

April 20, 2022

Katie Todt Lewicki and Associates, PLLC 3375 West Powers Circle Littleton, CO 80123

RE: Young Ranch Resource Quarry, File No. M-2021-009, 112 Construction Materials Reclamation Permit Application, Adequacy Review No. 4 – Bond Estimate

Ms. Todt:

The Division of Reclamation, Mining and Safety (Division) has completed its bond estimate (see enclosed) for the proposed operation based on the reclamation plan provided. Please review this estimate and provide any comments or questions you might have no later than <u>April 29</u>, 2022.

The Division estimates the required financial warranty for the proposed mine phase 1 disturbance to be in the amount of \$330,461.00. Please keep in mind, any proposed changes to the reclamation plan reviewed thus far may necessitate a revised bond estimate.

If you have any questions, you may contact me by telephone at 303-866-3567, ext. 8129 or by email at amy.eschberger@state.co.us.

Sincerely,

Amy Eschberger

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Environmental Protection Specialist

Encl: Division's bond estimate, dated 4/20/2022

Cc: Ben Miller, Lewicki and Associates, PLLC

Robert L. Young Jr., Young Ranch Resource, LLC

Rob Zuber, DRMS Zach Trujillo, DRMS

Michael Cunningham, DRMS



COST SUMMARY WORK

Young Quarry	Ranch Resourc	e Pe	rmit Action:	Phase 1 Disturbance	Permit/Jol	o#: M2021009
ROJECT Task #:	TIDENTIFIC 000	State:	Colorado		Abbreviation:	None

TASK LIST (DIRECT COSTS)

Task	Description.	Form	Fleet	Task Hours	Cost
001	Description	Used	Size		
001	Haul backfill material to quarry highwall	TRUCK1	1	28.34	\$23,391
002	Backfill quarry highwall to 2H:1V	EXCAVATE	1	15.46	\$3,014
003	Haul coarse rock to quarry highwall	TRUCK1	1	20.41	\$16,849
004	Place coarse rock cap on quarry highwall	EXCAVATE	1	8.64	\$1,684
005	Place growth medium on quarry highwall	SCRAPER1	1	5.40	\$8,093
006	Rip compacted area (1.7 acre)	RIPPER	1	2.51	\$658
006b	Single shank rip on WRL lifts	RIPPER	1	0.19	\$51
007	Grade active WRL lifts to 2.2H:1V	DOZER	2	5.78	\$2,733
008	Haul coarse rock to WRL slopes	TRUCK1	1	3.28	\$2,704
009	Place coarse rock cap on WRL slopes	EXCAVATE	1	1.06	\$207
010	Place growth medium on WRL slopes	SCRAPER1	1	0.97	\$1,448
011	Place growth medium on top WRL (1.7 ac)	SCRAPER1	1	1.94	\$2,912
012	Place growth medium on pit floor (26.7 ac)	SCRAPER1	1	21.27	\$31,862
013	Plant dry rangeland mix on 28.4 acres	REVEGE	1	14.20	\$32,457
014	Plant forest shrub mix on 7.3 acres	REVEGE	1	3.65	\$22,254
015	Plant tree tubelings on 7.3 acres	REVEGE	1	3.65	\$15,549
016	Mobilization/Demobilization	MOBILIZE	1	25.27	\$93,538
		SUBTO	TALS:	162.02	\$259,404

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$5,240
Performance bond:	1.05	Total =	\$2,724
Job superintendent:	121.00	Total =	\$8,716
Profit:	10.00	Total =	\$25,940

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.25	Total =	\$12,836
Reclamation management and/or administration:	5.00	_	\$15,101

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$71,057

TOTAL BOND AMOUNT (direct + indirect) = \$330,461

TRUCK/LOADER TEAM WORK

Task description:	Haul ba	ckfill materi	ial to qu	arry highwall	1		
Young Ranch R Site: Quarry	Resource	Permit	Action:	Phase 1 Dist	urbance	Permit/Job#: M	2021009
PROJECT IDE	NTIFICATION						
Task #: 001 Date: 4/20/ User: AME			olorado ilpin		Ab	breviation: No Filename: MO	one 009-001
Agency o	r organization nar	ne: DRMS	S				
HOURLY EQU	IPMENT COST	r			Shift has	is: 1 per day	
HOURET EQU	HIVIEIVI COD	<u>-</u>	Ean	ipment Descri		is. <u>i per day</u>	
-	Truck Loader Tea	m -Truck:	Cat 730)	puon		
		-Loader:	Cat D87				
Sup	oort Equipment -L Dı-	oad Area: ump Area:	Cat D8'	1 - 850			
Road N	Iaintenance –Mot		CAT 16				
	-Wa	ter Truck:	Water 7	Tanker, 3,500	Gal.		
Cost Breakdown:	Truck/Loa	nder Team			Equipment	Maintenar	nce Equipment
	Truck	Loader	Lo	oad Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	1	100	50	NA	50	50
Ownership cost/hour:	\$76.13	\$59	.72	\$97.46	NA	\$70.80	\$17.15
Operating cost/hour:	\$52.75	\$55		\$48.82	NA	\$28.16	\$14.60
%Utilization-riper:	NA	Φ.0	0	NA Do oo	NA	NA	NA
Ripper own. cost/hour:	NA		.00	\$0.00	NA NA	\$0.00	\$0.00
Ripper op. cost/hour: Operator cost/hour:	NA \$32.54	\$0 \$40	.00	\$0.00 \$41.30	NA NA	\$0.00 \$28.56	\$0.00 \$0.00
Unit Subtotals:	\$161.42	\$40 \$155		\$187.58	NA NA	\$127.51	\$31.75
Number of Units:	2	Ψ133	1	1	0	1	1
Group Subtotals:	Work:	\$478.47	1	Support:	\$187.58	Maint:	\$159.26
	ogt/hours \$925.21	<u> </u>		TIT	,		,
Total work team co	ost/flour: \$625.51	·					
MATERIAL QU	JANTITIES						
Initial volume			CCY	Swell	factor: 1.060		
Loose volume			LCY	5 wen	1.000		
So	ource of estimated	volume:	25 ft H x	500 ft L benc	h, vertical to 2H:	1 V	
Source	e of estimated swe	ell factor:	Cat Hand		,		
	Material Purch		\$0.00 \$0.00				
	10	otai Cost:	\$0.00				
HOURLY PRO	DDUCTION						
Truck Capacity:							
Truck Capacity: Truck Payload (we	ight) Basis:						
Material	weight: 2,850			Pounds/LCY			
	ription: Sand -			Dounds			
Rated P	ayload: <u>62,000</u>			Pounds			

Truck/Loader Worksheet Con	t d	1 ask # 001			Page 2 of 3	
Payload Capacity:	21.75	LCY				
Truck Bed (volume) Basis:						
Struck Volume:		CY				
Heaped Volume:		CY				
Average Volume:		CY				
Adjusted Volume:	21.75 Lo	CY				
Final 7	Γruck Volume B	ased on Number of L	oader Passes:	18.50	LCY	
Loading Tool Capacity			Dual	rat Siga Classe N	Τ.Α.	
Rated Capacity:	5.000	LCY (heaped)	Виск	ket Size Class: N	VA	_
Bucket Fill Factor:	0.925	Loose material - 1	/8" to 3/8" (90	- 95%) 0.925		_
Adjusted Capacity:	4.625	LCY	(* * * * * * * * * * * * * * * * * * *			_
Job Condition Corrections:		Site	Altitude (ft.): 8	3200 feet		
	Truck	Loader	Source			
Altitude Adj:	0.900	1.000	(CAT HB	5)		
Job Efficiency:	0.830	0.830	(CAT HB	5)		
Net Correction:	0.747	0.830				
Loading Tool Cycle Time:	Number o	f Loading Tool Passe	s Required to I	Fill Truck:	4 1	passes
Excavators and Front Shovels	<u>s:</u>					
Machine Cycle Time vs Selected Value w						
Track Loaders – I	Material Descrip	tion:				
Cycle Time Elements (min.):						
Load: NA	Mar	neuver: NA		Dump: 0.10	0	
Wheel and Track Loaders -	Unadjusted Basi	c Loader Cycle Time	(load, dump, n	naneuver):	0.500 min	utes
Cycle Time Factors				Factor (min.)	Source	
Material:	Material 1/8" to	3/4" diameter -0.02		-0.020	(Cat HB)	_
Stockpile:	Conveyor or do	zer piled 10 ft. high a	nd up 0.00	0.000	(Cat HB)	
Truck Ownership:		rship of trucks and lo	aders -0.04	-0.040	(Cat HB)	_
Operation:	Constant operat			-0.040	(Cat HB)	_
Dump Target:	Nominal target		. 1:	0.000	(Cat HB)	_
		Net Cycle Time	_	-0.100	minutes	
		Adjusted Loader Net Load Tim		0.400 1.300	minutes minutes	
Truck Cycle Time:						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.667	Minute
Truck Load Time:	1.300	Minutes	Adjusted	for site altitude:	1.300	Minute
ck Maneuver and Dump Time:	1.00	Minutes	Adjusted	for site altitude:	1.111	_ Minute
				_		_

<u>Truck Travel (Haul & Return) Time:</u> maintained 3.0

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

Haul Route:

Huur Rou	ic.					
Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	2.00	3.00	5.00	1427	0.753

Haul Time: 0.753 minutes

Return Route:

Ttotal II Ito	ate.					
Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	-2.00	3.00	1.00	3060	0.426

Return Time: 0.426 minutes
Total Truck Cycle Time: 4.257 minutes

Loading Tool unit

Production 564.41 LCY/Hour Adjusted for job efficiency: 468.46 LCY/Hour

Truck Unit Production

260.76 LCY/Hour Adjusted for job efficiency: 216.43 LCY/Hour

Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production:
Adjusted single truck/loader team production:
Adjusted multiple truck/loader team production:
432.86
LCY/Hour
432.86
LCY/Hour
432.86

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **28.34** Hours

Unit cost: \$1.907 /LCY Total job cost: **\$23,391**

HYDRAULIC EXCAVATOR WORK

Task description:	Ba	ickfill quarry l	nignwaii to	2H:1V			
Young Ranch Quarry	Resource	Per	mit Action:	Phase 1 Disturb	pance I	Permit/Job#:	M2021009
PROJECT IDE	ENTIFICAT	ΓΙΟΝ .					
Task #: 002)	State:	Colorado		Δh	oreviation:	None
	0/2022	County:	Gilpin			Filename:	M009-002
User: AM		_ county.	Опріп			i ilenume.	1000 002
	or organizatio	on nama: DI	RMS				
HOURLY EQU	_		XIVIS				
		<u></u>	G.: 1		**	,	260
Basic Mac Attachme		336D L 10'-6" PS Cab	Stick		Horsepower: Weight (MT):		9.30
Attachine	ent 1: KOP	'S Cab			Shift Basis:	-	er day
					Data Source:		CRG)
Coot Dural-dam.					zaa zomee.		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Cost Breakdown:				Utilization %			
Ownershi	p Cost/Hour:	\$83.4	42	NA			
	g Cost/Hour:	\$74.		100			
	or Cost/Hour:	\$37.		NA			
_	it Cost/Hour:	\$194					
Total Fle	et Cost/Hour:	: \$194	1.88				
		<u> </u>					
MATERIAL Q							
Initial value	na: 11 57/		CCV	Swall fact	tor: 1.000		
Initial volun			$-\frac{\text{CCY}}{1 \text{ CY}}$	Swell fact	tor: 1.000		
Loose volun	ne: 11,574		LCY		tor: 1.000		
Loose volun	ne: 11,574 Source of esti	mated volume:	LCY 25 ft H >	x 500 ft L bench	tor: 1.000		
Loose volun	ne: 11,574 Source of esti		LCY 25 ft H >	x 500 ft L bench	tor: 1.000		
Loose volun	Source of estimate	mated volume: ed swell factor:	LCY 25 ft H >	x 500 ft L bench	tor: 1.000		
Loose volun Sour HOURLY PRO	Source of estimate ODUCTION	mated volume: ed swell factor:	LCY 25 ft H > Cat Han	x 500 ft L bench dbook			
Loose volun	Source of estimate ODUCTION	mated volume: ed swell factor:	25 ft H 2 Cat Handaded, dump	x 500 ft L bench dbook bucket, swing em	pty):		
Loose volun Sour HOURLY PRO	Source of estimate of estimate of DUCTION Time (load but	mated volume: ed swell factor: \(\frac{1}{2}\)	25 ft H 2 Cat Handaded, dump Basic Job (x 500 ft L bench dbook bucket, swing em Condition Descrip	pty): tion: EXCE	LLENT	
Loose volun Sour HOURLY PRO	Source of estimate of estimate of DUCTION Time (load but	mated volume: ed swell factor: \(\frac{1}{2}\)	25 ft H 2 Cat Handaded, dump Basic Job (x 500 ft L bench dbook bucket, swing em Condition Description Basic Description	pty): tion: EXCE tion: EXCE	LLENT LLENT	
Loose volum Sour HOURLY PRO Excavator Cycle	Source of estimate DDUCTION Time (load but Se	mated volume: ed swell factor: \(\frac{1}{2}\)	25 ft H 2 Cat Handaded, dump Basic Job (x 500 ft L bench dbook bucket, swing em Condition Descrip	pty): tion: EXCE tion: EXCE		minutes
Loose volun Sour HOURLY PRO	Source of estimate DDUCTION Time (load but Se	mated volume: ed swell factor: \(\frac{1}{2}\)	25 ft H 2 Cat Handaded, dump Basic Job (x 500 ft L bench dbook bucket, swing em Condition Description Basic Description	pty): tion: EXCE tion: EXCE alue: 0.205	LLENT	
Loose volun Sour HOURLY PRO Excavator Cycle	Source of estimate DDUCTION Time (load but) Se acity	mated volume: ed swell factor: Value of the swell factor of the s	25 ft H 2 Cat Han aded, dump Basic Job (ondition with	bucket, swing employed	pty): tion: EXCE tion: EXCE	LLENT	
Loose volum Sour HOURLY PRO Excavator Cycle Load Bucket Cap Rated O	Source of estimate DDUCTION Time (load but) Se acity Capacity:	mated volume: ed swell factor: Lucket, swing load condary Job Co	25 ft H 2 Cat Han aded, dump Basic Job Condition with	bucket, swing employments and book bucket, swing employments and bescript him Basic Descript Cycle Time Variables.	pty): tion: EXCE tion: EXCE alue: 0.205 Bucket Size	LLENT Class: La	
Loose volum Sour HOURLY PRO Excavator Cycle Load Bucket Cap Rated C Bucket Fil	Source of estimate DDUCTION Time (load but) Se acity Capacity: Il Factor:	mated volume: ed swell factor: N acket, swing load condary Job Co 3.33 0.925	25 ft H 2 Cat Han aded, dump Basic Job Condition with	bucket, swing employed	pty): tion: EXCE tion: EXCE alue: 0.205 Bucket Size	LLENT Class: La	
Loose volum Sour HOURLY PRO Excavator Cycle Load Bucket Cap Rated O	Source of estimate DDUCTION Time (load but) Se acity Capacity: Il Factor:	mated volume: ed swell factor: Lucket, swing load condary Job Co	25 ft H 2 Cat Han aded, dump Basic Job Condition with	bucket, swing employments and book bucket, swing employments and bescript him Basic Descript Cycle Time Variables.	pty): tion: EXCE tion: EXCE alue: 0.205 Bucket Size	LLENT Class: La	
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Loose volum Sour HOURLY PRO Excavator Cycle Rated O Bucket Fil Adjusted O Job Condition Co Altitude	Source of estimate	mated volume: ed swell factor: Licket, swing load econdary Job Column 3.33 0.925 3.08 Dors 1.00	LCY 25 ft H x Cat Han aded, dump Basic Job (condition with LCY (he Loose m LCY Source (CAT H	bucket, swing employed	pty): tion: EXCE tion: EXCE	Class: La	
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Loose volum Sour HOURLY PRO Excavator Cycle Rated O Bucket Fil Adjusted O Job Condition Co Altitude	Source of estimate	mated volume: ed swell factor: Licket, swing load econdary Job Column 3.33 0.925 3.08 Dors 1.00	LCY 25 ft H x Cat Han aded, dump Basic Job (condition with LCY (he Loose m LCY Source (CAT H	bucket, swing employed	pty): tion: EXCE tion: EXCE	Class: La	
Loose volum Sour HOURLY PRO Excavator Cycle Rated C Bucket Fil Adjusted C Job Condition Co Altitude Job Efficie	Source of estimate	mated volume: ed swell factor: Condary Job Condary Jo	LCY 25 ft H x Cat Han aded, dump Basic Job (condition with LCY (he Loose m LCY Source (CAT H (1 shift/d multiplie	bucket, swing employed	pty): tion: EXCE tion: EXCE	Class: La 0.925 0 feet	
Loose volum Sour HOURLY PRO Excavator Cycle Rated C Bucket Fil Adjusted C Job Condition Co Altitude Job Efficie	Source of estimate DDUCTION Time (load but Se acity Capacity: Il Factor: Capacity: Capacity: Unadjuste Adjuste	mated volume: ed swell factor: Licket, swing load condary Job Con	LCY 25 ft H x Cat Han aded, dump Basic Job Condition with LCY (he Loose m LCY Source (CAT H (1 shift/d multiplie Production: Production:	bucket, swing employed	pty): tion: EXCE tion: EXCE	Class: La 0.925 0 feet	
Loose volum Sour HOURLY PRO Excavator Cycle Rated C Bucket Fil Adjusted C Job Condition Co Altitude Job Efficie	Source of estimate DDUCTION Time (load but Se acity Capacity: Il Factor: Capacity: Capacity: Unadjuste Adjuste	mated volume: ed swell factor: Name of the condary Job Condary Jo	LCY 25 ft H x Cat Han aded, dump Basic Job Condition with LCY (he Loose m LCY Source (CAT H (1 shift/d multiplie Production: Production:	bucket, swing employed	pty): tion: EXCE tion: EXCE EXCE 0.205 Bucket Size /8" (90 - 95%) e Altitude: 820	Class: La 0.925 0 feet	
Loose volum Sour HOURLY PRO Excavator Cycle Rated C Bucket Fil Adjusted C Job Condition Co Altitude Job Efficie	Source of estimate of estimate of estimate of estimate of estimate of the control	mated volume: ed swell factor: Licket, swing load condary Job Con	LCY 25 ft H x Cat Han aded, dump Basic Job Condition with LCY (he Loose m LCY Source (CAT H (1 shift/d multiplie Production: Production:	bucket, swing employed	pty): tion: EXCE tion: EXCE alue: 0.205 Bucket Size /8" (90 - 95%) Altitude: 820 LCY/Hour LCY/Hour	Class: La 0.925 0 feet	
Loose volum Sour HOURLY PRO Excavator Cycle T Load Bucket Cap Rated C Bucket Fil Adjusted C Job Condition Co Altitude Job Efficie Net Correct	Source of estimate	mated volume: ed swell factor: incket, swing load econdary Job Column 3.33 0.925 3.08 ors 1.00 0.83 0.83 ed Hourly United Hourly United Hourly United Hourly Fleet	LCY 25 ft H x Cat Han aded, dump Basic Job Condition with LCY (heterose many LCY Source (CAT Hand) (1 shift/d multiplie Production: Production:	bucket, swing employed	pty): tion: EXCE tion: EXCE alue: 0.205 Bucket Size /8" (90 - 95%) Altitude: 820 LCY/Hour LCY/Hour LCY/Hour	LLENT Class: La 0.925 0 feet	rge
Loose volum Sour HOURLY PRO Excavator Cycle Rated C Bucket Fil Adjusted C Job Condition Co Altitude Job Efficie Net Correct	Source of estimate of estimate of estimate of estimate of estimate of the control	mated volume: ed swell factor: Licket, swing load condary Job Con	LCY 25 ft H x Cat Han aded, dump Basic Job Condition with LCY (heterose many LCY Source (CAT Hand) (1 shift/d multiplie Production: Production:	bucket, swing employed	pty): tion: EXCE tion: EXCE alue: 0.205 Bucket Size /8" (90 - 95%) Altitude: 820 LCY/Hour LCY/Hour	LLENT Class: La 0.925 0 feet	

TRUCK/LOADER TEAM WORK

ite: Quarry	Resource		t Action	Phase 1 Dist	urbance	Permit/Job#: N	12021009
PROJECT IDE	NTIFICATION	<u>[</u>					
Task #: 003 Date: 4/20 User: AM			Colorad Gilpin	0	Ab		one 009-003
Agency	or organization nar	ne: DRM	IS				
HOURLY EQU	IPMENT COST	<u>r</u>			Shift bas	is: <u>1 per day</u>	
				quipment Descri	ption		
	Truck Loader Tea	m -Truck: -Loader:	Cat 7	30 966H			
Sur	port Equipment -I			90011 98T - 8SU			
D 41		ump Area:	NA	16)/			
Road I	Maintenance –Mot -Wa	or Grader: iter Truck:	CAT Water	r Tanker, 3,500 (Gal.		
Cost Breakdown	Truck/Lo	ader Team Loader		Support I Load Area	Equipment Dump Area	Maintena Motor Grader	Water Truck
Utilization-machine:	100		100	50	NA	50	50
Ownership cost/hour:	\$76.13	\$5	9.72	\$97.46	NA	\$70.80	\$17.15
Operating cost/hour:	\$52.75	-	5.20	\$48.82	NA	\$28.16	\$14.60
%Utilization-riper:	NA		0	NA	NA	NA	NA NA
pper own. cost/hour:	NA		0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA		0.00	\$0.00	NA NA	\$0.00	\$0.00
Operator cost/hour: Unit Subtotals:	\$32.54 \$161.42		0.71 5.63	\$41.30 \$187.58	NA NA	\$28.56 \$127.51	\$0.00 \$31.75
Number of Units:	2	\$13	1	1	0	1	Ψ31.7.
Group Subtotals:	Work:	\$478.47	-	Support:	\$187.58	Maint:	\$159.26
Total work team c	ost/hour: \$825.3 1				·		
MATERIAL Q	<u>UANTITIES</u>						
Initial volum Loose volum		0	CCY LCY	Swell	factor: 1.320		
	Source of estimated sweet of estimated sweet.			inch depth x 6.5 indbook	ac		
Source	Material Purch	_	\$0.00	indo o o k			
	To	otal Cost: _	\$0.00				
HOURLY PR	ODUCTION						
Truck Capacity:	<u> </u>						
	: 1 () D :						
Truck Payload (we Material	weight: 2,800	e - Broken		_ Pounds/LCY			

Payload Capacity:	22.14	LO	CY			
Truck Bed (volume) Basis:						
Struck Volume:	17.10	LCY				
Heaped Volume:	22.10	LCY				
Average Volume:	19.60	LCY				
Adjusted Volume:	22.10	LCY				
Fina	l Truck Volum	e Based on Numbe	er of Loader Passes:	20.00	LCY	
Loading Tool Capacity			_			
Rated Capacity:	5.000	LCY (heape		ket Size Class: _	NA	<u> </u>
Bucket Fill Factor:	1.000		Blasted (95%-105%	6) 1.000		_
Adjusted Capacity:	5.000	LCY				_
Job Condition Correction	<u>s:</u>		Site Altitude (ft.):	8200 feet		
	Truck	Loader	Source	!		
Altitude Adj:	0.900	1.000	(CAT HI	B)		
Job Efficiency:	0.830	0.830	(CAT HI	B)		
Net Correction:	0.747	0.830				
Net Correction: Loading Tool Cycle Time			l Passes Required to	Fill Truck:	4 1	passes
	: Numbe		l Passes Required to	Fill Truck:	4 1	passes
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time	: Numbe	er of Loading Tool	l Passes Required to	Fill Truck:	41	passes
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time	: Number els: vs. Job Condition within this Bas	er of Loading Tool on Rating: NA	l Passes Required to	Fill Truck:	<u>4</u> 1	passes
Excavators and Front Show Machine Cycle Time Selected Value	: Number els: vs. Job Condition within this Base Material Desc	er of Loading Tool on Rating: NA	l Passes Required to	Fill Truck:	4	passes
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders	E Number els: vs. Job Condition within this Base Material Descent:	er of Loading Tool on Rating: NA	l Passes Required to	Fill Truck:	,	passes
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min.	E Number els: vs. Job Condition within this Base Material Descent it	on Rating: NA NA NA NATION. Maneuver: NA		Dump: 0.1	,	
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA	E Number els: vs. Job Condition within this Base Material Descent it	on Rating: NA NA NA NATION. Maneuver: NA		Dump: 0.1	00	
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA Wheel and Track Loaders	E Number els: vs. Job Condition within this Base Material Descent Unadjusted B	on Rating: NA NA NA NATION. Maneuver: NA	Time (load, dump,	Dump: 0.1	00 0.500 min	
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA Wheel and Track Loaders Cycle Time Factors	E Numbered Street Numbered Str	on Rating: NA	Time (load, dump, and one)	Dump: 0.1 maneuver): Factor (min.)	00 0.500 min Source	
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership:	E Number els: vs. Job Condition within this Base Material Description: - Unadjusted B Material 6" and Conveyor or Common own	on Rating: NA	Time (load, dump, and one)	Dump: 0.1 maneuver): Factor (min.) 0.030 0.000 -0.040	00	
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	E Number els: vs. Job Condition within this Base - Material Descential Descential Descential Descential Office of the Material 6" of Conveyor of Common ow Constant open	on Rating: NA Sic Rating: Maneuver: NA Sasic Loader Cycle and over diameter r dozer piled 10 ft. vnership of trucks eration -0.04	Time (load, dump, and one)	Dump: 0.1 maneuver): Factor (min.) 0.030 0.000 -0.040 -0.040	00 min	
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership:	E Number els: vs. Job Condition within this Base Material Description: - Unadjusted B Material 6" and Conveyor or Common own	on Rating: NA	O.03 high and up 0.00 and loaders -0.04	Dump: 0.1 maneuver): Factor (min.) 0.030 0.000 -0.040 -0.040 0.000	00	
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	E Number els: vs. Job Condition within this Base - Material Descential Descential Descential Descential Office of the Material 6" of Conveyor of Common ow Constant open	on Rating: NA	Time (load, dump, 10.03 high and up 0.00 and loaders -0.04 Time Adjustment:	Dump: 0.1 maneuver): Factor (min.) 0.030 0.000 -0.040 -0.040 0.000 -0.050	00	
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	E Number els: vs. Job Condition within this Base - Material Descential Descential Descential Descential Office of the Material 6" of Conveyor of Common ow Constant open	on Rating: NA Sic Rating: NA Seription: NA S	Time (load, dump, 10.03 high and up 0.00 and loaders -0.04 Time Adjustment: oader Cycle Time:	Dump: 0.1 maneuver): Factor (min.) 0.030 0.000 -0.040 -0.040 0.000 -0.050 0.450	00	
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	E Number els: vs. Job Condition within this Base - Material Descential Descential Descential Descential Office of the Material 6" of Conveyor of Common ow Constant open	on Rating: NA Sic Rating: NA Seription: NA S	Time (load, dump, 10.03 high and up 0.00 and loaders -0.04 Time Adjustment:	Dump: 0.1 maneuver): Factor (min.) 0.030 0.000 -0.040 -0.040 0.000 -0.050	00	
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	E Number els: vs. Job Condition within this Base Material Descents: - Unadjusted B Material 6": Conveyor or Common ow Constant open Nominal targets:	on Rating: NA	O.03 high and up 0.00 and loaders -0.04 Time Adjustment: oader Cycle Time: dd Time per Truck:	Dump: 0.1 maneuver): Factor (min.) 0.030 0.000 -0.040 -0.040 0.000 -0.050 0.450 1.450	O0 Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	utes
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value 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	E Number els: vs. Job Condition within this Base Material Descent: - Unadjusted B Material 6" a Conveyor or Common ow Constant open Nominal target.	on Rating: NA Sic Rating: NA Pription: NA Basic Loader Cycle and over diameter dozer piled 10 ft. Eventship of trucks eration -0.04 get 0.00 Net Cycle Adjusted L Net Loa Minutes	O.03 high and up 0.00 and loaders -0.04 Time Adjustment: oader Cycle Time: dd Time per Truck: Adjusted	Dump: 0.1 maneuver): Factor (min.) 0.030 0.000 -0.040 -0.040 0.000 -0.050 0.450 1.450	00 Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes 0.667	utes
Loading Tool Cycle Time Excavators and Front Show Machine Cycle Time Selected Value Track Loaders Cycle Time Elements (min. Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	E Number els: vs. Job Condition within this Base Material Descents: - Unadjusted B Material 6": Conveyor or Common ow Constant open Nominal target and the content of the content open Nominal target and the c	on Rating: NA	O.03 high and up 0.00 and loaders -0.04 Time Adjustment: oader Cycle Time: dd Time per Truck: Adjusted	Dump: 0.1 maneuver): Factor (min.) 0.030 0.000 -0.040 -0.040 0.000 -0.050 0.450 1.450	O0 Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	utes

<u>Truck Travel (Haul & Return) Time:</u> maintained 3.0

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

Page 3 of 3

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	2.00	3.00	5.00	1427	0.753

Return Route:

Seg # Haul Distance Grade (%) Roll. Res Total Res Velocity Travel

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	-2.00	3.00	1.00	3060	0.426

Return Time: 0.426 minutes
Total Truck Cycle Time: 4.407 minutes

Loading Tool unit

Production ______ 566.93 ___ LCY/Hour Adjusted for job efficiency: _____ 470.55 ___ LCY/Hour Truck Unit Production

272.31 LCY/Hour Adjusted for job efficiency: 226.02 LCY/Hour

Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 452.03 LCY/Hour Adjusted single truck/loader team production: 452.03 LCY/Hour Adjusted multiple truck/loader team production: 452.03 LCY/Hour

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 20.41
 Hours

 Unit cost:
 \$1.826
 /LCY
 Total job cost:
 \$16,849

HYDRAULIC EXCAVATOR WORK

		acc course roc	k cap on qu	arry highwall			
Young Rancl	h Resource	Per	rmit Action:				
Quarry				Phase 1 Disturb	pance Pe	ermit/Job#:	M2021009
PROJECT ID	<u>DENTIFICA'</u>	<u>TION</u>					
Task #: 00)4	State:	Colorado		Abbi	reviation:	None
Date: 4/2	20/2022	County:	Gilpin		I	Filename:	M009-004
User: Al	ME					_	
Agency	y or organizati	on name: D	RMS				
HOURLY EQ	<u> UIPMENT</u>	COST					
Basic Ma	achine: Cat	336D L 10'-6'	'Stick		Horsepower:	2	.68
Attachn	nent 1: ROI	PS Cab			Weight (MT):	29	9.30
					Shift Basis:		er day
					Data Source:	(C	RG)
Cost Breakdown	<u>n:</u>						
				Utilization %			
	hip Cost/Hour:			NA			
	ing Cost/Hour:			100			
	tor Cost/Hour:			NA			
Total U	nit Cost/Hour:	\$194	88				
Total F	leet Cost/Hour	:: \$194	4.88				
MATERIAL (OUANTITII	ES					
Initial volu			CCY	Cruall for	1.000		
illitiai voit			CCI	Swell lac	tor: 1.000		
Loose volu	Source of esti	imated volume	LCY : Avg 8 in	depth x 6.5 ac	tor: 1.000		
Loose volu Sou HOURLY PR	Source of estimate SOUCTION	ed swell factor	LCY Avg 8 in Cat Hand	depth x 6.5 ac			
Loose volu Sou HOURLY PR	Source of estimate SOUCTION	ed swell factor	LCY Avg 8 in Cat Hand aded, dump 1	depth x 6.5 ac dbook bucket, swing em	apty):	LENT	
Loose volu Sou HOURLY PR	Source of estimate CODUCTION E Time (load by	ed swell factor <u>N</u> ucket, swing lo	LCY Avg 8 in Cat Hand aded, dump l Basic Job C	depth x 6.5 ac dbook bucket, swing em	upty): otion: EXCEL		
Loose volu Sou HOURLY PR	Source of estimate CODUCTION E Time (load by	ed swell factor <u>N</u> ucket, swing lo	LCY Avg 8 in Cat Hand aded, dump l Basic Job C	depth x 6.5 ac dbook bucket, swing em Condition Descrip nin Basic Descrip	npty): otion: EXCEL otion: EXCEL		minutas
Loose volu Sou HOURLY PR Excavator Cycle	Source of estimate and the state of estimate and the state of the stat	ed swell factor <u>N</u> ucket, swing lo	LCY Avg 8 in Cat Hand aded, dump l Basic Job C	depth x 6.5 ac dbook bucket, swing em	npty): otion: EXCEL otion: EXCEL		minutes
Loose volu Sou HOURLY PR	Source of estimate and the state of estimate and the state of the stat	ed swell factor <u>N</u> ucket, swing lo	LCY Avg 8 in Cat Hand aded, dump l Basic Job C	depth x 6.5 ac dbook bucket, swing em Condition Descrip nin Basic Descrip	otion: EXCEL otion: EXCEL alue: 0.205	LENT	
Loose volu Sou HOURLY PR Excavator Cycle Load Bucket Ca	Source of estimate CODUCTION Time (load by Secure of estimate)	ed swell factor N ucket, swing lo econdary Job C	LCY Avg 8 in Cat Hand aded, dump 1 Basic Job Condition with	depth x 6.5 ac dbook bucket, swing em Condition Descrip nin Basic Descrip Cycle Time V	npty): otion: EXCEL otion: EXCEL	LENT	
Loose volu Sou HOURLY PR Excavator Cycle Load Bucket Ca Rated	Source of estimate CODUCTION Time (load by Sepacity Capacity:	ed swell factor N ucket, swing lo econdary Job C 3.33	LCY Avg 8 in Cat Hand aded, dump I Basic Job Condition with	depth x 6.5 ac dbook bucket, swing em Condition Descrip nin Basic Descrip Cycle Time V	otion: EXCEL tion: EXCEL alue: 0.205 Bucket Size C	LENT	
Loose volu Sou HOURLY PR Excavator Cycle Load Bucket Ca Rated Bucket F	Source of estimate CODUCTION Time (load by pacity Capacity: Fill Factor:	ed swell factor N ucket, swing lo econdary Job C 3.33 1.000	LCY Avg 8 in Cat Hand aded, dump l Basic Job C ondition with LCY (he Rock - V	depth x 6.5 ac dbook bucket, swing em Condition Descrip nin Basic Descrip Cycle Time V	otion: EXCEL tion: EXCEL alue: 0.205 Bucket Size C	LENT	
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Loose volu Sou HOURLY PR Excavator Cycle Load Bucket Ca Rated Bucket F	Source of estimate and control of the control of th	ed swell factor N ucket, swing lo econdary Job C 3.33 1.000 3.33	LCY : Avg 8 in : Cat Hand aded, dump I Basic Job Condition with LCY (he Rock - W LCY	depth x 6.5 ac dbook bucket, swing em Condition Descrip nin Basic Descrip Cycle Time V aped) Vell Blasted (95%	otion: EXCEL tion: EXCEL alue: 0.205 Bucket Size C	LENT Class: Lai	
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Loose volu Sou HOURLY PR Excavator Cycle Load Bucket Ca Rated Bucket F Adjusted Job Condition C Altitud Job Effic	Source of estimate and control	N	LCY Avg 8 in Cat Hand aded, dump 1 Basic Job Condition with LCY (he Rock - V LCY Source (CAT H) (1 shift/da multiplied	depth x 6.5 ac dbook bucket, swing em Condition Descrip nin Basic Descrip Cycle Time V aped) Vell Blasted (95% Site B) ay)	apty): otion: EXCEL tion: EXCEL 0.205 Bucket Size C 6-105%) 1.000 e Altitude: 8200	LENT Class: Lai	
Loose volu Sou HOURLY PR Excavator Cycle Load Bucket Ca Rated Bucket F Adjusted Job Condition C Altitud Job Effic	Source of estimate and estimate	ed swell factor N ucket, swing lo econdary Job C 3.33 1.000 3.33 ors 1.00 0.83 0.83 ded Hourly Unit	LCY Avg 8 in Cat Hand aded, dump 1 Basic Job Condition with LCY (he Rock - V LCY Source (CAT H) (1 shift/d: multiplier t Production:	depth x 6.5 ac dbook bucket, swing em Condition Descrip nin Basic Descrip Cycle Time V aped) Vell Blasted (95% Site B) ay) r 974.63	btion: EXCEL EXCEL otion: EXCEL O.205 Bucket Size Co.5-105%) 1.000 e Altitude: 8200 LCY/Hour	LENT Class: Lai	
Loose volu Sou HOURLY PR Excavator Cycle Load Bucket Ca Rated Bucket F Adjusted Job Condition C Altitud Job Effic	Source of estimate and estimate	ed swell factor N ucket, swing lo econdary Job C 3.33 1.000 3.33 ors 1.00 0.83 0.83 ded Hourly United H	LCY Avg 8 in Cat Hand aded, dump 1 Basic Job Condition with LCY (he Rock - V LCY Source (CAT H) (1 shift/d; multiplier t Production:	depth x 6.5 ac dbook bucket, swing em Condition Descrip nin Basic Descrip Cycle Time V aped) Vell Blasted (95% Site B) ay) r 974.63 808.95	btion: EXCEL EXCEL Oction: EXCEL Oction: EXCEL Oction: EXCEL Oction: Octoon Oct	LENT Class: Lai	
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Loose volu Sou HOURLY PR Excavator Cycle Load Bucket Ca Rated Bucket F Adjusted Job Condition C Altitud Job Effic Net Corre	Source of estimate and estimate	ucket, swing lo econdary Job C 3.33 1.000 3.33 ors 1.00 0.83 0.83 ded Hourly United Hourly United Hourly Fleet	LCY Avg 8 in Cat Hand Aded, dump I Basic Job Condition with LCY (he Rock - V LCY Source (CAT H) (1 shift/d; multiplier t Production: t Production:	depth x 6.5 ac dbook bucket, swing em Condition Descrip nin Basic Descrip Cycle Time V saped) Vell Blasted (95% Site B) ay) r 974.63 808.95 808.95	btion: EXCEL EXCEL Oction: EXCEL Oction: EXCEL Oction: EXCEL Oction: Octoo Oct	LENT Class: Lar	ge
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SCRAPER TEAM WORK

,	Task description:	Place grow	th medi	um on qu	ıarry highwall			
Site:	Young Ranch Res Quarry	source	Permi	t Action:	Phase 1 Disturb	ance Peri	mit/Job#: <u>M202</u>	21009
	PROJECT IDEN	<u> </u>						
	Task #: 005 Date: 4/20/20 User: AME			Colorado Gilpin			viation: None ename: M009	-005
	Agency or o	organization name:	DRM	IS				
	HOURLY EQUIP	PMENT _			COSTS	hift basis: 1 per d	ay	
					ent Description			
			Scraper:	Cat 637	7G			
_	Suppo	ort Equipment -Loa	Dozer:	NA Cat D8	T - 8SU			
	Бирро		p Area:		T - 8SU			
	Road Ma	intenance –Motor		CAT 1	6M			
		-Water	Truck:	Water	Tanker, 3,500 Gal	•		
	Cost Breakdown:	Scraper Wo	rk Team		Support Equi	oment	Maintenance	e Equipment
•		Scraper	Do	zer	Load Area	Dump Area	Motor Grader	Water Truck
%U	Utilization-machine:	100		NA	50	100	50	50
O	wnership cost/hour:	\$218.34		NA	\$97.46	\$97.46	\$70.80	\$17.15
C	perating cost/hour:	\$208.00		NA	\$48.82	\$97.63	\$28.16	\$14.60
9	%Utilization-ripper:	NA		NA	NA	NA	NA	NA
Rip	per own. cost/hour:	NA		NA	\$0.00	\$0.00	\$0.00	\$0.00
R	ipper op. cost/hour:	NA		NA	\$0.00	\$0.00	\$0.00	\$0.00
(Operator cost/hour:	\$30.90		NA	\$41.30	\$41.30	\$28.56	\$0.00
	Unit Subtotals:	\$457.24		NA	\$187.58	\$236.39	\$127.51	\$31.75
	Number of Units:	2		0	1	1	1	1
	Group Subtotals:	Work:	\$91	4.48	Support:	\$423.97	Maint:	\$159.26
,	Total work team cost	/hour: \$1.497.71					1	
		<u> </u>						
:	MATERIAL QUA	<u>ANTITIES</u>						
	Initial volume:	5,243		CCY	Swell fact	or: 1.215		
	Loose volume:	6,370		LCY				
	Sou	rce of estimated vo	olume:	6 in dept	th x 6.5 ac			
	Source of	of estimated swell	factor:	Cat Han				
	HOUDI V DDOD	LICTION						
:	HOURLY PROD	<u>uction</u>			Sarapar R	owl (volume) Bas		
	3.6	1 (00 11 7 (3)			•			CV
N.	Material weight:	1,600 lbs/LCY Top Soil				Volume: 24.00 Volume: 34.00		LCY LCY
N	Material description: Rated Payload:	81,600 pounds			Heaped Average			LCY
	Payload Capacity:	51.00 LCY			Adjusted C			LCY

\sim	4			• •	
/ 'T	10	Α		'ime:	
	/ U	·	1	m.	

 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{0.80} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction: Site Altitude: 8200 feet

	Scraper	Push Dozer	Source
Altitude Adj:	0.980	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.813	NA	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade	Roll. Res	Total Res	Velocity (fpm)	Travel Time (min)
1	900.00	2.00	3.00	5.00	1867	0.58

Haul Time: **0.58** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	-2.00	3.00	1.00	2963	0.42

Return Time: 0.42 minutes Total Scraper team cycle time: 2.40 minutes Adjusted for job conditions: 589.43 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 1,178.85 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: LCY/Hour 1,178.85

Unadjusted unit production/hour:	725.00	LCY/Hou
Optimal Number of Scrapers per push dozer:		_

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	5.40	Hours
Unit cost:	\$1.270	/LCY	Total job cost:	\$8,093	

BULLDOZER RIPPING WORK

	Task description:	Rip con	mpacted area (1.7 acr	e)			
Site	Young Ranch I Quarry	Resource	Permit Action:	Phase 1 Distur	rbance Pe	ermit/Job#: _N	12021009
	PROJECT IDE	NTIFICATIO!	<u>N</u>				
	Task #: 006 Date: 4/20 User: AMI	/2022 E	State: Colorado County: Gilpin				one 009-006
	Agency o	or organization na	me: DRMS				
	HOURLY EQU	IPMENT COS	ST .				
	Basic M		— 8T - 8SU		Horsepower:	310	
	Ripper Attac		nk Ripper	<u>—</u> <u>—</u>	Shift Basis:	1 per d	
					Data Source:	(CRC	<u> </u>
	Cost Breakdown:			1			
		Ownership Cost	/Llour:	\$97.46	Utilization % NA		
		Operating Cost		\$97.40	100	-	
	Ripper	Ownership Cost		\$15.19	NA	-	
	Rippe	er Operating Cost		\$9.94	100	=	
		Operator Cost Total Unit Cost		\$41.30 \$261.52	NA	-	
			-				
		Total Fleet Cost	/Hour: \$263	1.52			
	MATERIAL QU	<u>UANTITIES</u>	Sele	ected estimating	g method: Area	ì	
	Alternate Methods	<u>:</u>					
Seismic:	NA		Bank Volume:	NA	BCY	NA	
Area:	1.70	acres	Rip Depth (ft):	1.50		4,114	BCY or CC
		Source of estima	ted quantity: 1.7 ac	top WRL			
	HOURLY PRO	DUCTION					<u></u>
		<u>Dec 1101</u>					
	Seismic:	Sei	ismic Velocity:	NA	feet/sec	ond	
	A	56.				0110	
	Area:	Average l	Ripping Depth:	2.56	feet/pas	s	
		_	Ripping Width:	7.08	feet/pas		
			ipping Length:	400.00	feet/pas		
			e Dozer Speed:	88.00 0.25	feet/mir		
			laneuver Time: n per unit area:	0.23	minutes acres/ho	•	
	Job Condition Cor						
				0.012			
	Una	djusted Hourly U	nit Production:	0.813	Acres/h	r	
			Site Altitude:	8,200	feet	ID .)	
			Altitude Adj: Job Efficiency:	1.00 0.83	(CAT H. (1 shift/		
			Net Correction:	0.83	multipli	•	
			ourly Unit Production:	0.68	Acres/hr		
			ourly Fleet Production:	0.68	Acres/hr		
	JOB TIME AN	· ·					
	Fleet size:		Grader(s)	Total job tim	ne:	2.52	Hours
	Unit cost:	\$387.347	Dar aara	Total job as	.at·	\$658	
	Unit cost:	φ361.341	Per acre	Total job co	st.	すいうひ	

BULLDOZER RIPPING WORK

	Task description:	Single sh	ank rip on WRL lif	ts			
Site	Young Ranch Description	Resource	Permit Action:	Phase 1 Distur	rbance Pe	ermit/Job#:	M2021009
	PROJECT IDE	NTIFICATION					
	Task #: 006 Date: 4/20 User: AM)/2022 C	State: Colorado Gilpin				None M009-006b
	Agency	or organization nam	e: DRMS				
	HOURLY EQU	JIPMENT COST					
	Basic N	Machine: Cat D87	Γ - 8SU		Horsepower:	3	10
	Ripper Atta		Ripper	<u> </u>	Shift Basis:	1 pe	r day
					Data Source:	(CI	RG)
	Cost Breakdown:						
		Ownership Cost/H	[01]##	\$97.46	Utilization % NA		
		Operating Cost/H		\$97.40	100	=	
	Rippe	r Ownership Cost/H		\$19.34	NA	-	
	Rippo	er Operating Cost/H		\$11.24	100	- -	
		Operator Cost/H		\$41.30	NA	-	
		Total Unit Cost/H	lour:	\$266.97			
		Total Fleet Cost/H	lour: \$260	5.97			
	MATERIAL Q	<u>UANTITIES</u>	Sele	ected estimating	g method: Area	ı	
	Alternate Methods	<u>s:</u>					
Seismic:	NA		Bank Volume:	NA	BCY	N	NA .
Area:	0.10	acres	Rip Depth (ft):	2.00		323	BCY or CC
		Source of estimated	d quantity: Single	shank rip at 10	ft intervals (x2 li	fts)	
	HOURLY PRO	DUCTION					
		20011011					
	Seismic:	Seisr	nic Velocity:	NA	feet/sec	ond	
		20131		1,12		0110	
	Area:	Average Ri	pping Depth:	3.71	feet/pas	s	
			oping Width:	5.56	feet/pas		
		Average Rip	ping Length:	300.00	feet/pas	S	
			Dozer Speed:	88.00	feet/mir		
		Average Mar	neuver Time: per unit area:	0.25 0.628	minutes acres/ho	•	
		·	per unit area.	0.028	acres/fic	Jui	
	Job Condition Con						
	Una	djusted Hourly Uni	t Production:	0.628	Acres/h	r	
			Site Altitude:	8,200	feet		
			Altitude Adj:	1.00	(CAT H		
			b Efficiency: t Correction:	0.83 0.83	(1 shift/ multipli	•	
			rly Unit Production: ly Fleet Production:	0.52 0.52	Acres/hr Acres/hr		
	JOB TIME AN	· ·	, 1 10 auc 110 11.		- 10100/111		
	Fleet size:		rader(s)	Total job tin	ne.	0.19	Hours
				ū			
	Unit cost:	\$512.269 Pe	r acre	Total job co	st:	\$51	

BULLDOZER WORK

Quarry	Resource	Per	mit Action:			
Zuully				Phase 1 Disturbance	Permit/Job#:	M2021009
PROJECT IDE	NTIFICATIO	N				
	MILICATION					
Task #: 007	/2.22	State:	Colorado		Abbreviation:	None
	/2022	County:	Gilpin		Filename:	M009-007
User: AMI	<u> </u>					
Agency o	r organization	name: DI	RMS			
HOURLY EQU	IPMENT CO	<u>OST</u>				
Basic Machine:	Cat D8T - 8	SU				
Horsepower:	310			_		
Blade Type:	Semi-Unive	rsal				
Attachment:	NA			<u>—</u>		
Shift Basis:	1 per day			<u>—</u>		
Data Source:	(CRG)					
Cost Breakdown:				<u> </u>		
Cost Breakdown.				Utilization %		
Ownership Cost/I	Hour:		\$97.46	NA		
Operating Cost/I			\$97.63	100		
Ripper own. Cost/I			\$0.00	NA		
Ripper op. Cost/l			\$0.00	0		
Operator Cost/l			\$41.30	NA		
MATERIAL QU						
Initial Volume:	8,334					
Initial Volume: Swell factor:	8,334 1.060					
Initial Volume:	8,334					
Initial Volume: Swell factor:	8,334 1.060 8,834 LCY d volume:	50 ft H x		ch (x2), 1H:1V to 2.2H:1	V	
Initial Volume: Swell factor: Loose volume: Source of estimated	8,334 1.060 8,834 LCY d volume: d swell factor:			ch (x2), 1H:1V to 2.2H:1	V	
Initial Volume: Swell factor: Loose volume: Source of estimate Source of estimate HOURLY PRO	8,334 1.060 8,834 LCY d volume: d swell factor:	Cat Hand		ch (x2), 1H:1V to 2.2H:1	V	
Initial Volume: Swell factor: Loose volume: Source of estimates Source of estimates	8,334 1.060 8,834 LCY d volume: d swell factor: DUCTION unce:		lbook	ch (x2), 1H:1V to 2.2H:1	V	
Initial Volume: Swell factor: Loose volume: Source of estimate: Source of estimate: HOURLY PRO Average push dista	8,334 1.060 8,834 LCY d volume: d swell factor: DUCTION nnce: production:	Cat Hand	lbook		V	
Initial Volume: Swell factor: Loose volume: Source of estimates Source of estimates HOURLY PRO Average push dista Unadjusted hourly Materials consister Average push grad	8,334 1.060 8,834 LCY d volume: d swell factor: DUCTION nnce: production: ncy description: ient: -5 %	Cat Hand	lbook /hr		<u>V</u>	
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 altitud	8,334 1.060 8,834 LCY d volume: d swell factor: DUCTION nnce: production: ncy description: ient: de: -5 % 8,200	Cat Hand 100 feet 852.6 LCY Consol	lbook /hr		V	
Initial Volume: Swell factor: Loose volume: Source of estimates Source of estimates HOURLY PRO Average push dista Unadjusted hourly Materials consister Average push grad Average site altitud Material weight:	8,334 1.060 8,834 LCY d volume: d swell factor: DUCTION nnce: production: ncy description: ient:	Cat Hand 100 feet 852.6 LCY Consol feet lbs/LCY	lbook /hr		V	
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 altitud Material weight: Weight description	8,334 1.060 8,834 LCY d volume: d swell factor: DUCTION Ince: production: cy description: de: 2,850 Sand	Cat Hand 100 feet 852.6 LCY Consol	lbook /hr		<u>V</u>	
Initial Volume: Swell factor: Loose volume: Source of estimates Source of estimates HOURLY PRO Average push dista Unadjusted hourly Materials consister Average push grad Average site altitude Material weight: Weight description Job Condition Corre	8,334 1.060 8,834 LCY d volume: d swell factor: DUCTION nnce: production: cy description: de: 8,200 2,850 : Sand- rection Factor	Cat Hand 100 feet 852.6 LCY Consol feet lbs/LCY Damp	/hr lidated stock	pile 1.0	V	
Initial Volume: Swell factor: Loose volume: Source of estimates Source of estimates HOURLY PRO Average push dista Unadjusted hourly Materials consister Average push grad Average site altitud Material weight: Weight description Job Condition Corr	8,334 1.060 8,834 LCY d volume: d swell factor: DUCTION Ince: production: cy description: de: 2,850 Sand	Cat Hand 100 feet 852.6 LCY Consol feet lbs/LCY Damp	lbook /hr	pile 1.0	<u>V</u>	

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.807	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8962

Adjusted unit production: 764.10 LCY/hr
Adjusted fleet production: 1528.2 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.309/LCY

Total job time: 5.78 Hours
Total job cost: \$2,733

TRUCK/LOADER TEAM WORK

Task description:	Haul co	arse rock to	WRL sl	opes			
Young Ranch F Site: Quarry	Resource	Permit A	Action:	Phase 1 Dist	urbance	Permit/Job#: M	2021009
PROJECT IDE	NTIFICATION						
Task #: 008 Date: $4/20$ User: AME			olorado Ipin		Ab	breviation: No Mo	one 009-008
Agency o	r organization nar	ne: DRMS					
HOURLY EQU	IPMFNT COST	r			Shift bas	is: 1 per day	
HOURET EQU	HWENT COS	<u>L</u>	Fau	ipment Descri		is. <u>i per day</u>	
	Truck Loader Tea	m -Truck:	Cat 730		ption		
<u> </u>	To invest I		CAT 96				
Sup	port Equipment -L Dı-		Cat D87 NA	1 - 8SU			
Road N	Maintenance –Mot	or Grader:	CAT 16				
	-Wa	ter Truck:	Water T	Tanker, 3,500 (Gal.		
Cost Breakdown:	Truck/Loa	ader Team			Equipment	Maintenan	nce Equipment
	Truck	Loader	Lo	oad Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	1	00	50	NA	50	50
Ownership cost/hour:	\$76.13	\$59.	72	\$97.46	NA	\$70.80	\$17.15
Operating cost/hour:	\$52.75	\$55.		\$48.82	NA	\$28.16	\$14.60
%Utilization-riper:	NA	Φ.Ο.	0	NA Do oo	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.		\$0.00	NA NA	\$0.00	\$0.00
Ripper op. cost/hour: Operator cost/hour:	NA \$32.54	\$0. \$40.		\$0.00 \$41.30	NA NA	\$0.00 \$28.56	\$0.00 \$0.00
Unit Subtotals:	\$161.42	\$155.		\$187.58	NA NA	\$127.51	\$31.75
Number of Units:	2	Ψ133.	1	1	0	1	1
Group Subtotals:	Work:	\$478.47	-	Support:	\$187.58	Maint:	\$159.26
Total work team co	ost/hour: \$925.31			11	·		
Total work team co)8t/110ti1. 3025.31	<u> </u>					
MATERIAL QU	JANTITIES						
Initial volume	e: 861	(CCY	Swell	factor: 1.320		
Loose volume			.CY	2,1,011	<u> </u>		
Se	ource of estimated	volume: A	Avg 8 in	ch depth x 0.8	ac		
Source	e of estimated swe	ell factor:	Cat Hand				
	Material Purch		0.00				
	10	ntai Cost	0.00				
HOURLY PRO	DDUCTION						
Truck Capacity:							
Truck Payload (we	ight) Basis:						
Material				Pounds/LCY			
Desc Rated P		e - Broken		Pounds			
Raicu I	02,000			1 Ounus			

Payload Capacity	: 22.14	LCY	Y			
Truck Bed (volume) Basi	s:					
Struck Volume:	17.10	LCY				
Heaped Volume:	22.10	LCY				
Average Volume:	19.60	LCY				
Adjusted Volume:	22.10	LCY				
Fi	nal Truck Volum	e Based on Number	of Loader Passes:	20.00	LCY	
Loading Tool Capacity			_			
Rated Capacity	: 5.000	LCY (heaped		ket Size Class:	NA	
Bucket Fill Factor			Blasted (95%-105%	(a) 1.000		_
Adjusted Capacity	5.000	LCY				_
Job Condition Correction	ons:	ı	Site Altitude (ft.):	8200 feet		
	Truck	Loader	Source			
Altitude Adj:	0.900	1.000	(CAT HI	· · · · · · · · · · · · · · · · · · ·		
	0.830	0.830	(CAT HI	3)		
Job Efficiency:						
Net Correction:	0.747	0.830				
·		0.830 er of Loading Tool I	Passes Required to	Fill Truck:	4	passes
Net Correction:	ne: Numbe		Passes Required to	Fill Truck:	4	passes
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim	ne: Numbe	er of Loading Tool Fool Fool Rating: NA	Passes Required to	Fill Truck:	4	passes
Net Correction: Loading Tool Cycle Tin Excavators and Front Sho Machine Cycle Tim Selected Val	ne: Number ovels: ne vs. Job Condition	er of Loading Tool F on Rating: NA sic Rating: NA	Passes Required to	Fill Truck:	4	passes
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val	ne: Number ovels: ne vs. Job Condition this Bases – Material Description.	er of Loading Tool F on Rating: NA sic Rating: NA	Passes Required to	Fill Truck:	4	passes
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val Track Loader	ne: Number ovels: ne vs. Job Condition within this Bases – Material Description.):	er of Loading Tool F on Rating: NA sic Rating: NA	Passes Required to		2.100	passes
Net Correction: Loading Tool Cycle Tim Excavators and Front She Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi	ne: Number ovels: ne vs. Job Condition ue within this Basers – Material Description.):	er of Loading Tool F on Rating: NA Sic Rating: NA cription: NA		Dump: 0.	.100	passes
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi	ne: Number ovels: ne vs. Job Condition ue within this Bases – Material Descent.): ers - Unadjusted B	er of Loading Tool F on Rating: NA Sic Rating: NA cription: NA		Dump: 0.	0.100 0.500 min	
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loader Cycle Time Facto Materia	ne: Number ovels: ne vs. Job Condition ue within this Bases – Material Descent.): Pers - Unadjusted Bases – Unadjusted Bases	on Rating: NA Sic Rating: NA Pription: Maneuver: NA Basic Loader Cycle Tand over diameter 0	Time (load, dump,	Dump: 0. maneuver): Factor (min. 0.030	0.500 min Source (Cat HB)	
Net Correction: Loading Tool Cycle Tim Excavators and Front She Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Facto Materia Stockpil	ne: Number ovels: ne vs. Job Condition ue within this Bases - Material Descent.): pers - Unadjusted Bases	on Rating: NA sic Rating: NA rription: NA Basic Loader Cycle T and over diameter 0 r dozer piled 10 ft. h	Fime (load, dump, and some state of the control of	Dump: 0. maneuver): Factor (min. 0.030 0.000	0.500 min Source (Cat HB) (Cat HB)	
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Facto Materia Stockpil Truck Ownershi	ne: Number ovels: ne vs. Job Condition ue within this Bases - Material Descent.): ers - Unadjusted B ers nl: Material 6" e: Conveyor or p: Common ow	on Rating: NA Sic Rating: NA Pription: Maneuver: NA Basic Loader Cycle T and over diameter 0 r dozer piled 10 ft. h wnership of trucks ar	Fime (load, dump, and some state of the control of	Dump: 0. maneuver): Factor (min. 0.030	0.500 min Source (Cat HB) (Cat HB) (Cat HB)	
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Facto Materia Stockpil Truck Ownershi Operatio	ne: Number ovels: ne vs. Job Condition ue within this Bases – Material Description.): pers - Unadjusted Burs – Unadjusted Burs – Unadjusted Burs – Conveyor or Common own: Constant opens.	er of Loading Tool F on Rating: NA sic Rating: NA cription: Maneuver: NA Basic Loader Cycle T and over diameter 0 r dozer piled 10 ft. h wnership of trucks ar eration -0.04	Fime (load, dump, and some state of the control of	Dump: 0. maneuver): Factor (min. 0.030 0.000 -0.040 -0.040	0.500 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)	
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Facto Materia Stockpil Truck Ownershi	ne: Number ovels: ne vs. Job Condition ue within this Bases – Material Description.): pers - Unadjusted Burs – Unadjusted Burs – Unadjusted Burs – Conveyor or Common own: Constant opens.	on Rating: NA Sic Rating: NA Sic Rating: NA Stription: NA	.03 igh and up 0.00 nd loaders -0.04	Dump: 0. maneuver): Factor (min. 0.030 0.000 -0.040 -0.040 0.000	0.500 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Facto Materia Stockpil Truck Ownershi Operatio	ne: Number ovels: ne vs. Job Condition ue within this Bases – Material Description.): pers - Unadjusted Burs – Unadjusted Burs – Unadjusted Burs – Conveyor or Common own: Constant opens.	on Rating: NA Sic Rating: NA Pription: Maneuver: NA Basic Loader Cycle T and over diameter 0 or dozer piled 10 ft. h wnership of trucks ar eration -0.04 get 0.00 Net Cycle T	Cime (load, dump, 10.03) igh and up 0.00 ind loaders -0.04 Time Adjustment:	Dump: 0. maneuver): Factor (min. 0.030 0.000 -0.040 -0.040 0.000 -0.050	0.500 min Source (Cat HB)	
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Facto Materia Stockpil Truck Ownershi Operatio	ne: Number ovels: ne vs. Job Condition ue within this Bases – Material Description.): pers - Unadjusted Burs – Unadjusted Burs – Unadjusted Burs – Conveyor or Common own: Constant opens.	on Rating: On Rating: NA Sic Rating: Maneuver: Maneuver: And Or dozer piled 10 ft. h Norriship of trucks ar eration -0.04 get 0.00 Net Cycle T Adjusted Loa	.03 igh and up 0.00 nd loaders -0.04	Dump: 0. maneuver): Factor (min. 0.030 0.000 -0.040 -0.040 0.000	0.500 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Facto Materia Stockpil Truck Ownershi Operatio	ne: Number ovels: ne vs. Job Condition ue within this Bases – Material Description.): pers - Unadjusted Burs – Unadjusted Burs – Unadjusted Burs – Conveyor or Common own: Constant opens.	on Rating: On Rating: NA Sic Rating: Maneuver: Maneuver: And Or dozer piled 10 ft. h Norriship of trucks ar eration -0.04 get 0.00 Net Cycle T Adjusted Loa	Time (load, dump, and loaders -0.04) Time Adjustment: Time Adjustment:	Dump: 0. maneuver): Factor (min. 0.030 0.000 -0.040 -0.040 0.000 -0.050 0.450	0.500 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	
Net Correction: Loading Tool Cycle Tim Excavators and Front She Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Facto Materia Stockpil Truck Ownershi Operatio Dump Targe	ne: Number ovels: ne vs. Job Condition ue within this Bases – Material Description.): Pers - Unadjusted Bases – Unadjusted Bases – Unadjusted Bases – Conveyor on Constant open in Constant open in Nominal target.	on Rating: On Rating: NA Sic Rating: Maneuver: Maneuver: And Or dozer piled 10 ft. h Norriship of trucks ar eration -0.04 get 0.00 Net Cycle T Adjusted Loa	Time (load, dump, 10.03) igh and up 0.00 ind loaders -0.04 Time Adjustment: ader Cycle Time: Time per Truck:	Dump: 0. maneuver): Factor (min. 0.030 0.000 -0.040 -0.040 0.000 -0.050 0.450	0.500 min O.500 min O.500 min O.500 min O.500 min O.500 Cat HB) O.500 (Cat HB) O.500 min O.	
Net Correction: Loading Tool Cycle Tim Excavators and Front Sho Machine Cycle Tim Selected Val Track Loader Cycle Time Elements (mi Load: NA Wheel and Track Loade Cycle Time Facto Materia Stockpil Truck Ownershi Operatio Dump Targe	ne: Number ovels: ne vs. Job Condition us within this Bases – Material Description.): Pers - Unadjusted Busines: Conveyor of Common own: Constant opers: Nominal targetime: 0.60	er of Loading Tool F on Rating: NA sic Rating: NA eription: Maneuver: NA Basic Loader Cycle T and over diameter 0 r dozer piled 10 ft. h vnership of trucks ar eration -0.04 get 0.00 Net Cycle T Adjusted Load Net Load	igh and up 0.00 and loaders -0.04 ime Adjustment: Time Per Truck: Adjusted	Dump: 0. maneuver): Factor (min. 0.030 0.000 -0.040 -0.040 0.000 -0.050 0.450 1.450	0.500 min Source	utes

<u>Truck Travel (Haul & Return) Time:</u> maintained 3.0

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1860.00	4.00	3.00	7.00	1036	1.860

Haul Time: **1.860** minutes Return Route: Haul Distance Grade (%) Roll. Res Total Res Velocity Travel Seg# Time (Ft) (%) (%) (fpm) (min) 1860.00 3.00 -1.00 3080 -4.00 0.654

> Return Time: 0.654 minutes Total Truck Cycle Time: 5.742 minutes

> > Selected Number of Trucks: 2 Truck(s)

Loading Tool unit

Adjusted for job efficiency: 470.55 Production 566.93 LCY/Hour LCY/Hour Truck Unit Production 208.99 LCY/Hour Adjusted for job efficiency: 173.47 LCY/Hour

> Adjusted hourly truck team production: 346.93 LCY/Hour Adjusted single truck/loader team production: 346.93 LCY/Hour LCY/Hour 346.93

Adjusted multiple truck/loader team production:

JOB TIME AND COST

Optimal No. of Trucks: 3 Truck(s)

Fleet size: 1 Team(s) Total job time: 3.28 Hours Unit cost: \$2.379 Total job cost: \$2,704 /LCY

HYDRAULIC EXCAVATOR WORK

=				RL slopes			
Young Ranch R : Quarry	Resource	Per	mit Action:	Phase 1 Disturb	ance	Permit/Job#:	M2021009
PROJECT IDEN	NTIFICATI	ON					
Task #: 009 Date: 4/20/ User: AME		State: County:	Colorado Gilpin		Ab	breviation: Filename:	None M009-009
Agency or	r organization	name: DF	RMS				
HOURLY EQUI	IPMENT CO	OST					
Basic Machi Attachmen	ine: Cat 33	6D L 10'-6"	Stick		Horsepower: Weight (MT): Shift Basis: Data Source:	2 1 p	268 9.30 er day CRG)
Cost Breakdown:							
	Cost/Hour:	\$83.4 \$74.	14	Utilization % NA 100			
-	Cost/Hour: Cost/Hour:	\$37.3 \$194.		NA			
	t Cost/Hour:	\$194					
Initial volume			$-\frac{\text{CCY}}{1 \text{ CY}}$	Swell fact	tor: 1.000		
Loose volume	e: 861 Ducce of estimated of e	swell factor: ket, swing loa	Avg 8 in Cat Hand aded, dump b	depth x 0.8 ac lbook bucket, swing employments	pty): tion: EXCE	CLLENT	
Loose volume So Source HOURLY PROI	e: 861 Ducce of estimated of e	swell factor: ket, swing loa	Avg 8 in Cat Hand aded, dump b	depth x 0.8 ac book bucket, swing emplored to be description by the second to be description by the second to be description by the second to be descripted to be described to be de	pty): tion: EXCE	LLENT LLENT	minutes
Loose volume So Source HOURLY PROI	e: 861 Ducce of estimated of e	swell factor: ket, swing loa	Avg 8 in Cat Hand aded, dump b	depth x 0.8 ac lbook bucket, swing employments	pty): tion: EXCE		minutes
Loose volume Soc Source HOURLY PROD Excavator Cycle Ti Load Bucket Capac	e: 861 Ducce of estimated of e	swell factor: ket, swing loa ondary Job Co 3.33	Avg 8 in Cat Hand aded, dump to Basic Job Condition with	depth x 0.8 ac book boucket, swing emplored on dition Description Basic Description Cycle Time Value	tion: EXCE tion: EXCE tion: O.205 Bucket Size	Class: <u>La</u>	
Loose volume So Source HOURLY PROI Excavator Cycle Ti	e: 861 Ducce of estimated of e	swell factor: ket, swing loa ondary Job Co	Avg 8 in Cat Hand aded, dump to Basic Job Condition with	depth x 0.8 ac book boucket, swing emplored to be depth to be de	tion: EXCE tion: EXCE tion: O.205 Bucket Size	Class: <u>La</u>	
Loose volume Soc Source HOURLY PROD Excavator Cycle Ti Load Bucket Capac Rated Ca Bucket Fill	e: 861 Ducce of estimated of e	swell factor: ket, swing loa ondary Job Co 3.33 1.000 3.33	Avg 8 in Cat Hand Aded, dump be Basic Job Condition with LCY (he Rock - W	depth x 0.8 ac lbook bucket, swing emplored on dition Description Basic Description Cycle Time Value aped) Vell Blasted (95%)	tion: EXCE tion: EXCE tion: O.205 Bucket Size	Class: <u>La</u>	
Loose volume Soc Source HOURLY PROD Excavator Cycle Ti Load Bucket Capace Rated Ca Bucket Fill: Adjusted Ca	see 861 Duction ource of estimated Duction ime (load buck Secondary: Factor: apacity: rection Factors Adj: acy: ource of estimated Secondary: Lapacity:	swell factor: ket, swing loa ondary Job Co 3.33 1.000 3.33	Avg 8 in Cat Hand Avg 8 in Cat Hand Aded, dump b Basic Job Condition with LCY (he Rock - W LCY Source (CAT HI (1 shift/da multiplier Production: Production:	depth x 0.8 ac book	pty): tion: EXCE tion: EXCE 0.205 Bucket Size -105%) 1.000	CLENT Class: La	
Loose volume Soc Source HOURLY PROD Excavator Cycle Ti Load Bucket Capace Rated Ca Bucket Fill Adjusted Ca Job Condition Corr Altitude A Job Efficien	se: 861 Duction ource of estimated Duction ime (load buck Secondary: Factor: apacity: rection Factors Adj: 1 acy: 0 ion: 0 Unadjusted Adjusted Adjusted	swell factor: ket, swing loa ondary Job Co 3.33 1.000 3.33 8 1.000 0.83 Hourly Unit Hourly Unit	Avg 8 in Cat Hand Avg 8 in Cat Hand Aded, dump b Basic Job Condition with LCY (he Rock - W LCY Source (CAT HI (1 shift/da multiplier Production: Production:	depth x 0.8 ac book	pty): tion: EXCE tion: EXCE alue: 0.205 Bucket Size -105%) 1.000 Altitude: 820 LCY/Hou LCY/Hou	CLENT Class: La	
Loose volume Soc Source HOURLY PROD Excavator Cycle Ti Load Bucket Capace Rated Ca Bucket Fill Adjusted Ca Job Condition Corr Altitude A Job Efficien Net Correcti	se: 861 Duction ource of estimated Duction ime (load buck Secondary: Factor: apacity: rection Factors Adj: 1 acy: 0 ion: 0 Unadjusted Adjusted Adjusted	swell factor: ket, swing loa ondary Job Co 3.33 1.000 3.33 8 1.000 0.83 Hourly Unit Hourly Unit	Avg 8 in Cat Hand Avg 8 in Cat Hand Aded, dump by Basic Job Condition with LCY (he Rock - W LCY Source (CAT HI (1 shift/da multiplier Production: Production: Production:	depth x 0.8 ac book	pty): tion: EXCE tion: EXCE alue: 0.205 Bucket Size -105%) 1.000 Altitude: 820 LCY/Hou LCY/Hou	CLENT Class: La	

SCRAPER TEAM WORK

Task # 010

Young Ranch Res Site: Quarry	Young Ranch Resource te: Quarry		it Action: Phase 1 Disturbance		mit/Job#:	M202100)9
PROJECT IDEN	TIFICATION						
Task #: 010		State: Colorado		Abbres	viation:	None	
Date: $\frac{310}{4/20/20}$		unty: Gilpin			ename:	M009-010)
User: AME		- <u> </u>					
Agency or o	organization name:	DRMS					
HOURLY EQUIP	PMENT		COSTShi	ft basis: 1 per d	<u>ay</u>		
			ent Description				
		Scraper: Cat 637	7G				_
Suppo	ort Equipment -Loa	-Dozer: NA	T - 8SU				<u></u> -
Suppo			T - 8SU				
Road Ma	intenance –Motor	L .					
	-Water	Truck: Water	Tanker, 3,500 Gal.				
Cost Breakdown:	Scraper Wo	rk Team	Support Equipr	nent	Main	tenance Eq	uipment
	Scraper	Dozer	Load Area	Dump Area	Motor C		Water Truck
%Utilization-machine:	100	NA	50	100		50	50
Ownership cost/hour:	\$218.34	NA	\$97.46	\$97.46	9	\$70.80	\$17.15
Operating cost/hour:	\$208.00	NA	\$48.82	\$97.63	9	\$28.16	\$14.60
%Utilization-ripper:	NA	NA	NA	NA		NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00		\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00		\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$41.30	\$41.30	9	\$28.56	\$0.00
Unit Subtotals:	\$457.24	NA	\$187.58	\$236.39	\$1	127.51	\$31.75
Number of Units:	2	0	1	1		1	1
Group Subtotals:	Work:	\$914.48	Support:	\$423.97]	Maint:	\$159.26
Total work team cost	t/hour: \$1,497.71						
MATERIAL QUA	<u>ANTITIES</u>						
Initial volume:	645	CCY	Swell facto	r: 1.215			
Loose volume:	784	LCY					
	arce of estimated vo		th x 0.8 ac				
Source of	of estimated swell	factor: Cat Hand	dbook				
HOURLY PROD	<u>UCTION</u>						
			Scraper Box	wl (volume) Basi	is:		
Material weight:	1,600 lbs/LCY		Struck V	olume: 24.00		LCY	
Material description:	Top Soil		Heaped V	olume: 34.00		LCY	
Rated Payload:	81,600 pounds		Average V			LCY	
Payload Capacity:	51.00 LCY		Adjusted Ca	pacity: 29.00		LCY	

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 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{0.80} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction: Site Altitude: 8200 feet

	Scraper	Push Dozer	Source
Altitude Adj:	0.980	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.813	NA	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1860.00	4.00	3.00	7.00	1362	1.41

Haul Time: 1.41 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1860.00	-4.00	3.00	-1.00	2972	0.68

Return Time: 0.68 minutes Total Scraper team cycle time: 3.49 minutes Adjusted for job conditions: 405.34 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 810.67 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: LCY/Hour 810.67

Unadjusted unit production/hour:	498.57	LCY/Hou
Optimal Number of Scrapers per push dozer:		

JOB TIME AND COST

Fleet size:	1	_ Team(s)	Total job time:	0.97	Hours
Unit cost:	\$1.847	/LCY	Total job cost:	\$1,448	

SCRAPER TEAM WORK

Site: Young Ranch Quarry	Resource	Permit A	ction:	Phase 1 Disturb	pance Per	mit/Job#:N	M202100	9
PROJECT IDE	ENTIFICATION							
Task #: 011		State: Col	orado	1	Abbre	viation: N	one	
		ounty: Gil	pin		Fil	lename: M	1009-011	
User: AM	<u>E</u>							
Agency	or organization name	: DRMS						
HOURLY EQU	JIPMENT			COSTS	hift basis: 1 per d	lav		
								
			quipm Cat 63'	ent Description 7G				_
			NA	, 0				
Sup	pport Equipment -Loa			3T - 8SU				
Pood	-Dum Maintenance –Motor		Cat D8 CAT 1	8T - 8SU				
Roau				Tanker, 3,500 Gal				_
		J.						
Cost Breakdown				Support Equi			nance Equ	uipment Water Truck
	Scraper	Dozer		Load Area	Dump Area	Motor Gra	ader	water Truck
%Utilization-machine			NA	50	100		50	50
Ownership cost/hou			NA	\$97.46	\$97.46		0.80	\$17.15
Operating cost/hou			NA	\$48.82	\$97.63		8.16	\$14.60
%Utilization-rippe			NA	NA	NA		NA	NA
Ripper own. cost/hou			NA	\$0.00	\$0.00		0.00	\$0.00
Ripper op. cost/hou			NA	\$0.00	\$0.00		0.00	\$0.00
Operator cost/hou			NA	\$41.30	\$41.30		8.56	\$0.00
Unit Subtotal	· ·		NA	\$187.58	\$236.39	\$12		\$31.75
Number of Units		00144	0	1	1	3.6	1	1
Group Subtotals		\$914.48	8	Support:	\$423.97	Ma	aint:	\$159.26
Total work team c	ost/hour: \$1,497.71							
MATERIAL Q	UANTITIES							
Initial volum	<u> </u>	C	CY	Swell fact	tor: 1.215			
Loose volum			CY	5 wen rae	1.213			
S	Source of estimated v	olume. 6 i	in den	th x 1.7 ac				
	ce of estimated swell			ldbook				_
HOUDI V DDO	DUCTION							
HOURLY PRO	DUCTION			Scraper B	owl (volume) Bas	is·		
Matarial: -1	ot: 1,600 lbc/LCV			•		10.	LCY	
Material weigh Material descriptio				Struck Heaped			_ LCY LCY	
Rated Payloa				Average			LCY	
Payload Capacit				Adjusted (Capacity: 29.00		LCY	

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 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{0.80} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction: Site Altitude: 8200 feet

	Scraper	Push Dozer	Source
Altitude Adj:	0.980	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.813	NA	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade	Roll. Res	Total Res	Velocity (fpm)	Travel Time
		(%)	(%)	(%)		(min)
1	1680.00	4.00	3.00	7.00	1362	1.28

Haul Time: 1.28 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1680.00	-4.00	3.00	-1.00	2972	0.62

Return Time: 0.62 minutes Total Scraper team cycle time: 3.30 minutes Adjusted for job conditions: 428.67 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 857.35 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: LCY/Hour 857.35

Unadjusted unit production/hour:	527.27	LCY/Hou
Optimal Number of Scrapers per push dozer:		

JOB TIME AND COST

Fleet size:	1	_ Team(s)	Total job time:	1.94	Hours
Unit cost:	\$1.747	_ /LCY	Total job cost:	\$2,912	

SCRAPER TEAM WORK

	Task description:	Place grow	th medi	um on pi	t floor (26.7 ac)			
Site:	Young Ranch Re- Quarry	source	Permi	t Action:	Phase 1 Disturb	ance Peri	mit/Job#: <u>M202</u>	1009
	PROJECT IDEN	<u>TIFICATION</u>						
	Task #: 012 Date: 4/20/20 User: AME			Colorado Gilpin			viation: None ename: M009-	012
	Agency or o	organization name:	DRM	IS				
	HOURLY EQUIP	PMENT			COSTS	hift basis: 1 per d	ay	
_	Suppo	ort Equipment -Loa		Cat 637 NA Cat D8	T - 8SU			
_	Road Ma	intenance –Motor	p Area: Grader: Truck:	CAT 1	T - 8SU 6M Γanker, 3,500 Gal			
	Cost Breakdown:	Scraper Wo			Support Equi		Maintenance	
		Scraper	Do		Load Area	Dump Area	Motor Grader	Water Truck
	Utilization-machine:	100		NA	50	100	50	50
	wnership cost/hour: Operating cost/hour:	\$218.34 \$208.00		NA NA	\$97.46 \$48.82	\$97.46 \$97.63	\$70.80 \$28.16	\$17.15 \$14.60
	%Utilization-ripper:	\$208.00 NA		NA NA	NA	\$97.03 NA	NA	\$14.00 NA
	oper own. cost/hour:	NA NA		NA	\$0.00	\$0.00	\$0.00	\$0.00
	Sipper op. cost/hour:	NA NA		NA	\$0.00	\$0.00	\$0.00	\$0.00
	Operator cost/hour:	\$30.90		NA	\$41.30	\$41.30	\$28.56	\$0.00
	Unit Subtotals:	\$457.24		NA	\$187.58	\$236.39	\$127.51	\$31.75
	Number of Units:	2		0	1	1	1	1
	Group Subtotals:	Work:	\$914		Support:	\$423.97	Maint:	\$159.26
	Total work team cost							
	MATERIAL QUA	ANTITIES						
	Initial volume: Loose volume:	21,538 26,169		CCY LCY	Swell fact	tor: 1.215		
		rce of estimated voor estimated swell	_	6 in dept Cat Han	th x 26.7 ac dbook			
	HOURLY PROD	<u>UCTION</u>						
					Scraper B	owl (volume) Bas	<u>is:</u>	
]	Material weight: Material description:	1,600 lbs/LCY Top Soil				Volume: 24.00 Volume: 34.00		.CY .CY
	Rated Payload: Payload Capacity:	81,600 pounds 51.00 LCY			Average Adjusted (Volume: 29.00		CY CY

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 $\begin{array}{lll} \text{Scraper Loading Time:} & \underline{0.80} \text{ Minutes} \\ \text{Maneuver and Spread Time:} & \underline{0.60} \text{ Minutes} \\ \end{array}$

Job Condition Correction: Site Altitude: 8200 feet

	Scraper	Push Dozer	Source
Altitude Adj:	0.980	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.813	NA	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res	Velocity (fpm)	Travel Time (min)
1	800.00	2.00	3.00	5.00	1867	0.52

Haul Time: **0.52** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	-2.00	3.00	1.00	2963	0.38

Return Time: 0.38 minutes Total Scraper team cycle time: 2.30 minutes Adjusted for job conditions: 615.05 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: 1,230.10 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: LCY/Hour 1,230.10

Unadjusted unit production/hour:	756.52	LCY/Hou
Optimal Number of Scrapers per push dozer:		

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	21.27	Hours
Unit cost:	\$1.218	/LCY	Total job cost:	\$31,862	

REVEGETATION WORK

Quarry	anch Resourc	e Per	rmit Action:	Phase 1 Disturbance	Permit/Job	#: <u>M2021009</u>
ROJECT	IDENTIFIC	ATION				
Task #:	013	State:	Colorado		Abbreviation:	None
i asix ii.		Country	Gilpin	_	Filename:	M009-013
Date:	4/20/2022	County:	Onpin		i iiciiaiiic.	1.1007 010

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	61.00	pound	\$0.36	\$21.96
Triple superphosphate, 0-46-0	44.00	pound	\$0.46	\$20.24
			Total Fertilizer Materials Cost/Acre	\$42.20

Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$38.77
	Total Fertilizer Application Cost/Acre	\$38.77

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indiangrass - Cheyenne	1.90	5.79	\$21.47
Sand Lovegrass - Bend	0.20	6.89	\$2.85
Bluebunch Wheatgrass - Secar	5.20	16.71	\$56.55
Blue Grama - Native	0.90	14.69	\$12.35
Indian Ricegrass - Native	2.00	6.47	\$13.00
Little Bluestem - Native	1.40	8.36	\$18.99
Mountain Brome - Bromar	5.10	8.20	\$19.38
Bottlebrush Squirreltail	3.40	14.99	\$55.17

Sandberg Bluegrass - VNS	0.30	6.37	\$2.52
Thickspike Wheatgrass - Critana	4.20	14.85	\$28.88
Western Wheatgrass - Native	5.70	14.39	\$34.20
Needlegrass, Green - Lodorm	1.90	7.89	\$22.37
Prairie Junegrass	0.10	5.32	\$2.60
Flax, Lewis Blue	1.90	12.60	\$31.35
Yarrow, Western	0.10	6.08	\$4.18
Totals Seed Mix	34.30	149.60	\$325.86

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	0.50	TON	\$307.02	\$153.51
Total Mulch Materials Cost/Acre				\$153.51

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$71.57
	Total Mulch Application Cost/Acre	\$71.57

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 28.4 Cost /Acre: \$863.91
Estimated Failure Rate: 50% Cost /Acre*: \$557.86

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$24,535.04

Reseeding Job Cost: \$7,921.61

Total Job Cost: \$32,457

Job Hours: 14.20

REVEGETATION WORK

Young R Quarry	anch Resource	e Pe	rmit Action:	Phase 1 Disturbance	Permit/Jol	o#: <u>M2021009</u>
DATECT	IDENTIFIC	ATION				
<u>KUJEC I</u>	IDENTIFIC	ATION				
Task #:	014	State:	Colorado		Abbreviation:	None
			Colorado Gilpin		Abbreviation: Filename:	None M009-014

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	61.00	pound	\$0.36	\$21.96
Triple superphosphate, 0-46-0	44.00	pound	\$0.46	\$20.24
			Total Fertilizer Materials Cost/Acre	\$42.20

Application

Description		Cost /Acre
Hydro spreader (MEANS 32 01 90.13 0180)		\$188.18
	Total Fertilizer Application Cost/Acre	\$188.18

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Bitterbrush, Antelope	5.20	1.60	\$101.40
Currant, Wax	0.40	1.38	\$23.72
Mahogany, Mountain	2.20	2.98	\$80.97
Sumac, Skunkbrush	5.20	2.44	\$109.20
Rabbitbrush, Douglas	0.20	2.98	\$2.90
Totals Seed Mix	13.20	11.38	\$318.20

Application

Description		Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)		\$965.73
	Total Seed Application Cost/Acre	\$965.73

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	0.50	TON	\$307.02	\$153.51
Total Mulch Materials Cost/Acre				\$153.51

Application

Description		Cost /Acre
Hydromulching (MEANS 32 92 19.13 1100)		\$96.80
	Total Mulch Application Cost/Acre	\$96.80

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:
 7.3
 Cost /Acre:
 \$1,764.62

 Estimated Failure Rate:
 100%
 Cost /Acre*:
 \$1,283.93

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$12,881.73

Reseeding Job Cost: \$9,372.69

Total Job Cost: \$22,254

Job Hours: 3.65

REVEGETATION WORK

T	Task description: Pl	lant tree tubeli	ings on 7.3 a	cres			
: ,	Young Ranch Resource Quarry	Pe	rmit Action:	Phase 1 Distu	rbance	Permit/Job	#: <u>M2021009</u>
ΡI	ROJECT IDENTIFICAT	<u> TION</u>					
	Task #: 015 Date: 4/20/2022 User: AME	State: County:	Colorado Gilpin		A	bbreviation: _ Filename: _	None M009-015
	Agency or organization	on name: DI	RMS				
Ŧ	ERTILIZING						
ΛĮ:	aterials						
	Description		Un Ac	re Unit	Co	st / Unit	Cost /Acre
					\$		\$
					To	otal Fertilizer Materials Cost/Acre	\$0.00
L						COSUTTETE	ψ0.00
Į	pplication						
	Description						Cost /Acre
							\$
				Total Fertiliz	er Applicati	on Cost/Acre	\$0.00
Γ]	<u>ILLING</u>						
	Description						Cost /Acre
	-						\$
					Total Tilli	ng Cost/Acre	\$0.00
SE	EEDING						
Ī	Seed Mix				Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
							\$
			7	Totals Seed Mix	x 0.00	0.00	\$0.00
4 <u>I</u>	pplication						
	Description						Cost /Acre

	\$
Total Seed Application Cost/Acre	\$0.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
Total Mulch Materials Cost/Acre				\$0.00

Application

Description	Со	st /Acre
	\$	
Total Mule	ch Application Cost/Acre	0.0
Total Mulc	ch Application Cost/Acre \$0.	.00

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Pine, Limber	150	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.35	\$2.40	\$352.50
Pine, Lodgepole	150	Bare root seedling, 11-16 inch ht. (MEANS)	\$4.75	\$2.40	\$712.50
	\$1,065.00				

JOB TIME AND COST

 No. of Acres:
 7.3
 Cost /Acre:
 \$1,065.00

 Estimated Failure Rate:
 100%
 Cost /Acre*:
 \$1,065.00

*Selected Replanting Work Items: NURSERY

Initial Job Cost: \$7,774.50

Reseeding Job Cost: \$7,774.50

Total Job Cost: \$15,549

3.65

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Т	'ask description:	Mobilization/E	Demobilization	1				
Site:	Young Ranch Reso Quarry	ource F	Permit Action:	Phase 1 Disturbance	Permit/Jo	bb#: <u>M2021009</u>		
<u>P</u> I	ROJECT IDENTI	FICATION						
	Task #: 016	State:	Colorado		Abbreviation:	None		
	Date: 4/20/202	22 County:	Gilpin		Filename:	M009-016		
	User: AME							
<u>E</u> (QUIPMENT TRA	ganization name: <u> </u>	<u>OST</u>					
				S	Shift basis:	1 per day		
				Cost Da	ta Source:	CRG Data		
	Truck Trac	ctor Description:	GENERIC ON	-HIGHWAY TRUCK TI		DIESEL POWERED,		
			400 HP (2ND HALF, 2006)					
	Truck Tra	iler Description:	on: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT					
			TRAILER (25T, 50T, AND 100T)					

Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$21.28	\$37.94	\$47.67
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

NON ROADABLE EQUIPMENT:

Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/unit	Size	Cost/hr/ fleet	Cost/hr/ fleet	Cost/ fleet
-	(TONS)						
Cat 730	25.19	\$76.13	\$68.37	4	\$578.00	\$273.48	\$1,000.00
CAT 966H	25.80	\$59.72	\$68.37	2	\$256.18	\$136.74	\$500.00
Cat D8T - 8SU	47.71	\$97.46	\$132.49	2	\$459.90	\$264.98	\$500.00
Cat D8T - 8SU	53.08	\$112.65	\$147.95	1	\$260.60	\$147.95	\$500.00
(multi shank)							
Cat D8T - 8SU	52.21	\$116.80	\$147.95	1	\$264.75	\$147.95	\$250.00
(single shank)							
CAT 16M	28.73	\$70.80	\$132.49	2	\$406.58	\$264.98	\$500.00
Cat 336D L 10'-6"	32.23	\$83.42	\$132.49	1	\$215.91	\$132.49	\$500.00
Stick							
Cat 637G	57.28	\$218.34	\$147.95	2	\$732.58	\$295.90	\$500.00
Drill/Broadcast	25.00	\$7.98	\$68.37	1	\$76.35	\$68.37	\$500.00
Seeder with							
Tractor							
Hydroseeder with	28.00	\$13.97	\$132.49	1	\$146.46	\$132.49	\$250.00
Tractor							

Subtotals: \$3,397.31 \$1,865.33 \$5,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 3,500 Gal.	\$46.35	2	\$92.70	\$92.70
Light Duty Pickup, 4x4, 1 T. Crew	\$20.51	1	\$20.51	\$20.51

Subtotals: \$113.21 \$113.21

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: **AURORA** (Wagner Rental)

> Total one-way travel distance: 45.00 miles Average Travel Speed: 55.00 mph

Total Non-Roadable Mob/Demob Cost *

\$93,352.41 '* two round trips with haul rig:

Total Roadable Mob/Demob Cost **

\$185.25 ** one round trip, no haul rig:

Transportation Cycle Time:

Non-Roadable Roadable

Equipment Equipment Haul Time (Hours): 0.82 0.82 Return Time (Hours): 0.82 0.82 Loading Time (Hours): 5.50 NA

Unloading Time (Hours):

5.50 NA Subtotals: 12.64 1.64

JOB TIME AND COST

Total job time: 25.27 Hours

\$93,538 Total job cost: