription

Site: CSite Permit Action: CJobAction Permit/Job#: CPermitID

**PROJECT IDENTIFICATION**

Task #: TTT State: CState Abbreviation: CAbbreviation  
 Date: mmddyyyy County: CCounty Filename: CFilename  
 User: UUU

Agency or organization name: CAgencyName

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

		Equipment Description
-Scraper:		Cat 637G w/push-pull
-Dozer:		NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 140,000 CCY Swell factor: 1.165  
 Loose volume: 163,100 LCY

Source of estimated volume: Map 58A  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		<u>Scraper Bowl (volume) Basis:</u>	
Material weight:	<u>2,900 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Decomposed rock - 50% Rock, 50% Earth</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>28.14 LCY</u>	Adjusted Capacity:	<u>28.14</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	250.00	25.00	5.00	30.00	267	0.94

Haul Time: 0.94 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	250.00	-25.00	5.00	-20.00	1201	0.31

Return Time: 0.31 minutes

Total Scraper team cycle time: 2.85 minutes

Adjusted for job conditions: 983.35 LCY/Hour

Selected Number of Scrapers: 2 Scraper(s)

Adjusted single scraper team (unit) hourly production: 983.35 LCY/Hour

Adjusted multiple scraper team (fleet) hourly production: 983.35 LCY/Hour

Unadjusted unit production/hour: 1,184.75 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s)

Total job time: 165.86 Hours

Unit cost: \$1.285 /LCY

Total job cost: \$209,507

**BULLDOZER WORK**

Task description: Push cut material from west fill on to bench

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 040 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-040  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 13,000  
 Swell factor: 1.330  
 Loose volume: 17,290 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 30 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.600	(POOR)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	0.298	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.0890

Adjusted unit production: 110.64 LCY/hr

Adjusted fleet production: **442.56 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$4.378/LCY

Total job time: **39.07 Hours**

Total job cost: **\$75,693**

**BULLDOZER WORK**

Task description: Push west fill to base of cut slope bench

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 041 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-041  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$9.48</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 13,000  
 Swell factor: 1.330  
 Loose volume: 17,290 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 400 feet  
 Unadjusted hourly production: 305.6 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.600</u>	<u>(POOR)</u>
Material consistency:	<u>1.200</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.200</u>	<u>(SLOT)</u>
Visibility:	<u>0.800</u>	<u>(POOR)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3185

Adjusted unit production: 97.33 LCY/hr

Adjusted fleet production: **389.32 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$4.977/LCY

Total job time: **44.41** Hours

Total job cost: **\$86,044**

**BULLDOZER WORK**

Task description: Push fill material back on to cut slope

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 042 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-042  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 13,000  
 Swell factor: 1.330  
 Loose volume: 17,290 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 200 feet  
 Unadjusted hourly production: 700.0 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 25 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	0.800	(POOR)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	0.422	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.1680

Adjusted unit production: 117.60 LCY/hr

Adjusted fleet production: **470.4 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$4.119/LCY

Total job time: **36.76 Hours**

Total job cost: **\$71,213**

**BULLDOZER WORK**

Task description: Move fill material from portal storage bench to base of cut

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 043 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-043  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 3,000  
 Swell factor: 1.330  
 Loose volume: 3,990 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 400 feet  
 Unadjusted hourly production: 305.6 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.600	(POOR)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	0.800	(POOR)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.1706

Adjusted unit production: 52.14 LCY/hr

Adjusted fleet production: **208.56 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$9.290/LCY

Total job time: **19.13 Hours**

Total job cost: **\$37,066**

**BULLDOZER WORK**

Task description: Move portal storage bench material on to cut slope

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 044 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-044  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 3,000  
 Swell factor: 1.330  
 Loose volume: 3,990 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 200 feet  
 Unadjusted hourly production: 700.0 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 25 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.600	(POOR)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.422	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.1920

Adjusted unit production: 134.40 LCY/hr

Adjusted fleet production: 537.6 LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$3.604/LCY

Total job time: 7.42 Hours

Total job cost: \$14,380

## COMPACTION WORK

Task description: Compact fill replaced material at MSB excavation site

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 045 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-045  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H Horsepower: 354  
Compactor Type: Soil - tamping foot Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 21,280 LCY Shrinkage factor: 0.875  
Compacted volume: 18,620 CCY

Source of estimated volume: Operator estimate  
Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production =  $(W \times S \times L \times C) / P$

Compacted width per pass (W): 7.34 feet  
Average Compactor Speed (S): 4.00 mph  
Compacted thickness of each lift (L): 10.00 inches  
Conversion Constant (C): 16.3 (5,280ft./12in./27cu.ft.)  
Required number of machine passes (P): 5 passes  
Unadjusted Hourly Unit Production: 957.14 CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.8300</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 794.42 CCY/Hour  
Adjusted Hourly Fleet Production: 1,588.85 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s) Total job time: 11.72 Hours

Unit cost: \$0.442 per CCY Total job cost: \$8,235

## BULLDOZER RIPPING WORK

Task description: Rip storage bench access road

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 046 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-046  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$9.48</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$484.37</u>	
Total Fleet Cost/Hour:	<u><b>\$1,937.46</b></u>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.47 acres Rip Depth (ft): 2.00 Volume: 1,517 BCY or CCY

Source of estimated quantity: SB-101 and SB-102

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: **2.78** Acres/hr

### JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **0.17** Hours

Unit cost: \$696.756 Per acre Total job cost: **\$327**

## BULLDOZER RIPPING WORK

Task description: Rip portal access road (east of portals)

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 048

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-048

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$9.48</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$484.37</u>	
Total Fleet Cost/Hour:	<u><b>\$1,937.46</b></u>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.60 acres Rip Depth (ft): 2.00 Volume: 1,936 BCY or CCY

Source of estimated quantity: SB-101 and SB-102

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: **2.78** Acres/hr

### JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **0.22** Hours

Unit cost: \$696.756 Per acre Total job cost: **\$418**

**BULLDOZER RIPPING WORK**

Task description: Rip Materials Storage Bench

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 050 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-050  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 3.65 acres Rip Depth (ft): 2.00 Volume: 11,777 BCY or CCY

Source of estimated quantity: SB-101 and SB-102

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 1.31 Hours

Unit cost: \$696.756 Per acre Total job cost: \$2,543

**SCRAPER TEAM WORK**

Task description: CTaskDescription

Site: CSite Permit Action: CJobAction Permit/Job#: CPermitID

**PROJECT IDENTIFICATION**

Task #: TTT State: CState Abbreviation: CAbbreviation  
 Date: mmddyyyy County: CCounty Filename: CFilename  
 User: UUU

Agency or organization name: CAgencyName

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 25,000 CCY Swell factor: 1.125  
 Loose volume: 28,125 LCY

Source of estimated volume: SB-101 and SB-102  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		<u>Scraper Bowl (volume) Basis:</u>	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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	450.00	-26.00	4.00	-22.00	889	0.70

Haul Time: 0.70 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	450.00	26.00	4.00	30.00	523	0.87

Return Time: 0.87 minutes

Total Scraper team cycle time: 3.17 minutes  
 Adjusted for job conditions: 911.17 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 911.17 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 911.17 LCY/Hour

Unadjusted unit production/hour: 1,097.79 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 30.87 Hours  
 Unit cost: \$1.386 /LCY Total job cost: \$38,989

**SCRAPER TEAM WORK**

Task description: CTaskDescription

Site: CSite Permit Action: CJobAction Permit/Job#: CPermitID

**PROJECT IDENTIFICATION**

Task #: TTT State: CState Abbreviation: CAbbreviation  
 Date: mmddyyyy County: CCounty Filename: CFilename  
 User: UUU

Agency or organization name: CAgencyName

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 4,000 CCY Swell factor: 1.250  
 Loose volume: 5,000 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		<u>Scraper Bowl (volume) Basis:</u>	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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	2625.00	-7.60	4.00	-3.60	2972	0.93

Haul Time: 0.93 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2625.00	7.60	4.00	11.60	1327	2.02

Return Time: 2.02 minutes

Total Scraper team cycle time: 4.55 minutes  
 Adjusted for job conditions: 634.81 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 634.81 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 634.81 LCY/Hour

Unadjusted unit production/hour: 764.84 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 7.88 Hours  
 Unit cost: \$1.990 /LCY Total job cost: \$9,949

**SCRAPER TEAM WORK**

Task description: Replace topsoil from stockpile #5 to west fill area

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 053

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-053

User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 1,000

CCY

Swell factor: 1.250

Loose volume: 1,250

LCY

Source of estimated volume: Operator estimate

Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Material weight: 2,550 lbs/LCY  
 Material description: Earth - Dry packed  
 Rated Payload: 81,600 pounds  
 Payload Capacity: 32.00 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: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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	2100.00	-16.70	4.00	-12.70	1201	1.87

Haul Time: 1.87 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2100.00	16.70	4.00	20.70	751	2.81

Return Time: 2.81 minutes

Total Scraper team cycle time: 6.28 minutes  
 Adjusted for job conditions: 459.94 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 459.94 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 459.94 LCY/Hour

Unadjusted unit production/hour: 554.14 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 2.72 Hours  
 Unit cost: \$2.746 /LCY Total job cost: \$3,433

**BULLDOZER RIPPING WORK**

Task description: Rip Truck Pull-out Lane

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 054 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-054  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.10 acres Rip Depth (ft): 2.00 Volume: 323 BCY or CCY

Source of estimated quantity: SB-101 and SB-102

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 0.04 Hours  
Unit cost: \$696.756 Per acre Total job cost: \$70

## HYDRAULIC EXCAVATOR WORK

Task description: Regrade mine access road from office to portals

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 055

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-055

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick

Horsepower: 268

Attachment 1: ROPS Cab

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 5,940

CCY

Swell factor: 1.165

Loose volume: 6,920

LCY

Source of estimated volume: Map 53

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE

Secondary Job Condition within Basic Description: AVERAGE

Cycle Time Value: 0.367 minutes

#### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850

Adjusted Capacity: 1.92 LCY

#### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 314.06 LCY/Hour

Adjusted Hourly Unit Production: 260.67 LCY/Hour

Adjusted Hourly Fleet Production: 260.67 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 26.55 Hours

Unit cost: \$1.905 /LCY Total job cost: \$13,185

**BULLDOZER RIPPING WORK**

Task description: Rip Main Surface Facilities Area

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 056 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-056  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 13.00 acres Rip Depth (ft): 2.00 Volume: 41,947 BCY or CCY

Source of estimated quantity: Map 53

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 4.68 Hours  
Unit cost: \$696.756 Per acre Total job cost: \$9,058

**BULLDOZER WORK**

Task description: Backfill/grade shop and warehouse area

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 057 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-057  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 1,913  
 Swell factor: 1.165  
 Loose volume: 2,229 LCY

Source of estimated volume: Permit Volume 7, Exhibit 43  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 80 feet  
 Unadjusted hourly production: 1,460.1 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 30 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.1059

Adjusted unit production: 154.62 LCY/hr

Adjusted fleet production: **618.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$3.133/LCY

Total job time: **3.60** Hours

Total job cost: **\$6,981**

**BULLDOZER WORK**

Task description: Backfill/grade office/bathroom area

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 058 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-058  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 6,447  
 Swell factor: 1.165  
 Loose volume: 7,511 LCY

Source of estimated volume: Permit Volume 7, Exhibit 43  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 95 feet  
 Unadjusted hourly production: 1,297.5 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 20 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	0.545	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2034

Adjusted unit production: 263.91 LCY/hr

Adjusted fleet production: **1055.64** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.835/LCY

Total job time: **7.11** Hours

Total job cost: **\$13,785**

**BULLDOZER WORK**

Task description: Backfill/grade parking lot

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 059 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-059  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 15,015  
 Swell factor: 1.165  
 Loose volume: 17,492 LCY

Source of estimated volume: Permit Volume 7, Exhibit 43  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 115 feet  
 Unadjusted hourly production: 1,130.6 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 401.82 LCY/hr

Adjusted fleet production: **1607.28** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.205/LCY

Total job time: **10.88** Hours

Total job cost: **\$21,086**

**BULLDOZER WORK**Task description: Backfill Ponds MB-1 and FW-1Site: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 061State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-061User: LDSAgency or organization name: Division of Reclamation, Mining and Safety**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37Total Fleet Cost/Hour: \$1,937.46**MATERIAL QUANTITIES**Initial Volume: 4,200Swell factor: 1.165Loose volume: 4,893 LCYSource of estimated volume: Map 54, Permit Volume 8A, Exhibit 66Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -30 %Average site altitude: 6,300 feetMaterial weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% 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:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5690

Adjusted unit production: 1,200.87 LCY/hr

Adjusted fleet production: **4803.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.403/LCY

Total job time: **1.02** Hours

Total job cost: **\$1,974**

**BULLDOZER WORK**Task description: Regrade Pond MB-1Site: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 062State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-062User: LDSAgency or organization name: Division of Reclamation, Mining and Safety**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$9.48</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$484.37Total Fleet Cost/Hour: \$1,937.46**MATERIAL QUANTITIES**Initial Volume: 30,193Swell factor: 1.165Loose volume: 35,175 LCYSource of estimated volume: Map 53, Division estimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 150 feetUnadjusted hourly production: 910.5 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 5 %Average site altitude: 6,300 feetMaterial weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.200</u>	<u>(SLOT)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2889

Adjusted unit production: 263.04 LCY/hr

Adjusted fleet production: **1052.16 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.841/LCY

Total job time: **33.43 Hours**

Total job cost: **\$64,771**

**BULLDOZER WORK**

Task description: Regrade freshwater pond FW-1

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 063 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-063  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 14,719  
 Swell factor: 1.165  
 Loose volume: 17,148 LCY

Source of estimated volume: Permit Volume 7, Exhibit 43  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 175 feet  
 Unadjusted hourly production: 805.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 5 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3209

Adjusted unit production: 258.42 LCY/hr

Adjusted fleet production: **1033.68** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.874/LCY

Total job time: **16.59** Hours

Total job cost: **\$32,140**

**BULLDOZER WORK**

Task description: Regrade Pond MB-3

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 067 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-067  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 5,655  
 Swell factor: 1.165  
 Loose volume: 6,588 LCY

Source of estimated volume: Permit Volume 8A, Exhibit 66  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 60 feet  
 Unadjusted hourly production: 1,872.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 665.31 LCY/hr

Adjusted fleet production: **2661.24** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.728/LCY

Total job time: **2.48** Hours

Total job cost: **\$4,796**

## HYDRAULIC EXCAVATOR WORK

Task description: Regrade diversion ditches DCW-1A, DCW-1B, and D1-6

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 070

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-070

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick

Horsepower: 268

Attachment 1: ROPS Cab

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 2,775

CCY

Swell factor: 1.165

Loose volume: 3,233

LCY

Source of estimated volume: Map 54, Table 44 and Exhibit 66

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.390 minutes

### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850

Adjusted Capacity: 1.92 LCY

### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 295.54 LCY/Hour

Adjusted Hourly Unit Production: 245.30 LCY/Hour

Adjusted Hourly Fleet Production: 245.30 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 13.18 Hours

Unit cost: \$2.025 /LCY Total job cost: \$6,546

## HYDRAULIC EXCAVATOR WORK

Task description: Regrade all sediment ditches

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 071 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-071  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick Horsepower: 268  
Attachment 1: ROPS Cab Weight (MT): 29.30  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 273 CCY Swell factor: 1.165  
Loose volume: 318 LCY

Source of estimated volume: Map 54, Table 44 and Exhibit 66  
Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE  
Secondary Job Condition within Basic Description: SEVERE  
Cycle Time Value: 0.390 minutes

#### Load Bucket Capacity

Rated Capacity: 2.26 LCY (heaped) Bucket Size Class: Medium  
Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850  
Adjusted Capacity: 1.92 LCY

#### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 295.54 LCY/Hour  
Adjusted Hourly Unit Production: 245.30 LCY/Hour  
Adjusted Hourly Fleet Production: 245.30 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 1.30 Hours  
Unit cost: \$2.025 /LCY Total job cost: \$644

**BULLDOZER RIPPING WORK**

Task description: Rip new light use and access roads

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 072 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-072  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 1.21 acres Rip Depth (ft): 2.00 Volume: 3,904 BCY or CCY

Source of estimated quantity: TR-65, drawing G101

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 0.44 Hours

Unit cost: \$696.756 Per acre Total job cost: \$843

## HYDRAULIC EXCAVATOR WORK

Task description: Regrade Middle Mine Facilities Road

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 073

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-073

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick

Horsepower: 268

Attachment 1: ROPS Cab

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 2,268

CCY

Swell factor: 1.165

Loose volume: 2,642

LCY

Source of estimated volume: Map 54, Table 44 and Exhibit 66

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.390 minutes

### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850

Adjusted Capacity: 1.92 LCY

### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 295.54 LCY/Hour

Adjusted Hourly Unit Production: 245.30 LCY/Hour

Adjusted Hourly Fleet Production: 245.30 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 10.77 Hours

Unit cost: \$2.025 /LCY Total job cost: \$5,350

**SCRAPER TEAM WORK**

Task description: Distribute Main Topsoil Stockpile

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 074

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-074

User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 84,800

CCY

Swell factor: 1.125

Loose volume: 95,400

LCY

Source of estimated volume: Operator estimate

Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Scraper Bowl (volume) Basis:

Material weight: 2,550 lbs/LCY  
 Material description: Earth - Dry packed  
 Rated Payload: 81,600 pounds  
 Payload Capacity: 32.00 LCY

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: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	5.00	5.00	10.00	922	1.76

Haul Time: 1.76 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	-5.00	5.00	0.00	2965	0.65

Return Time: 0.65 minutes

Total Scraper team cycle time: 4.01 minutes  
 Adjusted for job conditions: 720.30 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 720.30 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 720.30 LCY/Hour

Unadjusted unit production/hour: 867.83 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 132.44 Hours  
 Unit cost: \$1.754 /LCY Total job cost: \$167,297

**BULLDOZER WORK**

Task description: Spread topsoil on parking lot expansion, approved MR-317

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 075 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-075  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 2,549  
 Swell factor: 1.000  
 Loose volume: 2,549 LCY

Source of estimated volume: MR-317 submittal (1.58 acres X 1 ft thick)  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 115 feet  
 Unadjusted hourly production: 1,130.6 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 1,600 lbs/LCY

Weight description: Top Soil

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.600	(POOR)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(SLOT)
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: 0.6875

Adjusted unit production: 777.29 LCY/hr

Adjusted fleet production: **3109.16 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.623/LCY

Total job time: **0.82 Hours**

Total job cost: **\$1,588**

**BULLDOZER WORK**

Task description: Finish grade backfilled areas

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 076 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-076  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 43,262  
 Swell factor: 1.165  
 Loose volume: 50,400 LCY

Source of estimated volume: Map 53  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 60 feet  
 Unadjusted hourly production: 1,872.0 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.100	(50% SL)
Visibility:	0.800	(POOR)

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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3475

Adjusted unit production: 650.52 LCY/hr

Adjusted fleet production: **2602.08** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.745/LCY

Total job time: **19.37** Hours

Total job cost: **\$37,527**

## BULLDOZER RIPPING WORK

Task description: Rip expanded mine entrance area

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 077 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-077  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$9.48</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$484.37</u>	
Total Fleet Cost/Hour:	<u><b>\$1,937.46</b></u>	

### 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: Figure A-1

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: **2.78** Acres/hr

### JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **0.14** Hours

Unit cost: \$696.756 Per acre Total job cost: **\$279**

**BULLDOZER WORK**

Task description: Regrade mine entrance expansion area

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 078 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-078  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 1,465  
 Swell factor: 1.330  
 Loose volume: 1,948 LCY

Source of estimated volume: Map B-1  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2794

Adjusted unit production: 423.10 LCY/hr

Adjusted fleet production: **1692.4 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.145/LCY

Total job time: **1.15 Hours**

Total job cost: **\$2,231**

**TRUCK/LOADER TEAM WORK**

Task description: CTaskDescription

Site: CSite Permit Action: CJobAction Permit/Job#: CPermitID

**PROJECT IDENTIFICATION**

Task #: TTT State: CState Abbreviation: CAbbreviation  
 Date: mmddyyyy County: CCounty Filename: CFilename  
 User: UUU

Agency or organization name: CAgencyName

**HOURLY EQUIPMENT COST**

Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

**Cost Breakdown:**

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	5	1	1	1	0	0
Group Subtotals:	Work:	\$555.28	Support:	\$931.16	Maint:	\$0.00

Total work team cost/hour: \$1,486.44

**MATERIAL QUANTITIES**

Initial volume: 645 CCY Swell factor: 1.125  
 Loose volume: 726 LCY

Source of estimated volume: Permit volume 3, Exhibit 14; Permit volume 11, Exhibit 54  
 Source of estimated swell factor: Cat Handbook  
 Material Purchase Cost: \$0.00  
 Total Cost: \$0.00

**HOURLY PRODUCTION**

**Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 2,550 Pounds/LCY  
 Description: Earth - Dry packed  
 Rated Payload: 35,400 Pounds  
 Payload Capacity: 13.88 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	0.00	3.00	3.00	2824	0.279

Haul Time: 0.279 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	0.00	3.00	3.00	2874	0.199

Return Time: 0.199 minutes

Total Truck Cycle Time: 2.418 minutes

Loading Tool unit Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production 223.33 LCY/Hour      Adjusted for job efficiency: 185.36 LCY/Hour  
 Optimal No. of Trucks: 2 Truck(s)      Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 926.80 LCY/Hour  
 Adjusted single truck/loader team production: 430.96 LCY/Hour  
 Adjusted multiple truck/loader team production: 430.96 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 1.68 Hours  
 Unit cost: \$3.449 /LCY      Total job cost: \$2,503

**BULLDOZER RIPPING WORK**

Task description: Rip Bear #1 Mine area (Pond MB-5E)

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 080 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-080  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 5.00 acres Rip Depth (ft): 2.00 Volume: 16,133 BCY or CCY

Source of estimated quantity: Map 53

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier  
Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 1.80 Hours  
Unit cost: \$696.756 Per acre Total job cost: \$3,484

**TRUCK/LOADER TEAM WORK**

Task description: CTaskDescription

Site: CSite Permit Action: CJobAction Permit/Job#: CPermitID

**PROJECT IDENTIFICATION**

Task #: TTT State: CState Abbreviation: CAbbreviation  
 Date: mmddyyyy County: CCounty Filename: CFilename  
 User: UUU

Agency or organization name: CAgencyName

**HOURLY EQUIPMENT COST**

Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

**Cost Breakdown:**

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	5	1	1	1	0	0
Group Subtotals:	Work:	\$555.28	Support:	\$931.16	Maint:	\$0.00

Total work team cost/hour: **\$1,486.44**

**MATERIAL QUANTITIES**

Initial volume: 1,852 CCY Swell factor: 1.000  
 Loose volume: **1,852** LCY

Source of estimated volume: DRMS estimate  
 Source of estimated swell factor: Cat Handbook  
 Material Purchase Cost: \$0.00  
 Total Cost: \$0.00

**HOURLY PRODUCTION**

**Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 2,550 Pounds/LCY  
 Description: Sandstone  
 Rated Payload: 35,400 Pounds  
 Payload Capacity: 13.88 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.25 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.925</u>	Shale, Sandstone-Standing Bank ( 85%-100%) 0.925
Adjusted Capacity:	<u>4.625</u>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.040</u>	minutes
	Adjusted Loader Cycle Time:	<b>0.460</b>	minutes
	Net Load Time per Truck:	<b>0.560</b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.560</u>	Minutes	Adjusted for site altitude:	<u>0.560</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2400.00	0.00	3.00	3.00	2824	0.951

Haul Time: 0.951 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2400.00	0.00	3.00	3.00	2874	0.861

Return Time: 0.861 minutes

Total Truck Cycle Time: 3.772 minutes

Loading Tool unit Production 523.58 LCY/Hour      Adjusted for job efficiency: 434.58 LCY/Hour  
 Truck Unit Production 147.14 LCY/Hour      Adjusted for job efficiency: 122.12 LCY/Hour  
 Optimal No. of Trucks: 4 Truck(s)      Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 610.62 LCY/Hour  
 Adjusted single truck/loader team production: 434.58 LCY/Hour  
 Adjusted multiple truck/loader team production: 434.58 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 4.26 Hours  
 Unit cost: \$3.420 /LCY      Total job cost: \$6,335

## HYDRAULIC EXCAVATOR WORK

Task description: Regrade access road from Sylvester Gulch Rd to office

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 083

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-083

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick

Horsepower: 268

Attachment 1: ROPS Cab

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 4,209

CCY

Swell factor: 1.165

Loose volume: 4,903

LCY

Source of estimated volume: Map 53

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.390 minutes

#### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850

Adjusted Capacity: 1.92 LCY

#### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 295.54 LCY/Hour

Adjusted Hourly Unit Production: 245.30 LCY/Hour

Adjusted Hourly Fleet Production: 245.30 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 19.99 Hours

Unit cost: \$2.025 /LCY Total job cost: \$9,928

**BULLDOZER RIPPING WORK**

Task description: Rip access road from Hwy 133 to Sylvester Gulch Road

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 084 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9A-084  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.60 acres Rip Depth (ft): 2.00 Volume: 1,936 BCY or CCY

Source of estimated quantity: Map 53

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 0.22 Hours

Unit cost: \$696.756 Per acre Total job cost: \$418

**BULLDOZER WORK**

Task description: Regrade haul/access road from Hwy 133 to Syl. Gulch Fan Rd.

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 085 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-085  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 16,610  
 Swell factor: 1.165  
 Loose volume: 19,351 LCY

Source of estimated volume: MR-75  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2794

Adjusted unit production: 589.67 LCY/hr

Adjusted fleet production: **2358.68** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.821/LCY

Total job time: **8.20** Hours

Total job cost: **\$15,895**

**BULLDOZER WORK**

Task description: Regrade P-2 conveyer bench

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 087 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-087  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 10,000  
 Swell factor: 1.165  
 Loose volume: 11,650 LCY

Source of estimated volume: TR-118 submittal  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 5 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3209

Adjusted unit production: 677.26 LCY/hr

Adjusted fleet production: 2709.04 LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.715/LCY

Total job time: 4.30 Hours

Total job cost: \$8,332

**BULLDOZER WORK**

Task description: Regrade Pond MB-5E

Site: West Elk Mine Permit Action: MT9 - Part A Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 088 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-088  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 30,555  
 Swell factor: 1.165  
 Loose volume: 35,597 LCY

Source of estimated volume: Exhibit 66, Pond MB-5E, drawing CPP-L0-05.dwg  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 750.07 LCY/hr

Adjusted fleet production: **3000.28** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.646/LCY

Total job time: **11.86** Hours

Total job cost: **\$22,987**

## HYDRAULIC EXCAVATOR WORK

Task description: Regrade HR/AR from Sylvester Gulch Rd to office

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 089

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-089

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick

Horsepower: 268

Attachment 1: ROPS Cab

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 2,690

CCY

Swell factor: 1.330

Loose volume: 3,578

LCY

Source of estimated volume: Figure N-1

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.390 minutes

### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850

Adjusted Capacity: 1.92 LCY

### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 295.54 LCY/Hour

Adjusted Hourly Unit Production: 245.30 LCY/Hour

Adjusted Hourly Fleet Production: 245.30 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 14.59 Hours

Unit cost: \$2.025 /LCY Total job cost: \$7,244

## SAFEGUARDING UNDERGROUND OPENINGS

Task description: Seal all Mine portals (formerly task 702)

Site: West Elk Mine

Permit Action: MT9 - Part A

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 090

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9A-090

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Opening Description</b>	<b>Dimensions</b>	<b>Closure Method</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
1 Portal Seal	160 sq. ft.	Adit closure - bulkhead seal, >= 36 sq. ft. (per sq. ft.)	160.00	SF	\$287.50	\$46,000.00
1 Portal drain pipe	165 lin. ft.	PVC drain pipe, 6 in. diameter (per ln. ft. incl. mat. & labor)	165.00	LF	\$33.64	\$5,550.60
1 Portal Backfill	593 cu. yd.	Adit closure - backfilling (per cu. yd.)	593.00	CY	\$43.75	\$25,943.75
2 Portal Seal	160 sq. ft.	Adit closure - bulkhead seal, >= 36 sq. ft. (per sq. ft.)	160.00	SF	\$287.50	\$46,000.00
2 Portal drain pipe	190 lin. ft.	PVC drain pipe, 6 in. diameter (per ln. ft. incl. mat. & labor)	190.00	LF	\$33.64	\$6,391.60
2 Portal Backfill	741 cu. yd.	Adit closure - backfilling (per cu. yd.)	741.00	CY	\$43.75	\$32,418.75
3 Portal Seal	184 sq. ft.	Adit closure - bulkhead seal, >= 36 sq. ft. (per sq. ft.)	184.00	SF	\$287.50	\$52,900.00
3 Portal drain pipe	230 lin. ft.	PVC drain pipe, 6 in. diameter (per ln. ft. incl. mat. & labor)	230.00	LF	\$33.64	\$7,737.20
3 Portal Backfill	1124 cu. yd.	Adit closure - backfilling (per cu. yd.)	1,124.00	CY	\$43.75	\$49,175.00
4 Portal Seal	160 sq. ft.	Adit closure - bulkhead seal, >= 36 sq. ft. (per sq. ft.)	160.00	SF	\$287.50	\$46,000.00
4 Portal drain pipe	150 lin. ft.	PVC drain pipe, 6 in. diameter (per ln. ft. incl. mat. & labor)	150.00	LF	\$33.64	\$5,046.00
4 Portal Backfill	563 cu. ft.	Adit closure - backfilling (per cu. yd.)	563.00	CY	\$43.75	\$24,631.25
5 Portal Seal	160 sq. ft.	Adit closure - bulkhead seal, >= 36 sq. ft. (per sq. ft.)	160.00	SF	\$287.50	\$46,000.00
5 Portal drain pipe	175 lin. ft.	PVC drain pipe, 6 in. diameter (per ln. ft. incl. mat. & labor)	175.00	LF	\$33.64	\$5,887.00
5 Portal Backfill	563 cu. yd.	Adit closure - backfilling (per cu. yd.)	563.00	CY	\$43.75	\$24,631.25
6 Portal Seal	160 sq. ft.	Adit closure - bulkhead seal, >= 36 sq. ft. (per sq. ft.)	160.00	SF	\$287.50	\$46,000.00
6 Portal drain pipe	163 lin. ft.	PVC drain pipe, 6 in. diameter (per ln. ft. incl. mat. & labor)	163.00	LF	\$33.64	\$5,483.32

6 Portal Backfill	563 cu. ft.	Adit closure - backfilling (per cu. yd.)	563.00	CY	\$43.75	\$24,631.25
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**Job Hours:** 99.93

**Total Cost:** \$500,426.97

**EQUIPMENT MOBILIZATION/DEMobilIZATION**Task description: Mobilize/demobilize equipment for updated parts A-ESite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C198007**PROJECT IDENTIFICATION**

Task #: 091 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9A-091  
 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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
Ownership Cost/Hour:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

**NON ROADABLE EQUIPMENT:**

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D9T - 9SU	66.13	\$271.95	\$125.64	4	\$1,590.36	\$502.56	\$1,000.00
Cat 336D L 10'-6" Stick	32.23	\$244.29	\$122.78	1	\$367.07	\$122.78	\$250.00
Grove AP415. 41' 13.6MT	14.38	\$67.40	\$59.44	1	\$126.84	\$59.44	\$250.00
Cat 637G w/push-pull	59.59	\$281.32	\$125.64	1	\$406.96	\$125.64	\$500.00
CAT 825H	36.08	\$164.53	\$122.78	2	\$574.62	\$245.56	\$250.00
CAT 966H	25.80	\$57.78	\$59.44	2	\$234.44	\$118.88	\$500.00
CAT 14M	23.57	\$129.81	\$59.44	1	\$189.25	\$59.44	\$250.00
Cat D8T - 8SU	53.08	\$187.85	\$125.64	1	\$313.49	\$125.64	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$27.21	\$59.44	1	\$86.65	\$59.44	\$250.00

Subtotals: **\$3,990.14** **\$1,478.82** **\$3,750.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 10-12 cy, 6x4	\$108.12	1	\$108.12	\$108.12
Water Tanker, 3,500 Gal.	\$53.90	1	\$53.90	\$53.90
Fuel Tanker, 4x2, 170 HP	\$34.10	1	\$34.10	\$34.10
Lube Truck, 4x2, 190 HP	\$41.41	1	\$41.41	\$41.41
Light Duty Pickup, 4x4, 1 T. Crew	\$24.60	1	\$24.60	\$24.60

Subtotals: 

<b>\$262.13</b>	<b>\$262.13</b>
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**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: GRAND JUNCTION  
 Total one-way travel distance: 80.00 miles  
 Average Travel Speed: 40.00 mph

Total Non-Roadable Mob/Demob Cost \* \$45,336.40  
 \* \* two round trips with haul rig:  
 Total Roadable Mob/Demob Cost \*\* \$1,048.52  
 \*\* one round trip, no haul rig:

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	2.00	2.00
Return Time (Hours):	2.00	2.00
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	1.00	NA
Subtotals:	6.00	4.00

**JOB TIME AND COST**

Total job time: 12.00 Hours

Total job cost: \$46,385

## MISCELLANEOUS TRUCK WORK

Task description: CTaskDescription

Site: CSite Permit Action: CJobAction Permit/Job#: CPermitID

### PROJECT IDENTIFICATION

Task #: TTT State: CState Abbreviation: CAbbreviation  
Date: mmddyyyy County: CCounty Filename: CFilename  
User: UUU

Agency or organization name: CAgencyName

### HOURLY EQUIPMENT COST

Make and Model:	<u>Light Duty Pickup, 4x4, 1 T. Crew</u>	Horsepower:	<u>340</u>
Attachment 1:	<u>Fixed Gooseneck Trailer,120 Ton</u>	Shift Basis:	<u>1 per day</u>
Attachment 2:	<u></u>	Weight:	<u>2.45</u>
Labor Unit 1:	<u>Specialty Truck Driver</u>		(US Tons)
Labor Unit 2:	<u>General Laborer</u>		

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$25.21</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$33.64</u>	<u>100</u>
Operator Cost/Hour:	<u>\$49.75</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$108.60</u>	
Total Fleet Cost/Hour:	<u>\$108.60</u>	

### JOB TIME AND COST

Fleet size: 1 Truck(s) Total job time: 4.00 Hours  
Unit cost: \$108.60 /Hour Total job cost: \$434

## COST SUMMARY WORK

Task description: Part B: RPE, RPEE, NSSA

Site: West Elk Mine

Permit Action: MT9 - Part B

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 09B

State: Colorado

Abbreviation: None

Date: 1/27/2025

County: Delta

Filename: C007-09B

User: LDS

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
201	Demolish/remove structures in RPE, RPEE, and NSSA	DEMOLISH	1	16.00	\$32,038
202	Compact remaining refuse at RPEE	COMPACT	2	5.50	\$3,870
203	Haul cover material to RPE area	TRUCK1	1	73.03	\$102,508
204	Regrade RPE sediment control ditches	DOZER	4	0.26	\$494
205	Remove RPE ponds - Haul fill to top of refuse pile	SCRAPER1	1	32.80	\$41,435
206	Rip RPE road	RIPPER	4	0.11	\$223
208	Regrade RPE sediment control ditches	DOZER	4	3.98	\$7,715
209	Compact RPE road backfill	COMPACT	2	1.57	\$1,108
210	Haul remaining waste rock from prep. plant to RPEE	TRUCK1	1	62.76	\$88,083
211	Grade remaining coal waste rock into <24" lifts on RPEE	DOZER	4	3.54	\$6,851
212	Replace topsoil from stockpile to RPE ponds	TRUCK1	1	6.20	\$8,702
213	Replace topsoil from stockpile to RPE road	TRUCK1	1	1.38	\$1,941
214	Regrade NSS pond	DOZER	4	0.40	\$783
215	Regrade NSS area (TS footprint 6.2 acres)	DOZER	4	3.82	\$7,403
216	Regrade NSS area entrance road	DOZER	4	0.07	\$137
219	Rip light use road and auger drill sites (MR-354)	RIPPER	4	0.27	\$542
220	Regrade light use road and auger rig drill sites (MR-354)	DOZER	4	0.81	\$1,563
221	Haul topsoil from RPEE soil storage areas to RPEE	TRUCK1	1	134.33	\$188,535
222	Reveg RPEE (40 acres) incl. weed control	REVEGE	1	60.00	\$147,718
223	Reveg RPE (16.5 ac), NSS Area (6.2 ac)	REVEGE	1	45.40	\$50,660
224	Grade RPEE ditches to final configuration	DOZER	4	0.61	\$1,180
225	Use RPEE roadbase for portion of road regrading	DOZER	1	8.79	\$4,189
226	Rip RPEE roads (TR-133 legth)	RIPPER	4	2.01	\$3,894
227	Grade RPEE haul roads to AOC (TR133 changes)	DOZER	4	3.91	\$7,567
228	Haul topsoil from RPEE soil storage to reclaimed RPEE road	TRUCK1	1	51.57	\$26,341
<b><u>SUBTOTALS:</u></b>				<b>519.12</b>	<b>\$735,480</b>

## DEMOLITION WORK

Task description: Demolish/remove structures in RPE, RPEE, and NSSA

Site: West Elk Mine

Permit Action: MT9 - Part B

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 201

State: Colorado

Abbreviation: None

Date: 1/29/2025

County: Gunnison

Filename: MT9B-201

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 91.30 %

<b>Structure or Item Description</b>	<b>Dimensions</b>	<b>Demolition Menu Selection</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Culverts	12" diam	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	45.00	LF	\$5.91	\$265.89
Culvert CRPE-2	15" diam	Pipe, corrugated metal (CMP) - 15 in. diameter pipe	20.00	LF	\$6.97	\$139.35
Culverts	21" diam	Pipe, corrugated metal (CMP) - 21 in. diameter pipe	55.00	LF	\$9.28	\$510.16
Culverts	24" diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	200.00	LF	\$10.60	\$2,119.02
Culvert HR2	30" diam	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	80.00	LF	\$13.98	\$1,118.38
Field, lab geotech testing of RPEE lifts	6 samples	USER PROVIDED ITEM	6.00	EA	\$250.00	\$1,500.00
1/4ly eng. insp. RPEE (exh.82 sec.4.8.2)	4 times/yr X 10 yrs	USER PROVIDED ITEM	40.00	EA	\$500.00	\$20,000.00
Refuse truck bin - Superstructure	20x20x60	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	24,000.00	CF	\$0.35	\$8,342.40
refuse truck bin foundation	20x20x1	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	400.00	SF	\$2.48	\$991.80
Culvert CRPE-1	10" dia. x 20 'L	Pipe, corrugated metal (CMP) - 10 in. diameter pipe	20.00	LF	\$5.19	\$103.78

	<b>Subtotal</b>	<b>Total Cost</b>
<b>Job Hours:</b> <u>16.00</u>	<b>(unadjusted):</b> <u>\$35,090.78</u>	<b>(adjusted for location):</b> <u>\$32,037.88</u>

## COMPACTION WORK

Task description: Compact remaining refuse at RPEE

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 202 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9B-202  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H Horsepower: 354  
Compactor Type: Soil - tamping foot Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 10,000 LCY Shrinkage factor: 0.875  
Compacted volume: 8,750 CCY

Source of estimated volume: Sec. 7, Exh 82, assumed 10,000 cyds = 670 2-ft lifts

Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production =  $(W \times S \times L \times C) / P$

Compacted width per pass (W): 7.34 feet  
Average Compactor Speed (S): 4.00 mph  
Compacted thickness of each lift (L): 10.00 inches  
Conversion Constant (C): 16.3 (5,280ft./12in./27cu.ft.)  
Required number of machine passes (P): 5 passes  
Unadjusted Hourly Unit Production: 957.14 CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.8300</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 794.42 CCY/Hour

Adjusted Hourly Fleet Production: 1,588.85 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s) Total job time: 5.51 Hours

Unit cost: \$0.442 per CCY Total job cost: \$3,870

TRUCK/LOADER TEAM WORKTask description: Haul cover material to RPE areaSite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 203State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-203User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description	
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4	
-Loader:		CAT 966H	
Support Equipment -Load Area:		Cat D9T - 9SU	
-Dump Area:		Cat D9T - 9SU	
Road Maintenance -Motor Grader:		NA	
-Water Truck:		NA	

Cost Breakdown:

## Truck/Loader Team

## Support Equipment

## Maintenance Equipment

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	4	1	1	1	0	0
Group Subtotals:	Work: \$472.40		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,403.56MATERIAL QUANTITIESInitial volume: 24,433

CCY

Swell factor: 1.165Loose volume: 28,464

LCY

Source of estimated volume: DRMS estimateSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,900 Pounds/LCYDescription: Decomposed rock - 50% Rock, 50% EarthRated Payload: 35,400 PoundsPayload Capacity: 12.21 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) <u>0.900</u>
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2640.00	3.80	3.00	6.80	1568	1.716

Haul Time: 1.716 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2640.00	-3.80	3.00	-0.80	2938	0.944

Return Time: 0.944 minutes

Total Truck Cycle Time: 4.600 minutes

Loading Tool unit  
 Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production  
117.39 LCY/Hour      Adjusted for job efficiency: 97.43 LCY/Hour  
 Optimal No. of Trucks: 4 Truck(s)      Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 389.74 LCY/Hour  
 Adjusted single truck/loader team production: 389.74 LCY/Hour  
 Adjusted multiple truck/loader team production: 389.74 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 73.03 Hours  
 Unit cost: \$3.601 /LCY      Total job cost: \$102,508

**BULLDOZER WORK**

Task description: Regrade RPE sediment control ditches

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 204 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9B-204  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 150  
 Swell factor: 1.330  
 Loose volume: 200 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 200 feet  
 Unadjusted hourly production: 700.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2794

Adjusted unit production: 195.58 LCY/hr

Adjusted fleet production: **782.32 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$2.477/LCY

Total job time: **0.26 Hours**

Total job cost: **\$494**

**SCRAPER TEAM WORK**

Task description: Remove RPE ponds - Haul fill to top of refuse pile

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 205 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9B-205  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 15,795 CCY Swell factor: 1.115  
 Loose volume: 17,611 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		Scraper Bowl (volume) Basis:	
Material weight:	<u>2,500 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Clay - Dry</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.64 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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	2000.00	10.00	4.00	14.00	657	3.06

Haul Time: 3.06 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	-10.00	4.00	-6.00	2972	0.72

Return Time: 0.72 minutes

Total Scraper team cycle time: 5.38 minutes  
 Adjusted for job conditions: 536.88 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 536.88 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 536.88 LCY/Hour

Unadjusted unit production/hour: 646.84 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 32.80 Hours  
 Unit cost: \$2.353 /LCY Total job cost: \$41,435

## BULLDOZER RIPPING WORK

Task description: Rip RPE road

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 206 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9B-206  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$9.48</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$484.37</u>	
Total Fleet Cost/Hour:	<u><b>\$1,937.46</b></u>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.32 acres Rip Depth (ft): 2.00 Volume: 1,033 BCY or CCY

Source of estimated quantity: Figure N-1

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: **2.78** Acres/hr

### JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **0.12** Hours

Unit cost: \$696.756 Per acre Total job cost: **\$223**

**BULLDOZER WORK**

Task description: Regrade RPE sediment control ditches

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 208 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9B-208  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 2,690  
 Swell factor: 1.330  
 Loose volume: 3,578 LCY

Source of estimated volume: Map N-1  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 200 feet  
 Unadjusted hourly production: 700.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 5 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3209

Adjusted unit production: 224.63 LCY/hr

Adjusted fleet production: **898.52 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$2.156/LCY

Total job time: **3.98 Hours**

Total job cost: **\$7,715**

## COMPACTION WORK

Task description: Compact RPE road backfill

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 209 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9B-209  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H Horsepower: 354  
Compactor Type: Soil - tamping foot Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 3,578 LCY Shrinkage factor: 0.875  
Compacted volume: 3,131 CCY

Source of estimated volume: Map N-1  
Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production = (W x S x L x C) / P

Compacted width per pass (W): 7.34 feet  
Average Compactor Speed (S): 4.00 mph  
Compacted thickness of each lift (L): 10.00 inches  
Conversion Constant (C): 16.3 (5,280ft./12in./27cu.ft.)  
Required number of machine passes (P): 4 passes  
Unadjusted Hourly Unit Production: 1,196.42 CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.8300</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 993.03 CCY/Hour  
Adjusted Hourly Fleet Production: 1,986.06 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s) Total job time: 1.58 Hours

Unit cost: \$0.354 per CCY Total job cost: \$1,108

**TRUCK/LOADER TEAM WORK**

Task description: Haul remaining waste rock from prep. plant to RPEE

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 210 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9B-210  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

**Cost Breakdown:**

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	4	1	1	1	0	0
Group Subtotals:	Work: \$472.40		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,403.56

**MATERIAL QUANTITIES**

Initial volume: 10,000 CCY Swell factor: 1.000  
 Loose volume: 10,000 LCY

Source of estimated volume: TR-120, DRMS estimate  
 Source of estimated swell factor: Cat Handbook  
 Material Purchase Cost: \$0.00  
 Total Cost: \$0.00

**HOURLY PRODUCTION**

**Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 2,900 Pounds/LCY  
 Description: Decomposed rock - 50% Rock, 50% Earth  
 Rated Payload: 35,400 Pounds  
 Payload Capacity: 12.21 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) <u>0.900</u>
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	15840.00	3.00	3.00	6.00	1855	8.586

Haul Time: 8.586 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1980.00	-6.00	3.00	-3.00	2938	0.725

Return Time: 0.725 minutes

Total Truck Cycle Time: 11.251 minutes

Loading Tool unit  
 Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production  
48.00 LCY/Hour      Adjusted for job efficiency: 39.84 LCY/Hour  
 Optimal No. of Trucks: 11 Truck(s)      Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 159.35 LCY/Hour  
 Adjusted single truck/loader team production: 159.35 LCY/Hour  
 Adjusted multiple truck/loader team production: 159.35 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 62.76 Hours  
 Unit cost: \$8.808 /LCY      Total job cost: \$88,083

**BULLDOZER WORK**

Task description: Grade remaining coal waste rock into <24" lifts on RPEE

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 211 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9B-211  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$9.48</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 10,000  
 Swell factor: 1.000  
 Loose volume: 10,000 LCY

Source of estimated volume: Assumed 10,000 cyds of remaining waste  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.900</u>	<u>(AB.AVG.)</u>
Material consistency:	<u>1.200</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5687

Adjusted unit production: 707.01 LCY/hr

Adjusted fleet production: **2828.04** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.685/LCY

Total job time: **3.54** Hours

Total job cost: **\$6,851**

TRUCK/LOADER TEAM WORKTask description: Replace topsoil from stockpile to RPE pondsSite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 212State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-212User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

Cost Breakdown:

## Truck/Loader Team

## Support Equipment

## Maintenance Equipment

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	4	1	1	1	0	0
Group Subtotals:	Work: \$472.40		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,403.56MATERIAL QUANTITIESInitial volume: 2,338

CCY

Swell factor: 1.125Loose volume: 2,630

LCY

Source of estimated volume: TR-79, DRMS estimateSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,550

Pounds/LCY

Description: Earth - Dry packedRated Payload: 35,400

Pounds

Payload Capacity: 13.88

LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3000.00	1.50	3.00	4.50	2665	1.228

Haul Time: 1.228 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3000.00	-1.50	3.00	1.50	2905	1.058

Return Time: 1.058 minutes

Total Truck Cycle Time: 4.226 minutes

Loading Tool unit  
 Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production  
127.78 LCY/Hour      Adjusted for job efficiency: 106.06 LCY/Hour  
 Optimal No. of Trucks: 4 Truck(s)      Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 424.23 LCY/Hour  
 Adjusted single truck/loader team production: 424.23 LCY/Hour  
 Adjusted multiple truck/loader team production: 424.23 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 6.20 Hours  
 Unit cost: \$3.308 /LCY      Total job cost: \$8,702

TRUCK/LOADER TEAM WORKTask description: Replace topsoil from stockpile to RPE roadSite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 213State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-213User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	4	1	1	1	0	0
Group Subtotals:	Work: \$472.40		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,403.56MATERIAL QUANTITIESInitial volume: 516

CCY

Swell factor: 1.125Loose volume: 581

LCY

Source of estimated volume: TR-79, DRMS estimateSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,550

Pounds/LCY

Description: Earth - Dry packedRated Payload: 35,400

Pounds

Payload Capacity: 13.88

LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) <u>0.900</u>
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1980.00	6.00	3.00	9.00	1249	1.605

Haul Time: 1.605 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1980.00	-6.00	3.00	-3.00	2938	0.725

Return Time: 0.725 minutes

Total Truck Cycle Time: 4.270 minutes

Loading Tool unit Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production 126.46 LCY/Hour      Adjusted for job efficiency: 104.96 LCY/Hour  
 Optimal No. of Trucks: 4 Truck(s)      Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 419.86 LCY/Hour  
 Adjusted single truck/loader team production: 419.86 LCY/Hour  
 Adjusted multiple truck/loader team production: 419.86 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 1.38 Hours  
 Unit cost: \$3.343 /LCY      Total job cost: \$1,941

**BULLDOZER WORK**

Task description: Regrade NSS pond

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 214 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9B-214  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 613  
 Swell factor: 1.165  
 Loose volume: 714 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 441.83 LCY/hr

Adjusted fleet production: **1767.32** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.096/LCY

Total job time: **0.40** Hours

Total job cost: **\$783**

**BULLDOZER WORK**Task description: Regrade NSS area (TS footprint 6.2 acres)Site: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 215State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-215User: LDSAgency or organization name: Division of Reclamation, Mining and Safety**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37Total Fleet Cost/Hour: \$1,937.46**MATERIAL QUANTITIES**Initial Volume: 5,001Swell factor: 1.125Loose volume: 5,626 LCYSource of estimated volume: TS footprint, 6.2 acres X 0.5' deepSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 150 feetUnadjusted hourly production: 910.5 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 6,300 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4043

Adjusted unit production: 368.12 LCY/hr

Adjusted fleet production: **1472.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.316/LCY

Total job time: **3.82** Hours

Total job cost: **\$7,403**

**BULLDOZER WORK**

Task description: Regrade NSS area entrance road

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 216 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9B-216  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 107  
 Swell factor: 1.165  
 Loose volume: 125 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

