

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

1313 Sherman Street, Room 215 Denver, CO 80203

May 13, 2019

Mark Gardner Whitewater Building Materials Cooperation 940 South 10th Street Grand Junction, CO 81501

RE: Gunnison River Gravel Pits, Permit No. M-2009-048, Technical Revision (TR-3) Approval

Dear Mr. Gardner:

On May 13, 2019 the Division of Reclamation, Mining and Safety (Division) <u>approved</u> the Technical Revision request (TR-3) submitted on April 17, 2019, addressing the following:

Revise Mine Plan: Mine Pit #1 then Pit #5, 2000 CY of stockpile and compacted area to remain

The terms of the TR-3 approved by the Division are hereby incorporated into Permit No. M-2009-048. All other conditions and requirements of the permit remain in full force and effect.

The estimated liability amount of \$91,664.00 exceeds the \$88,767.00 Financial Warranty currently held for this site. If you have not already done so, please submit additional bond in the amount of \$2,897.00. **Pursuant to Section 34–32.5–117(4) of the Colorado Land Reclamation Act, adequate Financial Warranty must be submitted to the Division within 60 days of the mailing date of this letter.** The additional amount needs to be accepted prior **Friday, July 12, 2019**. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted. The revision will not be final until the bond is approved by the Division.

If you require additional information, or have questions or concerns, please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 970-254-8511 or via email at amy.yeldell@ state.co.us

Sincerely,

Geldell

Amy Yeldell Environmental Protection Specialist

Cc: Travis Marshall, Senior EPS, Grand Junction DRMS



COST SUMMARY WORK

Т	Task descrip	tion:	TR-3 Update						
Site:	Gunnison	River Grave	l Pits Pe	ermit Action:	TR-3	Permit	Job#:	M2009048	
<u>P</u>]	Task #: Date:	IDENTIFIC ACY 5/1/2019 ACY	ATION State: County:	Colorado Mesa		Abbreviation Filenam		None 1048	

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
000	Walk Away Provision-Pit 5	NA	1	1.00	\$12,404
002	Pit 1-Regarde highwalls	DOZER	2	56.24	\$23,306
003	Pit 1-Topsoil application	DOZER	2	5.62	\$2,329
004	Pit 1-Reveg	REVEGE	1	4.00	\$2,657
005	Pit 5-Rip Stockpile area	RIPPER	2	5.45	\$2,443
006	Pit 5-Topsoil application	DOZER	2	22.01	\$9,122
007	Pit 5-Reveg	REVEGE	1	16.00	\$15,607
008	Initial Mob	MOBILIZE	1	3.06	\$3,934
009	Secondary Mob	MOBILIZE	1	3.06	\$1,645
		<u>SUBTC</u>	DTALS:	116.44	\$73,447

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$1,484
Performance bond:	1.05	Total =	\$771
Job superintendent:	58.22	Total =	\$4,253
Profit:	10.00	Total =	\$7,345
		TOTAL O & P =	\$13,852
		CONTRACT AMOUNT (direct + $O \& P$) =	\$87,299

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): Engineering work and/or contract/bid preparation: Reclamation management and/or administration:	\$0 0.00 5.00	Total = Total =	\$0 \$0 \$4,365
CONTINGENCY:	0.00	Total =	\$0
	1	TOTAL INDIRECT COST =	\$18,217
TOTAL BO	\$91,664		

Gunnison River Gravel Pits M-2009-048 Task: 000 Water Supply

Walk Away-Provision

Pit 5 completely dewatered (107ac/ft + depletions = 147 ac/ft), pay for out of priority refilling (BOR Blue Mesa cost)

