

Gibson - DNR, Amber <amber.gibson@state.co.us>

Reclamation Cost Estimates - Ghost River

1 message

Gibson - DNR, Amber <amber.gibson@state.co.us>

Tue, Nov 26, 2024 at 5:04 PM

To: PFM Consulting <pfmconsultingcompany@gmail.com>

Hi Jodi,

Thank you for providing clarification for the cost estimate. The Reclamation Cost Estimate you provided with the application falls between these two estimates. On yours, you estimated for maximum disturbance for the life of the mine -- which we will need to estimate for for sure prior to the commencement of Phase II.

However, we have a couple options here since it is set up as a phased operation.

Option 1: We can bond the site for disturbance in Phase 1 only. This would bring the current bond from what you've provided down, <u>but</u> the Operator would be **required** to submit advanced notice to the Division prior to beginning Phase II to allow time for the Division to update the max disturbance estimate with inflation and to get that updated amount finalized before disturbing Phase II, or else they may face enforcement issues for disturbing areas that are not bonded for reclamation.

Option 2: We can bond the site now for the total maximum disturbance, but the Division's estimate is higher than the one provided in the application. This way if plans change and they need to begin Phase II and don't want to wait for rebonding to occur, they're covered.

If the Applicant's want to go with option one, I would still recommend going higher if they're able so that it may potentially cover them for the next few inspections and they don't have to deal with bond increases every time. However, that's not required.

Review the options and discuss it with the Applicants please, and get back to me when you can. Please let me know if we need to extend the deadline a few days so that this can be addressed. Currently, tomorrow and the morning of Monday December 2, 2024 are the only business days we have left before a decision will be made.

I've included the Reclamation cost estimate provided with the application, the Phase I only estimate, and the Total Max disturbance evidence for your reference.

Thanks,

Amber M. Gibson
Environmental Protection Specialist I



P 720.836.0967 | F 303.832.8106 | amber.gibson@state.co.us

Mailing: DRMS Room 215, 1001 E 62nd Ave, Denver, CO 80216 Physical: 1313 Sherman Street, Room 215, Denver, CO 80203

https://drms.colorado.gov/

3 attachments

7~

Max dist Phase I + Phase II_Ghost River Gravel Pit_M2024029.pdf

Phase I only_Reclamation Cost Estimate_GhostRiverGravelPit_M2024029.pdf 261K

Exhibit L_ReclamationCostEstimate_Applicant_GhostRiverGravelPit_M2024029.pdf 111K

COST SUMMARY WORK

-	Task description: Reclamation Cost Summary for Max Disturbance (Phase I and 2)						
Site:	Ghost River Gravel Pi	Permit <i>t</i>	Action:	New Application Dist Phase 1 ar		Permit/Job#	: <u>M2024029</u>
<u>P</u>	ROJECT IDENTIFIC Task #: 000 Date: 11/26/2024 User: AMG Agency or organization	State: Co	lorado erfano			_	None M029-000
<u>T</u>	ASK LIST (DIRECT	COSTS)					
Task				Form	Fleet	Task	C 1
	Description			Used	Size	Hours	Cost
001	Grade Highwalls to a			DOZER	1	4.37	\$956
002	Spread gravel in 2.1 a		1)	DOZER	1	1.45	\$301
003	1 1	se I Area (18.6 acres tot		DOZER REVEGE	1	18.45	\$4,022
004	Res.	4.6 ac Rngld Area & 4	ac	REVEGE	1	20.00	\$37,526
005	Mob/Demob			MOBILIZE	1	5.22	\$4,691
	NDIRECT COSTS VERHEAD AND PROFI	т.					
						T 4 1 606	70
	Liability insuran Performance bo					$Total = \frac{\$95}{\text{Total}} = \frac{\$49}{\$49}$	
	Job superintende						505
	Pro						750
					TOTA	$L O \& P = \boxed{\$7,}$	
			CONTR	ACT AMOUNT	(direct +	- O & P) =	5,209
L	EGAL - ENGINEERING	- PROJECT MANAGE	MENT:				
	Financial warranty pro	ocessing (legal/related co	osts):	\$500		Total = \$50	00
		d/or contract/bid prepara		4.25	_	Total = \$2,	346
	Reclamation manag	ement and/or administra	ation:	5.00		\$2,	760
		CONTINGEN	NCY:	0.00		Total =\$0	
				TOTAL I	NDIREC	T COST = \$13	3,320
		TOTA	AL BON	ND AMOUNT (direct + i	ndirect) =\$60),816

