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#### **Bowie #1 Midterm Review**

1 message

**Zuber - DNR, Rob** <rob.zuber@state.co.us> To: Basil Bear <basilbear@wolverinefuels.com>, Tamme Bishop <tamme.jestover@bresnan.net>

Tue, Oct 13, 2020 at 6:49 AM

Basil -

Please see the attached document related to the Bowie No. 1 Mine. As always, do not hesitate to call or email me with questions or comments.

Thanks in advance for your action on the items in bold in Section VI. Send an application to the PAP for the Bowie No. 1 Mine, as necessary (we can discuss if it is a minor revision or technical revision). If these items do not necessitate a revision to the PAP for the Bowie No. 1 Mine, please send a letter with a response to each of the items.

Rob

Rob Zuber, P.E. Environmental Protection Specialist II Active Mines Regulatory Program



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Bowie1\_MT8\_\_with\_RCE.pdf
3457K

#### **MIDTERM PERMIT REVIEW (MT-08)**

for Bowie Resources, LLC

## Bowie No. 1 Mine

Permit No. C-1981-038



Photo of East Mine by R. Zuber, March 2020

October 13, 2020

Virginia Brannon, Director

Prepared by Robert D. Zuber, P.E.

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

#### Introduction

This document presents the results of the Midterm Review of the Bowie No. 1 Mine permit, conducted by the Colorado Division of Reclamation, Mining and Safety (Division). The Bowie No. 1 Mine is owned and operated by Bowie Resources, LLC (BRL). This Midterm Review was conducted to fulfill the requirements of the Colorado Surface Coal Mining Reclamation Act (Act), and Rules 2.08.3, 2.06.2(9), 2.06.3(4), 2.06.5(3), 2.06.7(5), and 3.02.2(4) of the Rules and Regulations of the Colorado Mined Land Reclamation Board for Coal Mining (Rules), which were promulgated to implement the Act.

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

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

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

This Midterm Review consisted of a review of the Bowie No. 1 Mine permit application package and previous Division findings of compliance to ensure that the proposed operation is in compliance with the Rules and Act. The Division also reviewed all subsequent revisions and stipulation responses to ensure that all permit commitments and conditions were being followed. Problems and observations from past Division inspection reports were also considered.

The document has seven sections.

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

## Section I - Mine History and the Environment

### Mine and Permit Status and History

The Bowie No. 1 Mine was an underground mine which began operating in 1975 and was permitted under the permanent state regulatory program in 1981. The mine was originally called the Orchard Valley Mine and the original permittee of the 1981 permit was Colorado Westmoreland, Inc. (CWI). The permit has been transferred twice: first to Cyprus Orchard Valley Coal Corporation and then to BRL.

The original 1981 permit has been renewed seven times prior to this permit renewal application. Three permit revisions and two technical revisions expanded the original permit area of 2,283.5 acres to 8,859.9 acres. Permit Revision No. 4 entailed a transfer of over 2,000 acres to the Bowie No. 2 Mine and made other significant adjustments, and the revision reduced the permit area to 5,431.0 acres. In recent years, TR-59 increased the permit acreage by 4.2 acres because of adjustments to the boundary of the loadout, and TR-60 reduced the permit area by 400 acres because of another transfer of area to the Bowie No. 2 Mine. The current permit area for the Bowie No. 1 Mine is 5,035.2 acres.

The mine has been inactive for many years (the last mining was done in December 1997), and much of the surface area has been reclaimed. The post-mining land uses are grazing for livestock and wildlife at the mine site and orchard land at the loadout facilities.

Six bond release applications have been submitted for the Bowie No. 1 Mine. The first, SL-1, was a Phase I bond release request for the West Mine area that was subsequently withdrawn by the operator. SL-2, approved in 2004, granted Phase I bond release on the West Mine area. SL-3, approved in 2008, granted Phase I bond release on the Unit Train Loadout. SL-4 approved in 2013, was a Phase I bond release request for 40.15 acres at the East Mine. The acreage was increased to 70 acres at the East mine for backfilling and grading the East Mine. SL-5 was approved in 2016. The bond release was for 1.0 acres of Phase I at the West Mine and a total of 23.3 acres of Phase II, 10.2 acres at the Run of Mine Area and 13.1 acres at the West Mine. SL-6 was approved in February of 2018. SL-6 approved the release of 2.31 acres for Phase I associated with five ponds at the East Mine and the one pond at the Run of Mine Area. SL-6 also released 58.84 acres for Phase II at the East Mine.

### Description of Location, Land Use, Topography, Climate, Vegetation, Soils, and Wildlife

The Bowie No. 1 Mine is situated in the northeastern portion of Delta County, Colorado. The majority of the mine permit area is located approximately four miles north of Paonia, Colorado, along Steven's Gulch Road. The coal loadout facilities are located approximately one mile northeast of Paonia along State Highway No. 133. The permit area is located in portions of Sections 1, 2, 10, 11, 12, 13, 14, 15,

22, 23, 24, and 25, Township 13 South, Range 92 West and portions of Sections 17, 18, 19, 29, 30, 31, and 32, Township 13 South, Range 91 West of the 6th Principal Meridian.

The pre-mining land use classifications of the mine area are:

- Grazing land for domestic livestock and wildlife,
- Orchard land in the area of the loadout, and
- Previous mining disturbances.

BRL plans to return the land to grazing for livestock and wildlife for the mine sites, and to orchard land for the loadout facilities. Information pertaining to land use is presented in the permit application package (PAP): Sections 2.04.3 and 2.05.5 of Volume 1, the land use appendix in Volume 9, and Map No. 9-1.

The topography of the main portion of the mine (including the East Mine, the West Mine, storage areas, and the affected area above the mine workings) is characterized by steeply sloping mountains. The loadout and coal storage near the loadout are located on much flatter terrain close to the North Fork of the Gunnison River (the predominate part of the loadout is approximately 1,000 feet from the river and other portions are closer). The permit boundary for all of the mine, including the loadout, is shown on Map 4-1, Hydrologic Reconnaissance, in the permit application package (PAP). Map 4-1 also shows other pertinent features including roads, topography, and drainage basin boundaries.

The climate of the mine area is semi-arid and strongly influenced by microclimatic features including slope aspect, elevation, soil type, soil moisture content and vegetation. The average annual temperature is 49.0°F at Paonia, with an average monthly mean of 24.5°F in January and 71.9°F in July. At Paonia, the annual precipitation is 8 to 15 inches. Prevailing winds are from the south-southeast. Near Paonia, the strong drainage wind precludes frost pockets, thus creating a favorable microclimate for fruit tree farming. Information pertaining to climate is presented in the PAP: Section 2.04 of Volume 1 and in the Climatology and Wind Direction Appendix of Volume 9.

The vegetation of the disturbed areas at the Bowie No. 1 Mine include communities dominated by Gambel oak and serviceberry as well as pinon-juniper communities, where Utah juniper dominates over pinon pine. Other communities disturbed to a lesser degree include agriculture (orchards), mixed shrub, and riparian. No threatened or endangered plant species have been identified on the permit area. Information pertaining to vegetation baseline studies is presented in the PAP: Section 2.04 of Volume 1 and the Vegetation Appendix of Volume 9A.

The natural soil characteristics within the surface disturbance areas of the mine are generally deep. Generally, available water capacities are high, reflecting the potential of these soils to store water for plant use. The area is somewhat susceptible to landslides (especially in the steep topography of the East Mine bench area), and the continual sloughing of colluvial material in this area impairs horizon development. Topsoil layers at the existing facilities of the East Mine are shallow, ranging from about two inches to eight inches; surface textures are generally loams or clay loams with subsoils ranging from clay loams to clays. West Mine topsoil layers are much deeper, ranging from two feet to four feet in many places. Information pertaining to soil resources and their inventory is presented in the PAP: Section 2.04 of Volume 1 and the Soils Appendix of Volume 9.

Wildlife resources in the area include important winter range for both elk and deer. Golden eagles have been nesting near the mine site for several years, but no threatened or endangered wildlife species have been observed. The North Fork of the Gunnison River contains 12 species of fish, including three species of game fish (rainbow trout, brown trout, and northern pike). Information pertaining to fish and wildlife resources are in the PAP: Section 2.04 of Volume 1 and the Wildlife Appendix, Volume 9A.

### Description of the Geology and Hydrology of the Mine Area

The Somerset Coal Field lies on the southeast margin of the Piceance Basin and just south of Grand Mesa. The sedimentary strata exposed in the Somerset Coal Field dip at 3° to 5° to the north and northeast, and range in age from late Cretaceous to early Tertiary. Coal is produced from the Mesaverde Formation, a 2,500-foot-thick sequence of sandstone, shale and coals overlain by the Ohio Creek conglomerate and underlain by the Mancos Shale. The Mesaverde Formation is composed of four members which are, in order of decreasing age, the Rollins Sandstone, the Lower and Upper Coal members and the Barren member. Information on local and regional geology can be found in the PAP Section 2.04.6 of Volume 1. Maps 2-1, 2-2, 2-7, 2-8, 2-11, 2-12 and 6A-8 identify pertinent geologic features. Waste rock geochemical analyses can be found in Volume 6A.

Three categories of potential aquifers occur in the general area. These are alluvial and terrace deposits associated with the North Fork of the Gunnison River, the localized shallow alluvial/colluvial areas in the stream drainages, and ground water in the lenticular sandstones and the Rollins Sandstone of the Mesaverde Formation. The most significant occurrence of groundwater in the general area is associated with the alluvium of the North Fork of the Gunnison River, located approximately two miles southeast of the mine portals and 1,500 feet lower in elevation. Significant alluvial sand and gravel deposits averaging 34 feet thick exist along the river from the mouth of Terror Creek to the confluence with the Gunnison River. There are numerous wells in the area which draw water from this alluvium. Groundwater information can be found Sections 2.04 and 2.05.6 of Volume 1 of the PAP.

The Bowie No. 1 Mine permit area is drained by East Roatcap Creek, Steven's Gulch, Coal Gulch, and Terror Creek, all of which are tributaries to the North Fork of the Gunnison River. Terror Creek is a perennial stream with an aquatic community that includes some trout; it has a high gradient channel with riparian vegetation and alluvium confined to narrow bands along the channel. The three other creeks are intermittent to ephemeral drainages that only flow part of the year. There are several springs and ponds within the permit and adjacent area of the Bowie No. 1 Mine; most or all appear to

be intermittent. Surface water information is found in Volume 1, Sections 2.04 and 2.05.6, and in Volume 4 of the PAP.

#### Description of the Operation and Reclamation Plan

The Bowie No. 1 Mine is an underground mine that was in operation from 1975 to 1997. The operator, BRL, has ceased mining operations, and the mine is in the process of being reclaimed. There are three major disturbed areas within the permit boundary:

- The East Mine, including portals, the main offices, crushing and screening facilities, and storage and warehouse areas.
- The West Mine, including portals, a small maintenance facility, a ventilation shaft and water tank.
- The coal loadout facilities between the North Fork of the Gunnison River and State Highway 133, with a siding on the other (south) side of the river.

The mine utilized the room and pillar mining method of extracting coal. The general direction of mining was northward to extract coal from the D seam.

The approved reclamation plan required that the portals be backfilled, all surface facilities removed, the mine benches recontoured, the loadout regraded to approximate original contour, and all areas revegetated in accordance with the revegetation plan.

All structural demolition, backfilling, and grading operations have been completed at the East Mine.

At the West Mine, all structural demolition has been completed, and most of the backfilling and grading has been completed. The East Roatcap Creek culvert and two overlying sediment ponds still need to be removed. After these structures are removed, the cover material over the culvert will be graded back onto the hillslope, and the East Roatcap Creek drainage channel will be reconstructed.

A significant portion of the structural demolition has occurred at the loadout. However, additional work remains within the reclamation plan. This includes removal of the shop, removal of railroad tracks, removal of over 600 feet of a 60-inch culvert, and bridge reclamation. Also, grading and seeding are required in the approved plan for the loadout.

The temporary highway coal stockpile area needs to have the spur line and sediment pond removed and the soil from the road overpass redistributed to the cut slopes.

### Section II - Revisions to the Permit

The following revisions have been processed since the last renewal of the Bowie No. 1 Mine permit application package (RN-07 issued in May 2018).

MR-137 was received on 29 October 2018. This revision updated ownership and control information for the permittee's parent company and was approved and issued on 6 November 2018. MR-138 was received on 4 February 2020. This revision incorporated three wells into the groundwater monitoring plan and was approved and issued on 11 February 2020.

TR-63 was received on 22 January 2018. It revised the revegetation success standard. This revision was approved on 25 April 2018 and issued on 15 May 2018. TR-64 was received on 28 September 2018. It added the reclamation plan for West Mine ponds. This revision was approved on 3 May 2019 and issued on 21 May 2019. TR-65 was received on 21 December 2018. It reduced the number of monitoring sites for surface water and groundwater. This revision was approved on 17 January 2019 and issued on 5 February 2019.

#### Section III - Status of Stipulations

The stipulation history for the Bowie No. 1 Mine was reviewed as part of the midterm review. Any stipulations associated with this permit and issued over the life of this operation that are not discussed in this midterm review have been complied with, terminated, or withdrawn. No new stipulations have been imposed since the 2018 renewal (RN-07).

One stipulation has been complied with since the renewal in 2018:

#### Stipulation No. 59:

BOWIE RESOURCES, LLC (BRL) SHALL SUBMIT AN APPLICATION FOR A TECHNICAL REVISION ADDRESSING THE DESIGN FOR RECONSTRUCTION OF THE AFFECTED SEGMENT OF EAST ROATCAP CREEK, IN ACCORDANCE WITH RULE 4.05.4. THE REVISION MUST BE APPROVED AND ISSUED BY THE DIVISION PRIOR TO COMMENCEMENT OF ANY RECLAMATION ACTIVITIES RELATED TO PONDS W-1 AND W-2 AT THE WEST MINE.

Stipulation 59 was designated as complied with on September 28, 2018 when BRL submitted TR-64. (This revision was approved and issued by the Division in May of 2019.)

At the time of this midterm review, there are two active stipulation attached to the permit: Stipulation 26 and Stipulation 29.

#### **Stipulation 26**

ONE YEAR AFTER THE COMPLETION OF RECLAMATION ACTIVITIES AT THE LOADOUT, THE OPERATOR SHALL COMPARE THE SOIL CHARACTERISTICS OF THE RECLAIMED AREA WITH THE ADJACENT UNDISTURBED ORCHARD AREAS TO VERIFY THAT THE HYDROLOGIC FUNCTION OF FLOOD IRRIGABILITY HAS BEEN RESTORED. SUCH COMPARISON SHOULD BE IN THE FORM OF INFILTRATION, PERMEABILITY AND TEXTURE STUDIES.

Since the loadout has not been reclaimed, Stipulation No. 26 will remain active.

#### Stipulation 29

THE OPERATOR SHALL CONTINUE TO SUBMIT TO THE DIVISION AN ANNUAL REPORT OF INFLOWS, DISCHARGES, AND CONSUMPTION OF WATER WITHIN THE MINE. THIS REPORT IS TO INCLUDE A MINE WORKINGS MAP SHOWING THE LOCATION AND QUANTITY OF INFLOWS; A TABLE KEYED TO THE MINE MAP WHICH SHALL CONTAIN THE SOURCE (I.E., FAULT, FRACTURES, ETC.), QUANTITY, DURATION AND QUALITY (I.E., PH, ELECTRO-CONDUCTIVITY AND TERMPERATURE) OF ALL MEASURABLE INFLOWS; A TABLE CONTAINING RECORDS OF WATER IMPORTED FOR USE WITHIN THE MINE; A DISCUSSION OF THE WATER BALANCE.

Stipulation 29 remains active.

### <u>Section IV – Permit Variances and Specific Approvals</u>

The Bowie No. 1 Mine permit does not include a variance under Rules 2.06.2 (experimental practices), 2.06.3 (mountaintop removal), or 2.06.7 (variance from contemporaneous reclamation for combined surface and underground operations). The Bowie No. 1 Mine has obtained a variance from the requirement for restoration of affected lands to their approximate original contour (AOC) in accordance with Rules 2.06.5 and 4.27. The variance was granted under the 1981 permit and was reaffirmed with RN-07. The variance applies to the mine benches only and was granted due to a demonstration that backfilling the benches to AOC on the bench slopes would not achieve the required slope stability factor of 1.3 (see permit Volumes 6 and 6A, Stability Analysis, for complete discussion).

### Section V - Enforcement Actions

The Division has taken no enforcement actions since the renewal in 2018.

- 1. If there have been any changes to the ownership and control information for BRL since RN-07, BRL needs to provide updated identification of interests information as required by Rule 2.03.4.
- Per Rules 2.04.11(4) and 2.05.6(2), please update T&E species and discuss potential impacts to current State and Federal Threatened and Endangered plant and animal species lists. The Federal and State listed species of concern may have changed since the last revision. To find the most up to date lists, please reference the USFWS and Colorado CPW websites.

### Section VII – Reclamation Liability and Performance Bonding

With this midterm review, the Division updated the reclamation cost estimate, and the resulting amount is \$1,639,674. The increase from the previous reclamation cost estimate (\$1,463,269 from bond release SL-06) is due to general inflation and large increases in the costs for sealing of boreholes. [Note that RN-07 was issued shortly after SL-06, and an additional reclamation cost estimate was not determined to be necessary with the renewal.]

As explained in the findings document for SL-06, Rule 3.03.1(2) limits the amount of a bond release based on percentages of a task. For example, no more than 65 percent of a bond amount for a given area may be released due to backfilling, grading, and drainage control; the rest of the bond must be retained for the other reclamation requirements. Based on this rule, with SL-06 the Division determined that the reclamation liability for mining operations at the Bowie No. 1 Mine is \$2,779,202 (significantly higher than the reclamation cost estimate). This is the current liability for the mine. The Division currently holds two Corporate Sureties with a total amount of \$2,880,000 for the Bowie No. 1 Mine, and <u>additional bond is not required</u>.

This concludes the 2020 Midterm Review of the Bowie No. 1 Mine. <u>Please submit any required revision</u> applications responding to the issues outlined in Section VI on or before December 15, 2020.

**RECLAMATION COST ESTIMATE** 

# COST SUMMARY WORK

Task description:		MT-08 Cost Sun	nmary				
Site: Bowie No. 1 Mine		Per	Permit Action: MT8		MT8 Permit/Job		
PROJECT Task #: Date: User:	<b>IDENTIFI(</b> 000 10/1/2020 RDZ	CATION State: County:	Colorado Delta		Abbreviation: Filename:	None C038-000	

Agency or organization name: DRMS

## TASK LIST (DIRECT COSTS)

Task	Description	Form	Fleet	Task Hours	Cost
017	Description Backfill Orchard Valley West Mine Bench	Used DOZER	Size	5.92	\$9,400
017	Regrade Drill Pads from MR-124 and 125 and TR-	DOZER	4	3.54	\$5,624
017	38, 49 and 50	DOZEK	-	5.54	ψ3,024
041	Rip Roads	RIPPER	4	0.17	\$278
049	Regrade OVM Light Access Road	EXCAVATE	1	4.36	\$730
052	Regrade Old Waste Disposal Road	EXCAVATE	1	8.32	\$1,395
054	Finish Grade Lower Waste Disposal Road	GRADER	1	0.06	\$10
059	Regrade Light Use Roads from MR-125 and TR- 38, 49 and 50	DOZER	4	18.82	\$29,893
064	Finish Grade Upper Waste Disposal Road	GRADER	1	0.17	\$28
065	Finish Grade Crusher and Screening Road	GRADER	1	0.06	\$10
079	Establish Irrigation Ditch at Storage	EXCAVATE	1	1.70	\$285
093	Backfill and Regrade Coal Stockpile Pond	DOZER	4	0.19	\$296
095	Backfill and Regrade Pond W-1	DOZER	4	0.52	\$796
096	Backfill and Regrade Pond W-2	DOZER	4	0.52	\$796
102	Replace topsoil fm stockpile to OVWM resdisturbance area	DOZER	4	9.75	\$15,010
104	Replace Topsoil from Stockpile to OVWM Vent Shaft Access	DOZER	4	2.85	\$4,380
110	Replace Topsoil from Stockpile to Drill Pads	DOZER	4	1.42	\$2,192
111	Replace Topsoil from Stockpile Light-Use Roads to Drill Pads	DOZER	4	4.38	\$6,743
112	Replace Topsoil from Stockpile to Pond W-1	DOZER	4	0.29	\$441
113	Replace Topsoil from Stockpile to Pond W-2	DOZER	4	0.29	\$441
125	Plug and Seal all Boreholes	BOREHOLE	1	177.00	\$112,122
130	Reseed OVM - No Phase II Release	REVEGE	1	119.00	\$10,369
130A	Reseed OVM - Phase II Release Areas (ROM & 58.4 ac from OVM)	REVEGE	1	11.00	\$254,944
131	Reseed OVWM - Phase II Released	REVEGE	1	26.00	\$49,339
131A	Reseed OVWM - NoPhase II Release	REVEGE	1	9.00	\$20,200
137	East Mine Crushing and Screening Level	DEMOLISH	1	40.00	\$3,733
146	Mobilize/Demobilize Equipment for Initial Reclamation	MOBILIZE	1	10.28	\$44,314
147	Mobilize/Demobilize Equipment for Pond Cleaning	MOBILIZE	1	10.28	\$2,926
148	Mobilize/Demobilize Equipment for Pond Removal	MOBILIZE	1	10.28	\$4,101
149	Mobilize/Demobilize Equipment for Site Maintenance	MOBILIZE	1	10.28	\$15,625

158	YEARLY SITE MNTNC	SITEMAINT	1	0.00	\$96,348
		ENANCE			
201	Seal Loadout Wells	BOREHOLE	1	177.00	\$6,259
202	Demolish and Remove all Structures at Train	DEMOLISH	1	175.00	\$381,475
	Loadout				
204	Haul Footprint of Loadout Stockpiles to Refuse	TRUCK1	1	4.37	\$8,871
	Area				
205	Rip Coal Storage/Loadout Area	RIPPER	4	0.63	\$1,011
206	Excavation/Grading at Storage Area and Loadout	DOZER	4	34.33	\$54,539
207	Grade Railroad Spur	DOZER	4	50.43	\$80,105
208	Finish Grade Railroad Spur	GRADER	1	16.26	\$2,495
209	Replace Topsoil from Stockpile to Truck Dump	DOZER	4	0.59	\$945
	Station				
210	Reseed Train Loadout and Coal Stockpile Areas	REVEGE	1	80.00	\$49,079
211	Remove Coal Stockpile Pond	DOZER	4	0.19	\$305
212	Remove Train Loadout Pond	DOZER	4	1.58	\$2,511
		SUBTO	TALS:	1026.83	\$1,280,364
		·			

#### **INDIRECT COSTS**

#### **OVERHEAD AND PROFIT:**

2.02	Total =	\$25,863
1.05	Total =	\$13,444
513.42	Total =	\$35,708
10.00	Total =	\$128,036
	TOTAL O & P =	\$203,052
	CONTRACT AMOUNT (direct + $O \& P$ ) =	\$1,483,416
1	1.05 513.42	1.05     Total =       513.42     Total =

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	6.00	Total =	\$89,005
Reclamation management and/or administration:	4.50		\$66,754
CONTINGENCY:	0.00	Total =	\$0
		TOTAL INDIRECT COST =	\$359,310

TOTAL BOND AMOUNT (direct + indirect) = \_\_\_\$1,639,674

		Backfill Orchard Valley West Mine Bench			
Bowie No. 1 Mine	Peri	Permit Action: <u>MT8</u>		Permit/Job#:	C1981038
PROJECT IDENTIE	FICATION				
Task #: 017	State:	Colorado		Abbreviation:	None
Date: $10/1/2020$		Delta		Filename:	C038-017
User: RDZ				=	
Agency or orga	anization name: DR	RMS			
HOURLY EQUIPM	ENT COST				
	at D10T - 10SU				
Horsepower: 57					
	emi-Universal		_		
	shank ripper				
	per day CRG)				
Cost Breakdown:	, ,				
o 11 o or			<u>Utilization %</u>		
Ownership Cost/Hour:		\$170.04	NA		
Operating Cost/Hour:		\$153.03	100 NA		
Ripper own. Cost/Hour:		\$20.48 \$12.29	<u>NA</u> 100		
Ripper op. Cost/Hour: Operator Cost/Hour:		\$12.29	NA		
Fotal unit Cost/Hour: Fotal Fleet Cost/Hour: MATERIAL OUAN'	\$397.13 <b>\$1,588.53</b> TITIES				
	\$1,588.53 TITIES				
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,82         Swell factor:       1.10	\$1,588.53 TITIES 23				
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,82         Swell factor:       1.10	\$1,588.53 TITIES 23 65 89 LCY ume:Regrading	 g 3.5 acres, 0 book	.50' depth		
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,82         Swell factor:       1.10         Loose volume:       3,23         Source of estimated volu	\$1,588.53 TITIES 23 65 89 LCY ume: Regrading ell factor: Cat Hand		.50' depth		
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,82         Swell factor:       1.10         Loose volume:       3,23         Source of estimated volu       Source of estimated swe	\$1,588.53         TITIES         23         65         89 LCY         ume:       Regrading         ell factor:       Cat Hand         CTION       400 feet	book	.50' depth		
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,82         Swell factor:       1.10         Loose volume:       3,23         Source of estimated volu         Source of estimated swe         HOURLY PRODUC         Average push distance:	\$1,588.53         TITIES         23         65         89 LCY         ume:       Regrading         cll factor:       Cat Hand         Cat Hand         CTION         uction:       400 feet         497.3 LCY/	book			
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,82         Swell factor:       1.14         Loose volume:       3,23         Source of estimated volu       3,24         Source of estimated volu       3,24         MOURLY PRODUC       Average push distance:         Unadjusted hourly produ       Materials consistency de	\$1,588.53         TITIES         23         65         89 LCY         ume:       Regrading         cat Hand         Cat Hand         CTION         uction:       400 feet         497.3 LCY/         escription:       Compa	book			
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,8'         Swell factor:       1.10         Loose volume:       3,2'         Source of estimated volu         Source of estimated swe         HOURLY PRODUC         Average push distance:         Unadjusted hourly produ	\$1,588.53         TITIES         23         65         89 LCY         ume:       Regrading         cll factor:       Cat Hand         Cat Hand         CTION         uction:       400 feet         497.3 LCY/	book			
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,8/         Swell factor:       1.1/         Loose volume:       3,23         Source of estimated volu         Source of estimated swe         HOURLY PRODUC         Average push distance:         Unadjusted hourly produ         Materials consistency de         Average push gradient:	\$1,588.53         TITIES         23         65         89 LCY         ume:       Regrading         cll factor:       Cat Hand         CTION         uction:       400 feet         uction:       497.3 LCY/         escription:       Compa         10 %	book			
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       2,82         Swell factor:       1.10         Loose volume:       3,23         Source of estimated volu       3,24         Source of estimated volu       Source of estimated swe         HOURLY PRODUC       Average push distance:         Unadjusted hourly produ       Materials consistency de         Average push gradient:       Average site altitude:	\$1,588.53         TITIES         23         65         89 LCY         ume:       Regrading         cll factor:       Cat Hand         Cat Hand         CTION         uction:       400 feet         uction:       497.3 LCY/         escription:       Compa         10 %       7,300 feet	book hr 	nbankment 0.9		
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       2,82         Swell factor:       1.10         Loose volume:       3,23         Source of estimated volu       3,24         Source of estimated volu       Source of estimated swe         HOURLY PRODUC       Average push distance:         Unadjusted hourly produ       Materials consistency de         Average push gradient:       Average site altitude:         Material weight:       Weight description:         Iob Condition Correction       Iob Condition Correction	\$1,588.53         TITIES         23         65         89 LCY         ume:       Regrading         ell factor:       Cat Hand         CTION         uction:       400 feet         uction:       497.3 LCY/         escription:       Compa         10 %       7,300 feet         2,900 lbs/LCY       Decomposed rock         on Factor       External	book hr cted fill or en  - 50% Rock,	nbankment 0.9 50% Earth		
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,8'         Swell factor:       1.10         Loose volume:       3,2'         Source of estimated volu         Source of estimated swe         HOURLY PRODUC         Average push distance:         Unadjusted hourly produ         Materials consistency de         Average site altitude:         Material weight:         Weight description:         Iob Condition Correction         Operator	\$1,588.53TITIES236589 LCYume:Regrading Cat Hand21 factor:Cat HandCTIONuction: $400$ feetuction: $400$ feetuction: $400$ feetuction: $400$ feetuction: $297.3$ LCY/escription:Compa $10 \%$ 7,300 feet2,900 lbs/LCYDecomposed rockn Factor0.	book hr cted fill or er 50% Rock, 750			
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,8'         Swell factor:       1.10         Loose volume:       3,2'         Source of estimated volu         Source of estimated swe         HOURLY PRODUC         Average push distance:         Unadjusted hourly produ         Materials consistency de         Average site altitude:         Material weight:         Weight description:         Iob Condition Correction         Operator         Material consis	\$1,588.53TITIES23 $65$ 89 LCYRegrading80 LCYCat Hand21 factor:Ado feet21 factor: $400$ feet21 factor: $400$ feet21 factor: $400$ feet21 factor: $400$ feet21 factor:Compa10 % $7,300$ feet2,900 lbs/LCYDecomposed rockm Factorfactorr Skill: $0.$	book hr cted fill or er - 50% Rock, 750 900			
Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       2,8'         Swell factor:       1.14         Loose volume:       3,2'         Source of estimated volu       3,2'         Source of estimated swe       3,2'         HOURLY PRODUC       Average push distance:         Unadjusted hourly produ       Materials consistency de         Average push gradient:       Average site altitude:         Material weight:       Weight description:         Iob Condition Correction       Operator         Material consis       Dozing m	\$1,588.53TITIES236589 LCYRegrading80 LCYCat Hand21 factor: $Cat Hand2TION400 feetuction:\frac{400 \text{ feet}}{497.3 \text{ LCY/}}escription:Compa10 %7,300 \text{ feet}2,900 lbs/LCYDecomposed rockon Factorr Skill:0.ethod:1.$	book hr cted fill or er 50% Rock, 750			

Task # 017

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.2794	
Adjusted unit production:	38.95 LCY/hr	
Adjusted fleet production:	555.8 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$2.858/LCY

Total job time:	<b>5.92</b> Hours
Total job cost:	\$9,400

D 1 1 457	Task description:Regrade Drill Pads from MR-124 and 125 and TR-38, 49 and 50					
Bowie No. 1 Mine	Peri	Permit Action: MT8		Permit/Job#:	C1981038	
PROJECT IDENTI	FICATION					
Task #: 019	State:	Colorado		Abbreviation:	None	
Date: 10/1/2020	) County:	Delta		Filename:	C038-019	
User: RDZ	County:					
Agency or org	anization name: DR	RMS				
HOURLY EQUIPM	ENT COST					
	at D10T - 10SU					
Horsepower: 57						
Blade Type: Se	emi-Universal					
Attachment: 3-	-shank ripper					
Shift Basis: 1	per day					
	CRG)					
Cost Breakdown:		1				
		¢170.04	<u>Utilization %</u>			
Ownership Cost/Hour:		\$170.04	NA			
Operating Cost/Hour:		\$153.03	100			
Ripper own. Cost/Hour:		\$20.48	NA			
Ripper op. Cost/Hour:		\$12.29	100			
Operator Cost/Hour:	:	\$41.30	NA			
otal unit Cost/Hour	\$397.13					
Total unit Cost/Hour:	\$397.13 <b>\$1 588 53</b>					
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$397.13 <b>\$1,588.53</b>					
	\$1,588.53					
Fotal Fleet Cost/Hour:	\$1,588.53 TITIES					
Fotal Fleet Cost/Hour: MATERIAL QUAN Initial Volume: <u>8,7</u>	\$1,588.53 TITIES 100					
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2	\$1,588.53 TITIES 00 50					
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2	\$1,588.53 TITIES 100					
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2	\$1,588.53 TITIES 00 50 875 LCY	 Estimate				
Fotal Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,	\$1,588.53 TITIES 00 50 875 LCY ume:Division 2					
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volume	\$1,588.53 TITIES 00 50 875 LCY ume:Division 2					
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volt       Source of estimated sweet	\$1,588.53         TITIES         00         50         875 LCY         ume:       Division         ell factor:       Cat Hand					
Fotal Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volu       Source         Gource of estimated sweet       HOURLY PRODUCC	\$1,588.53 TITIES 00 50 875 LCY ume: Division ell factor: Cat Hand CTION					
Fotal Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volto       8,000000000000000000000000000000000000	\$1,588.53         TITIES         00         50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION       50 feet	book				
Fotal Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volu       Source         Gource of estimated sweet       HOURLY PRODUCC	\$1,588.53 TITIES 700 50 875 LCY ume: Division ell factor: Cat Hand CTION 50 feet	book				
Fotal Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volto       8,000000000000000000000000000000000000	\$1,588.53         TITIES         00         50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION         uction:       50 feet         2,748.7 LCY	book Y/hr	  mbankment 0.9			
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volu       3000000000000000000000000000000000000	\$1,588.53         TITIES         '00         :50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION         uction:       50 feet         2,748.7 LC'         escription:       Compa	book Y/hr	   nbankment 0.9			
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volto         Source of estimated sweet         HOURLY PRODUC         Average push distance:         Jnadjusted hourly product         Materials consistency de         Average push gradient:	\$1,588.53         TITIES         '00         :50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION         uction:       50 feet         uction:       2,748.7 LC'         escription:       Compa         10 %	book Y/hr				
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volu       3000000000000000000000000000000000000	\$1,588.53         TITIES         '00         :50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION         uction:       50 feet         2,748.7 LC'         escription:       Compa	book Y/hr	  mbankment 0.9			
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volto         Source of estimated sweet         HOURLY PRODUC         Average push distance:         Jnadjusted hourly product         Materials consistency de         Average push gradient:	\$1,588.53         TITIES         '00         :50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION         uction:       50 feet         uction:       2,748.7 LC'         escription:       Compa         10 %	book Y/hr	  nbankment 0.9			
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Gource of estimated volto       6000000000000000000000000000000000000	\$1,588.53         TITIES         '00         '50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION         uction:       50 feet         uction:       2,748.7 LCY         escription:       Compa         10 %       7,850 feet	book Y/hr	  mbankment 0.9			
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Gource of estimated volto       6000000000000000000000000000000000000	\$1,588.53         TITIES         '00         :50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION         uction:       50 feet         uction:       2,748.7 LC'         escription:       Compa         10 %       7,850 feet         2,900 lbs/LCY       User Provided	book Y/hr				
Fotal Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Gource of estimated volu       6000000000000000000000000000000000000	\$1,588.53         TITIES         '00         :50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION         uction:       50 feet         2,748.7 LC'         escription:       Compa         10 %         7,850 feet         2,900 lbs/LCY         User Provided         on Factor	book Y/hr  	Source			
Fotal Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volume       10,         Source of estimated sweet       6000000000000000000000000000000000000	\$1,588.53         TITIES         '00         '50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION         uction:       50 feet         2,748.7 LC'         escription:       Compa         10 %         7,850 feet         2,900 lbs/LCY         User Provided         on Factor         r Skill:       0.	book Y/hr cted fill or en	Source (AVG.)			
Fotal Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volto       50         Source of estimated sweet       60         HOURLY PRODUC       Average push distance:         Juadjusted hourly product       Materials consistency de         Average push gradient:       Average site altitude:         Material weight:       Weight description:         Ob Condition Correction       Operator         Material consist       60	\$1,588.53         TITIES         '00         :50         875 LCY         ume:       Division         ell factor:       Cat Hand         CTION         uction:       50 feet         uction:       2,748.7 LC'         escription:       Compa         10 %	book Y/hr cted fill or en	Source (AVG.) (CAT HB))			
Fotal Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       8,7         Swell factor:       1.2         Loose volume:       10,         Source of estimated volto         Source of estimated sweet         HOURLY PRODUC         Average push distance:         Jnadjusted hourly product         Materials consistency do         Average push gradient:         Average site altitude:         Material weight:         Veight description:         ob Condition Correction         Operator         Material consist         Dozing m	\$1,588.53TITIES'00:50:50:875 LCYume:Division:ell factor:Cat HandCTIONuction: $50$ feetuction: $2,748.7$ LCescription:Compa $10 \%$ 7,850 feet2,900 lbs/LCYUser Provideduser ProvidedOn Factorr Skill:0	book Y/hr cted fill or en	Source (AVG.)			

Task # 019

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.2794	
Adjusted unit production: 76	57.99 LCY/hr	
Adjusted fleet production: <b>3</b> 0	<b>71.96</b> LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.517/LCY

Total job time:	<b>3.54</b> Hours
Total job cost:	\$5,624

## BULLDOZER RIPPING WORK

	Task description	: Rip Roads					
Site	: Bowie No. 1 N	Aine	Permit Action:	MT8	Permit/J	ob#: <u>C1981038</u>	8
	PROJECT ID	<b>ENTIFICATION</b>					
	Task #: 04 Date: 10		State: Colorado		Abbreviati Filenar		
	User: RI		unty: Delta			ne: <u>C038-041</u>	
	Agency	or organization name	DRMS				
	HOURLY EQ	UIPMENT COST					
		Machine: Cat D107			Horsepower:	574	
	Ripper At	tachment: <u>3-Shank</u>	Ripper		Shift Basis: Data Source:	1 per day (CRG)	
	Cost Breakdown	<u>:</u>					
		Ownership Cost/Ho	11**	\$170.04	Utilization % NA		
		Operating Cost/Ho		\$153.03	100		
	Ripp	er Ownership Cost/Ho		\$20.48	NA		
	Rip	per Operating Cost/Ho		\$12.29	100		
		Operator Cost/Ho		\$41.30	NA		
		Total Unit Cost/Ho		\$397.13			
		Total Fleet Cost/Ho	ur: <b>\$1,58</b>	8.53			
	MATERIAL (	<u>QUANTITIES</u>	Sele	cted estimating	method: Area		
	Alternate Method	<u>ds:</u>					
Seismic:	NA 0.55		Bank Volume:	NA 2.00	BCY Volume: 1,775	NA	BCY or CC
Area:	0.33	acres	Rip Depth (ft):		Volume: 1,775		ber or ce
		Source of estimated	quantity: <u>Map 8-</u>	1			
	HOURLY PR	<u>ODUCTION</u>					
	Seismic:	C . :	- V-1:	NT A	fact/second		
		Seism	c Velocity:	NA	feet/second		
	Area:			2 07			
		Average Ripp Average Ripp		2.87 8.67	feet/pass feet/pass		
		Average Ripp		200.00	feet/pass		
		Average D		88.00	feet/minute		
		Average Mane		0.25	minutes/pass		
		Production pe		0.947	acres/hour		
	Job Condition Co	orrection Factors					
	Ur	nadjusted Hourly Unit	Production:	0.947	Acres/hr		
			te Altitude:	7,000	feet		
			ltitude Adj:	1.00	(CAT HB)		
			Efficiency:	0.83	(1 shift/day)		
		Net	Correction:	0.83	multiplier		
			y Unit Production: Fleet Production:	0.79 <b>3.14</b>	Acres/hr Acres/hr		
	JOB TIME AN						
	Fleet size:		der(s)	Total job time	e: 0.17	Hou	rs
	Unit cost:	\$505.373 Per	acre	Total job cos	st: \$278		

#### HYDRAULIC EXCAVATOR WORK

Task description:	Regrade OVM I	Light Access	Road			
Bowie No. 1 Mine	Per	rmit Action:	MT8	Pern	nit/Job#	: <u>C1981038</u>
PROJECT IDENTI	<b>FICATION</b>					
Task #: 049	State:	Colorado		Abbrev	iation:	None
Date: 10/1/2020		Delta			ename:	C038-049
User: RDZ						
Agency or org	ganization name: D	RMS				
HOURLY EQUIPM	IENT COST					
Basic Machine:	Cat 336D L 10'-6'	' Stick	H	Horsepower:		268
Attachment 1:	ROPS Cab			eight (MT):		29.30
				Shift Basis:	1 j	per day
			Ε	Data Source:	(	CRG)
Cost Breakdown:		1				
Ownership Cost	t/Hour: \$60.	67	Utilization %			
Operating Cost			<u>NA</u> 100			
Operator Cos			NA			
Total Unit Cos			± 14 ±			
Total Fleet Cos						
MATERIAL QUAN						
	977	CCY	Swell factor	:: 1.330		
	1,299	LCY				
Source	e of estimated volume:	: Map 8-7				
	estimated swell factor:	<b>1</b>	book			
HOURLY PRODUC						
Excavator Cycle Time (	load bucket, swing lo	aded, dump b	ucket, swing empty			
			ondition Description			
	Secondary Job C	ondition with	in Basic Descriptio		E	•
Load Bucket Capacity			Cycle Time Valu	le: 0.321		minutes
Load Bucket Capacity						r 1.
	0.00			Bucket Size Clas	ss: <u>M</u>	ledium
Rated Capaci Bucket Fill Fact		LCY (hea	aped) gh clay (80% - 90%	() 0 850		
Adjusted Capaci		LCY	gii ciay (80% - 90%	6) 0.830		
• •	-		S:4- A	14:4 1 7000 f	- 4	
Job Condition Correction	<u>III Factors</u>	q	Site P	Altitude: <u>7000</u> fee	21	
Altitude Adj:	1.00	Source (CAT HE	3)			
Job Efficiency:	0.83	(1 shift/da				
Net Correction:	0.83	multiplier	<u> </u>			
		-				
	nadjusted Hourly Unit		359.07	LCY/Hour		
	Adjusted Hourly Unit Adjusted Hourly Fleet		298.02 298.02	LCY/Hour LCY/Hour		
JOB TIME AND CO	5 <b>6</b>		270.02			
		_				
Fleet size:	1 Excavat	tor To	otal job time:	4.36		Hours
Unit cost: \$0	0.562 /LCY		Total job cost:	\$730		
φ				4.00		-

#### HYDRAULIC EXCAVATOR WORK

Task description:	Regrade Old Wa	ste Disposa	l Road			
Bowie No. 1 Mine	Per	mit Action:	MT8	Per	mit/Job#:	C1981038
PROJECT IDENTIFI	CATION					
Task #: 052 Date: 10/1/2020	State: County:	Colorado Delta			viation: lename:	None C038-052
User: <u>RDZ</u>	ization normal DI	RMS				
Agency or organ						
Basic Machine:	Cat 336D L 10'-6" ROPS Cab	Stick	W	Horsepower: /eight (MT): Shift Basis: Data Source:	11	268 29.30 per day CRG)
Cost Breakdown:						
Ownership Cost/H Operating Cost/H			Utilization % NA 100	-		
Operator Cost/H	Iour: \$37.		NA	-		
Total Unit Cost/H	Iour: \$167.	.52				
Total Fleet Cost/I	Hour: \$167	.52				
	<u>ITIES</u> 866 <b>482</b>	CCY LCY	Swell facto	r: <u>1.330</u>		
	f estimated volume: imated swell factor:	Map 8-1 Cat Hand	book			
			IDOOK			
HOURLY PRODUCT Excavator Cycle Time (lo		ded dump b	nucket swing empt	v).		
Excavator Cycle Thile (10	de bucket, swilig lot	-	ondition Description		Æ	
	Secondary Job Co		in Basic Description	on: AVERAC		
Load Bucket Capacity			Cycle Time Val	ue: 0.321		minutes
				Bucket Size Cla	ass: M	edium
Rated Capacity: Bucket Fill Factor:		_ LCY (heard tou	aped) 1gh clay (80% - 90%	%)0850		
Adjusted Capacity		LCY		,0,0.000		
Job Condition Correction	Factors		Site A	Altitude: <u>7000</u> fe	eet	
	1.00	Source				
Altitude Adj: Job Efficiency:	1.00 0.83	(CAT HI (1 shift/da				
Net Correction:	0.83	multiplier				
A	djusted Hourly Unit djusted Hourly Unit	Production:	359.07 298.02	LCY/Hour LCY/Hour		
	ljusted Hourly Fleet	Production:	298.02	LCY/Hour		
JOB TIME AND COS Fleet size: 1	<u>Excavat</u>	or Ta	otal job time:	8.33		Hours
		. 1	-			-
Unit cost: \$0.5	62 /LCY		Total job cost:	\$1,395		-

### MOTOR GRADER WORK

Task description:	Finish Grade Lower Waste	Disposal Road		
Bowie No. 1 Mine	Permit Action:	MT8	Permi	t/Job#: <u>C1981038</u>
PROJECT IDENTI	FICATION			
Task #: 054	State: Colorado		Abbrevia	ation: None
Date: $10/1/2020$				name: C038-054
User: RDZ	<u> </u>			
Agency or org	anization name: DRMS			
HOURLY EQUIPM	ENT COST			
Basic Machin	ne: CAT 14M		Horsepower:	259
Ripper Attachme			Shift Basis:	1 per day
11			Data Source:	(CRG)
C . D 11				,,,
Cost Breakdown:		I.		
0	anghin Cost/Hour	¢ ( = 00	Utilization %	
	ership Cost/Hour:	\$65.89 \$58.96	<u>NA</u>	
	erating Cost/Hour:	\$58.96	100 NA	
	ership Cost/Hour:erating Cost/Hour:	\$0.00	NA	
	perator Cost/Hour:	\$0.00	NA	
-	al Unit Cost/Hour:	\$153.41		
101		\$133.41		
Tota	Il Fleet Cost/Hour: \$1	53.41		
Sour	ce of estimated acreage:Map	8-1		
	TION			
HOURLY PRODUC	Average Grader Speed:	1.50	mnh	
	Selected Application:		mph grading (0-2.5 mph) ·	15
	Selected Blade Angle:	<u> </u>	degrees	1
	Effective Blade Length:	12.10	degrees	
Widtl	of blade overlap per pass:	2.00	feet	
	g or ripping width per pass:	10.10	feet	
	ed Hourly Unit Production:	1.8364	acres/hour	
Job Condition Correction	•		te Altitude: 7000 feet	:
	Sourc			
Altitude Adj:	1.00 (CAT H			
Job Efficiency:	0.85 (1sh/d, m			
Net Correction:	0.8500 multiplie	er		
	Adjusted Hourly Unit Production	: 1.5609	acres/Hour	
	Adjusted Hourly Fleet Production		acres/Hour	
	sujusted frominy fried froudelloit	. 1.3007	acres/11001	
JOB TIME AND CO	<u>)ST</u>			
Fleet size:	1 Grader(s)	Total job time:	0.06	Hours
II. it as it the	0.00	Tetel 'start	. <b>41</b> A	
Unit cost: \$9	per acre	Total job cost	: \$10	

Bowie No. 1 Mine	Peri	mit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTIFI	CATION				
Task #: 059	State:	Colorado		Abbreviation:	None
Date: $10/1/2020$	County:	Delta		Filename:	C038-059
User: RDZ	County.	Delta		i incliante.	0000-000
Agency or organ		RMS			
HOURLY EQUIPME					
Basic Machine: Cat Horsepower: 574	D10T - 10SU				
1	ni-Universal				
	nank ripper				
	er day				
Data Source: (CR	,				
<u></u>					
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hour:		\$170.04	NA		
Operating Cost/Hour:		\$153.03	100		
Ripper own. Cost/Hour:		\$20.48	NA		
Ripper op. Cost/Hour:		\$12.29	100		
Operator Cost/Hour:		\$41.30	NA		
Total Fleet Cost/Hour:	\$1,588.53				
MATERIAL QUANT	<u>ITIES</u>				
Initial Volume:18,28	80				
Initial Volume: 18,28 Swell factor: 1.250	80 D				
Initial Volume:18,28Swell factor:1.250Loose volume:22,85	80 0 50 LCY				
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum	80 0 50 LCY ne:Map 8-1;		me 1, page 53		
Initial Volume:18,28Swell factor:1.250Loose volume:22,85	80 0 50 LCY ne:Map 8-1;		me 1, page 53		
Initial Volume: 18,28 Swell factor: 1.25( Loose volume: 22,85 Source of estimated volum Source of estimated swell	80 0 <b>50</b> LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u>		me 1, page 53		
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum	80 0 <b>50</b> LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u>		me 1, page 53		
Initial Volume: 18,28 Swell factor: 1.25( Loose volume: 22,85 Source of estimated volum Source of estimated swell	80 0 <b>50</b> LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u>		me 1, page 53		
Initial Volume: 18,28 Swell factor: 1.25( Loose volume: 22,85 Source of estimated volun Source of estimated swell HOURLY PRODUCT	80 0 50 LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u> CION 200 feet	book	me 1, page 53		
Initial Volume: 18,28 Swell factor: 1.25( Loose volume: 22,85 Source of estimated volun Source of estimated swell HOURLY PRODUCT Average push distance:	80 50 LCY ne: Map 8-1; factor: Cat Hand CION 200 feet 200 feet 200 feet	book	me 1, page 53   mbankment 0.9		
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc	80 50 LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u> CION ction: <u>200 feet</u> 946.0 LCY/ cription: <u>Compa</u>	book hr			
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc	80 50 LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u> CION ction: <u>200 feet</u> 946.0 LCY/ cription: <u>Compa</u> <u>5 %</u>	book hr			
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc	80 50 LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u> CION ction: <u>200 feet</u> 946.0 LCY/ cription: <u>Compa</u>	book hr			
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc	80 50 LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u> CION ction: <u>200 feet</u> 946.0 LCY/ cription: <u>Compa</u> <u>5 %</u>	book hr			
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average push gradient: Average site altitude:	80 50 LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u> CION 200 feet etion: <u>946.0 LCY</u> / cription: <u>Compa</u> <u>5 %</u> 7,850 feet	book hr			
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average push gradient: Average site altitude: Material weight: Weight description:	80 <b>50</b> LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u> <b>CION</b> 200 feet ction: <u>946.0 LCY/</u> cription: <u>Compa</u> <u>5 %</u> 7,850 feet 2,900 lbs/LCY User Provided	book hr	mbankment 0.9		
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	80 <b>50</b> LCY ne: <u>Map 8-1;</u> factor: <u>Cat Hand</u> <b>CION</b> 200 feet 200 feet 200 feet 946.0 LCY/ cription: <u>Compa</u> <u>5 %</u> 7,850 feet 2,900 lbs/LCY User Provided Factor	book hr	mbankment 0.9		
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average push gradient: Average site altitude: Material weight: Weight description: Iob Condition Correction Operator S	80           0           50 LCY           ne:         Map 8-1;           factor:         Cat Hand           CION         200 feet           cription:         946.0 LCY/           cription:         Compa           5 %         7,850 feet           2,900 lbs/LCY         User Provided           Factor         Skill:         0.	book /hr 	mbankment 0.9		
Initial Volume: 18,28 Swell factor: 1.250 Loose volume: 22,85 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency desc Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	80           0           50 LCY           ne:         Map 8-1;           factor:         Cat Hand           CION           cription:         946.0 LCY/           cription:         Compa           5 %         7,850 feet           2,900 lbs/LCY         User Provided           Eactor         Skill:         0.           cncy:         0.	book /hr 	mbankment 0.9		

Job efficiency	: 0.830	(1 SHIFT/DAY)
Spoil pile	: 0.800	(FND-RF)
Push gradient	: 0.903	(CAT HB)
Altitude	: 1.000	(CAT HB)
Material Weight	. 0.793	(CAT HB)
Blade type	: 1.000	(PAT)
Net correction	: 0.3209	
Adjusted unit production:	303.57 LCY/hr	
Adjusted fleet production:	1214.28 LCY/hr	
—		

Fleet size:	4 Dozer(s)
Unit cost:	\$1.308/LCY

Total job time:	18.82 Hours
Total job cost:	\$29,893

### MOTOR GRADER WORK

Task description:	Finish Grade Upper Wa	aste Disposal Road			
Bowie No. 1 Mine	Permit Act	ion: MT8	Per	rmit/Job#:	C1981038
PROJECT IDENT	<b>FICATION</b>				
Task #: 064	State: Color	ado	Abbre	eviation:	None
Date: $10/1/202$				ilename:	C038-064
User: RDZ					0000 001
Agency or or	ganization name: DRMS				
HOURLY EQUIPM	<u>IENT COST</u>				
Basic Mach	ine: CAT 14M		Horsepower:		259
Ripper Attachm	ent:		Shift Basis:	1 p	er day
			Data Source:		CRG)
Cost Dessledowe			_		
Cost Breakdown:		1	Utilization %		
Ow	nership Cost/Hour:	\$65.89	NA		
	berating Cost/Hour:	\$58.96	100		
	nership Cost/Hour:	\$0.00	NA		
	berating Cost/Hour:	\$0.00			
	Operator Cost/Hour:	\$28.56	NA		
	tal Unit Cost/Hour:	\$153.41			
Tot	al Fleet Cost/Hour:	\$153.41			
		28 Iap8-1			acres
HOURLY PRODU	CTION				
1001211020	Average Grader Speed:	1.50	mph		
	Selected Application:		grading (0-2.5 mp	h) - 1.5	
	Selected Blade Angle:	30	degrees		
	Effective Blade Length:	12.10	feet		
Wid	th of blade overlap per pass:	2.00	feet		
Net gradir	g or ripping width per pass:	10.10	feet		
Unadjus	ted Hourly Unit Production:	1.8364	acres/hou	ır	
Job Condition Correcti	on Factors	Si	ite Altitude: <u>7100</u> f	eet	
	So	ource			
Altitude Adj:		T HB)			
Job Efficiency:		d, mod.)			
Net Correction:		iplier			
	Adjusted Hourly Unit Produc	tion: 1.5609	acres/Hour		
	Adjusted Hourly Fleet Produc		acres/Hour		
	Aujusteu Hoully Fleet Flouuc	uon. <b>1.3009</b>			
JOB TIME AND C	<u>OST</u>				
Fleet size:	1 Grader(s)	Total job time	e: 0.18		Hours
		-			
Unit cost: \$	98.28 per acre	Total job cos	t: \$28		-

### MOTOR GRADER WORK

Task description:	Finish Grade (	Crusher and So	creening Road			
Bowie No. 1 Min	e Po	ermit Action:	MT8	I	Permit/Job#:	C1981038
PROJECT IDEN	TIFICATION					
Task #: 065	State	: Colorado		Abl	breviation:	None
Date: $10/1/2$					Filename:	C038-065
User: RDZ						0000 000
Agency or	organization name: I	ORMS				
HOURLY EQUI	PMENT COST					
Basic Ma				Horsepower:		259
Ripper Attach				Shift Basis:		er day
Ripper / Rituen				Data Source:		CRG)
				Data Bource.	(	
Cost Breakdown:			1	<b>TT</b> . <b>1</b>		
			¢ < 7, 00	Utilization %		
	Ownership Cost/Hour:		\$65.89 \$58.06	NA 100	_	
	Operating Cost/Hour:		\$58.96	100 NA	_	
	Ownership Cost/Hour: Operating Cost/Hour:		\$0.00 \$0.00	NA	_	
Kipper	Operating Cost/Hour: Operator Cost/Hour:		\$0.00	NA	_	
,	· ·		\$153.41	INA	_	
	Total Unit Cost/Hour:		\$133.41			
7	Total Fleet Cost/Hour:	\$153	8.41			
	Area to be graded or rip					acres
		age: Map8-1	L			
HOURLY PROD	UCTION					
	Average Grader		1.50	mph		
	Selected Appli			grading (0-2.5 n		
	Selected Blade		30	degree	S	
***	Effective Blade L	<u> </u>	12.10	feet		
	idth of blade overlap pe		2.00	feet		
	ling or ripping width pe usted Hourly Unit Produ		10.10 1.8364	feet acres/h	0.011	
Job Condition Corre	-			te Altitude: 700		
		Source	51		<u>-</u> 1000	
Altitude A	dj: 1.00	(CAT HB	;)			
Job Efficienc		(1sh/d, mo				
Net Correctio		multiplier				
		•	1 5 400		_	
	Adjusted Hourly Un		1.5609	acres/Hour		
	Adjusted Hourly Flee	et Production:	1.5609	acres/Hour	ľ	
JOB TIME AND	COST					
Fleet size:	1 Grader(s	s)	Total job time	. 0.0	6	Hours
Unit cost:	\$98.28 per acre		Total job cost	: \$1	0	
Unit Cost:	\$98.28 per acre		i otal jub cost		v	

#### HYDRAULIC EXCAVATOR WORK

Task description:	Establish Irrigation Ditch at Storage					
Bowie No. 1 Mine	Pe	rmit Action:	MT8	P	ermit/Job#:	C1981038
PROJECT IDENTIF	<b>ICATION</b>					
Task #:         079           Date:         10/1/2020           User:         RDZ	State: County:	Colorado Delta			Filename:	None C038-079
Agency or orga	nization name: D	RMS				
HOURLY EQUIPM	ENT COST					
Basic Machine: Attachment 1:	Cat 336D L 10'-6 ROPS Cab	" Stick	W	Iorsepower: eight (MT): Shift Basis:	2	268 9.30 er day
			D	Data Source:	(C	CRG)
Cost Breakdown: Ownership Cost/	Hour: \$60	67	Utilization % NA			
Operating Cost/			100			
Operator Cost/	Hour: \$37		NA			
Total Unit Cost/	Hour: \$16	7.52				
Total Fleet Cost	/Hour:\$16	7.52				
MATERIAL QUAN						
	275 866	CCY LCY	Swell factor	: 1.330		
	of estimated volume stimated swell factor	1	erator Estimate			
HOURLY PRODUC						
Excavator Cycle Time (1	oad bucket, swing lo	baded, dump b	bucket, swing empty	<u>v):</u>		
			Condition Description			
	Secondary Job C	Condition with	in Basic Description Cycle Time Valu		KE	minutes
Load Bucket Capacity			Cycle Thile Valu	0.115		minutes
			]	Bucket Size	Class: Me	edium
Rated Capacit		LCY (he				
Bucket Fill Facto			ıgh clay (80% - 90%	6) 0.850		
Adjusted Capacit	·	LCY				
Job Condition Correction	n Factors		Site A	ltitude: <u>7000</u>	<u>)</u> feet	
A 4.*. 4 A 4*	1.00	Source				
Altitude Adj: Job Efficiency:	1.00 0.83	(CAT HI (1 shift/da	<u>,</u>			
Net Correction:	0.83	multiplier	<u>.</u>			
-				LOVILL		
	adjusted Hourly Uni Adjusted Hourly Uni		<u>259.01</u> 214.98	LCY/Hour LCY/Hour		
	djusted Hourly Flee		214.98	LCY/Hour		
JOB TIME AND CO	<u>ST</u>					
Fleet size:	1 Excava	tor T	otal job time:	1.7	0	Hours
Unit cost: \$0.	779 /LCY		Total job cost:	\$28	5	
$\bigcirc \qquad \qquad$			10tur j00 c0st.	φ <b>4</b> 0		

			•		
Bowie No. 1 Mine	Per	mit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTI	FICATION				
Task #: 093	State:	Colorado		Abbreviation:	None
Date: $10/1/2020$		Delta		Filename:	C038-093
User: RDZ					
Agency or orga	anization name:	RMS			
HOURLY EQUIPM	<u>ENT COST</u>				
Basic Machine: Ca	at D10T - 10SU				
Horsepower: 57	74				
Blade Type: Se	emi-Universal				
	shank ripper				
	per day				
Data Source: (C	CRG)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hour:		\$170.04	NA		
Operating Cost/Hour:		\$153.03	100		
Ripper own. Cost/Hour:		\$20.48	NA		
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour:		\$41.30	NA		
MATERIAL QUAN	<u>\$1,539.39</u> TITIES				
Initial Volume: 565	TITIES 5				
Initial Volume: 565 Swell factor: 1.3	TITIES 5				
Initial Volume: 565 Swell factor: 1.3	TITIES         5         30         LCY         ume:		me 1, page 33		
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu	TITIES 5 30 1 LCY ume: Map 8-1; cat Hand		me 1, page 33		
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe	TITIES 30 1 LCY ume: Map 8-1; 21 factor: Cat Hand CTION		me 1, page 33		
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC	TITIES 30 LLCY ume: <u>Map 8-1;</u> 211 factor: <u>Cat Hand</u> <u>CTION</u> 50 feet	book	me 1, page 33		
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ	TITIES         5         30         1 LCY         ume:       Map 8-1;         cat Hand         Cat Hand         CTION         uction:       50 feet         2,748.7 LC	book Y/hr			
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ	TITIES           30           1 LCY           ume:         Map 8-1;           bill factor:         Cat Hand <b>ZTION</b> uction:         50 feet           uction:         2,748.7 LC           escription:         Compa	book Y/hr	me 1, page 33		
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	TITIES         30         30         L LCY         ume:       Map 8-1;         ell factor:       Cat Hand         CTION         uction:       50 feet         uction:       2,748.7 LC         escription:       Compa         0 %	book Y/hr			
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude:	TITIES         30         30         LLCY         ume:       Map 8-1;         ell factor:       Cat Hand         CTION         uction:       50 feet         2,748.7 LC         escription:       Compa         0 %       7,200 feet	book Y/hr			
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight:	TITIES         5         30         LLCY         ume:       Map 8-1;         cat Hand         Cat Hand         CTION         uction:       50 feet         2,748.7 LC         escription:       Compa         0 %       7,200 feet         2,900 lbs/LCY	book Y/hr 	nbankment 0.9		
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description:	TITIES           30           30           LLCY           ume:         Map 8-1;           ell factor:         Cat Hand           CTION           uction:         50 feet           2,748.7 LC           escription:         Compa           0 %         7,200 feet           2,900 lbs/LCY         Decomposed rock	book Y/hr 	nbankment 0.9 50% Earth		
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Iob Condition Correctio	TITIES         5         30         1 LCY         ume:       Map 8-1;         cat Hand         Cat Hand         CTION         uction: $50$ feet         2,748.7 LC         escription:       Compa         0 %       7,200 feet         2,900 lbs/LCY       Decomposed rock         on Factor $Factor   $	book Y/hr 	nbankment 0.9 50% Earth		
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Iob Condition Correction Operator	TITIES         5         30         1 LCY         ume:       Map 8-1;         cat Hand         Cat Hand         CTION         uction: $50$ feet         2,748.7 LC         escription:       Compa         0 %       7,200 feet         2,900 lbs/LCY       Decomposed rock         n Factor       0,         r Skill:       0.	book Y/hr cted fill or en - 50% Rock, 750			
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Iob Condition Correction Operator Material consis	TITIES         5         30         1 LCY         ume:       Map 8-1;         une:       Cat Hand         State       State         Map 8-1;       Cat Hand         State       Cat Hand         State       State         0 %       Compa         1 %       0         1 %       0	book Y/hr cted fill or en - 50% Rock, 750 900			
Initial Volume: 565 Swell factor: 1.3 Loose volume: 751 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Iob Condition Correction Operator Material consis Dozing m	TITIES         30         30         1 LCY         ume:       Map 8-1;         bill factor:       Cat Hand         2TION         uction: $50$ feet         2,748.7 LC         escription:       Compa         0 %       7,200 feet         2,900 lbs/LCY       Decomposed rock         on Factor       r         r Skill:       0.         otherhod:       1.	book Y/hr cted fill or en - 50% Rock, 750			

Task # 093

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3554	
Adjusted unit production: 97	76.89 LCY/hr	
Adjusted fleet production: 39	907.56 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.394/LCY
Total job time:	0 10 Hours

I otal job time:	<b>0.19</b> Hours
Total job cost:	\$296

Page 1 of 2

Task description:	Backfill and R	egrade Pond V	N-1		
Bowie No. 1 Mine	P	ermit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTIE	<b><u>TICATION</u></b>				
Task #: 095	State	: Colorado		Abbreviation:	None
Date: $\frac{0.000}{10/1/2020}$				Filename:	C038-095
User: RDZ					
Agency or orga	nization name: <u>I</u>	ORMS			
HOURLY EQUIPM	ENT COST				
	tt D10T - 10SU				
Horsepower: 57					
	mi-Universal				
	shank ripper				
4	per day				
Data Source: (C	RG)				
Cost Breakdown:					
o ·· ~			<u>Utilization %</u>		
Ownership Cost/Hour:		\$170.04	NA		
Operating Cost/Hour:		\$153.03	100		
Ripper own. Cost/Hour:		\$20.48	NA		
		\$0.00	0		
Ripper op. Cost/Hour:					
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN	\$384.85 <b>\$1,539.39</b>	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: <u>1,20</u> Swell factor: <u>1.10</u>	\$1,539.39 FITIES 00 55	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: <u>1,20</u> Swell factor: <u>1.10</u>	\$1,539.39 FITIES 00	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 1,20 Swell factor: 1.10 Loose volume: 1,30	\$1,539.39 FITIES 00 65 98 LCY		NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: <u>1,20</u> Swell factor: <u>1.10</u>	\$1,539.39 FITIES 00 55 98 LCY ume:Operato	  or Estimate	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: <u>1,20</u> Swell factor: <u>1.10</u> Loose volume: <u>1,39</u> Source of estimated volu Source of estimated swe	\$1,539.39 FITIES 00 55 98 LCY Ime: Operato Il factor: Cat Har	  or Estimate	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 1,20 Swell factor: 1.10 Loose volume: 1,39 Source of estimated volu Source of estimated swe HOURLY PRODUC	\$1,539.39 <b>FITIES</b> 00 55 <b>98</b> LCY Ime: Operato Il factor: Cat Han <b>TION</b>	  or Estimate	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: <u>1,20</u> Swell factor: <u>1.10</u> Loose volume: <u>1,39</u> Source of estimated volu Source of estimated swe	\$1,539.39 <b>FITIES</b> 00 55 <b>98</b> LCY 100 11 factor: Operato Cat Har <b>TION</b> 75 feet	or Estimate ndbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 1,20 Swell factor: 1.10 Loose volume: 1,31 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance:	\$1,539.39         FITIES         00         55         98 LCY         ume:       Operate         11 factor:       Cat Han         TION         action:       75 feet         action:       2,105.3 L	or Estimate ndbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 1,20 Swell factor: 1.10 Loose volume: 1,39 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de	\$1,539.39         FITIES         00         55         98 LCY         ume:       Operato         11 factor:       Cat Han         TION         action:       75 feet         2,105.3 L         escription:       Comp	or Estimate ndbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 1,20 Swell factor: 1,10 Loose volume: 1,39 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ	\$1,539.39         FITIES         00         55         98 LCY         ume:       Operate         11 factor:       Cat Han         TION         action:       75 feet         action:       2,105.3 L	or Estimate ndbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 1,20 Swell factor: 1.11 Loose volume: 1,39 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	\$1,539.39         FITIES         00         55         98 LCY         ume:       Operato         11 factor:       Cat Han         TION         action:       75 feet         action:       2,105.3 L         escription:       Comp         5 %	or Estimate ndbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 1,20 Swell factor: 1.10 Loose volume: 1,39 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude:	\$1,539.39         FITIES         00         55         98 LCY         ume:       Operate         11 factor:       Cat Har         TION         action:       2,105.3 L         escription:       Comp         5 %         7,100 feet	or Estimate ndbook CY/hr pacted fill or en			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 1,20 Swell factor: 1.10 Loose volume: 1,33 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	\$1,539.39         FITIES         00         55         98 LCY         ume:       Operate         11 factor:       Cat Har         TION         action:       2,105.3 L         escription:       Com         5 %       7,100 feet         2,900 lbs/LCY       Decomposed room         n Factor       External	or Estimate ndbook CY/hr pacted fill or en			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 1,20 Swell factor: 1.10 Loose volume: 1,31 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator	\$1,539.39         FITIES         00         55         98 LCY         ume:       Operate         11 factor:       Cat Har         TION         action:       75 feet         action:       2,105.3 L         escription:       Composed         5 %       7,100 feet         2,900 lbs/LCY       Decomposed root         n Factor       Skill:	CY/hr pacted fill or er ck - 50% Rock, 0.750			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 1,20 Swell factor: 1.10 Loose volume: 1,39 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consis	\$1,539.39         FITIES         00         55         98 LCY         ume:       Operator         11 factor:       Cat Hand         TION         action:       75 feet         2,105.3 L         sscription:       Composed         5 %       7,100 feet         2,900 lbs/LCY       Decomposed root         n Factor       Skill:         tency:	CY/hr pacted fill or er ck - 50% Rock, 0.750 0.900			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 1,20 Swell factor: 1.10 Loose volume: 1,39 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consis Dozing m	\$1,539.39         FITIES         00         55         98 LCY         ume:       Operator         11 factor:       Cat Hand         TION         action:       75 feet         2,105.3 L         sscription:       Composed         5 %       7,100 feet         2,900 lbs/LCY       Decomposed root         n Factor       Skill:         tency:	CY/hr pacted fill or er ck - 50% Rock,			

0.830	(1 SHIFT/DAY)
0.800	(FND-RF)
0.903	(CAT HB)
1.000	(CAT HB)
0.793	(CAT HB)
1.000	(PAT)
0.3209	
75.59 LCY/hr	
<b>/02.36</b> LCY/hr	
	0.800 0.903 1.000 0.793 1.000 0.3209 25.59 LCY/hr

Fleet size:	4 Dozer(s)
Unit cost:	\$0.570/LCY
Total job times	0 52 Hours

Hours
6

Page 1 of 2

Task description:	Backfill and	i Regiaue i onu v	1-2		
Bowie No. 1 Mine		Permit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTIF	<b>ICATION</b>				
Task #:         096           Date:         10/1/2020           User:         RDZ		tate: Colorado nty: Delta		Abbreviation: Filename:	None C038-096
Agency or organ	nization name:	DRMS			
HOURLY EQUIPME	ENT COST				
	t D10T - 10SU				
Horsepower: 574					
<b>7</b> 1	ni-Universal				
	hank ripper				
	er day				
Data Source: (CI	RG)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hour:		\$170.04	NA		
Operating Cost/Hour:		\$153.03	100		
Ripper own. Cost/Hour:		\$20.48	NA		
Ripper op. Cost/Hour:		\$0.00	0		
~ ~		\$41.30	NT A		
	\$384.85 <b>\$1,539.39</b>	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume: 1,20	\$1,539.39 <u>TITIES</u>	\$41.30	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 1,20 Swell factor: 1.16	\$1,539.39 <u>TITIES</u> 0	\$41.30	NA		
Total unit Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       1,20         Swell factor:       1.16         Loose volume:       1,39         Source of estimated volu         Source of estimated swel	\$1,539.39 <u>TTIES</u> 0 5 8 LCY me: <u>Ope</u> 1 factor: <u>Cat</u>	erator Estimate Handbook			
Total unit Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       1,20         Swell factor:       1.16         Loose volume:       1,39         Source of estimated volu         Source of estimated swel         HOURLY PRODUCT	\$1,539.39 TTIES 0 5 8 LCY me: Ope 1 factor: Cat FION	erator Estimate Handbook			
Total unit Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       1,20         Swell factor:       1.16         Loose volume:       1,39         Source of estimated volu         Source of estimated swel	\$1,539.39 <u>TTIES</u> 0 5 8 LCY me: Ope 1 factor: Cat <u>FION</u> 75 fee	erator Estimate Handbook			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 1,20 Swell factor: 1.16 Loose volume: 1,39 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produc	\$1,539.39         TTIES         0         5         8 LCY         me:       Ope         1 factor:       Cat         FION         ction:       2,105.	erator Estimate Handbook			
Total unit Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       1,20         Swell factor:       1.16         Loose volume:       1,39         Source of estimated volu         Source of estimated swel         HOURLY PRODUCT         Average push distance:	\$1,539.39         TTIES         0         5         8 LCY         me:       Ope         1 factor:       Cat         FION         ction:       2,105.	erator Estimate Handbook t 3 LCY/hr			
Total unit Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       1,20         Swell factor:       1.16         Loose volume:       1,39         Source of estimated volu         Source of estimated swel         HOURLY PRODUCY         Average push distance:         Unadjusted hourly produce         Materials consistency des         Average push gradient:         Average site altitude:	\$1,539.39         TTIES         0         5         8 LCY         me:       Ope         1 factor:       Cat         FION         ction:       75 fee         ction:       2,105         scription:       C         5 %	t compacted fill or er			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 1,20 Swell factor: 1.16 Loose volume: 1,39 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency des Average push gradient:	\$1,539.39         TTIES         0         5         8 LCY         me:       Ope         1 factor:       Cat         FION         ction:       2,105.         scription:       C         5 %         7,100 feet         2,900 lbs/LC	t compacted fill or er	  nbankment 0.9		
Total unit Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       1,20         Swell factor:       1.16         Loose volume:       1,39         Source of estimated volut       Source of estimated swel         HOURLY PRODUCT         Average push distance:         Unadjusted hourly product         Materials consistency destination         Average site altitude:         Material weight:	\$1,539.39         TTIES         0         5         8 LCY         me:       Ope         1 factor:       Cat         FION         ction:       2,105.         scription:       C         5 %         7,100 feet         2,900 lbs/LC         Decomposed	t a LCY/hr ompacted fill or er	  nbankment 0.9		
Total unit Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       1,20         Swell factor:       1.16         Loose volume:       1,39         Source of estimated volu         Source of estimated volu         Source of estimated volu         Source of estimated swel         HOURLY PRODUCT         Average push distance:         Unadjusted hourly product         Materials consistency des         Average push gradient:         Average site altitude:         Material weight:         Weight description:         Job Condition Correction         Operator	\$1,539.39         TTIES         0         5         8 LCY         me:       Ope         1 factor:       Cat         FION         ction:       2,105.         scription:       C         5 %       7,100 feet         2,900 lbs/LC       Decomposed         Factor       Skill:	t a LCY/hr ompacted fill or er y rator Estimate t a LCY/hr ompacted fill or er y rock - 50% Rock, 0.750			
Total unit Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       1,20         Swell factor:       1.16         Loose volume:       1,39         Source of estimated volu         Source of estimated volu         Source of estimated volu         Source of estimated swel         HOURLY PRODUCT         Average push distance:         Unadjusted hourly product         Materials consistency des         Average push gradient:         Average site altitude:         Material weight:         Weight description:         Job Condition Correction         Operator         Material consist	\$1,539.39         TTIES         0         5         8 LCY         me:       Ope         1 factor:       Cat         FION         ction:       75 fee         2,105.         scription:       C         5 %       7,100 feet         2,900 lbs/LC       Decomposed         Factor       Skill:         ency:	t 3 LCY/hr ompacted fill or er 'Y l rock - 50% Rock, 0.750 0.900			
Total unit Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       1,20         Swell factor:       1.16         Loose volume:       1,39         Source of estimated volu         Source of estimated swel         HOURLY PRODUCT         Average push distance:         Unadjusted hourly product         Materials consistency dest         Average push gradient:         Average site altitude:         Material weight:         Weight description:         Job Condition Correction         Operator         Material consist         Dozing me	\$1,539.39         TTIES         0         5         8 LCY         me:       Ope         1 factor:       Cat         FION         ction:       75 fee         2,105.         scription:       C         5 %       7,100 feet         2,900 lbs/LC       Decomposed         Factor       Skill:         ency:	t a LCY/hr ompacted fill or er y rator Estimate t a LCY/hr ompacted fill or er y rock - 50% Rock, 0.750			

Task # 096

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3209	
Adjusted unit production: 67	75.59 LCY/hr	
Adjusted fleet production: $\overline{27}$	702.36 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.570/LCY
Total job times	0 52 Hours

I otal job time:	0.52 Hours
Total job cost:	\$796

Task description:	Replace topsoil f	m stockpne	to O v vv lvi resulstui Dal	ice ai ca	
Bowie No. 1 Mine	Per	mit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTIE	<b>FICATION</b>				
Task #: 102	State:	Colorado		Abbreviation:	None
Date: $\frac{102}{10/1/2020}$		Delta		Filename:	C038-102
User: RDZ	County.	Denu		i nonunie.	0000 102
Agency or orga	anization name: DI	RMS			
HOURLY EQUIPM	ENT COST				
	at D10T - 10SU				
Horsepower: 57	4 mi-Universal				
	shank ripper				
	per day				
Data Source: (C	RG)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hour:		\$170.04	NA		
Operating Cost/Hour:		\$153.03	100		
Ripper own. Cost/Hour:		\$20.48	NA		
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour:		\$41.30	NA		
MATERIAL QUAN' Initial Volume: 4,22 Swell factor: 1.00	35				
	35 LCY				
Source of estimated volu		9" replacem	ent denth		
Source of estimated swe	II tactor: Cat Hand		ent depth		
		lbook			
HOURLY PRODUC		lbook			
		lbook			
HOURLY PRODUC	TION 350 feet				
HOURLY PRODUC	350 feet           action:         556.8 LCY.				
HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	TION action: <u>350 feet</u> <u>556.8 LCY</u> escription: <u>Loose</u> <u>30 %</u>	/hr			
HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude:	350 feet         action:       556.8 LCY         escription:       Loose         30 %       7,200 feet	/hr			
HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight:	350 feet         action:       350 feet         scription:       Loose         30 %       7,200 feet         2,100 lbs/LCY	/hr			
HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description:	350 feet         action:       350 feet         556.8 LCY         escription:       Loose         30 %         7,200 feet         2,100 lbs/LCY         Earth - Loam	/hr			
HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correctio	TION 350 feet action: 556.8 LCY escription: Loose 30 % 7,200 feet 2,100 lbs/LCY Earth - Loam n Factor	/hr stockpile 1.2			
HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correctio Operator	$\begin{array}{c} \hline \textbf{TION} \\ \hline \textbf{350 feet} \\ \textbf{action:} & \underline{556.8 \ LCY} \\ \hline \textbf{scription:} & \underline{Loose} \\ \hline \underline{30 \%} \\ \hline 7,200 \ \textbf{feet} \\ \hline 2,100 \ \textbf{lbs/LCY} \\ \hline \textbf{Earth - Loam} \\ \hline \textbf{n Factor} \\ \hline \textbf{Skill:} & 0 \\ \hline \end{array}$	/hr stockpile 1.2	<u>Source</u> (AVG.)		
HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consis	350 feet         action:       350 feet         scription:       Loose         30 %       7,200 feet         2,100 lbs/LCY       Earth - Loam         n Factor       Skill:       0         tency:       1	/hr stockpile 1.2	<u>Source</u> (AVG.) (CAT HB)		
HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consis Dozing m	TION         350 feet         action: $556.8 LCY_{eff}$ escription:       Loose         30 %       7,200 feet         2,100 lbs/LCY       Earth - Loam         n Factor $\circ$ Skill:       0         tency:       1         ethod:       1	/hr stockpile 1.2	<u>Source</u> (AVG.)		

Task # 102

Job efficiency	0.830	(1 SHIFT/DAY)
Spoil pile	0.800	(FND-RF)
Push gradient	0.298	(CAT HB)
Altitude	1.000	(CAT HB)
Material Weight	1.095	(CAT HB)
Blade type	1.000	(PAT)
Net correction	n: 0.1950	
Adjusted unit production:	108.58 LCY/hr	
Adjusted fleet production:	434.32 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$3.544/LCY

Total job time:	<b>9.75</b> Hours
Total job cost:	\$15,010

Task description:	Replace Tops	on nom Stockp	ile to OVWM Vent Sh	art Access	
Bowie No. 1 Mine	I	Permit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTI	<b>FICATION</b>				
Task #: 104	Stat	e: Colorado		Abbreviation:	None
Date: $10/1/2020$				Filename:	C038-104
User: RDZ	<u> </u>				
Agency or org	ganization name:	DRMS			
HOURLY EQUIPM	<u>IENT COST</u>				
	Cat D10T - 10SU				
	574		_		
•••	Semi-Universal				
	s-shank ripper		<u> </u>		
	per day CRG)				
			_		
Cost Breakdown:					
		<b>*</b>	<u>Utilization %</u>		
Ownership Cost/Hour		\$170.04	NA		
Operating Cost/Hour		\$153.03	100		
Ripper own. Cost/Hour		\$20.48	NA		
Ripper op. Cost/Hour		\$0.00	0		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour:	\$384.85 <b>\$1,539.39</b>	\$41.30	NA		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume:3,3	\$384.85 <b>\$1,539.39</b> NTITIES 300	\$41.30	NA		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: <u>3,3</u> Swell factor: <u>1.1</u>	\$384.85 <b>\$1,539.39</b> <b>NTITIES</b> 300 115	\$41.30	NA		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 3,3 Swell factor: 1.1 Loose volume: 3,6	\$384.85 <b>\$1,539.39</b> <b>NTITIES</b> 300 115 <b>680</b> LCY				
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 3,2 Swell factor: 1.1 Loose volume: 3,6 Source of estimated vol	\$384.85 <b>\$1,539.39</b> <b>NTITIES</b> 300 115 <b>680</b> LCY lume: Permit	t Volume 1, Pag			
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 3,3 Swell factor: 1.1 Loose volume: 3,6	\$384.85 <b>\$1,539.39</b> <b>NTITIES</b> 300 115 <b>680</b> LCY lume: Permit				
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 3,3 Swell factor: 1.1 Loose volume: 3,6 Source of estimated vol Source of estimated swe	\$384.85 <b>\$1,539.39</b> <b>NTITIES</b> 300 115 <b>680</b> LCY lume: Permit Cat Ha	t Volume 1, Pag			
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 3,2 Swell factor: 1.1 Loose volume: 3,6 Source of estimated vol	\$384.85 <b>\$1,539.39</b> <b>NTITIES</b> 300 115 <b>680</b> LCY lume: Permit Cat Ha	t Volume 1, Pag			
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 3,3 Swell factor: 1.1 Loose volume: 3,6 Source of estimated vol Source of estimated swe	\$384.85 <b>\$1,539.39</b> <b>NTITIES</b> 300 115 <b>680</b> LCY lume: Permit vell factor: Cat Ha <b>CTION</b>	t Volume 1, Pag andbook			
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 3,5 Swell factor: 1.1 Loose volume: 3,6 Source of estimated vol Source of estimated swe HOURLY PRODUC	\$384.85 <b>\$1,539.39</b> <b>NTITIES</b> 300 115 <b>680</b> LCY lume: Permit cell factor: Cat Ha CTION 250 feet	t Volume 1, Pag andbook			
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 3,3 Swell factor: 1.1 Loose volume: 3,6 Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance:	\$384.85 <b>\$1,539.39</b> <b>NTITIES</b> 300 115 <b>680</b> LCY lume: Permit cell factor: Cat Ha CTION CTION 250 feet duction: 754.3 LC	t Volume 1, Pag andbook	e 64		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 3,2 Swell factor: 1,1 Loose volume: 3,6 Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d	\$384.85         \$1,539.39         NTITIES         300         115         680 LCY         lume:       Permit         rell factor:       Cat Ha         CTION         :       250 feet         duction:       754.3 LC         description:       Con	t Volume 1, Pag andbook	e 64		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 3,2 Swell factor: 1.1 Loose volume: 3,6 Source of estimated vol Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient:	<u>\$384.85</u> <b>\$1,539.39</b> <b>NTITIES</b> 300 115 <b>680</b> LCY lume: Permit rell factor: Cat Ha <b>CTION</b> : 250 feet duction: 754.3 LC lescription: Con : 10 %	t Volume 1, Pag andbook	e 64		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 3,2 Swell factor: 1,1 Loose volume: 3,6 Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d	\$384.85         \$1,539.39         NTITIES         300         115         680 LCY         lume:       Permit         rell factor:       Cat Ha         CTION         :       250 feet         duction:       754.3 LC         description:       Con	t Volume 1, Pag andbook	e 64		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 3,2 Swell factor: 1.1 Loose volume: 3,6 Source of estimated vol Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient:	<u>\$384.85</u> <b>\$1,539.39</b> <b>NTITIES</b> 300 115 <b>680</b> LCY lume: Permit rell factor: Cat Ha <b>CTION</b> : 250 feet duction: 754.3 LC lescription: Con : 10 %	t Volume 1, Pag andbook	e 64		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: <u>3,2</u> Swell factor: <u>1,1</u> Loose volume: <u>3,6</u> Source of estimated vol Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude:	\$384.85         \$1,539.39         NTITIES         300         115         680 LCY         lume:       Permit         rell factor:       Cat Ha         CTION         :       250 feet         duction:       754.3 LC         description:       Con         :       10 %         7,100 feet	t Volume 1, Pag andbook	e 64		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 3,3 Swell factor: 1.1 Loose volume: 3,6 Source of estimated vol Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average site altitude: Material weight:	\$384.85         \$1,539.39         NTITIES         300         115         680 LCY         lume:       Permit         rell factor:       Cat Ha         CTION         :       250 feet         duction:       754.3 LC         description:       Con         :       10 %         7,100 feet       2,100 lbs/LCY         Earth - Loam	t Volume 1, Pag andbook	e 64		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 3,3 Swell factor: 1.1 Loose volume: 3,6 Source of estimated vol Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operato	$\frac{\$384.85}{\$1,539.39}$ $\frac{\text{NTITIES}}{300}$ $\frac{300}{115}$ $\frac{300}{115}$ $\frac{680 \text{ LCY}}{680 \text{ LCY}}$ $\frac{\text{Permit}}{\text{Cat Ha}}$ $\frac{\text{CTION}}{\text{Cat Ha}}$ $\frac{250 \text{ feet}}{\text{Cat Ha}}$ $\frac{250 \text{ feet}}{\text{Cat Ha}}$ $\frac{250 \text{ feet}}{\text{Cat Ha}}$ $\frac{250 \text{ feet}}{\text{Cat Ha}}$ $\frac{10 \%}{754.3 \text{ LC}}$ $\frac{10 \%}{7,100 \text{ feet}}$ $\frac{2,100 \text{ lbs/LCY}}{\text{Earth - Loam}}$ $\frac{\text{on Factor}}{\text{or Skill:}}$	t Volume 1, Pag andbook	e 64		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume:	\$384.85         \$1,539.39         NTITIES         300         115         680 LCY         lume:       Permit         cat Ha         CTION         :       250 feet         duction:       754.3 LC         lescription:       Con         :       10 %         7,100 feet       2,100 lbs/LCY         Earth - Loam       on Factor         or Skill:	t Volume 1, Pag andbook	e 64 		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume:	\$384.85         \$1,539.39         NTITIES         300         115         680 LCY         lume:       Permit         cat Ha         CTION         :       250 feet         duction:       754.3 LC         lescription:       Con         :       10 %         7,100 feet       2,100 lbs/LCY         Earth - Loam       on Factor         or Skill:	t Volume 1, Pag andbook	e 64 		

Task # 104

Job efficiency	0.830	(1 SHIFT/DAY)
Spoil pile	0.800	(FND-RF)
Push gradient	t: 0.786	(CAT HB)
Altitude	e: 1.000	(CAT HB)
Material Weight	t: 1.095	(CAT HB)
Blade type	e: 1.000	(PAT)
Net correctior	n: 0.4286	
Adjusted unit production:	323.29 LCY/hr	
Adjusted fleet production:	1293.16 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$1.190/LCY

Total job time:	<b>2.85</b> Hours
Total job cost:	\$4,380
## BULLDOZER WORK

Task description:	Replace Topsoil	from Stockp	one to Drin Pa	aus		
Bowie No. 1 Mine	Peri	mit Action:	MT8		Permit/Job#:	C1981038
PROJECT IDENTIFI	CATION					
Task #: <u>110</u> Date: <u>10/1/2020</u> User: RDZ	State: County:	Colorado Delta			Abbreviation: Filename:	None C038-110
Agency or organ	ization name: DR	RMS				
HOURLY EQUIPME	NT COST					
	D10T - 10SU					
Horsepower: 574						
JI	ni-Universal					
	nank ripper					
	er day					
Data Source: (CR	(G)					
Cost Breakdown:						
			<u>Utiliza</u>	ation %		
Ownership Cost/Hour:		\$170.04	N	A		
Operating Cost/Hour:		\$153.03	10	00		
		\$20.48	N	A		
Ripper own. Cost/Hour:		\$0.00	(	0		
				r .		
Ripper own. Cost/Hour:	\$384.85 <b>\$1,539.39</b>	\$41.30	N	A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour:	\$1,539.39	\$41.30	N	A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume:5,455	\$1,539.39 <u>ITIES</u> 5	\$41.30	N	A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230	\$1,539.39 ITIES 5	\$41.30 	N	A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230	\$1,539.39 <u>ITIES</u> 5	\$41.30 	N	A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230	\$1,539.39 <u>ITIES</u> 5 0 LCY ne: Division 1	 Estimate	N	A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum	\$1,539.39 <u>ITIES</u> 5 0 0 LCY ne: <u>Division</u> factor: <u>CAT Han</u>	 Estimate	N	A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance:	\$1,539.39 <u>ITIES</u> 5 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1	Estimate dbook	N	A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum Source of estimated swell HOURLY PRODUCT	\$1,539.39 <u>ITIES</u> 5 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1	Estimate dbook	N	A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance:	\$1,539.39 ITIES 5 0 0 LCY ne: Division 1 factor: CAT Han CION 50 feet 2,748.7 LCY	Estimate dbook		A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc	\$1,539.39 ITIES 5 0 0 LCY ne: Division 1 factor: CAT Han CION 50 feet 2,748.7 LCY	Estimate dbook		A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency dest Average push gradient: Average site altitude:	\$1,539.39 ITIES 5 0 LCY ne: Division 1 factor: CAT Han CION CION 2,748.7 LC cription: Consoli 10 %	Estimate dbook		<u>A</u>		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency dest Average push gradient: Average site altitude:	\$1,539.39         ITIES         5         0         0 LCY         ne:       Division 1         factor:       CAT Han         Store       CAT Han         Store       2,748.7 LCY         cription:       Consolid         10 %       7,310 feet	Estimate dbook		A		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency dest Average push gradient: Average site altitude: Material weight: Weight description:	\$1,539.39         ITIES         5         0         D LCY         ne:       Division 1         factor:       CAT Han         Store       Store         Store       CAT Han         Store       Consolit         10 %       Consolit         10 %       Cathe         2,100 lbs/LCY       Earth - Loam	Estimate dbook	 			
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency dest Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	\$1,539.39         ITIES         5         0         0 LCY         ne:       Division 1         factor:       CAT Han         Store       Store         Store       Store         Interview       Store         Store       Consoli         10 %       Consoli         2,100 lbs/LCY       Earth - Loam         Factor       Store	Estimate dbook	  pile 1.0	Source		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency dest Average push gradient: Average site altitude: Material weight: Weight description:	\$1,539.39         ITIES         5         0         D LCY         ne:       Division 1         factor:       CAT Han         CION         cription:       50 feet         2,748.7 LCY         cription:       Consoli         10 %         7,310 feet         2,100 lbs/LCY         Earth - Loam         Factor         Skill:       0.	 Estimate dbook Y/hr idated stockp				
Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 5,455 Swell factor: 1.230 Loose volume: 6,710 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency dest Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S	\$1,539.39         ITIES         5         0         D LCY         ne:       Division I         factor:       CAT Han         CION         ction:       50 feet         2,748.7 LC         cription:       Consoli         10 %       7,310 feet         2,100 lbs/LCY       Earth - Loam         Factor       Skill:       0.         cncy:       1.	 Estimate idbook Y/hr idated stockp  750	  bile 1.0	Source (AVG.)		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.4286	
Adjusted unit production: 1,	178.09 LCY/hr	
Adjusted fleet production: 47	12.36 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.327/LCY

Total job time:	<b>1.42</b> Hours
Total job cost:	\$2,192

#### Task # 111

Page 1 of 2

## BULLDOZER WORK

Task description:		-	oile Light-Use Roads to		
Bowie No. 1 Mine	Perr	nit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTIFI	<b>ICATION</b>				
Task #: 111	State:	Colorado		Abbreviation:	None
Date: $10/1/2020$	County:	Delta		Filename:	C038-111
User: RDZ	County.	Denta		i nenume.	0000 111
Agency or organ	nization name: DR	MS			
HOURLY EQUIPME	<u>NT COST</u>				
Basic Machine: Cat	D10T - 10SU				
Horsepower: 574					
	ni-Universal				
Attachment: 3-sh	hank ripper				
	er day				
Data Source: (CR					
	,				
Cost Breakdown:		I	114:1: ···· 0/		
		¢170.04	<u>Utilization %</u>		
Ownership Cost/Hour:		\$170.04	NA 100		
Operating Cost/Hour:		\$153.03	100		
Ripper own. Cost/Hour:		\$20.48	NA		
Ripper op. Cost/Hour:		\$0.00	0		
		\$41.30	NA		
	\$384.85 <b>\$1,539.39</b>	φ11.00			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT	\$1,539.39	¢			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT	\$1,539.39 <u>TTIES</u>				
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume:6,63:	\$1,539.39 <u>ITIES</u> 5				
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume: <u>6,63</u> Swell factor: <u>1.230</u>	\$1,539.39 TTIES 5 0				
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume: <u>6,63</u> Swell factor: <u>1.230</u>	\$1,539.39 <u>ITIES</u> 5				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,63 Swell factor: 1.23 Loose volume: 8,16 Source of estimated volur	\$1,539.39 TTIES 5 0 1 LCY ne: Division I	  Estimate			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,633 Swell factor: 1.230 Loose volume: 8,16	\$1,539.39 TTIES 5 0 1 LCY ne: Division I	  Estimate			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,63: Swell factor: 1.230 Loose volume: 8,16 Source of estimated volur Source of estimated swell	\$1,539.39 TTIES 5 0 1 LCY ne: Division I factor: CAT Han	  Estimate			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,63: Swell factor: 1.230 Loose volume: 8,16 Source of estimated volur Source of estimated swell HOURLY PRODUCT	\$1,539.39 TTIES 5 0 1 LCY ne: Division I factor: CAT Han FION	  Estimate			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,63: Swell factor: 1.230 Loose volume: 8,16 Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance:	\$1,539.39 TTIES 5 0 1 LCY ne: Division I factor: CAT Han <u>CION</u> 200 feet	Estimate dbook			
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Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,63: Swell factor: 1.230 Loose volume: 8,16 Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance:	\$1,539.39         ITIES         5         0         1 LCY         ne:       Division I         factor:       CAT Han         CION         200 feet         ction:       946.0 LCY/	Estimate dbook			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,63: Swell factor: 1.234 Loose volume: 8,16 Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product	\$1,539.39         ITIES         5         0         1 LCY         ne:       Division I         factor:       CAT Han         CION         200 feet         ction:       946.0 LCY/	 Estimate dbook hr			
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Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,63: Swell factor: 1.230 Loose volume: 8,16 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency des Average push gradient: Average site altitude: Material weight:	\$1,539.39         ITIES         5         0         1 LCY         ne:       Division I         1 factor:       CAT Han         COD feet         ction:       946.0 LCY/         cription:       Consoli         5 %         7,310 feet         2,100 lbs/LCY         Earth - Loam	 Estimate dbook hr			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,63: Swell factor: 1.230 Loose volume: 8,16 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description:	\$1,539.39         ITIES         5         0         1 LCY         ne:       Division I         1 factor:       CAT Han         COO feet         ction:       946.0 LCY/         cription:       Consoli         5 %         7,310 feet         2,100 lbs/LCY         Earth - Loam         Factor	 Estimate dbook hr	  bile 1.0		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,63: Swell factor: 1.230 Loose volume: 8,16 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	\$1,539.39         TTIES         5         0         1 LCY         ne:       Division I         1 factor:       CAT Han         CION         ction:       200 feet         946.0 LCY/         cription:       Consoli         5 %         7,310 feet         2,100 lbs/LCY         Earth - Loam         Factor         Skill:       0.'	Estimate dbook	  bile 1.0  <u>Source</u>		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 6,63: Swell factor: 1.230 Loose volume: 8,16 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S	\$1,539.39 <b>ITIES</b> 501 LCY $1$ ne:Division Ifactor:CAT Han <b>CAT HanCION</b> ction: $200$ feet946.0 LCY/cription:Consoli $5 \%$ $7,310$ feet $2,100$ lbs/LCYEarth - LoamEarth - LoamFactorSkill:0.7ency:1.4				

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.4924	
Adjusted unit production: 46	55.81 LCY/hr	
Adjusted fleet production: 18	863.24 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.826/LCY

Total job time:	4.38 Hours
Total job cost:	\$6,743

## BULLDOZER WORK

Task description:	Replace Top	osoil from Stockp	oile to Pond W-1		
Bowie No. 1 Mine		Permit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTI	FICATION				
Task #: 112	St	ate: Colorado		Abbreviation:	None
Date: 10/1/2020 User: RDZ				Filename:	C038-112
Agency or org	anization name:	DRMS			
HOURLY EQUIPM	ENT COST				
	at D10T - 10SU				
	74 emi-Universal				
•••					
	shank ripper				
	per day CRG)				
Data Source: (C	.NU)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hour:		\$170.04	NA		
Operating Cost/Hour:		\$153.03	100		
Ripper own. Cost/Hour:		\$20.48	NA		
		\$0.00	0		
Ripper op. Cost/Hour:					
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour:	\$384.85 <b>\$1,539.39</b>	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN	\$384.85 \$1,539.39 TITIES	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume:530	\$384.85 \$1,539.39 TITIES	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 53( Swell factor: 1.1	\$384.85 \$1,539.39 TITIES ) 15	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 53( Swell factor: 1.1	\$384.85 \$1,539.39 TITIES	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 53( Swell factor: 1.1	\$384.85 <b>\$1,539.39</b> TITIES 0 15 LCY	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 530 Swell factor: 1.1 Loose volume: 591	\$384.85 \$1,539.39 TITIES 15 1 LCY ume:Divi		NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated swe	\$384.85 <b>\$1,539.39</b> TITIES D 15 1 LCY ume: Divi ell factor: CAT	sion Estimate	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 530 Swell factor: 1.1 Loose volume: 59 Source of estimated volu Source of estimated swee HOURLY PRODUC	\$384.85 <b>\$1,539.39</b> TITIES 15 1 LCY ume: Divi ell factor: CAT CTION	sion Estimate	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volt Source of estimated volt Source of estimated swe HOURLY PRODUC Average push distance:	\$384.85 \$1,539.39 TITIES D 15 1 LCY ume: Divi ell factor: CAT CTION 200 fee	sion Estimate Handbook	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated swee HOURLY PRODUC Average push distance: Unadjusted hourly produced	\$384.85 \$1,539.39 TITIES 0 15 LCY ume: Divi. ell factor: CAT CTION 200 fee 946.0 I	sion Estimate	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volt Source of estimated volt Source of estimated swe HOURLY PRODUC Average push distance:	\$384.85 \$1,539.39 TITIES 15 1 LCY ume: Divi ell factor: CAT CTION 200 fee 946.0 I	sion Estimate Handbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 53( Swell factor: 1.1 Loose volume: 591 Source of estimated volt Source of estimated volt Source of estimated swee <b>HOURLY PRODUC</b> Average push distance: Unadjusted hourly prod Materials consistency de Average push gradient:	\$384.85 \$1,539.39 TITIES 15 1 LCY ume: Divi ell factor: CAT CTION 200 fee 946.0 I escription: Co 0 %	sion Estimate Handbook et LCY/hr			
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Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volt Source of estimated volt Source of estimated swee HOURLY PRODUC Average push distance: Unadjusted hourly produced Materials consistency de Average push gradient: Average push gradient: Average site altitude:	\$384.85 \$1,539.39 TITIES 15 1 LCY ume: Divi- ell factor: CAT CTION 200 feet 200 feet 200 feet	sion Estimate Handbook Handbook tLCY/hr nsolidated stockp			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated volu Source of estimated sweet <b>HOURLY PRODUC</b> Average push distance: Unadjusted hourly produced Average push gradient: Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	\$384.85 \$1,539.39 TITIES 15 1 LCY ume: Divi 200 feet 200 feet 200 feet 200 feet 2,100 lbs/LC Earth - Loam on Factor	sion Estimate Sion Estimate Handbook et LCY/hr onsolidated stockp	  bile 1.0  <u>Source</u>		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 53( Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated volu Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly product Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator	$\begin{array}{c} & \\ & \\ & \\ & \\ & \\ \hline \\ \\ & \\ \hline \\ \\ & \\ \hline \\ \\ \\ \hline \\ \hline \hline \\ \hline \hline \\ \hline \\ \hline \\ \hline \hline \\ \hline \hline \\ \hline \\ \hline \hline \hline \\ \hline \hline \\ \hline \hline \\ \hline \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \hline \\ \hline \hline$	sion Estimate Sion Estimate Handbook et LCY/hr onsolidated stockp Y 0.750			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 53( Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated volu Source of estimated swee HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist	$\begin{array}{c} & \\ & \\ & \\ & \\ & \\ \hline \\ \\ & \\ \hline \\ \\ & \\ \hline \\ \\ \hline \\ \\ & \\ \hline \\ \hline \\ \\ \hline \\ \\ \hline \\ \hline \\ \hline \\ \\ \hline \hline \\ \hline \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \hline \\ \hline \hline \\ \hline \\ \hline \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \hline \\ \hline \\ \hline \hline$	sion Estimate Handbook Handbook Handbook Handbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 53( Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated volu Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist Dozing m	$\begin{array}{c} & \\ & \\ & \\ & \\ & \\ \hline \\ \\ & \\ \hline \\ \\ & \\ \hline \\ \\ \hline \\ \\ & \\ \hline \\ \hline \\ \\ \hline \\ \\ \hline \\ \hline \\ \hline \\ \\ \hline \hline \\ \hline \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \hline \\ \hline \hline \\ \hline \\ \hline \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \hline \\ \hline \\ \hline \hline$	sion Estimate Sion Estimate Handbook et LCY/hr onsolidated stockp Y 0.750			