147Ac/Ft @ \$84.38 = \$12,403.86

Total Water Cost \$12,403.86

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BULLDOZER WORK

Task description:	Pit 1-Re	garde highwalls			
Gunnison River G	ravel Pits	Permit Action:	TR-3	Permit/Job#:	M2009048
PROJECT IDENT	IFICATION				
Task #: 002		State: Colorado		Abbreviation:	None
Date: $5/1/2019$) (County: Mesa		Filename:	M048-002
User: ACY	·			T nenume.	11010 002
Agency or or	ganization nan	ne: DRMS			
HOURLY EQUIPM	MENT COST	<u>r</u>			
	Cat D8T - 8SU				
	310	1			
· · ·	Semi-Universa NA	1			
	NA 1 per day				
	(CRG)				
Cost Breakdown:					
		* ^ ~	<u>Utilization %</u>		
Ownership Cost/Hou		\$93.62	NA		
Operating Cost/Hou		\$73.35	100 NA		
Ripper own. Cost/Hou Ripper op. Cost/Hou		\$0.00 \$0.00	<u>NA</u> 0		
		\$0.00			
Operator Cost/Hou	1.	\$40.23	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$207.20 \$414.41				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUA	\$414.41 NTITIES				
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAI</u> Initial Volume: <u>2</u>	\$414.41 NTITIES 7,600				
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAI</u> Initial Volume: <u>2</u> Swell factor: <u>1</u>	\$414.41 NTITIES 7,600 .120				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2 Swell factor: 1	\$414.41 NTITIES 7,600 .120 0,912 LCY olume:	2300 LF 36'H 1:1 to 3 Cat Handbook	 3:1 cut fill, TR-3 Pit 1 m	ар	
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1. Loose volume: 3' Source of estimated volume swell stated volume	\$414.41 NTITIES 7,600 .120 0,912 LCY olume: 2 vell factor: 0		3:1 cut fill, TR-3 Pit 1 m	ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1. Loose volume: 3' Source of estimated vo Source of estimated sw HOURLY PRODU 1'	\$414.41 NTITIES 7,600 .120 0,912 LCY olume: vell factor: CTION		3:1 cut fill, TR-3 Pit 1 m	ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1. Loose volume: 3' Source of estimated volume swell stated volume	\$414.41 NTITIES 7,600 .120 0,912 LCY olume: vell factor: CTION :11	Cat Handbook	3:1 cut fill, TR-3 Pit 1 m	ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1. Loose volume: 3' Source of estimated volume swell Source of estimated swell HOURLY PRODU Average push distance State	\$414.41 NTITIES 7,600 .120 0,912 LCY olume: vell factor: CTION : duction:	Cat Handbook 5 feet		ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1 Loose volume: 30 Source of estimated volume 30 Source of estimated sw 4000000000000000000000000000000000000	\$414.41 NTITIES 7,600 .120 0,912 LCY olume: vell factor: CTION : duction:77 description: :5 %	Cat Handbook 5 feet 6.8 LCY/hr Compacted fill or e		ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1. Loose volume: 30 Source of estimated volume 30 Source of estimated sw HOURLY PRODU Average push distance Unadjusted hourly pro Materials consistency 10	\$414.41 \$414.41 NTITIES 7,600 .120 0,912 LCY olume: 2 vell factor: 0 CTION : 11 duction: 77 description:	Cat Handbook 5 feet 6.8 LCY/hr Compacted fill or e		ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1 Loose volume: 30 Source of estimated volume 30 Source of estimated sw 4000000000000000000000000000000000000	\$414.41 NTITIES 7,600 .120 0,912 LCY olume: vell factor: CTION : duction:77 description: :5 %	Cat Handbook 5 feet 6.8 LCY/hr Compacted fill or en t		ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1. Loose volume: 3' Source of estimated vo Source of estimated sw HOURLY PRODU Average push distance Unadjusted hourly pro Materials consistency Average push gradient Average site altitude:	\$414.41 NTITIES 7,600 .120 0,912 LCY olume: olume: Option:	Cat Handbook 5 feet 6.8 LCY/hr Compacted fill or en t		ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1. Loose volume: 3' Source of estimated volume 3' Source of estimated volume 4' Average push distance 1' Unadjusted hourly pro Materials consistency Average push gradient 4' Average site altitude: 1' Material weight: 1'	\$414.41 NTITIES 7,600 .120 0,912 LCY olume:	Cat Handbook 5 feet 6.8 LCY/hr Compacted fill or en t		ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1. Loose volume: 3' Source of estimated volume: 3' Source of estimated volume: 3' Source of estimated volume: 4' Average push distance 1' Unadjusted hourly pro Materials consistency Average push gradient Average site altitude: Material weight: Weight description: Job Condition Correct: Operat	\$414.41 NTITIES 7,600 .120 0,912 LCY olume: vell factor: CTION : 11 duction: description: :	Cat Handbook 5 feet 6.8 LCY/hr Compacted fill or en t LCY Pitrun 0.750	mbankment 0.9 <u>Source</u> (AVG.)	ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1. Loose volume: 3' Source of estimated volume: 3' Source of estimated volume: 3' Source of estimated volume: 4' Average push distance 1' Unadjusted hourly pro Materials consistency Average push gradient Average site altitude: Material weight: Weight description: Job Condition Correct Operat Material cons 1'	\$414.41 NTITIES 7,600 .120 0,912 LCY olume:	Cat Handbook 5 feet 6.8 LCY/hr Compacted fill or en t LCY Pitrun 0.750 0.900		ap	
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAI Initial Volume: 2' Swell factor: 1 Loose volume: 30 Source of estimated vo Source of estimated sw HOURLY PRODU Average push distance Unadjusted hourly pro Materials consistency Average push gradient Average site altitude: Material weight: Weight description: Job Condition Correct Operat Material cons Dozing	\$414.41 NTITIES 7,600 .120 0,912 LCY olume:	Cat Handbook 5 feet 6.8 LCY/hr Compacted fill or en t LCY Pitrun 0.750	mbankment 0.9 <u>Source</u> (AVG.)	ap	

Job efficienc	y: 0.830	(1 SHIFT/DAY)
Spoil pil	e: 0.800	(FND-RF)
Push gradier	nt: 1.115	(CAT HB)
Altitud	e: 1.000	(CAT HB)
Material Weigh	nt: 0.708	(CAT HB)
Blade typ	e: 1.000	(PAT)
Net correctio	n: 0.3538	
Adjusted unit production:	274.83 LCY/hr	
Adjusted fleet production:	549.66 LCY/hr	
—		

Fleet size:	2 Dozer(s)
Unit cost:	\$0.754/LCY
Total job time:	56 24 Hours

l'otal job time:	56.24 Hours
Total job cost:	\$23,306

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BULLDOZER WORK

Task description:	1 II 1	Topsoil app				
Gunnison River	Gravel Pits	Peri	mit Action:	TR-3	Permit/Job#:	M2009048
PROJECT IDE	NTIFICATI(<u>ON</u>				
Task #: 003		State:	Colorado		Abbreviation:	None
Date: $5/1/2$	019	County:	Mesa		Filename:	M048-003
User: ACY						
Agency	r organization	name: DR	RMS			
	C					
HOURLY EQU						
Basic Machine: Horsepower:	Cat D8T - 8 310	50				
Blade Type:	Semi-Unive	real				
Attachment:	NA	.1341				
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown:			I			
	T		¢02.52	<u>Utilization %</u>		
Ownership Cost/			\$93.62	NA 100		
Operating Cost/I			\$73.35	100 NA		
Ripper own. Cost/I			\$0.00 \$0.00	<u>NA</u> 0		
Ripper op. Cost/l Operator Cost/l			\$0.00	-		
Unergior Cost/	iour:		\$40.25	NA		
Total unit Cost/Ho Total Fleet Cost/H	ur: \$207.2 our: \$414. 4					
Total unit Cost/Ho	ur: \$207.2 our: \$414. 4					
Total unit Cost/Ho Total Fleet Cost/H MATERIAL QU Initial Volume:	ur: <u>\$207.2</u> our: \$414. 4 J ANTITIES 1,923					
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume:	ur: \$207.2 pur: \$414.4 JANTITIES 1,923 1.115 2,144 LCY	41	 	c above water		
Total unit Cost/Ho Total Fleet Cost/Ho <u>MATERIAL QI</u> Initial Volume: Swell factor:	ur: \$207.2 pur: \$414.4 JANTITIES 1,923 1.115 2,144 LCY 1 volume:	41		c above water		
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL OI Initial Volume: Swell factor: Loose volume: Source of estimated	ur: \$207.2 pur: \$414.4 JANTITIES 1,923 1.115 2,144 LCY 1 volume:	41 10" depth		c above water		
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL OI Initial Volume: Swell factor: Loose volume: Source of estimated	ur: \$207.2 yur: \$414.4 JANTITIES 1,923 1.115 2,144 LCY t volume: 1 swell factor:	41 10" depth		c above water		
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimated	ur: \$207.2 pur: \$414.4 JANTITIES 1,923 1.115 2,144 LCY 1 volume: 1 swell factor: DUCTION	41 10" depth		c above water		
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO	ur: \$207.2 our: \$414.4 JANTITIES 1,923 1.115 2,144 LCY 1 volume: 1 swell factor: DUCTION nce:	41 10" depth Cat Hand	book	c above water		
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista	ur: \$207.2 pur: \$414.4 JANTITIES 1,923 1.115 2,144 LCY d volume: d swell factor: DUCTION nce: production:	41 	book			
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PRO Average push dista Unadjusted hourly Materials consister	ur: \$207.2 pur: \$414.4 JANTITIES 1,923 1.115 2,144 LCY 1 volume: 1 swell factor: DUCTION nce: production: cy description:	41 	book hr			
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL OI Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PRO Average push dista Unadjusted hourly	ur: <u>\$207.2</u> pur: <u>\$414.</u> JANTITIES 1,923 1.115 2,144 LCY 1 volume: 1 swell factor: DUCTION nce: production: cy description: ient:0 %	41 10" depth Cat Hand 300 feet 291.4 LCY/ :Loose s	book hr			
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PRO Average push dista Unadjusted hourly Materials consister Average push grad	ur: $$207.2$ pur: $$414.4$ JANTITIES 1,923 1.115 2,144 LCY t volume: t swell factor: DUCTION nce: production: cy description: ient: 0 % le: 4,670	41 10" depth Cat Hand 300 feet 291.4 LCY/ :Loose s	book hr			
Total unit Cost/Ho Total Fleet Cost/Ho Total Fleet Cost/Ho Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consister Average push grad Average site altitud	ur: $$207.2$ yur: $$414.4$ JANTITIES 1,923 1.115 2,144 LCY t volume: t swell factor: DUCTION nce: production: cy description: ient: 0 % 4,670 2,100	41	book hr			
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PRO Average push dista Unadjusted hourly Materials consister Average push grad Average site altitud	ur: $$207.2$ yur: $$414.4$ JANTITIES 1,923 1.115 2,144 LCY d volume: 1 d swell factor: DUCTION nce:	41 	book hr			
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Total unit Cost/Ho Total Fleet Cost/Ho Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated Source of estimated Mourly PRO Average push dista Unadjusted hourly Materials consister Average push grad Average push grad Average site altitud Material weight: Weight description Job Condition Corr Op	ur: $$207.2$ pur: $$414.4$ pur: $$414.4$ JANTITIES1,9231.1152,144 LCYd volume:d swell factor:DUCTIONnce:production:	41 	book hr stockpile 1.2 750 200			
Total unit Cost/Ho Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PRO Average push dista Unadjusted hourly Materials consister Average push grad Average site altitud Material weight: Weight description <u>Job Condition Corr</u> Op	ur: $$207.2$ pur: $$414.4$ pur: $$414.4$ JANTITIES1,9231.1152,144 LCYd volume:d swell factor:DUCTIONnce:production:	41 	book hr stockpile 1.2	<u>Source</u> (AVG.)		

