

July 21, 2023

Nathan/Jason Rinderle Upland Gravel, LLC 3202 Springfield Rd Grand Junction, CO 81503

RE: Upland Gravel Pit, Permit No. M-2001-088, Proposed Surety Increase (SI-2)

Dear Mr. Rinderle:

This reclamation cost update was in response to the site inspection conducted on July 5, 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 2014 and no increases have occurred since the permit issuance. Below is a table summarizing input values that have been updated based on site conditions. 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.

General Assumptions:

- 15 ac affected, 2.1 ac reclaimed, 11 ac of overburden replaces on pit floor
- All slopes go to a 3H: 1V or less. Mostly cut/fill, minimal backfill necessary
- 2 ft overburden replacement and 1 foot topsoil replacement. Stockpiles are located in NW corner
- Drill seed, Disk 6", mulch w/ 2 ton/ac of straw, weed treatment of Halogeton
- Overall seeding amount higher than 2D area depicted on map due to sloping
- Currently hold, \$61,304. In a corporate surety. Last bond revision 2014.

Task	Form Used	Description
01a	Dozer	Grade perimeter highwalls to 3H:1V or less, approx. 20,000 BCY 1600LF, of 1H: 1V @ 28' H, mostly cut/fill, 125 ft push avg
02a	Scraper	Transport overburden 6,453 CCY ~2 ac 24"D avg 600 ft away,



		11 ac complete to date
02b	Dozer	Grade transported overburden 7,195 LCY
03a	Dozer	Create sediment structure in Unit 1 ~750 CCY 30' x 330' x 2'
04a	Ripper	Rip pit floor 13ac
05a	Scraper	Transport topsoil 20,490 CY 3.6 ac of slope + 9.1 ac pit floor @12", 400 ft avg dist -2.1 ac already reclaimed
05b	Dozer	Grade transported Topsoil 23,051 LCY Avg Push 50 ft
06a	Reveg	Reveg 12.7 ac
07a	Mob	Initial Mobilization
07b	Mob	Initial Mobilization

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. As noted you may also wish to revise your reclamation plan. If no response is received by **Friday, September 22, 2023** then I'll issue SI-2 the following Monday as is. SI-2 will result in a total required bond amount of **\$186,264**, which is <u>an increase of \$124,960</u> over the \$61,304 currently held.

Please feel free to contact me with any further questions. Amy Yeldell at the Division of Reclamation, Mining and Safety, Rm 215, 1001 E 62nd Ave, Denver CO 80216. Direct contact can be made by phone at 303-866-3567 Ext 8183 or via email at amy.yeldell@ state.co.us

Sincerely,

Amy Yeldell

Environmental Protection Specialist

Amy Geldell

COST SUMMARY WORK

: Upland Gravel		Permit Action: 07-2023	Permit/Job#: <u>M2001088</u>
ROJEC	Γ IDENTIFICA	ΓΙΟΝ	
Task #:	ACY	State: Colorado	Abbreviation: None
Date:	7/21/2023	County: Mesa	Filename: M088-ACY
I I a a m	ACY		

TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	
Task	Description	Used	Size	Hours	Cost
01a	Grade Highwalls	DOZER	2	28.80	\$24,501
02a	Transport overburden	SCRAPER1	1	8.81	\$14,070
02b	Grade Transported Overburden	DOZER	2	5.75	\$4,890
03a	Create sediment structure	DOZER	2	0.97	\$821
04a	Decompact pit floor	RIPPER	2	11.13	\$9,951
05a	Transport topsoil	SCRAPER1	1	26.40	\$42,138
05b	Grade Transported Topsoil	DOZER	2	15.27	\$12,993
06a	Revegetate affected area	REVEGE	1	24.00	\$29,086
07a	Initial Mobilization	MOBILIZE	1	3.00	\$6,624
07b	Secondary Mobilization	MOBILIZE	1	3.00	\$1,648
		<u>SUBTO</u>	TALS:	127.13	\$146,722

INDIRECT COSTS

OVERHEAD AND PROFIT:

 Liability insurance:
 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 2.02 <t

10.00 Total = $\begin{array}{c} 14,672 \\ \hline 1000 \\ 1000 \\ \hline 1000 \\ 1000 \\ \hline 1000 \\ 1000 \\ \hline 1000$

CONTRACT AMOUNT (direct + O & P) = $\frac{$425,315}{$170,035}$

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500 Total = \$500
Engineering work and/or contract/bid preparation: Reclamation management and/or administration: \$5.00 Total = \$7,227