Task description:		Grade Highwall	s to a 3H:1V	7		
Site: Ghost River G	ravel Pit	Pe	rmit Action:	New Application Max Dist Phase 1 and 2	Permit/Job	#: <u>M2024029</u>
PROJECT IDEN	TIFICA	TION				
Task #: 001 Date: 11/2 User: AM	6/2024 G	State: County:	Colorado Huerfano		Abbreviation: Filename:	None 1
Agency of	r organiza	tion name: DI	RMS			
HOURLY EQUI	PMENT	COST				
Basic Machine: Horsepower: Blade Type: Attachment: Shift Basis: Data Source:	Cat D' 240 Semi-1 3-shan 1 per c	7R DS XR Series Universal lk ripper lay	II	 		
Cost Breakdown:						
Ownership Cost/I Operating Cost/I			\$90.24 \$78.95	<u>Utilization %</u> NA 100		
Ripper Cost/I	own.		\$9.25	NA		
Ripper op. Cost/l Operator Cost/l	Hour:		\$1.56 \$38.59	30 NA	<u>—</u> —	
Total unit Cost/Ho Total Fleet Cost/H MATERIAL QU Initial Volume:	Iour: \$\frac{\\$}{\$ANTITI}\$ 1,953	2218.59 2218.59 ES				
Swell factor: Loose volume:	1.124 2,194 L	.CY				
Source of estimate Source of estimate factor:		2: 500' x 20 Cat Hand		vall dimensions, cut-fill n	nethod	
HOURLY PROD	OUCTIO	<u>N</u>				
Average push dist Unadjusted hourly production:		50 feet 1,022.9 LC	Y/hr			
Materials consiste	ncy descr	iption: Compa	acted fill or e	mbankment 0.9		
Average push gradient:		5 %				
Average site altitu	ide: <u>5</u>	5,674 feet				
Material weight:	2	2,900 lbs/LCY			_	
Weight description	n: S	Sand and gravel -	Dry			

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)
_		

Adjusted unit production:

Adjusted fleet production:

