

February 6, 2025

Scott Bakken Energy Fuels Resources (USA) Inc. 225 Union Blvd, Suite 600 Lakewood, CO 80228

RE: Whirlwind Mine, Permit No. 2007-044, Technical Revision (TR-2), Adequacy Review-2

Dear Mr. Bakken:

The Division of Reclamation, Mining and Safety (Division) is in the process of reviewing the above referenced Technical Revision in order to ensure that it adequately satisfies the requirements of the Colorado Mine Land Reclamation Act (Act) and the associated Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal and Designated Mining Operations (Rules). During review of the material submitted, the Division determined that the following issue(s) of concern need to be adequately addressed before the Technical Revision can be considered for approval. Please provide the following:

Exhibit E - Reclamation Plan

- 1. Pages E-7 and E8. With regards to burying on place the three HDPE pipelines is any sort of capping measures required?
 - a. Provide documentation from BLM that you have approval for the pipelines to be buried in place for final reclamation.

Exhibit L - Reclamation Costs

- 2. What are the anticipated job hours associated with the following user provided items?
 - a. BH1 Whirlwind decline bulkhead
 - b. 01W Water treatment sludge disposal -paste backfill
 - c. 01W Water treatment liner disposal
 - d. 01W Disposal of ion exchanger units
- 3. Please clarify if the quote from WRT for \$10,000 was per ion exchanger, so \$20,000 for both on site, OR for the system and a total of \$10,000 for disposal of the system.



Attached is a draft reclamation cost estimate. Total job hours and cost are subject to change based on adequacy responses. Please look it ever and let the Division know if any errors exist.

Please submit your response(s) to the above listed issue(s) by February 12, 2025. in order to allow the Division sufficient time for review. If you cannot address the above issues by February 12, 2025 please request an extension to the decision due date to ensure adequate time for the Division to review materials. A decision due date of February 15, 20254, has been set. If any adequacy issues remain by the decision due date the Division may deny your request.

The Division will continue to review your Technical Revision and will contact you if additional information is needed. If you require additional information, or have questions or concerns, please feel free to contact me.

Sincerely,

Amy Yeldell

Environmental Protection Specialist

Amy Geldell

Enclosures:

Draft TR-2 Reclamation Cost Estimate Bond table changes Demo hours and equipment table

Ec:

Travis Marshall, Senior EPS, DRMS Dawn Kolkman, Energy Fuels Jenniffer Whittington, BLM

COST SUMMARY WORK

Task descr	iption:	Update tasks ba	sed on TR-2		
Site: Whirlwi	ind Mine	Pe	rmit Action: TR2	Permit/Jol	b#: <u>M2007044</u>
<u>PROJECT</u>	IDENTIFI	<u>CATION</u>			
Task #:	ACY	State:	Colorado	Abbreviation:	None
Date:	2/6/2025	County:	Mesa	Filename:	M044-ACY
User:	ACY				

TASK LIST (DIRECT COSTS)

ask	Description	Form Used	Fle et Size	Task Hours	Cost
)1P	Removal of structures from Packrat Portal	DEMOLISH	1	49.02	\$8,274
)2p	Packrat-Seal Portal	MINESEAL	1	16.00	\$3,649
)3P	Packrat Re-establish 3H: 1V Slopes	DOZER	1	18.61	\$6,321
)4P	Packrat Pock 0.99 ac of slopes	EXCAVATE	1	25.11	\$13,044
)5P	Packrat Spread avalible topsoil over pcoking	EXCAVATE	1	2.96	\$1,539
06P	Packrat Cut/fil establish water bars on access rd	DOZER	1	7.00	\$2,377
)7P	Packrat Reveg 0.99 ac @ portal and 0.95 ac of access rd	REVEGE	1	24.00	\$16,250
)8P	Packrat Place obstruction boulders in place	LOADER	1	3.01	\$363
3H1	Whirlwind decline bulkhead construction	NA	1	1.00	\$465,340
1W	Whirlwind Demo of Structures at portal	DEMOLISH	1	150.00	\$138,227
)2W	Whirlwind Replace 11K cu/yrds of ore in portal	LOADER	1	67.54	\$8,141
)3W	Whirlwind Remove 18" of sub surface at ore pad	LOADER	1	7.98	\$962
)4W	Whirlwind Backfill portal	MINESEAL	1	16.00	\$3,649
)5W	Whirlwind Establish 3H: 1V Slopes on waste piles	DOZER	1	23.27	\$7,901
)6W	Whirlwind Rip 7.41 ac of compacted areas	RIPPER	1	12.69	\$4,386
)7W	Whirlwind Spread topsoil over 8.07 ac	DOZER	1	27.37	\$8,842
)8W	Whirlwind Reveg 8.07 ac + topsoil area 1.82 ac	REVEGE	1	16.00	\$54,864
)9W	Whirlwind Backfill Sediment Pond	DOZER	1	15.89	\$5,395
WP	Seal 2 air shafts	MINESEAL	1	32.00	\$41,293
2WP	Seal 2 power drops	BOREHOLE	1	24.00	\$3,786
SWP	Remove power drop lines	DEMOLISH	1	8.00	\$363
IWP	Rip vent and power drop areas prior to topsoil	RIPPER	1	2.22	\$768
SWP	Push topsoil over vent and power pads	DOZER	1	2.56	\$826
6WP	Reveg 1.1 ac of vent and power pads	REVEGE	1	16.00	\$9,408
MB1	Initial Mobilization	MOBILIZE	1	8.00	\$15,387
MB2	Secondary Mobilization	MOBILIZE	1	8.00	\$3,425

INDIRECT COSTS

OVERHEAD AND PROFIT:

 Liability insurance:
 2.02 Total =
 \$16,661

 Performance bond:
 1.05 Total =
 \$8,660

 Job superintendent:
 292.12 Total =
 \$23,156

 Profit:
 10.00 Total =
 \$82,478

Task # ACY

Profit: 10.00 $Total = \frac{\$82,478}{TOTAL O \& P = \frac{\$130,955}{\$955,735}}$

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500 Total = \$500

Engineering work and/or contract/bid preparation: 4.25 Total = \$40,619

Reclamation management and/or administration: 5.00 \$47,787

CONTINGENCY: 3.00 Total = \$24,743

TOTAL INDIRECT COST = \$244,604

TOTAL BOND AMOUNT (direct + indirect) = \$1,069,384

DEMOLITION WORK

,	Task description:	Removal of	structures fron	n Packrat Portal			
Site:	Whirlwind Mine		Permit Action:	TR2	Permit/s	Job#:	M2007044
PROJE	CT IDENTIFICATION	<u>N</u>					
Task #:	01P	State:	Colorado		Abbreviation:	Non	ne
Date:	2/6/2025	County:	Mesa		Filename:	M04	44-01P
User:	ACY	-					
	Agency or organiza	tion name:	DRMS				

UNIT COSTS

Location adjustment: 90.70 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Load out bins-load	12x12x22	Loading and 2 mile haul, no salvage - Machine loading	5.00	CY	\$21.15	\$105.75
shop doors	12x8	Hauling only, per mile, 12-18 CY truck - 50 mph average speed	120.00	MI	\$4.43	\$532.02
retaining wall	30' x 8'	Concrete retaining wall, 8' high, no reinforcing	300.00	LF	\$24.05	\$7,215.00
Load out footers	3' x 2' Dia	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft Max. 50 ft. push	48.00	LF	\$14.21	\$682.05
Load out Bins- haul	120 mi	Hauling only, per mile, 12-18 CY truck - 50 mph average speed	120.00	MI	\$4.43	\$532.02
Load out bins - dump fee	5 CY	Dump fees - Building construction materials.	5.00	CY	\$11.10	\$55.50

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	49.02	(unadjusted):	\$9,122.34	location):	\$8,273.96

SAFEGUARDING UNDERGROUND OPENINGS

	Task description:	Packrat-Sea	ıl Portal			
Site:	Whirlwind Mine		Permit Action:	TR2	Permit/.	Job#: <u>M2007044</u>
PROJE	CT IDENTIFICATION	<u>N</u>				
Task #: Date: User:	2/6/2025	State: County:	Colorado Mesa		Abbreviation: Filename:	None M044-02p
	Agency or organiza	tion name:	DRMS			
UNIT C	COSTS					

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Pakckrat Portal	12 x 10	Adit closure - backfilling (per opening)	1.00	EA	\$3,649.41	\$3,649.41

 Job Hours:
 16.00
 Total Cost:
 \$3,649.41

BULLDOZER WORK

Task description:	Pack	rat Re-estal	olish 3H: 1V	Slopes			
: Whirlwind Mine	e	Per	mit Action:	TR2		Permit/Job#:	M2007044
PROJECT IDEN	NTIFICATIO	<u>ON</u>					
Task #: 03P Date: 2/6/20 User: ACY	025	State: County:	Colorado Mesa			Abbreviation: Filename:	None M044-03P
	organization:	name: DF	RMS				
HOURLY EQUI							
Basic Machine:	Cat D8T - 8						
Horsepower:	310						
Blade Type:	Semi-Unive						
Attachment:	3-shank ripp	oer					
Shift Basis: Data Source:	1 per day (CRG)			_			
Cost Breakdown:	(Cito)						
Cost Dicardowii.					Utilization %		
Ownership Cost/H	Iour:		\$173.32		NA		
Operating Cost/H			\$109.71		100		
Ripper own. Cost/H			\$14.53		NA		
Ripper op. Cost/F	Iour:		\$1.99		25		
Operator Cost/H	Iour:		\$40.04		NA		
MATERIAL QU Initial Volume:	3,200						
Swell factor: Loose volume:	1.335 4,272 LCY						
Source of estimated Source of estimated		Reclamat Cat Hand					
HOURLY PROI	<u>DUCTION</u>						
Average push distar Unadjusted hourly p		100 feet 852.6 LCY/	/hr				
Materials consisten	cy description	Compa	cted fill or e	mbankn	nent 0.9		
Average push gradi Average site altitud		feet					
Material weight:	2,550	lbs/LCY				<u> </u>	
Weight description:	Sands	tone					
Job Condition Corre	ection Factor erator Skill:	0.	750		Source (AVG.)		
	onsistency:		900		(CAT HB))		
	ng method:		000		(GEN.)		
	Visibility:		000		(AVG.)		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2692

Adjusted unit production: 229.52 LCY/hr
Adjusted fleet production: 229.52 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$1.480/LCY

Total job time: 18.61 Hours
Total job cost: \$6,321

HYDRAULIC EXCAVATOR WORK

Task description:	Packrat Pock 0.99 ac of slo	pes		
Whirlwind Mine	Permit Action	: TR2	Permit/Job#	: <u>M2007044</u>
PROJECT IDENTI	FICATION			
Task #: 04P	State: Colorado)	Abbreviation:	None
Date: 2/6/2025	County: Mesa	5	Filename:	M044-04P
User: ACY				1110111011
-	DDMG			
	anization name: DRMS			
HOURLY EQUIPM				
Basic Machine:	Cat 320D L 9'-6" Stick		orsepower:	148
Attachment 1:	ROPS Cab		U , ,	21.55
				per day
		Da	ta Source:(CRG)
Cost Breakdown:				
0 11 0	/II	Utilization %		
Ownership Cost		NA 100		
Operating Cost		100		
Operator Cos		NA		
Total Unit Cost	/Hour: \$519.42	-		
Total Fleet Cos	t/Hour: \$519.42	_		
MATERIAL QUAN	TITIES			
Initial volume:	3,750 CCY	Swell factor:	1.000	
Loose volume:	3,750 LCY			
Source	of estimated volume: Reclam	ation Plan		
Source of 6	estimated swell factor: Cat Har	ndbook		
HOURLY PRODUC	<u>CTION</u>			
Excavator Cycle Time (load bucket, swing loaded, dump	bucket, swing empty)	<u>.</u>	
·	Basic Joh	Condition Description	: AVERAGE	
	Secondary Job Condition wi			
	Secondary 300 Condition wi	Cycle Time Value		minutes
Load Bucket Capacity		Cycle Time varae		
Zoue Buener cupuerty		р	ucket Size Class: M	Indium
D . 10	1.54		ucket Size Class:iv	Iedium
Rated Capaci		* '	50() 0 (75	
Bucket Fill Fact	-	Well blasted (60% - 75	0%) 0.675	
Adjusted Capaci	ty: LCY			
Job Condition Correction	n Factors	Site Al	titude: <u>6800</u> feet	
	Source			
Altitude Adj:	0.90 (CAT I			
Job Efficiency:	0.83 (1 shift/	day)		
Net Correction:	0.75 multipli	er		
U Ji	nadjusted Hourly Unit Production	n: 199.90	LCY/Hour	
	Adjusted Hourly Unit Production		LCY/Hour	
	Adjusted Hourly Fleet Production		LCY/Hour	
	•			
JOB TIME AND CO	<u>OST</u>			
		Total ioh time	25.11	Hours
JOB TIME AND CO		Total job time:	25.11	Hours

HYDRAULIC EXCAVATOR WORK

Task description:	Packrat Spre	Packrat Spread avalible topsoil over pcoking						
Whirlwind Mine		Permit Action	: TR2	·	Permit/Job#:	M2007044		
PROJECT IDENTII	FICATION							
Task #: 05P Date: 2/6/2025 User: ACY	Sta Coun		0	Ab	breviation: Filename:	None M044-05P		
Agency or orga	anization name:	DRMS						
HOURLY EQUIPM	ENT COST							
Basic Machine:	Cat 320D L 9'-	-6" Stick		Horsepower:	1	148		
Attachment 1:	ROPS Cab			Weight (MT):	2	1.55		
				Shift Basis: Data Source:		er day CRG)		
Cost Breakdown:				Data Source.	(C	,KO)		
Cost Breakdown.			Utilization %					
Ownership Cost		244.29	NA					
Operating Cost		218.49	100	_				
Operator Cost		\$56.64	NA	_				
Total Unit Cost	/Hour: \$	519.42	_					
Total Fleet Cos	t/Hour:	5519.42	_					
	<u>TITIES</u> 672 756	CCY LCY	Swell fac	etor: 1.125				
Source	of estimated volu	me: Reclam	nation Plan					
Source of e	estimated swell fac		ndbook					
HOURLY PRODUC	<u>CTION</u>							
Excavator Cycle Time (load bucket, swin	g loaded, dump	bucket, swing em	ipty):				
		Basic Ioh	Condition Descrip	otion: AVER	PAGE			
	Secondary Jo		thin Basic Descrip					
	J		Cycle Time V			minutes		
Load Bucket Capacity								
				Bucket Size	Class: Me	edium		
Rated Capacit		LCY (h						
Bucket Fill Factor			oam or sandy clay	(100% - 110%	1.050			
Adjusted Capacit		LCY						
Job Condition Correction	n Factors		Site	e Altitude: <u>680</u>	0 feet			
		Source						
Altitude Adj:	0.90	(CAT I						
Job Efficiency:	0.83	(1 shift/						
Net Correction:	0.75	multipli						
	nadjusted Hourly I			LCY/Hou				
	Adjusted Hourly I			LCY/Hou				
	Adjusted Hourly F	ieet Production	n: 255.19	LCY/Hou	Г			
JOB TIME AND CO	<u>)ST</u>							
Fleet size:	1 Exc	avator	Total job time:	2.9	96	Hours		
Unit cost: \$2	2.035 /LCY		Total job cost:	\$1,	539			
Ψ2	/201		Joo Cost.	Ψ-9•				

BULLDOZER WORK

Task description:	Pack	rat Cut/fil e	stablish wat	er bars o	on access rd		
: Whirlwind Min	e	Per	mit Action:	TR2		Permit/Job#:	M2007044
PROJECT IDEN	NTIFICATIO	<u>ON</u>					
Task #: 06P		State:	Colorado			Abbreviation:	None
Date: 2/6/2	025	County:	Mesa			Filename:	M044-06P
User: ACY		-				-	
Agency of	r organization	name: DF	RMS				
HOURLY EQU	IPMENT CO	OST					
Basic Machine:	Cat D8T - 8						
Horsepower:	310						
Blade Type:	Semi-Unive	ersal					
Attachment:	3-shank ripp	oer					
Shift Basis:	1 per day						
Data Source:	(CRG)			<u> </u>			
Cost Breakdown:							
				<u>I</u>	<u> Itilization %</u>		
Ownership Cost/H			\$173.32		NA		
Operating Cost/H			\$109.71		100		
Ripper own. Cost/H			\$14.53		NA 25		
Ripper op. Cost/H			\$1.99		25		
Operator Cost/H	lour:		\$40.04		NA		
MATERIAL QU Initial Volume: Swell factor:	1,597 1.430		_				
Loose volume:	2,284 LCY						
Source of estimated Source of estimated HOURLY PROI	l swell factor:	Reclamat Cat Hand					
Average push dista	<u>.</u>	100 feet					
Unadjusted hourly	production:	852.6 LCY	/hr				
Materials consisten	cy description:	Compa	cted fill or e	mbankme	ent 0.9		
Average push gradi Average site altitud		feet					
Material weight:	_3,300	lbs/LCY					
Weight description	: Decon	nposed rock	- 75% Rock	, 25% Ea	rth		
Job Condition Corr Ope	ection Factor erator Skill:	0.	750		Source (AVG.)		
	onsistency:		900		(CAT HB))		
	ng method:		000		(GEN.)		
	Visibility:		000		(AVG.)		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3827

Adjusted unit production: 326.29 LCY/hr
Adjusted fleet production: 326.29 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$1.041/LCY

Total job time: 7.00 Hours
Total job cost: \$2,377

REVEGETATION WORK

Task d	lescription:	Packrat Reveg 0.99 a	ıc @ portal an	d 0.95 ac of	access rd		
Wh	irlwind Mine	Permit Action: TR2 Permit/Job#:			: <u>M2007044</u>		
'ROJ	ECT IDENTIFI	CATION					
Tas	sk #: 07P	State: Co	lorado		Abl	oreviation:	None
	Date: 2/6/2025	County: Me					M044-07P
U	Jser: ACY						
	Agency or organ	nization name: DRMS					
ERT	<u>ILIZING</u>						
Aateria	als		77.41.7				1
Des	cription		Units / Acre	Unit	Cost	t / Unit	Cost /Acre
					\$		\$
					Tota	al Fertilizer Materials Cost/Acre	\$0.00
Applica Des	ation cription						Cost /Acre
							\$
			Total	Fertilizer A	Application	n Cost/Acre	\$0.00
<u> </u>	<u>NG</u>						
Des	cription						Cost /Acre
							\$
				Т	otal Tillin	g Cost/Acre	\$0.00
SEEDI	<u>ING</u>						
Cas	d Mis				Rate –	Seeds	Cost /Acre
Seed	d Mix				PLS LBS /	per SQ.	Cost /Acre
					Acre	FT	

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.60	9.79	\$17.19
Indian Ricegrass - Paloma	2.80	9.06	\$57.49
Crested Wheatgrass - Nordan	2.00	9.18	\$10.63
Pubescent Wheatgrass - Luna	4.00	8.26	\$20.02
Slender Wheatgrass - Pryor	2.60	9.49	\$16.07
Milk Vetch, Cicer - Lutana	0.40	1.33	\$3.92
Western Wheatgrass - Arriba	3.60	9.09	\$32.52
Needle and Thread	3.20	8.45	\$260.57
Flax, Lewis Blue	1.00	6.63	\$42.30

Saltbush, Four Wing	4.00	5.51	\$79.49
Penstemon, Palmer	0.20	4.42	\$15.59
Totals Seed Mix	24.40	81.23	\$555.78

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
Hay, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$36.14	\$36.14
Total Mulch Materials Cost/Acre				\$528.92

Application

Description		Cost /Acre
Hand spread, 1" deep (MEANS 32 91 13.16 0200)		\$4,017.20
Weed spray, hand, non-aquatic area, nox. [DMG]		\$209.61
	Total Mulch Application Cost/Acre	\$4,226.81

NURSERY STOCK PLANTING

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

JOB TIME AND COST

 No. of Acres:
 1.94
 Cost /Acre:
 \$5,584.07

 Estimated Failure Rate:
 50%
 Cost /Acre*:
 \$5,584.07

*Selected Replanting Work Items: SEEDING, MULCHING

Initial Job Cost: \$10,833.10

Reseeding Job Cost: \$5,416.55

Total Job Cost: Job Hours: 24.00

WHEEL LOADER – LOAD AND CARRY WORK

	1 acki at	Place obstruction	on boulders in	prace			
e: Whirlwind Mine		Permit Action	on: TR2		Per	mit/Job#:	M2007044
PROJECT IDEN	<u> </u>						
Task #: 08P		State: Colora	ado		Abbre	viation:	None
Date: 2/6/202	25	County: Mesa				lename:	M044-08P
User: ACY		<u> 1,1050</u>					
Agency or o	organization nam	ne: DRMS					
HOURLY EQUIP	PMENT COST	1					
Basic Machin		_		Horse	ower:		172
Attachment	· · · · · · · · · · · · · · · · · · ·		_		Basis:		er day
Attachment	1. KOI 5 Cab		_	Data S			CRG)
Cost Breakdown:			1				
O	4/II · ·	¢22.97	Utilizatio	on %			
Ownership C		\$32.87	NA 100				
Operating C Operator C		\$31.02 \$56.64	100 NA				
Total Unit C		\$120.53	INA				
Total Ollit C	OSt/110u1.	\$120.33	<u></u>				
Total Fleet C	Cost/Hour:	\$120.53					
MATERIAL QUA	ANTITIES						
Initial volume:	250	CCY	' Swe	ell factor: 1	.667		
Initial volume: Loose volume:	250 417	CCY		ell factor: 1	.667		
Loose volume:	417	LCY		ell factor: <u>1</u>	.667		
Loose volume: Sou	417	volume: Recla	amation Plan	ell factor: 1	.667		
Loose volume: Source of	417 rce of estimated of estimated swell	volume: Recla		ell factor: <u>1</u>	.667		
Loose volume: Source of	417 rce of estimated swell UCTION	volume: Reclaid I factor: Cat I	amation Plan Handbook			0.482	
Loose volume: Source of the s	417 rce of estimated of estimated swell UCTION Unadjuste	volume: Recla	amation Plan Handbook			0.483	minutes
Loose volume: Source of	417 rce of estimated of estimated swell UCTION Unadjuster	volume: Reclair Cat H	amation Plan Handbook ime (load, dum	p, maneuver):	Factor ((min.)	Source
Loose volume: Source of HOURLY PROD Loader Cycle Time: Cycle Time F	rce of estimated swell to the stimated swell	volume: Reclaid I factor: Cat I ed Basic Cycle T ustment - factor	amation Plan Handbook ime (load, dum not applicable (p, maneuver):	Factor ((min.)	Source (Cat HB)
Loose volume: Source of HOURLY PRODIT Loader Cycle Time: Cycle Time F Ma Stoo	Tree of estimated swell of estimated swell uCTION Unadjuster actors aterial: No adjuster kepile: No adj	volume: Reclar Cat I Cat	amation Plan Handbook ime (load, dum not applicable (not applicable (p, maneuver): 0.00 0.00	Factor (0.00	(min.) 00 00	Source (Cat HB) (Cat HB)
Loose volume: Source of the s	Tree of estimated swell of estimated swell uction Unadjuster actors atterial: No adjuster kepile: No adju	volume: Reclar Cat I and I seed Basic Cycle T sustment - factor ustment - factor	amation Plan Handbook ime (load, dum not applicable (not applicable (not applicable (p, maneuver): 0.00 0.00	Factor (0.000 0.00	(min.) 00 00 00	Source (Cat HB) (Cat HB) (Cat HB)
Loose volume: Source of S	417 rce of estimated swell UCTION Unadjuste Factors aterial: No adjuste ckpile: No adjuste rship: No adjuste ration: Incons	volume: Reclar Cat I and I seed Basic Cycle T seed	amation Plan Handbook ime (load, dum not applicable (not applicable (not applicable ().04	p, maneuver): 0.00 0.00 0.00	Factor (0.00 0.00 0.00 0.00 0.00	(min.) 00 00 00 00 40	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Loose volume: Source of the s	417 rce of estimated swell UCTION Unadjuste Factors aterial: No adjuste ckpile: No adjuste rship: No adjuste ration: Incons	volume: Reclaid factor: Cat I ed Basic Cycle T ustment - factor	amation Plan Handbook ime (load, dum not applicable (not applicable (not applicable ().04 not applicable (p, maneuver): 0.00 0.00 0.00 0.00	Factor (0.00 0.00 0.00 0.00 0.02	(min.) 00 00 00 00 40	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Loose volume: Source of S	417 rce of estimated swell UCTION Unadjuste Factors aterial: No adjuste ckpile: No adjuste rship: No adjuste ration: Incons	volume: Reclar Cat H ed Basic Cycle T ustment - factor istent operation (ustment - factor Net	amation Plan Handbook ime (load, dum not applicable (not applicable ().04 not applicable (t Cycle Time A	p, maneuver): 0.00 0.00 0.00 0.00 0.00 djustment:	Factor (0.00 0.00 0.00 0.00 0.02 0.00 0.02	(min.) 00 00 00 00 40 00 40	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Loose volume: Source of S	417 rce of estimated swell UCTION Unadjuste Factors aterial: No adjuste ckpile: No adjuste ration: Incons Farget: No adjuste	volume: Reclar land land land land land land land land	amation Plan Handbook ime (load, dum not applicable (not applicable (not applicable ().04 not applicable (p, maneuver): 0.00 0.00 0.00 0.00 0.00 djustment:	Factor (0.00 0.00 0.00 0.00 0.02	(min.) 00 00 00 00 40 00 40	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
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Loose volume: Source of S	Target: No adj	volume: Reclar land land land land land land land land	amation Plan Handbook ime (load, dum not applicable (not applicable (not applicable ().04 not applicable (t Cycle Time A ljusted Basic C	p, maneuver): 0.00 0.00 0.00 0.00 djustment: ycle Time:	Factor (0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	(min.) 00 00 00 00 40 00 40	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Loose volume: Source of S	Target: No adjusted in the string of estimated swell and the string of estimated swell and the string of estimated swell and the string of estimate in the string of estimated swell and estimat	volume: Reclar R	amation Plan Handbook ime (load, dum not applicable (not applicable (not applicable ().04 not applicable (t Cycle Time A ljusted Basic C	p, maneuver): 0.00 0.00 0.00 0.00 djustment: ycle Time:	Factor (0.00 0.00 0.00 0.00 0.00 0.052 ation 5.0	(min.) 00 00 00 00 40 00 40	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Loose volume: Source of S	Tarce of estimated swell of estimate in the swell of estimated swell of	volume: Reclar R	amation Plan Handbook ime (load, dum not applicable (not applicable (not applicable ().04 not applicable (t Cycle Time A ljusted Basic C	p, maneuver): 0.00 0.00 0.00 0.00 djustment: ycle Time:	Factor (0.00 0.00 0.00 0.00 0.00 0.052 ation 5.0	(min.) 00 00 00 00 40 00 40	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loose volume: Source of S	Tarce of estimated swell of estimated in the swell of estimated swell	volume: Reclar R	amation Plan Handbook ime (load, dum not applicable (not applicable (not applicable (to ap	p, maneuver): 0.00 0.00 0.00 0.00 djustment: ycle Time: 2" tire penetra 2" tire penetra	Factor (0.00 0.00 0.00 0.00 0.00 0.02 0.52 ation 5.0 ation 5.0	(min.) 00 00 00 00 40 00 40 23	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes
Loose volume: Source of S	Tree of estimated of estimated swell of estimate and conditions of the control of estimated swell of estimated swellows swell of estimated swell of est	volume: Reclar Reclar Red Reclar Red Reclar Red Red Reclar Red Res Reclar Reclar Red Reclar Recognization Recogniz	amation Plan Handbook ime (load, dum not applicable (not applicable (not applicable ().04 not applicable (t Cycle Time A ljusted Basic Cy ance, no water, ance, no water,	p, maneuver): 0.00 0.00 0.00 0.00 djustment: ycle Time: 2" tire penetra 2" tire penetra	Factor (0.00 0.00 0.00 0.00 0.02 0.02 0.52 ation 5.0 Trave	(min.) 00 00 00 00 40 00 40 23	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loose volume: Source of S	Tarce of estimated swell of estimated in the swell of estimated swell	volume: Reclar R	amation Plan Handbook ime (load, dum not applicable (not applicable (not applicable (to ap	p, maneuver): 0.00 0.00 0.00 0.00 djustment: ycle Time: 2" tire penetra 2" tire penetra	Factor (0.00 0.00 0.00 0.02 0.02 0.52 ation 5.0 Trave (min	(min.) 00 00 00 00 40 00 40 23	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes

Loader Worksheet Cont'd Task # 08P Page 2 of 2

			_	otal Travel Tim Fotal Cycle Tim		0.7424 1.2649	minutes minutes
Load Bucket Capacity	, -						
Rated Capa Bucket Fill Fac Adjusted Capa	ctor: () oulders, roots (80 -1009	%) 0.900	
Job Condition Correct Site Altitude: <u>6800</u> fee							
		Se	ource				
Altitude Adj	:1.00	(CA	AT HB)	<u></u>			
Job Efficiency	:0.83	(1 sh	nift/day)				
Net Correction	:0.83	mult mult	tiplier				
1	Jnadjusted Ho	ourly Unit Produc	ction:	166.49	LCY/H	Iour	
	Adjusted Ho	ourly Unit Produc	ction:	138.19	LCY/H	Iour	
	Adjusted Ho	urly Fleet Produc	ction:	138.19	LCY/H	Iour	
JOB TIME AND O	COST						
Fleet size:	1	Loader(s)	То	tal job time:		3.02	Hours

Unit cost: \$0.872 /LCY Total job cost: \$363

DEMOLITION WORK

Site:	Whirlwind Mine		Permit Action:	TR2	Permit/.	Job#: <u>M2007044</u>
OJEC	CT IDENTIFICATI	ON				
ask #:	01W	State:	Colorado		Abbreviation:	None
Date:	2/6/2025	County:	Mesa		Filename:	M044-01W
User:	ACY	_				