\$8,502

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$39,542

TOTAL BOND AMOUNT (direct + indirect) = \$186,264

BULLDOZER WORK

Task description:	Grade Highwalls			
e: Upland Gravel	Permit Action:	07-2023	Permit/Job#:	M2001088
PROJECT IDENTIFI	<u>ICATION</u>			
Task #: 01A	State: Colorado		Abbreviation:	None
Date: 7/21/2023	County: Mesa		Filename:	M088-01a
User: ACY			-	
Agency or organ	nization name: DRMS			
HOURLY EQUIPME	ENT COST			
Basic Machine: Cat	D8T - 8SU			
Horsepower: 310				
	ni-Universal			
Attachment: NA				
Shift Basis: 1 pe	er day			
Data Source: (CR	RG)			
Cost Breakdown:				
		<u>Utilization %</u>		
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:	\$40.04	NA		
T-4-1 '4 C4/II	\$405.24	•		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$425.34 \$850.67			
MATERIAL QUANT	ITIES			
•				
Initial Volume: 20,00				
Swell factor: 1.230				
Loose volume: 24,60	00 LCY			
Source of estimated volur	ne: Division of Reclama	tion, Mining & Safety		
Source of estimated swell	factor: Cat Handbook			
HOURLY PRODUCT	<u>rion</u>			
Average push distance:	125 feet			
Unadjusted hourly produc				
Materials consistency des		ombonisment 0.0		
Traceriais consistency ues	Compacted inf of t	mountainent 0.7		
Average push gradient:	-20 %			
Average site altitude:	4,800 feet			
Material weight:	2,500 lbs/LCY			
Weight description:	Clay - Dry		_	
	<u> </u>			
Job Condition Correction		Source		
Operator S		(AVG.)		
Material consiste		(CAT HB))		
Dozing me		(GEN.)		
Visib	ility: 1.000	(AVG.)		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.920	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5880

Adjusted unit production: 427.06 LCY/hr
Adjusted fleet production: 854.12 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.996/LCY

