

MINERALS PROGRAM INSPECTION REPORT PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME:	MINE/PROSPECTING ID#:	MINERAL:	COUNTY:
DDD	M-1984-076	Clay (general)	Elbert
INSPECTION TYPE:	INSPECTOR(S):	INSP. DATE:	INSP. TIME:
Surety Release Inspection	Amy Eschberger	April 13, 2021	10:00
OPERATOR:	OPERATOR REPRESENTATIVE:	TYPE OF OPERA	TION:
General Shale Brick, Inc.	Jason McGraw	112c - Construction	Regular Operation

REASON FOR INSPECTION:	BOND CALCULATION TYPE:	BOND AMOUNT:
Surety Release Requested	Complete Bond	\$194,050.00
DATE OF COMPLAINT:	POST INSP. CONTACTS:	JOINT INSP. AGENCY:
NA	None	None
WEATHER:	INSPECTOR'S SIGNATURE:	SIGNATURE DATE:
Clear	Clarry Exchanger	April 20, 2021

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Right of Entry

PROBLEM #1: The Division has no evidence the operator has the legal right to enter to conduct mining and reclamation for all owners of record of the surface and mineral rights of the affected lands, as required by Rule 6.4.14 and C.R.S. 34-32.5-112(1)(c)(IV).

CORRECTIVE ACTIONS: By the corrective action date, the operator must provide documentation of its legal right to enter to conduct mining and reclamation for all owners of record of the affected land. This may include a copy of a lease, deed, abstract of title, a current tax receipt, or a signed statement by the landowner and acknowledged by a Notary Public stating the operator has the legal right to enter to conduct mining and reclamation.

CORRECTIVE ACTION DUE DATE: May 20, 2021

INSPECTION TOPIC: Financial Warranty

PROBLEM #2: The financial warranty is not adequate to reclaim the site in accordance with the approved reclamation plan. This is a failure to maintain the proper financial warranty amount to complete reclamation of the affected lands pursuant to C.R.S. 34-32.5-117(4)(b) and Rule 4.2.1(1).

CORRECTIVE ACTIONS: The Division has re-evaluated the required financial warranty for reclaiming the site in accordance with the approved reclamation plan (see enclosed bond estimate). Any comments regarding the Division's bond estimate and/or evidence demonstrating reclamation work has been completed shall be submitted

by the corrective action date. If, by the corrective action date, no comments or additional information has been received, a notice of surety increase will be mailed to the operator for the amount shown in the enclosed bond estimate. The operator will have 60 days from the date on the surety increase notice to post the additional financial warranty.

CORRECTIVE ACTION DUE DATE: June 19, 2021

OBSERVATIONS

This was a surety release inspection of the DDD site (Permit No. M-1984-076) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division) in response to an Acreage Reduction Request (AR-04) filed with our office on March 23, 2021. No comments or objections on AR-04 were received within the public comment period which closed on April 7, 2021. The operator was represented during the inspection by Jason McGraw. This site is split into two mine areas, referred to by the operator as the DWR mine (west pit) and the DEB mine (east pit), which are located approximately 1.5 miles apart. The site is located approximately 19 miles north of Elizabeth, CO at the northern edge of Elbert County. Each mine area is accessed from the north directly off of Co Rd 194. **Photos 1-36** taken during the inspection are included with this report.

This is a 112c operation permitted for 100.52 acres to mine clay for brick manufacturing. The DWR mine consists of 59.05 acres and the DEB mine consists of 41.47 acres (see enclosed Google Earth image showing both DWR and DEB mines). This is an intermittent operation. The maximum allowed disturbed area at any time is 68 acres (for both mine areas), per Technical Revision No. 4 (TR-04; approved on April 11, 2018). The maximum mining depth is approximately 40 feet. Mined clay product is temporarily stored on site until needed at the operator's offsite brick manufacturing facility. Any salvaged overburden and topsoil is stored separately on site for reclamation. The operation is authorized to import up to 45,000 tons of inert fill (scrap brick generated from the operator's Denver brick plant) to the site for use in reclamation, per Technical Revision No. 2 (TR-02; approved on January 24, 2013). Stormwater management at the site will include the construction of diversion channels/berms and detention ponds, as needed.

The approved post-mining land use for the site is pastureland for grazing purposes. The reclamation plan calls for backfilling the scrap brick material into the pits in 5-10 foot lifts, blended with overburden and compacted, grading all disturbed slopes to 3H:1V or flatter, ripping compacted areas (e.g., stockpile/equipment storage areas, roads), replacing topsoil on disturbed land at an approximate depth of 10 inches, and revegetating the land with a grass seed mixture comprised of Blue grama, Little bluestem, Western wheatgrass, and Prairie sandreed. Two stormwater ponds will remain at the DWR mine for reclamation, including the "Wiesner stormwater pond" and the "Bostons stock pond". The approved reclamation plan does not call for leaving any stormwater ponds at the DEB mine.

In TR-04, the operator provided updated landowner information for the DWR mine, showing the affected lands are owned by three separate landowners, Wiesner, Faulhaber, and McDonald. According to the original approved permit, the affected lands at the DEB mine are owned by D. D. Daughenbaugh. If there has been a change in land ownership or a substantial change to a lease agreement that affects legal right of entry upon the affected lands, the operator must promptly notify the Division of such change in accordance with Rule 1.16(2). Additionally, the operator must provide the Division with documentation of its legal right to enter to conduct mining and reclamation for all owners of record of the surface and mineral rights of the affected lands. While the current operator took over the permit from Robinson Brick Company in 2008, the Division was unable to find any documentation in the permit file of General Shale Brick, Inc.'s legal right to enter the affected lands. This is cited as a problem in this report (Problem #1; see page 1), requiring the operator to provide evidence of its legal right to enter to conduct mining and reclamation for all owners of record of the affected lands. This may include a copy of a lease, deed, abstract of title, a current tax receipt, or a signed statement by the landowner and acknowledged by a Notary Public stating the operator has the legal right to enter to conduct mining and reclamation.

At the time of the inspection, the weather was cool and windy, and the ground was mostly dry. However, a few puddles remained in some areas from a recent storm event. A permit identification sign was posted at the main entrance to each mine site. The permit boundaries were delineated with property fencing and white posts. The

DWR mine was not active during the inspection. However, the Division did observe a haul truck at the DEB mine loading clay product to be transported to the operator's off-site brick manufacturing facility. According to the operator, the site is active every year in accordance with its intermittent status. While extraction activities have not occurred at the site since 2016/2017, the operation does haul off from product stockpiles throughout the year. Extraction activities are expected to recommence at the site later this year.

The Division first inspected the DWR mine (see enclosed Google Earth image of DWR mine), at which, the western 19.99 acres (owned by Wiesner) are proposed for release in AR-04 (see enclosed maps of DWR mine submitted with AR-04). The area proposed for release was used primarily as a stockpile storage area. A small stormwater pond (Wiesner stormwater pond) was constructed at the southwestern corner of the disturbed area. Approximately 14 acres were disturbed on this property. The operator completed removing the product stockpiles from this area and regrading and retopsoiling the area in 2016. The land was drill seeded in late 2016. According to the Division's last inspection report for this site (for its November 30, 2017 inspection), the vegetation was establishing well in this area for the first year of growth. During the current inspection, the Division observed all slopes in this area have been graded to 3H:1V or flatter, and the vegetative cover consists of an established stand of grasses. No erosion issues were observed. The stormwater pond remains at the southwestern corner of the reclaimed area. This pond was dry during the inspection. The Division believes the western portion of the permit area at the DWR mine has been reclaimed in accordance with the approved reclamation plan. Therefore, on April 13, 2021, the Division approved the operator's Acreage Reduction request (AR-04), leaving a permit area of 39.06 acres in the DWR mine area, and a total permit area of 80.53 acres (including the 41.47 acres in the DEB mine area). While no comments were submitted for AR-04, the Division did speak with the landowner of the parcel proposed for release, Thomas Wiesner, prior to the inspection. Mr. Wiesner stated he was pleased with the reclamation completed on his property and had no issues with the land being released from the permit.

The Division estimates current disturbance at the DWR mine to cover approximately 21 acres. This disturbance is split into two main areas, including a clay stockpile area to the north (near the site entrance), and a clay, scrap brick, overburden, and topsoil stockpile area to the south, adjacent to the mining area. Two narrow pits elongated in a north-south direction are present at the eastern and southeastern edges of the permit area, covering approximately 4 acres. These pits are approximately 25 feet deep, with highwall slope gradients ranging from near vertical to 2H:1V. The eastern highwall of the southern pit is located adjacent to the eastern permit boundary, so the operator will need to be careful not to disturb land offsite while reclaiming this highwall. Some stormwater was ponded on the pit floors. A pond approximately 0.95 acre in size (Bostons stock pond) is located west of the pits with slopes graded to 3H:1V and stable with good grass establishment. The land directly north, west, and south of the pond also has a good grass establishment and will not be redisturbed by the operation. The pond was dry during the inspection. Plenty of topsoil has been salvaged and stockpiled on site to complete reclamation, including a large topsoil stockpile stored west of the pit area, and topsoil stockpiles bermed along the northern and southern edges of the clay stockpile area. These stockpiles were stable with good grass cover. The portion of the permit area located south of the clay stockpile area (owned by Faulhaber) may not be disturbed by the operation, and is currently fenced off.

The Division estimates reclamation of current disturbance at the DWR mine would include backfilling the eastern pit highwalls to 3H:1V (due to their close proximity to the eastern permit boundary), grading other pit highwalls to 3H:1V using cut/fill methods, backfilling the imported scrap brick material into the pits, ripping 15.8 acres of compacted areas (stockpiling/equipment storage areas and roads), replacing topsoil on 19.8 acres (21 acres disturbance – 1.2 acres reclaimed stock pond area), and revegetating 19.8 acres.

The Division inspected the DEB mine next (see enclosed Google Earth image of DEB mine), which is located approximately 1.5 miles east of the DWR mine. The Division estimates current disturbance at the DEB mine to

cover approximately 22.5 acres. This disturbance is split into two main areas, including a pit and scrap brick stockpile area to the east (near the site entrance), and a clay stockpile area to the west. The pit is elongated in an east-west direction, covering approximately 3.2 acres. The pit is approximately 25-30 feet deep, with highwall slope gradients ranging from 1H:1V to 2H:1V. The pit opens up to the west and is deeper at its northern edge. The eastern highwall of the pit is located adjacent to the eastern permit boundary, so the operator will need to be careful not to disturb land offsite while reclaiming this highwall. The area directly north of the pit has been stripped in preparation of mining. Two stormwater ponds have been constructed at this site, one along the western edge of the pit area (approximately 0.95 acre in size) and the other at the southern edge of the clay stockpile area (approximately 0.35 acre in size). These ponds were dry during the inspection. A large scrap brick stockpile is stored just south of the pit. Plenty of topsoil has been salvaged and stockpiled on site to complete reclamation, including the topsoil stockpile area. A draw runs along the western and southern edges of the clay stockpile area. This draw flows to the southeast when carrying water, but is typically dry. The operator has constructed a berm along the western and southern edges of the mining area to keep runoff from the mine from entering the draw.

The Division estimates reclamation of current disturbance at the DEB mine would include backfilling the eastern pit highwall to 3H:1V (due to its close proximity to the eastern permit boundary), grading other pit highwalls to 3H:1V using cut/fill methods, backfilling the imported scrap brick material into the pit, backfilling the two stormwater ponds, ripping 18 acres of compacted areas (stockpiling/equipment storage areas and roads), replacing topsoil on 22.5 acres, and revegetating 22.5 acres.

