## COST SUMMARY WORK

Task description:		Updated Bond C	alc Post Ins	pection 1-25-18				
Site:	Site: 15 Road Gravel Pit		Permit Action: 2018-01		Permit/Jol	o#: <u>M2002114</u>		
<u>PR</u>	<u>OJECT I</u>	DENTIFIC	CATION					
	Task #:	ACY	State:	Colorado		Abbreviation:	None	
	Date:	2/7/2018	County:	Mesa		Filename:	M114-ACY	
	User:	ACY				_		

Agency or organization name: \_\_\_\_\_\_DRMS\_\_\_\_

## TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Drain lakes 3 & 4 for backfilling	PUMPING	1	2,088.95	\$97,137.00
02a	Transport Lake 3 Overburden for Backfilling & Placement	TRUCK1	1	36.56	\$34,817.00
02b	Transport Lake 4 Overburden for Backfilling & Placement	TRUCK1	1	97.48	\$92,846.00
03a	Structure Removal	DEMOLISH	1	8.00	\$3,304.57
04a	Transport Lake 3 Topsoil and Placement	TRUCK1	1	12.68	\$12,081.00
04b	Transport Lake 4 Topsoil and Placement	TRUCK1	1	37.04	\$35,279.00
04c	Transport Topsoil and Placement for Roads and ROW	TRUCK1	1	16.81	\$16,009.00
05a	Rip Compacted Areas	RIPPER	2	25.39	\$10,424.00
06a	Revegetate Dry Rangeland	REVEGE	1	60.00	\$114,347.00
06b	Revegetate Wetland Areas	REVEGE	1	30.00	\$68,132.00
07a	Initial Mobilization	MOBILIZE	1	2.34	\$6,363.00
07b	Secondary Mobilization	MOBILIZE	1	2.34	\$1,474.00
		SUBTO	DTALS:	2417.59	\$492,214

## **INDIRECT COSTS**

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$9,942.72
Performance bond:	1.05	Total =	\$5,168.25
Job superintendent:	164.32	Total =	\$12,003.58
Profit:	10.00	Total =	\$49,221.40
		TOTAL O & P =	\$76,335.95
		CONTRACT AMOUNT (direct + O & P) = $($	\$568,549.95

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): Engineering work and/or contract/bid preparation: Reclamation management and/or administration:	500.00 4.25 5.00	Total = Total =	500.00 \$24,163.37 \$28,427.50
CONTINGENCY:	3.00	Total =	\$14,766.42
	TOTAL IN	DIRECT COST =	\$144,193.24
TOTAL BO	ND AMOUNT (di	irect + indirect) =	\$636,407.24

#### PUMPING WORK

Task description:	Drain	lakes 3 & 4 for bacl	kfilling		
15 Road Gravel Pit		Permit Action	n: <u>2018-01</u>	Permit/Job#:	M2002114
PROJECT IDENTIF	TICATIO	N			
Task #:         01A           Date:         2/7/2018           User:         ACY		State: Colorad County: Mesa	lo	Abbreviation: Filename:	None M114-01a
Agency or orga	nization na	ame: DRMS			
HOURLY EQUIPMI					
Make and Model: Attachment 1: Attachment 2: Labor Unit 1:	Descrip Submer Suction Dischar Pump o	tion sible pump - 460v, 8 hose - 6 in. diam., 2 ge hose - 6 in. D., 25	5 ft.	Quantity           1           2           1	
Horsepower: Shift Basis: 1	95 per day				
Weight:	0.70				
(U	S Tons)				
Cost Breakdown:	<b>(11</b>	\$5.72	Utilization %		
Ownership Cost/ Operating Cost/		\$12.25	NA 100		
Operator Cost/		\$28.53	NA		
Total Unit Cost/	Hour:	\$46.50			
Total Fleet Cost <b>PUMPING QUANTI</b>		\$46.50			
Initial Pond Vol		120,494,724.00		Conversion factor:	1.0000
Final Pond Vol		120,494,724.00	gallons	conversion factor.	1.0000
Total Pond Inflow Su	ırface			Unit inflow rate in	
	Area:	2,008,116	Sq. ft.	gph/sq. ft.:	0.1758
Total Pond Inflow Vo per l	Hour:	353,026.79	gallons		
Source	of estimate	d volume: 46.1 a	c of ponds pumped	12' down	
PUMPING TIME		<u> </u>	<u> </u>		
	vimum D	nn Cansaitur	170,000	anh/numn	
		np Capacity: uction Head:	5	gph/pump feet	
		charge Head:	25	feet	
		Total Head:	30	feet	
		np Capacity:	165,600	gph/pump	
		Site Altitude:	4,470	feet	
:L. A	stad Duma:	ng Capacity:	165,600	anh	
		mping Time:	727.63	gph hours	
		ial Pumping:	256,871,171	gallons	
Net Una	djusted Pu	mping Time:	2,278.78	Hours	
		ment Factor:	1.0000	(3% rule)	
		ency Factor:	0.9167	(55 min./hr.)	
	·	mping Time:	2,088.96	hours	
JOB TIME AND CO	<u>ost</u>		Total j	ob time: <b>2,088.96</b>	Hours
Unit cost: \$0.00	00257	/Gallon	Total j	job cost: <b>\$97,137</b>	

Task description:	Transpo	ort Lake 3 Over	burden for Backf	illing & Placeme	nt	
Site: 15 Road Gravel I	Pit	Permit Act	ion: 2018-01		Permit/Job#: <u>M</u>	2002114
PROJECT IDEN	<b>TIFICATION</b>	[				
Task #: 02A		State: Colo		Ab	breviation: No	
Date: 2/7/20	18	County: Mesa	1		Filename: M1	14-02a
User: <u>ACY</u>						
	organization nar					
HOURLY EQUIE	<u>PMENT COS</u>	<u>l'</u>		Shift bas	sis: <u>1 per day</u>	
		<b>—</b> 1 — 7	Equipment Descri	iption		
T	ruck Loader Tea		t 740 AT 980H			
Suppo	ort Equipment -L		t D8T - 8SU			
	-Di	ump Area: Ca	t D8T - 8SU			
Road Ma	intenance –Mot					
	-Wa	ter Truck: NA	ł			
Cost Breakdown:	Truck/Lo	ader Team	Support	Equipment	Maintenan	ce Equipment
<u>e obr Breakown</u>	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	15	100	NA	NA
Ownership cost/hour:	\$67.61	\$48.81	\$83.81	\$83.81	NA	NA
Operating cost/hour:	\$53.30	\$52.37	\$9.93	\$66.17	NA	NA
%Utilization-riper:	NA	0	20	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$7.55	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$1.44	\$0.00	NA	NA
Operator cost/hour:	\$25.65	\$41.46	\$40.52	\$40.52	NA	NA
Unit Subtotals:	\$146.56	\$142.64	\$135.70	\$190.50	NA	NA
Number of Units:	2	1	1	<u><u></u> 2</u>	0	0
Group Subtotals:	Work:	\$435.76	Support:	\$516.70	Maint:	\$0.00
Total work team cost	t/hour: <u>\$952.46</u>	<u> </u>				
MATERIAL QUA	ANTITIES					
Initial volume:	22,222	CC	Y Swell	factor: 1.000		
Loose volume:	22,22	LC	Y			
Sou	rce of estimated	volume: 150	0 lft 20' H to 3:1			
Source	of estimated swe		Handbook			
	Material Purch					
	Те	otal Cost: \$0.0	00			
HOURLY PRO	DUCTION					
Truck Capacity:						
Truck Payload (weig						
Material w		1 1 <del>-</del>	Pounds/LCY	*		
Descri Rated Pay		nd clay - Loose	Pounds			
Payload Cap			LCY			
i aj iona cup						

		LCY				
Heaped Volume:		LCY				
Average Volume:		LCY				
Adjusted Volume:	31.40	LCY				
Final	Truck Volume	Based on Number o	f Loader Passes:	31.50	LCY	
Loading Tool Capacity	Truck Volume	Dused on Humber o	1 Louder 1 asses.	51.50		
Loading 1001 Capacity			Dual	tot Size Closer N		
Detal Constitut	7.500		Buci	ket Size Class: <u>N</u>	ÍA	_
Rated Capacity:	7.500	LCY (heaped)	sandy clay (100%	1100() 1.050		-
	<b>7.875</b>	LCY	sandy ciay (100%)	- 110%) 1.030		-
Adjusted Capacity:	1.0/5					
Job Condition Corrections:	_	S	ite Altitude (ft.): 4	<u>1470</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE	3)		
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.830	0.830				
	L					
Loading Tool Cycle Time:	Number	of Loading Tool Pa	asses Required to 1	Fill Truck:	f	basses
Excavators and Front Shovel	s:					
Machine Cycle Time vs	Lob Condition	n Rating: NA				
Machine Cycle Thile V	s. Job Condition					
Selected Value v	vithin this Basi					
		c Rating: NA				
Track Loaders –	Material Descri	c Rating: NA				
Track Loaders – Cycle Time Elements (min.):	Material Descri	c Rating: NA				
Track Loaders –	Material Descri	c Rating: NA		 Dump:0.100	)	
Track Loaders – Cycle Time Elements (min.):	Material Descri	c Rating: NA iption: laneuver: NA	me (load, dump, r	·	)	ıtes
Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u>	Material Descri	c Rating: NA iption: laneuver: NA	me (load, dump, r	·		ıtes
Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders -	Material Descri	c Rating: <u>NA</u> iption: laneuver: <u>NA</u> sic Loader Cycle Tit	me (load, dump, r	naneuver):0	.550 minu	ites
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile:	Material Descri M Unadjusted Ba  Mixed materi Conveyor or o	c Rating: <u>NA</u> iption: laneuver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig	gh and up 0.00	naneuver): 0 Factor (min.) 0.020 0.000	.550 minu Source (Cat HB) (Cat HB)	ites
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr	c Rating: NA iption: laneuver: NA sic Loader Cycle Tit al 0.02 dozer piled 10 ft. hig nership of trucks and	gh and up 0.00	naneuver): 0 Factor (min.) 0.020 0.000 -0.040	.550 minu Source (Cat HB) (Cat HB) (Cat HB)	ites  
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper	c Rating: NA iption: laneuver: NA sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04	gh and up 0.00	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites 
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr	c Rating: NA iption: laneuver: NA sic Loader Cycle Tin al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00	gh and up 0.00 1 loaders -0.04	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	utes   
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper	c Rating: NA iption: laneuver: NA sic Loader Cycle Ting al 0.02 dozer piled 10 ft. hig hership of trucks and ration -0.04 et 0.00 Net Cycle Ting	gh and up 0.00 1 loaders -0.04 me Adjustment:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	ites    
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper	c Rating: NA iption: laneuver: NA sic Loader Cycle Ting al 0.02 dozer piled 10 ft. high hership of trucks and ration -0.04 et 0.00 Net Cycle Ting Adjusted Load	gh and up 0.00 1 loaders -0.04 me Adjustment: ler Cycle Time:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	ites   
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper	c Rating: NA iption: laneuver: NA sic Loader Cycle Ting al 0.02 dozer piled 10 ft. high hership of trucks and ration -0.04 et 0.00 Net Cycle Ting Adjusted Load	gh and up 0.00 1 loaders -0.04 me Adjustment:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	ites   
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper	c Rating: NA iption: laneuver: NA sic Loader Cycle Ting al 0.02 dozer piled 10 ft. high hership of trucks and ration -0.04 et 0.00 Net Cycle Ting Adjusted Load	gh and up 0.00 1 loaders -0.04 me Adjustment: ler Cycle Time:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	ites   
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper Nominal targe	c Rating: NA iption: laneuver: NA sic Loader Cycle Ting al 0.02 dozer piled 10 ft. high hership of trucks and ration -0.04 et 0.00 Net Cycle Ting Adjusted Load	gh and up 0.00 1 loaders -0.04 me Adjustment: ler Cycle Time: Time per Truck:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper Nominal targo	c Rating: NA iption: laneuver: NA sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00 Net Cycle Tir Adjusted Load Net Load T	gh and up 0.00 1 loaders -0.04 ne Adjustment: ler Cycle Time: Time per Truck: Adjusted	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	    
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common own Constant oper Nominal targe	c Rating: NA iption:	gh and up 0.00 1 loaders -0.04 ne Adjustment: ler Cycle Time: Time per Truck: Adjusted Adjusted	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570 for site altitude:	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes 0.600	utes 
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time: Truck Load Time:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common own Constant oper Nominal targe Nominal targe 0.60 : 0.60 : 1.570	c Rating: NA iption:	gh and up 0.00 1 loaders -0.04 me Adjustment: ler Cycle Time: Time per Truck: Adjusted Adjusted Adjusted	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570 for site altitude: for site altitude:	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) 0.600 1.570 1.000	    Minute

Haul Rou Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1200.	00	1.00	8.00	9.00	983	1.312	
					Haul Time:	1.312	minutes	
Return Ro	oute:				=			
Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1200.	00	-1.00	8.00	7.00	2470	0.679	
					Return Time:	0.679	minutes	
				Total Tru	ck Cycle Time:	5.161	minutes	
Loading Too Produ		870.97	LCY/Hour		Adjusted for j	ob efficiency:	722.90	LCY/Hour
Truck Unit Produ	iction	366.21	LCY/Hour		Adjusted for j	ob efficiency:	303.95	LCY/Hour
Optimal No. of Tr	ucks:	2	Truck(s)		Selected Numb	per of Trucks:	2	Truck(s)
			Adjuste	d hourly truc	k team production	on: 607.	.91 LCY/H	lour
					er team production			
			Adjusted multip	le truck/loade	er team production	on: 607.	.91 LCY/H	lour
JOB TI	ME AN	ND COST						
JOB TIN Fleet		<u>D COST</u> 1	Team(s)	r	Fotal job time:	36.5	6 Hour	'S

Site 15 Deed Course 1		D	+ 1 -+	n. 2010 01		Domit/Ich#.	12002114
Site: 15 Road Gravel P	าเ	Permit	t Actio	n: 2018-01		Permit/Job#: <u>M</u>	12002114
PROJECT IDEN	<b>FIFICATION</b>	[					
Task #: 02B		State: 0	Colora	do	Ab	breviation: No	one
Date: $2/7/201$	18	County:	Mesa			Filename: M	114-02b
User: <u>ACY</u>							
Agency or o	organization nar	ne: DRM	IS				
HOURLY EQUIP	MENT COS	<u>r</u>			Shift bas	sis: <u>1 per day</u>	
		_	E	quipment Descr	iption		
Tı	uck Loader Tea	m -Truck:	Cat 7	740	•		
Summe	at Equipment I	-Loader:		' 980H D8T - 8SU			
Suppo	rt Equipment -I D-	ump Area:		D8T - 8SU			
Road Ma	intenance –Mot		NA				
	-Wa	ter Truck:	NA				
Cost Breakdown:	Truck/Lo	ader Team		Support	Equipment	Maintenai	nce Equipment
	Truck	Loader		Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100		100	15	100	NA	N
Ownership cost/hour:	\$67.61		8.81	\$83.81	\$83.81	NA	N
Operating cost/hour:	\$53.30	\$52	2.37	\$9.93	\$66.17	NA	N
%Utilization-riper:	NA		0	20	NA	NA	N
Ripper own. cost/hour:	NA		0.00	\$7.55	\$0.00	NA	N
Ripper op. cost/hour:	NA		0.00	\$1.44	\$0.00	NA	N
Operator cost/hour:	\$25.65		1.46	\$40.52	\$40.52	NA	N
Unit Subtotals:	\$146.56	\$142	2.64	\$135.70	\$190.50	NA	NA
Number of Units:	2	<i><b>* 1 7 7 7 7</b></i>	1	1	2	0	<u> </u>
Group Subtotals:	Work:	\$435.76		Support:	\$516.70	Maint:	\$0.00
Total work team cost	/hour: <u>\$952.46</u>	<u> </u>					
MATEDIAL OUA	NTITIES						
MATERIAL QUA							
Initial volume:	<u>59,259</u> <b>59,25</b>	<u>'0</u>	CCY LCY	Swell	factor: <u>1.000</u>		
Loose volume:	· · · · · · · · · · · · · · · · · · ·						
	rce of estimated			lft 20' H to 3:1 andbook			
Source	Material Purch		\$0.00	andbook			
	Te	otal Cost:	\$0.00				
HOURLY PRO	JUCTION						
Truck Capacity:	ha) Desite						
Truck Payload (weig Material we				Pounds/LCY	7		
Descrij		nd clay - Lo	ose		- 		
Rated Pay	vload: 87,000			Pounds			
Payload Cap	acity: 32.22			LCY			

Struck Volume:	24.20	LCY				
Heaped Volume:		LCY				
Average Volume:		LCY				
Adjusted Volume:		LCY				
Final	Truck Volume	Based on Number of	f Loader Passes:	31.50	LCY	
Loading Tool Capacity						
			Bucl	ket Size Class: N	A	
Rated Capacity:	7.500	LCY (heaped)				_
Bucket Fill Factor:	1.050		andy clay (100%	- 110%) 1.050		-
Adjusted Capacity:	7.875	LCY	· · ·	,		-
Job Condition Corrections:	_	Si	te Altitude (ft.):	<u>1470</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE	3)		
Job Efficiency:	0.830	0.830	(CAT HE	· · · · · · · · · · · · · · · · · · ·		
			(0			
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	Number	of Loading Tool Pa	sses Required to ]	Fill Truck:	4 r	asses
Excavators and Front Shove		or 2000ing 100110			F	
Machine Cycle Time v Selected Value v						
	viunn uns Dasi	c Rating: NA				
Track Loaders – Cycle Time Elements (min.):	Material Descri					
Track Loaders –	Material Descri			 Dump: 0.100		
Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u>	Material Descri	iption:		·		
Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders -	Material Descri	iption:	me (load, dump, r	·	. <u></u>	ıtes
Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders - Cycle Time Factors	Material Descri  Unadjusted Ba	iption: laneuver:NA sic Loader Cycle Tir	ne (load, dump, r	naneuver): 0 Factor (min.)	.550 minu Source	ites
Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders - <u>Cycle Time Factors</u> Material:	Material Descri  Unadjusted Ba  Mixed materi	iption: laneuver: NA isic Loader Cycle Tin al 0.02		naneuver):0 Factor (min.) 0.020	.550 minu Source (Cat HB)	ites
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o	iption: laneuver:NA isic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig	h and up 0.00	naneuver): 0 Factor (min.) 0.020 0.000	550 minu Source (Cat HB) (Cat HB)	ites 
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership:	Material Descri M Unadjusted Ba Mixed materi Conveyor or c Common owr	iption: laneuver:NA isic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig nership of trucks and	h and up 0.00	naneuver): 0 Factor (min.) 0.020 0.000 -0.040	550 minu Source (Cat HB) (Cat HB) (Cat HB)	ites 
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper	iption: laneuver: NA sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04	h and up 0.00	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites  
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership:	Material Descri M Unadjusted Ba Mixed materi Conveyor or c Common owr	iption: laneuver: NA sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00	h and up 0.00 loaders -0.04	maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites    
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper	iption: laneuver: NA sic Loader Cycle Tin al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00 Net Cycle Tin	h and up 0.00 loaders -0.04 ne Adjustment:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	Ites    
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper	iption: Ianeuver: NA sic Loader Cycle Tin al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00 Net Cycle Tin Adjusted Load	h and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	ites   
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper	iption: Ianeuver: NA sic Loader Cycle Tin al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00 Net Cycle Tin Adjusted Load	h and up 0.00 loaders -0.04 ne Adjustment:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	ites   
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper	iption: Ianeuver: NA sic Loader Cycle Tin al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00 Net Cycle Tin Adjusted Load	h and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	ites   
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common own Constant oper Nominal targe	iption: Ianeuver: NA sic Loader Cycle Tin al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00 Net Cycle Tin Adjusted Load	h and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time: 'ime per Truck:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common own Constant open Nominal targo	iption: Ianeuver:NA Isic Loader Cycle Tin al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T	h and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time: 'ime per Truck: Adjusted	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570	550minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)minutesminutesminutesminutes	
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common owr Constant oper Nominal targe	iption: laneuver:NA usic Loader Cycle Tin al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T Minutes	h and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time: ime per Truck: Adjusted Adjusted	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570 for site altitude:	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes 0.600	Ites 
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time Truck Load Time	Material Descri M Unadjusted Ba Mixed materi Conveyor or o Common own Constant oper Nominal targe Nominal targe : 0.60 : 1.570 : 1.00	iption: Ianeuver:NA Isic Loader Cycle Tin al 0.02 dozer piled 10 ft. hig hership of trucks and ration -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T Minutes Minutes Minutes	h and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time: 'ime per Truck: Adjusted Adjusted Adjusted	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570 for site altitude: for site altitude:	550minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)minutesminutesminutes0.6001.5701.000	    Minute

Haul Rou	ite:							
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1200.0	00	1.00	8.00	9.00	983	1.312	
				1	Haul Time:	1.312	minutes	
Return Re	oute:				-			
Seg #	Haul I	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1200.0	00	-1.00	8.00	7.00	2470	0.679	
					Return Time:	0.679	minutes	5
				Total Tru	ck Cycle Time:	5.161	minutes	5
Loading Too	ol unit							
0	uction	870.97	LCY/Hour		Adjusted for j	ob efficiency:	722.90	LCY/Hour
Truck Unit Produ	uction							
	-	366.21	LCY/Hour		Adjusted for j	ob efficiency:	303.95	LCY/Hour
Optimal No. of Tr	rucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
			Adjuste	ed hourly truc	k team production	on: 607	.91 LCY	/Hour
					er team production			/Hour
			Adjusted multip	le truck/loade	er team production	on: 607	.91 LCY	/Hour
JOB TI	ME AN	D COST						
Fleet	size:	1	Team(s)	r	Fotal job time:	97.4	8 Ho	urs
Unit	cost:	\$1.567	/LCY		Total job cost:	\$92,84	46	

#### **DEMOLITION WORK**

Та	ask description:	Structure I	Removal			
Site: 1	15 Road Gravel Pit		Permit Action:	2018-01	Permit/J	ob#: M2002114
<u>PROJEC</u>	T IDENTIFICATIO	<u>N</u>				
Task #:	03A	State:	Colorado		Abbreviation:	None
Date:	2/7/2018	County:	Mesa		Filename:	M114-03a
User:	ACY					

#### UNIT COSTS

Scale

Structure or Item

Description

Dimensions

24' x 28'

# Demolition Menu<br/>SelectionQuantityUnitUnit<br/>CostTotal CostLoading and 2 mile haul,<br/>no salvage - Machine<br/>loading25.00CY\$17.70\$442.50

Location adjustment: 95.50 %

		no salvage - Machine loading				
Office	24' x 28' x 8'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	5,376.00	CF	\$0.19	\$1,042.94
Office Foundation	24' x 28' x 6"	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	672.00	SF	\$0.65	\$438.14
Scale	24' x 28'	Hauling only, per mile, 12-18 CY truck - 30 mph average speed	30.00	MI	\$7.89	\$236.70
Storage Building	30' x 60'	USER PROVIDED ITEM	300.00	-	\$1.00	\$300.00
Fuel Storage	-	USER PROVIDED ITEM	1,000.00	-	\$1.00	\$1,000.00

				<b>Total Cost</b>	
		Subtotal		(adjusted for	
Job Hours:	8.00	(unadjusted):	\$3,460.28	location):	\$3,304.57

Site: 15 Road Gravel	Pit	Permit Acti	on: 2018-01		Permit/Job#: M	2002114
PROJECT IDEN	TIFICATION	-			1 1 1 1	
$\begin{array}{rrr} \text{Task #:} & 04\text{A} \\ \text{Date:} & 2/7/20 \end{array}$	18	State: Color County: Mesa	ado	Ab	breviation: <u>No</u> Filename: M1	ne 14-04a
User: ACY		county. <u>mesu</u>				11014
Agency or	organization nar	ne: DRMS				
HOURLY EQUI	PMENT COST	Г		Shift bas	is: <u>1 per day</u>	
<u>HOURE LOUI</u>			Equipment Descri		13. <u>1 per duy</u>	
Т	ruck Loader Tea		: 740	puon		
			Т 980Н			
Supp	ort Equipment -L		: D8T - 8SU : D8T - 8SU			
Road Ma	aintenance – Mot					
		ter Truck: NA				
Cost Breakdown:	Truck/Lo	ader Team	Support	Equipment	Maintanan	ce Equipment
<u>Cost Dreakdown</u> .	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	15	100	NA	NA
Ownership cost/hour:	\$67.61	\$48.81	\$83.81	\$83.81	NA	NA
Operating cost/hour:	\$53.30	\$52.37	\$9.93	\$66.17	NA	NA
%Utilization-riper:	NA	0	20	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$7.55	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$1.44	\$0.00	NA	NA
Operator cost/hour:	\$25.65	\$41.46	\$40.52	\$40.52	NA	NA
Unit Subtotals:	\$146.56	\$142.64	\$135.70	\$190.50	NA	NA
Number of Units:	2	1	1	2	0	0
Group Subtotals:	Work:	\$435.76	Support:	\$516.70	Maint:	\$0.00
Total work team cos	t/hour: <u>\$952.46</u>	<u>j</u>				
MATERIAL QU	ANTITIES					
			z 0 11	<b>6</b>		
Initial volume: Loose volume:		CCY 1 LCY		factor: 1.000		
	· · · · · ·			and 5 as stadsmil		
	urce of estimated of estimated swe		) lft x 63' H banks Handbook	and 5 ac stockpil	e area	
	Material Purch					
	То	otal Cost: \$0.0	0			
HOURLY PRO	DUCTION					
Truck Capacity:						
Truck Payload (weig	ght) Basis:					
Material w	veight: 1,600		Pounds/LCY			
Descri	* <u> </u>					
Rated Pa	yload: 87,000		Pounds			

Struck Volume:	24.20	LCY				
neaped volume:	31.40	LCY				
Average Volume:	27.80	LCY				
Adjusted Volume:	31.40	LCY				
Final	Truck Volume	Based on Number o	f Loader Passes:	31.50	LCY	
Loading Tool Capacity						
			Buch	ket Size Class: <u>N</u>	Α	_
Rated Capacity:	7.500	LCY (heaped)				
Bucket Fill Factor:	1.050	Moist loam or	sandy clay (100%	- 110%) 1.050		-
Adjusted Capacity:	7.875	LCY				_
Job Condition Corrections:	_	S	ite Altitude (ft.): 4	<u>4470</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE			
Job Efficiency:	0.830	0.830	(CAT HE	·		
Net Correction:	0.830	0.830				
	0.830	0.830				
Loading Tool Cycle Time:	Number	r of Loading Tool Pa	asses Required to 1	Fill Truck:	4 p	asses
Excavators and Front Shovel	s:					
	<u></u>					
Machine Cycle Time vs Selected Value v						
-	vithin this Basi	c Rating: NA				
Selected Value v	vithin this Basi Material Descr	c Rating: NA				
Selected Value v Track Loaders –	vithin this Basi Material Descr	c Rating: NA		 Dump: 0.100	)	
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u>	vithin this Basi Material Descr N	ic Rating: <u>NA</u> iption: faneuver: <u>NA</u>		I		
Selected Value v Track Loaders – Cycle Time Elements (min.):	vithin this Basi Material Descr N	ic Rating: <u>NA</u> iption: faneuver: <u>NA</u>	me (load, dump, r	I	) .550 mint	Ites
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders - Cycle Time Factors	vithin this Basi Material Descr  Unadjusted Ba	ic Rating: <u>NA</u> iption: faneuver: <u>NA</u> asic Loader Cycle Ti	me (load, dump, r	naneuver): 0 Factor (min.)	.550 minu Source	ites
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders - <u>Cycle Time Factors</u> Material:	vithin this Basi Material Descr M Unadjusted Ba Mixed mater	ic Rating: NA iption: Maneuver: NA asic Loader Cycle Ti ial 0.02		naneuver):0 Factor (min.) 0.020	.550 minu	ites
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile:	vithin this Basi Material Descr M Unadjusted Ba Mixed materi Conveyor or	ic Rating: <u>NA</u> iption: faneuver: <u>NA</u> asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig	gh and up 0.00	naneuver): 0 Factor (min.) 0.020 0.000	.550 mint Source (Cat HB) (Cat HB)	ites 
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership:	vithin this Basi Material Descr M Unadjusted Ba Mixed materi Conveyor or Common ow	ic Rating: NA iption: faneuver: NA asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig nership of trucks and	gh and up 0.00	maneuver): 0 Factor (min.) 0.020 0.000 -0.040	.550 mint Source (Cat HB) (Cat HB) (Cat HB)	ites  
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	vithin this Basi Material Descr M Unadjusted Ba Mixed materi Conveyor or Common ow Constant ope	ic Rating: NA iption: faneuver: NA asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04	gh and up 0.00	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites   
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership:	vithin this Basi Material Descr M Unadjusted Ba Mixed materi Conveyor or Common ow	ic Rating: NA iption: faneuver: NA asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 get 0.00	gh and up 0.00 1 loaders -0.04	maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	Ites   
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	vithin this Basi Material Descr M Unadjusted Ba Mixed materi Conveyor or Common ow Constant ope	ic Rating: NA iption: faneuver: NA asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 jet 0.00 Net Cycle Tin	gh and up 0.00 1 loaders -0.04 me Adjustment:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	Ites    
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	vithin this Basi Material Descr M Unadjusted Ba Mixed materi Conveyor or Common ow Constant ope	a Rating: NA iption: Maneuver: NA asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 yet 0.00 Net Cycle Tin Adjusted Load	gh and up 0.00 1 loaders -0.04 me Adjustment: ler Cycle Time:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites    
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	vithin this Basi Material Descr M Unadjusted Ba Mixed materi Conveyor or Common ow Constant ope	a Rating: NA iption: Maneuver: NA asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 yet 0.00 Net Cycle Tin Adjusted Load	gh and up 0.00 1 loaders -0.04 me Adjustment:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	ites   
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	vithin this Basi Material Descr M Unadjusted Ba Mixed materi Conveyor or Common ow Constant ope	a Rating: NA iption: Maneuver: NA asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 yet 0.00 Net Cycle Tin Adjusted Load	gh and up 0.00 1 loaders -0.04 me Adjustment: ler Cycle Time:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	ites   
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	vithin this Basi Material Descr M Unadjusted Ba Mixed materi Conveyor or Common ow Constant ope Nominal targ	a Rating: NA iption: Maneuver: NA asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 yet 0.00 Net Cycle Tin Adjusted Load	gh and up 0.00 1 loaders -0.04 me Adjustment: ler Cycle Time: Time per Truck:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	-
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	vithin this Basi Material Descr M Unadjusted Ba Mixed materi Conveyor or Common ow Constant ope Nominal targ	ic Rating: NA iption: Ianeuver: NA asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 jet 0.00 Net Cycle Tin Adjusted Load Net Load T	gh and up 0.00 1 loaders -0.04 ne Adjustment: ler Cycle Time: Time per Truck: Adjusted	maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time:	vithin this Basi Material Descr Munadjusted Ba Mixed materi Conveyor or Common ow Constant ope Nominal targ	ic Rating: NA iption: faneuver: NA asic Loader Cycle Ti ial 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 get 0.00 Net Cycle Tin Adjusted Load Net Load T Minutes	gh and up 0.00 1 loaders -0.04 me Adjustment: ler Cycle Time: Time per Truck: Adjusted Adjusted	maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570 for site altitude:	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes 0.600	ntes 

Haul Route		~				<b>T</b> 1	
Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time	
	· /					(min)	
1	1200.00	1.00	8.00	9.00	983	1.312	
				Haul Time:	1.312	minutes	
Return Rou			1				
Seg #	Haul Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)		(%)	(%)	(fpm)	Time (min)	
1	1200.00	-1.00	8.00	7.00	2470	0.679	
				Return Time:	0.679	minute	5
			Total Tru	ck Cycle Time:	5.161	minute	5
Loading Tool	unit						
Produc		LCY/Hour		Adjusted for j	ob efficiency:	722.90	LCY/Hour
Truck Unit Produc							
	366.21	LCY/Hour		Adjusted for j	ob efficiency:	303.95	LCY/Hour
Optimal No. of Tru	ucks: 2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
		Adjuste	ed hourly truc	k team production	on: 607	.91 LCY	/Hour
				er team production		.91 LCY	/Hour
		Adjusted multip	le truck/loade	er team production	on: 607	<b>.91</b> LCY	/Hour
JOB TIM	IE AND COST						
Fleet s	ize: 1	Team(s)	r	Fotal job time:	12.68	8 Ho	urs
Unit c	ost: \$1.567	/LCY		Total job cost:	\$12,0	81	

Task description:	Transpo	rt Lake 4 To	opsoi	l and Placement			
Site: 15 Road Gravel P	Pit	Permit.	Actio	on: 2018-01		Permit/Job#:	M2002114
PROJECT IDEN	<b>FIFICATION</b>						
Task #:         04B           Date:         2/7/20           User:         ACY	18 0		olora Iesa	do	Ab		None //114-04b
	·		1				
Agency or o	organization nam	e: DRMS	)				
HOURLY EQUIP	MENT COST	-			Shift bas	is: <u>1 per day</u>	
				Equipment Descri	ption		
Ti	uck Loader Tea	n -Truck: -Loader:	Cat '	740 Г 980Н			
Suppo	rt Equipment -L			D8T - 8SU			
		mp Area:		D8T - 8SU			
Road Ma	intenance – Moto	or Grader:	NA NA				
	- vv a	el lluck.	INA				
Cost Breakdown:	Truck/Loa	der Team		11	Equipment		ance Equipment
	Truck	Loader		Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	1	00	15	100	NA	A N
Ownership cost/hour:	\$67.61	\$48	.81	\$83.81	\$83.81	NA	A N
Operating cost/hour:	\$53.30	\$52.	.37	\$9.93	\$66.17	NA	A N
%Utilization-riper:	NA		0	20	NA	NA	A N
Ripper own. cost/hour:	NA		.00	\$7.55	\$0.00	NA	
Ripper op. cost/hour:	NA		.00	\$1.44	\$0.00	NA	
Operator cost/hour:	\$25.65	\$41.		\$40.52	\$40.52	NA	
Unit Subtotals:	\$146.56	\$142.		\$135.70	\$190.50	NA	
Number of Units:	2	ф 425 <del>П</del> С	1	1	2		)
Group Subtotals:	Work:	\$435.76		Support:	\$516.70	Maint	: \$0.00
Total work team cost	/hour: <b><u>\$952.46</u></b>						
MATEDIAL OUA	NTTTTEC						
MATERIAL QUA							
Initial volume:	22,517		CCY	Swell	factor: 1.000		
Loose volume:	22,51		LCY				
	rce of estimated of estimated swe			lft x 63' H banks andbook	and 15.15 ac min	ing storage area	1
Source	Material Purcha		\$0.00				
			\$0.00				
HOURLY PRO	DUCTION						
Truck Capacity:							
Truck Payload (weig				Davida/LCV			
Material we Descri		il		Pounds/LCY			
Rated Pay	vload: 87,000			Pounds			
Payload Cap	acity: 54.38		-	LCY			

Heaped Volume:		LCY				
- <u>-</u>		LCY				
Average Volume:		LCY				
Adjusted Volume:	31.40 L	LCY				
Final	Truck Volume I	Based on Number of	of Loader Passes:	31.50	LCY	
Loading Tool Capacity						
			Bucl	ket Size Class: N	A	
Rated Capacity:	7.500	LCY (heaped)				_
Bucket Fill Factor:	1.050		sandy clay (100%	- 110%) 1.050		-
Adjusted Capacity:	7.875	LCY		,		-
Job Condition Corrections:	_	S	Site Altitude (ft.): 4	<u>4470</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE			
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	Number	of Loading Tool Pa	asses Required to	Fill Truck.	4 r	asses
Loading Tool Cycle Time:	i vuinoer v	of Louding 10011	usses required to		ł	143505
Excavators and Front Shovel	s:					
Excavators and Front Shovel		Define NA				
Machine Cycle Time vs	s. Job Condition					
Machine Cycle Time vs Selected Value v	s. Job Condition within this Basic	Rating: NA				
Machine Cycle Time vs	s. Job Condition within this Basic	Rating: NA				
Machine Cycle Time vs Selected Value v Track Loaders – I	s. Job Condition vithin this Basic Material Descrip	Rating: NA		 Dump: 0.100	)	
Machine Cycle Time vs Selected Value v Track Loaders – I Cycle Time Elements (min.): Load: <u>NA</u>	s. Job Condition vithin this Basic Material Descrip Ma	e Rating: NA ption:	ime (load, dump, t	I		ites
Machine Cycle Time vs Selected Value v Track Loaders – I Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders -	s. Job Condition vithin this Basic Material Descrip Ma	e Rating: NA ption:	ime (load, dump, r	naneuver): 0	.550 minu	ıtes
Machine Cycle Time vs Selected Value v Track Loaders – I Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders - Cycle Time Factors	s. Job Condition vithin this Basic Material Descrip Ma  Unadjusted Bas	e Rating: <u>NA</u> ption: aneuver: <u>NA</u> sic Loader Cycle Ti	ime (load, dump, r	naneuver): 0 Factor (min.)	.550 minu Source	ites
Machine Cycle Time vs Selected Value v Track Loaders – I Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders - <u>Cycle Time Factors</u> Material:	s. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas	e Rating: NA ption: aneuver: NA sic Loader Cycle Ti al 0.02		naneuver):0 Factor (min.) 0.020	.550 minu Source (Cat HB)	ites 
Machine Cycle Time vs Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile:	s. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas <u>Mixed materia</u> Conveyor or do	e Rating: NA ption: aneuver: NA sic Loader Cycle Ti al 0.02 lozer piled 10 ft. hig	gh and up 0.00	naneuver): 0 Factor (min.) 0.020 0.000	.550 minu Source (Cat HB) (Cat HB)	ites  
Machine Cycle Time vs Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership:	s. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas Mixed materia Conveyor or de Common owne	e Rating: NA ption: aneuver: NA sic Loader Cycle Ti al 0.02 lozer piled 10 ft. hig ership of trucks and	gh and up 0.00	maneuver): 0 Factor (min.) 0.020 0.000 -0.040	.550 minu Source (Cat HB) (Cat HB) (Cat HB)	ites 
Machine Cycle Time vs Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile:	s. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas <u>Mixed materia</u> Conveyor or do	Rating: NA ption: aneuver: NA sic Loader Cycle Ti al 0.02 lozer piled 10 ft. hig ership of trucks and ation -0.04	gh and up 0.00	naneuver): 0 Factor (min.) 0.020 0.000	.550 minu Source (Cat HB) (Cat HB)	ites   
Machine Cycle Time vs Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	s. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas Mixed materia Conveyor or do Common owne Constant opera	e Rating: NA ption:	gh and up 0.00	maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	Ites    
Machine Cycle Time vs Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	s. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas Mixed materia Conveyor or do Common owne Constant opera	Rating: NA ption: aneuver: NA sic Loader Cycle Ti al 0.02 lozer piled 10 ft. hig ership of trucks and ation -0.04 t 0.00 Net Cycle Ti	gh and up 0.00 d loaders -0.04	maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites    
Machine Cycle Time vs Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	s. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas Mixed materia Conveyor or do Common owne Constant opera	Rating: NA ption: aneuver: NA sic Loader Cycle Ti d 0.02 lozer piled 10 ft. hig ership of trucks and ation -0.04 t 0.00 Net Cycle Ti Adjusted Load	gh and up 0.00 d loaders -0.04 me Adjustment:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	ites   
Machine Cycle Time vs Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	s. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas Mixed materia Conveyor or do Common owne Constant opera	Rating: NA ption: aneuver: NA sic Loader Cycle Ti d 0.02 lozer piled 10 ft. hig ership of trucks and ation -0.04 t 0.00 Net Cycle Ti Adjusted Load	gh and up 0.00 d loaders -0.04 me Adjustment: der Cycle Time:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	Ites    
Machine Cycle Time vs Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	s. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas Mixed materia Conveyor or de Common owne Constant opera Nominal target	Rating: NA ption: aneuver: NA sic Loader Cycle Ti d 0.02 lozer piled 10 ft. hig ership of trucks and ation -0.04 t 0.00 Net Cycle Ti Adjusted Load	gh and up 0.00 d loaders -0.04 me Adjustment: der Cycle Time: Time per Truck:	naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	
Machine Cycle Time vs Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	s. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas Mixed materia Conveyor or do Common owne Constant opera Nominal target 0.60	e Rating: NA ption: aneuver: NA sic Loader Cycle Ti al 0.02 lozer piled 10 ft. hig ership of trucks and ation -0.04 it 0.00 Net Cycle Ti Adjusted Load Net Load T	gh and up 0.00 d loaders -0.04 me Adjustment: der Cycle Time: Time per Truck: Adjusted	maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	    
Machine Cycle Time vs Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time:	S. Job Condition vithin this Basic Material Descrip Ma Unadjusted Bas Mixed materia Conveyor or de Common owne Constant opera Nominal target 0.60 1.570	Rating: NA ption: aneuver: NA sic Loader Cycle Ti d 0.02 lozer piled 10 ft. hig ership of trucks and ation -0.04 t 0.00 Net Cycle Ti Adjusted Load Net Load T Minutes	gh and up 0.00 d loaders -0.04 me Adjustment: der Cycle Time: Time per Truck: Adjusted Adjusted	maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570 for site altitude:	.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes 0.600	Minute: Minute: Minute:

Haul Rout		~ •	~				<b>TT</b> 1	
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel Time	
	(Ft)			(%)	(%)	(fpm)	(min)	
1	1200.	00	1.00	8.00	9.00	983	1.312	
					Haul Time:	1.312	minutes	
Return Ro			I	I	1	11		
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1200.	00	-1.00	8.00	7.00	2470	0.679	
					Return Time:	0.679	minute	es
				Total Tru	ck Cycle Time:	5.161	minute	es
Loading Tool	l unit							
Produ		870.97	LCY/Hour		Adjusted for j	ob efficiency:	722.90	LCY/Hour
Truck Unit Produ	ction							
	-	366.21	LCY/Hour		Adjusted for j	ob efficiency:	303.95	LCY/Hour
Optimal No. of Tru	ucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
			Adjuste	ed hourly truc	k team production	on: 607.	.91 LCY	Y/Hour
			Adjusted sing	le truck/loade	er team production	on: 607.	.91 LCY	Y/Hour
			Adjusted multip	le truck/loade	er team production	on: <b>607</b> .	.91 LCY	Y/Hour
IOR TIN	ле ал	D COST						
			_ / \					
Fleet s	size:	1	Team(s)		Total job time:	37.04	<b>4</b> He	ours
Unit c	cost:	\$1.567	/LCY		Total job cost:	\$35,2	79	

