

Department of Natural Resources

1313 Sherman Street, Room 215 Denver, CO 80203

July 13, 2017

Joe C. Baxter Midway Aggregates, RLLP P.O. Box 580 Rye, CO 81069

Re: Midway Pit, Permit No. M-1988-018 Technical Revision Application TR-2

**Financial Warranty Revision** 

Mr. Baxter:

David King has discussed the Division's previous bond estimate based on your Technical Revision 2 (TR-02) submittal. Based on these discussions, the Division has eliminated Task 005 for "Finish Grade Reclamation Area". A revised bond estimate is enclosed.

On May 25, 2017 the Division received a request to extend the decision date for Technical Revision 2 (TR-02) by 60 days. The current decision date is July 24, 2017. The Division has not received a response to our May 22, 2017 preliminary adequacy review (PAR), copy enclosed.

The decision date for TR-02 is July 24, 2017. Please be advised that if you are unable to satisfactorily address any concerns identified in the aforementioned PAR before the decision date, it will be your responsibility to request an extension of the review period. If there are outstanding issues that have not been adequately addressed prior to the end of the review period, and no extension has been requested, the Division may deny this Technical Revision.

If you have any questions, please contact me (303-866-3567 ext. 8169).

Sincerely,

Timothy A. Cazier, P.E.

**Environmental Protection Specialist** 

**Enclosures** 

ec: Wally Erickson, DRMS

DRMS file

David King, Midway Aggregates



### **COST SUMMARY WORK**

e: Midway Pit		Permit Action: 2017 TR-02		Permit/Job	#: <u>M1988018</u>
PROJECT	Γ IDENTIFIC	<u>CATION</u>			
Task #: Date:		State: Colorado County: El Paso		Abbreviation: Filename:	None M018-000
	TC1				

### **TASK LIST (DIRECT COSTS)**

Task	D	Form	Fleet	Task Hours	Cost
	Description	Used	Size		Cost
001	Backfill 3 Ponds	DOZER	1	12.55	\$2,865.00
002	Knockdown Near Vert. West Highwalls	DOZER	1	0.92	\$210.00
003	Knockdown Northside Highwalls	DOZER	1	0.89	\$204.00
004	Place 3" Topsoil on Disturbed Area (22 acres)	SCRAPER1	1	28.55	\$7,090.00
005	Finish Grade Reclamation Area - DELETED	NA	0	0.00	\$0.00
06A	Reveg using seed drill	REVEGE	1	80.00	\$35,513.00
06B	Reveg using broadcast method	REVEGE	1	4.00	\$1,645.00
070	Mob/Demob (revised)	MOBILIZE	1	2.84	\$2,143.00
		OTALS:	129.75	\$49,670	

#### **INDIRECT COSTS**

#### **OVERHEAD AND PROFIT:**

2.02 \$1,003.33 Liability insurance: Total = Performance bond: 1.05 Total = \$521.54 Job superintendent: 72.87 Total = \$5,323.15 \$4,967.00 Profit: 10.00 Total =

