EXHIBIT 28 BOND CALCULATIONS MIDTERM REVIEW NO. 8



August 29, 2021

New Elk Coal Company, LLC. Attn: Larry Cook 12250 Highway 12 Weston, CO 81091

RE: New Elk Mine, C-1981-012, Midterm Review No. 8 (MT8)

Dear Mr. Cook,

The Colorado Division of Reclamation, Mining and Safety has completed a Midterm Review of the New Elk Mine permit. The Midterm Review Findings Document is enclosed. If you have any questions, please feel free to contact me at Jared.Ebert@state.co.us or (303) 866-3567 ext. 8120.

Sincerely,

yand The

Jared Ebert Senior Environmental Protection Specialist

ec: Nick Mason, NECC



MIDTERM PERMIT REVIEW (MT- 8) for New Elk Coal Company, LLC

New Elk Mine

Permit No. C-1981-012





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

August 29, 2021 Virginia Brannon, Director

> Prepared by DJ Cunningham and Jared Ebert

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

Section I Introduction

This document presents the results of the Midterm Review of the New Elk Mine permit, conducted by the Colorado Division of Reclamation, Mining and Safety (Division). The New Elk Mine is owned and operated by New Elk Coal Company, LLC (NECC). 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(10), 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 two and one-half years.

This Midterm Review of the New Elk mine consisted of a detailed review of the New 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.

Section II Status of Stipulations and Revisions to the Permit

The Review Process

The New Elk Mine, previously known as the Allen Mine, began operations in 1951. The New Elk Mine operated under an interim permit issued by the Colorado Mined Land Reclamation Division (the "Division") on 25 January 1978, pursuant to the Colorado Mined Land Reclamation Act. CF&I Steel Corporation, the previous owners, submitted an application for a new permit on 4 February 1981, pursuant to Section 34-33-109 of the Colorado Surface Coal Mining Reclamation Act. The Division reviewed that application and a proposed decision was issued on 19 December 1983.

The New Elk mine permit has been transferred on four occasions. Permit rights were transferred from CF&I Steel Corporation to Wyoming Fuel Company on 31 January 1984. Permit rights were transferred from Wyoming Fuel Company to Basin Resources, Inc. (BRI) on 2 9 March I 993, (SOI). In April 1997, permit rights were transferred from BRI to Picketwire Processing, LLC (S02). And finally, the permit was transferred from Picketwire Processing, LLC to New Elk Coal Company LLC on 19 March 2007, (S03). In March 2010, New Elk Coal Company (NECC) provided information that Cline Mining Corporation had purchased New Elk Coal Company (MR91). NECC provided notification in November 20 11 (MR98) that NECC would continue as the permittee, but TK Mining Services LLC, would be the mine operator. In March 2012 (MR108), TK Mining Services, LLC, was removed as mine operator and NECC resumed its status as mine operator. On November 25, 2020, NECC submitted Succession of Operator application (SO4) that kept NECC as the permittee but change the parent company to Allegiance Coal, LLC.

This is the eighth midterm review of the permit since it was originally issued in accordance with Rule 2.08.3 Permit Revisions and/or renewals since last Mid Term Review (Mid Term Review 7) issued on August 25, 2016:

Permit Revision or Renewal	Description	Proposed Decision Date
Permit Renewal No. 7 (RN7)	Permit Renewal	14 November 2019

Technical Revisions since the last Mid Term Review (Mid Term Review 7) issued on August 25, 2016:

Revision Number	Description	Proposed Decision Date
TR 75	RDA reclamation cost	1 October 2020
TR 74	Exploration Drilling	22 October 2020
TR 73	Revise Water Monitoring Program	13 December 2018
TR 72	Permit Boundary change	27 April 2017

Revision Number	Number	
MR 127	Update Contact information	28 May 2021
MR 126	Move Location of Drill Hole	05 February 2021
MR 125	Weed Management Plan	20 August 2018
MR 124	Update Exhibit 1 and Exhibit 28	02 May 2017

Minor Revisions since the last Mid Term Review (Mid Term Review 7) Approved August 2016:

Permit Transfers since the last Mid Term Review (MT 7) that was approved August 2016:

Revision Number	Description	Proposed Decision Date
SO4	Change of Ownership	22 January 2021

There have been no bond releases since Renewal No. 5 approved 6 March 2009.

The stipulation history for the New 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. Stipulations consist of timely submissions of the reports and inspections identified in table 4, below. All reports and inspections have been submitted.

Annual Hydrology Reports	Pond Inspections	Discharge Monitoring Reports
Annual Reclamation Reports	Refuse Pile Inspections	

Section III

Summary

Description of the Environment

The New Elk Mine is located approximately 24 miles west of Trinidad, Colorado. The New Elk Mine, previously known as the Allen Mine, began operations in 1951.

The mine site is located in a plateau area. The elevation of the surface facilities ranges from 7,400 to 7,800 feet. Land use in the area consists of cropland, rangeland, pastureland, and wildlife habitat. Livestock grazing and hay production on irrigated lands are the main agricultural practice conducted in the general area. A variety of large and small mammals, birds, fish, amphibians, and reptiles are permanent or temporary residents of the area.

The New Elk Mine is located in the western limb of the Raton Basin. The Raton Basin is a broad, asymmetric syncline whose axis trends north-south. Previous mining at this site was entirely within the Allen seam, stratigraphically located in the Raton Formation (Upper Cretaceous and Paleocene). The Poison Canyon Formation (Paleocene) unconformably overlies the Raton Formation. The Poison Canyon Formation has a thickness of approximately 200 feet and occurs only as small, isolated outcrops above an elevation of 8,000 feet. Unconsolidated Quaternary alluvial and colluvial deposits overlie the Raton Formation in the low lying areas.

The rock strata dip approximately two degrees to the north northeast. The permit area contains one steep, normal fault trending east-northeast with vertical displacement less than 25 feet. The Allen Seam lies from 450 to 900 feet below the surface. Immediately above the coal are interbedded sandstones, siltstones, and shales. Interbedded sandstones, shales, and siltstones also underlie the seam.

The alluvium of the Middle Fork of the Purgatoire River is a significant aquifer in the permit and adjacent areas. The Purgatoire River originates several miles west of the mine in the Sangre de Cristo Mountain Range. It flows into the Arkansas River near Las Animas, Colorado, approximately 120 miles northeast of the mine.

Portions of the Apache Canyon, Pete Canyon, and Ciruela Canyon drainages are found within the permit area. These basins contain intermittent and ephemeral streams that flow predominately in response to runoff from snowmelt during the spring and intense rainfall during the summer. A portion of the flow in intermittent drainages is sustained by groundwater discharges. Pete Canyon is tributary to the North Fork of the Purgatoire River, while Apache and Ciruela Canyons are tributary to the main stem of the Purgatoire River.

The region is characterized by a semi-arid climate. The prevailing wind is from the southwest and average annual precipitation is 16.92 inches. The length of the growing season in the area varies from 90 to 110 days.

Vegetative communities in the area of the mine can be separated into two physiognomic types: the low grassland and riparian communities along the Purgatoire River valley bottom, and forest communities dominating the slopes and upland areas along the river valley. Communities on the north-facing slope

and the river valley were inventoried and found to contain four distinct vegetative communities at the New Elk Mine area: a Ponderosa pine-Douglas fir-oak community (*Pinusponderosa - Pseudotsuga menziesii*), a Ponderosa pine-oak community (*Pinus ponderosa - Quercus gambelii*), a grassland community, and a riparian willow (*Salix XX*) carr community. The Ponderosa pine-Douglas fir-oak community (*Pinusponderosa - Pseudotsuga menziesii*, *Quercus gambelii*), is found on the north-facing slope above the mine facilities at elevations above 7,600 feet. The overstory consists of mature Ponderosa pine and Douglas fir with interspersed Pinon pine (*Pinus XX*) and Rocky Mountain juniper, (*Juniperus scopulorum*). The dominant shrub species is *Quercus gambelii*, (Gambel's oak).

Vegetative cover is relatively sparse (12 percent) and productivity is low (62 lb/ac). The Ponderosa pine-oak community occurs on the north facing slopes above 7,500 feet on the eastern two-thirds of the permit area. Pure *Pinus ponderosa* stands are interspersed with *Quercus gambelii*), *Pinus XX* and *Juniperus scopulorum*. Vegetative cover is low at (4 percent), as is productivity at (44 lb/ac). Since no undisturbed grassland communities could be found at the New Elk Mine, the grassland community was inventoried at the adjacent Golden Eagle Mine on a plateau above the river at 7,200 feet elevation. Dominant grass species were *Bouteloua gracilis* (blue gramma), and *Pascopyrum smithii* (western wheatgrass), with many other minor graminoids including a number of forbs. Artemisia tridentate Nut (big sagebrush) and *Gutierrezia sarothrae* (broom snakeweed) were the dominant shrubs. Vegetative cover can be characterized as moderate (18 percent), as is productivity at (560 lb/ac). The *Salix XX*, (willow carr) riparian community is located in the Purgatoire River drainage at an elevation of 7,400 feet at the New Elk Mine. The dominant species was *Salix XX* with a diverse graminoid and forb understory.

Vegetative cover is high (43 percent), as is productivity (2,140 lb/ac).

Soils in the area range from very shallow on the steep side slopes to deep, well-drained loams with a darkcolored surface layer found in the valley bottom along the Purgatoire River.

The Jansen Loadout is located in an unincorporated area on the west side of Trinidad, Colorado. Land use of the site has been industrial for at least two decades. The site is located immediately north of and adjacent to the Burlington Northern Santa Fe (BNSF) railroad grade on a thin layer of Purgatoire River alluvial deposits capping bedrock sedimentary formations. No intermittent, ephemeral, or perennial drainages cross the site. An intermittent arroyo named Colorado Canyon arroyo borders the site on the eastern boundary. This arroyo flows only during snowmelt episodes in the spring or from storm runoff after summer thunderstorms.

Climate at the loadout is similar to that of the mine site, but slightly dryer due to lower elevation.

All soils and native vegetation have been previously removed from the loadout site. Weeds and volunteer species persist, especially on the fringes of the disturbance. The site has no natural wildlife habitat and the site is fenced to prevent access of domestic animals and big game.

Description of the Operation and Reclamation Plan

Of the 3,585 acres originally permitted at the New Elk Mine, 155 acres were already disturbed for working areas and facilities. Permit Revision #1 added 120 acres to the permit area, of which 36 acres were affected by new, proposed surface facilities. The resulting permit area encompassed 3,705 acres with 191 acres of surface disturbance. On October 26, 1998 the Division approved Phase I, II, and III bond release on 3,233.0 acres south of Highway 12 of further liability as per Division written policy for release of areas overlying underground workings. Of the 3,233.0 acres included in SL1, 597.0 had been undermined, but none of the acreage had been disturbed at the surface. Included in this area are two small areas of surface disturbance (the Apache Canyon ventilation shafts), which were transferred to the Golden Eagle Mine permit, #C-81-013. The resulting permit area totaled about 900 acres.

The Division approved a partial Phase 1 Bond Release No.2 (SL2) on November 16, 2006, for 35.14 acres. SL2 approved completion of demolition of structures, backfill and grading, of 19.08 acres at the East portal, and 16.06 acres at the West portal. SL2 also released liability for activities that had previously received approval but had never been implemented. Liability release of activities never implemented also removed approval of these activities from the permit.

The existing operation at the time of original permitting consisted of several benches used for storage, office building, shop buildings, railroad tracks, two portals, conveyors, coal silos, substations, fans, air shafts, a water tank, a parking lot, four sediment ponds, ditches, culverts, roads, and a refuse disposal area. Surface facilities added as a result of permitting actions included a refuse disposal valley fill and sediment pond north of Highway 12, two new topsoil stockpiles, coal stockpiles, conveyors, a preparation plant and thickener tank, and the Jansen Loadout.

A coal processing plant currently exists at the mine. In 2011, NECC constructed a new set of portals (Bates Portals) located southeast of the coal silos. The mine plan is shown on Map 3. The Mine plan for the Blue seam progresses eastward and southward. In May 2011, NECC reopened the Allen seam as well. Allen seam mine plan progresses mainly to the south and east. Coal is mined by continuous miners. In July 2012, NECC suspended coal extraction, In May 0f 2021, NECC began mining coal again. On June 24, 2021, NECC submitted Permit Revision No. 5 (PR5), this revision updates the Blue Seam mining plan. The Division is currently reviewing PR5 and several revisions, updates, and clarifications will be required for the mine plan, these issues will be addressed under a separate adequacy review letter pertaining to PR5.

A Refuse Disposal Area (RDA) was constructed north of Highway 12 as a valley fill. Coal is processed at the New Elk Mine. Previous operation of the New Elk Mine processed coal from the Lorencito Canyon Mine. Coal refuse is transported by conveyor over Highway 12 and deposited in the RDA north of the highway. Pond cleaning material and small quantities of rock were added to the original refuse pile, now referred to as the Development Waste Pile (DWP) southwest of the main mine entrance. The DWP reached its maximum size in late 2006 and was regraded, top soiled, and reseeded. Construction of the Bates portals and development of workings to access the Blue seam coal seam resulted in excavation and construction of a subsoil stockpile and a development waste disposal area (DWDA#2). The DWDA#2 is located southeast of the main entrance. In 2012, the Division approved construction of a small material storage area for disposal of development waste during NECC's permitting (TR65) of a third Development Waste Disposal Area, DWDA#3, located at the previously reclaimed west portal area.

Following the startup of mining operations in 2011, most of the surface facilities were for a time, put

back into operation. The East Portal, the East Portal vent shaft, two portals at the West Mine, the West Mine vent shaft, and the Upper Apache Canyon vent shaft were reopened in 201 0 to allow access of employees and materials as well as ventilation airways. Two portal entries at the West Mine were resealed in 2010.

Upon reclamation, the bench areas at the mine will be graded to the approximate original contour. The disturbed areas will be topsoiled (depending on the area) or ripped, then seeded and mulched to establish a vegetative cover of a variety consistent with surrounding vegetation. The stream channel diversion of the Middle Fork of the Purgatoire River, which was approved under Permit Revision #1, is permanent and will remain as constructed. Monitoring has demonstrated that this work was successful and the reconstructed channel is stable.

Topsoil was salvaged from the disturbed area above the Refuse Disposal Area (RDA) during each successive movement of the clean water diversion ditch above the RDA. This material was used in the reclamation of the current lower benches of the RDA. TR75 approved in October of 2020 defined a borrow area where cover material will be obtained should operations at the RDA terminate earlier than anticipated by the operation.

A topsoil borrow area in the West Mine area, in addition to stockpiled topsoil, will be used to reclaim the areas of the existing and proposed surface facilities. Due to previous disturbance prior to the enactment of the Colorado Surface Coal Mining Reclamation Act, very little topsoil is available for use during reclamation of areas previously disturbed. Permitted disturbed areas, underlain by refuse, whether pre-law or post-law, will receive topsoil prior to re-seeding and mulching. Permitted disturbed areas not on refuse material will be ripped prior to reseeding and mulching. See Maps 15 and 16 for specific identification of these two types of disturbed areas.

The post-mining land use is rangeland for most of the disturbed area and wildlife habitat (upland and riparian) for the remainder of the disturbed area. These land uses are compatible with the surrounding uses. The proximity of the mine site to the Purgatoire River and the heavily forested areas to the south indicate a high probability of wildlife use following reclamation. Riparian vegetation, as well as the use of native grasses and shrubs, is planned.

Operations at the Jansen Loadout are limited to the weighing of coal trucks, unloading and stockpiling of coal, and conveying and loading of coal into unit trains. The operator estimates that 24,000 tons of coal can be stored at the site. The operator is approved to utilize covered coal conveyors and water spray to minimize fugitive dust. Storm water runoff is handled by the existing grade and a series of ditches and small sumps. One small fuel tank is approved to be stored at the site. DRMS requires the posting of mine identification signs at the entrance to the site on the west side and around the perimeter.

The pre-mining and post-mining land use at the Jansen Load out is industrial. When the Jansen Loadout is no longer necessary for loading on coal, all structures, except those specifically identified in Attachment 2 of Exhibit 40 for permanent retention, will be removed and the site will be graded and returned to a rail siding for use by the landowner.

Section IV ENFORCEMENT ACTIONS

No enforcement actions have been issued since 2013.

Permit Variances and Specific Approvals

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. No experimental practices or such variances are approved for the New Elk Mine.

Section V

REVIEW and DISCUSSION

This section consists of questions or comments raised as a result of the Division's review of the permit application, related materials, and review of the reclamation cost estimate. NECC will be required to address the items listed below by applying for an appropriate revision to the permit in accordance with Rule 2.08.3(3).

Section 1.0 - Table of Contents

1. Please update the list of maps to reflect the maps that have been changed since TR-70 was issued, and the dates of the currently approved maps.

Rule 2.03 Legal, Financial, Compliance and Related Information

- 2. Please verify that the ownership and control information and the list of neighboring surface and subsurface owners are correct or update them as necessary.
- 3. Please update Table 2 to show the updated DRMS permit approved on November 14, 2019.

Rule 2.04 - Information on Environmental Resources

4. Please update section 2.04.4 with the necessary information from the cultural resource survey conducted for TR75.

Rule 2.05 - Operation and Reclamation Plans

The Division is currently reviewing Permit Revision No. 5 (PR5) submitted by NECC that updates the mining plan in the Blue Seam. Based on the review of PR5, NECC will need to address several adequacy items to revise, update and clarify the mining plan for the remainder of this permit term. These items will addressed under a separate adequacy review issued for PR5. For MT8, NECC will need to address the following:

- 5. Table 27 is outdated in regards to the NPDES discharge points. Please update the table and clarify the outfall for NE-080.
- 6. Section 2.05.3(4) describes water within the mine workings. Please update the discussion to reflect actual conditions encountered during the reopening of the mine as well as the current drainage plan within the mine.

Section VI DETERMINATION of BOND AMOUNT

As of August 19, 2021, the Division estimates liability at the New Elk Mine to be \$5,206,046.00. This amount is sufficient to assure completion of the remaining reclamation work at the site if the work had to be performed by the Division, including the cost of re-establishing vegetation on any revegetated areas, should those areas fail. The permittee currently has posted corporate sureties with the Division in the amount of \$4,647,856.08 for the New Elk Mine.

The current required surety for the New Elk Mine is \$4,605,014.08, and the Division currently holds \$4,647,856.08 of bond in the form of corporate sureties. The estimated liability at the site based on this review is \$601,031.92 more than the current required surety and is \$558,189.92 more than the current bond held for the site. The Division requests that NECC review the reclamation cost estimate attached to this midterm review document. If NECC has any specific concerns regarding the reclamation cost estimate, please submit them by September 30, 2021. If no comments or concerns are received by this date, the Division may initiate the bond adjustment process in accordance with Rule 3.02.2(4).

This concludes the 2021 Midterm Review (MT8) of the New Elk Mine. Please submit any required revision applications responding to the issues outlined in Section V on or before 14 October 2021.

COST SUMMARY WORK

te: New Elk Mine		Ik Mine Permit Action: Mid Term 08		981012	
PROJECT IDE	NTIFICATION				
Task #:	000	State: Colorado	Abbreviation:	None	
Date:	8/5/2021	County: Las Animas	Filename:	C012-000	
User:	DC1				

TASK LIST (DIRECT COSTS)

		Form	Fleet	Task	
Task	Description	Used	Size	Hours	Cost
001	Backfill and Regrade East Portal Area	DOZER	3	83.38	\$84,916
002	Push Temporary Coal Stockpiles to Conveyor	DOZER	3	12.23	\$11,328
003	Regrade Pond 004	DOZER	1	7.81	\$2,651
004	Regrade Pond 006	DOZER	1	8.73	\$2,864
005	Regrade Pond 007	DOZER	1	21.50	\$7,053
006	Regrade Pond 008; Rip and Regrade Spillway	DOZER	1	66.13	\$22,068
007	Regrade West Portal Containment Area 1	DOZER	1	5.21	\$1,708
008	Regrade temporary Ditches at West Portal	DOZER	1	0.31	\$95
009	Backfill East Portal Face	DOZER	3	0.93	\$943
010	Backfill West Portal Face	DOZER	2	1.39	\$911
011	Backfill Bates Portal Face	DOZER	2	38.69	\$25,379
012	Regrade Areas from MR-99, MR-107, MR-111, MR- 114	DOZER	3	1.43	\$1,327
013	Replace Topsoil on D26 Extension	DOZER	1	0.24	\$73
014	Backfill and Regrade DWDA Expansion	DOZER	2	2.68	\$1,820
015	Replace Topsoil on Six Drill Pads and Mud Pits	DOZER	1	3.88	\$1,199
016	Rip and Regrade C&W Train Shop Area	DOZER	2	12.74	\$8,647
017	Regrade Access Road to NW Vent Shaft (TR72)	DOZER	1	2.33	\$590
018	Regrade Access Road to NW Vent Shaft	DOZER	1	2.33	\$590
019	Strip and Place 5 acres of topsoil RDA	TRUCK1	1	82.68	\$63,274
020	Strip and Place 10 acres of Cover over 2 feet from borrowRDA	TRUCK1	1	287.66	\$220,149
021	Strip and Place 4 acres of Cover over 2 feet from RDA back	TRUCK1	1	115.07	\$88,061
022	Strip and Place 5 acres of Cover over 2 feet from borrow RDA	TRUCK1	1	236.40	\$180,919
023	Replace topsoil over borrow area RDA	TRUCK1	1	53.94	\$32,976
024	Backfill and Regrade Transformer and Rock Dust Cut Slope	TRUCK1	1	48.56	\$56,080
025	Replace Topsoil to Transformer and Rock Dust Cut Slope	TRUCK1	1	1.40	\$1,597
026	Clean Ponds 004, 007, and 008 Twice During Liability Period	TRUCK1	1	121.05	\$105,007
027	Replace Topsoil on NW vent Fan Aea (TR72)	TRUCK1	1	5.95	\$2,230

029 De 030 Ex 031 Plu 032 Se 033 Ha 034 Ha 035 Re 036 Re 037 Re 038 Re 039 Re	aul Clean Coal Stockpile to Development Waste le eplace Cover material on DWDA #2 eplace Topsoil to DWDA #2	DEMOLISH DEMOLISH BOREHOLE BOREHOLE SCRAPER1 SCRAPER1 SCRAPER1	1 1 1 1 1 1	1,009.00 24.00 60.00 73.00 36.00 12.59	\$1,960,889 \$77,932 \$51,126 \$146,843 \$39,715 \$14,483
030 Ex 031 Pli 032 Se 033 Ha 034 Ha 035 Re 036 Re 037 Re 038 Re 039 Re	ploration Drilling TR-74 ug and Seal All Boreholes and Monitoring Wells aal Additional Wells aul Raw Coal Stockpile to Development Waste le aul Clean Coal Stockpile to Development Waste le eplace Cover material on DWDA #2 eplace Topsoil to DWDA #2	BOREHOLE BOREHOLE BOREHOLE SCRAPER1 SCRAPER1	1 1 1	60.00 73.00 36.00	\$51,126 \$146,843 \$39,715
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033 Ha Pil 034 Ha Pil 035 Re 035 Re 036 Re 037 Re 038 Re 039 Re	le aul Clean Coal Stockpile to Development Waste le eplace Cover material on DWDA #2 eplace Topsoil to DWDA #2	SCRAPER1 SCRAPER1	1		
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035 Re 036 Re 037 Re 038 Re 039 Re	eplace Cover material on DWDA #2 eplace Topsoil to DWDA #2	SCRAPER1	1	20.43	\$23,224
036 Re 037 Re 038 Re 039 Re	eplace Topsoil to DWDA #2	SCRAPER1			
037 Re 038 Re 039 Re	· · · · · · · · · · · · · · · · · · ·	JENAI LINI	1	2.29	\$2,809
038 Re 039 Re		SCRAPER1	1	5.40	\$6,622
039 Re	place Topsoil to Area East of Pond 5	SCRAPER1	1	0.42	\$516
	eplace Topsoil to Pond 005	SCRAPER1	1	0.30	\$359
040 Re	eplace Topsoil to Area Under Conveyor	SCRAPER1	1	0.90	\$1,106
	eplace Topsoil to Raw Coal Storage Stockpile	SCRAPER1	1	1.37	\$1,675
041 Re	eplace Topsoil to Small DR Area in Large DNR	SCRAPER1	1	0.10	\$124
	ea				
	eplace Topsoil to Clean Coal Stockpile	SCRAPER1	1	0.93	\$1,140
	eplace Topsoil to East Extension of River	SCRAPER1	1	0.22	\$269
	Imphouse				
	place Topsoil to Embedded Waste Area	SCRAPER1	1	2.01	\$2,471
	eplace Topsoil to RDA	SCRAPER1	1	122.41	\$150,090
	eplace Topsoil to Four Bench Slopes	SCRAPER1	1	15.69	\$19,421
	eplace Topsoil to RDA Pond	SCRAPER1	1	5.17	\$6,233
	eplace Topsoil to Bates Portal Face-Up	SCRAPER1	1	3.01	\$3,687
	eplace Topsoil to West DWDA	SCRAPER1	1	67.00	\$87,625
	ompact Final RDA Surface	COMPACT	1	32.46	\$5,971
	al Portals and Vent Shafts	MINESEAL	1	270.00	\$273,452
	egrading 30,000 LCY Refuse	GRADER	2	4.14	\$1,377
	nish Grade Refuse Disposal Area	GRADER	1	5.31	\$929
	nish Grade West DWDA Area	GRADER	1	8.35	\$1,460
	00 year ditch	EXCAVATE	1	27.86	\$3,618
	eplaceTopsoil to Zig Zag Road	EXCAVATE	1	0.47	\$67
	te Maintenance during the 10 year liability	SITEMAINTEN	1	400.00	\$40,516
	eriod	ANCE	2	0.50	ć0 701
	p Mine Entry Area Prior to Regrading	RIPPER	3	8.56	\$8,721
	p Wedge Area Prior to Regrading	RIPPER	3	0.76	\$781
	p Prep Plant Area Prior to Regrading	RIPPER	3	2.57	\$2,622
	p West Portal DNR Areas p East Portal - Only DNR Area	RIPPER RIPPER	3	11.94 16.78	\$12,169 \$17,091
	p Zig Zag Road and Slurry Line Road	RIPPER	3	0.44	\$455
	eseed RDA Borrow Area	REVEGE	4	5.00	\$6,261
	eseed Facilities Area with Rangeland Mix	REVEGE	1	178.00	\$0,201 \$126,769
	eseed RDA	REVEGE	1	95.25	\$39,756
	eseed DWP with Rangeland Mix	REVEGE	1	11.24	\$7,350
	eseed Disturbed Areas with Riparian Habitat	REVEGE	1	21.14	\$15,363
	ant 6 Shrub Clumps	REVEGE	1	5.60	\$2,399
	eed Control - Assume 1/4 of Area Three Times	REVEGE	1	102.71	\$19,583
	ed Rangeland Seed Mix on MR Areas	REVEGE	1	2.22	\$4,447
	eseed C&W Facilities Area with Rangeland Mix	REVEGE	1	12.00	\$7,820

		<u>SUI</u>	BTOTALS:	3948.04	\$4,160,423
079	Mobilize/Demobilize Equipment for Site Maintenance	MOBILIZE	1	3.70	\$3,241
078	Mobilize/Demobilize Equipment for Pond Removal	MOBILIZE	1	3.70	\$1,410
077	Mobilize/Demobilize Equipment for Pond Cleaning	MOBILIZE	1	3.70	\$1,535
076	Mobilize/Demobilize Equipment for Initial Reclamation	MOBILIZE	1	3.70	\$14,840
075	Seed NW Vent Fan and Access Road (TR72)	REVEGE	1	1.55	\$2,189
074	Reseed West DWDA Expansion Area with Rangeland Mix	REVEGE	1	20.40	\$13,295
073	Reseed Zig Zag with Rangland Mix	REVEGE	1	1.60	\$2,122

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$84,041
Performance bond:	1.05	Total =	\$43,684
Job superintendent:	1,719.04	Total =	\$123,822
Profit:	10.00	Total =	\$416,042
		TOTAL O & P =	\$667,590
		CONTRACT AMOUNT (direct + O & P) =	\$4,828,013

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$0	Total =	\$0
Engineering work and/or contract/bid preparation:	4.25	Total =	\$205,191
Reclamation management and/or administration:	3.58		\$172,843
CONTINGENCY:	0.00	Total =	\$0
	TOT	AL INDIRECT COST =	\$1,045,623
тот	TAL BOND AMOUNT	(direct + indirect) =	\$5,206,046

	Task description: Back			and Reg	ade East Por	tal Area		
ite:	: New Elk Mine			Permit Action: Mid Term 08		Permit/Jo	b#: C1981012	
P	ROJECT IDE	NTIFICATIO	N					
Γ	Task #:	001		State:	Colorado		Abbreviation:	None
	Date:	7/30/2021	(County:	Las Animas		Filename:	C012-001
	User:	DC1						
Г Н		ncy or organiz UIPMENT CC		ne: DR	MS			
	Basic Mac	hine: Cat I	09T - 9SU					
	Horsepo	Horsepower: 405						
	Blade ⁻	Type: Sem	-Universa	I				
	Attachr	ment: 3-sh	ank ripper					

Cost Breakdown:

Shift Basis:

Data Source:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.	\$10.26	NA
Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$11.48	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$339.46
Total Fleet Cost/Hour:	\$1,018.39

1 per day

(CRG)

MATERIAL QUANTITIES

Initial Volume:	144,850
Swell factor:	1.125
Loose volume:	162,956 LCY

Source of estimated volume:	PAP Exhibit 28
Source of estimated swell	Operator Estimate
factor:	

Average push distance:	100 feet
Unadjusted hourly	1,243.2 LCY/hr
production:	
Materials consistency	Compacted fill or embankment 0.9
description:	

5 %		
7,500 feet		
2,132 lbs/LCY		
User Provided		
	7,500 feet 2,132 lbs/LCY	7,500 feet 2,132 lbs/LCY

Job Condition Correction Fac	tor		<u>Source</u>
Operator Skill:		0.900	(AB.AVG.)
Material consistence	:y:	0.900	(CAT HB))
Dozing metho	d:	1.000	(GEN.)
Visibilit	:y:	1.000	(AVG.)
Job efficienc	:y:	0.830	(1 SHIFT/DAY)
Spoil pil	e:	0.800	(FND-RF)
Push gradier	Push gradient:		(CAT HB)
Altitude:		1.000	(CAT HB)
Material Weight:		1.079	(CAT HB)
Blade typ	Blade type:		(PAT)
Net correctio	n:	0.5240	
Adjusted unit 65		1.44 LCY/hr	
production:	production:		
Adjusted fleet 19 production:		54.32 LCY/hr	

Fleet size:	3 Dozer(s)
Unit cost:	\$0.521/LCY
Total job time:	83.38 Hours
Total job cost:	\$84,916

Task description: Push Temporary Coal Stockpiles to Conveyor							
Site	: New Elk	Mine	Per	mit Action:	Mid Term 08	Permit/Jol	o#: C1981012
<u> </u>	PROJECT IDI	ENTIFICATION					
[Task #:	002	State:	Colorado		Abbreviation:	None
		7/20/2024	<u> </u>			= 1	0040.000

Date:	7/30/2021	County:	Las Animas	Filename:	C012-002
User:	DC1				
٨σ٩	ncy or organizatior	name: D	RMS		-
Agei	ncy of organization	Thame. D	INIVIS		

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.	\$0.00	NA
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$308.72
Total Fleet Cost/Hour:	\$926.17

MATERIAL QUANTITIES

Initial Volume:	13,250		_		
Swell factor:	1.000				
Loose volume:	13,250 LCY				
Source of estimate	PAP 2 05-4	a Table 18a	Push to conv	/ev	

Source of estimated volume:	PAP 2.05-4a Table 18a. Push to conveyor
Source of estimated swell	Cat Handbook
factor:	

Average push distance:	400 feet
Unadjusted hourly production:	305.6 LCY/hr
Materials consistency description:	Partly consolidated stockpile 1.1
Average push	0%

gradient:	
Average site altitude:	7,000 feet
Material weight:	1,600 lbs/LCY
Weight description:	Coal - Bituminous, Raw

Job Condition Correction Fact	tor		<u>Source</u>
Operator Skill:		0.900	(AB.AVG.)
Material consistency:		1.100	(CAT HB)
Dozing metho	d:	1.000	(GEN.)
Visibilit	y:	1.000	(AVG.)
Job efficienc	y:	0.830	(1 SHIFT/DAY)
Spoil pil	e:	1.000	(DOZ-OC)
Push gradien	Push gradient:		(CAT HB)
Altitude:		1.000	(CAT HB)
Material Weight:		1.438	(CAT HB)
Blade typ	Blade type:		(PAT)
Net correctio	n:	1.1816	
production: Adjusted fleet		1.10 LCY/hr	
		83.3 LCY/hr	

Fleet size:	3 Dozer(s)
Unit cost:	\$0.855/LCY
Total job time:	12.23 Hours
Total job cost:	\$11,328

Task description:		Regrade Pond 004			
Site	: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#: C1981012		
	·				