501.63 LCY/hr

501.63 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.436/LCY

Total job time: 4.37 Hours
Total job cost: \$956

PROJECT IDENTIFICATION	lask descr	iption:	Spread	ı gravel in	2.1 acre gra	avel area		
Task #: 002	: Ghost R	River Gravel 1	Pit	Per	mit Action:		Permit/Job#:	M2024029
Task #: 002	DDOIEC	T IDENTIE	TCATIO	N T				
Date:	PROJEC	1 IDENTIF	ICATIO	<u>IN</u>				
User: AMG	Task #:						Abbreviation:	None
Agency or organization name: DRMS			4	County:	Huerfano		Filename:	2
Basic Machine:	User:	AMG						
Basic Machine:	A	gency or orga	nization n	ame: D	RMS			
Horsepower: Semi-Universal Attachment: NA Shift Basis: 1 per day Data Source: (CRG)	HOURLY	Y EQUIPMI	ENT COS	<u>ST</u>				
Blade Type:	Basic M	[achine: Ca	t D7R DS	XR Series	II			
Attachment: Shift Basis: 1 per day Data Source: (CRG) Cost Breakdown: Utilization % Ownership Cost/Hour: \$90.24 NA Operating Cost/Hour: \$90.00 NA Ripper own. Cost/Hour: \$0.00 NA Ripper oyn. Cost/Hour: \$0.00 O Operator Cost/Hour: \$207.78 Total unit Cost/Hour: \$227.78 Total Unit Cost/Hour: \$227.78 Total Fleet Cost/Hour: \$227.78 Total Fleet Cost/Hour: \$227.78 MATERIAL QUANTITIES Initial Volume: 847 Swell factor: 1.060 Loose volume: 898 LCY Source of estimated volume: Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Average push distance: 1,022.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: -5 % Average push gradient: -5 % Average push gradient: -5 5 Average site altitude: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Operator Skill: 0.750 Operator Skill: 0.100 Operator S	Horse	epower: 24	0			<u> </u>		
Shift Basis:	Blad	e Type: Se	mi-Univer	sal				
Data Source: (CRG)	Atta	chment: NA	A					
Cost Breakdown:								
Ownership Cost/Hour: \$90.24 NA	Data	Source: (C	RG)			<u></u>		
Ownership Cost/Hour: \$90.24 NA	Cost Break	down:						
Ownership Cost/Hour: Operating Cost/Hour: Sipper own. Cost/Hour: Sipper op. Cost/Hour: Sipper op. Cost/Hour: Signer op. Cost/Hour: S						<u>Utilization %</u>		
Ripper own. Cost/Hour: Ripper op. Cost/Hour: S0.00 Operator Cost/Hour: S207.78 Total unit Cost/Hour: S207.78 MATERIAL QUANTITIES Initial Volume: Save of estimated volume: Source of estimated volume: Source of estimated swell factor: Unadjusted hourly production: Materials consistency description: Material weight: S0.00 NA NA NA S207.78 NA S207.78 S207.78 S207.78 S207.78 Sinches deep across 2.1 acres Cat Handbook HOURLY PRODUCTION Average push distance: Unadjusted hourly production: S0.02.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: S0.674 feet Material weight: S0.674 feet Material weight: S0.674 feet Source Operator Skill: O.750 Operator Skill: OPERATOR SAMPA OPER						NA		
Ripper op. Cost/Hour: Operator Cost/Hour: S38.59 NA Total unit Cost/Hour: S207.78 Total Fleet Cost/Hour: S207.78 MATERIAL QUANTITIES Initial Volume: S98 LCY Source of estimated volume: Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Average push distance: Unadjusted hourly production: Materials consistency description: Average push gradient: Average site altitude: Average site altitude: Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Operator Skill: Operator Skill: Advarial consistency: Operator Skill: Operator						100		
Operator Cost/Hour: \$38.59 NA Total unit Cost/Hour: \$207.78 Total Fleet Cost/Hour: \$207.78 MATERIAL QUANTITIES Initial Volume: 847 Swell factor: 1.060 Loose volume: 898 LCY Source of estimated volume: Cat Handbook HOURLY PRODUCTION Average push distance: 50 feet Unadjusted hourly production: 1,022.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: -5 % Average site altitude: 5,674 feet Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)								
Total unit Cost/Hour: \$207.78 Total Fleet Cost/Hour: \$207.78 MATERIAL QUANTITIES Initial Volume: 847 Swell factor: 1.060 Loose volume: 898 LCY Source of estimated volume: Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Average push distance: 50 feet Unadjusted hourly production: 1.022.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: -5 % Average site altitude: 5.674 feet Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Operator Skill: 0.750 Source Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)						0		
MATERIAL QUANTITIES Initial Volume: 847 Swell factor: 1.060 Loose volume: 898 LCY Source of estimated volume: Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Average push distance: 50 feet Unadjusted hourly production: 1,022.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: -5 % Average site altitude: -5,674 feet Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)	Operato	r Cost/Hour:			\$38.59	NA		
Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Average push distance: 50 feet Unadjusted hourly production: 1,022.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: -5 % Average site altitude: 5,674 feet Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)	MATERI Initial Vo Swell	IAL QUANT plume: 847 factor: 1.00	FITIES 50					
Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Average push distance: 50 feet Unadjusted hourly production: 1,022.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: -5 % Average site altitude: 5,674 feet Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)	Source of a	estimated volu	me:	3inches o	leen across 2	.1 acres		
Average push distance: 50 feet Unadjusted hourly production: 1,022.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: -5 % Average site altitude: 5,674 feet Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)			-					
Average push distance: 50 feet Unadjusted hourly production: 1,022.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: -5 % Average site altitude: 5,674 feet Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)			-					
Unadjusted hourly production: 1,022.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: -5 % Average site altitude: 5,674 feet Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Source Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)	HOURL	Y PRODUC	TION					
Unadjusted hourly production: 1,022.9 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: -5 % Average site altitude: 5,674 feet Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Source Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)	A voroco n	ich dictoroo	4	(O foot				
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Average push gradient:	Onadjustee	i nourry produ		,022.7 LC	17111			
Average site altitude: 5,674 feet Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Source Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)	Materials o	onsistency de	scription:	Partly	consolidated	stockpile 1.1		
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Material weight: 2,550 lbs/LCY Weight description: Gravel - Dry Job Condition Correction Factor Source Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)				eet				
Weight description: Gravel - Dry	Material w	eight:	2,550 H	os/LCY				
Job Condition Correction FactorSourceOperator Skill:0.750(AVG.)Material consistency:1.100(CAT HB)							_	
Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)	•	-	-	2-1		~		
Material consistency: 1.100 (CAT HB)	Job Condit			^	750			
	1. /							
LIOZING Method: LIUU / NIV/, ST \	IV				.100	(50% SL)		

Visibility:	1.000	(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:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production: 619.88 LCY/hr
Adjusted fleet production: 619.88 LCY/hr

JOB TIME AND COST

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

Total job time: 1.45 Hours
Total job cost: \$301

Task description:	Sprea	id topsoil ir	Phase I Ar	ea (18.6 acres total)		
: _Ghost River Gr	avel Pit	Per	mit Action:	New Application Max Dist Phase 1 and 2	Permit/Job#:	M2024029
PROJECT IDE	NTIFICATIO)N				
	· · · · · · · · · · · · · · · · · · ·		C-11-		A 1-1ii	N
Task #: 003 Date: 11/20	6/2024	State:	Colorado Huerfano		Abbreviation: Filename:	None 3
User: AMC		County:	nueriano		riiename: _	3
						
Agency o	r organization i	name: DI	RMS			
HOURLY EQU	IPMENT CO	<u>ost</u>				
Basic Machine:	Cat D7R DS	XR Series	II			
Horsepower:	240			_		
Blade Type:	Semi-Unive	rsal				
Attachment:	3-shank ripp	er		<u> </u>		
Shift Basis:	1 per day			<u> </u>		
Data Source:	(CRG)			<u> </u>		
Cost Breakdown:						
				<u>Utilization %</u>		
Ownership Cost/I	Hour:		\$90.24	NA		
Operating Cost/I			\$78.95	100		
Ripper own. Cost/I			\$9.25	NA		
Ripper op. Cost/I	Hour:		\$1.04	20		
Operator Cost/I	Hour:		\$38.59	NA		
MATERIAL QU Initial Volume: Swell factor:	15,004 1.215					
Loose volume:	18,230 LCY					
Source of estimated Source of estimated HOURLY PRO	d swell factor:	4 acres an		res for resid 14.6 acres of	`rangeland	
Average push dista Unadjusted hourly		360 feet NA LCY/h	r			
Materials consister	ncy description:	Partly	consolidated	stockpile 1.1		
Average push grad Average site altitud		feet				
Material weight:	1,600	lbs/LCY			_	
Weight description	: Top So	oil				
Job Condition Corn				Source		
Op	erator Skill:		.750	(AVG.)		
	consistency:		.100	(CAT HB)		
Doz	ing method:		.100	(50% SL)		
	Visibility:	1.	.000	(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:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production: 988.33 LCY/hr
Adjusted fleet production: 988.33 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.221/LCY

Total job time: 18.45 Hours
Total job cost: \$4,022

REVEGETATION WORK

Task description: :: Ghost River Gravel Pit		Rangeland Area & 4 ac New Application Max Dist Phase 1 and 2		b#: M2024029
PROJECT IDENTIFIC Task #: 004	ATION State: Colorado		Abbreviation:	None
Date: 11/26/2024 User: AMG	County: Huerfano		Filename:	4
Agency or organiz	zation name: DRMS			
TILLING Description				Cost /Acre
Disc harrowing, 6" deep	(MEANS 32 91 13.23 6100)			\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	1.20	19.59	\$25.59
Sand Dropseed	0.10	11.94	\$1.30
Galleta	1.60	5.84	\$88.70
Western Wheatgrass - Arriba	16.00	40.40	\$144.54
Winter Fat	0.10	0.25	\$4.67
Totals Seed Mix	19.00	78.02	\$264.80

Total Tilling Cost/Acre

\$117.61

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$272.56
Total Seed Application Cost/Acre	\$272.56

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25

Total Mulch Application Cost/Acre	62.42.62
Total Mulch Application Cost/Acre	\$242.63

JOB TIME AND COST

No. of Acres: 18.6 Cost /Acre: \$1,883.16 Estimated Failure Rate: 25% Cost /Acre*: \$537.36

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$35,026.78

Reseeding Job Cost: \$2,498.72

Total Job Cost: \$37,526

Job Hours: 20.00

Permit/Job#: M2024029

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Permit Action: New Application Max

Dist Phase 1 and 2

PROJECT IDENTIFICATION

Task description:

Site: Ghost River Gravel Pit

Task #:005State:ColoradoAbbreviation:NoneDate:11/26/2024County:HuerfanoFilename:5

User: AMG

Agency or organization name: DRMS

EQUIPMENT TRANSPORT RIG COST

Mob/Demob

Shift basis: 1 per day
Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,

400 HP (2ND HALF, 2006)

Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT

TRAILER (25T, 50T, AND 100T)

Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

NON ROADABLE EQUIPMENT:

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 D7R DS XR	35.93	\$99.49	\$122.78	1	\$222.27	\$122.78	\$250.00
Series II							
Drill/Broadcast	25.00	\$41.02	\$59.44	2	\$200.92	\$118.88	\$500.00
Seeder with							
Tractor							
Power Mulcher	6.00	\$27.21	\$59.44	1	\$86.65	\$59.44	\$250.00
(Bowie LD-90)							

Subtotals: \$509.84 \$301.10 \$1,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Fuel Tanker, 4x2, 170 HP	\$55.22	1	\$55.22	\$55.22
Water Tanker, 2,500 Gal.	\$55.22	1	\$55.22	\$55.22
Light Duty Pickup, 4x4, 3/4 T.	\$119.71	1	\$119.71	\$119.71

Subtotals:	\$230.15	\$230.15
Subjudiais.	M2.3U.1.3	5430.13

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

PUEBLO

miles

55.00

mph

<u>Transportation Cycle Time:</u>

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.64	0.64
Return Time (Hours):	0.64	0.64
Loading Time (Hours):	0.67	NA
Unloading Time (Hours):	0.67	NA
Subtotals:	2.61	1.27

JOB TIME AND COST

Total job time:	5.23	Hours
Total job cost:	\$4,691	

COST SUMMARY WORK

	sk description: Reclamation Cost Summary				
e: _	Ghost River Gravel Pit Permit Action:	New Application	on	Permit/Joba	#: <u>M2024029</u>
PR	OJECT IDENTIFICATION				
	Task #: 000 State: Colorado		,	Abbreviation:	None
	Date: 11/26/2024 County: Huerfano			Filename:	M029-000
	User: AMG			=	
	Agency or organization name: DRMS				
TA	SK LIST (DIRECT COSTS)				
1.		Form	Fleet	Task	
k	Description	Used	Size	Hours	Cost
	Grade Highwalls to a 3H:1V	DOZER	1	4.37	\$956
	Spread gravel in 2.1 acre gravel area	DOZER	1	1.45	\$301
	Spread topsoil in Phase I Area (7 acres total)	DOZER	1	6.94	\$1,514
	Phase I Re-veg, 3 ac Rangleand Area & 4 ac Residential	REVEGE	1	7.00	\$14,122
	Mob/Demob	MOBILIZE	1	5.22	\$4,691
		SUBTO	OTALS:	24.98	\$21,584
	DIRECT COSTS	SUBTO	OTALS:	24.98	\$21,584
	DIRECT COSTS ERHEAD AND PROFIT:	SUBTO	OTALS:	24.98	\$21,584
	ERHEAD AND PROFIT: Liability insurance: 2.02	SUBTO	OTALS:	Total = \$4.	36
	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05	SUBTO	OTALS:	Total = \$4 Total = \$2	36 27
	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05 Job superintendent: 11.76	SUBTO	OTALS:	Total = \$4. Total = \$2. Total = \$9.	36 27 32
	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05	SUBTO		Total = \$4. Total = \$2. Total = \$9. Total = \$2.	36 27 32 ,158
	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05 Job superintendent: 11.76 Profit: 10.00		TOTAL	$\begin{array}{cccc} Total = & \$4 \\ Total = & \$2 \\ Total = & \$9 \\ Total = & \$2 \\ O \& P = & \$3 \end{array}$	36 27 32 ,158 ,753
	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05 Job superintendent: 11.76 Profit: 10.00	SUBTO	TOTAL	$\begin{array}{cccc} Total = & \$4 \\ Total = & \$2 \\ Total = & \$9 \\ Total = & \$2 \\ O \& P = & \$3 \end{array}$	36 27 32 ,158
OV	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05 Job superintendent: 11.76 Profit: 10.00	RACT AMOUNT	TOTAL	$\begin{array}{cccc} Total = & \$4 \\ Total = & \$2 \\ Total = & \$9 \\ Total = & \$2 \\ O \& P = & \$3 \end{array}$	36 27 32 ,158 ,753
OV	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05 Job superintendent: 11.76 Profit: 10.00 CONT	RACT AMOUNT	TOTAL	$\begin{array}{cccc} Total = & \$4 \\ Total = & \$2 \\ Total = & \$9 \\ Total = & \$2 \\ O \& P = & \$3 \end{array}$	36 27 32 ,158 ,753 5,337
OV	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05 Job superintendent: 11.76 Profit: 10.00 CONT	RACT AMOUNT: : \$500 4.25	TOTAL	Total = \$4 Total = \$2 Total = \$9 Total = \$2 O & P = \$3 O & P) = \$2 Total = \$5 Total = \$1	36 27 32 ,158 ,753 5,337
OV	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05 Job superintendent: 11.76 Profit: 10.00 CONT	RACT AMOUNT : \$500	TOTAL	Total = \$4 Total = \$2 Total = \$9 Total = \$2 O & P = \$3 O & P) = \$2 Total = \$5 Total = \$1	36 27 32 ,158 ,753 5,337
OV	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05 Job superintendent: 11.76 Profit: 10.00 CONT	RACT AMOUNT: : \$500 4.25	TOTAL	Total = \$4 Total = \$2 Total = \$9 Total = \$2 O & P = \$3 O & P) = \$2 Total = \$5 Total = \$1	36 27 32 ,158 ,753 5,337 00 ,077 ,267
OV	ERHEAD AND PROFIT: Liability insurance: 2.02 Performance bond: 1.05 Job superintendent: 11.76 Profit: 10.00 CONT GAL - ENGINEERING - PROJECT MANAGEMENT Financial warranty processing (legal/related costs): Engineering work and/or contract/bid preparation: Reclamation management and/or administration:	RACT AMOUNT: \$500 4.25 5.00	TOTAI Γ (direct +	Total = \$4 $Total = 2 $Total = 9 $Total = 2 $O & P = 3 $O & P) = 2 $Total = 5 $Total = 1 $Total = 0	36 27 32 ,158 ,753 5,337 00 ,077 ,267

PROJECT IDENTIFICATION Task #: 001 State: Colorado Date: 11/14/2024 County: Huerfano User: AMG Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D7R DS XR Series II Horsepower: 240 Blade Type: Semi-Universal Attachment: 3-shank ripper Shift Basis: 1 per day	Jew Application	Permit/Job#: Abbreviation: Filename:	M2024029 None M029-001
Task #: 001 State: Colorado Date: 11/14/2024 County: Huerfano User: AMG Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D7R DS XR Series II Horsepower: 240 Blade Type: Semi-Universal Attachment: 3-shank ripper			
Date: 11/14/2024 County: Huerfano User: AMG Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D7R DS XR Series II Horsepower: 240 Blade Type: Semi-Universal Attachment: 3-shank ripper			
Date: 11/14/2024 County: Huerfano User: AMG Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D7R DS XR Series II Horsepower: 240 Blade Type: Semi-Universal Attachment: 3-shank ripper			
User: AMG Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D7R DS XR Series II Horsepower: 240 Blade Type: Semi-Universal Attachment: 3-shank ripper			141025 001
Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D7R DS XR Series II Horsepower: 240 Blade Type: Semi-Universal Attachment: 3-shank ripper			
HOURLY EQUIPMENT COST Basic Machine: Cat D7R DS XR Series II Horsepower: 240 Blade Type: Semi-Universal Attachment: 3-shank ripper			
Basic Machine: Cat D7R DS XR Series II Horsepower: 240 Blade Type: Semi-Universal Attachment: 3-shank ripper			
Horsepower: 240 Blade Type: Semi-Universal Attachment: 3-shank ripper			
Blade Type: Semi-Universal Attachment: 3-shank ripper			
Attachment: 3-shank ripper			
Shift Basis: 1 per day			
Data Source: (CRG)			
Cost Breakdown:			
	<u>Utilization %</u>		
Ownership Cost/Hour: \$90.24	NA		
Operating Cost/Hour: \$78.95	100	<u> </u>	
Ripper own. Cost/Hour: \$9.25	NA		
Ripper op. Cost/Hour: \$1.56	30	<u> </u>	
Operator Cost/Hour: \$38.59	NA		
Initial Volume: 1,953 Swell factor: 1.124			
Loose volume: 2,194 LCY			
Source of estimated volume: Source of estimated swell factor: 500' x 20' max highwall Cat Handbook	dimensions, cut-fill me	thod	
HOURLY PRODUCTION			
Average push distance: 50 feet			
Unadjusted hourly production: 1,022.9 LCY/hr			
Materials consistency description: Compacted fill or emb	ankment 0.9		
Average push gradient: -5 % Average site altitude: 5,674 feet			
		-	
Average site altitude: 5,674 feet		-	
Average site altitude: 5,674 feet Material weight: 2,900 lbs/LCY Weight description: Sand and gravel - Dry Job Condition Correction Factor	Source	-	
Average site altitude: 5,674 feet Material weight: 2,900 lbs/LCY Weight description: Sand and gravel - Dry Job Condition Correction Factor Operator Skill: 0.750	(AVG.)	-	
Average site altitude: 5,674 feet Material weight: 2,900 lbs/LCY Weight description: Sand and gravel - Dry Job Condition Correction Factor		-	

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production: 501.63 LCY/hr
Adjusted fleet production: 501.63 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.436/LCY

Total job time: 4.37 Hours
Total job cost: \$956

Task description:	Sprea	d gravel in 2.1	acre gra	vel area		
: Ghost River G	ravel Pit	Permit A	Action: _	New Application	Permit/Job#:	M2024029
PROJECT IDE	NTIFICATIO	<u>)N</u>				
Task #: 002			olorado		Abbreviation:	None
	6/2024		uerfano		Filename:	M029-002
User: AM						
Agency of	or organization i	name: DRMS				
HOURLY EQU						
Basic Machine:		S XR Series II				
Horsepower:		XIX Series II		<u> </u>		
Blade Type:		rsal		<u> </u>		
Attachment:				_		
Shift Basis:	1 per day			_		
Data Source:	(CRG)			<u> </u>		
Cost Breakdown:						
				<u>Utilization %</u>		
Ownership Cost/			\$90.24	NA 100		
Operating Cost/			\$78.95	100		
Ripper own. Cost/ Ripper op. Cost/			\$0.00 \$0.00	NA 0		
Operator Cost/			\$38.59			
Operator Cost/	пош.		\$30.39	NA		
MATERIAL QU Initial Volume: Swell factor:	847					
Loose volume:	898 LCY					
Source of estimate Source of estimate		3inches deep Cat Handboo		1 acres		
HOURLY PRO	DUCTION					
Average push dista Unadjusted hourly		50 feet 1,022.9 LCY/hr	•			
Materials consister	ncy description:	Partly cons	olidated s	stockpile 1.1		
Average push grad Average site altitude		feet				
Material weight:	2,550	lbs/LCY			<u> </u>	
Weight description	n: Grave	l - Dry				
Job Condition Cor				Source		
	erator Skill: _	0.750		(AVG.)		
	consistency: _	1.100		(CAT HB)		
Doz	ing method:	1.100		(50% SL)		
	Visibility:	1.000		(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:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production: 619.88 LCY/hr
Adjusted fleet production: 619.88 LCY/hr

JOB TIME AND COST

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

Total job time: 1.45 Hours
Total job cost: \$301

Task description:	Spread	topsoil ir	n Phase I Ar	ea (7 acres total)		
: _Ghost River Gra	vel Pit	Per	mit Action:	New Application	Permit/Job#:	M2024029
PROJECT IDEN	TIFICATION	<u>N</u>				
Task #: 003		State:	Colorado		Abbreviation:	None
Date: 11/26	/2024	County:	Huerfano		Filename:	M029-003
User: AMG		J		_	-	
Agency or	organization na	me: DI	RMS			
HOURLY EQUI	PMENT COS	<u>T</u>				
Basic Machine:	Cat D7R DS	XR Series	II			
Horsepower:	240			<u> </u>		
Blade Type:	Semi-Univers					
Attachment:	3-shank rippe	r		<u> </u>		
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown:						
				<u>Utilization %</u>		
Ownership Cost/H	our:		\$90.24	NA		
Operating Cost/H	our:		\$78.95	100		
Ripper own. Cost/H			\$9.25	NA		
Ripper op. Cost/H	our:		\$1.04	20		
Operator Cost/H	our:		\$38.59	NA		
MATERIAL QU Initial Volume: Swell factor:	5,647 1.215					
Loose volume:	6,861 LCY					
Source of estimated Source of estimated	swell factor:	4 acres as		res for resid., 3 acres of	rangeland	
HOURLY PROD	<u>UCTION</u>					
Average push distar Unadjusted hourly p		60 feet A LCY/h	r			
Materials consistend	ey description:	Partly	consolidated	stockpile 1.1		
Average push gradic Average site altitude		et	<u> </u>			
Material weight:	1,600 lb	s/LCY				
Weight description:	Top Soi	1				
Job Condition Corre	ection Factor			Source		
	rator Skill:		.750	(AVG.)		
Material co			.100	(CAT HB)		
Dozir	ng method:		.100	(50% SL)		
	Visibility:	1	.000	(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:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production: 988.33 LCY/hr
Adjusted fleet production: 988.33 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.221/LCY

