

January 2, 2024

Leon Moores Moores Mining, LLC 32905 Hihgway 141 Gateway, CO 81522

## RE: Moores Pit, Permit No. M-1980-170, Proposed Surety Increase SI-5

Dear Mr. Moores:

This reclamation cost update was in response to the site inspection conducted on December 19, 2023. It is Division policy to periodically update its costs to ensure that the Financial Warranty adequately, reflects the actual current cost of fulfilling the requirements of the approved reclamation plan.

The bond was last recalculated in 2018 with SI-4. Below is a table summarizing input values that have been updated in since the SI-4 calculation. This table does not account for price changes resulting from inflation or other RS Means cost changes. Bond calculations are based on a combination of field observations and worst case scenario based on the approved reclamation plan.

Task	Form Used	Description	
01a	Dozer	Reduce main highwall to 3H: 1V 45'H, 500LF @ 1H: 1V = 9,375 BCY Prev: 50'H x 350LF = 16,052 BCY	
02a	Dozer	Misc grading and sloping Phase 1, 2, 3 No Changes use CN-1 estimate 18,412 CCY	
03a	Dozer	Replace 6" of fines as growth material 17 ac @ 6" = 13,713 CCY, push 250 LF Prev: 18 ac @ 6" = 16,000 LCY, push 200LF	



Task	Form Used	Description
04a	Reveg	Reveg with Type A seed mix
		Reveg 6 ac (Phase 1, 2 ,3 rec plan), remove secondary fertilizer app, use tractor to apply fertilizer rather than push spreader
		Prev: 8 ac w/ 30% failure
05a	Reveg	Reveg with Type B seed mix
		Reveg 11 ac (Phase 1, 2, 3 rec plan), remove secondary fertilizer app, corrected seed mix, use tractor to apply fertilizer rather than push spreader
		Prev: 10 Ac w/ 30% Failure
06a	Demo	Add in scale house Demo
		10' x 25' x 8' wood bldg. on site bury
07a/b	Mob	Update equipment
		2 Dozers
Indirect		Update hrs

Per policy I wanted to send this out for review prior to issuance. Please look it over and let me know if there are errors or concerns. If no response is received by Friday, March 1, 2024 then I'll issue SI-5 as is. SI-5 will result in a total required bond amount of **\$154,622**, which is an increase of <u>\$62,772</u> over the \$91,850 currently held.

Sincerely,

Amy Geldell

*Amy Yeldell* Environmental Protection Specialist

Ec: Travis Marshall, Senior EPS, Grand Junction DRMS

# COST SUMMARY WORK

Task description	on:	Post inspection u	ıpdate				
Site: Moores Pit		Per	mit Action:	2023-12	Permit/Job	#: <u>M1980178</u>	
PROJECT ID Task #: Date: User:	ACY /2/2024	ATION State: County:	Colorado Mesa			None M178-ACY	

Agency or organization name: DRMS

# TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Reduce main highwall to 3H: 1V	DOZER	2	25.45	\$21,652
02a	Misc grading and sloping Phase 1, 2, 3 DOZER 2		33.90	\$28,842	
03a	Replace 6" of fines of growth medium	DOZER	2	29.92	\$25,454
04a	Reveg with "Type A" seed mix	REVEGE	1	8.00	\$14,891
05a	Reveg with "Type B" seed mix	REVEGE	1	16.00	\$25,436
06a	Demo on site features	DEMOLISH	] 1	4.00	\$389
07a	Initial mobilization of equipment	MOBILIZE	1	6.00	\$6,978
07b	Secondary mobilization of equipment	MOBILIZE	1	6.00	\$2,454
	SUBTOTALS:				\$126,096

# **INDIRECT COSTS**

# OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$2,547
Performance bond:	1.05	Total =	\$1,324
Job superintendent:	64.64	Total =	\$4,206
Profit:	10.00	Total =	\$12,610
		TOTAL O & P =	\$20,687
		CONTRACT AMOUNT (direct + O & P) = $($	\$146,783

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	0.00	Total =	\$0
Reclamation management and/or administration:	5.00		\$7,339
CONTINGENCY:	0.00	Total =	\$0
	]	FOTAL INDIRECT COST =	\$28,526
TOTAL BO	ND AM	OUNT (direct + indirect) =	\$154,622

# BULLDOZER WORK

PROJECT IDENTIFICATION         Task #:       01A         State:       Colorado         Abbrevia	it/Job#: <u>M1980178</u> ation: <u>None</u> name: <u>M178-01a</u>
Task #:       01A       State:       Colorado       Abbrevia         Date: $1/2/2024$ County:       Mesa       Filen         Agency or organization name:       DRMS <b>HOURLY EQUIPMENT COST</b> Basic Machine:       Cat D8T - 8SU         Horsepower:       310         Blade Type:       Semi-Universal         Attachment:       NA         Shift Basis:       1 per day         Data Source:       (CRG)         Cost Breakdown:       \$143.92         Ownership Cost/Hour:       \$143.92         Ripper op. Cost/Hour:       \$143.92         Shift Basis:       1 per day         Data Source:       \$143.92         Ownership Cost/Hour:       \$143.92         Ripper op. Cost/Hour:       \$40.00         NA       NA         Operator Cost/Hour:       \$425.34         Total unit Cost/Hour:       \$425.34         Total Fleet Cost/Hour:       \$850.67         MATERIAL QUANTITIES       Initial Volume:         Initial Volume:       9,375         Swell factor:       1.430	
Date:       1/2/2024       County:       Mesa       Filen         Jser:       ACY       Agency or organization name:       DRMS         HOURLY EQUIPMENT COST       Basic Machine:       Cat D8T - 8SU       Horsepower:       310         Blade Type:       Semi-Universal       Attachment:       NA         Aftachment:       NA       Shift Basis:       1 per day         Data Source:       (CRG)       (CRG)         Cost Breakdown:       \$143.92       100         Napper own. Cost/Hour:       \$143.92       100         Ripper own. Cost/Hour:       \$0.00       NA         Ripper op. Cost/Hour:       \$425.34       NA         Total unit Cost/Hour:       \$425.34       Total Fleet Cost/Hour:         MATERIAL QUANTITIES       Initial Volume:       9,375         Swell factor:       1.430	
HOURLY EQUIPMENT COST         Basic Machine:       Cat D8T - 8SU         Horsepower:       310         Blade Type:       Semi-Universal         Attachment:       NA         Shift Basis:       1 per day         Data Source:       (CRG)         Cost Breakdown: <ul> <li>(CRG)</li> <li>Cost Breakdown:</li> <li>Stata Source:</li> <li>(CRG)</li> <li>Cost Hour:</li> <li>\$\$241.38</li> <li>NA</li> <li>Operating Cost/Hour:</li> <li>\$\$143.92</li> <li>100</li> <li>NA</li> <li>Ripper own. Cost/Hour:</li> <li>\$\$0.00</li> <li>NA</li> <li>Ripper op. Cost/Hour:</li> <li>\$\$40.04</li> <li>NA</li> <li>Total unit Cost/Hour:</li> <li>\$\$425.34</li> <li>Total Fleet Cost/Hour:</li> <li>\$\$425.34</li> <li>Sto.67</li> <li>MATERIAL QUANTITIES</li> <li>Initial Volume:</li> <li>9.375</li> <li>Swell factor:</li> <li>1.430</li> <li></li></ul>	
Basic Machine:       Cat D8T - 8SU         Horsepower:       310         Blade Type:       Semi-Universal         Attachment:       NA         Shift Basis:       1 per day         Data Source:       (CRG)         Cost Breakdown:       Utilization %         Ownership Cost/Hour:       \$241.38         NA       Operating Cost/Hour:         \$143.92       100         Ripper own. Cost/Hour:       \$0.00         Operator Cost/Hour:       \$0.00         Operator Cost/Hour:       \$40.04         NA       NA         Total unit Cost/Hour:       \$425.34         Total Fleet Cost/Hour:       \$850.67         MATERIAL QUANTITIES       Swell factor:       9.375         Swell factor:       1.430	
Horsepower: $310$ Blade Type:Semi-UniversalAttachment:NAShift Basis:1 per dayData Source:(CRG)Cost Breakdown:Utilization %Ownership Cost/Hour:\$241.38Operating Cost/Hour:\$143.92NA0perating Cost/Hour:Singper own. Cost/Hour:\$0.00NARipper own. Cost/Hour:\$0.00Operator Cost/Hour:\$425.34Total unit Cost/Hour:\$425.34Total Init Cost/Hour:\$850.67MATERIAL QUANTITIESInitial Volume: $9,375$ Swell factor: $1.430$	
Blade Type:       Semi-Universal         Attachment:       NA         Shift Basis:       1 per day         Data Source:       (CRG)         Cost Breakdown:       (CRG)         Ownership Cost/Hour:       \$241.38         Operating Cost/Hour:       \$143.92         Ripper own. Cost/Hour:       \$0.00         NA       NA         Operator Cost/Hour:       \$0.00         Na       \$40.04         NA       NA         Operator Cost/Hour:       \$425.34         Total unit Cost/Hour:       \$425.34         Total Volur:       \$850.67         MATERIAL QUANTITIES       Initial Volume:         9,375       1.430	
Attachment:       NA         Shift Basis:       1 per day         Data Source:       (CRG)         Cost Breakdown:       Utilization %         Ownership Cost/Hour:       \$241.38       NA         Operating Cost/Hour:       \$143.92       100         Ripper own. Cost/Hour:       \$0.00       NA         Ripper op. Cost/Hour:       \$0.00       0         Operator Cost/Hour:       \$425.34         Total unit Cost/Hour:       \$425.34         Total Fleet Cost/Hour:       \$850.67         MATERIAL QUANTITIES       Initial Volume:       9,375         Swell factor:       1.430	
Shift Basis: 1 per day   Data Source: (CRG)     Cost Breakdown:   Ownership Cost/Hour:   Statistic Cost/Hour:   St	
Data Source:       (CRG)         Cost Breakdown:       Utilization %         Ownership Cost/Hour:       \$241.38       NA         Operating Cost/Hour:       \$143.92       100         Ripper own. Cost/Hour:       \$0.00       NA         Ripper op. Cost/Hour:       \$0.00       0         Operator Cost/Hour:       \$0.00       0         Operator Cost/Hour:       \$40.04       NA         Total unit Cost/Hour:       \$425.34	
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Operating Cost/Hour:       \$143.92       100         Ripper own. Cost/Hour:       \$0.00       NA         Ripper op. Cost/Hour:       \$0.00       0         Operator Cost/Hour:       \$40.04       NA         Total unit Cost/Hour:       \$425.34         Total Fleet Cost/Hour:       \$850.67         MATERIAL QUANTITIES         Initial Volume:       9,375         Swell factor:       1.430	
Ripper op. Cost/Hour:       \$0.00       0         Operator Cost/Hour:       \$40.04       NA         Total unit Cost/Hour:       \$425.34         Total Fleet Cost/Hour:       \$850.67         MATERIAL QUANTITIES         Initial Volume:       9,375         Swell factor:       1.430	
Operator Cost/Hour:       \$40.04       NA         Total unit Cost/Hour:       \$425.34         Total Fleet Cost/Hour:       \$850.67         MATERIAL QUANTITIES         Initial Volume:       9,375         Swell factor:       1.430	
Total unit Cost/Hour:       \$425.34         Total Fleet Cost/Hour:       \$850.67         MATERIAL QUANTITIES         Initial Volume:       9,375         Swell factor:       1.430	
Total Fleet Cost/Hour:       \$850.67         MATERIAL QUANTITIES         Initial Volume:       9,375         Swell factor:       1.430	
Swell factor: 1.430	
Loose volume: 13,406 LCY	
Source of estimated volume:       45' H 500FL @ 1:1 cyt/fill         Source of estimated swell factor:       Cat Handbook	_
HOURLY PRODUCTION	
Average push distance: 150 feet	
Unadjusted hourly production: <u>634.3 LCY/hr</u>	
Materials consistency description: Compacted fill or embankment 0.9	
Average push gradient:-15 %Average site altitude:6,100 feet	
Material weight: 3,300 lbs/LCY	
Weight description: Decomposed rock - 75% Rock, 25% Earth	
Job Condition Correction Factor         Source	
Operator Skill: 0.750 (AVG.)	
Material consistency: 0.900 (CAT HB))	
Dozing method: 1.000 (GEN.)	

Task # 01A

Job efficiency:	0.830	(1 SHIFT/DAY)		
Spoil pile:	0.800	(FND-RF)		
Push gradient:	1.329	(CAT HB)		
Altitude:	1.000	(CAT HB)		
Material Weight:	0.697	(CAT HB)		
Blade type:	1.000	(PAT)		
Net correction:	0.4152			
Adjusted unit production:	263.36 LCY/hr			
Adjusted fleet production: <b>526.72</b> LCY/hr				

Fleet size:	2 Dozer(s)
Unit cost:	\$1.615/LCY

Total job time:	<b>25.45</b> Hours
Total job cost:	\$21,652

# BULLDOZER WORK

	0 0	1 9	ase 1, 2, 3		
Moores Pit	Pern	nit Action:	2023-12	Permit/Job#:	M1980178
PROJECT IDENTI	<b>FICATION</b>				
Task #: 02A	State:	Colorado		Abbreviation:	None
Date: 1/2/2024		Mesa		Filename:	M178-02a
User: ACY					
Agency or org	ganization name: <u>DR</u>	MS			
HOURLY EQUIPM	IENT COST				
	Cat D8T - 8SU				
1	10				
• • • •	emi-Universal JA				
	per day				
	CRG)				
Cost Breakdown:					
		<b>#2 (1 2</b> 0	<u>Utilization %</u>		
Ownership Cost/Hour		\$241.38	NA		
Operating Cost/Hour		\$143.92 \$0.00	100 NA		
Ripper own. Cost/Hour Ripper op. Cost/Hour		\$0.00	0		
Operator Cost/Hour		\$40.04	NA		
Operator Cost/Hour	•	\$ <del>4</del> 0.04	NA		
MATERIAL QUAN					
Initial Volume: 18 Swell factor: 1.2	3,415 215	_			
Initial Volume: 18 Swell factor: 1.2	3,415	_			
Initial Volume: $18$ Swell factor: $1.2$ Loose volume: $22$ Source of estimated vol	2,415 215 2, <b>374</b> LCY lume:CN-1 Cos				
Initial Volume:18Swell factor:1.2Loose volume:22	3,415 215 2, <b>374</b> LCY lume:CN-1 Cos				
Initial Volume: 18 Swell factor: 1.2 Loose volume: 22 Source of estimated vol Source of estimated sw	215 215 2 <b>,374</b> LCY lume: <u>CN-1 Cos</u> ell factor: <u>Cat Handb</u>				
Initial Volume: <u>18</u> Swell factor: <u>1.2</u> Loose volume: <u>22</u> Source of estimated vol Source of estimated sw <u>HOURLY PRODUC</u>	215 215 2 <b>.374</b> LCY lume: <u>CN-1 Cos</u> ell factor: <u>Cat Handt</u> C <b>TION</b>				
Initial Volume: <u>18</u> Swell factor: <u>1.2</u> Loose volume: <u>22</u> Source of estimated vol Source of estimated sw <u>HOURLY PRODUC</u> Average push distance:	215 215 2 <b>.,374</b> LCY lume: <u>CN-1 Cos</u> ell factor: <u>Cat Handt</u> C <b>TION</b> 100 feet	book			
Initial Volume: 18 Swell factor: 1.2 Loose volume: 22 Source of estimated vol Source of estimated sw HOURLY PRODUC	3,415 215 2, <b>374</b> LCY lume: <u>CN-1 Cos</u> ell factor: <u>Cat Handt</u> C <b>TION</b> fuction: <u>100 feet</u> 4uction: <u>852.6 LCY/</u>	book	  bile 1.0		
Initial Volume: <u>18</u> Swell factor: <u>1.2</u> Loose volume: <u>22</u> Source of estimated vol Source of estimated sw <u>HOURLY PRODUC</u> Average push distance: Unadjusted hourly proc Materials consistency d	415 215 2374 LCY lume: <u>CN-1 Cos</u> ell factor: <u>Cat Handb</u> <u>CTION</u> luction: <u>100 feet</u> luction: <u>852.6 LCY/I</u> lescription: <u>Consoli</u>	book hr	 		
Initial Volume: <u>18</u> Swell factor: <u>1.2</u> Loose volume: <u>22</u> Source of estimated vol Source of estimated sw <u>HOURLY PRODUC</u> Average push distance: Unadjusted hourly prod	415 215 2374 LCY lume: <u>CN-1 Cos</u> ell factor: <u>Cat Handb</u> <u>CTION</u> luction: <u>100 feet</u> luction: <u>852.6 LCY/I</u> lescription: <u>Consoli</u>	book hr	 		
Initial Volume: <u>18</u> Swell factor: <u>1.2</u> Loose volume: <u>22</u> Source of estimated vol Source of estimated sw <u>HOURLY PRODUC</u> Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude:	3,415         215         215         2,374 LCY         lume:       CN-1 Cos         ell factor:       Cat Handb         CTION         function:       100 feet         luction:       852.6 LCY/I         lescription:       Consoli         -5 %	book hr			
Initial Volume: <u>18</u> Swell factor: <u>1.2</u> Loose volume: <u>22</u> Source of estimated vol Source of estimated sw <u>HOURLY PRODUC</u> Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude:	$\frac{415}{215}$ $\frac{215}{2,374} \text{ LCY}$ $\frac{100 \text{ feet}}{100 \text{ feet}}$	book hr dated stockp			
Initial Volume: <u>18</u> Swell factor: <u>1.2</u> Loose volume: <b>22</b> Source of estimated vol Source of estimated sw <b>HOURLY PRODUG</b> Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	A 415 A	book hr dated stockp 	, 25% Earth		
Initial Volume: <u>18</u> Swell factor: <u>1.2</u> Loose volume: <u>22</u> Source of estimated vol Source of estimated sw <u>HOURLY PRODUC</u> Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	$\begin{array}{c} 3,415 \\ \hline 215 \\ \hline 215 \\ \hline 2,374 LCY \\ \hline lume: CN-1 Cos \\ \hline ell factor: Cat Handt \\ \hline CTION \\ \hline 100 feet \\ \hline 100 feet \\ \hline 100 feet \\ \hline 100 feet \\ \hline 3,300 feet \\ \hline 3,300 lbs/LCY \\ \hline Decomposed rock \\ \hline on Factor \\ \hline 0.7 Skill: 0.7 \\ 0.7 \\ \hline 0.7$	book hr dated stockp - 75% Rock, 750	, 25% Earth Source (AVG.)		
Initial Volume: <u>18</u> Swell factor: <u>1.2</u> Loose volume: <u>22</u> Source of estimated vol Source of estimated sw <u>HOURLY PRODUC</u> Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consi	$\begin{array}{c} 415 \\ \hline 215 \\ \hline 225 \\ \hline$	book hr dated stockp - 75% Rock, 750 000	, 25% Earth <u>Source</u> (AVG.) (CAT HB)		
Initial Volume: <u>18</u> Swell factor: <u>1.2</u> Loose volume: <u>22</u> Source of estimated vol Source of estimated sw <u>HOURLY PRODUC</u> Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude: Material weight: Weight description: <u>Job Condition Correction</u> Material consi Dozing m	3,415 $215$ $215$ $2374$ LCY         lume:       CN-1 Cos         ell factor:       Cat Handb         CTION         function: $100$ feet         function: $852.6$ LCY/I         lescription:       Consoli $-5%$ $6,100$ feet $3,300$ lbs/LCY       Decomposed rock         on Factor $0.7$ or Skill: $0.7$ istency: $1.0$	book hr dated stockp - 75% Rock, 750	, 25% Earth Source (AVG.)		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3870	
Adjusted unit production: 32	29.96 LCY/hr	
Adjusted fleet production: 65	59.92 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$1.289/LCY

Total job time:	<b>33.90</b> Hours
Total job cost:	\$28,842

# BULLDOZER WORK

Task description:	Replace 6" of fine	es of growth	n medium		
Moores Pit	Perr	nit Action:	2023-12	Permit/Job#:	M1980178
PROJECT IDENTIE	<b>FICATION</b>				
Task #: 03A	State:	Colorado		Abbreviation:	None
Date: $1/2/2024$	County:	Mesa		Filename:	M178-03a
User: ACY				-	
Agency or orga	anization name: DR	MS			
HOURLY EQUIPM	ENT COST				
	ut D8T - 8SU				
Horsepower: 31					
•	mi-Universal				
Attachment: NA					
	per day				
	RG)				
Cost Breakdown:					
		** • • • •	Utilization %		
Ownership Cost/Hour:	. <u></u>	\$241.38	NA		
Operating Cost/Hour:		\$143.92	100 NA		
Ripper own. Cost/Hour:		\$0.00 \$0.00	<u>NA</u> 0		
			0		
Ripper op. Cost/Hour:		<b>Φ40 04</b>			
Operator Cost/Hour:	¢ 405.24	\$40.04	NA		
	\$425.34 <b>\$850.67</b>	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour:	\$850.67	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN	\$850.67 <u>FITIES</u>	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume:13,	\$850.67 FITIES 713	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13, Swell factor: 1.00	\$850.67 FITIES 713 50	\$40.04 	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: 13, Swell factor: 1.00 Loose volume: 14,	\$850.67 FITIES 713 50 536 LCY		NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: 13, Swell factor: 1.00 Loose volume: 14, Source of estimated volu	\$850.67 <u>FITIES</u> 713 50 536 LCY ume: _6" over 1'	  7 ac	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: 13, Swell factor: 1.00 Loose volume: 14,	\$850.67 FITIES 713 50 536 LCY Ime: _6" over 1'	  7 ac	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: <u>13,</u> Swell factor: <u>1.00</u> Loose volume: <u>14,</u> Source of estimated volu Source of estimated swe	\$850.67 FITIES 713 50 536 LCY Ime: <u>6" over 11</u> Il factor: <u>Cat Hand</u>	  7 ac	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: 13, Swell factor: 1.00 Loose volume: 14, Source of estimated volu	\$850.67 FITIES 713 50 536 LCY Ime: <u>6" over 11</u> Il factor: <u>Cat Hand</u>	  7 ac	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13,7 Swell factor: 1.00 Loose volume: 14,4 Source of estimated volu Source of estimated swe HOURLY PRODUC	\$850.67 <u>FITIES</u> 713 50 536 LCY Ime: <u>6</u> " over 1' 11 factor: <u>Cat Hand</u> <u>TION</u>	  7 ac	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13,7 Swell factor: 1.00 Loose volume: 14,5 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance:	\$850.67 <u>FITIES</u> 713 50 536 LCY ume: <u>6" over 1"</u> 11 factor: <u>Cat Handl</u> <u>TION</u> <u>250 feet</u>		NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13,7 Swell factor: 1.00 Loose volume: 14,4 Source of estimated volu Source of estimated swe HOURLY PRODUC	\$850.67         FITIES         713         50         536 LCY         ume:       6" over 1"         Il factor:       Cat Handle         TION         action:       250 feet         377.8 LCY/	 7 ac book			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13,7 Swell factor: 1.00 Loose volume: 14,5 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de	\$850.67         FITIES         713         50         536 LCY         ume:       6" over 1"         Il factor:       Cat Hand         TION         action:       250 feet         action:       377.8 LCY/         escription:       Partly c	 7 ac book			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13,7 Swell factor: 1.00 Loose volume: 14,5 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	\$850.67 <b>FITIES</b> 713         50         536 LCY         ume:       6" over 1'         Il factor:       Cat Handle <b>TION</b> action:       250 feet         action:       377.8 LCY/         escription:       Partly c         -10 %	 7 ac book			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13,7 Swell factor: 1.00 Loose volume: 14,5 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de	\$850.67         FITIES         713         50         536 LCY         ume:       6" over 1"         Il factor:       Cat Hand         TION         action:       250 feet         action:       377.8 LCY/         escription:       Partly c	 7 ac book			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13,7 Swell factor: 1.00 Loose volume: 14,5 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	\$850.67 <b>FITIES</b> 713         50         536 LCY         ume:       6" over 1'         Il factor:       Cat Handle <b>TION</b> action:       250 feet         action:       377.8 LCY/         escription:       Partly c         -10 %	 7 ac book			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANY Initial Volume: 13, Swell factor: 1.00 Loose volume: 14, Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude:	\$850.67 <b>FITIES</b> 713         50         536 LCY         ime:       6" over 1"         Il factor:       Cat Handle <b>TION</b> action:       250 feet         action:       377.8 LCY/         escription:       Partly c         -10 %       6,100 feet	 7 ac book			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANY Initial Volume: 13, Swell factor: 1.00 Loose volume: 14, Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description:	\$850.67 <b>FITIES</b> 713         50         536 LCY         ime:       6" over 1"         If factor:       Cat Handle <b>TION</b> action:       250 feet         action:       377.8 LCY/         escription:       Partly c         -10 %       6,100 feet         2,400 lbs/LCY       Sand - Dry, loose	 7 ac book			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANY Initial Volume: 13,7 Swell factor: 1.00 Loose volume: 14,5 Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	\$850.67 <b>FITIES</b> 713         50         536 LCY         ime:       6" over 1"         If factor:       Cat Handle <b>TION</b> action:       250 feet         action:       377.8 LCY/         escription:       Partly c         -10 %       6,100 feet         2,400 lbs/LCY       Sand - Dry, loose         n Factor	7 ac book hr consolidated			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANY Initial Volume: 13, Swell factor: 1.00 Loose volume: 14, Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description:	\$850.67 <b>IITIES</b> 713         50         536 LCY         ume:       6" over 1"         If factor:       Cat Handle <b>TION</b> action:       250 feet         action:       377.8 LCY/         escription:       Partly c				
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 13,' Swell factor: 1.00 Loose volume: 14,' Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator	\$850.67 <b>FITTLES</b> 713         50         536 LCY         ume:       6" over 1"         Il factor:       Cat Handle <b>TION</b> action:       250 feet         action:       250 feet         action:       250 feet         action:       250 feet         action:       277.8 LCY/         escription:       Partly c			3)	

Job efficien	ey:	0.830	(1 SHIFT/DAY)
Spoil pi	le:	0.800	(FND-RF)
Push gradie	nt:	1.225	(CAT HB)
Altitu	le:	1.000	(CAT HB)
Material Weig	ht:	0.958	(CAT HB)
Blade ty	be:	1.000	(PAT)
Net correction	on: 0.6429		
	242.89 LCY	/hr	
Adjusted unit production:	272.07 LC I	. / 111	

Fleet size:	2 Dozer(s)
Unit cost:	\$1.751/LCY

Total job time:	<b>29.92</b> Hours
Total job cost:	\$25,454

# **REVEGETATION WORK**

#: <u>M1980178</u>
None
M178-04a

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	200.00	pound	\$0.50	\$99.34
			Total Fertilizer Materials	
			Cost/Acre	\$99.34

# **Application**

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$41.82
	Total Fertilizer Application Cost/Acre	\$41.82

# **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	12.00	57.85	\$30.60
Indian Ricegrass - Paloma	3.00	9.71	\$33.38
Sand Dropseed	0.25	29.84	\$2.44
Sideoats Grama - Butte	0.75	2.46	\$6.75
Hard Fescue - Discovery	5.00	64.85	\$14.63
Galleta	5.00	18.25	\$111.75
Western Wheatgrass - Arriba	7.50	18.94	\$48.75
Needle and Thread	0.25	0.66	\$10.46
Timothy, Alpine - Native	2.00	59.69	\$48.50
Totals Seed Mix	35.75	262.26	\$307.25