PROJECT IDENTIFICATION

Task #:	003	State:	Colorado	Abbreviation:	None
Date:	7/30/2021	County:	Las Animas	Filename:	C012-003
User:	DC1				
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:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.	\$19.26	NA
Cost/Hour:	\$15.20	NA NA
Ripper op. Cost/Hour:	\$11.48	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$339.46
Total Fleet Cost/Hour:	\$339.46

MATERIAL QUANTITIES

Initial Volume:	3,840
Swell factor:	1.125
Loose volume:	4,320 LCY

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

Average push distance:	12	5 feet
Unadjusted hourly production:	1,	055.6 LCY/hr
Materials consistency description:		Compacted fill or embankment 0.9
	1	
Average push	5 %	

gradient:		
Average site altitude:	7,500 feet	
Material weight:	2,132 lbs/LCY	
Weight description:	User Provided	

tor		<u>Source</u>
ill:	0.900	(AB.AVG.)
cy:	0.900	(CAT HB))
d:	1.000	(GEN.)
ty:	1.000	(AVG.)
cy:	0.830	(1 SHIFT/DAY)
le:	0.600	(FND-SF)
Push gradient:		(CAT HB)
le:	1.000	(CAT HB)
Material Weight:		(CAT HB)
be:	1.000	(PAT)
n:	0.3930	
1		
Adjusted unit		
41	. 4.85 LCY/hr	
	de: ht: pe: on: 41	ill: 0.900 cy: 0.900 od: 1.000 ty: 1.000 cy: 0.830 le: 0.600 nt: 0.903 de: 1.000 ht: 1.079 oe: 1.000

Fleet size:	1 Dozer(s)
Unit cost:	\$0.818/LCY
Total job time:	10.41 Hours
Total job cost:	\$3,535

	Task description:	Regrade Pond 006			
Site:	New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012
_					

PROJECT IDENTIFICATION

Task #:	004	State:	Colorado	Abbreviation:	None
Date:	7/30/2021	County:	Las Animas	Filename:	C012-004
User:	DC1				
Age	ncy or organizatior	n name: DR	MS		-

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:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$327.98
Total Fleet Cost/Hour:	\$327.98

MATERIAL QUANTITIES

Initial Volume:	6,160
Swell factor:	1.125
Loose volume:	6,930 LCY

Source of estimated volume:	Division of Reclamation, Mining & Safety
Source of estimated swell	Operator Estimate
factor:	

Average push distance:	75 feet	
Unadjusted hourly production:	1,514.3 LCY/hr	
Materials consistency description:	Compacted fill or embankme	nt 0.9
Average push	%	

gradient:	
Average site altitude:	7,500 feet
Material weight:	2,132 lbs/LCY
Weight description:	User Provided

Job Condition Correction Fac			<u>Source</u>	
Operator Skill: Material consistency:		0.900		(AB.AVG.)
		0.900		(CAT HB))
Dozing metho	d:	1.000	(GEN.)	
Visibilit	:y:	1.000		(AVG.)
Job efficienc	:y:	0.830		(1 SHIFT/DAY)
Spoil pil	e:	0.800		(FND-RF)
Push gradier	Push gradient:			(CAT HB)
Altitude:		1.000		(CAT HB)
Material Weight:		1.079		(CAT HB)
Blade type:		1.000		(PAT)
			_	
Net correctio	n:	0.5240		
Adjusted unit		3.49 LCY/hr		
production:		95.49 LC1/III		
Adjusted fleet		3.49 LCY/hr		
production:		9.49 LCT/III		

Fleet size:	1 Dozer(s)
Unit cost:	\$0.413/LCY
Total job time:	8.73 Hours
Total job cost:	\$2,864

	Task description:	Regrade Pond 007	
Site	: New Elk Mine	Permit Action: Mid Term 08 Permit/Job#: C1981012	

PROJECT IDENTIFICATION

Task #:	005	State:	Colorado	Abbreviation:	None
Date:	7/30/2021	County:	Las Animas	Filename:	C012-005
User:	DC1				
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:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$327.98
Total Fleet Cost/Hour:	\$327.98

MATERIAL QUANTITIES

Initial Volume:	9,120
Swell factor:	1.125
Loose volume:	10,260 LCY

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

Average push distance:	15	50 feet
Unadjusted hourly production:		10.5 LCY/hr
Materials consistency description:		Compacted fill or embankment 0.9
Average push	5 %	

gradient:		
Average site altitude:	7,500 feet	
Material weight:	2,132 lbs/LCY	
Weight description:	User Provided	

Job Condition Correction Factor Source			
Operator Skill:		0.900	(AB.AVG.)
Material consistence	:y:	0.900	(CAT HB))
Dozing metho	d:	1.000	(GEN.)
Visibilit	ty:	1.000	(AVG.)
Job efficience	:y:	0.830	(1 SHIFT/DAY)
Spoil pi	le:	0.800	(FND-RF)
Push gradier	nt:	0.903	(CAT HB)
Altitud	Altitude:		(CAT HB)
Material Weight:		1.079	(CAT HB)
Blade type:		1.000	(PAT)
Net correctio	n:	0.5240	
Adjusted unit		7.10 LCY/hr	
production:			
Adjusted fleet 47		'7.1 LCY/hr	
production:			

Fleet size:	1 Dozer(s)
Unit cost:	\$0.687/LCY
Total job time:	21.50 Hours
Total job cost:	\$7,053

[Task description:	Regrade	e Pond 008; Rip and R	egrade Spillway		
Site	New Elk Mine		Permit Action:	Mid Term 08	Permit/Job#:	C1981012
PROJECT IDENTIFICATION						

Task #:	006	State:	Colorado	Abbreviation:	None
Date:	7/30/2021	County:	Las Animas	Filename:	C012-006
User:	DC1				
Age	ency or organization	n name: DR	MS		

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:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$5.74	50
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$333.72
Total Fleet Cost/Hour:	\$333.72

MATERIAL QUANTITIES

Initial Volume:	28,300
Swell factor:	1.125
Loose volume:	31,838 LCY

Source of estimated volume:	Division of Reclamation, Mining & Safety
Source of estimated swell	Operator Estimate
factor:	

Average push distance:	12	25 feet
Unadjusted hourly 1 production:		055.6 LCY/hr
Materials consistency description:		Compacted fill or embankment 0.9
Average push	10 %	

gradient:		
Average site altitude:	7,500 feet	
Material weight:	2,132 lbs/LCY	
Weight description:	User Provided	

Job Condition Correction Fac	tor		<u>Source</u>
Operator Skill:		0.900	(AB.AVG.)
Material consistence	:y:	0.900	(CAT HB))
Dozing metho	d:	1.000	(GEN.)
Visibilit	ty:	1.000	(AVG.)
Job efficienc	:y:	0.830	(1 SHIFT/DAY)
Spoil pil	le:	0.800	(FND-RF)
Push gradier	nt:	0.786	(CAT HB)
Altitud	le:	1.000	(CAT HB)
Material Weigh	nt:	1.079	(CAT HB)
Blade typ	Blade type:		(PAT)
Net correctio	n:	0.4561	
Adjusted unit		31.46 LCY/hr	
production:		51.40 LCT/III	
Adjusted fleet		31.46 LCY/hr	
production: 48		1.40 LCT/III	

Fleet size:	1 Dozer(s)
Unit cost:	\$0.693/LCY
Total job time:	66.13 Hours
Total job cost:	\$22,068

Task description:	Regrade West Portal Containr	Regrade West Portal Containment Area 1			
Site: New Elk Mine	New Elk Mine Permit Action: Mid Term 08 Permit/Job#: C1981012				

PROJECT IDENTIFICATION

Та	ask #:	007	State:	Colorado	Abbreviation:	None
[Date:	7/30/2021	County:	Las Animas	Filename:	C012-007
1	User:	DC1				
	Age	ncy or organizatior	n name: DR	MS		

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:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$327.98
Total Fleet Cost/Hour:	\$327.98

MATERIAL QUANTITIES

Initial Volume:	3,340
Swell factor:	1.125
Loose volume:	3,758 LCY

Source of estimated volume:	Division of Reclamation, Mining & Safety
Source of estimated swell	Operator Estimate
factor:	

Average push distance:	10)0 feet
Unadjusted hourly 2 production:		243.2 LCY/hr
Materials consistency description:		Compacted fill or embankment 0.9
Average push	0 %	

gradient:	
Average site altitude:	7,500 feet
Material weight:	2,132 lbs/LCY
Weight description:	User Provided

Job Condition Correction Factor Source					
Operator Sk	ill:	0.900	(AB.AVG.)		
Material consistence	:y:	0.900	(CAT HB))		
Dozing metho	d:	1.000	(GEN.)		
Visibilit	ty:	1.000	(AVG.)		
Job efficience	:y:	0.830	(1 SHIFT/DAY)		
Spoil pi	le:	0.800	(FND-RF)		
Push gradient:		1.000	(CAT HB)		
Altitude:		1.000	(CAT HB)		
Material Weight:		1.079	(CAT HB)		
Blade typ	Blade type:		(PAT)		
Net correction:		0.5803			
Adjusted unit production: 72		1 1.43 LCY/hr			
Adjusted fleet 72 production:		2 1.43 LCY/hr			

Fleet size:	1 Dozer(s)
Unit cost:	\$0.455/LCY
Total job time:	5.21 Hours
Total job cost:	\$1,708

	Task description:	Regrad	Regrade temporary Ditches at West Portal				
Site	e: New Elk Mine	Mid Term 08	Permit/Job#:	C1981012			

PROJECT IDENTIFICATION

Task #:	008	State:	Colorado	Abbreviation:	None	
Date:	7/30/2021	County:	Las Animas	Filename:	C012-008	
User:	DC1					
Agency or organization name: DRMS						

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.	\$0.00	NA
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$308.72
Total Fleet Cost/Hour:	\$308.72

MATERIAL QUANTITIES

Initial Volume:	217
Swell factor:	1.125
Loose volume:	244 LCY

Source of estimated volume:	1300 ft. D29 & D29B
Source of estimated swell	Operator Estimate
factor:	

Average push distance:	75	i feet
		514.3 LCY/hr
Materials consistency description:		Compacted fill or embankment 0.9
Average push	5 %	

gradient:	
Average site altitude:	7,500 feet
Material weight:	2,132 lbs/LCY
Weight description:	User Provided

Job Condition Correction Factor Source				
Operator Skill:		0.900		(AB.AVG.)
Material consistence	y:	0.900		(CAT HB))
Dozing metho	d:	1.000	(GEN.)	
Visibilit	y:	1.000	(AVG.)	
Job efficienc	y:	0.830	(1 SHIFT/DAY)	
Spoil pil	e:	0.800		(FND-RF)
Push gradient:		0.903	(CAT HB)	
Altitude:		1.000		(CAT HB)
Material Weigh	Material Weight:			(CAT HB)
Blade typ	Blade type:			(PAT)
			_	
Net correctio	n:	0.5240		
Adjusted unit		3.49 LCY/hr		
production:		5.49 LCT/11		
Adjusted fleet		793.49 LCY/hr		
production:	75	3.43 LC1/11		

Fleet size:	1 Dozer(s)
Unit cost:	\$0.389/LCY
Total job time:	0.31 Hours
Total job cost:	\$95

	Task description:	Backfill East Portal Face			
Site:	New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012

PROJECT IDENTIFICATION

Task #:	009	State:	Colorado	Abbreviation:	None
Date:	7/30/2021	County:	Las Animas	Filename:	C012-009
User:	DC1				
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:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.	\$19.26	NA
Cost/Hour:	\$15.20	NA NA
Ripper op. Cost/Hour:	\$11.48	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$339.46
Total Fleet Cost/Hour:	\$1,018.39

MATERIAL QUANTITIES

Initial Volume:	1,400
Swell factor:	1.125
Loose volume:	1,575 LCY

Source of estimated volume:	Division of Reclamation, Mining & Safety
Source of estimated swell	Operator Estimate
factor:	

Average push distance:	10)0 feet
Unadjusted hourly production:	1,	243.2 LCY/hr
Materials consistency description:		Compacted fill or embankment 0.9
Average push	10 %	

gradient:	
Average site altitude:	7,500 feet
Material weight:	2,132 lbs/LCY
Weight description:	User Provided

Job Condition Correction Factor Source				<u>Source</u>
Operator Skill:		0.900	(AB.AVG.)	
Material consistenc	y:	0.900		(CAT HB))
Dozing metho	d:	1.000		(GEN.)
Visibilit	y:	1.000		(AVG.)
Job efficienc	y:	0.830		(1 SHIFT/DAY)
Spoil pil	e:	0.800		(FND-RF)
Push gradient:		0.786	(CAT HB)	
Altitude:		1.000	(CAT HB)	
Material Weight:		1.079	(CAT HB)	
Blade type:		1.000		(PAT)
			_	
Net correction	n:	0.4561		
Adjusted unit	56	7.02 LCY/hr		
production:	50	7.02 LCT/11		
Adjusted fleet	1701.06 LCY/hr			
production:	1/			

Fleet size:	3 Dozer(s)
Unit cost:	\$0.599/LCY
Total job time:	0.93 Hours
Total job cost:	\$943

Task description:		Backfill West Portal Face					
Site: New Elk Mine		Permit Action:	Mid Term 08	Permit/Job#:	C1981012		

PROJECT IDENTIFICATION

Task #:	010	State:	Colorado	Abbreviation:	None
Date:	7/30/2021	County:	Las Animas	Filename:	C012-010
User:	DC1				
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:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$327.98
Total Fleet Cost/Hour:	\$655.96

MATERIAL QUANTITIES

Initial Volume:	1,400
Swell factor:	1.125
Loose volume:	1,575 LCY

Source of estimated volume:		Division of Reclamation, Mining & Safety		
	Source of estimated swell	Operator Estimate		
	factor:			

Average push distance:	10)0 feet
Unadjusted hourly production:	1,	243.2 LCY/hr
Materials consistency description:		Compacted fill or embankment 0.9
Average push	10 %	

gradient:		
Average site altitude:	7,500 feet	
Material weight:	2,132 lbs/LCY	
Weight description:	User Provided	

Job Condition Correction Factor Source				
Operator Skill:		0.900 (AB.		(AB.AVG.)
Material consistenc	y:	0.900		(CAT HB))
Dozing metho	d:	1.000		(GEN.)
Visibilit	y:	1.000		(AVG.)
Job efficienc	y:	0.830	(1 SHIFT/DAY)	
Spoil pil	e:	0.800		(FND-RF)
Push gradient:		0.786	(CAT HB)	
Altitude:		1.000	(CAT HB)	
Material Weight:		1.079		(CAT HB)
Blade type:		1.000		(PAT)
			_	
Net correctio	n:	0.4561		
Adjusted unit		7.02 LCY/hr		
production:		17.02 LCT/11		
Adjusted fleet	Adjusted fleet			
production:		34.04 LCY/hr		

Fleet size:	2 Dozer(s)					
Unit cost:	\$0.578/LCY					
Total job time:	1.39 Hours					
Total job cost:	\$911					
Task description:		Backfill Bates Portal Face				
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Site: New Elk Mine		Permit Action:	Mid Term 08	Permit/Job#:	C1981012	

PROJECT IDENTIFICATION

Task #:	011	State:	Colorado	Abbreviation:	None			
Date:	7/30/2021	County:	Las Animas	Filename:	C012-011			
User:	DC1							
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:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$327.98
Total Fleet Cost/Hour:	\$655.96

MATERIAL QUANTITIES

Initial Volume:	39,000
Swell factor:	1.125
Loose volume:	43,875 LCY

Source of estimated volume:	Division of Reclamation, Mining & Safety
Source of estimated swell	Operator Estimate
factor:	

Average push distance: 1		D0 feet
Unadjusted hourly production:	1,	243.2 LCY/hr
Materials consistency description:		Compacted fill or embankment 0.9
Average push	10 %	

gradient:	
Average site altitude:	7,500 feet
Material weight:	2,132 lbs/LCY
Weight description:	User Provided

Job Condition Correction Factor Source					
Operator Skill:		0.900	(AB.AVG.)		
Material consistency:		0.900	(CAT HB))		
Dozing metho	d:	1.000	(GEN.)		
Visibilit	ty:	1.000	(AVG.)		
Job efficience	:y:	0.830	(1 SHIFT/DAY)		
Spoil pi	le:	0.800	(FND-RF)		
Push gradier	Push gradient:		(CAT HB)		
Altitud	Altitude:		(CAT HB)		
Material Weight:		1.079	(CAT HB)		
Blade typ	Blade type:		(PAT)		
Net correction:		0.4561			
Adjusted unit production: 56		57.02 LCY/hr			
Adjusted fleet 11 production:		34.04 LCY/hr			

Fleet size:	2 Dozer(s)
Unit cost:	\$0.578/LCY
Total job time:	38.69 Hours
Total job cost:	\$25,379

	Task description:	Regrade Areas from MR-99, MR-107, MR-111, MR-114					
Site: New Elk Mine			Permit Action:	Mid Term 08	Permit/Job#:	C1981012	

PROJECT IDENTIFICATION

	Task #:	012	State:	Colorado	Abbreviation:	None				
	Date:	7/30/2021	County:	Las Animas	Filename:	C012-012				
	User:	DC1								
Γ	Agency or organization name: DRMS									

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$308.72
Total Fleet Cost/Hour:	\$926.17

MATERIAL QUANTITIES

Initial Volume:	5,536		
Swell factor:	1.125		
Loose volume:	6,228 LCY		
		7	

Source of estimated volume:	Exhibit 28- p. 232 assume 4" "topsoil material"
Source of estimated swell	Operator Estimate
factor:	

Average push distance:	rage push distance: 60	
Unadjusted hourly production:	nadjusted hourly 1,	
Materials consistency description:		Loose stockpile 1.2
Average push	0 %	

gradient:			
Average site altitude:	7,400 feet		
Material weight:	2,132 lbs/LCY		
Weight description:	User Provided		

Job Condition Correction Fac	tor			<u>Source</u>
Operator Ski	0.900		(AB.AVG.)	
Material consistence	:y:	1.200		(CAT HB)
Dozing metho	d:	1.000		(GEN.)
Visibilit	y:	1.000		(AVG.)
Job efficienc	:y:	0.830		(1 SHIFT/DAY)
Spoil pil	e:	0.800		(FND-RF)
Push gradier	nt:	1.000	(CAT HB)	
Altitud	Altitude:		(CAT HB)	
Material Weight:		1.079	(CAT HB)	
Blade typ	e:	1.000		(PAT)
Net correctio	n:	0.7738		
Adjusted unit		448.55 LCY/hr		
production:				
Adjusted fleet		45.65 LCY/hr		
production:	43	43.03 LCT/11		

Fleet size:	3 Dozer(s)
Unit cost:	\$0.213/LCY
Total job time:	1.43 Hours
Total job cost:	\$1,327

Task description	n: Replac	e Topsoil on D26 Exter	nsion			
Site: New Elk Mi	e	Permit Action:	Mid Term 08	Permit/Job#:	C1981012	

PROJECT IDENTIFICATION

	Task #:	013	State:	Colorado	Abbreviation:	None				
	Date:	7/30/2021	County:	Las Animas	Filename:	C012-013				
	User:	DC1								
Γ	Agency or organization name: DRMS									

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$308.72
Total Fleet Cost/Hour:	\$308.72

MATERIAL QUANTITIES

Initial Volume:	264
Swell factor:	1.250
Loose volume:	330 LCY

Source of estimated volume:	Division of Reclamation, Mining & Safety
Source of estimated swell	Operator Estimate
factor:	

Average push distance:	50 feet		
Unadjusted hourly production:	2,110.5 LCY/hr		
Materials consistency description:	Partly consolidate	ed stockpile 1.1	
Average push	5 %		

gradient:			
Average site altitude:	7,500 feet		
Material weight:	2,055 lbs/LCY		
Weight description:	User Provided		

Job Condition Correction Factor Source				
Operator Skill:		0.900		(AB.AVG.)
Material consistence	:y:	1.100		(CAT HB)
Dozing metho	d:	1.000		(GEN.)
Visibilit	ty:	1.000		(AVG.)
Job efficience	:y:	0.830		(1 SHIFT/DAY)
Spoil pi	le:	0.800		(FND-RF)
Push gradier	nt:	0.903		(CAT HB)
Altitud	Altitude:		(CAT HB)	
Material Weight:		1.119	(CAT HB)	
Blade type:		1.000		(PAT)
Net correctio	n:	0.6642		
production:		401.79 LCY/hr		
		01.79 LCY/hr		

Fleet size:	1 Dozer(s)
Unit cost:	\$0.220/LCY
Total job time:	0.24 Hours
Total job cost:	\$73

Task description:	Backfill and Regrade DWDA Expansion		
Site: New Elk Mine	Permit Action: Mid	Term 08 Permit/Job#:	C1981012

PROJECT IDENTIFICATION

	Task #:	014	State:	Colorado	Abbreviation:	None
	Date:	7/30/2021	County:	Las Animas	Filename:	C012-014
	User:	DC1				
Γ	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:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.	\$19.26	NA
Cost/Hour:	\$19.20	NA
Ripper op. Cost/Hour:	\$11.48	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$339.46
Total Fleet Cost/Hour:	\$678.92

MATERIAL QUANTITIES

Initial Volume:	1,936
Swell factor:	1.125
Loose volume:	2,178 LCY

	Source of estimated volume:	Division of Reclamation, Mining & Safety
Source of estimated swell		Operator Estimate
	factor:	

Average push distance:	2	00 feet
		00.0 LCY/hr
Materials consistency description:		Compacted fill or embankment 0.9
Average push	0 %	

gradient:	
Average site altitude:	7,500 feet
Material weight:	2,132 lbs/LCY
Weight description:	User Provided

Job Condition Correction Factor Source				
Operator Skill:		0.900		(AB.AVG.)
Material consistenc	y:	0.900		(CAT HB))
Dozing metho	d:	1.000		(GEN.)
Visibilit	y:	1.000		(AVG.)
Job efficienc	y:	0.830		(1 SHIFT/DAY)
Spoil pil	e:	0.800		(FND-RF)
Push gradien	nt:	1.000		(CAT HB)
Altitud	e:	1.000		(CAT HB)
Material Weigh	nt:	1.079		(CAT HB)
Blade typ	Blade type:			(PAT)
Net correctio	n:	0.5803		
Adjusted unit		6.21 LCY/hr		
production: 40		0.21 LCT/11		
Adjusted fleet 81 production:		2.42 LCY/hr	T	
		2.42 LUT/III		

Fleet size:	2 Dozer(s)
Unit cost:	\$0.836/LCY
Total job time:	2.68 Hours
Total job cost:	\$1,820

	Task description:	Replace Topsoil on Six Drill Pads and Mud Pits					
Site	: New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012		
		AI .					
•	PROJECT IDENTIFICATIO			<u></u>			

Task #:	015	State:	Colorado	Abbreviation:	None
Date:	7/30/2021	County:	Las Animas	Filename:	C012-015
User:	DC1				
Agency or organization name: DRMS					

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.	\$0.00	NA
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$308.72
Total Fleet Cost/Hour:	\$308.72

MATERIAL QUANTITIES

Initial Volume:	2,200
Swell factor:	1.125
Loose volume:	2,475 LCY

Source of estimated volume:	Division Estimate
Source of estimated swell	Operator Estimate
factor:	

Average push distance:125 feetUnadjusted hourly production:1,055.6 LCY/hr		5 feet		
		055.6 LCY/hr	_	
Materials consistency description:		Consolidated stockpile 1	.0	
Average push	5 %			

gradient:			
Average site altitude:	7,600 feet		
Material weight:	2,055 lbs/LCY		
Weight description:	User Provided		

Job Condition Correction Factor Source				
Operator Skill: Material consistency:		0.900	(AB.AVG.)	
		1.000	(CAT HB)	
Dozing metho	d:	1.000	(GEN.)	
Visibilit	ty:	1.000	(AVG.)	
Job efficienc	:y:	0.830	(1 SHIFT/DAY)	
Spoil pil	le:	0.800	(FND-RF)	
Push gradient:		0.903	(CAT HB)	
Altitude:		1.000	(CAT HB)	
Material Weight:		1.119	(CAT HB)	
Blade type:		1.000	(PAT)	
Net correctio	n:	0.6038		
production: Adjusted fleet				
		37.37 LCY/hr		
		7.37 LCY/hr		

Fleet size:	1 Dozer(s)
Unit cost:	\$0.484/LCY
Total job time:	3.88 Hours
Total job cost:	\$1,199

Task description:	Rip and Regrade C&W Train Shop Area		
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#: C1981012	

PROJECT IDENTIFICATION

Т	ask #:	016	State:	Colorado	Abbreviation:	None
	Date:	7/30/2021	County:	Las Animas	Filename:	C012-016
	User:	DC1				
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:

		Utilization %
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.	\$19.26	NA
Cost/Hour:	\$19.20	NA
Ripper op. Cost/Hour:	\$11.48	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$339.46
Total Fleet Cost/Hour:	\$678.92

MATERIAL QUANTITIES

Initial Volume:	14,520
Swell factor:	1.125
Loose volume:	16,335 LCY

Source of estimated volume:	Map 11, Map 15
Source of estimated swell	Operator Estimate
factor:	

Average push distance:	10	00 feet
Unadjusted hourly production:	1,3	243.2 LCY/hr
Materials consistency description:		Dry, non-cohesive 0.8
Average push	0 %	

gradient:		
Average site altitude:	7,500 feet	
Material weight:	2,132 lbs/LCY	
Weight description:	User Provided	

Job Condition Correction Fact	tor			<u>Source</u>
Operator Ski	ill:	0.900		(AB.AVG.)
Material consistenc	:y:	0.800		(CAT HB)
Dozing metho	d:	1.000		(GEN.)
Visibilit	y:	1.000		(AVG.)
Job efficienc	:y:	0.830		(1 SHIFT/DAY)
Spoil pil	e:	0.800		(FND-RF)
Push gradient:		1.000	(CAT HB)	
Altitude:		1.000	(CAT HB)	
Material Weight:		1.079	(CAT HB)	
Blade typ	e:	1.000		(PAT)
			_	
Net correctio	n:	0.5158		
Adjusted unit	64	1.24 LCY/hr		
production:	04	1.24 LCT/11		
Adjusted fleet	17	282.48 LCY/hr		
production:	12	02.40 LUT/III		

Fleet size:	2 Dozer(s)
Unit cost:	\$0.529/LCY
Total job time:	12.74 Hours
Total job cost:	\$8,647

Task description:	Regrade Access Road to NW Vent Shaft (TR72)			
Site: New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012
PROJECT IDENTIFICATION	<u>1</u>			

Task #:	017	State:	Colorado	Abbreviation:	None
Date:	7/30/2021	County:	Las Animas	Filename:	C012-017
User:	DC1				
Agency or organization name: DRMS					

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$97.46	NA
Operating Cost/Hour:	\$97.63	100
Ripper own.	\$15.19	NA
Cost/Hour:	¢15.15	
Ripper op. Cost/Hour:	\$1.49	15
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$253.07
Total Fleet Cost/Hour:	\$253.07

MATERIAL QUANTITIES

Initial Volume:	1,111
Swell factor:	1.165
Loose volume:	1,294 LCY

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

Average push distance:	50	feet
Unadjusted hourly production:	1,4	400.0 LCY/hr
Materials consistency description:		Compacted fill or embankment 0.9
Average push	-5 %	

gradient:	
Average site altitude:	7,300 feet
Material weight:	2,900 lbs/LCY
Weight description:	Decomposed rock - 50% Rock, 50% Earth

Job Condition Correction Fac	tor		<u>Source</u>
Operator Ski	ill:	0.750	(AVG.)
Material consistence	:y:	0.900	(CAT HB))
Dozing metho	d:	1.000	(GEN.)
Visibilit	y:	1.000	(AVG.)
Job efficienc	y:	0.830	(1 SHIFT/DAY)
Spoil pil	e:	0.800	(FND-RF)
Push gradier	nt:	1.115	(CAT HB)
Altitud	e:	1.000	(CAT HB)
Material Weigh	nt:	0.793	(CAT HB)
Blade typ	e:	1.000	(PAT)
Net correctio	n:	0.3963	
Adjusted unit production:	55	4.82 LCY/hr	
Adjusted fleet production:	55	4.82 LCY/hr	

Fleet size:	1 Dozer(s)
Unit cost:	\$0.456/LCY
Total job time:	2.33 Hours
Total job cost:	\$590

	Task description:	Regrade Access Road to NW Vent Shaft				
Site	New Elk Mine		Permit Action:	Mid Term 08	Permit/Job#:	C1981012

PROJECT IDENTIFICATION

	Task #:	018	State:	Colorado	Abbreviation:	None
	Date:	8/5/2021	County:	Las Animas	Filename:	C012-018
	User:	DC1				
Agency or organization name: DRMS						

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$97.46	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$15.19	NA
Ripper op. Cost/Hour:	\$1.49	15
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour:	\$253.07
Total Fleet Cost/Hour:	\$253.07

MATERIAL QUANTITIES

Initial Volume:	1,111
Swell factor:	1.165
Loose volume:	1,294 LCY

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

Average push distance:	50 feet
Unadjusted hourly production:	1,400.0 LCY/hr
Materials consistency description:	Compacted fill or embankment 0.9
Average push	-5 %

gradient:	
Average site altitude:	7,300 feet
Material weight:	2,900 lbs/LCY
Weight description:	Decomposed rock - 50% Rock, 50% Earth

Job Condition Correction Fac	tor		<u>Source</u>
Operator Ski	ill:	0.750	(AVG.)
Material consistence	:y:	0.900	(CAT HB))
Dozing metho	d:	1.000	(GEN.)
Visibilit	ty:	1.000	(AVG.)
Job efficience	:y:	0.830	(1 SHIFT/DAY)
Spoil pil	le:	0.800	(FND-RF)
Push gradier	nt:	1.115	(CAT HB)
Altitud	Altitude:		(CAT HB)
Material Weigh	nt:	0.793	(CAT HB)
Blade typ	e:	1.000	(PAT)
Net correctio	n:	0.3963	
Adjusted unit production:	55	4.82 LCY/hr	
Adjusted fleet 55 production:		4.82 LCY/hr	

Fleet size:	1 Dozer(s)
Unit cost:	\$0.456/LCY
Total job time:	2.33 Hours
Total job cost:	\$590

TRUCK/LOADER TEAM WORK

Task descri	ption:	Strip and Plac	ce 5 acres of top	soil RDA (TR75)			
New Elk	Mine		Permit Action:	Mid Term 08	Pern	nit/Job#: C198	1012
PROJECT ID	ENTIFICATIO	N					
Task #:	019	State	e: Colorado		Abbreviat	tion: None	
Date:	8/5/2021	Count	y: Las Animas		Filena	me: C012-019)
User:	DC1						
Age	ency or organiz	ation name:	DRMS				
	UIPMENT CO	<u>IST</u>			Shift basis: <u>1</u>	per day	
			Equip	ment Description			
	Truck Lo	oader Team -Tru					
		-Load		L 8'-10" Stick			
	Support Equ	ipment -Load A		OS Series II LGP			
		-Dump A		OS Series II LGP			
R	bad Maintenar	ice –Motor Grad Water Tru-		nker, 3,500 Gal.			
		-water m	uck. Water la	ilker, 5,500 Gal.			
Cost Breakdo	own: T	- ruck/Loader Te	am	Support Equip	ment	Maintenance E	auipment
		Truck	Excavator	Load Area	Dump Area	Motor	Water Truck
0/11+11:+:		100	100	50	50	Grader	25
	n-machine:	100	100	50	50	25	25
	cost/hour:	\$72.63	\$52.19	\$81.02	\$81.02	\$85.80	\$17.15
-	cost/hour:	\$49.40	\$43.34	\$39.67	\$39.67	\$15.10	\$7.30
	ation-riper:	NA	0	NA	NA	NA	NA
ľ	Ripper own. cost/hour:	NA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op.	cost/hour:	NA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Operator	cost/hour:	\$32.54	\$37.32	\$41.30	\$41.30	\$28.56	\$0.00
Uni	t Subtotals:	\$154.57	\$132.85	\$161.99	\$161.99	\$129.46	\$24.45
Numb	er of Units:	1	1	1	1	1	1
	o Subtotals:	Work:	\$287.42	Support:	\$323.98	Maint:	\$153.91

Total work team cost/hour: **\$765.31**

MATERIAL QUANTITIES

Initial volume:	9,274	CCY	Swell factor:	1.000
Loose volume:	9,274	LCY		
		1		
Source of estimated volume:		Division	of Reclamation, Mini	ng & Safety
Source of estimated swell factor:		Cat Hand	lbook	
N	1aterial Purchase Cost:	\$0.00		
	Total Cost:	\$0.00		

Truck Capacity:

Thack capacity.			
Truck Payload (weight) Basis	• •		
Material weight:	1,600	Pounds/LCY	
Description:	Top Soil		-
Rated Payload:	52,000	Pounds	
Payload Capacity:	32.50	LCY	

Truck Bed (volume) Basis:

Struck Volume:	14.50	LCY
Heaped Volume:	18.70	LCY
Average Volume:	16.60	LCY
Adjusted Volume:	18.70	LCY
Final Truck Volume		LCY
Based on Number of	18.23	
Loader Passes:		

Loading Tool Capacity

Bucket Size Class:	Medium

Rated Capacity:	1.100	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - uniform aggregates to 1/8" (95-100%) 0.975
Adjusted Capacity:	1.073	LCY

Job Condition Corrections:

Site Altitude (ft.): 7680 feet

	Truck	Loader	Source
Altitude Adj:	1.000	0.830	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.689	

Number of Loading Tool Passes Required to Fill	17	passes
Truck:	17	

Loading Tool Cycle Time:

Excavators and Front Shovels:

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

Track Loaders – Material Description:

Cycle Time Elements (min.):						
Load: NA	Maneuver:	NA	Dump:	0.100		
Wheel and Track Loaders -	Unadjusted Basic Loade	r Cycle Time (loa	ad, dump, maneuver):	N	IA m	inutes
Cycle Time Factors			Factor	(min.)	Source	
Material:	NA		N	4	(Cat HB)	
Stockpile:	NA		N	4	(Cat HB)	
Truck Ownership:	NA		N	4	(Cat HB)	
Operation:	NA		N	4	(Cat HB)	

Dump Target:	NA	NA	(Cat HB)
	Net Cycle Time Adjustment:	NA	minutes
	Adjusted Loader Cycle Time:	0.282	minutes
	Net Load Time per Truck:	4.612	minutes

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	4.612	Minutes	Adjusted for site altitude:	5.557	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,

	nuui nouti	с.									
	Seg #	Haul (Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)			
	1	800.0	0	5.00	2.00	7.00	1050	0.821	-		
	Return Ro	uto.				Haul Time:	0.821	[minute	es]
	Seg #	1	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)			
	1	800.0	0	-5.00	2.00	-3.00	3159	0.317	,		
						Return Time:	. 0.317	,	minut	es	
					Total Tru	uck Cycle Time:	8.095	5	minut	es	
L	oading Too. Prodi	ol unit uction	180.62	LCY/Hour		Adjusted for j	ob efficiency:	1	49.91		LCY/Hour
Truck	Unit Prod	uction	135.15	LCY/Hour		Adjusted for j	ob efficiency:	1	12.17		LCY/Hour
Optim	al No. of T	rucks:	1	Truck(s)		Selected Num	ber of Trucks:		1		Truck(s)
								-			

Adjusted hourly truck team production:	112.17	LCY/Hour
Adjusted single truck/loader team production:	112.17	LCY/Hour
Adjusted multiple truck/loader team production:	112.17	LCY/Hour

Fleet size:	1	Team(s)	Total job time:	82.68	Hours
Unit cost:	\$6.823	/LCY	Total job cost:	\$63,274	

TRUCK/LOADER TEAM WORK

Site: New Elk	Mino		Dom	mit Action:	Mid Term	08 L	Permit/Job	\#· /	C1981012
Site. New Elk			Perr	mt Action:		00	Permit/JOL	J#. 0	C1301017
PROJECT ID	ENTIFICATIO	<u>DN</u>							
Task #:	020		State:	Colorado		Ab	breviation:	None	e
Date:	8/5/2021	(County:	Las Anima	as		Filename:	C012	2-020
User:	DC1								
Age	ncy or organ	ization nam	ne: DRN	٨S					
HOURLY EQ	<u>UIPMENT C</u>	<u>OST</u>				Shift b	asis: <u>1 per da</u>	Y	
				Equ	ipment Descr	iption			
	Truck	Loader Tea	m -Truck:	Cat 725					
			-Loader:	Cat 319	D L 8'-10" St	ick			
	Support Eq	uipment -L	oad Area:	Cat D7F	R DS Series II I	_GP			
		-Du	imp Area:	Cat D7F	R DS Series II I	_GP			
Ro	oad Maintena			CAT 14					
		-Wa	ter Truck:	Water	Fanker, 3,500	Gal.			
Cost Breakdo	wn:	Truck/Loa	der Team		Support	Equipment	Mai	ntenar	nce Equipmen
		, Truck	Excavato	or Lo	oad Area	Dump Area	Motor Grader		Water Truck
%Utilization-mad	hine:	100		100	50	50		25	25
Ownership cost/	hour:	\$72.63	\$!	52.19	\$81.02	\$81.02	\$85	.80	\$17.15
Operating cost/	hour:	\$49.40	\$4	43.34	\$39.67	\$39.67	\$15	.10	\$7.30
%Utilization-	riper:	NA		0	NA	NA		NA	NA
Ripper cost/		NA	:	\$0.00	\$0.00	\$0.00	\$0	.00	\$0.00
Ripper op. cost/	hour:	NA		\$0.00	\$0.00	\$0.00	\$0	.00	\$0.00
Operator cost/	hour:	\$32.54	\$3	37.32	\$41.30	\$41.30	\$28	.56	\$0.00
Unit Subt	otals [.]	\$154.57	\$1	32.85	\$161.99	\$161.99	\$129	46	\$24.45

Total work team cost/hour: \$765.31

1

Work: \$287.42

MATERIAL QUANTITIES

Number of Units:

Group Subtotals:

Initial volume:	32,267	CCY	Swell factor:	1.000	
Loose volume:	32,267	LCY			
Source	e of estimated volume:	Operator	r Provided		
Source of	estimated swell factor:	Cat Hand	lbook		
N	Naterial Purchase Cost:	\$0.00			
	Total Cost:	\$0.00			

1

1

1

\$153.91

Maint:

1

1

\$323.98

Support:

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis:

Material weight:	2,650	Pounds/LCY	
Description:	Decomposed rock - 25% R		
Rated Payload:	52,000	Pounds	
Payload Capacity:	19.62	LCY	

Truck Bed (volume) Basis:

Struck Volume:	14.50	LCY
Heaped Volume:	18.70	LCY
Average Volume:	16.60	LCY
Adjusted Volume:	18.70	LCY
Final Truck Volume		LCY
Based on Number of	18.23	
Loader Passes:		

Loading Tool Capacity

Bucket Size Class:	Medium
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Rated Capacity:	1.100	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - uniform aggregates to 1/8" (95-100%) 0.975
Adjusted Capacity:	1.073	LCY

Job Condition Corrections:

Site Altitude (ft.): 7680 feet

	Truck	Loader	Source
Altitude Adj:	1.000	0.830	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.689	

Number of Loading Tool Passes Required to Fill	17	passes
Truck:	17	

Loading Tool Cycle Time:

Excavators and Front Shovels:

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

Track Loaders – Material Description:

Cycle Time Elements (min.):

Load:	NA	Maneuver:	NA		Dump:	0.100		
Wheel and ⁻	Track Loaders -	Unadjusted Basic Loade	er Cycle Time (loa	ad, dump, n	naneuver):	1	NA	minutes
Cycle	e Time Factors				Factor	(min.)	Sou	rce
	Material:	NA			NA	4	(Cat	HB)
	Stockpile:	NA			NA	4	(Cat	HB)
Tru	ck Ownership:	NA			NA	4	(Cat	HB)
	Operation:	NA			NA	4	(Cat	HB)
	Dump Target:	NA			NA	4	(Cat	HB)
		Ne	et Cycle Time Ad	justment:	NA	4	minu	utes
		Ad	justed Loader Cy	cle Time:	0.2	82	minu	utes

Net Load Time per Truck: 4.612 minutes
--

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	4.612	Minutes	Adjusted for site altitude:	5.557	Minutes
Truck Maneuver and Dump	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes
Time:					

Truck Travel (Haul & Return) Time: maintained 2.0 Road Condition: Hard, smooth, stabilized, surfaced, watered,

	nuur noute										
	Seg #	Haul (Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)			
	1	800.0	0	5.00	2.00	7.00	1050	0.821	-		
	Return Roi	ute:				Haul Time:	0.821		minute	es]
	Seg #		Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)			
	1	800.0	0	-5.00	2.00	-3.00	3159	0.317	,		
			F		Total Tri	Return Time: uck Cycle Time:			minut minut]
			L		Total In	dek cycle fille.	. 8.095	_	minu		
L	oading Too Produ	ol unit uction	180.62	LCY/Hour		Adjusted for j	ob efficiency:	1	49.91		LCY/Hour
Truck	Unit Produ	uction	135.15	LCY/Hour		Adjusted for j	ob efficiency:	1	12.17		LCY/Hour
Optim	al No. of T	rucks:	1	Truck(s)		Selected Num	ber of Trucks:		1		Truck(s)
								F			

Adjusted hourly truck team production:	112.17	LCY/Hour
Adjusted single truck/loader team production:	112.17	LCY/Hour
Adjusted multiple truck/loader team production:	112.17	LCY/Hour

Fleet size:	1	Team(s)	Total job time:	287.66	Hours
Unit cost:	\$6.823	/LCY	Total job cost:	\$220,149	

TRUCK/LOADER TEAM WORK

Task description:	Strip ar	nd Place 4 acro	es of Cover over 2 fe	eet from RDA ba	ck			
Site: New Elk Mine		Permit	Action: Mid Term	08	Permit/Job#: C1981012			
PROJECT IDENTIFI	ICATION							
Task #: 021		State: Co	orado	Abl	previation:	None		
Date: 8/5/	2021 (County: Las	Animas		Filename:	C012-021		
User: DC1								
Agency or	organization nan	ne: DRMS						
HOURLY EQUIPM	ENT COST			Shift ba	isis: <u>1 per day</u>	-		
			Equipment Descr	iption				
Truck Loader Team -Truck: Cat 725								
			Cat 319D L 8'-10" St					
Supp	ort Equipment -L		Cat D7R DS Series II LGP					
			Cat D7R DS Series II	LGP				
Road Ma	intenance – Moto		CAT 14M					
	-wa	ter Truck: \	Vater Tanker, 3,500	Gal.				
Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Main	tenance Equipment		
	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck		
%Utilization-machine:	100	10	0 50	50		25 25		
Ownership cost/hour:	\$72.63	\$52.1	9 \$81.02	\$81.02	\$85.8	80 \$17.15		
Operating cost/hour:	\$49.40	\$43.3	4 \$39.67	\$39.67	\$15.3	10 \$7.30		
%Utilization-riper:	NA		0 NA	NA	Ν	NA NA		
Ripper own. cost/hour:	NA	\$0.C	0 \$0.00	\$0.00	\$0.0	00 \$0.00		
Ripper op. cost/hour:	NA	\$0.0	0 \$0.00	\$0.00	\$0.0	00 \$0.00		
Operator cost/hour:	\$32.54	\$37.3	2 \$41.30	\$41.30	\$28.5	56 \$0.00		

\$161.99

Support:

1

\$161.99

\$323.98

1

\$129.46

Maint:

1

\$24.45

\$153.91

1

Total work team cost/hour: \$765.31

\$154.57

1

Work: \$287.42

MATERIAL QUANTITIES

Unit Subtotals:

Number of Units:

Group Subtotals:

Initial volume:	12,907	CCY	Swell factor:	1.000	_
Loose volume:	12,907	LCY			
Source	e of estimated volume:	Operator	r Provided		
Source of e	estimated swell factor:	Cat Hand	lbook		
N	1aterial Purchase Cost:	\$0.00			
	Total Cost:	\$0.00			

\$132.85

1

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis:

Material weight:	2,650	Pounds/LCY	
Description:	Decomposed rock - 25% R	ock, 75% Earth	
Rated Payload:	52,000	Pounds	
Payload Capacity:	19.62	LCY	

Truck Bed (volume) Basis:

Struck Volume:	14.50	LCY
Heaped Volume:	18.70	LCY
Average Volume:	16.60	LCY
Adjusted Volume:	18.70	LCY
Final Truck Volume		LCY
Based on Number of	18.23	
Loader Passes:		

Loading Tool Capacity

Bucket Size Class:	Medium
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Rated Capacity:	1.100	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - uniform aggregates to 1/8" (95-100%) 0.975
Adjusted Capacity:	1.073	LCY

Job Condition Corrections:

Site Altitude (ft.): 7680 feet

	Truck	Loader	Source
Altitude Adj:	1.000	0.830	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.689	

Number of Loading Tool Passes Required to Fill	17	passes
Truck:	17	

Loading Tool Cycle Time:

Excavators and Front Shovels:

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

Track Loaders – Material Description:

Cycle Time Elements (min.):

Load:	NA	Maneuver:	NA		Dump:	0.100		
Wheel and T	Frack Loaders -	Unadjusted Basic Loade	er Cycle Time (loa	ad, dump, n	naneuver):	1	NA	minute
Cycle	e Time Factors				Factor	(min.)	Sou	rce
	Material:	NA			N	4	(Cat	HB)
	Stockpile:	NA			N	4	(Cat	HB)
Truc	ck Ownership:	NA			N	4	(Cat	HB)
	Operation:	NA			N	4	(Cat	HB)
	Dump Target:	NA			N	4	(Cat	HB)
		Ne	et Cycle Time Ad	ustment:	N	4	minu	utes
		Ad	justed Loader Cy	cle Time:	0.2	82	minu	utes

Net Load Time per Truck: 4.612 minutes
--

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	4.612	Minutes	Adjusted for site altitude:	5.557	Minutes
Truck Maneuver and Dump	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes
Time:					

Truck Travel (Haul & Return) Time: maintained 2.0 Road Condition: Hard, smooth, stabilized, surfaced, watered,

nau	noute.									
Se	5	aul Distance ⁻ t)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)			
1	8	00.00	5.00	2.00	7.00	1050	0.821			
Rotu	rn Route:				Haul Time:	0.821		minutes	5]
	g # H	aul Distance ^E t)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)			
1	8	00.00	-5.00	2.00	-3.00	3159	0.317	,		
		[Return Time:	0.317	,	minute	es	
		[Total Tr	uck Cycle Time:	8.095	5	minute	es	
Loadi	ng Tool ur Productie		LCY/Hour		Adjusted for j	ob efficiency:	1	49.91	L	_CY/Hour
ruck Unit	Productio	on 135.15	LCY/Hour		Adjusted for j	ob efficiency:	1	12.17	L	_CY/Hour
ptimal No	o. of Truck	xs: 1	Truck(s)		Selected Num	ber of Trucks:		1	1	Γruck(s)
							-			

Adjusted hourly truck team production:	112.17	LCY/Hour
Adjusted single truck/loader team production:	112.17	LCY/Hour
Adjusted multiple truck/loader team production:	112.17	LCY/Hour

Fleet size:	1	Team(s)	Total job time:	115.07	Hours
Unit cost:	\$6.823	/LCY	Total job cost:	\$88,061	

TRUCK/LOADER TEAM WORK

Task description:	Strip ar	nd Place 5 a	cres of	Cover over 2 fe	et from borrow	RDA	
ite: New Elk Mine		Perm	it Actio	n: Mid Term	08	Permit/Job	#: C1981012
PROJECT IDENTIF	ICATION						
Task #: 022		State:	Colorad	lo	Abb	previation:	None
Date: 8/5	/2021	County:	Las Anir	mas		Filename:	C012-022
User: DC1	-						
Agency o	r organization nan	ne: DRM	S				
HOURLY EQUIPM	IENT COST				Shift ba	sis: <u>1 per day</u>	L
			Eq	quipment Descr	iption		
	Truck Loader Tea	m -Truck:	Cat 7				
		-Loader:		19D L 8'-10" St			
Sup	port Equipment -L			7R DS Series II L	-		
		imp Area:		7R DS Series II L	_GP		
Road IVI	aintenance – Moto	or Grader: ter Truck:	CAT 1	r Tanker, 3,500			
	-vva	Lef Truck.	wate	1 Taliker, 5,500	Gal.		
<u>Cost Breakdown</u> :	Truck/Loa	der Team		Support	Equipment	Mair	ntenance Equipmen
	Truck	Excavato	r	Load Area	Dump Area	Motor Grader	Water Truck
Utilization-machine:	100		100	50	50		25 25
wnership cost/hour:	\$72.63	\$5	2.19	\$81.02	\$81.02	\$85.	80 \$17.15
Operating cost/hour:	\$49.40	\$4	3.34	\$39.67	\$39.67	\$15.	10 \$7.30
%Utilization-riper:	NA		0	NA	NA	1	NA NA
Ripper own. cost/hour:	NA	Ş	0.00	\$0.00	\$0.00	\$0.	00 \$0.00
ipper op. cost/hour:	NA	\$	0.00	\$0.00	\$0.00	\$0.	00 \$0.00
Operator cost/hour:	\$32.54	\$3	7.32	\$41.30	\$41.30	\$28.	56 \$0.00

\$161.99

Support:

1

\$161.99

\$323.98

1

\$129.46

Maint:

1

\$24.45

\$153.91

1

Total work team cost/hour: \$765.31

\$154.57

1

Work:

MATERIAL QUANTITIES

Unit Subtotals:

Number of Units:

Group Subtotals:

Initial volume:	26,517	CCY	Swell factor:	1.000	
Loose volume:	26,517	LCY			
Source	e of estimated volume:	Operato	r Provided		
Source of	estimated swell factor:	Cat Hand	lbook		
N	Naterial Purchase Cost:	\$0.00			
Total Cost:					

\$132.85

\$287.42

1

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis:

Material weight:	2,650	Pounds/LCY	
Description:	Decomposed rock - 25% R	ock, 75% Earth	
Rated Payload:	52,000	Pounds	
Payload Capacity:	19.62	LCY	

Truck Bed (volume) Basis:

Struck Volume:	14.50	LCY
Heaped Volume:	18.70	LCY
Average Volume:	16.60	LCY
Adjusted Volume:	18.70	LCY
Final Truck Volume		LCY
Based on Number of	18.23	
Loader Passes:		

Loading Tool Capacity

Bucket Size Class:	Medium
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Rated Capacity:	1.100	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - uniform aggregates to 1/8" (95-100%) 0.975
Adjusted Capacity:	1.073	LCY

Job Condition Corrections:

Site Altitude (ft.): 7680 feet

	Truck	Loader	Source
Altitude Adj:	1.000	0.830	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.689	

Number of Loading Tool Passes Required to Fill	17	passes
Truck:	17	

Loading Tool Cycle Time:

Excavators and Front Shovels:

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

Track Loaders – Material Description:

Cycle Time Elements (min.):

		0.100	Dump:	NA	Maneuver:	NA	Load:
minutes	NA		naneuver):	r Cycle Time (load, dump, i	sted Basic Loade	Frack Loaders - U	Wheel and T
ırce	Sou	(min.)	Factor			e Time Factors	Cycle
: HB)	(Cat	4	NA			Material:	
HB)	(Cat	4	NA			Stockpile:	
: HB)	(Cat	4	NA			ck Ownership:	Tru
HB)	(Cat HB)		NA		: NA		
HB)	(Cat	4	NA			Dump Target:	
utes	minu	4	NA	t Cycle Time Adjustment:	Ne		
utes	minu	82	0.2	usted Loader Cycle Time:	Ad		

Net Load Time per Truck: 4.612 minutes
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Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	4.612	Minutes	Adjusted for site altitude:	5.557	Minutes
Truck Maneuver and Dump	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes
Time:					

Truck Travel (Haul & Return) Time: maintained 2.0 Road Condition: Hard, smooth, stabilized, surfaced, watered,

	naul Noule	•									
	Seg #	Haul ((Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)			
	1	800.0	0	5.00	2.00	7.00	1050	0.821			
	Return Rou	ito:				Haul Time:	0.821		minute	es]
	Seg #		Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)	il.		
	1	800.0	0	-5.00	2.00	-3.00	3159	0.317	,		
						Return Time:	0.317	,	minut	tes	
					Total Tr	uck Cycle Time:	8.095	6	minut	tes	
L	oading Too Produ		180.62	LCY/Hour		Adjusted for j	ob efficiency:	1	49.91	L	.CY/Hour
Truck	Unit Produ	iction	135.15	LCY/Hour		Adjusted for j	ob efficiency:	1	12.17	L	_CY/Hour
Optim	al No. of Tr	ucks:	1	Truck(s)		Selected Numl	ber of Trucks:		1	1	Fruck(s)
								-			

Adjusted multiple truck/loader team production:	112.17	LCY/Hour
Adjusted single truck/loader team production:	112.17	LCY/Hour
Adjusted hourly truck team production:	112.17	LCY/Hour

Fleet size:	1	Team(s)	Total job time:	236.40	Hours
Unit cost:	\$6.823	/LCY	Total job cost:	\$180,919	

TRUCK/LOADER TEAM WORK

	Task description:	Replace topsoil over borrow	eplace topsoil over borrow area RDA					
Site	: New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012			

PROJECT IDENTIFICATION

Task #:	023	State:	Colorado	Abbreviation:	None		
Date:	8/5/2021	County:	Las Animas	Filename:	C012-023		
User:	DC1						
Agency or organization name: DRMS							

HOURLY EQUIPMENT COST

Shift basis: <u>1 per day</u>

	Equipment Description
Truck Loader Team -Truck:	Cat 725
-Loader:	Cat 319D L 8'-10" Stick
Support Equipment -Load Area:	Cat D7R DS Series II LGP
-Dump Area:	Cat D7R DS Series II LGP
Road Maintenance – Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:	Truck/Loa	Truck/Loader Team		Equipment	Maintenance Equipment		
	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck	
%Utilization-machine:	100	100	50	50	NA	NA	
Ownership cost/hour:	\$72.63	\$52.19	\$81.02	\$81.02	NA	NA	
Operating cost/hour:	\$49.40	\$43.34	\$39.67	\$39.67	NA	NA	
%Utilization-riper:	NA	0	NA	NA	NA	NA	
Ripper own. cost/hour:	NA	\$0.00	\$0.00	\$0.00	NA	NA	
Ripper op. cost/hour:	NA	\$0.00	\$0.00	\$0.00	NA	NA	
Operator cost/hour:	\$32.54	\$37.32	\$41.30	\$41.30	NA	NA	
Unit Subtotals:	\$154.57	\$132.85	\$161.99	\$161.99	NA	NA	
Number of Units:	1	1	1	1	0	0	
Group Subtotals:	Work:	\$287.42	Support:	\$323.98	Maint:	\$0.00	

Total work team cost/hour: **<u>\$611.40</u>**

MATERIAL QUANTITIES

Initial volume:	6,050	CCY	Swell factor:	1.000
Loose volume:	6,050	LCY		
Source of estimated volume:		Division	of Reclamation, Mini	ng & Safety
Source of estimated swell factor:		Cat Hand	lbook	
Material Purchase Cost:		\$0.00		
	Total Cost:	\$0.00		

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis:

Material weight:	1,600	Pounds/LCY	
Description:	Top Soil		
Rated Payload:	52,000	Pounds	
Payload Capacity:	32.50	LCY	

Truck Bed (volume) Basis:

Struck Volume:	14.50	LCY
Heaped Volume:	18.70	LCY
Average Volume:	16.60	LCY
Adjusted Volume:	18.70	LCY
Final Truck Volume		LCY
Based on Number of	18.23	
Loader Passes:		

Loading Tool Capacity

Bucket Size Class:	Medium
--------------------	--------

Rated Capacity:	1.100	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - uniform aggregates to 1/8" (95-100%) 0.975
Adjusted Capacity:	1.073	LCY

Job Condition Corrections:

Site Altitude (ft.): 7680 feet

	Truck	Loader	Source
Altitude Adj:	1.000	0.830	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.689	

Number of Loading Tool Passes Required to Fill	17	passes
Truck:	17	

Loading Tool Cycle Time:

Excavators and Front Shovels:

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

Track Loaders – Material Description:

Cycle Time Elements (min.):

Load:	NA	Maneuver:	NA		Dump:	0.100		
Wheel and T	rack Loaders -	Unadjusted Basic Loade	er Cycle Time (loa	ad, dump, r	naneuver):	1	NA	minutes
	Time Factors				Factor		Sou	
	Material:	NA			N	4	(Cat	HB)
	Stockpile:	NA			N	4	(Cat	HB)
Truc	k Ownership:	NA			N/	4	(Cat	HB)
	Operation:	NA			N	4	(Cat	HB)
	Dump Target:	NA			N/	4	(Cat	HB)
		Ne	et Cycle Time Ad	justment:	N	4	minu	utes
		Ad	justed Loader Cy	cle Time:	0.2	82	minu	utes

Net Load Time per Truck: 4.612 minutes
--

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	4.612	Minutes	Adjusted for site altitude:	5.557	Minutes
Truck Maneuver and Dump	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes
Time:					

Truck Travel (Haul & Return) Time: maintained 2.0 Road Condition: Hard, smooth, stabilized, surfaced, watered,

Seg #	Haul Di	stance	Grade (%)	Roll. Res	Total Res	Velocity	Trave		
000 //	(Ft)	stance		(%)	(%)	(fpm)	Time (min)		
1	800.00		5.00	2.00	7.00	1050	0.821		
					Haul Time:	0.821		minutes	
Return Rou	ute:								
Seg #	Haul Di: (Ft)	stance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)	l	
1	800.00		-5.00	2.00	-3.00	3159	0.317	,	
		Γ			Return Time:	0.317		minute	S
				Total Tr	uck Cycle Time:	8.095		minute	S
Loading Too Produ	ol unit uction	180.62	LCY/Hour		Adjusted for job efficiency:] 1	49.91	LCY/Hour
uck Unit Production		135.15	LCY/Hour		Adjusted for job efficiency:		1	12.17	LCY/Hour
timal No. of Trucks:		1	Truck(s)		Selected Number of Trucks:			1	Truck(s)

Adjusted multiple truck/loader team production:	112.17	LCY/Hour
Adjusted single truck/loader team production:	112.17	LCY/Hour
Adjusted hourly truck team production:	112.17	LCY/Hour

Fleet size:	1	Team(s)	Total job time:	53.94	Hours					
Unit cost:	\$5.451	/LCY	Total job cost:	\$32,976						
Task description: Backfill and Regra			Backfill	and Reg	ade Trans	former and Ro	ock Dust Cut Slop	e		
--------------------------------------	--------------------	-----------------------------	---	---	---	---	-------------------	------------------------	--------	------------------------------
Site:	New Elk I	Vine		Per	mit Action	n: Mid Term	08	Permit/Job	o#: C	21981012
PF	ROJECT IDE	INTIFICATIO	N							
	Task #:	024	<u> </u>	State:	Colorado	_	Abl	previation:	None	
-	Date:	8/5/2021		County:	Las Anim	-	ADI	Filename:	C012	
	User:	DC1		county.		183		Filenanie.	CUIZ	-024
	0361.	DCI								
	Age	ncy or organiz	ation nan	ne: DR	MS					
					Equ	uipment Descri	intion			
		Truck L	oader Tea	m -Truck		ic 10-12 cy, 6x4				
		Truck L	oader Tea	m -Truck: Loader:	Generi	ic 10-12 cy, 6x4				
_		Truck L Support Equ		-Loader	Generi CAT 95	ic 10-12 cy, 6x4				
_			ipment -L	-Loader	Generi CAT 95 Cat D9	ic 10-12 су, 6х4 50Н				
_	Ro		ipment -L -Du nce –Moto	-Loader oad Area Imp Area or Grader	Generi CAT 95 Cat D9 Cat D9 Cat D9	ic 10-12 cy, 6x4 50H 9T - 9SU 9T - 9SU 4M	4			
_	Ro	Support Equ	ipment -L -Du nce –Moto	-Loader oad Area Imp Area	Generi CAT 95 Cat D9 Cat D9 Cat D9	ic 10-12 cy, 6x4 50H 9T - 9SU 9T - 9SU	4			
	Ro Dost Breakdo	Support Equ ad Maintenar	ipment -L -Du nce –Moto	-Loader oad Area Imp Area or Grader ter Truck	Generi CAT 95 CAT 95 Cat D9 Cat D9 Cat D9 CAT 14 Water	ic 10-12 cy, 6x4 50H DT - 9SU DT - 9SU 4M • Tanker, 5,000	4	Mai	ntenan	
		Support Equ ad Maintenar	ipment -L -Du nce –Moto -Wa	-Loader oad Area Imp Area or Grader ter Truck	: Generi : CAT 95 : Cat D9 : Cat D9 : CAT 12 : CAT 12 : Water	ic 10-12 cy, 6x4 50H DT - 9SU DT - 9SU 4M • Tanker, 5,000	Gal.	Mai Motor Grader		ice Equipment Water Truck
		Support Equ ad Maintenar	ipment -L -Du nce –Moto -Wa Fruck/Loa	-Loader oad Area imp Area or Grader ter Truck der Team	: Generi : CAT 95 : Cat D9 : Cat D9 : CAT 12 : CAT 12 : Water	ic 10-12 cy, 6x4 50H DT - 9SU DT - 9SU 4M Tanker, 5,000 Support	Gal. Equipment	Motor		

\$141.41

NA

\$0.00

\$0.00

\$41.30

\$308.72

Support:

1

\$141.41

NA

\$0.00

\$0.00

\$41.30

\$308.72

\$617.44

1

\$30.20

NA

\$0.00

\$0.00

\$28.56

\$144.56

Maint:

1

\$20.98

\$0.00

\$0.00

\$21.12

\$75.55

\$220.11

1

NA

Total work team cost/hour: \$1,154.86

\$44.28

NA

NA

NA

3

\$0.00

\$67.15

Work:

\$36.56

\$0.00

\$0.00

\$40.71

\$115.86

\$317.31

1

0

MATERIAL QUANTITIES

Operating cost/hour:

Ripper op. cost/hour:

Operator cost/hour:

Unit Subtotals:

Number of Units:

Group Subtotals:

%Utilization-riper:

Ripper own.

cost/hour:

Initial volume:	17,500	CCY	Swell factor:	1.125		
Loose volume:	19,688	LCY				
		1				
Source	Source of estimated volume:		Division of Reclamation, Mining & Safety			
Source of	estimated swell factor:	Operato	r Estimate			
N	Naterial Purchase Cost:	\$0.00				
	Total Cost:	\$0.00				

HOURLY PRODUCTION

Material weight:	1	Pounds/LCY	
Description:	User Provided		
Rated Payload:	35,400	Pounds	
Payload Capacity:	35,400.00	LCY	

Struck Volume:	10.00	LCY
Heaped Volume:	12.00	LCY
Average Volume:	11.00	LCY
Adjusted Volume:	12.00	LCY
Final Truck Volume		LCY
Based on Number of	9.46	
Loader Passes:		

Loading Tool Capacity

Bucke	t Size Class:	NA	

Rated Capacity:	4.300	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	4.730	LCY

Job Condition Corrections:

Site Altitude (ft.): 7500 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	

Number of Loading Tool Passes Required to Fill	r	passes
Truck:	Z	

Loading Tool Cycle Time:

Excavators and Front Shovels:

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

Track Loaders – Material Description:

Load:	NA	Maneuver:	NA		Dump:	0.100			
Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes									
Cycle	e Time Factors				Factor	(min.)	Sou	irce	
	Material:	Material 3/4" to 6" di	iameter 0.00		0.0	00	(Cat	HB)	
	Stockpile:	Conveyor or dozer pil	ed 10 ft. high or	less 0.01	0.010 (Cat		HB)		
Truck Ownership:		Common ownership o 0.04	of trucks and loa	ders -	-0.0	40	(Cat	HB)	
	Operation:	Constant operation -0	0.04		-0.0	40	(Cat	HB)	
	Dump Target:	Nominal target 0.00			0.0	00	(Cat	HB)	
		Ne	et Cycle Time Ad	justment:	-0.0	70	min	utes	

Adjusted Loader Cycle Time:	0.430	minutes
Net Load Time per Truck:	0.530	minutes

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	0.530	Minutes	Adjusted for site altitude:	0.530	Minutes
Truck Maneuver and Dump	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes
Time:					

Truck Travel (Haul & Return) Time: maintained 3.0

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

	nau nout	C .									
	Seg #	Haul (Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)	-		
	1	1500	.00	4.00	3.00	7.00	1568	0.989)		
	Return Ro	ute:				Haul Time:	0.989		minutes	S]
	Seg #		Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)	-		
	1	1500	.00	-4.00	3.00	-1.00	2938	0.567	7		
			F			Return Time			minute]
					lotal Ir	uck Cycle Time	3.486		minute	es	
L	oading To Prod	ol unit uction	551.07	LCY/Hour		Adjusted for j	ob efficiency:	4	157.39	L	.CY/Hour
Truck	Unit Prod	uction	162.82	LCY/Hour		Adjusted for j	ob efficiency:	1	135.14	L	.CY/Hour
Optim	al No. of T	rucks:	3	Truck(s)		Selected Num	ber of Trucks:		3	Т	ruck(s)
								-			

Adjusted hourly truck team production:	405.43	LCY/Hour
Adjusted single truck/loader team production:	405.43	LCY/Hour
Adjusted multiple truck/loader team production:	405.43	LCY/Hour

Fleet size:	1	Team(s)	Total job time:	48.56	Hours
Unit cost:	\$2.848	/LCY	Total job cost:	\$56,080	