Task # 003

Job efficienc	cy:	0.830	(1 SHIFT/DAY)
Spoil pil	le:	0.800	(FND-RF)
Push gradient:		1.000	(CAT HB)
Altitude:		1.000	(CAT HB)
Material Weight:		1.095	(CAT HB)
Blade type:		1.000	(PAT)
Net correctio	on:	0.6544	
Adjusted unit production:	190).69 LCY/hr	
Adjusted fleet production:	381	1.38 LCY/hr	
-			

Fleet size:	2 Dozer(s)
Unit cost:	\$1.087/LCY

Total job time:	5.62 Hours
Total job cost:	\$2,329

REVEGETATION WORK

Task des	scription:	Pit 1-Reveg			
Site: Gunn	ison River Grave	I Pits Permit Action:	TR-3	Permit/Job	#: M2009048
PROJE	CT IDENTIFIC	ATION			
Task	#: 004	State: Colorado		Abbreviation:	None
Da	te: 5/1/2019	County: Mesa		Filename:	M048-004
Use	er: ACY			-	
	Agency or organiz	ation name: DRMS			

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Potassium nitrate, 13-46-0	100.00	pound	\$1.25	\$125.00
			Total Fertilizer Materials Cost/Acre	\$125.00

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$34.72
	Total Fertilizer Application Cost/Acre	\$34.72

TILLING

Description		Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)		\$106.29
	Total Tilling Cost/Acre	\$106.29

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	1.00	39.03	\$29.00
Alkaligrass, Fult's	0.50	13.77	\$1.74
Crested Wheatgrass - Hy-Crest	3.00	13.77	\$13.59
Tall Fescue - Maxim Blend (Dwarf)	3.00	15.63	\$7.11
Saltbush, Four Wing	1.00	1.38	\$12.80
Totals Seed Mix	8.50	83.59	\$64.24

Application

Description	Cost /Acre

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.81	\$2.81
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$288.00	\$576.00
Total Mulch Materials Cost/Acre				\$578.81

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$68.78
Power mulcher (MEANS 32 91 13.16 0350)		\$92.78
Weed spray, truck, aquatic area, nox. [DMG]		\$70.14
	Total Mulch Application Cost/Acre	\$231.70