<u>Job Condition Correction Factor</u>		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 441.83 LCY/hr

Adjusted fleet production: **1767.32** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.096/LCY

Total job time: **0.07** Hours

Total job cost: **\$137**

**BULLDOZER RIPPING WORK**

Task description: Rip light use road and auger drill sites (MR-354)

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 219 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9B-219  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.60 acres Rip Depth (ft): 2.00 Volume: 1,936 BCY or CCY

Source of estimated quantity: MR-352 submittal, Table 2, 0.6 acre

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 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: 0.646 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.646 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.54 Acres/hr  
Adjusted Hourly Fleet Production: 2.14 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 0.28 Hours

Unit cost: \$903.900 Per acre Total job cost: \$542

**BULLDOZER WORK**

Task description: Regrade light use road and auger rig drill sites (MR-354)

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 220 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9B-220  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 968  
 Swell factor: 1.330  
 Loose volume: 1,287 LCY

Source of estimated volume: 0.6 acre x 1 ft deep  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 5 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3209

Adjusted unit production: 398.94 LCY/hr

Adjusted fleet production: **1595.76 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.214/LCY

Total job time: **0.81 Hours**

Total job cost: **\$1,563**

TRUCK/LOADER TEAM WORKTask description: Haul topsoil from RPEE soil storage areas to RPEESite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 221State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-221User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	4	1	1	1	0	0
Group Subtotals:	Work: \$472.40		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,403.56MATERIAL QUANTITIESInitial volume: 64,533

CCY

Swell factor: 1.000Loose volume: 64,533

LCY

Source of estimated volume: 10 acres X 2ft thickSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,900 Pounds/LCYDescription: Decomposed rock - 50% Rock, 50% EarthRated Payload: 35,400 PoundsPayload Capacity: 12.21 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 11.00 LCY

Loading Tool Capacity

Bucket Size Class: NA  
 Rated Capacity: 5.000 LCY (heaped)  
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100  
 Adjusted Capacity: 5.500 LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b>0.440</b>	minutes
	Net Load Time per Truck:	<b>0.540</b>	minutes

Truck Cycle Time:

Truck Exchange Time: 0.50 Minutes Adjusted for site altitude: 0.500 Minutes  
 Truck Load Time: 0.540 Minutes Adjusted for site altitude: 0.540 Minutes  
 Truck Maneuver and Dump Time: 0.90 Minutes Adjusted for site altitude: 0.900 Minutes

Truck Travel (Haul & Return) Time:

Road Condition: Hard, smooth, stabilized, surfaced, watered, maintained 2.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2600.00	5.00	2.00	7.00	1568	1.691

Haul Time: 1.691 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2600.00	-5.00	2.00	-3.00	2938	0.930

Return Time: 0.930 minutes

Total Truck Cycle Time: 4.561 minutes

Loading Tool unit Production 634.62 LCY/Hour      Adjusted for job efficiency: 526.73 LCY/Hour  
 Truck Unit Production 144.71 LCY/Hour      Adjusted for job efficiency: 120.11 LCY/Hour  
 Optimal No. of Trucks: 4 Truck(s)      Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 480.42 LCY/Hour  
 Adjusted single truck/loader team production: 480.42 LCY/Hour  
 Adjusted multiple truck/loader team production: 480.42 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 134.33 Hours  
 Unit cost: \$2.922 /LCY      Total job cost: \$188,535

**REVEGETATION WORK**Task description: Reveg RPEE (40 acres) incl. weed controlSite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 222State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-222User: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium sulfate, 21-0-0 with 24% S	50.00	pound	\$0.55	\$27.30
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$27.30</b>

**Application**

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$43.12
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$43.12</b>

**TILLING**

Description	Cost /Acre
Chisel plowing {DMG}	\$102.41
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
<b>Total Tilling Cost/Acre</b>	
	<b>\$220.02</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	6.00	19.56	\$83.04
Arizona Fescue - Redondo	1.00	11.48	\$15.06
Bluebunch Wheatgrass - Secar	6.00	19.28	\$63.08
Aster, Engleman's	1.00	4.76	\$226.88
Indian Ricegrass - Native	3.00	9.71	\$51.88
Sand Dropseed	0.20	23.88	\$2.60
Mountain Brome - Bromar	8.00	12.86	\$48.14
Kentucky Bluegrass - Lato	6.00	296.14	\$22.14
Burnett, Small (or Little) - Delar	1.00	1.26	\$4.46
Pubescent Wheatgrass - VNS	6.00	12.40	\$33.87



Job Hours: 60.00

**REVEGETATION WORK**Task description: Reveg RPE (16.5 ac), NSS Area (6.2 ac)Site: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 223State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-223User: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium sulfate, 21-0-0 with 24% S	50.00	pound	\$0.55	\$27.30
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$27.30</b>

**Application**

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$43.12
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$43.12</b>

**TILLING**

Description	Cost /Acre
Chisel plowing {DMG}	\$102.41
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
<b>Total Tilling Cost/Acre</b>	
	<b>\$220.02</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	3.00	9.78	\$41.52
Arizona Fescue - Redondo	0.50	5.74	\$7.53
Bluebunch Wheatgrass - Secar	3.00	9.64	\$31.54
Aster, Engleman's	0.50	2.38	\$113.44
Indian Ricegrass - Native	1.50	4.86	\$25.94
Sand Dropseed	0.10	11.94	\$1.30
Mountain Brome - Bromar	4.00	6.43	\$24.07
Kentucky Bluegrass - Lato	3.00	148.07	\$11.07
Burnett, Small (or Little) - Delar	0.50	0.63	\$2.23
Pubescent Wheatgrass - VNS	3.00	6.20	\$16.93

Streambank Wheatgrass - Sodar	3.00	9.78	\$24.91
Thickspike Wheatgrass - Critana	3.00	10.61	\$24.45
Coreopsis, Plains	0.50	15.86	\$32.08
Western Wheatgrass - Arriba	3.00	7.58	\$27.10
Vetch, American	1.00	0.45	\$123.12
Flax, Lewis Blue	0.25	1.66	\$10.57
Globemallow, Scarlet (or copper)	0.50	5.66	\$92.78
Penstemon, Rocky Mountain	0.25	3.92	\$15.35
<b>Totals Seed Mix</b>	30.60	261.18	<b>\$625.93</b>

**Application**

<b>Description</b>	<b>Cost /Acre</b>
Drill Seeding (DRMS Survey Cost)	\$236.64
<b>Total Seed Application Cost/Acre</b>	<b>\$236.64</b>

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	0.75	TON	\$492.78	\$369.59
<b>Total Mulch Materials Cost/Acre</b>				<b>\$369.59</b>

**Application**

<b>Description</b>	<b>Cost /Acre</b>
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
<b>Total Mulch Application Cost/Acre</b>	<b>\$242.63</b>

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres: 22.7 Cost /Acre: \$1,765.23  
 Estimated Failure Rate: 50% Cost /Acre\*: \$932.99  
 \*Selected Replanting Work Items: FERTILIZING,SEEDING,NURSERY

Initial Job Cost: \$40,070.72  
 Reseeding Job Cost: \$10,589.44  
 Total Job Cost: \$50,660  
 Job Hours: 45.40

**BULLDOZER WORK**

Task description: Grade RPEE ditches to final configuration

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 224 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9B-224  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 1,200  
 Swell factor: 1.330  
 Loose volume: 1,596 LCY

Source of estimated volume: 0.6 acre x 1 ft deep  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3104

Adjusted unit production: 655.10 LCY/hr

Adjusted fleet production: 2620.4 LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.739/LCY

Total job time: 0.61 Hours

Total job cost: \$1,180

**BULLDOZER WORK**Task description: Use RPEE roadbase for portion of road regradingSite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 225State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-225User: LDSAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$1.90</u>	<u>20</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$476.78Total Fleet Cost/Hour: **\$476.78****MATERIAL QUANTITIES**Initial Volume: 5,540Swell factor: 1.090Loose volume: **6,039 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 1,243.2 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -5 %Average site altitude: 7,350 feetMaterial weight: 2,600 lbs/LCYWeight description: Clay and gravel - Wet**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

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:	0.885	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5528

Adjusted unit production: 687.24 LCY/hr

Adjusted fleet production: **687.24 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.694/LCY

Total job time: **8.79 Hours**

Total job cost: **\$4,189**

**BULLDOZER RIPPING WORK**

Task description: Rip RPEE roads (TR-133 legth)

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 226 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9B-226  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 1-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$15.77	NA
Ripper Operating Cost/Hour:	\$10.35	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$482.22	
Total Fleet Cost/Hour:	<b>\$1,928.86</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 3.43 acres Rip Depth (ft): 3.00 Volume: 16,601 BCY or CCY

Source of estimated quantity: 8,800 ft L X 17 ft. wide(Drawing C-05 Exhibit 82)

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 4.05 feet/pass  
Average Ripping Width: 6.08 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: 0.512 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.512 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.42 Acres/hr  
Adjusted Hourly Fleet Production: 1.70 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 2.02 Hours

Unit cost: \$1135.220 Per acre Total job cost: \$3,894

**BULLDOZER WORK**

Task description: Grade RPEE haul roads to AOC (TR133 changes)

Site: West Elk Mine Permit Action: MT9 - Part B Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 227 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9B-227  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 5,541  
 Swell factor: 1.330  
 Loose volume: 7,369 LCY

Source of estimated volume: 0.6 acre x 1 ft deep  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.800	(POOR)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2235

Adjusted unit production: 471.70 LCY/hr

Adjusted fleet production: **1886.8 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.027/LCY

Total job time: **3.91 Hours**

Total job cost: **\$7,567**

TRUCK/LOADER TEAM WORKTask description: Haul topsoil from RPEE soil storage to reclaimed RPEE roadSite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 228State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-228User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		NA
-Dump Area:		NA
Road Maintenance -Motor Grader:		NA
-Water Truck:		Water Tanker, 2,500 Gal.

Cost Breakdown:

## Truck/Loader Team

## Support Equipment

## Maintenance Equipment

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	NA	NA	NA	25
Ownership cost/hour:	\$22.44	\$57.78	NA	NA	NA	\$11.65
Operating cost/hour:	\$60.44	\$46.25	NA	NA	NA	\$5.61
% Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	NA	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	\$0.00
Operator cost/hour:	\$0.00	\$36.85	NA	NA	NA	\$21.12
Unit Subtotals:	\$82.88	\$140.88	NA	NA	NA	\$38.39
Number of Units:	4	1	0	0	0	1
Group Subtotals:	Work: \$472.40		Support: \$0.00		Maint: \$38.39	

Total work team cost/hour: \$510.79MATERIAL QUANTITIESInitial volume: 24,933

CCY

Swell factor: 1.000Loose volume: 24,933

LCY

Source of estimated volume: 8800 ft. long X 17 ft wide X 1.5 ft thickSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,650 Pounds/LCYDescription: Decomposed rock - 25% Rock, 75% EarthRated Payload: 35,400 PoundsPayload Capacity: 13.36 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 11.00 LCY

Loading Tool Capacity

Bucket Size Class: NA  
 Rated Capacity: 5.000 LCY (heaped)  
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100  
 Adjusted Capacity: 5.500 LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b>0.440</b>	minutes
	Net Load Time per Truck:	<b>0.540</b>	minutes

Truck Cycle Time:

Truck Exchange Time: 0.50 Minutes Adjusted for site altitude: 0.500 Minutes  
 Truck Load Time: 0.540 Minutes Adjusted for site altitude: 0.540 Minutes  
 Truck Maneuver and Dump Time: 0.90 Minutes Adjusted for site altitude: 0.900 Minutes

Truck Travel (Haul & Return) 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	2000.00	5.00	5.00	10.00	1068	1.886

Haul Time: 1.886 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	-5.00	5.00	0.00	2938	0.706

Return Time: 0.706 minutes

Total Truck Cycle Time: 4.532 minutes

Loading Tool unit Production 634.62 LCY/Hour      Adjusted for job efficiency: 526.73 LCY/Hour  
 Truck Unit Production 145.63 LCY/Hour      Adjusted for job efficiency: 120.87 LCY/Hour  
 Optimal No. of Trucks: 4 Truck(s)      Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 483.50 LCY/Hour  
 Adjusted single truck/loader team production: 483.50 LCY/Hour  
 Adjusted multiple truck/loader team production: 483.50 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 51.57 Hours  
 Unit cost: \$1.056 /LCY      Total job cost: \$26,341

## COST SUMMARY WORK

Task description: Part C: Sylvester Gulch

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 09C

State: Colorado

Abbreviation: None

Date: 1/27/2025

County: Delta

Filename: C007-09C

User: LDS

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
301	Demolish/remove structures: Sylvester G., Shaft #3, Syl. G.	DEMOLISH	1	335.03	\$277,256
301a	Seal Sly Gulch Vent Shafts	MINESEAL	1	40.00	\$258,832
301b	Seal Sly Gulch Boreholes (Electric, De-gas, Concrete)	BOREHOLE	1	13.88	\$28,203
301c	Seal Sly Gulch Dewatering Wells 1-4	BOREHOLE	1	0.22	\$1,888
301d	Box Canyon Well: plug and seal	BOREHOLE	1	2.92	\$14,450
301e	Box Canyon North Monitoring Hole: plug and seal	BOREHOLE	1	2.64	\$3,158
302	Rip substation road	RIPPER	4	0.02	\$56
303	Regrade main access road to substation	DOZER	4	2.24	\$4,348
304	Rip Sylvester Gulch fan pad and road	RIPPER	4	0.26	\$523
305	Backfill Sylvester Gulch fan pad	DOZER	4	0.86	\$1,674
307	Replace topsoil f/ stockpile to Shaft #3 pad & light use rd.	SCRAPER1	1	17.90	\$22,609
307a	push topsoil at Shaft #3 area back on Shaft #3 pad	DOZER	4	1.09	\$2,076
308	Regrade shaft #3 pad and roads	DOZER	4	435.68	\$844,109
309	Compact backfilled material at Shaft #3 pad and roads	COMPACT	2	88.47	\$62,172
310	Rip shaft #3 and roads	RIPPER	4	1.25	\$2,439
311	Haul Shaft #3 backfill from Shafts #1 & #2 (Task 228, PR-7)	TRUCK1	1	432.06	\$620,922
313	Regrade material at Sylvester Gulch light-use road upgrade	DOZER	4	2.71	\$5,251
314	Replace topsoil f/ stockpile to fill light use rd. expansion	SCRAPER1	1	0.73	\$920
315	Compact backfill on widened portion of Syl. G. light use rd	COMPACT	2	3.23	\$2,273
316	Backfill and regrade DMEA powerline road	DOZER	4	0.31	\$591
317	Replace topsoil f/ stockpile to power pole roads 9 and 11-16	SCRAPER1	1	0.53	\$664
318	Reveg RPE, Haul Rd., NSS Area, all Syl. Gul. fac.&ext rd	REVEGE	1	193.56	\$575,864
319	Move topsoil f/stockpile to shaft site and electric b.h. rd	TRUCK1	1	120.08	\$158,588
320	Replace topsoil f/stockpile #1	TRUCK1	1	29.24	\$38,616
321	Replace topsoil f/stockpile #3	TRUCK1	1	102.75	\$135,700
322	Replace topsoil f/stockpile 4	TRUCK1	1	5.22	\$7,761
323	Haul backfill material to Main Access Road Stations 58-92	TRUCK1	1	31.08	\$41,049

325	Regrade ventilation shaft site	DOZER	4	94.77	\$183,612
326	Regrade light use roads from PR-7	DOZER	4	41.08	\$79,583
327	Regrade main access road from stations 58-92	DOZER	4	28.78	\$55,766
328	Regrade main road from stations 7-58	DOZER	4	38.39	\$74,383
329	Regrade substation access road, PR-7	DOZER	4	10.00	\$19,375
330	Rip all SGFA disturbance areas	GRADER	1	18.77	\$4,817
331	Pull up material for light use road reclamation	EXCAVATE	1	108.28	\$53,780
332	Compact shaft backfill material	COMPACT	2	17.62	\$12,383
333	Compact substation backfill	COMPACT	2	1.41	\$992
334	Compact light use road material	COMPACT	2	11.70	\$8,228
335	Compact substation road material	COMPACT	2	2.15	\$1,515
336	Compact main access road backfill material	COMPACT	2	5.36	\$3,767
337	Backfill intake and exhaust shafts, PR-7	DOZER	4	0.25	\$479
338	Regrade road to drill hole #4, MR-236	DOZER	4	0.42	\$819
339	Replace topsoil from stockpile to drill pad #4, MR-236	DOZER	4	0.19	\$374
340	Regrade SGFA dewatering facility structures	DOZER	4	32.69	\$63,344
341	Replace topsoil f/ stockpile to SGFA dewatering facilities	SCRAPER1	1	3.96	\$5,000
342	Rip dewater. borehole pad, rd., rd. powerlines/switchgear,	RIPPER	4	0.35	\$697
343	Regrade access road to powerlines and switchgears	DOZER	4	1.65	\$3,193
344	Remove base from light use roads to powerline/switchgear	SCRAPER1	1	0.60	\$763
345	Remove topsoil f/stockpile to l.use rd. for powerpoles 7 and	SCRAPER1	1	0.19	\$235
346	Replace topsoil f/stockpile to french drains and trenches	SCRAPER1	1	6.55	\$8,279
347	Haul subsoil f/ live subsoil pile #1 to CSLY-4 excavation	SCRAPER1	1	2.21	\$2,793
348	Replace topsoil from stockpile to CSLY-4 excavation	SCRAPER1	1	1.61	\$2,028
349	Replace topsoil from stockpile to roads and powerpoles 9-17	DOZER	4	0.14	\$263
352	Regrade dewatering boreholes and access roads (MR-212)	DOZER	4	0.59	\$1,145
353	Regrade dewatering borehole drill pads (MR-212)	DOZER	4	8.91	\$17,261
354	Regrade ditch DCW-7	DOZER	4	0.16	\$312
355	Replace topsoil from stockpile to CSLY-4 excavation	SCRAPER1	1	0.65	\$821
356	Remove roadbase from dewatering borehole road to pad	SCRAPER1	1	0.15	\$193
357	Remove and replace topsoil to remove water pipeline (MR-209)	DOZER	4	0.23	\$451
358	Regrade access roads (MR-244)	DOZER	4	0.79	\$1,523
359	Replace topsoil on roads (MR-247)	DOZER	4	0.17	\$332
362	Excavate 1500' HDPE pipe-f/heater bldg at Shaft 1 --MDW2308	EXCAVATE	1	1.30	\$647
363	Rip aggregate road base on Syl. Gulch rd extension	RIPPER	4	2.27	\$4,410
364	Load/haul offsite aggregate f/Syl Gulch Rd extension	TRUCK1	1	31.50	\$46,822
365	Backfill cuttings into additional MDW at Vent Shaft #3	EXCAVATE	1	0.18	\$92
366	Haul offsite excavated embankment material f/Syl G. Rd exten	TRUCK1	1	44.98	\$49,997

367	Compact regraded Sylvester G. road extension	COMPACT	2	5.24	\$3,683
368	Replace topsoil on Sylvester Gulch road extension (TR-99)	TRUCK1	1	18.88	\$28,068
369	Rip Syl. Gulch mine water treatment ponds and ramps	RIPPER	4	0.24	\$482
370	L. mine wtr trmt pond: Push embankment into pond, regrade	DOZER	4	2.55	\$4,948
<b><u>SUBTOTALS:</u></b>				<b>2411.87</b>	<b>\$3,859,647</b>

## DEMOLITION WORK

Task description: Demolish/remove structures: Sylvester G., Shaft #3, Syl. G.

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 301

State: Colorado

Abbreviation: None

Date: 1/27/2025

County: Gunnison

Filename: MT9C-301

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 91.30 %

<b>Structure or Item Description</b>	<b>Dimensions</b>	<b>Demolition Menu Selection</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Sylvester Gulch Fan - Superstructure	120x20x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	24,000.00	CF	\$0.24	\$5,841.60
-Floor	120x20	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 50 ft. push	2,400.00	SF	\$2.37	\$5,683.68
-Footings	2x3	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	280.00	LF	\$14.26	\$3,992.91
Shaft #3 - Collar	12x12x2	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	10.60	CY	\$151.50	\$1,605.90
-Screen enclosure	12x12x6	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	864.00	CF	\$0.24	\$210.30
-Concrete barriers	15x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	64.00	CF	\$0.24	\$15.58
Emergency escape capsule facility-Building	10x16x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	1,600.00	CF	\$0.24	\$389.44
-Foundation	6x6	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	36.00	SF	\$1.24	\$44.63
Ventilation facility intake shaft-Collar	34 ft diam x 15 in th	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	4.00	CY	\$151.50	\$606.00
-Collar base/footer	43x40x4.0	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	255.00	CF	\$0.24	\$62.07
-Exhaust shaft collar	28 diam. x 12 in th	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push	88.00	SF	\$2.38	\$209.15
-Base/footer	34x42x4	Pavement, concrete, demolition only, 7 in. to	212.00	CY	\$151.50	\$32,118.00

		24 in. thick - Reinforced				
-Main fans/motor houses	8x10x4	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	12.00	CY	\$151.50	\$1,818.00
-Main fans/motor houses	8x10x4	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	12.00	CY	\$151.50	\$1,818.00
-Fans ducting	4x10x560	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	22,400.00	CF	\$0.24	\$5,452.16
Main road - Barriers	350	Railing, roadside guiderail posts only	350.00	EA	\$6.56	\$2,296.00
-Guardrail	1760	Railing, roadside guiderail and posts (posts on 20 ft. centers)	1,750.00	LF	\$18.79	\$32,882.50
Syl. Gulch Bulk Rock Dust Storage/Supply Fac. (MR-297) - Support building	12x20xx10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	2,400.00	CF	\$0.24	\$584.16
-Concrete pad	12x20x6"	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 200 ft. push	240.00	SF	\$1.19	\$285.22
Syl. Gulch Vent Shaft #1-Remove fence	8x12x40	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	40.00	LF	\$3.53	\$141.20
-Remove 10,000-gal. water tank	10,000 gal.	Excavate and load tank onto trailer, non-leaking - 9,000 gal. to 12,000 gal.	1.00	EA	\$1,645.00	\$1,645.00
-Remove 10,000-gal. septic tank	10,000 gal.	Excavate and load tank onto trailer, non-leaking - 9,000 gal. to 12,000 gal.	1.00	EA	\$1,645.00	\$1,645.00
-Remove raw sewage from tank	5,000	Remove sludge, water, and rem. product from tank - 3,000 to 5,000 gal.	1.00	EA	\$259.50	\$259.50
-Transport sew. tank to landfill	10,000 gal.	Haul tank to certified salvage dump - 9,000 to 12,000 gal. tank	1.00	EA	\$1,050.00	\$1,050.00
-Remove 4 bath houses	2x40x10 (4)	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	3,200.00	CF	\$0.24	\$778.88
-Remove office	12x55x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	6,600.00	CF	\$0.24	\$1,606.44
Shaft #2 compressor bldg. addition (MR-310)-Building	15x40x12	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	7,200.00	CF	\$0.24	\$1,752.48
-Pad	15x47	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	705.00	SF	\$2.48	\$1,748.05

Above-ground steel water line in Syl. Gulch (MR-323)-Cut into 30-lengths	2,610 lf x 1-ft diam.	Pipe, sewer/water - 12 in. diameter pipe	2,610.00	LF	\$5.24	\$13,676.40
-Load and haul offsite	30x80x1ft	Loading and 5 mile haul, salvage allowed - Steel frame structures	97.00	CY	\$13.75	\$1,333.75
Above-ground HDPE water in Syl. Gulch (MR-323)-Cut into 30-lengths	4980 lf	Pipe, sewer/water - 12 in. diameter pipe	4,980.00	LF	\$5.24	\$26,095.20
-Load and haul offsite	4,980x1x1	Loading and 5 mile haul, salvage allowed - Masonry structures	184.00	CY	\$13.30	\$2,447.20
2 Water pumps in Syl. Gulch (MR-323)	37 cyds	Loading and 5 mile haul, salvage allowed - Steel frame structures	37.00	CY	\$13.75	\$508.75
Syl. Gulch Rd. extension (TR-99)-Barbed wire fence with posts	96 lf	Fencing, barbed wire, - 5 strand	96.00	LF	\$2.80	\$268.80
-16-ft long steel gate	16 lf	Fencing, chain link, including posts and fabric - to 6 ft. high	16.00	LF	\$3.02	\$48.32
-Headwall - inlet of 84-inch culvert	11x11x12 inches	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	125.00	SF	\$4.52	\$565.06
-Headwall - outlet of 84-inch culvert	11x11x12 inches	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	125.00	SF	\$4.52	\$565.06
-Silt fence	4,518 lf	Fencing, barbed wire, - 5 strand	4,518.00	LF	\$2.80	\$12,650.40
-Geotextile	7,510 cf	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	7,510.00	CF	\$0.24	\$1,827.93
-4 manhole covers	20 syds	Pavement, concrete, demolition only, to 6 in. thick - Rod reinforcing	20.00	SY	\$18.20	\$364.00
Vent shaft 1 compressor building (MR-339)-Superstructure	30x45.1x14	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	18,950.00	CF	\$0.24	\$4,612.43
-Concrete floor	64.5 sf	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	65.00	SF	\$2.48	\$161.17
-Remove 2 compressors	37 cyds each	Loading and 5 mile haul, salvage allowed - Steel frame structures	74.00	CY	\$13.75	\$1,017.50
1800-feet of 8-inch diam. HDPE in Syl. Gulch rd. extension	1400 lf	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	1,400.00	LF	\$4.51	\$6,309.52
Load and haul 1400 ft of 8-inch diam. HDPE f/Syl. Gulch rd. extension	92 cyds	Loading and 2 mile haul, no salvage - Machine loading	92.00	CY	\$21.15	\$1,945.80