Total job time: 28.80 Hours
Total job cost: \$24,501

SCRAPER TEAM WORK

%Utilization-machine: 100 100 NA NA NA NA Ownership cost/hour: \$249.04 \$241.38 NA	Task description:	Transport	overburd	len				
Task #: 02A	Site: Upland Gravel		Permit	Action:	07-2023	Peri	mit/Job#: <u>M200</u>	1088
Date:		<u>TIFICATION</u>						
User: Acy Agency or organization name: DRMS			· · · · · · · · · · · · · · · · · · ·					
Figure Cost Sthift basis: 1 per day		2023 Cou	inty: N	Aesa		Fil	ename: <u>M088-</u>	02a
Equipment Description	Agency or	organization name:	DRM	S				
Scraper	HOURLY EQUI	<u>PMENT</u>			COSTS	hift basis: 1 per d	<u>ay</u>	
Support Equipment - Load Area:								
Support Equipment - Load Area: -Dump Area: NA NA NA			-					
Doump Area: NA NA NA NA NA NA NA NA	Cunn				Γ - 8SU			
Road Maintenance - Motor Grader: -Water Truck: NA NA	Supp		-					
Scraper Work Team Support Equipment Maintenance Equipment	Road M	aintenance –Motor (Grader:	NA				
Scraper		-Water	Truck:	NA				
Scraper	Cost Breakdown:	Scraper Wor	k Team		Support Equi	oment	Maintenance	Equipment
Ownership cost/hour: \$249.04 \$241.38 NA				er				Water Truck
Operating cost/hour: \$289.36 \$143.92 NA NA NA NA %Utilization-ripper: NA NA <t< td=""><td>%Utilization-machine:</td><td>100</td><td></td><td>100</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td></t<>	%Utilization-machine:	100		100	NA	NA	NA	NA
%Utilization-ripper: NA NA <td>Ownership cost/hour:</td> <td>\$249.04</td> <td>\$2</td> <td>241.38</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td>	Ownership cost/hour:	\$249.04	\$2	241.38	NA	NA	NA	NA
Ripper own. cost/hour:	Operating cost/hour:	\$289.36	\$1	143.92	NA	NA	NA	NA
Ripper op. cost/hour:	%Utilization-ripper:	NA		NA	NA	NA	NA	NA
Operator cost/hour: \$47.07	Ripper own. cost/hour:	NA		\$0.00	NA	NA	NA	NA
Unit Subtotals: \$585.47	Ripper op. cost/hour:	NA		\$0.00	NA	NA	NA	NA
Number of Units: 2 1 0 0 0 Group Subtotals: Work: \$1,596.28 Support: \$0.00 Maint: \$0.00 Total work team cost/hour: \$1,596.28 MATERIAL QUANTITIES Initial volume: 6,453 CCY Swell factor: 1.115 Loose volume: 7,195 LCY Source of estimated volume: Division of Reclamation, Mining & Safety Cat Handbook HOURLY PRODUCTION Scraper Bowl (volume) Basis: Material weight: 2,500 lbs/LCY Struck Volume: 15.70 LCY Material description: Clay - Dry Heaped Volume: 22.00 LCY Rated Payload: 52,800 pounds Average Volume: 18.85 LCY	Operator cost/hour:	\$47.07	9	\$40.04	NA	NA	NA	NA
Group Subtotals: Work: \$1,596.28 Support: \$0.00 Maint: \$0.00 Total work team cost/hour: \$1,596.28 MATERIAL QUANTITIES Initial volume: 6,453 CCY Swell factor: 1.115 Loose volume: 7,195 LCY Source of estimated volume: Source of estimated swell factor: Division of Reclamation, Mining & Safety Cat Handbook HOURLY PRODUCTION Scraper Bowl (volume) Basis: Material weight: 2,500 lbs/LCY Material description: Clay - Dry Rated Payload: 52,800 pounds Support: \$0.00 Maint: \$0.00 Maint: \$0.00 Maint: \$0.00	Unit Subtotals:	\$585.47	\$4	125.34	NA	NA	NA	NA
Total work team cost/hour: \$1,596.28 MATERIAL QUANTITIES Initial volume: 6,453	Number of Units:	2		1	0	0	0	C
MATERIAL QUANTITIES Initial volume: 6,453	Group Subtotals:	Work:	\$1,59	6.28	Support:	\$0.00	Maint:	\$0.00
Initial volume: 6,453	Total work team cos	st/hour: \$1,596.28						
Loose volume: 7,195 LCY Source of estimated volume: Division of Reclamation, Mining & Safety Cat Handbook HOURLY PRODUCTION Scraper Bowl (volume) Basis: Material weight: 2,500 lbs/LCY Material description: Clay - Dry Rated Payload: 52,800 pounds LCY Average Volume: 15.70 LCY Heaped Volume: 22.00 LCY Average Volume: 18.85 LCY	MATERIAL QU	<u>ANTITIES</u>						
Source of estimated volume: Source of estimated swell factor: Division of Reclamation, Mining & Safety	Initial volume:				Swell fact	tor: 1.115		
Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Scraper Bowl (volume) Basis: Material weight: 2,500 lbs/LCY Material description: Clay - Dry Rated Payload: 52,800 pounds Struck Volume: 15.70 Heaped Volume: 22.00 LCY Average Volume: 18.85 LCY	Loose volume:	7,195		LCY				
HOURLY PRODUCTION Scraper Bowl (volume) Basis: Material weight: 2,500 lbs/LCY Struck Volume: 15.70 LCY Material description: Clay - Dry Heaped Volume: 22.00 LCY Rated Payload: 52,800 pounds Average Volume: 18.85 LCY						Mining & Safety		
Material weight: 2,500 lbs/LCY Struck Volume: 15.70 LCY Material description: Clay - Dry Heaped Volume: 22.00 LCY Rated Payload: 52,800 pounds Average Volume: 18.85 LCY	Source	of estimated swell f	actor:	Cat Hand	dbook			
Material weight:2,500 lbs/LCYStruck Volume:15.70LCYMaterial description:Clay - DryHeaped Volume:22.00LCYRated Payload:52,800 poundsAverage Volume:18.85LCY	HOURLY PROD	<u>OUCTION</u>						
Material description:Clay - DryHeaped Volume:22.00LCYRated Payload:52,800 poundsAverage Volume:18.85LCY					Scraper Bo	owl (volume) Bas	is:	
Rated Payload: 52,800 pounds Average Volume: 18.85 LCY	Material weight:	2,500 lbs/LCY			Struck	Volume: 15.70	L	CY
Payload Capacity: 21 12 LCY Adjusted Capacity: 18 85 LCY								

Site Altitude: 4800 feet

C_{λ}	ycle	Ti	me:

Scraper Loading Time: 0.90 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res	Velocity (fpm)	Travel Time (min)
1	600.00	0.00	4.00	4.00	2665	0.46

Haul Time: **0.46** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	0.00	4.00	4.00	2849	0.34

0.34 minutes Return Time: Total Scraper team cycle time: 2.30 minutes Adjusted for job conditions: 816.29 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 816.29 Adjusted multiple scraper team (fleet) hourly production: 816.29 LCY/Hour

Unadjusted unit production/hour: 983.48 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	8.81	Hours
Unit cost:	\$1.956	/LCY	Total job cost:	\$14,070	

BULLDOZER WORK

Task descript	tion:	Grade Transported Overburden						
: Upland G	ravel	Perr	nit Action:	07-2023	Permit/Job#:	M2001088		
PROJECT	<u>IDENTIFIC</u>	<u>SATION</u>						
Task #:	02B	State:	Colorado		Abbreviation:	None		
Date:	7/21/2023	County:	Mesa		Filename:	M088-02b		
User:	ACY							
Age	ency or organiz	zation name:DR	MS					
HOURLY	EQUIPMEN	T COST						
Basic Mac	chine: Cat D	98T - 8SU						
Horsep				_				
Blade '		-Universal		<u> </u>				
Attach	-			<u> </u>				
Shift I		*						
Data So	ource: (CRG	r)		_				
Cost Breakdo	<u>own</u> :							
_				<u>Utilization %</u>				
Ownership			\$241.38	NA 100				
	Cost/Hour:		\$143.92	100				
Ripper own.			\$0.00	NA				
Ripper op.	The second secon		\$0.00	0				
Operator	Cost/Hour:		\$40.04	NA				
Total unit Co Total Fleet C		\$425.34 \$850.67						
MATERIA	L QUANTIT	ries						
Initial Volu Swell fac			_					
Loose volu		CY	_					
			_					
	imated volume			on, Mining & Safety				
Source of est	imated swell fa	actor: Cat Handl	ook					
_								
HOURLY	PRODUCTI:	<u>ON</u>						
Average push	n distance:	50 feet						
	ourly producti		//hr					
ū	nsistency descr		tockpile 1.2					
		0.07						
Average push Average site		0 % 4,800 feet	<u> </u>					
Material weig	ght:	2,500 lbs/LCY			<u> </u>			
Weight descr	ription:	Clay - Dry						
Job Conditio	n Correction Fa	actor_		Source				
	Operator Sk		750	(AVG.)				
Mat	erial consisten	cy: 1.2	200	(CAT HB)				
	Dozing metho	od· 10	000	(GEN.)	-			
	Visibili		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:	0.920	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5498

Adjusted unit production: 769.72 LCY/hr
Adjusted fleet production: 1539.44 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.553/LCY

Total job time: 5.75 Hours
Total job cost: \$4,890

MOTOR GRADER WORK

Task description:	Ripping Pit Floor			
e: Upland Gravel Pit I	No. 3 Permit Action	: 07-2023	Permit/J	ob#: M2005077
PROJECT IDENTI	FICATION			
Task #: 02B	State: Colorado	0	Abbreviati	on: None
Date: 7/17/2023	B County: Mesa		Filenar	me: M077-02b
User: ACY				
Agency or org	anization name: DRMS			
HOURLY EQUIPM	IENT COST			
Basic Machi	ne: CAT 14M		Horsepower:	259
Ripper Attachme	nt: Multi-Shank Ripper		Shift Basis:	1 per day
11			Data Source:	(CRG)
Cost Breakdown:				
Cost Breakdowii:			Utilization %	
Owi	nership Cost/Hour:	\$149.33	NA	
	erating Cost/Hour:	\$92.79	100	
-	nership Cost/Hour:	\$5.83	NA	
	erating Cost/Hour:	\$4.02	100	
	perator Cost/Hour:	\$46.87	NA	
Tot	al Unit Cost/Hour:	\$298.84		
Total	al Elect Cost/Hours	298.84		
100	al Fleet Cost/Hour: \$2	470.0 4		
MATERIAL QUAN	TITIES			
Total Are	a to be graded or ripped: 10.30	0		acres
Sou	rce of estimated acreage: Phas	e 1, 2 and 4 bottom	ng - 10 3 ng	
300	ree of estimated acreage. Filas	e 1, 2 and 4 botton	is ~10.5 ac	
HOURLY PRODUC	<u>CTION</u>			
	Average Grader Speed:	1.50	mph	
	Selected Application:		oing (0-3 mph) - 1.50	
	Selected Blade Angle:	-1	degrees	
Widt	Effective Blade Length: n of blade overlap per pass:	2.00	feet feet	
	g or ripping width per pass:	8.50	feet	
	ed Hourly Unit Production:	1.5455	acres/hour	
· ·				
Job Condition Correction	on Factors Source		e Altitude: 5000 feet	
Altitude Adj:	1.00 (CAT I			
Job Efficiency:	0.85 (1sh/d, r			
Net Correction:	0.8500 multipli			
			ooros/IJour	
	Adjusted Hourly Unit Production		acres/Hour acres/Hour	
	Adjusted Hourly Fleet Production	1.5130	actes/mour	
JOB TIME AND CO	<u>OST</u>			
Fleet size:	1 Grader(s)	Total job time:	7.84	Hours
Unit ac et do	27.40	Total :-1 ·	\$2.242	
Unit cost: \$2	27.49 per acre	Total job cost:	\$2,343	

