

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

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:
Green Bros Pit No 2	M-1995-030	Sand and gravel	Morgan
INSPECTION TYPE:	INSPECTOR(S):	INSP. DATE:	INSP. TIME:
Monitoring	Jared L. Ebert	January 12, 2017	11:00
OPERATOR:	OPERATOR REPRESENTATIVE:	TYPE OF OPERAT	FION:
McAtee Construction Company	Kenny Lambert, Sterling Redi Mix	112c - Construction	Regular Operation

REASON FOR INSPECTION:		BOND CALCULATION TYPE:	BOND AMOUNT:
Normal I&E Program		Complete Bond	\$25,500.00
DATE OF COMPLAINT:		POST INSP. CONTACTS:	JOINT INSP. AGENCY:
NA		None	None
WEATHER:	INSPE	CTOR'S SIGNATURE:	SIGNATURE DATE:
Cloudy	Ja	ind Ebeth	January 18, 2017

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: Backfilling & Grading

PROBLEM/POSSIBLE VIOLATION: Problem: The operator has not marked and established the required 25 foot setback from the permit boundary as required by the approved permit. This is a problem at this time for failure to comply with the condition of the reclamation permit in accordance C.R.S. 34.32.5-109(2)(a).

CORRECTIVE ACTIONS: Please mark the required 25 foot setback from the northern permit boundary. Please provide the Division written notification when the setback has been marked along with photo documentation. **CORRECTIVE ACTION DUE DATE:** 2/24/17

INSPECTION TOPIC: Signs & Markers

PROBLEM/POSSIBLE VIOLATION: Problem: The mine identification sign and affected area boundary markers were not observed per the requirements of Rule 3.1.12.

CORRECTIVE ACTIONS: The operator must post a sign at the entrance to the mine site which shall be clearly visible from the access road and specify the following; the name of the operator, indicate that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board, and the permit number. The boundaries of the affected area must be marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries.

CORRECTIVE ACTION DUE DATE: 2/24/17

OBSERVATIONS

This was a normal monitoring inspection of the Green Brothers Pit #2; DRMS Permit No. M-1995-030, operated by McAtee Construction Company (McAtee). I, Jared Ebert of the Colorado Division of Reclamation, Mining and Safety (Division) conducted the inspection. Mr. Kenny Lambert, with Sterling Redi Mix/Green Brothers Redi Mix accompanied me during the inspection. The weather was cloudy, cool and windy at the time of the inspection. This is a 46.82 acre 112c mining operation.

Backfilling and Grading:

Mining was not occurring at the time of the inspection. This is a dredging operation that has created a small open water gravel pit on the west side of the site. A shallow dry pit excavation is also located on the east side of the site. The surface area of the water of the western pit was estimated using Google Earth from a June 2016 aerial photograph. The surface area of the water was found to be about 2.75 acres and based on the site inspection, this estimate appears to be accurate. The side slopes of the western pond vary in angle, but on average appeared to be at a 2.5:1 horizontal to vertical ratio above and below the water line as far as could be seen from the shore. According to the approved permit, there should be an un-mined 25.0 foot setback from the permit boundary line to the top of the pit slope. From the top of the pit slopes, the pit is required to be graded to a 3:1 horizontal to vertical ratio both five feet above and ten feet below the water line. The western pit's northern shore is likely near the 25 foot setback. McAtee will need to establish and mark this 25 foot setback at the site in accordance with the approved permit.

The eastern pit is a shallow excavation with short gentle side slopes. This pit does not appear to have been active for a long time as vegetation such as trees and grasses have established in this area.

Financial Warranty:

The reclamation cost estimate was last calculated in 2012 when the operator applied for a permit conversion (CN-01). In accordance with Rule 4.2.1(2), the Division has reviewed the estimated cost to reclaim the site and found that the current bond of \$25,500.00 is an inadequate amount. The Division calculated the cost to reclaim the affected area to be \$31,829.97. Attached for the Operator review, is a copy of the reclamation cost summary. By February 1, 2017, the Division will issue a Surety Increase (SI) revision; please contact the Division prior to February 1, 2017 to discuss any questions regarding the cost estimate. When the SI is issued, the Operator will then have 60 days to submit the additional financial warranty.

Hydrologic Balance:

Based on the information provided with the CN-01 permit application, no more than 3.6 acres of water surface area will be opened until additional water has been purchased. At this time, it appears the surface water area is below this threshold.