Dump fees HDPE f/Syl. Gulch rd. extension	92 cyds	Dump fees - Building construction materials.	92.00	CY	\$11.10	\$1,021.20
Ductile steel pipe, Nitrogen at #2 shaft (MR-349)-Removal	6-in diam x 280 lf	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	280.00	LF	\$4.51	\$1,261.90
-Load/haul	16 cyds	Loading and 2 mile haul, no salvage - Machine loading	16.00	CY	\$21.15	\$338.40
-Dump fee	16 cyds	Dump fees - Building construction materials.	16.00	CY	\$11.10	\$177.60
Vent shaft 1 modifications (MR-353)-2,500 hp fan equip. and ducting	12,000 cf	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	12,000.00	CF	\$0.24	\$2,920.80
-Concrete slab	20x40x12	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	800.00	SF	\$2.48	\$1,983.60
-Footers	2x3x115 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	115.00	LF	\$14.88	\$1,710.84
-Fan motor building	16x22x24	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	8,448.00	CF	\$0.26	\$2,155.93
--Concrete slab	16x22x12" th	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	352.00	SF	\$2.48	\$872.78
--Footers	100 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	100.00	LF	\$14.88	\$1,487.69
-Fan lubrication unit building	12x12x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	1,440.00	CF	\$0.24	\$350.50
--Concrete slab	12x12	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	144.00	SF	\$2.48	\$357.05
--Footers	2x3x67lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	67.00	LF	\$14.88	\$996.75
-Fan MCC building	12x16x12	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	2,304.00	CF	\$0.24	\$560.79
--Concrete slab	12x16x1	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	192.00	SF	\$2.48	\$476.06
--Footers	2x3x81 lf	Demo. and on-site disposal in excavated	81.00	LF	\$14.88	\$1,205.03

		pit, 2.0 ft. x 3 ft. - Max. 200 ft. push				
-Transformers	2 each	NON-PCB Transformer Removal	2.00	EA	\$2,397.20	\$4,794.40
--Transformer pad	12x16x1	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	192.00	SF	\$2.48	\$476.06
--Footers	2x3x81 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	81.00	LF	\$14.88	\$1,205.03
-Shaft #1 heater building	20x10x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	2,000.00	CF	\$0.24	\$486.80
--Equipment	10x5x5	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	250.00	CF	\$0.24	\$60.85
--Slab	20x20x 6 in	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	400.00	SF	\$1.24	\$495.88
--Footers	80 lf x1	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	80.00	LF	\$4.96	\$396.72
--Buried HDPE pipe	20 lf x 8 in diam	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	20.00	LF	\$4.51	\$90.14
Shaft 2 modifications (MR-353) - Building	20x20x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	4,000.00	CF	\$0.24	\$973.60
-Slab	20x20x6 in	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	400.00	SF	\$1.24	\$495.88
-Footers	12 lf x 1 ft	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	12.00	LF	\$4.96	\$59.51
-Buried HDPE pipe	60 lf x 8 in diam	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	60.00	LF	\$4.51	\$270.41
Nitrogen supply facility - Building (MR-353)	36x72x12	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	31,882.00	CF	\$0.24	\$7,760.08
-Slab	36x72x1	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	2,592.00	SF	\$2.48	\$6,426.86
-Footers	2x3x268 lf	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	268.00	LF	\$4.96	\$1,329.01

-Buried aluminum pipe	60 lf x 6 in diam	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	60.00	LF	\$4.51	\$270.41
Culverts	12" diam	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	57.00	LF	\$5.91	\$336.79
Culverts	15" diam	Pipe, corrugated metal (CMP) - 15 in. diameter pipe	30.00	LF	\$6.97	\$209.03
Culverts	18" diam	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	253.00	LF	\$8.10	\$2,048.59
Culverts	21" diam	Pipe, corrugated metal (CMP) - 21 in. diameter pipe	151.00	LF	\$9.28	\$1,400.63
Culverts	24" diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	324.00	LF	\$10.60	\$3,432.81
Culverts	30" diam	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	860.00	LF	\$13.98	\$12,022.54
Culverts	36" diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	36.00	LF	\$16.96	\$610.57
Culverts	48" diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	140.00	LF	\$24.52	\$3,433.16
Culverts	60" diam	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	54.00	LF	\$33.06	\$1,785.38
Culverts	72" diam	Pipe, corrugated metal (CMP) - 72 in. diameter pipe	122.00	LF	\$43.42	\$5,296.94
Culverts	84" diam	Pipe, corrugated metal (CMP) - 84 in. diameter pipe	234.00	LF	\$53.60	\$12,542.38
Concrete pad, 2250 kw generator (MR-362)	78x15x1.5	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	1,170.00	SF	\$2.48	\$2,901.02
Steel housing, 2250 kw generator (MR-362)	31x10.5x12.3	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	3,987.00	CF	\$0.26	\$1,017.48
Steel fuel tanks, 2250 kw generator (MR-362)	34x10.67x4.8	Haul tank to certified salvage dump - 9,000 to 12,000 gal. tank	1.00	EA	\$1,050.00	\$1,050.00
Steel housing for transformer/control unit (MR-362)	40x8x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	3,040.00	CF	\$0.26	\$775.81
Concrete pad for 50 kw generator (MR-362)	11x4x1	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	44.00	SF	\$2.48	\$109.10
Fuel tanks for 50 kw generator	10.8x3.33x6.75	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	1.00	EA	\$760.00	\$760.00
Syl. G. Substation	8x32x1	Demo. and on-site	256.00	SF	\$2.48	\$634.75

slab, added in MR-370		disposal in excavated pit, 12 in. thick - Max. 200 ft. push				
Lower mine water treatment pond-Fence	900 lf	Fencing, chain link, including posts and fabric - to 6 ft. high	900.00	LF	\$3.02	\$2,718.00
-Electrical controls building	12x12x8	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	1,152.00	CF	\$0.24	\$280.40
-Inlet pipe	33x 48 in diam	Pipe, reinforced concrete (RCP) - 48 in. diameter pipe	33.00	LF	\$79.73	\$2,630.99
-Outlet pipe	280x 12 in diam	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	280.00	LF	\$5.91	\$1,654.41
Demolish addition to NiGen building (MR-393)	16' x 58' x 15'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	13,920.00	CF	\$0.24	\$3,388.13
-Demolish and dispose of floor	16' x 58' x 0.42'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	928.00	SF	\$1.16	\$1,073.23
-Demolish and dispose of footers	16' x 58' x 16"	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	90.00	LF	\$4.63	\$416.35
Second rock dust bin superstructure (MR-466)	10.5' dia x 36.5' h	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	1,204.00	CF	\$0.35	\$418.51
-Floor	33'3" x 33'3" x 2'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	2,178.00	SF	\$2.31	\$5,037.93
-Footing (piers)	1'10" 1'6" x 2' x 4	Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft. - Max. 10,000 ft. haul	8.00	LF	\$6.94	\$55.51
Box Canyon Well Pumphouse (MR-474)	20'x30'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	12,000.00	CF	\$0.24	\$2,920.80
-Pumphouse Foundation	133 cy	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	3,591.00	SF	\$2.31	\$8,306.34

**Job Hours:** 335.03

**Subtotal (unadjusted):** \$303,675.28

**Total Cost (adjusted for location):** \$277,255.53

## SAFEGUARDING UNDERGROUND OPENINGS

Task description: Seal Sly Gulch Vent Shafts

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 301A

State: Colorado

Abbreviation: None

Date: 1/29/2025

County: Delta

Filename: MT9C-301a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Opening Description</b>	<b>Dimensions</b>	<b>Closure Method</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Shaft #1 steel beams (see Ex 69)	34ft dia, beams @3ft c-c	Steel Support Beam W 14X30	303.00	LF	\$62.23	\$18,855.69
Shaft #2 steel beams	28ft dia, beams @3ft c-c	Steel Support Beam W 14X30	205.00	LF	\$62.23	\$12,757.15
Shaft #3 steel beams	10ft dia, beams @2ft c-c	Steel Support Beam W 10X15	39.00	LF	\$38.85	\$1,515.15
Shaft #1 concrete plug	34ft dia x 7ft depth	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	6,355.00	CF	\$19.53	\$124,113.15
Shaft #2 concrete plug	28ft dia x 7ft depth	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	4,310.00	CF	\$19.53	\$84,174.30
Shaft #3 concrete plug	10ft dia x 7ft depth	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	550.00	CF	\$19.53	\$10,741.50
Shaft #1 backfill	34ft dia x 3ft depth	Shaft closure - backfilling, Machine Backfill	303.00	CY	\$12.50	\$3,787.50
Shaft #2 backfill	28ft dia x 3ft depth	Shaft closure - backfilling, Machine Backfill	205.00	CY	\$12.50	\$2,562.50
Shaft #3 backfill	10ft dia x 3ft depth	Shaft closure - backfilling, Machine Backfill	26.00	CY	\$12.50	\$325.00

**Job Hours:** 40.00

**Total Cost:** \$258,831.94

## BOREHOLE SEALING WORK

Task description: Seal Sly Gulch Boreholes (Electric, De-gas, Concrete)

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 301B  
Date: 1/29/2025  
User: LDS

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: MT9C-301b

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bottom Plug (Electric, De-Gas)	PVC plug - 12 in. diameter borehole	11"	NA	2.00	EA	\$167.62	\$335.25
Fill Holes with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	11"	1305'	849.00	bag	\$22.00	\$18,678.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	NA	11.00	LF	\$3.23	\$35.53
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	3.00	EA	\$46.00	\$138.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	13.88	EA	\$587.96	\$8,160.88
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	13.88	EA	\$55.22	\$766.45
Bottom Plug (Concrete delivery)	PVC plug - 8 in. diameter borehole	7"	NA	1.00	EA	\$89.31	\$89.31

**Job Hours:** 13.88

**Total Cost:** \$28,203.00

## BOREHOLE SEALING WORK

Task description: Seal Sly Gulch Dewatering Wells 1-4

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 301C  
Date: 1/29/2025  
User: LDS

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: MT9C-301c

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Plug @ 10' (1, 2, 3)	PVC plug - 12 in. diameter borehole	18"	NA	3.00	EA	\$167.62	\$502.87
Cement plug 10' - 3'	Portland cement grout ( Bag, material cost only...94 lb. bag)	18"	7'	37.00	bag	\$22.00	\$814.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	24"	NA	24.00	LF	\$3.23	\$77.52
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	4.00	EA	\$46.00	\$184.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	0.22	EA	\$587.96	\$129.35
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	0.22	EA	\$55.22	\$12.15
Plug @ 10' (4)	PVC plug - 12 in. diameter borehole	12"	NA	1.00	EA	\$167.62	\$167.62

Job Hours: 0.22

Total Cost: \$1,888.00

## BOREHOLE SEALING WORK

Task description: Box Canyon Well: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 301D

State: Colorado

Abbreviation: None

Date: 1/27/2025

County: Gunnison

Filename: C007-301d

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 12 in. diameter borehole	12"	0	1.00	EA	\$167.62	\$167.62
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	18"	365	561.00	bag	\$22.00	\$12,342.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	20"	5	5.00	LF	\$3.23	\$16.15
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$46.00	\$46.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	2.92	EA	\$587.96	\$1,716.84
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	2.92	EA	\$55.22	\$161.24

**Job Hours:** 2.92

**Total Cost:** \$14,450.00

## BOREHOLE SEALING WORK

Task description: Box Canyon North Monitoring Hole: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 301E  
Date: 1/27/2025  
User: LDS

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: C007-301e

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 6 in. diameter borehole	6.25	0	1.00	EA	\$65.19	\$65.19
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	6.25	330	61.00	bag	\$22.00	\$1,342.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	6.25	2	2.00	LF	\$3.23	\$6.46
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$46.00	\$46.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	2.64	EA	\$587.96	\$1,552.21
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	2.64	EA	\$55.22	\$145.78

**Job Hours:** 2.64

**Total Cost:** \$3,158.00

**BULLDOZER RIPPING WORK**

Task description: Rip substation road

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 302 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-302  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.08 acres Rip Depth (ft): 2.00 Volume: 258 BCY or CCY

Source of estimated quantity: Map 53

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 0.03 Hours

Unit cost: \$696.756 Per acre Total job cost: \$56

**BULLDOZER WORK**

Task description: Regrade main access road to substation

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 303 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-303  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 1,722  
 Swell factor: 1.165  
 Loose volume: 2,006 LCY

Source of estimated volume: Permit volume 7, Exhibit 43d  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 30 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.1059

Adjusted unit production: 223.50 LCY/hr

Adjusted fleet production: 894 LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$2.167/LCY

Total job time: 2.24 Hours

Total job cost: \$4,348

**BULLDOZER RIPPING WORK**

Task description: Rip Sylvester Gulch fan pad and road

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 304 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-304  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.75 acres Rip Depth (ft): 2.00 Volume: 2,420 BCY or CCY

Source of estimated quantity: Map 53

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 0.27 Hours

Unit cost: \$696.756 Per acre Total job cost: \$523

**BULLDOZER WORK**

Task description: Backfill Sylvester Gulch fan pad

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 305 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-305  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 2,099  
 Swell factor: 1.165  
 Loose volume: 2,445 LCY

Source of estimated volume: Permit volume 7, Exhibit 43f  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3352

Adjusted unit production: 707.44 LCY/hr

Adjusted fleet production: **2829.76** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.685/LCY

Total job time: **0.86** Hours

Total job cost: **\$1,674**

**SCRAPER TEAM WORK**

Task description: Replace topsoil f/ stockpile to Shaft #3 pad & light use rd.

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 307 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-307  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 5,500 CCY Swell factor: 1.250  
 Loose volume: 6,875 LCY

Source of estimated volume: Exhibit 69 haul TS from SGTS pile 1, p. 5  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		Scraper Bowl (volume) Basis:	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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	4500.00	4.60	4.00	8.60	1042	4.36

Haul Time: 4.36 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4500.00	-4.60	4.00	-0.60	2972	1.56

Return Time: 1.56 minutes

Total Scraper team cycle time: 7.52 minutes  
 Adjusted for job conditions: 384.10 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 384.10 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 384.10 LCY/Hour

Unadjusted unit production/hour: 462.77 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 17.90 Hours  
 Unit cost: \$3.289 /LCY Total job cost: \$22,609

**BULLDOZER WORK**Task description: Push topsoil at Shaft #3 area back on Shaft #3 padSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 307AState: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-307aUser: LDSAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$1.90	20
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$476.78Total Fleet Cost/Hour: \$1,907.13**MATERIAL QUANTITIES**Initial Volume: 4,500Swell factor: 1.125Loose volume: 5,063 LCYSource of estimated volume: Exhibit 69, Shaft #3 descriptionSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: -5 %Average site altitude: 7,000 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(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:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5509

Adjusted unit production: 1,162.67 LCY/hr

Adjusted fleet production: **4650.68** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.410/LCY

Total job time: **1.09** Hours

Total job cost: **\$2,076**

**BULLDOZER WORK**

Task description: Regrade shaft #3 pad and roads

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 308 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-308  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 151,000  
 Swell factor: 1.330  
 Loose volume: 200,830 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 30 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.700	(FND-MF)
Push gradient:	0.298	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.0927

Adjusted unit production: 115.24 LCY/hr

Adjusted fleet production: **460.96 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$4.203/LCY

Total job time: **435.68 Hours**

Total job cost: **\$844,109**

## COMPACTION WORK

Task description: Compact backfilled material at Shaft #3 pad and roads

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 309 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-309  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H Horsepower: 354  
Compactor Type: Soil - tamping foot Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 200,830 LCY Shrinkage factor: 0.875  
Compacted volume: 175,726 CCY

Source of estimated volume: Operator estimate  
Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production = (W x S x L x C) / P

Compacted width per pass (W): 7.34 feet  
Average Compactor Speed (S): 4.00 mph  
Compacted thickness of each lift (L): 10.00 inches  
Conversion Constant (C): 16.3 (5,280ft./12in./27cu.ft.)  
Required number of machine passes (P): 4 passes  
Unadjusted Hourly Unit Production: 1,196.42 CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.8300</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 993.03 CCY/Hour  
Adjusted Hourly Fleet Production: 1,986.06 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s) Total job time: 88.48 Hours

Unit cost: \$0.354 per CCY Total job cost: \$62,172

**BULLDOZER RIPPING WORK**

Task description: Rip shaft #3 and roads

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 310 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-310  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 3.50 acres Rip Depth (ft): 2.00 Volume: 11,293 BCY or CCY

Source of estimated quantity: Map 53

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 1.26 Hours

Unit cost: \$696.756 Per acre Total job cost: \$2,439

TRUCK/LOADER TEAM WORKTask description: Haul Shaft #3 backfill from Shafts #1 & #2 (Task 228, PR-7)Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007PROJECT IDENTIFICATION

Task #: 311 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-311  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	70	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$115.05	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$416.27	\$465.58	NA	NA
Number of Units:	5	1	1	1	0	0
Group Subtotals:	Work: \$555.28		Support: \$881.85		Maint: \$0.00	

Total work team cost/hour: \$1,437.13MATERIAL QUANTITIES

Initial volume: 140,000 CCY Swell factor: 1.330  
 Loose volume: 186,200 LCY

Source of estimated volume: Exhibit 69 p.14, Map 53B  
 Source of estimated swell factor: Cat Handbook  
 Material Purchase Cost: \$0.00  
 Total Cost: \$0.00

HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,900 Pounds/LCY  
 Description: Decomposed rock - 50% Rock, 50% Earth  
 Rated Payload: 35,400 Pounds  
 Payload Capacity: 12.21 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2400.00	6.50	3.00	9.50	1068	2.261

Haul Time: 2.261 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2400.00	-6.50	3.00	-3.50	2938	0.864

Return Time: 0.864 minutes

Total Truck Cycle Time: 5.065 minutes

Loading Tool unit Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production 106.61 LCY/Hour      Adjusted for job efficiency: 88.49 LCY/Hour  
 Optimal No. of Trucks: 5 Truck(s)      Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 442.45 LCY/Hour  
 Adjusted single truck/loader team production: 430.96 LCY/Hour  
 Adjusted multiple truck/loader team production: 430.96 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 432.06 Hours  
 Unit cost: \$3.335 /LCY      Total job cost: \$620,922

**BULLDOZER WORK**

Task description: Regrade material at Sylvester Gulch light-use road upgrade

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 313 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-313  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 5,520  
 Swell factor: 1.330  
 Loose volume: 7,342 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 5 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3209

Adjusted unit production: 677.26 LCY/hr

Adjusted fleet production: **2709.04 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.715/LCY

Total job time: **2.71 Hours**

Total job cost: **\$5,251**

**SCRAPER TEAM WORK**

Task description: Replace topsoil f/ stockpile to fill light use rd. expansion

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 314 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-314  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 833 CCY Swell factor: 1.250  
 Loose volume: 1,041 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		Scraper Bowl (volume) Basis:	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	200.00	4.60	5.00	9.60	922	0.24

Haul Time: 0.24 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	200.00	-4.60	5.00	0.40	2965	0.18

Return Time: 0.18 minutes

Total Scraper team cycle time: 2.02 minutes  
 Adjusted for job conditions: 1,429.90 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 1,429.90 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 1,429.90 LCY/Hour

Unadjusted unit production/hour: 1,722.77 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 0.73 Hours  
 Unit cost: \$0.883 /LCY Total job cost: \$920

## COMPACTION WORK

Task description: Compact backfill on widened portion of Syl. G. light use rd

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 315 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-315  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H Horsepower: 354  
Compactor Type: Soil - tamping foot Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 7,342 LCY Shrinkage factor: 0.875  
Compacted volume: 6,424 CCY

Source of estimated volume: Division estimate  
Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production = (W x S x L x C) / P

Compacted width per pass (W): 7.34 feet  
Average Compactor Speed (S): 4.00 mph  
Compacted thickness of each lift (L): 10.00 inches  
Conversion Constant (C): 16.3 (5,280ft./12in./27cu.ft.)  
Required number of machine passes (P): 4 passes  
Unadjusted Hourly Unit Production: 1,196.42 CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.8300</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 993.03 CCY/Hour  
Adjusted Hourly Fleet Production: 1,986.06 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s) Total job time: 3.23 Hours

Unit cost: \$0.354 per CCY Total job cost: \$2,273

**BULLDOZER WORK**

Task description: Backfill and regrade DMEA powerline road

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 316 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-316  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 270  
 Swell factor: 1.330  
 Loose volume: 359 LCY

Source of estimated volume: MR-240  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 15 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2367

Adjusted unit production: 294.27 LCY/hr

Adjusted fleet production: **1177.08** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.646/LCY

Total job time: **0.31** Hours

Total job cost: **\$591**

**SCRAPER TEAM WORK**

Task description: Replace topsoil f/ stockpile to power pole roads 9 and 11-16

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 317 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-317  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 470 CCY Swell factor: 1.125  
 Loose volume: 529 LCY

Source of estimated volume: Exhibit 69, Table 2  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		Scraper Bowl (volume) Basis:	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	200.00	5.00	5.00	10.00	922	0.25
2	400.00	-15.00	5.00	-10.00	1628	0.34

Haul Time: 0.59 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	15.00	5.00	20.00	772	0.53
2	200.00	-5.00	5.00	0.00	2965	0.15

Return Time: 0.68 minutes

Total Scraper team cycle time: 2.87 minutes  
 Adjusted for job conditions: 1,006.41 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 1,006.41 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 1,006.41 LCY/Hour

Unadjusted unit production/hour: 1,212.54 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 0.53 Hours

Unit cost: \$1.255 /LCY Total job cost: \$664

**REVEGETATION WORK**Task description: Reveg RPE, Haul Rd., NSS Area, all Syl. Gul. fac.&ext rdSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 318State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-318User: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium sulfate, 21-0-0 with 24% S	50.00	pound	\$0.55	\$27.30
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$27.30</b>

**Application**

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$43.12
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$43.12</b>

**TILLING**

Description	Cost /Acre
Chisel plowing {DMG}	\$102.41
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
<b>Total Tilling Cost/Acre</b>	<b>\$220.02</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	3.00	9.78	\$41.52
Arizona Fescue - Redondo	0.50	5.74	\$7.53
Bluebunch Wheatgrass - Secar	3.00	9.64	\$31.54
Aster, Engleman's	0.50	2.38	\$113.44
Indian Ricegrass - Native	1.50	4.86	\$25.94
Sand Dropseed	0.10	11.94	\$1.30
Mountain Brome - Bromar	4.00	6.43	\$24.07
Kentucky Bluegrass - Lato	3.00	148.07	\$11.07
Burnett, Small (or Little) - Delar	0.50	0.63	\$2.23
Pubescent Wheatgrass - VNS	3.00	6.20	\$16.93

Streambank Wheatgrass - Sodar	3.00	9.78	\$24.91
Thickspike Wheatgrass - Critana	3.00	10.61	\$24.45
Coreopsis, Plains	0.50	15.86	\$32.08
Western Wheatgrass - Arriba	3.00	7.58	\$27.10
Vetch, American	1.00	0.45	\$123.12
Flax, Lewis Blue	0.25	1.66	\$10.57
Globemallow, Scarlet (or copper)	0.50	5.66	\$92.78
Penstemon, Rocky Mountain	0.25	3.92	\$15.35
<b>Totals Seed Mix</b>	30.60	261.18	<b>\$625.93</b>

**Application**

<b>Description</b>	<b>Cost /Acre</b>
	\$
<b>Total Seed Application Cost/Acre</b>	<b>\$0.00</b>

**MULCHING and MISCELLANEOUS****Materials**

<b>Description</b>	<b>Units / Acre</b>	<b>Unit</b>	<b>Cost / Unit</b>	<b>Cost /Acre</b>
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
<b>Total Mulch Materials Cost/Acre</b>				<b>\$985.56</b>

**Application**

<b>Description</b>	<b>Cost /Acre</b>
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
<b>Total Mulch Application Cost/Acre</b>	<b>\$242.63</b>

**NURSERY STOCK PLANTING**

<b>Common Name</b>	<b>No / Acre</b>	<b>Type and Size</b>	<b>Planting Cost</b>	<b>Fertilizer Pellet Cost</b>	<b>Cost /Acre</b>
Chokecherry	250	Tubling, 10 cu. in. container {(MEANS)}	\$2.37	\$0.00	\$592.50
Oak, Gambel's	150	Tubling, 10 cu. in. container {(MEANS)}	\$2.72	\$0.00	\$408.00
Rabbitbrush, Rubber	50	Tubling, 10 cu. in. container {(MEANS)}	\$2.39	\$0.00	\$119.50
Rose, Wood's	250	Tubling, 10 cu. in. container {(MEANS)}	\$2.37	\$0.00	\$592.50
Serviceberry	250	Tubling, 10 cu. in. container {(MEANS)}	\$2.37	\$0.00	\$592.50
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$2,305.00</b>

