

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

1313 Sherman Street, Room 215 Denver, CO 80203

October 23, 2019

Jason Burkey Oldcastle SW Group, Inc., dba United Companies of Mesa County 2273 River Road Grand Junction, CO 81502

RE: Sievers Pit, Permit No. M-1977-098, Technical Revision (TR-4) Approval

Dear Mr. Burkey:

On October 23, 2019 the Division of Reclamation, Mining, and Safety (Division) <u>approved</u> the Technical Revision request (TR-4) submitted on August 6, 2019, addressing the following:

Revise Mining Plan to allow for entire the 122.9 acre mining area to be affected.

The terms of the TR-4 approved by the Division are hereby incorporated into Permit No. M-1977-098. All other conditions and requirements of the permit remain in full force and effect.

The estimated liability amount of \$794,357 exceeds the \$432,580 Financial Warranty currently held for this site. If you have not already done so, please submit <u>additional bond in the amount of \$361,777</u>. 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 303-866-3567 Ext 8183 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

T	ask descrip	otion:	TR-4 Update				
e: _	Sievers P	it	Per	rmit Action:	TR-4	Permit/Job	o#: <u>M1977098</u>
PR	ROJECT	IDENTIFIC	CATION				
	Task #:	ACY	State:	Colorado		Abbreviation:	None
		10/11/00/10		0 6 11		D'1	MOOD A CN
	Date:	10/11/2019	County:	Garfield		Filename:	M098-ACY

TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	a
1 dox	Description	Used	Size	Hours	Cost
01a	Demo onsite structures	DEMOLISH	1	40.00	\$67,106
02a	Rip asphalt road and cement parking area/pads	RIPPER	4	1.76	\$2,061
02b	Remove/haul apshalt/cement to excavated pit	SCRAPER1	2	2.35	\$7,297
03a	Highwall reduction	DOZER	4	26.27	\$28,222
04a	Rip pit floor	RIPPER	4	36.24	\$42,262
05a	Transport topsoil	SCRAPER1	2	82.70	\$256,277
05b	Distribute topsoil/finish grading	DOZER	4	12.84	\$13,796
06a	Reveg slopes-22.1 ac	REVEGE] 1	28.00	\$37,696
06b	Reveg pit floor - 100.8 ac	REVEGE] 1	126.00	\$163,694
07a	Initial Mob	MOBILIZE] 1	2.68	\$11,691
07b	Secondary Mob	MOBILIZE	1	2.68	\$1,453
		<u>SUBTO</u>	TALS:	361.52	\$631,555

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$12,757
Performance bond:	1.05	Total =	\$6,631
Job superintendent:	180.76	Total =	\$12,543
Profit:	10.00	Total =	\$63,156
		TOTAL O & P =	\$95,087
		CONTRACT AMOUNT (direct + O & P) = $($	\$726,642
LEGAL - ENGINEERING - PRO	OJECT MANA	GEMENT:	

TOTAL BO	ND AN	IOUNT (direct + indirect) =	\$794,357
		TOTAL INDIRECT COST =	\$162,802
CONTINGENCY:	0.00	Total =	\$0
Reclamation management and/or administration:	5.00		\$36,332
Engineering work and/or contract/bid preparation:	4.25	Total =	\$30,882
Financial warranty processing (legal/related costs):	\$500	Total =	\$500

DEMOLITION WORK

,	Task description:	Demo onsite	structures			
Site:	Sievers Pit		Permit Action:	TR-4	Permit/J	ob#: <u>M1977098</u>
PROJE	CT IDENTIFICATIO	<u>N</u>				
Task #:	01A	State:	Colorado		Abbreviation:	None
Date:	10/11/2019	County:	Garfield		Filename:	M098-01a
User:	ACY					
	Agency or organiza	tion name:	DRMS			

UNIT COSTS

Location adjustment: 86.60 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Shop Buildings	200'L x 50'W x 20'H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 50 ft. push	200,000.00	CF	\$0.18	\$35,600.00
Office Building #1	80'L x 40'W x 15'H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	48,000.00	CF	\$0.19	\$9,024.00
Office Building #2	55'W x 75'L x 15'H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	61,875.00	CF	\$0.19	\$11,632.50
Shop Pad/Appron Cement	Approx 18,400sqft	Demo. and on-site disposal in existing pit, 8 in. thick - Max. 50 ft. push	18,400.00	SF	\$1.15	\$21,233.60

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	40.00	(unadjusted):	\$77,490.10	location):	\$67,106.43

BULLDOZER RIPPING WORK

	-				1			
Site:	Sievers Pit		Permit Action:	TR-4	Perr	nit/Job#:	M1977098	1
	PROJECT ID	ENTIFICAT	ION					
	$\begin{array}{c} \text{Task #:} & 022 \\ \text{Date:} & 10/ \\ \text{User:} & AC \end{array}$	A /11/2019 CY	State:ColoradoCounty:Garfield		Abbrev Fil	viation:	None M098-02a	
	Agency	or organization	n name: DRMS					
	HOURLY FO	UIPMENT (OST					_
	Basic	Machine: C	at DOT - 9SU		Horsepower	/	105	
	Ripper Att	achment: 3-	Shank Ripper		Shift Basis:	1 p	er day	_
					Data Source:	(C	CRG)	_
	Cost Breakdown:	<u>.</u>						
		O	Sect/II	¢121.40	Utilization %			
		Ownership C	Cost/Hour:	\$121.49	<u> </u>			
	Rippe	er Ownership (Cost/Hour:	\$13.94	NA			
	Ripp	per Operating C	Cost/Hour:	\$8.96	100			
		Operator C	Cost/Hour:	\$41.24	NA			
		Total Unit C	Cost/Hour:	\$291.46				
		Total Fleet C	Cost/Hour: \$1,16	5.85				
	MATERIAL C	DUANTITIE	S Solo	etad estimating	mothod: Aron			
	Alternate Matha		<u> </u>	cieu estimating	g method. Area			
	Alternate Method	18:						
-		<u></u>						
mic:	NA 3.70		Bank Volume:	NA 1.00	BCY	15	NA	$\overline{\mathbf{CV}}$ or
mic: area:	NA 3.79	acres	Bank Volume: Rip Depth (ft):	NA 1.00	BCY Volume: <u>6,1</u>	15	NA B	CY or
mic: trea:	NA 3.79	acres Source of est	Bank Volume: Rip Depth (ft): imated quantity:3.39 ac	NA 1.00 of asphalt road	BCY Volume: 6,1 ls, 0.4 ac of cmt pac	15 Is	NA B	CY or
mic: Area:	NA 3.79 HOURLY PRO	acres Source of est	Bank Volume: Rip Depth (ft): imated quantity: 3.39 ac	NA 1.00 of asphalt road	BCY Volume: 6,1 ls, 0.4 ac of cmt pac	15 Is	NA B	CY or
mic: rea:	NA 3.79 HOURLY PRO	acres acres Source of est DDUCTION	Bank Volume: Rip Depth (ft): imated quantity:3.39 ac	NA 1.00 of asphalt road	BCY Volume: <u>6,1</u> ls, 0.4 ac of cmt pac	15 Is	NA B	CY or
mic: rea:	NA 3.79 HOURLY PRO Seismic:	acres Source of est ODUCTION	Bank Volume: Rip Depth (ft): imated quantity:3.39 ac Seismic Velocity:	NA 1.00 of asphalt road NA	BCY Volume: <u>6,1</u> ls, 0.4 ac of cmt pac	15 ls d	NA B	CY or
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mic: .rea:	<u>NA</u> 3.79 HOURLY PRO Seismic: <u>Area:</u>	acres Source of est ODUCTION Avera	Bank Volume: Rip Depth (ft): imated quantity:3.39 ac Seismic Velocity: age Ripping Depth:	NA 1.00 of asphalt road NA 2.63	BCY Volume: <u>6,1</u> ls, 0.4 ac of cmt pac feet/secon feet/pass	<u>15</u> ls d	NA B	CY or
mic: area:	<u>NA</u> 3.79 HOURLY PRO Seismic: Area:	acres Source of est ODUCTION Avera Avera	Bank Volume: Rip Depth (ft): imated quantity: <u>3.39 ac</u> Seismic Velocity: ge Ripping Depth: ge Ripping Width:	NA 1.00 of asphalt road NA 2.63 7.67	BCY Volume: <u>6,1</u> ls, 0.4 ac of cmt pac feet/secon feet/pass feet/pass	<u>15</u> ls d	NA B	CY or
mic: .rea:	<u>NA</u> 3.79 HOURLY PRO Seismic: <u>Area:</u>	acres Source of est ODUCTION Avera Avera	Bank Volume: Rip Depth (ft):	NA 1.00 of asphalt road NA 2.63 7.67 50.00	BCY Volume: 6,1 Is, 0.4 ac of cmt pac feet/secon feet/pass feet/pass feet/pass feet/pass	15 ls d	NA B	CY or
mic: .rea:	<u>NA</u> 3.79 HOURLY PRO Seismic: Area:	acres Source of est ODUCTION Avera Avera Avera Avera	Bank Volume: Rip Depth (ft): imated quantity: <u>3.39 ac</u> Seismic Velocity: ge Ripping Depth: ge Ripping Width: ge Ripping Length: prage Dozer Speed: manual difference in the second sec	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25	BCY Volume: 6,1 ls, 0.4 ac of cmt pac feet/secon feet/pass feet/pass feet/pass feet/pass feet/minut feet/minut s/p	15 ls d	NA B	CY or
mic: area:	NA 3.79 HOURLY PRO Seismic: Area:	acres Source of est DDUCTION Avera Avera Averag Averag Produ	Bank Volume: Rip Depth (ft): imated quantity:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646	BCY Volume: 6,1 ls, 0.4 ac of cmt pac feet/secon feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass	15 ls d	NA B	CY or
mic: area:	<u>NA</u> 3.79 HOURLY PRO Seismic: Area:	acres Source of est ODUCTION Avera Avera Averag Averag Produ	Bank Volume:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646	BCY Volume: 6,1 Is, 0.4 ac of cmt pace feet/secon feet/pass feet/pass feet/pass feet/pass feet/minut minutes/p acres/hour	15 ls d	NA B	CY or
mic: rea:	NA 3.79 HOURLY PRO Seismic: Area: Job Condition Co	acres Source of est ODUCTION Avera Avera Averag Averag Produ	Bank Volume:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646	BCY Volume: 6,1 ls, 0.4 ac of cmt pac feet/secon feet/pass feet/pass feet/pass feet/pass feet/pass feet/minut minutes/p acres/hour	15 ls d	NA B	CY or
mic: area:	<u>NA</u> 3.79 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Source of est ODUCTION Avera Avera Averag Averag Produ	Bank Volume: Rip Depth (ft): imated quantity: 3.39 ac seismic Velocity: age Ripping Depth: age Ripping Width: age Ripping Length: age Ripping Length: age Maneuver Time: ction per unit area: age Y Unit Production:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646 0.646	BCY Volume: 6,1 ls, 0.4 ac of cmt pace feet/secon feet/pass feet/pass feet/pass feet/pass feet/minut minutes/p acres/hour Acres/hr	15 ls d	NA B	CY or
mic: Area:	<u>NA</u> 3.79 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Source of est ODUCTION Avera Avera Averag Averag Produ orrection Factor adjusted Hourl	Bank Volume: Rip Depth (ft): imated quantity: 3.39 ac seismic Velocity: age Ripping Depth: age Ripping Width: age Ripping Length: arage Dozer Speed: action per unit area: age Vinit Production: Site Altitude:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646 0.646 6,020	BCY Volume: 6,1 ls, 0.4 ac of cmt pac feet/secon feet/pass feet/pass feet/pass feet/pass feet/minut minutes/p acres/hour Acres/hr feet	15 ls d	NA B	CY or
mic: .rea:	<u>NA</u> 3.79 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Source of est ODUCTION Avera Avera Averag Ave Averag Produ	Bank Volume: Rip Depth (ft): imated quantity: 3.39 ac Seismic Velocity: age Ripping Depth: age Ripping Width: age Ripping Length: brage Dozer Speed: ction per unit area: ction per unit area: site Altitude: Altitude Adj:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646 0.646 6,020 1.00 0.02	BCY Volume: 6,1 ls, 0.4 ac of cmt pac feet/secon feet/pass feet/pass feet/pass feet/pass feet/pass feet/minut minutes/p acres/hour Acres/hr feet (CAT HB	15 ls d e ass	NA B	CY or
mic: .rea:	<u>NA</u> <u>3.79</u> HOURLY PRO Seismic: Area: Job Condition Co Un	acres Source of est ODUCTION Avera Avera Averag Produ Orrection Factor	Bank Volume: Rip Depth (ft): imated quantity: 3.39 ac seismic Velocity: age Ripping Depth: age Ripping Width: age Ripping Length: age Ripping Length: age Maneuver Time: ction per unit area: rs y Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Nat Correction:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646 0.646 6,020 1.00 0.83 0.83 0.92	BCY Volume: 6,1 b, 0.4 ac of cmt pace feet/secon feet/pass feet/pass feet/pass feet/pass feet/minut minutes/p acres/hou Acres/hr feet (CAT HB (1 shift/da	15 ls d e asss	NA B	CY or
mic: rea:	NA 3.79 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Source of est ODUCTION Avera Avera Averag Averag Produ orrection Factor adjusted Hourl	Bank Volume: Rip Depth (ft): imated quantity: 3.39 ac Seismic Velocity: age Ripping Depth: age Ripping Width: age Ripping Length: arage Dozer Speed: action per unit area: age Vinit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646 6,020 1.00 0.83 0.83	BCY Volume: 6,1 ls, 0.4 ac of cmt pace feet/secon feet/pass feet feet (CAT HB (1 shift/da multiplier	15 ls d e ass) y)	NA B	CY or
mic: rea:	<u>NA</u> 3.79 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Source of est ODUCTION Avera Avera Averag Ave Averag Produ produ	Bank Volume: Rip Depth (ft): imated quantity: 3.39 ac Seismic Velocity: age Ripping Depth: age Ripping Depth: age Ripping Length: brage Dozer Speed: ction per unit area: ction per unit area: ste Altitude: Altitude Adj: Job Efficiency: Net Correction: d Hourly Unit Production:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646 6,020 1.00 0.83 0.83 0.54	BCY Volume: 6,1 ls, 0.4 ac of cmt pace feet/secon feet/pass feet/p	15 d d) y)	<u>NA</u> B	CY or
mic: rea:	<u>NA</u> <u>3.79</u> HOURLY PRO Seismic: Area: Job Condition Co Un	acres Source of est ODUCTION Avera Avera Averag Produ Orrection Factor adjusted Hourl	Bank Volume: Rip Depth (ft): imated quantity: 3.39 ac Seismic Velocity: age Ripping Depth: age Ripping Depth: age Ripping Length: age Ripping Length: age Maneuver Time: ction per unit area: minit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Hourly Unit Production:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646 0.646 6,020 1.00 0.83 0.83 0.83 0.54 2.14	BCY Volume: 6,1 ls, 0.4 ac of cmt pace feet/secon feet/pass feet (CAT HB (1 shift/da multiplier Acres/hr	15 ls d e asss) y)	NA B	CY or
mic: .rea:	<u>NA</u> <u>3.79</u> HOURLY PRO Seismic: Area: Job Condition Co Un	acres Source of est ODUCTION Avera Avera Averag Produ produ prection Factor adjusted Hourl Adjusted Adjusted	Bank Volume: Rip Depth (ft): imated quantity: 3.39 ac Seismic Velocity: age Ripping Depth: age Ripping Depth: age Ripping Length: brage Dozer Speed: ction per unit area: ction per unit area: rss y Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: d Hourly Unit Production:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646 6,020 1.00 0.83 0.83 0.83 0.54 2.14	BCY Volume: 6,1 ls, 0.4 ac of cmt pace feet/secon feet/pass feet/p	15 ls d e ass) y)	NA B	CY or
mic: area:	NA 3.79 HOURLY PRO Seismic: Area: Job Condition Co Un JOB TIME AN Fleet size:	acres Source of est ODUCTION Avera Avera Averag Produ Drection Factor adjusted Hourl Adjusted MD COST 4	Bank Volume: Rip Depth (ft): imated quantity: 3.39 ac Seismic Velocity: age Ripping Depth: age Ripping Width: age Ripping Length: arage Dozer Speed: action per unit area: astronomer unit area: by Unit Production:	NA 1.00 of asphalt road NA 2.63 7.67 50.00 88.00 0.25 0.646 6,020 1.00 0.83 0.83 0.54 2.14 Total job tim	BCY Volume: 6,1 ls, 0.4 ac of cmt pace feet/secon feet/pass feet/p	15 ls d e ass) y) y)	NA B	CY or -