Gen. Compliance with Mine Plan:

The affected area is spilt into three different areas, the plant area, the Phase I mining area north of the Edward Gill Ditch and the proposed Phase II mining area south of the Edward Gill Ditch. A large stockpile of mined material is located at the plant site area along with a scale and scale house. The western and eastern pit areas discussed above are located within the Phase I mining area. A large berm of material is in place surrounding the exposed groundwater pond on the western side of the site. It appears this berm was recently created and is likely made up of some topsoil.

Off-site Damage:

The permit boundaries were not marked, so it is not clear if any off-site damage has occurred. Stockpiling and processing operations in the plant site and on the northwest side of the western pit are likely very near the northern permit boundary. Also it appears the operator has affected land in the plant site area very close to the western boundary. McAtee will need to mark their permit boundaries and take care not to affect land outside of the approved boundary.

Support Facilities On-site:

The operator has not constructed the proposed processing facilities at the site as discussed in the permit.

Signs and Markers:

The mine entrance sign was not found nor was the permit boundary marked. This issue is cited as a problem at the beginning of this report.

Topsoil:

Recently stripped material is stockpiled in a berm around the exposed groundwater pond on the western side of the affected area. If this material will remain in place for an extended period of time it will need to be stabilized with vegetative cover.

PHOTOGRAPHS



Figure 1. From the southwest corner of the west pit looking east.



Figure 2. From the southwest side of the western pit looking north east.



Figure 3. From the southeast corner of the western pit looking north.



Figure 4. Plant site area.



Figure 5. North side of the eastern pit excavation looking south.

GENERAL INSPECTION TOPICS

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

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

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

Inspection Contact Address Darren Gebhart McAtee Construction Company P.O. Box 1908 Sterling, CO 80751

Enclosure: January 18, 2017, CIRCES Cost Estimate.

CC: Kenny Lambert, Sterling Redi Mix via e-mail

COST SUMMARY WORK

Т	ask description:	Cost Summary				
Site:	Green Bros Pit No 2	Permit Action:	January 2017 C Estimate	lost	Permit/Job#	: <u>M1995030</u>
PR	ROJECT IDENTIFIC	ATION				
	Task #: 000 Date: 1/18/2017 User: JLE	State: Colorado County: Morgan		A	bbreviation: Filename:	None
TA	Agency or organiz		1		1	
Task	Description		Form Used	Fleet Size	Task Hours	Cost
001	Cut/Fill pond shorelin	e from 2.5H:1V to 3H:1V	DOZER	1	6.47	\$1,295.00
002	Grading and shaping		GRADER	1	11.64	\$1,302.00
003	Replacing topsoil ove	r disturbed areas	DOZER	1	21.66	\$3,467.00
004	Ripping stockpile/plan		RIPPER	1	12.36	\$2,648.00
005	Revegetating disturbe		REVEGE	1	6.55	\$14,740.00
006	Equipment Mobilizati		MOBILIZE	1	1.20	\$1,386.00
	. <u>-</u>		SUBTO	DTALS:	59.88	\$24,838

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$501.73
Performance bond:	1.05	Total =	\$260.80
Job superintendent:	29.94	Total =	\$2,229.93
Profit:	10.00	Total =	\$2,483.80
		TOTAL O & P =	\$5,476.26
		CONTRACT AMOUNT (direct + $O \& P$) =	\$30,314.26

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): Engineering work and/or contract/bid preparation: Reclamation management and/or administration:	0.00 0.00 5.00	Total = Total =	0.00 \$0.00 \$1,515.71
CONTINGENCY:	0.00	- Total =	\$0.00
	TOTAL IN	NDIRECT COST =	\$6,991.97
TOTAL BO	ND AMOUNT (d	lirect + indirect) =	\$31,829.97

BULLDOZER WORK

Task descrip	otion:	Cut/Fill pond sh	oreline from	2.5H:1V to 3H:1V		
te: Green Bi	ros Pit No 2	Pe	rmit Action:	January 2017 Cost Estimate	Permit/Jol	o#: <u>M1995030</u>
PROJECT	IDENTIFI	CATION				
Task #: Date: User:	001 1/18/2017 JLE	State: County:	Colorado Morgan		Abbreviation: Filename:	None 001
Age	ency or organ	nization name: DI	RMS			
HOURLY	FOLIPME	NT COST				
Basic Ma Horsep Blade Attach Shift	chine: Car power: 310 Type: Sen nment: NA Basis: 1 p	t D8T - 8SU 0 mi-Universal A ver day		 		
Data S		RG)		_		
	Cost/Hour:		\$82.01	Utilization % NA		
	Cost/Hour: Ripper own.		\$79.23	100		
	Cost/Hour:		\$0.00	NA		
	Cost/Hour: Cost/Hour:		\$0.00 \$38.89	0 NA		
MATERIA Initial Vol Swell fa Loose vol	ume: <u>3,43</u> actor: <u>1.12</u>	38				
				an Mining & Cofeta		
	stimated volu stimated swe			on, Mining & Safety		
HOURLY I	PRODUCT	<u>'ION</u>				
Average pu Unadjusted production:		50 feet 1,400.0 LC	Y/hr			
Materials co	onsistency de	escription: <u>Compa</u>	acted fill or en	nbankment 0.9		
Average pu gradient:	sh	0 %				
Average sit	e altitude:	4,248 feet				
Material we	eight:	2,900 lbs/LCY				
Weight des	cription:	Sand and gravel -	Dry			
Job Condition	n Correction	Factor		Source		

Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4265

Adjusted unit production:	597.10 LCY/hr
Adjusted fleet production:	597.1 LCY/hr

JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.335/LCY

Total job time:	6.47 Hours
Total job cost:	\$1,295

MOTOR GRADER WORK

Task description:	Grading and sha	apıng			
e: Green Bros Pit No 2		rmit Action:	January 201 Estimate	7 Cost	Permit/Job#: <u>M1995030</u>
PROJECT IDENTIF	TCATION				
Task #: 002	State:	Colorado		۸bbr	eviation: None
Date: $1/18/201^{\circ}$		Morgan			ilename: M030-002
User: JLE	<u> </u>	liforguit			
Agency or orga	anization name: DR	RMS			
HOURLY EQUIPM	ENT COST				
Basic Machin	ne: CAT 140M			Horsepower:	183
Ripper Attachme				Shift Basis:	1 per day
11			_	Data Source:	(CRG)
Cost Breakdown:					
<u>Cost Broakdo wik</u>				Utilization %	
Own	ership Cost/Hour:		\$36.00	NA	
	erating Cost/Hour:		\$40.02	100	
11	ership Cost/Hour:		\$0.00	NA	
	erating Cost/Hour:		\$0.00 \$35.83	NI A	
1	al Unit Cost/Hour:		\$33.83 \$111.85	NA	
Lota			\$111.05		
Tota MATERIAL QUAN	l Fleet Cost/Hour:	\$111 d:	.85		acres
Tota MATERIAL QUAN Total Area	<u> </u>	d: <u>16.00</u>	.85		acres
Tota MATERIAL QUAN Total Area	TITIES a to be graded or ripped ce of estimated acreag	d: <u>16.00</u>			acres
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BULLDOZER WORK

Task description:	Replacing	g topsoi	il over distu	rbed areas		
e: _Green Bros Pit No 2		Per	rmit Action:	January 2017 Cost Estimate	Permit/Jo	b#: <u>M1995030</u>
PROJECT IDENTIFI	CATION					
Task #: 003 Date: 1/18/2017 User: JLE		State: ounty:	Colorado Morgan		Abbreviation: Filename:	None 003
Agency or organ	nization name	: DR	RMS			
HOURLY EQUIPME	NT COST					
Basic Machine: Cat	t D8T - 8U					
Horsepower: 305				-		
• 1	iversal			-		
Attachment: NA				-		
	er day			-		
Data Source: (CI	RG)			-		
Cost Breakdown:						
				Utilization %		
Ownership Cost/Hour:			\$52.86	NA		
Operating Cost/Hour:			\$68.35	100		
Ripper own.			\$0.00	NA		
Cost/Hour:						
Ripper op. Cost/Hour:			\$0.00	0		
Operator Cost/Hour:			\$38.89	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$160.10 \$160.10					
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume: <u>13,9</u>	\$160.10 ITIES 049					
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume: <u>13,9</u> Swell factor: <u>1.00</u>	\$160.10 ITIES 049					
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 13,9 Swell factor: 1.00 Loose volume: 13,9 Source of estimated volu 5 Source of estimated swe 5 factor: 1	\$160.10 ITIES 049 00 049 LCY ume: Di sill Ca	vision of the second se		on, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 13,9 Swell factor: 1.00 Loose volume: 13,9 Source of estimated volu 50 Source of estimated swe factor: HOURLY PRODUCT 100	\$160.10 ITIES 049 00 049 LCY ume: Di ell Ca CION	at Hand				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 13,9 Swell factor: 1.00 Loose volume: 13,9 Source of estimated volu 50 Source of estimated volu 50 MOURLY PRODUCT 100 Average push distance: 100	\$160.10 ITIES 049 00 149 LCY ume: Di ell Ca <u>CION</u> <u>120</u>	at Hand	book			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 13,9 Swell factor: 1.00 Loose volume: 13,9 Source of estimated volu 30 Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly 100	\$160.10 ITIES 049 00 149 LCY ume: Di ell Ca <u>CION</u> <u>120</u>	at Hand	book			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 13,9 Swell factor: 1.00 Loose volume: 13,9 Source of estimated volu 50 Source of estimated volu 50 MOURLY PRODUCT 100 Average push distance: 100	\$160.10 ITIES 049 00 149 LCY ume: Di ell Ca <u>CION</u> <u>120</u>	at Hand	book			
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 13,9 Swell factor: 1.00 Loose volume: 13,9 Source of estimated volu 30 Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly 100	\$160.10 ITIES 049 00 049 049 049 049 049 049 010 0249 0249 030 049 049 049 049 049 049 0249 030 049 049 020 031 049 049 049 049 049 049 049 049 00 010 020 0210 120 817. 0210	t Hand feet 7 LCY/	book	 on, Mining & Safety 		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 13,9 Swell factor: 1.00 Loose volume: 13,9 Source of estimated volu 50 Source of estimated volu 50 Source of estimated swe 6 factor: 100 HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description: Average push 100	\$160.10 ITIES 049 00 049 049 049 049 049 049 010 0249 0249 030 049 049 049 049 049 049 0249 030 049 049 020 031 049 049 049 049 049 049 049 049 00 010 020 0210 120 817. 0210	t Hand feet 7 LCY/	book	 on, Mining & Safety 		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 13,9 Swell factor: 1.00 Loose volume: 13,9 Source of estimated volu 30,9 Source of estimated volu 500 Source of estimated swelfactor: 100 HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description:	\$160.10 ITIES 049 00 049 LCY ume: Di 01 Ca <u>120</u> 817. 	t Hand feet 7 LCY/	book	 on, Mining & Safety 		
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 13,9 Swell factor: 1.00 Loose volume: 13,9 Source of estimated volu 50 Source of estimated volu 50 Source of estimated swe 6 factor: 100 HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description: Average push gradient:	\$160.10 ITIES 049 00 049 LCY ume: Di ell Ca CION	feet 7 LCY/ Consoli	book	 on, Mining & Safety 		
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Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 13,9 Swell factor: 1.00 Loose volume: 13,9 Source of estimated volu Source of estimated swefactor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description: Average push gradient: Average site altitude: Material weight: Weight description:	\$160.10 ITIES 049 00 049 LCY ume: Dial CION 120 817. 0 % 4,248 feet 1,600 lbs/I Top Soil	feet 7 LCY/ Consoli	book	 on, Mining & Safety ile 1.0		
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Dozing metho	od:	1.100	(50% SL)
Visibili	ty:	1.000	(AVG.)
Job efficience	ey:	0.830	(1 SHIFT/DAY)
Spoil pi	le:	0.800	(FND-RF)
Push gradier	nt:	1.000	(CAT HB)
Altitud	le:	1.000	(CAT HB)
Material Weig	ht:	1.438	(CAT HB)
Blade typ	Blade type:		(PAT)
Net correction	on:	0.7877	
Adjusted unit production:	64	4.10 LCY/hr	
Adjusted fleet production:	64	4.1 LCY/hr	

JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.249/LCY

Total job time:	21.66 Hours
Total job cost:	\$3,467

BULLDOZER RIPPING WORK

Task description:	Ripping stock	xpile/plant area	ì					
ite: Green Bros Pit		Permit Action:	January 201 Estimate	17 Cost	Permit/Jo	ob#: _	M19950	30
PROJECT IDEN	TIFICATION							
Task #: 004	State	e: Colorado		Abl	previation:	No	ne	
	County County	: Morgan			Filename:	004	1	
User: JLE								
Agency of	r organization name:	DRMS						
HOURLY EQUI	PMENT COST							
Basic M		1 T		11		210		
Ripper Attac				Horsepower: Shift Basis:		$\frac{310}{\text{per da}}$	17	
Ripper Auac	milent. <u>5-Shank Rip</u>			Data Source:		CRG)	*	
				Duiu Source.	(eno)		
Cost Breakdown:			1	T 14:1:				
	Ownership Cost/Hour:		\$82.01	Utilization % NA				
	Operating Cost/Hour:		\$79.23	100	_			
Ripper	Ownership Cost/Hour:		\$8.40	NA				
	r Operating Cost/Hour:		\$5.62	100	_			
11	Operator Cost/Hour:		\$38.89	NA				
	Total Unit Cost/Hour:		\$214.15					
	Total Fleet Cost/Hour:	\$214	.15					
MATERIAL QU Alternate Methods:		Bank Volume:	ted estimating	BCY		N	IA	
Alternate Methods: nic: NA ea: 7.22	acres	Bank Volume: Rip Depth (ft):	NA 2.00			N	JA	BCY or
Alternate Methods: nic: NA ea: 7.22	acres I Source of estimated quan	Bank Volume: Rip Depth (ft):	NA 2.00	BCY		N	JA	BCY or
Alternate Methods: nic: NA ea: 7.22 S HOURLY PROE	acres I Source of estimated quan	Bank Volume: Rip Depth (ft):	NA 2.00	BCY		N	JA	BCY or
Alternate Methods: nic: NA ea: 7.22	acres I Source of estimated quan	Bank Volume: Rip Depth (ft): ntity: <u>DRMS</u>	NA 2.00	BCY	: 23,297	N	IA	BCY or
Alternate Methods: iic: NA ea: 7.22 S HOURLY PROE Seismic:	acres H Source of estimated quan	Bank Volume: Rip Depth (ft): ntity: <u>DRMS</u>	NA 2.00 Estimate	BCY Volume	: 23,297	N	IA	BCY or
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Alternate Methods: iic: NA ea: 7.22 S HOURLY PROE Seismic:	acres I Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping I Average Ripping I Average Ripping I Average Dozer	Bank Volume: Rip Depth (ft): ntity: <u>DRMS</u> elocity: Depth: Width: Length: Speed:	<u>NA</u> 2.00 Estimate NA 2.56 7.08 100.00 88.00	BCY Volume feet/se feets feet feet feet	: 23,297	N		BCY or
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Alternate Methods: nic: NA ea: 7.22 S HOURLY PROE Seismic: Area:	acres H Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping L Average Ripping L Average Maneuver Production per un	Bank Volume: Rip Depth (ft): ntity: <u>DRMS</u> elocity: Depth: Width: Speed: Time:	<u>NA</u> 2.00 Estimate NA 2.56 7.08 100.00 88.00	BCY Volume feet/se feets feet feet feet	: 23,297 econd	N		BCY or
Alternate Methods: hic: NA ea: 7.22 S HOURLY PROD Seismic: Area: Job Condition Correct	acres H Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping L Average Ripping L Average Maneuver Production per un ection Factors	Bank Volume: Rip Depth (ft): ntity: <u>DRMS</u> elocity: Depth: Width: Length: Speed: t Time: it area:	<u>NA</u> 2.00 Estimate NA 2.56 7.08 100.00 88.00 0.25 0.703	BCY Volume feet/se mph degree feet feet feet acres/	: 23,297 econd es	N	JA	BCY or
Alternate Methods: hic: NA ea: 7.22 S HOURLY PROD Seismic: Area: Job Condition Correct	acres H Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping L Average Ripping L Average Maneuver Production per un	Bank Volume: Rip Depth (ft): ntity: <u>DRMS</u> elocity: Depth: Width: Length: Speed: t Time: it area:	<u>NA</u> 2.00 Estimate NA 2.56 7.08 100.00 88.00 0.25	BCY Volume feet/se feets feet feet feet feet	: 23,297 econd es	N	JA	BCY or
Alternate Methods: hic: NA ea: 7.22 S HOURLY PROD Seismic: Area: Job Condition Correct	acres I Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping I Average Ripping I Average Ripping I Average Maneuver Production per un ection Factors justed Hourly Unit Produ	Bank Volume: Rip Depth (ft): ntity: elocity: Depth: Width: Speed: r Time: it area: uction: Ititude:	NA 2.00 Estimate NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,248	BCY Volume feet/se mph degree feet feet feet feet acres/ Acres, feet	: 23,297 econd es hour /hr	N	JA	BCY or
Alternate Methods: hic: NA ea: 7.22 S HOURLY PROD Seismic: Area: Job Condition Correct	acres H Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping L Average Ripping L Average Maneuver Production per un ection Factors justed Hourly Unit Production	Bank Volume: Rip Depth (ft): ntity: <u>DRMS</u> elocity: Depth: Width: Length: Speed: t area: it area: uction: ltitude: de Adj:	<u>NA</u> 2.00 Estimate NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,248 1.00	BCY Volume feet/se mph degree feet feet feet acres/ Acres, feet (CAT	: 23,297 econd es hour /hr HB)	N		BCY or
Alternate Methods: hic: NA ea: 7.22 S HOURLY PROD Seismic: Area: Job Condition Correct	acres H Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping L Average Ripping L Average Maneuver Production per un ection Factors justed Hourly Unit Production Site Al Altitud Job Effic	Bank Volume: Rip Depth (ft): ntity: <u>DRMS</u> elocity: Depth: Width: Speed: r Time: it area: uction: ltitude: ciency:	<u>NA</u> 2.00 Estimate NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,248 1.00 0.83	BCY BCY BCY BCY Colume BCY	: 23,297 econd es hour /hr HB) ft/day)	N		BCY or
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Alternate Methods: hic: NA ea: 7.22 S HOURLY PROD Seismic: Area: Job Condition Correct	acres H Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping L Average Ripping L Average Maneuver Production per un ection Factors justed Hourly Unit Production Site Al Altitud Job Effic Net Corr Adjusted Hourly Un	Bank Volume: Rip Depth (ft): htity:	<u>NA</u> 2.00 Estimate NA 2.56 7.08 100.00 88.00 0.25 0.703 4,248 1.00 0.83 0.83 0.58	BCY Volume feet/se mph degree feet feet feet acres/ Acres. feet (CAT (1 shit multip Acres/hr	: 23,297 econd es hour /hr HB) ft/day)	N	JA	BCY or
Alternate Methods: hic: NA ea: 7.22 S HOURLY PROD Seismic: Area: Job Condition Correct	acres H Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping L Average Ripping L Average Maneuver Production per un ection Factors justed Hourly Unit Production Site Al Altitud Job Effic Net Corr	Bank Volume: Rip Depth (ft): htity:	NA 2.00 Estimate NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,248 1.00 0.83 0.83	BCY Volume feet/se mph degree feet feet feet acres/ Acres, feet (CAT (1 shit multip	: 23,297 econd es hour /hr HB) ft/day)	N		BCY or
Alternate Methods: nic: NA ea: 7.22 S HOURLY PROE Seismic: Area: Job Condition Correct Unad	acres H Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping Average Ripping L Average Ripping L Average Maneuver Production per un ection Factors justed Hourly Unit Production Site Al Altitud Job Effic Net Corr Adjusted Hourly Un	Bank Volume: Rip Depth (ft): htity:	<u>NA</u> 2.00 Estimate NA 2.56 7.08 100.00 88.00 0.25 0.703 4,248 1.00 0.83 0.83 0.58	BCY Volume feet/se mph degree feet feet feet acres/ Acres. feet (CAT (1 shit multip Acres/hr	: 23,297 econd es hour /hr HB) ft/day)	N		BCY or
Alternate Methods: hic: NA ea: 7.22 S HOURLY PROD Seismic: Area: Job Condition Correct	acres H Source of estimated quan DUCTION Seismic Ve Average Ripping Average Ripping Average Ripping L Average Ripping L Average Maneuver Production per un ection Factors justed Hourly Unit Production Site Al Altitud Job Effic Net Corr Adjusted Hourly Un	Bank Volume: Rip Depth (ft): ntity:	<u>NA</u> 2.00 Estimate NA 2.56 7.08 100.00 88.00 0.25 0.703 4,248 1.00 0.83 0.83 0.58	BCY Volume feet/se mph degree feet feet feet feet acres/ Acres. feet (CAT (1 shift multip Acres/hr Acres/hr	: 23,297 econd es hour /hr HB) ft/day)	N	Hours	BCY or

Unit cost: \$366.793 P	er acre
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Total job cost:

\$2,648

REVEGETATION WORK

Task description: Reveg		Revegetating di	sturbed area	S			
te:	Green Bro	os Pit No 2	Pe	rmit Action:	January 2017 Cost Estimate	Permit/Jo	b#: <u>M1995030</u>
<u>PR</u>	OJECT I	DENTIFIC	CATION				
	Task #:	005	State:	Colorado		Abbreviation:	None
	Task #: _ Date:	005 1/18/2017	State: County:	Colorado Morgan		Abbreviation: Filename:	None 005

FERTILIZING

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
13-13-13, 19-9-0	40.00	pound	\$0.26	\$10.40
			Total Fertilizer Materials Cost/Acre	\$10.40

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$21.34
	Total Fertilizer Application Cost/Acre	\$21.34

TILLING

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.50	19.51	\$11.43
Sideoats Grama - Vaughn	0.90	2.95	\$10.13
Western Wheatgrass - Arriba	6.40	16.16	\$23.62
Needlegrass, Green - Lodorm	2.00	8.31	\$10.80
Totals Seed Mix	9.80	46.94	\$55.98

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Rodeo @ 2.0 pt/ac	1.00	ACRE	\$6.72	\$6.72
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$246.00	\$492.00
Total Mulch Materials Cost/Acre				\$498.72

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$66.02
Weed spray, hand, aquatic area, nox. [DMG]		\$183.16
	Total Mulch Application Cost/Acre	\$249.18

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

JOB TIME AND COST

	No. of Acres:	13.1	Cost /Acre	: \$1,067.62
Estimate	ed Failure Rate:	20%	Cost /Acre*	: \$287.98
*Selected Replanti	ng Work Items:	SEEDING		
Initial Job Cost:	\$13,985.82			
Reseeding Job Cost:	\$754.51		-	
Total Job Cost:	\$14,740		-	
Job Hours:	6.55		-	

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Green Bros P	it No 2	Permit	Action: Janu Estir	ary 2017 Co nate		Permit/Job#: <u>N</u>	11995030
PROJECT IDE	NTIFICATI	ON					
Task #: 000	5	State: Co	olorado		Abbre	eviation: None	
Date: 1/1	8/2017	County: Me	organ		Fi	lename: 006	
User: JLI	E						
Agency	or organization	n name: DRMS					
EQUIPMENT T	ΓΡΑΝϚΡΟΡ	T DIC COST					
	INAUSION	1 M G COST					
					Shift ba		
				C	ost Data Sour	rce: CRG Da	ita
Truc	K Tractor Desc	ription GENE	RIC ON-HIGH	WAYTRU	CK TRACTO	DR, 6X4, DIESEI	POWERED
11401					(2ND HALF,		li o ii Liub,
True	k Trailer Desc	ription: G	ENERIC FOLT		· · ·	ROP DECK EQU	IPMENT
		- r					
					251.501. AP	ND 1001)	
				I KAILEK (25T, 50T, AN	ND 1001)	
Cost Breakdown:				INAILER	251, 501, Ar	ND 1001)	
	apacities	0-25 Tons	26-50 Tons		<u>Z51, 501, AP</u>	ND 1001)	
Available Rig C		0-25 Tons \$16.63	26-50 Tons	51+	Tons	ND 1001)	
Available Rig C Ownership	Capacities Cost/Hour: c Cost/Hour:			51 + \$2		ND 1001)	
Available Rig C Ownership Operating	Cost/Hour:	\$16.63	26-50 Tons \$18.37	51 + \$2 \$5	Tons 2.33	ND 1001)	
Available Rig C Ownership Operating Operato	cost/Hour: g Cost/Hour:	\$16.63 \$44.38	26-50 Tons \$18.37 \$46.13	51 + \$2 \$5 \$2	Tons 2.33 0.07	ND 1001)	
Available Rig C Ownership Operating Operato Helpe	o Cost/Hour: g Cost/Hour: r Cost/Hour:	\$16.63 \$44.38 \$27.66	26-50 Tons \$18.37 \$46.13 \$27.66	51 + \$2 \$5 \$2 \$2 \$2	Tons 2.33 0.07 7.66	ND 1001)	
Available Rig C Ownership Operating Operato Helpe	c Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour:	\$16.63 \$44.38 \$27.66 \$0.00	26-50 Tons \$18.37 \$46.13 \$27.66 \$25.39	51 + \$2 \$5 \$2 \$2 \$2	Tons 2.33 0.07 7.66 5.39	ND 1001)	
Available Rig C Ownership Operating Operato Helpe Total Uni	o Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour:	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67	26-50 Tons \$18.37 \$46.13 \$27.66 \$25.39	51 + \$2 \$5 \$2 \$2 \$2	Tons 2.33 0.07 7.66 5.39	ND 1001)	
Available Rig O Ownership Operating Operato Helpe Total Uni	Cost/Hour: cost/Hour: cost/Hour: cost/Hour: cost/Hour: cost/Hour:	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 MENT:	26-50 Tons \$18.37 \$46.13 \$27.66 \$25.39 \$117.55	51+ \$2 \$5 \$2 \$2 \$12	Tons 2.33 0.07 7.66 5.39 25.45		DOT Permit
Available Rig C Ownership Operating Operato Helpe Total Uni NON ROADAB Machine	Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour: BLE EQUIPM Weight/	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 MENT: Owner ship	26-50 Tons \$18.37 \$46.13 \$27.66 \$25.39 \$117.55 Haul Rig	51+ \$2 \$5 \$2 \$2 \$12 Fleet	Tons 2.33 0.07 7.66 5.39 25.45 Haul Trip	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Available Rig O Ownership Operating Operato Helpe Total Uni	Cost/Hour: g Cost/Hour: r Cost/Hour: t Cost/Hour: t Cost/Hour: BLE EQUIPN Weight/ Unit	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 MENT:	26-50 Tons \$18.37 \$46.13 \$27.66 \$25.39 \$117.55	51+ \$2 \$5 \$2 \$2 \$12	Tons 2.33 0.07 7.66 5.39 25.45 Haul Trip Cost/hr/	Return Trip	
Available Rig C Ownership Operating Operato Helpe: Total Uni NON ROADAB Machine Description	Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour: BLE EQUIPM Weight/ Unit (TONS)	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 MENT: Owner ship Cost/hr/ unit	26-50 Tons \$18.37 \$46.13 \$27.66 \$25.39 \$117.55 Haul Rig Cost/hr/unit	51+ \$2 \$5 \$2 \$2 \$12 Fleet	Tons 2.33 0.07 7.66 5.39 25.45 Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	Cost/ fleet
Available Rig C Ownership Operating Operato Helpe Total Uni NON ROADAB Machine	Cost/Hour: g Cost/Hour: r Cost/Hour: t Cost/Hour: t Cost/Hour: BLE EQUIPN Weight/ Unit	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 MENT: Owner ship	26-50 Tons \$18.37 \$46.13 \$27.66 \$25.39 \$117.55 Haul Rig	51+ \$2 \$5 \$2 \$2 \$12 Fleet Size	Tons 2.33 0.07 7.66 5.39 25.45 Haul Trip Cost/hr/	Return Trip	DOT Permit Cost/ fleet \$250.00 \$250.00
Ownership Operating Operato Helpe Total Uni NON ROADAB Machine Description Cat D8T - 8SU	Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour: SLE EQUIPM Weight/ Unit (TONS) 47.71	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 MENT: Owner ship Cost/hr/ unit \$82.01	26-50 Tons \$18.37 \$46.13 \$27.66 \$25.39 \$117.55 Haul Rig Cost/hr/unit \$117.55	51+ \$2 \$5 \$2 \$2 \$12 Fleet Size 1	Tons 2.33 0.07 7.66 5.39 25.45 Haul Trip Cost/hr/ fleet \$199.56	Return Trip Cost/hr/ fleet \$117.55	Cost/ fleet \$250.00

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.	\$56.19	1	\$56.19	\$56.19
Light Duty Pickup, 4x4, 3/4 T.	\$33.81	1	\$33.81	\$33.81
		Subtotals:	\$90.00	\$90.00

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	FORT MORGAN	
Total one-way travel distance:	2.00	miles
Average Travel Speed:	40.00	mph
Total Non-Roadable Mob/Demob Cost *	\$1,377.28	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$9.00	

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.05	0.05
Return Time (Hours):	0.05	0.05
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	0.60	0.10

JOB TIME AND COST

Total job time:	1.20	Hours

Total job cost: \$1,386