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
		Totals 1	Nursery Stoc	k Cost / Acre	\$ 0.00

No. of Acres:	1.43	Cost /Acre:	\$1,372.76
Estimated Failure Rate:	40%	Cost /Acre*:	\$1,213.04
*Selected Replanting Work Items:	TILLING,SEEDING	G,MULCHING	

Initial Job Cost:	\$1,963.05
Reseeding Job Cost:	\$693.86
Total Job Cost:	\$2,657
Job Hours:	4.00

BULLDOZER RIPPING WORK

	Task description:	Pit 5-	Rip Stockpile area					
Site	: Gunnison Riv	er Gravel Pits	Permit Action:	TR-3	Per	mit/Job#	: <u>M20090</u>	948
	PROJECT ID	ENTIFICATI	<u>DN</u>					
	Task #: 00:	5	State: Colorado		Abbre	viation:	None	
		/2019	County: Mesa			ename:	M048-00	15
	User: AC					chunic.	11010 00	
	Agency	or organization	name: DRMS					
	HOURLY EQ	UIPMENT CC	<u>DST</u>					
	Basic	Machine: Cat	D8T - 8SU		Horsepower:		310	
	Ripper Att	achment: 3-Sl	nank Ripper		Shift Basis:	11	per day	
					Data Source:	(CRG)	
	Cost Breakdown	:						
	<u>Cost Breakto ()</u>	-		1	Utilization %			
		Ownership Co	st/Hour:	\$93.62	NA			
		Operating Co		\$73.35	100			
	Ripp	er Ownership Co		\$8.93	NA			
	Rip	per Operating Co	st/Hour:	\$7.78	100			
		Operator Co	st/Hour:	\$40.23	NA			
		Total Unit Co	st/Hour:	\$223.91				
		Total Fleet Co	st/Hour: \$447	.82				
	MATERIAL (·		.1 1 4			
			Sele	cted estimating	method: Area			
	Alternate Method	<u>ls:</u>						
Seismic:	NA		Bank Volume:	NA	BCY		NA	
Area:	7.00	acres	Rip Depth (ft):	2.00	Volume: 22	,587		BCY or CCY
	Source of estimated quantity: Staff estimates							
	HOURLY PR	ODUCTION						
	Seismic:	c	aismia Valoaitus	NA	feet/secor	d		
		G	eismic Velocity:	INA		lu		
	Area:							
			e Ripping Depth:	2.56	feet/pass			
			e Ripping Width:	7.08	feet/pass			
			Ripping Length:	200.00	feet/pass			
			ge Dozer Speed:	88.00	feet/minu			
			Maneuver Time:	0.25	minutes/p			
		Product	ion per unit area:	0.773	acres/hou	r		
	Job Condition Co	orrection Factors						
	Un	adjusted Hourly	Unit Production:	0.773	Acres/hr			
			Site Altitude:	4,670	feet			
			Altitude Adj:	1.00	(CAT HB			
			Job Efficiency:	0.83	(1 shift/da	-		
			Net Correction:	0.83	multiplier	•		
		Adjusted]	Hourly Unit Production:	0.64	Acres/hr			
			Hourly Fleet Production:	1.28	Acres/hr			
	JOB TIME AN	ND COST						
	Fleet size:	2	Grader(s)	Total job time	e: 5.	45	Но	urs
	Unit cost:	\$348.931	Per acre	Total job cos	t: \$2,	443		

