



STATE OF
COLORADO

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

1 message

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



COLORADO
Division of Reclamation,
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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.

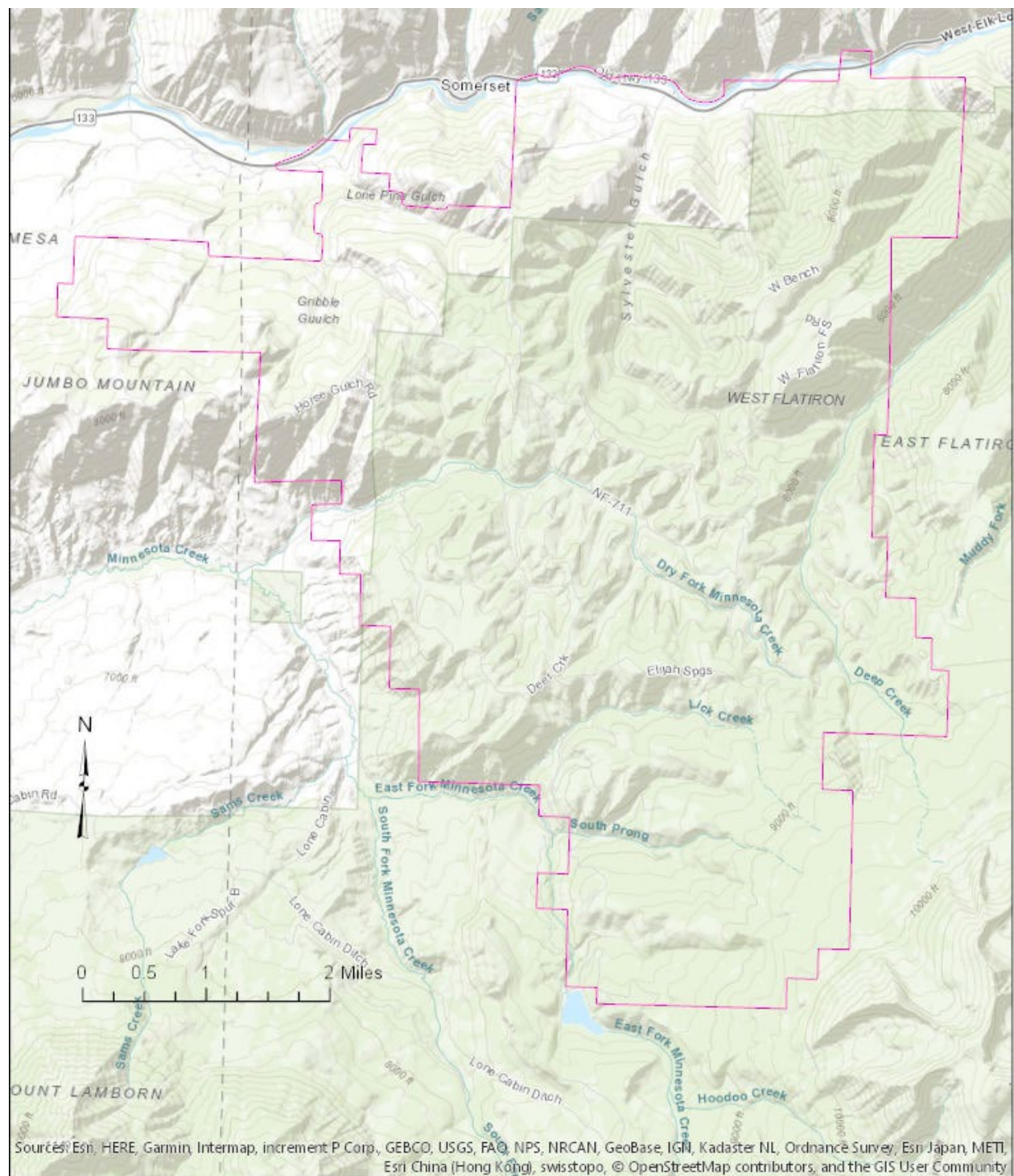


Figure 1: Approximate location of the West Elk Mine permit area

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
<u>SUBTOTALS:</u>				8041.78	\$11,635,753

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
<u>SUBTOTALS:</u>				2603.24	\$5,324,948

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/bathhouse	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	

Job Hours: 1,485.50Subtotal
(unadjusted): \$3,663,692.42Total Cost
(adjusted for location): \$3,344,951.18

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:	<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>\$1,937.46</u>	

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

Job Condition Correction Factors

Unadjusted Hourly Unit Production:	<u>0.838</u>	<u>Acres/hr</u>
Site Altitude:	<u>6,300</u>	<u>feet</u>
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>

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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask description: Regrade 1.2 million gallon water tank padSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-004User: LDSAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift 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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$456.10Total Fleet Cost/Hour: \$1,824.38**MATERIAL QUANTITIES**Initial Volume: 1,032Swell factor: 1.165Loose volume: 1,202 LCYSource of estimated volume: TR-70Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 125 feetUnadjusted hourly production: 1,055.6 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 7,380 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:	1.000	(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 WORKTask description: Distribute topsoil at 1.2 million gallon water tank padSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-005User: LDSAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift 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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$456.10Total Fleet Cost/Hour: \$1,824.38**MATERIAL QUANTITIES**Initial Volume: 1,032Swell factor: 1.215Loose volume: 1,254 LCYSource of estimated volume: TR-70Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 125 feetUnadjusted hourly production: 1,055.6 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 7,380 feetMaterial weight: 1,600 lbs/LCYWeight 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 WORKTask description: Regrade topsoil 1.2 million gallon water tank padSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 006State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-006User: LDSAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift 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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$456.10Total Fleet Cost/Hour: \$1,824.38**MATERIAL QUANTITIES**Initial Volume: 1,032Swell factor: 1.215Loose volume: 1,254 LCYSource of estimated volume: TR-70Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 125 feetUnadjusted hourly production: 1,055.6 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 7,380 feetMaterial weight: 1,600 lbs/LCYWeight 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#: C1980007**PROJECT IDENTIFICATION**Task #: 008State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-008User: LDSAgency 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:	3	1	1	1	0	0
Group Subtotals:	Work: \$389.52		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,320.68**MATERIAL QUANTITIES**Initial 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: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 WORKTask description: Haul fill from SubsoilPile#1 to TrainLO Pond MB-4 & Sed TrapSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 011State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-011User: LDSAgency 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: 1.125Loose volume: 242

LCY

Source of estimated volume: TR-82, Drawing 3Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.080	minutes
Adjusted Loader Cycle Time:		0.420	minutes
Net Load Time per Truck:		0.520	minutes

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	0.520	Minutes	Adjusted for site altitude:	0.520	Minutes
Truck Maneuver and Dump Time:	0.90	Minutes	Adjusted for site altitude:	0.900	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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **0.59** HoursUnit 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

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

Unadjusted Hourly Unit Production: 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:	\$1,937.46	

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 WORKTask 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:

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

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

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>5</u>	passes
Unadjusted Hourly Unit Production:	<u>957.14</u>	CCY/hour

Job Condition Correction Factors

Site Altitude: 6,300 feet

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

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 WORKTask 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

Attachment 1: ROPS Cab

Horsepower: 268

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

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

Unadjusted Hourly Unit Production: 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 WORKTask description: **Replace topsoil from stockpile to ROM pad expansion**Site: **West Elk Mine**Permit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 023State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-023User: LDSAgency 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: 1.250Loose volume: **7,500**