Site: New Elk Mine	2	Perm	nit Actio	n: Mid Term	08	Permit/Job)# :	C1981012
PROJECT IDENT	FICATION							
Task #: 02	5	State:	Colorad	lo	Abl	previation:	Nor	ne
Date: 8/	5/2021	County:	Las Anir	mas		Filename:	C01	.2-025
User: DO	21							
Agency	or organization nar	ne: DRM	IS					
HOURLY EQUIP	MENT COST				Shift ba	asis: <u>1 per da</u>	<u>y</u>	
			Eq	uipment Descr	iption			
	Truck Loader Tea	am -Truck:	Gene	ric 10-12 cy, 6x	4			
		-Loader:	CAT 9	950H				
Su	oport Equipment -L			9T - 9SU				
		ump Area:		9T - 9SU				
Road	Maintenance – Moto		CAT 1		Cal			
	-vva	ter Truck:	wate	r Tanker, 5,000	Gal.			
Cost Breakdown:	Truck/Loa	der Team		Support	Equipment	Mai	ntena	ance Equipmen
	Truck	Loader		Load Area	Dump Area	Motor Grader		Water Truck
%Utilization-machine	: 100		65	100	100		50	50
Ownership cost/hour	: \$22.87	\$3	8.59	\$126.01	\$126.01	\$85	.80	\$33.45
Operating cost/hour	: \$44.28	\$2	3.76	\$141.41	\$141.41	\$30	.20	\$20.98
%Utilization-riper	: NA		0	NA	NA		NA	NA
Ripper own cost/hour	ΝΔ	\$	0.00	\$0.00	\$0.00	\$0	.00	\$0.00
Ripper op. cost/hour	: NA	\$	0.00	\$0.00	\$0.00	\$0	.00	\$0.00
Operator cost/hour	: \$0.00	\$4	0.71	\$41.30	\$41.30	\$28	.56	\$21.12
Unit Subtotals	: \$67.15	\$10	3.06	\$308.72	\$308.72	\$144	56	\$75.55

Total work team cost/hour: \$1,142.06

3

Work: \$304.51

MATERIAL QUANTITIES

Number of Units:

Group Subtotals:

Initial volume:	400	CCY	Swell factor:	1.000
Loose volume:	400	LCY		
Source	e of estimated volume:	Division	of Reclamation, Mini	ng & Safety
Source of estimated swell factor:		Operator	r Estimate	
N	1aterial Purchase Cost:	\$0.00		
	Total Cost:	\$0.00		

1

1

Support:

\$617.44

1

1

\$220.11

Maint:

1

HOURLY PRODUCTION

Material weight:	2,055	Pounds/LCY	
Description:	User Provided		
Rated Payload:	35,400	Pounds	
Payload Capacity:	17.23	LCY	

Struck Volume:	10.00	LCY
Heaped Volume:	12.00	LCY
Average Volume:	11.00	LCY
Adjusted Volume:	12.00	LCY
Final Truck Volume		LCY
Based on Number of	9.46	
Loader Passes:		

Loading Tool Capacity

Bucke	t Size Class:	NA	

Rated Capacity:	4.300	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	4.730	LCY

Job Condition Corrections:

Site Altitude (ft.): 7500 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	

Number of Loading Tool Passes Required to Fill	r	passes
Truck:	Z	

Loading Tool Cycle Time:

Excavators and Front Shovels:

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

Track Loaders – Material Description:

	_							
Load:	NA	Maneuver:	NA		Dump:	0.100		
Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes								
Cycle	e Time Factors				Factor	(min.)	Sou	rce
	Material:	Material 3/4" to 6" di	Material 3/4" to 6" diameter 0.00			00	(Cat	HB)
	Stockpile:	Conveyor or dozer pil	Conveyor or dozer piled 10 ft. high or less 0.01			0.010		HB)
True	ck Ownership:	Common ownership of trucks and loaders - 0.04			-0.0	40	(Cat	HB)
	Operation:	Constant operation -0.04			-0.0	40	(Cat	HB)
	Dump Target:	Nominal target 0.00			0.00	00	(Cat	HB)
		Ne	et Cycle Time Ad	ustment:	-0.0	70	mini	utes

Adjusted Loader Cycle Time:	0.430	minutes
Net Load Time per Truck:	0.530	minutes

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	0.530	Minutes	Adjusted for site altitude:	0.530	Minutes
Truck Maneuver and Dump	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes
Time:					

Truck Travel (Haul & Return) Time: maintained 3.0

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

nuu nout	с.								
Seg #	Haul [(Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)		
1	3000.	00	4.00	3.00	7.00	1568	1.946	5	
					Haul Time:	1.946		minutes	
Return Ro Seg #		Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)		
1	3000.	00	-4.00	3.00	-1.00	2938	1.064	Ļ	
		[Return Time:	1.064		minute	S
		L		Total Tr	uck Cycle Time:	4.940		minute	S
Loading To Prod	ol unit uction	551.07	LCY/Hour		Adjusted for j	ob efficiency:	4	57.39	LCY/Hor
ick Unit Prod	uction	114.90	LCY/Hour		Adjusted for job efficiency:			95.37	LCY/Ho
imal No. of T	rucks:	5	Truck(s)		Selected Number of Trucks:			3	Truck(s)

Adjusted hourly truck team production:	286.10	LCY/Hour
Adjusted single truck/loader team production:	286.10	LCY/Hour
Adjusted multiple truck/loader team production:	286.10	LCY/Hour

Fleet size:	1	Team(s)	Total job time:	1.40	Hours
Unit cost:	\$3.992	/LCY	Total job cost:	\$1,597	

Site: New Elk Mine		Pern	nit Action:	: Mid Term	08	Permit/Job	#: C198	31012
PROJECT IDENTIF								
Task #: 026		State:	Colorado		۸h	breviation:	None	
		County:	Las Anima			Filename:	C012-026	<u>.</u>
User: DC1		oo an ty t						<u>-</u>
Agency o	r organization nar	ne: DRM	٨S					
HOURLY EQUIPM					Shift ba	asis: <u>1 per da</u>	Ý	
			Eau	ipment Descr	iption			
	Truck Loader Tea	m -Truck:		c 8-10 cy, 6x4				
		-Loader:		5D L 10'-6" St	ick			
Sup	oort Equipment -L	oad Area:	NA					
	-Dı	ump Area:	Cat D9	T - 9SU				
Road M	aintenance – Moto	or Grader:	CAT 14					
	-Wa	ter Truck:	Water [•]	Tanker, 5,000	Gal.			
Cost Breakdown:	Truck/Loa	der Team		Support	Equipment	Maii	ntenance E	Equipment
	Truck	Excavato	or Lo	oad Area	Dump Area	Motor Grader		ter Truck
%Utilization-machine:	100		75	NA	100		50	50
Ownership cost/hour:	\$18.14	\$8	33.42	NA	\$126.01	\$85	.80	\$33.45
Operating cost/hour:	\$35.95	\$5	55.61	NA	\$141.41	\$30	.20	\$20.98
%Utilization-riper:	NA		0	NA	NA		NA	NA
Ripper own. cost/hour:	NA	Ś	\$0.00	NA	\$0.00	\$0.	.00	\$0.00
Ripper op. cost/hour:	NA	¢,	\$0.00	NA	\$0.00	\$0,	.00	\$0.00
Operator cost/hour:	\$0.00	\$3	37.32	NA	\$41.30	\$28	.56	\$21.12
Unit Subtotals:	\$54.09	\$17	76.34	NA	\$308.72	\$144	56	\$75.55

Total work team cost/hour: \$867.44

3

Work: \$338.61

MATERIAL QUANTITIES

Number of Units:

Group Subtotals:

Initial volume:	19,095	CCY	Swell factor:	1.000			
Loose volume:	19,095	LCY					
Source	Source of estimated volume:		Division of Reclamation, Mining & Safety				
Source of e	estimated swell factor:	Cat Hand	lbook				
N	1aterial Purchase Cost:	\$0.00					
	Total Cost:	\$0.00					

1

0

\$308.72

Support:

1

1

\$220.11

Maint:

1

HOURLY PRODUCTION

Material weight:	2,700	Pounds/LCY	
Description:	Earth - Wet excavated		
Rated Payload:	27,280	Pounds	
Payload Capacity:	10.10	LCY	

Struck Volume:	8.00	LCY
Heaped Volume:	10.00	LCY
Average Volume:	9.00	LCY
Adjusted Volume:	10.00	LCY
Final Truck Volume		LCY
Based on Number of	8.81	
Loader Passes:		

Loading Tool Capacity

Bucket Size Class:	Medium
--------------------	--------

Rated Capacity:	2.260	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - mixed moist aggregates (95-100%) 0.975
Adjusted Capacity:	2.204	LCY

Job Condition Corrections:

Site Altitude (ft.): 7500 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	

Number of Loading Tool Passes Required to Fill	4	passes
Truck:	4	

Loading Tool Cycle Time:

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating:	BELOW AVERAGE
Selected Value within this Basic Rating:	SEVERE

Track Loaders – Material Description:

Load:	NA	Maneuver:	NA		Dump:	0.100		
Wheel and ⁻	Track Loaders -	Unadjusted Basic Loade	er Cycle Time (loa	ad, dump, n	naneuver):	1	NA	minutes
Cycle	e Time Factors				Factor	(min.)	Sou	rce
	Material:	NA			N/	4	(Cat	HB)
	Stockpile:	NA		NA		(Cat HB)		
Tru	ck Ownership: NA NA		NA		4	(Cat	HB)	
	Operation:	NA			N/	4	(Cat	HB)
	Dump Target:	NA			N/	4	(Cat	HB)
		Ne	et Cycle Time Ad	justment:	N	4	minu	utes
		Ad	justed Loader Cy	cle Time:	0.3	90	minu	utes

Net Load Time per Truck: 1.270 mi

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	1.270	Minutes	Adjusted for site altitude:	1.270	Minutes
Truck Maneuver and Dump Time:	0.80	Minutes	Adjusted for site altitude:	0.800	Minutes

Truck Travel (Haul & Return) Time: penetration 4.0 Road Condition: Rutted dirt, little maintenance, no water, 1" tire

Seg #	Haul D (Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)	1	
1	5000.0	00	5.00	4.00	9.00	1249	4.024		
Return Ro	ute [.]				Haul Time:	4.024		minutes	
Seg #		Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Trave Time (min)	Ι	
1	5000.0	00	-5.00	4.00	-1.00	2938	1.754		
		Γ			Return Time:	1.754	[minutes	
				Total Tr	uck Cycle Time:	8.348		minutes	
Loading Too Produ	ol unit uction	298.78	LCY/Hour		Adjusted for j	ob efficiency:	24	47.99	LCY/Hour
ruck Unit Produ	uction	63.35	LCY/Hour		Adjusted for j	ob efficiency:	5	52.58	LCY/Hour
ptimal No. of T	rucks:	5	Truck(s)		Selected Num	per of Trucks:		3	Truck(s)

Adjusted multiple truck/loader team production:		LCY/Hour
Adjusted single truck/loader team production:	157.74	LCY/Hour
Adjusted hourly truck team production:	157.74	LCY/Hour

Fleet size:	1	Team(s)	Total job time:	121.05	Hours
Unit cost:	\$5.499	/LCY	Total job cost:	\$105,007	

	Task description:	Replace Topsoil on NW vent Fan Area (TR72)							
Site	New Elk Mine	Perm	it Action:	Mid Term 08	Permit/Job	o#: C1981012			
	PROJECT IDENTIFICATIO	N							

Task #: 027 State: Colorado Abbreviation: None 8/5/2021 Las Animas Filename: Date: County: C012-027 User: DC1 Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: <u>1 per day</u>

	Equipment Description
Truck Loader Team -Truck:	Generic 8-10 cy, 6x4
-Loader:	CAT 928Hz
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance – Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Maintena	ance Equipment
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	45	NA	100	NA	NA
Ownership cost/hour:	\$18.14	\$30.09	NA	\$97.46	NA	NA
Operating cost/hour:	\$35.95	\$13.44	NA	\$97.63	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Operator cost/hour:	\$0.00	\$40.71	NA	\$41.30	NA	NA
Unit Subtotals:	\$54.09	\$84.24	NA	\$236.39	NA	NA
Number of Units:	1	1	0	1	0	0
Group Subtotals:	Work:	\$138.33	Support:	\$236.39	Maint:	\$0.00

Total work team cost/hour: \$374.72

MATERIAL QUANTITIES

Initial volume:	694	CCY	Swell factor:	1.215	
Loose volume:	843	LCY			
Source	e of estimated volume:	Division	of Reclamation, Mini	ng & Safety	
Source of estimated swell factor:		Cat Hand	lbook		
Material Purchase Cost:		\$0.00			
	Total Cost:	\$0.00			

HOURLY PRODUCTION

Material weight:	1,600	Pounds/LCY
Description:	Top Soil	
Rated Payload:	27,280	Pounds
Payload Capacity:	17.05	LCY

Struck Volume:	8.00	LCY
Heaped Volume:	10.00	LCY
Average Volume:	9.00	LCY
Adjusted Volume:	10.00	LCY
Final Truck Volume Based		LCY
on Number of Loader	9.90	
Passes:		

Loading Tool Capacity

Bucket Size Class:	NA
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Rated Capacity:	3.000	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	3.300	LCY

Job Condition Corrections:

Site Altitude (ft.): 7350 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				
Number of Loading Tool Passes Required to Fill Truck: 3 passes						

Loading Tool Cycle Time:

Excavators and Front Shovels:

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

Track Loaders – Material Description:

Load:	NA	Maneuver:	NA		Dump:	0.100		
	Wheel and Track	Loaders - Unadjusted Basic	Loader Cycle Time	(load, dump,	maneuver)	: C).475	minutes
Cy	cle Time Factors				Factor	(min.)	Sou	rce
	Material:	Mixed material 0.02			0.0	20	(Cat	HB)
	Stockpile:	Dumped by truck 0.02			0.02	20	(Cat	HB)
Т	ruck Ownership:	Common ownership of t	rucks and loaders -	0.04	-0.0	40	(Cat	HB)
	Operation:	Constant operation -0.04	ļ		-0.0	40	(Cat	HB)
	Dump Target:	Nominal target 0.00			0.0	00	(Cat	HB)
			Net Cycle Time A	djustment:	-0.0	40	minu	ites
			Adjusted Loader	Cycle Time:	0.4	35	minu	ites
			Net Load Time	e per Truck:	0.9	70	minu	ites

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	0.970	Minutes	Adjusted for site altitude:	0.970	Minutes
Truck Maneuver and Dump Time:	0.80	Minutes	Adjusted for site altitude:	0.800	Minutes

Truck Travel (Haul & Return) Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res	Velocity	Travel Time
				(%)	(fpm)	(min)
1	500.00	8.00	5.00	13.00	834	0.607
2	250.00	6.00	5.00	11.00	1018	0.247
		_				
			На	ul Time:	0.854	minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	250.00	-6.00	5.00	-1.00	2938	0.127
2	500.00	-8.00	5.00	-3.00	2938	0.228

Return Time:	0.355	minutes
Total Truck Cycle Time:	3.479	minutes

Loading Tool unit Production	404.08	LCY/Hour	Adjusted for job efficiency:	335.39	LCY/Hour
Truck Unit Production	170.74	LCY/Hour	Adjusted for job efficiency:	141.71	LCY/Hour
Optimal No. of Trucks:	2	Truck(s)	Selected Number of Trucks:	1	Truck(s)

Adjusted hourly truck team production:	141.71	LCY/Hour
Adjusted single truck/loader team production:	141.71	LCY/Hour
Adjusted multiple truck/loader team production:	141.71	LCY/Hour

Fleet size:	1	Team(s)	Total job time:	5.95	Hours
Unit cost:	\$2.644	/LCY	Total job cost:	\$2,230	

DEMOLITION WORK

Task description:	Demolish and Remove All Structures						
Site: New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012			

PROJECT IDENTIFICATION

Task #:	028	State:	Colorado	Abbreviation:	None						
Date:	8/5/2021	County:	Las Animas	Filename:	C012-028						
User:	DC1										
	Agency or organization name: DRMS										

UNIT COSTS

Location adjustment: 94.00 %

Structure or Item		Demolition Menu				
Description	Dimensions	Selection	Quantity	Unit	Unit Cost	Total Cost
Pump House at North River Stockpile	25'X20'X10'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	5,000.00	CF	\$0.22	\$1,075.00
-Pad	25'X20'X6'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	250.00	SF	\$1.00	\$250.25
-Footers	1'X2'X88	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft Max. 10,000 ft. haul	88.00	LF	\$4.00	\$352.00
East Portal Fan	30'X14'X10'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	4,200.00	CF	\$0.22	\$903.00
-Pad	20'X10'X12"	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	200.00	SF	\$2.00	\$400.40
-Steel Duct Work	18'X18'X10'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	3,240.00	CF	\$0.22	\$696.60
-Fan and Related Structures	10,000lbs	USER PROVIDED ITEM	10,000.00	LBS	\$0.25	\$2,500.00
Oil House	33'X32'X16'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	16,896.00	CF	\$0.22	\$3,632.64
-Pad	33'X32'X4"	Demo. and on-site disposal in existing pit, 4 in. thick - Max. 10,000 ft. haul	1,056.00	SF	\$0.67	\$704.35
Hoist House	54'X42'X24'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	54,432.00	CF	\$0.22	\$11,702.88
-Pad	51'X42'X24"	Pavement, concrete, demolition only, 7 in.	159.00	CY	\$133.50	\$21,226.50

		to 24 in. thick - Reinforced				
-Hoist Unit and Controls	18,000lbs	USER PROVIDED ITEM	18,000.00	LBS	\$0.25	\$4,500.00
Hoist House 2	20'X40'X20'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	16,000.00	CF	\$0.22	\$3,440.00
-Sheave	30 Tons	USER PROVIDED ITEM	30.00	TON	\$24.34	\$730.20
-Pad	50'X30'X5.4"	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	300.00	CY	\$133.50	\$40,050.00
Industrial Building - Segment 1	246'X50'X23'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	282,900.00	CF	\$0.22	\$60,823.50
Industrial Building - Segment 2	246'X49'X38'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	458,052.00	CF	\$0.22	\$98,481.18
Industrial Building - Segment 3	246'X40.5'X21'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	209,223.00	CF	\$0.22	\$44,982.95
-Pad	246'X139.5'X6"	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	34,317.00	SF	\$1.00	\$34,351.32
Transfer Building	42'X22'X31.5'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	29,106.00	CF	\$0.22	\$6,257.79
Breaker Building	65'X45'X65'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	190,125.00	CF	\$0.22	\$40,876.88
-Pad	65'X45'X24"	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	217.00	CY	\$133.50	\$28,969.50
Slope Conveyor Drive House Building	50' x 37.5' x 15'h	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	28,125.00	CF	\$0.22	\$6,159.38
-Drive and Internal Equipment	3,706 CF	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	3,706.00	CF	\$0.22	\$796.79
-Foundation	45'X37'X5'	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	308.00	CY	\$133.50	\$41,118.00
-Slope Belt	1,000'L X 6'w x6'h	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	36,000.00	CF	\$0.30	\$10,800.00
-Transfer Belt	1,000'L x	Conveyor, demolition,	36,000.00	CF	\$0.30	\$10,800.00

	6'wx6'h	on-site disposal, existing pit, 10,000 ft. haul				
-Drive Belt	1000'Lx6'wx6'h	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	36,000.00	CF	\$0.30	\$10,800.00
-Retaining Wall	40'X6'X2'	Wall, concrete, demolition only, average reinforcing - 24 in. thick	240.00	SF	\$4.45	\$1,068.00
Breaker Building Rock Box	14'X24'X10'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	3,360.00	CF	\$0.22	\$722.40
-Pad	20 CY	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	20.00	CY	\$133.50	\$2,670.00
-Retaining Wall	3.5'X12"X80 LF	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	280.00	SF	\$3.77	\$1,055.60
Sewage Plant Building	20'X20'X12'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	4,800.00	CF	\$0.22	\$1,032.00
-Pad	40 CY	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	40.00	СҮ	\$133.50	\$5,340.00
-32,000 Gallon Sludge Tank	32,000 G	Comprehensive storage tank removal, non-leaking - 9,000 to 12,000 gal. tank	1.00	EA	\$7,335.93	\$7,335.93
-Pump Sudge From Tank	32,000 G	Remove sludge, water, and rem. product from tank - 9,000 to 12,000 gal.	1.00	EA	\$397.00	\$397.00
Water Pipe Vaults (fig.2a)	16' x 10' x 8'	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	134.80	СҮ	\$133.50	\$17,995.80
-400,000 Gallon Water Tank	20'X43' Diameter	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	29,029.00	CF	\$0.22	\$6,241.24
-Pad	2'X44'	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	113.00	CY	\$133.50	\$15,085.50
-25,000 Gallon Water Tank	21'X11' Diameter	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	1,995.00	CF	\$0.22	\$428.93
-Pad	2'X12'	Pavement, concrete, demolition only, 7 in. to 24 in. thick -	8.00	CY	\$133.50	\$1,068.00

		Reinforced				
Water Tank	21.5'X24'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	8,714.00	CF	\$0.22	\$1,873.51
-Footers	67.5 LF (5)	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft Max. 10,000 ft. haul	338.00	LF	\$4.00	\$1,352.00
Emergency Escape Hoist	20'X20'X20'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	8,000.00	CF	\$0.22	\$1,720.00
Prep Plant	78'X65'X82'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	415,740.00	CF	\$0.22	\$89,384.10
-Pad	78'X65'X24"	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	376.00	СҮ	\$133.50	\$50,196.00
-Footers	2'X3'	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul	283.00	LF	\$12.01	\$3,398.83
Thickener Tank	100'DX12'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	3,770.00	SF	\$2.00	\$7,547.54
-Pad	100'DX12"	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	290.80	СҮ	\$133.50	\$38,821.80
Coal Silos (2)	70'X183'X3' (Each)	Explosive demolition, large projects - Concrete structures	1,408,600.00	CF	\$0.32	\$450,752.00
-Pad (2)	70'X24" (Each)	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	570.00	СҮ	\$133.50	\$76,095.00
-Footers	2'X3'X220 LF	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul	440.00	LF	\$12.01	\$5,284.40
River Crossing Bridge (metal foot bridge)	30' x 4'w x 3'h	Bridge Demolition - Steel	120.00	SF	\$9.57	\$1,148.40
Slope Rail Track	1,325 LF	Railroad track - Ties and track	1,325.00	LF	\$9.98	\$13,223.50
-Fencing	500 LF	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	500.00	LF	\$3.08	\$1,540.00
-Retaining Wall	3.5'X12"X150LF	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	525.00	SF	\$3.77	\$1,979.25
Rock Dust Bin	5,000 CF	Bldg. (SN) demo./on-	5,000.00	CF	\$0.22	\$1,075.00

		site disposal in existing pit or cut - Max.				
		10,000 ft. haul				
-Pad	12'X12'X1'th	Pavement, concrete,	5.33	CY	\$133.50	\$711.56
		demolition only, 7 in.				
		to 24 in. thick -				
		Reinforced				
-Compressor	20'X20'X10'	Bldg. (SN) demo./on-	4,000.00	CF	\$0.22	\$860.00
Building		site disposal in existing				
		pit or cut - Max. 10,000 ft. haul				
-Equipment	20'X20'X10'	Bldg. (SN) demo./on-	2,000.00	CF	\$0.22	\$430.00
Removal	20 720 710	site disposal in existing	2,000.00	Ci	JU.22	3430.00
ile illoval		pit or cut - Max.				
		10,000 ft. haul				
-Pad	20'X20'X2'	Pavement, concrete,	27.00	CY	\$133.50	\$3,604.50
		demolition only, 7 in.				. ,
		to 24 in. thick -				
		Reinforced				
Refuse Substation	32'X17.5'X6'	Bldg. (SN) demo./on-	3,360.00	CF	\$0.22	\$722.40
		site disposal in existing				
		pit or cut - Max.				
_		10,000 ft. haul				
-Remove	NA	NON-PCB Transformer	1.00	EA	\$2,238.20	\$2,238.20
Transformer		Removal	2 2 5 0 0 0		<u> </u>	6722.40
Plant Substation	32'X17.5'X6'	Bldg. (SN) demo./on-	3,360.00	CF	\$0.22	\$722.40
		site disposal in existing pit or cut - Max.				
		10,000 ft. haul				
-Remove	NA	NON-PCB Transformer	1.00	EA	\$2,238.20	\$2,238.20
Transformer		Removal				
East Portal	32'X17.5'X6'	Bldg. (SN) demo./on-	3,360.00	CF	\$0.22	\$722.40
Substation		site disposal in existing				
		pit or cut - Max.				
		10,000 ft. haul				
-Remove	NA	NON-PCB Transformer	1.00	EA	\$2,238.20	\$2,238.20
Transformer		Removal			40.00	
Thickener	15'DX12'	Bldg. (SN) demo./on-	2,120.00	CF	\$0.22	\$455.80
Substation		site disposal in existing				
		pit or cut - Max. 10,000 ft. haul				
-Pad	15'DX12"	Demo. and on-site	176.70	SF	\$2.00	\$353.75
	10 5/12	disposal in existing pit,	1, 5., 6		<i></i>	<i>4656.75</i>
		12 in. thick - Max.				
		10,000 ft. haul				
-Remove	NA	NON-PCB Transformer	1.00	EA	\$2,238.20	\$2,238.20
Transformer		Removal				
Electric House	9'X9'X10'	Bldg. (SN) demo./on-	810.00	CF	\$0.22	\$174.15
		site disposal in existing				
		pit or cut - Max.				
		10,000 ft. haul				
-Concrete Portion	7'X7'X5'	Bldg. (SC) demo./on-	245.00	CF	\$0.26	\$62.48
		site disposal in existing				
		pit or cut - Max. 10,000 ft. haul				
Electric Power	96 CY	USER PROVIDED ITEM	96.00	СҮ	\$24.34	\$2,336.64
Upgrade Equip.	50 CT		30.00		γ2 4 .34	04-70،20
opping runt			1			

Bates Portal Access Rd Retaining Walls	12"X8'X 285LF	Demo. and on-site disposal in existing pit, 12 in. thick - Max.	285.00	SF	\$3.77	\$1,074.45
-Footer	6'X12"	10,000 ft. haul Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 200 ft. push	285.00	LF	\$12.64	\$3,602.40
Bates Portal Ditch 26 Retaining Wall	50 CY	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	50.00	СҮ	\$133.50	\$6,675.00
Bates Portal Conveyor Drive Bldg.	24'X42'X30'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	30,240.00	CF	\$0.22	\$6,501.60
-Pad	24'X42'X2'	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	74.00	CY	\$133.50	\$9,879.00
Bates Portal Conveyor Transfer Bldg.	18'X18'X30'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	9,720.00	CF	\$0.22	\$2,089.80
-Pad	18'X18'X2'	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	24.00	CY	\$133.50	\$3,204.00
Bates Portal Vent Fan	20'X20'X14'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	1,520.00	CF	\$0.22	\$326.80
-Concrete Portion	20'X10'X6"	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	200.00	SF	\$1.00	\$200.20
-Fan Removal	5,000 lbs	USER PROVIDED ITEM	5,000.00	LBS	\$0.25	\$1,250.00
-Fan Motor	5,000 lbs	USER PROVIDED ITEM	5,000.00	LBS	\$0.25	\$1,250.00
West Portal Fan	20'X20'X14'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	1,520.00	CF	\$0.22	\$326.80
-Concrete Portion	22.4'X22.4'X6"	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	501.00	SF	\$1.00	\$501.50
-Fan Removal	3,500 lbs	USER PROVIDED ITEM	3,500.00	LBS	\$0.25	\$875.00
-Fan Motor	4,000 lbs	USER PROVIDED ITEM	4,000.00	LBS	\$0.25	\$1,000.00
West Portal Fan Transformer	8,000 lbs	NON-PCB Transformer Removal	1.00	EA	\$2,238.20	\$2,238.20
- Pad	15'X12'X1'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	180.00	SF	\$2.00	\$360.36
Acid Tank	10'DX12'	Comprehensive storage tank removal, non-leaking - 6,000 to 8,000 gal. tank	1.00	EA	\$5,283.95	\$5,283.95

Fuel Containment Sumps (2)	17'X10'X3'X8"	Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul	1,004.00	SF	\$1.33	\$1,339.34
-Petroleum Contaminated Soil Removal	10 cy	Dispose of contaminated soil at approved landfill - Minimum	10.00	СҮ	\$145.00	\$1,450.00
Antifreeze Tank Sump	39'X11'X4'X8"	Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul	829.00	SF	\$1.33	\$1,105.89
Stacking Tube - Raw Coal	9'DX59'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	3,753.00	CF	\$0.22	\$806.90
Water Pumphouse Tank	20'DX15'X8"	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	950.00	CF	\$0.22	\$204.25
Scale House	6'X4'X8'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	192.00	CF	\$0.22	\$41.28
-Scale	12'X30'X4'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	360.00	SF	\$2.00	\$720.72
Powerline Removal	19580 LF	Disposal of utility pole cross arms and hardware surplus material	19,580.00	LF	\$0.01	\$195.80
Sewage Treatment Tank - Buried	8.5'X5.5'X96'	Comprehensive storage tank removal, non-leaking - 9,000 to 12,000 gal. tank	1.00	EA	\$7,335.93	\$7,335.93
Slope Belt Conveyor	75 LF X 8'	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	1.22	EA	\$3,125.00	\$3,812.50
Transfer Belt Conveyor	8'X85 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	1.38	EA	\$3,125.00	\$4,312.50
Tube Belt Conveyor	8'X582 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	9.50	EA	\$3,125.00	\$29,687.50
Raw Coal to Transfer Bldg	6'X374 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	6.00	EA	\$3,125.00	\$18,750.00
Raw Coal Reclaim to Prep Plant	6'X296 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	4.80	EA	\$3,125.00	\$15,000.00
Clean Coal Reclaim to Transfer Bldg.	6'X497 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	8.00	EA	\$3,125.00	\$25,000.00
Clean Coal from Prep Plant	6'X230 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	3.74	EA	\$3,125.00	\$11,687.50
Refuse Belt-	6'X1,050 LF	Conveyor, Horizontal	17.00	EA	\$3,125.00	\$53,125.00

Overland		Belt 24" Belt, 61.5' Length				
Refuse Belt - Elevated	6'X406 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	6.60	EA	\$3,125.00	\$20,625.00
Truck Dump	6'X170 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	1.10	EA	\$3,125.00	\$3,437.50
Silo Loadout	8'X200 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	3.25	EA	\$3,125.00	\$10,156.25
Transfer to Loadout	8'X114 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	1.85	EA	\$3,125.00	\$5,781.25
Raw Coal Reclaim Tunnel	12'D CMP*253'	Pipe, corrugated metal (CMP) - 144 in. diameter pipe	253.00	LF	\$79.57	\$20,130.70
Clean Coal Reclaim Tunnel	12'D CMP*275'	Pipe, corrugated metal (CMP) - 144 in. diameter pipe	275.00	LF	\$79.57	\$21,881.20
Culvert #1	21"	Pipe, corrugated metal (CMP) - 21 in. diameter pipe	25.00	LF	\$6.39	\$159.80
Culvert #5	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	38.00	LF	\$4.10	\$155.69
Culvert #6	60"	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	17.00	LF	\$22.20	\$377.33
Culvert #7	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	75.00	LF	\$4.10	\$307.28
Culvert #11	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	75.00	LF	\$4.10	\$307.28
Culvert #12	21"	Pipe, corrugated metal (CMP) - 21 in. diameter pipe	775.00	LF	\$6.39	\$4,953.80
Culvert #13	21"	Pipe, corrugated metal (CMP) - 21 in. diameter pipe	50.00	LF	\$6.39	\$319.60
Culvert #17	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	69.00	LF	\$11.32	\$780.94
Culvert #19	33"	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	38.00	LF	\$9.35	\$355.30
Culvert #21	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	50.00	LF	\$11.32	\$565.90
Culvert #22	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	19.00	LF	\$4.10	\$77.84
Culvert #24	60"	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	160.00	LF	\$22.20	\$3,551.36
Culvert #25	60"	Pipe, corrugated metal (CMP) - 60 in.	140.00	LF	\$22.20	\$3,107.44

		diameter pipe				
Culvert #26	42"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	13.00	LF	\$11.32	\$147.13
Culvert #28	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	31.00	LF	\$4.10	\$127.01
Culvert #29	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	38.00	LF	\$4.10	\$155.69
Culvert #31	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	50.00	LF	\$5.57	\$278.70
Culvert #32	33"	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	44.00	LF	\$9.35	\$411.40
Culvert #33	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	125.00	LF	\$4.10	\$512.13
Culvert #34	15"	Pipe, corrugated metal (CMP) - 15 in. diameter pipe	31.00	LF	\$4.81	\$149.20
Culvert #35	6"	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	19.00	LF	\$3.12	\$59.34
Culvert #36	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	31.00	LF	\$4.10	\$127.01
Culvert #37	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	50.00	LF	\$11.32	\$565.90
Culvert #41	48"	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	19.00	LF	\$16.51	\$313.69
Culvert #46	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	19.00	LF	\$4.10	\$77.84
Culvert #47	15"	Pipe, corrugated metal (CMP) - 15 in. diameter pipe	13.00	LF	\$4.81	\$62.57
Culvert #48	42"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	313.00	LF	\$11.32	\$3,542.53
Culvert #50	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	25.00	LF	\$5.57	\$139.35
Culvert #52	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	50.00	LF	\$11.32	\$565.90
Culvert #53	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	60.00	LF	\$7.25	\$435.24
Culvert #54	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	50.00	LF	\$11.32	\$565.90
Culvert #55	8"	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	25.00	LF	\$3.12	\$78.08

Culvert #59	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	28.00	LF	\$5.57	\$156.07
Culvert #60	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	31.00	LF	\$7.25	\$224.87
Culvert #61 8"		Pipe, corrugated metal (CMP) - 8 in. diameter pipe	25.00	LF	\$3.12	\$78.08
Culvert #62	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	13.00	LF	\$4.10	\$53.26
Culvert #64	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	50.00	LF	\$7.25	\$362.70
Culvert #65	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	19.00	LF	\$4.10	\$77.84
Culvert #66	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	18.00	LF	\$5.57	\$100.33
Culvert #67	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	22.00	LF	\$5.57	\$122.63
Culvert #68	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	48.00	LF	\$5.57	\$267.55
Culvert #69	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	80.00	LF	\$5.57	\$445.92
Bates Portal Conveyor to Breaker Bldg.	8'X970 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	15.80	EA	\$3,125.00	\$49,375.00
Jansen Loadout Truck Scale	15'X40'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	600.00	SF	\$2.00	\$1,201.20
Jansen Coal Conveyor	2,740 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	44.50	EA	\$3,125.00	\$139,062.50
-Footers	45cy	Pavement, concrete, demolition only, 7 in. to 24 in. thick - Reinforced	45.00	СҮ	\$133.50	\$6,007.50
-Transfer Points	10'X10'X10' (3)	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	3,000.00	CF	\$0.22	\$657.00
-Footers	3'X2'	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul	120.00	LF	\$12.01	\$1,441.20
Jansen Loadout Bin	38'X35'X40'	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	53,200.00	CF	\$0.22	\$11,650.80
Jansen Feed Hopper	20'X15'X16'	Bldg. (MN) demo./on- site disposal in existing	4,920.00	CF	\$0.22	\$1,077.48

		pit or cut - Max. 10,000 ft. haul				
Two Radial stackers @ RDA (p. 2.05-27)	2(150' I)	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	4.90	EA	\$3,125.00	\$15,312.50
RDA portable belt (p. 2.05-27)	500'Lx6'x8'	Conveyor, demolition, off-site disposal in approved landfill, 30 mile haul	24,000.00	CF	\$0.73	\$17,520.00
remove piping @ slurry wells	50 ft.	Pipe, steel, welded connections - 10 in. diameter pipe	50.00	LF	\$6.73	\$336.50
remove HPDE slurry line (MR 104)	9000 ft. l	Pipe, steel, welded connections - 10 in. diameter pipe	9,000.00	LF	\$6.73	\$60,570.00
Culvert #C75	42"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	60.00	LF	\$11.32	\$679.08
Culvert #C76	42"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	40.00	LF	\$11.32	\$452.72
Culvert #C14A	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	70.00	LF	\$11.32	\$792.26
Culvert #C70	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	68.00	LF	\$5.57	\$379.03
Culvert #C71	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	54.00	LF	\$5.57	\$301.00
Culvert #C72	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	120.00	LF	\$7.25	\$870.48
Culvert #C73	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	190.00	LF	\$7.25	\$1,378.26
Culvert #C74	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	40.00	LF	\$7.25	\$290.16
Culvert #C16A	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	45.00	LF	\$7.25	\$326.43
Culvert #C16B	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	220.00	LF	\$7.25	\$1,595.88
Culvert #C12A	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	160.00	LF	\$11.32	\$1,810.88
Culvert #C17A	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	20.00	LF	\$11.32	\$226.36
Culvert #C17B	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	75.00	LF	\$11.32	\$848.85
Culvert #C28	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	46.00	LF	\$7.25	\$333.68
Culvert #C28A	24"	Pipe, corrugated metal	60.00	LF	\$7.25	\$435.24

		(CMP) - 24 in.				
Culvert #C29	24"	diameter pipe Pipe, corrugated metal (CMP) - 24 in.	34.00	LF	\$7.25	\$246.64
Bathhouse (TR61)	62'l x 21w' x 12'h	diameter pipe Bldg. (SN) demo./on- site disposal in existing pit or cut - Max.	15,624.00	CF	\$0.22	\$3,359.16
-bathhouse pad (TR61)	62/lx 21'w x 0.5'th	10,000 ft. haul Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	1,302.00	SF	\$1.00	\$1,303.30
Belt feeder (MR101)	35' x 12' x6'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	2,520.00	CF	\$0.22	\$541.80
36" Belt (MR101)	36" x 500 lf	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	8.10	EA	\$3,125.00	\$25,312.50
Elevating belt (MR101)	36" x 100 lf	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	1.62	EA	\$3,125.00	\$5,062.50
Office shop (MR105)	100'l x 50'w x 18'h	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	90,000.00	CF	\$0.22	\$19,710.00
-Office shop floor (MR105)	100'l x 50'w x 0.5'th	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	5,000.00	SF	\$1.00	\$5,005.00
Pump house (MR105)	12'x 12'x 10'h	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	1,440.00	CF	\$0.22	\$309.60
-pump house floor	12'x12'x 0.5'th	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	144.00	SF	\$1.00	\$144.14
Radial stacker pads (MR97)	3'x 3'x 1'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 200 ft. push	9.00	SF	\$2.02	\$18.14
200 foot conveyor extension (MR97)	200 lf	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	3.25	EA	\$3,125.00	\$10,156.25
Conveyor tube (MR97)	80'l x 10' dia	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	6,282.00	CF	\$0.22	\$1,350.63
Disposal of Powerline crossarms, cable, et.al.	19580 LF	Disposal of utility pole cross arms and hardware surplus material	19,580.00	LF	\$0.01	\$195.80
Fan and Duct (MR113)	(50'x12'x12')2	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	14,400.00	CF	\$0.22	\$3,153.60

8 Footers (MR113)	14'x 2'x6'	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul	112.00	LF	\$12.01	\$1,345.12
42" temp belt conveyor (MR113)	115'x3.5'x6'	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	1.87	EA	\$3,125.00	\$5,843.75
42" Silo #1 conveyor (MR113)	165'x3.5'x3'	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	2.68	EA	\$3,125.00	\$8,375.00
42" Silo #2 conveyor (MR113)	56'x3.5'x3'	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	0.91	EA	\$3,125.00	\$2,843.75
Retaining Wall North Elev. (MR113)	12"th. x 790'L	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	790.00	SF	\$3.77	\$2,978.30
Retaining Wall East Elev. (MR113)	12"thx 360'L	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	360.00	SF	\$3.77	\$1,357.20
footer (MR113)	12"x?	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul	110.00	LF	\$12.01	\$1,321.10
Truck Loadout (MR113)	9'x18'x22'	Bldg. (SN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	3,564.00	CF	\$0.22	\$766.26
4 footers (MR113)	2'x4'x4'	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul	16.00	LF	\$12.01	\$192.16
Silo Belt Transfer structure (MR113)	25'x 15'x 22' (MR113)	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	8,250.00	CF	\$0.22	\$1,806.75
4 footers (MR113)	2'x 4' x4' (MR113)	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul	16.00	LF	\$12.01	\$192.16
35 Ton Coal Blending Bins (MR113)	30'x 12'x 22'	Bldg. (MN) demo./on- site disposal in existing pit or cut - Max. 10,000 ft. haul	7,920.00	CF	\$0.22	\$1,734.48
6 Footers (MR113)	2'x 4'x 4'	Demo. and on-site disposal in existing pit, 2.0 ft. x 3 ft Max. 10,000 ft. haul	24.00	LF	\$12.01	\$288.24
Culvert C23	30" X 50'L	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	50.00	LF	\$9.35	\$467.50
Culvert C82	30" X 25'L	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	25.00	LF	\$9.35	\$233.75
Culvert C83	18" x 20'L	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	20.00	LF	\$5.57	\$111.48

Culvert C84	18" X20'L	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	20.00	LF	\$5.57	\$111.48
Culvert C85	36" X 65'L	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	65.00	LF	\$11.32	\$735.67
Power Pole Removal	2' x 40'	Utility Poles, Wood 35' - 45' high (each pole)	78.00	EA	\$292.00	\$22,776.00

ſ					Total Cost	
			Subtotal		(adjusted for	
	Job Hours:	1,009.00	(unadjusted):	\$2,086,052.41	location):	\$1,960,889.27

DEMOLITION WORK

	Task description:	Demolish a	Demolish and Remove Structures @ C&W area						
Site:	New Elk Mine		Permit Action:	Mid Term 08	Permit/Job#:	C1981012			
Site:	New Elk Mine		Permit Action:	Mid Term 08	Permit/Job#:	C1981012			

PROJECT IDENTIFICATION

Task #:	029	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-029
User:	DC1				
	Agency or organiz	ation name:	DRMS		

UNIT COSTS

Location adjustment: 94.00 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
C&W Train Shop	110 X 70 X 30	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	231,000.00	CF	\$0.22	\$49,665.00
C&W Train Shop Office	70 X 24 X 12	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	20,160.00	CF	\$0.22	\$4,334.40
C&W Train Shop Slab	134 X 70	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	9,380.00	SF	\$1.00	\$9,389.38
10 Stall Garage	100 X 24 X 20Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul48,000.00		CF	\$0.22	\$10,320.00	
10 Stall Garage Slab	100 X 24	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	2,400.00	SF	\$1.00	\$2,402.40
10 Stall Garage Apron	100 X 10	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	1,000.00	SF	\$1.00	\$1,001.00
Train Sand Loading Building	30 X 16 X 20	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	9,600.00	CF	\$0.22	\$2,064.00
Train Sand Loading Slab	30 X 16	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	480.00	SF	\$1.00	\$480.48
Train Sand Loading Apron	35 X 5.7	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	200.00	SF	\$1.00	\$200.20
Car Department Office	40 X 15 X 12	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	7,200.00	CF	\$0.22	\$1,548.00

Car Dept. Office Slab	56 X 20	Demo. and on-site	1,120.00	SF	\$1.00	\$1,121.12
		disposal in existing pit, 6				
		in. thick - Max. 10,000				
		ft. haul				
Car Dept. Office	50 X 3.5	Demo. and on-site	175.00	SF	\$1.00	\$175.18
Sidewalk		disposal in existing pit, 6				
		in. thick - Max. 10,000				
		ft. haul				
Fire Hose Building	8 X 8 X 8	Bldg. (SN) demo./on-site	512.00	CF	\$0.22	\$110.08
		disposal in existing pit				
		or cut - Max. 10,000 ft.				
		haul				
Fire Hose Building	8 X 8	Demo. and on-site	64.00	SF	\$1.00	\$64.06
Slab		disposal in existing pit, 6				
		in. thick - Max. 10,000				
		ft. haul				
Fire Hose Propane	16 X 3	Bldg. (SN) demo./on-site	144.00	CF	\$0.22	\$30.96
Tank		disposal in existing pit				
		or cut - Max. 10,000 ft.				
		haul				

Γ					Total Cost	
			Subtotal		(adjusted for	
	Job Hours:	24.00	(unadjusted):	\$82,906.26	location):	\$77,931.88

BOREHOLE SEALING WORK

	Task description:	Exploration Drilling TR-74			
Site:	New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012

PROJECT IDENTIFICATION

Task #:	030	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-030
User:	DC1				
	Agency or organiz	ation name:	DRMS		

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Total depth for all Drilling	SCHRAMM T450WS	5	3850	51.30	EA	\$606.54	\$31,115.50
Water Truck for all time	Water Tanker, 10,000 Gal.	5	3850	51.30	EA	\$213.81	\$10,968.45
Plug	PVC plug - 6 in. diameter borehole	5	NA	8.00	EA	\$61.43	\$491.44
Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	8.00	EA	\$37.50	\$300.00
Cement	Portland cement grout (Bag, material cost only94 lb. bag)	5	3850	117.00	bag	\$19.95	\$2,334.15
Drill Pad Reclamation	Cat D6T LGP	NA	NA	16.00	EA	\$189.16	\$3,026.56
Road Reclamation	Cat D6T XL	NA	NA	16.00	EA	\$180.59	\$2,889.44

Job Hours: 60.00	Total Cost:	\$51,126.00
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BOREHOLE SEALING WORK

Task description:	cription: Plug and Seal All Boreholes and Monitoring Wells						
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#:	C1981012				

PROJECT IDENTIFICATION

Task #:	031	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-031
User:	DC1				
	Agency or organiz	ation name:	DRMS		

UNIT COSTS

DestrictionDestrictionDestrictionCenturyOffillCostMW1 - MW10 Fill w/CementBag, material cost only94 lb. bag)4"1507.00bag\$19.95\$139.65-PlugPVC plug - 4 in, diameter borehole4"NA10.00EA\$33.98\$339.80-Cut Casings at -Cut Casings at -Cut Casings at -Cut Casing removal -Cut Casing at -Cut Casing atParticle at -Cut Casing at -Cut Casing at -Cut Casing at -Cut Casing atParticle at -Cut Casing at -Cut Ca	Borehole	Sealing/Item Method						
w/CementBag, material cost only94 lb. bag)NA10.00EA\$33.98\$339.80-PlugPVC plug - 4 in. diameter borehole4"NA10.00EA\$33.98\$339.80-Cut Casings at SurfaceExposed casing removal - Calculate Circumference in Linear Feet4"NA4.00LF\$3.26\$13.04-Borehole Marker BoreholeBoreholeNANA10.00EA\$37.50\$375.00-Borehole Marker BoreholeSCHRAMM T450WSNANA10.00EA\$29.70\$594.00-Water Truck WAter Tanker, 2,500NANA20.00EA\$29.70\$594.00TimeGal.Gal.4"137 LF6.00bag\$19.95\$119.70PAW1 - PAW3, PPortland cement grout (diameter borehole4"137 LF6.00EA\$33.98\$203.88-Cut Casings at SurfaceExposed casing removal calculate Circumference in Linear FeetNANA4.00LF\$3.26\$13.04-Cut Casings at SurfaceExposed casing removal calculate Circumference in Linear FeetNANA4.00LF\$3.26\$13.04-Drill Rig TimeSCHRAMM T450WSNANA12.00EA\$29.70\$225.00-Borehole location/identification marker (EA, material cost only)NANA12.00EA\$29.70\$356.40-Borehole location/identification marker (EA, material cost only)NANA<	Description		Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
only94 lb. bag)rrrrrrr-PlugPVC plug - 4 in. diameter borehole4"NA10.00EA\$33.98\$339.80-Calculate Circumference in Linear Feet-Calculate 	MW1 - MW10 Fill	Portland cement grout (4"	150	7.00	bag	\$19.95	\$139.65
-Plug diameter boreholePVC plug - 4 in. diameter borehole4"NA10.00EA\$33.98\$339.80Cut Casings at SurfaceExposed casing removal - Calculate Circumference in Linear Feet4"NA4.00LF\$3.26\$13.04- Borehole Marker Borehole MarkerBorehole location/identification marker (EA, material cost only)NANA10.00EA\$37.50\$375.00- Drill Rig TimeSCHRAMM TA50WSNANA20.00EA\$501.24\$10,024.80- Water Truck Water TruckWater Tanker, 2,500NANA20.00EA\$29.70\$594.00- PAW3, P SHI MC(ement only	w/Cement	0.						
diameter boreholeImage: Constraint of the state of the sta								
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marker (EA, material cost only)name<					10.00	273	<i>\$57.50</i>	<i>\$375.00</i>
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marker (EA, material cost only)marker	-Borehole Marker	Borehole	NA	NA	6.00	EA	\$37.50	\$225.00
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w/Cement Bag, material cost only94 lb. bag) Image: Cost only in the second sec			411	424015	53.00		¢10.05	64 057 25
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diameter borehole NA 4.00 LF \$3.26 \$13.04	-Plug		<u> </u>	ΝΔ	3.00	F۸	¢33.08	\$101.94
-Cut Casings at Exposed casing removal 4" NA 4.00 LF \$3.26 \$13.04	Flug		4	INA	3.00		923.20	Ş101.74
	-Cut Casings at		4"	NA	4.00	LF	\$3.26	\$13.04
	Surface	- Calculate	. 			<u>-</u>	+	+ -0.0 .

	Circumference in Linear Feet						
-Borehole Markers	Borehole location/identification marker (EA, material cost only)	NA	NA	3.00	EA	\$37.50	\$112.50
-Drill Rig Time	SCHRAMM T450WS	NA	NA	18.00	EA	\$501.24	\$9,022.32
-Water Truck	Water Tanker, 2,500	NA	NA	18.00	EA	\$29.70	\$534.60
Time	Gal.						
RW1 & SW1 - SW6 Fill w/Cement	Portland cement grout (Bag, material cost only94 lb. bag)	4"	161 LF	7.00	bag	\$19.95	\$139.65
-Plug	PVC plug - 4 in. diameter borehole	4"	NA	7.00	EA	\$33.98	\$237.86
-Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	4"	NA	4.00	LF	\$3.26	\$13.04
-Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	7.00	EA	\$37.50	\$262.50
-Drill Rig Time	SCHRAMM T450WS	NA	NA	14.00	EA	\$501.24	\$7,017.36
-Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	14.00	EA	\$29.70	\$415.80
Dewatering Holes Fill w/Cement	Portland cement grout (Bag, material cost only94 lb. bag)	4"	450	19.00	bag	\$19.95	\$379.05
-Plug	PVC plug - 4 in. diameter borehole	4"	NA	2.00	EA	\$33.98	\$67.96
-Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	4"	NA	4.00	LF	\$3.26	\$13.04
-Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	2.00	EA	\$37.50	\$75.00
-Drill Rig Time	SCHRAMM T450WS	NA	NA	10.00	EA	\$501.24	\$5,012.40
-Water Truck Time	Water Tanker, 2,500 Gal.	NA	NA	10.00	EA	\$29.70	\$297.00
Seal 3 Slurry wells (MR95)	Portland cement grout (Bag, material cost only94 lb. bag)	9"	1350	298.00	bag	\$19.95	\$5,945.10
-Drill rig and labor	Atlas Capco DM45/HP - 9.0"	NA	NA	12.00	EA	\$561.88	\$6,742.56
-Water Truck time	Water Tanker, 2,500 Gal.	na	na	12.00	EA	\$29.70	\$356.40
-slurry well plugs	PVC plug - 8 in. diameter borehole	9"	NA	3.00	EA	\$84.15	\$252.45
-slurry hole markers	Borehole location/identification marker (EA, material cost only)	NA	NA	3.00	EA	\$37.50	\$112.50
Seal NE-16-11 (MR96)	Portland cement grout (Bag, material cost only94 lb. bag)	9"	392	86.00	bag	\$19.95	\$1,715.70
-plug	PVC plug - 8 in. diameter borehole	9"	NA	1.00	EA	\$84.15	\$84.15
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-marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$37.50	\$37.50
-Rig and labor	Altas Capco DM25SP - 6-3/4"	NA	NA	4.00	EA	\$585.95	\$2,343.80
-water truck time	Water Tanker, 2,500 Gal.	NA	NA	4.00	EA	\$29.70	\$118.80
Plug 6 "exploration" wells (MR114)	Portland cement grout (Bag, material cost only94 lb. bag)	6"	2270	223.00	bag	\$19.95	\$4,448.85
-plugs	PVC plug - 6 in. diameter borehole	6"	NA	6.00	EA	\$61.43	\$368.58
-drill rig and labor	Altas Capco DM25SP - 6-3/4"	NA	NA	36.00	EA	\$585.95	\$21,094.20
-water truck time	Water Tanker, 2,500 Gal.	NA	NA	36.00	EA	\$29.70	\$1,069.20
Seal NE01-12, NE17-12, NE18-12 (MR107)	Portland cement grout (Bag, material cost only94 lb. bag)	6"	2500	245.00	bag	\$19.95	\$4,887.75
-plug	PVC plug - 6 in. diameter borehole	6"	NA	3.00	EA	\$61.43	\$184.29
-Mark holes	Borehole location/identification marker (EA, material cost only)	NA	NA	3.00	EA	\$37.50	\$112.50
-Rig and Labor	Altas Capco DM25SP - 6-3/4"	NA	NA	6.00	EA	\$585.95	\$3,515.70
-water truck time	Water Tanker, 2,500 Gal.	NA	NA	8.00	EA	\$29.70	\$237.60
Seal 2 alluvial wells (MR116)	Portland cement grout (Bag, material cost only94 lb. bag)	4"	60	2.62	bag	\$19.95	\$52.27
-marker	Borehole location/identification marker (EA, material cost only)	NA	NA	2.00	EA	\$37.50	\$75.00
-labor	General laborer - Colorado (total incl. fringes, empl. burden)	na	na	2.00	HR	\$23.53	\$47.06
Plug and Seal NE- 05-11 (4wells) and 08-11(4 wells)	Portland cement grout (Bag, material cost only94 lb. bag)	9"	5200	1,148.00	bag	\$19.95	\$22,902.60
-marker	Borehole location/identification marker (EA, material cost only)	NA	NA	8.00	EA	\$37.50	\$300.00
-cut casing	Exposed casing removal - Calculate Circumference in Linear Feet	9"	72	8.00	LF	\$3.26	\$26.08
-rig and labor	Atlas Capco DM45/HP - 9.0"	NA	NA	45.00	EA	\$561.88	\$25,284.60
-water tanker	Water Tanker, 2,500 Gal.	NA	NA	45.00	EA	\$29.70	\$1,336.50

	Job Hours:	73.00	Total Cost:	\$146,843.00
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BOREHOLE SEALING WORK

Task description:	Seal Additional Wells			
Site: New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012

PROJECT IDENTIFICATION

Task #:	032	State:	Colorado	Abbreviation:	None	
Date:	8/5/2021	County:	Las Animas	Filename:	C012-032	
User:	DC1					
Agency or organization name: DRMS						

UNIT COSTS

Borehole	Sealing/Item Method					Unit	Tatal Cast
Description		Diameter	Length	Quantity	Unit	Cost	Total Cost
Seal SF2	Portland cement grout (Bag, material cost only94 lb. bag)	7.625	700.6	122.28	bag	\$19.95	\$2,439.49
Plug Hole	PVC plug - 8 in. diameter borehole	8	NA	1.00	EA	\$84.15	\$84.15
Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$37.50	\$37.50
Cut Casing	Exposed casing removal - Calculate Circumference in Linear Feet	7.625	NA	1.00	LF	\$3.26	\$3.26
Seal NM20	Portland cement grout (Bag, material cost only94 lb. bag)	7.625	507	88.48	bag	\$19.95	\$1,765.18
Plug Hole	PVC plug - 8 in. diameter borehole	8	NA	1.00	EA	\$84.15	\$84.15
Cut Casing	Exposed casing removal - Calculate Circumference in Linear Feet	7.625	NA	1.00	LF	\$3.26	\$3.26
Mark Hole	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$37.50	\$37.50
Seal NM21	Portland cement grout (Bag, material cost only94 lb. bag)	7.625	1244.5	217.21	bag	\$19.95	\$4,333.34
Plug Hole	PVC plug - 8 in. diameter borehole	8	NA	1.00	EA	\$84.15	\$84.15
Cut Casing	Exposed casing removal - Calculate Circumference in Linear Feet	7.625	NA	1.00	LF	\$3.26	\$3.26
Mark Hole	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$37.50	\$37.50

Seal NM22	Portland cement grout (7.625	562.7	98.21	bag	\$19.95	\$1,959.29
	Bag, material cost						
	only94 lb. bag)						
Plug Hole	PVC plug - 8 in.	8	NA	1.00	EA	\$84.15	\$84.15
	diameter borehole						
Cut Casing	Exposed casing removal	7.625	NA	1.00	LF	\$3.26	\$3.26
	- Calculate						
	Circumference in Linear						
	Feet						
Mark Hole	Borehole	NA	NA	1.00	EA	\$37.50	\$37.50
	location/identification						
	marker (EA, material						
	cost only)						
Seal NM23	Portland cement grout (7.625	1388.91	242.41	bag	\$19.95	\$4,836.08
	Bag, material cost						
	only94 lb. bag)						
Plug Hole	PVC plug - 8 in.	8	NA	1.00	EA	\$84.15	\$84.15
	diameter borehole						
Cut Casing	Exposed casing removal	7.625	NA	1.00	LF	\$3.26	\$3.26
	- Calculate						
	Circumference in Linear						
	Feet						
Mark Hole	Borehole	NA	NA	1.00	EA	\$37.50	\$37.50
	location/identification						
	marker (EA, material						
	cost only)						
Drill Rig	Atlas Capco DM45/HP -	7.625	NA	36.00	EA	\$561.88	\$20,227.68
	9.0"						
Flatbed	Flatbed Truck, 4x2, 15K	NA	NA	36.00	EA	\$22.62	\$814.32
Equipment Truck	GVW						
Water Truck	Water Tanker, 5,000	NA	NA	36.00	EA	\$75.41	\$2,714.76
	Gal.						

Job Hours: 36.00 Total Cost: \$39,715.00
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	Task description:	Haul Raw Coal Stockpile to Development Waste Pile				
Site	: New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012	

PROJECT IDENTIFICATION

Task #:	033	State:	Colorado	Abbreviation:	None			
Date:	8/5/2021	County:	Las Animas	Filename:	C012-033			
User:	DC1							
	Agency or organization name: DRMS							

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description					
-Scraper:	Cat 627G				
-Dozer:	Cat D9T - 9SU				
Support Equipment -Load Area:	NA				
-Dump Area:	NA				
Road Maintenance – Motor Grader:	CAT 14M				
-Water Truck:	Water Tanker, 5,000 Gal.				

Cost Breakdown:	Scraper W	ork Team	Support Equ	ipment	Maintenance Equipment		
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck	
%Utilization- machine:	100	45	NA	NA	50	50	
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45	
Operating cost/hour:	\$153.83	\$63.63	NA	NA	\$30.20	\$20.98	
%Utilization-ripper:	NA	20	NA	NA	NA	NA	
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00	
Ripper op. cost/hour:	NA	\$2.30	NA	NA	\$0.00	\$0.00	
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12	
Unit Subtotals:	\$339.00	\$252.50	NA	NA	\$144.56	\$75.55	
Number of Units:	2	1	0	0	1	1	
Group Subtotals:	Work:	\$930.50	Support:	\$0.00	Maint:	\$220.11	

Total work team cost/hour: **\$1,150.61**

MATERIAL QUANTITIES

Initial volume:	5,900	CCY	Swell factor:	1.185					
Loose volume:	6,992	LCY							
So	urce of estimated volume:	Division of Reclamation, Mining & Safety							
Source	of estimated swell factor:	Cat Handbook							

HOURLY PRODUCTION

Material weight:	1,600 lbs/LCY	Struck Volume:	15.70	LCY
Material	Coal - Bituminous, Raw	Heaped Volume:	22.00	LCY
description:				

Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	33.00 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2500.00	3.00	3.00	6.00	1855	1.43
				Haul Time:	1.43 minutes	5

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpr	m) 1	Fravel Time (min)
1	2500.00	-3.00	3.00	0.00	2921	().95
		[Re	eturn Time:	0.95 n	ninutes	

Total Scraper team cycle time:	3.38	minutes
Adjusted for job conditions:	277.73	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	555.46	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	555.46	LCY/Hour

Unadjusted unit production/hour:	334.62	LCY/Hour
Optimal Number of Scrapers per push dozer:		

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	12.59	Hours
	40.000	4.00			
Unit cost:	\$2.071	/LCY	Total job cost:	\$14,483	_

Site Altitude: 7500 feet

Cite: New File Mine Devente Action: Mid Teves 00 Devente /Jale#u C1001012
Site: New Elk Mine Permit Action: Mid Term 08 Permit/Job#: C1981012

PROJECT IDENTIFICATION

Task #:	034	State:	Colorado	Abbreviation:	None	
Date:	8/5/2021	County:	Las Animas	Filename:	C012-034	
User:	DC1					
	Agency or organization name: DRMS					

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipr	nent Description
-Scraper:	Cat 627G
-Dozer:	Cat D9T - 9SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance – Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown: Scrap	oer Work Team	Supp	ort Equipment	Ma	intenance Equip	ment
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	35	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$49.49	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	20	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$2.30	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$238.36	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$916.36	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: **\$1,136.47**

MATERIAL QUANTITIES

Initial volume:	7,600	CCY	Swell factor:	1.185
Loose volume:	9,006	LCY		
So	urce of estimated volume:	Division of	Reclamation, Mining &	Safety
Source	of estimated swell factor:	Cat Handb	ook	1

HOURLY PRODUCTION

Material weight:	1,600 lbs/LCY	Struck Volume:	15.70	LCY
Material	Coal - Bituminous, Raw	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	33.00 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	0.40 Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3500.00	3.00	3.00	6.00	1855	1.97
				Haul Time:	1.97 minutes	

Return Route:

		Roll. Res (%)	Total Res (%)	Velocity (fpm)	· ·
1 3500.00 -3.0	00 3	3.00	0.00	2921	1.29

Return Time:	1.29	minutes	
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Total Scraper team cycle time:	4.26	minutes
Adjusted for job conditions:	220.36	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	440.72	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	440.72	LCY/Hour

Unadjusted unit production/hour:	265.49	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	20.43	Hours
Unit cost:	\$2.579	/LCY	Total job cost:	\$23,224	

Task de	scription: Repla	ce Cover material on D	WDA #2		
Site: New	Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012

PROJECT IDENTIFICATION

Task #:	035	State:	Colorado	Abbreviation:	None	
Date:	8/5/2021	County:	Las Animas	Filename:	C012-035	
User:	DC1					
	Agency or organization name: DRMS					

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description				
-Scraper:	Cat 627G			
-Dozer:	Cat D9T - 9SU			
Support Equipment -Load Area:	NA			
-Dump Area:	NA			
Road Maintenance – Motor Grader:	CAT 14M			
-Water Truck:	Water Tanker, 5,000 Gal.			

Cost Breakdown: Scra	per Work Team	Sup	port Equipment	٦	Maintenance Equ	ipment
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$327.98	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,005.98	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: **\$1,226.09**

MATERIAL QUANTITIES

Initial volume:	1,613	CCY	Swell factor:	1.125
Loose volume:	1,815	LCY		
So	urce of estimated volume:	Map 11, P	AP cover requirement.	
Source	of estimated swell factor:	Operator I	Estimate	

HOURLY PRODUCTION

Material weight:	2,132 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	24.77 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	0.40 Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	3.00	3.00	6.00	1855	0.96
				Haul Time:	0.96 minutes	

Return Route:

		%) Total Res (%)	Velocity (fpm)	• •
1 1000.00 -10.00	3.00	-7.00	2938	0.41

Return Time: 0.41 minutes		1	
	Return Time:	0.41	minutes

Total Scraper team cycle time:	2.37	minutes
Adjusted for job conditions:	396.09	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	792.18	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	792.18	LCY/Hour

Unadjusted unit production/hour:	477.22	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	2.29	Hours
Unit cost:	\$1.548	/LCY	Total job cost:	\$2,809	

	Task description:	eplace Topsoil to DWDA #2			
Site	New Elk Mine	Permit Action: Mid Term 08	Permit/Job#:	C1981012	

PROJECT IDENTIFICATION

Task #:	036	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-036
User:	DC1				
	Agency or organization	on name: DRM	٨S		

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipr	Equipment Description				
-Scraper:	Cat 627G				
-Dozer:	Cat D9T - 9SU				
Support Equipment -Load Area:	NA				
-Dump Area:	NA				
Road Maintenance – Motor Grader:	CAT 14M				
-Water Truck:	Water Tanker, 5,000 Gal.				

Cost Breakdown: Scrap	per Work Team	Sup	port Equipment	Μ	aintenance Equi	oment
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$327.98	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,005.98	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: <u>\$1,226.09</u>

MATERIAL QUANTITIES

Initial volume:	3,900	CCY	Swell factor:	1.000
Loose volume:	3,900	LCY		
So	urce of estimated volume:	Division of	Reclamation, Mining &	Safety
50	aree of estimated volume.	DIVISION	Reclamation, winning &	Salety
Source	Source of estimated swell factor:		Estimate	

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	3.00	3.00	6.00	1855	0.96
				Haul Time:	0.96 minutes	5

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	-3.00	3.00	0.00	2921	0.64

Return Time:	0.64	minutes
Total Scraper team cycle time:	2.60	minutes
Adjusted for job conditions:	361.0	5 LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	722.1	0 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	722.1	0 LCY/Hour

Unadjusted unit production/hour:	435.00	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	5.40	Hours
Unit cost:	\$1.698	/LCY	Total job cost:	\$6,622	

Task description:	Replace Topsoil to Area East of Pond 5				
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#:	C1981012		

PROJECT IDENTIFICATION

Task #:	037	State:	Colorado	Abbreviation:	None			
Date:	8/5/2021	County:	Las Animas	Filename:	C012-037			
User:	DC1							
	Agency or organization name: DRMS							

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description				
-Scraper:	Cat 627G			
-Dozer:	Cat D9T - 9SU			
Support Equipment -Load Area:	NA			
-Dump Area:	NA			
Road Maintenance – Motor Grader:	CAT 14M			
-Water Truck:	Water Tanker, 5,000 Gal.			

Cost Breakdown: Scra	per Work Team	Supp	ort Equipment	Mai	ntenance Equipm	nent
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$327.98	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,005.98	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: \$1,226.09

MATERIAL QUANTITIES

Initial volume:	425	CCY	Swell factor:	1.000
Loose volume:	425	LCY		
<u>د</u> م	urce of estimated volume:	Division of	Reclamation, Mining &	Safaty
30		DIVISION OF	Reclamation, Minning &	Salety
Source	of estimated swell factor:	Operator E	Estimate	

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	5.00	3.00	8.00	1381	0.56
				Haul Time:	0.56 minutes	5

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	-5.00	3.00	-2.00	2938	0.30

Return Time:	0.30	minutes
Total Scraper team cycle time:	1.86	minutes
Adjusted for job conditions:	504.69	Ð LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	1,009.3	B9 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	1,009.3	B9 LCY/Hour

Unadjusted unit production/hour:	608.06	LCY/Hour
Optimal Number of Scrapers per push dozer:		

F	leet size:	1	Team(s)	Total job time:	0.42	Hours
	Unit cost:	\$1.215	/LCY	Total job cost:	\$516	

Task description:	Replace Topsoil to Pond 005						
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#:	C1981012				

PROJECT IDENTIFICATION

Task #:	038	State:	Colorado	Abbreviation:	None			
Date:	8/5/2021	County:	Las Animas	Filename:	C012-038			
User:	DC1							
	Agency or organization name: DRMS							

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description				
-Scraper:	Cat 627G			
-Dozer:	Cat D9T - 9SU			
Support Equipment -Load Area:	NA			
-Dump Area:	NA			
Road Maintenance – Motor Grader:	CAT 14M			
-Water Truck:	Water Tanker, 5,000 Gal.			

Cost Breakdown:	Cost Breakdown: Scraper Work Team		Suppor	t Equipment	Mainte	enance Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$308.72	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$986.72	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: <u>\$1,206.83</u>

MATERIAL QUANTITIES

Initial volume:	300	CCY	Swell factor:	1.000
Loose volume:	300	LCY		
So	urce of estimated volume:	Division of	Reclamation, Mining &	Safety
Source	of estimated swell factor:	Operator I	, 0	,

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	5.00	3.00	8.00	1381	0.56
				Haul Time:	0.56 minute	25

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	-5.00	3.00	-2.00	2938	0.30
			R	Return Time:	0.30 minut	es
			Total Scraper	team cycle time:	1.86	minutes
			Adjusted for	or job conditions:	504.69	LCY/Hour
		2	Scraper(s)			
	Adjust	ourly production:	1,009.39	LCY/Hour		
	Adjusted	multiple scrap	oer team (fleet) ho	ourly production:	1,009.39	LCY/Hour
C	Unadjusted unit pro Optimal Number of Scrapers po	LCY/Hour				
JOB TIM	IE AND COST					
F	leet size: 1	Team(s)	-	Total job time:	0.30	Hours
ι	Jnit cost: \$1.196	/LCY		Total job cost:	\$359	

Task description:	Replace Topsoil to Area Under Conveyor		
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#:	C1981012

PROJECT IDENTIFICATION

Task #:	039	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-039
User:	DC1				
	Agency or organizatio	on name: DRM	ЛS		

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipr	nent Description
-Scraper:	Cat 627G
-Dozer:	Cat D9T - 9SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance – Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown: Scrap	er Work Team	Supp	ort Equipment	Ma	intenance Equip	ment
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	20	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$2.30	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$330.28	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,008.28	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: \$1,228.39

MATERIAL QUANTITIES

Initial volume:	1,300	CCY	Swell factor:	1.000
Loose volume:	1,300	LCY		
		Division of	Declamation Mining 9	Cafate
50	urce of estimated volume:	Division of	Reclamation, Mining &	Salety
Source	of estimated swell factor:	Operator E	Estimate	

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	200.00	5.00	3.00	8.00	1381	0.20
				Haul Time:	0.20 minutes	

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	200.00	-5.00	3.00	-2.00	2938	0.10

	Return Time:	0.10	minutes]
	Total Scraper team cycle tim	ne: 1.3	0 minut	es
	Adjusted for job conditions:			our
	Selected Number of Scrape	rs: 2	Scrap	er(s)
Adjusted single scra	per team (unit) hourly production	on: 1,444	.20 LCY/H	our
Adjusted multiple scra	per team (fleet) hourly production	on: 1,444	.20 LCY/H	our

Unadjusted unit production/hour:	870.00	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	0.90	Hours
Unit cost:	\$0.851	/LCY	Total job cost:	\$1,106	

Task description:	Replace Topsoil to Raw Coal Storage Stockpile	lace Topsoil to Raw Coal Storage Stockpile				
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#:	C1981012			

PROJECT IDENTIFICATION

Task #:	040	State:	Colorado	Abbreviation:	None		
Date:	8/5/2021	County:	Las Animas	Filename:	C012-040		
User:	DC1						
	Agency or organization name: DRMS						

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description			
-Scraper:	Cat 627G		
-Dozer:	Cat D9T - 9SU		
Support Equipment -Load Area:	NA		
-Dump Area:	NA		
Road Maintenance – Motor Grader:	CAT 14M		
-Water Truck:	Water Tanker, 5,000 Gal.		

Cost Breakdown: Scrape	er Work Team	Suppor	t Equipment	Maint	enance Equipmen	t
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$327.98	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,005.98	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: \$1,226.09

MATERIAL QUANTITIES

Initial volume:	1,060	CCY	Swell factor:	1.000
Loose volume:	1,060	LCY		
<u>م</u>	urce of estimated volume:	Division of	Reclamation, Mining &	Safaty
30	urce of estimated volume.	DIVISION	Reclamation, Minning &	Salety
Source	of estimated swell factor:	Operator E	Estimate	

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	0.00	3.00	3.00	2824	0.75
				Haul Time:	0.75 minutes	5

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1600.00	0.00	3.00	3.00	2874	0.67

Return Time:	0.67	minutes
Total Scraper team cycle tim	e: 2.4	2 minutes
Adjusted for job condition	is: 387.9	90 LCY/Hour
Selected Number of Scraper	rs: 2	Scraper(s)
Adjusted single scraper team (unit) hourly productio	n: 775.8	31 LCY/Hour
Adjusted multiple scraper team (fleet) hourly productio	n: 775.	B1 LCY/Hour

Unadjusted unit production/hour:	467.36	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet siz	e: 1	Team(s)	Total job time:	1.37	Hours
Unit co	it: \$1.580	/LCY	Total job cost:	\$1,675	

Task description:	Replace Topsoil to Small DR Area in Large DNR Area					
Site: New Elk Mine	Permit Action: Mid Term 08 Permit/Job#: C1981012					

PROJECT IDENTIFICATION

Task #:	041	State:	Colorado	Abbreviation:	None			
Date:	8/5/2021	County:	Las Animas	Filename:	C012-041			
User:	DC1							
	Agency or organization name: DRMS							

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description				
-Scraper:	Cat 627G			
-Dozer:	Cat D9T - 9SU			
Support Equipment -Load Area:	NA			
-Dump Area:	NA			
Road Maintenance – Motor Grader:	CAT 14M			
-Water Truck:	Water Tanker, 5,000 Gal.			

Cost Breakdown: Scra	per Work Team	Su	oport Equipment		Maintenance Eq	uipment
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$327.98	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,005.98	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: \$1,226.09

MATERIAL QUANTITIES

Initial volume:	70	CCY	Swell factor:	1.000
Loose volume:	70	LCY		
So	urce of estimated volume:	Division of	Reclamation, Mining &	Safety
Source	of estimated swell factor:	Operator E	Estimate	

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	0.00	3.00	3.00	2824	0.90
				Haul Time:	0.90 minutes	

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	0.00	3.00	3.00	2874	0.81

Return Time:	0.81	minutes
Total Scraper team cycle time:	2.71	minutes
Adjusted for job conditions:	346.3	9 LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	692.7	9 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	692.7	9 LCY/Hour

Unadjusted unit production/hour:	417.34	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	0.10	Hours
Unit cost:	\$1.770	/LCY	Total job cost:	\$124	

Task descriptio	n: Replace Topsoil	Replace Topsoil to Clean Coal Stockpile				
Site: New Elk Min	e Per	mit Action: Mid Term 08	Permit/Job#:	C1981012		

PROJECT IDENTIFICATION

Task #:	042	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-042
User:	DC1				
	Agency or organization	on name: DRM	ЛS		

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description			
-Scraper:	Cat 627G		
-Dozer:	Cat D9T - 9SU		
Support Equipment -Load Area:	NA		
-Dump Area:	NA		
Road Maintenance – Motor Grader:	CAT 14M		
-Water Truck:	Water Tanker, 5,000 Gal.		

Cost Breakdown: Scr	aper Work Team	Supp	ort Equipment	Maii	ntenance Equipme	ent
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$327.98	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,005.98	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: **\$1,226.09**

MATERIAL QUANTITIES

Initial volume:	600	CCY	Swell factor:	1.000
Loose volume:	600	LCY		
Sou	urce of estimated volume:	Division of	Reclamation, Mining &	Safety
Source	of estimated swell factor:	Operator I	Estimate	

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume	: 15.70	LCY
Material	User Provided	Heaped Volume	: 22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume	: 18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity	r: 18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2300.00	0.00	3.00	3.00	2824	1.00
				Haul Time:	1.00 minutes	

Return Route:

1 2300.00 0.00 3.00 3.00 2874 0.91	Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
	1	2300.00	0.00	3.00	3.00	2874	0.91

Return Time: 0.91 minutes

Total Scraper team cycle time:	2.91	minutes
Adjusted for job conditions:	322.59	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	645.18	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	645.18	LCY/Hour

Unadjusted unit production/hour:	388.66	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	0.93	Hours
Unit cost:	\$1.900	/LCY	Total job cost:	\$1,140	

		Task description:	Replace Topsoil to East Extension of River Pumphouse					
Site: New Elk Mine Permit Action: Mid Term 08 Permit/Job#: C1981012	Site:	New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012		

PROJECT IDENTIFICATION

Task #:	043	State:	Colorado	Abbreviation:	None				
Date:	8/5/2021	County:	Las Animas	Filename:	C012-043				
User:	DC1								
	Agency or organization name: DRMS								

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description				
-Scraper:	Cat 627G			
-Dozer:	Cat D9T - 9SU			
Support Equipment -Load Area:	NA			
-Dump Area:	NA			
Road Maintenance – Motor Grader:	CAT 14M			
-Water Truck:	Water Tanker, 5,000 Gal.			

Cost Breakdown: Scrap	oer Work Team	Supp	port Equipment	М	aintenance Equip	oment
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$327.98	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,005.98	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: \$1,226.09

MATERIAL QUANTITIES

Initial volume:	180	CCY	Swell factor:	1.000
Loose volume:	180	LCY		
So	urce of estimated volume:	Division of	Reclamation, Mining &	Safety
		Cat Handb	, 0	

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1100.00	5.00	3.00	8.00	1381	0.85
				Haul Time:	0.85 minutes	5

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1100.00	-5.00	3.00	-2.00	2938	0.44

Return Time:	0.44 m	inutes
Total Scraper team cycle time:	2.29	minutes
Adjusted for job conditions:	409.93	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	819.85	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	819.85	LCY/Hour

Unadjusted unit production/hour:	493.89	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	0.22	Hours
Unit cost:	\$1.496	/LCY	Total job cost:	\$269	

Task description:	Replace Topsoil to Embedded Was	te Area	
Site: New Elk Mine	Permit Action: Mid	Term 08 Permit/Job#:	C1981012

PROJECT IDENTIFICATION

Task #:	044	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-044
User:	DC1				
	Agency or organizatio	on name: DRM	ЛS		

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipr	nent Description
-Scraper:	Cat 627G
-Dozer:	Cat D9T - 9SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance – Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown: Scrap	oer Work Team	Supp	ort Equipment	Ma	aintenance Equip	ment
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$327.98	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,005.98	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: \$1,226.09

MATERIAL QUANTITIES

Initial volume:	1,950	CCY	Swell factor:	1.000
Loose volume:	1,950	LCY		
So	urce of estimated volume:	Division of	Reclamation, Mining &	Safety
Source of estimated swell factor:		Operator I	, 0	Surcey

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	0.00	3.00	3.00	2824	0.51
				Haul Time:	0.51 minutes	5

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	0.43

Return Time:	0.43	minutes
Total Scraper team cycle time:	1.94	minutes
Adjusted for job conditions:	483.8	8 LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	967.7	6 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	967.7	6 LCY/Hour

Unadjusted unit production/hour:	582.99	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	2.01	Hours
Unit cost:	\$1.267	/LCY	Total job cost:	\$2,471	

Task description:	Replace Topsoil to RDA	leplace Topsoil to RDA				
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#: C1981012				

PROJECT IDENTIFICATION

Task #:	045	State:	Colorado	Abbreviation:	None			
Date:	8/5/2021	County:	Las Animas	Filename:	C012-045			
User:	DC1							
	Agency or organization name: DRMS							

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description			
-Scraper:	Cat 627G		
-Dozer:	Cat D9T - 9SU		
Support Equipment -Load Area:	NA		
-Dump Area:	NA		
Road Maintenance – Motor Grader:	CAT 14M		
-Water Truck:	Water Tanker, 5,000 Gal.		

Cost Breakdown: Sci	aper Work Team		Support Equipment			Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck	
%Utilization-machine:	100	100	NA	NA	50	50	
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45	
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98	
%Utilization-ripper:	NA	0	NA	NA	NA	NA	
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00	
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00	
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12	
Unit Subtotals:	\$339.00	\$327.98	NA	NA	\$144.56	\$75.55	
Number of Units:	2	1	0	0	1	1	
Group Subtotals:	Work:	\$1,005.98	Support:	\$0.00	Maint:	\$220.11	

Total work team cost/hour: **\$1,226.09**

MATERIAL QUANTITIES

Initial volume:	27,824	CCY	Swell factor:	1.000
Loose volume:	27,824	LCY		
So	Source of estimated volume:		eet 3; Permit page 2.05	-38
Source	Source of estimated swell factor:		Estimate	

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	-3.00	3.00	0.00	2921	0.30
2	650.00	2.00	3.00	5.00	2218	3.08
3	2200.00	7.00	3.00	10.00	1068	1.81
4	600.00	8.00	3.00	11.00	1018	0.59
				Haul Time:	5.78 minute	25

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-8.00	3.00	-5.00	2938	0.27
2	2200.00	-7.00	3.00	-4.00	2938	0.80
3	650.00	-2.00	3.00	1.00	2913	0.22
4	500.00	3.00	3.00	6.00	2736	0.19

Return Time: 1.48

minutes

Total Scraper team cycle time:	8.26	minutes
Adjusted for job conditions:	113.65	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	227.30	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	227.30	LCY/Hour

Unadjusted unit production/hour:	136.92	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	122.41	Hours
	45.004	(1.0)			
Unit cost:	\$5.394	/LCY	Total job cost:	\$150,090	_

Task description:	Replace Topsoil to Four Bench Slopes		
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#:	C1981012

PROJECT IDENTIFICATION

Task #:	046	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-046
User:	DC1				
	Agency or organization	on name: DRM	ИS		

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description		
-Scraper:	Cat 627G	
-Dozer:	Cat D9T - 9SU	
Support Equipment -Load Area:	NA	
-Dump Area:	NA	
Road Maintenance – Motor Grader:	CAT 14M	
-Water Truck:	Water Tanker, 5,000 Gal.	

Cost Breakdown: Scra	per Work Team	Sup	port Equipment	Ν	Maintenance Equ	ipment
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	100	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$11.48	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$339.46	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,017.46	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: \$1,237.57

MATERIAL QUANTITIES

Initial volume:	3,580	CCY	Swell factor:	1.000
Loose volume:	3,580	LCY		
So	urce of estimated volume:	PAP map 1	1 sheet 3: 5.5 acres	
			ook	

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	-3.00	3.00	0.00	2921	0.30
2	650.00	2.00	3.00	5.00	2218	3.08
3	2200.00	7.00	3.00	10.00	1068	1.81
4	450.00	-15.00	3.00	-12.00	1749	0.36
				Haul Time:	5.55 minute	es

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	450.00	15.00	3.00	18.00	990	0.47
2	2200.00	-7.00	3.00	-4.00	2938	0.80
3	650.00	-2.00	3.00	1.00	2913	0.22
4	500.00	3.00	3.00	6.00	2736	0.19

Return Time:	1.68
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minutes

Total Scraper team cycle time:	8.23	minutes
Adjusted for job conditions:	114.06	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	228.12	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	228.12	LCY/Hour

Unadjusted unit production/hour:	137.42	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	15.69	Hours
	és 425	4.00	-	<u> </u>	
Unit cost:	\$5.425	/LCY	Total job cost:	\$19,421	_

Task description:	Replace Topsoil to RDA Pond		
Site: New Elk Mine	Permit Action: Mid To	erm 08 Permit/Job#:	C1981012

PROJECT IDENTIFICATION

Task #:	047	State:	Colorado	Abbreviation:	None		
Date:	8/5/2021	County:	Las Animas	Filename:	C012-047		
User:	DC1						
	Agency or organization name: DRMS						

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description				
-Scraper:	Cat 627G			
-Dozer:	Cat D9T - 9SU			
Support Equipment -Load Area:	NA			
-Dump Area:	NA			
Road Maintenance – Motor Grader:	CAT 14M			
-Water Truck:	Water Tanker, 5,000 Gal.			

Cost Breakdown:	Scraper Work Team	Supp	ort Equipment	Maintena	nce Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.
%Utilization-ripper:	NA	NA	NA	NA	NA	1
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.
Unit Subtotals:	\$339.00	\$308.72	NA	NA	\$144.56	\$75.
Number of Units:	2	1	0	0	1	
Group Subtotals:	Work:	\$986.72	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: **\$1,206.83**

MATERIAL QUANTITIES

Initial volume:	1,975	CCY	Swell factor:	1.000
Loose volume:	1,975	LCY		
So	urce of estimated volume:	Division of	Reclamation, Mining &	Safety
Source	of estimated swell factor:	Cat Handb		,

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	0.40 Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2500.00	10.00	3.00	13.00	834	3.01
				Haul Time:	3.01 minutes	5

Return Route:

		6) Total Res (%)	Velocity (fpm)	
1 2500.00 -10.00	3.00	-7.00	2938	0.90

	_	
Return Time:	0.90	minutes

Total Scraper team cycle time:	4.91	minutes
Adjusted for job conditions:	191.19	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	382.37	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	382.37	LCY/Hour

Unadjusted unit production/hour:	230.35	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	5.17	Hours
Unit cost:	\$3.156	/LCY	Total job cost:	\$6,233	

Task description:	Replace Topsoil to Bates Porta	Replace Topsoil to Bates Portal Face-Up			
Site: New Elk Mine	Permit Action:	Mid Term 08	Permit/Job#:	C1981012	

PROJECT IDENTIFICATION

Task #:	048	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-048
User:	DC1				
	Agency or organization	on name: DRM	٨S		

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipr	nent Description
-Scraper:	Cat 627G
-Dozer:	Cat D9T - 9SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance – Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown: Scra	per Work Team	Sup	oport Equipment		Maintenance Eq	uipment
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$154.27	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$153.83	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$19.26	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$339.00	\$327.98	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,005.98	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: \$1,226.09

MATERIAL QUANTITIES

Initial volume:	1,150	CCY	Swell factor:	1.000
Loose volume:	1,150	LCY		
<u>م</u>	urce of estimated volume:	Division of	Reclamation, Mining &	Safaty
30		DIVISION	Reclamation, Minning &	Salety
Source	of estimated swell factor:	Operator I	Estimate	

HOURLY PRODUCTION

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Scraper Loading Time:	<u>0.40</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7500 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2500.00	10.00	3.00	13.00	834	3.01
				Haul Time:	3.01 minutes	5

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2500.00	-10.00	3.00	-7.00	2938	0.90

Return Time:	0.90	minutes
Total Scraper team cycle time:	4.91	minutes
Adjusted for job conditions:	191.1	9 LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	382.3	7 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	382.3	7 LCY/Hour

Unadjusted unit production/hour:	230.35	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet	size:	1	Team(s)	Total job time:	3.01	Hours
Unit	cost:	\$3.207	/LCY	Total job cost:	\$3,687	
SCRAPER TEAM WORK

Task description:	Replace Topsoil to West DWDA					
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#:	C1981012			

PROJECT IDENTIFICATION

Task #:	049	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-049
User:	DC1				
	Agency or organization	on name: DRM	ЛS		

HOURLY EQUIPMENT

COSTShift basis: <u>1 per day</u>

Equipment Description		
-Scraper:	Cat 627G w/push-pull	
-Dozer:	Cat D9T - 9SU	
Support Equipment -Load Area:	NA	
-Dump Area:	NA	
Road Maintenance – Motor Grader:	CAT 14M	
-Water Truck:	Water Tanker, 5,000 Gal.	

Cost Breakdown: Scrap	er Work Team	Supp	ort Equipment	Mai	ntenance Equipm	nent
	Scraper	Dozer	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	NA	NA	50	50
Ownership cost/hour:	\$188.81	\$126.01	NA	NA	\$85.80	\$33.45
Operating cost/hour:	\$169.82	\$141.41	NA	NA	\$30.20	\$20.98
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$389.53	\$308.72	NA	NA	\$144.56	\$75.55
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,087.78	Support:	\$0.00	Maint:	\$220.11

Total work team cost/hour: \$1,307.89

MATERIAL QUANTITIES

Initial volume:	39,912	CCY	Swell factor:	1.125
Loose volume:	44,901	LCY		
So	urce of estimated volume:	Division of	Reclamation, Mining &	Safety
30	uite of estimated volume.	DIVISION	Reclamation, winning &	Jalety
Source	of estimated swell factor:	Operator E	Estimate	

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight:	2,055 lbs/LCY	Struck Volume:	15.70	LCY
Material	User Provided	Heaped Volume:	22.00	LCY
description:				
Rated Payload:	52,800 pounds	Average Volume:	18.85	LCY
Payload Capacity:	25.69 LCY	Adjusted Capacity:	18.85	LCY

Cycle Time:

Scraper Loading Time:	<u>0.90</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 7600 feet

	Scraper	Push Dozer	Source
Altitude Adj:	0.960	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.797	0.830	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	5.00	3.00	8.00	1381	0.78
				Haul Time:	0.78 minutes	5

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	-5.00	3.00	-2.00	2938	0.41

Return Time:	0.41	minutes
Total Scraper team cycle time:	2.69	minutes
Adjusted for job conditions:	670.1	.9 LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	670.1	.9 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	670.1	LCY/Hour

Unadjusted unit production/hour:	840.89	LCY/Hour
Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	67.00	Hours
Unit cost:	\$1.952	/LCY	Total job cost:	\$87,625	

COMPACTION WORK

New Elk M	line	Permit A	ction:	Mid Term 08	Perm	nit/Job#:	C198101	2
<u> </u>								
ROJECT IDE	NTIFICATION							
Task #:	050	State:	Colora	ado		Abbr	reviation:	None
Date:	8/5/2021	County:	Las Ar	nimas		F	ilename:	C012-050
User:	DC1							
	Agency or organi	ization name: Df	RMS					
ΟΠΒΙΥ ΕΟυ	IPMENT COST							
OURLY EQU	IPMENT COST	7						
	Basic Machine:	CAT 815F				power:		240
		CAT 815F Soil - tamping foo	ot			power: ft Basis:	1 p	per day
	Basic Machine:		ot		Shif		1 p	-
(Basic Machine: Compactor Type:		ot.		Shif	ft Basis:	1 p	per day
(Basic Machine: Compactor Type:		ot		Shif	ft Basis: Source:	1 p	per day
	Basic Machine: Compactor Type: <u>/n:</u>	Soil - tamping foo	<u>ot</u>	\$91.25	Shif Data	ft Basis: Source:	1 p	per day
(Basic Machine: Compactor Type: <u>/n:</u> Owner	Soil - tamping foo	ot	\$91.25 \$66.66	Shif Data Utilizat	ion %	1 p	per day
(Basic Machine: Compactor Type: <u>/n:</u> Owner Opera	Soil - tamping for rship Cost/Hour: ating Cost/Hour:	ot	\$66.66	Shif Data Utilizat NA 10	ion % 0	1 p	per day
(Basic Machine: Compactor Type: <u>/n:</u> Owner Opera Oper	Soil - tamping for rship Cost/Hour: ating Cost/Hour: rator Cost/Hour:	<u>ot</u>	\$66.66 \$26.02	Shif Data Utilizat	ion % 0	1 p	per day
(Basic Machine: Compactor Type: <u>(n:</u> Owner Opera Oper Total	Soil - tamping for rship Cost/Hour: ating Cost/Hour:	ot	\$66.66	Shif Data Utilizat NA 10	ion % 0	1 p	per day

MATERIAL QUANTITIES

Loose volume:	26,250	LCY	Shrinkage factor:	0.870
Compacted volume:	22,838	CCY		

Source of estimated volume:	8.13 acre RDA surface X 2 ft. lift
Source of estimated shrinkage factor:	Cat Handbook

HOURLY PRODUCTION

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

Compacted width per pass (W):	6.50	feet
Average Compactor Speed (S):	4.00	mph
Compacted thickness of each lift (L):	8.00	inches
Conversion Constant (C):	16.3	(5,280ft./12in./27cu.ft.)
Required number of machine passes (P):	4	passes
Unadjusted Hourly Unit Production:	847.60	CCY/hour

Job Condition Correction Factors

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

Adjusted Hourly Unit Production:	703.51	CCY/Hour
Adjusted Hourly Fleet Production:	703.51	CCY/Hour

JOB TIME AND COST

Fleet size:	1	Compactor(s)	Total job time:	32.46	Hours

Site Altitude: 7,500 feet

_					
	Unit cost:	\$0.261	per CCY	Total job cost:	\$5,971

SAFEGUARDING UNDERGROUND OPENINGS

Task description:	Seal Portals and Vent Shafts				
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#:	C1981012		

PROJECT IDENTIFICATION

Task #:	051	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-051
User:	DC1				
	Agency or organiz	ation name:	DRMS		

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Seal East Portal	12'X10'	Adit closure - bulkhead seal, >= 36 sq. ft. (per sq. ft.)	120.00	SF	\$192.07	\$23,048.40
Backfill East Portal	12'X10'X50'	Adit closure - backfilling (per cu. yd.)	222.00	CY	\$25.00	\$5,550.00
Drain Pipe	100 LF	PVC drain pipe, 6 in. diameter (per In. ft. incl. mat. & labor)	100.00	LF	\$11.74	\$1,174.00
Seal West Portals (2)	15'X10'	Adit closure - bulkhead seal, >= 36 sq. ft. (per sq. ft.)	300.00	SF	\$192.07	\$57,621.00
Backfill West Portals (2)	600 CY	Adit closure - backfilling (per cu. yd.)	600.00	CY	\$25.00	\$15,000.00
Drain Pipes	100 LF (2)	PVC drain pipe, 6 in. diameter (per In. ft. incl. mat. & labor)	200.00	LF	\$11.74	\$2,348.00
Seal Bates Portals (3)	14'X18'	Adit closure - bulkhead seal, >= 36 sq. ft. (per sq. ft.)	756.00	SF	\$192.07	\$145,204.92
Backfill Bates Portals (3)	14'X18'X50'	Adit closure - backfilling (per cu. yd.)	466.00	CY	\$25.00	\$11,650.00
Drain Pipes (3)	100 LF (3)	PVC drain pipe, 6 in. diameter (per In. ft. incl. mat. & labor)	300.00	LF	\$11.74	\$3,522.00
East Portal Fan Shaft Concrete Cap	16' D	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	200.00	CF	\$13.89	\$2,778.00
Apache Canyon East Shaft Concrete Cap	16" D	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	200.00	CF	\$13.89	\$2,778.00
Apache Canyon West Shaft Concrete Cap	16" D	Shaft closure - concrete cap, poured-in-place (per Cubic Feet)	200.00	CF	\$13.89	\$2,778.00

Job Hours: 270.00	Total Cost:	\$273,452.32
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MOTOR GRADER WORK

New Elk M	ine	Permit A	t Action: Mid Term		m 08 P		ermit/Job#: C19810		2
ROJECT IDEN	NTIFICATION								
Task #:	052	State	: Colorado			Abb	reviation:	None	
Date:	8/5/2021	County	y: Las Animas				Filename:		C012-052
User:	DC1								
	Agency or organi	zation name: D	RMS						
OURLY EQU	IPMENT COST			-					
	Basic Machine:	CAT 16M					epower:		297
Ripp	per Attachment:	Multi-Shank Rip	oper		Shift Basis: Data Source:		-	per day	
		J		L		Data	Source:	((CRG)
ost Breakdow	<u>n:</u>								
						Utiliza	tion %		
		ship Cost/Hour:			\$70.80		IA		
		ating Cost/Hour:			\$56.31		00		
		ship Cost/Hour:			\$5.52 \$4.85		A 00		
		ating Cost/Hour: ator Cost/Hour:			\$4.85 \$28.56		JU IA		
		Unit Cost/Hour:			\$166.04				
	Total F	leet Cost/Hour:		\$332.0	8				
				+					
IATERIAL QU	JANTITIES								
	Total Area t	o be graded or rip	ped: 1	19.00					acres
	Source	of estimated acre	age: (Operator p	provided (TR75	5)			

Average Grader Speed:	1.50	mph
Selected Application:	Finish grading	; (0-2.5 mph) - 1.5
Selected Blade Angle:	0	degrees
Effective Blade Length:	16.00	feet
Width of blade overlap per pass:	2.00	feet
Net grading or ripping width per pass:	14.00	feet
Unadjusted Hourly Unit Production:	2.5455	acres/hour

Job Condition Correction Factors

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

Adjusted Hourly Unit Production:	2.2909	acres/Hour
Adjusted Hourly Fleet Production:	4.5818	acres/Hour

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: 4.15 Hours
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Site Altitude: 7680 feet

Unit cost:	\$72.48	per acre	Total job cost:	\$1,377
	•		-	

MOTOR GRADER WORK

New Elk Mine	Permit Ac	ction: Mid Ter	m 08	Permit/Job#:	C198101	2
ROJECT IDENTIFICATION						
Task #: 053	State:	Colorado		Abb	reviation:	None
Date: 8/5/2021	County:	Las Animas			Filename:	C012-053
User: DC1						
Agency or organ	ization name: DR	MS				
Basic Machine:	CAT 14M			Horsepower:		259
Ripper Attachment:	0			Shift Basis:	1	per day
			1	Data Source:		(CRG)
<u>Cost Breakdown:</u>	-		L			
			1	Utilization %		
Owner	rship Cost/Hour:		\$85.80	NA		
	ating Cost/Hour:		\$60.40	100		
Ripper Owner	rship Cost/Hour:		\$0.00	NA		
	ating Cost/Hour:		\$0.00			
•	rator Cost/Hour:		\$28.56	NA		
Total	Unit Cost/Hour:		\$174.76			
	Fleet Cost/Hour:	\$174.7	76			
Total :						
	,					
MATERIAL QUANTITIES	to be graded or ripp	ed: 8.30				acres

HOURLY PRODUCTION

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

Site Altitude: 7500 feet

Job Condition Correction Factors

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

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

Fleet size: 1 Grader(s) Total job time: 5.32 Ho	lours	
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Unit cost:	\$111.96	per acre	Total job cost:	\$929
	•		•	

MOTOR GRADER WORK

10	isk descripti		ish Grade West DV	BAA	cu				
	New Elk Mi	ine	Permit A	ction:	Mid Terr	n 08	Permit/Jo	o#: C198101	2
K	JIECT IDEN	ITIFICATION							
	Task #:	054	State:	Colo	orado			Abbreviation:	None
	Date:	8/5/2021	County:	Las	Animas			Filename:	C012-054
	User:	DC1							
		Agency or organi	zation name: DF	RMS					
		0,0							
)	URLY EQUI	PMENT COST							
			CAT 4 49 4		Г				250
	Dian	Basic Machine:	CAT 14M				Horsepowe Shift Basi		259
	кірр	per Attachment:					Data Sourc		per day (CRG)
-					L		Data Sourc	с.	(end)
5	<u>t Breakdowr</u>	<u>n:</u>							
						4	Utilization %		
			ship Cost/Hour:			\$85.80	NA		
			ting Cost/Hour:			\$60.40	100		
			ship Cost/Hour: iting Cost/Hour:			\$0.00 \$0.00	NA		
			ator Cost/Hour:			\$0.00 \$28.56	NA		
		•	Unit Cost/Hour:			\$174.76			
		Total				Ş174.70			
		Total F	leet Cost/Hour:		\$174.7	6			
Α	TERIAL QU	JANTITIES							
		Total Area t	o be graded or ripp	ed.	10.20				acres
		Total Area t							ucres
		Source	of estimated acrea	age:	NECC				
D	URLY PRO	DUCTION							
			Average Grader S	Sneed.	٦	1.50	mph		
			Selected Appli				h grading (0-2.5	mph) - 1.5	
-			Calastad Diada		1	45			

	1.00	
Selected Application:	Finish grading	(0-2.5 mph) - 1.5
Selected Blade Angle:	45	degrees
Effective Blade Length:	9.90	feet
Width of blade overlap per pass:	2.00	feet
Net grading or ripping width per pass:	7.90	feet
Unadjusted Hourly Unit Production:	1.4364	acres/hour

Site Altitude: 7680 feet

Job Condition Correction Factors

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

Adjusted Hourly Unit Production:	1.2209	acres/Hour
Adjusted Hourly Fleet Production:	1.2209	acres/Hour

Fleet size:1Grader(s)Total job time:8.35Hours

Unit cost:	\$143.14	per acre	Total job cost:	\$1,460
	•			

HYDRAULIC EXCAVATOR WORK

	ption:	100 yea	ar ditch Mainter	nance					
New Elk	Mine		Permit Ac	tion:	Mid Term 08	P	ermit/Job#:	C198101	2
PROJECT ID	ENTIFICATIO	N							
Task #			Stata	Colora	de		4 h h	eviation:	Nono
Date			State: County:	Las An				ilename:	None C012-055
User			county.	Lus / III				inclidine.	0012 000
	Agency or o	organizativ	on name: DRI						1
				113					
HOURLY EQ	UIPMENT CO	<u>)ST</u>							
E	Basic Machine:	: Cat 31	5D L 8'-6" Stick			Но	rsepower:		115
1	Attachment 1:	: ROPS (Cab				eight (MT):	-	17.32
							Shift Basis:	-	per day
		<u> </u>				Da	ta Source:	(CRG)
Cost Breakdo	<u>wn:</u>		1						
					Utilization %				
	Ownership Co		\$51.4		NA				
	Operating Co		\$41.0		100				
	Operator Co Total Unit Co		\$37.3 \$129.8		NA				
		st/Hour.	\$129.0	55					
	Total Fleet C	ost/Hour:	\$129	.85					
MATERIAL (QUANTITIES								
	tial volume:	4,000		CCY	Swell	factor:	1.000		
Loc	ose volume:	4,000		LCY					
		irce of est	imated volume:	Oner	ator Provided (TR75)				
			ed swell factor:		landbook				
	ODUCTION								
					sic Job Condition Des				
			Cooperaternal	oh Condi	ition within Basic Des	cription:	AVERAGE		-
			Secondary J						
Excavator Cu	clo Timo (lood	huckot ov			Cycle Tim				minutes
		bucket, sv							minutes
			ving loaded, du	mp bucke	Cycle Tim et, swing empty):				minutes
				mp bucke	Cycle Tim et, swing empty):				minutes
	<u>Capacity</u>	Βι	ving loaded, dur ucket Size Class:	mp bucke	Cycle Tim et, swing empty): ium				minutes
	Capacity Rated Capa	Bu city:	ving loaded, dur ucket Size Class: 0.80	mp bucke	Cycle Tim et, swing empty): ium heaped)	e Value:	0.256		minutes
<u>oad Bucket (</u>	Capacity Rated Capa Bucket Fill Fac	Bu city: ctor:	ving loaded, dui ucket Size Class: 0.80 1.025	mp bucke : Medi LCY (I Rock	Cycle Tim et, swing empty): ium	e Value:	0.256		minutes
Load Bucket (Capacity Rated Capa Bucket Fill Fac Adjusted Capa	Bu city: ctor: ctity:	ving loaded, dur ucket Size Class: 0.80	mp bucke	Cycle Tim et, swing empty): ium heaped) - Earth Mixture (100	ve Value: %-105%)	0.256		minutes
Load Bucket (Capacity Rated Capa Bucket Fill Fac	Bu city: ctor: ctity:	ving loaded, dui ucket Size Class: 0.80 1.025	mp bucke : Medi LCY (I Rock	Cycle Tim et, swing empty): ium heaped)	ve Value: %-105%)	0.256		minutes
Load Bucket (Capacity Rated Capa Bucket Fill Fac Adjusted Capa n Correction Fa	Bu ccity: cctor: ccity: actors	ving loaded, dur ucket Size Class: 0.80 1.025 0.82	mp bucke Medi LCY (I Rock LCY So	Cycle Tim et, swing empty): ium heaped) - Earth Mixture (100 Site Altituc	ve Value: %-105%)	0.256		minutes
Load Bucket (Capacity Rated Capa Bucket Fill Fac Adjusted Capa n Correction Fac Altitude Adj	Bu ccity: cctor: ccity: acctors :	ving loaded, dui ucket Size Class: 0.80 1.025 0.82 0.90	mp bucke Medi LCY (I Rock LCY So (CA	Cycle Tim et, swing empty): ium heaped) - Earth Mixture (100 Site Altituc ource	ve Value: %-105%)	0.256		minutes
Load Bucket (Capacity Rated Capa Bucket Fill Fac Adjusted Capa n Correction Fa Altitude Adj Job Efficiency	Bucity: ctor: ctor: city: actors : :	ving loaded, dur ucket Size Class: 0.80 1.025 0.82 0.90 0.83	mp bucke Medi LCY (I Rock LCY So (CA (1 sh	Cycle Tim et, swing empty): ium heaped) - Earth Mixture (100 Site Altituc Site Altituc ource AT HB) ift/day)	ve Value: %-105%)	0.256		minutes
Load Bucket (Capacity Rated Capa Bucket Fill Fac Adjusted Capa n Correction Fac Altitude Adj	Bucity: ctor: ctor: city: actors : :	ving loaded, dui ucket Size Class: 0.80 1.025 0.82 0.90	mp bucke Medi LCY (I Rock LCY So (CA (1 sh	Cycle Tim et, swing empty): ium heaped) - Earth Mixture (100 Site Altituc ource	ve Value: %-105%)	0.256		minutes
Load Bucket (Capacity Rated Capa Bucket Fill Fac Adjusted Capa n Correction Fa Altitude Adj Job Efficiency	Bu ctor: ctor: ctor: actors ctor	ving loaded, dur ucket Size Class: 0.80 1.025 0.82 0.90 0.83	mp bucke Medi LCY (I Rock LCY So (CA (1 sh multi	Cycle Tim et, swing empty): ium heaped) - Earth Mixture (100 Site Altituc Site Altituc ource AT HB) iff/day)	e Value: <u>%-105%)</u> e: <u>7820</u> †	0.256		minutes
Load Bucket (Capacity Rated Capa Bucket Fill Fac Adjusted Capa n Correction Fa Altitude Adj Job Efficiency	Bu city: ctor: city: actors city: city	ving loaded, dur ucket Size Class: 0.80 1.025 0.82 0.90 0.83 0.75	mp bucke Medi LCY (I Rock LCY LCY So (CA (1 sh multi it Produc it Produc	Cycle Tim et, swing empty): ium heaped) - Earth Mixture (100 Site Altituc Site Altituc ource AT HB) ift/day) iplier tion: 192.19 ction: 143.56	e: <u>7820</u> 1	0.256 1.025 feet		minutes

Fleet size:	1	Excavator	Total job time:	27.86	Hours
Unit cost:	\$0.904	/LCY	Total job cost:	\$3,618	

HYDRAULIC EXCAVATOR WORK

	Fask descripti	on:	Replace	e Topsoil to Zig	Zag Road				
:	New Elk Mi	ine	[Permit Ac	ction: Mid	Term 08	Permit/Job#:	C198101	2
PR	ROJECT IDEN	TIFICATION	I						
	Task #:	056	- [State:	Colorado		Abb	reviation:	None
	Date:	8/5/2021		County:	Las Anima	S		-ilename:	C012-056
	User:	DC1		county.	Las / unite			incinante.	0012 000
_		Agency or o	ganizatio						1
		Agency or o	rganizatio	on name: DR	MS				
HC	OURLY EQUI	IPMENT CO	<u>ST</u>						
	Bas	sic Machine:	Cat 32	0D L 9'-6" Stick	<	Н	orsepower:		148
	Att	tachment 1:	ROPS (Cab		W	/eight (MT):	Ĩ	21.55
							Shift Basis:		per day
						D	ata Source:	((CRG)
<u>Co</u>	st Breakdowi	<u>n:</u>							
						Utilization %			
		wnership Cos	-	\$56.1		NA			
		perating Cos		\$47.8		100			
—		Operator Cos		\$37.3		NA			
		otal Unit Cos	ι/πour:	\$141.	21				
	Т	otal Fleet Co	st/Hour:	\$141	1.31	_			
M	ATERIAL QU	JANTITIES							
			108		CCY	Swell factor:	1.000		
	Loose	e volume:	108		LCY				
		Sour	co of octi	mated volume	. 0.2.20 V	assume 4" topsoil	_		
				ed swell factor		r Estimate			
		Source o							
нс	OURLY PROI		<u> </u>						
10	OURLY PROI					ob Condition Description			
нс	OURLY PROI					n within Basic Description	n: AVERAGE		
		DUCTION		Secondary J	ob Conditior	within Basic Description Cycle Time Value	n: AVERAGE		minutes
Exc	cavator Cycle	DUCTION			ob Conditior	within Basic Description Cycle Time Value	n: AVERAGE		minutes
Ξχα		DUCTION	pucket, sv	Secondary J ving loaded, du	mp bucket, s	within Basic Description Cycle Time Value wing empty):	n: AVERAGE		minutes
Exc	cavator Cycle	DUCTION	pucket, sv	Secondary J	mp bucket, s	within Basic Description Cycle Time Value wing empty):	n: AVERAGE		minutes
Exc	cavator Cycle ad Bucket Ca	DUCTION Time (load b pacity	bucket, sv	Secondary J ving loaded, du ucket Size Class	ob Condition	n within Basic Description Cycle Time Value wing empty):	n: AVERAGE		minutes
Exc	cavator Cycle ad Bucket Ca	DUCTION Time (load t pacity Rated Capac	bucket, sv Bu	Secondary J ving loaded, du ucket Size Class 1.54	ob Condition mp bucket, s : Medium LCY (hea	n within Basic Description Cycle Time Value wing empty): ped)	n: AVERAGE e: 0.323		minutes
Exc	cavator Cycle ad Bucket Ca Βι	DUCTION Time (load b pacity Rated Capac ucket Fill Fact	bucket, sv Bu ity: or:	Secondary J ving loaded, du ucket Size Class 1.54 1.100	ob Condition mp bucket, s : Medium LCY (hea Other - r	n within Basic Description Cycle Time Value wing empty): ped)	n: AVERAGE		minutes
Exc	cavator Cycle ad Bucket Ca Bu Adj	DUCTION Time (load k pacity Rated Capac ucket Fill Fact justed Capac	bucket, sv Bu ity: or: ity:	Secondary J ving loaded, du ucket Size Class 1.54	ob Condition mp bucket, s : Medium LCY (hea	n within Basic Description Cycle Time Value wing empty): ped) ock/dirt mixtures (100-	n: AVERAGE e: 0.323		minutes
<u>-0</u> ;	cavator Cycle ad Bucket Ca Βι	DUCTION Time (load k pacity Rated Capac ucket Fill Fact justed Capac	bucket, sv Bu ity: or: ity:	Secondary J ving loaded, du ucket Size Class 1.54 1.100	ob Condition mp bucket, s : Medium LCY (hea Other - r	n within Basic Description Cycle Time Value wing empty): ped)	n: AVERAGE e: 0.323		minutes
Exc	cavator Cycle ad Bucket Ca Bu Bu Ad	DUCTION Time (load b pacity Rated Capac ucket Fill Fact justed Capac Correction Fac	bucket, sv Bu ity: cor: ity: ctors	Secondary J ving loaded, du ucket Size Class 1.54 1.100 1.69	ob Condition mp bucket, s : Medium LCY (hea Other - r LCY Sourc	n within Basic Description Cycle Time Value swing empty): ped) ock/dirt mixtures (100- Site Altitude: <u>7700</u> e	n: AVERAGE e: 0.323		minutes
Exc	cavator Cycle ad Bucket Ca Bu Adj b Condition C	DUCTION Time (load b pacity Rated Capac Joket Fill Fact Justed Capac Correction Fact Altitude Adj:	bucket, sv Bu ity: cor: ity: ctors	Secondary J ving loaded, du ucket Size Class 1.54 1.100 1.69	ob Condition mp bucket, s Medium LCY (hea Other - r LCY Sourc (CAT H	n within Basic Description Cycle Time Value wing empty): ped) ock/dirt mixtures (100- Site Altitude: <u>7700</u> e B)	n: AVERAGE e: 0.323		minutes
Exc	cavator Cycle ad Bucket Ca Bu Adj b Condition C	DUCTION Time (load b pacity Rated Capac ucket Fill Fact justed Capac Correction Fact Correction Fact Altitude Adj: b Efficiency:	bucket, sw Bu ity: cor: ity: ctors	Secondary J ving loaded, du ucket Size Class 1.54 1.100 1.69 0.87 0.83	ob Condition mp bucket, s Medium LCY (hea Other - r LCY Sourc (CAT H (1 shift/	ped) ock/dirt mixtures (100- Site Altitude: 7700 B) day)	n: AVERAGE e: 0.323		minutes
Exc	cavator Cycle ad Bucket Ca Bu Adj b Condition C	DUCTION Time (load b pacity Rated Capac Joket Fill Fact Justed Capac Correction Fact Altitude Adj:	bucket, sw Bu ity: cor: ity: ctors	Secondary J ving loaded, du ucket Size Class 1.54 1.100 1.69	ob Condition mp bucket, s Medium LCY (hea Other - r LCY Sourc (CAT H	ped) ock/dirt mixtures (100- Site Altitude: 7700 B) day)	n: AVERAGE e: 0.323		minutes
Exc	cavator Cycle ad Bucket Ca Bu Adj b Condition C	DUCTION Time (load b pacity Rated Capac ucket Fill Fact justed Capac Correction Fact Correction Fact Altitude Adj: b Efficiency:	bucket, sw Bu ity: cor: ity: ctors Ctors Unadju	Secondary J ving loaded, du icket Size Class 1.54 1.100 1.69 0.87 0.83 0.72 sted Hourly Un	ob Condition mp bucket, s Medium LCY (hea Other - r LCY Sourc (CAT H (1 shift/ multiplie it Production	ped) ock/dirt mixtures (100- Site Altitude: 7700 e B) day) er 314.67	n: AVERAGE e: 0.323 -120%) 1.100 <u>0</u> feet LCY/Hour		minutes
	cavator Cycle ad Bucket Ca Bu Adj b Condition C	DUCTION Time (load b pacity Rated Capac ucket Fill Fact justed Capac Correction Fact Correction Fact Altitude Adj: b Efficiency:	bucket, sw Bu ity: cor: ity: ctors ctors Unadju Adju	Secondary J ving loaded, du ucket Size Class 1.54 1.100 1.69 0.87 0.83 0.72	ob Condition mp bucket, s Medium LCY (hea Other - r LCY Sourc (CAT H (1 shift/ multiplie it Production it Production	ped) ock/dirt mixtures (100- Site Altitude: 7700 B) day) er 1: 314.67 1: 227.23	n: AVERAGE e: 0.323		minutes

Fleet size:	1	Excavator	Total job time:	0.47	Hours
Unit cost:	\$0.622	/LCY	Total job cost:	\$67	

SITE MAINTENANCE

Tas	sk description:	Site Ma	intenance during th	e 10 year liabilit	y period			
Site: N	lew Elk Mine		Permit Action:	Mid Term 08		Permit/	Job#:	C1981012
	DENTIFICATION	Cha	tau Calarada	ſ	0 k k v cv		Nega	
ROJECT II Task #:	DENTIFICATION 057	Sta	ite: Colorado		Abbrev	viation:	None	
		Sta Cour				viation: ename:	None C012-0	57

DRMS

UNIT COSTS

Agency or organization name:

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Rill and gully repair	400.00	Cat D3K LGP - 3P	400.00	EA	\$101.29	\$40,516.00

Job Hours: 400	00.00	Total Cost:	\$40,516.00
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		Г		1					
New Elk Min	ne		Per	mit Action:	Mid Term (08		Permit/Jol	b#: C1981012
ROJECT IDENT	TIFICATION	<u>l</u>							
Task #: 0)58		State:	Colorado		Γ	Abbr	eviation:	None
Date: 8,	3/5/2021	C	ounty:	Las Animas			F	ilename:	C012-058
User: D	DC1								
Agency	y or organiza	tion name	e: DR	MS					
	<u>, e. e.8</u> <u>.</u>								
OURLY EQUIF	PMENT COS	<u>ST</u>							
Basic	c Machine:	Cat D9T	- 9SU			Horse	power:		405
Ripper At	ttachment:	3-Shank	Ripper				ft Basis:	1 r	oer day
						5111	t Dusis.	- P	
						-	Source:		CRG)
ost Breakdown						-			
ost Breakdown:	: <u></u>					Data			
ost Breakdown:	<u>:</u> Ownersh	ip Cost/H			\$126.01	Data Utiliza	Source:		
ost Breakdown	Ownersh	ip Cost/H	our:		\$126.01 \$141.41	Data Utiliza	Source:		
	Ownersh	ng Cost/H	our: our:			Data Utiliza N 1	Source: ation % IA		
Ripp	Ownersh Operatir	ng Cost/H ip Cost/H	our: our:		\$141.41	Data Utiliza N 1 N	Source: ation % IA 00		
Ripp	Ownersh Operatir per Ownersh per Operatir	ng Cost/H ip Cost/H	our: our: our: our:		\$141.41 \$19.26	Data Utiliza N 1 N	Source: Ation % IA 00 IA		
Ripp	Ownersh Operatir per Ownersh per Operatir Operato	ng Cost/H ip Cost/H ng Cost/H	our: our: our: our: our:		\$141.41 \$19.26 \$11.48	Data Utiliza N 1 N	Source: Ation % IA 00 IA 00		

Selected estimating method: Area

MATERIAL QUANTITIES

Alternate Methods:

	Seismic:	NA		Bank Volume:	NA	BCY	NA	
	Area:	17.86	acres	Rip Depth (ft):	2.00	Volume:	57,628	BCY or CCY
_								

Source of estimated quantity: Map 11

HOURLY PRODUCTION

~			
54	וסוב	mic	•
30	-131	THE	1

Seismic Velocit	:y: NA	feet/second	
<u>Area:</u>			
Average Ripping Dept	h: 4.05	feet/pass	
Average Ripping Widt	h: 7.67	feet/pass	
Average Ripping Lengt	h: 200.00	feet/pass	
Average Dozer Spee	d: 88.00	feet/minute	
Average Maneuver Tim	e: 0.25	minutes/pass	
Production per unit are	ea: 0.838	acres/hour	

Unadjusted Hourly Unit Production:	0.838	Acres/hr	
Site Altitude:	7,500	feet	
Altitude Adj:	1.00	(CAT HB)	
Job Efficiency:	0.83	(1 shift/day)	
Net Correction:	0.83	multiplier	
Adjusted Hourly Unit Produc	tion: 0.70	Acres/hr	

	Adjusted H	Adjusted Hourly Fleet Production:			Acres/hr		
JOB TIME AND COST							
Fleet size:	3	Grader(s)		Total job time:	8.56	Hours	
Unit cost:	\$488.306	Per acre		Total job cost:	\$8,721		

Т	ask descrip	otion:	Rip Wedge	Area P	rior to Regr	ading				
	New Elk I	Mine		Perm	nit Action:	Mid Term (08	Р	ermit/Jol	o#: C1981012
PR	OJECT IDE		<u>J</u>							
	Task #:	059	Sta	ate:	Colorado			Abbre	viation:	None
	Date:	8/5/2021	Cour	nty:	Las Animas			Fil	ename:	C012-059
	User:	DC1								
	Age	ncy or organiza	ation name:	DRM	IS					
HO	DURLY EQ	UIPMENT CO	<u>SI</u>							
	Ba	asic Machine:	Cat D9T - 9	SU			Horsepo	ower:		405
	Ripper	Attachment:	3-Shank Ri	pper			Shift E	Basis:	1 p	er day
							Data So	urce:	()	CRG)
Cos	st Breakdo [,]	wn:								
							Utilizatio	on %		
		Ownersh	nip Cost/Hour	r:		\$126.01	NA			
		Operati	ng Cost/Hour	::		\$141.41	100			
		ipper Ownersh				\$19.26	NA			
	[Ripper Operatii	-			\$11.48	100			
		Operat	or Cost/Hour	r:		\$41.30	NA			
						\$339.46				
		Total Ur	nit Cost/Hour			ŞSS9.40				

Selected estimating method: Area

MATERIAL QUANTITIES

Alternate Methods:

[Seismic:	NA		Bank Volume:	NA	BCY	NA	
	Area:	1.60	acres	Rip Depth (ft):	2.00	Volume:	5,163	BCY or CCY
-			_					

Source of estimated quantity: Map 11

HOURLY PRODUCTION

Seismic:

Seismic Velocity:	NA	feet/second
Area:		
Average Ripping Depth:	4.05	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

Unadjusted Hourly Unit Production:	0.838	Acres/hr	
Site Altitude:	7,500	feet	
Altitude Adj:	1.00	(CAT HB)	
Job Efficiency:	0.83	(1 shift/day)	
Net Correction:	0.83	multiplier	
Adjusted Hourly Unit Produc	tion: 0.70	Acres/hr	

	Adjusted	Hourly Fleet Produc	tion:	2.09	Acres/hr	
OB TIME AND	<u>COST</u>					
Fleet size:	3	Grader(s)	Т	otal job time:	0.77	Hours
Unit cost:	\$488.306	Per acre	r I	Total job cost:	\$781	

-						
New Elk Mine	Р	ermit Action:	Mid Term (08	Permit/Jo	b#: C1981012
ROJECT IDENTIFICATION						
Task #: 060	State:	Colorado		Abbr	eviation:	None
Date: 8/5/2021	County:	Las Animas		F	ilename:	C012-060
User: DC1						
Agency or organizat	ion name: D	RMS				
		-				
OURLY EQUIPMENT COS	<u>T</u>					
Basic Machine:	Cat D9T - 9SU			Horsepower:		405
Ripper Attachment:	3-Shank Rippe	r		Shift Basis:	1 p	er day
				Data Source:	(CRG)
ost Breakdown:						
			1	Utilization %		
	p Cost/Hour:		\$126.01	NA		
Ownershi	p Cost/Hour: g Cost/Hour:		\$126.01 \$141.41			
Ownershi	g Cost/Hour:			NA		
Ownershi Operatin	g Cost/Hour: p Cost/Hour:		\$141.41	NA 100		
Ownershij Operatin Ripper Ownershij Ripper Operatin	g Cost/Hour: p Cost/Hour:		\$141.41 \$19.26	NA 100 NA		
Ownershij Operatin Ripper Ownershij Ripper Operatin Operato	g Cost/Hour: p Cost/Hour: g Cost/Hour:		\$141.41 \$19.26 \$11.48	NA 100 NA 100		

Selected estimating method: Area

MATERIAL QUANTITIES

Alternate Methods:

[Seismic:	NA		Bank Volume:	NA	BCY	NA	
	Area:	5.37	acres	Rip Depth (ft):	2.00	Volume:	17,327	BCY or CCY
-			-					

Source of estimated quantity: Map 11

HOURLY PRODUCTION

Seismic:

Seismic Velocity:	NA	feet/second
Area:		
Average Ripping Depth:	4.05	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

Unadjusted Hourly Unit Production:	0.838	Acres/hr	
Site Altitude:	7,500	feet	
Altitude Adj:	1.00	(CAT HB)	
Job Efficiency:	0.83	(1 shift/day)	
Net Correction:	0.83	multiplier	
Adjusted Hourly Unit Produc	tion: 0.70	Acres/hr	

	Adjusted	Adjusted Hourly Fleet Production:			Acres/hr	
JOB TIME AND	<u>COST</u>					
Fleet size:	3	Grader(s)		Total job time:	2.57	Hours
Unit cost:	\$488.306	Per acre		Total job cost:	\$2,622	

: New Elk	Mine		Permit Action:	Mid Term (08	Permit/Job	o#: C1981012
PROJECT ID	ENTIFICATION	<u>i</u>					
Task #:	061	Stat	e: Colorado		Ab	breviation:	None
Date:	8/5/2021	Count	:y: Las Animas			Filename:	C012-061
User:	DC1						
Age	ency or organiza	ation name:	DRMS				
	UIPMENT CO	<u>51</u>					
E	asic Machine:	Cat D9T - 95	U		Horsepower	:	405
Rippe	r Attachment:	3-Shank Rip	per		Shift Basis	: 1 p	er day
					Data Source	: (CRG)
		-					ee/
Cost Breakdo	own:	2					
Cost Breakdo	<u>own:</u>				Utilization %		
Cost Breakdo		ip Cost/Hour:	-	\$126.01	Utilization % NA		
Cost Breakdo	Ownersh	ip Cost/Hour: ng Cost/Hour:		\$126.01 \$141.41			
	Ownersh	ng Cost/Hour:			NA		
	Ownersh Operatii	ng Cost/Hour: ip Cost/Hour:		\$141.41	NA 100		
	Ownersh Operati Ripper Ownersh Ripper Operati	ng Cost/Hour: ip Cost/Hour:		\$141.41 \$19.26	NA 100 NA		
	Ownersh Operatii Ripper Ownersh Ripper Operatii Operat	ng Cost/Hour: iip Cost/Hour: ng Cost/Hour:		\$141.41 \$19.26 \$11.48	NA 100 NA 100		

MATERIAL QUANTITIES

Alternate Methods:

	Seismic:	NA		Bank Volume:	NA	BCY	NA		
	Area:	24.92	acres	Rip Depth (ft):	1.50	Volume:	60,306	BCY or CCY	
_									

Source of estimated quantity: Map 16 (substract out DWDA#3 area Map12)

HOURLY PRODUCTION

Seismic:			
Seisining.	Coic	mic	
	Seis	mc.	

Seismic Velocity:	NA	feet/second
Area:		
Average Ripping Depth:	4.05	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

Unadjusted Hourly Unit Production:	0.838	Acres/hr	
Site Altitude:	7,500	feet	
Altitude Adj:	1.00	(CAT HB)	
Job Efficiency:	0.83	(1 shift/day)	
Net Correction:	0.83	multiplier	
Adjusted Hourly Unit Product	ion: 0.70	Acres/hr	

		Adjusted H	Hourly Fleet Product	ion:	2.09	Acres/hr		
<u>10</u>	B TIME AND	<u>COST</u>						
	Fleet size:	3	Grader(s)		Total job time:	11.95	Hours	
	Unit cost:	\$488.306	Per acre		Total job cost:	\$12,169		

<u>:</u> :	New Elk	Mine		Permit	Action:	Mid Term ()8	Perm	nit/Job	#:	C1981012
<u>P</u>	ROJECT ID	ENTIFICATION	<u>l</u>								
Γ	Task #:	062	Sta	ate: Co	olorado			Abbreviat	ion:	Nor	ne
	Date:	8/5/2021	Coun	nty: La	is Animas			Filena	me:	C01	.2-062
	User:	DC1									
	Age	ency or organiza	tion name:	DRMS							
<u>H</u>	OURLY EQ	UIPMENT COS	<u>5T</u>								
Γ	В	asic Machine:	Cat D9T - 9	SU			Horsepo	wer:	4	105	
	Ripper	r Attachment:	3-Shank Rij	pper			Shift B	acic	1 n/	er da	
							JIIILD	2313.	тр	ci ua	у
				<u> </u>			Data Sou			CRG)	У
C	ost Breakdo	wn:		<u> </u>							<u>y</u>
<u>C</u>	ost Breakdo	wn:						rce:			<u>y</u>
	ost Breakdo		ip Cost/Hour			\$126.01	Data Sou	rce:			<u>y</u>
	ost Breakdo	Ownersh	ip Cost/Hour ng Cost/Hour	:		\$126.01 \$141.41	Data Sou Utilizatio	rce:			<u>y</u>
		Ownersh	ng Cost/Hour	· · · · · · · · · · · · · · · · · · ·			Data Sou Utilizatio NA	rce:			<u>y</u>
	R	Ownersh Operatir	ng Cost/Hour ip Cost/Hour	· · · · · · · · · · · · · · · · · · ·		\$141.41	Data Sou Utilizatio NA 100	rce:			<u>y</u>
	R	Ownersh Operatir Ripper Ownersh Ripper Operatir	ng Cost/Hour ip Cost/Hour	······································		\$141.41 \$19.26	Data Sou Utilizatio NA 100 NA	rce:			<u>y</u>
	R	Ownersh Operatir Ripper Ownersh Ripper Operatir Operat	ng Cost/Hour ip Cost/Hour ng Cost/Hour	······································		\$141.41 \$19.26 \$11.48	Data Sou Utilizatio NA 100 NA 100	rce:			<u>y</u>

Selected estimating method: Area

MATERIAL QUANTITIES

Alternate Methods:

	Seismic:	NA		Bank Volume:	NA	BCY	NA	
	Area:	35.00	acres	Rip Depth (ft):	2.00	Volume:	112,933	BCY or CCY
-			-					

Source of estimated quantity: Map 11

HOURLY PRODUCTION

Seismic:

NA	feet/second
4.05	feet/pass
7.67	feet/pass
200.00	feet/pass
88.00	feet/minute
0.25	minutes/pass
0.838	acres/hour
	4.05 7.67 200.00 88.00 0.25

Unadjusted Hourly Unit Production:	0.838	Acres/hr	
Site Altitude:	7,500	feet	
Altitude Adj:	1.00	(CAT HB)	
Job Efficiency:	0.83	(1 shift/day)	
Net Correction:	0.83	multiplier	
		<u> </u>	
Adjusted Hourly Unit Product	ion: 0.70	Acres/hr	

	Adjusted H	Adjusted Hourly Fleet Production:			Acres/hr		
JOB TIME AND	<u>COST</u>						
Fleet size:	3	Grader(s)		Total job time:	16.78	Hours	
Unit cost:	\$488.306	Per acre		Total job cost:	\$17,091		

Task descrip	tion:	Rip Z	ig Zag F	Road	and Slurry Li	ne Road				
New Elk N	Mine			Per	mit Action:	Mid Term ()8	Permit/Jo	b#:	C1981012
PROJECT IDE	NTIFICATION	l								
Task #:	063		Sta	te:	Colorado		A	bbreviation:	No	ne
Date:	8/5/2021		Coun	ty:	Las Animas			Filename:	C0	12-063
User:	DC1									
Ager	ncy or organiza	ation n	ame:	DR	MS					
	JIPMENT COS									
		•••	DOT OF	~					405	
	asic Machine:		D9T - 99				Horsepowe		405	
	asic Machine: Attachment:		D9T - 99 nank Rip				Shift Basi	s: 1 p	ber d	
Ripper	Attachment:							s: 1 p		
Ripper	Attachment:						Shift Basi Data Source	s: 1 p e: (ber d	
Ripper	Attachment: wn:	3-Sh	nank Rip	oper			Shift Basi Data Source Utilization 9	s: 1 p e: (ber d	
Ripper	Attachment: <u>wn:</u> Ownersh	3-Sh	nank Rip	pper		\$126.01	Shift Basi Data Source	s: 1 p e: (ber d	
Ripper Cost Breakdov	Attachment: <u>wn:</u> Ownersh Operatir	3-Sh ip Cost	nank Rip st/Hour: st/Hour:	oper		\$141.41	Shift Basi Data Source Utilization 9	s: 1 p e: (ber d	
Ripper Cost Breakdov	Attachment: <u>wn:</u> Ownersh	3-Sh ip Cost	nank Rip st/Hour: st/Hour:	oper			Shift Basi Data Source Utilization 9 NA	s: 1 p e: (ber d	
Ripper Cost Breakdov	Attachment: <u>wn:</u> Ownersh Operatir	3-Sh iip Cost ng Cost iip Cost	ank Rip t/Hour: t/Hour: t/Hour:	oper		\$141.41	Shift Basi Data Source Utilization 9 NA 100	s: 1 p e: (ber d	
Ripper Cost Breakdov	Attachment: <u>wn:</u> Ownersh Operatir ipper Ownersh	3-Sh ip Cost ip Cost ip Cost ng Cost	t/Hour: t/Hour: t/Hour: t/Hour:	pper		\$141.41 \$19.26	Shift Basi Data Source Utilization 9 NA 100 NA	s: 1 p e: (ber d	
Ripper Cost Breakdov	Attachment: <u>wn:</u> Ownersh Operatir ipper Ownersh Ripper Operatir	3-Sh ip Cost ng Cost ip Cost ng Cost or Cost	ank Rip st/Hours st/Hours st/Hours st/Hours	pper		\$141.41 \$19.26 \$11.48	Shift Basi Data Source Utilization 9 NA 100 NA 100	s: 1 p e: (ber d	

Selected estimating method: Area

MATERIAL QUANTITIES

Alternate Methods:

[Seismic:	NA		Bank Volume:	NA	BCY	NA	
	Area:	0.80	acres	Rip Depth (ft):	1.00	Volume:	1,291	BCY or CCY
-			6					

Source of estimated quantity: PAP Page 2.05-7c, Map 12, Map 11-sheet 1

HOURLY PRODUCTION

Seis	IIIIC.

	Seismic Velocity:	NA	feet/second	
<u>Area:</u>				
	Average Ripping Depth:	2.63	feet/pass	
	Average Ripping Width:	7.67	feet/pass	
	Average Ripping Length:	75.00	feet/pass	
	Average Dozer Speed:	88.00	feet/minute	
	Average Maneuver Time:	0.25	minutes/pass	
	Production per unit area:	0.719	acres/hour	

Unadjusted Hourly Unit Production:	0.719	Acres/hr	
Site Altitude:	7,700	feet	
Altitude Adj:	1.00	(CAT HB)	
Job Efficiency:	0.83	(1 shift/day)	
Net Correction:	0.83	multiplier	
Adjusted Hourly Unit Product	ion: 0.60	Acres/hr	

	Adjusted I	Hourly Fleet Producti	on: 1 .	.79	Acres/hr		
JOB TIME AND	<u>COST</u>						
Fleet size:	3	Grader(s)	Total jo	ob time:	0.45	Hours	
Unit cost:	\$568.957	Per acre	Total jo	ob cost:	\$455		

REVEGETATION WORK

Task description:	Reseed RDA Borrow Area	
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#: C1981012

PROJECT IDENTIFICATION

Task #:	064	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-064
User:	DC1				
Age	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

<u>TILLING</u>

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Buffalograss - Bison	0.50	0.48	\$4.75
Blue Grama - Hachita	0.67	10.94	\$10.70
Little Bluestem - Cimarron	1.20	7.16	\$14.98
Sideoats Grama - Butte	2.50	8.21	\$22.50
Milk Vetch, Cicer - Monarch	0.33	1.10	\$2.71
Streambank Wheatgrass - Sodar	1.50	4.89	\$8.55
Sainfoin - Remont	1.67	0.73	\$5.28

Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Arriba	2.00	5.05	\$13.00
Rabbitbrush, Rubber	0.15	2.23	\$9.64
Rose, Wood's	0.20	0.00	\$4.10
Daisy or Sunflower, Maximillians	0.11	0.62	\$6.16
Flax, Lewis Blue	0.11	0.73	\$1.82
Spike Muhly	0.33	12.12	\$3.20
Penstemon, Rocky Mountain	0.11	1.72	\$3.25
Totals Seed Mix	11.88	57.76	\$114.07

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

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

NURSERY STOCK PLANTING

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

No. of Acres:	5	Cost /Acre:	\$1,137.97
Estimated Failure Rate:	33%	Cost /Acre*:	\$346.07
 *Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$5,689.85
Reseeding Job Cost:	\$571.02
Total Job Cost:	\$6,261
Job Hours:	5.00

REVEGETATION WORK

Task description:	Reseed Facilities Area with Rangeland Mix					
Site: New Elk Mine	te: New Elk Mine Permit Action: Mid Term 08 Permit/Job#: C1981012					

PROJECT IDENTIFICATION

Task #:	065	State:	Colorado	Abbreviation:	None		
Date:	8/5/2021	County:	Las Animas	Filename:	C012-065		
User:	DC1						
Agency or organization name: DRMS							

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	30.00	pound	\$0.37	\$11.10
			Total Fertilizer Materials Cost/Acre	\$11.10

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$38.77
	Total Fertilizer Application Cost/Acre	\$38.77

<u>TILLING</u>

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Buffalograss - Bison	0.50	0.48	\$4.75
Blue Grama - Hachita	0.67	10.94	\$10.70
Little Bluestem - Cimarron	1.20	7.16	\$14.98
Sideoats Grama - Butte	2.50	8.21	\$22.50
Milk Vetch, Cicer - Monarch	0.33	1.10	\$2.71
Streambank Wheatgrass - Sodar	1.50	4.89	\$8.55
Sainfoin - Remont	1.67	0.73	\$5.28
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Arriba	2.00	5.05	\$13.00

Rabbitbrush, Rubber	0.15	2.23	\$9.64
Rose, Wood's	0.25	0.00	\$5.13
Daisy or Sunflower, Maximillians	0.11	0.62	\$6.16
Flax, Lewis Blue	0.11	0.73	\$1.82
Spike Muhly	0.33	12.12	\$3.20
Penstemon, Rocky Mountain	0.11	1.72	\$3.25
Totals Seed Mix	11.93	57.76	\$115.09

Application

Description		Cost /Acre
Drill Seeding (DRMS Survey Cost)		\$232.00
То	tal Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

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

NURSERY STOCK PLANTING

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

No. of Acres:	97.26	Cost /Acre:	\$1,188.86
Estimated Failure Rate:	33%	Cost /Acre*:	\$347.09
 *Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$115,628.52
Reseeding Job Cost:	\$11,140.13
Total Job Cost:	\$126,769
Job Hours:	178.00

REVEGETATION WORK

Task description:	Reseed RDA	
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#: C1981012

PROJECT IDENTIFICATION

Task #:	066	State:	Colorado	Abbreviation:	None		
Date:	8/5/2021	County:	Las Animas	Filename:	C012-066		
User:	DC1						
Age	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

<u>TILLING</u>

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Buffalograss - Bison	0.50	0.48	\$4.75
Blue Grama - Hachita	0.67	10.94	\$10.70
Little Bluestem - Cimarron	1.20	7.16	\$14.98
Sideoats Grama - Butte	2.50	8.21	\$22.50
Milk Vetch, Cicer - Monarch	0.33	1.10	\$2.71
Streambank Wheatgrass - Sodar	1.50	4.89	\$8.55
Sainfoin - Remont	1.67	0.73	\$5.28

Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Arriba	2.00	5.05	\$13.00
Rabbitbrush, Rubber	0.15	2.23	\$9.64
Rose, Wood's	0.20	0.00	\$4.10
Daisy or Sunflower, Maximillians	0.11	0.62	\$6.16
Flax, Lewis Blue	0.11	0.73	\$1.82
Spike Muhly	0.33	12.12	\$3.20
Penstemon, Rocky Mountain	0.11	1.72	\$3.25
Totals Seed Mix	11.88	57.76	\$114.07

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

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

NURSERY STOCK PLANTING

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

No. of Acres:	31.75	Cost /Acre:	\$1,137.97
Estimated Failure Rate:	33%	Cost /Acre*:	\$346.07
 *Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$36,130.55			
Reseeding Job Cost:	\$3,625.95			
Total Job Cost:	\$39,756			
Job Hours:	95.25			
Task description:	Reseed DWP with Rangeland Mix			
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Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#: C1981012		

PROJECT IDENTIFICATION

Task #:	067	State:	Colorado	Abbreviation:	None	
Date:	8/5/2021	County:	Las Animas	Filename:	C012-067	
User:	DC1					
Agency or organization name: DRMS						

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	30.00	pound	\$0.37	\$11.10
			Total Fertilizer Materials Cost/Acre	\$11.10

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$38.77
	Total Fertilizer Application Cost/Acre	\$38.77

<u>TILLING</u>

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

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Buffalograss - Bison	0.50	0.48	\$4.75
Blue Grama - Hachita	0.67	10.94	\$10.70
Little Bluestem - Cimarron	1.20	7.16	\$14.98
Sideoats Grama - Butte	2.50	8.21	\$22.50
Smooth Brome - Manchar	1.00	3.33	\$3.33
Milk Vetch, Cicer - Monarch	0.33	1.10	\$2.71
Streambank Wheatgrass - Sodar	1.50	4.89	\$8.55
Sainfoin - Remont	1.67	0.73	\$5.28
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44

Western Wheatgrass - Arriba	2.00	5.05	\$13.00
Rabbitbrush, Rubber	0.15	2.23	\$9.64
Rose, Wood's	0.25	0.00	\$5.13
Daisy or Sunflower, Maximillians	0.11	0.62	\$6.16
Flax, Lewis Blue	0.11	0.73	\$1.82
Spike Muhly	0.33	12.12	\$3.20
Penstemon, Rocky Mountain	0.11	1.72	\$3.25
Totals Seed Mix	12.93	61.08	\$118.42

Description		Cost /Acre
Drill Seeding (DRMS Survey Cost)		\$232.00
	Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

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

NURSERY STOCK PLANTING

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

No. of Acres:	5.62	Cost /Acre:	\$1,192.19
Estimated Failure Rate:	33%	Cost /Acre*:	\$350.42
 *Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$6,700.11
Reseeding Job Cost:	\$649.89
Total Job Cost:	\$7,350
Job Hours:	11.24

Task description:	Reseed Disturbed Areas with Riparian Habitat				
Site: New Elk Mine Permit Action: Mid Term 08 Permit/Job#: C1981012					

PROJECT IDENTIFICATION

Task #:	068	State:	Colorado	Abbreviation:	None		
Date:	8/5/2021	County:	Las Animas	Filename:	C012-068		
User:	DC1						
Ag	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

<u>TILLING</u>

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

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Buffalograss - Bison	1.00	0.96	\$9.50
Blue Grama - Hachita	1.34	21.87	\$21.41
Little Bluestem - Cimarron	2.40	14.33	\$29.96
Sideoats Grama - Butte	5.00	16.41	\$45.00
Milk Vetch, Cicer - Monarch	0.66	2.20	\$5.41
Streambank Wheatgrass - Sodar	3.00	9.78	\$17.10
Sainfoin - Remont	3.34	1.46	\$10.55

Thickspike Wheatgrass - Critana	1.00	3.54	\$6.88
Western Wheatgrass - Arriba	4.00	10.10	\$26.00
Rabbitbrush, Rubber	0.30	4.47	\$19.29
Rose, Wood's	0.50	0.00	\$10.25
Daisy or Sunflower, Maximillians	0.22	1.25	\$12.32
Flax, Lewis Blue	0.22	1.46	\$3.63
Spike Muhly	0.66	24.24	\$6.40
Penstemon, Rocky Mountain	0.22	3.45	\$6.49
Totals Seed Mix	23.86	115.51	\$230.19

Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

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

NURSERY STOCK PLANTING

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

No. of Acres:	10.57	Cost /Acre:	\$1,289.31
Estimated Failure Rate:	33%	Cost /Acre*:	\$497.41
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$13,628.01
Reseeding Job Cost:	\$1,735.02
Total Job Cost:	\$15,363
Job Hours:	21.14

	Task description:	Plant 6	ant 6 Shrub Clumps				
Site:	New Elk Mine		Permit Action:	Mid Term 08	Permit/Job#:	C1981012	

PROJECT IDENTIFICATION

Task #:	069	State:	Colorado	Abbreviation:	None
Date: 8/5/2021 County		County:	Las Animas	Filename:	C012-069
User:	DC1				
Age					

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

<u>TILLING</u>

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre

	\$
Total Seed Application Cos	t/Acre \$0.00

MULCHING and MISCELLANEOUS

Materials

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

Application

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

NURSERY STOCK PLANTING

No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
74	Tubling, 10 cu. in. container {(MEANS)	\$2.43	\$2.40	\$179.82
74	Tubling, 10 cu. in. container {(MEANS)	\$2.43	\$2.40	\$179.82
74	Tubling, 10 cu. in. container {(MEANS)	\$2.03	\$2.40	\$150.22
74	Tubling, 10 cu. in. container {(MEANS)	\$2.05	\$2.40	\$151.70
74	Tubling, 10 cu. in. container {(MEANS)	\$2.05	\$2.40	\$151.70
74	Tubling, 10 cu. in. container {(MEANS)	\$4.45	\$2.40	\$329.30
	Tot	ala Nursary Sta	ek Cost / Acro	\$1,142.56
	Acre 74 74 74 74 74 74 74	AcreType and Size74Tubling, 10 cu. in. container {(MEANS)74Tubling, 10 cu. in. container {(MEANS)	AcreType and SizeCost74Tubling, 10 cu. in. container {(MEANS)\$2.4374Tubling, 10 cu. in. container {(MEANS)\$2.0374Tubling, 10 cu. in. container {(MEANS)\$2.0374Tubling, 10 cu. in. container {(MEANS)\$2.0574Tubling, 10 cu. in. container {(MEANS)\$2.0574Tubling, 10 cu. in. container {(MEANS)\$2.0574Tubling, 10 cu. in. container {(MEANS)\$4.4574Tubling, 10 cu. in. container {(MEANS)\$4.45	AcreType and SizeCostPellet Cost74Tubling, 10 cu. in. container {(MEANS)\$2.43\$2.4074Tubling, 10 cu. in. container {(MEANS)\$2.43\$2.4074Tubling, 10 cu. in. container {(MEANS)\$2.03\$2.4074Tubling, 10 cu. in. container {(MEANS)\$2.03\$2.4074Tubling, 10 cu. in. container {(MEANS)\$2.05\$2.4074Tubling, 10 cu. in. container {(MEANS)\$2.45\$2.40

No. of Acres:	1.4	Cost /Acre:	\$1,142.56
Estimated Failure Rate:	50%	Cost /Acre*:	\$1,142.56
 *Selected Replanting Work Items:	NURSERY		

Initial Job Cost:	\$1,599.58
Reseeding Job Cost:	\$799.79
Total Job Cost:	\$2,399
Job Hours:	5.60

	Task description: Weed Control - Assume 1/4 of Area Three Times						
Site:	New Elk Mine		Permit Action:	Mid Term 08	Permit/Job#:	C1981012	

PROJECT IDENTIFICATION

Task #:	070	State:	Colorado	Abbreviation:	None		
Date:	8/5/2021	County:	Las Animas	Filename:	C012-070		
User:	DC1						
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

<u>TILLING</u>

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

<u>SEEDING</u>

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

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

	\$
Total Seed Application Cost/Ac	re \$0.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.98	\$2.98
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$4.52	\$4.52
Total Mulch Materials Cost/Acre				\$7.50

Application

Description		Cost /Acre
Weed spray, hand, non-aquatic area, nox. [DMG]		\$183.16
	Total Mulch Application Cost/Acre	\$183.16

NURSERY STOCK PLANTING

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

No. of Acres:	102.71	Cost /Acre:	\$190.66
Estimated Failure Rate:	0%	Cost /Acre*:	\$0.00
 *Selected Replanting Work Items:	NONE		

Initial Job Cost:	\$19,582.69
Reseeding Job Cost:	\$0.00
Total Job Cost:	\$19,583
Job Hours:	102.71

Task description:	Seed Rangeland Seed Mix on MR Areas			
Site: New Elk Mine	Permit Action: Mid Term	08 Permit/Job#: C1981		

PROJECT IDENTIFICATION

Task #:	071	State:	Colorado	Abbreviation:	None	
Date:	8/5/2021	County:	Las Animas	Filename:	C012-071	
User:	DC1					
Age	Agency or organization name: DRMS					

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	30.00	pound	\$0.37	\$11.10
			Total Fertilizer Materials Cost/Acre	\$11.10

Application

Description Hand spread (MEANS 32 01 90.13 0100)		Cost /Acre \$644.69
	Total Fertilizer Application Cost/Acre	\$644.69

<u>TILLING</u>

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

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Buffalograss - Bison	1.00	0.96	\$9.50
Blue Grama - Hachita	1.34	21.87	\$21.41
Little Bluestem - Cimarron	2.40	14.33	\$29.96
Sideoats Grama - Butte	5.00	16.41	\$45.00
Milk Vetch, Cicer - Monarch	0.66	2.20	\$5.41
Streambank Wheatgrass - Sodar	3.00	9.78	\$17.10
Sainfoin - Remont	3.34	1.46	\$10.55
Thickspike Wheatgrass - Critana	1.00	3.54	\$6.88
Western Wheatgrass - Arriba	4.00	10.10	\$26.00

Rabbitbrush, Rubber	0.30	4.47	\$19.29
Rose, Wood's	0.50	0.00	\$10.25
Daisy or Sunflower, Maximillians	0.22	1.25	\$12.32
Flax, Lewis Blue	0.22	1.46	\$3.63
Spike Muhly	0.66	24.24	\$6.40
Penstemon, Rocky Mountain	0.22	3.45	\$6.49
Totals Seed Mix	23.86	115.51	\$230.19

Description		Cost /Acre
Broadcast seeding [DMG]		\$267.22
	Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$71.57
Total Mulch Application Cost/Acre	\$71.57

NURSERY STOCK PLANTING

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

No. of Acres:	2.22	Cost /Acre:	\$1,838.81
Estimated Failure Rate:	33%	Cost /Acre*:	\$497.41
 *Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$4,082.16
Reseeding Job Cost:	\$364.40
Total Job Cost:	\$4,447
Job Hours:	2.22

Task description:	Reseed C&W Facilities Area with Rangeland Mix					
Site: New Elk Mine						

PROJECT IDENTIFICATION

Task #:	072	State:	Colorado	Abbreviation:	None	
Date:	8/5/2021	County:	Las Animas	Filename:	C012-072	
User:	DC1					
Agency or organization name: DRMS						

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	30.00	pound	\$0.37	\$11.10
			Total Fertilizer Materials Cost/Acre	\$11.10

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$38.77
	Total Fertilizer Application Cost/Acre	\$38.77

<u>TILLING</u>

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

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Buffalograss - Bison	0.50	0.48	\$4.75
Blue Grama - Hachita	0.67	10.94	\$10.70
Little Bluestem - Cimarron	1.20	7.16	\$14.98
Sideoats Grama - Butte	2.50	8.21	\$22.50
Milk Vetch, Cicer - Monarch	0.33	1.10	\$2.71
Streambank Wheatgrass - Sodar	1.50	4.89	\$8.55
Sainfoin - Remont	1.67	0.73	\$5.28
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Arriba	2.00	5.05	\$13.00

Rabbitbrush, Rubber	0.15	2.23	\$9.64
Rose, Wood's	0.25	0.00	\$5.13
Daisy or Sunflower, Maximillians	0.11	0.62	\$6.16
Flax, Lewis Blue	0.11	0.73	\$1.82
Spike Muhly	0.33	12.12	\$3.20
Penstemon, Rocky Mountain	0.11	1.72	\$3.25
Totals Seed Mix	11.93	57.76	\$115.09

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Ac	cre \$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

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

NURSERY STOCK PLANTING

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

No. of Acres:	6	Cost /Acre:	\$1,188.86
Estimated Failure Rate:	33%	Cost /Acre*:	\$347.09
 *Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$7,133.16
Reseeding Job Cost:	\$687.24
Total Job Cost:	\$7,820
Job Hours:	12.00

Task description:	Reseed Zig Zag with Rangland Mix				
Site: New Elk Mine	Permit Action: Mid Term 08	Permit/Job#: C1981012			

PROJECT IDENTIFICATION

Task #:	073	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-073
User:	DC1				
Age	ency or organization	n name: DR	MS		

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	30.00	pound	\$0.37	\$11.10
			Total Fertilizer Materials Cost/Acre	\$11.10

Application

Description		Cost /Acre
NA-fertilizer application incl. with hydroseeding		\$201.68
	Total Fertilizer Application Cost/Acre	\$201.68

<u>TILLING</u>

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

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Buffalograss - Bison	1.00	0.96	\$9.50
Blue Grama - Hachita	1.34	21.87	\$21.41
Little Bluestem - Cimarron	2.40	14.33	\$29.96
Sideoats Grama - Butte	5.00	16.41	\$45.00
Milk Vetch, Cicer - Monarch	0.66	2.20	\$5.41
Streambank Wheatgrass - Sodar	3.00	9.78	\$17.10
Sainfoin - Remont	3.34	1.46	\$10.55
Thickspike Wheatgrass - Critana	1.00	3.54	\$6.88
Western Wheatgrass - Arriba	4.00	10.10	\$26.00

Rabbitbrush, Rubber	0.30	4.47	\$19.29
Rose, Wood's	0.50	0.00	\$10.25
Daisy or Sunflower, Maximillians	0.22	1.25	\$12.32
Flax, Lewis Blue	0.22	1.46	\$3.63
Spike Muhly	0.66	24.24	\$6.40
Penstemon, Rocky Mountain	0.22	3.45	\$6.49
Totals Seed Mix	23.86	115.51	\$230.19

Description	Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)	\$965.73
Total Seed Application Cost/Acre	\$965.73

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hydromulch, 1 ton/ac. rate {Materials Only}	2.00	ACRE	\$424.71	\$849.42
Total Mulch Materials Cost/Acre				\$849.42

Application

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

NURSERY STOCK PLANTING

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

No. of Acres:	0.8	Cost /Acre:	\$2,258.12
Estimated Failure Rate:	33%	Cost /Acre*:	\$1,195.92
 *Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$1,806.50
Reseeding Job Cost:	\$315.72
Total Job Cost:	\$2,122
Job Hours:	1.60

	Task description:	Reseed	Reseed West DWDA Expansion Area with Rangeland Mix					
Site:	Site: New Elk Mine Permit Action: Mid Term 08 Permit/Job#: C1981012							

PROJECT IDENTIFICATION

Task #:	074	State:	Colorado	Abbreviation:	None	
Date:	8/5/2021	County:	Las Animas	Filename:	C012-074	
User:	DC1					
Agency or organization name: DRMS						

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	30.00	pound	\$0.37	\$11.10
			Total Fertilizer Materials Cost/Acre	\$11.10

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$38.77
	Total Fertilizer Application Cost/Acre	\$38.77

<u>TILLING</u>

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

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Buffalograss - Bison	0.50	0.48	\$4.75
Blue Grama - Hachita	0.67	10.94	\$10.70
Little Bluestem - Cimarron	1.20	7.16	\$14.98
Sideoats Grama - Butte	2.50	8.21	\$22.50
Milk Vetch, Cicer - Monarch	0.33	1.10	\$2.71
Streambank Wheatgrass - Sodar	1.50	4.89	\$8.55
Sainfoin - Remont	1.67	0.73	\$5.28
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Arriba	2.00	5.05	\$13.00

Rabbitbrush, Rubber	0.15	2.23	\$9.64
Rose, Wood's	0.25	0.00	\$5.13
Daisy or Sunflower, Maximillians	0.11	0.62	\$6.16
Flax, Lewis Blue	0.11	0.73	\$1.82
Spike Muhly	0.33	12.12	\$3.20
Penstemon, Rocky Mountain	0.11	1.72	\$3.25
Totals Seed Mix	11.93	57.76	\$115.09

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Ac	cre \$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

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

NURSERY STOCK PLANTING

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

No. of Acres:	10.2	Cost /Acre:	\$1,188.86
Estimated Failure Rate:	33%	Cost /Acre*:	\$347.09
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$12,126.37
Reseeding Job Cost:	\$1,168.30
Total Job Cost:	\$13,295
Job Hours:	20.40

Task description:	Seed NW Vent Fan and Access Road (TR72)				
Site: New Elk Mine Permit Action: Mid Term 08 Permit/Job#: C1981012					
PROJECT IDENTIFICATION					

RUJECT IDENTIFICATION

Task #:	075	State:	Colorado	Abbreviation:	None
Date:	8/5/2021	County:	Las Animas	Filename:	C012-075
User:	DC1				
Agency or organization name: DRMS					

FERTILIZING

Materials

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

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
Blue Grama - Native	0.67	10.94	\$9.20
Buffalograss - Native/Plains	0.50	0.48	\$6.03
Little Bluestem - Native	1.20	7.16	\$16.28
Sideoats Grama - Vaughn	2.50	8.21	\$20.94
Smooth Brome - Lincoln	1.00	3.33	\$3.33
Kleingrass - Select 75	0.33	3.77	\$3.26
Milk Vetch, Cicer - Monarch	0.33	1.10	\$2.71
Streambank Wheatgrass - Sodar	1.50	4.89	\$8.55
Sainfoin - Remont	1.67	0.73	\$5.28
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Native	2.00	5.05	\$12.00
Totals Seed Mix	12.20	47.42	\$91.00

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				4
				\$614.04

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$71.57
	Total Mulch Application Cost/Acre	\$71.57

NURSERY STOCK PLANTING

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

No. of Acres:	1.55	Cost /Acre:	\$1,008.61
Estimated Failure Rate:	40%	Cost /Acre*:	\$1,008.61
 *Selected Replanting Work Items:	SEEDING, MULCHI	NG	

Initial Job Cost:	\$1,563.35
Reseeding Job Cost:	\$625.34
Total Job Cost:	\$2,189
Job Hours:	1.55

BILIZATION/DEMOBILIZATION

Task desc	ription:	Mobilize/Demobil	lize Equipment for	Initial Rec	lamation			
: New El	k Mine	Perr	mit Action: Mid T	erm 08	Pe	ermit/Jo	ob#: <u>C1</u>	.981012
PROJECT I	IDENTIFICATION							
Task #	t: 076	State:	Colorado		Abbrev	iation:	None	
Date	e: 8/5/2021	County:	Las Animas		 File	name:	C012-0	076
User	r: DC1							
А	gency or organizat	tion name: DRM	1S					
EQUIPME	INT TRANSPORT	<u>RIG COST</u>						
					Shift basi	s:	1 per day	y
				C	Cost Data Source		CRG Data	<u> </u>
Cost Break	Truck Trailer De	escription: GEN	IERIC FOLDING GO	OSENECK,	ND HALF, 2006) DROP DECK EQ AND 100T)	UIPME	NT TRAIL	ER (25T, 50T,
Available	e Rig Capacities	0-25 Tons	26-50 Tons	51+	+ Tons			
	vnership Cost/Hou		\$37.94		17.67			
	perating Cost/Hou		\$50.48	\$5	56.21			
	Derator Cost/Hour		\$20.54	\$2	20.54			
	Helper Cost/Hou	r: \$0.00	\$23.53	\$2	23.53			
Тс	otal Unit Cost/Hou		\$132.49		47.95			
NON ROA Machine	ADABLE EQUIPMI		Haul Rig	Fleet	Haul Trip	Return	Trip	DOT Permit
Descriptio	0	Cost/hr/	Cost/hr/unit	Size	Cost/hr/		r/ fleet	Cost/ fleet
Description	(TONS)		cosymyanic	5120	fleet			
Cat D9T - 9		\$126.01	\$147.95	3	\$821.88	\$443.85	5	\$750.00
CAT 14M	23.57	\$85.80	\$68.37	1	\$154.17	\$68.37	·	\$250.00
C++ C27C	11.00	÷15127	¢122.40	2	6570.50			

CAT 14IVI	23.57	\$85.80	Ş68.37	1	\$154.17	Ş68.37	\$250.00
Cat 627G	41.80	\$154.27	\$132.49	2	\$573.52	\$264.98	\$500.00
Water Tanker,	15.00	\$33.45	\$68.37	1	\$101.82	\$68.37	\$250.00
5,000 Gal.							
Atlas Capco	0.00	\$306.46	\$68.37	1	\$374.83	\$68.37	\$250.00
DM45/HP - 9.0"							
CAT 950H	20.13	\$38.59	\$68.37	1	\$106.96	\$68.37	\$250.00
Drill/Broadcast	25.00	\$7.98	\$68.37	2	\$152.70	\$136.74	\$500.00
Seeder with							
Tractor							
Power Mulcher	6.00	\$14.98	\$68.37	1	\$83.35	\$68.37	\$250.00
(Bowie LD-90)							
Cat D7R DS Series	34.57	\$81.02	\$132.49	1	\$213.51	\$132.49	\$250.00
II LGP							

Subtotals: \$2,582.74 \$1,319.91 \$3,250.00

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 10-12 cy, 6x4	\$99.06	3	\$297.18	\$297.18
Fuel Tanker, 4x2, 170 HP	\$29.70	1	\$29.70	\$29.70
Lube Truck, 4x2, 190 HP	\$35.20	1	\$35.20	\$35.20
		Subtotals:	\$362.08	\$362.08

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	TRINIDAD 27.00 40.00	miles mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$14,351.32	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$488.81	

Transportation Cycle Time:

Non-	
Roadable	Roadable
Equipment	Equipment
0.68	0.68
0.68	0.68
0.25	NA
0.25	NA
1.85	1.35
	Roadable Equipment 0.68 0.68 0.25 0.25

JOB TIME AND COST

Total job time:	3.70	Hours

Total job cost: \$14,840

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Mobilize/Dei	mobilize Equipment	for Pond Cleaning			
e: New Elk Mine		Permit Action: <u>Mi</u>	d Term 08	Permit/Job#: <u>C1981012</u>		
PROJECT IDENTIFICAT	ION					
Task #: 077	Stat	e: Colorado		Abbreviation:	None	
Date: 8/5/2021	Count	ty: Las Animas		Filename:	C012-077	
User: DC1						
Agency or orga	nization name:	DRMS				
<i>.</i> , <i>.</i>	-					
EQUIPMENT TRANSP	ORT RIG COST					
			Ch	ift basis	1 nor dou	
			Sri Cost Data		1 per day CRG Data	
			COSLDALA	Source.		
Truck Trac	tor Description:	GENERIC ON-HIG	HWAY TRUCK TRACTO	R, 6X4, DIESEL	POWERED, 400 HP	
			(2ND HALF,	2006)		
Truck Trai	ler Description:	GENERIC FOLDING	GOOSENECK, DROP D	ECK EQUIPMEN	NT TRAILER (25T, 50T	
	_		AND 10	ЭТ)		
Cost Dreakdours	_					
Cost Breakdown:						
Available Rig Capaciti	es 0-25 T	ons 26-50 Ton	is 51+ Tons			
Ownership Cost,	/Hour: \$21.	28 \$37.94	\$47.67			
Operating Cost,	/Hour: \$26.	55 \$50.48	\$56.21			
Operator Cost	/Hour: \$20.	54 \$20.54	\$20.54			
Helper Cost	/Hour: \$0.0	0 \$23.53	\$23.53			

NON ROADABLE EQUIPMENT:

Total Unit Cost/Hour: \$68.37

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 336D L 10'-6" Stick	32.23	\$83.42	\$132.49	1	\$215.91	\$132.49	\$250.00
			:	Subtotals:	\$215.91	\$132.49	\$250.00

\$132.49

\$147.95

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 8-10 cy, 6x4	\$86.00	3	\$258.00	\$258.00
		Subtotals:	\$258.00	\$258.00

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	TRINIDAD	
Total one-way travel distance:	27.00	miles
Average Travel Speed:	40.00	mph
Total Non-Roadable Mob/Demob Cost *	\$1,186.25	
'* two round trips with haul rig:		_
Total Roadable Mob/Demob Cost **	\$348.30	
** one round trip, no haul rig:		

Transportation Cycle Time:

Non- Roadable	Roadable
	Equipment
0.68	0.68
0.68	0.68
0.25	NA
0.25	NA
1.85	1.35
	Roadable Equipment 0.68 0.68 0.25 0.25

Total job time:	3.70	Hours
Total job cost:	\$1,535	

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: Mo	bilize/Demobiliz	e Equipment for F	ond Removal		
ite: New Elk Mine	Permi	it Action: <u>Mid Te</u>	erm 08	Permit/Jo	b#: <u>C1981012</u>
PROJECT IDENTIFICATION					
Task #: 078	State: C	olorado	А	bbreviation:	None
Date: 8/5/2021 User: DC1	County: L	as Animas		Filename:	C012-078
Agency or organization	n name:DRMS				
EQUIPMENT TRANSPORT RIG	<u>G COST</u>				
			Shi	ft basis:	1 per day
			Cost Data		CRG Data
Truck Tractor Desc	cription: GEN	NERIC ON-HIGHWA	Y TRUCK TRACTOI (2ND HALF, 3	, ,	POWERED, 400 HP
Truck Trailer Desc	ription: GENE	RIC FOLDING GOO	, ,	,	NT TRAILER (25T, 50T,
			AND 100	Т)	
Cost Breakdown:					
Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons		
Ownership Cost/Hour:	\$21.28	\$37.94	\$47.67		
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21		
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54		
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53		
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95		

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D9T - 9SU	60.01	\$126.01	\$147.95	1	\$273.96	\$147.95	\$250.00
			:	Subtotals:	\$273.96	\$147.95	\$250.00

ROADABLE EQUIPMENT:

Machine Description Flatbed Truck, 6x4, 45K GVW	Total Cost/hr/ unit \$49.15	Fleet Size	Haul Trip Cost/hr/ fleet \$49.15	Return Trip Cost/hr/ fleet \$49.15
		Subtotals:	\$49.15	\$49.15

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	TRINIDAD	
Total one-way travel distance:	27.00	miles
Average Travel Speed:	40.00	mph
Total Non-Roadable Mob/Demob Cost *	\$1.343.54	
'* two round trips with haul rig:		_
Total Roadable Mob/Demob Cost **	\$66.35	
** one round trip, no haul rig:		

Transportation Cycle Time:

Haul Time (Hours): Return Time (Hours):	Non- Roadable Equipment 0.68 0.68	Roadable Equipment 0.68 0.68
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	1.85	1.35

Total job time:	3.70	Hours
Total job cost:	\$1,410	

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Mobilize/Demobiliz	e Equipment for	Site Maintenance		
ite: New Elk Mine	Permi	t Action: Mid T	erm 08	Permit/Jo	ob#: <u>C1981012</u>
PROJECT IDENTIFICATION					
Task #: 079	State: C	olorado	А	bbreviation:	None
Date: 8/5/2021	County: L	as Animas		Filename:	C012-079
User: DC1					
EQUIPMENT TRANSPORT	<u>RIG COST</u>		Shii Cost Data	-	1 per day CRG Data
Truck Tractor D	escription: GEN	IERIC ON-HIGHW	AY TRUCK TRACTOF (2ND HALF, 2		POWERED, 400 HP
Truck Trailer D	escription: GENE	RIC FOLDING GO	OSENECK, DROP DE AND 100		NT TRAILER (25T, 50T,
Cost Breakdown:					
Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons	_	
Ownership Cost/Hou	: \$21.28	\$37.94	\$47.67	_	
Operating Cost/Hour	r: \$26.55	\$50.48	\$56.21		

Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D3K LGP - 3P	9.20	\$30.26	\$68.37	10	\$986.30	\$683.70	\$0.00

Subtotals:	\$986.30	\$683.70	\$0.00	
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ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
		Subtotals:	\$0.00	\$0.00

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	TRINIDAD	
Total one-way travel distance:	27.00	miles
Average Travel Speed:	40.00	mph
Total Non-Roadable Mob/Demob Cost *	\$3,240.80	
'* two round trips with haul rig:		_
Total Roadable Mob/Demob Cost **	\$0.00	
** one round trip, no haul rig:		

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.68	0.68
Return Time (Hours):	0.68	0.68
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	1.85	1.35

Total job time:	3.70	Hours
Total job cost:	\$3,241	_