BULLDOZER WORK

Task description:	Create	e sediment	structure				
: Upland Gravel		Per	mit Action:	07-2023		Permit/Job#:	M2001088
PROJECT IDEN	TIFICATIO	<u>N</u>					
Task #: 03A		State:	Colorado			Abbreviation:	None
Date: $\frac{0.011}{7/21/2}$	2023	County:	Mesa			Filename:	M088-03a
User: ACY							
	• ,•	. DI	DMC				
Agency or	organization n	ame: Di	RMS				
HOURLY EQUI	PMENT CO	<u>ST</u>					
Basic Machine:	Cat D8T - 85	SU		_			
Horsepower: Blade Type:	310 Semi-Univer	1					
Attachment:	NA	Sai		_			
Shift Basis:	1 per day						
Data Source:	(CRG)						
	(CRO)						
Cost Breakdown:				¥ ¥.44	• 0/		
O	· · · · · · · · · · · · · · · · · · ·		¢241.20	<u>Util</u>	ization %		
Ownership Cost/H Operating Cost/H			\$241.38 \$143.92		NA 100		
Ripper own. Cost/H			\$0.00		NA		
Ripper own. Cost/H			\$0.00		0	<u></u>	
Operator Cost/H			\$40.04		NA		
operator cosur.			Ψ.σ.σ.		11/1		
MATERIAL QU Initial Volume: Swell factor:	750 1.115						
Loose volume:	836 LCY						
Source of estimated Source of estimated		Division Cat Hand	of Reclamat	ion, Mining	& Safety		
HOURLY PROL	OUCTION						
Average push distar	nce:	50 feet					
Unadjusted hourly p		1,400.0 LC	Y/hr				
Materials consistend	cy description:	Compa	acted fill or e	mbankment	0.9		
Average push gradic Average site altitude		eet					
Material weight:	2,500 1	bs/LCY				_	
Weight description:	Clay - I	Dry					
Job Condition Corre		^	750	ı	Source		
	rator Skill:		.750		(AVG.)		
Material co			.900		(CAT HB))		
Dozn	ng method:		.000		(GEN.)		
	Visibility:	l	.000		(AVG.)		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.920	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3093

Adjusted unit production: 433.02 LCY/hr
Adjusted fleet production: 866.04 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.982/LCY

Total job time: 0.97 Hours
Total job cost: \$821

BULLDOZER RIPPING WORK

	Task description:	Deco	mpact pit floor				
Site:	Upland Grave	l	Permit Action:	07-2023	Permit/J	ob#: <u>M200</u>	1088
	PROJECT IDI	ENTIFICATION	<u>ON</u>				
	Task #: 04A	A	State: Colorado		Abbreviation	on: None	
		1/2023	County: Mesa		Filenan		04a
	User: AC	Y					
	Agency	or organization	name: DRMS				
	HOURLY EQ	UIPMENT CO	<u>OST</u>				
	Basic 1	Machine: Cat	D8T - 8SU		Horsepower:	310	
	Ripper Atta		hank Ripper		Shift Basis:	1 per day	
					Data Source:	(CRG)	
	Cost Breakdown:						
					Utilization %		
		Ownership Co		\$241.38	NA NA		
	Pinn	Operating Co er Ownership Co		\$143.92 \$14.11	100 NA		
		er Operating Co		\$7.45	100		
	тарг	Operator Co		\$40.04	NA		
		Total Unit Co		\$446.90			
		Total Fleet Co	ost/Hour: \$893	5.79			
	MATERIAL Q			etad estimating	method: Area		
	Alternate Method		Sele	cted estimating	method. Area		
		<u>.s.</u>	D 1 W 1	NT A	DCV	NYA	
Seismic: Area:	NA 13.00	acres	Bank Volume: _ Rip Depth (ft):	NA 2.00	BCY Volume: 41,947	NA	BCY or CCY
111000			nated quantity: Staff es				
	HOUDI V DD		nated quantity. Starr es	timates			
	HOURLY PRO	DUCTION					
	Seismic:		Seismic Velocity:	NA	feet/second		
			beisinic velocity.	IVA	ree/second		
	Area:		D' ' D 4	2.56	C /		
			e Ripping Depth: e Ripping Width:	2.56 7.08	feet/pass feet/pass		
			Ripping Width: Ripping Length:	100.00	feet/pass		
			age Dozer Speed:	88.00	feet/minute		
			Maneuver Time:	0.25	minutes/pass		
		Product	ion per unit area:	0.703	acres/hour		
	Job Condition Co	rrection Factors					
	Un	adjusted Hourly	Unit Production:	0.703	Acres/hr		
			Site Altitude:	4,800	feet		
			Altitude Adj:	1.00	(CAT HB)		
			Job Efficiency:	0.83	(1 shift/day)		
			Net Correction:	0.83	multiplier		
		Adjusted	Hourly Unit Production:	0.58	Acres/hr		
		Adjusted I	Hourly Fleet Production:	1.17	Acres/hr		
	JOB TIME AN	ID COST					
	Fleet size:	2	Grader(s)	Total job time	e: 11.13	I	Hours
	Unit cost:	\$765.443	Per acre	Total job cos	st: \$9,951		

SCRAPER TEAM WORK

Task description:	Transport	topsoil				
Site: _Upland Gravel		Permit Action:	07-2023	Peri	mit/Job#: <u>M200</u>	1088
PROJECT IDEN	<u>TIFICATION</u>					
Task #: 05A	S	State: Colorado		Abbre	viation: None	
Date: 7/21/20	023 Cor	unty: Mesa		Fil	ename: M088-	05a
User: ACY						
Agency or	organization name:	DRMS				
HOURLY EQUIP	PMENT		COSTS	hift basis: 1 per d	<u>ay</u>	
		Equipm	ent Description			
		craper: Cat 62	7G w/push-pull			
			T - 8SU			
Suppo	ort Equipment -Load	d Area: NA p Area: NA				
Road Ma	intenance –Motor (
	-Water					
Cost Breakdown:	Scraper Wor		Support Equi		Maintenance	Equipment Water Truck
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	water Truck
%Utilization-machine:	100	100	NA	NA	NA	NA
Ownership cost/hour:	\$249.04	\$241.38	NA	NA	NA	NA
Operating cost/hour:	\$289.36	\$143.92	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$47.07	\$40.04	NA	NA	NA	NA
Unit Subtotals:	\$585.47	\$425.34	NA	NA	NA	NA
Number of Units:	2	1	0	0	0	0
Group Subtotals:	Work:	\$1,596.28	Support:	\$0.00	Maint:	\$0.00
Total work team cost	t/hour: \$1,596.28					
MATERIAL QUA						
Initial volume:	20,490	CCY	Swell fact	tor: 1.125		
Loose volume:	23,051	LCY				
	rce of estimated vo		of Reclamation,	Mining & Safety		
Source	of estimated swell f	factor: Cat Han	dbook			
HOURLY PROD	<u>UCTION</u>					
			Scraper Be	owl (volume) Bas	is:	
Material weight:	2,550 lbs/LCY		Struck	Volume: 15.70	L	CY
Material description:	Earth - Dry packet	ed	Heaped	Volume: 22.00	L	CY
Rated Payload:	52,800 pounds		Average			CY
Payload Capacity:	20.71 LCY		Adjusted (Canacity: 18.85	L	CY

Site Altitude: 4800 feet

Cycle Time:

Scraper Loading Time: 0.90 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	400.00	0.00	4.00	4.00	2665	0.38

Haul Time: **0.38** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res	Velocity (fpm)	Travel Time (min)
1	400.00	0.00	4.00	4.00	2849	0.27

0.27 minutes Return Time: 2.15 Total Scraper team cycle time: minutes Adjusted for job conditions: 873.24 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 873.24 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 873.24 LCY/Hour