Task description:	Transpo	ort Topsoil	and P	Placement for Ro	ads and ROW		
Site: 15 Road Gravel	Pit	Permit	t Actio	on: 2018-01	]	Permit/Job#: <u>M</u>	2002114
PROJECT IDEN	TIFICATION	<u>[</u>					
Task #: 04C			Colora	ado	Ab	breviation: No	
Date: $2/7/2$	018	County: _]	Mesa			Filename: M1	14-04c
User: <u>ACY</u>							
Agency of	organization nar	me: DRM	IS				
HOURLY EQU	PMENT COS	<u>Γ</u>			Shift bas	is: <u>1 per day</u>	
			]	Equipment Descri	iption		
r	Fruck Loader Tea			740			
Supr	ort Equipment -I	-Loader:		T 980H D8T - 8SU			
Subt		ump Area:		D8T - 8SU			
Road M	laintenance – Mot	or Grader:	NA				
	-Wa	ter Truck:	NA				
Cost Breakdown:	Truck/Lo	ader Team		Support	Equipment	Maintenan	ce Equipment
	Truck	Loader		Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100		100	15	100	NA	NA
Ownership cost/hour:	\$67.61	\$4	8.81	\$83.81	\$83.81	NA	NA
Operating cost/hour:	\$53.30	\$5	2.37	\$9.93	\$66.17	NA	NA
%Utilization-riper:	NA		0	20	NA	NA	NA
Ripper own. cost/hour:	NA		0.00	\$7.55	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$	0.00	\$1.44	\$0.00	NA	NA
Operator cost/hour:	\$25.65		1.46	\$40.52	\$40.52	NA	NA
Unit Subtotals:	\$146.56	\$14	2.64	\$135.70	\$190.50	NA	NA
Number of Units:	2		1	1	2	0	0
Group Subtotals:	Work:	\$435.76		Support:	\$516.70	Maint:	\$0.00
Total work team co		<u>.</u>					
<u>MATERIAL QU</u>	<u>ANTITIES</u>						
Initial volume			CCY		factor: 1.000		
Loose volume	: 10,21	.8	LCY				
	ource of estimated		9.5 a				
Source	e of estimated swe Material Purch		Cat F \$0.00	Handbook			
		otal Cost: _	\$0.00				
HOURLY PRO	DUCTION						
<u>Truck Capacity:</u> <u>Truck Payload (wei</u>				_ ·			
Material	weight: <u>1,600</u> ription: Top So	vil		Pounds/LCY			
Rated Pa				Pounds			
Payload Ca				LCY			

Truck Bed (volume) Basis: Struck Volume:						
		.CY				
Heaped Volume:		.CY				
Average Volume:		.CY				
Adjusted Volume:		.CY				
Fin	al Truck Volume B	Based on Number o	f Loader Passes:	31.50	LCY	
Loading Tool Capacity						
<u>.</u>			Buc	ket Size Class: N	IA	
Rated Capacity:	7.500	LCY (heaped)	Duci		111	_
Bucket Fill Factor:	1.050		sandy clay (100%	- 110%) 1.050		-
Adjusted Capacity:	7.875	LCY	sandy citay (100%)	- 110/0) 1.050		-
Job Condition Correction	<u>18:</u>	S	ite Altitude (ft.): 4	<u>4470</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE	· · · · · · · · · · · · · · · · · · ·		
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.830	0.830				
Looding Tool Cruck Merry	N.	of Looding Tasl D	Degrade Degradered (		1	00000
Loading Tool Cycle Time		of Loading Tool Pa	isses Required to	Fill I fuck:	r	asses
Excavators and Front Show	vels:					
Machine Cycle Time						
	e within this Basic – Material Descrip	<u> </u>				
Cycle Time Elements (min	-					
Load: NA		neuver: NA		Dump: 0.100		
Load. NA	Ivia	IICUVCI. INA		Dump. 0.100		
					)	
Wheel and Track Loaders	s - Unadjusted Basi	ic Loader Cycle Ti	me (load, dump, r	naneuver): 0	) 0.550 minu	ites
		ic Loader Cycle Ti	me (load, dump, r	naneuver):0 Factor (min.)		ites
Wheel and Track Loaders Cycle Time Factors Material	5		me (load, dump, r		.550 minu	ites -
Cycle Time Factors	S Mixed material			Factor (min.)	0.550 minu Source	utes 
Cycle Time Factors Material	<ul> <li>Mixed material</li> <li>Conveyor or do</li> </ul>	1 0.02	th and up 0.00	Factor (min.) 0.020	0.550 minu Source (Cat HB)	ites - - -
Cycle Time Factors Material Stockpile Truck Ownership Operation	<ul> <li>Mixed material</li> <li>Conveyor or do</li> <li>Common owner</li> <li>Constant operation</li> </ul>	1 0.02 ozer piled 10 ft. hig ership of trucks and tion -0.04	th and up 0.00	Factor (min.) 0.020 0.000 -0.040 -0.040	0.550minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)	ites 
Cycle Time Factors Material Stockpile Truck Ownership	<ul> <li>Mixed material</li> <li>Conveyor or do</li> <li>Common owner</li> <li>Constant operation</li> </ul>	1 0.02 ozer piled 10 ft. hig ership of trucks and tition -0.04 5 0.00	th and up 0.00 1 loaders -0.04	Factor (min.) 0.020 0.000 -0.040 -0.040 0.000	Source(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)	ites    
Cycle Time Factors Material Stockpile Truck Ownership Operation	<ul> <li>Mixed material</li> <li>Conveyor or do</li> <li>Common owner</li> <li>Constant operation</li> </ul>	1 0.02 ozer piled 10 ft. hig ership of trucks and ttion -0.04 0.00 Net Cycle Tir	h and up 0.00 l loaders -0.04 ne Adjustment:	Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	ites    
Cycle Time Factors Material Stockpile Truck Ownership Operation	<ul> <li>Mixed material</li> <li>Conveyor or do</li> <li>Common owner</li> <li>Constant operation</li> </ul>	1 0.02 ozer piled 10 ft. hig ership of trucks and ttion -0.04 0.00 Net Cycle Tin Adjusted Load	h and up 0.00 l loaders -0.04 ne Adjustment: ler Cycle Time:	Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     minutes       minutes     minutes	ites    
Cycle Time Factors Material Stockpile Truck Ownership Operation	<ul> <li>Mixed material</li> <li>Conveyor or do</li> <li>Common owner</li> <li>Constant operation</li> </ul>	1 0.02 ozer piled 10 ft. hig ership of trucks and ttion -0.04 0.00 Net Cycle Tin Adjusted Load	h and up 0.00 l loaders -0.04 ne Adjustment:	Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	ntes 
Cycle Time Factors Material Stockpile Truck Ownership Operation	<ul> <li>Mixed material</li> <li>Conveyor or do</li> <li>Common owner</li> <li>Constant operation</li> </ul>	1 0.02 ozer piled 10 ft. hig ership of trucks and ttion -0.04 0.00 Net Cycle Tin Adjusted Load	h and up 0.00 l loaders -0.04 ne Adjustment: ler Cycle Time:	Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     minutes       minutes     minutes	ites   
Cycle Time Factors Material Stockpile Truck Ownership Operation Dump Target	Mixed material Conveyor or do Common owne Constant opera Nominal target	1 0.02 ozer piled 10 ft. hig ership of trucks and ttion -0.04 0.00 Net Cycle Tin Adjusted Load	th and up 0.00 l loaders -0.04 me Adjustment: ler Cycle Time: Time per Truck:	Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490	.550     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     minutes       minutes     minutes	-
Cycle Time Factors Material Stockpile Truck Ownership Operation Dump Target <u>Truck Cycle Time:</u>	Mixed material Conveyor or do Common owner Constant opera Nominal target	1 0.02 ozer piled 10 ft. hig ership of trucks and tion -0.04 0.00 Net Cycle Tir Adjusted Load Net Load T	h and up 0.00 l loaders -0.04 ne Adjustment: ler Cycle Time: ime per Truck: Adjusted	Factor (min.) 0.020 0.000 -0.040 0.000 -0.060 0.490 1.570	.550     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       minutes     minutes       minutes     minutes	- - - - Minutes
Cycle Time Factors Material Stockpile Truck Ownership Operation Dump Target <u>Truck Cycle Time:</u> Truck Exchange Tim Truck Load Tim	s Mixed material Conveyor or do Common owner Constant opera Nominal target ne: 0.60 ne: 1.570	1 0.02 ozer piled 10 ft. hig ership of trucks and ttion -0.04 0.00 Net Cycle Tir Adjusted Load Net Load T Minutes	h and up 0.00 l loaders -0.04 me Adjustment: ler Cycle Time: Time per Truck: Adjusted Adjusted	Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570 for site altitude:	0.550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes 0.600	Minutes Minutes Minutes
Cycle Time Factors Material Stockpile Truck Ownership Operation Dump Target <u>Truck Cycle Time:</u> Truck Exchange Tin	s Mixed material Conveyor or do Common owner Constant opera Nominal target ne: 0.60 ne: 1.570 ne: 1.00	1 0.02 ozer piled 10 ft. hig ership of trucks and tion -0.04 0.00 Net Cycle Tir Adjusted Load Net Load T Minutes Minutes Minutes	h and up 0.00 l loaders -0.04 ne Adjustment: ler Cycle Time: Time per Truck: Adjusted Adjusted Adjusted	Factor (min.) 0.020 0.000 -0.040 0.000 -0.060 0.490 1.570 for site altitude: for site altitude:	0.550     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       minutes     minutes       minutes     minutes       0.600     1.570       1.000     1.000	- - - - Minutes