After conducting this inspection, the Division re-evaluated the required financial warranty for reclaiming the site (both the DWR mine and the DEB mine) in accordance with the approved reclamation plan (see enclosed bond estimate), and found this amount to be \$325,670.00, which is \$131,620.00 more than the currently held amount of \$194,050.00. This is cited as a problem in this report (Problem #2; see pages 1 and 2) for failure to maintain the proper financial warranty amount to complete reclamation of the affected lands in accordance with the approved reclamation plan. The operator is encouraged to review the enclosed bond estimate and submit any comments or evidence of reclamation work completed within 60 days of the date of this inspection report. If, by the 60-day corrective action deadline, the Division has not received any comments from the operator, a notice of Surety Increase will be issued for the amount calculated in the enclosed bond estimate. The operator will then have 60 days from the date of such notice to post the additional required financial warranty.

If the operator wishes to revise the reclamation plan for the site, this can be done through the submittal of a Technical Revision (for a minor change; see enclosed form) or an Amendment application (for a significant change and/or increase in affected acreage).

This concludes the report.

Any questions or comments regarding this inspection report should be forwarded to Amy Eschberger at the Colorado Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, via telephone at 303-866-3567, ext. 8129, or via email at <u>amy.eschberger@state.co.us</u>.

PERMIT #: M-1984-076 INSPECTOR'S INITIALS: AME INSPECTION DATE: April 13, 2021

PHOTOGRAPHS



Photo 1. View of DWR mine looking north across eastern edge of area proposed for release in AR-04, showing white post marking its eastern boundary. Note established grasses in this area.



Photo 2. View of DWR mine looking northwest across area proposed for release in AR-04, showing slopes graded to 3H:1V or flatter and an established grass cover.



Photo 3. View of DWR mine looking west across area proposed for release in AR-04, showing slopes graded to 3H:1V or flatter and an established grass cover.



Photo 4. View of DWR mine looking southwest across area proposed for release in AR-04, showing slopes graded to 3H:1V or flatter and an established grass cover.



Photo 5. View of DWR mine looking south across area proposed for release in AR-04, showing slopes graded to 3H:1V or flatter and an established grass cover.



Photo 6. View of DWR mine looking northwest across northern portion of stormwater pond that remains in area proposed for release in AR-04. This pond was dry during the inspection.



Photo 7. View of DWR mine looking southwest across southern portion of stormwater pond that remains in area proposed for release in AR-04. This pond was dry during the inspection.



Photo 8. View of DWR mine looking south across southern portion of area proposed for release in AR-04 which was undisturbed by the operation.



Photo 9. View of DWR mine looking southeast across southern portion of Faulhaber parcel, which may not be mined by the operation.



Photo 10. View of DWR mine looking northwest across clay stockpiles area near site entrance. Some imported scrap brick was also stored in this area (visible at right).



Photo 11. View of DWR mine looking west across clay stockpiles area near site entrance.



Photo 12. View of DWR mine looking southwest at topsoil stockpile (indicated) stored along southern edge of clay stockpile area. This stockpile was stable with good grass cover.



Photo 13. View of DWR mine looking south across clay stockpiles area near site entrance.



Photo 14. View of DWR mine looking south across eastern edge of clay stockpile area where imported scrap brick is stored.



Photo 15. View of DWR mine looking south across northern portion of north pit, approximately 25 feet deep with highwall slopes at 1H:1V to 2H:1V.



Photo 16. View of DWR mine looking south across southern portion of north pit. Note some ponded stormwater present on pit floor.



Photo 17. View of DWR mine looking east across southern portion of north pit, approximately 25 feet deep with highwall slopes at near vertical to 2H:1V. Note some ponded stormwater present on pit floor.



Photo 18. View of DWR mine looking east across stock pond constructed west of pit area, with slopes at 3H:1V or flatter and stable with good grass cover. This pond was dry during the inspection.



Photo 19. View of DWR mine looking northeast at eastern highwall of south pit, approximately 25 feet in height with slopes at near vertical to 1H:1V.



Photo 20. View of DWR mine looking north across south pit, approximately 25 feet deep with highwall slopes at near vertical to 2H:1V. Note some ponded stormwater present on pit floor.



Photo 21. View of DWR mine looking east at large topsoil stockpile (indicated) stored just west of pit area. This stockpile was stable with good grass cover.



Photo 22. View of DWR mine looking west at clay stockpile (at left) and large scrap brick stockpile (at right) stored just west of pit area.



Photo 23. View of DEB mine looking southeast at eastern pit highwall, approximately 25 feet in height with slopes at 1H:1V to 1.5H:1V.



Photo 24. View of DEB mine looking south across pit. Note large scrap brick stockpile (in background) stored south of pit.



Photo 25. View of DEB mine looking southwest across pit, approximately 25-30 feet deep with highwall slopes at 1H:1V to 2H:1V.



Photo 26. View of DEB mine looking north at northern pit highwall, approximately 30 feet in height with slopes at 1H:1V to 2H:1V.



Photo 27. View of DEB mine looking northwest at topsoil stockpile stored along northern edge of pit area. This stockpile was stable with good grass cover.



Photo 28. View of DEB mine looking southeast across stormwater pond constructed along western edge of pit area. This pond was dry during the inspection.



Photo 29. View of DEB mine looking east at large scrap brick stockpile stored south of pit area. A topsoil stockpile is stored to the south of this stockpile (not shown in photo).



Photo 30. View of DEB mine looking east across entire pit area disturbance. Note pit (at center), area north of pit to be mined (at left), and scrap brick stockpile (at right). Topsoil stockpiles are stored along northern and southern edges of this area (far left and far right)



Photo 31. View of DEB mine looking north at topsoil stockpile (indicated) stored along northern edge of clay stockpile area. This stockpile was stable with good grass cover.



Photo 32. View of DEB mine looking south across clay stockpile area located at western edge of permit area.



Photo 33. View of DEB mine looking north across clay stockpile area located at western edge of permit area.



Photo 34. View of DEB mine looking north at clay stockpile area, showing haul truck present during inspection to transport clay off site to operator's brick manufacturing facility.



Photo 35. View of DEB mine looking east across stormwater pond constructed at southern edge of clay stockpile area. This pond was dry during the inspection.



Photo 36. View of DEB mine looking east across undisturbed portion of permit area between pit area (to the east) and clay stockpile area (to the west).

GENERAL INSPECTION TOPICS

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

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

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

Inspection Contact Address

Jason McGraw General Shale Brick, Inc. 1845 W. Dartmouth Ave. Denver, CO 80110

- Encls: Google Earth image showing both DWR and DEB mines Google Earth image of DWR mine
 (2) Maps of DWR mine submitted with AR-04 Google Earth image of DEB mine Division's bond estimate Technical Revision form
- CC: Harold Stickler, General Shale Brick, Inc. Michael Cunningham, DRMS

M-1984-076 / DDD / General Shale Brick, Inc. (112c)

DWR Mine (west pit) and DEB Mine (east pit) Red Outline = 80.53 acres = Total Permit Area after AR-04 Approval (39.06 acres DWR Mine + 41.47 acres DEB Mine) Purple Outline = 43.5 acres = Total Disturbed Area (21 acres DWR Mine + 22.5 acres DEB Mine) (Image data from 4/3/2020)

50

M1984-076_DDD_DEB-Mine

1 mi

M1984-076_DDD_DWR-Mine

29



2-0

M-1984-076 / DDD / General Shale Brick, Inc. (112c)

DWR Mine (west pit) Red Outline = 39.06 acres = Permit Area ater AR-04 approval (location approximated based on approved permit maps) Purple Outline = 21 acres = Disturbed Area (Image data from 4/3/2020)

M1984-076_DDD_DWR-Mine









M-1984-076 / DDD / General Shale Brick, Inc. (112c)

DEB Mine (east pit) Red Outline = 41.47 acres = Permit Area (location approximated based on approved permit maps) Purple Outline = 22.5 acres = Disturbed Area (Image data from 4/3/2020)





Image © 2021 Maxar Technologies

COST SUMMARY WORK

DDD		Pe	rmit Action:	4/13/2021 Inspection- 2	Permit/Job	#: <u>M1984076</u>
PROJECT	IDENTIFIC	CATION				
Task #:	000	State:	Colorado		Abbreviation:	None
	4/16/2021	County:	Elbert		Filename:	M076-000
Date:	1/10/2021					

TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	
Lask	Description	Used	Size	Hours	Cost
001	DWR mine - Backfill eastern pit highwalls	DOZER	2	21.86	\$10,814
002	DWR mine - Cut/fill pit highwalls	DOZER	2	5.53	\$2,737
003	DWR mine - Backfill south pit with inert fill	LOADER	2	109.45	\$23,300
004	DWR mine - Rip compacted areas	RIPPER	2	11.46	\$6,156
005	DWR mine - Retopsoil 19.8 acres	SCRAPER1	1	22.39	\$23,816
006	DWR mine - Revegetate 19.8 acres	REVEGE	1	9.90	\$28,960
007	DEB mine - Backfill eastern pit highwalls	DOZER	2	4.92	\$2,433
008	DEB mine - Cut/fill pit highwalls	DOZER	2	5.41	\$2,676
009	DEB mine - Backfill pit with inert fill	LOADER	2	114.88	\$24,455
010	DEB mine - Backfill eastern pond	LOADER	2	63.16	\$13,446
011	DEB mine - Backfill western pond	LOADER	2	11.37	\$2,421
012	DEB mine - Rip compacted areas	RIPPER	2	12.98	\$6,971
013	DEB mine - Retopsoil 22.5 acres	SCRAPER1	1	34.61	\$36,807
014	DEB mine - Revegetate 22.5 acres	REVEGE	1	11.25	\$32,909
015	Mobilization/demobilization	MOBILIZE	1	13.94	\$36,106
		SUBTO	DTALS:	453.11	\$254,007

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$5,131
Performance bond:	1.05	Total =	\$2,667
Job superintendent:	150.00	Total =	\$10,432
Profit:	10.00	Total =	\$25,401
		TOTAL O & P =	\$43,631
		CONTRACT AMOUNT (direct + O & P) = $($	\$297,638

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.25	Total =	\$12,650
Reclamation management and/or administration:	5.00		\$14,882
CONTINGENCY:	0.00	Total =	\$0
	TOTA	L INDIRECT COST =	\$71,663

TOTAL BOND AMOUNT (direct + indirect) = _____\$325,670

BULLDOZER WORK

Task description:	DWR n	nine - Bao	kfill eastern	ı pit highwalls		
DDD		Per	mit Action:	4/13/2021 Inspection-2	Permit/Job#:	M1984076
				-		
PROJECT IDENTI	FICATION	<u>I</u>				
Task #: 001		State:	Colorado		Abbreviation:	None
Date: 4/16/2021		County:	Elbert		Filename:	M076-001
User: AME						
Agency or orga	anization nai	me: DF	RMS			
HOURLY EQUIPM	ENT COS	<u>T</u>				
Basic Machine: Ca	at D8T - 8SU	J				
Horsepower: 31						
	emi-Universa	ıl				
Attachment: N.						
	per day					
Data Source: (C	CRG)					
Cost Breakdown:						
				Utilization %		
Ownership Cost/Hour:			\$116.22	NA		
Operating Cost/Hour:			\$89.77	100		
Ripper own. Cost/Hour:			\$0.00	NA		
Ripper op. Cost/Hour:			\$0.00	0		
Operator Cost/Hour:			\$41.30	NA		
MATERIAL QUAN Initial Volume: 23, Swell factor: 1.1	148					
	042 LCY					
		D . 1 . 1				
Source of estimated volu		East high Cat Hand		ft L x 25 ft H		
Source of estimated swe			JUUK			
HOURLY PRODUC	TION					
Average push distance:		feet				
Unadjusted hourly produ	uction: 1 ,	017.1 LC	Y/hr			
Materials consistency de	escription:	Consol	idated stock	pile 1.0		
Average push gradient: Average site altitude:	5 % 6,080 fee					
	0,000 100					
irreruge site unitude.						
Material weight:	2,650 lbs	s/LCY				
-			- 25% Rock	, 75% Earth		
Material weight: Weight description: Job Condition Correctio	Decompo	osed rock		Source		
Material weight: Weight description: Job Condition Correctio Operator	Decompo n Factor Skill:	osed rock	000	Source (EXCL.)		
Material weight: Weight description: <u>Job Condition Correctio</u> Operator Material consis	Decompo n Factor Skill: stency:	0 sed rock 1. 1.	000	Source (EXCL.) (CAT HB)		
Material weight: Weight description: <u>Job Condition Correctio</u> Operator Material consis Dozing m	Decompo n Factor Skill: stency:	0 sed rock 1. 1. 1.	000	Source (EXCL.)		

Job efficienc	y: 0.830	(1 SHIFT/DAY)
Spoil pi	le: 0.900	(SSD-FC)
Push gradier	nt: 0.903	(CAT HB)
Altitud	le: 1.000	(CAT HB)
Material Weigl	nt: 0.868	(CAT HB)
Blade typ	e: 1.000	(PAT)
Net correctio	n:0.5855	
Adjusted unit production:	595.51 LCY/hr	
Adjusted fleet production:	1191.02 LCY/hr	

JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$0.415/LCY

Total job time:	21.86 Hours
Total job cost:	\$10,814

BULLDOZER WORK

Task description:	DW	R mine - Cut	/fill pit high	iwalls		
DDD		Peri	mit Action:	4/13/2021 Inspection-2	Permit/Job#:	M1984076
PROJECT IDEN	FIFICATI	<u>ION</u>				
Task #: 002 Date: 4/16/20 User: AME	021	State: County:	Colorado Elbert		Abbreviation: Filename:	None M076-002
Agency or o	organization	name: DR	RMS			
	-					
HOURLY EQUIP						
Basic Machine:	Cat D8T -	850				
Horsepower:	310					
Blade Type:	Semi-Univ	versal				
Attachment:	NA					
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown:						
			¢116.00	Utilization %		
Ownership Cost/Ho			\$116.22	NA		
Operating Cost/Ho			\$89.77	100		
Ripper own. Cost/Ho			\$0.00	NA		
Ripper op. Cost/Ho	-		\$0.00	0		
Operator Cost/Us	11r.		\$41.30	NA		
Operator Cost/Ho			φ + 1.50	INA		
•		28	φ + 1.50	INA		
Total unit Cost/Hour Total Fleet Cost/Hour	: \$247		ψ+1.50			
Total unit Cost/Hour	: \$247		φ41.30			
Total unit Cost/Hour	: \$247 r: \$494	.57	φ+1.30			
Total unit Cost/Hour Total Fleet Cost/Hou MATERIAL QUA	: \$247 r: \$494	.57	\$ 1 1.50			
Total unit Cost/Hour Total Fleet Cost/Hou <u>MATERIAL QUA</u> Initial Volume:	: \$247 r: \$494 ANTITIES 7,813	.57	φ + 1.30			
Total unit Cost/Hour Total Fleet Cost/Hou MATERIAL QUA Initial Volume: Swell factor:	: \$247 r: \$494 ANTITIES 7,813 1.250	.57				
Total unit Cost/Hour Total Fleet Cost/Hou MATERIAL QUA Initial Volume: Swell factor:	: \$247 r: \$494 ANTITIES 7,813	.57	φ+1.30			
Total unit Cost/Hour Total Fleet Cost/Hou MATERIAL QUA Initial Volume: Swell factor:	: \$247 r: \$494 ANTITIES 7,813 1.250 9,766 LCY	.57 <u>5</u>		th Highwalls 1,350 ft L x	 25 ft H	
Total unit Cost/Hour Total Fleet Cost/Hou MATERIAL QUA Initial Volume: Swell factor: Loose volume:	: \$247 r: \$494 ANTITIES 7,813 1.250 9,766 LCY volume:	.57	est, and Sou		25 ft H	
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Total unit Cost/Hour Total Fleet Cost/Hou MATERIAL QUA Initial Volume:	: \$247 r: \$494 ANTITIES 7,813 1.250 9,766 LCY volume: swell factor:	.57	est, and Sou		25 ft H	
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Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated s HOURLY PRODU	: \$247 r: \$494 ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: UCTION ce:	.57 2 	est, and Sou		25 ft H	
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated s HOURLY PRODU	: \$247 r: \$494 ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: UCTION ce:	North, W	est, and Sou		25 ft H	
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated s HOURLY PRODU	: \$247 r: \$494 ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: UCTION ce: roduction:	.57 North, W Cat Hand 75 feet 1,017.1 LC	est, and Sou book		25 ft H	
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated s HOURLY PRODU Average push distance Unadjusted hourly pr Materials consistency	: \$247 r: \$494 ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: UCTION ce: roduction: y description	.57 North, W Cat Hand 75 feet 1,017.1 LC	est, and Sou book	 th Highwalls 1,350 ft L x 	25 ft H	
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distance Unadjusted hourly pr Materials consistency	: \$247 r: \$494 ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: UCTION ce: roduction: y description nt:5 %	.57 North, W Cat Hand 75 feet 1,017.1 LC n: Compa	est, and Sou book	 th Highwalls 1,350 ft L x 	25 ft H	
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated s HOURLY PRODU Average push distance Unadjusted hourly pr Materials consistency	: \$247 r: \$494 ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: UCTION ce: roduction: y description nt:5 %	.57 North, W Cat Hand 75 feet 1,017.1 LC	est, and Sou book	 th Highwalls 1,350 ft L x 	25 ft H	
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distance Unadjusted hourly pr Materials consistency	: $$247$ r: $$494$ ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: UCTION ce: roduction: y description nt: -5% 6,080	.57 North, W Cat Hand 75 feet 1,017.1 LC n: Compa	est, and Sou book	 th Highwalls 1,350 ft L x 		
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated v Source of estimated s HOURLY PRODI Average push distance Unadjusted hourly pr Materials consistency Average push gradier Average site altitude:	: $$247$ r: $$494$ ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: uction: y description ee: roduction: y description nt: -5% 6,080 2,650	.57 North, W Cat Hand 75 feet 1,017.1 LC n:Compa	 est, and Sou book Y/hr cted fill or e	th Highwalls 1,350 ft L x	25 ft H	
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distance Unadjusted hourly pr Materials consistency Average push gradien Average site altitude: Material weight: Weight description:	: $$247$ r: $$494$ ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: well factor: UCTION ce: roduction: y description nt: -5% 6,080 2,650 Deco	.57 North, W Cat Hand 75 feet 1,017.1 LC n: Compa 0 feet 0 lbs/LCY omposed rock	 est, and Sou book Y/hr cted fill or e		25 ft H	
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of es	$\frac{\$247}{\$494}$ ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: well factor: UCTION ce: roduction: y description nt: $\frac{-5\%}{6,080}$ 2,650 Deco	.57 North, W Cat Hand 75 feet 1,017.1 LC n: Compa 0 feet 0 lbs/LCY	est, and Sou book Y/hr cted fill or e	th Highwalls 1,350 ft L x mbankment 0.9 , 75% Earth 		
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of es	$\frac{\$247}{\$494}$ ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: well factor: UCTION ce: roduction: y description nt: $\frac{-5\%}{6,080}$ 2,650 $\frac{1}{2,650}$ ction Factor ator Skill:		est, and Sou book Y/hr cted fill or e 		25 ft H	
Total unit Cost/Hour Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of es	$\frac{\$247}{\$494}$ ANTITIES 7,813 1.250 9,766 LCY volume: swell factor: well factor: UCTION ce: roduction: y description nt: $\frac{-5\%}{6,080}$ 2,650 $\frac{1}{2,650}$ ction Factor ator Skill:	.57 North, W Cat Hand 75 feet 1,017.1 LC n: Compa 0 feet 0 lbs/LCY omposed rock 1. 0.	est, and Sou book Y/hr cted fill or e	th Highwalls 1,350 ft L x mbankment 0.9 , 75% Earth 		

		1		
Job efficiency:	0.830	(1 SHIFT/DAY)		
Spoil pile:	1.000	(DOZ-OC)		
Push gradient:	1.115	(CAT HB)		
Altitude:	1.000	(CAT HB)		
Material Weight:	0.868	(CAT HB)		
Blade type:	1.000	(PAT)		
Net correction:	0.8676			
Adjusted unit production: 88	2.44 LCY/hr			

Adjusted fleet production:	1764.88 LCY/hr

JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$0.280/LCY

Total job time:	5.53 Hours
Total job cost:	\$2,737

Page 1 of 2

WHEEL LOADER - LOAD AND CARRY WORK

DDD	Permit Action:		4/13/2021 Inspection- 2	Permit/Job#:	M1984076
PROJECT IDENTIFIC	ATION				
Task #: 003	State:	Colorado		Abbreviation:	None
Date: 4/16/2021 User: AME	County:	Elbert		Filename:	M076-003
Agency or organiza	ation name: DRM	AS			
HOURLY EQUIPMEN	Г COST				
Basic Machine: CA	AT 962H		Horse	power:	209
Attachment 1: RO	OPS Cab		Shift	Basis: 1 p	er day
			Data S	ource: (0	CRG)
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hou			NA		
Operating Cost/Hou			100		
Operator Cost/Hou			NA		
Total Unit Cost/Hou	ır: \$106.4	4			
Total Fleet Cost/Ho	ur: \$212.8	37			
MATERIAL QUANTIT Initial volume: 22,50 Loose volume:		CCY	Swell factor: _1	.000	
	,			11 1	
	stimated volume: ated swell factor:	Cat Hand	max 45,000 tons inert fi	Il on site at any tim	e
Source of estim	aleu swell lactor.	Cat Hait	JUUUK		
HOURLY PRODUCTIO)N				
		ycle Time	(load, dump, maneuver)	0.500	minutes
Cycle Time Factors				Factor (min.)	Source
Material: Bank or broken material 0.04)4	0.040	(Cat HB)
Stockpile:	Dumped by truck	Dumped by truck 0.02			(Cat HB)
Truck Ownership:		Common ownership of trucks and loaders -0.04			(Cat HB)
Operation:	Constant operation			-0.040	(Cat HB)
Dump Target:	Nominal target 0			0.000	(Cat HB)
Net Cycle Time Adjustment:				-0.020 0.480	minutes minutes
	Adjusted Basic Cycle Time:				

Haul:Rutted dirt, little maintenance, no water, 2" tire penetration 5.0Return:Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	750	3.00	5.00	8.00	0.8524	(Cat HB)
Return Route:	750	-3.00	5.00	2.00	0.5427	(Cat HB)
Total Travel Time:	1.3951	minutes				
--------------------	--------	---------				
Total Cycle Time:	1.8751	minutes				
LCY (heaped)						

Load Bucket Capacity

Rated Capacity:	4.30	LCY (heaped)
Bucket Fill Factor:	0.900	Rock - Poorly Blasted (85%-95%) 0.900
Adjusted Capacity:	3.87	LCY

Job Condition Correction Factors Site Altitude: <u>6080</u> feet

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

Unadjusted Hourly Unit Production:	123.83	LCY/Hour
Adjusted Hourly Unit Production:	102.78	LCY/Hour
Adjusted Hourly Fleet Production:	205.56	LCY/Hour

Fleet size:	2	Loader(s)	Total job time:	109.45	Hours
Unit cost:	\$1.036	/LCY	Total job cost:	\$23,300	

BULLDOZER RIPPING WORK

	Task description:	DWR mine - Rip com	pacted	areas				
		Permit A	Action:	4/13/2021 Insp				
Site:	DDD			2	Perm	nit/Job#:	M1984	076
	PROJECT IDEN	NTIFICATION						
	Task #: 004 Date: 4/16/2 User: AME	2021 County: Elt	olorado bert		Abbrev File	iation: ename:	None M076-0	04
	Agency of	r organization name: DRMS						
	HOURLY EQUI	IPMENT COST						
	Basic Ma	achine: Cat D8T - 8SU			Horsepower:		310	
	Ripper Attac				Shift Basis:	1 p	oer day	
					Data Source:	((CRG)	
	Cost Breakdown:			1	TT 1			
		Ownership Cost/Hour:		\$116.22	Utilization % NA			
		Operating Cost/Hour:		\$89.77	100			
		Ownership Cost/Hour:		\$12.00	NA			
	Ripper	Operating Cost/Hour: Operator Cost/Hour:		\$9.18 \$41.30	100 NA			
		Total Unit Cost/Hour:		\$268.46				
		Total Fleet Cost/Hour:	\$53	6.91				
			\$ 33	0.91				
	MATERIAL QU	ANTITIES	Sel	ected estimating	method: Area			
	Alternate Methods:							
ismic:	NA	Bank Vo		NA	BCY		NA	
Area:	15.80	acres Rip Deptl	h (ft):	1.50	Volume: 38,2	236		BCY or C
	C L	Source of estimated quantity:	21 acro	es disturbed - 1.2	acre pond - 4 acre	pit		
	HOURLY PROI	DUCTION						
	Seismic:							
		Seismic Velocity:		NA	feet/second	1		
	Area:							
		Average Ripping Depth:		2.56	feet/pass			
		Average Ripping Width: Average Ripping Length:		7.08 650.00	feet/pass feet/pass			
		Average Dozer Speed:		88.00	feet/minute	9		
		Average Maneuver Time:		0.25	minutes/pa			
		Production per unit area:		0.830	acres/hour			
	Job Condition Corr	ection Factors						
	Unad	justed Hourly Unit Production:		0.830	Acres/hr			
		Site Altitude:		6,080	feet			
		Altitude Adj:		1.00	(CAT HB)			
		Job Efficiency:		0.83	(1 shift/day	y)		
		Net Correction:		0.83	multiplier			
		Adjusted Hourly Unit Prod Adjusted Hourly Fleet Prod		0.69 1.38	Acres/hr Acres/hr			
	JOB TIME AND) COST						
	Fleet size:	2 Grader(s)		Total job time	e:11.4	17	He	ours
	Unit cost:	\$389.653 Per acre		Total job cost	t: \$6,1	56		

CIRCES Cost Estimating Software

SCRAPER TEAM WORK

Site: D	DD		Permit	t Action:	4/13/2021 Inspe 2		mit/Job#: <u>M198</u>	34076
<u>PR(</u>	DJECT IDENT	TIFICATION						
Т	ask #: 005		State: (Colorado		Abbrev	viation: None	
	Date: 4/16/20	021 Co	ounty: 1	Elbert		Fil	ename: M076-	-005
	User: <u>AME</u>	brganization name	: DRM	2				
		0			COSTS	-: ft h : 1		
<u>n0</u>	URLY EQUIP			F.		hift basis: <u>1 per d</u>	ay	
		_9	Scraper:	Equipme Cat 631	ent Description			
			-Dozer:	NA				
	Suppor	rt Equipment -Loa		Cat D8	Γ - 8SU			
	Road Mai	-Dum intenance –Motor	p Area: Grader:	NA CAT 16	5M			
	Road Ma		r Truck:		Fanker, 2,500 Gal			
<u>Cost</u>	Breakdown:	Scraper Wo	1	7.04	Support Equip Load Area		Maintenance Motor Grader	Equipment Water Truc
		Scraper	Do	zer	Load Area	Dump Area	Motor Grader	water frue
	ation-machine:	100		NA	100	NA	100	10
	ship cost/hour:	\$144.75		NA	\$116.22	NA	\$55.79	\$10.0
-	ting cost/hour:	\$145.83		NA	\$89.77	NA	\$60.08	\$18.7
	lization-ripper:	NA		NA	NA	NA	NA	N
	own. cost/hour:	NA		NA	\$0.00	NA	\$0.00	\$0.0
	r op. cost/hour:	NA		NA	\$0.00	NA	\$0.00	\$0.0
-	rator cost/hour: Unit Subtotals:	\$30.90		NA	\$41.30	NA	\$28.56	\$0.0
	umber of Units:	\$321.47		NA 0	\$247.28	NA 0	\$144.43	\$28.8
	roup Subtotals:	Work:	\$642		Support:	\$247.28	Maint:	\$173.27
	_		φ 0 42	2.94	Support.	\$247.28	Ivianit.	\$175.27
	l work team cost TERIAL QUA Initial volume: Loose volume:	<u>NTITIES</u> 26,619 32,342		CCY LCY	Swell fact	or: <u>1.215</u>		
		rce of estimated vo of estimated swell		21 acres Cat Hand	disturbed - 1.2 ac. lbook	re pond, 10 in dep	oth	
HO	URLY PRODU	UCTION						
					Scraper Bo	owl (volume) Basi	is:	
Ν	Iaterial weight:	1,600 lbs/LCY			Struck	Volume: 24.00	L	.CY
Mater	rial description:	Top Soil			Heaped	Volume: 34.00	I	.CY
	Rated Payload:	81,600 pounds			Average	Volume: 29.00	Ι	.CY
	yload Capacity:	51.00 LCY			Adjusted C			.CY

<u>0.80</u> Minutes

0.70 Minutes

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

Site Altitude: 6080 feet

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

Travel Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	4.00	3.00	7.00	962	0.35

Haul Time: 0.35 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	-4.00	3.00	-1.00	2920	0.15

Return Time:	0.15	minutes
Total Scraper team cycle time:	2.00	minutes
Adjusted for job conditions:	722.10	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	1,444.20	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	1,444.20	LCY/Hour
Unadjusted unit mechanics (hours) 970.00 I CV/Hours		

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

Fleet size:	1	Team(s)	Total job time:	22.39	Hours
Unit cost:	\$0.736	/LCY	Total job cost:	\$23,816	_

REVEGETATION WORK

DDD		Pe	rmit Action:	4/13/2021 Inspection- 2	Permit/Jol	o#: <u>M1984076</u>
ROJECT	<u>IDENTIFIC</u>	CATION				
Task #:	006	State:	Colorado		Abbreviation:	None
Date:	4/16/2021	County:	Elbert		Filename:	M076-006
User:	AME					

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Potassium nitrate, 13-46-0	87.00	pound	\$1.23	\$106.58
			Total Fertilizer Materials Cost/Acre	\$106.58

Application

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

TILLING

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Lovington	0.90	14.69	\$14.38
Little Bluestem - Native	1.40	8.36	\$18.99
Western Wheatgrass - Arriba	4.80	12.12	\$31.20
Prairie Sandreed - Goshen	1.30	8.15	\$13.46
Totals Seed Mix	8.40	43.31	\$78.03

Application

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

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, 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
Weed spray, hand, non-aquatic area, nox. [DMG]		\$183.16
	Total Mulch Application Cost/Acre	\$253.33

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

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	15%	Cost /Acre: Cost /Acre*:	
Initial Job Cost: Reseeding Job Cost: Total Job Cost: Job Hours:	\$920.79 \$28,960			

BULLDOZER WORK

Task description:	DEB	mine - Back	fill eastern	pit highwalls		
DDD		Pern	nit Action:	4/13/2021 Inspection- 2	Permit/Job#:	M1984076
PROJECT IDENT	<u>'IFICATI</u>	<u>ON</u>				
Task #: 007 Date: 4/16/20 User: AME	21	State: County:	Colorado Elbert		Abbreviation: Filename:	None M076-007
Agency or o	rganization	name: DR	MS			
HOURLY EQUIP	MENT CO	OST				
Basic Machine:	Cat D8T - 8					
Horsepower: Blade Type:	310 Semi-Unive	ersal				
	NA					
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown:	·					
Cost Droakdown.				Utilization %		
Ownership Cost/Hor	ır:		\$116.22	NA		
Operating Cost/Hor	ır:		\$89.77	100		
Ripper own. Cost/Hor			\$0.00	NA		
Ripper op. Cost/Hor			\$0.00	0		
Operator Cost/Hor	ır:		\$41.30	NA		
Swell factor: 1	NTITIES ,208 .125					
Loose volume: 5	,859 LCY					
Source of estimated v Source of estimated s		East high Cat Handl	walls 225 ft book	L x 25 ft H		
HOURLY PRODU	UCTION					
Average push distance Unadjusted hourly pro		75 feet 1,017.1 LCY	ζ/hr			
Materials consistency	description	1: Consoli	dated stockp	pile 1.0		
Average push gradien Average site altitude:	t: <u>5 %</u> <u>6,020</u>	feet				
Material weight:	2,650	lbs/LCY			_	
Weight description:	Deco	mposed rock	- 25% Rock	, 75% Earth		
Job Condition Correc	tion Factor			Source		
	tor Skill:		000	(EXCL.)		
Material con			000	(CAT HB)		
-						
	method:		000	(GEN.) (AVG.)		

Task # 007

Job efficience	ey: 0.830	(1 SHIFT/DAY)
Spoil pi	le: 0.900	(SSD-FC)
Push gradier	nt: 0.903	(CAT HB)
Altitud	le: 1.000	(CAT HB)
Material Weigl	ht: 0.868	(CAT HB)
Blade typ	be: 1.000	(PAT)
Net correction	on: 0.5855	
Adjusted unit production:	595.51 LCY/hr	
Adjusted fleet production:	1191.02 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.415/LCY

Total job time:	4.92 Hours
Total job cost:	\$2,433

BULLDOZER WORK

		s mine - Cut/	fill pit high	walls		
: DDD		Per	nit Action:	4/13/2021 Inspection-2	Permit/Job#:	M1984076
PROJECT IDEN	TIFICATI	ON				
Task #: 008 Date: 4/16/ User: AME		State: County:	Colorado Elbert		Abbreviation: Filename:	None M076-008
	organization	nama: DE	MS			
Agency of	organization	i name. Dr				
HOURLY EQU	PMENT C	<u>OST</u>				
Basic Machine:	Cat D8T -	8SU				
Horsepower:	310	1				
Blade Type:	Semi-Univ	versal				
Attachment: Shift Basis:	NA 1 page days					
	1 per day (CRG)					
Data Source:	(CKG)					
Cost Breakdown:				Utilization %		
Ownership Cost/H	lour:		\$116.22	NA		
Operating Cost/H			\$89.77	100		
Ripper own. Cost/H			\$0.00	NA		
Ripper op. Cost/H	lour:		\$0.00	0		
Operator Cost/H	lour:		\$41.30	NA		
Total Fleet Cost/Ho <u>MATERIAL QU</u> Initial Volume:	<u>.</u>					
Swell factor: Loose volume:	1.250 9,549 LCY					
	1.250 9,549 LCY volume:			th Highwalls 1,320 ft L x 2	25 ft H	
Loose volume: Source of estimated	1.250 9,549 LCY volume: swell factor:			th Highwalls 1,320 ft L x 2 	25 ft H	
Loose volume: Source of estimated Source of estimated	1.250 9,549 LCY volume: swell factor: DUCTION nce:		book	th Highwalls 1,320 ft L x 2	25 ft H	
Loose volume: Source of estimated Source of estimated HOURLY PROI Average push dista	1.250 9,549 LCY volume: swell factor: DUCTION nce: production:	Cat Hand 75 feet 1,017.1 LC	book Y/hr	th Highwalls 1,320 ft L x 2 mbankment 0.9	25 ft H	
Loose volume: Source of estimated Source of estimated HOURLY PROI Average push dista Unadjusted hourly	1.250 9,549 LCY volume: swell factor: DUCTION nce: production: cy description ent:5 %	Cat Hand 75 feet 1,017.1 LC	book Y/hr		25 ft H	
Loose volume: Source of estimated Source of estimated HOURLY PROD Average push dista Unadjusted hourly Materials consisten Average push gradi	1.250 9,549 LCY volume: swell factor: DUCTION nce: production: cy description ent: -5 % e: 6,020	Cat Hand 75 feet 1,017.1 LC n: Compa	book Y/hr		25 ft H	
Loose volume: Source of estimated Source of estimated HOURLY PROD Average push dista Unadjusted hourly Materials consisten Average push gradi Average site altitud	1.250 9,549 LCY volume: swell factor: $\frac{\text{OUCTION}}{\text{oce:}}$ oroduction: cy description ent: $\frac{-5 \%}{6,020}$ $2,650$	Cat Hand 75 feet 1,017.1 LC n: Compa	book Y/hr cted fill or e	mbankment 0.9	25 ft H	
Loose volume: Source of estimated Source of estimated HOURLY PROI Average push dista Unadjusted hourly Materials consisten Average push gradi Average site altitud Material weight:	1.250 9,549 LCY volume: swell factor: DUCTION nce: production: cy description ent: -5 % 6,020 2,650 Decc	Cat Hand 75 feet 1,017.1 LC a: Compa) feet) lbs/LCY	book Y/hr cted fill or e	mbankment 0.9	25 ft H	
Loose volume: Source of estimated Source of estimated HOURLY PROI Average push dista Unadjusted hourly Materials consisten Average push gradi Average site altitud Material weight: Weight description Job Condition Corr Ope	1.250 9,549 LCY volume: swell factor: DUCTION nce: production: cy description et: -5 % 6,020 2,650 Decce ection Factor rator Skill:	Cat Hand 75 feet 1,017.1 LC n: Compa) feet) lbs/LCY omposed rock	book Y/hr cted fill or e - 25% Rock 000		25 ft H	
Loose volume: Source of estimated Source of estimated HOURLY PROI Average push dista Unadjusted hourly Materials consisten Average push gradi Average site altitud Material weight: Weight description Job Condition Corr Ope Material c	1.250 9,549 LCY volume: swell factor: DUCTION nce: production: cy description ent: -5 %	Cat Hand 75 feet 1,017.1 LC n: Compa) feet) lbs/LCY omposed rock - 1. 0.	book Y/hr cted fill or e - 25% Rock 000 900		25 ft H	
Loose volume: Source of estimated Source of estimated HOURLY PROI Average push dista Unadjusted hourly Materials consisten Average push gradi Average site altitud Material weight: Weight description Job Condition Corr Ope Material c	1.250 9,549 LCY volume: swell factor: DUCTION nce: production: cy description et: -5 % 6,020 2,650 Decce ection Factor rator Skill:	Cat Hand 75 feet 1,017.1 LC n: Compa) feet) lbs/LCY omposed rock	book Y/hr cted fill or e - 25% Rock 000		25 ft H	

Task # 008

Job efficienc	y: 0.830	(1 SHIFT/DAY)
Spoil pil	e: 1.000	(DOZ-OC)
Push gradier	nt: 1.115	(CAT HB)
Altitud	e: 1.000	(CAT HB)
Material Weigh	nt: 0.868	(CAT HB)
Blade typ	e: 1.000	(PAT)
Net correctio	n: 0.8676	
Adjusted unit production:	882.44 LCY/hr	
Adjusted fleet production:	1764.88 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.280/LCY

Total job time:	5.41 Hours
Total job cost:	\$2,676

Page 1 of 2

WHEEL LOADER - LOAD AND CARRY WORK

				2	Permit/Job#:	M1984076
PROJE	CT IDENTIFIC	CATION				
Task	#: 009	State	: Colorado		Abbreviation:	None
Dat Use		County	: Elbert		Filename:	M076-009
	Agency or organiz	zation name: <u>l</u>	ORMS			
HOUR	LY EQUIPMEN	NT COST				
В	asic Machine: C	CAT 962H		Horsep	ower:	209
	Attachment 1: F	ROPS Cab		Shift E	Basis: 1 p	er day
				Data So	ource: (C	CRG)
Cost Bre	akdown:					
				Utilization %		
	Ownership Cost/Ho		8.67	NA		
	Operating Cost/Ho		7.06	100		
	Operator Cost/Ho		0.71	NA		
,	Total Unit Cost/Ho	our: \$10	06.44			
1	Total Fleet Cost/H	four: \$2	12.87			
MATE	RIAL QUANTI'	TIES				
		500	CCY	Swell factor: <u>1.</u>	000	
Loc	ose volume:	22,500	LCY			
	Source of	estimated volum	e: Per TR-2	2 max 45,000 tons inert fill	on site at any tim	e
	Source of estin	mated swell facto	or: Cat Hand	dbook	•	
HOUR	LY PRODUCTI	ION				
Loader (Cycle Time:	Unadjusted Bas	ic Cycle Time	(load, dump, maneuver):	0.500	minutes
C	Cycle Time Factors	3			Factor (min.)	Source
	Material:		en material 0.	04	0.040	(Cat HB)
	Stockpile:				0.020	(Cat HB)
	Truck Ownership:			cks and loaders -0.04	-0.040	(Cat HB)
	Operation:				-0.040	(Cat HB)
	Dump Target:	: Nominal targ		cle Time Adjustment:	0.000	(Cat HB)
				alo l'imo Admetmont	-0.020	minutes

Haul:Rutted dirt, little maintenance, no water, 2" tire penetration 5.0Return:Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	800	3.00	5.00	8.00	0.9092	(Cat HB)
Return Route:	800	-3.00	5.00	2.00	0.5789	(Cat HB)

			Total Travel Tin Total Cycle Tin		1.4881 1.9681	minutes
Load Bucket Capacity						
Rated Capaci Bucket Fill Fact Adjusted Capaci	or: 0.900	LCY (hea Rock - Po LCY	aped) porly Blasted (85%	6-95%) (0.900	
Job Condition Correction Site Altitude: <u>6020</u> feet	on Factors					
		Source				
Altitude Adj:	1.00	(CAT HE	8)			
Job Efficiency:	0.83	(1 shift/da	y)			
Net Correction:	0.83	multiplier				
U	nadjusted Hourly Un	it Production:	117.98	LCY/	Hour	
	Adjusted Hourly Un	it Production:	97.93	LCY/	Hour	
	Adjusted Hourly Fle	et Production:	195.85	LCY/	Hour	
JOB TIME AND CO	<u>DST</u>					
Fleet size:	2 Loader(s)	Total job time:		114.88	Hours

Fleet size:	2	Loader(s)	Total job time:	114.88	Hours
Unit cost:	\$1.087	/LCY	Total job cost:	\$24,455	

WHEEL LOADER - LOAD AND CARRY WORK

PROJECT IDENTIFICATION Task #: 010 State: Colorado Date: 416/2021 County: Elbert Date: 416/2021 County: Elbert Agency or organization name: DRMS Horsepower: 209 Attachment 1: ROPS Cab Basic Machine: CAT 962H Horsepower: 1 per day Data Source: (CRG) Potata Source: (CRG) None \$37.06 Ownership Cost/Hour: \$28.67 MA NA Operator Cost/Hour: \$37.06 Operator Cost/Hour: \$310.64 Total Unit Cost/Hour: \$212.87 MATERIAL OUANTITIES Initial volume: 22,990 Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook MATERIAL OU Coder Cycle Time: Unajusted Basic Cycle Time (load, dump, maneuver): 0.500 minute Cycle Time Factors Mixed material 0.02 0.020 (Cat HE Stockpile: Dumped by truck 0.02 0.020 (Cat HE <td< th=""><th>Task description:</th><th>DEB mine - Backfill eastern</th><th>1 pond</th><th></th><th></th></td<>	Task description:	DEB mine - Backfill eastern	1 pond		
Task #: 010 State: Colorado Abbreviation: None Date: <u>AME</u> County: Elbert Filename: M076-016 User: <u>AME</u> Agency or organization name: DRMS IOURLY EQUIPMENT COST Basic Machine: CAT 962H Horsepower: 209 Attachment 1: ROPS Cab Shift Basis: 1 per day Data Source: (CRG) Cord) Cord) Ownership Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operating Cost/Hour: \$28.67 NA Operating Cost/Hour: \$106.44 Total Unit Cost/Hour: \$212.87 MATERIAL QUANTITIES Initial volume: 22,990 CCY Swell factor: 1.165 Loose volume: 26,783 LCY Source of estimated swell factor: Cat Handbook Outlet PRODUCTION adder Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minute Cycle Time Factors Mixed material 0.02 0.020 (Cat HE Stotckpile: Dumpdus	: DDD	Permit Action:	•	Permit/Job#:	M1984076
Date: 4/16/2021 County: Elbert Filename: M076-014 User: AME Filename: DRMS Agency or organization name: DRMS HOURLY EOUIPMENT COST Basic Machine: CAT 962H Horsepower: 209 Attachment 1: ROPS Cab Shift Basis: 1 per day Data Source: (CRG) CCGG) Cost Breakdown: \$28.67 NA Operating Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operating Cost/Hour: \$106.44 Total Unit Cost/Hour: \$212.87 MATERIAL QUANTITIES Initial volume: 22,990 CCY Swell factor: 1.165 Loose volume: 26,783 LCY Source of estimated volume: 0.95 are pond x 15 ft deep Source of estimated swell factor: 0.500 minute Cycle Time Factors Cat Handbook 0.020 (Cat HE Material: Mixed material 0.02 0.020 (Cat HE Source of estimated savel factor: 0.200 CCY	PROJECT IDENTIFICA	ATION			
Date: 4/16/2021 County: Elbert Filename: M076-014 User: AME Filename: DRMS Agency or organization name: DRMS HOURLY EOUIPMENT COST Basic Machine: CAT 962H Horsepower: 209 Attachment 1: ROPS Cab Shift Basis: 1 per day Data Source: (CRG) CCGG) Cost Breakdown: \$28.67 NA Operating Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operating Cost/Hour: \$106.44 Total Unit Cost/Hour: \$212.87 MATERIAL QUANTITIES Initial volume: 22,990 CCY Swell factor: 1.165 Loose volume: 26,783 LCY Source of estimated volume: 0.95 are pond x 15 ft deep Source of estimated swell factor: 0.500 minute Cycle Time Factors Cat Handbook 0.020 (Cat HE Material: Mixed material 0.02 0.020 (Cat HE Source of estimated savel factor: 0.200 CCY	Task #: 010	State: Colorado		Abbreviation:	None
Agency or organization name: DRMS DURLY EQUIPMENT COST Basic Machine: CAT 962H Attachment 1: ROPS Cab Shift Basis: 1 per day Data Source: (CRG) Source of Breakdown: Utilization % Ownership Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operating Cost/Hour: \$106.44 Total Unit Cost/Hour: \$212.87 DATERIAL OUANTITIES ICY Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated volume: 0.95 acre pond x 15 ft deep Source 500C Source of estimated swell factor: Cat Handbook Initiate 0.500 minute Cycle Time: Unaljusted Basic Cycle Time (load, dump, maneuver): 0.500 minute Cycle Time: Unaljusted Basic Cycle Time (load, dump, maneuver): 0.500 minute Cycle Time: Unapped by truck 0.02 0.020 (Cat HE Operation: Constant operation -0.04 -0.040 (Cat HE Operation: Constant operation -0.04 -0.040 (Cat HE Operato					M076-010
IOURLY EQUIPMENT COST Basic Machine: CAT 962H Horsepower: 209 Attachment 1: ROPS Cab Shift Basis: I per day Data Source: (CRG) Cost Breakdown: Ownership Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operator Cost/Hour: \$37.06 100 Operator Cost/Hour: \$106.44 Total Unit Cost/Hour: \$212.87 MATERIAL QUANTITIES Initial volume: 22,990 CCY Swell factor: 1.165 Loose volume: 26,783 LCY Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook Cat Handbook minute Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minute Cycle Time Factors Material 0.02 0.020 (Cat HE Stockpile: Dumped by truck 0.02 0.020 (Cat HE Operation: Constant operation -0.04 -0.040 (Cat HE Operation: Constant operation -0.04 -	User: AME				
Basic Machine: CAT 962H Horsepower: 209 Attachment 1: ROPS Cab Data Source: 1 per day Ost Breakdown: Utilization % (CRG) Cost Breakdown: Utilization % (CRG) Ownership Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operator Cost/Hour: \$31.06 100 Operator Cost/Hour: \$106.44 Total Unit Cost/Hour: \$212.87 MATERIAL OUANTITIES LCY Swell factor: 1.165 Loose volume: 26,783 LCY Swell factor: 0.95 acre pond x 15 ft deep Source of estimated volume: 0.95 acre pond x 15 ft deep 500 minute Source of estimated swell factor: Cat Handbook Cat Handbook Output PRODUCTION .oader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minute Cycle Time Factors Factor (min.) Source Source Cycle Time Factors: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.020 (Cat HE Stockpile: Dumped by truck 0.02 0.020	Agency or organiza	tion name: DRMS			
Attachment 1: ROPS Cab 1 per day Data Source: (CRG) Cost Breakdown: Utilization % Ownership Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operator Cost/Hour: \$37.06 100 Operator Cost/Hour: \$40.71 NA Total Unit Cost/Hour: \$106.44	HOURLY EQUIPMEN?	<u>r cost</u>			
Attachment 1: ROPS Cab 1 per day Data Source: (CRG) Cost Breakdown: Utilization % Ownership Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operator Cost/Hour: \$37.06 100 Operator Cost/Hour: \$40.71 NA Total Unit Cost/Hour: \$106.44	Basic Machine: C/	AT 962H	Horsen	wer.	209
Data Source: (CRG) Cost Breakdown: Utilization % Ownership Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operator Cost/Hour: \$37.06 100 Operator Cost/Hour: \$106.44 NA Total Unit Cost/Hour: \$106.44 NA Total Fleet Cost/Hour: \$212.87 MATERIAL QUANTITIES Initial volume: 22,990 Loose volume: 26,783 LCY Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION 200 coader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minutu Cycle Time Factors Factor (min.) Source of (Cat HE Stockpile: Dumped by truck 0.02 0.020 (Cat HE Truck Ownership: Common ownership of trucks and loaders -0.04 -0.040 (Cat HE Operation: Constant operation -0.04 -0.040 (Cat HE Dump Target: Nominal target 0.00 0.000 (Cat HE Net Cycle Time Adjusted Bas					
Cost Breakdown: Utilization % Ownership Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operator Cost/Hour: \$37.06 100 Operator Cost/Hour: \$40.71 NA Total Unit Cost/Hour: \$106.44				1	
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Ownership Cost/Hour: \$28.67 NA Operating Cost/Hour: \$37.06 100 Operator Cost/Hour: \$40.71 NA Total Unit Cost/Hour: \$106.44	Cost Breakdown:		Litilization 0/		
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Operator Cost/Hour: \$40.71 NA Total Unit Cost/Hour: \$106.44 Total Fleet Cost/Hour: \$212.87 MATERIAL QUANTITIES Initial volume: 22,990 CCY Swell factor: 1.165 Loose volume: 26,783 Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minute .oader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.020 (Cat HE Material: Mixed material 0.02 0.020 (Cat HE Stockpile: Dumped by truck 0.02 0.020 (Cat HE Operation: Constant operation -0.04 -0.040 (Cat HE Dump Target: Nominal target 0.00 0.0000 (Cat HE Net Cycle Time: 0.460 minute: Adjusted Basic Cycle Time: 0.460 minute:		-			
Total Unit Cost/Hour: \$106.44 Total Fleet Cost/Hour: \$212.87 MATERIAL QUANTITIES Initial volume: 22,990 CCY Swell factor: 1.165 Loose volume: 26,783 LCY Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION .oader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minute Cycle Time Factors Factor (min.) Source Source Material: Mixed material 0.02 0.020 (Cat HE Stockpile: Dumped by truck 0.02 0.020 (Cat HE Operation: Constant operation -0.04 -0.040 (Cat HE Dump Target: Nominal target 0.00 0.000 (Cat HE Net Cycle Time Adjustment: -0.040 minute: Adjusted Basic Cycle Time -0.040 minute:					
Total Fleet Cost/Hour: \$212.87 MATERIAL QUANTITIES Initial volume: 22,990 CCY Swell factor: 1.165 Loose volume: 26,783 LCY Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION .oader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minute Cycle Time Factors Factor (min.) Source Source Material: Mixed material 0.02 0.020 (Cat HE Stockpile: Dumped by truck 0.02 0.020 (Cat HE Operation: Constant operation -0.04 -0.040 (Cat HE Dump Target: Nominal target 0.00 0.000 (Cat HE Net Cycle Time Adjustment: -0.040 minute: Adjusted Basic Cycle Time -0.040 minute:	-				
MATERIAL QUANTITIES Initial volume: 22,990 CCY Swell factor: 1.165 Loose volume: 26,783 LCY Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook MOURLY PRODUCTION Souder Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minute Cycle Time Factors Factor (min.) Source Source Material: Mixed material 0.02 0.020 (Cat HE Stockpile: Dumped by truck 0.02 0.020 (Cat HE Operation: Constant operation -0.04 -0.040 (Cat HE Dump Target: Nominal target 0.00 0.000 (Cat HE Net Cycle Time Adjustment: -0.040 minute: Adjusted Basic Cycle Time 0.460 minute:					
Initial volume: 22,990 CCY Swell factor: 1.165 Loose volume: 26,783 LCY Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook Mount of the system of the syste	Total Fleet Cost/Hor	ur: \$212.87			
Initial volume: 22,990 CCY Swell factor: 1.165 Loose volume: 26,783 LCY Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook Mount of the system of the syste	MATERIAL OUANTIT	IES			
Loose volume: 26,783 LCY Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION coader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minute coader Cycle Time Factors Factor (min.) Source Material: Mixed material 0.02 0.020 (Cat HE Stockpile: Dumped by truck 0.02 0.020 (Cat HE Truck Ownership: Common ownership of trucks and loaders -0.04 -0.040 (Cat HE Dump Target: Nominal target 0.00 0.000 (Cat HE Net Cycle Time Adjustment: -0.040 minute: Adjusted Basic Cycle Time: 0.460 minute:			Swall factor 1	165	
Source of estimated volume: 0.95 acre pond x 15 ft deep Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION			Swell factor. 1.	103	
Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION coader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minute Cycle Time Factors Factor (min.) Source Material: Mixed material 0.02 0.020 (Cat HE Stockpile: Dumped by truck 0.02 0.020 (Cat HE Truck Ownership: Common ownership of trucks and loaders -0.04 -0.040 (Cat HE Operation: Constant operation -0.04 -0.040 (Cat HE Dump Target: Nominal target 0.00 0.0000 (Cat HE Adjusted Basic Cycle Time Adjustment: -0.040 minutes					
HOURLY PRODUCTION aoader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minute <u>Cycle Time Factors</u> Factor (min.) Source <u>Material</u> : Mixed material 0.02 0.020 (Cat HE Stockpile: Dumped by truck 0.02 0.020 (Cat HE Truck Ownership: Common ownership of trucks and loaders -0.04 -0.040 (Cat HE Operation: Constant operation -0.04 -0.040 (Cat HE Dump Target: Nominal target 0.00 0.000 (Cat HE Adjusted Basic Cycle Time 0.040 minutes					
Loader Cycle Time:Unadjusted Basic Cycle Time (load, dump, maneuver):0.500minuteCycle Time FactorsFactor (min.)SourceMaterial:Mixed material 0.020.020(Cat HEStockpile:Dumped by truck 0.020.020(Cat HETruck Ownership:Common ownership of trucks and loaders -0.04-0.040(Cat HEOperation:Constant operation -0.04-0.040(Cat HEDump Target:Nominal target 0.000.000(Cat HEAdjusted Basic Cycle Time:0.460minutes	Source of estim	ated swell factor: Cat Han	dbook		
Loader Cycle Time:Unadjusted Basic Cycle Time (load, dump, maneuver):0.500minuteCycle Time FactorsFactor (min.)SourceMaterial:Mixed material 0.020.020(Cat HEStockpile:Dumped by truck 0.020.020(Cat HETruck Ownership:Common ownership of trucks and loaders -0.04-0.040(Cat HEOperation:Constant operation -0.04-0.040(Cat HEDump Target:Nominal target 0.000.000(Cat HEAdjusted Basic Cycle Time:0.460minutes					
Cycle Time FactorsFactor (min.)SourceMaterial:Mixed material 0.020.020(Cat HEStockpile:Dumped by truck 0.020.020(Cat HETruck Ownership:Common ownership of trucks and loaders -0.04-0.040(Cat HEOperation:Constant operation -0.04-0.040(Cat HEDump Target:Nominal target 0.000.000(Cat HEAdjusted Basic Cycle Time:0.460minutest	HOURLY PRODUCTIC	<u>DN</u>			
Cycle Time FactorsFactor (min.)SourceMaterial:Mixed material 0.020.020(Cat HEStockpile:Dumped by truck 0.020.020(Cat HETruck Ownership:Common ownership of trucks and loaders -0.04-0.040(Cat HEOperation:Constant operation -0.04-0.040(Cat HEDump Target:Nominal target 0.000.000(Cat HEAdjusted Basic Cycle Time:-0.040minutes	Loader Cycle Time:	Unadiusted Basic Cycle Time	(load, dump, maneuver):	0.500	minutes
Material:Mixed material 0.020.020(Cat HEStockpile:Dumped by truck 0.020.020(Cat HETruck Ownership:Common ownership of trucks and loaders -0.04-0.040(Cat HEOperation:Constant operation -0.04-0.040(Cat HEDump Target:Nominal target 0.000.000(Cat HENet Cycle Time Adjustment: Adjusted Basic Cycle Time:-0.0400.460minutest	-		· · · · · · · · · · · · · · · · · · ·		
Stockpile:Dumped by truck 0.020.020(Cat HETruck Ownership:Common ownership of trucks and loaders -0.04-0.040(Cat HEOperation:Constant operation -0.04-0.040(Cat HEDump Target:Nominal target 0.000.000(Cat HENet Cycle Time Adjustment: Adjusted Basic Cycle Time:-0.0400.460minutest		Mixed material 0.02		· · · ·	
Truck Ownership:Common ownership of trucks and loaders -0.04-0.040(Cat HEOperation:Constant operation -0.04-0.040(Cat HEDump Target:Nominal target 0.000.000(Cat HENet Cycle Time Adjustment: Adjusted Basic Cycle Time:-0.0400.460minutest					,
Operation:Constant operation -0.04-0.040(Cat HEDump Target:Nominal target 0.000.000(Cat HENet Cycle Time Adjustment:-0.040minutesAdjusted Basic Cycle Time:0.460minutes	*	1 1	cks and loaders -0.04		(Cat HB)
Dump Target:Nominal target 0.000.000(Cat HENet Cycle Time Adjustment:-0.040minutesAdjusted Basic Cycle Time:0.460minutes	1				(Cat HB)
Net Cycle Time Adjustment:-0.040minutesAdjusted Basic Cycle Time:0.460minutes	Å				(Cat HB)
		Net Cy	cle Time Adjustment:	-0.040	minutes
		Adjus	ted Basic Cycle Time:	0.460	minutes
Colling Resistance – Road Conditions	Rolling Resistance Road C	onditions			
Rolling Resistance – Road Conditions Haul: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0	-				

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

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	350	3.00	5.00	8.00	0.3978	(Cat HB)
Return Route:	350	-3.00	5.00	2.00	0.2533	(Cat HB)

			otal Travel Ti 'otal Cycle Ti		minutes minutes
Load Bucket Capacity					
Rated Capacit Bucket Fill Facto Adjusted Capacit	r: 1.100	LCY (heaped) Other - rock/d		(100-120%) 1.100	
Job Condition Correction Site Altitude: <u>6020</u> feet	n Factors				
Altitude Adj: Job Efficiency: Net Correction: Un	1.00 0.83 0.83 adjusted Hourly Un	Source (CAT HB) (1 shift/day) multiplier it Production:	255.44	LCY/Hour	
	Adjusted Hourly Un adjusted Hourly Flee		212.01 424.02	LCY/Hour LCY/Hour	
JOB TIME AND CO	<u>ST</u>				
Fleet size:	2 Loader(s	s) Tot	al job time:	63.16	Hours

Unit cost:	\$0.502	/LCY	Total job cost:	\$13,446
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Page 1 of 2

WHEEL LOADER - LOAD AND CARRY WORK

DDD		Peri	mit Action:		tion-	D	M1004074
DDD				2		Permit/Job#:	M1984076
PROJECT	Γ IDENTIFICA	ATION					
Task #:	011	State:	Colorado		A	Abbreviation:	None
Date:	4/16/2021	County:	Elbert			Filename:	M076-011
User:	AME						
Ag	gency or organiza	tion name: DR	RMS				
HOURLY	EQUIPMENT	T COST					
		AT 962H		I	Horsepowe	èr.	209
		DPS Cab		-	Shift Basi		er day
			Data Sourc		CRG)		
Cost Brast-	lown					`	
Cost Breakd	IOWII:			Utilization %			
Owr	nership Cost/Hou	r: \$28.6	57	NA			
	erating Cost/Hou			100	-		
	perator Cost/Hou			NA	-		
-	al Unit Cost/Hou		44		-		
-	al Fleet Cost/Hou	ır: \$212	87				
Tot							
Tot							
MATERIA	AL QUANTIT	IES		0 11 0 4	1165		
MATERIA Initial	AL QUANTIT	<u>IES</u>	_ CCY	Swell factor	r: <u>1.165</u>	í	
MATERIA Initial	AL QUANTIT volume:4,517 volume:	IES 7 5,262		Swell factor	r: <u>1.165</u>	i	
MATERIA Initial	AL QUANTIT volume: 4,517 volume: Source of es	IES 7 5,262 stimated volume:	_ CCY _ LCY _ 0.35 acre	e pond x 8 ft deep	r: <u>1.165</u>	<u>.</u>	
MATERIA Initial	AL QUANTIT volume: 4,517 volume: Source of es	IES 7 5,262	CCY LCY	e pond x 8 ft deep	r: <u>1.165</u>	; 	
MATERIA Initial Loose	AL QUANTIT volume: volume: Source of estimation	UES 5,262 stimated volume: ated swell factor:	_ CCY _ LCY _ 0.35 acre	e pond x 8 ft deep	r: <u>1.165</u>	<u>.</u>	
MATERIA Initial Loose	AL QUANTIT volume: 4,517 volume: Source of es	UES 5,262 stimated volume: ated swell factor:	_ CCY _ LCY _ 0.35 acre	e pond x 8 ft deep	r: <u>1.165</u>	<u>.</u>	
MATERIA Initial Loose	AL QUANTIT volume:	UES 5,262 stimated volume: ated swell factor: DN	CCY LCY 0.35 acre Cat Hand	e pond x 8 ft deep		0.500	minutes
MATERIA Initial Loose HOURLY Loader Cycl	AL QUANTIT volume:	UES 5,262 stimated volume: ated swell factor: DN	CCY LCY 0.35 acre Cat Hand	e pond x 8 ft deep dbook	uver):		minutes Source
MATERIA Initial Loose HOURLY Loader Cycl	AL QUANTIT volume: volume: Source of estima Source of estima PRODUCTIO le Time:	UES 7 5,262 stimated volume: ated swell factor: DN	CCY LCY 0.35 acre Cat Hand	e pond x 8 ft deep dbook	uver):	0.500	
MATERIA Initial Loose HOURLY Loader Cycl	AL QUANTIT volume:	UES 5,262 stimated volume: ated swell factor: DN Jnadjusted Basic Mixed material Dumped by tru	CCY LCY 0.35 acre Cat Hand Cycle Time 0.02 ck 0.02	e pond x 8 ft deep dbook (load, dump, mane	uver): Fa	0.500 actor (min.)	Source (Cat HB) (Cat HB)
MATERIA Initial Loose HOURLY Loader Cycl	AL QUANTITI volume:	IES 5,262 stimated volume: ated swell factor: DN Jnadjusted Basic Mixed material Dumped by tru Common owne	CCY LCY 0.35 acre Cat Hand Cycle Time 0.02 ck 0.02 rship of truc	e pond x 8 ft deep dbook	uver): Fa	0.500 actor (min.) 0.020 0.020 -0.040	Source (Cat HB) (Cat HB) (Cat HB)
MATERIA Initial Loose HOURLY Loader Cycl	AL QUANTITI volume:	IES 5,262 stimated volume: ated swell factor: DN Jnadjusted Basic Mixed material Dumped by tru Common owne Constant operation	Cycle Time	e pond x 8 ft deep dbook (load, dump, mane	uver): Fa	0.500 actor (min.) 0.020 0.020 -0.040 -0.040	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)
MATERIA Initial Loose HOURLY Loader Cycl	AL QUANTITI volume:	IES 5,262 stimated volume: ated swell factor: DN Jnadjusted Basic Mixed material Dumped by tru Common owne	Cycle Time 0.02 Cot 0.02 Ck 0.02 ck 0.02 ck 0.02 ck 0.02	e pond x 8 ft deep dbook (load, dump, mane cks and loaders -0.0	uver): Fa	0.500 actor (min.) 0.020 0.020 -0.040 -0.040 0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
MATERIA Initial Loose HOURLY Loader Cycl	AL QUANTITI volume:	IES 5,262 stimated volume: ated swell factor: DN Jnadjusted Basic Mixed material Dumped by tru Common owne Constant operation	Cycle Time 0.02 ck 0.02 rship of truc tion -0.04 0.00 Net Cy	e pond x 8 ft deep dbook (load, dump, mane	uver): Fa	0.500 actor (min.) 0.020 0.020 -0.040 -0.040	Source (Cat HB)

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	300	3.00	5.00	8.00	0.3409	(Cat HB)
Return Route:	300	-3.00	5.00	2.00	0.2171	(Cat HB)

			Total Travel T Total Cycle T		minutes minutes
Load Bucket Capacity					
Rated Capac Bucket Fill Fac	•	LCY (hea Other - ro	ped) ck/dirt mixtures	(100-120%) 1.100	
Adjusted Capac	ity: 4.73	LCY		· · · · · · · · · · · · · · · · · · ·	
Job Condition Correcti Site Altitude: <u>6020</u> fee					
		Source			
Altitude Adj:	1.00	(CAT HB	3)		
Job Efficiency:	0.83	(1 shift/da	y)		
Net Correction:	0.83	multiplier			
U	Inadjusted Hourly Unit	t Production:	278.77	LCY/Hour	
	Adjusted Hourly Unit	t Production:	231.38	LCY/Hour	
	Adjusted Hourly Flee	t Production:	462.76	LCY/Hour	
JOB TIME AND C		,		11.25	
Fleet size:	2 Loader(s))	Total job time:	11.37	Hours

Total job cost: **\$2,421**

Unit cost: _____\$0.460 /LCY

BULLDOZER RIPPING WORK

	Task description:	DEB mine - Rip comp	pacted a	reas			
G .		Permit A	ction:	4/13/2021 Inspe		r 1 //	1 1004076
Site:	DDD		-	2	Permit/J	lob#:	M1984076
	PROJECT IDENTI	FICATION					
	Task #: 012		lorado		Abbreviati		lone
	Date: <u>4/16/202</u> User: AME	1 County: Elt	pert		Filenai	ne: <u>N</u>	1076-012
		ganization name: DRMS					
	HOURLY EQUIPM						
	Basic Machi				Homenowan	310)
	Ripper Attachme				Horsepower: Shift Basis:	1 per	
	Tupper Tumerini				Data Source:	(CR	
	Cost Breakdown:					·	
	<u>Cost Dicurdo wii.</u>			1	Utilization %		
		nership Cost/Hour:		\$116.22	NA		
		erating Cost/Hour:		\$89.77	100		
		nership Cost/Hour: erating Cost/Hour:		\$12.00 \$9.18	<u>NA</u> 100		
		perator Cost/Hour:		\$9.18	 NA		
		tal Unit Cost/Hour:		\$268.46			
			.	,			
	Tot	al Fleet Cost/Hour:	\$536	.91			
	MATERIAL QUAN	TITIES	Sele	cted estimating n	nethod: Area		
	Alternate Methods:						
Seismic:	NA	Bank Vol	lume:	NA	BCY	NA	A
Area:	18.00	acres Rip Depth	n (ft):	1.50	Volume: 43,560		BCY or CC
	Sou	ce of estimated quantity:	22.5 ac	disturbed - 3.2 a	c pit - 0.95 ac pond -	0.35 ac	pond
					F F F F F F F F F F		
	HOURLY PRODU	<u>CTION</u>					
	Seismic:	~					
		Seismic Velocity:		NA	feet/second		
	Area:						
		Average Ripping Depth:		2.56	feet/pass		
		Average Ripping Width:		7.08	feet/pass		
		Average Ripping Length: Average Dozer Speed:		800.00 88.00	feet/pass feet/minute		
		Average Maneuver Time:		0.25	minutes/pass		
		Production per unit area:		0.835	acres/hour		
	Job Condition Correction	on Factors					
		ed Hourly Unit Production:		0.835	Acres/hr		
	5	Site Altitude:		6,020	feet		
		Altitude Adj:		1.00	(CAT HB)		
		Job Efficiency:		0.83	(1 shift/day)		
		Net Correction:		0.83	multiplier		
		Adjusted Hourly Unit Prod Adjusted Hourly Fleet Prod		0.69 1.39	Acres/hr Acres/hr		
				1.07	10100/11		
	JOB TIME AND CO			Total ich time-	12.98		Hours
	Fleet size:	2 Grader(s)		Total job time:	12.98		
	Unit cost: \$38	Per acre		Total job cost:	\$6,971		

CIRCES Cost Estimating Software

SCRAPER TEAM WORK

Site: DDD		Permit	Action:	4/13/2021 Inspe 2		rmit/Job#: _	M1984	076
PROJECT IDENT	TIFICATION							
Task #: 013		State: (Colorado		Abbr	eviation:	None	
Date: $\frac{4}{16}/20$	021 Cor	unty: I	Elbert		F	ilename:	M076-0	13
User: <u>AME</u> Agency or o	organization name:	DRM	S					
HOURLY EQUIP	MENT			COSTS	hift basis: <u>1 per</u>	dav		
			Equipme	ent Description	<u></u>	<u></u>		
	-S	Scraper:	Cat 631					
		-Dozer:	NA Cat D8'	T OCL				
Suppo	rt Equipment -Loa Dum-	d Area: p Area:	NA	1 - 850				
Road Ma	intenance –Motor		CAT 16					
	-Water	Truck:	Water 7	Fanker, 2,500 Gal				
Cost Breakdown:	Scraper Wo	rk Team		Support Equip	oment	Maint	enance F	quipment
<u>cost Dicardo mi</u> .	Scraper	Doz	zer	Load Area	Dump Area	Motor G		Water Tru
%Utilization-machine:	100		NA	100	NA		100	
Ownership cost/hour:	\$144.75		NA	\$116.22	NA	\$	55.79	\$10
Operating cost/hour:	\$145.83		NA	\$89.77	NA	\$	60.08	\$18
%Utilization-ripper:	NA		NA	NA	NA		NA	
Ripper own. cost/hour:	NA		NA	\$0.00	NA		\$0.00	\$0
Ripper op. cost/hour:	NA		NA	\$0.00	NA		\$0.00	\$0
Operator cost/hour:	\$30.90		NA	\$41.30	NA		28.56	\$(
Unit Subtotals:	\$321.47		NA	\$247.28	NA		44.43	\$28
Number of Units:	2 Work:	¢ < 42	0	<u>1</u>	0		1 Maint:	\$173.27
Group Subtotals:		\$642	2.94	Support:	\$247.28	ľ	Maint:	\$175.2
Total work team cost	/hour: <u>\$1,063.49</u>							
MATERIAL QUA	NTITIES							
Initial volume:	30,249		CCY	Swell fact	or: 1.215			
Loose volume:	36,753		LCY					
	rce of estimated vo of estimated swell f		22.5 acre Cat Hand	es disturbed, 10 in dbook	depth			
HOURLY PROD	UCTION							
				Scraper Bo	owl (volume) Ba	sis:		
Material weight:	1,600 lbs/LCY			Struck	Volume: 24.00)	LC	Y
Material description:	Top Soil			Heaped				
Rated Payload: Payload Capacity:	81,600 pounds 51.00 LCY			Average Adjusted C			LC LC	
Payload Lanacity								

<u>0.80</u> Minutes

0.70 Minutes

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

Site Altitude: 6020 feet

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

Travel Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	5.00	3.00	8.00	783	0.91

Haul Time: 0.91 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	-5.00	3.00	-2.00	2920	0.31

Return Time:	0.31	minutes
Total Scraper team cycle time:	2.72	minutes
Adjusted for job conditions:	530.96	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	1,061.91	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	1,061.91	LCY/Hour
Unadjusted unit production/hour: 639.71 LCY/Hour Optimal Number of Scrapers per push dozer:		

Fleet size:	1	Team(s)	Total job time:	34.61	Hours
Unit cost:	\$1.001	/LCY	Total job cost:	\$36,807	

REVEGETATION WORK

Task description: DEB m		DEB mine - Rev	egetate 22.5	acres		
e: DDD		Pe	rmit Action:	4/13/2021 Inspection-2	Permit/Job	o#: <u>M1984076</u>
			Calanada		Attensietien	Nana
Task #:	014 4/16/2021	State: County:	Colorado Elbert		Abbreviation: Filename:	None M076-014
Date:						

FERTILIZING

Materials Units / Cost / Unit Cost /Acre Description Unit Acre \$1.23 \$106.58 Potassium nitrate, 13-46-0 87.00 pound **Total Fertilizer** Materials \$106.58 Cost/Acre

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
Blue Grama - Lovington	0.90	14.69	\$14.38
Little Bluestem - Native	1.40	8.36	\$18.99
Western Wheatgrass - Arriba	4.80	12.12	\$31.20
Prairie Sandreed - Goshen	1.30	8.15	\$13.46
Totals Seed Mix	8.40	43.31	\$78.03

Application

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

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, 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
Weed spray, hand, non-aquatic area, nox. [DMG]	\$183.16
Total Mulch Application Cost/Acre	\$253.33

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

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	15%	Cost /Acre: Cost /Acre*:	
Initial Job Cost: Reseeding Job Cost: Total Job Cost: Job Hours:	\$1,046.35 \$32,909			

EQUIPMENT MOBILIZATION/DEMOBILIZATION

PROJECT IDENTIFICATION Task #: 015 State: Colorado Abbreviation: None Date: 4/16/2021 County: Elbert Filename: M076-015 User: AME Filename: M076-015 Agency or organization name: DRMS EQUIPMENT TRANSPORT RIG COST Shift basis: 1 per day Cost Data Source: Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERE 400 HP (2ND HALF, 2006) Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T) Cost Breakdown: Available Rig Capacities 0-25 Tons 26-50 Tons 51+ Tons Operator Cost/Hour: \$23.63 \$23.63 Operator Cost/Hour: \$23.63 \$23.63 \$23.63 \$23.63 Operator Cost/Hour: \$26.56 \$47.02 \$55.69 Operator Cost/Hour: \$23.63 \$23.63 \$23.63 Helpe Cost/Hour: \$67.39 \$123.81 \$141.54 Machine Morie Ship Cost/hr/ inti Cost/hr/ inti	Task descriptio	n: Mo	bilization/demob	ilization				
Task #:015State:ColoradoAbbreviation:NoneDate: $\frac{4/16/2021}{AME}$ County:ElbertFilename:M076-015User: \overline{AME} DRMSAgency or organization name:DRMSEQUIPMENT TRANSPORT RIG COSTShift basis:1 per day Cost Data Source:Cond DataTruck Tractor Description:GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERE 400 HP (2ND HALF, 2006)Truck Trailer Description:GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T)Cost Breakdown:Available Rig Capacities0-25 Tons26-50 Tons51+ Tons 00 perating Cost/Hour:\$17.20\$29.63\$38.69Operating Cost/Hour:\$17.20\$29.63\$38.69Operating Cost/Hour:\$23.63\$23.63Operatior Cost/Hour:\$23.63\$23.63Operatior Cost/Hour:\$23.63\$23.63Operatior Cost/Hour:\$67.39\$123.81\$141.54MachineWeight/ (ToNS)Owner ship Cost/hr/unitGost/hr/unit ReturnCost/hr/fleet Cost/hr/ ReturnDOT Pec Cost/hrMachineWeight/ (TONS)Owner ship Cost/hr/unitFleet 	: DDD		Permit		2021 Inspe		Permit/Job#: <u>N</u>	11984076
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EQUIPMENT TRANSPORT RIG COSTShift basis: $1 \text{ per day} Cost Data Source: \overline{CRG Data}Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERE 400 HP (2ND HALF, 2006)Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T)Cost Breakdown:Available Rig Capacities 0-25 Tons 26-50 Tons 51+ TonsOwnership Cost/Hour: $17.20 $29.63 $38.69Operating Cost/Hour: $26.56 $47.02 $55.69Operator Cost/Hour: $23.63 $23.63 $23.63Helper Cost/Hour: $67.39 $123.81 $141.54NON ROADABLE EQUIPMENT:Cost/hr/unit Cost/Hour: $67.39 $123.81 $141.54Machine Weight/Unit Cost/hr/unit Cost/hr/unit SizeCost/hr/init Cost/hr/unit Size 123.81 $141.54Machine Weight/Cost/hr/unit Size $123.81 $141.54Machine Weight/2.5.00 $144.75 $141.54 $2 $359.20 $2247.62 $250.00Cat D8T - 8SU $47.71 $116.22 $123.81 $2 $480.06 $247.62 $250.00Cat D8T - 8SU $47.31 $55.79 $123.81 $2 $359.20 $2247.62 $250.00CAT 16M $28.73 $55.79 $123.81 $2 $359.20 $2247.62 $500.00CAT 962H $29.00 $247.62 $500.00CAT 962H $29.00 $247.62 $500.00CAT 962H $29.00 $247.62 $500.00CAT 962H $29.00 $6.72 $67.39 $2 $$			County: El	bert		Fi	ilename: M07	6-015
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Seeder with Tractor								
Subtotals: \$2,291.70 \$1,330.96 \$2,500.					a 1			\$2,500.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 2,500 Gal.	\$28.84	2	\$57.68	\$57.68
Light Duty Pickup, 4x4, 3/4 T.	\$13.23	2	\$26.46	\$26.46
		Subtotals:	\$84.14	\$84.14

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	AURORA 26.75 55.00	miles mph
Total Non-Roadable Mob/Demob Cost *	\$36,024.26	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$81.85	

Transportation Cycle Time:

Haul Time (Hours): Return Time (Hours): Loading Time (Hours):	Non- Roadable Equipment 0.49 0.49 3.00	Roadable Equipment 0.49 0.49 NA
Unloading Time (Hours):	3.00	NA
Subtotals:	6.97	0.97

JOB TIME AND COST

Total job time: 13.95 Hours

Total job cost: **\$36,106**



COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY

1313 Sherman Street, Room 215, Denver, Colorado 80203 ph(303) 866-3567

REQUEST FOR TECHNICAL REVISION (TR) COVER SHEET

File No.: M-	Site Name:	
County	TR#	(DRMS Use only)
Permittee <u>:</u>		
Operator (If Other than Per	mittee):	
Permittee Representative:_		
Please provide a brief desc	ription of the proposed revision:	

As defined by the Minerals Rules, a Technical Revision (TR) is: "a change in the permit or application which does not have more than a minor effect upon the approved or proposed Reclamation or Environmental Protection Plan." The Division is charged with determining if the revision as submitted meets this definition. If the Division determines that the proposed revision is beyond the scope of a TR, the Division may require the submittal of a permit amendment to make the required or desired changes to the permit.

The request for a TR is not considered "filed for review" until the appropriate fee is received by the Division (as listed below by permit type). Please submit the appropriate fee with your request to expedite the review process. After the TR is submitted with the appropriate fee, the Division will determine if it is approvable within 30 days. If the Division requires additional information to approve a TR, you will be notified of specific deficiencies that will need to be addressed. If at the end of the 30 day review period there are still outstanding deficiencies, the Division must deny the TR unless the permittee requests additional time, in writing, to provide the required information.

There is no pre-defined format for the submittal of a TR; however, it is up to the permittee to provide sufficient information to the Division to approve the TR request, including updated mining and reclamation plan maps that accurately depict the changes proposed in the requested TR.

Required Fees for Technical Revision by Permit Type - Please mark the correct fee and submit it with your request for a Technical Revision.

<u>Permit Type</u>	Required TR Fee	Submitted (mark only one)
110c, 111, 112 construction materials, and 112 quarries	\$216	
112 hard rock (not DMO)	\$175	
110d, 112d(1, 2 or 3)	\$1006	