Unadjusted unit production/hour: 1,052.09 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	26.40	Hours
Unit cost:	\$1.828	/LCY	Total job cost:	\$42,138	

BULLDOZER WORK

Task description:	Grade	Transported Topsoil			
e: <u>Upland Gravel</u>	ı	Permit Action:	07-2023	Permit/Job#:	M2001088
PROJECT IDE	NTIFICATIO	<u>N</u>			
Task #: 05B		State: Colorado		Abbreviation:	None
Date: 7/21	/2023	County: Mesa		Filename:	M088-05b
User: AC	Y			-	
Agency	or organization na	nme: DRMS			
HOURLY EQU	JIPMENT COS	<u>ST</u>			
Basic Machine		U	<u> </u>		
Horsepower			<u> </u>		
Blade Type:		sal	<u> </u>		
Attachment: Shift Basis:					
Data Source:			<u></u>		
	(CRO)				
Cost Breakdown:			TT:414 .4 .4.		
Osymorphia Cost	Поле	\$241.38	<u>Utilization %</u> NA		
Ownership Cost/ Operating Cost/		\$143.92	100		
Ripper own. Cost/		\$0.00	NA		
Ripper own. Cost/		\$0.00	0		
Operator Cost/		\$40.04	NA		
operator cost		Ψ 10.01	IVA		
Total unit Cost/Ho					
Total Fleet Cost/H	lour: \$850.67				
MATERIAL Q	HANTITIES				
Initial Volume:	23,051				
Swell factor:	1.000				
Loose volume:	23,051 LCY				
Source of estimate	ed volume:	Division of Reclamat	ion, Mining & Safety		
Source of estimate	ed swell factor:	Cat Handbook			
HOURLY PRO	<u>DUCTION</u>				
Average push dist	ance: 5	0 feet			
Unadjusted hourly		,400.0 LCY/hr			
Materials consiste	ncy description:	Loose stockpile 1.2			
Average push grad					
Average site altitu	de: 4,800 fe	eet			
Material weight:		os/LCY		<u></u>	
Weight description	n: Earth - 1	Dry packed			
Job Condition Con	rection Factor		Source		
	perator Skill:	0.750	(AVG.)		
	consistency:	1.200	(CAT HB)		
Doz	zing method:	1.000	(GEN.)		
	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:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5390

Adjusted unit production: 754.60 LCY/hr
Adjusted fleet production: 1509.2 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.564/LCY

Total job time: 15.27 Hours
Total job cost: \$12,993

REVEGETATION WORK

Revegetate affected area Site: Upland Gravel Permit Action: 07-2023 Permit/Job#: M2001088

PROJECT IDENTIFICATION

Task #: 06A State: Colorado Abbreviation: None Date: 7/21/2023 County: Mesa Filename: M088-06a

User: ACY

Agency or organization name: DRMS

FERTILIZING

Task description:

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	100.00	pound	\$0.50	\$49.67
			Total Fertilizer	
			Materials	
			Cost/Acre	\$49.67

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
Indian Ricegrass - Paloma	2.00	6.47	\$22.25
Crested Wheatgrass - Ephraim	1.60	7.35	\$6.92
Sand Dropseed	0.05	5.97	\$0.49
Pubescent Wheatgrass - Luna	3.00	6.20	\$10.20
Galleta	2.70	9.86	\$60.35
Saltbush, Four Wing	3.00	4.13	\$37.50
Saltbush, Shadscale	3.00	4.48	\$30.00
Totals Seed Mix	15.35	44.45	\$167.70

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}	1.50	TON	\$429.79	\$644.68
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Herbicide - Plateau @ 1.0 pt/ac	1.00	ACRE	\$19.79	\$19.79
Total Mulch Materials Cost/Acre				\$668.48

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
					\$
	\$0.00				

JOB TIME AND COST

 No. of Acres:
 12.7
 Cost /Acre:
 \$1,557.34

 Estimated Failure Rate:
 50%
 Cost /Acre*:
 \$1,465.85

*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$19,778.22

Reseeding Job Cost: \$9,308.15

Total Job Cost: \$29,086

24.00

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: Init	tial Mobilization			
e: Upland Gravel	Permit	Action: <u>07-2023</u>	Permit/Jo	b#: <u>M2001088</u>
PROJECT IDENTIFICATI	<u>ON</u>			
Task #: 07A Date: 7/21/2023		olorado Iesa	Abbreviation: Filename:	None M088-07a
User: ACY	County. N	iesa	Friename.	W000-07a
Agency or organization	n name: DRMS	S		
<u>EQUIPMENT TRANSPOR</u>	T RIG COST			1 per day CRG Data
Truck Tractor Desc	ription: GENI		AY TRUCK TRACTOR, 6X4, 400 HP (2ND HALF, 2006)	DIESEL POWERED
Truck Trailer Desc	ription: C		G GOOSENECK, DROP DEC AILER (25T, 50T, AND 100T)	~
Cost Breakdown:				
Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons	
Ownership Cost/Hour:	\$20.26	\$36.04	\$47.05	
Operating Cost/Hour:	\$39.51	\$76.08	\$82.85	
Operator Cost/Hour	\$22.52	\$22.52	\$22.52	

NON ROADABLE EQUIPMENT:

Helper Cost/Hour:
Total Unit Cost/Hour:

\$0.00

\$82.29

Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
	(TONS)		t		fleet		
Cat D8T - 8SU	53.08	\$255.49	\$175.95	2	\$862.88	\$351.90	\$500.00
Cat 627G w/push-	43.48	\$249.04	\$158.17	1	\$407.21	\$158.17	\$250.00
pull							
Drill/Broadcast	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Seeder with							
Tractor							
Power Mulcher	6.00	\$25.94	\$82.29	1	\$108.23	\$82.29	\$250.00
(Bowie LD-90)							

\$23.53

\$158.17

\$23.53

\$175.95

Subtotals: \$1,467.34 \$674.65 \$1,250.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 4x2, 30K GVW	\$92.68	1	\$92.68	\$92.68
Light Duty Pickup, 4x4, 3/4 T.	\$72.29	2	\$144.58	\$144.58

Subtotals	\$237.26	\$237.26

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

GRAND JUNCTION
miles
mph

Total Non-Roadable Mob/Demob Cost *
 '* two round trips with haul rig:
 Total Roadable Mob/Demob Cost **
 ** one round trip, no haul rig:

\$6,505.68

\$118.63

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.25	0.25
Return Time (Hours):	0.25	0.25
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.50	0.50

JOB TIME AND COST

Total job cost: 3.00 Hours

Total job cost: \$6,624

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Secondary Mobiliza	ation			
e: Upland Gravel	Permi	t Action: <u>07-202</u>	23	Permit/Job	o#: _M2001088
PROJECT IDENTIFICA	<u>TION</u>				
Task #: 07B	State: C	Colorado	Ab	breviation:	None
Date: 7/21/2023	County: N	Mesa		Filename:	M088-07b
User: ACY	_				
Agency or organizat	tion name: DRM	S			
8 · · 7 · · · · · · · · · · · · · · · · · · ·	· · · · · · · · ·				
EQUIPMENT TRANSPO	ORT RIG COST				
			Cl.:C	. handar 1	1 4
			Snin Cost Data S		l per day CRG Data
			Cost Data S	ource	KU Data
Truck Tractor D	escription: GEN	ERIC ON-HIGHW			DIESEL POWERED,
			400 HP (2ND HAI		
Truck Trailer D	escription: (NG GOOSENECK,		K EQUIPMENT
		T	RAILER (25T, 50T,	AND 100T)	
Cost Breakdown:					
Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons	:	
Ownership Cost/Hour		\$36.04	\$47.05		
Operating Cost/Hour		\$76.08	\$82.85		
Operating Cost Hour	• μυν.υ1				

NON ROADABLE EQUIPMENT:

Helper Cost/Hour:
Total Unit Cost/Hour:

\$0.00

\$82.29

Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
	(TONS)		t		fleet		
Drill/Broadcast	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Seeder with							
Tractor							
Power Mulcher	6.00	\$25.94	\$82.29	1	\$108.23	\$82.29	\$250.00
(Bowie LD-90)							

\$23.53

\$158.17

\$23.53

\$175.95

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, 3/4 T.	\$72.29	2	\$144.58	\$144.58

Subtotals: \$144.58 \$144.58

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

GRAND JUNCTION
miles
mph

Total Non-Roadable Mob/Demob Cost *
 '* two round trips with haul rig:
 Total Roadable Mob/Demob Cost **
 ** one round trip, no haul rig:

\$1,575.42

\$72.29

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.25	0.25
Return Time (Hours):	0.25	0.25
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.50	0.50

JOB TIME AND COST

Total job cost: 3.00 Hours

Total job cost: \$1,648