SCRAPER TEAM WORK

Site: Sievers Pit		Permit Action:	TR-4	Permi	t/Job#: <u>M197</u>	7098
PROJECT IDENT	IFICATION					
Task #: 02B	St	ate: Colorado		Abbrevi	ation: None	
Date: 10/11/20	019 Cour	nty: Garfield		Filer	name: M098-	02b
Agency or or	rganization name	DRMS				
Agency of o	gamzation name.	DIGNS				
HOURLY EQUIP	<u>MENT</u>		COSTSI	hift basis: <u>1 per day</u>	<u>/</u>	
		Equipme	ent Description			
	-Sc -I	raper: Cat 657	G w/push-pull			
Suppor	t Equipment -Load	Area: Cat D9	Γ - 9SU			
	-Dump	Area: NA				
Road Main	ntenance – Motor G -Water 7	rader: NA				
	-water 1					
<u>Cost Breakdown</u> :	Scraper Work	Team	Support Equip	oment	Maintenance	Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Tru
%Utilization-machine:	100	100	10	NA	NA	
Ownership cost/hour:	\$205.66	\$121.49	\$121.49	NA	NA	
Operating cost/hour:	\$226.28	\$105.84	\$10.58	NA	NA	
%Utilization-ripper:	NA	NA	NA	NA	NA	
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	
Operator cost/hour:	\$30.86	\$41.24	\$41.24	NA	NA	
Unit Subtotals:	\$462.80	\$268.57	\$173.31	NA	NA	
Number of Units:	4	4	1	0	0	* 0.00
Group Subtotals:	Work:	\$2,925.48	Support:	\$173.31	Maint:	\$0.00
Total work team cost/	hour: \$3,098.79					
MATERIAL QUA	<u>NTITIES</u>					
Initial volume:	6,115	CCY	Swell fact	tor: 1.060		
Loose volume:	6,482	LCY				
Sour	ce of estimated vol	ume: <u>Ripped V</u>	/olume			
Source of	t estimated swell fa	ctor: <u>Cat Hanc</u>	lbook			
HOURLY PRODU	UCTION					
			Scraper Bo	owl (volume) Basis		
Material weight	2,550 lbs/I CV		Struck	Volume: 32.00	- T.	CY
Material description:	Gravel - Dry		Heaped	Volume: 44.00	L	CY
Rated Payload:	104,000 pounds		Average	Volume: 38.00	L	CY
Darda d Canaditan	40.78 I CV		A directed (oposity: 20.00	T	CV

<u>1.10</u> Minutes

<u>0.60</u> Minutes

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

Site Altitude: 6020 feet

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

Travel Time:

Road Condition: <u>Rutted dirt, little maintenance, no water, 2" tire penetration 5.0</u>

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-2.00	5.00	3.00	2883	0.55

Haul Time: **0.55** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade	Roll. Res	Total Res	Velocity (fpm)	Travel Time
		(%)	(%)	(%)		(min)
1	600.00	2.00	5.00	7.00	2687	0.50
				Return Time:	0.50	minutes
			Total Scraper	team cycle time:	2.75	minutes
			Adjusted for	or job conditions:	1,376.29	LCY/Hour
			Selected Nu	mber of Scrapers:	2	Scraper(s)
	Adjusted	l single scrap	er team (unit) h	ourly production:	1,376.29	LCY/Hour
	Adjusted m	ultiple scrap	er team (fleet) h	ourly production:	2,752.58	LCY/Hour
Optimal	Unadjusted unit proo Number of Scrapers pe	luction/hour: r push dozer:	1,658.18	LCY/Hour		
JOB TI	ME AND COST					
Fleet	size: 2	Team(s)	То	otal job time:	2.35	Hours

Unit cost: _____\$1.126 /LCY

Total job cost: ______\$7,297_____

Page 1 of 2

BULLDOZER WORK

: Sievers Pit	Permit Action:	ΓR-4	Permit/Job#:	M1977098
PROJECT IDENTI	FICATION			
Task #: 03A	State: Colorado		Abbreviation:	None
Date: $10/11/201$	9 County: Garfield		Filename:	M098-03a
User: ACY			-	
Agency or org	anization name: DRMS			
HOURLY EQUIPM	ENT COST			
Basic Machine: C	at D9T - 9SU			
Horsepower: 40)5	-		
Blade Type: Se	emi-Universal	-		
Attachment: N	A	-		
Shift Basis: 1	per day	-		
Data Source. (C		-		
Cost Breakdown:				
Or an analysis Constant	¢101.40	Utilization %		
Ownership Cost/Hour:	\$121.49 \$105.94	100		
Ripper own Cost/Hour	\$105.84	NA		
Ripper own. Cost/Hour: Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour	\$41.24	ΝΔ		
- F		1111		
Total Fleet Cost/Hour:	\$208.37 \$1,074.27			
Total Fleet Cost/Hour:	\$208.37 \$1,074.27 <u>TITIES</u>			
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62,	\$208.57 \$1,074.27 TITIES 222			
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor:	\$208.37 \$1,074.27 TITIES 222 24			
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69,	\$208.37 \$1,074.27 TITIES 222 24 913 LCY			
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volumed 61,	\$208.37 \$1,074.27 TITIES 222 24 913 LCY ume: TR-4: 700 LE to a 3:1 c			
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volu Source of estimated sweet	\$208.37 \$1,074.27 TITIES 222 24 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook	ut/fill		
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volu Source of estimated sweet	\$208.37 \$1,074.27 TITIES 222 24 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook	 ut/fill		
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volt Source of estimated swe HOURLY PRODUC	\$208.37 \$1,074.27 TITIES 222 24 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook CTION	ut/fill		
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volt Source of estimated sweet HOURLY PRODUC Avarage push distances	\$208.37 \$1,074.27 TITIES 222 24 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook CTION 60 foot	 ut/fill		
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volto Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly produced Loosely of the stance	\$208.37 \$1,074.27 TITIES 222 24 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook CTION 60 feet usction: 1872.0 LCX/br	 ut/fill		
Notar unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volt Source of estimated sweet HOURLY PRODUCE Average push distance: Unadjusted hourly produce 69,	\$208.37 \$1,074.27 TITIES 222 24 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook CTION action: 60 feet 1,872.0 LCY/hr	 ut/fill		
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volt Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly product Materials consistency definition	\$208.37 \$1,074.27 TITIES 222 24 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook CTION 60 feet uction: 1,872.0 LCY/hr escription: Compacted fill or eml	 ut/fill bankment 0.9		
Notin unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volt Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly product Materials consistency de Average push gradient: Constant of the state of th	\$208.37 \$1,074.27 TITIES 222 24 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook CTION action: 60 feet uction: 1,872.0 LCY/hr escription: Compacted fill or eml 0 % 0	 ut/fill bankment 0.9		
Notin unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency de Average push gradient: Average site altitude:	$\begin{array}{r} $208.37 \\ \hline \$1,074.27 \\ \hline \\ \hline \\ \hline \\ \$1,074.27 \\ \hline \\ \hline \\ \hline \\ \$1,074.27 \\ \hline \\ $	 ut/fill bankment 0.9		
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated voltor Source of estimated voltor Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly prodit Materials consistency de Average site altitude: Material weight:	$ \frac{3208.37}{\$1,074.27} $ TITIES $ \frac{222}{24} $ 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook CTION $ \frac{60 \text{ feet}}{1,872.0 \text{ LCY/hr}} $ escription: 1,872.0 LCY/hr $ \frac{0 \%}{6,020 \text{ feet}} $ 2,900 lbs/LCY	 ut/fill bankment 0.9		
Total Fleet Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volto Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency de Average site altitude: Material weight: Weight description:	$\frac{5208.37}{\$1,074.27}$ TITIES 222 24 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook CTION $\frac{60 \text{ feet}}{1,872.0 \text{ LCY/hr}}$ escription: Compacted fill or eml $\frac{0\%}{6,020 \text{ feet}}$ 2,900 lbs/LCY Sand and gravel - Dry	 ut/fill bankment 0.9		
Notin unit cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volt Source of estimated volt Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly prode Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	$\frac{$208.37}{$1,074.27}$ TITIES $\frac{222}{24}$ 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook $\frac{50 \text{ feet}}{2 \text{ (at Handbook)}}$ Unction: $\frac{60 \text{ feet}}{1,872.0 \text{ LCY/hr}}$ escription: Compacted fill or eml $\frac{0 \%}{6,020 \text{ feet}}$ 2,900 lbs/LCY Sand and gravel - Dry on Factor	ut/fill bankment 0.9		
Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated voltor 69, Source of estimated voltor 69, Source of estimated voltor 69, Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly product Materials consistency de Average site altitude: Material weight: Weight description: Job Condition Correction Operator	$\frac{$208.37}{$1,074.27}$ TITIES $\frac{222}{24}$ 913 LCY ume: TR-4: 700 LF to a 3:1 c cat Handbook $\frac{60 \text{ feet}}{Cat \text{ Handbook}}$ THON $\frac{60 \text{ feet}}{CTION}$ uction: 1,872.0 LCY/hr escription: Compacted fill or eml $\frac{0 \%}{6,020 \text{ feet}}$ $2,900 \text{ lbs/LCY}$ Sand and gravel - Dry $\frac{0 \text{ Factor}}{r \text{ Skill: 0.750}}$			
Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated voltor Source of estimated voltor Source of estimated voltor Source of estimated sweet HOURLY PRODUC Average push distance: Unadjusted hourly prodit Materials consistency de Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist	$\begin{array}{r c c c c c c c c c c c c c c c c c c c$			
Total Fleet Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 62, Swell factor: 1.1 Loose volume: 69, Source of estimated volto 5000000000000000000000000000000000000	$ \frac{$208.37}{$1,074.27} $ TITIES $ 222 24 913 LCY ume: TR-4: 700 LF to a 3:1 c ell factor: Cat Handbook CTION \frac{60 \text{ feet}}{1,872.0 \text{ LCY/hr}} escription: Compacted fill or eml \frac{0 \%}{6,020 \text{ feet}} 2,900 \text{ lbs/LCY} Sand and gravel - Dry \frac{0 \text{ Factor}}{1,800} r Skill: 0.750 \frac{0.900}{0.900} \frac{0.900}{0.900} $			

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	. 0.793	(CAT HB)
Blade type	1.000	(PAT)
Net correction	. 0.3554	
Adjusted unit production:	665.31 LCY/hr	
Adjusted fleet production:	2661.24 LCY/hr	

JOB TIME AND COST

Fleet size:	4 Dozer(s)
Unit cost:	\$0.404/LCY

Total job time:	26.27 Hours
Total job cost:	\$28,222

BULLDOZER RIPPING WORK

Site:							
	Sievers Pit		Permit Action:	TR-4	Permi	/Job#: <u>M197</u>	7098
	PROJECT ID	ENTIFICAT	TION				
	Task #: 044 Date: 10/ User: AC	A /11/2019 CY	State: Colorado County: Garfield		Abbrevia Filen	tion: None ame: M098-	04a
	Agency	or organizatio	on name: DRMS				
	HOURLY FO	UIPMENT (~OST				
	Basia	Machina: C	at DOT OSU		Horsopowar	405	
	Ripper Att	achment: 3	-Shank Ripper		Shift Basis:	1 per day	
			**		Data Source:	(CRG)	
	Cost Breakdown:	<u>.</u>		i			
		Oumanshin	Cost/Hour	\$121.40	Utilization %		
		Operating	Cost/Hour:	\$105.84	100		
	Ripp	er Ownership	Cost/Hour:	\$13.94	NA		
	Rip	per Operating	Cost/Hour:	\$8.96	100		
		Operator (Cost/Hour:	\$41.24	NA		
		Total Unit		\$291.40			
		Total Fleet	Cost/Hour: \$1,16	5.85			
	MATERIAL ()UANTITIE	Sele	cted estimating	method: Area		
	Alternate Method	ls:		-			
mic	NA		Don't Volumou				
me.			Bank Volume	ΝΔ	BCY	NΔ	
rea:	100.80	acres	Rip Depth (ft):	NA 2.00	BCY Volume: 325,2	NA 248	BCY or
rea:	100.80	acres	Rip Depth (ft):	$\frac{NA}{2.00}$	BCY Volume: 325,2	NA 248	BCY or
rea:	100.80	acres Source of es	timated quantity:	NA 2.00 00.8 ac to be fla	BCY Volume: <u>325,2</u> t pit floor	NA 248	BCY or
rea:	<u>100.80</u>	acres Source of es ODUCTION	timated quantity: <u>TR-4 1</u>	NA 2.00 00.8 ac to be fla	BCY Volume:325,2	NA 248	BCY or
rea:	HOURLY PRO	acres Source of es ODUCTION	timated quantity: <u>TR-4 1</u>	NA 2.00 00.8 ac to be fla	BCY Volume: <u>325,2</u> t pit floor	NA 248	BCY or
rea:	HOURLY PRO	acres Source of es ODUCTION	Bank Volume: Rip Depth (ft): timated quantity: TR-4 1 Seismic Velocity:	NA 2.00 00.8 ac to be fla NA	BCY Volume: <u>325,2</u> t pit floor feet/second	NA 248	BCY or
rea:	HOURLY PRO	acres Source of es ODUCTION	Bank Volume: Rip Depth (ft): timated quantity: TR-4 1 Seismic Velocity:	<u>NA</u> 2.00 00.8 ac to be fla <u>NA</u>	BCY Volume: <u>325,2</u> t pit floor feet/second	<u>NA</u> 248	BCY or
rea:	HOURLY PRO Seismic: Area:	acres Source of es ODUCTION Aver:	Bank volume: Rip Depth (ft): timated quantity: TR-4 1 Seismic Velocity: age Ripping Depth: age Ripping Width:	NA 2.00 00.8 ac to be fla NA 2.63 7.67	BCY Volume: <u>325,</u> t pit floor feet/second feet/pass feet/pass	NA 248	BCY or
rea:	<u>HOURLY PROSeismic:</u>	acres Source of es ODUCTION Avera Avera	Bank Volume: Rip Depth (ft): timated quantity: TR-4 1 Seismic Velocity: age Ripping Depth: age Ripping Width: ge Ripping Length:	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00	BCY Volume: <u>325,2</u> t pit floor feet/second feet/pass feet/pass feet/pass	<u>NA</u> 248	BCY or
rea:	HOURLY PRO Seismic: Area:	acres Source of es ODUCTION Avera Avera Avera	Bank Volume: Rip Depth (ft): timated quantity: TR-4 1 Seismic Velocity: age Ripping Depth: age Ripping Width: ge Ripping Length: erage Dozer Speed:	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00	BCY Volume: <u>325,7</u> t pit floor feet/second <u>feet/pass</u> feet/pass feet/pass feet/pass feet/pass	<u>NA</u> 248	BCY or
rea:	<u>HOURLY PROSeismic:</u> <u>Area:</u>	acres Source of es ODUCTION Avera Avera Avera Avera	Bank Volume: Rip Depth (ft): timated quantity: TR-4 1 I Seismic Velocity: age Ripping Depth: age Ripping Width: ge Ripping Length: erage Dozer Speed: ge Maneuver Time:	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25	BCY Volume: <u>325,2</u> t pit floor feet/second feet/pass feet/pass feet/pass feet/pass feet/pass	<u>NA</u> 248	BCY or
rea:	HOURLY PRO Seismic: Area:	acres Source of es ODUCTION Avera Avera Avera Avera Produ	Bank volume: Rip Depth (ft): timated quantity: TR-4 1 Seismic Velocity: age Ripping Depth: age Ripping Width: ge Ripping Length: erage Dozer Speed: ge Maneuver Time: action per unit area:	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838	BCY Volume: <u>325,</u> t pit floor feet/second feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass	<u>NA</u> 248	BCY or
rea:	<u>IOURLY PRO</u> <u>Seismic:</u> <u>Area:</u> <u>Job Condition Co</u>	acres Source of es ODUCTION Avera Avera Avera Avera Produ	Bank volume: Rip Depth (ft): timated quantity: TR-4 1 I Seismic Velocity: age Ripping Depth: age Ripping Width: ge Ripping Length: erage Dozer Speed: ge Maneuver Time: action per unit area:	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838	BCY Volume: <u>325,2</u> t pit floor feet/second feet/pass feet/pass feet/pass feet/pass feet/pass acres/hour	<u>NA</u> 248	BCY or
rea:	<u>IOURLY PRO</u> <u>Seismic:</u> <u>Area:</u> <u>Job Condition Co</u> Un	acres Source of es ODUCTION Avera Avera Avera Produ Orrection Factor	Bank volume: Rip Depth (ft): timated quantity: TR-4 1 Seismic Velocity: age Ripping Depth: age Ripping Depth: ge Ripping Length: ge Ripping Length: ge Maneuver Time: uction per unit area: prs ly Unit Production:	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838 0.838	BCY Volume: <u>325,7</u> t pit floor feet/second feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass acres/hour Acres/hr	<u>NA</u> 248	BCY or
rea:	<u>IOURLY PRO</u> <u>Seismic:</u> <u>Area:</u> <u>Job Condition Co</u> Un	acres Source of es ODUCTION Avera Avera Avera Avera Produ Orrection Factor	Bank volume: Rip Depth (ft): timated quantity: TR-4 1 I I Seismic Velocity: I age Ripping Depth: I age Ripping Depth: I ge Ripping Length: I ge Maneuver Time: I uction per unit area: I In Unit Production: I Site Altitude: I	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838 0.838 6.020	BCY Volume: <u>325,2</u> t pit floor feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet	<u>NA</u> 248	_ BCY or
rea:	<u>HOURLY PRO</u> Seismic: Area: Job Condition Co	acres Source of es ODUCTION Avera Avera Avera Produ orrection Facto adjusted Hour	Bank volume: Rip Depth (ft): timated quantity: TR-4 1 Seismic Velocity: age Ripping Depth: age Ripping Depth: age Ripping Length: ge Ripping Length: ge Maneuver Time: uction per unit area: Drs Hy Unit Production: Site Altitude: Altitude Adj:	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838 0.838 6,020 1.00	BCY Volume: <u>325,7</u> t pit floor feet/second feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/hour Acres/hr feet (CAT HB)	NA 248	BCY or
rea:	<u>HOURLY PRO</u> Seismic: <u>Area:</u> Job Condition Co	acres Source of es ODUCTION Avera Avera Avera Avera Produ Orrection Facto	Bank volume: Rip Depth (ft): timated quantity: TR-4 1 Seismic Velocity: age Ripping Depth: age Ripping Depth: age Ripping Depth: age Ripping Length: erage Dozer Speed: ge Maneuver Time: action per unit area: DTS Hy Unit Production: Site Altitude: Altitude Adj: Job Efficiency:	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838 0.838 6,020 1.00 0.83	BCY Volume: 325,2 t pit floor feet/second feet/pass	NA 248	BCY or
rea:	<u>IOURLY PRO</u> <u>Seismic:</u> <u>Area:</u> <u>Job Condition Cc</u> Un	acres Source of es ODUCTION Avera Avera Avera Produ Orrection Facto adjusted Hour	Bank volume: Rip Depth (ft):	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838 0.838 6,020 1.00 0.83 0.83	BCY Volume: 325,2 t pit floor feet/second feet/pass feet four	NA 248	BCY or
rea:	<u>HOURLY PR</u> <u>Seismic:</u> <u>Area:</u> <u>Job Condition Co</u> Un	acres Source of es ODUCTION Avera Avera Avera Produ Orrection Facto adjusted Hour	Bank volume: Rip Depth (ft):	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838 6,020 1.00 0.83 0.83 0.70	BCY Volume: 325,2 t pit floor feet/second feet/pass	NA 248	BCY or
rea:	<u>HOURLY PRO</u> Seismic: Area: Job Condition Co	acres Source of es ODUCTION Avera Avera Avera Avera Produ orrection Facto adjusted Hour	Bank volume: Rip Depth (ft):	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838 6,020 1.00 0.83 0.83 0.70 2.78	BCY Volume: 325,2 t pit floor feet/second feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier Acres/hr Acres/hr	NA 248	BCY or
rea:	<u>HOURLY PRO</u> Seismic: Area: Job Condition Co Un	acres Source of es ODUCTION Avera Avera Avera Avera Produ orrection Facto adjusted Hour Adjusted MD COST	Bank volume: Rip Depth (ft): timated quantity: TR-4 1 Seismic Velocity: age Ripping Depth: age Ripping Depth: age Ripping Length: ge Ripping Length: ge Maneuver Time: action per unit area: DTS Hy Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: ed Hourly Unit Production:	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838 6,020 1.00 0.83 0.83 0.70 2.78	BCY Volume: 325,2 t pit floor feet/second feet/pass feet four	NA 248	BCY or
rea:	<u>HOURLY PRO</u> Seismic: Area: Job Condition Co Un JOB TIME AN Fleet size:	acres Source of es ODUCTION Avera Avera Avera Avera Avera Avera Produ Orrection Facto adjusted Hour Adjuste Adjuste Adjuste Adjuste Adjuste Adjuste Adjuste	Bank volume: Rip Depth (ft): timated quantity: TR-4 1 I I Seismic Velocity: I age Ripping Depth: I age Ripping Depth: I age Ripping Length: I ge Ripping Length: I ge Maneuver Time: I action per unit area: I DTS I Hy Unit Production: I Site Altitude: I Altitude Adj: I Job Efficiency: I Net Correction: I ed Hourly Unit Production: I Grader(s) I	NA 2.00 00.8 ac to be fla NA 2.63 7.67 200.00 88.00 0.25 0.838 6,020 1.00 0.83 0.70 2.78 Total job time	BCY Volume: 325,2 t pit floor feet/second feet/pass feet four feet (CAT HB) four facres/hr Acres/hr Acres/hr feet Acres/hr facres/hr	NA 248	BCY or

Page 1 of 2

SCRAPER TEAM WORK

Site: Sievers Pit		Permit Action:	TR-4	Perr	mit/Job#: <u>M197</u>	7098
PROJECT IDENT	TIFICATION					
Task #: 05A	St	ate: Colorado		Abbrey	viation: None	
Date: 10/11/2	019 Cou	nty: Garfield		Fil	ename: M098-	05a
User: ACY						
Agency or o	rganization name:	DRMS				
HOURLY EQUIP	MENT_		COSTS	nift basis: <u>1 per d</u>	<u>ay</u>	
		Equipm	ent Description			
	-Sc	craper: Cat 65	7G w/push-pull			
Suppor	 t Fauinment -Load	Dozer: Cat D9	71 - 9SU 71 - 9SU			
Suppor	-Dump	Area: NA	1)50			
Road Mai	ntenance – Motor G	rader: NA				
	-Water	Iruck: NA				
Cost Breakdown:	Scraper Worl	k Team	Support Equip	oment	Maintenance	Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Tru
%Utilization-machine:	100	100	10	NA	NA	
Ownership cost/hour:	\$205.66	\$121.49	\$121.49	NA	NA	
Operating cost/hour:	\$226.28	\$105.84	\$10.58	NA	NA	
%Utilization-ripper:	NA	NA	NA	NA	NA	
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	
Operator cost/hour:	\$30.86	\$41.24	\$41.24	NA	NA	
Unit Subtotals:	\$462.80	\$268.57	\$173.31	NA	NA	
Number of Units:	4	4	1	0	0	
Group Subtotals:	Work:	\$2,925.48	Support:	\$173.31	Maint:	\$0.00
Total work team cost/	/hour: \$3,098.79					
MATERIAL QUA	NTITIES					
Initial volume:	<u>153,347</u> 186,317	CCY	Swell fact	or: <u>1.215</u>		
Sour	yea of astimated vol	10" for	100.8 as of flat and	1.6" for 22.1 as sh	opos	
Source o	f estimated swell fa	actor: Cat Han	dbook	10 101 22.1 de si	opes	
HOURLY PRODU	JCTION					
			Scraper Bo	owl (volume) Basi	is:	
Material weight:	1,600 lbs/LCY		Struck	Volume: 32.00	L	CY
Material description:	Top Soil		Heaped	Volume: 44.00	L	CY
	101000		. –			

<u>1.10</u> Minutes

<u>0.60</u> Minutes

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

Site Altitude: 6020 feet

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

Travel Time:

Road Condition: Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	0.00	8.00	8.00	1426	0.92

Haul Time: **0.92** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade	Roll. Res	Total Res	Velocity (fpm)	Travel Time
		(%)	(%)	(%)		(min)
1	1200.00	0.00	8.00	8.00	2428	0.74
				Return Time:	0.74	ninutes
			Total Scraper	team cycle time:	3.36	minutes
			Adjusted for	or job conditions:	1,126.43	LCY/Hour
			Selected Nur	nber of Scrapers:	2	Scraper(s)
	Adjusted	l single scrap	er team (unit) ho	ourly production:	1,126.43	LCY/Hour
	Adjusted m	ultiple scrape	er team (fleet) he	ourly production:	2,252.86	LCY/Hour
Optimal	Unadjusted unit proo Number of Scrapers pe	luction/hour: r push dozer:	1,357.14	LCY/Hour		
JOB TI	ME AND COST		T	. 1 . 1	0 0 5 0	

Fleet size:	2	Team(s)	Total job time:	82.70	Hours
Unit cost:	\$1.375	/LCY	Total job cost:	\$256,277	

Page 1 of 2

BULLDOZER WORK

Task description:	Distribute topsoil/finish grad	ling		
Sievers Pit	Permit Action:	Permit/Job#:	M1977098	
PROJECT IDENTIF	ICATION			
Task #: 05B	State: Colorado		Abbreviation:	None
Date: $10/11/2019$	County: Garfield		Filename:	M098-05b
User: ACY			-	
Agency or organ	nization name: DRMS			
HOURLY EQUIPME	<u>ENT COST</u>			
Basic Machine: Cat	D9T - 9SU			
Horsepower: 405	i			
Blade Type: Sen	ni-Universal			
Attachment: NA	·			
Shift Basis: 1 pe	er day			
Data Source: (CF	RG)			
Cost Breakdown:				
		Utilization %		
Ownership Cost/Hour:	\$121.49	NA		
Operating Cost/Hour:	\$105.84	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$41.24	NA		
MATERIAL QUANT Initial Volume: 93,12	ITIES 59			
Swell factor:1.00Loose volume:93,13	0 59 LCY			
Source of estimated volur Source of estimated swell	ne: Half of transported vo factor: Cat Handbook	l (186,317 LCY)		
HOURLY PRODUCT	<u>FION</u>			
Average push distance:	50 feet			
Unadjusted hourly produc	etion: 2,110.5 LCY/hr			
Materials consistency des	cription: Loose stockpile 1.2			
Average push gradient: Average site altitude:	0 % 6,020 feet			
Material weight:	1,600 lbs/LCY		_	
Weight description:	Top Soil			
Job Condition Correction	Factor	Source		
Operator S	Skill: 0.750	(AVG.)		
Material consiste	5KIII. 0.750	· · ·		
	ency: 1.200	(CAT HB)		
Dozing me	ency: 1.200 thod: 1.000	(CAT HB) (GEN.)		

Job efficience	cy: 0.830	(1 SHIFT/DAY)
Spoil pi	le: 0.800	(FND-RF)
Push gradie	nt: 1.000	(CAT HB)
Altitud	le: 1.000	(CAT HB)
Material Weig	ht: 1.438	(CAT HB)
Blade typ	be: 1.000	(PAT)
Net correction	on: 0.8593	
Adjusted unit production:	1,813.55 LCY/hr	
Adjusted fleet production:		

JOB TIME AND COST

Fleet size:	4 Dozer(s)
Unit cost:	\$0.148/LCY

Total job time:	12.84 Hours
Total job cost:	\$13,796

REVEGETATION WORK

o: Siovors I	91011. 914	Dermit Action:	TP /	Permit/Iol	₩· M1077008
	11		1 K-4		Jπ. <u>N11977098</u>
PROJECT	IDENTIFIC	ATION			
Task #:	06A	State: Colorado		Abbreviation:	None
Date:	10/11/2019	County: Garfield		Filename:	M098-06a
2	ACN				

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
6-24-24, 10-20-10, 15-15-15	200.00	pound	\$0.27	\$53.00
			Total Fertilizer Materials Cost/Acre	\$53.00

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$36.15
	Total Fertilizer Application Cost/Acre	\$36.15

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$101.93
Total Tilling Cost/Acre	\$101.93

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	0.10	11.94	\$0.98
Smooth Brome - Manchar	2.00	6.66	\$6.65
Pubescent Wheatgrass - Luna	11.00	22.73	\$37.40
Streambank Wheatgrass - Sodar	11.00	35.86	\$62.70
Totals Seed Mix	24.10	77.18	\$107.73

Application

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

Total Seed Application Cost/Acre

\$232.00

MULCHING and MISCELLANEOUS

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$6.25	\$6.25
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$596.25

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$95.83
Weed spray, truck, non-aquatic area, nox. [DMG]		\$71.50
	Total Mulch Application Cost/Acre	\$237.50

NURSERY STOCK PLANTING

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

JOB TIME AND COST

	No. of Acres:	22.1	Cost /Acre:	\$1,364.56
Estimate	ed Failure Rate:	25%	Cost /Acre*:	\$1,364.56
*Selected Replanti	ng Work Items:	FERTILIZING,TII	LING,SEEDING,MU	
	-	LCHING		
Initial Job Cost:	\$30,156.78			
Reseeding Job Cost:	\$7,539.19			
Total Job Cost:	\$37,696			
Job Hours:	28.00			

REVEGETATION WORK

te: Sievers Pit		Permit A	Action: TR-4	Permit/Job#: <u>M197709</u>	
<u>ROJECT</u>	IDENTIFIC	ATION			
Task #:	06B	State: Col	orado	Abbreviation:	None
Date:	10/11/2019	County: Ga	field	Filename:	M098-06b
User.	ACY				

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
6-24-24, 10-20-10, 15-15-15	200.00	pound	\$0.27	\$53.00
			Total Fertilizer Materials Cost/Acre	\$53.00

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$36.15
	Total Fertilizer Application Cost/Acre	\$36.15

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$101.93
Total Tilling Cost/Acre	\$101.93

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Crested Wheatgrass - Fairway	1.00	4.59	\$4.03
Kentucky Bluegrass - Lato	0.10	4.94	\$0.34
Red Clover - Medium	0.20	1.24	\$2.67
Smooth Brome - Manchar	1.50	4.99	\$4.99
Western Wheatgrass - Native	5.00	12.63	\$30.00
Timothy - Climax	0.20	5.74	\$0.32
Totals Seed Mix	8.00	34.13	\$42.33

Application

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

MULCHING and MISCELLANEOUS

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$6.25	\$6.25
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$596.25

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$95.83
Weed spray, truck, non-aquatic area, nox. [DMG]		\$71.50
	Total Mulch Application Cost/Acre	\$237.50

NURSERY STOCK PLANTING

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

JOB TIME AND COST

	No. of Acres:	100.8	Cost /Acre:	\$1,299.16	
Estimate	ed Failure Rate:	25%	Cost /Acre*:	\$1,299.16	
*Selected Replanti	ng Work Items:	FERTILIZING,TII	LING,SEEDING,MU		
-	-	LCHING			
Initial Job Cost:	\$130,955.33				
Reseeding Job Cost:	\$32,738.83				
Total Job Cost:	\$163,694				
Job Hours:	126.00				

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Init	tial Mob					
Sievers Pit		Permit	Action: <u>TR-4</u>]	Permit/Job#: <u>M</u>	1977098
PROJECT IDEN	NTIFICATI	<u>ON</u>					
Task #: 07A		State: Co	olorado		Abbre	viation: None	
Date: 10/1	1/2019	County: Ga	urfield		Fi	lename: M098	-07a
User: AC	Y	·					
Agency of	r organizatior	n name: DRMS					
EQUIPMENT T	RANSPOR	T RIG COST					
•					Shift ba	sis: 1 per da	V
				C	Cost Data Sour	ce: CRG Da	ta
Truck	Tractor Desc	ription: GENE	RIC ON-HIGH	WAY TRU 400 HP	ICK TRACTO (2ND HALF,	OR, 6X4, DIESEL 2006)	POWERED,
Truck	Trailer Desc	ription: G	ENERIC FOLD	ING GOO	SENECK. DF	OP DECK EOU	IPMENT
11001		inpuloini di	7	RAILER ((25T, 50T, AN	ND 100T)	
Cost Breakdown: Available Rig Ca	apacities	0-25 Tons	26-50 Tons	51+	Tons		
Ownership	Cost/Hour:	\$17.20	\$29.63	\$3	8.69		
Operating	Cost/Hour:	\$26.56	\$47.02	\$5	5.69		
Operator	Cost/Hour:	\$23.63	\$23.63	\$2	3.63		
Helper	Cost/Hour:	\$0.00	\$23.53	\$2	3.53		
Total Unit	Cost/Hour:	\$67.39	\$123.81	\$14	41.54		
NON ROADAB	LE EQUIPN	MENT:					
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
ĩ	(TONS)		t		fleet		
Cat D9T - 9SU	66.13	\$135.43	\$141.54	4	\$1,107.88	\$566.16	\$1,000.00
Cat 657G w/push- pull	80.25	\$205.66	\$141.54	4	\$1,388.80	\$566.16	\$1,000.00
Drill/Broadcast	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00
Seeder with							
Tractor Down Mailabar	6.00	\$0.74	\$67.20	1	\$77.12	\$67.20	\$250.00
(Bowie LD-90)	6.00	<u></u>	۵0 <i>1.3</i> 9	1	\$77.13	\$07.39 \$	\$250.00

Subtotals: \$2,659.35 \$1,267.10 \$2,500.00

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	\$76.23	1	\$76.23	\$76.23
		Subtotals:	\$76.23	\$76.23

EQUIPMENT HAUL DISTANCE and Time

	GLENWOOD SPRINGS,	Nearest Major City or Town within project area region:
	СО	
miles	6.00	Total one-way travel distance:
mph	35.00	Average Travel Speed:
	\$11,664.91	Total Non-Roadable Mob/Demob Cost *
	\$26.14	Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.17	0.17
Return Time (Hours):	0.17	0.17
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.34	0.34