BULLDOZER WORK

Task description:	Pit 5-Topsoil app				
Gunnison River Grav	vel Pits Per	mit Action:	TR-3	Permit/Job#:	M2009048
PROJECT IDENTIF	TICATION				
Task #: 006	State:	Colorado		Abbreviation:	None
Date: $\frac{5/1}{2019}$	County:	Mesa		Filename:	M048-006
User: ACY					
Agency or orga	nization name: DF	RMS			
HOURLY EQUIPMI	ENT COST				
Basic Machine: Ca	tt D8T - 8SU				
Horsepower: 31					
• •	mi-Universal				
Attachment: NA					
	per day				
Data Source: (Cl	RG)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hour:		\$93.62	NA		
Operating Cost/Hour:		\$73.35	100		
Ripper own. Cost/Hour:		\$0.00	NA		
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour:		\$40.23	NA		
MATERIAL QUANT Initial Volume: 7,52	29				
Initial Volume: 7,52 Swell factor: 1.11	29				
Initial Volume:7,52Swell factor:1.11Loose volume:8,39Source of estimated voluSource of estimated swel	29 15 95 LCY Ime: <u>10" depth</u> Il factor: <u>Cat Hand</u>	n over 7 ac ab book	oove water		
Initial Volume: 7,52 Swell factor: 1.11 Loose volume: 8,39 Source of estimated volu Source of estimated swel HOURLY PRODUC	29 15 95 LCY Ime: <u>10" depth</u> Il factor: <u>Cat Hand</u> TION		oove water		
Initial Volume:7,52Swell factor:1.11Loose volume:8,39Source of estimated voluSource of estimated swel	29 15 95 LCY ume: <u>10" depth</u> 11 factor: <u>Cat Hand</u> TION <u>300 feet</u>	book	oove water		
Initial Volume: 7,52 Swell factor: 1.11 Loose volume: 8,39 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance:	29 15 95 LCY ume: <u>10" depth</u> 11 factor: <u>Cat Hand</u> TION action: <u>300 feet</u> 291.4 LCY/	book			
Initial Volume: 7,52 Swell factor: 1.11 Loose volume: 8,39 Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ	29 15 95 LCY ume: <u>10" depth</u> 11 factor: <u>Cat Hand</u> TION action: <u>300 feet</u> 291.4 LCY/	book /hr			
Initial Volume: 7,52 Swell factor: 1.11 Loose volume: 8,39 Source of estimated volu Source of estimated swel HOURLY PRODUC' Average push distance: Unadjusted hourly produ Materials consistency de: Average push gradient: 1	$\frac{29}{15}$ $\frac{10^{\circ} \text{ depth}}{295 \text{ LCY}}$ $\frac{10^{\circ} \text{ depth}}{201 \text{ Cat Hand}}$ $\frac{300 \text{ feet}}{291.4 \text{ LCY}}$ $\frac{300 \text{ feet}}{291.4 \text{ LCY}}$	book /hr			
Initial Volume: 7,52 Swell factor: 1.11 Loose volume: 8,39 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly produ Materials consistency de: Average push gradient: Average site altitude:	$\begin{array}{r} 29\\ 15\\ \hline 95 \text{ LCY}\\ \hline 10^{\circ} \text{ depth}\\ \hline 11 \text{ factor:} & \underline{10^{\circ} \text{ depth}}\\ \hline 10^{\circ} \text{ depth}\\ \hline 11 \text{ factor:} & \underline{200 \text{ feet}}\\ \hline 10^{\circ} \text{ factor:} & \underline{291.4 \text{ LCY}}\\ \hline 10^{\circ} \text{ scription:} & \underline{1000 \text{ foet}}\\ \hline 0 \%\\ \hline 4,670 \text{ feet} \end{array}$	book /hr			
Initial Volume:7,52Swell factor:1.11Loose volume:8,39Source of estimated voluSource of estimated swelHOURLY PRODUCCAverage push distance:Unadjusted hourly produMaterials consistency desAverage push gradient:Average site altitude:Material weight:	$\begin{array}{r} 29\\ 15\\ \hline 95 LCY\\ \hline 100 \\ \hline$	book /hr			
Initial Volume: 7,52 Swell factor: 1.11 Loose volume: 8,39 Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ Materials consistency de: Average site altitude: Material weight: Weight description: Job Condition Correction Operator	$\begin{array}{c} 29\\ 15\\ \hline 95 LCY\\ \hline 100 \\ \hline 1$	/hr stockpile 1.2	<u>Source</u> (AVG.)		
Initial Volume: 7,52 Swell factor: 1.11 Loose volume: 8,39 Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ Materials consistency de: Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist	29 15 95 LCY ume: 10" depth Il factor: Cat Hand TION action: 291.4 LCY/ escription: Loose s 0 % 4,670 feet 2,100 lbs/LCY Earth - Loam n Factor Skill: 0. tency: 1.	/hr stockpile 1.2	<u>Source</u> (AVG.) (CAT HB)		
Initial Volume: 7,52 Swell factor: 1.11 Loose volume: 8,39 Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ Materials consistency de: Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist Dozing me	29 15 95 LCY ume: 10" depth Il factor: Cat Hand TION action: 300 feet 291.4 LCY/ scription: Loose s 0 % 4,670 feet 2,100 lbs/LCY Earth - Loam n Factor Skill: 0. tency: 1.	/hr stockpile 1.2	<u>Source</u> (AVG.)		

0.830	(1 SHIFT/DAY)
0.800	(FND-RF)
1.000	(CAT HB)
1.000	(CAT HB)
1.095	(CAT HB)
1.000	(PAT)
0.6544	
90.69 LCY/hr	
81.38 LCY/hr	
	0.800 1.000 1.000 1.095 1.000 0.6544 00.69 LCY/hr

Fleet size:	2 Dozer(s)
Unit cost:	\$1.087/LCY

Total job time:	22.01 Hours
Total job cost:	\$9,122

REVEGETATION WORK

Т	ask descrip	otion:	Pit 5-Reveg				
Site:	Gunnison	Niver Grave	l Pits Pe	rmit Action:	TR-3	Permit/Job	t: <u>M2009048</u>
<u>P</u>]	ROJECT	IDENTIFIC	ATION				
	Task #: Date: User:	007 5/1/2019 ACY	State: County:	Colorado Mesa		Abbreviation: Filename:	None M048-007
		ency or organiz	zation name:	RMS			

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Potassium nitrate, 13-46-0	100.00	pound	\$1.25	\$125.00
			Total Fertilizer Materials Cost/Acre	\$125.00

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$34.72
	Total Fertilizer Application Cost/Acre	\$34.72

TILLING

Description		Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)		\$106.29
	Total Tilling Cost/Acre	\$106.29

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	1.00	39.03	\$29.00
Alkaligrass, Fult's	0.50	13.77	\$1.74
Crested Wheatgrass - Hy-Crest	3.00	13.77	\$13.59
Tall Fescue - Maxim Blend (Dwarf)	3.00	15.63	\$7.11
Saltbush, Four Wing	1.00	1.38	\$12.80
Totals Seed Mix	8.50	83.59	\$64.24

Application

Description	Cost /Acre

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.81	\$2.81
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$288.00	\$576.00
Total Mulch Materials Cost/Acre				\$578.81

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$68.78
Power mulcher (MEANS 32 91 13.16 0350)		\$92.78
Weed spray, truck, aquatic area, nox. [DMG]		\$70.14
	Total Mulch Application Cost/Acre	\$231.70

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
		Totals 1	Nursery Stoc	k Cost / Acre	\$ \$0.00

No. of Acres:	8.4	Cost /Acre:	\$1,372.76
Estimated Failure Rate:	40%	Cost /Acre*:	\$1,213.04
*Selected Replanting Work Items:	TILLING,SEEDING	G,MULCHING	

Initial Job Cost:	\$11,531.18
Reseeding Job Cost:	\$4,075.81
Total Job Cost:	\$15,607
Job Hours:	16.00

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description	on: Init	ial Mob					
e: Gunnison R	River Gravel Pits	Permit	Action: <u>TR-3</u>		I	Permit/Job#:	M2009048
PROJECT ID	ENTIFICATI	<u>ON</u>					
Task #: 0	008	State: Co	olorado		Abbre	viation: No	one
Date: 5	5/1/2019	County: Mo	esa		Fi	lename: M	048-008
User: A	ACY	•					
Agenc	y or organization	name: DRMS					
EQUIPMENT	TTRANSPOR	<u>T RIG COST</u>					
					Shift ba		r day
					Cost Data Sour	ce: CRG	Data
Tn	uck Tractor Desc	ription: GENE	RIC ON-HIGH	WAY TRI	ICK TRACTO	DR 6X4 DIE	SEL POWERED,
110	dek Hactor Dese				(2ND HALF,		SELTOWERED,
Tr	uck Trailer Desc	ription G	ENERIC FOLD				OUIPMENT
11	dek Huner Dese				(25T, 50T, AN		
			-		(201,001,11	(2 1001)	
Cost Breakdowr	<u>1:</u>						
Available Rig	Capacities	0-25 Tons	26-50 Tons	51	+ Tons		
	hip Cost/Hour:	\$16.63	\$18.37		22.33		
Operati	ing Cost/Hour:	\$44.38	\$46.13	\$	50.07		
Ópera	tor Cost/Hour:	\$27.66	\$27.66	\$	27.66		
Help	per Cost/Hour:	\$0.00	\$25.39	\$	25.39		
Total U	nit Cost/Hour:	\$88.67	\$117.55	\$1	25.45		
NON ROADA	BLE EQUIPN	MENT:					
			11 1 D'	171	XX 1 (T) :	Determ Trin	DOT Dermit
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip Cost/hr/ fle	
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/		
C DOT COL	(TONS)	¢102.55	t	2	fleet	\$250.00	¢700.00
Cat D8T - 8SU	53.08	\$102.55	\$125.45	2	\$456.00	\$250.90	\$500.00
Drill/Broadcast Seeder with Tractor	25.00	\$15.54	\$88.67	1	\$104.21	\$88.67	\$250.00
Power Mulcher	6.00	\$8.33	\$88.67	1	\$97.00	\$88.67	\$250.00
(Bowie LD-90)	0.00	φ0.55	<i>400.07</i>	-	<i>\\\</i>	400.0 <i>1</i>	φ250.00