<u>UNIT COSTS</u>

Location adjustment: 90.70 %

Structure or Item		Demolition Menu				
Description	Dimensions	Selection	Quantity	Unit	Unit Cost	Total Cost
Water treatment	40 CY yrds	USER PROVIDED	40.00	CY	\$2,125.00	\$85,000.00
sludge disposal		ITEM				
Chain link fence	6' H x 1100 LF	Fencing, chain link, including posts and fabric - to 6 ft. high	1,100.00	LF	\$3.02	\$3,322.00
Barbed wire fence	3 strand	Fencing, barbed wire, - 3 strand	2,500.00	LF	\$1.82	\$4,550.00
Water treatment liner disposal	7000 sq/ft	USER PROVIDED ITEM	7,000.00	SF	\$6.50	\$45,500.00
Shop Building	40' x 50'	Bldg. (SN) demo./off- site disposal in approved landfill - Max. 60 mile haul	222.00	CF	\$0.76	\$168.85
Shop slab	40' x 50' x 6"	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	3,000.00	SF	\$1.24	\$3,719.10
Used Oil pad	8' x 10' x 4"	Demo. and on-site disposal in excavated pit, 4 in. thick - Max. 200 ft. push	80.00	SF	\$0.83	\$66.12
Aux. Slab	4' x 6' x 6"	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	24.00	SF	\$1.24	\$29.75
Ore pad sump	6' x 6' x 6"	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	36.00	SF	\$1.24	\$44.63
Disposal of Ion Exchanger Units	TR2	USER PROVIDED ITEM	1.00	EA	\$10,000.00	\$10,000.00

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	150.00	(unadjusted):	\$152,400.45	location):	\$138,227.21

WHEEL LOADER – LOAD AND CARRY WORK

Task description:	Whirlwi	nd Replace 11K	cu/yrds of ore	in portal		
e: Whirlwind Mine		Permit Action	on: TR2		Permit/Job#	: <u>M2007044</u>
PROJECT IDENT	TIFICATION					
Task #: 02W		State: Colora	ado		Abbreviation:	None
Date: $\frac{2/6}{202}$	25 (County: Mesa			Filename:	M044-02W
User: ACY		<u> </u>			1 11011111101	
Agency or o	organization nam	ne: DRMS				
HOURLY EQUIP	MENT COST	1				
Basic Machine				Horsepo	ower:	172
Attachment			=	Shift H		per day
	11012 040		=	Data So		CRG)
Cost Breakdown:						,
O	4/II · ·	¢22.07	Utilizatio	on %		
Ownership C Operating C		\$32.87 \$31.02	NA 100			
Operator C		\$56.64	NA			
Total Unit C		\$120.53	IVA			
		·	<u></u>			
Total Fleet C	Cost/Hour:	\$120.53				
MATERIAL QUA	NTITIES					
Initial volume:	11,000	CCY	' Swe	ell factor: 1.0	000	
Loose volume:	11,000	D LCY				
Sour	rce of estimated	volumo: Acco	pted estimate			
	of estimated swe		Handbook			
Source	or estimated swe	<u> </u>	Iundooon			
HOURLY PRODU	<u>UCTION</u>					
<u>Loader Cycle Time:</u>	Unadjuste	ed Basic Cycle T	ime (load, dum	p, maneuver):	0.483	minutes
Cycle Time F	actors				Factor (min.)	Source
		material 0.02			0.020	(Cat HB)
		ustment - factor			0.000	(Cat HB)
Truck Owne		ustment - factor		0.00	0.000	(Cat HB)
		ant operation -0.0)4		-0.040	(Cat HB)
Dump T	arget: Nomin	nal target 0.00	Cycle Time A	dingtment	0.000 -0.020	(Cat HB)
			ljusted Basic C		0.463	minutes minutes
			ijusicu Basic C	yele Tille.	0.403	
Rolling Resistance –	Road Condition	<u>S</u>				
Н	aul: Rutted d	irt, little mainten	ance, no water,	2" tire penetrat	tion 5.0	
Ret	urn: Rutted d	irt, little mainten	ance, no water,	2" tire penetrat	tion 5.0	
Haul and Return Tim	e					
	_				1	
		Grade Res	Rolling	Total Res	Travel Time	
	Length	Grade Res.	Rolling Res. (%)	Total Res.	Travel Time (minutes)	Source
Haul Route:		Grade Res. (%) 0.00	Rolling Res. (%) 5.00	Total Res. (%) 5.00	Travel Time (minutes) 0.2749	Source (Cat HB)

Total Travel Time: 0.5214 minutes Total Cycle Time: 0.9839 minutes **Load Bucket Capacity** Rated Capacity: 3.90 LCY (heaped) Blasted rock - avg. blasted (75 - 90%) 0.825 Bucket Fill Factor: 0.825 Adjusted Capacity: 3.22 LCY Job Condition Correction Factors Site Altitude: 6800 feet Source Altitude Adj: (CAT HB) Job Efficiency: 0.83 (1 shift/day) Net Correction: 0.83 multiplier Unadjusted Hourly Unit Production: 196.21 LCY/Hour Adjusted Hourly Unit Production: 162.85 LCY/Hour Adjusted Hourly Fleet Production: 162.85 LCY/Hour **JOB TIME AND COST** Fleet size: _____ Loader(s) Total job time: 67.55 Hours

Unit cost: ____ \$0.740 /LCY

\$8,141

Total job cost:

WHEEL LOADER – LOAD AND CARRY WORK

Task description:	Whirlwi	nd Remove 18"	of sub surface	at ore pau		
e: Whirlwind Mine		Permit Acti	ion: TR2		_ Permit/Job#	#: <u>M2007044</u>
PROJECT IDEN	<u>TIFICATION</u>					
Task #: 03W		State: Color	ado		Abbreviation:	None
Date: 2/6/20	25	County: Mesa			Filename:	
User: ACY					1 11011411101	
Agency or	organization nam	ne: DRMS				
HOURLY EQUI	PMENT COST	1				
Basic Machin		<u>-</u>		Horsep	oower.	172
Attachment			_			per day
Attachincht	1. KOI 5 Cau		_	Data S		(CRG)
Cost Breakdown:			1 17:44			(CITO)
Overn analysis (Cost/House	¢22.97	Utilizatio			
Ownership C Operating C		\$32.87 \$31.02	NA 100			
Operating C		\$56.64	NA			
Total Unit C		\$120.53	IVA			
Total Ollit C		Ψ120.55				
Total Fleet	Cost/Hour:	\$120.53				
MATERIAL QUA	ANTITIES					
Initial volume:		CC	Y Sw	ell factor: 1	.215	
Initial volume: Loose volume:	1,210	CC\		ell factor: 1	.215	
Loose volume:	1,210 1,470	LCY	7	ell factor: 1	.215	
Loose volume:	1,210 1,470 arce of estimated	volume: Recl	amation Plan	ell factor: <u>1</u>	.215	
Loose volume:	1,210 1,470	volume: Recl	7	ell factor: 1	.215	
Loose volume:	1,210 1,470 1,470 arce of estimated of estimated swe	volume: Recl	amation Plan	ell factor: <u>1</u>	.215	
Loose volume: Sou Source	1,210 1,470 1,470 arce of estimated of estimated swe	volume: Recl	amation Plan Handbook			minutes
Loose volume: Source HOURLY PROD	1,210 1,470 1,470 1,210 1,	volume: Recl ll factor: Cat	amation Plan Handbook			minutes Source
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time	1,210 1,470 1,470 arce of estimated swell UCTION Unadjusted Factors Autorial: Material	volume: Recl ll factor: Cat ed Basic Cycle T al 3/4" to 6" dia	Amation Plan Handbook Time (load, dum	p, maneuver):	0.483	
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I	1,210 1,470 1,470 1,470 1,470 Irce of estimated swe UCTION Unadjusted Factors aterial: Materickpile: No adj	volume: Recl ll factor: Cat ed Basic Cycle T al 3/4" to 6" dia ustment - factor	amation Plan Handbook Time (load, dum meter 0.00 not applicable (p, maneuver):	0.483 Factor (min.) 0.000 0.000	Source (Cat HB) (Cat HB)
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own	1,210 1,470 1,470 1,470 Irce of estimated swe UCTION Unadjuste Factors aterial: Materi ckpile: No adj ership: No adj	volume: Recl ll factor: Cat ed Basic Cycle T al 3/4" to 6" dia ustment - factor ustment - factor	amation Plan Handbook Time (load, dum meter 0.00 not applicable (not applicable)	p, maneuver):	0.483 Factor (min.) 0.000 0.000 0.000	Source (Cat HB) (Cat HB) (Cat HB)
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own	1,210 1,470 1,470 1,470 Irce of estimated swe UCTION Unadjuste Factors aterial: Materi ckpile: No adj ership: No adj eration: Incons	volume: Recled factor: Cat al 3/4" to 6" dia ustment - factor ustment - factor istent operation	amation Plan Handbook Time (load, dum meter 0.00 not applicable (not applicable)	p, maneuver):	0.483 Factor (min.) 0.000 0.000 0.000 0.040	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own	1,210 1,470 1,470 1,470 Irce of estimated swe UCTION Unadjuste Factors aterial: Materi ckpile: No adj ership: No adj eration: Incons	volume: Recled factor: Cat al 3/4" to 6" dia ustment - factor ustment - factor istent operation al target 0.00	amation Plan Handbook Time (load, dum meter 0.00 not applicable (not applicable (0.04	p, maneuver): 0.00 0.00	0.483 Factor (min.) 0.000 0.000 0.000 0.040 0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own	1,210 1,470 1,470 1,470 Irce of estimated swe UCTION Unadjuste Factors aterial: Materi ckpile: No adj ership: No adj eration: Incons	volume: Reclar R	amation Plan Handbook Time (load, dum meter 0.00 not applicable (not applicable (0.04 t Cycle Time A	p, maneuver): 0.00 0.00 djustment:	0.483 Factor (min.) 0.000 0.000 0.000 0.040 0.000 0.040	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own	1,210 1,470 1,470 1,470 Irce of estimated swe UCTION Unadjuste Factors aterial: Materi ckpile: No adj ership: No adj eration: Incons	volume: Reclar R	amation Plan Handbook Time (load, dum meter 0.00 not applicable (not applicable (0.04	p, maneuver): 0.00 0.00 djustment:	0.483 Factor (min.) 0.000 0.000 0.000 0.040 0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own	1,210 1,470 1,	volume: Recl ll factor: Cat al 3/4" to 6" dia ustment - factor ustment - factor istent operation hal target 0.00 Ne	amation Plan Handbook Time (load, dum meter 0.00 not applicable (not applicable (0.04 t Cycle Time A	p, maneuver): 0.00 0.00 djustment:	0.483 Factor (min.) 0.000 0.000 0.000 0.040 0.000 0.040	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own Ope Dump ' Rolling Resistance -	1,210 1,470 1,470 1,470 Irce of estimated swe UCTION Unadjuste Factors aterial: Materi ckpile: No adj ership: No adj ership: No adj ership: Incons Target: Nomin	volume: Recl ll factor: Cat al 3/4" to 6" dia ustment - factor ustment - factor istent operation hal target 0.00 Ne Act	amation Plan Handbook Time (load, dum meter 0.00 not applicable (not applicable (0.04 t Cycle Time A djusted Basic C	p, maneuver): 0.00 0.00 djustment: ycle Time:	0.483 Factor (min.) 0.000 0.000 0.000 0.040 0.040 0.040 0.523	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own Ope Dump T	1,210 1,470 1,470 1,470 Irce of estimated swe UCTION Unadjuste Factors aterial: Materi ckpile: No adj ership: No adj ership: No adj ership: No mir Road Condition: Road Condition: Haul: Rutted di	volume: Recl ll factor: Cat al 3/4" to 6" dia ustment - factor ustment - factor istent operation hal target 0.00 Ne	amation Plan Handbook Time (load, dum meter 0.00 not applicable (not applicable (0.04 at Cycle Time A djusted Basic C	p, maneuver): 0.00 0.00 djustment: ycle Time:	0.483 Factor (min.) 0.000 0.000 0.040 0.040 0.523	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own Ope Dump T	1,210 1,470 1,470 1,470 Irce of estimated swe UCTION Unadjuste Factors aterial: Materi ckpile: No adj ership: No adj ership: No adj ership: No mir Road Condition Haul: Rutted di Rutted di	volume: Recl ll factor: Cat al 3/4" to 6" dia ustment - factor ustment - factor istent operation hal target 0.00 Ne Additional target of the second	amation Plan Handbook Time (load, dum meter 0.00 not applicable (not applicable (0.04 at Cycle Time A djusted Basic C	p, maneuver): 0.00 0.00 djustment: ycle Time:	0.483 Factor (min.) 0.000 0.000 0.040 0.040 0.523	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own Ope Dump ' Rolling Resistance — H Re	1,210 1,470 1,	volume: Recl ll factor: Cat al 3/4" to 6" dia ustment - factor ustment - factor istent operation nal target 0.00 Ne Additional target of the second of the	amation Plan Handbook Time (load, dum meter 0.00 not applicable (0.04 t Cycle Time A djusted Basic C ance, no water, ance, no water,	p, maneuver): 0.00 0.00 djustment: ycle Time: 2" tire penetra 2" tire penetra	0.483 Factor (min.) 0.000 0.000 0.000 0.040 0.040 0.523 ation 5.0 ation 5.0	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own Ope Dump ' Rolling Resistance — H Re	1,210 1,470 1,	volume: Recl ll factor: Cat ed Basic Cycle T al 3/4" to 6" dia ustment - factor ustment - factor ustment operation hal target 0.00 Ne Add s irt, little mainten irt, little mainten Grade Res.	amation Plan Handbook Time (load, dum meter 0.00 not applicable (0.04 tt Cycle Time A djusted Basic C mance, no water, mance, no water, mance, no water, mance, no water,	p, maneuver): 0.00 0.00 djustment: ycle Time: 2" tire penetra 2" tire penetra	0.483 Factor (min.) 0.000 0.000 0.000 0.040 0.040 0.523 ation 5.0 Travel Time	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loose volume: Source HOURLY PROD Loader Cycle Time: Cycle Time I M Sto Truck Own Ope Dump ' Rolling Resistance — H Re	1,210 1,470 1,	volume: Recl ll factor: Cat al 3/4" to 6" dia ustment - factor ustment - factor istent operation nal target 0.00 Ne Additional target of the second of the	amation Plan Handbook Time (load, dum meter 0.00 not applicable (0.04 t Cycle Time A djusted Basic C ance, no water, ance, no water,	p, maneuver): 0.00 0.00 djustment: ycle Time: 2" tire penetra 2" tire penetra	0.483 Factor (min.) 0.000 0.000 0.000 0.040 0.040 0.523 ation 5.0 ation 5.0	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes

			Total Travel Tin Total Cycle Tin		0.3476 0.8701	minutes minutes
Load Bucket Capacity						
Rated Capacity	7:	LCY (heap	ped)			
Bucket Fill Factor	r: 0.825	Blasted ro	ck - avg. blasted	(75 - 90)	%) 0.825	
Adjusted Capacity	<i>7</i> : 3.22	LCY				
Job Condition Correction Site Altitude: <u>6800</u> feet	Factors					
		Source				
Altitude Adj:	1.00	(CAT HB))			
Job Efficiency:	0.83	(1 shift/day	<u>')</u>			
Net Correction:	0.83	multiplier				
	adjusted Hourly Uni Adjusted Hourly Uni		221.87 184.15	LCY/I		
	djusted Hourly Flee		184.15	LCY/I	Hour	
JOB TIME AND CO	<u>ST</u>					
Fleet size:	Loader(s)	Total job time: _		7.98	Hours

Unit cost: \$0.654 /LCY Total job cost: \$962

SAFEGUARDING UNDERGROUND OPENINGS

Ta	ask description:	Whirlwind	Backfill portal			
Site:	Whirlwind Mine		Permit Action:	TR2	Permit/3	Job#: <u>M2007044</u>
<u>ROJEC</u>	T IDENTIFICATIO	<u>N</u>				
Task #:	04W	State:	Colorado		Abbreviation:	None
Date: User:	2/6/2025 ACY	County:	Mesa		Filename:	M044-04W
	Agency or organization	ation name:	DRMS			

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Whirlwind Portal	10' x 12'	Adit closure - backfilling (per opening)	1.00	EA	\$3,649.41	\$3,649.41

BULLDOZER WORK

Task description:	Whirly	vind Establish 3H: 1V	Slopes on waste piles		
Whirlwind Mine		Permit Action:	TR2	Permit/Job#:	M2007044
PROJECT IDENT	TFICATIO	<u>N</u>			
Task #: 05W		State: Colorado		Abbreviation:	None
Date: $\frac{0.5 \text{ W}}{2/6/202}$	5	County: Mesa		Filename:	M044-05W
User: $\frac{2707202}{ACY}$	<u> </u>	County. <u>Wiesa</u>		Thename.	W1044-03 W
Agency or o	rganization na	ime: DRMS			
HOURLY EQUIP	MENT COS	<u>ST</u>			
	Cat D8T - 8S	U			
Horsepower:	310				
- I	Semi-Univers				
	3-shank rippe	r			
	1 per day		<u></u>		
Data Source:	(CRG)				
Cost Breakdown:					
			<u>Utilization %</u>		
Ownership Cost/Hou	ır:	\$173.32	NA		
Operating Cost/Hor	ır:	\$109.71	100		
Ripper own. Cost/Hor		\$14.53	NA		
Ripper op. Cost/Hor	ır:	\$1.99	25		
Operator Cost/Hor	ır:	\$40.04	NA		
Tatal Cart/III	\$220.50				
Total unit Cost/Hour: Total Fleet Cost/Hour	\$339.58 \$330.58				
Total Fleet Cost/Hour	** \$339.58	l			
MATERIAL QUA	NTITIES				
	1,000				
	.335				
Loose volume:5	5,340 LCY				
Source of estimated v	olume:	Previous calc			
Source of estimated s	well factor:	Cat Handbook			
HOURLY PRODU	ICTION				
Average push distance		00 feet			
Unadjusted hourly pro		52.6 LCY/hr			
Materials consistency	description:	Compacted fill or e	embankment 0.9		
Average push gradien	t: 15 %				
Average push gradien Average site altitude:	6,800 fe	et			
Material weight:	2,550 lb	os/LCY			
Weight description:	Sandsto	ne			
Job Condition Correct	tion Factor		Source		
	tor Skill:	0.750	(AVG.)		
Material con		0.900	(CAT HB))		
	method:	1.000	(GEN.)		
	isibility:	1.000	(AVG.)		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2692

Adjusted unit production: 229.52 LCY/hr
Adjusted fleet production: 229.52 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$1.480/LCY

Total job time: 23.27 Hours
Total job cost: \$7,901

BULLDOZER RIPPING WORK

	Task description	: <u>Wh</u>	irlwind Rip 7.41 ac of con	npacted areas				
Site	: Whirlwind M	line	Permit Action:	TR2	Pe	ermit/Job#	: <u>M20070</u>)44
	PROJECT ID	ENTIFICAT	<u>ION</u>					
	Task #: 06	W	State: Colorado		Abbı	eviation:	None	
		5/2025	County: Mesa			Filename:	M044-06	SW .
	User: AC	CY	·					
	Agency	or organization	n name: DRMS					
	HOURLY EQ	UIPMENT C	OST					
			nt D8T - 8SU		Horsepower:		310	
	Ripper Att		Shank Ripper	<u> </u>	Shift Basis:	1 .	per day	
					Data Source:		CRG)	<u> </u>
	Cost Breakdown	:						
		_			Utilization %			
		Ownership C		\$173.32	NA			
		Operating C		\$109.71	100			
		er Ownership C		\$14.53	NA 100			
	Rip	per Operating C Operator C		\$7.95 \$40.04	100 NA			
		Total Unit C		\$345.55	NA			
		Total Fleet C	Cost/Hour: \$345	5.55				
	MATERIAL (QUANTITIES	Sele Sele	cted estimating	g method: Area	Į.		
	Alternate Method	ds:						
Seismic:	NA		Bank Volume:	NA	BCY		NA	
Area:	7.41	acres	Rip Depth (ft):	2.50		29,887	INA	BCY or CC
ı ırcu.	7.11		<u> </u>			22,007		Der or ee
			imated quantity: Reclam	ation Pian				
	HOURLY PR	<u>ODUCTION</u>						
	Seismic:							
			Seismic Velocity:	NA	feet/seco	ond		
	Area:							
		Avera	ge Ripping Depth:	1.00	feet/pas	S		
			ge Ripping Width:	7.08	feet/pas			
		_	e Ripping Length:	100.00	feet/pass			
			rage Dozer Speed:e Maneuver Time:	88.00 0.25	feet/min minutes			
			etion per unit area:	0.23	acres/ho	•		
	Joh Condition Co		•	0.703				
	Job Condition Co							
	Ur	nadjusted Hourl	y Unit Production:	0.703	Acres/h	r		
			Site Altitude:	6,800	feet			
			Altitude Adj:	1.00	(CAT H			
			Job Efficiency:	0.83	(1 shift/			
			Net Correction:	0.83	multipli	er		
			Hourly Unit Production:	0.58	Acres/hr			
		·	Hourly Fleet Production:	0.58	Acres/hr			
	JOB TIME AN	ND COST						
	Fleet size:	1	_ Grader(s)	Total job tim	ne:1	2.69	Но	urs
	Unit cost:	\$591.852	Per acre	Total iob co	set· \$2	4.386		

BULLDOZER WORK

		lwind Spre	•			
Whirlwind Min	e	Per	mit Action:	TR2	Permit/Job#:	M2007044
PROJECT IDEN	NTIFICATIO	<u>ON</u>				
Task #: 07W		State:	Colorado		Abbreviation:	None
Date: 2/6/2	025	County:	Mesa		Filename:	M044-07W
User: ACY						
Agency or	organization	name: DF	RMS			
HOURLY EQUI	PMENT CO	<u>OST</u>				
Basic Machine:	Cat D8T - 8	SU				
Horsepower:	310			<u> </u>		
Blade Type:	Semi-Unive	rsal				
Attachment:	NA					
Shift Basis:	1 per day			_		
Data Source:	(CRG)			<u> </u>		
Cost Breakdown:						
				<u>Utilization %</u>		
Ownership Cost/H			\$173.32	NA		
Operating Cost/F			\$109.71	100		
Ripper own. Cost/H			\$0.00	NA 2.5		
Ripper op. Cost/F	·		\$0.00	25		
Operator Cost/H	Iour:		\$40.04	NA		
MATERIAL QU Initial Volume: Swell factor:	15,324 1.000					
-						
Loose volume:	15,324 LCY					
Loose volume: Source of estimated Source of estimated	l volume:	Reclamat Cat Hand	ion Plan E-1 book	5		
Source of estimated	l volume: I swell factor:			5		
Source of estimated Source of estimated HOURLY PROD	I volume: I swell factor: DUCTION nce:	Cat Hand	book	5		
Source of estimated Source of estimated HOURLY PROI Average push dista Unadjusted hourly	I volume: I swell factor: DUCTION nce: production:	Cat Hand	/hr			
Source of estimated Source of estimated HOURLY PROD Average push dista Unadjusted hourly Materials consisten	I volume: I swell factor: DUCTION nce: production:	Cat Hand	/hr	stockpile 1.1		
Source of estimated Source of estimated HOURLY PROI Average push dista Unadjusted hourly	I volume: I swell factor: DUCTION nce: production: cy description: ent:15 %	Cat Hand 100 feet 852.6 LCY	/hr			
Source of estimated Source of estimated HOURLY PROD Average push dista Unadjusted hourly Materials consisten Average push gradi	l volume: I swell factor: DUCTION nce: production: cy description: ent: e: -15 % 6,800	Cat Hand 100 feet 852.6 LCY	/hr			
Source of estimated Source of estimated HOURLY PROD Average push dista Unadjusted hourly Materials consisten Average push gradi Average site altitud	I volume: I swell factor: DUCTION nce: production: cy description: ent: e: 6,800 2,550	Cat Hand 100 feet 852.6 LCY Partly of	/hr consolidated			
Source of estimated Source of estimated HOURLY PROJECT Average push dista Unadjusted hourly Materials consistent Average push gradic Average site altitude Material weight: Weight description Job Condition Corr	l volume: I swell factor: DUCTION nce: production: cy description: ent: 6,800 2,550 Earth ection Factor	Cat Hand 100 feet 852.6 LCY Partly of feet lbs/LCY Dry packet	/hr consolidated	stockpile 1.1		
Source of estimated Source of estimated Source of estimated HOURLY PROJECT Average push dista Unadjusted hourly Materials consistent Average push gradit Average site altitude Material weight: Weight description Job Condition Correct Ope	l volume: I swell factor: DUCTION nce: production: cy description: ent:15 % e:6,800 2,550 Earth ection Factor erator Skill:	Cat Hand 100 feet 852.6 LCY Partly of feet lbs/LCY Dry packed	/hr consolidated	stockpile 1.1 Source (AVG.)		
Source of estimated Source of estimated Source of estimated HOURLY PRODE Average push distar Unadjusted hourly Materials consistent Average push gradic Average site altitude Material weight: Weight description Job Condition Corresponding Condition Corresponding Material control of the Condition Corresponding Conditi	l volume: I swell factor: DUCTION nce: production: cy description: ent: 6,800 2,550 Earth ection Factor	Cat Hand 100 feet 852.6 LCY Partly of feet lbs/LCY Dry packed	/hr consolidated	stockpile 1.1		

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

Net correction: 0.6567

Adjusted unit production: 559.90 LCY/hr
Adjusted fleet production: 559.9 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.577/LCY

Total job time: 27.37 Hours
Total job cost: \$8,842

REVEGETATION WORK

Task description:	Whirlwind Reveg 8.07	ac + topsoil	area 1.82 a	ac		
Whirlwind Mine	Permit Action: TR2 Permit/Job#:					: <u>M2007044</u>
PROJECT IDENTIFI	<u>ICATION</u>					
Task #: 08W Date: 2/6/2025 User: ACY	State: Color County: Mesa					None M044-08W
Agency or orga	nization name: DRMS					
FERTILIZING						
Laterials						
Description		Units / Acre	Unit	Cost	t / Unit	Cost /Acre
				\$		\$
				Tota	al Fertilizer Materials Cost/Acre	\$0.00
pplication Description						Cost /Acre
		Total	Fertilizer	Application	n Cost/Acre	\$0.00
TILLING						
Description Disc harrowing, 6" de	ep (MEANS 32 91 13.23 61)	00)				Cost /Acre \$117.61
		,	7	Γotal Tillin _į	g Cost/Acre	\$117.61
SEEDING						
Seed Mix				Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre

Blue Grama - Hachita

Indian Ricegrass - Paloma

Crested Wheatgrass - Nordan

Pubescent Wheatgrass - Luna

Slender Wheatgrass - Pryor

Milk Vetch, Cicer - Lutana

Needle and Thread

Saltbush, Four Wing

Flax, Lewis Blue

Western Wheatgrass - Arriba

CIRCES Cost Estimating Software	

\$17.19

\$57.49

\$10.63

\$20.02

\$16.07

\$32.52

\$42.30

\$79.49

\$260.57

\$3.92

0.60

2.80

2.00

4.00

2.60

0.40

3.60

3.20

1.00

4.00

9.79

9.06

9.18

8.26

9.49

1.33

9.09

8.45

6.63

5.51

Penstemon, Palmer	0.20	4.42	\$15.59
Totals Seed Mix	24.40	81.23	\$555.78

Application

Description		Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)		\$1,359.07
	Total Seed Application Cost/Acre	\$1,359.07

MULCHING and MISCELLANEOUS

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$36.14	\$36.14
Hydromulch, 1 ton/ac. rate {Materials Only}	1.00	ACRE	\$1,459.26	\$1,459.26
Total Mulch Materials Cost/Acre				\$1,495.40

Application

Description		Cost /Acre
NA-mulch application incl. with hydroseeding		\$0.00
Weed spray, hand, non-aquatic area, nox. [DMG]		\$209.61
	Total Mulch Application Cost/Acre	\$209.61

NURSERY STOCK PLANTING

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

JOB TIME AND COST

Cost /Acre: \$3,737.47 Cost /Acre*: \$3,619.86 No. of Acres: 9.89

Estimated Failure Rate: 50%

*Selected Replanting Work Items: SEEDING,MULCHING

Initial Job Cost: \$36,963.58
Reseeding Job Cost: \$17,900.21 Total Job Cost: **\$54,864** Job Hours: **16.00**

BULLDOZER WORK

Task description:	Whir	lwind Back	fill Sedimen	t Pond		
: Whirlwind Mine	e	Perr	nit Action:	TR2	Permit/Job#:	M2007044
PROJECT IDEN	TIFICATION	<u>ON</u>				
Task #: 09W Date: 2/6/20	025	State: County:	Colorado Mesa		Abbreviation: Filename:	None M044-09W
User: ACY		J				
Agency or	organization	name: DR	MS			
HOURLY EQUI	PMENT CO	<u>OST</u>				
Basic Machine:	Cat D8T - 8	SU		<u>—</u>		
Horsepower:	310					
Blade Type:	Semi-Unive			<u> </u>		
Attachment: Shift Basis:	3-shank ripp 1 per day	ber		<u></u>		
Data Source:	(CRG)			<u> </u>		
Cost Breakdown:						
O			¢172.22	<u>Utilization</u>	<u>%</u>	
Ownership Cost/H Operating Cost/H			\$173.32 \$109.71	NA 100		
Ripper own. Cost/H			\$14.53	NA		
Ripper op. Cost/H			\$1.99	25		
Operator Cost/H	-		\$40.04	NA		
Initial Volume: Swell factor:	4,608 1.165					
Loose volume:	5,368 LCY		_			
Source of estimated Source of estimated		Reclamati Cat Hand				
HOURLY PROI	<u>OUCTION</u>					
Average push distar Unadjusted hourly p		100 feet 852.6 LCY/	hr			
Materials consistend	cy description:	Compa	cted fill or e	mbankment 0.9		
Average push gradi Average site altitud		feet	_			
Material weight:	2,900	lbs/LCY				
Weight description:	Decor	nposed rock	- 50% Rock	, 50% Earth		
Job Condition Corre	ection Factor rator Skill:	0.7	750	Sou (AV		
	onsistency:		900	(CAT		
	ng method:		000	(GE		
	Visibility:		000	(AV		