LCY

Source of estimated volume: MR-240Source 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 4.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 5.96 minutesAdjusted for job conditions: 484.63 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 484.63 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 484.63 LCY/HourUnadjusted unit production/hour: 583.89 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 15.48 HoursUnit cost: \$2.606 /LCYTotal 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:	\$256.63	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 2.50 acres

Source of estimated acreage: Map 53

HOURLY PRODUCTION

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

Job Condition Correction Factors

Site Altitude: 6300 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.85</u>	(1sh/d, mod.)
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: **1.60** 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#: C1980007**PROJECT IDENTIFICATION**Task #: 028State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-028User: LDSAgency 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:	3	1	1	1	0	0
Group Subtotals:	Work: \$389.52		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,320.68**MATERIAL QUANTITIES**Initial 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: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
penetration 5.0

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

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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **64.51** HoursUnit cost: \$3.064 /LCY Total job cost: **\$85,193**

TRUCK/LOADER TEAM WORKTask description: CTaskDescriptionSite: CSitePermit Action: CJobActionPermit/Job#: CPermitID**PROJECT IDENTIFICATION**Task #: TTTState: CStateAbbreviation: CAbbreviationDate: mmddyyyyCounty: CCountyFilename: CFilenameUser: UUUAgency 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: 1.125Loose volume: 12,938

LCY

Source of estimated volume: Operator estimateSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **38.77** HoursUnit cost: \$4.455 /LCY Total job cost: **\$57,632**

BULLDOZER WORKTask 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 WORKTask 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 WORKTask description: Regrade light use roads for water tank topsoil pileSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 036State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-036User: 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: 889Swell factor: 1.330Loose volume: 1,182 LCYSource of estimated volume: Division estimateSource 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: 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:	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 WORKTask 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 contours**Site: **West Elk Mine**Permit Action: **MT9 - Part A**Permit/Job#: **C1980007****PROJECT IDENTIFICATION**Task #: **038**State: **Colorado**Abbreviation: **None**Date: **1/28/2025**County: **Gunnison**Filename: **MT9A-038**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: **8,723**

CCY

Swell factor: **1.330**Loose volume: **11,602**

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: **2,900** Pounds/LCYDescription: **Decomposed rock - 50% Rock, 50% Earth**Rated 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
penetration 5.0

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

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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **64.11** HoursUnit cost: \$8.214 /LCY Total job cost: **\$95,298**

SCRAPER TEAM WORKTask description: CTaskDescriptionSite: 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 PRODUCTIONScraper Bowl (volume) Basis:

Material weight: 2,900 lbs/LCY Struck Volume: 24.00 LCY
 Material description: Decomposed rock - 50% Rock, Heaped Volume: 34.00 LCY
50% Earth
 Rated Payload: 81,600 pounds Average Volume: 29.00 LCY
 Payload Capacity: 28.14 LCY Adjusted Capacity: 28.14 LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 5.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 2.85 minutesAdjusted for job conditions: 983.35 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 983.35 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 983.35 LCY/HourUnadjusted unit production/hour: 1,184.75 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 165.86 HoursUnit cost: \$1.285 /LCYTotal job cost: \$209,507

BULLDOZER WORKTask 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 WORKTask description: Push west fill to base of cut slope benchSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 041State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-041User: 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: 13,000Swell factor: 1.330Loose volume: 17,290 LCYSource of estimated volume: Operator estimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 400 feetUnadjusted hourly production: 305.6 LCY/hrMaterials consistency description: Loose stockpile 1.2Average 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:	0.600	(POOR)
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:	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 WORKTask 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:	<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: 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/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>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:	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 WORKTask description: Move fill material from portal storage bench to base of cutSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 043State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-043User: 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: 3,000Swell factor: 1.330Loose volume: 3,990 LCYSource of estimated volume: Operator estimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 400 feetUnadjusted hourly production: 305.6 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average 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:	0.600	(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 WORKTask description: Move portal storage bench material on to cut slopeSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 044State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-044User: 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: 3,000Swell factor: 1.330Loose volume: 3,990 LCYSource of estimated volume: Operator estimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 700.0 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 25 %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:	0.600	(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:

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

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):	<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>5</u>	passes
Unadjusted Hourly Unit Production:	<u>957.14</u>	CCY/hour

Job Condition Correction Factors

Site Altitude: 6,300 feet

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

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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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:	\$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:	\$1,937.46	

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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask description: CTaskDescriptionSite: 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 PRODUCTIONScraper Bowl (volume) Basis:

Material weight: 2,550 lbs/LCY Struck Volume: 24.00 LCY
 Material description: Earth - Dry packed Heaped Volume: 34.00 LCY
 Rated Payload: 81,600 pounds Average Volume: 29.00 LCY
 Payload Capacity: 32.00 LCY Adjusted Capacity: 29.00 LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 4.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 3.17 minutesAdjusted for job conditions: 911.17 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 911.17 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 911.17 LCY/HourUnadjusted unit production/hour: 1,097.79 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 30.87 HoursUnit cost: \$1.386 /LCYTotal job cost: \$38,989

SCRAPER TEAM WORKTask description: CTaskDescriptionSite: 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 PRODUCTIONScraper Bowl (volume) Basis:

Material weight: 2,550 lbs/LCY Struck Volume: 24.00 LCY
 Material description: Earth - Dry packed Heaped Volume: 34.00 LCY
 Rated Payload: 81,600 pounds Average Volume: 29.00 LCY
 Payload Capacity: 32.00 LCY Adjusted Capacity: 29.00 LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 4.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 4.55 minutesAdjusted for job conditions: 634.81 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 634.81 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 634.81 LCY/HourUnadjusted unit production/hour: 764.84 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 7.88 HoursUnit cost: \$1.990 /LCYTotal job cost: \$9,949

SCRAPER TEAM WORKTask 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**

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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 4.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 6.28 minutesAdjusted for job conditions: 459.94 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 459.94 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 459.94 LCY/HourUnadjusted unit production/hour: 554.14 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 2.72 HoursUnit cost: \$2.746 /LCYTotal 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:	<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>\$1,937.46</u>	

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

Job Condition Correction Factors

Unadjusted Hourly Unit Production:	<u>0.838</u>	<u>Acres/hr</u>
Site Altitude:	<u>6,300</u>	<u>feet</u>
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>

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

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

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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask description: Backfill/grade shop and warehouse areaSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 057State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-057User: 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: 1,913Swell factor: 1.165Loose volume: 2,229 LCYSource of estimated volume: Permit Volume 7, Exhibit 43Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 80 feetUnadjusted hourly production: 1,460.1 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:	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 WORKTask description: Backfill/grade office/bathroom areaSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 058State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-058User: 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: 6,447Swell factor: 1.165Loose volume: 7,511 LCYSource of estimated volume: Permit Volume 7, Exhibit 43Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 95 feetUnadjusted hourly production: 1,297.5 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 20 %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:	0.900	(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 WORKTask description: Backfill/grade parking lotSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 059State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-059User: 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: 15,015Swell factor: 1.165Loose volume: 17,492 LCYSource of estimated volume: Permit Volume 7, Exhibit 43Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 115 feetUnadjusted hourly production: 1,130.6 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average 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:	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 WORKTask description: **Backfill Ponds MB-1 and FW-1**Site: **West Elk Mine**Permit Action: **MT9 - Part A**Permit/Job#: **C1980007****PROJECT IDENTIFICATION**Task #: **061**State: **Colorado**Abbreviation: **None**Date: **1/28/2025**County: **Gunnison**Filename: **MT9A-061**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: **Map 54, Permit Volume 8A, Exhibit 66**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:	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 WORKTask description: **Regrade Pond MB-1**Site: **West Elk Mine**Permit Action: **MT9 - Part A**Permit/Job#: **C1980007****PROJECT IDENTIFICATION**Task #: **062**State: **Colorado**Abbreviation: **None**Date: **1/28/2025**County: **Gunnison**Filename: **MT9A-062**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: **30,193**Swell factor: **1.165**Loose volume: **35,175 LCY**Source of estimated volume: **Map 53, Division estimate**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **150 feet**Unadjusted hourly production: **910.5 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:	1.200	(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: 0.2889