Job efficiency:		0.830	(1 SHIFT/DAY)
Spoil pil	le:	0.800	(FND-RF)
Push gradier	nt:	1.000	(CAT HB)
Altitud	le:	1.000	(CAT HB)
Material Weigh	ht:	1.095	(CAT HB)
Blade typ	pe:	1.000	(PAT)
Net correctio	on:	0.5453	
Adjusted unit production:	515	5.85 LCY/hr	
Adjusted fleet production:	206	63.4 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.746/LCY
Total job times	0 20 Hours

Total job time:	<b>0.29</b> Hours
Total job cost:	\$441

## BULLDOZER WORK

Task description:	Replace Topso	il from Stockp	bile to Pond W-2		
Bowie No. 1 Mine	P	ermit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTI	FICATION				
Task #: 113	State	: Colorado		Abbreviation:	None
Date: 10/1/2020 User: RDZ				Filename:	C038-113
Agency or orga	anization name: <u>l</u>	DRMS			
HOURLY EQUIPM	<u>ENT COST</u>				
	at D10T - 10SU				
Horsepower: 57	emi-Universal				
•1					
	shank ripper				
	per day CRG)				
Data Source: (C	AU)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hour:		\$170.04	NA		
Operating Cost/Hour:		\$153.03	100		
Ripper own. Cost/Hour:		\$20.48	NA		
		\$0.00	0		
Ripper op. Cost/Hour:		¢ 41 20	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour:	\$384.85 <b>\$1,539.39</b>	\$41.30			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN	\$384.85 \$1,539.39 TITIES	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume:530	\$384.85 \$1,539.39 TITIES	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 530 Swell factor: 1.1	\$384.85 \$1,539.39 TITIES ) 15	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 530 Swell factor: 1.1	\$384.85 \$1,539.39 TITIES	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 530 Swell factor: 1.1	\$384.85 \$1,539.39 TITIES ) 15 1 LCY	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 530 Swell factor: 1.1 Loose volume: 591	\$384.85 \$1,539.39 TITIES 15 1 LCY ume: Divisio		NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu	\$384.85 \$1,539.39 TITIES 15 1 LCY ume: Divisio	n Estimate			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu	\$384.85 \$1,539.39 TITIES 15 1 LCY ume: Divisio CAT H	n Estimate			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance:	\$384.85 \$1,539.39 TITIES 15 1 LCY ume: Divisio cll factor: CAT H CTION 200 feet	on Estimate [andbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated swe HOURLY PRODUC	\$384.85 \$1,539.39 TITIES 15 1 LCY ume: Divisio cll factor: CAT H CTION 200 feet	on Estimate [andbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance:	\$384.85 \$1,539.39 TITIES ) 15 1 LCY ume: Divisio CAT H CTION 200 feet 946.0 LC	on Estimate [andbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produced Materials consistency defined	\$384.85 \$1,539.39 TITIES ) 15 1 LCY ume: Divisio CAT H CTION 200 feet 946.0 LC escription: Cons	on Estimate landbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	\$384.85         \$1,539.39         TITIES         )         15         LCY         ume:       Divisio         Jl factor:       CAT H         CTION         auction:       946.0 LC         escription:       Cons         0 %	on Estimate landbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produced Materials consistency defined	\$384.85 \$1,539.39 TITIES ) 15 1 LCY ume: Divisio CAT H CTION 200 feet 946.0 LC escription: Cons	on Estimate landbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	\$384.85 \$1,539.39 TITIES ) 15 1 LCY ume: Divisio U factor: CAT H CTION 200 feet uction: 946.0 LC escription: Cons 0 %	on Estimate landbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude:	<u>\$384.85</u> <b>\$1,539.39</b> <b>TITIES</b> 15 1 LCY ume: Divisio CAT H <b>CTION</b> uction: 200 feet 946.0 LC escription: Cons 0 % 7,310 feet	on Estimate landbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correctio	$ \begin{array}{r} & \$384.85 \\ \hline \$1,539.39 \\ \hline \hline \\ \hline \\ \hline \\ \$1,539.39 \\ \hline \\ $	on Estimate landbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correctio Operator	$ \begin{array}{r} & \$384.85 \\ \hline \$1,539.39 \\ \hline \hline \\ \hline \\ \$1,539.39 \\ \hline \\ 15 \\ \hline \\ 15 \\ \hline \\ 15 \\ \hline \\ 15 \\ \hline \\ \hline \\ \hline \\ \hline \\ 15 \\ \hline \\ \hline \\ \hline \\ 15 \\ \hline \\ \hline \\ \hline \\ \hline \\ 15 \\ \hline \\ $	on Estimate [andbook] Y/hr solidated stockp			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correctio Operator Material consist	$\begin{array}{c} \$384.85 \\ \$1,539.39 \\ \hline \\ \hline \\ \$1,539.39 \\ \hline \\ 15 \\ 1 \text{ LCY} \\ \hline \\ \hline \\ 15 \\ 1 \text{ LCY} \\ \hline \\ \hline \\ \hline \\ 15 \\ \hline \\ \hline \\ \hline \\ 15 \\ \hline \\ 15 \\ \hline \\ \hline \\ 15 \\ \hline \\ 15 \\ \hline \\ 15 \\ \hline \\ \hline 15 \\ \hline \\ 15 \\ \hline 15 \\ 15 \\$	n Estimate andbook Y/hr solidated stockp			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 530 Swell factor: 1.1 Loose volume: 591 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correctio Operator Material consis Dozing m	$\begin{array}{c} \$384.85 \\ \$1,539.39 \\ \hline \\ \hline \\ \$1,539.39 \\ \hline \\ 15 \\ 1 \text{ LCY} \\ \hline \\ \hline \\ 15 \\ 1 \text{ LCY} \\ \hline \\ \hline \\ \hline \\ 15 \\ \hline \\ \hline \\ \hline \\ 15 \\ \hline \\ 15 \\ \hline \\ \hline \\ 15 \\ \hline \\ 15 \\ \hline \\ 15 \\ \hline \\ \hline 15 \\ \hline \\ 15 \\ \hline 15 \\ 15 \\$	on Estimate [andbook] Y/hr solidated stockp			

Job efficienc	cy:	0.830	(1 SHIFT/DAY)
Spoil pil	le:	0.800	(FND-RF)
Push gradier	nt:	1.000	(CAT HB)
Altitud	le:	1.000	(CAT HB)
Material Weigh	ht:	1.095	(CAT HB)
Blade typ	pe:	1.000	(PAT)
Net correctio	on:	0.5453	
Adjusted unit production:	515	5.85 LCY/hr	
Adjusted fleet production:	206	63.4 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.746/LCY
Total job times	0 20 Hours

Total job time:	<b>0.29</b> Hours
Total job cost:	\$441

# BOREHOLE SEALING WORK

r	Task description:	Plug and Se	eal all Boreholes	-		
Site:	Bowie No. 1 Mine		Permit Action:	MT8	Permit/J	ob#: <u>C1981038</u>
PROJE(	CT IDENTIFICATION	N				
Task #: Date:	-	State: County:	Colorado Delta		Abbreviation: Filename:	None C038-125
User:		County.	Denta			0000 120
	Agency or organization	tion name:	DRMS			

# **UNIT COSTS**

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bottom plug for 2.5" wells	PVC plug - 2 in. diameter borehole	2.5	na	9.00	EA	\$24.09	\$216.81
Fiil Holes with	Portland cement grout (	2.5	20	3.00	bag	\$15.95	\$47.85
Concrete	Bag, material cost only94 lb. bag)	2.3	na	5.00	bag	\$15.95	
Borehole Marker	Borehole location/identification marker (EA, material cost only)	na	na	9.00	EA	\$35.50	\$319.50
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	2.5	NA	9.00	LF	\$3.26	\$29.34
Drill Rig Time	SCHRAMM T450WS	na	na	9.00	EA	\$415.81	\$3,742.29
Water Truck Time	Water Tanker, 5,000 Gal.	na	na	9.00	EA	\$71.44	\$642.96
Bottom Plug for 5" Wells	PVC plug - 6 in. diameter borehole	6	na	13.00	EA	\$60.19	\$782.47
Fill Holes with concrete	Portland cement grout ( Bag, material cost only94 lb. bag)	6	na	219.00	bag	\$15.95	\$3,493.05
Borehole Marker	Borehole location/identification marker (EA, material cost only)	na	na	13.00	EA	\$35.50	\$461.50
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	6	na	20.00	LF	\$3.26	\$65.20
Drill Rig Time	SCHRAMM T450WS	na	na	52.00	EA	\$415.81	\$21,622.12
Bottom Plug for Shallow 6" wells	PVC plug - 6 in. diameter borehole	6	na	3.00	EA	\$60.19	\$180.57
Fill Hole with concrete	Portland cement grout ( Bag, material cost only94 lb. bag)	6	na	20.00	bag	\$15.95	\$319.00
Borehole Marker	Borehole location/identification marker (EA, material cost only)	na	na	3.00	EA	\$35.50	\$106.50
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	6	na	5.00	LF	\$3.26	\$16.30

Drill Rig Time	SCHRAMM T450WS	na	na	12.00	EA	\$415.81	\$4,989.72
Water Truck Time	Water Tanker, 5,000 Gal.	na	na	12.00	EA	\$71.44	\$857.28
Bottom Plug for	PVC plug - 6 in.	6	na	1.00	EA	\$60.19	\$60.19
Intermediate 6" Well	diameter borehole						
Fill Holes with Concrete	Portland cement grout ( Bag, material cost only94 lb. bag)	6	na	51.00	bag	\$15.95	\$813.45
Borehole Marker	Borehole location/identification marker (EA, material cost only)	na	na	1.00	EA	\$35.50	\$35.50
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	6	na	2.00	LF	\$3.26	\$6.52
Drill Rig Time	SCHRAMM T450WS	na	na	8.00	EA	\$415.81	\$3,326.48
Water Truck Time	Water Tanker, 5,000 Gal.	na	na	8.00	EA	\$71.44	\$571.52
Bottom Plug for	PVC plug - 6 in.	6	na	2.00	EA	\$60.19	\$120.38
Deep 6" Wells Fill Holes with Concrete	diameter borehole Portland cement grout ( Bag, material cost	6	na	207.00	bag	\$15.95	\$3,301.65
Borehole Markers	only94 lb. bag) Borehole location/identification marker (EA, material cost only)	na	na	2.00	EA	\$35.50	\$71.00
Cut Casing At Surface	Exposed casing removal - Calculate Circumference in Linear Feet	6	na	3.00	LF	\$3.26	\$9.78
Drill Rig Time	SCHRAMM T450WS	na	na	24.00	EA	\$415.81	\$9,979.44
Water Truck Time	Water Tanker, 5,000 Gal.	na	na	24.00	EA	\$71.44	\$1,714.56
Bottom Plug GVB-10A - B	PVC plug - 10 in. diameter borehole	10	na	2.00	EA	\$112.95	\$225.90
Fill Holes with Concrete	Portland cement grout ( Bag, material cost only94 lb. bag)	na	na	330.00	bag	\$15.95	\$5,263.50
Borehole Marker	Borehole location/identification marker (EA, material cost only)	na	na	2.00	EA	\$35.50	\$71.00
Cut Casing At Surface	Exposed casing removal - Calculate Circumference in Linear Feet	10	na	5.00	LF	\$3.26	\$16.30
Drill Rig Time	SCHRAMM T450WS	na	na	16.00	EA	\$415.81	\$6,652.96
Water Truck Time	Water Tanker, 5,000 Gal.	na	na	16.00	EA	\$71.44	\$1,143.04
Bottom Plug Ex. Holes TR-49 & MR-124	PVC plug - 10 in. diameter borehole	10	na	3.00	EA	\$112.95	\$338.85
Fill Holes with Concrete	Portland cement grout ( Bag, material cost only94 lb. bag)	na	na	1,065.00	bag	\$15.95	\$16,986.75
Borehole Marker	Borehole location/identification marker (EA, material cost only)	na	na	3.00	EA	\$35.50	\$106.50

Cut Casing at Surface	Exposed casing removal - Calculate	10	na	8.00	LF	\$3.26	\$26.08
	Circumference in Linear Feet						
Drill Rig Time	SCHRAMM T450WS	na	na	48.00	EA	\$415.81	\$19,958.88
Water Truck Time	Water Tanker, 5,000 Gal.	na	na	48.00	EA	\$71.44	\$3,429.12

 Job Hours:
 177.00
 Total Cost:
 \$112,122.00

# **REVEGETATION WORK**

Task descri	ption:	Reseed OVM - No Phase II	Release		
Site: Bowie N	o. 1 Mine	Permit Action:	MT8	Permit/Jol	o#: <u>C1981038</u>
	<b>DENTIFIC</b>				Nama
Task #: Date: User:	130 10/1/2020 RDZ	State:ColoradoCounty:Delta		Abbreviation: Filename:	None C038-130
User:				Filename:	<u>C038-1</u>

## **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
8-24-24, 10-15-15, 10-20-20	30.00	pound	\$0.32	\$9.45
			Total Fertilizer Materials	
			Cost/Acre	\$9.45

#### Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

## **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	0.40	4.59	\$3.70
Indian Ricegrass - Paloma	2.00	6.47	\$22.25
Bitterbrush, Antelope	8.00	2.46	\$156.00
Aster, Smooth	0.40	6.96	\$58.60
Burnett, Small (or Little) - Delar	4.00	5.05	\$10.00
Milk Vetch, Cicer - Lutana	2.00	6.66	\$16.40
Slender Wheatgrass - San Luis	1.60	5.84	\$6.80
Streambank Wheatgrass - Sodar	1.60	5.22	\$9.12
Thickspike Wheatgrass - Critana	1.60	5.66	\$11.00
Western Wheatgrass - Arriba	2.00	5.05	\$13.00
Rabbitbrush, Rubber	0.80	11.92	\$51.44

Rose, Wood's	3.00	0.00	\$61.50
Flax, Lewis Blue	1.00	6.63	\$16.50
Snowberry, Western	2.00	3.44	\$127.00
Winter Fat	3.00	7.64	\$61.50
Totals Seed Mix	33.40	83.60	\$624.81

#### Application

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 tackifier, >15 ac. {Materials Only}	1.00	ACRE	\$527.08	\$527.08
Hydromulch, 1 ton/ac. rate {Materials Only}	1.00	ACRE	\$527.08	\$527.08
Total Mulch Materials Cost/Acre				\$1,054.16

#### Application

Description		Cost /Acre
Hydromulching (MEANS 32 92 19.13 1100)		\$968.00
	Total Mulch Application Cost/Acre	\$968.00

#### **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:	2.31	Cost /Acre:	\$3,766.34
Estimate	ed Failure Rate:	20%	Cost /Acre*:	\$3,612.70
*Selected Replanti	ng Work Items:	SEEDING, MULCHIN	IG	
Initial Job Cost:	\$8,700.25			
Reseeding Job Cost:	\$1.669.07			

Reseeding Job Cost:	\$1,669.07
Total Job Cost:	\$10,369
Job Hours:	119.00

# **REVEGETATION WORK**

ite: Bowie No. 1 Mine		Mine     Permit Action:     MT8		Permit/Job#: <u>C1981038</u>	
	<u>IDENTIFIC</u>				
Task #:	130A	State: C	Colorado	Abbreviation:	None
Date:	10/1/2020	County: I	Delta	Filename:	C038-130A
User:	RDZ				

## **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
8-24-24, 10-15-15, 10-20-20	30.00	pound	\$0.32	\$9.45
			Total Fertilizer Materials Cost/Acre	\$9.45

#### Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

## **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Act	re \$107.16

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	0.40	4.59	\$3.70
Indian Ricegrass - Paloma	2.00	6.47	\$22.25
Bitterbrush, Antelope	8.00	2.46	\$156.00
Aster, Smooth	0.40	6.96	\$58.60
Burnett, Small (or Little) - Delar	4.00	5.05	\$10.00
Milk Vetch, Cicer - Lutana	2.00	6.66	\$16.40
Slender Wheatgrass - San Luis	1.60	5.84	\$6.80
Streambank Wheatgrass - Sodar	1.60	5.22	\$9.12
Thickspike Wheatgrass - Critana	1.60	5.66	\$11.00
Western Wheatgrass - Arriba	2.00	5.05	\$13.00
Rabbitbrush, Rubber	0.80	11.92	\$51.44

Rose, Wood's	3.00	0.00	\$61.50
Flax, Lewis Blue	1.00	6.63	\$16.50
Snowberry, Western	2.00	3.44	\$127.00
Winter Fat	3.00	7.64	\$61.50
Totals Seed Mix	33.40	83.60	\$624.81

#### Application

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 tackifier, >15 ac. {Materials Only}	1.00	ACRE	\$527.08	\$527.08
Hydromulch, 1 ton/ac. rate {Materials Only}	1.00	ACRE	\$527.08	\$527.08
Total Mulch Materials Cost/Acre				\$1,054.16

#### Application

Description		Cost /Acre
Hydromulching (MEANS 32 92 19.13 1100)		\$968.00
	Total Mulch Application Cost/Acre	\$968.00

#### **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:	67.69		Cost /Acre:	\$3,766.34	
Estimate	ed Failure Rate:	0%		Cost /Acre*:	\$3,612.70	
*Selected Replanti	ng Work Items:	SEEDING,MUL	.CHING			
Initial Job Cost:	\$254,943.55					
Reseeding Job Cost:	\$0.00					
Total Job Cost:	\$254,944					
Job Hours:	11.00					

# **REVEGETATION WORK**

Task d	description:	Reseed OVWM - Phase II R	eleased		_
Site: Boy	wie No. 1 Mine	Permit Action:	MT8	Permit/Job	#: <u>C1981038</u>
	ECT IDENTIFIC				
	sk #: $131$ Date: $10/1/2020$	State: Colorado County: Delta		Abbreviation: Filename:	None C038-131
	Jser: RDZ				0000 101

## **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
8-24-24, 10-15-15, 10-20-20	30.00	pound	\$0.32	\$9.45
			Total Fertilizer Materials Cost/Acre	\$9.45

#### Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

## **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	0.40	4.59	\$3.70
Indian Ricegrass - Paloma	2.00	6.47	\$22.25
Bitterbrush, Antelope	8.00	2.46	\$156.00
Aster, Smooth	0.40	6.96	\$58.60
Burnett, Small (or Little) - Delar	4.00	5.05	\$10.00
Milk Vetch, Cicer - Lutana	2.00	6.66	\$16.40
Slender Wheatgrass - San Luis	1.60	5.84	\$6.80
Streambank Wheatgrass - Sodar	1.60	5.22	\$9.12
Thickspike Wheatgrass - Critana	1.60	5.66	\$11.00
Western Wheatgrass - Arriba	2.00	5.05	\$13.00
Rabbitbrush, Rubber	0.80	11.92	\$51.44

Rose, Wood's	3.00	0.00	\$61.50
Flax, Lewis Blue	1.00	6.63	\$16.50
Snowberry, Western	2.00	3.44	\$127.00
Winter Fat	3.00	7.64	\$61.50
Totals Seed Mix	33.40	83.60	\$624.81

#### Application

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 tackifier, <15 ac. {Materials Only}	1.00	ACRE	\$527.08	\$527.08
Hydromulch, 1 ton/ac. rate {Materials Only}	1.00	ACRE	\$527.08	\$527.08
Total Mulch Materials Cost/Acre				\$1,054.16

#### Application

Description		Cost /Acre
Hydromulching (MEANS 32 92 19.13 1100)		\$968.00
	Total Mulch Application Cost/Acre	\$968.00

#### **NURSERY STOCK PLANTING**

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

	No. of Acres:	13.1		Cost /Acre:	\$3,766.34	
Estimate	ed Failure Rate:	0%		Cost /Acre*:	\$3,612.70	
*Selected Replanti	ng Work Items:	SEEDING,MUL	.CHING			
Initial Job Cost:	\$49,339.05					
Reseeding Job Cost:	\$0.00					
Total Job Cost:	\$49,339					
Job Hours:	26.00					

# **REVEGETATION WORK**

Task descrij	ption:	Reseed OVWM - NoPhase II	Release		
Site: Bowie No	o. 1 Mine	Permit Action:	MT8	Permit/Job	o#: <u>C1981038</u>
PROJECT Task #:	IDENTIFIC	CATION State: Colorado		Abbreviation:	None
Date: User:	10/1/2020 RDZ	County: Delta		Filename:	C038-131A

## **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
8-24-24, 10-15-15, 10-20-20	30.00	pound	\$0.32	\$9.45
			Total Fertilizer Materials	
			Cost/Acre	\$9.45

#### Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

## **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Act	re \$107.16

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	0.40	4.59	\$3.70
Indian Ricegrass - Paloma	2.00	6.47	\$22.25
Bitterbrush, Antelope	8.00	2.46	\$156.00
Aster, Smooth	0.40	6.96	\$58.60
Burnett, Small (or Little) - Delar	4.00	5.05	\$10.00
Milk Vetch, Cicer - Lutana	2.00	6.66	\$16.40
Slender Wheatgrass - San Luis	1.60	5.84	\$6.80
Streambank Wheatgrass - Sodar	1.60	5.22	\$9.12
Thickspike Wheatgrass - Critana	1.60	5.66	\$11.00
Western Wheatgrass - Arriba	2.00	5.05	\$13.00
Rabbitbrush, Rubber	0.80	11.92	\$51.44

Rose, Wood's	3.00	0.00	\$61.50
Flax, Lewis Blue	1.00	6.63	\$16.50
Snowberry, Western	2.00	3.44	\$127.00
Winter Fat	3.00	7.64	\$61.50
Totals Seed Mix	33.40	83.60	\$624.81

#### Application

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 tackifier, <15 ac. {Materials Only}	1.00	ACRE	\$527.08	\$527.08
Hydromulch, 1 ton/ac. rate {Materials Only}	1.00	ACRE	\$527.08	\$527.08
Total Mulch Materials Cost/Acre				\$1,054.16

#### Application

Description		Cost /Acre
Hydromulching (MEANS 32 92 19.13 1100)		\$968.00
	Total Mulch Application Cost/Acre	\$968.00

#### **NURSERY STOCK PLANTING**

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

No. of Acres:	4.5	Cost /Acre:	\$3,766.34
Estimated Failure Rate:	20%	Cost /Acre*:	\$3,612.70
*Selected Replanting Work Items:	SEEDING, MULCHING		
Initial Job Cost: <b>\$16 948 53</b>			

Initial Job Cost:	\$16,948.53
Reseeding Job Cost:	\$3,251.43
Total Job Cost:	\$20,200
Job Hours:	9.00

#### **DEMOLITION WORK**

Т	ask description:	East Mine	Crushing and So	creening Level		
Site: _]	Bowie No. 1 Mine		Permit Action:	MT8	Permit/.	Job#: <u>C1981038</u>
<u>PROJEC</u>	T IDENTIFICATIO	N				
Task #:	137	State:	Colorado		Abbreviation:	None
Date:	10/1/2020	County:	Delta		Filename:	C038-137
User:	RDZ					
	Agency or organiza	tion name:	DRMS			

Location adjustment: 98.20 %

#### UNIT COSTS

#### Structure or Item **Demolition Menu** Unit **Total Cost** Dimensions Quantity Unit Selection Description Cost Guard Shack Floor 120 sf Demo. and on-site 120.00 SF \$133.56 \$1.11 disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul Fencing, chain link, Guard Shack Fence 118 lf 118.00 LF \$2.95 \$348.10 including posts and fabric - 8 ft. to 10 ft. high Culvert Removal 18 115 lf Pipe, corrugated metal 115.00 LF \$5.39 \$619.39 inch (CMP) - 18 in. diameter pipe Pipe, corrugated metal Culvert Removal 24 100 lf 100.00 LF \$7.01 \$701.20 (CMP) - 24 in. diameter inch pipe Culvert Removal 48 125 lf Pipe, corrugated metal LF \$1,999.63 125.00 \$16.00 (CMP) - 48 in. diameter inch pipe

				<b>Total Cost</b>	
		Subtotal		(adjusted for	
Job Hours:	40.00	(unadjusted):	\$3,801.88	location):	\$3,733.45

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Mo	bilize/Demobilize	e Equipment fo	r Initial	Reclamation		
e: Bowie No. 1 Mi	ne	Permit	Action: MT8			Permit/Job#: <u>C</u>	1981038
PROJECT IDEN	TIFICATI	<u>ON</u>					
Task #:       146         Date:       10/1/         User:       RDZ	2020		olorado elta			eviation: None ilename: C038	-146
Agency or	organization	name: DRMS					
EQUIPMENT TI	RANSPOR'	<u>T RIG COST</u>					
					Shift ba Cost Data Sour	rce: CRG Da	ta
Truck	Fractor Desc	_		400 H	P (2ND HALF,		
Truck	Trailer Desc	ription: G			OSENECK, DF R (25T, 50T, AN	ROP DECK EQU ND 100T)	IPMENT
Cost Breakdown:							
Available Rig Ca		0-25 Tons	26-50 Tons		l+ Tons		
Ownership (		\$17.20	\$29.63		\$38.69		
Operating (		\$26.56	\$47.02		\$55.69		
	Cost/Hour:	\$23.63	\$23.63		\$23.63		
Helper (	Cost/Hour:	\$0.00	\$23.53	9	\$23.53		
Total Unit C	Cost/Hour:	\$67.39	\$123.81	\$	5141.54		
NON ROADABL	E EQUIPN	<u>IENT:</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
-	(TONS)		t		fleet		
Cat D10T - 10SU	93.31	\$190.52	\$141.54	4	\$1,328.24	\$566.16	\$1,000.00
Cat 773F	49.74	\$97.85	\$123.81	5	\$1,108.30	\$619.05	\$1,250.00
CAT 990H	83.34	\$111.11	\$141.54	1	\$252.65	\$141.54	\$250.00
Water Tanker, 5,000 Gal.	15.00	\$29.31	\$67.39	2	\$193.40	\$134.78	\$500.00
CAT 14M	23.57	\$65.89	\$67.39	1	\$133.28	\$67.39	\$250.00
Cat 637G w/push- pull	59.59	\$181.30	\$141.54	2	\$645.68	\$283.08	\$500.00
CAT 815F	22.88	\$63.43	\$67.39	1	\$130.82	\$67.39	\$250.00
ATLAS COPCO ROC D3-01,3.0 in.	0.00	\$58.81	\$67.39	2	\$252.40	\$134.78	\$500.00
Cat 336D L 10'-6" Stick	32.23	\$60.67	\$123.81	1	\$184.48	\$123.81	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.72	\$67.39	1	\$74.11	\$67.39	\$250.00

Subtotals: \$4,303.36

\$2,205.37 \$5,000.00

#### **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/	Fleet Size	Haul Trip	Return Trip
	unit		Cost/hr/ fleet	Cost/hr/ fleet
Flatbed Truck, 6x4, 45K GVW	\$50.03	1	\$50.03	\$50.03
Fuel Tanker, 6x4, 210 HP	\$45.29	1	\$45.29	\$45.29
Lube Truck, 6x4, 250 HP	\$46.71	1	\$46.71	\$46.71
Light Duty Pickup, 4x4, 1 T.	\$21.48	1	\$21.48	\$21.48
Crew				
		Subtotals:	\$163.51	\$163.51

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	GRAND JUNCTION 90.00 35.00	miles mph
Total Non-Roadable Mob/Demob Cost *	\$43,473.47	_ mpn
<ul><li>** two round trips with haul rig: Total Roadable Mob/Demob Cost **</li><li>** one round trip, no haul rig:</li></ul>	\$840.91	_

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	2.57	2.57
Return Time (Hours):	2.57	2.57
Loading Time (Hours):	0.00	NA
Unloading Time (Hours):	0.00	NA
Subtotals:	5.14	5.14

#### JOB TIME AND COST

Total job time: 10.29 Hours

Total job cost: \_\_\_\_\_\_\$44,314\_\_\_\_\_

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Bowie No. 1 Min	ie	Permit	Action: MT8		]	Permit/Jo	b#: <u>C1</u>	981038
PROJECT IDEN	<b>FIFICATI</b>	<u>ON</u>						
Task #: 147		State: Co	olorado		Abbre	eviation:	None	
Date: 10/1/2	2020	County: De	elta		Fi	lename:	C038-	147
User: RDZ								
Agency or	organizatior	name: DRMS						
EQUIPMENT TR	ANSPOR	<u>T RIG COST</u>						
				C	Shift ba Cost Data Sour		1 per day CRG Dat	
Truck 7	ractor Desc	ription: GENE	RIC ON-HIGH		JCK TRACTO (2ND HALF,		DIESEL	POWERED,
Truck	Frailer Desc	ription: G	ENERIC FOLD	ING GOO	SENECK, DR	ROP DEC	K EQUI	PMENT
			]	RAILER	(25T, 50T, AN	ND 100T)		
Cost Breakdown:								
Available Rig Car	acities	0-25 Tons	26-50 Tons	51+	Tons			
Ownership C		\$17.20	\$29.63		8.69			
Operating C		\$26.56	\$47.02		5.69			
Operator C	ost/Hour:	\$23.63	\$23.63	\$2	3.63			
Helper C	ost/Hour:	\$0.00	\$23.53	\$2	3.53			
Total Unit C	ost/Hour:	\$67.39	\$123.81	\$14	41.54			
	E EOUIPN	<u> 1ENT:</u>						
NON ROADABL						Return	Trip	DOT Permit
NON ROADABL		Owner ship	Haul Rig	Fleet	Haul Trip	notuin		DOTTORIM
	Weight/ Unit	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/uni	Fleet Size	Haul Trip Cost/hr/ fleet	Cost/hr		Cost/ fleet
Machine	Weight/						/ fleet	

# **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 6x4, 45K GVW	\$50.03	1	\$50.03	\$50.03
Fuel Tanker, 6x4, 210 HP	\$45.29	1	\$45.29	\$45.29
Lube Truck, 6x4, 250 HP	\$46.71	1	\$46.71	\$46.71
Light Duty Pickup, 4x4, 1 T. Crew	\$21.48	1	\$21.48	\$21.48
		Subtotals:	\$163.51	\$163.51

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	GRAND JUNCTION 90.00 35.00	miles mph
Total Non-Roadable Mob/Demob Cost *	\$2,085.49	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$840.91	_

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	2.57	2.57
Return Time (Hours):	2.57	2.57
Loading Time (Hours):	0.00	NA
Unloading Time (Hours):	0.00	NA
Subtotals:	5.14	5.14

#### JOB TIME AND COST

Total job time: **10.29** Hours

Total job cost: \$2,926

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

	on: <u>Mo</u>	Joinze, Demobilize	Equipment for	Fond Ke	emovai		
Bowie No. 1	Mine	Permit	Action: MT8			Permit/Job#	: <u>C1981038</u>
PROJECT ID	ENTIFICAT	ION					
Task #: 1	48	State: Co	lorado		Abbre	eviation:	None
Date: 1	0/1/2020	County: De	lta		Fi	ilename:	C038-148
User: H	RDZ						
Agenc	y or organizatio	n name: DRMS					
EQUIPMENT	TRANSPOR	T RIG COST					
					Shift ba	usis: 1 r	ber day
				(	Cost Data Sou	1	G Data
	ick Tractor Desc			400 HP	(2ND HALF,	2006)	ESEL POWERED,
Ir	uck Trailer Desc	cription: Gl	ENERIC FOLD		SENECK, DF (25T, 50T, Al		EQUIPMENT
			1	KAILEK	(251, 501, Al	ND 1001)	
Cost Breakdowr	<u>ı:</u>						
Available Rig	Capacities	0-25 Tons	26-50 Tons	51-	+ Tons		
	nip Cost/Hour:	\$17.20	\$29.63		38.69		
	ng Cost/Hour:	\$26.56	\$47.02		55.69		
	tor Cost/Hour:	\$23.63	\$23.63		23.63		
	per Cost/Hour:	\$0.00	\$23.53		23.53		
Total U	nit Cost/Hour:	\$67.39	\$123.81	\$1	41.54		
	BLE EQUIP	MENT:					
NON KOADA			Haul Dia	Fleet	Haul Trip	Return Tr	ip DOT Permit
	Weight/	Owner ship	Halli Kig		i indui i i i i i i i i i i i i i i i i i i		
Machine	Weight/ Unit	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/uni			Cost/hr/ f	leet Cost/ fleet
	Unit	Owner ship Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/ fleet	Cost/hr/ fl	leet Cost/ fleet
Machine			Cost/hr/uni		Cost/hr/	\$141.54	leet Cost/ fleet \$250.00
Machine Description	Unit (TONS)	Cost/hr/ unit	Cost/hr/uni t	Size	Cost/hr/ fleet		

 Subtotals:
 \$372.53
 \$208.93
 \$500.00

#### **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$21.48	1	\$21.48	\$21.48
		Subtotals:	\$21.48	\$21.48

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	GRAND JUNCTION 90.00 35.00	miles mph
Total Non-Roadable Mob/Demob Cost *	\$3,990.37	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$110.47	_

Transportation Cycle Time:

Haul Time (Hours): Return Time (Hours): Loading Time (Hours):	Non- Roadable Equipment 2.57 2.57 0.00	Roadable Equipment 2.57 2.57 NA
Unloading Time (Hours):	0.00	NA NA
Subtotals:	5.14	5.14

#### JOB TIME AND COST

Total job time: **10.29** Hours

Total job cost: \_\_\_\_\_\_\$4,101\_\_\_\_\_

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Bowie No. 1 Mi	ine	Permit	Action: MT8		]	Permit/Job#: <u>C</u>	1981038
PROJECT IDEN	TIFICATI	<u>ON</u>					
Task #: 149		State: Co	lorado		Abbre	eviation: None	
	/2020		elta			lename: C038-	-149
User: RDZ		J					
Agency of	r organizatior	n name: DRMS					
EQUIPMENT T	RANSPOR'	<u>T RIG COST</u>					
					Shift ba		
				C	Cost Data Sour	rce: CRG Da	ta
Truck	Tractor Desc	ription: GENE	RIC ON-HIGH			OR, 6X4, DIESEL	POWERED,
					(2ND HALF,		
<b>T</b> 1	T 11 D	· · ·	CUEDIC FOI D	DIG GOO	CENEQU DE	OD DECK EOU	
Truck	Trailer Desc	ription: G				ROP DECK EQU	IPMENT
Truck	Trailer Desc	ription: G			SENECK, DF (25T, 50T, AN		IPMENT
	Trailer Desc	ription: Gl					IPMENT
Cost Breakdown:		- 	1	TRAILER (	(25T, 50T, AN		IPMENT
Cost Breakdown: Available Rig Ca	pacities	0-25 Tons	7 26-50 Tons	<b>FRAILER ( 51</b> +	(25T, 50T, AN Tons		IPMENT
<u>Cost Breakdown:</u> Available Rig Ca Ownership	<b>pacities</b> Cost/Hour:	0-25 Tons \$17.20	7 26-50 Tons \$29.63	<u>51+</u>	25T, 50T, AN Tons 8.69		IPMENT
Cost Breakdown: Available Rig Ca Ownership Operating	<b>pacities</b> Cost/Hour: Cost/Hour:	0-25 Tons	7 26-50 Tons	<b>51+</b> 51+ \$3 \$5	<b>Tons</b> 8.69 5.69		IPMENT
Cost Breakdown: Available Rig Ca Ownership Operating Operator	<b>pacities</b> Cost/Hour: Cost/Hour: Cost/Hour:	0-25 Tons \$17.20 \$26.56	<b>26-50 Tons</b> \$29.63 \$47.02	<b>51+</b> \$3 \$5 \$2	25T, 50T, AN Tons 8.69		IPMENT
Cost Breakdown: Available Rig Ca Ownership Operating Operator	<b>pacities</b> Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour:	0-25 Tons \$17.20 \$26.56 \$23.63	<b>26-50 Tons</b> \$29.63 \$47.02 \$23.63	<b>51+</b> \$3 \$5 \$2 \$2 \$2	<b>Tons</b> 8.69 5.69 3.63		IPMENT
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper	<b>pacities</b> Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour:	0-25 Tons \$17.20 \$26.56 \$23.63 \$0.00	<b>26-50 Tons</b> \$29.63 \$47.02 \$23.63 \$23.53	<b>51+</b> \$3 \$5 \$2 \$2 \$2	<b>Tons</b> 8.69 5.69 3.63 3.53		IPMENT
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper	pacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour:	0-25 Tons           \$17.20           \$26.56           \$23.63           \$0.00           \$67.39	<b>26-50 Tons</b> \$29.63 \$47.02 \$23.63 \$23.53	<b>51+</b> \$3 \$5 \$2 \$2 \$2	<b>Tons</b> 8.69 5.69 3.63 3.53		IPMENT
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit NON ROADABL	pacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour:	0-25 Tons \$17.20 \$26.56 \$23.63 \$0.00 \$67.39 MENT:	<b>26-50 Tons</b> \$29.63 \$47.02 \$23.63 \$23.53 \$123.81	S1+           \$3           \$5           \$2           \$14	<b>Tons</b> 8.69 5.69 3.63 3.53 41.54	ND 100T)	
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit NON ROADABL Machine	pacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: LE EQUIPN Weight/	0-25 Tons           \$17.20           \$26.56           \$23.63           \$0.00           \$67.39             MENT:           Owner ship	<b>26-50 Tons</b> \$29.63 \$47.02 \$23.63 \$23.53 \$123.81 Haul Rig	<b>51+</b> <b>51+</b> <b>53</b> <b>5</b> <b>5</b> <b>5</b> <b>5</b> <b>5</b> <b>5</b> <b>5</b> <b>5</b> <b>5</b> <b>5</b>	225T, 50T, AN Tons 8.69 5.69 3.63 3.53 41.54 Haul Trip	ND 100T) Return Trip	DOT Permit
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit NON ROADABL	pacities         Cost/Hour:         Cost/Hour:         Cost/Hour:         Cost/Hour:         Cost/Hour:         Cost/Hour:         Cost/Hour:         Veight/         Unit	0-25 Tons \$17.20 \$26.56 \$23.63 \$0.00 \$67.39 MENT:	26-50 Tons           \$29.63           \$47.02           \$23.63           \$123.81           Haul Rig           Cost/hr/uni	S1+           \$3           \$5           \$2           \$14	Tons           8.69           5.69           3.63           3.53           41.54   Haul Trip Cost/hr/	ND 100T)	
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit NON ROADABI Machine Description	pacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: <b>LE EQUIPN</b> Weight/ Unit (TONS)	0-25 Tons           \$17.20           \$26.56           \$23.63           \$0.00           \$67.39           MENT:           Owner ship           Cost/hr/ unit	26-50 Tons           \$29.63           \$47.02           \$23.63           \$123.81           Haul Rig           Cost/hr/uni           t	Size           Fleet           Size	Tons           8.69           5.69           3.63           3.53           41.54   Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit NON ROADABI Machine Description Cat D3K LGP - 3P	pacitiesCost/Hour:Cost/Hour:Cost/Hour:Cost/Hour:Cost/Hour:LE EQUIPNWeight/ Unit (TONS)9.20	0-25 Tons           \$17.20           \$26.56           \$23.63           \$0.00           \$67.39           MENT:           Owner ship           Cost/hr/ unit           \$27.78	Z6-50 Tons           \$29.63           \$47.02           \$23.63           \$123.81           Haul Rig           Cost/hr/uni           t           \$67.39	Size           Fleet           Size           10	Tons           8.69           5.69           3.63           3.53           41.54   Haul Trip Cost/hr/ fleet \$951.70	Return Trip Cost/hr/ fleet \$673.90	DOT Permit Cost/ fleet \$250.00
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit NON ROADABI Machine Description	pacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: <b>LE EQUIPN</b> Weight/ Unit (TONS)	0-25 Tons           \$17.20           \$26.56           \$23.63           \$0.00           \$67.39           MENT:           Owner ship           Cost/hr/ unit	26-50 Tons           \$29.63           \$47.02           \$23.63           \$123.81           Haul Rig           Cost/hr/uni           t	Size           Fleet           Size	Tons           8.69           5.69           3.63           3.53           41.54   Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet

# **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$21.48	10	\$214.80	\$214.80
		Subtotals:	\$214.80	\$214.80

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	GRAND JUNCTION 90.00 35.00	miles mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$14,520.31	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$1,104.69	_

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	2.57	2.57
Return Time (Hours):	2.57	2.57
Loading Time (Hours):	0.00	NA
Unloading Time (Hours):	0.00	NA
Subtotals:	5.14	5.14

#### JOB TIME AND COST

Total job time: **10.29** Hours

Total job cost: \_\_\_\_\_\_\$15,625

#### SITE MAINTENANCE

	Task description:	YEARLY S	ITE MNTNC			
Site:	Bowie No. 1 Mine		Permit Action:	MT8	Permit/.	Job#: <u>C1981038</u>
<u>PROJE</u>	CT IDENTIFICATION	<u>N</u>				
Task #:	: 158	State:	Colorado		Abbreviation:	None
Dates	: 10/1/2020	County:	Delta		Filename:	C038-158
User	: RDZ					
	Agency or organizat	ion name:	DRMS			
UNIT C	<u>OSTS</u>					

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
D3 Dozer	6.00	Cat D3K LGP - 3P	60.00	EA	\$96.33	\$5,779.80
CAT Motor Grader	2.00	CAT 14M	20.00	EA	\$153.41	\$3,068.20
POND CLEANING	5.00	USER PROVIDED ITEM	5.00	EA	\$17,500.00	\$87,500.00

Job Hours: 0.00

Total Cost: \$96,348.00

## BOREHOLE SEALING WORK

1	Fask description:	Seal Loadou	ıt Wells			
Site:	Bowie No. 1 Mine		Permit Action:	MT8	Permit/J	lob#: <u>C1981038</u>
<u>PROJE</u>	CT IDENTIFICATIO	N				
Task #:	201	State:	Colorado		Abbreviation:	None
Date:	10/1/2020	County:	Delta		Filename:	C038-201
User:	RDZ				_	
	Agency or organiza	tion name:	DRMS			

# UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bottom plug for 6" wells	PVC plug - 6 in. diameter borehole	6	na	1.00	EA	\$60.19	\$60.19
Fiil Holes with Concrete	Portland cement grout ( Bag, material cost only94 lb. bag)	6	na	19.60	bag	\$15.95	\$312.62
Borehole Marker	Borehole location/identification marker (EA, material cost only)	na	na	1.00	EA	\$35.50	\$35.50
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	na	na	1.00	LF	\$3.26	\$3.26
Drill Rig Time	SCHRAMM T450WS	na	na	12.00	EA	\$415.81	\$4,989.72
Water Truck Time	Water Tanker, 5,000 Gal.	na	na	12.00	EA	\$71.44	\$857.28

Job Hours: \_\_\_\_\_177.00

Total Cost: \$6,259.00

## **DEMOLITION WORK**

sk description:	Demolish and Remove all	Structures at <b>T</b>	Frain Loadout	
Bowie No. 1 Mine	Permit Action:	MT8	Permit/J	ob#: <u>C1981038</u>
<b>F IDENTIFICATIO</b>	<u>N</u>			
202	State: Colorado		Abbreviation:	None
10/1/2020	County: Delta		Filename:	C038-202
RDZ				
	Bowie No. 1 Mine T IDENTIFICATION 202 10/1/2020	Bowie No. 1 Mine     Permit Action:       T IDENTIFICATION     202       202     State:       10/1/2020     County:	Bowie No. 1 Mine     Permit Action: MT8       T IDENTIFICATION       202     State: Colorado       10/1/2020     County: Delta	Bowie No. 1 Mine     Permit Action:     MT8     Permit/J       T IDENTIFICATION     202     State:     Colorado     Abbreviation:       10/1/2020     County:     Delta     Filename:

## UNIT COSTS

# Location adjustment: 98.20 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Truck Dump	1200 sqft	Demo. and on-site	1,200.00	SF	\$1.49	\$1,786.80
Superstructure Slab		disposal in excavated pit, 10 in. thick - Max. 200 ft. push				φ1,760.60
Truck Dump Superstructure Footing	170	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 200 ft. push	170.00	LF	\$10.72	\$1,822.40
MCC at Truck Dump Superstructure Slab	364 sqft	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	364.00	SF	\$1.49	\$542.00
Scrubber Superstructure Footings	10 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 200 ft. push	10.00	LF	\$10.72	\$107.20
Tunnel Building Superstructure Slab	1152 sqft	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	1,152.00	SF	\$1.49	\$1,715.33
Tunnel Building Superstructure Footings	128 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 200 ft. push	128.00	LF	\$10.72	\$1,372.16
Tunnel Building Superstructure Concrete Tunnel	1440 sqft	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	1,440.00	SF	\$1.90	\$2,736.00
Truck Scale Superstructure	768 cf	Bldg. (SN) demo./on- site disposal in excavated pit - Max. 200 ft. push	768.00	CF	\$0.21	\$162.82
Truck Scale Superstructure Slab	996 sqft	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	996.00	SF	\$1.49	\$1,483.04
Silo Fan Footing	4.5 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 200 ft. push	4.50	LF	\$10.72	\$48.24
Silo Buildings Superstructure Slab	Buildings 256 sqft Demo. and on-site		256.00	SF	\$1.49	\$381.18

Coal Storage Silos Superstructure Slab			11,545.00	SF	\$1.61	\$18,587.45
Coal Storage Silos Superstructure Footings	89 cy	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 200 ft. push	89.00	LF	\$10.72	\$954.08
MCC at Silo Superstructure Slab	504 sqft	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	504.00	SF	\$1.49	\$750.46
Substation Superstructure Slab	291 sqft	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	291.00	SF	\$1.49	\$433.30
Substation Superstructure Footing	168 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 200 ft. push	168.00	LF	\$10.72	\$1,800.96
Shop Building Superstructure	150000 cf	Bldg. (SN) demo./on- site disposal in excavated pit - Max. 200 ft. push	150,000.00	CF	\$0.21	\$31,800.00
Shop Building Superstructure Slab	5420 sqft	Demo. and on-site disposal in existing pit, 10 in. thick - Max. 200 ft. push	5,420.00	SF	\$1.42	\$7,685.56
Shop Building Superstructure Footings	300 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 200 ft. push	300.00	LF	\$10.72	\$3,216.00
Pump House at Silo Superstructure Slab	1164 sqft	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	1,164.00	SF	\$1.49	\$1,733.20
MCC at Loadout Superstructure Slab	672 sqft	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	672.00	SF	\$1.49	\$1,000.61
Misc Fencing	2800 lf	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	2,800.00	LF	\$2.95	\$8,260.00
Train Loadout Superstructure Slab	900 sqft	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	900.00	SF	\$1.49	\$1,340.10
Train Loadout Superstructure Footings	120 lf	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 200 ft. push	120.00	LF	\$10.72	\$1,286.40
Train Loadout Superstructure Fence	120 lf	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	120.00	LF	\$2.95	\$354.00
Pump House at Loadout Superstructure	16280 cf	Bldg. (MN) demo./on- site disposal in excavated pit - Max.	16,280.00	CF	\$0.23	\$3,776.96

		200 ft. push				
Pump House at Loadout Slab	813 sqft	Demo. and on-site disposal in excavated pit, 10 in. thick - Max. 200 ft. push	813.00	SF	\$1.49	\$1,210.56
Pump House at Loadout Walls	1944 sqft	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	1,944.00	SF	\$1.90	\$3,693.60
Railroad Track	7088 lf	Railroad track - Ties and track	7,088.00	LF	\$9.56	\$67,761.28
Railroad Track Ballast	1590 cy	Railroad track - Ballast	1,590.00	СҮ	\$4.68	\$7,441.20
Bridge Reclamation (Adjusted Cyprus Estimate)	1 bridge	USER PROVIDED ITEM	1.00	ea	\$156,669.00	\$156,669.00
500 Gallon Fuel Tank (2)	500 gal	Hazardous waste removal - Drum solids/liquids, per drum, (7+ drum job)	2.00	DRUM	\$488.75	\$977.50
500 Gallon Fuel Tank (2) Remove Sludge	500 gal	Remove sludge, water, and rem. product from tank - 3,000 to 5,000 gal.	2.00	EA	\$233.00	\$466.00
500 Gallon Fuel Tank (2) Disposal of Sludge	100 gal	Dispose of tank sludge off-site - Average	100.00	GAL	\$6.25	\$625.00
500 Gallon Fuel Tank (2) Add CO2 for Tank Cleaning	15 lbs	Insert dry ice (CO2) into tank to produce inert gas - 1.5 lbs./100 gal.	15.00	LB	\$1.89	\$28.35
500 Gallon Fuel Tank (2) Haul Tanks to Certified Dump	2 tanks	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	2.00	EA	\$760.00	\$1,520.00
Concrete Disposal Charges	1911 CY	Loading and 5 mile haul, salvage allowed - Concrete frame structures	1,911.00	СҮ	\$12.55	\$23,983.05
Culvert Removal - 24" Culvert	24 inches	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	934.00	LF	\$7.01	\$6,549.21
Culvert Removal - 36" Culvert	36 inches	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	36.00	LF	\$10.95	\$394.02
Culvert Removal - 60" Culvert	60 inches	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	627.00	LF	\$21.53	\$13,498.06
Single post power poles	22 poles	Utility Poles, Wood 35' - 45' high (each pole)	22.00	EA	\$282.00	\$6,204.00
Single post cross members	22 Poles	Utility Pole Cross Arm	22.00	EA	\$98.00	\$2,156.00
Disposal of Utility Pole and Harware Surplus Material	4,400 ft Long	Disposal of utility pole and hardware surplus material	4,400.00	LF	\$0.02	\$88.00
Disposal of Utility Pole Cross Arms and Hardware Surplus Material	4,400 ft Long	Disposal of utility pole cross arms and hardware surplus material	4,400.00	LF	\$0.01	\$44.00
Metering Substation	3ft * 3ft *3ft	Bldg. (SN) demo./on-	27.00	CF	\$0.19	\$5.13

Demo Worksheet Cont'd

		site disposal in existing pit or cut - Max. 10,000 ft. haul				
Metering point concrete slab	4ft * 8ft * 4in	Floor, concrete, demolition only, average reinforcing - 4 in. thick	32.00	SF	\$0.54	\$17.28
					T-4-1 C4	

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	175.00	(unadjusted):	\$388,467.49	location):	\$381,475.08

# TRUCK/LOADER TEAM WORK

Task description:	Haul Fo	otprint of Lo	adout Stockp	oiles to R	efuse Area		
Site: Bowie No. 1 Min	e	Permit A	ction: MT8	3	]	Permit/Job#: <u>C</u>	1981038
PROJECT IDEN	TIFICATION	[					
Task #: 204 Date: 10/1/2	2020		lorado lta		Ab	breviation: No Filename: C0	one 038-204
User: RDZ							
Agency or	organization nar	ne: DRMS					
HOURLY EQUI	PMENT COST	<u>r</u>			Shift bas	is: <u>1 per day</u>	
			Equipment	t Descript	tion		
Т	ruck Loader Tea		Cat 773F CAT 990H				
Supp	ort Equipment -L	oad Area:	Cat D10T - 10				
Dood M	-Du aintenance –Mot		Cat D10T - 10 CAT 14M	)SU			
Koad M			Water Tanker	, 5,000 G	al.		
				, ,			
<u>Cost Breakdown</u> :		ader Team		upport Ec			nce Equipment
	Truck	Loader	Load Ar	rea	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	6	55	100	100	50	50
Ownership cost/hour:	\$97.85	\$111.1	1 \$1	70.04	\$170.04	\$65.89	\$29.31
Operating cost/hour:	\$94.20	\$75.8		53.03	\$153.03	\$29.48	\$21.07
%Utilization-riper:	NA		0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.0		\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.0		\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.7		641.30	\$41.30	\$28.56	\$0.00
Unit Subtotals: Number of Units:	\$225.38	\$227.7		1	\$364.36	\$123.93	\$50.38
Group Subtotals:	4 Work:	\$1,129.23	1	pport:	1 \$728.72	1 Maint:	\$174.31
Group Subiotais.	WOIK.	\$1,129.23	Su	pport.	\$720.72	Maint.	\$1/4.31
Total work team cos	st/hour: <u>\$2,032.</u>	26					
MATERIAL QU	ANTITIES						
Initial volume:	1,613	С	CY	Swell fa	ctor: 1.370		
Loose volume:	2,21	0 L	CY				
So	urce of estimated	volume: D	vivision Estim	ate			
Source	of estimated swe		vivision Estim	ate			
	Material Purch		0.00				
	10	otal Cost: \$	0.00				
HOURLY PRO	<b>DUCTION</b>						
Truck Capacity:							
Truck Payload (wei				1 / 011			
Material v Descr		rovided	Poune	ds/LCY			
Rated Pa			Poune	de			
Payload Ca				us			
Struck Volume:	35.00	LCY					
---	---	--	---	--	--	---	
Heaped Volume:	46.50	LCY					
Average Volume:	40.75	LCY					
Adjusted Volume:	46.50	LCY					
Final Loading Tool Capacity	l Truck Volume	Based on Number	of Loader Passes:	43.88	LCY		
			Buc	ket Size Class: N	ΙA		
Rated Capacity:	11.250	LCY (heaped)	)				
Bucket Fill Factor:	0.975	Loose materia	al - uniform aggreg	ates to 1/8" (95-100	0%) 0.975	_	
Adjusted Capacity:	10.969	LCY					
Job Condition Corrections	<u>:</u>		Site Altitude (ft.): 2	<u>7100</u> feet			
	Truck	Loader	Source				
Altitude Adj:	1.000	1.000	(CAT HE	3)			
Job Efficiency:	0.830	0.830	(CAT HE	3)			
Net Correction:	0.830	0.830					
Loading Tool Cycle Time:	Number	r of Loading Tool F	Passes Required to	Fill Truck:	41	passes	
Excavators and Front Shove	els:						
Machina Cuala Tima	a Joh Condition	n Dating, NA					
Machine Cycle Time v Selected Value	vs. Job Condition within this Basic						
-	within this Basi	c Rating: NA					
Selected Value	within this Basi Material Descr	c Rating: NA					
Selected Value Track Loaders –	within this Basi Material Descr :	c Rating: NA		 Dump:0.100	)		
Selected Value Track Loaders – Cycle Time Elements (min.)	within this Basi Material Descr M	c Rating: NA iption: Ianeuver: NA			)	utes	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: <u>NA</u> Wheel and Track Loaders	within this Basi Material Descr M	c Rating: NA iption: Ianeuver: NA	Time (load, dump, 1	maneuver): 0	.600 min	utes	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA	within this Basi Material Descr : - M - Unadjusted Ba	c Rating: NA iption: Ianeuver: NA				utes	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: <u>NA</u> Wheel and Track Loaders Cycle Time Factors	within this Basi Material Descr.	c Rating: NA iption: Ianeuver: NA usic Loader Cycle T	0	maneuver): 0 Factor (min.)	.600 min Source	utes 	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material:	within this Basi Material Descr Material Descr Unadjusted Ba Material 3/4" Conveyor or 6	c Rating: NA iption: Ianeuver: NA usic Loader Cycle T to 6" diameter 0.00	0 igh or less 0.01	maneuver): 0 Factor (min.) 0.000 0.010 -0.040	.600 min Source (Cat HB) (Cat HB) (Cat HB)	utes 	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	within this Basi Material Descr : - Unadjusted Ba Material 3/4" Conveyor or Common own Constant open	c Rating: NA iption: laneuver: NA sic Loader Cycle T to 6" diameter 0.0 dozer piled 10 ft. h nership of trucks ar ration -0.04	0 igh or less 0.01	maneuver): 0 Factor (min.) 0.000 0.010 -0.040 -0.040	.600 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	utes 	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership:	within this Basi Material Descr M - Unadjusted Ba Material 3/4" Conveyor or Common own	c Rating: NA iption: laneuver: NA usic Loader Cycle T to 6" diameter 0.0 dozer piled 10 ft. ht nership of trucks ar ration -0.04 et 0.00	0 igh or less 0.01 nd loaders -0.04	maneuver): 0 Factor (min.) 0.000 0.010 -0.040 -0.040 0.000	.600 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	utes 	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	within this Basi Material Descr : - Unadjusted Ba Material 3/4" Conveyor or Common own Constant open	c Rating: NA iption: Ianeuver: NA asic Loader Cycle T to 6" diameter 0.0 dozer piled 10 ft. h nership of trucks ar ration -0.04 et 0.00 Net Cycle T	0 igh or less 0.01 nd loaders -0.04 ime Adjustment:	maneuver): 0 Factor (min.) 0.000 0.010 -0.040 -0.040 0.000 -0.070	.600 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	utes 	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	within this Basi Material Descr : - Unadjusted Ba Material 3/4" Conveyor or Common own Constant open	c Rating: NA iption: Ianeuver: NA asic Loader Cycle T to 6" diameter 0.00 dozer piled 10 ft. hi nership of trucks ar ration -0.04 et 0.00 Net Cycle T Adjusted Loa	0 igh or less 0.01 nd loaders -0.04 ime Adjustment: ader Cycle Time:	maneuver): 0 Factor (min.) 0.000 0.010 -0.040 -0.040 0.000 -0.070 0.530	.600 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	utes 	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	within this Basi Material Descr : - Unadjusted Ba Material 3/4" Conveyor or Common own Constant open	c Rating: NA iption: Ianeuver: NA asic Loader Cycle T to 6" diameter 0.00 dozer piled 10 ft. hi nership of trucks ar ration -0.04 et 0.00 Net Cycle T Adjusted Loa	0 igh or less 0.01 nd loaders -0.04 ime Adjustment:	maneuver): 0 Factor (min.) 0.000 0.010 -0.040 -0.040 0.000 -0.070	.600 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	utes 	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	within this Basi Material Descr : - Unadjusted Ba Material 3/4" Conveyor or Common own Constant open	c Rating: NA iption: Ianeuver: NA asic Loader Cycle T to 6" diameter 0.00 dozer piled 10 ft. hi nership of trucks ar ration -0.04 et 0.00 Net Cycle T Adjusted Loa	0 igh or less 0.01 nd loaders -0.04 ime Adjustment: ader Cycle Time:	maneuver): 0 Factor (min.) 0.000 0.010 -0.040 -0.040 0.000 -0.070 0.530	.600 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	utes 	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	within this Basic Material Descr Material Descr Unadjusted Ba Material 3/4" Conveyor or Common own Constant open Nominal targ	c Rating: NA iption: Ianeuver: NA asic Loader Cycle T to 6" diameter 0.00 dozer piled 10 ft. hi nership of trucks ar ration -0.04 et 0.00 Net Cycle T Adjusted Loa	0 igh or less 0.01 nd loaders -0.04 ime Adjustment: ader Cycle Time: Time per Truck:	maneuver): 0 Factor (min.) 0.000 0.010 -0.040 -0.040 0.000 -0.070 0.530	.600 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes		
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	within this Basi Material Descr - Material 3/4" Conveyor or Common own Constant oper Nominal targe	c Rating: NA iption: Ianeuver: NA asic Loader Cycle T to 6" diameter 0.00 dozer piled 10 ft. hi nership of trucks ar ration -0.04 et 0.00 Net Cycle T Adjusted Loa Net Load	0 igh or less 0.01 nd loaders -0.04 ime Adjustment: nder Cycle Time: Time per Truck: Adjusted	maneuver): 0 Factor (min.) 0.000 0.010 -0.040 -0.040 0.000 -0.070 0.530 1.690	.600 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	   	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time	within this Basi Material Descr Material Descr Unadjusted Ba Material 3/4" Conveyor or o Common own Constant oper Nominal targ	c Rating: NA iption: laneuver: NA usic Loader Cycle T to 6" diameter 0.00 dozer piled 10 ft. hr nership of trucks ar ration -0.04 et 0.00 Net Cycle T Adjusted Loa Net Load Minutes	0 igh or less 0.01 nd loaders -0.04 ime Adjustment: nder Cycle Time: Time per Truck: Adjusted Adjusted	maneuver): 0 Factor (min.) 0.000 0.010 -0.040 -0.040 0.000 -0.070 0.530 1.690 for site altitude:	.600 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	utes — — — — — — — — — — — — —	
Selected Value Track Loaders – Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time Truck Load Time	within this Basic Material Descr - Unadjusted Ba Material 3/4" Conveyor or of Common own Constant oper Nominal targe e: 0.70 e: 1.690 e: 1.10	c Rating: NA iption: Ianeuver: NA asic Loader Cycle T to 6" diameter 0.00 dozer piled 10 ft. h nership of trucks ar ration -0.04 et 0.00 Net Cycle T Adjusted Loa Net Load Minutes Minutes Minutes	0 igh or less 0.01 nd loaders -0.04 ime Adjustment: ader Cycle Time: Time per Truck: Adjusted Adjusted Adjusted	maneuver): 0 Factor (min.) 0.000 0.010 -0.040 -0.040 0.000 -0.070 0.530 1.690 for site altitude: for site altitude:	.600     min       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       0.700     ninutes       0.700     1.690       1.100	     Minutes	

Haul Rou Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
Seg #	(Ft)	Jistance	Glade (%)	(%)	(%)	(fpm)	Time (min)	
1	21120	.00	0.00	3.00	3.00	2983	7.643	
					Haul Time:	7.643	minutes	
Return Ro	oute:				-			
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	21120	.00	0.00	3.00	3.00	3569	6.131	
				Total Tm	Return Time: ck Cycle Time:	<u>6.131</u> 17.264	minutes	
					ck Cycle Time.	1/.204		•
Loading Too								
Produ ck Unit Produ		1,101.46	LCY/Hour		Adjusted for j	ob efficiency:	914.22	LCY/Hour
ick Unit Produ	-	152.48	LCY/Hour		Adjusted for j	ob efficiency:	126.56	LCY/Hour
mal No. of Tr	ucks:	7	Truck(s)		Selected Numl	ber of Trucks:	4	Truck(s)
			Adjuste	d hourly truc	k team production	on: 506.	.25 LCY	/Hour
					er team production			/Hour
			Adjusted multip	le truck/loade	er team production	on: 506.	.25 LCY	/Hour
JOB TIN	ME AN	D COST						
Fleet	size:	1	Team(s)	-	Fotal job time:	4.37	Но	urs

### BULLDOZER RIPPING WORK

1	Task description:	Rip Coa	l Storage/	/Loadout A	rea				
Site:	Bowie No. 1 M	line	Perm	nit Action:	MT8		Permit/Job#	: <u>C19810</u>	)38
]	PROJECT IDI	ENTIFICATION							
	Task #:         205           Date:         10/           User:         RD	1/2020	State: County:	Colorado Delta		Ab	breviation: Filename:	None C038-20	05
	Agency	or organization nan	ne: DRI	MS					
1		UIPMENT COST							
=			<u>-</u> 0T - 10SU	T		Horsepower:		574	
	Ripper Att		k Ripper			Shift Basis:	1	per day	
						Data Source:	(	CRG)	
<u>(</u>	Cost Breakdown:	<u>.</u>				Utilization %			
		Ownership Cost/H	Hour:		\$170.04	NA			
		Operating Cost/H	Hour:		\$153.03	100			
		er Ownership Cost/H			\$20.48	NA 100			
	Кірг	oer Operating Cost/H Operator Cost/H			\$12.29 \$41.30	100 NA			
		Total Unit Cost/H			\$397.13	1111			
		Total Fleet Cost/H		\$1.5	88.53				
T	MATEDIAL C			, í					
_	MATERIAL Q			Sel	ected estimating	method: Are	ea		
<u>/</u>	Alternate Method	<u>ls:</u>							
mic:	NA			Volume:	NA	BCY	6 452	NA	DOV
rea:	2.00	acres	-	Depth (ft):	2.00	Volume:	6,453		BCY or 0
		Source of estimate	d quantity	7: <u>Map 8</u>	-1				
<u>]</u>	HOURLY PRO	<b>DDUCTION</b>							
5	<u>Seismic:</u>								
		Seis	mic Veloc	city:	NA	feet/se	cond		
4	Area:								
		Average Ri Average Ri			2.87 8.67	feet/pa feet/pa			
		Average Rip			200.00	feet/pa			
			Dozer Spe		88.00	feet/m			
		Average Ma			0.25		es/pass		
		Production	per unit a	rea:	0.947	acres/l	nour		
<u>]</u>	Job Condition Co	orrection Factors							
	Un	adjusted Hourly Un	it Producti	ion:	0.947	Acres	'nr		
			Site Altitu	ıde:	6,800	feet			
			Altitude A		1.00	(CAT	HB)		
			ob Efficier	· ·	0.83	(1 shif			
		Ne	et Correcti	ion:	0.83	multip	lier		
		Adjusted Hou Adjusted Hou			0.79 <b>3.14</b>	Acres/hr Acres/hr			
	JOB TIME AN	U U	-						
-	Fleet size:		rader(s)		Total job tim	e:	0.64	Ho	ours
	Unit cost:	\$505.373 P	er acre		Total job cos		\$1,011		

Task description:				Ŭ		
Bowie No. 1 Mine		Peri	mit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENI	FIFICATIO	N				
Task #: _206		State:	Colorado		Abbreviation:	None
Date: 10/1/20 User: RDZ	120	County:	Delta		Filename:	C038-206
Agency or o	organization n	ame: DR	RMS			
HOURLY EQUIP	MENT CO	<u>ST</u>				
	Cat D10T - 1	l0SU				
Horsepower:	574					
Blade Type:	Semi-Univer					
Attachment:	3-shank ripp	er				
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown:						
				Utilization %		
Ownership Cost/Hor	ur:		\$170.04	NA		
Operating Cost/Hor			\$153.03	100		
Ripper own. Cost/Ho			\$20.48	NA		
Ripper op. Cost/Hor			\$12.29	100		
Operator Cost/Hor	-		\$41.30	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour	\$397.13 r: <b>\$1,588</b>					
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA	\$397.12 r: <b>\$1,588</b>					
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume:	\$397.12 r: <b>\$1,588</b> <b>NTITIES</b> 23,232					
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor:	\$397.12 r: <b>\$1,588</b> <b>NTITIES</b> 23,232 1.165					
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor:	\$397.12 r: <b>\$1,588</b> <b>NTITIES</b> 23,232					
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2	\$397.12 r: \$1,588. NTITIES 23,232 1.165 27,065 LCY	.53				
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v	\$397.12 r: \$1,588. <b>NTITIES</b> 23,232 1.165 27,065 LCY volume:	.53 Permit Vo				
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2	\$397.12 r: \$1,588. <b>NTITIES</b> 23,232 1.165 27,065 LCY volume:	.53				
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated s	x: \$397.1: \$1,588. xNTITIES 23,232 1.165 27,065 LCY volume: well factor:	.53 Permit Vo				
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v	x: \$397.1: \$1,588. xNTITIES 23,232 1.165 27,065 LCY volume: well factor:	.53 Permit Vo				
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated s HOURLY PRODU	\$397.1:         r:       \$1,588.         ANTITIES         23,232         1.165         27,065 LCY         volume:         well factor:         UCTION         ve:	.53 Permit Vo CAT Han 400 feet	DI 1, Page 60			
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated s HOURLY PRODU	\$397.1:         r:       \$1,588.         ANTITIES         23,232         1.165         27,065 LCY         volume:         well factor:         UCTION         ve:	.53 Permit Vo CAT Han	DI 1, Page 60			
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated s HOURLY PRODU	\$397.1:         r:       \$1,588.         ANTITIES         23,232         1.165         27,065 LCY         volume:         well factor:         UCTION         re:          oduction:	<u>Permit Vo</u> CAT Han 400 feet 497.3 LCY/	ol 1, Page 60 idbook			
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro	\$397.1:         r:       \$1,588.         ANTITIES         23,232         1.165         27,065 LCY         volume:         well factor:         UCTION         ee:          oduction:          v description:	<u>Permit Vo</u> CAT Han 400 feet 497.3 LCY/	ol 1, Page 60 idbook			
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distance Unadjusted hourly pro- Materials consistency Average push gradien	\$397.1:         r:       \$1,588.         ANTITIES         23,232         1.165         27,065 LCY         volume:         well factor:         UCTION         ee:          oduction:          v description:         nt:      5 %	<u>-53</u> <u>Permit Vo</u> CAT Han 400 feet 497.3 LCY/ <u>Compa</u>	ol 1, Page 60 idbook			
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro	\$397.1:         r:       \$1,588.         ANTITIES         23,232         1.165         27,065 LCY         volume:         well factor:         UCTION         ee:          oduction:          v description:         nt:      5 %	<u>-53</u> <u>Permit Vo</u> CAT Han 400 feet 497.3 LCY/ <u>Compa</u>	ol 1, Page 60 idbook			
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distance Unadjusted hourly pro- Materials consistency Average push gradien	$\frac{$397.1:}{$1,588}$ <b>ANTITIES</b> 23,232 1.165 27,065 LCY Folume: Well factor: UCTION Fe: CODUCTION Fe: CODUCTION Fe: CODUCTION Find: Find: CODUCTION Find: Find: CODUCTION Find:	<u>-53</u> <u>Permit Vo</u> CAT Han 400 feet 497.3 LCY/ <u>Compa</u>	ol 1, Page 60 idbook			
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro Materials consistency Average push gradien Average site altitude:	$\frac{\$397.12}{\$1,588}$ <b>ANTITIES</b> 23,232 1.165 27,065 LCY Folume: Well factor: UCTION Fe: Coduction: COUCTION Fe: COUCTION	Permit Vo CAT Han 400 feet 497.3 LCY/ Compa feet bs/LCY	ol 1, Page 60 idbook			
Total unit Cost/Hour: Total Fleet Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro Materials consistency Average push gradien Average site altitude: Material weight:	\$397.1:         r:       \$1,588.         23,232         1.165         27,065 LCY         volume:         well factor:         UCTION         re:          oduction:          v description:         nt:      5 %        000 ff        2,900 ff        2,900 ff	Permit Vo CAT Han 400 feet 497.3 LCY/ Compa feet bs/LCY				
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro Materials consistency Average push gradien Average site altitude: Material weight: Weight description: Iob Condition Correc	\$397.1:         r:       \$1,588.         23,232         1.165         27,065 LCY         volume:         well factor:         UCTION         re:          oduction:          v description:         nt:      5 %        000 ff        2,900 ff        2,900 ff	Permit Vo CAT Han 400 feet 497.3 LCY/ Compa feet bs/LCY posed rock		 		
Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro Materials consistency Average push gradien Average site altitude: Material weight: Weight description: Iob Condition Correc	$\frac{$397.1:}{$1,588.}$ <b>ANTITIES</b> 23,232 1.165 27,065 LCY 70lume: 70lu	 Permit Vo CAT Han 400 feet 497.3 LCY/ Compa feet bs/LCY posed rock 0.				
Total unit Cost/Hour: Total Fleet Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated v So	$\frac{$397.1:}{$1,588.}$ <b>ANTITIES</b> 23,232 1.165 27,065 LCY 70lume: 70lu	Permit Vo CAT Han 400 feet 497.3 LCY/ Compa feet bs/LCY posed rock 0. 0.				

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3963	
Adjusted unit production: 19	7.08 LCY/hr	
Adjusted fleet production: <b>78</b>	8.32 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$2.015/LCY

Total job time:	<b>34.33</b> Hours
Total job cost:	\$54,539

	Grade Railroa	iu spui			
Bowie No. 1 Mine	F	Permit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENT	<b>IFICATION</b>				
Task #: 207	State	e: Colorado		Abbreviation:	None
Date: $10/1/202$		-		Filename:	C038-207
User: RDZ	County				
Agency or or	ganization name:	DRMS			
HOURLY EQUIPM	MENT COST				
Basic Machine:	Cat D10T - 10SU				
	574				
Blade Type:	Semi-Universal				
	3-shank ripper				
	1 per day				
Data Source:	(CRG)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hou		\$170.04	NA		
Operating Cost/Hou		\$153.03	100		
Ripper own. Cost/Hou		\$20.48	NA		
Ripper op. Cost/Hou		\$12.29	100		
Operator Cost/Hou	ır:	\$41.30	NA		
MATERIAL QUA					
Initial Volume: 1	13,504				
Initial Volume: 1 Swell factor: 1	13,504 .330				
Initial Volume:1Swell factor:1Loose volume:1	13,504 .330 <b>50,960</b> LCY				
Initial Volume:       1         Swell factor:       1         Loose volume:       1         Source of estimated volume:       1	13,504 .330 <b>50,960</b> LCY blume:1988 C	Cyprus Estimate	9		
Initial Volume:1Swell factor:1Loose volume:1	13,504 .330 <b>50,960</b> LCY blume:1988 C	Cyprus Estimate Handbook	<u>.</u>		
Initial Volume:       1         Swell factor:       1         Loose volume:       1         Source of estimated volume:       1	13,504 .330 <b>50,960</b> LCY blume: <u>1988 C</u> vell factor: <u>CAT F</u>		;		
Initial Volume: 1 Swell factor: 1 Loose volume: 1 Source of estimated vo Source of estimated sw HOURLY PRODU	13,504 .330 <b>50,960</b> LCY olume: 1988 ( vell factor: CAT F (CTION) c: 100 feet	Iandbook	<u></u>		
Initial Volume: 1 Swell factor: 1 Loose volume: 1 Source of estimated vo Source of estimated sw HOURLY PRODU Average push distance Unadjusted hourly pro	13,504         .330 <b>50,960</b> LCY         blume:       1988 C         well factor:       CAT H         ICTION         e:       100 feet         oduction:       1,718.9 I	Handbook			
Initial Volume:       1         Swell factor:       1         Loose volume:       1         Source of estimated volume       1         Source of estimated sw       1         HOURLY PRODU       1         Average push distance       1         Unadjusted hourly pro       1         Materials consistency       1	13,504         .330 <b>50,960</b> LCY         blume:       1988 C         well factor:       CAT F         Image:       100 feet         bduction:       1,718.9 I         description:       Com	Handbook	e  mbankment 0.9		
Initial Volume: 1 Swell factor: 1 Loose volume: 1 Source of estimated vo Source of estimated sw HOURLY PRODU Average push distance Unadjusted hourly pro	13,504         .330 <b>50,960</b> LCY         blume:       1988 C         well factor:       CAT F         Image:       100 feet         bduction:       1,718.9 I         description:       Com	Handbook			
Initial Volume:       1         Swell factor:       1         Loose volume:       1         Source of estimated volume       1         Source of estimated sw       1         HOURLY PRODU       Average push distance         Unadjusted hourly pro       Materials consistency         Average push gradient       1	13,504 .330 <b>50,960</b> LCY olume: <u>1988 C</u> well factor: <u>CAT F</u> (CTION) c: <u>100 feet</u> duction: <u>1,718.9 I</u> description: <u>Com</u> t: <u>-10 %</u>	Handbook			
Initial Volume: 1 Swell factor: 1. Loose volume: 1 Source of estimated vo Source of estimated sw HOURLY PRODU Average push distance Unadjusted hourly pro Materials consistency Average push gradient Average site altitude:	13,504         .330 <b>50,960</b> LCY         blume:       1988 C         well factor:       CAT F         Image:       100 feet         duction:       1,718.9 I         description:       Com         t:       -10 %         6,500 feet	LCY/hr	mbankment 0.9		
Initial Volume:       1         Swell factor:       1         Loose volume:       1         Source of estimated volume:       1         Source of estimated swell       1 <b>HOURLY PRODU</b> Average push distance         Unadjusted hourly pro       1         Materials consistency       1         Average push gradient       1         Average site altitude:       1         Material weight:       1         Weight description:       1         Job Condition Correct       1	13,504         .330 <b>50,960</b> LCY         olume:       1988 C         well factor:       CAT F         Image:       100 feet         oduction:       1,718.9 I         description:       Com         t:       -10 %	LCY/hr npacted fill or e			
Initial Volume:       1         Swell factor:       1         Loose volume:       1         Source of estimated volume:       1         Source of estimated swell       1 <b>HOURLY PRODU</b> Average push distance         Unadjusted hourly pro       Materials consistency         Average push gradient       Average site altitude:         Material weight:       Weight description:         Job Condition Correct:       Operat	13,504         .330 <b>50,960</b> LCY         olume:       1988 C         well factor:       CAT F         Image:       100 feet         oduction:       1,718.9 I         description:       Com         t:       -10 %	LCY/hr npacted fill or e wck - 50% Rock 0.750			
Initial Volume:       1         Swell factor:       1         Loose volume:       1         Source of estimated volume:       1         Source of estimated swell       1 <b>HOURLY PRODU</b> Average push distance         Unadjusted hourly pro       Materials consistency         Average push gradient       Average site altitude:         Material weight:       Weight description:         Job Condition Correct       Operat         Material cons       1	13,504         .330 <b>50,960</b> LCY         olume:       1988 C         well factor:       CAT F         Image:       100 feet         oduction:       1,718.9 I         description:       Com         t:       -10 %	LCY/hr         npacted fill or end			
Initial Volume:       1         Swell factor:       1         Loose volume:       1         Source of estimated volume:       1         Source of estimated swell       1         HOURLY PRODU       Average push distance         Unadjusted hourly pro       Materials consistency         Average push gradient       Average site altitude:         Material weight:       Weight description:         Job Condition Correct       Operat         Material cons       Dozing	13,504         .330 <b>50,960</b> LCY         olume:       1988 C         well factor:       CAT F         Image:       100 feet         oduction:       1,718.9 I         description:       Com         t:       -10 %	LCY/hr npacted fill or e wck - 50% Rock 0.750			

Task # 207

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.4354	
Adjusted unit production: 74	48.41 LCY/hr	
Adjusted fleet production: 29	993.64 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.531/LCY

Total job time:	<b>50.43</b> Hours
Total job cost:	\$80,105

### MOTOR GRADER WORK

Task description:	Finish Grade Railroad S	pur			
Bowie No. 1 Mine	Permit Actio	on: MT8	Per	rmit/Job#:	C1981038
PROJECT IDENT	<b>IFICATION</b>				
Task #: 208	State: Colora	do	Abbre	eviation:	None
Date: $10/1/202$				ilename:	C038-208
User: RDZ	ecounty: <u></u>			<u> </u>	2000 2000
	ganization name: DRMS				
<i>.</i>					
HOURLY EQUIP	<u>MENT COST</u>				
Basic Mach			Horsepower:		259
Ripper Attachm	ent:		Shift Basis:		er day
			Data Source:	(0	CRG)
Cost Breakdown:					
			Utilization %		
	/nership Cost/Hour:	\$65.89	NA		
	perating Cost/Hour:	\$58.96	100		
	vnership Cost/Hour:	\$0.00	NA		
	perating Cost/Hour:	\$0.00 \$28.56	NA		
	operator Cost/Hour:	\$28.30	NA		
10		\$155.41			
То	tal Fleet Cost/Hour:	\$153.41			
So	urce of estimated acreage: Ma	up8-1			
HOURLY PRODU	CTION				
	Average Grader Speed:	1.50	mph		
	Selected Application:		grading (0-2.5 mp	h) - 1.5	
	Selected Blade Angle:	30	degrees	,	
	Effective Blade Length:	12.10	feet		
	th of blade overlap per pass:	2.00	feet		
	ng or ripping width per pass:	10.10	feet		
Unadjus	ted Hourly Unit Production:	1.8364	acres/hou	ır	
Job Condition Correct			ite Altitude: 7000 f	feet	
Altituda Ad:					
Altitude Adj Job Efficiency		, mod.)			
Net Correction					
	Adjusted Hourly Unit Producti		acres/Hour		
	Adjusted Hourly Fleet Production	on: <b>1.5609</b>	acres/Hour		
JOB TIME AND C	OST				
Fleet size:	1 Grader(s)	Total job time	e:16.27	,	Hours
Unit cost:	598.28 per acre	Total job cos	t: <b>\$2,49</b>	5	
	98.28 per acre	rotar job cos	ι. φ <b>2,49</b> :	5	

				oile to Truck Dump St		
Bowie No. 1 Mine	2	Per	mit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDEN	TIFICATIO	N				
Task #: 209		State:	Colorado		Abbreviation:	None
Date: $10/1/20$	020	County:	Delta		Filename:	C038-209
User: RDZ	020	County.	Della		Filenanie.	0038-209
		DI				
Agency or o	organization r	name: DF	RMS			
HOURLY EQUIP	PMENT CO	ST				
Basic Machine:	Cat D10T -	10SU				
Horsepower:	574					
Blade Type:	Semi-Unive					
Attachment:	3-shank ripp	er				
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown:						
				Utilization %		
Ownership Cost/Ho	our:		\$170.04	NA		
Operating Cost/Ho	our:		\$153.03	100		
Ripper own. Cost/Ho	our:		\$20.48	NA		
Ripper op. Cost/Ho	our:		\$12.29	100		
Operator Cost/Ho	our:		\$41.30	NA		
Γotal unit Cost/Hour Γotal Fleet Cost/Hou	ır: <b>\$1,588</b>					
	ır: <b>\$1,588</b>					
Fotal Fleet Cost/Hou MATERIAL QUA Initial Volume:	ır: <b>\$1,588</b> ANTITIES 2,000					
Fotal Fleet Cost/Hou MATERIAL QUA Initial Volume: Swell factor:	r: <b>\$1,588</b> ANTITIES 2,000 1.115					
Fotal Fleet Cost/Hou MATERIAL QUA Initial Volume: Swell factor:	ır: <b>\$1,588</b> ANTITIES 2,000					
Fotal Fleet Cost/Hou MATERIAL QUA Initial Volume: Swell factor:	ar: \$1,588 ANTITIES 2,000 1.115 2,230 LCY	3.53	  ol 1, Page 65	; Operator Estimate		
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:	r: <b>\$1,588</b> <b>ANTITIES</b> 2,000 1.115 <b>2,230</b> LCY volume:	3.53		; Operator Estimate		
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume	r: <b>\$1,588</b> <b>ANTITIES</b> 2,000 1.115 <b>2,230</b> LCY volume:	Permit Vo		; Operator Estimate		
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume	\$1,588         ANTITIES         2,000         1.115         2,230 LCY         volume:         swell factor:	Permit Vo		; Operator Estimate		
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume:         Source of estimated volume:         Source of estimated volume:         HOURLY PROD	ar: \$1,588 ANTITIES 2,000 1.115 2,230 LCY volume: swell factor: UCTION	Permit Vo CAT Har		; Operator Estimate		
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume:         Source of estimated volume:         Source of estimated volume:         Source of estimated volume:         Average push distance	r: \$1,588 ANTITIES 2,000 1.115 2,230 LCY volume: swell factor: UCTION ce:	Permit Vo CAT Har	ndbook	; Operator Estimate		
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume:         Source of estimated volume:         Source of estimated volume:         HOURLY PROD	r: \$1,588 ANTITIES 2,000 1.115 2,230 LCY volume: swell factor: UCTION ce:	Permit Vo CAT Har	ndbook	; Operator Estimate		
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume:         Source of estimated volume:         Source of estimated volume:         Source of estimated volume:         Average push distance	antifies         2,000         1.115         2,230 LCY         volume:         swell factor:         UCTION         ce:         roduction:	Permit Vo CAT Har 100 feet 1,718.9 LC	ndbook			
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume         Source of estimated volume         Source of estimated volume         Average push distance         Unadjusted hourly pr         Materials consistency	xr:       \$1,588         xNTITIES       2,000         1.115       2,230 LCY         volume:       swell factor:         wolume:       swell factor:         UCTION	Permit Vo CAT Har 100 feet 1,718.9 LC	ndbook			
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume:         Source of estimated volume:         HOURLY PROD         Average push distance         Unadjusted hourly pr         Materials consistency         Average push gradien	antifies         2,000         1.115         2,230 LCY         volume:         swell factor:         UCTION         ce:         roduction:         y description:         nt:       0 %	Permit Vo           CAT Har           100 feet           1,718.9 LC           Consol	ndbook			
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume         Source of estimated volume         Source of estimated volume         Average push distance         Unadjusted hourly pr         Materials consistency	antifies         2,000         1.115         2,230 LCY         volume:         swell factor:         UCTION         ce:         roduction:         y description:         nt:       0 %	Permit Vo           CAT Har           100 feet           1,718.9 LC           Consol	ndbook			
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume:         Source of estimated volume:         HOURLY PROD         Average push distance         Unadjusted hourly pr         Materials consistency         Average push gradien	antifies         2,000         1.115         2,230 LCY         volume:         swell factor:         UCTION         ce:         roduction:         y description:         nt:       0 %         :       6,500 ;	Permit Vo           CAT Har           100 feet           1,718.9 LC           Consol	ndbook			
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume:         Average push distance         Vaterials consistence         Average push gradier         Average site altitude:	antifies         2,000         1.115         2,230 LCY         volume:         swell factor:         UCTION         ce:         roduction:         y description:         nt:       0 %         :       6,500 ±         2,100 ±	Permit Vo CAT Har 100 feet 1,718.9 LC Consol feet	ndbook			
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated volume:         Average push distance         Unadjusted hourly pr         Materials consistence         Average push gradier         Average site altitude:         Material weight:         Weight description:	antifies         2,000         1.115         2,230 LCY         volume:         swell factor:         UCTION         ce:         roduction:         y description:         nt:       0 %         :       6,500 f	Permit Vo CAT Har 100 feet 1,718.9 LC Consol feet	ndbook			
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated v         Average push distance         Unadjusted hourly pr         Materials consistence         Average push gradier         Average site altitude:         Material weight:         Weight description:         Iob Condition Correct	antifies         2,000         1.115         2,230 LCY         volume:         swell factor:         UCTION         ce:         roduction:         y description:         nt:       0 %         :       6,500 f	Permit Vo CAT Har 100 feet 1,718.9 LC Consol feet lbs/LCY Loam	ndbook			
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated v         Average push distance         Unadjusted hourly pr         Materials consistence         Average push gradier         Average site altitude:         Material weight:         Weight description:         Iob Condition Correct	antifies         2,000         1.115         2,230 LCY         volume:         swell factor:         UCTION         ce:         roduction:         y description:         nt:       0 %         2,100 I         Earth -         ction Factor         ator Skill:	Permit Vo CAT Har 100 feet 1,718.9 LC Consol feet lbs/LCY Loam 0.	Idbook Y/hr idated stockp	bile 1.0		
Fotal Fleet Cost/Hou         MATERIAL QUA         Initial Volume:         Swell factor:         Loose volume:         Source of estimated with the set of the	antifies         2,000         1.115         2,230 LCY         volume:         swell factor:         UCTION         ce:         roduction:         y description:         nt:       0 %         2,100 I         Earth -         ction Factor         ator Skill:	Permit Vo           CAT Har           100 feet           1,718.9 LC	Y/hr idated stockp	bile 1.0	)	

Job efficiency	y: 0.830	(1 SHIFT/DAY)
Spoil pile	e: 0.800	(FND-RF)
Push gradien	t: 1.000	(CAT HB)
Altitude	e: 1.000	(CAT HB)
Material Weigh	t: 1.095	(CAT HB)
Blade type	e: 1.000	(PAT)
Net correction	n: 0.5453	
Adjusted unit production:	937.32 LCY/hr	
Adjusted fleet production:	3749.28 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.424/LCY
Total job times	0 50 Hours

I otal job time:	0.59 Hours
Total job cost:	\$945

## **REVEGETATION WORK**

Task descr	iption:	Reseed Train Loadout and C	Coal Stockpile A	Areas	
Site: Bowie N	o. 1 Mine	Permit Action:	MT8	Permit/Job	o#: <u>C1981038</u>
	<u>IDENTIFIC</u>				
Task #:	210	State: Colorado		Abbreviation:	None
Date:	10/1/2020	County: Delta		Filename:	C038-210
User:	RDZ				

### **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
0-10-20, 3-9-18	1.00	pound	\$0.18	\$0.18
8-24-24, 10-15-15, 10-20-20	30.00	pound	\$0.32	\$9.45
			Total Fertilizer Materials Cost/Acre	\$9.63

### **Application**

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$37.03
	Total Fertilizer Application Cost/Acre	\$37.03

## **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Fringed Bromegrass - Native	4.38	8.03	\$74.38
Rye, Perennial Tetraploid - Elgon	3.50	19.85	\$6.30
Meadow Brome - Regar	5.25	4.82	\$20.87
Orchardgrass - Potomac	4.38	54.24	\$18.66
Totals Seed Mix	17.50	86.94	\$120.20

### Application

\$0.00

Total Seed Application Cost/Acre\$0.00

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

#### Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$101.93
	Total Mulch Application Cost/Acre	\$172.10

### NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 1	Nursery Stoc	k Cost / Acre	\$0.00

	No. of Acres:	40		Cost /Acre:	\$1,048.12
Estimat	ed Failure Rate:	20%		Cost /Acre*:	\$894.30
*Selected Replanti	ng Work Items:	SEEDING,MU	LCHING		
Initial Job Cost:	\$41,924.80				
Reseeding Job Cost:	\$7,154.40				
Total Job Cost:	\$49,079				
Job Hours:	80.00				

Page 1 of 2

	Remove Coal Stoc	1			
Bowie No. 1 Mine	Perm	it Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTIF	TICATION				
Task #: 211	State:	Colorado		Abbreviation:	None
Date: $\frac{211}{10/1/2020}$		Delta		Filename:	C038-211
User: RDZ	County	Dena		Thename.	000-211
Agency or orga	inization name: DRM	AS			
HOURLY EQUIPM	ENT COST				
	t D10T - 10SU				
Horsepower: 574			_		
VI	mi-Universal		_		
	shank ripper				
	ber day				
<u></u>	RG)		_		
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hour:		\$170.04	NA		
Operating Cost/Hour:		\$153.03	100		
Ripper own. Cost/Hour:		\$20.48	NA		
Ripper op. Cost/Hour:		\$12.29	100		
Operator Cost/Hour:		\$41.30	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$397.13 <b>\$1,588.53</b>				
Total Fleet Cost/Hour:	\$1,588.53 <u>FITIES</u>				
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume:565	\$1,588.53 <u>FITIES</u>				
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 565 Swell factor: 1.33	\$1,588.53 FITIES 30	-			
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 565 Swell factor: 1.33	\$1,588.53 FITIES 30 LCY	- - - 1, Page 35			
Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       565         Swell factor:       1.33         Loose volume:       751	\$1,588.53 FITIES 30 LCY me:Permit Vol				
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 565 Swell factor: 1.33 Loose volume: 751 Source of estimated volu	\$1,588.53 <u>FITIES</u> 30 LCY Ime: <u>Permit Vol</u> Infactor: <u>CAT Hand</u>				
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 565 Swell factor: 1.33 Loose volume: 751 Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance:	\$1,588.53 <b><u>FITIES</u></b> 30 LCY ume: <u>Permit Vol</u> Il factor: <u>CAT Hand</u> <u><b>TION</b></u> 50 feet	book			
Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       565         Swell factor:       1.33         Loose volume:       751         Source of estimated volu       swel         HOURLY PRODUCT       1.33	\$1,588.53 <b><u>FITIES</u></b> 30 LCY ume: <u>Permit Vol</u> Il factor: <u>CAT Hand</u> <u><b>TION</b></u> 50 feet	book			
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 565 Swell factor: 1.33 Loose volume: 751 Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance:	\$1,588.53         FITIES         30         LCY         ume:       Permit Vol         Il factor:       CAT Hand         TION         action:       50 feet         2,748.7 LCY	book /hr	   nbankment 0.9		
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 565 Swell factor: 1.33 Loose volume: 751 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	\$1,588.53         ITTIES         30         LCY         ame:       Permit Vol         Il factor:       CAT Hand         TION         action:       50 feet         2,748.7 LCY/         scription:       Compact         0 %	book /hr			
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 565 Swell factor: 1.33 Loose volume: 751 Source of estimated volu Source of estimated swel HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude:	\$1,588.53         FITIES         30         LCY         ame:       Permit Vol         Il factor:       CAT Hand         TION         action:       50 feet         action:       2,748.7 LCY/         scription:       Compact         0 %       7,200 feet	book /hr			
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 565 Swell factor: 1.33 Loose volume: 751 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight:	\$1,588.53         ITTIES         30         LCY         ume:       Permit Vol         Il factor:       CAT Hand         TION         action:       50 feet         action:       2,748.7 LCY/         scription:       Compact         0 %       7,200 feet         2,900 lbs/LCY	book /hr ed fill or er	nbankment 0.9		
Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       565         Swell factor:       1.33         Loose volume:       751         Source of estimated volu       Source of estimated swel         HOURLY PRODUC       Average push distance:         Unadjusted hourly produ       Materials consistency de         Average push gradient:       Average site altitude:         Material weight:       Weight description:	\$1,588.53         FITIES         30         LCY         ame:       Permit Vol         Il factor:       CAT Hand         TION         action:       2,748.7 LCY/         scription:       Compact         0 %       7,200 feet         2,900 lbs/LCY       Decomposed rock -	book /hr ed fill or er			
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 565 Swell factor: 1.33 Loose volume: 751 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	\$1,588.53         FITIES         30         LCY         ame:       Permit Vol         If factor:       CAT Hand         TION         action:       50 feet         action:       2,748.7 LCY/         scription:       Compact         0 %       7,200 feet         2,900 lbs/LCY       Decomposed rock -         n Factor       1	book /hr ed fill or er 50% Rock,			
Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 565 Swell factor: 1.33 Loose volume: 751 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator	\$1,588.53         ITTIES         30         LCY         ume:       Permit Vol         Il factor:       CAT Hand         TION         action: $\frac{50 \text{ feet}}{2,748.7 \text{ LCY/}}$ scription:       Compact         0 %       7,200 feet         2,900 lbs/LCY       Decomposed rock -         n Factor       0.7:	book /hr ed fill or er 50% Rock,	nbankment 0.9 50% Earth <u>Source</u> (AVG.)		
Total Fleet Cost/Hour:         MATERIAL QUANT         Initial Volume:       565         Swell factor:       1.33         Loose volume:       751         Source of estimated volu       swell         Source of estimated swell          HOURLY PRODUCT       Average push distance:         Unadjusted hourly product       Materials consistency de         Average push gradient:       Average site altitude:         Material weight:       Weight description:         Job Condition Correction       Job Condition Correction	\$1,588.53         ITTIES         30         LCY         ume:       Permit Vol         Il factor:       CAT Hand         TION         action: $50$ feet         action: $2,748.7$ LCY/         scription:       Compact         0 %       7,200 feet         2,900 lbs/LCY       Decomposed rock -         n Factor       Skill:       0.72         still:       0.72         0.900       0.90	book /hr ed fill or er 50% Rock, 50 00			

Job efficienc	y: 0.830	(1 SHIFT/DAY)
Spoil pil	e: 0.800	(FND-RF)
Push gradier	nt: 1.000	(CAT HB)
Altitud	e: 1.000	(CAT HB)
Material Weigh	it: 0.793	(CAT HB)
Blade typ	e: 1.000	(PAT)
Net correctio	n: 0.3554	
Adjusted unit production:	976.89 LCY/hr	
Adjusted fleet production:	3907.56 LCY/hr	
—		

Fleet size:	4 Dozer(s)
Unit cost:	\$0.407/LCY

Total job time:	<b>0.19</b> Hours
Total job cost:	\$305

Task description:	<b>Remove Train L</b>	oadout Ponc	1		
Bowie No. 1 Mine	Per	mit Action:	MT8	Permit/Job#:	C1981038
PROJECT IDENTI	FICATION				
Task #: 212	State:	Colorado		Abbreviation:	None
Date: $10/1/2020$		Delta		Filename:	C038-212
User: RDZ	County.	Dona		-	0000 212
Agency or orga	anization name: DR	RMS			
HOURLY EQUIPM	ENT COST				
	at D10T - 10SU				
Horsepower: 57					
	emi-Universal				
	shank ripper				
	per day				
Data Source: (C	CRG)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hour:		\$170.04	NA		
Operating Cost/Hour:		\$153.03	100		
Ripper own. Cost/Hour:		\$20.48	NA		
		\$12.29	100		
Ripper op. Cost/Hour:		¢ 11 20	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour:	\$397.13 <b>\$1,588.53</b>	\$41.30			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN	\$397.13 \$1,588.53	\$41.30	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume:29	\$397.13 <b>\$1,588.53</b> TITIES 04	\$41.30 	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: <u>2,9</u> Swell factor: <u>1.3</u>	\$397.13 <b>\$1,588.53</b> TITIES 04 30		NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8	\$397.13 <b>\$1,588.53</b> TITIES 04 30 62 LCY				
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu	\$397.13 \$1,588.53 TITIES 04 30 62 LCY ume:Permit Vo				
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8	\$397.13 \$1,588.53 TITIES 04 30 62 LCY ume:Permit Vo				
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu Source of estimated swe	\$397.13 \$1,588.53 TITIES 04 30 62 LCY ume: Permit Vo CAT Han				
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu	\$397.13 \$1,588.53 TITIES 04 30 62 LCY ume: Permit Vo CAT Han CTION				
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance:	\$397.13 \$1,588.53 TITIES 04 30 62 LCY ume: Permit Vo CAT Han CTION 100 feet	 ol 1, Page 11 idbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu Source of estimated swee HOURLY PRODUC	\$397.13 \$1,588.53 TITIES 04 30 62 LCY ume: Permit Vo CAT Han CTION 100 feet	 ol 1, Page 11 idbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance:	\$397.13 \$1,588.53 TITIES 04 30 62 LCY ume: Permit Vo CAT Han CTION uction: 100 feet 1,718.9 LC	ol 1, Page 11 idbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu Source of estimated swee HOURLY PRODUC Average push distance: Unadjusted hourly produ	\$397.13 \$1,588.53 TITIES 04 30 62 LCY ume: Permit Vo CAT Han CTION uction: 100 feet 1,718.9 LC	ol 1, Page 11 idbook	1; Map 8a-2		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly product Materials consistency de Average push gradient:	\$397.13         \$1,588.53         TITIES         04         30         62 LCY         ume:       Permit Vo         01 factor:       CAT Han         2TION         uction:       100 feet         1,718.9 LC         escription:       Compa         0 %	ol 1, Page 11 idbook	1; Map 8a-2		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu Source of estimated volu Source of estimated swee HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude:	\$397.13         \$1,588.53         TITIES         04         30         62 LCY         ume:       Permit Vo         cAT Han         CAT Han         CAT Han         CAT Han         CAT Han         Constant         100 feet         uction:       1,718.9 LC         escription:       Compa         0 %       7,200 feet	 ol 1, Page 11 idbook Y/hr cted fill or en	1; Map 8a-2		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu Source of estimated volu Source of estimated swee HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correctio	\$397.13         \$1,588.53         TITIES         04         30         62 LCY         ume:       Permit Vo         cAT Han         CAT Han         CTION         uction:       100 feet         1,718.9 LC         escription:       Compa         0 %       7,200 feet         2,900 lbs/LCY       Decomposed rock         n Factor       0		1; Map 8a-2  mbankment 0.9		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volu Source of estimated volu Source of estimated swee HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator	$\begin{array}{c c} \$397.13 \\ \$1,588.53 \\ \hline \textbf{TITIES} \\ 04 \\ 30 \\ \hline \textbf{62 LCY} \\ \textbf{ume: Permit Volume: CAT Hand \\ \hline \textbf{CAT Hand } \\ \hline CA$		1; Map 8a-2 		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volt Source of estimated volt Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist	$\begin{array}{c c} \$397.13 \\ \$1,588.53 \\ \hline \textbf{TITIES} \\ 04 \\ 30 \\ \hline \textbf{62 LCY} \\ \hline \textbf{ume:} & \underline{\text{Permit Vo}} \\ \hline \textbf{62 LCY} \\ \hline \textbf{ume:} & \underline{\text{Permit Vo}} \\ \hline \textbf{62 LCY} \\ \hline \textbf{ume:} & \underline{\text{Permit Vo}} \\ \hline \textbf{62 LCY} \\ \hline \textbf{cAT Han} \\ \hline \textbf{710N} \\ \hline \textbf{100 feet} \\ \hline \textbf{1,718.9 LC} \\ \hline \textbf{cascription:} & \underline{\text{Compa}} \\ \hline \textbf{0 \%} \\ \hline \textbf{7,200 feet} \\ \hline \textbf{2,900 lbs/LCY} \\ \hline \textbf{Decomposed rock} \\ \hline \textbf{n Factor} \\ \textbf{r Skill:} & \underline{\textbf{0}}, \\ \hline \textbf{stency:} & \underline{\textbf{0}}, \\ \hline \textbf{0}, \hline \textbf{0}, \\ \hline \textbf{0}, \hline \hline $		1; Map 8a-2 		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 2,9 Swell factor: 1.3 Loose volume: 3,8 Source of estimated volt Source of estimated volt Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consis Dozing m	$\begin{array}{c c} \$397.13 \\ \$1,588.53 \\ \hline \\ $		1; Map 8a-2 		

Job efficiency	y: 0.830	(1 SHIFT/DAY)
Spoil pile	e: 0.800	(FND-RF)
Push gradien	t: 1.000	(CAT HB)
Altitude	e: 1.000	(CAT HB)
Material Weigh	t: 0.793	(CAT HB)
Blade type	e: 1.000	(PAT)
Net correction	n: <u>0.3554</u>	
Adjusted unit production:	610.90 LCY/hr	
Adjusted fleet production:	2443.6 LCY/hr	

Fleet size:	4 Dozer(s)
Unit cost:	\$0.650/LCY

Total job time:	1.58 Hours
Total job cost:	\$2,511