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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3963

Adjusted unit production: 337.89 LCY/hr
Adjusted fleet production: 337.89 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$1.005/LCY

Total job time: Total job cost: 15.89 Hours \$5,395

SAFEGUARDING UNDERGROUND OPENINGS

Site:	Whirlwind Mine		Permit Action: _	TR2	Permit/.	Job#: M2007044
<u>ROJEC</u>	CT IDENTIFICAT	<u>ION</u>				
Task #:	1WP	State:	Colorado		Abbreviation:	None
Date:	2/6/2025	County:	Mesa		Filename:	M044-1WP
User:	ACY	_			<u> </u>	

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Air shaft	6' dia	Shaft closure - monolithic plug (per opening)	2.00	EA	\$20,646.59	\$41,293.18

Job Hours: ______ 32.00 ____ Total Cost: _____ \$41,293.18

BOREHOLE SEALING WORK

Site:	Whirlwind Mine		Permit Action:	TR2	Permit/.	Job#: <u>M2007044</u>
OJEC	T IDENTIFICATION	<u>ON</u>				
`ask #:	2WP	State:	Colorado		Abbreviation:	None
Date:	2/6/2025	County:	Mesa		Filename:	M044-2WP
User:	ACY					

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Seal Power drop holes	USER PROVIDED ITEM	6	5	2.00	EA	\$1,250.00	\$2,500.00
Plug W-1	Portland cement grout - 2 in. (labor, equip, materials)	2	150	150.00	LF	\$8.57	\$1,285.65

Job Hours: 24.00 Total Cost: \$3,786.00

DEMOLITION WORK

	Task descriptio	on: Remov	ve power drop lines					
Site:	Whirlwind Mine		Permit Action: TR2		Permit/Job#: <u>M2007044</u>			
<u>PROJE</u>	CT IDENTII	FICATION						
Task # Date User	2/6/2025 ACY	Cou or organization nam			Abbreviat Filena		I-3WP	
UNIT C	<u>OSTS</u>				Location	adjustment	<u>: 90.70 %</u>	
Struct	ure or Item		Demolition Menu					
	cription	Dimensions	Selection	Quantity	Unit	Unit Cost	Total Cost	
Des		Dimensions 200 LF of cable		Quantity 200.00	Unit LF		Total Cost \$400.00	

BULLDOZER RIPPING WORK

	Task description:	: Rip	vent and power drop are	as prior to top	osoil			
Site	: Whirlwind M	line	Permit Action:	TR2	Pe	rmit/Job#	: <u>M20070</u>	44
	PROJECT ID	ENTIFICATI	<u>ION</u>					
	Task #: 4WP State: Colorado				Abbro	eviation:	None	
		5/2025	County: Mesa		Filename: M044-4WP			VP
	User: AC		, <u> </u>				-	
	Agency	or organization	name: DRMS					
	HOURLY EQ	UIPMENT C	<u>OST</u>					
	Basic	Machine: Ca	t D8T - 8SU		Horsepower:		310	
	Ripper Att	tachment: 3-5	Shank Ripper		Shift Basis:		per day	
					Data Source:	(CRG)	
	Cost Breakdown	<u>.</u>						
					Utilization %			
		Ownership C		\$173.32	NA			
	ъ.	Operating C		\$109.71	100			
		er Ownership C		\$14.53	NA 100			
	Кірј	per Operating C		\$7.95	100			
		Operator C Total Unit C	-	\$40.04 \$345.55	NA			
		Total Fleet C	ost/Hour: \$345	5.55				
	MATERIAL (<u> UANTITIES</u>	Sele	cted estimating	g method: Area			
	Alternate Method	ds:						
Seismic:	NA		Bank Volume:	NA	BCY		NA	
Area:	1.10	acres	Rip Depth (ft):	2.00	Volume: 3	,549		BCY or CCY
		Source of esti	mated quantity: Reclam	ation Plan				
	HOURLY PRO		· · · · ·					
		<u>obeciion</u>						
	Seismic:				feet/seco	m d		
			Seismic Velocity:	NA	reet/seco	ilu		
	Area:							
			ge Ripping Depth:	1.00	feet/pass			
			ge Ripping Width:e Ripping Length:	7.08 50.00	feet/pass feet/pass			
			rage Dozer Speed:	88.00	feet/min			
	Average Maneuver Time: Production per unit area:			0.25	minutes/			
				0.596	acres/hou	-		
	Job Condition Co							
	Unadjusted Hourly Unit Production: 0.596				Acres/hr			
		•	Site Altitude:	6,800	feet			
			Altitude Adj:	1.00	(CAT H	B)		
			Job Efficiency:	0.83	(1 shift/d			
			Net Correction:	0.83	multiplie			
			Hourly Unit Production: Hourly Fleet Production:	0.49 0.49	Acres/hr Acres/hr			
	JOB TIME AND COST							
	Fleet size:	1	_ Grader(s)	Total job tim	ne:	.22	Но	urs
	Unit cost:	\$698.580	Per acre	Total iob co	st: \$	768		

BULLDOZER WORK

Task description:	Push to	psoil over vent and p	ower pads		
: Whirlwind Mine	9	Permit Action:	TR2	Permit/Job#:	M2007044
PROJECT IDEN	TIFICATION	<u> </u>			
Task #: 5WP		State: Colorado		Abbreviation:	None
Date: 2/6/20)25	County: Mesa		Filename:	M044-5WP
User: ACY			_		
Agency or	organization na	me: DRMS			
HOURLY EQUI	PMENT COS	<u>T</u>			
Basic Machine:	Cat D8T - 8SI	J			
Horsepower:	310				
Blade Type:	Semi-Univers	al			
Attachment:	NA				
Shift Basis:	1 per day				
Data Source:	(CRG)		<u>—</u>		
Cost Breakdown:					
-			<u>Utilization %</u>		
Ownership Cost/H		\$173.32	NA		
Operating Cost/H		\$109.71	100		
Ripper own. Cost/H		\$0.00	NA		
Ripper op. Cost/H		\$0.00	0		
Operator Cost/F	lour:	\$40.04	NA		
MATERIAL QU Initial Volume: Swell factor:	1,769 1.000				
Loose volume:	1,769 LCY				
Source of estimated Source of estimated	_	Reclamation Plan Cat Handbook			
HOURLY PROI	<u>OUCTION</u>				
Average push distant		0 feet 400.0 LCY/hr			
Unadjusted hourly p Materials consistence			stocknile 1 1		
		Partly consolidated	зыскрие 1.1		
Average push gradi Average site altitud		et			
Material weight:	2,550 lb	s/LCY		<u>—</u>	
Weight description:	Earth - I	Dry packed			
Job Condition Corre			Source		
	rator Skill:	0.750	(AVG.)		
	onsistency:	1.100	(CAT HB)		
Dozi	ng 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: 0.4941

Adjusted unit production: 691.74 LCY/hr
Adjusted fleet production: 691.74 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.467/LCY

Total job time: 2.56 Hours
Total job cost: \$826

REVEGETATION WORK

Whirlwind Mine	Permit Ac	tion: TR2			Permit/Job#	: <u>M2007044</u>
ROJECT IDENTIFICA	<u>TION</u>					
Task #: 6WP	State: Color County: Mesa					None M044-6WP
Date: 2/6/2025 User: ACY	County: <u>Mesa</u>				Filename:	MU44-6WP
Agency or organizat	tion name: DRMS					
ERTILIZING						
aterials						
Description		Units / Acre	Unit	Cost	t / Unit	Cost /Acre
				\$		\$
				Tota	al Fertilizer Materials Cost/Acre	\$0.00
pplication						
oplication Description						Cost /Acre
						Cost /Acre
		Tota	l Fertilizer	Application	n Cost/Acre	
Description		Tota	l Fertilizer	Application	n Cost/Acre	\$
Description		Tota	l Fertilizer	Application	n Cost/Acre	\$
Description LLING	MEANS 32 91 13.23 610		l Fertilizer	Application	n Cost/Acre	\$ \$0.00
Description LLING Description	MEANS 32 91 13.23 610				n Cost/Acre	\$ \$0.00 Cost /Acre
ILLING Description	MEANS 32 91 13.23 610					\$ \$0.00 Cost /Acre \$117.61

Seed Mix	PLS LBS / Acre	per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.60	9.79	\$17.19
Indian Ricegrass - Paloma	2.80	9.06	\$57.49
Crested Wheatgrass - Nordan	2.00	9.18	\$10.63
Pubescent Wheatgrass - Luna	4.00	8.26	\$20.02
Slender Wheatgrass - Pryor	2.60	9.49	\$16.07
Milk Vetch, Cicer - Lutana	0.40	1.33	\$3.92
Western Wheatgrass - Arriba	3.60	9.09	\$32.52
Needle and Thread	3.20	8.45	\$260.57
Flax, Lewis Blue	1.00	6.63	\$42.30
Saltbush, Four Wing	4.00	5.51	\$79.49

Penstemon, Palmer	0.20	4.42	\$15.59
Totals Seed Mix	24.40	81.23	\$555.78

Application

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

MULCHING and MISCELLANEOUS

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$36.14	\$36.14
Total Mulch Materials Cost/Acre				\$528.92

Application

Description		Cost /Acre
Hand spread, 1" deep (MEANS 32 91 13.16 0200)		\$4,017.20
Weed spray, hand, non-aquatic area, nox. [DMG]		\$209.61
	Total Mulch Application Cost/Acre	\$4,226.81

NURSERY STOCK PLANTING

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

JOB TIME AND COST

Cost /Acre: \$5,701.68 Cost /Acre*: \$5,701.68 No. of Acres: 1.1

Estimated Failure Rate: 50%

*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$6,271.85 Reseeding Job Cost: \$3,135.92 Total Job Cost: \$9,408 Job Hours: **16.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Initial Mobilizatio	n			
Site: Whirlwind Mine	Perm	it Action: TR	2	Permit/Jo	b#: <u>M2007044</u>
PROJECT IDENTIFIC	<u>CATION</u>				
Task #:MB1	State:	Colorado	A	Abbreviation:	None
Date: 2/6/2025	County:	Mesa		Filename:	M044-MB1
User: ACY					
Agency or organi	zation name: DRM	1S			
EQUIPMENT TRANSI	PORT RIG COST				
			Ch:	ft basis:	1 man day
			Cost Data		1 per day CRG Data
			Cost Data	bource	CKO Data
Truck Tractor	Description: GEN	ERIC ON-HIG			DIESEL POWERED,
			400 HP (2ND HA		
Truck Trailer	Description:	GENERIC FOL	DING GOOSENECK		_
			TRAILER (25T, 50T	T, AND 100T)	<u> </u>
Cost Breakdown:					
Available Rig Capacities	0-25 Tons	26-50 Tons	s 51+ Tons	_ ;	
Ownership Cost/Ho	our: \$10.44	\$22.18	\$23.94	_	
Operating Cost/Ho	our: \$26.48	\$54.55	\$55.65		

\$22.52

\$23.53

\$122.78

\$22.52

\$23.53

\$125.64

NON ROADABLE EQUIPMENT:

Total Unit Cost/Hour:

Operator Cost/Hour:

Helper Cost/Hour:

\$22.52

\$0.00

\$59.44

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	\$187.85	\$125.64	1	\$313.49	\$125.64	\$250.00
Cat 315D L 8'-6"	19.05	\$244.29	\$59.44	1	\$303.73	\$59.44	\$250.00
Stick							
CAT 938H	16.34	\$32.87	\$59.44	1	\$92.31	\$59.44	\$250.00
Hydroseeder with	28.00	\$45.21	\$122.78	1	\$167.99	\$122.78	\$250.00
Tractor							
CAT 246C	3.58	\$39.42	\$59.44	1	\$98.86	\$59.44	\$250.00
Cat 320D L 9'-6"	23.70	\$244.29	\$59.44	1	\$303.73	\$59.44	\$250.00
Stick							
CAT 450E	9.80	\$78.06	\$59.44	1	\$137.50	\$59.44	\$250.00
Drill/Broadcast	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
Seeder with							
Tractor							

Subtotals: \$1,518.07 \$605.06 \$2,000.00

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	\$78.53	1	\$78.53	\$78.53
Water Tanker, 3,500 Gal.	\$92.81	1	\$92.81	\$92.81

Generic 12-18 cy, 6x4	\$114.77	2	\$229.54	\$229.54	
Light Duty Pickup, 4x4, 1 T.	\$81.06	2	\$162.12	\$162.12	
Crew					
Light Duty Pickup, 4x4, 3/4 T.	\$97.64	1	\$97.64	\$97.64	

Subtotals: \$660.64 \$660.64

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
40.00
mph

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	1.50	1.50
Return Time (Hours):	1.50	1.50
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	4.00	3.00

JOB TIME AND COST

Total job cost: 8.00 Hours

Total job cost: \$15,387

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description	: See	condary Mobili	zation				
ite: Whirlwind M	line	Perm	nit Action: TR2	Permit/Jo	Permit/Job#: <u>M2007044</u>		
PROJECT IDE	NTIFICAT	<u>ION</u>					
Task #: M	B2	State:	Colorado	Abbreviation:	None		
Date: ${2/6}$	5/2025	County:	Mesa	Filename:	M044-MB2		
User: AC	CY	<u> </u>					
Agency	or organizatio	n name: DRN	AS				
87							
EQUIPMENT	TRANSPOR	T RIG COST	1				
EQUITIVE:		THIS COST	-				
					1 per day		
				Cost Data Source:	CRG Data		
Truc	k Tractor Desc	cription: GEN	NERIC ON-HIGHW	AY TRUCK TRACTOR, 6X4,	DIESEL POWERED,		
		1		400 HP (2ND HALF, 2006)			
Truc	k Trailer Desc	cription:	GENERIC FOLDIN	NG GOOSENECK, DROP DEC	K EQUIPMENT		
			TR	AILER (25T, 50T, AND 100T)			
Cort Dov. L. L.							
Cost Breakdown:							
Available Rig (0-25 Tons	26-50 Tons	51+ Tons			
	p Cost/Hour:	\$10.44	\$22.18	\$23.94			
	g Cost/Hour:	\$26.48	\$54.55	\$55.65			
Operato	r Cost/Hour:	\$22.52	\$22.52	\$22.52			
Helpe	r Cost/Hour	\$0.00	\$23.53	\$23.53			

NON ROADABLE EQUIPMENT:

Total Unit Cost/Hour:

\$59.44

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		
Hydroseeder with	28.00	\$45.21	\$122.78	1	\$167.99	\$122.78	\$250.00
Tractor							
Drill/Broadcast	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
Seeder with							
Tractor							

\$122.78

\$125.64

Subtotals: \$268.45 \$182.22 \$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.	\$81.06	1	\$81.06	\$81.06
Crew				
Light Duty Pickup, 4x4, 3/4 T.	\$97.64	1	\$97.64	\$97.64

0 1 1	\$178.70	\$178.70
Subtotale	\$1'/X'/II	\$17/X7/II

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

40.00

mph

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	1.50	1.50
Return Time (Hours):	1.50	1.50
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	4.00	3.00

JOB TIME AND COST

Total job cost: 8.00 Hours

Total job cost: \$3,425



Bond table changes TR-2

General Assumptions:

- Inflationary updates on all task for 2024 pricing
- Includes new Linkan water treatment system (TR-2)
- Whirlwind Bulkhead cost avg of 3 quotes provided under TR-2
- No Packrat contingency bulkhead since only surface was affected to date
- Updated user provided items
- Demo job hours and equipment used summarized on attached sheet.

Below is a table which summarizes the input changes made from CS-1 to TR-2. This table does not account for inflation or unit cost changes. Corresponding changes are also highlighted on the bond calculation.

Task	Form Used	Description
BH1	N/A	Avg Cost = \$465,340
		Iron Woman = \$575,000, Thirsty Bird = \$202,183, RAM = \$619,730
01P	Demo	Adjust total job hours - see attached sheet
02P	Mineseal	No Changes
03P	Dozer	No Changes
04P	Excavate	Switch to 320D since used for Demo
05P	Excavate	Switch to 320D since used for Demo
06P	Dozer	No Changes
07P	Reveg	No Changes
08P	Loader	No Changes
01W	Demo	Update user provided costs
		Adjusted total job hours – see attached sheet



		Water Treatment Sludge Disposal: 19CY generated, using past backfill becomes 40 CY. Quote Thirsty Bird \$85,000
		Water Treatment Liner Disposal: \$45,500 remove liner and haul to offsite landfill
		Add Disposal of Ion Exchanger Units : Quote from WRT \$10,000
02W	Loader	No Changes
03W	Loader	No Changes
04W	Mineseal	No Changes
05W	Dozer	No Changes
06W	Ripper	No Changes
07W	Dozer	15,324 CY
		Correct volume based on pg. E-15
08W	Reveg	Include seeding of spread topsoil footprint. Add 1.82 ac for total of 9.89 ac. Update method to hydro seeing and hydro mulch Pg E-16
		Reduced job hrs. based on seeding method
09W	Dozer	No Changes
1WP	Mineseal	No Changes
2WP	Borehole	Use quotes for plugging power drops
		Thirsty Bird Quote \$2,500
		Add-Monitoring Well abandonment 2" PVC ~150 ft deep
3WP	Demo	Update user provided costs
		Thirsty Bird Quote \$2 per LF pf wire
		3" HDPE, 2" HDPE, 6" HDPE ????
4WP	Ripper	No Changes
5WP	Dozer	No Changes
6WP	Reveg	No Changes
MB1	Mob	Updated for equipment used
MB2	Mob	No Changes

Indirect	No Changes
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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

Ec:

Travis Marshall, Senior EPS, Grand Junction DRMS

	J	lob Demo H	lours						
isk	Quantity	Unit	Min Hrs	Max Hrs	Crew	Crew			
oad Out bins - load	5	CY	0.33	0.33	B-17	B-17	Loader - 450E	Dump Truck, 8 C.Y., 220 H.P.	
hop doors	120	MI	7.2	7.2	B-34B	B-34B	Dump Truck, 12 C.Y., 400 H.P.		
etaining wall	300	LF	32.1	32.1	B-13K	B-13K	Excavator - 315D		
oad Out bins - load	48	LF	2.19	2.23	CIRCES 16	CIRCES 16	Dozer - D8	Excavator - 320D	Excavato
oad Out bins -haul	120	MI	7.2	7.2	B-34B	B-34B	Dump Truck, 12 C.Y., 400 H.P.		
oad Out bins - Dump fee	5	CY	-	-	-	-	-	-	
Total Total			49.02	49.06					
01W					_	_			
ask	Quantity	Unit	Min Hrs	Max Hrs	Crew	Crew			
Vater Treatment Sludge Dis	40	CY	?	?	?	?			
hain link fence	1,100	LF	50.6	50.6	B-6	B-6	Loader - 450E		
arbed wire fince	2,500	LF	92.5	92.5	-	-	-		
Vater treatement liner disp	7,000	SqFt	?	?	?	?			
shop building	222	CF	0.12	0.14	B-3	B-3	Track Loader - 963D		
Shop slab	3,000	SF	6.67	7.25	CIRCES 16	CIRCES 16	Dozer - D8	Excavator - 320D	Excavator
Jsed oil pad	80	SF	0.18	0.2	CIRCES 16	CIRCES 16	Dozer - D8	Excavator - 320D	Excavator
ux. slab	24	SF	0.05	0.06	CIRCES 16	CIRCES 16	Dozer - D8	Excavator - 320D	Excavator
Ore pad sump	36	SF	0.08	0.09	CIRCES 16	CIRCES 16	Dozer - D8	Excavator - 320D	Excavator
Disposal of ion exchanges	1	EA	?	?	?	?			
Total .			150.20	150.84					