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 WORKTask description: **Regrade freshwater pond FW-1**Site: **West Elk Mine**Permit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 063State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-063User: 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: 14,719Swell factor: 1.165Loose volume: **17,148 LCY**Source of estimated volume: Permit Volume 7, Exhibit 43Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 175 feetUnadjusted hourly production: 805.3 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:	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 WORKTask 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:	\$244.29	NA
Operating Cost/Hour:	\$218.49	100
Operator Cost/Hour:	\$33.87	NA
Total Unit Cost/Hour:	\$496.65	
Total Fleet Cost/Hour:	\$496.65	

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

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:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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:	\$244.29	NA
Operating Cost/Hour:	\$218.49	100
Operator Cost/Hour:	\$33.87	NA
Total Unit Cost/Hour:	\$496.65	
Total Fleet Cost/Hour:	\$496.65	

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

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

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 WORKTask description: **Distribute Main Topsoil Stockpile**Site: **West Elk Mine**Permit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 074State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-074User: LDSAgency 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: 1.125Loose volume: **95,400**

LCY

Source of estimated volume: Operator estimateSource 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 5.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 4.01 minutesAdjusted for job conditions: 720.30 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 720.30 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 720.30 LCY/HourUnadjusted unit production/hour: 867.83 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 132.44 HoursUnit cost: \$1.754 /LCYTotal job cost: \$167,297

BULLDOZER WORKTask description: Spread topsoil on parking lot expansion, approved MR-317Site: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 075State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-075User: 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: 2,549Swell factor: 1.000Loose volume: 2,549 LCYSource 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 feetUnadjusted hourly production: 1,130.6 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push gradient: 0 %Average site altitude: 6,300 feetMaterial weight: 1,600 lbs/LCYWeight 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 WORKTask description: **Finish grade backfilled areas**Site: **West Elk Mine**Permit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 076State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-076User: 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: 43,262Swell factor: 1.165Loose volume: **50,400 LCY**Source of estimated volume: Map 53Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 60 feetUnadjusted hourly production: 1,872.0 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average 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:	1.000	(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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask description: Regrade mine entrance expansion areaSite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 078State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-078User: 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: 1,465Swell factor: 1.330Loose volume: 1,948 LCYSource of estimated volume: Map B-1Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 1,514.3 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 10 %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:	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 WORKTask description: CTaskDescriptionSite: CSitePermit Action: CJobActionPermit/Job#: CPermitID**PROJECT IDENTIFICATION**Task #: TTTState: CStateAbbreviation: CAbbreviationDate: mmddyyyyCounty: CCountyFilename: CFilenameUser: UUUAgency 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: 1.125Loose volume: 726

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: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **1.68** HoursUnit 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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask description: CTaskDescriptionSite: CSitePermit Action: CJobActionPermit/Job#: CPermitID**PROJECT IDENTIFICATION**Task #: TTTState: CStateAbbreviation: CAbbreviationDate: mmddyyyyCounty: CCountyFilename: CFilenameUser: UUUAgency 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: 1.000Loose volume: 1,852

LCY

Source of estimated volume: DRMS estimateSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 2,550

Pounds/LCY

Description: SandstoneRated 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:	5.000	LCY (heaped)
Bucket Fill Factor:	0.925	Shale, Sandstone-Standing Bank (85%-100%) 0.925
Adjusted Capacity:	4.625	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.040	minutes
Adjusted Loader Cycle Time:		0.460	minutes
Net Load Time per Truck:		0.560	minutes

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	0.560	Minutes	Adjusted for site altitude:	0.560	Minutes
Truck Maneuver and Dump Time:	0.90	Minutes	Adjusted for site altitude:	0.900	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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **4.26** HoursUnit 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>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask description: Regrade haul/access road from Hwy 133 to Syl. Gulch Fan Rd.Site: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 085State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9A-085User: 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: 16,610Swell factor: 1.165Loose volume: 19,351 LCYSource of estimated volume: MR-75Source 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: 10 %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:	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 WORKTask description: **Regrade P-2 conveyor 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 WORKTask 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

Attachment 1: ROPS Cab

Horsepower: 268

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
Date: 1/28/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9A-090

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
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/DEMOBILIZATIONTask description: Mobilize/demobilize equipment for updated parts A-ESite: West Elk MinePermit Action: MT9 - Part APermit/Job#: C1980007**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:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D9T - 9SU	66.13	\$271.95	\$125.64	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:	\$262.13	\$262.13
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EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>GRAND JUNCTION</u>	
Total one-way travel distance:	<u>80.00</u>	miles
Average Travel Speed:	<u>40.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$45,336.40</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$1,048.52</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>2.00</u>	<u>2.00</u>
Return Time (Hours):	<u>2.00</u>	<u>2.00</u>
Loading Time (Hours):	<u>1.00</u>	<u>NA</u>
Unloading Time (Hours):	<u>1.00</u>	<u>NA</u>
Subtotals:	<u>6.00</u>	<u>4.00</u>

JOB TIME AND COST

Total job time:	<u>12.00</u>	Hours
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Total job cost:	<u>\$46,385</u>
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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>		<u>(US Tons)</u>
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:	<u>1</u>	Truck(s)	Total job time:	<u>4.00</u>	Hours
Unit cost:	<u>\$108.60</u>	/Hour	Total job cost:	<u>\$434</u>	

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 length)	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
<u>SUBTOTALS:</u>				519.12	\$735,480

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 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
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

Job Hours: 16.00

Subtotal
(unadjusted): \$35,090.78

Total Cost
(adjusted for location): \$32,037.88

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:

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

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):	<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>5</u>	passes
Unadjusted Hourly Unit Production:	<u>957.14</u>	CCY/hour

Job Condition Correction Factors

Site Altitude: 6,300 feet

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

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 area**Site: **West Elk Mine**Permit Action: **MT9 - Part B**Permit/Job#: **C1980007****PROJECT IDENTIFICATION**Task #: **203**State: **Colorado**Abbreviation: **None**Date: **1/29/2025**County: **Gunnison**Filename: **MT9B-203**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-ripper:	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: **24,433**

CCY

Swell factor: **1.165**Loose volume: **28,464**

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: **2,900** Pounds/LCYDescription: **Decomposed rock - 50% Rock, 50% Earth**Rated 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **73.03** HoursUnit cost: \$3.601 /LCY Total job cost: **\$102,508**

BULLDOZER WORKTask 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 WORKTask description: **Remove RPE ponds - Haul fill to top of refuse pile**Site: **West Elk Mine**Permit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 205State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-205User: LDSAgency 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: 1.115Loose volume: **17,611**

LCY

Source of estimated volume: Division estimateSource 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 4.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 5.38 minutesAdjusted for job conditions: 536.88 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 536.88 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 536.88 LCY/HourUnadjusted unit production/hour: 646.84 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 32.80 HoursUnit cost: \$2.353 /LCYTotal 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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask description: **Regrade RPE sediment control ditches**Site: **West Elk Mine**Permit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 208State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-208User: 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: 2,690Swell factor: 1.330Loose volume: **3,578 LCY**Source of estimated volume: Map N-1Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 700.0 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:	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:

Ownership Cost/Hour:	<u>\$164.53</u>	Utilization %
Operating Cost/Hour:	<u>\$161.21</u>	<u>NA</u>
Operator Cost/Hour:	<u>\$25.60</u>	<u>100</u>
Total Unit Cost/Hour:	<u>\$351.34</u>	<u>NA</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 = $(W \times S \times L \times C) / P$

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

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

Unit cost: \$0.354 per CCY Total job cost: \$1,108

TRUCK/LOADER TEAM WORKTask description: Haul remaining waste rock from prep. plant to RPEESite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 210State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-210User: LDSAgency 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-ripper:	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: 1.000Loose volume: 10,000

LCY

Source of estimated volume: TR-120, DRMS estimateSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **62.76** HoursUnit cost: \$8.808 /LCY Total job cost: **\$88,083**

BULLDOZER WORKTask description: Grade remaining coal waste rock into <24" lifts on RPEESite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 211State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-211User: 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: 10,000Swell factor: 1.000Loose volume: 10,000 LCYSource of estimated volume: Assumed 10,000 cyds of remaining wasteSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 1,243.2 LCY/hrMaterials consistency description: Loose stockpile 1.2Average 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:	0.900	(AB.AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	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#: C1980007**PROJECT IDENTIFICATION**Task #: 212State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-212User: LDSAgency 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: 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: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **6.20** HoursUnit 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#: C1980007**PROJECT IDENTIFICATION**Task #: 213State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-213User: LDSAgency 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-ripper:	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: 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: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **1.38** HoursUnit cost: \$3.343 /LCY Total job cost: **\$1,941**

BULLDOZER WORKTask description: Regrade NSS pondSite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 214State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-214User: 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: 613Swell factor: 1.165Loose volume: 714 LCYSource of estimated volume: Division estimateSource 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: 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:	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 WORKTask 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 WORKTask description: Regrade NSS area entrance roadSite: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 216State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-216User: 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: 107Swell factor: 1.165Loose volume: 125 LCYSource of estimated volume: Division estimateSource 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: 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:	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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask description: Regrade light use road and auger rig drill sites (MR-354)Site: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 220State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-220User: 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: 968Swell factor: 1.330Loose volume: 1,287 LCYSource of estimated volume: 0.6 acre x 1 ft deepSource 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: 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:	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#: C1980007**PROJECT IDENTIFICATION**Task #: 221State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-221User: LDSAgency 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-ripper:	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: 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: \$0.00**HOURLY PRODUCTION****Truck 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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
maintained 2.0

Road Condition: Hard, smooth, stabilized, surfaced, watered,

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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **134.33** HoursUnit cost: \$2.922 /LCY Total job cost: **\$188,535**

REVEGETATION WORKTask 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
			Total Fertilizer Materials Cost/Acre	\$27.30

Application

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

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$102.41
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$220.02

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, Engelman'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

Streambank Wheatgrass - Sodar	6.00	19.56	\$49.82
Thickspike Wheatgrass - Critana	6.00	21.21	\$48.89
Coreopsis, Plains	1.00	31.72	\$64.16
Western Wheatgrass - Arriba	6.00	15.15	\$54.20
Vetch, American	2.00	0.91	\$246.23
Flax, Lewis Blue	0.50	3.32	\$21.15
Globemallow, Scarlet (or copper)	1.00	11.32	\$185.55
Penstemon, Rocky Mountain	0.50	7.84	\$30.71
Totals Seed Mix	61.20	522.35	\$1,251.86

Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.13	\$4.13
Herbicide - Banvel @ 1.0 pt/ac	1.00	ACRE	\$8.33	\$8.33
Straw, delivered {MEANS 31 25 14.16 1200}	1.25	TON	\$492.78	\$615.98
Total Mulch Materials Cost/Acre				\$628.44

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres: 40 Cost /Acre: \$2,895.53
 Estimated Failure Rate: 50% Cost /Acre*: \$1,594.84
 *Selected Replanting Work Items: FERTILIZING,SEEDING,NURSERY

Initial Job Cost: \$115,821.20
 Reseeding Job Cost: \$31,896.80
 Total Job Cost: \$147,718

Job Hours: 60.00

REVEGETATION WORKTask 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
			Total Fertilizer Materials Cost/Acre	\$27.30

Application

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

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$102.41
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$220.02

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
Totals Seed Mix	30.60	261.18	\$625.93

Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	0.75	TON	\$492.78	\$369.59
Total Mulch Materials Cost/Acre				\$369.59

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres: 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 WORKTask 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:	<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: 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/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>1.000</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:	0.793	(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 WORKTask 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:	\$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: **\$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:	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:	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
Ripper Attachment: 1-Shank Ripper

Horsepower: 405

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:	\$1,928.86	

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 WORKTask description: Grade RPEE haul roads to AOC (TR133 changes)Site: West Elk MinePermit Action: MT9 - Part BPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 227State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-227User: 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: 5,541Swell factor: 1.330Loose volume: 7,369 LCYSource of estimated volume: 0.6 acre x 1 ft deepSource 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: 10 %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:	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#: C1980007**PROJECT IDENTIFICATION**Task #: 228State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9B-228User: LDSAgency 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:		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: \$510.79**MATERIAL QUANTITIES**Initial volume: 24,933

CCY

Swell factor: 1.000Loose volume: 24,933

LCY

Source of estimated volume: 8800 ft. long X 17 ft wide X1.5 ft thickSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck 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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
penetration 5.0

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

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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **51.57** HoursUnit 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
<u>SUBTOTALS:</u>				2411.87	\$3,859,647

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 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
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-fet 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
Date: 1/29/2025
User: LDS

State: Colorado
County: Delta

Abbreviation: None
Filename: MT9C-301a

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
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

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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:	\$1,937.46	

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 WORKTask description: Regrade main access road to substationSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 303State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-303User: 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: 1,722Swell factor: 1.165Loose volume: 2,006 LCYSource of estimated volume: Permit volume 7, Exhibit 43dSource 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:	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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask 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 WORKTask description: **Replace topsoil f/ stockpile to Shaft #3 pad & light use rd.**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 307State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-307User: LDSAgency 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: 1.250Loose volume: **6,875**

LCY

Source of estimated volume: Exhibit 69 haul TS from SGTS pile 1, p. 5Source 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 4.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 7.52 minutesAdjusted for job conditions: 384.10 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 384.10 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 384.10 LCY/HourUnadjusted unit production/hour: 462.77 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 17.90 HoursUnit cost: \$3.289 /LCYTotal job cost: \$22,609

BULLDOZER WORKTask 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 WORKTask description: Regrade shaft #3 pad and roadsSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 308State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-308User: 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: 151,000Swell factor: 1.330Loose volume: 200,830 LCYSource of estimated volume: Operator estimateSource 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: 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:	0.700	(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:

Ownership Cost/Hour:	<u>\$164.53</u>	Utilization %	<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 = $(W \times S \times L \times C) / P$

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

Altitude Adj:	<u>1.00</u>	Source
Job Efficiency:	<u>0.83</u>	(CAT HB)
Net Correction:	<u>0.8300</u>	(1 shift/day)
		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: 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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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#: C1980007**PROJECT IDENTIFICATION**Task #: 311State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-311User: LDSAgency 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	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: \$1,437.13**MATERIAL QUANTITIES**Initial volume: 140,000

CCY

Swell factor: 1.330Loose volume: 186,200

LCY

Source of estimated volume: Exhibit 69 p.14, Map 53BSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **432.06** HoursUnit cost: \$3.335 /LCY Total job cost: **\$620,922**

BULLDOZER WORKTask description: Regrade material at Sylvester Gulch light-use road upgradeSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 313State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-313User: 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: 5,520Swell factor: 1.330Loose volume: 7,342 LCYSource of estimated volume: Operator estimateSource 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: 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:	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 WORKTask description: **Replace topsoil f/ stockpile to fill light use rd. expansion**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 314State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-314User: LDSAgency 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: 1.250Loose volume: **1,041**

LCY

Source of estimated volume: Division estimateSource 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 5.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 2.02 minutesAdjusted for job conditions: 1,429.90 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,429.90 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,429.90 LCY/HourUnadjusted unit production/hour: 1,722.77 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 0.73 HoursUnit cost: \$0.883 /LCYTotal 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:

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

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

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

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

Unit cost: \$0.354 per CCY

Total job cost: **\$2,273**

BULLDOZER WORKTask description: Backfill and regrade DMEA powerline roadSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 316State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-316User: 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: 270Swell factor: 1.330Loose volume: 359 LCYSource of estimated volume: MR-240Source 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: 15 %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:	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 WORKTask description: **Replace topsoil f/ stockpile to power pole roads 9 and 11-16**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 317State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-317User: LDSAgency 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: 1.125Loose volume: **529**

LCY

Source of estimated volume: Exhibit 69, Table 2Source 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 5.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 2.87 minutesAdjusted for job conditions: 1,006.41 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,006.41 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,006.41 LCY/HourUnadjusted unit production/hour: 1,212.54 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 0.53 HoursUnit cost: \$1.255 /LCYTotal job cost: \$664

REVEGETATION WORKTask 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
			Total Fertilizer Materials Cost/Acre	\$27.30

Application

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

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$102.41
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$220.02

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
Totals Seed Mix	30.60	261.18	\$625.93

Application

Description	Cost /Acre
	\$
Total Seed Application Cost/Acre	\$0.00

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
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
Totals Nursery Stock Cost / Acre					\$2,305.00

JOB TIME AND COSTNo. 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#: C1980007**PROJECT IDENTIFICATION**Task #: 319State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-319User: LDSAgency 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:	3	1	1	1	0	0
Group Subtotals:	Work: \$389.52		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,320.68**MATERIAL QUANTITIES**Initial 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: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **120.08** HoursUnit 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#: C1980007**PROJECT IDENTIFICATION**Task #: 320State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-320User: LDSAgency 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:	3	1	1	1	0	0
Group Subtotals:	Work: \$389.52		Support: \$931.16		Maint: \$0.00	

Total work team cost/hour: \$1,320.68**MATERIAL QUANTITIES**Initial 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: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **29.24** HoursUnit 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#: C1980007**PROJECT IDENTIFICATION**Task #: 321State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-321User: LDSAgency 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-ripper:	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: \$1,320.68**MATERIAL QUANTITIES**Initial 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: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **102.75** HoursUnit cost: \$3.378 /LCY Total job cost: **\$135,700**

TRUCK/LOADER TEAM WORKTask description: **Replace topsoil f/stockpile 4**Site: **West Elk Mine**Permit Action: **MT9 - Part C**Permit/Job#: **C1980007****PROJECT IDENTIFICATION**Task #: **322**State: **Colorado**Abbreviation: **None**Date: **1/29/2025**County: **Gunnison**Filename: **MT9C-322**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: **2,000**

CCY

Swell factor: **1.125**Loose volume: **2,250**

LCY

Source of estimated volume: **Page 2.02-53**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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **5.22** HoursUnit cost: \$3.449 /LCY Total job cost: **\$7,761**

TRUCK/LOADER TEAM WORKTask description: **Haul backfill material to Main Access Road Stations 58-92**Site: **West Elk Mine**Permit Action: **MT9 - Part C**Permit/Job#: **C1980007****PROJECT IDENTIFICATION**Task #: **323**State: **Colorado**Abbreviation: **None**Date: **1/29/2025**County: **Gunnison**Filename: **MT9C-323**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-ripper:	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: **\$1,320.68****MATERIAL QUANTITIES**Initial volume: **10,444**

CCY

Swell factor: **1.125**Loose volume: **11,750**

LCY

Source of estimated volume: **Table 2, Exhibit 69**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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: **31.08** HoursUnit cost: \$3.494 /LCY Total job cost: **\$41,049**

BULLDOZER WORKTask description: Regrade ventilation shaft siteSite: 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:	<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: 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/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>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

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 WORKTask description: **Regrade light use roads from PR-7**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 326State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-326User: 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: 22,815Swell factor: 1.165Loose volume: **26,579 LCY**Source of estimated volume: Exhibit 69, Table 2Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 700.0 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:	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 WORKTask description: **Regrade main access road from stations 58-92**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 327State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-327User: 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: 10,444Swell factor: 1.165Loose volume: **12,167 LCY**Source of estimated volume: Exhibit 69, Table 2Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 300 feetUnadjusted hourly production: 437.8 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 10 %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:	0.900	(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 WORKTask description: Regrade main road from stations 7-58Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 328State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-328User: 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: 18,519Swell factor: 1.165Loose volume: 21,575 LCYSource of estimated volume: Exhibit 69, Table 2Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 300 feetUnadjusted hourly production: 437.8 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:	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 WORKTask description: **Regrade substation access road, PR-7**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 329State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-329User: 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 LCY**Source of estimated volume: Exhibit 69, Table 2Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 300 feetUnadjusted hourly production: 437.8 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 10 %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:	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:	\$256.63	

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

Job Condition Correction Factors

Site Altitude: 6300 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.85</u>	(1sh/d, mod.)
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: **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

Attachment 1: ROPS Cab

Horsepower: 268

Weight (MT): 29.30

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

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

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

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:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

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:

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

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

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

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

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):	<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

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

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

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

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

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

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

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

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

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

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

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

Unit cost: \$0.354 per CCY

Total job cost: **\$3,767**

BULLDOZER WORKTask description: **Backfill intake and exhaust shafts, PR-7**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 337State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-337User: 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: 169Swell factor: 1.165Loose volume: **197 LCY**Source of estimated volume: Division estimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 700.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average 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:	<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>0.800</u>	<u>(POOR)</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: 0.2843

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 WORKTask description: **Regrade road to drill hole #4, MR-236**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 338State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-338User: 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: 674Swell factor: 1.330Loose volume: **896 LCY**Source of estimated volume: Division estimateSource 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: 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:	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 WORKTask description: Replace topsoil from stockpile to drill pad #4, MR-236Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 339State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-339User: 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: 506Swell factor: 1.250Loose volume: 633 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: 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:	1.200	(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 WORKTask description: Regrade SGFA dewatering facility structuresSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 340State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-340User: 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: 15,000Swell factor: 1.330Loose volume: 19,950 LCYSource of estimated volume: Division estimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 546.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 10 %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:	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 WORKTask 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****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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 5.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 2.42 minutesAdjusted for job conditions: 1,193.55 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,193.55 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,193.55 LCY/HourUnadjusted unit production/hour: 1,438.02 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 3.96 HoursUnit cost: \$1.058 /LCYTotal 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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask description: Regrade access road to powerlines and switchgearsSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 343State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-343User: 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: 2,500Swell factor: 1.165Loose volume: 2,913 LCYSource of estimated volume: Operator estimateSource 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: 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:	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 WORKTask description: **Remove base from light use roads to powerline/switchgear**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 344State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-344User: LDSAgency 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: 1.000Loose volume: **250**