JOB TIME AND COST

Total job time:	2.69	Hours

Total job cost: \$11,691

EQUIPMENT MOBILIZATION/DEMOBILIZATION

		U U					
Sievers Pit		Permit	Action: <u>TR-4</u>]	Permit/Job#:	M1977098
PROJECT IDE	NTIFICATI	ON					
Task #: 07E	}	State: Co	olorado		Abbre	eviation: N	one
Date: 10/ User: AC	11/2019 Y	County: Ga	rfield		Fi	lename: M	I098-07b
Agency of	or organization	n name: DRMS					
EQUIPMENT T	RANSPOR	<u>T RIG COST</u>					
				(Shift ba Cost Data Sour	sis: 1 pe rce: CRG	er day d Data
Truck	Tractor Desc	ription: GENE	RIC ON-HIGH	WAY TRU 400 HP	JCK TRACTO (2ND HALF.	OR, 6X4, DIE 2006)	SEL POWERED,
Trucl	c Trailer Desc	ription: G	ENERIC FOLD	ING GOO FRAILER	SENECK, DF (25T, 50T, AN	ROP DECK E ND 100T)	QUIPMENT
Cost Breakdown:							
Cost Breakdown: Available Rig Ca	apacities	0-25 Tons	26-50 Tons	51+	Tons		
Cost Breakdown: Available Rig Ca Ownership	apacities Cost/Hour:	0-25 Tons \$17.20	26-50 Tons \$29.63	51 +	Tons 8.69		
Cost Breakdown: Available Rig Ca Ownership Operating	apacities Cost/Hour: Cost/Hour:	0-25 Tons \$17.20 \$26.56	26-50 Tons \$29.63 \$47.02	51 + \$3 \$5	• Tons 18.69 15.69		
Cost Breakdown: Available Rig Ca Ownership Operating Operator	apacities Cost/Hour: Cost/Hour: Cost/Hour:	0-25 Tons \$17.20 \$26.56 \$23.63	26-50 Tons \$29.63 \$47.02 \$23.63	51 + \$3 \$5 \$2	Tons 8.69 5.69 3.63		
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper	apacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour:	0-25 Tons \$17.20 \$26.56 \$23.63 \$0.00	26-50 Tons \$29.63 \$47.02 \$23.63 \$23.53	51 + \$3 \$5 \$2 \$2	Tons 88.69 5.69 3.63 3.53		
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit	apacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour:	0-25 Tons \$17.20 \$26.56 \$23.63 \$0.00 \$67.39	26-50 Tons \$29.63 \$47.02 \$23.63 \$23.53 \$123.81	51+ \$3 \$5 \$2 \$2 \$2 \$1	Tons 18.69 15.69 13.63 13.53 41.54		
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit	apacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: LE EQUIPN	0-25 Tons \$17.20 \$26.56 \$23.63 \$0.00 \$67.39	26-50 Tons \$29.63 \$47.02 \$23.63 \$23.53 \$123.81	51+ \$3 \$5 \$2 \$2 \$1	Tons 8.69 5.69 93.63 93.53 41.54		
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit CON ROADAB Machine	Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: LE EQUIPN Weight/	0-25 Tons \$17.20 \$26.56 \$23.63 \$0.00 \$67.39	26-50 Tons \$29.63 \$47.02 \$23.63 \$23.53 \$123.81 Haul Rig	51+ \$3 \$5 \$2 \$2 \$1 \$1	• Tons • 8 .69 • 5 .69 • 2 .3.63 • 2 .3.53 • 4 1.54 Haul Trip	Return Trip	DOT Permit
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit CON ROADAB Machine Description	Apacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: LE EQUIPN Weight/ Unit (TONS)	0-25 Tons \$17.20 \$26.56 \$23.63 \$0.00 \$67.39 MENT: Owner ship Cost/hr/ unit	26-50 Tons \$29.63 \$47.02 \$23.63 \$23.53 \$123.81 Haul Rig Cost/hr/uni t	51+ \$3 \$5 \$2 \$2 \$1 \$1 Fleet Size	Tons 8.69 5.69 23.63 23.53 41.54 Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fle	DOT Permit et Cost/ fleet
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit NON ROADAB Machine Description Drill/Broadcast Seeder with Tractor	Apacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: LE EQUIPN Weight/ Unit (TONS) 25.00	0-25 Tons \$17.20 \$26.56 \$23.63 \$0.00 \$67.39 MENT: Owner ship Cost/hr/ unit \$18.15	26-50 Tons \$29.63 \$47.02 \$23.63 \$23.53 \$123.81 Haul Rig Cost/hr/uni t \$67.39	51+ \$3 \$5 \$2 \$2 \$2 \$1 \$1 Fleet Size 1	Tons 88.69 55.69 23.63 23.53 41.54 Haul Trip Cost/hr/ fleet \$85.54	Return Trip Cost/hr/ fle \$67.39	DOT Permit et Cost/ fleet \$250.00
Cost Breakdown: Available Rig Ca Ownership Operating Operator Helper Total Unit NON ROADAB Machine Description Drill/Broadcast Seeder with Tractor Power Mulcher (Bowie LD-90)	Apacities Cost/Hour: Cost/Hour: Cost/Hour: Cost/Hour: LE EQUIPN Weight/ Unit (TONS) 25.00 6.00	0-25 Tons \$17.20 \$26.56 \$23.63 \$0.00 \$67.39 MENT: Owner ship Cost/hr/ unit \$18.15 \$9.74	26-50 Tons \$29.63 \$47.02 \$23.63 \$23.53 \$123.81 Haul Rig Cost/hr/uni t \$67.39 \$67.39	51+ \$3 \$5 \$2 \$2 \$1 \$1 Fleet Size 1	Tons 88.69 55.69 23.63 23.53 41.54 Haul Trip Cost/hr/ fleet \$85.54 \$77.13	Return Trip Cost/hr/ fle \$67.39 \$67.39	b DOT Permit Cost/ fleet \$250.00 \$250.00

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	\$76.23	1	\$76.23	\$76.23
		Subtotals:	\$76.23	\$76.23

EQUIPMENT HAUL DISTANCE and Time

	GLENWOOD SPRINGS,	Nearest Major City or Town within project area region:
	СО	
miles	6.00	Total one-way travel distance:
mph	35.00	Average Travel Speed:
	\$1,427.32	Total Non-Roadable Mob/Demob Cost *
	\$26.14	Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.17	0.17
Return Time (Hours):	0.17	0.17
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.34	0.34

JOB TIME AND COST

Total job time:	2.69	Hours

Total job cost: \$1,453



1313 Sherman Street, Room 215 Denver, CO 80203

October 11, 2019

RE: Sievers Pit, Permit No. M-1977-098, TR-4 Reclamation Cost Estimate

Dear Mr. Burkey:

This reclamation cost update was in response a site inspection conducted on June 25, 2019 and TR-4 submitted on August 6, 2019. The last Surety Increase (SI-5) was in 2017. Since then there have been significant updates to the CIRCES estimating software. Note that it is Division policy to periodically update its costs to ensure that the Financial Warranty adequately, reflects the actual current cost of fulfilling the requirements of the approved reclamation plan.

Below is a table summarizing input values that have been updated with this calculation (TR-4) as compared to the previous (SI-5). Text in red are input values specifically pulled from TR-4. This table does not account for price changes resulting from inflation or other RS Means cost changes. Bond calculations are based on a combination of field observations and worst case scenario based on the approved reclamation permit.

Task	Form Used	Justification
01a	Demo	Push/haul distances for disposal of offices on site updated from 50 ft. to 10,000 ft. max (actuals range from 430 to 600 ft.
	Demo	Apron concrete around shop accounted for, demo are updated from 10,000 sq. ft. to approx. 18,400 sq. ft. based on Google Earth aerial imagery
02a	Ripper	Pads are more realistically 8" + thick not 6". Volume updated from 3,057 to 6,115 CCY.
		Updated fleet to 4x D9 Dozers (scrapper task use)
02b	Scrapper	Switched to scrapper since already mobilized (4x 657 G w/ push/pull D9 Dozers).
		Volume updated from 3,057 to 6,115 CCY to reflected ripped amount.
		Updated grade to -2 downhill since office area is above pit.
03a	Dozer	TR-4 knock down highwall, 700 LF to 3H:1V is 62,222 CY



		Updated grade to 0 since dozing up/down and highwall push would be 60 ft. for length of highwall Updated fleet to 4x D9 Dozers (scrapper task use)
04a	Ripper	TR-4 estimates pit floor to be 100.8 ac Updated fleet to 4x D9 Dozers (scrapper task use)
05a	Scrapper	Topsoil 153,347 CCY (10" for 100.8 ac of flat is 135,520 CY and 6" for 22.1 ac of slopes is 17,827.33) Switched to 4x 657 G w/ push/pull D9 Dozers Updated road condition to Soft, rutted 8.0, rather than Very soft, muddy 20.0
05b	Dozer	Updated volume spread to reflect actual LCY volume transported 49,072 to 93,159 LCY. Total of 186,317 LCY transported
06a &b	Reveg	TR-4 22.1 slopes and 100.8 flat Switched from chisel to disk plow. Added power mulcher Updated hours to reflect addition workload
07a&b	Mob	Updated fleets bases on tasks above. No loader, 4 x scrapper teams, added power mulcher
Indirect		Decrease job/superintendent hour with more efficient use of equipment

Please feel free to contact me with any further questions. 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 303-866-3567 Ext 8183 or via email at amy.yeldell@ state.co.us

Sincerely,

Amy Geldell

Amy Yeldell Environmental Protection Specialist

Ec: Travis Marshall, Senior EPS, Grand Junction DRMS