**JOB TIME AND COST**No. of Acres: 96.78Cost /Acre: \$4,449.56

Estimated Failure Rate:	<u>50%</u>	Cost /Acre*:	<u>\$3,001.35</u>
*Selected Replanting Work Items:	<u>FERTILIZING,SEEDING,NURSERY</u>		

Initial Job Cost:	<u>\$430,628.42</u>
Reseeding Job Cost:	<u>\$145,235.33</u>
Total Job Cost:	<u>\$575,864</u>
Job Hours:	<u>193.56</u>

TRUCK/LOADER TEAM WORKTask description: Move topsoil f/stockpile to shaft site and electric b.h. rdSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 319State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-319User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	3	1	1	1	0	0
Group Subtotals:	Work: \$389.52		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,320.68MATERIAL QUANTITIESInitial volume: 46,000

CCY

Swell factor: 1.125Loose volume: 51,750

LCY

Source of estimated volume: Page 2.02-53Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,550

Pounds/LCY

Description: Earth - Dry packedRated Payload: 35,400

Pounds

Payload Capacity: 13.88

LCY



Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	0.00	3.00	3.00	2824	0.420

Haul Time: 0.420 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	0.00	3.00	3.00	2874	0.339

Return Time: 0.339 minutes

Total Truck Cycle Time: 2.699 minutes

Loading Tool unit  
 Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production  
200.07 LCY/Hour      Adjusted for job efficiency: 166.06 LCY/Hour  
 Optimal No. of Trucks: 3 Truck(s)      Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 498.18 LCY/Hour  
 Adjusted single truck/loader team production: 430.96 LCY/Hour  
 Adjusted multiple truck/loader team production: 430.96 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 120.08 Hours  
 Unit cost: \$3.064 /LCY      Total job cost: \$158,588

TRUCK/LOADER TEAM WORKTask description: Replace topsoil f/stockpile #1Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 320State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-320User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description	
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4	
-Loader:		CAT 966H	
Support Equipment -Load Area:		Cat D9T - 9SU	
-Dump Area:		Cat D9T - 9SU	
Road Maintenance -Motor Grader:		NA	
-Water Truck:		NA	

Cost Breakdown:

## Truck/Loader Team

## Support Equipment

## Maintenance Equipment

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	3	1	1	1	0	0
Group Subtotals:	Work: \$389.52		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,320.68MATERIAL QUANTITIESInitial volume: 11,000

CCY

Swell factor: 1.125Loose volume: 12,375

LCY

Source of estimated volume: Page 2.02-53Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,550

Pounds/LCY

Description: Earth - Dry packedRated Payload: 35,400

Pounds

Payload Capacity: 13.88

LCY



Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	-10.00	3.00	-7.00	2367	0.509

Haul Time: 0.509 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	10.00	3.00	13.00	1384	0.728

Return Time: 0.728 minutes

Total Truck Cycle Time: 3.177 minutes

Loading Tool unit  
 Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production  
169.97 LCY/Hour      Adjusted for job efficiency: 141.08 LCY/Hour  
 Optimal No. of Trucks: 3 Truck(s)      Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 423.23 LCY/Hour  
 Adjusted single truck/loader team production: 423.23 LCY/Hour  
 Adjusted multiple truck/loader team production: 423.23 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 29.24 Hours  
 Unit cost: \$3.120 /LCY      Total job cost: \$38,616

TRUCK/LOADER TEAM WORKTask description: Replace topsoil f/stockpile #3Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 321State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-321User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description	
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4	
-Loader:		CAT 966H	
Support Equipment -Load Area:		Cat D9T - 9SU	
-Dump Area:		Cat D9T - 9SU	
Road Maintenance -Motor Grader:		NA	
-Water Truck:		NA	

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	3	1	1	1	0	0
Group Subtotals:	Work: \$389.52		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,320.68MATERIAL QUANTITIESInitial volume: 35,710

CCY

Swell factor: 1.125Loose volume: 40,174

LCY

Source of estimated volume: Page 2.02-53Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,550

Pounds/LCY

Description: Earth - Dry packedRated Payload: 35,400

Pounds

Payload Capacity: 13.88

LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) <u>0.900</u>
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1950.00	-3.80	3.00	-0.80	2938	0.714

Haul Time: 0.714 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1950.00	3.80	3.00	6.80	2555	0.785

Return Time: 0.785 minutes

Total Truck Cycle Time: 3.439 minutes

Loading Tool unit  
 Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production  
157.02 LCY/Hour      Adjusted for job efficiency: 130.33 LCY/Hour  
 Optimal No. of Trucks: 3 Truck(s)      Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 390.99 LCY/Hour  
 Adjusted single truck/loader team production: 390.99 LCY/Hour  
 Adjusted multiple truck/loader team production: 390.99 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 102.75 Hours  
 Unit cost: \$3.378 /LCY      Total job cost: \$135,700

TRUCK/LOADER TEAM WORKTask description: Replace topsoil f/stockpile 4Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 322State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-322User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description	
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4	
-Loader:		CAT 966H	
Support Equipment -Load Area:		Cat D9T - 9SU	
-Dump Area:		Cat D9T - 9SU	
Road Maintenance -Motor Grader:		NA	
-Water Truck:		NA	

Cost Breakdown:

## Truck/Loader Team

## Support Equipment

## Maintenance Equipment

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	5	1	1	1	0	0
Group Subtotals:	Work: \$555.28		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,486.44MATERIAL QUANTITIESInitial volume: 2,000

CCY

Swell factor: 1.125Loose volume: 2,250

LCY

Source of estimated volume: Page 2.02-53Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,550

Pounds/LCY

Description: Earth - Dry packedRated Payload: 35,400

Pounds

Payload Capacity: 13.88

LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	14.20	3.00	17.20	650	1.543

Haul Time: 1.543 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2100.00	-14.20	3.00	-11.20	2367	0.950

Return Time: 0.950 minutes

Total Truck Cycle Time: 4.433 minutes

Loading Tool unit Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production 121.81 LCY/Hour      Adjusted for job efficiency: 101.11 LCY/Hour  
 Optimal No. of Trucks: 4 Truck(s)      Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 505.53 LCY/Hour  
 Adjusted single truck/loader team production: 430.96 LCY/Hour  
 Adjusted multiple truck/loader team production: 430.96 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 5.22 Hours  
 Unit cost: \$3.449 /LCY      Total job cost: \$7,761

TRUCK/LOADER TEAM WORKTask description: Haul backfill material to Main Access Road Stations 58-92Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 323State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-323User: LDSAgency or organization name: Division of Reclamation, Mining and SafetyHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description	
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4	
-Loader:		CAT 966H	
Support Equipment -Load Area:		Cat D9T - 9SU	
-Dump Area:		Cat D9T - 9SU	
Road Maintenance -Motor Grader:		NA	
-Water Truck:		NA	

Cost Breakdown:

## Truck/Loader Team

## Support Equipment

## Maintenance Equipment

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	3	1	1	1	0	0
Group Subtotals:	Work: \$389.52		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,320.68MATERIAL QUANTITIESInitial volume: 10,444

CCY

Swell factor: 1.125Loose volume: 11,750

LCY

Source of estimated volume: Table 2, Exhibit 69Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,550

Pounds/LCY

Description: Earth - Dry packedRated Payload: 35,400

Pounds

Payload Capacity: 13.88

LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	10.00	3.00	13.00	834	1.207

Haul Time: 1.207 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	-10.00	3.00	-7.00	2938	0.410

Return Time: 0.410 minutes

Total Truck Cycle Time: 3.557 minutes

Loading Tool unit  
 Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production  
151.81 LCY/Hour      Adjusted for job efficiency: 126.01 LCY/Hour  
 Optimal No. of Trucks: 3 Truck(s)      Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 378.02 LCY/Hour  
 Adjusted single truck/loader team production: 378.02 LCY/Hour  
 Adjusted multiple truck/loader team production: 378.02 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 31.08 Hours  
 Unit cost: \$3.494 /LCY      Total job cost: \$41,049

**BULLDOZER WORK**

Task description: Regrade ventilation shaft site

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 325 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-325  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 40,000  
 Swell factor: 1.165  
 Loose volume: 46,600 LCY

Source of estimated volume: Exhibit 69, Table 2  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 300 feet  
 Unadjusted hourly production: 437.8 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 5 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.700	(FND-MF)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2808

Adjusted unit production: 122.93 LCY/hr

Adjusted fleet production: **491.72 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$3.940/LCY

Total job time: **94.77 Hours**

Total job cost: **\$183,612**

**BULLDOZER WORK**

Task description: Regrade light use roads from PR-7

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 326 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-326  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 22,815  
 Swell factor: 1.165  
 Loose volume: 26,579 LCY

Source of estimated volume: Exhibit 69, Table 2  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 200 feet  
 Unadjusted hourly production: 700.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 5 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.600	(POOR)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2311

Adjusted unit production: 161.77 LCY/hr

Adjusted fleet production: **647.08 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$2.994/LCY

Total job time: **41.08 Hours**

Total job cost: **\$79,583**

**BULLDOZER WORK**

Task description: Regrade main access road from stations 58-92

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 327 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-327  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 10,444  
 Swell factor: 1.165  
 Loose volume: 12,167 LCY

Source of estimated volume: Exhibit 69, Table 2  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 300 feet  
 Unadjusted hourly production: 437.8 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2414

Adjusted unit production: 105.68 LCY/hr

Adjusted fleet production: **422.72 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$4.583/LCY

Total job time: **28.78 Hours**

Total job cost: **\$55,766**

**BULLDOZER WORK**

Task description: Regrade main road from stations 7-58

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 328 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-328  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 18,519  
 Swell factor: 1.165  
 Loose volume: 21,575 LCY

Source of estimated volume: Exhibit 69, Table 2  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 300 feet  
 Unadjusted hourly production: 437.8 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 5 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3209

Adjusted unit production: 140.49 LCY/hr

Adjusted fleet production: **561.96 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$3.448/LCY

Total job time: **38.39 Hours**

Total job cost: **\$74,383**

**BULLDOZER WORK**

Task description: Regrade substation access road, PR-7

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 329 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-329  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 4,200  
 Swell factor: 1.165  
 Loose volume: 4,893 LCY

Source of estimated volume: Exhibit 69, Table 2  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 300 feet  
 Unadjusted hourly production: 437.8 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2794

Adjusted unit production: 122.32 LCY/hr

Adjusted fleet production: **489.28 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$3.960/LCY

Total job time: **10.00 Hours**

Total job cost: **\$19,375**

## MOTOR GRADER WORK

Task description: Rip all SGFA disturbance areas

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 330

State: Colorado

Abbreviation: None

Date: 1/29/2025

County: Gunnison

Filename: MT9C-330

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 14M

Horsepower: 259

Ripper Attachment: Multi-Shank Ripper

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:	\$5.75	NA
Ripper Operating Cost/Hour:	\$4.18	100
Operator Cost/Hour:	\$27.76	NA
Total Unit Cost/Hour:	\$256.63	
Total Fleet Cost/Hour:	<b>\$256.63</b>	

### MATERIAL QUANTITIES

Total Area to be graded or ripped: 29.30 acres

Source of estimated acreage: Exhibit 69, Table 2

### 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: 6300 feet

Altitude Adj:	<u>1.00</u>	Source
Job Efficiency:	<u>0.85</u>	(CAT HB)
Net Correction:	<u>0.8500</u>	(1sh/d, mod.)
		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: 18.77 Hours

Unit cost: \$164.41 per acre Total job cost: \$4,817

## HYDRAULIC EXCAVATOR WORK

Task description: Pull up material for light use road reclamation

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 331 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-331  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick Horsepower: 268  
Attachment 1: ROPS Cab Weight (MT): 29.30  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 22,800 CCY Swell factor: 1.165  
Loose volume: 26,562 LCY

Source of estimated volume: Exhibit 69, Table 2  
Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE  
Secondary Job Condition within Basic Description: SEVERE  
Cycle Time Value: 0.390 minutes

#### Load Bucket Capacity

Rated Capacity: 2.26 LCY (heaped) Bucket Size Class: Medium  
Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850  
Adjusted Capacity: 1.92 LCY

#### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 295.54 LCY/Hour  
Adjusted Hourly Unit Production: 245.30 LCY/Hour  
Adjusted Hourly Fleet Production: 245.30 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 108.29 Hours  
Unit cost: \$2.025 /LCY Total job cost: \$53,780

## COMPACTION WORK

Task description: Compact shaft backfill material

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 332

State: Colorado

Abbreviation: None

Date: 1/29/2025

County: Gunnison

Filename: MT9C-332

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H

Horsepower: 354

Compactor Type: Soil - tamping foot

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 40,000

LCY

Shrinkage factor: 0.875

Compacted volume: 35,000

CCY

Source of estimated volume: Exhibit 69, Table 2

Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production =  $(W \times S \times L \times C) / P$

Compacted width per pass (W):	<u>7.34</u>	feet
Average Compactor Speed (S):	<u>4.00</u>	mph
Compacted thickness of each lift (L):	<u>10.00</u>	inches
Conversion Constant (C):	<u>16.3</u>	(5,280ft./12in./27cu.ft.)
Required number of machine passes (P):	<u>4</u>	passes
Unadjusted Hourly Unit Production:	<u>1,196.42</u>	CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.8300</u>	multiplier

Adjusted Hourly Unit Production: 993.03 CCY/Hour

Adjusted Hourly Fleet Production: 1,986.06 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s)

Total job time: 17.62 Hours

Unit cost: \$0.354 per CCY

Total job cost: \$12,383

## COMPACTION WORK

Task description: Compact substation backfill

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 333 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-333  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H Horsepower: 354  
Compactor Type: Soil - tamping foot Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 3,204 LCY Shrinkage factor: 0.875  
Compacted volume: 2,804 CCY

Source of estimated volume: Exhibit 69, Table 2

Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production =  $(W \times S \times L \times C) / P$

Compacted width per pass (W): 7.34 feet  
Average Compactor Speed (S): 4.00 mph  
Compacted thickness of each lift (L): 10.00 inches  
Conversion Constant (C): 16.3 (5,280ft./12in./27cu.ft.)  
Required number of machine passes (P): 4 passes  
Unadjusted Hourly Unit Production: 1,196.42 CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.8300</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 993.03 CCY/Hour

Adjusted Hourly Fleet Production: 1,986.06 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s) Total job time: 1.41 Hours

Unit cost: \$0.354 per CCY Total job cost: \$992

## COMPACTION WORK

Task description: Compact light use road material

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 334

State: Colorado

Abbreviation: None

Date: 1/29/2025

County: Gunnison

Filename: MT9C-334

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H

Horsepower: 354

Compactor Type: Soil - tamping foot

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 26,579

LCY

Shrinkage factor: 0.875

Compacted volume: 23,257

CCY

Source of estimated volume: Exhibit 69, Table 2

Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production =  $(W \times S \times L \times C) / P$

Compacted width per pass (W):	<u>7.34</u>	feet
Average Compactor Speed (S):	<u>4.00</u>	mph
Compacted thickness of each lift (L):	<u>10.00</u>	inches
Conversion Constant (C):	<u>16.3</u>	(5,280ft./12in./27cu.ft.)
Required number of machine passes (P):	<u>4</u>	passes
Unadjusted Hourly Unit Production:	<u>1,196.42</u>	CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.8300</u>	multiplier

Adjusted Hourly Unit Production: 993.03 CCY/Hour

Adjusted Hourly Fleet Production: 1,986.06 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s)

Total job time: 11.71 Hours

Unit cost: \$0.354 per CCY

Total job cost: \$8,228

## COMPACTION WORK

Task description: Compact substation road material

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 335

State: Colorado

Abbreviation: None

Date: 1/29/2025

County: Gunnison

Filename: MT9C-335

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H

Horsepower: 354

Compactor Type: Soil - tamping foot

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 4,893

LCY

Shrinkage factor: 0.875

Compacted volume: 4,281

CCY

Source of estimated volume: Exhibit 69, Table 2

Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production =  $(W \times S \times L \times C) / P$

Compacted width per pass (W):	<u>7.34</u>	feet
Average Compactor Speed (S):	<u>4.00</u>	mph
Compacted thickness of each lift (L):	<u>10.00</u>	inches
Conversion Constant (C):	<u>16.3</u>	(5,280ft./12in./27cu.ft.)
Required number of machine passes (P):	<u>4</u>	passes
Unadjusted Hourly Unit Production:	<u>1,196.42</u>	CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.8300</u>	multiplier

Adjusted Hourly Unit Production: 993.03 CCY/Hour

Adjusted Hourly Fleet Production: 1,986.06 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s)

Total job time: 2.16 Hours

Unit cost: \$0.354 per CCY

Total job cost: \$1,515

## COMPACTION WORK

Task description: Compact main access road backfill material

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 336 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-336  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H Horsepower: 354  
Compactor Type: Soil - tamping foot Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 12,167 LCY Shrinkage factor: 0.875  
Compacted volume: 10,646 CCY

Source of estimated volume: Division estimate  
Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production = (W x S x L x C) / P

Compacted width per pass (W): 7.34 feet  
Average Compactor Speed (S): 4.00 mph  
Compacted thickness of each lift (L): 10.00 inches  
Conversion Constant (C): 16.3 (5,280ft./12in./27cu.ft.)  
Required number of machine passes (P): 4 passes  
Unadjusted Hourly Unit Production: 1,196.42 CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.8300</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 993.03 CCY/Hour  
Adjusted Hourly Fleet Production: 1,986.06 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s) Total job time: 5.36 Hours

Unit cost: \$0.354 per CCY Total job cost: \$3,767

**BULLDOZER WORK**

Task description: Backfill intake and exhaust shafts, PR-7

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 337 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-337  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 169  
 Swell factor: 1.165  
 Loose volume: 197 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 200 feet  
 Unadjusted hourly production: 700.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

<u>Job Condition Correction Factor</u>		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	0.800	(POOR)

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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2843

Adjusted unit production: 199.01 LCY/hr

Adjusted fleet production: **796.04** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$2.434/LCY

Total job time: **0.25** Hours

Total job cost: **\$479**

**BULLDOZER WORK**

Task description: Regrade road to drill hole #4, MR-236

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 338 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-338  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 674  
 Swell factor: 1.330  
 Loose volume: 896 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4265

Adjusted unit production: 530.22 LCY/hr

Adjusted fleet production: **2120.88** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.914/LCY

Total job time: **0.42** Hours

Total job cost: **\$819**

**BULLDOZER WORK**

Task description: Replace topsoil from stockpile to drill pad #4, MR-236

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 339 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-339  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 506  
 Swell factor: 1.250  
 Loose volume: 633 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	0.800	(POOR)

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:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3881

Adjusted unit production: 819.09 LCY/hr

Adjusted fleet production: **3276.36** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.591/LCY

Total job time: **0.19** Hours

Total job cost: **\$374**

**BULLDOZER WORK**

Task description: Regrade SGFA dewatering facility structures

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 340 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-340  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 15,000  
 Swell factor: 1.330  
 Loose volume: 19,950 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 250 feet  
 Unadjusted hourly production: 546.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2794

Adjusted unit production: 152.55 LCY/hr

Adjusted fleet production: **610.2 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$3.175/LCY

Total job time: **32.69 Hours**

Total job cost: **\$63,344**

**SCRAPER TEAM WORK**

Task description: Replace topsoil f/ stockpile to SGFA dewatering facilities

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 341 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-341  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 4,200 CCY Swell factor: 1.125  
 Loose volume: 4,725 LCY

Source of estimated volume: Table 2  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		<u>Scraper Bowl (volume) Basis:</u>	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	575.00	-10.00	5.00	-5.00	2972	0.25

Haul Time: 0.25 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	575.00	10.00	5.00	15.00	1047	0.57

Return Time: 0.57 minutes

Total Scraper team cycle time: 2.42 minutes  
 Adjusted for job conditions: 1,193.55 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 1,193.55 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 1,193.55 LCY/Hour

Unadjusted unit production/hour: 1,438.02 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 3.96 Hours  
 Unit cost: \$1.058 /LCY Total job cost: \$5,000

**BULLDOZER RIPPING WORK**

Task description: Rip dewater. borehole pad, rd., rd. powerlines/switchgear,

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 342 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-342  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 1.00 acres Rip Depth (ft): 2.00 Volume: 3,227 BCY or CCY

Source of estimated quantity: Map 53

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 0.36 Hours

Unit cost: \$696.756 Per acre Total job cost: \$697

**BULLDOZER WORK**

Task description: Regrade access road to powerlines and switchgears

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 343 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-343  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 2,500  
 Swell factor: 1.165  
 Loose volume: 2,913 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 441.83 LCY/hr

Adjusted fleet production: **1767.32 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.096/LCY

Total job time: **1.65 Hours**

Total job cost: **\$3,193**

**SCRAPER TEAM WORK**

Task description: Remove base from light use roads to powerline/switchgear

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 344 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-344  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 250 CCY Swell factor: 1.000  
 Loose volume: 250 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		<u>Scraper Bowl (volume) Basis:</u>	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5100.00	-5.80	5.00	-0.80	2972	1.77

Haul Time: 1.77 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5100.00	5.80	5.00	10.80	1434	3.61

Return Time: 3.61 minutes

Total Scraper team cycle time: 6.98 minutes  
 Adjusted for job conditions: 413.81 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 413.81 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 413.81 LCY/Hour

Unadjusted unit production/hour: 498.57 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 0.60 Hours  
 Unit cost: \$3.052 /LCY Total job cost: \$763

**SCRAPER TEAM WORK**

Task description: Remove topsoil f/stockpile to l.use rd. for powerpoles 7 and

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 345 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-345  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 178 CCY Swell factor: 1.250  
 Loose volume: 223 LCY

Source of estimated volume: Page 2.05-53  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		Scraper Bowl (volume) Basis:	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	550.00	-2.70	5.00	2.30	2939	0.45

Haul Time: 0.45 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	550.00	2.70	5.00	7.70	1931	0.37

Return Time: 0.37 minutes

Total Scraper team cycle time: 2.42 minutes  
 Adjusted for job conditions: 1,193.55 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 1,193.55 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 1,193.55 LCY/Hour

Unadjusted unit production/hour: 1,438.02 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 0.19 Hours  
 Unit cost: \$1.058 /LCY Total job cost: \$235

**SCRAPER TEAM WORK**

Task description: Replace topsoil f/stockpile to french drains and trenches

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 346 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-346  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 3,388 CCY Swell factor: 1.250  
 Loose volume: 4,235 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		Scraper Bowl (volume) Basis:	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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	2000.00	-10.00	4.00	-6.00	2192	0.98

Haul Time: 0.98 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	10.00	4.00	14.00	1073	1.89

Return Time: 1.89 minutes

Total Scraper team cycle time: 4.47 minutes  
 Adjusted for job conditions: 646.17 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 646.17 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 646.17 LCY/Hour

Unadjusted unit production/hour: 778.52 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 6.55 Hours  
 Unit cost: \$1.955 /LCY Total job cost: \$8,279

**SCRAPER TEAM WORK**

Task description: Haul subsoil f/ live subsoil pile #1 to CSLY-4 excavation

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 347 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-347  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 592 CCY Swell factor: 1.250  
 Loose volume: 740 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		Scraper Bowl (volume) Basis:	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	6750.00	2.70	3.00	5.70	1477	4.64

Haul Time: 4.64 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	6750.00	-2.70	3.00	0.30	2965	2.39

Return Time: 2.39 minutes

Total Scraper team cycle time: 8.63 minutes  
 Adjusted for job conditions: 334.69 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 334.69 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 334.69 LCY/Hour

Unadjusted unit production/hour: 403.24 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 2.21 Hours  
 Unit cost: \$3.774 /LCY Total job cost: \$2,793

**SCRAPER TEAM WORK**

Task description: Replace topsoil from stockpile to CSLY-4 excavation

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 348 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-348  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 333 CCY Swell factor: 1.250  
 Loose volume: 416 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		Scraper Bowl (volume) Basis:	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8750.00	4.10	3.00	7.10	1362	6.50

Haul Time: 6.50 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8750.00	-4.10	3.00	-1.10	2972	3.04

Return Time: 3.04 minutes

Total Scraper team cycle time: 11.14 minutes  
 Adjusted for job conditions: 259.28 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 259.28 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 259.28 LCY/Hour

Unadjusted unit production/hour: 312.39 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 1.61 Hours  
 Unit cost: \$4.872 /LCY Total job cost: \$2,028

**BULLDOZER WORK**

Task description: Replace topsoil from stockpile to roads and powerpoles 9-17

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 349 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-349  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 412  
 Swell factor: 1.250  
 Loose volume: 515 LCY

Source of estimated volume: Page 2.05-53  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4492

Adjusted unit production: 948.04 LCY/hr

Adjusted fleet production: **3792.16** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.511/LCY

Total job time: **0.14** Hours

Total job cost: **\$263**

**BULLDOZER WORK**

Task description: Regrade dewatering boreholes and access roads (MR-212)

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 352 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-352  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 1,204  
 Swell factor: 1.330  
 Loose volume: 1,601 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 5 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3209

Adjusted unit production: 677.26 LCY/hr

Adjusted fleet production: **2709.04 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.715/LCY

Total job time: **0.59 Hours**

Total job cost: **\$1,145**

**BULLDOZER WORK**

Task description: Regrade dewatering borehole drill pads (MR-212)

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 353 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-353  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 6,666  
 Swell factor: 1.330  
 Loose volume: 8,866 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 200 feet  
 Unadjusted hourly production: 700.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 248.78 LCY/hr

Adjusted fleet production: 995.12 LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$1.947/LCY

Total job time: 8.91 Hours

Total job cost: \$17,261

**BULLDOZER WORK**Task description: Regrade ditch DCW-7Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 354State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-354User: LDSAgency or organization name: Division of Reclamation, Mining and Safety**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37Total Fleet Cost/Hour: \$1,937.46**MATERIAL QUANTITIES**Initial Volume: 444Swell factor: 1.330Loose volume: 591 LCYSource of estimated volume: Division estimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 6,300 feetMaterial weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4344

Adjusted unit production: 916.80 LCY/hr

Adjusted fleet production: **3667.2 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.528/LCY

Total job time: **0.16 Hours**

Total job cost: **\$312**

**SCRAPER TEAM WORK**

Task description: Replace topsoil from stockpile to CSLY-4 excavation

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 355 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-355  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 778 CCY Swell factor: 1.250  
 Loose volume: 973 LCY

Source of estimated volume: Operator estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		<u>Scraper Bowl (volume) Basis:</u>	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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	225.00	-8.80	4.00	-4.80	2972	0.11

Haul Time: 0.11 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	225.00	8.80	4.00	12.80	1201	0.22

Return Time: 0.22 minutes

Total Scraper team cycle time: 1.93 minutes  
 Adjusted for job conditions: 1,496.58 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 1,496.58 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 1,496.58 LCY/Hour

Unadjusted unit production/hour: 1,803.11 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 0.65 Hours  
 Unit cost: \$0.844 /LCY Total job cost: \$821

**SCRAPER TEAM WORK**

Task description: Remove roadbase from dewatering borehole road to pad

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 356 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-356  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT**

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
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	NA	NA	NA	NA	NA
Ownership cost/hour:	\$281.32	NA	NA	NA	NA	NA
Operating cost/hour:	\$319.35	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$631.57	NA	NA	NA	NA	NA
Number of Units:	2	0	0	0	0	0
Group Subtotals:	Work:	\$1,263.14	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,263.14

**MATERIAL QUANTITIES**

Initial volume: 216 CCY Swell factor: 1.000  
 Loose volume: 216 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

		<u>Scraper Bowl (volume) Basis:</u>	
Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u> LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u> LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u> LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u> LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6300 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	225.00	8.80	4.00	12.80	710	0.33

Haul Time: 0.33 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	225.00	-8.80	4.00	-4.80	2972	0.11

Return Time: 0.11 minutes

Total Scraper team cycle time: 2.04 minutes  
 Adjusted for job conditions: 1,415.88 LCY/Hour  
 Selected Number of Scrapers: 2 Scraper(s)  
 Adjusted single scraper team (unit) hourly production: 1,415.88 LCY/Hour  
 Adjusted multiple scraper team (fleet) hourly production: 1,415.88 LCY/Hour

Unadjusted unit production/hour: 1,705.88 LCY/Hour  
 Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**

Fleet size: 1 Team(s) Total job time: 0.15 Hours  
 Unit cost: \$0.892 /LCY Total job cost: \$193

**BULLDOZER WORK**

Task description: Remove and replace topsoil to remove water pipeline (MR-209)

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 357 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-357  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 636  
 Swell factor: 1.250  
 Loose volume: 795 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,300 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>		<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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4043

Adjusted unit production: 853.28 LCY/hr

Adjusted fleet production: **3413.12** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.568/LCY

Total job time: **0.23** Hours

Total job cost: **\$451**

**BULLDOZER WORK**

Task description: Regrade access roads (MR-244)

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 358 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-358  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 1,585  
 Swell factor: 1.165  
 Loose volume: 1,847 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -15 %  
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% 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:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4724

Adjusted unit production: 587.29 LCY/hr

Adjusted fleet production: **2349.16 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.825/LCY

Total job time: **0.79 Hours**

Total job cost: **\$1,523**

**BULLDOZER WORK**

Task description: Replace topsoil on roads (MR-247)

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 359 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-359  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper own. Cost/Hour:	\$18.79	NA
Ripper op. Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 508  
 Swell factor: 1.125  
 Loose volume: 572 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -10 %  
 Average site altitude: 6,300 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5503

Adjusted unit production: 833.32 LCY/hr

Adjusted fleet production: **3333.28** LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.581/LCY

Total job time: **0.17** Hours

Total job cost: **\$332**

## HYDRAULIC EXCAVATOR WORK

Task description: Excavate 1500' HDPE pipe-f/heater bldg at Shaft 1 --MDW2308

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 362

State: Colorado

Abbreviation: None

Date: 1/29/2025

County: Gunnison

Filename: MT9C-362

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick

Horsepower: 268

Attachment 1: ROPS Cab

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 333

CCY

Swell factor: 1.165

Loose volume: 388

LCY

Source of estimated volume: Exhibit 69, Table 2

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: AVERAGE

Secondary Job Condition within Basic Description: AVERAGE

Cycle Time Value: 0.321 minutes

#### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850

Adjusted Capacity: 1.92 LCY

#### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 359.07 LCY/Hour

Adjusted Hourly Unit Production: 298.02 LCY/Hour

Adjusted Hourly Fleet Production: 298.02 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 1.30 Hours

Unit cost: \$1.666 /LCY Total job cost: \$647

**BULLDOZER RIPPING WORK**

Task description: Rip aggregate road base on Syl. Gulch rd extension

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 363 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-363  
User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$253.16	NA
Operating Cost/Hour:	\$164.35	100
Ripper Ownership Cost/Hour:	\$18.79	NA
Ripper Operating Cost/Hour:	\$9.48	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$484.37	
Total Fleet Cost/Hour:	<b>\$1,937.46</b>	

**MATERIAL QUANTITIES**

Selected estimating method: Area

**Alternate Methods:**

Seismic: NA Bank Volume: NA BCY NA  
Area: 6.33 acres Rip Depth (ft): 2.00 Volume: 20,425 BCY or CCY

Source of estimated quantity: Volume 15, TR-99

**HOURLY PRODUCTION**

**Seismic:**

Seismic Velocity: NA feet/second

**Area:**

Average Ripping Depth: 2.63 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

**Job Condition Correction Factors**

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 6,300 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: 2.78 Acres/hr

**JOB TIME AND COST**

Fleet size: 4 Grader(s) Total job time: 2.28 Hours

Unit cost: \$696.756 Per acre Total job cost: \$4,410

**TRUCK/LOADER TEAM WORK**

Task description: Load/haul offsite aggregate f/Syl Gulch Rd extension

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 364 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-364  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

**Cost Breakdown:**

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	5	1	1	1	0	0
Group Subtotals:	Work:	\$555.28	Support:	\$931.16	Maint:	\$0.00

Total work team cost/hour: \$1,486.44

**MATERIAL QUANTITIES**

Initial volume: 6,351 CCY Swell factor: 1.000  
 Loose volume: 6,351 LCY

Source of estimated volume: 8130 tons @3200 lbs/cyd, swelled 25%  
 Source of estimated swell factor: Cat Handbook  
 Material Purchase Cost: \$0.00  
 Total Cost: \$0.00

**HOURLY PRODUCTION**

**Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 2,550 Pounds/LCY  
 Description: Gravel - Dry  
 Rated Payload: 35,400 Pounds  
 Payload Capacity: 13.88 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 8.75 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.875</u>	Loose material - 1/2" to 3/4" (85 - 90%) 0.875
Adjusted Capacity:	<u>4.375</u>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b>0.440</b>	minutes
	Net Load Time per Truck:	<b>0.540</b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time:  
maintained 3.0

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10000.00	3.00	3.00	6.00	1855	5.437

Haul Time: 5.437 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10000.00	-3.00	3.00	0.00	2938	3.429

Return Time: 3.429 minutes

Total Truck Cycle Time: 10.806 minutes

Loading Tool unit Production 504.81 LCY/Hour      Adjusted for job efficiency: 418.99 LCY/Hour  
 Truck Unit Production 48.58 LCY/Hour      Adjusted for job efficiency: 40.32 LCY/Hour  
 Optimal No. of Trucks: 10 Truck(s)      Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 201.62 LCY/Hour  
 Adjusted single truck/loader team production: 201.62 LCY/Hour  
 Adjusted multiple truck/loader team production: 201.62 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 31.50 Hours  
 Unit cost: \$7.372 /LCY      Total job cost: \$46,822

## HYDRAULIC EXCAVATOR WORK

Task description: Backfill cuttings into additional MDW at Vent Shaft #3

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 365 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-365  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 336D L 10'-6" Stick Horsepower: 268  
Attachment 1: ROPS Cab Weight (MT): 29.30  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$244.29</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$218.49</u>	<u>100</u>
Operator Cost/Hour:	<u>\$33.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$496.65</u>	
Total Fleet Cost/Hour:	<u>\$496.65</u>	

### MATERIAL QUANTITIES

Initial volume: 34 CCY Swell factor: 1.330  
Loose volume: 45 LCY

Source of estimated volume: Exhibit 69, Table 2  
Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: BELOW AVERAGE  
Secondary Job Condition within Basic Description: SEVERE  
Cycle Time Value: 0.390 minutes

#### Load Bucket Capacity

Rated Capacity: 2.26 LCY (heaped) Bucket Size Class: Medium  
Bucket Fill Factor: 0.850 Hard, tough clay (80% - 90%) 0.850  
Adjusted Capacity: 1.92 LCY

#### Job Condition Correction Factors

Site Altitude: 6300 feet

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

Unadjusted Hourly Unit Production: 295.54 LCY/Hour  
Adjusted Hourly Unit Production: 245.30 LCY/Hour  
Adjusted Hourly Fleet Production: 245.30 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 0.18 Hours  
Unit cost: \$2.025 /LCY Total job cost: \$92

**TRUCK/LOADER TEAM WORK**

Task description: Haul offsite excavated embankment material f/Syl G. Rd exten

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 366 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-366  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

**Cost Breakdown:**

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	0	0	0	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$0.00	\$0.00	\$0.00	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$94.63	\$301.23	\$301.23	NA	NA
Number of Units:	5	1	1	1	0	0
Group Subtotals:	Work: \$509.03		Support: \$602.46		Maint: \$0.00	

Total work team cost/hour: \$1,111.49

**MATERIAL QUANTITIES**

Initial volume: 8,834 CCY Swell factor: 1.000  
 Loose volume: 8,834 LCY

Source of estimated volume: Assume 25% of 31,331 cyds material (Vol. 15), swelled 16.5%  
 Source of estimated swell factor: Cat Handbook  
 Material Purchase Cost: \$0.00  
 Total Cost: \$0.00

**HOURLY PRODUCTION**

**Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 2,900 Pounds/LCY  
 Description: Decomposed rock - 50% Rock, 50% Earth  
 Rated Payload: 35,400 Pounds  
 Payload Capacity: 12.21 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) 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	10560.00	1.00	5.00	6.00	1855	5.739

Haul Time: 5.739 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	-1.00	5.00	4.00	2849	3.732

Return Time: 3.732 minutes

Total Truck Cycle Time: 11.411 minutes

Loading Tool unit Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production 47.32 LCY/Hour      Adjusted for job efficiency: 39.28 LCY/Hour  
 Optimal No. of Trucks: 11 Truck(s)      Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 196.39 LCY/Hour  
 Adjusted single truck/loader team production: 196.39 LCY/Hour  
 Adjusted multiple truck/loader team production: 196.39 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 44.98 Hours  
 Unit cost: \$5.660 /LCY      Total job cost: \$49,997

## COMPACTION WORK

Task description: Compact regraded Sylvester G. road extension

Site: West Elk Mine

Permit Action: MT9 - Part C

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 367

State: Colorado

Abbreviation: None

Date: 1/29/2025

County: Gunnison

Filename: MT9C-367

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 825H

Horsepower: 354

Compactor Type: Soil - tamping foot

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$164.53</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$161.21</u>	<u>100</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	
Total Fleet Cost/Hour:	<u>\$702.67</u>	

### MATERIAL QUANTITIES

Loose volume: 11,897 LCY

Compacted volume: 10,410 CCY

Shrinkage factor: 0.875

Source of estimated volume: 6.33 acres x 1 ft deep, swelled 16.5%

Source of estimated shrinkage factor: Cat Handbook

### HOURLY PRODUCTION

Unadjusted hourly production =  $(W \times S \times L \times C) / P$

Compacted width per pass (W): 7.34 feet

Average Compactor Speed (S): 4.00 mph

Compacted thickness of each lift (L): 10.00 inches

Conversion Constant (C): 16.3 (5,280ft./12in./27cu.ft.)

Required number of machine passes (P): 4 passes

Unadjusted Hourly Unit Production: 1,196.42 CCY/hour

#### Job Condition Correction Factors

Site Altitude: 6,300 feet

		Source
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.8300</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 993.03 CCY/Hour

Adjusted Hourly Fleet Production: 1,986.06 CCY/Hour

### JOB TIME AND COST

Fleet size: 2 Compactor(s)

Total job time: 5.24 Hours

Unit cost: \$0.354 per CCY

Total job cost: \$3,683

**TRUCK/LOADER TEAM WORK**

Task description: Replace topsoil on Sylvester Gulch road extension (TR-99)

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 368 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-368  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 966H
Support Equipment -Load Area:		Cat D9T - 9SU
-Dump Area:		Cat D9T - 9SU
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

**Cost Breakdown:**

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	100	100	NA	NA
Ownership cost/hour:	\$22.44	\$57.78	\$253.16	\$253.16	NA	NA
Operating cost/hour:	\$60.44	\$46.25	\$164.35	\$164.35	NA	NA
% Utilization-riper:	NA	0	100	100	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$18.79	\$18.79	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$9.48	\$9.48	NA	NA
Operator cost/hour:	\$0.00	\$36.85	\$38.59	\$38.59	NA	NA
Unit Subtotals:	\$82.88	\$140.88	\$465.58	\$465.58	NA	NA
Number of Units:	5	1	1	1	0	0
Group Subtotals:	Work:	\$555.28	Support:	\$931.16	Maint:	\$0.00

Total work team cost/hour: \$1,486.44

**MATERIAL QUANTITIES**

Initial volume: 5,652 CCY Swell factor: 1.125  
 Loose volume: 6,359 LCY

Source of estimated volume: Section 3.0 of permit Exhibit 75  
 Source of estimated swell factor: Cat Handbook  
 Material Purchase Cost: \$0.00  
 Total Cost: \$0.00

**HOURLY PRODUCTION**

**Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 2,550 Pounds/LCY  
 Description: Earth - Dry packed  
 Rated Payload: 35,400 Pounds  
 Payload Capacity: 13.88 LCY

Truck Bed (volume) Basis:

Struck Volume: 10.00 LCY  
 Heaped Volume: 12.00 LCY  
 Average Volume: 11.00 LCY  
 Adjusted Volume: 12.00 LCY

Final Truck Volume Based on Number of Loader Passes: 9.00 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>5.000</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.900</u>	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	<b><u>4.500</u></b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: NA                      Maneuver: NA                      Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	<u>-0.060</u>	minutes
	Adjusted Loader Cycle Time:	<b><u>0.440</u></b>	minutes
	Net Load Time per Truck:	<b><u>0.540</u></b>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.50</u>	Minutes	Adjusted for site altitude:	<u>0.500</u>	Minutes
Truck Load Time:	<u>0.540</u>	Minutes	Adjusted for site altitude:	<u>0.540</u>	Minutes
Truck Maneuver and Dump Time:	<u>0.90</u>	Minutes	Adjusted for site altitude:	<u>0.900</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5280.00	3.00	3.00	6.00	1855	2.893

Haul Time: 2.893 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5280.00	-3.00	3.00	0.00	2938	1.822

Return Time: 1.822 minutes

Total Truck Cycle Time: 6.655 minutes

Loading Tool unit Production 519.23 LCY/Hour      Adjusted for job efficiency: 430.96 LCY/Hour  
 Truck Unit Production 81.14 LCY/Hour      Adjusted for job efficiency: 67.35 LCY/Hour  
 Optimal No. of Trucks: 6 Truck(s)      Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 336.74 LCY/Hour  
 Adjusted single truck/loader team production: 336.74 LCY/Hour  
 Adjusted multiple truck/loader team production: 336.74 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: 18.88 Hours  
 Unit cost: \$4.414 /LCY      Total job cost: \$28,068

## BULLDOZER RIPPING WORK

Task description: Rip Syl. Gulch mine water treatment ponds and ramps

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 369 State: Colorado Abbreviation: None  
Date: 1/29/2025 County: Gunnison Filename: MT9C-369  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$9.48</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$484.37</u>	
Total Fleet Cost/Hour:	<u><b>\$1,937.46</b></u>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.63 acres Rip Depth (ft): 2.00 Volume: 2,033 BCY or CCY

Source of estimated quantity: Exhibit 69, plan view drawings

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.00 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 100.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.762 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.762 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: 0.63 Acres/hr  
Adjusted Hourly Fleet Production: **2.53** Acres/hr

### JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **0.25** Hours

Unit cost: \$765.804 Per acre Total job cost: **\$482**

**BULLDOZER WORK**

Task description: L. mine wtr trmt pond: Push embankment into pond, regrade

Site: West Elk Mine Permit Action: MT9 - Part C Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 370 State: Colorado Abbreviation: None  
 Date: 1/29/2025 County: Gunnison Filename: MT9C-370  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$253.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$164.35</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$18.79</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$9.48</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$484.37  
 Total Fleet Cost/Hour: \$1,937.46

**MATERIAL QUANTITIES**

Initial Volume: 5,939  
 Swell factor: 1.165  
 Loose volume: 6,919 LCY

Source of estimated volume: Division estimate  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 5 %  
 Average site altitude: 6,800 feet

Material weight: 2,900 lbs/LCY

Weight description: Decomposed rock - 50% Rock, 50% Earth

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3209

Adjusted unit production: 677.26 LCY/hr

Adjusted fleet production: 2709.04 LCY/hr

### **JOB TIME AND COST**

Fleet size: 4 Dozer(s)

Unit cost: \$0.715/LCY

Total job time: 2.55 Hours

Total job cost: \$4,948

## COST SUMMARY WORK

Task description: Part D: Boreholes plus associated pads and roads

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 09D

State: Colorado

Abbreviation: None

Date: 1/27/2025

County: Delta

Filename: C007-09D

User: LDS

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
401a	RPEE geotech boreholes, permitted with MR-35: plug and seal	BOREHOLE	1	3.68	\$6,868
401b	RPEE geotech boreholes, permitted with MR-354: regrade	DOZER	1	4.09	\$1,314
401c	RPEE geotech boreholes, permitted with MR-354: topsoil	DOZER	1	2.97	\$956
401d	RPEE geotech boreholes MR354: broadcast PRD mt shrb seed mix	REVEGE	1	2.70	\$1,481
402a	93 Inclinometers: plug and seal	BOREHOLE	1	48.36	\$46,085
403a	15 x 1" open stand pipes: plug and seal	BOREHOLE	1	10.20	\$7,787
404a	24 x 2" open stand pipes: plug and seal	BOREHOLE	1	19.58	\$15,391
405a	1 x 3" open stand pipe: plug and seal	BOREHOLE	1	0.62	\$552
406a	49 x 4" open stand pipes: plug and seal	BOREHOLE	1	34.10	\$33,227
407a	2 x 8" open stand pipes: plug and seal	BOREHOLE	1	1.98	\$3,210
408a	81 x 1" piezometers: plug and seal	BOREHOLE	1	33.05	\$27,603
409a	25 x 2" piezometers: plug and seal	BOREHOLE	1	12.20	\$10,329
410a	10 x 4" piezometers: plug and seal	BOREHOLE	1	18.08	\$16,244
411a	2 x 4" inclinometers: plug and seal	BOREHOLE	1	1.04	\$1,059
412a	1 x 6" pumping well: plug and seal	BOREHOLE	1	1.14	\$1,381
414d	26 MVBs included in SL-05: broadcast PRD mt shrb seed mix	REVEGE	1	13.85	\$27,371
416c	E2-34 access road: topsoil	DOZER	1	4.60	\$1,481
416d	21 MVBs etc in SL07: broadcast PRD mt shrb seed mix	REVEGE	1	19.23	\$38,003
417c	E364/65 and E368/72: topsoil	DOZER	1	12.14	\$3,903
417d	19 MVBs included in SL-08: broadcast PRD mt shrb seed mix	REVEGE	1	10.05	\$19,861
418c	E3-29: topsoil	DOZER	1	5.20	\$1,672
418d	21 MVBs/Exp in SL-10: broadcast PRD mt shrb seed mix	REVEGE	1	9.97	\$19,703
419c	11 of 35 MVBs/Exp in SL-12: topsoil	DOZER	1	55.99	\$18,007
419d	35 MVBs/Exp in SL-12: broadcast PRD mt shrb seed mix	REVEGE	1	22.58	\$44,624
420a	4 B-seam MVBs, 15-17: plug and seal	BOREHOLE	1	8.80	\$17,866
420b	4 B-seam MVBs, 15-17: regrade	DOZER	1	40.87	\$13,143
420c	4 B-seam MVBs, 15-17: topsoil	DOZER	1	13.62	\$4,382
420d	4 B-seam MVBs, 15-17: broadcast PRD mt shrb seed mix	REVEGE	1	2.00	\$3,952
421a	7 Exp & 11 B-seam MVBs, 18-25: plug and seal	BOREHOLE	1	39.60	\$80,369

421b	7 Exp & 11 B-seam MVBs, 18-25: regrade	DOZER	1	310.17	\$99,756
421c	7 Exp & 11 B-seam MVBs, 18-25: topsoil	DOZER	1	103.39	\$33,252
421d	7 Exp & 11 B-seam MVBs,18-25: broadcast PRD mt shrb seed mix	REVEGE	1	15.18	\$29,999
422a	6 Exp holes, 2009 D-I: plug and seal	BOREHOLE	1	13.20	\$15,149
422b	6 Exp holes, 2009 D-I: regrade	DOZER	1	10.01	\$3,221
422c	6 Exp holes, 2009 D-I: topsoil	DOZER	1	3.34	\$1,074
422d	6 Exp holes, 2009 D-I: broadcast PRD mt shrb seed mix	REVEGE	1	0.49	\$968
423c	6 Exp holes, Lick Creek A-F: topsoil	DOZER	1	13.62	\$4,382
423d	6 Exp holes, Lick Creek A-F: broadcast PRD mt shrb seed mix	REVEGE	1	2.00	\$3,952
424a	4 Exp holes, E seam: plug and seal	BOREHOLE	1	8.80	\$9,848
424b	4 Exp holes, E seam: regrade	DOZER	1	10.22	\$3,286
424c	4 Exp holes, E seam: topsoil	DOZER	1	3.41	\$1,096
424d	4 Exp holes, E seam: broadcast PRD mt shrb seed mix	REVEGE	1	0.50	\$988
425a	2 E-seam MVBs, ESM-1 & -2: plug and seal	BOREHOLE	1	4.40	\$8,931
425b	2 E-seam MVBs, ESM-1 & -2: regrade	DOZER	1	20.43	\$6,572
425c	2 E-seam MVBs, ESM-1 & -2: topsoil	DOZER	1	6.81	\$2,190
425d	2 E-seam MVBs, ESM-1 & -2: broadcast PRD mt shrb seed mix	REVEGE	1	1.00	\$1,976
426a	7 E-seam MVBs, panels 2-6, P&A pre2020: plug and seal	BOREHOLE	1	15.40	\$31,253
426b	7 E-seam MVBs, panels 2-6, P&A pre2020: regrade	DOZER	1	69.68	\$22,409
426c	7 E-seam MVBs, panels 2-6, P&A pre2020: topsoil	DOZER	1	23.22	\$7,469
426d	7E-seamMVBs, panels 2-6, P&Apr20: broadcastPRDmtshrbseedmix	REVEGE	1	3.41	\$6,739
427a	6 of 7 E-seam MVBs, panels 2-6, open2020: plug and seal	BOREHOLE	1	13.20	\$26,797
427b	6 of 7 E-seam MVBs, panels 2-6, open2020: regrade	DOZER	1	125.05	\$40,218
427c	7 E-seam MVBs, panels 2-6, open2020: topsoil	DOZER	1	47.20	\$15,180
427d	7E-seamMVBs, panels 2-6, open2020: broadcastPRDmtshrbseedmix	REVEGE	1	6.93	\$13,695
428a	4 of 12 E-seam MVBs, panel 7: plug and seal	BOREHOLE	1	2.20	\$4,456
428b	1 of 12 E-seam MVBs, panel 7: regrade	DOZER	1	10.22	\$3,286
428c	12 E-seam MVBs, panel 7: topsoil	DOZER	1	49.64	\$15,965
428d	12 E-seam MVBs, panel 7: broadcastPRDmtshrbseedmix	REVEGE	1	8.20	\$16,205
429a	1 of 8 E-seam MVBs, panel 8: plug and seal	BOREHOLE	1	2.20	\$4,456
429b	1 of 8 E-seam MVBs, panel 8: regrade	DOZER	1	10.22	\$3,286
429c	8 E-seam MVBs, panel 8: topsoil	DOZER	1	48.60	\$15,632
429d	8 E-seam MVBs, panel 8: broadcastPRDmtshrbseedmix	REVEGE	1	7.14	\$14,110
430a	9 E-seam MVBs, panel 9: plug and seal	BOREHOLE	1	19.80	\$40,185
430b	9 E-seam MVBs, panel 9: regrade	DOZER	1	101.80	\$32,740
430c	9 E-seam MVBs, panel 9: topsoil	DOZER	1	33.93	\$10,914
430d	9 E-seam MVBs, panel 9: broadcastPRDmtshrbseedmix	REVEGE	1	4.98	\$9,842
431a	6 E-seam MVBs, panel 10: plug and seal	BOREHOLE	1	13.20	\$26,797
431b	6 E-seam MVBs, panel 10: regrade	DOZER	1	94.12	\$30,271
431c	6 E-seam MVBs, panel 10: topsoil	DOZER	1	31.38	\$10,091

431d	6 E-seam MVBs, panel 10: broadcastPRDmtshrbseedmix	REVEGE	1	4.61	\$9,110
432a	7 E-seam MVBs, panel 11: plug and seal	BOREHOLE	1	15.40	\$31,253
432b	7 E-seam MVBs, panel 11: regrade	DOZER	1	82.12	\$26,410
432c	7 E-seam MVBs, panel 11: topsoil	DOZER	1	27.37	\$8,804
432d	7 E-seam MVBs, panel 11: broadcastPRDmtshrbseedmix	REVEGE	1	4.02	\$7,945
433a	8 E-seam MVBs, panel 12: plug and seal	BOREHOLE	1	17.60	\$35,706
433b	8 E-seam MVBs, panel 12: regrade	DOZER	1	162.28	\$52,193
433c	8 E-seam MVBs, panel 12: topsoil	DOZER	1	47.34	\$15,226
433d	8 E-seam MVBs, panel 12: broadcastPRDmtshrbseedmix	REVEGE	1	6.95	\$13,735
434a	2 E-seam MVBs, panel 14: plug and seal	BOREHOLE	1	4.40	\$8,931
434b	2 E-seam MVBs, panel 14: regrade	DOZER	1	33.30	\$10,709
434c	2 E-seam MVBs, panel 14: topsoil	DOZER	1	11.10	\$3,570
434d	2 E-seam MVBs, panel 14: broadcastPRDmtshrbseedmix	REVEGE	1	1.63	\$3,221
435c	SS1 MVBs: topsoil	DOZER	1	27.45	\$8,828
435d	SS1 MVBs: broadcastPRDmtshrbseedmix	REVEGE	1	13.13	\$25,948
436c	SS2 MVBs: topsoil	DOZER	1	24.32	\$7,821
436d	SS2 MVBs: broadcastPRDmtshrbseedmix	REVEGE	1	14.49	\$28,636
439c	5 Exploration holes, MR423: topsoil	DOZER	1	9.63	\$3,096
439d	5 Exploration holes, MR423: broadcastPRDmtshrbseedmix	REVEGE	1	1.41	\$2,787
440c	3 Exploration holes, MR424: regrade	DOZER	1	7.92	\$2,549
440d	3 Exploration holes, MR424: broadcastPRDmtshrbseedmix	REVEGE	1	1.16	\$2,292
441a	22 of 33 Monitoring wells: plug and seal	BOREHOLE	1	87.12	\$65,252
442a	2 gas characterization holes: plug and seal (MR-469)	BOREHOLE	1	20.80	\$26,950
460	Removal of temporary pipe, S Prong Creek	DEMOLISH	1	4.00	\$1,331
461	S Prong Creek subsidence repair: BroadcastPRDmtshrbseedmix	REVEGE	1	0.60	\$1,186
462	Removal of 2 temporary bridges	DEMOLISH	1	8.00	\$2,984
463	Transport 2 temporary bridges	MISCTRUK	1	8.00	\$1,120
<b><u>SUBTOTALS:</u></b>				<b>2367.13</b>	<b>\$1,504,053</b>

## BOREHOLE SEALING WORK

Task description: RPEE geotech boreholes, permitted with MR-35: plug and seal

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 401A State: Colorado Abbreviation: None  
Date: 1/30/2025 County: Gunnison Filename: MT9D-401a  
User: LDS

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bottom Plug	PVC plug - 8 in. diameter borehole	8"	46	10.00	EA	\$89.31	\$893.06
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	8"	460	140.00	bag	\$22.00	\$3,080.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	8"	21	21.00	LF	\$3.23	\$67.83
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	10.00	EA	\$46.00	\$460.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	3.68	EA	\$587.96	\$2,163.69
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	3.68	EA	\$55.22	\$203.21

**Job Hours:** 3.68

**Total Cost:** \$6,868.00

**BULLDOZER WORK**

Task description: RPEE geotech boreholes, permitted with MR-354: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 401B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-401b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 968  
 Swell factor: 1.125  
 Loose volume: 1,089 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 7,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.900</u>	<u>(AB.AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **4.09** Hours

Total job cost: **\$1,314**

**BULLDOZER WORK**

Task description: RPEE geotech boreholes, permitted with MR-354: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 401C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-401c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 968  
 Swell factor: 1.000  
 Loose volume: 968 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 10 %  
 Average site altitude: 7,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	1.100	(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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4485

Adjusted unit production: 325.75 LCY/hr

Adjusted fleet production: 325.75 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.987/LCY

Total job time: 2.97 Hours

Total job cost: \$956

**REVEGETATION WORK**Task description: RPEE geotech boreholes MR354: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 401DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-401dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 93 Inclinometers: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 402A  
Date: 1/30/2025  
User: LDS

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: MT9D-402a

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bottom Plug	PVC plug - 4 in. diameter borehole	3.35"	0	93.00	EA	\$36.06	\$3,353.73
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	3.35"	6045	322.00	bag	\$22.00	\$7,084.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	3.35"	82	82.00	LF	\$3.23	\$264.86
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	93.00	EA	\$46.00	\$4,278.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	48.36	EA	\$587.96	\$28,433.75
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	48.36	EA	\$55.22	\$2,670.44

**Job Hours:** 48.36

**Total Cost:** \$46,085.00

## BOREHOLE SEALING WORK

Task description: 15 x 1" open stand pipes: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 403A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-403a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 2 in. diameter borehole	1"	0	15.00	EA	\$26.09	\$391.41
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	1"	1275	6.00	bag	\$22.00	\$132.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	1"	4	4.00	LF	\$3.23	\$12.92
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	15.00	EA	\$46.00	\$690.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	10.20	EA	\$587.96	\$5,997.19
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	10.20	EA	\$55.22	\$563.24

**Job Hours:** 10.20

**Total Cost:** \$7,787.00

## BOREHOLE SEALING WORK

Task description: 24 x 2" open stand pipes: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 404A  
Date: 1/30/2025  
User: LDS

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: MT9D-404a

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 2 in. diameter borehole	2"	0	24.00	EA	\$26.09	\$626.25
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	2"	2448	46.00	bag	\$22.00	\$1,012.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	2"	13	13.00	LF	\$3.23	\$41.99
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	24.00	EA	\$46.00	\$1,104.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	19.60	EA	\$587.96	\$11,524.02
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	19.60	EA	\$55.22	\$1,082.31

**Job Hours:** 19.58

**Total Cost:** \$15,391.00

## BOREHOLE SEALING WORK

Task description: 1 x 3" open stand pipe: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 405A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-405a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 4 in. diameter borehole	3"	0	1.00	EA	\$36.06	\$36.06
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	3"	78	3.00	bag	\$22.00	\$66.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	3"	1	1.00	LF	\$3.23	\$3.23
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$46.00	\$46.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	0.62	EA	\$587.96	\$366.89
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	0.62	EA	\$55.22	\$34.24

**Job Hours:** 0.62

**Total Cost:** \$552.00

## BOREHOLE SEALING WORK

Task description: 49 x 4" open stand pipes: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 406A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-406a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 4 in. diameter borehole	4"	0	49.00	EA	\$36.06	\$1,767.02
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	4"	4263	323.00	bag	\$22.00	\$7,106.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	4"	51	51.00	LF	\$3.23	\$164.73
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	49.00	EA	\$46.00	\$2,254.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	34.10	EA	\$587.96	\$20,051.79
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	34.10	EA	\$55.22	\$1,883.00

**Job Hours:** 34.10

**Total Cost:** \$33,227.00

## BOREHOLE SEALING WORK

Task description: 2 x 8" open stand pipes: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 407A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-407a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 8 in. diameter borehole	8"	0	2.00	EA	\$89.31	\$178.61
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	8"	248	75.00	bag	\$22.00	\$1,650.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	8"	4	4.00	LF	\$3.23	\$12.92
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	2.00	EA	\$46.00	\$92.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	1.98	EA	\$587.96	\$1,166.51
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	1.98	EA	\$55.22	\$109.56

**Job Hours:** 1.98

**Total Cost:** \$3,210.00

## BOREHOLE SEALING WORK

Task description: 81 x 1" piezometers: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 408A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-408a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 2 in. diameter borehole	1"	0	81.00	EA	\$26.09	\$2,113.59
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	1"	4131	20.00	bag	\$22.00	\$440.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	1"	21	21.00	LF	\$3.23	\$67.83
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	81.00	EA	\$46.00	\$3,726.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	33.05	EA	\$587.96	\$19,430.90
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	33.05	EA	\$55.22	\$1,824.91

**Job Hours:** 33.05

**Total Cost:** \$27,603.00

## BOREHOLE SEALING WORK

Task description: 25 x 2" piezometers: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 409A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-409a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 2 in. diameter borehole	2"	0	25.00	EA	\$26.09	\$652.34
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	2"	1525	29.00	bag	\$22.00	\$638.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	2"	13	13.00	LF	\$3.23	\$41.99
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	25.00	EA	\$46.00	\$1,150.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	12.20	EA	\$587.96	\$7,173.11
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	12.20	EA	\$55.22	\$673.68

**Job Hours:** 12.20

**Total Cost:** \$10,329.00

## BOREHOLE SEALING WORK

Task description: 10 x 4" piezometers: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 410A  
Date: 1/30/2025  
User: LDS

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: MT9D-410a

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 4 in. diameter borehole	4"	0	10.00	EA	\$36.06	\$360.62
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	4"	2260	171.00	bag	\$22.00	\$3,762.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	4"	10	10.00	LF	\$3.23	\$32.30
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	10.00	EA	\$46.00	\$460.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	18.08	EA	\$587.96	\$10,630.32
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	18.08	EA	\$55.22	\$998.38

**Job Hours:** 18.08

**Total Cost:** \$16,244.00

## BOREHOLE SEALING WORK

Task description: 2 x 4" inclinometers: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 411A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-411a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 4 in. diameter borehole	4"	0	2.00	EA	\$36.06	\$72.12
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	4"	130	10.00	bag	\$22.00	\$220.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	4"	2	2.00	LF	\$3.23	\$6.46
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	2.00	EA	\$46.00	\$92.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	1.04	EA	\$587.96	\$611.48
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	1.04	EA	\$55.22	\$57.43

**Job Hours:** 1.04

**Total Cost:** \$1,059.00

## BOREHOLE SEALING WORK

Task description: 1 x 6" pumping well: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 412A  
Date: 1/30/2025  
User: LDS

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: MT9D-412a

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 6 in. diameter borehole	6"	0	1.00	EA	\$65.19	\$65.19
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	6"	143	24.00	bag	\$22.00	\$528.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	6"	2	2.00	LF	\$3.23	\$6.46
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$46.00	\$46.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	1.14	EA	\$587.96	\$672.63
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	1.14	EA	\$55.22	\$63.17

**Job Hours:** 1.14

**Total Cost:** \$1,381.00

REVEGETATION WORKTask description: 26 MVBs included in SL-05: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 414DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-414dUser: LDSAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



**BULLDOZER WORK**

Task description: E2-34 access road: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 416C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-416c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 1,500  
 Swell factor: 1.000  
 Loose volume: 1,500 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	1.100	(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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4485

Adjusted unit production: 325.75 LCY/hr

Adjusted fleet production: 325.75 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.987/LCY

Total job time: 4.60 Hours

Total job cost: \$1,481

**REVEGETATION WORK**Task description: 21 MVBs etc in SL07: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 416DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-416dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



**BULLDOZER WORK**

Task description: E364/65 and E368/72: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 417C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-417c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 3,953  
 Swell factor: 1.000  
 Loose volume: 3,953 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	1.100	(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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4485

Adjusted unit production: 325.75 LCY/hr

Adjusted fleet production: **325.75 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.987/LCY

Total job time: **12.14 Hours**

Total job cost: **\$3,903**

REVEGETATION WORKTask description: 19 MVBs included in SL-08: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 417DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-417dUser: LDSAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



**BULLDOZER WORK**

Task description:     **E3-29: topsoil**    

Site:     **West Elk Mine**     Permit Action:     **MT9 - Part D**     Permit/Job#:     **C1980007**    

**PROJECT IDENTIFICATION**

Task #:     418C     State:     Colorado     Abbreviation:     None      
 Date:     1/30/2025     County:     Gunnison     Filename:     MT9D-418c      
 User:     LDS    

Agency or organization name:     DRMS    

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour:     \$321.62      
 Total Fleet Cost/Hour:     **\$321.62**    

**MATERIAL QUANTITIES**

Initial Volume:     1,694      
 Swell factor:     1.000      
 Loose volume:     **1,694** LCY    

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

**HOURLY PRODUCTION**

Average push distance:     125 feet      
 Unadjusted hourly production:     726.3 LCY/hr    

Materials consistency description:     Partly consolidated stockpile 1.1    

Average push gradient:     10 %      
 Average site altitude:     8,000 feet    

Material weight:     2,650 lbs/LCY    

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	1.100	(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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4485

Adjusted unit production: 325.75 LCY/hr

Adjusted fleet production: 325.75 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.987/LCY

Total job time: 5.20 Hours

Total job cost: \$1,672

**REVEGETATION WORK**Task description: 21 MVBs/Exp in SL-10: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 418DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-418dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



**BULLDOZER WORK**

Task description: 11 of 35 MVBs/Exp in SL-12: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 419C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-419c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 13,262  
 Swell factor: 1.125  
 Loose volume: 14,920 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **55.99 Hours**

Total job cost: **\$18,007**

**REVEGETATION WORK**Task description: 35 MVBs/Exp in SL-12: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 419DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-419dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 4 B-seam MVBs, 15-17: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 420A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-420a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	4.00	EA	\$122.34	\$489.38
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	1100	522.00	bag	\$22.00	\$11,484.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	15	15.00	LF	\$3.23	\$48.45
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	4.00	EA	\$46.00	\$184.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	8.80	EA	\$587.96	\$5,174.05
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	8.80	EA	\$55.22	\$485.94

**Job Hours:** 8.80

**Total Cost:** \$17,866.00

**BULLDOZER WORK**

Task description: 4 B-seam MVBs, 15-17: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 420B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-420b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 9,680  
 Swell factor: 1.125  
 Loose volume: **10,890 LCY**

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **40.87** Hours

Total job cost: **\$13,143**

**BULLDOZER WORK**

Task description: 4 B-seam MVBs, 15-17: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 420C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-420c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 3,227  
 Swell factor: 1.125  
 Loose volume: 3,630 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **13.62 Hours**

Total job cost: **\$4,382**

REVEGETATION WORKTask description: 4 B-seam MVBs, 15-17: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 420DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-420dUser: LDSAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 7 Exp & 11 B-seam MVBs, 18-25: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 421A  
Date: 1/30/2025  
User: LDS

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: MT9D-421a

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	18.00	EA	\$122.34	\$2,202.19
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	4950	2,348.00	bag	\$22.00	\$51,656.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	66	66.00	LF	\$3.23	\$213.18
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	18.00	EA	\$46.00	\$828.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	39.60	EA	\$587.96	\$23,283.22
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	39.60	EA	\$55.22	\$2,186.71

**Job Hours:** 39.60

**Total Cost:** \$80,369.00

**BULLDOZER WORK**

Task description: 7 Exp & 11 B-seam MVBs, 18-25: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 421B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-421b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 73,471  
 Swell factor: 1.125  
 Loose volume: 82,655 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **310.17 Hours**

Total job cost: **\$99,756**

**BULLDOZER WORK**

Task description: 7 Exp & 11 B-seam MVBs, 18-25: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 421C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-421c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 24,490  
 Swell factor: 1.125  
 Loose volume: 27,551 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.900</u>	<u>(AB.AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **103.39 Hours**

Total job cost: **\$33,252**

**REVEGETATION WORK**Task description: 7 Exp & 11 B-seam MVBs,18-25: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 421DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-421dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 6 Exp holes, 2009 D-I: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 422A  
Date: 1/30/2025  
User: LDS

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: MT9D-422a

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 6 in. diameter borehole	5.875"	0	6.00	EA	\$65.19	\$391.15
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	5.875"	1650	270.00	bag	\$22.00	\$5,940.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	10"	16	16.00	LF	\$3.23	\$51.68
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	6.00	EA	\$46.00	\$276.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	13.20	EA	\$587.96	\$7,761.07
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	13.20	EA	\$55.22	\$728.90

**Job Hours:** 13.20

**Total Cost:** \$15,149.00

**BULLDOZER WORK**

Task description: 6 Exp holes, 2009 D-I: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 422B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-422b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 2,372  
 Swell factor: 1.125  
 Loose volume: 2,669 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **10.01** Hours

Total job cost: **\$3,221**

**BULLDOZER WORK**

Task description: 6 Exp holes, 2009 D-I: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 422C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-422c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 791  
 Swell factor: 1.125  
 Loose volume: 890 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **3.34** Hours

Total job cost: **\$1,074**

**REVEGETATION WORK**Task description: 6 Exp holes, 2009 D-I: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 422DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-422dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



**BULLDOZER WORK**Task description: 6 Exp holes, Lick Creek A-F: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 423CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-423cUser: LDSAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$321.62**MATERIAL QUANTITIES**Initial Volume: 3,227Swell factor: 1.125Loose volume: 3,630 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 125 feetUnadjusted hourly production: 726.3 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 10 %Average site altitude: 8,000 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **13.62 Hours**

Total job cost: **\$4,382**

REVEGETATION WORKTask description: 6 Exp holes, Lick Creek A-F: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 423DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-423dUser: LDSAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 4 Exp holes, E seam: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 424A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-424a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 4 in. diameter borehole	4"	0	2.00	EA	\$36.06	\$72.12
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	4"	550	42.00	bag	\$22.00	\$924.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	8"	4	4.00	LF	\$3.23	\$12.92
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	4.00	EA	\$46.00	\$184.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	8.80	EA	\$587.96	\$5,174.05
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	8.80	EA	\$55.22	\$485.94
Bottom Plug	PVC plug - 8 in. diameter borehole	7"	NA	2.00	EA	\$89.31	\$178.61
Fill hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	7"	550	128.00	bag	\$22.00	\$2,816.00

**Job Hours:** 8.80

**Total Cost:** \$9,848.00

**BULLDOZER WORK**

Task description: 4 Exp holes, E seam: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 424B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-424b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 2,420  
 Swell factor: 1.125  
 Loose volume: 2,723 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **10.22 Hours**

Total job cost: **\$3,286**

**BULLDOZER WORK**

Task description: 4 Exp holes, E seam: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 424C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-424c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 807  
 Swell factor: 1.125  
 Loose volume: 908 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.900</u>	<u>(AB.AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **3.41** Hours

Total job cost: **\$1,096**

**REVEGETATION WORK**Task description: 4 Exp holes, E seam: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 424DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-424dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 2 E-seam MVBs, ESM-1 & -2: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 425A  
Date: 1/30/2025  
User: LDS

State: Colorado  
County: Gunnison

Abbreviation: None  
Filename: MT9D-425a

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	2.00	EA	\$122.34	\$244.69
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	550	261.00	bag	\$22.00	\$5,742.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	7	7.00	LF	\$3.23	\$22.61
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	2.00	EA	\$46.00	\$92.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	4.40	EA	\$587.96	\$2,587.02
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	4.40	EA	\$55.22	\$242.97

**Job Hours:** 4.40

**Total Cost:** \$8,931.00

**BULLDOZER WORK**

Task description: 2 E-seam MVBs, ESM-1 & -2: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 425B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-425b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 4,840  
 Swell factor: 1.125  
 Loose volume: 5,445 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **20.43 Hours**

Total job cost: **\$6,572**

**BULLDOZER WORK**

Task description: 2 E-seam MVBs, ESM-1 & -2: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 425C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-425c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 1,613  
 Swell factor: 1.125  
 Loose volume: 1,815 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **6.81 Hours**

Total job cost: **\$2,190**

REVEGETATION WORKTask description: 2 E-seam MVBs, ESM-1 & -2: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 425DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-425dUser: LDSAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 7 E-seam MVBs, panels 2-6, P&A pre2020: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 426A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-426a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	7.00	EA	\$122.34	\$856.41
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	1925	913.00	bag	\$22.00	\$20,086.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	26	26.00	LF	\$3.23	\$83.98
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	7.00	EA	\$46.00	\$322.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	15.40	EA	\$587.96	\$9,054.58
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	15.40	EA	\$55.22	\$850.39

**Job Hours:** 15.40

**Total Cost:** \$31,253.00

**BULLDOZER WORK**

Task description: 7 E-seam MVBs, panels 2-6, P&A pre2020: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 426B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-426b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 16,504  
 Swell factor: 1.125  
 Loose volume: 18,567 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **69.68 Hours**

Total job cost: **\$22,409**

**BULLDOZER WORK**Task description: 7 E-seam MVBs, panels 2-6, P&A pre2020: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 426CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-426cUser: LDSAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$321.62**MATERIAL QUANTITIES**Initial Volume: 5,501Swell factor: 1.125Loose volume: 6,189 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 125 feetUnadjusted hourly production: 726.3 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 10 %Average site altitude: 8,000 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **23.22 Hours**

Total job cost: **\$7,469**

**REVEGETATION WORK**Task description: 7E-seamMVBS, panels 2-6, P&Apre20: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 426DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-426dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 6 of 7 E-seam MVBs, panels 2-6, open2020: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 427A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-427a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	6.00	EA	\$122.34	\$734.06
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	1650	783.00	bag	\$22.00	\$17,226.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	22	22.00	LF	\$3.23	\$71.06
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	6.00	EA	\$46.00	\$276.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	13.20	EA	\$587.96	\$7,761.07
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	13.20	EA	\$55.22	\$728.90

**Job Hours:** 13.20

**Total Cost:** \$26,797.00

**BULLDOZER WORK**

Task description: 6 of 7 E-seam MVBs, panels 2-6, open2020: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 427B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-427b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 29,621  
 Swell factor: 1.125  
 Loose volume: 33,324 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.900</u>	<u>(AB.AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **125.05** Hours

Total job cost: **\$40,218**

**BULLDOZER WORK**

Task description: 7 E-seam MVBs, panels 2-6, open2020: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 427C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-427c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 11,180  
 Swell factor: 1.125  
 Loose volume: 12,578 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **47.20** Hours

Total job cost: **\$15,180**

**REVEGETATION WORK**Task description: 7E-seamMVBS, panels 2-6, open2020: broadcastPRDmtshrbseedmixSite: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007**PROJECT IDENTIFICATION**

Task #: 427D State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-427d  
 User: LDS

Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 4 of 12 E-seam MVBs, panel 7: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 428A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-428a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	1.00	EA	\$122.34	\$122.34
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	275	130.00	bag	\$22.00	\$2,860.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	4	4.00	LF	\$3.23	\$12.92
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$46.00	\$46.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	2.20	EA	\$587.96	\$1,293.51
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	2.20	EA	\$55.22	\$121.48

**Job Hours:** 2.20

**Total Cost:** \$4,456.00

**BULLDOZER WORK**

Task description: 1 of 12 E-seam MVBs, panel 7: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 428B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-428b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 2,420  
 Swell factor: 1.125  
 Loose volume: 2,723 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.900</u>	<u>(AB.AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **10.22 Hours**

Total job cost: **\$3,286**

**BULLDOZER WORK**Task description: 12 E-seam MVBs, panel 7: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 428CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-428cUser: LDSAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$321.62**MATERIAL QUANTITIES**Initial Volume: 13,229Swell factor: 1.125Loose volume: 14,883 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 125 feetUnadjusted hourly production: 726.3 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 10 %Average site altitude: 8,000 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.900	(SSD-FC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4128

Adjusted unit production: 299.82 LCY/hr

Adjusted fleet production: **299.82 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.073/LCY

Total job time: **49.64 Hours**

Total job cost: **\$15,965**

**REVEGETATION WORK**Task description: 12 E-seam MVBs, panel 7: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 428DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-428dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 1 of 8 E-seam MVBs, panel 8: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 429A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-429a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	1.00	EA	\$122.34	\$122.34
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	275	130.00	bag	\$22.00	\$2,860.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	4	4.00	LF	\$3.23	\$12.92
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$46.00	\$46.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	2.20	EA	\$587.96	\$1,293.51
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	2.20	EA	\$55.22	\$121.48

**Job Hours:** 2.20

**Total Cost:** \$4,456.00

**BULLDOZER WORK**

Task description: 1 of 8 E-seam MVBs, panel 8: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 429B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-429b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 2,420  
 Swell factor: 1.125  
 Loose volume: 2,723 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **10.22** Hours

Total job cost: **\$3,286**

**BULLDOZER WORK**

Task description: 8 E-seam MVBs, panel 8: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 429C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-429c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 11,513  
 Swell factor: 1.125  
 Loose volume: 12,952 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **48.60** Hours