LCY

Source of estimated volume: Operator estimateSource 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 5.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 6.98 minutesAdjusted for job conditions: 413.81 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 413.81 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 413.81 LCY/HourUnadjusted unit production/hour: 498.57 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 0.60 HoursUnit cost: \$3.052 /LCYTotal job cost: \$763

SCRAPER TEAM WORKTask description: **Remove topsoil f/stockpile to l.use rd. for powerpoles 7 and**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 345State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-345User: LDSAgency 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: 1.250Loose volume: 223

LCY

Source of estimated volume: Page 2.05-53Source 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 5.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 2.42 minutesAdjusted for job conditions: 1,193.55 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,193.55 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,193.55 LCY/HourUnadjusted unit production/hour: 1,438.02 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 0.19 HoursUnit cost: \$1.058 /LCYTotal job cost: \$235

SCRAPER TEAM WORKTask description: **Replace topsoil f/stockpile to french drains and trenches**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 346State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-346User: LDSAgency 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: 1.250Loose volume: **4,235**

LCY

Source of estimated volume: Division estimateSource 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 4.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 4.47 minutesAdjusted for job conditions: 646.17 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 646.17 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 646.17 LCY/HourUnadjusted unit production/hour: 778.52 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 6.55 HoursUnit cost: \$1.955 /LCYTotal job cost: \$8,279

SCRAPER TEAM WORKTask 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 3.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 8.63 minutesAdjusted for job conditions: 334.69 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 334.69 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 334.69 LCY/HourUnadjusted unit production/hour: 403.24 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 2.21 HoursUnit cost: \$3.774 /LCYTotal job cost: \$2,793

SCRAPER TEAM WORKTask description: **Replace topsoil from stockpile to CSLY-4 excavation**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 348State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-348User: LDSAgency 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: 1.250Loose volume: **416**

LCY

Source of estimated volume: Operator estimateSource 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 3.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 11.14 minutesAdjusted for job conditions: 259.28 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 259.28 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 259.28 LCY/HourUnadjusted unit production/hour: 312.39 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 1.61 HoursUnit cost: \$4.872 /LCYTotal job cost: \$2,028

BULLDOZER WORKTask description: Replace topsoil from stockpile to roads and powerpoles 9-17Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 349State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-349User: 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: 412Swell factor: 1.250Loose volume: 515 LCYSource of estimated volume: Page 2.05-53Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push gradient: 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:	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 WORKTask description: **Regrade dewatering boreholes and access roads (MR-212)**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 352State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-352User: 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: 1,204Swell factor: 1.330Loose volume: **1,601 LCY**Source 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: 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:	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 WORKTask description: **Regrade dewatering borehole drill pads (MR-212)**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 353State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-353User: 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: 6,666Swell factor: 1.330Loose volume: **8,866 LCY**Source of estimated volume: Division estimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 700.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average 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:	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 WORKTask description: **Regrade ditch DCW-7**Site: **West Elk Mine**Permit Action: **MT9 - Part C**Permit/Job#: **C1980007****PROJECT IDENTIFICATION**Task #: **354**State: **Colorado**Abbreviation: **None**Date: **1/29/2025**County: **Gunnison**Filename: **MT9C-354**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: **444**Swell factor: **1.330**Loose volume: **591 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: **Partly consolidated stockpile 1.1**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:	1.100	(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 WORKTask description: **Replace topsoil from stockpile to CSLY-4 excavation**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 355State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-355User: LDSAgency 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: 1.250Loose volume: **973**

LCY

Source of estimated volume: Operator estimateSource 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 4.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 1.93 minutesAdjusted for job conditions: 1,496.58 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,496.58 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,496.58 LCY/HourUnadjusted unit production/hour: 1,803.11 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 0.65 HoursUnit cost: \$0.844 /LCYTotal job cost: \$821

SCRAPER TEAM WORKTask description: **Remove roadbase from dewatering borehole road to pad**Site: **West Elk Mine**Permit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 356State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-356User: LDSAgency 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: 1.000Loose volume: **216**

LCY

Source of estimated volume: Division estimateSource 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 MinutesManeuver and Spread Time: 0.60 MinutesJob 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 4.0Haul 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 minutesReturn 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 minutesTotal Scraper team cycle time: 2.04 minutesAdjusted for job conditions: 1,415.88 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,415.88 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,415.88 LCY/HourUnadjusted unit production/hour: 1,705.88 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 0.15 HoursUnit cost: \$0.892 /LCYTotal job cost: \$193

BULLDOZER WORKTask description: Remove and replace topsoil to remove water pipeline (MR-209)Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 357State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-357User: 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: 636Swell factor: 1.250Loose volume: 795 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: 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: 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 WORKTask description: Regrade access roads (MR-244)Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 358State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-358User: 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: 1,585Swell factor: 1.165Loose volume: 1,847 LCYSource of estimated volume: Division estimateSource 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: -15 %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:	1.329	(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 WORKTask description: Replace topsoil on roads (MR-247)Site: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 359State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-359User: 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: 508Swell factor: 1.125Loose volume: 572 LCYSource of estimated volume: Division estimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 1,514.3 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push gradient: -10 %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:	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>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

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
Ripper Attachment: 3-Shank Ripper

Horsepower: 405

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:	\$1,937.46	

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 WORKTask description: Load/haul offsite aggregate f/Syl Gulch Rd extensionSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 364State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-364User: LDSAgency 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-ripper:	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: 1.000Loose volume: 6,351

LCY

Source of estimated volume: 8130 tons @3200 lbs/cyd, swelled 25%Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 2,550

Pounds/LCY

Description: Gravel - DryRated 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:	5.000	LCY (heaped)
Bucket Fill Factor:	0.875	Loose material - 1/2" to 3/4" (85 - 90%) 0.875
Adjusted Capacity:	4.375	LCY

Job Condition Corrections:

Site Altitude (ft.): 6300 feet

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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** minutesTotal 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

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: 0.18 Hours

Unit cost: \$2.025 /LCY Total job cost: \$92

TRUCK/LOADER TEAM WORKTask description: Haul offsite excavated embankment material f/Syl G. Rd extenSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 366State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-366User: LDSAgency 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: 1.000Loose 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 HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck 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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
penetration 5.0

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

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 minutesTotal 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 COSTFleet size: 1 Team(s) Total job time: 44.98 HoursUnit 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:

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

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):	<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

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

Unit cost: \$0.354 per CCY

Total job cost: \$3,683

TRUCK/LOADER TEAM WORKTask 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-ripper:	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:	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

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

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

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		0.540	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:
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	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** minutesTotal 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:	\$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:	\$1,937.46	

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 WORKTask description: L. mine wtr trmt pond: Push embankment into pond, regradeSite: West Elk MinePermit Action: MT9 - Part CPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 370State: ColoradoAbbreviation: NoneDate: 1/29/2025County: GunnisonFilename: MT9C-370User: 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: 5,939Swell factor: 1.165Loose volume: 6,919 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: Compacted fill or embankment 0.9Average push gradient: 5 %Average site altitude: 6,800 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:	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 shrub 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 shrub 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 shrub 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 shrub 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 shrub 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	7 E-seam MVBs, panels 2-6, P&A pre2020: broadcast PRD mt shrub seed mix	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	7 E-seam MVBs, panels 2-6, open2020: broadcast PRD mt shrub seed mix	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: broadcast PRD mt shrub seed mix	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: broadcast PRD mt shrub seed mix	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: broadcast PRD mt shrub seed mix	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
<u>SUBTOTALS:</u>				2367.13	\$1,504,053

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 WORKTask description: RPEE geotech boreholes, permitted with MR-354: regradeSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 401BState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-401bUser: 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: 968Swell factor: 1.125Loose volume: 1,089 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: 7,000 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: **4.09** Hours

Total job cost: **\$1,314**

BULLDOZER WORKTask description: RPEE geotech boreholes, permitted with MR-354: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 401CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-401cUser: 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: 968Swell factor: 1.000Loose volume: 968 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: Partly consolidated stockpile 1.1Average push gradient: 10 %Average site altitude: 7,000 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:	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 WORKTask description: RPEE geotech boreholes MR354: broadcast PRD mt shrb seed mixSite: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007**PROJECT IDENTIFICATION**

Task #: 401D State: Colorado Abbreviation: None
 Date: 1/30/2025 County: Gunnison Filename: MT9D-401d
 User: LDS

Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.13	\$4.13
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$989.69

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	0.6	Cost /Acre:	\$2,297.84
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$1,378.70		
Reseeding Job Cost:	\$102.71		
Total Job Cost:	\$1,481		
Job Hours:	2.70		

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-403a

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-405a

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"	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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-406a

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"	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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-407a

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"	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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-408a

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-409a

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-411a

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"	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

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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#: C1980007**PROJECT IDENTIFICATION**Task #: 414DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-414dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	13.85	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$25,000.08		
Reseeding Job Cost:	\$2,370.90		
Total Job Cost:	\$27,371		
Job Hours:	13.85		

BULLDOZER WORKTask 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 WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	19.23	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$34,711.30		
Reseeding Job Cost:	\$3,291.87		
Total Job Cost:	\$38,003		
Job Hours:	19.23		

BULLDOZER WORKTask description: E364/65 and E368/72: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 417CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-417cUser: 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: 3,953Swell factor: 1.000Loose volume: 3,953 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: Partly consolidated stockpile 1.1Average 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:	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#: C1980007**PROJECT IDENTIFICATION**Task #: 417DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-417dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	10.05	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$18,140.85		
Reseeding Job Cost:	\$1,720.40		
Total Job Cost:	\$19,861		
Job Hours:	10.05		

BULLDOZER WORKTask 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 WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	9.97	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$17,996.45		
Reseeding Job Cost:	\$1,706.70		
Total Job Cost:	\$19,703		
Job Hours:	9.97		

BULLDOZER WORKTask description: 11 of 35 MVBs/Exp in SL-12: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 419CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-419cUser: 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: 13,262Swell factor: 1.125Loose volume: 14,920 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: **55.99** Hours

Total job cost: **\$18,007**

REVEGETATION WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	22.58	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$40,758.25		
Reseeding Job Cost:	\$3,865.33		
Total Job Cost:	\$44,624		
Job Hours:	22.58		

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-420a

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	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 WORKTask 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 WORKTask 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#: C1980007**PROJECT IDENTIFICATION**Task #: 420DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-420dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	<u>2</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>\$3,610.12</u>		
Reseeding Job Cost:	<u>\$342.37</u>		
Total Job Cost:	<u>\$3,952</u>		
Job Hours:	<u>2.00</u>		

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

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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 WORKTask 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 WORKTask 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:	\$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: **24,490**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:	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: **103.39** Hours

Total job cost: **\$33,252**

REVEGETATION WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres: 15.18 Cost /Acre: \$1,805.06
 Estimated Failure Rate: 20% Cost /Acre*: \$855.92
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$27,400.81**
 Reseeding Job Cost: **\$2,598.57**
 Total Job Cost: **\$29,999**
 Job Hours: **15.18**

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

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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 WORKTask 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 WORKTask 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 WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	<u>0.49</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>\$884.48</u>		
Reseeding Job Cost:	<u>\$83.88</u>		
Total Job Cost:	<u>\$968</u>		
Job Hours:	<u>0.49</u>		

BULLDOZER WORKTask description: **6 Exp holes, Lick Creek A-F: topsoil**Site: **West Elk Mine**Permit Action: **MT9 - Part D**Permit/Job#: **C1980007****PROJECT IDENTIFICATION**Task #: **423C**State: **Colorado**Abbreviation: **None**Date: **1/30/2025**County: **Gunnison**Filename: **MT9D-423c**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: 6 Exp holes, Lick Creek A-F: broadcast PRD mt shrb seed mixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 423DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-423dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	<u>2</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>\$3,610.12</u>		
Reseeding Job Cost:	<u>\$342.37</u>		
Total Job Cost:	<u>\$3,952</u>		
Job Hours:	<u>2.00</u>		

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-424a

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"	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 WORKTask 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 WORKTask 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:	\$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: **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:	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: **3.41** Hours

Total job cost: **\$1,096**

REVEGETATION WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

[illegible]

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	0.5	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$902.53		
Reseeding Job Cost:	\$85.59		
Total Job Cost:	\$988		
Job Hours:	0.50		

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

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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 WORKTask description: 2 E-seam MVBs, ESM-1 & -2: regradeSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 425BState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-425bUser: 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: 4,840Swell factor: 1.125Loose volume: 5,445 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: **20.43** Hours

Total job cost: **\$6,572**

BULLDOZER WORKTask description: 2 E-seam MVBs, ESM-1 & -2: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 425CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-425cUser: 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: 1,613Swell factor: 1.125Loose volume: 1,815 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: **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#: C1980007**PROJECT IDENTIFICATION**Task #: 425DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-425dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	1	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$1,805.06		
Reseeding Job Cost:	\$171.18		
Total Job Cost:	\$1,976		
Job Hours:	1.00		

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-426a

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	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 WORKTask description: 7 E-seam MVBs, panels 2-6, P&A pre2020: regradeSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 426BState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-426bUser: 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: 16,504Swell factor: 1.125Loose volume: 18,567 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: **69.68** Hours

Total job cost: **\$22,409**

BULLDOZER WORKTask 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 WORKTask description: 7E-seamMVBs, panels 2-6, P&Apre20: broadcastPRDmtshrbseedmixSite: West Elk Mine Permit Action: MT9 - Part D Permit/Job#: C1980007**PROJECT IDENTIFICATION**

Task #: 426D State: Colorado Abbreviation: None
 Date: 1/30/2025 County: Gunnison Filename: MT9D-426d
 User: LDS

Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	<u>3.41</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>\$6,155.25</u>		
Reseeding Job Cost:	<u>\$583.74</u>		
Total Job Cost:	<u>\$6,739</u>		
Job Hours:	<u>3.41</u>		

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-427a

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	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 WORKTask 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:	\$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: **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:	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: **125.05** Hours

Total job cost: **\$40,218**

BULLDOZER WORKTask description: 7 E-seam MVBs, panels 2-6, open2020: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 427CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-427cUser: 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: 11,180Swell factor: 1.125Loose volume: 12,578 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: **47.20** Hours

Total job cost: **\$15,180**

REVEGETATION WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	6.93	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$12,509.07		
Reseeding Job Cost:	\$1,186.31		
Total Job Cost:	\$13,695		
Job Hours:	6.93		

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-428a

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 WORKTask description: 1 of 12 E-seam MVBs, panel 7: regradeSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 428BState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-428bUser: 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: 2,420Swell factor: 1.125Loose volume: **2,723 LCY**Source 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: **10.22** Hours

Total job cost: **\$3,286**

BULLDOZER WORKTask 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 WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	8.2	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$14,801.49		
Reseeding Job Cost:	\$1,403.71		
Total Job Cost:	\$16,205		
Job Hours:	8.20		

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-429a

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 WORKTask 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 WORKTask 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#: C1980007**PROJECT IDENTIFICATION**Task #: 429DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-429dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres: 7.14 Cost /Acre: \$1,805.06
 Estimated Failure Rate: 20% Cost /Acre*: \$855.92
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$12,888.13**
 Reseeding Job Cost: **\$1,222.25**
 Total Job Cost: **\$14,110**
 Job Hours: **7.14**

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-430a

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	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 WORKTask 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 WORKTask 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 WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	4.98	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$8,989.20		
Reseeding Job Cost:	\$852.50		
Total Job Cost:	\$9,842		
Job Hours:	4.98		

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-431a

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	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 WORKTask 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 WORKTask 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 WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres: 4.61 Cost /Acre: \$1,805.06
 Estimated Failure Rate: 20% Cost /Acre*: \$855.92
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$8,321.33**
 Reseeding Job Cost: **\$789.16**
 Total Job Cost: **\$9,110**
 Job Hours: **4.61**

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-432a

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	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 WORKTask description: 7 E-seam MVBs, panel 11: regradeSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 432BState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-432bUser: 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: 19,451Swell factor: 1.125Loose volume: 21,882 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: **82.12** Hours

Total job cost: **\$26,410**

BULLDOZER WORKTask description: 7 E-seam MVBs, panel 11: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 432CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-432cUser: 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: 6,484Swell factor: 1.125Loose volume: 7,295 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: **27.37** Hours

Total job cost: **\$8,804**

REVEGETATION WORKTask description: 7 E-seam MVBs, panel 11: broadcastPRDmtshrbseedmixSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 432DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-432dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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
			\$
Totals Seed Mix			\$

Application

Cost /Acre

Description	
	\$
Total Seed Application Cost/Acre	\$

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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	4.02	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$7,256.34
Reseeding Job Cost:	\$688.16
Total Job Cost:	\$7,945
Job Hours:	4.02

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

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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 WORKTask 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 WORKTask 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 WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	6.95	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$12,545.17		
Reseeding Job Cost:	\$1,189.73		
Total Job Cost:	\$13,735		
Job Hours:	6.95		

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-434a

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	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 WORKTask description: 2 E-seam MVBs, panel 14: regradeSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 434BState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-434bUser: 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: 7,887Swell factor: 1.125Loose volume: 8,873 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: **33.30** Hours

Total job cost: **\$10,709**

BULLDOZER WORKTask 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#: C1980007**PROJECT IDENTIFICATION**Task #: 434DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-434dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	<u>1.63</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>\$2,942.25</u>		
Reseeding Job Cost:	<u>\$279.03</u>		
Total Job Cost:	<u>\$3,221</u>		
Job Hours:	<u>1.63</u>		

BULLDOZER WORKTask description: SS1 MVBs: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 435CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-435cUser: 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: 6,502Swell factor: 1.125Loose volume: 7,315 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: **27.45** Hours

Total job cost: **\$8,828**

REVEGETATION WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	<u>13.13</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>\$23,700.44</u>		
Reseeding Job Cost:	<u>\$2,247.65</u>		
Total Job Cost:	<u>\$25,948</u>		
Job Hours:	<u>13.13</u>		

BULLDOZER WORKTask description: SS2 MVBs: topsoilSite: West Elk MinePermit Action: MT9 - Part DPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 436CState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-436cUser: 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: 5,760Swell factor: 1.125Loose volume: 6,480 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: **24.32** Hours

Total job cost: **\$7,821**

REVEGETATION WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	14.49	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$26,155.32		
Reseeding Job Cost:	\$2,480.46		
Total Job Cost:	\$28,636		
Job Hours:	14.49		

BULLDOZER WORKTask 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#: C1980007**PROJECT IDENTIFICATION**Task #: 439DState: ColoradoAbbreviation: NoneDate: 1/30/2025County: GunnisonFilename: MT9D-439dUser: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	<u>1.41</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>\$2,545.13</u>		
Reseeding Job Cost:	<u>\$241.37</u>		
Total Job Cost:	<u>\$2,787</u>		
Job Hours:	<u>1.41</u>		

BULLDOZER WORKTask 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 WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	<u>1.16</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>\$2,093.87</u>		
Reseeding Job Cost:	<u>\$198.57</u>		
Total Job Cost:	<u>\$2,292</u>		
Job Hours:	<u>1.16</u>		

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
Date: 1/30/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9D-441a

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
Date: 1/29/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: C007-442a

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	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 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
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 WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	0.6	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$1,083.04		
Reseeding Job Cost:	\$102.71		
Total Job Cost:	\$1,186		
Job Hours:	0.60		

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 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
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: Truck Tractor, 6x4, 75K GVW

Horsepower: 400

Attachment 1: Tilt Deck Trailer, 20 ton

Shift Basis: 1 per day

Attachment 2: _____

Weight: 12.50

Labor Unit 1: Transport Rig Driver

(US Tons)

Labor Unit 2: Helper

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)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
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
<u>SUBTOTALS:</u>				140.42	\$211,625

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 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
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

Job Hours: 51.10Subtotal
(unadjusted): \$33,431.85Total Cost
(adjusted for
location): \$30,523.28

BULLDOZER WORKTask description: Regrade Deer Creek Vent Shaft pad & access rd (1.9 Acres)Site: West Elk MinePermit Action: MT9 - Part EPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 602State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9E-602User: LDSAgency or organization name: Division of Reclamation, Mining and Safety**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: 3,065Swell factor: 1.250Loose volume: 3,831 LCYSource of estimated volume: Ex. 77 (1.9 acres * 1ft)Source 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: -5 %Average site altitude: 6,300 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:	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 WORKTask description: Regrade Deer Creek Vent Shaft pad & access rd (1.9 Acres)Site: West Elk MinePermit Action: MT9 - Part EPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 603State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: C007-603User: LDSAgency or organization name: Division of Reclamation, Mining and Safety**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: 3,065Swell factor: 1.250Loose volume: 3,831 LCYSource of estimated volume: Ex. 77 (1.9 acres * 1ft)Source 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: -5 %Average site altitude: 6,300 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:	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#: C1980007**PROJECT IDENTIFICATION**Task #: 604State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: MT9E-604User: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	1.9	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$3,429.61		
Reseeding Job Cost:	\$325.25		
Total Job Cost:	\$3,755		
Job Hours:	2.70		

REVEGETATION WORKTask 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
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	1.9	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$3,429.61		
Reseeding Job Cost:	\$325.25		
Total Job Cost:	\$3,755		
Job Hours:	2.70		

REVEGETATION WORKTask description: Deer Creek fence: broadcast PRD mt shrb seed mix (MR-471)Site: West Elk MinePermit Action: MT9 - Part EPermit/Job#: C1980007**PROJECT IDENTIFICATION**Task #: 606State: ColoradoAbbreviation: NoneDate: 1/28/2025County: GunnisonFilename: C007-606User: LDSAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

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

Totals Seed Mix	22.50	269.47	\$583.36
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Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
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
Total Mulch Materials Cost/Acre				\$496.91

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
Total Mulch Application Cost/Acre	\$452.23

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	0.29	Cost /Acre:	\$1,805.06
Estimated Failure Rate:	20%	Cost /Acre*:	\$855.92
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$523.47		
Reseeding Job Cost:	\$49.64		
Total Job Cost:	\$573		
Job Hours:	0.29		

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:	\$256.63	

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

Job Condition Correction Factors

Site Altitude: 6300 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.85</u>	(1sh/d, mod.)
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
Date: 1/28/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9E-611

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
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)l	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
Date: 1/28/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: MT9E-612

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
Date: 1/28/2025
User: LDS

State: Colorado
County: Gunnison

Abbreviation: None
Filename: C007-613

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
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

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
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