Total job time: 6.94 Hours
Total job cost: \$1,514

REVEGETATION WORK

Ghost River Gravel Pi	t Permit Action: New Application	n Permit/Jo	Permit/Job#: <u>M2024029</u>	
ROJECT IDENTIFIC Task #: 004	<u>CATION</u> State: Colorado	Abbreviation:	None	
Date: 11/26/2024	County: Huerfano		M029-004	
User: AMG				
Agency or organi LLING Description	zation name: <u>DRMS</u>		Cost /Acre	

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	1.20	19.59	\$25.59
Sand Dropseed	0.10	11.94	\$1.30
Galleta	1.60	5.84	\$88.70
Western Wheatgrass - Arriba	16.00	40.40	\$144.54
Winter Fat	0.10	0.25	\$4.67
Totals Seed Mix	19.00	78.02	\$264.80

Total Tilling Cost/Acre

\$117.61

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$272.56
Total Seed Application Cost/Acre	\$272.56

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25

Reveg	Wor	ksheet	Cont'	d
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Total Mulch Application Cost/Acre	\$242.63

JOB TIME AND COST

No. of Acres: $\frac{7}{25\%}$ Cost /Acre: $\frac{\$1,883.16}{\$537.36}$

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$13,182.12

Reseeding Job Cost: \$940.38

Total Job Cost: Job Hours: 7.00

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Mob/Demob				
te: Ghost River Gravel Pit	Pern	nit Action:	New Application	Permit/Jol	b#: <u>M2024029</u>
PROJECT IDENTIFICA	ATION				
Task #: 005 Date: 11/26/2024 User: AMG Agency or organize	County:	Colorado Huerfano		Abbreviation: Filename:	None M029-005
EQUIPMENT TRANSP	ORT RIG COST	<u>-</u>			1 per day
Truck Tractor I	Description: GEN	NERIC ON-	-HIGHWAY TRUCK		CRG Data DIESEL POWERED,
Truck Trailer I	Description:	GENERIC	FOLDING GOOSEN		•
Cost Breakdown:			·		

Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

NON ROADABLE EQUIPMENT:

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 D7R DS XR	35.93	\$99.49	\$122.78	1	\$222.27	\$122.78	\$250.00
Series II							
Drill/Broadcast	25.00	\$41.02	\$59.44	2	\$200.92	\$118.88	\$500.00
Seeder with							
Tractor							
Power Mulcher	6.00	\$27.21	\$59.44	1	\$86.65	\$59.44	\$250.00
(Bowie LD-90)							

Subtotals: \$509.84 \$301.10 \$1,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Fuel Tanker, 4x2, 170 HP	\$55.22	1	\$55.22	\$55.22
Water Tanker, 2,500 Gal.	\$55.22	1	\$55.22	\$55.22
Light Duty Pickup, 4x4, 3/4 T.	\$119.71	1	\$119.71	\$119.71

Subtotals:	\$230.15	\$230.15	
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EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

PUEBLO

miles

55.00

mph

<u>Transportation Cycle Time:</u>

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.64	0.64
Return Time (Hours):	0.64	0.64
Loading Time (Hours):	0.67	NA
Unloading Time (Hours):	0.67	NA
Subtotals:	2.61	1.27

JOB TIME AND COST

Total job time:	5.23	Hours
Total job cost:	\$4,691	

6.4.12 Exhibit L

Reclamation Costs

Reclamation cost estimates were calculated on a per acre basis and applied to maximum active mining area of 21.6 acres.

Direct Tasks	Unit	Quantity	Cost	Total Cost
Grading Highwalls		-		
3H:1V Pushdown	Hours	35		\$7700.00
Dozer				
Placing Topsoil/Fines				
Bull Dozer	Hours	6	\$145.00	\$870.00
Loader	Hours	6	\$145.00	\$870.00
Seeding				
Broadcasting	Hours	3	\$300.00	\$900.00
Seed Mix	Acre	1	\$1200.00	\$1200.00
Mulch	Acre	1	\$187.50	\$187.50
Tracking seed/mulch				
Dozer	Hours	0.33	\$154.00	\$50.82
Area Reclaimed	Acre	14.7		\$34,375.00
Mobilization Fee	Hours	1	\$100	\$100
Indirect Tasks				
Liability Insurance			0.0155	\$635.00
Performance Bond			0.015	\$615.00
Profit			0.1	\$4,099.00
Job Superintendent	Hours	20	\$88.00	\$1,760.00
Miscellaneous Indirect			0.0925	\$920.00
Total Bond				\$51,945.00

6.4.13 Exhibit M Other Permits and Licenses

• Huerfano County Special Use Permit.