Total job cost: **\$15,632**

REVEGETATION WORKTask description: 8 E-seam MVBs, panel 8: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 429DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-429dUser: LDSAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 9 E-seam MVBs, panel 9: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 430A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-430a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	9.00	EA	\$122.34	\$1,101.10
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	2475	1,174.00	bag	\$22.00	\$25,828.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	33	33.00	LF	\$3.23	\$106.59
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	9.00	EA	\$46.00	\$414.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	19.80	EA	\$587.96	\$11,641.61
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	19.80	EA	\$55.22	\$1,093.36

**Job Hours:** 19.80

**Total Cost:** \$40,185.00

**BULLDOZER WORK**

Task description: 9 E-seam MVBs, panel 9: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 430B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-430b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 24,113  
 Swell factor: 1.125  
 Loose volume: 27,127 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **101.80 Hours**

Total job cost: **\$32,740**

**BULLDOZER WORK**

Task description: 9 E-seam MVBs, panel 9: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 430C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-430c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 8,038  
 Swell factor: 1.125  
 Loose volume: 9,043 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **33.93** Hours

Total job cost: **\$10,914**

**REVEGETATION WORK**Task description: 9 E-seam MVBs, panel 9: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 430DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-430dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 6 E-seam MVBs, panel 10: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 431A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-431a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	6.00	EA	\$122.34	\$734.06
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	1650	783.00	bag	\$22.00	\$17,226.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	22	22.00	LF	\$3.23	\$71.06
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	6.00	EA	\$46.00	\$276.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	13.20	EA	\$587.96	\$7,761.07
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	13.20	EA	\$55.22	\$728.90

**Job Hours:** 13.20

**Total Cost:** \$26,797.00

**BULLDOZER WORK**

Task description: 6 E-seam MVBs, panel 10: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 431B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-431b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 22,295  
 Swell factor: 1.125  
 Loose volume: 25,082 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **94.12** Hours

Total job cost: **\$30,271**

**BULLDOZER WORK**

Task description: 6 E-seam MVBs, panel 10: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 431C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-431c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 7,432  
 Swell factor: 1.125  
 Loose volume: 8,361 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **31.38 Hours**

Total job cost: **\$10,091**

**REVEGETATION WORK**Task description: 6 E-seam MVBs, panel 10: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 431DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-431dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 7 E-seam MVBs, panel 11: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 432A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-432a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	7.00	EA	\$122.34	\$856.41
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	1925	913.00	bag	\$22.00	\$20,086.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	26	26.00	LF	\$3.23	\$83.98
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	7.00	EA	\$46.00	\$322.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	15.40	EA	\$587.96	\$9,054.58
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	15.40	EA	\$55.22	\$850.39

**Job Hours:** 15.40

**Total Cost:** \$31,253.00

**BULLDOZER WORK**

Task description: 7 E-seam MVBs, panel 11: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 432B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-432b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 19,451  
 Swell factor: 1.125  
 Loose volume: 21,882 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **82.12 Hours**

Total job cost: **\$26,410**

**BULLDOZER WORK**

Task description: 7 E-seam MVBs, panel 11: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 432C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-432c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 6,484  
 Swell factor: 1.125  
 Loose volume: 7,295 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **27.37 Hours**

Total job cost: **\$8,804**

**REVEGETATION WORK**

Task description: 7 E-seam MVBs, panel 11: broadcastPRDmtshrbseedmix

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 432D State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-432d  
 User: LDS  
 Agency or organization name: DRMS

**FERTILIZING**

**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
			\$
<b>Totals Seed Mix</b>			<b>\$</b>

**Application**

	Cost /Acre

<b>Description</b>	
	\$
<b>Total Seed Application Cost/Acre</b>	<b>\$</b>

**MULCHING and MISCELLANEOUS**

**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.13	\$4.13
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
<b>Total Mulch Materials Cost/Acre</b>				<b>\$496.91</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Weed spray, hand, non-aquatic area, nox. [DMG]	\$209.61
<b>Total Mulch Application Cost/Acre</b>	<b>\$452.23</b>

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

	No. of Acres: <u>4.02</u>	Cost /Acre: <u>\$1,805.06</u>
	Estimated Failure Rate: <u>20%</u>	Cost /Acre*: <u>\$855.92</u>
	*Selected Replanting Work Items: <u>SEEDING</u>	
Initial Job Cost:	<u>\$7,256.34</u>	
Reseeding Job Cost:	<u>\$688.16</u>	
Total Job Cost:	<u>\$7,945</u>	
Job Hours:	<u>4.02</u>	

## BOREHOLE SEALING WORK

Task description: 8 E-seam MVBs, panel 12: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 433A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-433a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	8.00	EA	\$122.34	\$978.75
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	2200	1,043.00	bag	\$22.00	\$22,946.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	29	29.00	LF	\$3.23	\$93.67
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	8.00	EA	\$46.00	\$368.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	17.60	EA	\$587.96	\$10,348.10
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	17.60	EA	\$55.22	\$971.87

**Job Hours:** 17.60

**Total Cost:** \$35,706.00

**BULLDOZER WORK**

Task description: 8 E-seam MVBs, panel 12: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 433B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-433b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 33,641  
 Swell factor: 1.125  
 Loose volume: 37,846 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3211

Adjusted unit production: 233.21 LCY/hr

Adjusted fleet production: **233.21 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.379/LCY

Total job time: **162.28 Hours**

Total job cost: **\$52,193**

**BULLDOZER WORK**

Task description: 8 E-seam MVBs, panel 12: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 433C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-433c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 11,214  
 Swell factor: 1.125  
 Loose volume: 12,616 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **47.34** Hours

Total job cost: **\$15,226**

**REVEGETATION WORK**Task description: 8 E-seam MVBs, panel 12: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 433DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-433dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 2 E-seam MVBs, panel 14: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 434A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-434a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	2.00	EA	\$122.34	\$244.69
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	550	261.00	bag	\$22.00	\$5,742.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	29	7.00	LF	\$3.23	\$22.61
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	2.00	EA	\$46.00	\$92.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	4.40	EA	\$587.96	\$2,587.02
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	4.40	EA	\$55.22	\$242.97

**Job Hours:** 4.40

**Total Cost:** \$8,931.00

**BULLDOZER WORK**

Task description: 2 E-seam MVBs, panel 14: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 434B State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-434b  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 7,887  
 Swell factor: 1.125  
 Loose volume: 8,873 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **33.30 Hours**

Total job cost: **\$10,709**

**BULLDOZER WORK**

Task description: 2 E-seam MVBs, panel 14: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 434C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-434c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 2,629  
 Swell factor: 1.125  
 Loose volume: 2,958 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **11.10** Hours

Total job cost: **\$3,570**

REVEGETATION WORKTask description: 2 E-seam MVBs, panel 14: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 434DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-434dUser: LDSAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



**BULLDOZER WORK**

Task description: SS1 MVBs: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 435C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-435c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 6,502  
 Swell factor: 1.125  
 Loose volume: 7,315 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **27.45 Hours**

Total job cost: **\$8,828**

**REVEGETATION WORK**Task description: SS1 MVBs: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 435DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-435dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



**BULLDOZER WORK**

Task description: SS2 MVBs: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 436C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-436c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 5,760  
 Swell factor: 1.125  
 Loose volume: 6,480 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **24.32 Hours**

Total job cost: **\$7,821**

**REVEGETATION WORK**Task description: SS2 MVBs: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 436DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-436dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



**BULLDOZER WORK**

Task description: 5 Exploration holes, MR423: topsoil

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 439C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-439c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 2,280  
 Swell factor: 1.125  
 Loose volume: 2,565 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **9.63** Hours

Total job cost: **\$3,096**

REVEGETATION WORKTask description: 5 Exploration holes, MR423: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 439DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-439dUser: LDSAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



**BULLDOZER WORK**

Task description: 3 Exploration holes, MR424: regrade

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 440C State: Colorado Abbreviation: None  
 Date: 1/30/2025 County: Gunnison Filename: MT9D-440c  
 User: LDS

Agency or organization name: DRMS

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 1,877  
 Swell factor: 1.125  
 Loose volume: 2,112 LCY

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

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %  
 Average site altitude: 8,000 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3669

Adjusted unit production: 266.48 LCY/hr

Adjusted fleet production: **266.48** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.207/LCY

Total job time: **7.92** Hours

Total job cost: **\$2,549**

**REVEGETATION WORK**Task description: 3 Exploration holes, MR424: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 440DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-440dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## BOREHOLE SEALING WORK

Task description: 22 of 33 Monitoring wells: plug and seal

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 441A

State: Colorado

Abbreviation: None

Date: 1/30/2025

County: Gunnison

Filename: MT9D-441a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bottom Plug	PVC plug - 4 in. diameter borehole	4"	NA	22.00	EA	\$36.06	\$793.36
Fill 4" hole with concrete to full depth of hole	Portland cement grout ( Bag, material cost only...94 lb. bag)	4"	10890	826.00	bag	\$22.00	\$18,172.00
Cut 8" outer casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	8"	NA	46.00	LF	\$3.23	\$148.58
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	22.00	EA	\$46.00	\$1,012.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	87.12	EA	\$483.88	\$42,155.63
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	87.12	EA	\$34.10	\$2,970.79

**Job Hours:** 87.12

**Total Cost:** \$65,252.00

## BOREHOLE SEALING WORK

Task description: 2 gas characterization holes: plug and seal (MR-469)

Site: West Elk Mine

Permit Action: MT9 - Part D

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 442A

State: Colorado

Abbreviation: None

Date: 1/29/2025

County: Gunnison

Filename: C007-442a

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 8 in. diameter borehole	7"	0	2.00	EA	\$89.31	\$178.61
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	7"	1300	604.00	bag	\$22.00	\$13,288.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	7"	4	4.00	LF	\$3.23	\$12.92
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	2.00	EA	\$46.00	\$92.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	20.80	EA	\$587.96	\$12,229.57
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	20.80	EA	\$55.22	\$1,148.58

**Job Hours:** 20.80

**Total Cost:** \$26,950.00

DEMOLITION WORK

Task description: Removal of temporary pipe, S Prong Creek

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 460 State: Colorado Abbreviation: None  
Date: 1/30/2025 County: Delta Filename: MT9D-460  
User: LDS

Agency or organization name: DRMS

**UNIT COSTS**

**Location adjustment: 90.70 %**

<b>Structure or Item Description</b>	<b>Dimensions</b>	<b>Demolition Menu Selection</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Temporary pipe	280' x 6"	Pipe, sewer/water - 12 in. diameter pipe	280.00	LF	\$5.24	\$1,467.20

**Job Hours:** 4.00      **Subtotal (unadjusted):** \$1,467.20      **Total Cost (adjusted for location):** \$1,330.75

**REVEGETATION WORK**Task description: S Prong Creek subsidence repair: BroadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 461State: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-461User: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



DEMOLITION WORK

Task description: Removal of 2 temporary bridges

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 462 State: Colorado Abbreviation: None  
Date: 1/30/2025 County: Delta Filename: MT9D-462  
User: LDS

Agency or organization name: DRMS

**UNIT COSTS**

**Location adjustment: 90.70 %**

<b>Structure or Item Description</b>	<b>Dimensions</b>	<b>Demolition Menu Selection</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Removal of 2 temporary bridges	14' x 40'	Excavate and load tank onto trailer, non-leaking - 9,000 gal. to 12,000 gal.	2.00	EA	\$1,645.00	\$3,290.00

Job Hours: 8.00

**Subtotal  
(unadjusted): \$3,290.00**

**Total Cost  
(adjusted for location): \$2,984.03**

## MISCELLANEOUS TRUCK WORK

Task description: Transport 2 temporary bridges

Site: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 463 State: Colorado Abbreviation: None  
Date: 1/30/2025 County: Delta Filename: MT9D-463  
User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Make and Model:	<u>Truck Tractor, 6x4, 75K GVW</u>	Horsepower:	<u>400</u>
Attachment 1:	<u>Tilt Deck Trailer, 20 ton</u>	Shift Basis:	<u>1 per day</u>
Attachment 2:	<u></u>	Weight:	<u>12.50</u>
Labor Unit 1:	<u>Transport Rig Driver</u>		<u>(US Tons)</u>
Labor Unit 2:	<u>Helper</u>		

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$29.92</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$59.76</u>	<u>100</u>
Operator Cost/Hour:	<u>\$50.37</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$140.05</u>	
Total Fleet Cost/Hour:	<u>\$140.05</u>	

### JOB TIME AND COST

Fleet size: 1 Truck(s) Total job time: 8.00 Hours  
Unit cost: \$140.05 /Hour Total job cost: \$1,120

COST SUMMARY WORK

Task description: Part E: Deer Creek, Minnesota Creek

Site: West Elk Mine

Permit Action: MT9 - Part E

Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 09E

State: Colorado

Abbreviation: None

Date: 1/27/2025

County: Delta

Filename: C007-09E

User: LDS

Agency or organization name: DRMS

**TASK LIST (DIRECT COSTS)**

<b>Task</b>	<b>Description</b>	<b>Form Used</b>	<b>Fleet Size</b>	<b>Task Hours</b>	<b>Cost</b>
601	Demolish/remove structures-Deer Creek/Minnesota Creek Are	DEMOLISH	1	51.10	\$30,523
602	Regrade Deer Creek Vent Shaft pad & access rd (1.9 Acres)	DOZER	1	10.13	\$3,259
603	Regrade Deer Creek Vent Shaft pad & access rd (1.9 Acres)	DOZER	1	10.13	\$3,259
604	Deer Creek Vent Shaft: broadcast PRD mt shrb seed mix	REVEGE	1	2.70	\$3,755
605	Monument dam borrow area: broadcast PRD mt shrb seed mix	REVEGE	1	2.70	\$3,755
606	Deer Creek fence: broadcast PRD mt shrb seed mix (MR-471)	REVEGE	1	0.29	\$573
610	Grade topsoil on Monument dam borrow area (1.9 Acres)	GRADER	1	1.21	\$312
611	Seal Deer Creek Vent Shafts (See Ex. 77)	MINESEAL	1	40.00	\$136,525
612	1 x 10" shaft (DC-3, Deer Creek Elec BH): plug and seal	BOREHOLE	1	6.60	\$6,156
613	Geological hole at Deer Creek Shaft: plug and seal (MR-475)	BOREHOLE	1	4.96	\$4,801
614	1 x 19" B to E pilot hole: plug (TR-153)	MINESEAL	1	4.00	\$2,368
615	1 x 19" B to E pilot hole: seal (TR-153)	BOREHOLE	1	6.60	\$16,339
<b><u>SUBTOTALS:</u></b>				<b>140.42</b>	<b>\$211,625</b>

## DEMOLITION WORK

Task description: Demolish/remove structures-Deer Creek/Minnesota Creek Are

Site: West Elk Mine

Permit Action: MT9 - Part E

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 601

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9E-601

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 91.30 %

<b>Structure or Item Description</b>	<b>Dimensions</b>	<b>Demolition Menu Selection</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Deer Creek Shaft fence (TR-109)	700 lf x 6 ft high	Fencing, chain link, including posts and fabric - to 6 ft. high	700.00	LF	\$3.02	\$2,114.00
Deer Creek Shaft - Superstructure	30x30x10	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 50 ft. push	9,000.00	CF	\$0.22	\$1,940.40
-Footings	2x3x75 lf	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft. - Max. 50 ft. push	75.00	LF	\$13.59	\$1,019.46
-Collar	8x3x88 lf	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	78.00	CY	\$151.50	\$11,817.00
Deer Creek Emergency Shaft - Buliding	30x20x30	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	18,000.00	CF	\$0.24	\$4,381.20
-Floor	30x20x8 in	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 50 ft. push	600.00	SF	\$1.58	\$947.28
-Footings	2x3x24 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 200 ft. push	24.00	LF	\$14.88	\$357.05
Deer Creek Shaft Generator Building (TR-109)- Superstructure	30x10x10	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	3,000.00	CF	\$0.24	\$730.20
-Floor	30x10x8 in th	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	300.00	SF	\$1.65	\$495.90
-Propane tank	1	Excavate and load tank onto trailer, non-leaking - 3,000 gal. to 5,000 gal.	1.00	EA	\$692.50	\$692.50
-Haul propane tank to dump	1	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	1.00	EA	\$760.00	\$760.00
Deer Creek Emergency Shaft Collar	4x3x25 lf	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	11.00	CY	\$151.50	\$1,666.50
Minnesota Reservoir robotic monitoring station - building	10x10x11	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	1,100.00	CF	\$0.24	\$267.74

-Gate at USFS Rd. 711.2B	30x4	Fencing, chain link, including posts and fabric - to 6 ft. high	30.00	LF	\$3.02	\$90.60
Remove 1260ft of 9 ft high fence (MR-471)	1260'x9'	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	1,260.00	LF	\$3.53	\$4,447.80
Remove 200ft of 9ft fence, monument dam survey station (MR- 473)	200'x9'	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	200.00	LF	\$3.53	\$706.00
Temporary pad for E to B seam shaft construction (MR- 483)	10'x10'x18"	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push	150.00	SF	\$2.38	\$356.51
E to B pilot hole pad (TR-153)	10'x27'x12"	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push	270.00	SF	\$2.38	\$641.71

<b>Job Hours:</b> <u>51.10</u>	<b>Subtotal</b> <b>(unadjusted):</b> <u>\$33,431.85</u>	<b>Total Cost</b> <b>(adjusted for</b> <b>location):</b> <u>\$30,523.28</u>
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**BULLDOZER WORK**

Task description: Regrade Deer Creek Vent Shaft pad & access rd (1.9 Acres)

Site: West Elk Mine Permit Action: MT9 - Part E Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 602 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: MT9E-602  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 3,065  
 Swell factor: 1.250  
 Loose volume: 3,831 LCY

Source of estimated volume: Ex. 77 (1.9 acres \* 1ft)  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -5 %  
 Average site altitude: 6,300 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5205

Adjusted unit production: 378.04 LCY/hr

Adjusted fleet production: **378.04 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.851/LCY

Total job time: **10.13 Hours**

Total job cost: **\$3,259**

**BULLDOZER WORK**

Task description: Regrade Deer Creek Vent Shaft pad & access rd (1.9 Acres)

Site: West Elk Mine Permit Action: MT9 - Part E Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 603 State: Colorado Abbreviation: None  
 Date: 1/28/2025 County: Gunnison Filename: C007-603  
 User: LDS

Agency or organization name: Division of Reclamation, Mining and Safety

**HOURLY EQUIPMENT COST**

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	100
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62  
 Total Fleet Cost/Hour: \$321.62

**MATERIAL QUANTITIES**

Initial Volume: 3,065  
 Swell factor: 1.250  
 Loose volume: 3,831 LCY

Source of estimated volume: Ex. 77 (1.9 acres \* 1ft)  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 125 feet  
 Unadjusted hourly production: 726.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -5 %  
 Average site altitude: 6,300 feet

Material weight: 2,650 lbs/LCY

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

**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.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:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5205

Adjusted unit production: 378.04 LCY/hr

Adjusted fleet production: **378.04 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.851/LCY

Total job time: **10.13 Hours**

Total job cost: **\$3,259**

REVEGETATION WORKTask description: Deer Creek Vent Shaft: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part EPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 604State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9E-604User: LDSAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



**REVEGETATION WORK**Task description: Monument dam borrow area: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part EPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 605State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9E-605User: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



REVEGETATION WORKTask description: Deer Creek fence: broadcast PRD mt shrb seed mix (MR-471)Site: West Elk MinePermit Action: MT9 - Part EPermit/Job#: C1980007PROJECT IDENTIFICATIONTask #: 606State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: C007-606User: LDSAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

Application

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	
	<b>\$0.00</b>

TILLING

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	
	<b>\$0.00</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	3.00	9.71	\$51.88
Mountain Brome - Bromar	4.00	6.43	\$24.07
Sandberg Bluegrass - VNS	3.00	63.71	\$43.34
Lupine, Silver	1.00	0.59	\$119.56
Western Wheatgrass - Arriba	4.00	10.10	\$36.13
Prairie Junegrass	3.00	159.46	\$146.22
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Bluebunch Wheatgrass - Goldar	3.00	9.64	\$34.38
Golden Banner	1.00	2.00	\$97.07



## MOTOR GRADER WORK

Task description: Grade topsoil on Monument dam borrow area (1.9 Acres)

Site: West Elk Mine

Permit Action: MT9 - Part E

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 610

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9E-610

User: LDS

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 14M

Horsepower: 259

Ripper Attachment: Multi-Shank Ripper

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:	\$5.75	NA
Ripper Operating Cost/Hour:	\$4.18	100
Operator Cost/Hour:	\$27.76	NA
Total Unit Cost/Hour:	\$256.63	
Total Fleet Cost/Hour:	<b>\$256.63</b>	

### MATERIAL QUANTITIES

Total Area to be graded or ripped: 1.90 acres

Source of estimated acreage: TR-108 submittal, Drawing C1.9

### 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: 6300 feet

Altitude Adj:	<u>1.00</u>	Source <u>(CAT HB)</u>
Job Efficiency:	<u>0.85</u>	<u>(1sh/d, mod.)</u>
Net Correction:	<u>0.8500</u>	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: 1.22 Hours

Unit cost: \$164.41 per acre Total job cost: \$312

## SAFEGUARDING UNDERGROUND OPENINGS

Task description: Seal Deer Creek Vent Shafts (See Ex. 77)

Site: West Elk Mine

Permit Action: MT9 - Part E

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 611

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: MT9E-611

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Opening Description</b>	<b>Dimensions</b>	<b>Closure Method</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Deer Creek Vent Shaft (concrete plug)	24ft*PI*50ft	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	3,770.00	CF	\$19.53	\$73,628.10
Deer Creek Vent Shaft (backfill, purchased)	24ft*PI*340ft	Shaft closure - backfilling, Machine Backfill	2,848.00	CY	\$12.50	\$35,600.00
Deer Creek Escape Shaft (concrete plug)	6ft*PI*50ft	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	942.00	CF	\$19.53	\$18,397.26
Deer Creek Escape Shaft (backfil, purchased)	6ft*PI*340ft	Shaft closure - backfilling, Machine Backfill	712.00	CY	\$12.50	\$8,900.00

**Job Hours:** 40.00

**Total Cost:** \$136,525.36

## BOREHOLE SEALING WORK

Task description: 1 x 10" shaft (DC-3, Deer Creek Elec BH): plug and seal

Site: West Elk Mine Permit Action: MT9 - Part E Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 612 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: MT9E-612  
User: LDS

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bottom Plug	PVC plug - 10 in. diameter borehole	10"	0	1.00	EA	\$122.34	\$122.34
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	10"	383	182.00	bag	\$22.00	\$4,004.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	14"	4	4.00	LF	\$3.23	\$12.92
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$46.00	\$46.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	3.06	EA	\$587.96	\$1,801.51
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	3.06	EA	\$55.22	\$168.97

Job Hours: 6.60

Total Cost: \$6,156.00

## BOREHOLE SEALING WORK

Task description: Geological hole at Deer Creek Shaft: plug and seal (MR-475)

Site: West Elk Mine Permit Action: MT9 - Part E Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 613 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Gunnison Filename: C007-613  
User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Bottom Plug	PVC plug - 6 in. diameter borehole	4.8"	0	1.00	EA	\$65.19	\$65.19
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	4.8"	620	68.00	bag	\$22.00	\$1,496.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	4.8"	1	1.00	LF	\$3.23	\$3.23
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$46.00	\$46.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	4.96	EA	\$587.96	\$2,916.28
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	4.96	EA	\$55.22	\$273.89

**Job Hours:** 4.96

**Total Cost:** \$4,801.00

**SAFEGUARDING UNDERGROUND OPENINGS**

Task description: 1 x 19" B to E pilot hole: plug (TR-153)

Site: West Elk Mine Permit Action: MT9 - Part E Permit/Job#: C1980007

**PROJECT IDENTIFICATION**

Task #: 614 State: Colorado Abbreviation: None  
Date: 1/28/2025 County: Delta Filename: C007-614  
User: LDS

Agency or organization name: DRMS

**UNIT COSTS**

<b>Opening Description</b>	<b>Dimensions</b>	<b>Closure Method</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Plug 19" hole	19"	Shaft closure - hollow core plug with structure (per cu. yd.)	1.00	CY	\$2,368.00	\$2,368.00

**Job Hours:** 4.00

**Total Cost:** \$2,368.00

## BOREHOLE SEALING WORK

Task description: 1 x 19" B to E pilot hole: seal (TR-153)

Site: West Elk Mine

Permit Action: MT9 - Part E

Permit/Job#: C1980007

### PROJECT IDENTIFICATION

Task #: 615

State: Colorado

Abbreviation: None

Date: 1/28/2025

County: Gunnison

Filename: C007-615

User: LDS

Agency or organization name: DRMS

### UNIT COSTS

<b>Borehole Description</b>	<b>Sealing/Item Method</b>	<b>Diameter</b>	<b>Length</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Fill Hole with Cement	Portland cement grout ( Bag, material cost only...94 lb. bag)	19"	380	651.00	bag	\$22.00	\$14,322.00
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	19	5	5.00	LF	\$3.23	\$16.15
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$46.00	\$46.00
Drill Rig Time	SCHRAMM T450WS	NA	NA	3.04	EA	\$587.96	\$1,787.40
Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	3.04	EA	\$55.22	\$167.87

**Job Hours:** 6.60

**Total Cost:** \$16,339.00