#### Application

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

### **MULCHING and MISCELLANEOUS**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$429.79	\$859.57
Total Mulch Materials Cost/Acre				\$863.58

# Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$74.46
Power mulcher (MEANS 32 91 13.16 0350)		\$147.67
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$284.85

# **NURSERY STOCK PLANTING**

Job Hours: **8.00** 

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 2	Nursery Stoc	ek Cost / Acre	\$0.00

	No. of Acres:	6	Cost /Acre:	\$1,941.66
Estimate	ed Failure Rate:	30%	Cost /Acre*:	\$1,800.50
*Selected Replanting	ng Work Items:	TILLING,SEEDIN	IG,MULCHING	
Initial Job Cost:	\$11,649.96			
Reseeding Job Cost:				
Total Job Cost:	\$14,891			

# **REVEGETATION WORK**

Task descr	iption:	Reveg with "Type B"	seed mix		
Site: Moores Pit		Permit Action: 2023-12		Permit/Job#: M198017	
<b>PROJECT</b>	<u>IDENTIFIC</u>	CATION			
Task #:	05A	State: Col	orado	Abbreviation:	None
Date:	1/2/2024	County: Me	sa	Filename:	M178-05a
User:	ACY				
A	gency or organ	zation name: DRMS			

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	200.00	pound	\$0.50	\$99.34
			Total Fertilizer Materials	
			Cost/Acre	\$99.34

# **Application**

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$41.82
	Total Fertilizer Application Cost/Acre	\$41.82

# **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.25	0.31	\$17.55
Indian Ricegrass - Paloma	1.00	3.24	\$11.13
Bitterbrush, Antelope	0.12	0.04	\$2.34
Galleta	2.00	7.30	\$44.70
Sage, Fringed	0.06	5.01	\$2.46
Saltbush, Gardner	2.00	5.10	\$22.75
Globemallow, Scarlet (or copper)	0.50	5.66	\$67.75
Timothy - Climax	2.00	57.39	\$3.20
Yarrow, Western	0.12	7.30	\$5.02
Totals Seed Mix	8.05	91.35	\$176.89

#### Application

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

# **MULCHING and MISCELLANEOUS**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$429.79	\$859.57
Total Mulch Materials Cost/Acre				\$863.58

# Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$74.46
Power mulcher (MEANS 32 91 13.16 0350)		\$147.67
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$284.85

# **NURSERY STOCK PLANTING**

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

	No. of Acres:	11	Cost /Acre:	\$1,811.30
Estimate	ed Failure Rate:	30%	Cost /Acre*:	\$1,670.14
*Selected Replanti	ng Work Items:	TILLING,SEEDI	NG,MULCHING	
Initial Jab Coate	\$10.024.20			
Initial Job Cost:				
Reseeding Job Cost:	\$5,511.46			
Total Job Cost:	\$25,436			
Job Hours:	16.00			

# **DEMOLITION WORK**

Task description	on: Demo	on site features				
Site: Moores Pit		Permit Action: 2023-12			ermit/Job#:	M1980178
PROJECT IDENTI	FICATION					
Task #:06ADate:1/2/2024User:ACYAgency		State: <u>Colorado</u> unty: <u>Mesa</u> ne: <u>DRMS</u>		Abbreviat Filena		e '8-06a
<u>UNIT COSTS</u>				<b>Location</b>	adjustmen	<u>t: 89.80 %</u>
Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Scale house	10' x25' x 8'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	2,000.00	CF	\$0.22	\$432.80
				т	atal Cast	

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	4.00	(unadjusted):	\$432.80	location):	\$388.65

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Init	ial mobilization o	of equipment				
: <u>Moores Pit</u>		Permit	Action: <u>2023</u>	-12		Permit/Job#: <u>M</u>	1980178
PROJECT IDE	NTIFICATI	<u>ON</u>					
Task #: 07A	Δ	State: Co	olorado		Abbre	eviation: None	
	/2024	County: Mo	esa		Fi	ilename: M178	5-07a
User: AC	Y						
Agency of	or organization	name: DRMS					
EQUIPMENT 1	<b>RANSPOR</b>	<u>T RIG COST</u>					
					Shift ba	sis: 1 per da	v
				C	Cost Data Sou		
						-	
Truck	Tractor Desci	ription: GENE	RIC ON-HIGH			DR, 6X4, DIESEL	L POWERED,
T	- Taoilea Dessa		ENEDIC EOL		(2ND HALF,	<i>′</i>	DMENT
Iruci	k Trailer Desci	ription: G			SENECK, DF (25T, 50T, Al	ROP DECK EQU	IPMENI
				INAILER	(231, 301, Al	ND 1001)	
Cost Breakdown:							
Available Rig C	apacities	0-25 Tons	26-50 Tons	51+	Tons		
Ownership	Cost/Hour:	\$20.26	\$36.04	\$4	7.05		
	Cost/Hour:	\$39.51	\$76.08		2.85		
Operator	Cost/Hour:	\$22.52	\$22.52		2.52		
	Cost/Hour:	\$0.00	\$23.53		3.53		
Total Unit	Cost/Hour:	\$82.29	\$158.17	\$17	75.95		
NON ROADAB	<u>LE EQUIPN</u>	<u> 1ENT:</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
Description	(TONS)		t	SILC	fleet		
Cat D8T - 8SU	47.71	\$241.38	\$158.17	2	\$799.10	\$316.34	\$250.00
Drill/Broadcast	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Seeder with	20.00	<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>	<i><b>4</b>02.27</i>	-	407.0 <u>2</u>	<i><b>402.2</b></i>	φ200.00
Tractor							
Power Mulcher	6.00	\$25.94	\$82.29	1	\$108.23	\$82.29	\$250.00
(Bowie LD-90)							
,		·		~			
				Subtotals:	\$996.35	\$480.92	\$750.00

## **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$83.90	1	\$83.90	\$83.90
Light Duty Pickup, 4x4, 3/4 T.	\$88.63	1	\$88.63	\$88.63
Flatbed Truck, 4x2, 30K GVW	\$92.68	1	\$92.68	\$92.68
		Subtotals	· \$265.21	\$265.21

Subtotals: **\$265.21** \$265.21

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	GRAND JUNCTION, CO	
Total one-way travel distance:	50.00	miles
Average Travel Speed:	50.00	mph
Total Non-Roadable Mob/Demob Cost *	\$6,447.24	_
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$530.42	

#### Transportation Cycle Time:

Non-	
Roadable	Roadable
Equipment	Equipment
1.00	1.00
1.00	1.00
0.50	NA
0.50	NA
3.00	2.00
	Roadable           Equipment           1.00           0.50           0.50

#### JOB TIME AND COST

Total job time:	6.00	Hours
Total job cost:	\$6,978	_

CIRCES Cost Estimating Software

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Sec	ondary mobilizat	ion of equipme	nt			
e: Moores Pit		Permit	Action: <u>2023</u> -	12		Permit/Job#: <u>M</u>	1980178
PROJECT IDE	NTIFICATI	<u>ON</u>					
Task #: 07]	В	State: Co	olorado		Abbre	eviation: None	
	2/2024	County: Me				ilename: M178	
User: AC	CY						
Agency	or organization	n name: DRMS					
EQUIPMENT 7	<b>FRANSPOR</b>	<u>T RIG COST</u>					
					Shift ba	sis: 1 per da	ıy
				(	Cost Data Sou		
Trucl	k Tractor Desc	ription: GENE	RIC ON-HIGH		JCK TRACTO (2ND HALF,	OR, 6X4, DIESEI 2006)	L POWERED,
True	k Trailer Desc	ription G	ENERIC FOLD		\/	ROP DECK EQU	IPMENT
IIuc	x Huner Dese				(25T, 50T, AI		
Cost Breakdown:					× / /		
Available Rig C	apacities	0-25 Tons	26-50 Tons	51+	- Tons		
	Cost/Hour:	\$20.26	\$36.04		17.05		
	g Cost/Hour:	\$39.51	\$76.08		82.85		
	r Cost/Hour:	\$22.52	\$22.52		22.52		
	r Cost/Hour:	\$0.00	\$23.53		23.53		
Total Uni	t Cost/Hour:	\$82.29	\$158.17	\$1	75.95		
		TENT.					
NON ROADAB	DLE EQUIPT	<u>VILVIN I :</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit (TONS)	Cost/hr/ unit	Cost/hr/uni t	Size	Cost/hr/ fleet	Cost/hr/ fleet	Cost/ fleet
Drill/Broadcast Seeder with Tractor	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$25.94	\$82.29	1	\$108.23	\$82.29	\$250.00

Subtotals: **\$197.25 \$164.58 \$500.00** 

# **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$83.90	2	\$167.80	\$167.80
		Subtotals:	\$167.80	\$167.80

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	GRAND JUNCTION, CO	
Total one-way travel distance:	50.00	miles
Average Travel Speed:	50.00	mph
Total Non-Roadable Mob/Demob Cost *	\$2,118.16 \$335.60	_

#### Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	1.00	1.00
Return Time (Hours):	1.00	1.00
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	3.00	2.00

#### JOB TIME AND COST

Total job time:	6.00	Hours
Total job cost:	\$2,454	_

CIRCES Cost Estimating Software