Subtotals: \$657.21 \$428.24 \$1,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$76.10	1	\$76.10	\$76.10
		Subtotals:	\$76.10	\$76.10

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	GRAND JUNCTION 12.00 45.00	miles mph
Total Non-Roadable Mob/Demob Cost *	\$3,893.33	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$40.59	_

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.27	0.27
Return Time (Hours):	0.27	0.27
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.53	0.53

JOB TIME AND COST

Total job time: **3.07** Hours

Total job cost: \$3,934

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task desc	ription:	Seco	ondary Mob					
e: Gunnis	on River Gra	avel Pits	Permit	Action: <u>TR-3</u>		1	Permit/Job#:	M2009048
<u>PROJEC</u>	Γ IDENTIF	ICATIO	<u>DN</u>					
Task #	: 009		State: Co	olorado		Abbre	viation: N	one
Date	-			esa				048-009
User	ACY		J					
А	gency or orga	anization	name: DRMS					
EOUIPM	ENT TRAN	SPOR	TRIG COST					
						Shift ba	sis' 1 ne	r day
						Cost Data Sou	1	Data
	T		intion CENE					
	Truck Tract	or Descr	ipuon: GENE	RIC UN-HIGH		(2ND HALF,		SEL POWERED,
	Truck Trail	ler Descr	intion: G	ENERIC FOLD			,	OLIEMENT
	THUCK THAT	lei Desei				(25T, 50T, AN		
				-		(251, 501, 74	(D 1001)	
Cost Break	<u>down:</u>							
Available	Rig Capacit	ties	0-25 Tons	26-50 Tons	51-	+ Tons		
	nership Cost/		\$16.63	\$18.37	\$2	22.33		
Op	erating Cost/	Hour:	\$44.38	\$46.13	\$	50.07		
C	perator Cost/		\$27.66	\$27.66	\$2	27.66		
	Helper Cost/		\$0.00	\$25.39		25.39		
То	tal Unit Cost/	Hour:	\$88.67	\$117.55	\$1	25.45		
NON ROA	ADABLE E	QUIPM	IENT:					
Machine	W 7	eight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Descriptio		nit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fle	
Descriptio		ONS)		t	5120	fleet		
Drill/Broad	lcast 25	.00	\$15.54	\$88.67	1	\$104.21	\$88.67	\$250.00
Seeder wit	h							
Tractor Power Mu	cher 6.0)()	\$8.33	\$88.67	1	\$97.00	\$88.67	\$250.00
(Bowie LD			ψ0.33	φ00.07	1	φ77.00	ψ00.07	φ250.00

Subtotals: **\$201.21 \$177.34 \$500.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$76.10	1	\$76.10	\$76.10
		Subtotals:	\$76.10	\$76.10

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	GRAND JUNCTION 12.00 45.00	miles mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$1,604.31	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$40.59	

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.27	0.27
Return Time (Hours):	0.27	0.27
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.53	0.53

JOB TIME AND COST

Total job time: **3.07** Hours

Total job cost: \$1,645

Gunnison River Gravel Pits M-2009-048 TR-3 Updates

Mine Pit 1 then resume mining of Pit 5. Concurrent reclamation, only one pit dewatered completely at one time.

Pit 1:

- 2300 LF perimeter of affected lands
- Mining depth 36' H , re-grade to 3:1, approx. 26 ft above water
- 5.18 ac affected lands- 3.5 ac pond -0.25 stockpile area = 1.43 ac to be topsoiled and seeded
- 2000 cy stockpile to remain unreclaimed north of pond (approx.. 1 ac)

Pit 5:

- Based on current site conditions
- Approx. 0.6 ac currently pond, slopes surrounding are graded, topsoiled, no seed
- Approx. 7 ac stockpile area, needs ripping, topsoil and seed
- 10.5 ac affected lands 0.6 ac pond 1.5 ac stockpile = 8.4 ac topsoil and seed
- Once mined out only 3 ac will require seeding (5.5 ac pond)
- Compacted pad area to be left unreclaimed north of pond (approx. 2 ac.)