TOTAL O & P = \$11,815.02 CONTRACT AMOUNT (direct + O & P) = \$61,485.02

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00 Total = 0.00

Engineering work and/or contract/bid preparation: 0.00 Total = \$0.00

Reclamation management and/or administration: 5.00 \$3,074.25

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$14,889.27

TOTAL BOND AMOUNT (direct + indirect) = \$64,559.27

**ROUNDED TOTAL BOND AMOUNT (direct + indirect) = \$64,560.00** 

## **BULLDOZER WORK**

Task description	n:	Backfill	3 Ponds				
: Midway Pit		Permit Action: 2017 TR-02			Permit/Job#:	M1988018	
PROJECT II	ENTIF	CATION					
Task #: 00	01		State: Colorado		Abbreviation:	None	
	/22/2017		County: El Paso		Filename:	M018-001	
User: T	C1				=		
Agenc	y or orgar	nization nam	e: DRMS				
HOURLY E	)UIPME	NT COST					
Basic Machin		D9T - 9SU					
Horsepow							
Blade Ty	٠	ni-Universal					
Attachme				<u>—</u>			
Shift Bas		er day					
Data Sour	ce: (CR	(G)		<u> </u>			
Cost Breakdow	<u>n</u> :						
				<u>Utilization %</u>			
Ownership Co			\$100.59	NA			
Operating Co			\$87.23	100			
Ripper own. Co			\$0.00	NA			
Ripper op. Co			\$0.00	0			
			Φ 4 Ω . <b>C</b> Ω	3.7.4			
Operator Co Total unit Cost/ Total Fleet Cost  MATERIAL	Hour: t/Hour:	\$228.34 <b>\$228.34</b> ITIES	\$40.52	NA NA			
Total unit Cost/ Total Fleet Cost MATERIAL  Initial Volume Swell facto	Hour: t/Hour: <b>QUANT</b> e: 14,7: r: 1.12:	\$228.34 ITIES 55	\$40.52				
Total unit Cost/ Total Fleet Cost MATERIAL  Initial Volume	Hour: t/Hour: <b>QUANT</b> e: 14,7: r: 1.12:	\$228.34 ITIES 55	\$40.52	NA			
Total unit Cost/ Total Fleet Cost MATERIAL  Initial Volume Swell facto	Hour: t/Hour:  QUANT e: 14,7:	\$228.34 ITIES 55 599 LCY ne:	see spread sheets - as				
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim	Hour: t/Hour:  OUANT e: 14,7': 1.12: 16,5': ated volur ated swell	\$228.34  ITIES  55  699 LCY  ne: S factor: C	see spread sheets - as				
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim Source of estim HOURLY PE	Hour: t/Hour:  QUANT e: 14,7' r: 1.12: e: 16,5' ated volur ated swell  RODUCT	\$228.34  ITIES 55 599 LCY ne: _S factor: _C TION 75	see spread sheets - as Cat Handbook				
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim Source of estim	Hour: t/Hour:  QUANT e: 14,7' r: 1.12: e: 16,5' ated volur ated swell  RODUCT	\$228.34  ITIES 55 599 LCY ne: _S factor: _C TION 75	ee spread sheets - as Cat Handbook				
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim Source of estim HOURLY PE	Hour: t/Hour:  QUANT e: 14,7: r: 1.12: e: 16,5! ated volur ated swell  RODUCT istance: rly product	\$228.34  ITIES  55  99 LCY  ne:	see spread sheets - as Cat Handbook	sume 12 ft depth			
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim Source of estim HOURLY PR  Average push d Unadjusted hou	Hour: t/Hour:  QUANT e: 14,7: r: 1.12: e: 16,5: ated volur ated swell  RODUCT istance: rly product stency des	\$228.34  ITIES  55  99 LCY  ne:	lee spread sheets - as Cat Handbook feet 14.3 LCY/hr Partly consolidated	sume 12 ft depth			
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim Source of estim HOURLY PE Average push d Unadjusted hou Materials consist Average push g Average site alt	Hour: t/Hour:  QUANT e: 14,7: 1.12: e: 16,5: ated volur ated swell  RODUCT istance: rly product stency des radient: itude:	\$228.34  ITIES  55  599 LCY  ne:	See spread sheets - as Cat Handbook feet 14.3 LCY/hr Partly consolidated	sume 12 ft depth			
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim Source of estim HOURLY PE Average push d Unadjusted hou Materials consist Average push g Average site alt	Hour: t/Hour:  QUANT e: 14,7' r: 1.12: 16,5' ated volur ated swell  RODUCT istance: rly product stency des radient: itude:	\$228.34  ITIES  55  59 LCY  ne:	See spread sheets - as Cat Handbook feet 14.3 LCY/hr Partly consolidated	sume 12 ft depth  stockpile 1.1			
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim Source of estim  HOURLY PE  Average push d Unadjusted hou  Materials consist Average push g Average site alt  Material weight	Hour: t/Hour:  QUANT e: 14,7: r: 1.12: e: 16,5: ated volur ated swell  RODUCT istance: rly product stency des radient: itude: : ion:	\$228.34  ITIES  55  599 LCY  ne: Serion: 75  CION  ction: 1,5  cription: -10 %  5,400 feet  2,650 lbs/	see spread sheets - as Cat Handbook  feet 14.3 LCY/hr  Partly consolidated	sume 12 ft depth  stockpile 1.1			
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim Source of estim  HOURLY PE  Average push d Unadjusted hou  Materials consist Average push g Average site alt  Material weight Weight descript Job Condition C	Hour: t/Hour:  QUANT e: 14,7: r: 1.12: e: 16,5: ated volur ated swell  RODUCT istance: rly product stency des radient: itude: : ion:	\$228.34  ITIES  55  599 LCY  ne: Serion: 75  CION  ction: 1,5  cription: -10 %  5,400 feet  2,650 lbs/ Decompo	see spread sheets - as Cat Handbook  feet 14.3 LCY/hr  Partly consolidated	sume 12 ft depth stockpile 1.1			
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim Source of estim  HOURLY PE  Average push d Unadjusted hou  Materials consist  Average push g Average site alt  Material weight  Weight descript  Job Condition C	Hour: t/Hour:  QUANT e: 14,7: r: 1.12: 16,5: ated volur ated swell  RODUCT istance: rly product stency des radient: itude: : Correction Operator S al consiste	\$228.34  ITIES  55  599 LCY  ne:	see spread sheets - as Cat Handbook  feet 14.3 LCY/hr  Partly consolidated  LCY  sed rock - 25% Rock	sume 12 ft depth  stockpile 1.1  stockpile 1.1  stockpile 1.1  Source			
Total unit Cost/ Total Fleet Cost  MATERIAL  Initial Volume Swell facto Loose volume Source of estim Source of estim  HOURLY PE  Average push d Unadjusted hou  Materials consist  Average push g Average site alt  Material weight  Weight descript  Job Condition C	Hour: t/Hour:  QUANT e: 14,7' r: 1.12: 16,5' ated volur ated swell  RODUCT istance: rly product stency des radient: itude: : ion: Correction Operator S	\$228.34  ITIES  55  599 LCY  ne:	see spread sheets - as Cat Handbook  feet 14.3 LCY/hr  Partly consolidated  LCY  sed rock - 25% Rock  0.750	sume 12 ft depth  stockpile 1.1  stockpile 1.1  stockpile 4.1			

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8737

Adjusted unit production: 1,323.04 LCY/hr
Adjusted fleet production: 1323.04 LCY/hr

## **JOB TIME AND COST**

Fleet size: 1 Dozer(s)
Unit cost: \$0.173/LCY

Total job time: 12.55 Hours 
Total job cost: \$2,865

## **BULLDOZER WORK**

Task description:	Knockdown Near Vert. West Highwalls						
Midway Pit		Per	mit Action:	2017 TR-02	Permit/Job#:	M1988018	
PROJECT IDEN	NTIFICA	TION					
Task #: 002		State:	Colorado		Abbreviation:	None	
Date: 5/22/2	2017	County:	El Paso		Filename:	M018-002	
User: TC1		<u></u>					
Agency or	r organizat	ion name: DI	RMS				
HOURLY EQUI	<u>IPMENT</u>	COST					
Basic Machine:	Cat D9	Γ - 9SU					
Horsepower:	405						
Blade Type:		niversal		<u> </u>			
Attachment:	NA 1 mars de			<u> </u>			
Shift Basis:	1 per da	ıy		<u> </u>			
Data Source:	(CRG)			<u></u>			
Cost Breakdown:							
0 11 0 2	•		<b>0100 ₹</b> 0	<u>Utilization %</u>			
Ownership Cost/F			\$100.59	NA 100			
Operating Cost/H Ripper own. Cost/H			\$87.23 \$0.00	100 N A			
Ripper own. Cost/F			\$0.00	NA 0			
				<u> </u>			
Operator Cost/H	10UF:		\$40.52	NA			
Total unit Cost/Hou	ır: \$2	228.34					
Total Fleet Cost/Ho	our: \$2	228.34		<del></del>			
MATERIAL QU Initial Volume: Swell factor:	1,864 1.125	<u>ES</u>					
Loose volume:	2,097 LC	TY					
Source of estimated Source of estimated HOURLY PROI	l swell fac	tor: Cat Hand		ets - assume 10 ft height			
Average push distant		50 feet					
Unadjusted hourly	production	: 2,110.5 LC	Y/hr				
Materials consisten	cy descrip	tion: Partly	consolidated	stockpile 1.1			
Average push gradi Average site altitud		5 % 400 feet					
Material weight:		650 lbs/LCY			_		
Weight description:	: <u>D</u>	ecomposed rock	- 25% Rock	, 75% Earth			
Job Condition Corr				Source			
	erator Skill		750	(AVG.)			
Material c			100	(CAT HB)			
Dozi	ng method		200	(SLOT)			
	Visibility	r: 1.	.000	(AVG.)			

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

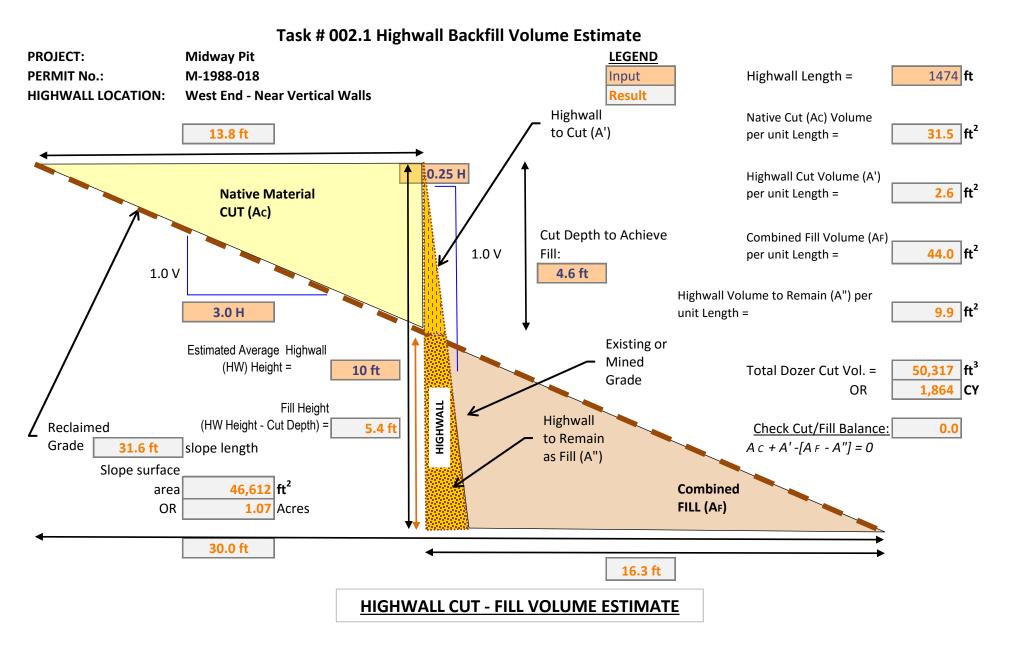
Net correction: 1.0813

Adjusted unit production: 2,282.08 LCY/hr
Adjusted fleet production: 2282.08 LCY/hr

## **JOB TIME AND COST**

Fleet size: 1 Dozer(s)
Unit cost: \$0.100/LCY

Total job time: 0.92 Hours
Total job cost: \$210



## **BULLDOZER WORK**

Task description:		Knockdown Northside Highwalls				
Midway Pit		Per	mit Action:	2017 TR-02	Permit/Job#:	M1988018
PROJECT IDE	NTIFIC	ATION				
Task #: 003		State:	Colorado		Abbreviation:	None
Date: 5/22	/2017	County:	El Paso		Filename:	M018-003
User: TC1					_	
Agency o	or organiza	ation name: DF	RMS			
HOURLY EQU						
Basic Machine:		9T - 9SU				
Horsepower:		71 750		<u>—</u>		
Blade Type:		Universal		<del></del>		
Attachment:						
Shift Basis:				<u> </u>		
Data Source:	(CRG)	)		<u> </u>		
Cost Breakdown:						
				<u>Utilization %</u>		
Ownership Cost/			\$100.59	NA		
Operating Cost/			\$87.23	100		
Ripper own. Cost/			\$0.00	NA		
Ripper op. Cost/			\$0.00	0		
Operator Cost/	Hour:		\$40.52	NA		
					<del></del>	
Total unit Cost/Ho	ur: \$	5228.34				
Total unit Cost/Ho Total Fleet Cost/H	our:	5228.34 5228.34				
	our:	8228.34	_			
Total Fleet Cost/H  MATERIAL QU  Initial Volume:	our: \$\frac{\\$}{\$}\$ UANTIT 1,813	S228.34 SIES				
MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate	Our:	CY See revise Cat Hand		ets - assume 15 ft height		
MATERIAL QUE Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO	0ur: \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	CY See revise Cat Hand		ets - assume 15 ft height		
MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate	our: \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	CY See revise Cat Hand  DN  50 feet	lbook	ets - assume 15 ft height		
MATERIAL QUE Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista	UANTIT  1,813  1.125  2,040 L  d volume: d swell factorics: production	See revise   CY   See revise   Cat Hand	Y/hr	ets - assume 15 ft height		
MATERIAL QUE Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly	UANTIT  1,813  1.125  2,040 L  d volume: d swell factor  DUCTIC  ance: production  mey description:  iient:	See revise   CY   See revise   Cat Hand	Y/hr			
MATERIAL QUE Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consistent Average push grade	our: \$\frac{1}{8}\$  UANTIT  1,813  1,125  2,040 L  d volume: d swell factorics: production may descripted: 5	See revise   Cat Hand	Y/hr			
MATERIAL QUE Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consister Average push grad Average site altitude	our: \$\frac{1}{8}\$  UANTIT  1,813  1.125  2,040 L  d volume: d swell factorized swell facto	See revise   Cat Hand	Y/hr consolidated	stockpile 1.1		
MATERIAL QI Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consisten Average push grad Average site altitud Material weight: Weight description Job Condition Cor	1,813	See revise   Cat Hand	Y/hr consolidated	stockpile 1.1 , 75% Earth Source		
MATERIAL QUE Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consistent Average push grad Average site altitude Material weight: Weight description Job Condition Cor	Our: \$\frac{1}{8}\$  UANTIT  1,813  1.125  2,040 L  d volume: d swell factor  DUCTIC  nnce: production  ncy description: \$\frac{2}{1}\$  a: \$\frac{1}{1}\$  rection Factor Ski	See revise   Cat Hand	Y/hr consolidated - 25% Rock	stockpile 1.1  , 75% Earth  Source (AVG.)		
MATERIAL QUE Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO Average push dista Unadjusted hourly Materials consistent Average push grad Average site altitude Material weight: Weight description Job Condition Cor Op Material of	1,813	See revise   CY   See revise   Cat Hand	Y/hr consolidated	stockpile 1.1 , 75% Earth Source		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.0813

Adjusted unit production: 2,282.08 LCY/hr
Adjusted fleet production: 2282.08 LCY/hr

## **JOB TIME AND COST**

Fleet size: 1 Dozer(s)
Unit cost: \$0.100/LCY

Total job time: 0.89 Hours
Total job cost: \$204

#### Task # 003.1 Highwall Backfill Volume Estimate PROJECT: **Midway Pit LEGEND** 825 ft **PERMIT No.:** M-1988-018 Highwall Length = Input **North Side Highwalls** Result **HIGHWALL LOCATION:** Highwall Native Cut (Ac) Volume to Cut (A') 47.5 ft<sup>2</sup> 16.9 ft per unit Length = 0.75 H Highwall Cut Volume (A') 11.9 ft<sup>2</sup> **Native Material** per unit Length = CUT (Ac) Cut Depth to Achieve Combined Fill Volume (AF) 131.8 ft<sup>2</sup> 1.0 V Fill: per unit Length = 1.0 V 5.6 ft Highwall Volume to Remain (A") per 72.5 ft<sup>2</sup> 3.0 H unit Length = Existing or Estimated Average Highwall Mined 48,944 ft<sup>3</sup> (HW) Height = 15 ft Total Dozer Cut Vol. = Grade 1,813 CY OR HIGHWALL Fill Height Highwall (HW Height - Cut Depth) = 9.4 ft 0.0 Reclaimed Check Cut/Fill Balance: to Remain Grade Ac + A' - [AF - A''] = 047.4 ft slope length as Fill (A") Slope surface 39,133 ft<sup>2</sup> Combined area 0.90 Acres FILL (A<sub>F</sub>) OR 45.0 ft 28.1 ft **HIGHWALL CUT - FILL VOLUME ESTIMATE**

# SCRAPER TEAM WORK

Site: Midway Pit	Place 3" Topsoil o		2017 TR-02		mit/Job#: M198	= 8018
Site. Mildway I it	Ferm	it Action.	2017 TK-02		III/J00#. <u>W1198</u>	8018
PROJECT IDENT	<b>TIFICATION</b>					
Tools #1 004	Stata	Colomada		A b b way	viction. None	
Task #: 004 Date: 5/22/20	State: _ O17 County:	Colorado El Paso			viation: None ename: M018-	004
User: $\frac{3/22/20}{\text{TC1}}$	County	LiTaso			chame. Wio16-	004
Agency or o	organization name: DRM	⁄IS				
HOURLY EQUIP	MENT		COSTSI	hift basis: 1 per d	ay	
		Fauinme	ent Description			
	-Scraper:	Cat 631				
	-Dozer:	NA				
Suppo	rt Equipment -Load Area:	NA				
Road Ma	-Dump Area: intenance –Motor Grader:	NA NA				
Road Wa	-Water Truck:	NA				
Cost Breakdown:	Scraper Work Team		Support Equip		Maintenance	
	Scraper Do	ozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	NA	NA	NA
Ownership cost/hour:	\$98.72	NA	NA	NA	NA	NA
Operating cost/hour:	\$108.19	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$41.46	NA	NA	NA	NA	NA
Unit Subtotals:	\$248.37	NA	NA	NA	NA	NA
Number of Units:	1	0	0	0	0	0
Group Subtotals:	Work: \$24	8.37	Support:	\$0.00	Maint:	\$0.00
Total work team cost	/hour: <b>\$248.37</b>					
MATERIAL QUA	<u>ANTITIES</u>					
Initial volume:	8,873	CCY	Swell fact	tor: 1.125		
Loose volume:	9,982	LCY			<del></del>	
Sou	rce of estimated volume:	3" depth	over 22 acres			
	of estimated swell factor:	Cat Hand				
HOURLY PRODU	<u>UCTION</u>					
			Scraper Bo	owl (volume) Basi	is:	
Material weight:	2,650 lbs/LCY		Struck '	Volume: 24.00	L	CY
Material description:	Decomposed rock - 25% 75% Earth	Rock,	Heaped '	Volume: 34.00	L	CY
Rated Payload:	81,600 pounds		Average `	Volume: 29.00		CY
Payload Capacity:	30.79 LCY		Adjusted C			CY

$\sim$	1	m.
7	ICIE	Time:
	CIC	I IIIIC.

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{0.80} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.70} \text{ Minutes} \\ \end{array}$ 

Job Condition Correction: Site Altitude: 5400 feet

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

#### **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	1500.00	-5.00	8.00	3.00	2227	0.97

Haul Time: **0.97** minutes

#### Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	5.00	8.00	13.00	918	1.66

Return Time: 1.66 minutes Total Scraper team cycle time: 4.13 minutes Adjusted for job conditions: 349.69 LCY/Hour Selected Number of Scrapers: 1 Scraper(s) Adjusted single scraper team (unit) hourly production: 349.69 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 349.69 LCY/Hour

Unadjusted unit production/hour:	421.31	LCY/Hou
Optimal Number of Scrapers per push dozer:		_

### **JOB TIME AND COST**

Fleet size:	1	Team(s)	Total job time:	28.55	Hours
Unit cost:	\$0.710	/LCY	Total job cost:	\$7,090	

# **REVEGETATION WORK**

Midway Pit	Permit Action:	2017	TR-02	Permit/Job	#: <u>M1988018</u>
ROJECT IDENTIFICATION					
Task #: 06A State Date: 5/22/2017 County User: TC1  Agency or organization name: 1	: El Paso			Abbreviation: Filename:	None M018-06A
<u>ERTILIZING</u>					
Iaterials  Description	Un Ac	nits /	Unit	Cost / Unit	Cost /Acre
				\$	\$
				Total Fertilizer Materials Cost/Acre	\$0.00
pplication					
Description					Cost /Acre
					\$
		Total	Fertilizer A	application Cost/Acre	\$0.00
ILLING					
Description					Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91	13.23 6100)				\$106.29
			To	otal Tilling Cost/Acre	<b>\$106.29</b>

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.15	5.85	\$4.25
Sand Dropseed	0.05	5.97	\$0.54
Little Bluestem - Pastura	1.34	8.00	\$22.55
Sideoats Grama - Vaughn	1.82	5.97	\$18.20
Galleta	0.37	1.35	\$9.14
Needle and Thread	1.09	2.88	\$45.24
Western Wheatgrass - Native	3.20	8.08	\$22.40
Saltbush, Four Wing	1.00	1.38	\$12.50
Winter Fat	0.02	0.05	\$0.41
Totals Seed Mix	9.04	39.53	\$135.23

**Application** 

Description		Cost /Acre
Drill seeding (MEANS 32 92 19.13 0020)		\$438.00
	<b>Total Seed Application Cost/Acre</b>	\$438.00

## **MULCHING and MISCELLANEOUS**

#### Materials

Description Straw, delivered {MEANS 31 25 14.16 1200}	Units / Acre 2.00	Unit TON	Cost / Unit \$261.00	Cost /Acre \$522.00
Total Mulch Materials Cost/Acre	2.00	TOIN	\$201.00	\$522.00 \$522.00

Application

Description		Cost /Acre
Power mulcher (MEANS 32 91 13.16 0350)		\$99.32
	<b>Total Mulch Application Cost/Acre</b>	\$99.32

## **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:
 21
 Cost /Acre:
 \$1,300.84

 Estimated Failure Rate:
 30%
 Cost /Acre\*:
 \$1,300.84

\*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: \$27,317.64

Reseeding Job Cost: \$8,195.29

Total Job Cost: \$35,513

80.00

# **REVEGETATION WORK**

Task description: Reveg using Midway Pit	ng broadcas Permit A	action: 2017	TR-02	Permit/Job	p#: <u>M1988018</u>
PROJECT IDENTIFICATION					
Date: 5/22/2017 Con User: TC1	inty: El P	orado Paso		Abbreviation: Filename:	None M018-06B
Agency or organization name: ERTILIZING	DRMS				
Agrials		Units /			T
Description		Acre	Unit	Cost / Unit	Cost /Acre
				\$	\$
				Total Fertilizer Materials Cost/Acre	<b>;</b>
Application					Cost /Acre
Description					\$
		Total	Fertilizer A	pplication Cost/Acre	
<u> </u>					
Description					Cost /Acre
Disc harrowing, 6" deep (MEANS 3:	2 91 13.23 6	5100)			\$106.29
			To	otal Tilling Cost/Acre	\$106.29
SEEDING					
				Rate –	

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.30	11.71	\$8.50
Sand Dropseed	0.10	11.94	\$1.08
Little Bluestem - Pastura	2.68	16.00	\$45.10
Sideoats Grama - Vaughn	3.64	11.95	\$36.40
Galleta	0.74	2.70	\$18.28
Needle and Thread	2.18	5.76	\$90.47
Western Wheatgrass - Native	6.40	16.16	\$44.80
Saltbush, Four Wing	2.00	2.75	\$25.00
Winter Fat	0.04	0.10	\$0.82
Totals Seed Mix	18.08	79.07	\$270.45

**Application** 

Description		Cost /Acre
Broadcast seeding [DMG]		\$267.22
	<b>Total Seed Application Cost/Acre</b>	\$267.22

## **MULCHING and MISCELLANEOUS**

#### Materials

Description Straw, delivered {MEANS 31 25 14.16 1200}	Units / Acre 2.00	Unit TON	Cost / Unit \$261.00	Cost /Acre \$522.00
Total Mulch Materials Cost/Acre	2.00	TOIN	\$201.00	\$522.00 \$522.00

Application

Description		Cost /Acre
Power mulcher (MEANS 32 91 13.16 0350)		\$99.32
	<b>Total Mulch Application Cost/Acre</b>	\$99.32

## **NURSERY STOCK PLANTING**

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

## **JOB TIME AND COST**

 No. of Acres:
 1
 Cost /Acre:
 \$1,265.28

 Estimated Failure Rate:
 30%
 Cost /Acre\*:
 \$1,265.28

\*Selected Replanting Work Items: TILLING, SEEDING, MULCHING

Initial Job Cost: \$1,265.28

Reseeding Job Cost: \$379.58

Total Job Cost: Job Hours: 4.00

## EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: M	ob/Demob (revise	ed)			
e: Midway Pit	Permi	Action: 2017 T	R-02	Permit/Job	o#: M1988018
PROJECT IDENTIFICAT	<u>ION</u>				
Task #: 070	State: C	olorado	Abb	reviation:	None
Date: 7/11/2017	County: E	l Paso		Filename:	M018-070
User: TC1	_				
Agency or organization	on name: DRMS	S			
EQUIPMENT TRANSPO	RT RIG COST				
			Shift b	oasis: 1	l per day
			Cost Data So	urce: C	CRG Data
Truck Tractor Des	cription: GENI	ERIC ON-HIGHW	AY TRUCK TRACT	ΓOR. 6Χ4. Ι	DIESEL POWERED,
	r		400 HP (2ND HALI		,
Truck Trailer Des	cription:	GENERIC FOLDIN	NG GOOSENECK, D	PROP DECI	K EQUIPMENT
		TR	AILER (25T, 50T, A	AND 100T)	
Cost Breakdown:					
	0.05.75	2 ( FO F	<b>74 7</b> 5		
Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons		
Ownership Cost/Hour:	\$16.63	\$18.37	\$22.33		
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07		
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66		

#### **NON ROADABLE EQUIPMENT:**

Helper Cost/Hour:
Total Unit Cost/Hour:

\$0.00

\$88.67

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/uni t	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D9T - 9SU	60.01	\$100.59	\$125.45	1	\$226.04	\$125.45	\$250.00
Cat 631G	52.50	\$98.72	\$125.45	1	\$224.17	\$125.45	\$250.00

\$25.39

\$117.55

\$25.39

\$125.45

Subtotals: \$450.21 \$250.90 \$500.00

## **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Drill/Broadcast Seeder with	\$30.89	1	\$30.89	\$30.89
Tractor				
Power Mulcher (Bowie LD-90)	\$21.31	1	\$21.31	\$21.31

Subtotals: \$52.20 \$52.20

## **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: COLORADO SPRINGS
Total one-way travel distance: 23.00 miles
Average Travel Speed: 50.00 mph

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

\$2,095.23

\$48.02

#### **Transportation Cycle Time:**

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.46	0.46
Return Time (Hours):	0.46	0.46
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	1.42	0.92

#### **JOB TIME AND COST**

Total job cost: 2.84 Hours

Total job cost: \$2,143