Page 3 of 3

_	Haul Rout	te:							_
	Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel Time	
		(Ft)			(%)	(%)	(fpm)	(min)	
	1	1200.	00	1.00	8.00	9.00	983	1.312	
						Haul Time:	1.312	minutes	5
_	Return Ro	oute:					-		_
	Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
		(Ft)			(%)	(%)	(fpm)	Time (min)	
	1	1200.	00	-1.00	8.00	7.00	2470	0.679	
						Return Time:	0.679	minut	es
					Total Tru	ck Cycle Time:	5.161	minut	es
L	oading Too	l unit							
	Produ		870.97	LCY/Hour		Adjusted for j	ob efficiency:	722.90	LCY/Hour
Truck	Unit Produ	iction	366.21	LCY/Hour		A divistad for i	ob efficiency:	303.95	LCY/Hour
			500.21			Aujusted for j	ob efficiency.	303.93	
Optima	al No. of Tr	ucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
				Adjuste	ed hourly true	k team production	on: 607	.91 LC	Y/Hour
						er team production			Y/Hour
				Adjusted multip	le truck/loade	er team production	on: 607	<b>.91</b> LC	Y/Hour
	JOB TIN	ME AN	ND COST						
	Fleet	size:	1	Team(s)	]	Fotal job time:	16.8	<u>1</u> H	lours
	Unit o	cost:	\$1.567	/LCY	,	Total job cost:	\$16,0	09	

# BULLDOZER RIPPING WORK

	Task description	Rip (	Compacted Areas					
Site	: 15 Road Grav	vel Pit	Permit Action:	2018-01	Per	rmit/Job#	: <u>M20021</u>	14
	PROJECT ID	<b>ENTIFICATI</b>	<u>DN</u>					
	Task #: 05. Date: $2/7$ User: AC	//2018	State:ColoradoCounty:Mesa			eviation: ilename:	None M114-05a	a
	Agency	or organization	name: DRMS					
	HOURLY EQ	•						
			D8T - 8SU		Horsepower:		310	
	Ripper Att		hank Ripper		Shift Basis:		per day	
	C (D 11				Data Source:	()	CRG)	
	Cost Breakdown	<u>:</u>			Utilization %			
		Ownership Co		\$83.81	NA			
	Rinn	Operating Co er Ownership Co		\$66.17 \$7.55	100 NA			
		per Operating Co		\$7.21	100			
		Operator Co	st/Hour:	\$40.52	NA			
		Total Unit Co	st/Hour:	\$205.26				
		Total Fleet Co	st/Hour: \$410	).52				
	MATERIAL (	<u>DUANTITIES</u>	Sele	cted estimating	method: Area			
	Alternate Method	ds:						
Seismic:	NA		Bank Volume:	NA	BCY		NA	
Area:	29.65	acres	Rip Depth (ft):	2.00	Volume: 9	5,671		BCY or CCY
		Source of estin	nated quantity: 5 ac sto	ockpiles, 15.15 a	ac storage area 5,	9.5 ac roa	ds & ROW	
	HOURLY PR	<b>ODUCTION</b>						
	Seismic:							
		S	Seismic Velocity:	NA	feet/seco	nd		
	Area:							
			e Ripping Depth: e Ripping Width:	2.56 7.08	mph			
		-	Ripping Length:	100.00	degrees feet			
			ige Dozer Speed:	88.00	feet			
			Maneuver Time:	0.25	feet			
		Product	ion per unit area:	0.703	acres/hou	ır		
	Job Condition Co	orrection Factors						
	Ur	adjusted Hourly	Unit Production:	0.703	Acres/hr			
			Site Altitude:	4,470	feet			
			Altitude Adj:	1.00	(CAT HI			
			Job Efficiency: Net Correction:	0.83	(1 shift/d multiplie	•		
			· · · · · · · · · · · · · · · · · · ·			1		
			Hourly Unit Production: Hourly Fleet Production:	0.58	Acres/hr Acres/hr			
		•		1.1/				
	JOB TIME AN			m				
	Fleet size:	2	Grader(s)	Total job time	e:2	5.39	Hou	ırs
	Unit cost:	\$351.566	Per acre	Total job cos	st: \$10	),424		

# **REVEGETATION WORK**

Task descri	ption:	Revegetate Dry Rangeland				
ite: 15 Road Gravel Pit		Permit Action:	Permit Action: 2018-01 Permit/Jo		b#: <u>M2002114</u>	
PROJECT Task #:	IDENTIFIC	CATION State: Colorado		Abbreviation:	None	
Date: User:	2/7/2018 ACY	County: Mesa		Filename:	M114-06a	

## **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Manure, 43.56 tons/ac.	1.00	acre	\$2,143.93	\$2,143.93
Sodium nitrate, 16-0-0	750.00	pound	\$0.70	\$525.00
			Total Fertilizer Materials	
			Cost/Acre	\$2,668.93

## Application

Description		Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)		\$60.98
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$144.62
	<b>Total Fertilizer Application Cost/Acre</b>	\$205.60

## TILLING

Description		Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)		\$106.29
Weed control spraying (MEANS 31 31 16.13 3100)		\$242.00
	Total Tilling Cost/Acre	¢2.49.20
	Total Tilling Cost/Acre	\$348.29

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	2.50	298.44	\$27.10
Sandberg Bluegrass - VNS	2.00	42.47	\$16.12
Galleta	2.50	9.13	\$61.75
Globemallow, Scarlet (or copper)	0.50	5.66	\$67.75
Winter Fat	0.25	0.64	\$5.13
Yarrow, Western	0.50	30.40	\$20.90
Kochia, Forage (Prostrate)	0.25	35.11	\$2.25

Totals Seed Mix	8.50	421.84	\$200.99	
			φ=000	

#### 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	\$2.74	\$2.74
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$261.00	\$261.00
Total Mulch Materials Cost/Acre				\$263.74

#### Application

	Cost /Acre
	\$66.02
	\$99.32
	\$23.35
Total Mulch Application Cost/Acre	\$188.69
	Total Mulch Application Cost/Acre

#### 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:	24.2	Cost /Acre:	\$4,108.24	
Estimate	ed Failure Rate:	50%	Cost /Acre*:	\$1,233.71	-
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,MULCHING		-
Initial Job Cost:	\$99,419.41				
Reseeding Job Cost:	\$14,927.89				
Total Job Cost:	\$114,347				
Job Hours:	60.00				

# **REVEGETATION WORK**

Task descri 15 Road	ption: Gravel Pit	Revegetate Wetlan	d Areas t Action: 2018-01	Permit/Jol	b#: M2002114
PROJECT	IDENTIFIC	CATION			
Task #:	06B	State: 0	Colorado	Abbreviation:	None
Data	2/7/2018	County: N	lesa	Filename:	M114-06b
Date:					

## **FERTILIZING**

## Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Manure, 43.56 tons/ac.	1.00	acre	\$2,143.93	\$2,143.93
Sodium nitrate, 16-0-0	750.00	pound	\$0.70	\$525.00
			Total Fertilizer	
			Materials	
			Cost/Acre	\$2,668.93

## Application

Description		Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)		\$60.98
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$144.62
Т	<b>Fotal Fertilizer Application Cost/Acre</b>	\$205.60

#### 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	\$28.32
Orchardgrass - Potomac	0.50	6.20	\$1.52
Elk Sedge	0.10	0.23	\$43.10
Slender Wheatgrass - Native	3.00	10.95	\$8.46
Western Wheatgrass - Arriba	0.10	0.25	\$0.81
Sweetvetch, Utah or Northern	0.50	0.23	\$37.50
Red Top	1.00	114.55	\$8.25
Reedgrass, Canadian (or Blue Joint)	0.20	20.57	\$40.77
Reedgrass, Northern - Native	0.50	51.42	\$67.62

Saltgrass, Inland	1.00	13.86	\$43.53
Snowberry, Western	1.00	1.72	\$63.50
Sumac, Skunkbrush	0.40	0.19	\$8.40
Timothy, Alpine - Native	1.00	29.84	\$24.17
Basin Wildrye - Trailhead	1.50	6.10	\$22.58
Greasewood, Black	1.00	140.45	\$19.00
Totals Seed Mix	12.80	435.59	\$417.51

#### **Application**

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

#### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.74	\$2.74
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$261.00	\$261.00
Total Mulch Materials Cost/Acre				\$263.74

#### Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$66.02
Power mulcher (MEANS 32 91 13.16 0350)		\$99.32
Weed spray, truck, aquatic area, annuals [DMG]		\$27.30
То	tal Mulch Application Cost/Acre	\$192.64

## NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood, Plains	22	Container, 2 gallon (MEANS)	\$30.80	\$2.40	\$677.60
	1	Totals	Nursery Stoc	ek Cost / Acre	\$677.60

#### JOB TIME AND COST

	No. of Acres:	13.39	Cost /Acre:	\$4,799.53	
Estimate	ed Failure Rate:	15%	Cost /Acre*:	\$1,925.00	
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,NURSERY,MULC		
-	-	HING			
Initial Job Cost:	\$64,265.71				
Reseeding Job Cost:	\$3,866.36				
Total Job Cost:	\$68,132				
Job Hours:	30.00				

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:		ial Mobilization					
15 Road Gravel	Pit	Permit	Action: 2018	-01	]	Permit/Job#: <u>M</u>	2002114
PROJECT IDEN	TIFICATI	<u>ON</u>					
Task #: 07A		State: Co	olorado		Abbre	viation: None	
Date: 2/7/2	018	County: Mo	esa		Fi	lename: M114	-07a
User: ACY							
Agency or	organizatior	n name: DRMS					
EQUIPMENT TH	RANSPOR	<u>T RIG COST</u>					
					Shift ba	sis: 1 per da	v
				C	Cost Data Sour		
Truck 7	Fractor Desc	ription: GENE	RIC ON-HIGH			OR, 6X4, DIESEL	POWERED,
					(2ND HALF,		
Truck	Trailer Desc	ription: G				OP DECK EQUI	IPMENT
				FRAILER (	(25T, 50T, AN	ND 100T)	
Cost Breakdown:							
Available Rig Caj		0-25 Tons	26-50 Tons		Tons		
Ownership O		\$16.63	\$18.37		2.33		
Operating C	Cost/Hour:	\$44.38	\$46.13	\$5	0.07		
Operator (	Cost/Hour:	\$27.66	\$27.66		7.66		
	Cost/Hour:	\$0.00	\$25.39	\$2	5.39		
Total Unit C	Cost/Hour:	\$88.67	\$117.55	\$12	25.45		
NON ROADABL	E EQUIPN	<u>AENT:</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
-	(TONS)		t		fleet		
Submersible pump - 460v, 8 in.	0.70	\$5.50	\$88.67	1	\$94.17	\$88.67	\$250.00
Cat D8T - 8SU	53.08	\$91.36	\$125.45	2	\$433.62	\$250.90	\$250.00
Cat 740	36.49	\$67.61	\$117.55	1	\$185.16	\$117.55	\$250.00
CAT 980H	33.12	\$48.81	\$117.55	2	\$332.72	\$235.10	\$500.00
Drill/Broadcast Seeder with Tractor	25.00	\$12.22	\$88.67	1	\$100.89	\$88.67	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$7.03	\$88.67	1	\$95.70	\$88.67	\$250.00
(Bome EB )0)							

Subtotals: **\$1,242.26** \$869.56

## **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	\$47.96	2	\$95.92	\$95.92
		Subtotals:	\$95.92	\$95.92

## **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	FRUITA 3.00 35.00	miles mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$6,346.55	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$16.44	

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.09	0.09
Return Time (Hours):	0.09	0.09
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.17	0.17

#### JOB TIME AND COST

Total job time: 2.34 Hours

Total job cost: **\$6,363** 

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Tasl	k descrip	otion:	Secondary	<b>Mobilization</b>					
e: <u>1</u>	5 Road (	Gravel Pit		Permit Action	on: <u>2018</u>	3-01	]	Permit/Job#:	M2002114
<u>PRC</u>	<b>)JECT</b>	IDENTIFI	CATION						
J	Гask #:	07B	S	State: Colorad	do		Abbre	viation: N	one
	Date:	2/7/2018		County: Mesa					[114-07b
	User:	ACY							
	Age	ency or organ	ization name:	DRMS					
EQL	JIPME	NT TRANS	PORT RIG	COST					
							Shift ba	sis: 1 pe	r day
						(	Cost Data Sour	ce: CRG	Data
		Truck Traile	r Description:	GENE		DING GOC	(2ND HALF, SENECK, DF (25T, 50T, AN	ROP DECK E	QUIPMENT
Cost	Breakdo	wn:							
Ava	ailable R	Rig Capacitie	es 0-25	5 Tons 20	6-50 Tons	51-	- Tons		
	Owne	rship Cost/H	our: \$1	6.63	\$18.37	\$2	22.33		
		ating Cost/H		4.38	\$46.13	\$	50.07		
		erator Cost/H		27.66	\$27.66		27.66		
		lelper Cost/H		0.00	\$25.39		25.39		
	Total	Unit Cost/H	our: \$8	38.67	\$117.55	\$1	25.45		
NON	N ROAI	DABLE EQ	UIPMENT	<u>:</u>					
Ma	chine	Wei	oht/ Ou	ner ship Ha	ul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
	scription			1	ost/hr/uni	Size	Cost/hr/	Cost/hr/ fle	
_ 20	r		NS)				fleet		
	ll/Broadca der with ctor			.22 \$8	8.67	1	\$100.89	\$88.67	\$250.00
D	ver Mulch	er 6.00	\$7.0	0.0 m	8.67	1	\$95.70	\$88.67	\$250.00

Subtotals: **\$196.59 \$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	\$47.96	2	\$95.92	\$95.92
		Subtotals:	\$95.92	\$95.92

## **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance:	FRUITA 3.00	miles
Average Travel Speed:	35.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$1,457.28	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$16.44	

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.09	0.09
Return Time (Hours):	0.09	0.09
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.17	0.17

#### JOB TIME AND COST

Total job time: 2.34 Hours

Total job cost: \$1,474

	#Lake 2 Keleased AK-1	- Current Bund 11854,778 GRS-plated 2014
M-2002-114 15 Road	Pit 2018 Update	-1101, 1 ADDROX \$1(034.1085
21a Pumping	1: None 2: 21.4ac e 12' -7 46.1ac 3: 24.7ac e 12'	~ 120,494,724 gal
	1: None 3: 400 sqft x 1500 1ft = 600,000 -D 4: 400 sqft x 4000 1ft = 1,600,000 -D	22,222 су 59,259.2 су
)3a Demo	Office 24'x28'x8' Storage B	ion 24'x28'x6" wilding rage
)4a-c Truck	1: None 3: 63 #ft x 1500 1ft = 94,500-22 + Stockpiles 4: 63 ft x 4000 1ft = 252,000 = + Mining area 5 storage Boards + ROW N	ac × 8" = 5,377.7864 05.78ac ×8" = 6,222 cy
)5a Bipper	Heavily compacted areas 17 Sac + 15.15ac + 9.5ac = 29	alesac
T	Ry Bangeland, 50% failure, 24 Siosolid (manure) e 43.56 ta/ac + Disc to mix Dill Seed w/ 2 ta/ac power mu	
	Netland Mix, 1590 failure, 15'fr 11.5ac Luke 1 = 13.39ac total Biosolid (manure) @ 43.56 tan/ac +B Broadcast, Disk to mix 2 tan/ac mulch power + crimp, quat Cottonwood transplant N350 tota	ic weeds spray
)Tarb Mob	1-8" Submersible pump 1- 2-980 Loader 1.	- Drill seed - Dower mulch - Crew trucks

## **Revegetation**

The revegetation cost is \$950 per acre for dryland, except that 2 seedings will be used due to the dry nature of the area. A cost of \$1200 is used for wetland areas but these areas do not require a  $2^{nd}$  seeding.

Task #	Description	Units	Quantity	Cost/unit	Cost
1	Drain Lake 1 to install wetlands	gal	86,282,724	\$0.000338	\$29,164
	Backfill Overburden for wetland shelves	су	167,125	\$1.50	\$250,688
3	Drain Pit 3 to do backfilling	gal	34,212,000	\$0.000338	\$11,564
4	Drain Pit 4 to do backfilling	gal	86,282,724	\$0.000338	\$29,164
5	Pits 3 and 4 backfilling	су	118,325	\$1.55	\$183,404
6	Structure removal			a these	\$12,300
7	Topsoiling	су	48,374	\$1.40	\$67,724
8	Topsoil Preparation	acres	44.96	\$200.00	\$8,992
9	Wetland Revegetation	acres	15.18	\$1,200.00	\$18,216
10	Dryland Revegetation	acres	29.78	\$1,900.00	\$56,582
11					
12	All the second second second				
Totals					<u> </u>
TULAIS	<u> </u>				\$667,796
	DRMS Overhead		28%		\$186,983
	Total Bond Required				\$854,778

Worst case reclamation costs for this scenario are given below: