COST SUMMARY WORK

Т	Γask description:	C-1996-084 Permit Renewa	No. 5 Rec	clamation Cost Estimate	
Site:	Lorencito Canyon Min	e Permit Action:	RN5	Permit/Job#:	C199608

PROJECT IDENTIFICATION

Task #:	000	State:	Colorado	Abbreviation:	None
Date:	6/28/2022	County:	Las Animas	Filename:	C084-000

User: <u>JLE</u>

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	
	Description	Used	Size	Hours	Cost
001	Grade Borrow Area 3	GRADER	1	1.72	\$312
002	Replace Topsoil from Stockpile BA#1 to Fill 7a	TRUCK1	1	4.84	\$7,273
003	Replace Topsoil from Stockpile SSP#2 to Fill 9a	TRUCK1	1	7.31	\$10,998
004	Replace Topsoil from Stockpile SSP#3 to Fill 8	TRUCK1	1	13.00	\$19,562
005	Replace Topsoil from Stockpile SSP#2 to N-1	TRUCK1	1	8.17	\$12,297
006	Replace Topsoil from Stockpile BA#2 to C-1	TRUCK1	1	12.76	\$19,195
007	Replace Topsoil from Stockpile BA#1 to C-2	TRUCK1	1	7.86	\$11,862
008	Replace Topsoil from Stockpile BA#2 to S-2	TRUCK1	1	3.07	\$4,534
009	Replace Topsoil from Stockpile BA#3 to S-4	TRUCK1	1	3.33	\$5,854
010	Replace Topsoil from Stockpile BA#32to W-2	TRUCK1	1	10.58	\$18,599
011	Replace Topsoil from Stockpile BA#3 to W-3	TRUCK1	1	2.98	\$4,466
012	Replace Topsoil from Stockpile BA#3 to W-5	TRUCK1	1	10.74	\$18,916
013	Replace Topsoil from SA Stockpile to Service	DOZER	2	0.23	\$157
	Area				
014	Replace Live-Handled Topsoil to W-1	DOZER	2	4.33	\$2,843
015	Replace Topsoil from Upslope to W-1	DOZER	2	3.60	\$2,361
016	Replace Live-Handled Topsoil to W-1	DOZER	2	1.72	\$1,131
017	ReplaceTopsoil from Upslope Area to W-4	DOZER	2	1.92	\$1,257
018	Replace Live-Handled Topsoil to W-6	DOZER	2	1.54	\$1,013
019	Replace Topsoil from Upslope Area to W-6	DOZER	2	0.86	\$563
020	Replace Topsoil from Stockpile BA#3 to W-6	TRUCK1	1	1.11	\$1,957
021	Replace Live-Handled Topsoil to N-2	DOZER	2	11.55	\$7,843
022	Replace Topsoil from Upslope Area to N-2	DOZER	2	12.84	\$8,420
023	Replace Live-Handled Topsoil to S-3	DOZER	2	0.98	\$644
024	Replace Topsoil from Upslope to S-3	DOZER	2	0.53	\$346
025	Replace Topsoil from Stockpile BA#3 to S-3	TRUCK1	1	0.67	\$1,186
026	Replace Topsoil from Stockpile SSP#2 to N-1	DOZER	2	4.16	\$2,827
027	Replace Live-Handled Topsoil to E-2	DOZER	2	0.57	\$377
028	Replace Topsoil from Upslope Area to E-2	DOZER	2	0.82	\$541
029	Replace Live-Handled Topsoil to E-3	DOZER	2	1.65	\$1,083
030	Replace Topsoil from Stockpile BA#3 to E-3	TRUCK1	1	1.27	\$2,223
031	Replace Topsoil from Upslope Area to BA#1	DOZER	2	1.81	\$1,227
032	Replace Topsoil from Upslope Area to BA#2	DOZER	2	1.73	\$1,133
033	Replace Topsoil from Upslope Area to BA#3	DOZER	2	3.23	\$2,121
034	Remove Topsoil from Knob Above Cut	DOZER	2	15.04	\$9,867
040	Plug and Seal Drill Hole and Monitoring Wells	BOREHOLE	1	33.30	\$48,161
050	Broadcast Seeding Mine Site	REVEGE	1	126.00	\$191,906
051	Hydroseeding Steep Slopes at Mine Site	REVEGE	1	16.00	\$58,442
052	Fertilize Mine Site During Year 2	REVEGE	1	84.00	\$11,027

	\$782,868				
072	Mobilize/Demobilize Equipment for Site Maintenance	MOBILIZE	1	4.28	\$29,112
071	Mobilize/Demobilize Equipment for Pond Cleaning	MOBILIZE	1	4.28	\$3,179
070	Mobilize/Demobilize for Initial Reclamation	MOBILIZE	1	4.28	\$21,244
061	Site Maintenance	SITEMAINT ENANCE	1	40.00	\$134,398
060	Clean Sediment Ponds at Mine Site	TRUCK1	1	122.42	\$82,454
055	Direct Shrub Seeding	REVEGE	1	9.00	\$762
054	Broadcast Seed Borrow Area 3	REVEGE	1	4.05	\$6,168
053	Fertilize Mine Site During Year 3	REVEGE	1	84.00	\$11,027

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02 Total = \$15,814 Total = \$8,220 Performance bond: 1.05 Job superintendent: 345.07 Total = \$24,855 Profit: 10.00 Total = \$78,287

TOTAL O & P = $\frac{$76,287}{$127,176}$

CONTRACT AMOUNT (direct + O & P) = \$910,044

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500 Total = \$500

Engineering work and/or contract/bid preparation: 6.00 Total = \$54,603

Reclamation management and/or administration: 4.50 \$40,952

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$223,230

TOTAL BOND AMOUNT (direct + indirect) = \$1,006,098

MOTOR GRADER WORK

r ask description.		de Dorrow		D115		
Lorencito Canyo	n Mine	Pe	ermit Action:	RN5	Po	ermit/Job#: <u>C1996084</u>
ROJECT IDENT	IFICATION	<u>ON</u>				
Task #: 001		State:	Colorado		Abbrev	riation: None
Date: 5/20/20	022	County:	Las Anima	as	File	ename: NA
User: CJD						
Agency or o	rganization	name: D	RMS			
HOURLY EQUIP	MENT CO	<u>OST</u>				
Basic Mac	hine: CA	AT 14M			Horsepower:	259
Ripper Attachi	ment: Mu	ılti-Shank R	ipper		Shift Basis:	1 per day
					Data Source:	(CRG)
Cost Breakdown:						
					Utilization %	
	wnership Co	_		\$85.80	NA	
	perating Co			\$60.40	100	
	wnership Co			\$5.52	NA	
	Operating Co	_		\$0.00	0 NA	
	Operator Co	_		\$28.56	NA	
1	otal Unit Co	ost/Hour: _		\$180.28		
To	otal Fleet Co	ost/Hour:	\$180	0.28		
	rea to be gr	aded or ripp	-			acres
So	ource of esti	mated acrea	ge: Table?	2.05.4-1f		
HOURLY PRODU	CTION					
		ge Grader S		1.50	mph	
		cted Applica			grading (0-2.5 mph) - 1.5
		ted Blade A		30	degrees	
Wie		ve Blade Le overlap per		12.10 2.00	feet feet	
		ig width per		10.10	feet	
_		Unit Produc		1.8364	acres/hour	ſ
ob Condition Correct	•				Site Altitude: 7100 f	
			Source			
Altitude Ad	ij: 1	1.00	(CAT H			
Job Efficiency).85	(1sh/d, mo			
Net Correction		8500	multiplier			
	Adjusted	Hourly Unit	Production:	1.5609	acres/Hour	
			Production:	1.5609	acres/Hour	
IOB TIME AND (COST					
Fleet size:	1	Grader(s)	Total job time	e: 1.73	Hours
Unit cost:	\$115.50	per acre		Total job cos	t: \$312	

7	Task description: Replace Topso	il from Stockp	oile BA#1 to Fill	7a		
Site:	Lorencito Canyon Mine	ermit Action:	RN5	Permit/Jo	b#: C1996084	
<u>P</u>	ROJECT IDENTIFICATION					
	Task #: 002 State:	Colorado		Abbreviation:	None	
	Date: 5/20/2022 County:	Las Animas	S	Filename:	C084-002	
	User: CJD					
<u>H</u>	Agency or organization name: OURLY EQUIPMENT COST	RMS		Shift basis: 1 per da	<u>ny</u>	
			ment Description			
	Truck Loader Team -Truck	k: Cat 773F	7			
	-Loade	er: CAT 990)H high lift			
	Support Equipment -Load Are	a: Cat D9T	- 9SU			
	-Dump Are	a: Cat D9T	- 9SU			
	Road Maintenance - Motor Grade	er: CAT 14N	M			
	-Water True	k. Water Ta	nker 5 000 Gal			

Cost Breakdown:	Truck/Loader Team		Support	Equipment	Maintenance Equipment		
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck	
					Grader		
%Utilization-machine:	100	95	50	100	25	25	
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45	
Operating cost/hour:	\$92.14	\$105.00	\$70.71	\$141.41	\$15.10	\$10.49	
%Utilization-riper:	NA	0	50	0	NA	NA	
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00	
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00	
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12	
Unit Subtotals:	\$247.53	\$262.12	\$243.76	\$308.72	\$129.46	\$65.06	
Number of Units:	2	1	1	1	1	1	
Group Subtotals:	Work:	\$757.18	Support:	\$552.48	Maint:	\$194.52	

Total work team cost/hour: \$1,504.18

MATERIAL QUANTITIES

Initial volume: 3,440 CCY Swell factor: 1.125

Loose volume: 3,870 LCY

Source of estimated volume: Table 2.05.4-1f

Source of estimated swell factor: Cat Handbook

Material Purchase Cost: \$0.00

Total Cost: \$0.00

HOURLY PRODUCTION Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA LCY (heaped) Rated Capacity: 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) 0.830 Job Efficiency: 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver):

		· · · · · · · · · · · · · · · · · · ·	
Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Tru	ck Excl	nange Time:	0.70	Minutes	Adju	sted for site a	ıltitude:	0.700	Mi
	Truck	Load Time:	1.750	Minutes	Adju	sted for site a	altitude:	1.750	Mi
Truck M	laneuve	r and Dump Time:	1.10	Minutes	Adju	sted for site a	altitude:	1.100	Mi
Truck Trav	5.0	ıl & Return) T	Cime:	Road Conditi	on: Rutted dirt,	little mainter	nance, no wa	ter, 2" tire	2
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)		(11)	(%)	(%)	(fpm)	Time		
1	1200.	00	-8.00	5.00	-3.00	3512	(min) 0.402		
1	1200.	.00	-8.00	5.00	-3.00	3312	0.402		
Return Rou	ıte:				Haul Time:	0.402	min	utes	
Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)			(%)	(%)	(fpm)	Time (min)		
1	1200.	.00	8.00	5.00	13.00	1362	0.925		
					Return Time:	0.92	5 mi	nutes	
				Total Tru	ck Cycle Time:	4.87	7 mi	nutes	
Loading Too									
	iction	964.29	LCY/Hour		Adjusted for jo	ob efficiency	800.3	6 L	CY/Hour
k Unit Produ	action	484.42	LCY/Hour		Adjusted for jo	ob efficiency	402.0	7 L	CY/Hour
	rucks:	2	Truck(s)		Selected Numb	er of Trucks	:2	Т	ruck(s)
nal No. of Ti			Adjusted	hourly truck	team productio	n: 804	.13 L	CY/Hour	
nal No. of Ti							0.36 L	CY/Hour	
nal No. of Ti			Adjusted single djusted multiple					CY/Hour	

Total job time: 4.84 Hours

Total job cost: \$7,273

Fleet size: 1 Team(s)

Unit cost: \$1.879 /LCY

Task description:	Replace	Topsoil from S	tockpile SSP#2 t	o Fill 9a		
Site: Lorencito Cany	on Mine	Permit Act	tion: RN5		Permit/Job#:	C1996084
PROJECT IDEN	TIFICATION					
Task #: 003		State: Colora	ado	Abb	oreviation: No	ne
Date: $\frac{6/23}{}$	2022	County: Las A				84-003
User: CJD						
Agency or	organization nan	ne: DRMS				
HOURLY EQUII	PMENT COST	1 -		Shift ba	sis: <u>1 per day</u>	
			Equipment Descr	iption		
T	ruck Loader Tear		773F			
Suppo	ort Equipment -L		T 990H high lift D9T - 9SU			
Биррс			D9T - 9SU			
Road Ma	aintenance – Moto	or Grader: CA'	Т 14М			
	-Wat	ter Truck: Wat	ter Tanker, 5,000	Gal.		
Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Maintan	ance Equipment
Cost Breakdown.	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
%Utilization-machine:	100	05	50	100	Grader 25	25
Ownership cost/hour:	100 \$122.05	95 \$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$105.00	\$70.71	\$120.01	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own.						
cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$262.12	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work:	\$757.18	Support:	\$552.48	Maint:	\$194.52
Total work team cos	t/hour: \$1,504.1	8				
MATERIAL QUA	<u>ANTITIES</u>					
Initial volume		CCY		factor: 1.125		
Loose volume	5,569	LCY				
	irce of estimated		e 2.05.4-1f			
Source	of estimated swe		Handbook			
	Material Purcha	tal Cost: $\frac{\$0.00}{\$0.00}$	-			
	10	tai Cost. \$0.00	J			

HOURLY PRODUCTION

Truck Capacity:								
Truck Payload (weight) Basis			D d.	л см				
Material weight: Description:	2,550 Earth - Dry p	andrad	Pounds	LCI				
Rated Payload:	122,520	ackeu	Pounds					
Payload Capacity:	48.05		- LCY					
i ayidad Capacity.	40.03		_ LC1					
To all Dall (all and Dall)								
Truck Bed (volume) Basis: Struck Volume:	35.00	LCY						
Heaped Volume:	46.50	LCY						
Average Volume:	40.75	LCY						
Adjusted Volume:	46.50	LCY						
<u> </u>								
Final 7	Γruck Volume	Based on Nu	ımber of L	oader Passes:	39.38		LCY	
Loading Tool Capacity								
				Bucl	ket Size Class:	NA		
Rated Capacity:	11.250		heaped)					_
Bucket Fill Factor:	0.875	Loose	material -	1" and over (8	35 - 90%) 0.87	5		_
Adjusted Capacity:	9.844	LCY						
Ich Condition Connections			Cita	Altituda (ft.)	7100 foot			
Job Condition Corrections:	_			Altitude (ft.):				
Altitude Adj:	1.000	Load		Source (CAT HI				
Job Efficiency:	0.830	0.83		(CAT HI				
Job Efficiency.	0.030	0.0.	50	(CAT III	3)			
Net Correction:	0.830	0.83	30					
Loading Tool Cycle Time:	,	Number of I	oading To	ol Passes Requ	uired to Fill			passes
		rumoer or E	ouding 10	or russes requ	Truck: _		4	passes
Excavators and Front Shove		D. et	NT A					
Machine Cycle Time vs Selected Value v			NA NA					
		_	INA					
Track Loaders –		приоп:						
Cycle Time Elements (min.):								
Load: NA	N	Maneuver:	NA		Dump:	0.100		
Wheel and Tracl	k Loaders - Un	adiusted Bas	ic Loader	Cycle Time (le	oad, dump.		_ mir	nutes
				•	maneuver):	0.60	0	
Cycle Time Factors					Factor (min	1)	Source	
Material:	Mixed mate	rial 0.02			0.020	1.)	(Cat HB)	
Stockpile:		r dozer piled	10 ft. high	n or less				
	0.01				0.010		(Cat HB)	
Truck Ownership:		wnership of t	rucks and	loaders -	-0.040		(Cat HB)	
0	0.04							
Operation: Dump Target:	Nominal tar	eration -0.04	-		-0.040 0.000		(Cat HB)	_
Dump Target:	Nominai tai		vele Time	Adjustment:	-0.050		minutes	_
				Cycle Time:	0.550		minutes	
				ne per Truck:	1.750		minutes	
Truck Cycle Time:								
Truck Exchange Time	e: 0.70	Minutes		Adjusted	for site altitude	e:	0.700	Minutes

Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

<u>Truck Travel (Haul & Return) Time:</u> penetration 5.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	11.00	5.00	16.00	526	1.345

Haul Time: 1.345 minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	-11.00	5.00	-6.00	3512	0.254

Return Time: 0.254 minutes
Total Truck Cycle Time: 5.149 minutes

Loading Tool unit

Production LCY/Hour Adjusted for job efficiency: 800.36 LCY/Hour 964.29 Truck Unit Production Adjusted for job efficiency: 380.83 458.83 LCY/Hour LCY/Hour Optimal No. of Trucks: Truck(s) Selected Number of Trucks: Truck(s)

Adjusted hourly truck team production: 761.65 LCY/Hour Adjusted single truck/loader team production: 761.65 LCY/Hour Adjusted multiple truck/loader team production: 761.65 LCY/Hour

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	7.31	Hours
Unit cost:	\$1.975	/LCY	Total job cost:	\$10,998	

Task description:	Replace Topsoil fi	rom Stockpile SSP#3 to Fil	18	
Site: Lorencito Canyon Min	e Pern	nit Action: RN5	Permit/Jo	b#: C1996084
PROJECT IDENTIFIC	<u>ATION</u>			
Task #: 004	State:	Colorado	Abbreviation:	None
Date: 6/23/2022	County:	Las Animas	Filename:	A
User: CJD				
Agency or organiz HOURLY EQUIPMEN		MS	Shift basis: 1 per da	a <u>y</u>
		Equipment Description	n	
Truck Lo	ader Team -Truck:	Cat 773F		
	-Loader:	CAT 990H high lift		
Support Equi	pment -Load Area:	Cat D9T - 9SU		
	-Dump Area:	Cat D9T - 9SU		<u> </u>
Road Maintenar	ce –Motor Grader:	CAT 14M		
	-Water Truck:	Water Tanker, 5,000 Gal.		

Cost Breakdown:	reakdown: Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	95	50	100	25	25
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$105.00	\$70.71	\$141.41	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$262.12	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work:	\$757.18	Support:	\$552.48	Maint:	\$194.52

Total work team cost/hour: \$1,504.18

MATERIAL QUANTITIES

Initial volume: 8,820 CCY Swell factor: 1.125

Loose volume: 9,923 LCY

Source of estimated volume: Table 2.05.4-1f
Source of estimated swell factor: Cat Handbook

Material Purchase Cost: \$0.00 Solution \$0.00

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA LCY (heaped) Rated Capacity: 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) 0.830 Job Efficiency: 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600

	1	maneuver).	
Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Truck Cyc	ele Tim	<u>e:</u>							
Truck Exchange Time: 0			0.70	Minutes	Adju	sted for site al	titude:	0.700	Mi
	Truck	Load Time:	1.750	Minutes	Adju	sted for site al	titude:	1.750	Mi
Truck M	laneuve	r and Dump Time:	1.10	Minutes	Adju	sted for site al	titude:	1.100	Mi
Truck Trav		ıl & Return) T	<u>'ime:</u>	Road Condition	on: <u>Rutted dirt,</u>	little maintena	ance, no wat	er, 2" tir	<u>e</u>
Haul Route	<u>e:</u>								
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel Time		
	(Ft)			(%)	(%)	(fpm)	(min)		
1	400.0	00	19.00	5.00	24.00	338	1.187		
Return Rou	ıte:				Haul Time:	1.187	min	utes	
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)			(%)	(%)	(fpm)	Time (min)		
1	400.0	00	-19.00	5.00	-14.00	1377	0.403		
					Return Time:	0.403	mi	nutes	
				Total Tru	ck Cycle Time:			nutes	
Loading Too	ol unit								
Produ	action	964.29	LCY/Hour	•	Adjusted for jo	ob efficiency:	800.3	6 I	CY/Hour
ck Unit Produ	iction	459.63	LCY/Hour		Adjusted for jo	ob efficiency:	381.4	9 I	.CY/Hour
nal No. of Tr	ucks:	2	Truck(s)		Selected Numb	er of Trucks:	2		Truck(s)
			Adjusted	d hourly truck	team productio	n: 762.	99 LO	CY/Hour	
					team productio			CY/Hour	
		A	djusted multiple	e truck/loader	team productio	n: 762.	99 LO	CY/Hour	•
JOB TIM	IE AN	D COST							
Fleet	ci70:	1	Team(s)	т	otal job time:	13.00	.	Hours	

Total job cost: **\$19,562**

Unit cost: \$1.971 /LCY

Lorencito Canyon Mine		ne Per	Permit Action: RN5		Permit/Job#: C1996084		
<u>PROJECT</u>	DENTIFIC	CATION					
Task #:	005	State:	Colorado	Abbreviation:	None		
Date:	6/23/2022	County:	Las Animas	Filename:	A		
User:	CJD						
	ency or organiz		RMS	C1.'C 1' 1	1.		
	ency or organiz		RMS Equipment Descri	Shift basis: <u>1 per c</u>	<u>lay</u>		
	<u>EQUIPMEN</u>		Equipment Descri		<u>lay</u>		
	<u>EQUIPMEN</u>	T COST	Equipment Descri		<u>lay</u>		
	EQUIPMEN Truck Lo	T COST Dader Team -Truck	Equipment Descri : Cat 773F : CAT 990H high lift		lay		
	EQUIPMEN Truck Lo	T COST Dader Team -Truck -Loader	Equipment Descri Cat 773F CAT 990H high lift Cat D9T - 9SU		day		
HOURLY	EQUIPMEN Truck Lo	T COST Dader Team -Truck -Loader ipment -Load Area	Equipment Descri : Cat 773F : CAT 990H high lift : Cat D9T - 9SU : Cat D9T - 9SU		lay		

Cost Breakdown:	Truck/Loader Team		Support	Equipment	Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	95	50	100	25	25
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$105.00	\$70.71	\$141.41	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$262.12	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work:	\$757.18	Support:	\$552.48	Maint:	\$194.52

Total work team cost/hour: \$1,504.18

MATERIAL QUANTITIES

Initial volume: _5,060 CCY Swell factor: _1.125

Loose volume: 5,693 LCY

Source of estimated volume: Table 2.05.4-1f

Source of estimated swell factor: Cat Handbook

Material Purchase Cost: \$0.00

Total Cost: \$0.00

HOURLY PRODUCTION Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA Rated Capacity: LCY (heaped) 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) 0.830 Job Efficiency: 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver):

	-		
Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:

penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	17.00	5.00	22.00	359	1.676

Haul Time:	1.676	minutes
------------	-------	---------

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-17.00	5.00	-12.00	1920	0.406

Return Time: 0.406 minutes
Total Truck Cycle Time: 5.632 minutes

Loading Tool unit

Production 964.29 LCY/Hour Adjusted for job efficiency: 800.36 LCY/Hour Truck Unit Production 419.48 LCY/Hour Adjusted for job efficiency: 348.17 LCY/Hour

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

Adjusted hourly truck team production: 696.33 LCY/Hour Adjusted single truck/loader team production: 696.33 LCY/Hour Adjusted multiple truck/loader team production: 696.33 LCY/Hour

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	8.17	Hours
Unit cost:	\$2.160	/LCY	Total job cost:	\$12,297	

Task description: Replace Topsoil fr	om Stockpile BA#2 to C-1				
Site: Lorencito Canyon Mine Perm	nit Action: RN5	Permit/Jo	b#: C1996084		
PROJECT IDENTIFICATION					
Task #: 006 State:	Colorado	Abbreviation:	None		
Date: 6/23/2022 County:	Las Animas	Filename:	A		
User: CJD					
Agency or organization name: DRMS HOURLY EQUIPMENT COST Shift basis: 1 per day					
	Equipment Description				
Truck Loader Team -Truck:	Cat 773F				
-Loader:	CAT 990H high lift				
Support Equipment -Load Area:	Cat D9T - 9SU				
-Dump Area:	Cat D9T - 9SU				
Road Maintenance – Motor Grader:	CAT 14M				
-Water Truck:	Water Tanker, 5,000 Gal.				

Cost Breakdown:	Truck/Loa	der Team	Support Equipment		Maintenance Equipme	
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	95	50	100	25	25
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$105.00	\$70.71	\$141.41	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$262.12	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work:	\$757.18	Support:	\$552.48	Maint:	\$194.52

Total work team cost/hour: \$1,504.18

MATERIAL QUANTITIES

Initial volume: 7,750 CCY Swell factor: 1.125 LCY

Source of estimated volume:

Source of estimated swell factor:

Material Purchase Cost:

Table 2.05.4-1f

Cat Handbook

\$0.00

Total Cost: \$0.00

HOURLY PRODUCTION Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA LCY (heaped) Rated Capacity: 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) Job Efficiency: 0.830 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver):

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:

penetration 5.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	8.00	5.00	13.00	678	1.798

Haul Time:	1.798	minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	-8.00	5.00	-3.00	3569	0.392

Return Time:	0.392	minutes
Total Truck Cycle Time:	5.740	minutes

In	ading	$T_{00}1$	unit
LU	aumg	1001	um

Production Truck Unit Production	964.29	LCY/Hour	Adjusted for job efficiency:	800.36	LCY/Hour
Truck Chit Froduction	411.59	LCY/Hour	Adjusted for job efficiency:	341.62	LCY/Hour
Optimal No. of Trucks:	2	Truck(s)	Selected Number of Trucks:	2	Truck(s)

Adjusted hourly truck team production:	683.23	LCY/Hour
Adjusted single truck/loader team production:	683.23	LCY/Hour
Adjusted multiple truck/loader team production:	683.23	LCY/Hour

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	12.76	Hours
Unit cost:	\$2.202	/LCY	Total job cost:	\$19,195	_

Task description: Replace Topsoil f				from Stockpile BA#1 to C-2	2	
Site:	Site: Lorencito Canyon Mine Perm		mit Action: RN5	Permit/Jo	b#: C1996084	
<u>P</u>	ROJECT	<u>IDENTIFIC</u>	<u>CATION</u>			
	Task #:	007	State:	Colorado	Abbreviation:	None
	Date:	6/23/2022	County:	Las Animas	Filename:	A
	User:	CJD				
<u>H</u>	OURLY 1	<u>EQUIPMEN</u>	T COST		Shift basis: 1 per da	<u>ay</u>
_				Equipment Descriptio	n	
		Truck Lo	oader Team -Truck:			
			-Loader:			
		Support Equi	ipment -Load Area:	Cat D9T - 9SU		
			-Dump Area:	Cat D9T - 9SU		
	R	oad Maintenai	nce –Motor Grader:	CAT 14M		
			-Water Truck:	Water Tanker, 5,000 Gal.		

Cost Breakdown:	Truck/Loa	Truck/Loader Team		Support Equipment		Maintenance Equipment	
Truck		Loader	Load Area	Dump Area	Motor	Water Truck	
				_	Grader		
%Utilization-machine:	100	100	50	100	25	25	
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45	
Operating cost/hour:	\$92.14	\$110.53	\$70.71	\$141.41	\$15.10	\$10.49	
%Utilization-riper:	NA	0	50	0	NA	NA	
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00	
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00	
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12	
Unit Subtotals:	\$247.53	\$267.65	\$243.76	\$308.72	\$129.46	\$65.06	
Number of Units:	2	1	1	1	1	1	
Group Subtotals:	Work:	\$762.71	Support:	\$552.48	Maint:	\$194.52	

Total work team cost/hour: \$1,509.71

MATERIAL QUANTITIES

Initial volume: 5,590 CCY Swell factor: 1.125 LCY

volume: 6,289 LCY

Source of estimated volume: Table 2.05.4-1f
Source of estimated swell factor: Cat Handbook

Material Purchase Cost: \$0.00 Solution \$0.00

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA Rated Capacity: LCY (heaped) 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) 0.830 Job Efficiency: 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver):

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:

penetration 5.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	-8.00	5.00	-3.00	3512	0.343

					Haul Time:		0.343		minute	S
F	Return Rou	ıte:				-				
			 	 _			-	-	1	

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	8.00	5.00	13.00	1362	0.778

Return Time: 0.778 minutes
Total Truck Cycle Time: 4.671 minutes

Loading	Tool	unit
Loading	1001	umt

Production Truck Unit Production	964.29	_ LCY/Hour	Adjusted for job efficiency:	800.36	LCY/Hour
Truck Omt Froduction	505.78	_ LCY/Hour	Adjusted for job efficiency:	419.80	LCY/Hour
Optimal No. of Trucks:	2	Truck(s)	Selected Number of Trucks:	2	Truck(s)

Adjusted hourly truck team production: 839.60 LCY/Hour Adjusted single truck/loader team production: 800.36 LCY/Hour Adjusted multiple truck/loader team production: 800.36 LCY/Hour

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	7.86	Hours
Unit cost:	\$1.886	/LCY	Total job cost:	\$11,862	

l ask description: Replace Topsoil II	rom Stockpile BA#2 to S-2		
Site: Lorencito Canyon Mine Pern	nit Action: RN5	Permit/Jol	b#: C1996084
PROJECT IDENTIFICATION			
Task #: 008 State:	Colorado	Abbreviation:	None
Date: $6/23/2022$ County:	Las Animas	Filename:	A
User: CJD			
Agency or organization name: DRM HOURLY EQUIPMENT COST	<u>1S</u>	Shift basis: 1 per da	<u></u>
	Equipment Description		
Truck Loader Team -Truck:	Cat 773F		
-Loader:	CAT 990H high lift		
Support Equipment -Load Area:	Cat D9T - 9SU		
-Dump Area:	Cat D9T - 9SU		
Road Maintenance – Motor Grader:	CAT 14M		
-Water Truck:	Water Tanker, 5,000 Gal.		

Cost Breakdown:	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	70	50	100	25	25
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$77.37	\$70.71	\$141.41	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$234.49	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work:	\$729.55	Support:	\$552.48	Maint:	\$194.52

Total work team cost/hour: \$1,476.55

MATERIAL QUANTITIES

Initial volume: 970 CCY Swell factor: 1.125 LCY

Source of estimated volume: Table 2.05.4-1f
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: \$0.00

Total Cost: \$0.00

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA LCY (heaped) Rated Capacity: 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) 0.830 Job Efficiency: 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver):

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:

penetration 5.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8100.00	0.00	5.00	5.00	1741	4.837

Haul Time: 4.837 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8100.00	0.00	5.00	5.00	3405	2.648

Return Time: 2.648 minutes
Total Truck Cycle Time: 11.035 minutes

Loading Tool unit

Production 964.29 LCY/Hour Adjusted for job efficiency: 800.36 LCY/Hour Truck Unit Production 214.09 LCY/Hour Adjusted for job efficiency: 177.70 LCY/Hour

Adjusted hourly truck team production: 355.39 LCY/Hour Adjusted single truck/loader team production: 355.39 LCY/Hour Adjusted multiple truck/loader team production: 355.39 LCY/Hour

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	3.07	Hours
Unit cost:	\$4.155	/LCY	Total job cost:	\$4,534	

Task description:	Replace Topsoil fi	rom Stockpile BA#3 to S-4			
Site: Lorencito Canyon Mine Permi		nit Action: RN5	Permit/Jo	b#: C1996084	
PROJECT IDENTIFICA	<u>TION</u>				
Task #: 009	State:	Colorado	Abbreviation:	None	
Date: 6/23/2022	County:	Las Animas	Filename:	A	•
User: CJD					
Agency or organizat HOURLY EQUIPMENT		AS	Shift basis: 1 per da	a <u>v</u>	
		Equipment Description	1		
Truck Load	ler Team -Truck:	Cat 773F			
	-Loader:	CAT 990H high lift			
Support Equipr	nent -Load Area:	Cat D9T - 9SU			
	-Dump Area:	Cat D9T - 9SU			
Road Maintenance	e –Motor Grader:	CAT 14M		<u> </u>	
	-Water Truck:	Water Tanker, 5,000 Gal.			

Cost Breakdown:	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	50	100	25	25
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$110.53	\$70.71	\$141.41	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$267.65	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,010.24	Support:	\$552.48	Maint:	\$194.52

Total work team cost/hour: \$1,757.24

MATERIAL QUANTITIES

Initial volume: 2,370 CCY Swell factor: 1.125
Loose volume: 2,666 LCY

Source of estimated volume: Table 2.05.4-1f
Source of estimated swell factor: Cat Handbook

Material Purchase Cost: \$0.00 Solution \$0.00

HOURLY PRODUCTION Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA LCY (heaped) Rated Capacity: 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) Job Efficiency: 0.830 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver):

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:

penetration 5.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2200.00	5.00	5.00	10.00	773	2.874

Return Route: Haul Time: 2.874 minutes

Return Route.								
Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)		
1	2200.00	-5.00	5.00	0.00	3569	0.761		

Return Time: 0.761 minutes
Total Truck Cycle Time: 7.185 minutes

Loading Tool unit

Production LCY/Hour Adjusted for job efficiency: 800.36 LCY/Hour 964.29 Truck Unit Production Adjusted for job efficiency: 272.91 328.81 LCY/Hour LCY/Hour Optimal No. of Trucks: Truck(s) Selected Number of Trucks: Truck(s)

Adjusted hourly truck team production: 818.74 LCY/Hour Adjusted single truck/loader team production: 800.36 LCY/Hour Adjusted multiple truck/loader team production: 800.36 LCY/Hour

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	3.33	Hours
Unit cost:	\$2.196	/LCY	Total job cost:	\$5,854	

Task description: Replace Topsoil II	om Stockpile BA#32to W-2		
Site: Lorencito Canyon Mine Perm	nit Action: RN5	Permit/Jo	b#: C1996084
PROJECT IDENTIFICATION			
Task #: 010 State:	Colorado	Abbreviation:	None
Date: 6/23/2022 County:	Las Animas	Filename:	A
User: CJD		•	
Agency or organization name: DRM HOURLY EQUIPMENT COST	1S	Shift basis: 1 per da	<u></u>
	Equipment Description		
Truck Loader Team -Truck:	Cat 773F		
-Loader:	CAT 990H high lift		
Support Equipment -Load Area:	Cat D9T - 9SU		
-Dump Area:	Cat D9T - 9SU		
Road Maintenance – Motor Grader:	CAT 14M		
-Water Truck:	Water Tanker, 5,000 Gal.		

Cost Breakdown:	: Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
				_	Grader	
%Utilization-machine:	100	100	50	100	25	25
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$110.53	\$70.71	\$141.41	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$267.65	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,010.24	Support:	\$552.48	Maint:	\$194.52

Total work team cost/hour: \$1,757.24

MATERIAL QUANTITIES

Initial volume: 7,530 CCY Swell factor: 1.125 LCY

Source of estimated volume:
Source of estimated swell factor:
Material Purchase Cost:

Table 2.05.4-1f

Cat Handbook

\$0.00

Total Cost: \$0.00

HOURLY PRODUCTION Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA LCY (heaped) Rated Capacity: 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) 0.830 Job Efficiency: 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver):

		′ 	
Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:

penetration 5.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2200.00	7.00	5.00	12.00	721	3.082

Haul Time:	3.082	minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2200.00	-7.00	5.00	-2.00	3569	0.657

Return Time:	0.657	minutes
Total Truck Cycle Time:	7.289	minutes

Loading	Too1	unit

Production Truck Unit Production	964.29	LCY/Hour	Adjusted for job efficiency:	800.36	LCY/Hour
Truck Chit Froduction	324.12	LCY/Hour	Adjusted for job efficiency:	269.02	LCY/Hour
Optimal No. of Trucks:	3	Truck(s)	Selected Number of Trucks:	3	Truck(s)

Adjusted hourly truck team production:	807.06	LCY/Hour
Adjusted single truck/loader team production:	800.36	LCY/Hour
Adjusted multiple truck/loader team production:	800.36	LCY/Hour

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	10.58	Hours
Unit cost:	\$2.196	/LCY	Total job cost:	\$18,599	

TRUCK/LOADER TEAM WORK

Task description: Replace Topsoil II	om Stockpile BA#3 to W-3		
Site: Lorencito Canyon Mine Perm	nit Action: RN5	Permit/Jo	b#: C1996084
PROJECT IDENTIFICATION			
Task #: 011 State:	Colorado	Abbreviation:	None
Date: 6/23/2022 County:	Las Animas	Filename:	A
User: CJD		•	
Agency or organization name: DRM HOURLY EQUIPMENT COST	<u>ny</u>		
	Equipment Description		
Truck Loader Team -Truck:	Cat 773F		
Loader:	CAT 990H high lift		
Support Equipment -Load Area:	Cat D9T - 9SU		
-Dump Area:	Cat D9T - 9SU		
Road Maintenance – Motor Grader:	CAT 14M	<u>-</u>	
-Water Truck:	Water Tanker, 5,000 Gal.		

Cost Breakdown:	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	90	50	100	25	25
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$99.48	\$70.71	\$141.41	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$256.59	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work:	\$751.65	Support:	\$552.48	Maint:	\$194.52

Total work team cost/hour: \$1,498.65

MATERIAL QUANTITIES

Initial volume: 1,830 CCY Swell factor: 1.125
Loose volume: 2,059 LCY

volume: 2,059 LCY

Source of estimated volume: Table 2.05.4-1f
Source of estimated swell factor: Cat Handbook

Material Purchase Cost: \$0.00 Solution \$0.00

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA LCY (heaped) Rated Capacity: 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) 0.830 Job Efficiency: 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver).

maneuver).					
Cycle Time Factors		Factor (min.)	Source		
Material:	Mixed material 0.02	0.020	(Cat HB)		
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)		
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)		
Operation:	Constant operation -0.04	-0.040	(Cat HB)		
Dump Target:	Nominal target 0.00	0.000	(Cat HB)		
	Net Cycle Time Adjustment:	-0.050	minutes		
	Adjusted Loader Cycle Time:	0.550	minutes		
	Net Load Time per Truck:	1.750	minutes		

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:

penetration 5.0

Road Condition: Rutted dirt, little maintenance, no water, 2" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	3.00	5.00	8.00	1023	1.523

Haul Time: 1.523 minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	-3.00	5.00	2.00	3569	0.604

Return Time: 0.604 minutes
Total Truck Cycle Time: 5.677 minutes

Loading Tool unit

Production 964.29 LCY/Hour Adjusted for job efficiency: 800.36 LCY/Hour Truck Unit Production 416.15 LCY/Hour Adjusted for job efficiency: 345.41 LCY/Hour

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

Adjusted hourly truck team production: 690.81 LCY/Hour Adjusted single truck/loader team production: 690.81 LCY/Hour Adjusted multiple truck/loader team production: 690.81 LCY/Hour

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 2.98
 Hours

 Unit cost:
 \$2.169
 /LCY
 Total job cost:
 \$4,466

TRUCK/LOADER TEAM WORK

l ask description: Replace Topsoil II	rom Stockpile BA#3 to W-5		
Site: Lorencito Canyon Mine Perm	nit Action: RN5	Permit/Jo	b#: C1996084
PROJECT IDENTIFICATION			
Task #: 012 State:	Colorado	Abbreviation:	None
Date: 6/23/2022 County:	Las Animas	Filename:	A
User: CJD		•	
Agency or organization name: DRN HOURLY EQUIPMENT COST	1S	Shift basis: 1 per da	<u></u>
	Equipment Description		
Truck Loader Team -Truck:	Cat 773F		
-Loader:	CAT 990H high lift		
Support Equipment -Load Area:	Cat D9T - 9SU		
-Dump Area:	Cat D9T - 9SU		
Road Maintenance – Motor Grader:	CAT 14M	<u>-</u>	
-Water Truck:	Water Tanker, 5,000 Gal.		

Cost Breakdown:	Truck/Loa	Truck/Loader Team		Support Equipment		ince Equipment
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
				_	Grader	
%Utilization-machine:	100	100	50	100	25	35
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$110.53	\$70.71	\$141.41	\$15.10	\$14.69
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$267.65	\$243.76	\$308.72	\$129.46	\$69.26
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,010.24	Support:	\$552.48	Maint:	\$198.72

Total work team cost/hour: \$1,761.44

MATERIAL QUANTITIES

Initial volume: 7,640 CCY Swell factor: 1.125 LCY

Source of estimated volume: Table 2.05.4-1f
Source of estimated swell factor: Cat Handbook

Material Purchase Cost: \$0.00 Solution \$0.00

HOURLY PRODUCTION Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA LCY (heaped) Rated Capacity: 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) Job Efficiency: 0.830 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver).

	ı	naneuver).	
Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:

penetration 5.0

Road Condition: Rutted dirt, little maintenance, no water, 2" tire

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2700.00	4.00	5.00	9.00	977	2.823

Haul Time: 2.823 minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2700.00	-4.00	5.00	1.00	3569	0.919

Return Time: 0.919 minutes
Total Truck Cycle Time: 7.292 minutes

Loading Tool unit

Production LCY/Hour Adjusted for job efficiency: 800.36 LCY/Hour 964.29 **Truck Unit Production** 323.99 LCY/Hour Adjusted for job efficiency: 268.91 LCY/Hour Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: Truck(s)

Adjusted hourly truck team production: 806.72 LCY/Hour Adjusted single truck/loader team production: 800.36 LCY/Hour Adjusted multiple truck/loader team production: 800.36 LCY/Hour

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	10.74	Hours
Unit cost:	\$2.201	/LCY	Total job cost:	\$18,916	

Task description:	Replace To	psoil from SA St	ockpile to Service Arc	ea	
Lorencito Canyon M	<u> Iine</u>	Permit Action:	RN5	Permit/Jo	b#: <u>C1996084</u>
PROJECT IDENTIF	ICATION				
Task #: 013		ate: Colorado		Abbreviation:	None
Date: $\frac{6/23}{2022}$			S	Filename:	A
User: CJD				1 11011111111	
Agency or orga	nization name:	DRMS			
HOURLY EQUIPME					
	at D9T - 9SU		=		
<u> </u>	mi-Universal		=		
			_		
	shank ripper oer day		=		
	RG)		_		
	NO)		-		
Cost Breakdown:					
			<u>Utilization %</u>		
Ownership Cost/Hour:		\$126.01	NA		
Operating Cost/Hour:		\$141.41	100		
Ripper own. Cost/Hour:		\$19.26	NA		
Ripper op. Cost/Hour:	-	\$11.48	100		
Operator Cost/Hour:		\$41.30	NA		
MATERIAL QUANT Initial Volume: 210)				
Swell factor: 1.12	25				
Loose volume: 236	LCY				
Source of estimated vol	ume: Tobi	e 2.05.4-1f			
Source of estimated voi		Handbook			
factor:	cm Cat.	Hallabook			
1001011					
HOURLY PRODUCT	ΓΙΟN				
Average push distance:	75 feet				
Unadjusted hourly		3 LCY/hr			
production:	1,514				
Production.					
Materials consistency	Co	onsolidated stockp	oile 1.0		
description:					
Average push	0 %				
gradient:					
Average site altitude:	7,100 feet				
=					
Material weight:	2,550 lbs/LC	Y			
Weight description:	Earth - Dry p	acked			

Job Condition Correction Factor		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3369

Adjusted unit production:

Adjusted fleet production:

510.17 LCY/hr

1020.34 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.665/LCY

Total job time: 0.23 Hours
Total job cost: \$157

Task description:	Rep	olace Live-Handled Topso	il to W-1				
e: Lorencito Canyon	Mine	Permit Action:	Permit Action: RN5		Permit/Job#:C1996084		
PROJECT IDENTII	FICATI	<u>ON</u>					
Task #: 014		State: Colorado		Abbreviation:	None		
Date: $\frac{6/23/202}{6}$	2	County: Las Animas		Filename:	A		
User: CJD	 -						
Agency or org	anization	name: DRMS					
HOURLY EQUIPM	ENT CO	OST					
	Cat D9T -						
·	05						
	emi-Univ	versal					
	-shank ri						
	per day	. 1					
	CRG)						
Cost Breakdown:							
Cost Dicardown.			Utilization %				
Ownership Cost/Hour	:	\$126.01	NA				
Operating Cost/Hour		\$141.41	100				
Ripper own		\$19.26	NA				
Cost/Hour							
Ripper op. Cost/Hour		\$0.00	0				
Operator Cost/Hour	:	\$41.30	NA				
Total unit Cost/Hour:	\$327	.98					
Total Fleet Cost/Hour:							
MATERIAL QUAN	<u>TITIES</u>						
Initial Volume: 2,7	740						
Swell factor: 1.	125						
	083 LCY						
Course of estimated	Jumai	Toble 2.05 4.1f					
Source of estimated vo		Table 2.05.4-1f Cat Handbook					
Source of estimated sy factor:	ven	Cat Handbook					
ractor.			<u>—</u>				
HOURLY PRODUC	TION						
Average push distance		125 feet					
Unadjusted hourly	•	1,055.6 LCY/hr	<u> </u>				
production:		1,033.0 LC 1/III					
1							
Materials consistency		Consolidated stockpi	le 1.0				
description:							
Average push	0 %						
gradient:	-						

Average site altitude:	7,100 feet	
Average site attitude.	7,100 1001	

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Source

Net correction: 0.3369

Adjusted unit production: Adjusted fleet

production:

355.63 LCY/hr

711.26 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.922/LCY

Total job time: 4.33 Hours
Total job cost: \$2,843

Та	ask descript	tion:	Re	eplace Topsoil	from Upsloj	pe to W-1		
te:	Lorencito	Canyo	on Mine	Pe	rmit Action:	RN5	Permit/Jo	ob#: <u>C1996084</u>
PR	OJECT I	DENT	ΓΙΓΙCΑΤ	ION				
	Task #:	015		State:	Colorado		Abbreviation:	None
	Date:	6/23/2	2022	County:	Las Anima	S	Filename:	A
	User: _	CJD		_				
	Ager	ncy or o	organizatio	on name: DF	RMS			
HC	OURLY E	QUIP	MENT (COST				
	Basic Macl	hine:	Cat D9T	- 9SU				
	Horsepo		405			-		
	Blade T		Semi-Un			-		
	Attachn	_	3-shank			-		
	Shift B Data So	-	1 per day (CRG)	/		-		
		-	(CKG)			-		
Cos	st Breakdov	<u>vn</u> :			i.	TT: 11	,	
0)manahin (Cost/II.			¢126.01	<u>Utilization %</u>	<u>0</u>	
Ownership Cost/Hour: Operating Cost/Hour:			\$126.01 \$141.41	NA 100				
•		ipper o						
		Cost/H			\$19.26	NA		
F	Ripper op. (\$0.00	0		
	Operator C				\$41.30	NA		
T	otal unit Co	ost/Hou	ır: \$32	27.98				
T	otal Fleet C	Cost/Ho	our: \$65	55.96				
				_				
<u>M</u> A	ATERIAL	ا QUA	NTITIE	<u>S</u>				
I	Initial Volu	me:	2,740					
	Swell fac	tor:	1.250		<u> </u>			
]	Loose volu	me:	3,425 LC	Y	<u> </u>			
Sc	ource of est	timated	l volume:	Table 2.0	5 4-1f			
	ource of est			Cat Hand				
	ictor:			Cut Hund	COOK			
HC	OURLY P	RODI	UCTION					
A	verage pusl	h distaı	nce:	125 feet				
	nadjusted h			1,055.6 LC	Y/hr			
	roduction:	•		•				

Materials consistency

Consolidated stockpile 1.0

description:

Average push

gradient:

-5 %

Average site altitude: 7,100 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

Job Condition Correction Factor

Source 0.900 Operator Skill: (AB.AVG.) Material consistency: (CAT HB) 1.000 Dozing method: 1.000 (GEN.) Visibility: (AVG.) 1.000 Job efficiency: 0.830(1 SHIFT/DAY) Spoil pile: 0.600 (FND-SF) Push gradient: 1.115 (CAT HB) Altitude: 1.000 (CAT HB) (CAT HB) Material Weight: 0.902

1.000

(PAT)

Net correction: 0.4508

Adjusted unit

475.86 LCY/hr production:

Blade type:

Adjusted fleet production:

951.72 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.689/LCY

Total job time: **3.60** Hours Total job cost: \$2,361

	Replace Live-Handled Topsoi Permit Action:		~ • • •	1.11. 0100.500.1
: Lorencito Canyon Mine	RN5	Permit/Jo	b#: <u>C1996084</u>	
PROJECT IDENTIFICA	<u> TION</u>			
Task #: 016	State: Colorado		Abbreviation:	None
Date: 6/23/2022	County: Las Animas		Filename:	A
User: CJD	<u> </u>			
Agency or organizat	ion name: DRMS			
HOURLY EQUIPMENT	COST			
Basic Machine: Cat D9'	Γ - 9SU			
Horsepower: 405				
	niversal			
Attachment: 3-shank				
Shift Basis: 1 per da Data Source: (CRG)	ny			
Cost Breakdown:		T T.111		
Orang analisa Carat/III assau	\$126.01	<u>Utilization %</u> NA		
Ownership Cost/Hour: Operating Cost/Hour:	\$120.01	100		
Ripper own.				
Cost/Hour:	\$19.26	NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$41.30	NA		
Total unit Cost/Hour: \$3	327.98		·	
	655.96			
<u></u>		<u> </u>		
MATERIAL QUANTITI	<u>ES</u>			
Initial Volume: 1,090				
Swell factor: 1.125				
Loose volume: 1,226 LO	CY			
Source of estimated volume:	Table 2.05.4-1f			
Source of estimated swell	Cat Handbook			
factor:				

HOURLY PRODUCTION

Average push distance: 125 feet

Unadjusted hourly

production:

1,055.6 LCY/hr

Materials consistency

description:

Consolidated stockpile 1.0

Average push

gradient:

Average site altitude:

7,100 feet

Material weight:

2,550 lbs/LCY

0 %

Weight description:

Earth - Dry packed

Job Condition Correction Factor		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)

1.000 (CAT HB) Altitude: Material Weight: 0.902 (CAT HB)

1.000 (PAT) Blade type:

Net correction: 0.3369

Adjusted unit 355.63 LCY/hr production:

Adjusted fleet 711.26 LCY/hr production:

JOB TIME AND COST

Fleet size: 2 Dozer(s) Unit cost: \$0.922/LCY

Total job time: **1.72** Hours Total job cost: \$1,131

: Lorencito Canyon M	ine Pe	rmit Action:	RN5	Permit/Jo	ob#: <u>C1996084</u>
PROJECT IDENTIFI	CATION				
Task #: 017	State:	Colorado		Abbreviation:	None
Date: 6/23/2022 User: CJD	County:	Las Animas	<u>S</u>	Filename:	A
Agency or organ	nization name: DF	RMS			
HOURLY EQUIPME	NT COST				
	D9T - 9SU				
Horsepower: 405	ni-Universal				
	hank ripper er day				
	RG)				
	(C)				
Cost Breakdown:		1			
			<u>Utilization %</u>		
Ownership Cost/Hour:		\$126.01	NA		
Operating Cost/Hour:		\$141.41	100		
Ripper own.		\$19.26	NA		
Cost/Hour:		·			
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour:		\$41.30	NA		
Total unit Cost/Hour:	\$327.98				
Total Fleet Cost/Hour:	\$655.96				

Initial Volume: 1,090
Swell factor: 1.250
Loose volume: 1,363 LCY

Source of estimated volume:	Table 2.05.4-1f	
Source of estimated swell factor:	Cat Handbook	
HOURLY PRODUCTION	<u>1</u>	
Average push distance:	125 feet	
Unadjusted hourly production:	1,055.6 LCY/hr	
Materials consistency description:	Consolidated stockpile 1	.0
Average push 0 9 gradient:	%	
Average site altitude: 7,	100 feet	
Material weight: 2,5	550 lbs/LCY	
Weight description: Ea	orth - Dry packed	
Job Condition Correction Factor	or_	<u>Source</u>
Operator Skill		(AVG.)
Material consistency		(CAT HB)
Dozing method		(GEN.)
Visibility	-	(AVG.)
Job efficiency	: 0.830	(1 SHIFT/DAY)
Spoil pile	: 0.600	(FND-SF)
Push gradient	: 1.000	(CAT HB)
Altitude	: 1.000	(CAT HB)
Material Weight	: 0.902	(CAT HB)
Blade type	-	(PAT)
Net correction	: 0.3369	
production:	355.63 LCY/hr	
Adjusted fleet production:	711.26 LCY/hr	<u></u>

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.922/LCY

Total job time: 1.92 Hours Total job cost: \$1,257

Ta	sk descrip	tion:	Re	place Live-H	andled Topso	il to W-6		
te:	Lorencito	Canyo	on Mine	Pe	rmit Action: _	RN5	Permit/Jo	b#: <u>C1996084</u>
PR	OJECT I	IDENT	TIFICAT	<u>ION</u>				
	Task #:	018		State:	Colorado		Abbreviation:	None
	Date:	6/23/2	2022	County:	Las Animas		Filename:	A
	User:	CJD		_				
	Age	ncy or o	organizatio	n name: DI	RMS			
	C	,	C					
НО	URLY E	EOUIP	MENT C	OST				
	Basic Mac							
-	Horsep	-	Cat D9T 405	- 930				
	Blade 7	-	Semi-Un	iversal				
	Attach	• •	3-shank r					
	Shift I		1 per day					
	Data Sc	_	(CRG)					
Con	t Desaltda	-						
Cos	t Breakdo	<u>wii</u> :			1	<u>Utilization %</u>		
0	wnership	Cost/He	our:		\$126.01	NA		
	Operating				\$141.41	100		
		Ripper o						
		Cost/H			\$19.26	NA		
R	Sipper op.	Cost/He	our:		\$0.00	0		
	Operator	Cost/He	our:		\$41.30	NA		
То	otal unit C	ost/Hou	ır: \$32	7.98				
To	otal Fleet (Cost/Ho		5.96		<u> </u>		

MATERIAL QUANTITIES

Initial Volume: 1,400
Swell factor: 1.125

Loose volume: 1,575 LCY

Source of estimated volume: Table 2.05.4-1f
Source of estimated swell Cat Handbook

factor:

HOURLY PRODUCTION

Average push distance: 75 feet

Unadjusted hourly 1,514.3 LCY/hr

production:

Materials consistency

description:

Consolidated stockpile 1.0

Source

Average push

0 %

gradient:

Average site altitude: 7,100 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

Job Condition Correction Factor

Operator Skill: 0.750 (AVG.) Material consistency: 1.000 (CAT HB) 1.000 Dozing method: (GEN.) Visibility: 1.000 (AVG.) Job efficiency: 0.830 (1 SHIFT/DAY) 0.600 (FND-SF) Spoil pile: Push gradient: 1.000 (CAT HB) Altitude: 1.000 (CAT HB) Material Weight: 0.902 (CAT HB) Blade type: 1.000 (PAT)

Net correction: 0.3369

Adjusted unit production: 510.17 LCY/hr

Adjusted fleet production:

1020.34 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.643/LCY

Total job time: 1.54 Hours
Total job cost: \$1,013

		<u>I</u>	BULLDOZE	ER WORK		
Task description:	Repla	ice Topsoil	from Upslop	e Area to W-6		
Site: Lorencito Can	yon Mine	Pe	rmit Action:	RN5	Permit/Jo	b#: C1996084
PROJECT IDEN	NTIFICATIO	N				
Task #: 019 Date: 6/23 User: CJE	3/2022	State: County:	Colorado Las Animas	3	Abbreviation: Filename:	None A
	r organization n		RMS			
HOURLY EQUI		<u>_</u>				
Basic Machine:		SU				
Horsepower:						
Blade Type:						
Attachment:		er				
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown:						
				<u>Utilization %</u>		
Ownership Cost/	Hour:		\$126.01	NA		
Operating Cost/	Hour:		\$141.41	100		
Ripper Cost/			\$19.26	NA	·	
Ripper op. Cost/	Hour:		\$0.00	0		

Operator Cost/Ho		\$41.30	NA
-	-		IVA
Total unit Cost/Hour			_
Total Fleet Cost/Hor	ur: \$655	.96	<u> </u>
MATERIAL QUA	<u>NTITIES</u>		
	700		
	1.250		
Loose volume:	875 LCY		
Source of estimated Source of estimated factor:		Table 2.05.4-1f Cat Handbook	
HOURLY PRODU	CTION		
Average push distan	ce:	75 feet	
Unadjusted hourly		1,514.3 LCY/hr	
production:			<u></u>
Materials consistence description:	ry	Consolidated stockpile	e 1.0
Average push gradient: Average site altitude	0 % 	0 feet	
Material weight:	·	0 lbs/LCY	
Weight description:	Eartl	ı - Dry packed	
Job Condition Correct	ion Factor		<u>Source</u>
	tor Skill:	0.750	(AVG.)
Material cor		1.000	(CAT HB)
	g method: Visibility:	1.000	(GEN.)
	fficiency:	1.000 0.830	(AVG.) (1 SHIFT/DAY)
	spoil pile:	0.600	(FND-SF)
	gradient:	1.000	(CAT HB)
	Altitude:		
	-	1.000	(CAT HB)
	l Weight:	0.902	(CAT HB)
ВІ	ade type:	1.000	(PAT)
Net co	orrection:	0.3369	
Adjusted unit production:	51	0.17 LCY/hr	
Adjusted fleet production:	10	20.34 LCY/hr	
JOB TIME AND O	COST		

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.643/LCY

Total job time: 0.86 Hours
Total job cost: \$563

TRUCK/LOADER TEAM WORK

e: Lorenci	to Canyon Mine	Pern	nit Action: RN5	Permit/Jo	ob#: <u>C1996084</u>
PROJECT	TIDENTIFICAT	<u>ION</u>			
Task #:	020	State:	Colorado	Abbreviation:	None
Date:	6/23/2022	County:	Las Animas	Filename:	A
User:	CJD				
HOURLY	EQUIPMENT C	COST		Shift basis: 1 per da	a <u>y</u>
			Equipment Description		
	Truck Loade	r Team -Truck:	Cat 773F		
		-Loader:	CAT 990H high lift		
Support Equipment -Load Area:			Cat D9T - 9SU		_
		-Dump Area:	Cat D9T - 9SU		<u> </u>
	Road Maintenance -	-Motor Grader:	CAT 14M	·	
		-Water Truck:	Water Tanker 5 000 Gal		

Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Maintena	nce Equipment
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	50	100	25	25
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$110.53	\$70.71	\$141.41	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$267.65	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,010.24	Support:	\$552.48	Maint:	\$194.52

Total work team cost/hour: \$1,757.24

MATERIAL QUANTITIES

Initial volume: 700 CCY Swell factor: 1.125

Loose volume: **788** LCY

Source of estimated volume: Table 2.05.4-1f

Source of estimated swell factor: Cat Handbook

Material Purchase Cost: \$0.00

Total Cost: \$0.00

HOURLY PRODUCTION

Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA Rated Capacity: LCY (heaped) 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) 0.830 Job Efficiency: 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver):

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:

penetration 5.0

Road Condition: Rutted dirt, little maintenance, no water, 2" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3600.00	3.00	5.00	8.00	1023	3.576

Haul Time:	3.576	minutes
------------	-------	---------

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3600.00	-3.00	5.00	2.00	3569	1.193

Return Time:	1.193	minutes
Total Truck Cycle Time:	8.319	minutes

Look	lina	Tool	111011
Loac	шц	1001	um

Production	964.29	LCY/Hour	Adjusted for job efficiency:	800.36	LCY/Hour
Truck Unit Production	283.99	LCY/Hour	Adjusted for job efficiency:	235.71	LCY/Hour
Optimal No. of Trucks:	3	Truck(s)	Selected Number of Trucks:	3	Truck(s)

Adjusted hourly truck team production:	707.13	LCY/Hour
Adjusted single truck/loader team production:	707.13	LCY/Hour
Adjusted multiple truck/loader team production:	707.13	LCY/Hour

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	1.11	Hours
Unit cost:	\$2.485	_ /LCY	Total job cost:	\$1,957	

e: Lorencito Canyon M			oil to N-2		
	Iine	Permit Action:	RN5	Permit/Jo	b#: <u>C1996084</u>
PROJECT IDENTIF	ICATION	<u>[</u>			
Task #: 021		State: Colorado		Abbreviation:	None
Date: 6/23/2022	,	County: Las Anima	S	Filename:	A
User: CJD					
Agency or organ	nization na	me: DRMS			
HOURLY EQUIPME	ENT COS	<u>r</u>			
Basic Machine: Ca	t D9T - 9S	IJ			
Horsepower: 40:			· =		
• • • • • • • • • • • • • • • • • • • •	mi-Univers		=		
	shank rippe	<u>r</u>	-		
	per day		-		
	RG)		-		
Cost Breakdown:			<u>Utilization %</u>		
Ownership Cost/Hour:		\$126.01	NA		
Operating Cost/Hour:		\$141.41	100		
Ripper own. Cost/Hour:		\$19.26	NA		
Ripper op. Cost/Hour:		\$11.48	100		
Operator Cost/Hour:		\$41.30	NA		
MATERIAL QUANT Initial Volume: 6,30 Swell factor: 1.12	00 25				
Loose volume: 7 08	RR I CY				
	88 LCY				
Loose volume:	ume:	Table 2.05.4-1f Cat Handbook			
Source of estimated vol Source of estimated swe	ume: _ ell _				
Source of estimated vol Source of estimated swe factor:	ume: _ ell _ 	Cat Handbook			
Source of estimated vol Source of estimated swe factor:	ume:ell				
Source of estimated vol Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly	ume:ell	Cat Handbook 50 feet	ile 1.0		
Source of estimated vol Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description: Average push gradient:	ume:ell	Cat Handbook 50 feet 10.5 LCY/hr Consolidated stockp	ile 1.0		
Source of estimated vol Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description: Average push	ume:ell	Cat Handbook 50 feet 10.5 LCY/hr Consolidated stockp	ile 1.0		
Source of estimated vol Source of estimated swe factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency description: Average push gradient:	ume:ell	Cat Handbook 50 feet 10.5 LCY/hr Consolidated stockp	ile 1.0		

Job Condition Correction Factor		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)
		

Net correction: 0.3369

Adjusted unit production:

Adjusted fleet production:

306.75 LCY/hr

613.5 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$1.107/LCY

Total job time: 11.55 Hours
Total job cost: \$7,843

Task description:	Replace Topsoil	from Upslope Aı	rea to N-2		
e: Lorencito Canyon Mi	ine Pe	rmit Action: RN	5	Permit/Jo	b#: <u>C1996084</u>
PROJECT IDENTIFIC	CATION				
Task #: 022	State:	Colorado		Abbreviation:	None
Date: 6/23/2022	County:	Las Animas		Filename:	A
User: CJD					
Agency or organ	ization name: DR	MS			
HOURLY EQUIPMEN	NT COST				
	D9T - 9SU				
Horsepower: 405	<i>D</i> 71 750				
	ni-Universal				
• • • • • • • • • • • • • • • • • • • •	ank ripper				
	er day				
Data Source: (CR					
Cost Breakdown:	•				
COST DICAKOOWII.			Utilization %		
Ownership Cost/Hour:		\$126.01	NA		
Operating Cost/Hour:		\$141.41	100		
Ripper own.		010.26			
Cost/Hour:		\$19.26	NA		
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour:		\$41.30	NA		
Total unit Cost/Hour:	\$327.98				
Total Fleet Cost/Hour:	\$655.96				
Total Fleet Cost/Hour.	φ055.70				
MATERIAL QUANTI	TIES				
Initial Volume: 6,300)				
Swell factor: 1.250					
	5 LCY	_			
Source of estimated volu					
Source of estimated swel factor:	1 Cat Hand	book			
iuctor.	-				
HOURLY PRODUCT	ION				
Average push distance:	150 feet				
Unadjusted hourly	910.5 LCY/	hr			
production:	510.3 LC 1/	111			
production.					
Materials consistency	Consol	dated stockpile 1.	0		
description:	Collson	autou stockpiic 1.	•		
assoription.					
Average push	0 %				
gradient:					

Average site altitude:	7,100 feet	
Average site attitude.	7,100 1001	

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

Job Condition Correction Factor

Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Source

Net correction: 0.3369

Adjusted unit production:

306.75 LCY/hr

Adjusted fleet production:

613.5 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$1.069/LCY

Total job time: 12.84 Hours
Total job cost: \$8,420

E. Lorencito Canyon Mine Permit Action: RN5 PROJECT IDENTIFICATION Task #: 023		Abbreviation: Filename:	b#: <u>C1996084</u> None A
Task #: 023 State: Colorado Date: 6/23/2022 County: Las Animas User: CJD Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D9T - 9SU Horsepower: 405			
Task #: 023 State: Colorado Date: 6/23/2022 County: Las Animas User: CJD Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D9T - 9SU Horsepower: 405			
Date: 6/23/2022 County: Las Animas User: CJD Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D9T - 9SU Horsepower: 405			
Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D9T - 9SU Horsepower: 405			
HOURLY EQUIPMENT COST Basic Machine: Cat D9T - 9SU Horsepower: 405			
Basic Machine: Cat D9T - 9SU Horsepower: 405			
Horsepower: 405			
Horsepower: 405			
Blade Type: Semi-Universal			
ziace Type:			
Attachment: 3-shank ripper			
Shift Basis: 1 per day			
Data Source: (CRG)			
Cost Breakdown:			
<u>U</u> 1	ilization %		
Ownership Cost/Hour: \$126.01	NA		
Operating Cost/Hour: \$141.41	100		
Ripper own. \$19.26	NA		
Cost/Hour:			
Ripper op. Cost/Hour: \$0.00	0		
Operator Cost/Hour: \$41.30	NA		
Total unit Cost/Hour: \$327.98			
Total Fleet Cost/Hour: \$655.96			
40000			
MATERIAL QUANTITIES			
Initial Volume: 890			
Swell factor: 1.125			
Loose volume: 1,001 LCY			
Source of estimated volume: Table 2.05.4-1f			
Source of estimated swell Cat Handbook factor:			
HOURLY PRODUCTION			
Average push distance: 75 feet			
Unadjusted hourly 1,514.3 LCY/hr production:			

Materials consistency

Consolidated stockpile 1.0

description:

Average push

0 %

gradient:

Average site altitude: 7,100 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

Job Condition Correction Factor

 Operator Skill:
 0.750
 (AVG.)

 Material consistency:
 1.000
 (CAT HB)

 Dozing method:
 1.000
 (GEN.)

 Visibility:
 1.000
 (AVG.)

 Job efficiency:
 0.830
 (1 SHIFT/DAY)

Source

 Spoil pile:
 0.600
 (FND-SF)

 Push gradient:
 1.000
 (CAT HB)

Altitude: 1.000 (CAT HB)

Material Weight: 0.902 (CAT HB)

Blade type: 1.000 (PAT)

Net correction: 0.3369

Adjusted unit 510.17 LCY/hr

production:
Adjusted fleet production:

1020.34 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.643/LCY

Total job time: 0.98 Hours
Total job cost: \$644

Lorencito Canyo	on Mine	Permit Action:	RN5	Permit/Jo	b#: <u>C1996084</u>
PROJECT IDENT	TIFICATION OF THE PROPERTY OF	<u>ON</u>			
Task #: 024		State: Colorado		Abbreviation:	None
Date: 6/23/2	2022	County: Las Animas		Filename:	A
User: CJD					
Agency or o	organization	name: DRMS			
HOURLY EQUIP	MENT CO	<u>OST</u>			
Basic Machine:	Cat D9T -	9SU			
Horsepower:	405				
Blade Type:	Semi-Univ				
Attachment:	3-shank rip	pper			
Shift Basis: Data Source:	1 per day				
·-	(CRG)				
Cost Breakdown:		1	TT:'1' .' 0/		
Ownership Cost/Ho	2114.	\$126.01	<u>Utilization %</u> NA		
Operating Cost/He		\$120.01	100		
Ripper o					
Cost/He		\$19.26	NA		
Ripper op. Cost/He	our:	\$0.00	0		
Operator Cost/He	our:	\$41.30	NA		
Total unit Cost/Hou	ır: \$327.	98			
Total Fleet Cost/Ho					
	-				
MATERIAL QUA	NTITIES				
Initial Volume:	480				
Swell factor:	1.250				
Loose volume:	600 LCY				
Source of estimated	volume:	Table 2.05.4-1f			
Source of estimated		Cat Handbook			
factor:					

HOURLY PRODUCTION

Average push distance: 75 feet

Unadjusted hourly

production:

1,514.3 LCY/hr

Materials consistency

description:

Consolidated stockpile 1.0

Average push

gradient:

-5 %

Average site altitude:

7,100 feet

Material weight:

2,550 lbs/LCY

Weight description:

Earth - Dry packed

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.115	(CAT HB)

1.000 (CAT HB) Altitude: Material Weight: 0.902 (CAT HB) Blade type: 1.000 (PAT)

Net correction: 0.3756

Adjusted unit 568.77 LCY/hr production:

Adjusted fleet 1137.54 LCY/hr production:

JOB TIME AND COST

Fleet size: 2 Dozer(s) Unit cost: \$0.577/LCY

Total job time: **0.53** Hours Total job cost: \$346

TRUCK/LOADER TEAM WORK

Τ	ask descrip	otion:	Replace Topsoil f	rom Stockp	oile BA#3 to	o S-3			
Site:	Lorencito	o Canyon Min	e Peri	mit Action:	RN5		Permit/Jo	b#: C1996084	
<u>Pl</u>	ROJECT	IDENTIFIC	<u>ATION</u>						
	Task #:	025	State:	Colorado			Abbreviation:	None	
	Date:	6/23/2022	County:	Las Animas	S		Filename:	A	_
	User:	CJD							
<u>H</u>		ency or organiz		MS			Shift basis: 1 per da	<u>ny</u>	
				Equip	ment Descr	ription			
		Truck Lo	ader Team -Truck:	Cat 773F	7				
			-Loader:	CAT 990)H high lift				
		Support Equi	pment -Load Area:	Cat D9T	- 9SU				
			-Dump Area:	Cat D9T	- 9SU				
	R	oad Maintenar	nce –Motor Grader:	CAT 14N	M				
			-Water Truck:	Water Ta	nker, 5,000	Gal.			

Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Maintena	nce Equipment
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	50	100	25	25
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$110.53	\$70.71	\$141.41	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$267.65	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,010.24	Support:	\$552.48	Maint:	\$194.52

Total work team cost/hour: \$1,757.24

MATERIAL QUANTITIES

Initial volume: 480 CCY Swell factor: 1.125	
---	--

Loose volume: 540	LCY
Source of estimated volume:	Table 2.05.4-1f
Source of estimated swell factor:	Cat Handbook
Material Purchase Cost:	\$0.00
Total Cost:	\$0.00

HOURLY PRODUCTION Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,550 Pounds/LCY Description: Earth - Dry packed Rated Payload: Pounds 122,520 Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 **LCY** Adjusted Volume: 46.50 LCY Final Truck Volume Based on Number of Loader Passes: 39.38 LCY **Loading Tool Capacity** Bucket Size Class: NA LCY (heaped) Rated Capacity: 11.250 Bucket Fill Factor: 0.875 Loose material - 1" and over (85 - 90%) 0.875 Adjusted Capacity: 9.844 LCY **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) Job Efficiency: 0.830 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver).

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes
	Net Load Time per Truck:	1.750	minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:

penetration 5.0

Road Condition: Rutted dirt, little maintenance, no water, 2" tire

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2400.00	4.00	5.00	9.00	977	2.516

Haul Time: 2.516 minutes

Return Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2400.00	-4.00	5.00	1.00	3569	0.835

Return Time: 0.835 minutes
Total Truck Cycle Time: 6.901 minutes

Loading Tool unit

Production LCY/Hour Adjusted for job efficiency: 800.36 LCY/Hour 964.29 **Truck Unit Production** 284.14 342.34 LCY/Hour Adjusted for job efficiency: LCY/Hour Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: Truck(s)

Adjusted hourly truck team production: 852.43 LCY/Hour Adjusted single truck/loader team production: 800.36 LCY/Hour Adjusted multiple truck/loader team production: 800.36 LCY/Hour

JOB TIME AND COST

Fleet size:	1	_ Team(s)	Total job time:	0.67	Hours
Unit cost:	\$2.196	/LCY	Total job cost:	\$1,186	_

	Kepi	ace ropson from Stock	pile SSP#2 to N-1		
e: Lorencito Canyon M	ine	Permit Action:	RN5	Permit/Jo	ob#: <u>C1996084</u>
PROJECT IDENTIFI	CATIO	<u>N</u>			
Task #: 026		State: Colorado		Abbreviation:	None
Date: 6/23/2022		County: Las Anima	as	Filename:	A
User: CJD					
Agency or organ	nization r	name: DRMS			
HOURLY EQUIPME	NT CO	<u>ST</u>			
Basic Machine: Cat	D9T - 9	SU			
Horsepower: 405			_		
• • • • • • • • • • • • • • • • • • • •	ni-Unive		_		
	hank ripp	oer	_		
	er day		_		
	RG)		_		
Cost Breakdown:			Utilization %		
Ownership Cost/Hour:		\$126.01	NA		
Operating Cost/Hour:		\$141.41	100		
Ripper own. Cost/Hour:		\$19.26	NA		
Ripper op. Cost/Hour:	-	\$11.48	100		
Operator Cost/Hour:		\$41.30	NA		
MATERIAL QUANT Initial Volume: 3,10 Swell factor: 1.12 Loose volume: 3,48	0				
		T 11 2 0 7 1 1 6			
Source of estimated volu Source of estimated swe factor:		Table 2.05.4-1f Cat Handbook			
HOURLY PRODUCT	ION				
Average push distance:		100 feet			
	_	1,243.2 LCY/hr			
Unadjusted hourly production:	_	1,2 13.2 20 1711			
Unadjusted hourly	_	Consolidated stock	pile 1.0		
Unadjusted hourly production: Materials consistency description: Average push gradient:	0 %	Consolidated stock	pile 1.0		
Unadjusted hourly production: Materials consistency description: Average push	0 %	Consolidated stock	pile 1.0		
Unadjusted hourly production: Materials consistency description: Average push gradient:	7,100	Consolidated stock	pile 1.0		

Job Condition Correction Factor		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3369

Adjusted unit production:

Adjusted fleet production:

418.83 LCY/hr

837.66 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.811/LCY

Total job time: 4.16 Hours
Total job cost: \$2,827

Task description:	Replace Live-Ha	andled Topsoil to) E-2		
te: Lorencito Canyon M	<u>ine</u> Pe	rmit Action: RN	N5	Permit/Joba	#: <u>C1996084</u>
PROJECT IDENTIFI	CATION				
Task #: 027	State:	Colorado		Abbreviation:	None
Date: 6/23/2022	County:	Las Animas		_	A
User: CJD				_	
Agency or organ	nization name: DF	RMS			
HOURLY EQUIPME	NT COST				
•	t D9T - 9SU				
Horsepower: 405					
<u> </u>	ni-Universal				
• • • • • • • • • • • • • • • • • • • •	hank ripper				
	er day				
	RG)				
Cost Breakdown:					
COSt Dieakdowii.			Utilization %		
Ownership Cost/Hour:		\$126.01	NA		
Operating Cost/Hour:	-	\$141.41	100		
Ripper own.		-			
Cost/Hour:		\$19.26	NA		
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour:	-	\$41.30	NA		
-					
Total unit Cost/Hour:	\$327.98				
Total Fleet Cost/Hour:	\$655.96				
MATERIAL QUANT	ITIEC				
	<u> </u>				
Initial Volume: 750 Swell factor: 1.12	5	_			
		_			
Loose volume: 844	LCY	_			
Source of estimated volu	ume: Table 2.0	5.4-1f			
Source of estimated swe	ell Cat Hand	book			
factor:					
HOURLY PRODUCT	<u>'ION</u>				
Average push distance:	75 feet				
Unadjusted hourly	1,514.3 LC	Y/hr			
production:	1,314.3 DC	. ,			
L-10444					
Materials consistency	Consol	idated stockpile 1	.0		
description:	2 3 - 100 1				
r					
Average push	0 %				
gradient:					

A 1,1, 1	7 100 6	
Average site altitude:	7,100 feet	

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

Job Condition Correction Factor

Operator Skill:	0.900	(AB.AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Source

Net correction: 0.4851

Adjusted unit production:
Adjusted fleet production:

734.59 LCY/hr

1469.18 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.446/LCY

Total job time: 0.57 Hours
Total job cost: \$377

T	ask description	n:	Repl	ace Topsoil	from Upslope	Area to E-2		
Site:	Lorencito Ca	anyon]	Mine	Pe	rmit Action: _	RN5	Permit/Jo	ob#: <u>C1996084</u>
PF	ROJECT ID	ENTII	FICATIO	<u>DN</u>				
	Task #: 02	28		State:	Colorado		Abbreviation:	None
		/23/202	2	County:	Las Animas		Filename:	A
		JD	<u> </u>					
	Aganar		anization	nomo: DI	RMS			
	Agency	or org	amzanom	name. Dr	CIVIS			
Н	OURLY EQ	UIPM	ENT CO	ST				
	Basic Machin		at D9T - 9					
	Horsepowe		05	930				
	Blade Typ		emi-Unive	reol				
	Attachmei		-shank rip					
	Shift Basi		per day	pei				
	Data Source		CRG)					
~			JKU)					
<u>Co</u>	st Breakdown:	:			1	TT('1' - 4' 0/		
	0	. 4 /TT			0126.01	<u>Utilization %</u>		
'	Ownership Cos				\$126.01 \$141.41	NA 100		
	Operating Cos				\$141.41	100		
		oer own st/Hour			\$19.26	NA		
	Ripper op. Cos				\$0.00	0		
	Operator Cos				\$41.30			
	Operator Cos	SUTTOUL	•		\$41.30	NA		
	Total unit Cost		\$327.	98				
7	Total Fleet Cos	st/Hour:	\$655.	96		<u> </u>		
\mathbf{M}	<u>ATERIAL (</u>	DUAN	<u>TITIES</u>					
	Initial Volume	e: 75	0					
	Swell factor		250		<u>—</u>			
	Loose volume		8 LCY					
				T 11 0 0				
	Source of estim			Table 2.0				
	Source of estim	iated sv	veii	Cat Hand	BOOK			
1	actor:			-		<u> </u>		
<u>H</u>	OURLY PRO	ODUC	TION					
1	Average push d	listance	.•	75 feet				
	Jnadjusted hou		-	1,514.3 LC	Y/hr			
	oroduction:	· -J		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				

Materials consistency

Average site altitude:

Consolidated stockpile 1.0

description:

Average push

gradient:

dient:

7,100 feet

-5 %

Material weight:

2,550 lbs/LCY

Weight description:

Earth - Dry packed

Job Condition Correction Factor

Operator Skill: 0.750 (AVG.) (CAT HB) Material consistency: 1.000 Dozing method: 1.000 (GEN.) Visibility: (AVG.) 1.000 Job efficiency: 0.830(1 SHIFT/DAY) Spoil pile: 0.600 (FND-SF) Push gradient: 1.115 (CAT HB) Altitude: 1.000 (CAT HB)

Source

Material Weight: 0.902 (CAT HB)

Blade type: 1.000 (PAT)

Net correction: 0.3756

Adjusted unit

production: 568.77 LCY/hr

Adjusted fleet production:

1137.54 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.577/LCY

Total job time: **0.82** Hours

Total job cost: \$541

Lorencito Canyon	Mine P	ermit Action:	RN5	Permit/Jo	b#: <u>C1996084</u>
PROJECT IDENTI	FICATION				
Task #: 029	State:	Colorado		Abbreviation:	None
Date: $6/23/202$ User: CJD	County:	Las Animas	S	Filename:	Α
Agency or org	ganization name:D	RMS			
HOURLY EQUIPM	IENT COST				
	Cat D9T - 9SU				
<u> </u>	105				
	Semi-Universal S-shank ripper				
	per day				
	CRG)				
Cost Breakdown:		1			
O 11 C 4/II		Φ126 O1	<u>Utilization %</u>		
Ownership Cost/Hou		\$126.01 \$141.41	NA 100		
Operating Cost/Hou Ripper own		\$141.41	100		
Cost/Hou		\$19.26	NA		
Ripper op. Cost/Hou		\$0.00	0		
Operator Cost/Hou		\$41.30	NA NA		
Total unit Cost/Hour:	\$327.98	1			
Total Fleet Cost/Hour	\$655.96				
MATERIAL QUAN	<u>TTTTES</u>				
Initial Volume: 90	00				
Swell factor: 1.	125				
Loose volume: 1,	013 LCY				
Source of estimated v	olume: Table 2.	05.4-1f			
Source of estimated s	well Cat Han	dbook		· <u></u>	
factor:					

HOURLY PRODUCTION

Average push distance: 150 feet

Unadjusted hourly production:

910.5 LCY/hr

Materials consistency

description:

Consolidated stockpile 1.0

Average push

gradient:

0 %

Average site altitude:

7,100 feet

Material weight:

2,550 lbs/LCY

Weight description:

Earth - Dry packed

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3369

Adjusted unit

306.75 LCY/hr

production: Adjusted fleet production:

613.5 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost:

\$1.069/LCY

Total job time:

1.65 Hours

Total job cost:

\$1,083

TRUCK/LOADER TEAM WORK

Tas	sk descrip					
te: I	Lorencito	Canyon Mine	e Per	rmit Action: RN5	Permit/Jo	ob#: C1996084
PR(OJECT :	IDENTIFIC	ATION			
,	Task #:	030	State:	Colorado	Abbreviation:	None
	Date:	6/23/2022	County:	Las Animas	Filename:	A
	User:	CJD				
	Age	ency or organiza	ation name: DR	RMS		
НО	C	ency or organiza			Shift basis: 1 per d	a <u>v</u>
<u>HO</u>	C	EQUIPMENT		Equipment Descript		ay
HO	C	EQUIPMENT	<u> </u>	Equipment Descript : Cat 773F		a <u>v</u>
<u>HO</u>	C	EQUIPMENT Truck Loa	F COST ader Team -Truck	Equipment Descript Cat 773F CAT 990H high lift		ay
<u>HO</u>	URLY I	Truck Loa Support Equip	T COST ader Team -Truck: -Loader: oment -Load Area: -Dump Area:	Equipment Descript Cat 773F CAT 990H high lift Cat D9T - 9SU Cat D9T - 9SU		ay
<u>HO</u>	URLY I	Truck Loa Support Equip	T COST ader Team -Truck -Loader oment -Load Area	Equipment Descript Cat 773F CAT 990H high lift Cat D9T - 9SU Cat D9T - 9SU CAT 14M	ion	ay

Cost Breakdown:	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor	Water Truck
					Grader	
%Utilization-machine:	100	100	50	100	25	25
Ownership cost/hour:	\$122.05	\$116.41	\$126.01	\$126.01	\$85.80	\$33.45
Operating cost/hour:	\$92.14	\$110.53	\$70.71	\$141.41	\$15.10	\$10.49
%Utilization-riper:	NA	0	50	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$19.26	\$19.26	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$5.74	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$33.34	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$247.53	\$267.65	\$243.76	\$308.72	\$129.46	\$65.06
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,010.24	Support:	\$552.48	Maint:	\$194.52

Total work team cost/hour: \$1,757.24

MATERIAL QUANTITIES

Initial volume: 900 CCY Swell factor: 1.125

Loose volume: ______ LCY

Source of estimated volume: Table 2.05.4-1f

Source of estimated swell factor: Cat Handbook
Material Purchase Cost: \$0.00

rchase Cost: \$0.00 Total Cost: \$0.00

HOURLY PRODUCTION Truck Capacity: Truck Payload (weight) Basis: Material weight: Pounds/LCY 2,550 Description: Earth - Dry packed Rated Payload: 122,520 Pounds Payload Capacity: 48.05 LCY Truck Bed (volume) Basis: Struck Volume: 35.00 **LCY** Heaped Volume: 46.50 LCY Average Volume: 40.75 LCY Adjusted Volume: 46.50 **LCY** Final Truck Volume Based on Number of Loader Passes: 39.38 LCY Loading Tool Capacity Bucket Size Class: NA Rated Capacity: LCY (heaped) 11.250 Bucket Fill Factor: Loose material - 1" and over (85 - 90%) 0.875 0.875 Adjusted Capacity: 9.844 **Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) Job Efficiency: 0.830 0.830 (CAT HB) Net Correction: 0.830 0.830 **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes Truck: Excavators and Front Shovels: Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes 0.600 maneuver):

	-		
Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.050	minutes
	Adjusted Loader Cycle Time:	0.550	minutes

Adjusted Loader Cycle Time: 0.550 minutes

Net Load Time per Truck: 1.750 minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.750	Minutes	Adjusted for site altitude:	1.750	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

<u>Truck Travel (Haul & Return) Time:</u> penetration 5.0

Road Condition: Rutted dirt, little maintenance, no water, 2" tire

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2800.00	-5.00	5.00	0.00	3569	1.108

				Haul Time:	1.108	minutes
Return Rou	ıte:					
Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2800.00	5.00	5.00	10.00	1819	1.621

Return Time:	1.621	minutes
Total Truck Cycle Time:	6.279	minutes

		Adjusted hou	urly truck team production:	936.87	LCY/Ho	our
Optimal No. of Trucks:	3	Truck(s)	Selected Number of Tr	ucks:	3	Truck(s)
Truck Unit Production	376.25	LCY/Hour	Adjusted for job effici	ency:	312.29	LCY/Hou
Loading Tool unit Production Truck Unit Production	964.29	LCY/Hour	Adjusted for job effici	ency:	800.36	LCY/Hou

Adjusted hourly truck team production:	936.87	LCY/Hour
Adjusted single truck/loader team production:	800.36	LCY/Hour
Adjusted multiple truck/loader team production:	800.36	LCY/Hour

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	1.27	Hours
Unit cost:	\$2.196	_ /LCY	Total job cost:	\$2,223	

Task description:	Replace Topsoil	from Upslope A	Area to BA#1		
Lorencito Canyon M	<u>fline</u> Per	rmit Action: R	N5	Permit/Jo	b#: <u>C1996084</u>
PROJECT IDENTIF	<u>ICATION</u>				
Task #: 031 Date: 6/23/2022 User: CJD	State: County:	Colorado Las Animas		Abbreviation: Filename:	None A
Agency or orga	nization name:DR	MS			
HOURLY EQUIPME	ENT COST				
	at D9T - 9SU				
Horsepower: 40					
	mi-Universal				
	shank ripper				
	per day				
Data Source: (C	RG)				
Cost Breakdown:		1	Hiliantian 0/		
Ownership Cost/Hour:		\$126.01	<u>Utilization %</u> NA		
Operating Cost/Hour:		\$141.41	100	<u></u>	
Ripper own. Cost/Hour:		\$19.26	NA		
Ripper op. Cost/Hour:		\$11.48	100		
Operator Cost/Hour:		\$41.30	NA		
MATERIAL QUANT Initial Volume:1,03	80	_			
Swell factor: 1.2.2 Loose volume: 1,3	50 50 LCY	_			
Source of estimated vol Source of estimated swe factor:			_		
HOURLY PRODUC	<u> FION</u>				
Average push distance: Unadjusted hourly production:	100 feet 1,243.2 LC	Y/hr	-		
Materials consistency description:	Consol	idated stockpile	1.0		
Average push gradient:	-5 %				
Average site altitude:	7,100 feet				
Material weight:	2,550 lbs/LCY				
Weight description:	Earth - Dry packe	1			

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	0.800	(POOR)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3005

Adjusted unit production:

Adjusted fleet production:

373.58 LCY/hr

747.16 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$0.909/LCY

Total job time: 1.81 Hours
Total job cost: \$1,227

Task description: Re	place Topsoil from Upsl	lope Area to BA#2		
: Lorencito Canyon Mine	Permit Action	n: RN5	Permit/Job	#: <u>C1996084</u>
PROJECT IDENTIFICAT	ION			
Task #: 032	State: Colorado			None
Date: 6/23/2022	County: Las Anin	nas	Filename: _	A
User: CJD				
Agency or organization	n name: DRMS			
HOURLY EQUIPMENT C	<u>OST</u>			
Basic Machine: Cat D9T	- 9SU			
Horsepower: 405				
Blade Type: Semi-Uni	versal			
Attachment: 3-shank r	ipper			
Shift Basis: 1 per day	•			
Data Source: (CRG)				
Cost Breakdown:				
Overnanskin Cast/Haven	¢126.01	<u>Utilization %</u>		
Ownership Cost/Hour:	\$126.01 \$141.41	NA 100		
Operating Cost/Hour:	\$141.41	100		
Ripper own. Cost/Hour:	\$19.26	NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$41.30	NA		
	•	IVA		
Total unit Cost/Hour: \$32				
Total Fleet Cost/Hour: \$65	5.96			
MATERIAL QUANTITIES	2			
	<u>2</u>			
Initial Volume: 1,290				
Swell factor: 1.250				
Loose volume: 1,613 LCY				
Source of estimated volume:	Table 2.05.4-1f			
Source of estimated swell	Cat Handbook			
factor:				
	-			
HOURLY PRODUCTION				
Average push distance:	100 feet			
Unadjusted hourly production:	1,243.2 LCY/hr			
Materials consistency description:	Consolidated stoc	kpile 1.0		
Average push -5 %	,)			

Average site altitude: 7,100 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

Job Condition Correction Factor

Source (AVG.) Operator Skill: 0.750 1.000 (CAT HB) Material consistency: Dozing method: 1.000 (GEN.) Visibility: 1.000 (AVG.) Job efficiency: (1 SHIFT/DAY) 0.830Spoil pile: 0.600 (FND-SF) Push gradient: 1.115 (CAT HB) Altitude: 1.000 (CAT HB) Material Weight: 0.902 (CAT HB)

1.000

(PAT)

Net correction: 0.3756

Blade type:

Adjusted unit 466.95 LCY/hr production:

Adjusted fleet 933.9 LCY/hr production:

JOB TIME AND COST

Fleet size: 2 Dozer(s) \$0.702/LCY Unit cost:

Total job time: **1.73** Hours Total job cost: \$1,133

Task description:l	Replace Topsoil from Upslope	e Area to BA#3		
e: Lorencito Canyon Mine	Permit Action:	RN5	Permit/Job#: C1996	084
PROJECT IDENTIFICA	TION			
Task #: 033	State: Colorado		Abbreviation: None	
Date: 6/23/2022	County: Las Animas	-	Filename: A	
User: CJD	<u> </u>			
Agency or organizat	ion name: DRMS			
HOURLY EQUIPMENT	COST			
Basic Machine: Cat D9	T - 9SU			
Horsepower: 405				
Blade Type: Semi-U	Universal			
Attachment: 3-shanl	k ripper			
Shift Basis: 1 per d	ay			
Data Source: (CRG)				
<u>Cost Breakdown</u> :	I	Utilization %		
Ownership Cost/Hour:	\$126.01	NA		
Operating Cost/Hour:	\$141.41	100		
Ripper own.				
Cost/Hour:	\$19.26	NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$41.30	NA		
Total unit Cost/Hour: \$3	327.98			
Total Fleet Cost/Hour: \$6	655.96			
		<u> </u>		
MATERIAL QUANTITI	<u>ES</u>			
Initial Volume: 2,900				
Swell factor: 1.250				
Loose volume: 3,625 Lo	<u>UY</u>			
Source of estimated volume	: Table 2.05.4-1f			
Source of estimated swell factor:	Cat Handbook			
HOURLY PRODUCTIO	<u>N</u>			
Average push distance:	100 feet			
Unadjusted hourly production:	1,243.2 LCY/hr	_		

Materials consistency

description:

Consolidated stockpile 1.0

Average push

gradient:

-5 %

Average site altitude:

7,100 feet

Material weight:

2,550 lbs/LCY

Weight description:

Earth - Dry packed

Job	Condition	Correction	Factor

	Source
0.900	(AB.AVG.)
1.000	(CAT HB)
1.000	(GEN.)
1.000	(AVG.)
0.830	(1 SHIFT/DAY)
0.600	(FND-SF)
1.115	(CAT HB)
1.000	(CAT HB)
0.902	(CAT HB)
1.000	(PAT)
	0.900 1.000 1.000 1.000 0.830 0.600 1.115 1.000 0.902

Net correction: 0.4508

Adjusted unit production:

560.43 LCY/hr

Adjusted fleet production:

1120.86 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.585/LCY

Total job time: **3.23** Hours

Total job cost: \$2,121

Lorencito Canyon	n Mine Pe	ermit Action:	RN5	Permit/Jo	b#: <u>C199608</u> 4
PROJECT IDENT	<u>IFICATION</u>				
Task #: 034	State:	Colorado		Abbreviation:	None
Date: 6/23/20	O22 County:	Las Animas	S	Filename:	A
User: CJD					
Agency or or	rganization name:Dl	RMS			
HOURLY EQUIPN	MENT COST				
	Cat D9T - 9SU				
Horsepower:	405				
Blade Type:	Semi-Universal				
Attachment:	3-shank ripper				
Shift Basis:	1 per day				
Data Source:	(CRG)				
Cost Breakdown:					
			<u>Utilization %</u>		
Ownership Cost/Hor		\$126.01	NA		
Operating Cost/Ho		\$141.41	100		
Ripper ov Cost/Ho		\$19.26	NA		
Ripper op. Cost/Ho	· · ·	\$0.00	0		
Operator Cost/Ho		\$41.30	NA		
•		Ψ1.50	NA		
Total unit Cost/Hour					
Total Fleet Cost/Hou	ır: \$655.96				
MATERIAL QUA	NTITIES				
	5,916				
Swell factor:	1.250 7,395 LCY				

HOURLY PRODUCTION

Average push distance: 300 feet Unadjusted hourly 437.8 LCY/hr production: Materials consistency Consolidated stockpile 1.0 description: Average push 0 % gradient: 7,100 feet Average site altitude: Material weight: 2,550 lbs/LCY Weight description: Earth - Dry packed Job Condition Correction Factor Source Operator Skill: 0.750 (AVG.) Material consistency: 1.000 (CAT HB) Dozing method: 1.000 (GEN.) Visibility: 1.000 (AVG.) Job efficiency: 0.830(1 SHIFT/DAY) Spoil pile: 1.000 (DOZ-OC) Push gradient: 1.000 (CAT HB) Altitude: 1.000 (CAT HB) Material Weight: 0.902 (CAT HB) Blade type: 1.000 (PAT)

Net correction: 0.5615

Adjusted unit production:
Adjusted fleet production:

245.82 LCY/hr

491.64 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$1.334/LCY

ψ1.554/LC1

Total job time: Total job cost: 15.04 Hours \$9,867

BOREHOLE SEALING WORK

ite: Le	orencito Canyon Mine	Permit A	action: RN5	Pe	rmit/Job#:	C1996084
PR	OJECT IDENTIFIC	<u>CATION</u>				
	Task 040 #:	State: Colo	orado	Abbreviation:	None	
	Date: 6/23/2022 User: JLE	County: Las	Animas	Filename:	A	

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Plug and Seal 8" Holes (1)	Portland cement grout (Bag, material cost only94 lb. bag)	8"	25	4.30	bag	\$19.95	\$85.79
Borehole Plug	PVC plug - 8 in. diameter borehole	8"	NA	1.00	EA	\$84.15	\$84.15
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$37.50	\$37.50
Drill Rig and Labor	SCHRAMM T145EX	NA	NA	1.00	EA	\$486.70	\$486.70
Water Truck	Water Tanker, 2,500 Gal.	NA	NA	1.00	EA	\$29.70	\$29.70
Plug and Seal 6" Holes (9)	Portland cement grout (Bag, material cost only94 lb. bag)	6"	209	20.00	bag	\$19.95	\$399.00
Borehole Plug	PVC plug - 6 in. diameter borehole	6"	NA	9.00	EA	\$61.43	\$552.87
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	9.00	EA	\$37.50	\$337.50
Drill Rig and Labor	SCHRAMM T145EX	NA	NA	9.00	EA	\$486.70	\$4,380.30

Water Truck	Water Tanker, 2,500	NA	NA	9.00	EA	\$29.70	\$267.30
	Gal.				127.1	·	
Seal All 4" Holes (17)	Portland cement grout (Bag, material cost only94 lb. bag)	4"	4231	184.00	bag	\$19.95	\$3,670.80
Borehole Plug	PVC plug - 4 in. diameter borehole	4"	NA	17.00	EA	\$33.98	\$577.66
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	17.00	EA	\$37.50	\$637.50
Drill Rig and Labor	SCHRAMM T145EX	NA	NA	17.00	EA	\$486.70	\$8,273.90
Water Truck	Water Tanker, 2,500 Gal.	NA	NA	17.00	EA	\$29.70	\$504.90
Plug and Seal 8" Holes (1)	Portland cement grout (Bag, material cost only94 lb. bag)	8"	25	4.30	bag	\$19.95	\$85.79
Borehole Plug	PVC plug - 8 in. diameter borehole	8"	NA	1.00	EA	\$84.15	\$84.15
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$37.50	\$37.50
Drill Rig and Labor	SCHRAMM T145EX	NA	NA	1.00	EA	\$486.70	\$486.70
Water Truck	Water Tanker, 2,500 Gal.	NA	NA	1.00	EA	\$29.70	\$29.70
Plug and Seal 6" Holes (9)	Portland cement grout (Bag, material cost only94 lb. bag)	6"	209	20.00	bag	\$19.95	\$399.00
Borehole Plug	PVC plug - 6 in. diameter borehole	6"	NA	9.00	EA	\$61.43	\$552.87
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	9.00	EA	\$37.50	\$337.50
Drill Rig and Labor	SCHRAMM T145EX	NA	NA	9.00	EA	\$486.70	\$4,380.30
Water Truck	Water Tanker, 2,500 Gal.	NA	NA	9.00	EA	\$29.70	\$267.30
Seal All 4" Holes (17)	Portland cement grout (Bag, material cost only94 lb. bag)	4"	4231	184.00	bag	\$19.95	\$3,670.80
Borehole Plug	PVC plug - 4 in. diameter borehole	4"	NA	17.00	EA	\$33.98	\$577.66
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	17.00	EA	\$37.50	\$637.50
Drill Rig and Labor	SCHRAMM T145EX	NA	NA	17.00	EA	\$486.70	\$8,273.90
Water Truck	Water Tanker, 2,500 Gal.	NA	NA	17.00	EA	\$29.70	\$504.90
TR21 Corehole - Seal	Portland cement grout (Bag, material cost only94 lb. bag)	5	610	103.00	bag	\$19.95	\$2,054.85

TR 21	PVC plug - 6 in.	5	610	1.00	EA	\$61.43	\$61.43
Borehole	diameter borehole						
Plug							
TR21 Marker	Borehole	NA	NA	1.00	EA	\$37.50	\$37.50
	location/identification						
	marker (EA, material						
	cost only)						
TR21 Drill	SCHRAMM T145EX	NA	NA	6.30	EA	\$592.00	\$3,729.60
Rig							
TR21 Water	Water Tanker, 5,000	NA	NA	6.30	EA	\$96.53	\$608.14
Truck	Gal.						
TR21 Pad	Cat D9T - 9SU	NA	NA	3.00	EA	\$339.46	\$1,018.38
regrade							

Job Hours: 33.30 Total Cost: \$48,161.00	Job Hours:	33.30	Total Cost:	\$48,161.00
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REVEGETATION WORK

Task desc	ription:	Broadcast Seedin	g Mine Site	2			
Site: Lorenc	ito Canyon Mir	ne Perr	nit Action:	RN5	Permit/Jo	ob#:	C1996084
PROJEC'	Γ IDENTIFIC	CATION					
Task # Date	6/23/2022		Colorado Las Anima	S	Abbreviation: Filename:	N A	one
User	E CJD gency or organiz	 zation name: DRM	AS.				

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	250.00	pound	\$0.37	\$92.50
				\$92.50

Total Fertilizer	
Materials	
Cost/Acre	

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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.56
Total Tilling Cost/Acre	\$114.56

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	0.96	8.57	\$11.04
Blue Grama - Native	0.40	6.53	\$5.49
Little Bluestem - Native	0.56	3.34	\$7.60
Sideoats Grama - Butte	0.64	2.10	\$5.76
Orchardgrass - Shawnee	1.50	18.60	\$4.65
Alfalfa - Ranger (inoculated)	1.60	7.71	\$4.08
Sheep Fescue - Covar	0.48	7.49	\$2.93
Milk Vetch, Cicer - Monarch	1.50	4.99	\$12.30
Mahogany, Mountain	1.20	1.63	\$44.17
Western Wheatgrass - Arriba	6.00	15.15	\$39.00
Needlegrass, Green - Lodorm	2.00	8.31	\$23.55
Saltbush, Four Wing	0.80	1.10	\$10.00
Winter Fat	1.60	4.08	\$32.80
Penstemon, Rocky Mountain	0.50	7.84	\$14.75
Totals Seed Mix	19.74	97.44	\$218.11

Application

Description		Cost /Acre
Broadcast seeding [DMG]		\$267.22
Tot	al Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description	Cost /Acre	

Crimping, with tractor {DMG survey data}		\$71.57
Power mulcher (MEANS 32 91 13.16 0350)		\$106.29
	Total Mulch Application Cost/Acre	\$177.86

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:	84	Cost /Acre:	\$1,523.06
Estimated Failure Rate:	50%	Cost /Acre*:	\$1,523.06
*Selected Replanting Work Items:	FERTILIZING,TILLING,SEEDING,MU		
	LCHING		

Initial Job Cost: \$127,937.04

Reseeding Job Cost: \$63,968.52

Total Job Cost: \$191,906

126.00

REVEGETATION WORK

Lorenci	to Canyon Mine	Pe Pe	rmit Action:	RN5	Permit/Jol	o#: <u>C1996084</u>
ROJECT	T IDENTIFICA	ATION				
Task #:	051	State:	Colorado		Abbreviation:	None
Date:	6/23/2022	County:	Las Animas		Filename:	A
User:	CJD					
ERTILIZ	<u>ZING</u>					
aterials						
aterials Descript	tion		Unit Acre	TT *4	Cost / Unit	Cost /Acre
	tion 18-46-0, 5-10-5			Unit	Cost / Unit \$0.37	Cost /Acre \$92.50

\$92.50

Cost/Acre

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
Switchgrass - Blackwell	0.96	8.57	\$11.04
Blue Grama - Native	0.40	6.53	\$5.49
Little Bluestem - Native	0.56	3.34	\$7.60
Sideoats Grama - Butte	0.64	2.10	\$5.76
Orchardgrass - Shawnee	1.50	18.60	\$4.65
Alfalfa - Ranger (inoculated)	1.60	7.71	\$4.08
Sheep Fescue - Covar	0.48	7.49	\$2.93
Milk Vetch, Cicer - Monarch	1.50	4.99	\$12.30
Mahogany, Mountain	1.20	1.63	\$44.17
Western Wheatgrass - Arriba	6.00	15.15	\$39.00
Needlegrass, Green - Lodorm	2.00	8.31	\$23.55
Saltbush, Four Wing	0.80	1.10	\$10.00
Winter Fat	1.60	4.08	\$32.80
Penstemon, Rocky Mountain	0.50	7.84	\$14.75
Totals Seed Mix	19.74	97.44	\$218.11

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
Hydromulch tackifier, >15 ac. {Materials Only}	1.00	ACRE	\$424.71	\$424.71
Hydromulch, 1 ton/ac. rate {Materials Only}	1.00	ACRE	\$424.71	\$424.71
Total Mulch Materials Cost/Acre				\$849.42

A	pplication	

Description		Cost /Acre
NA-mulch application incl. with hydroseeding		\$0.00
	Total Mulch Application Cost/Acre	\$0.00

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:	18	Cost /Acre:	\$2,164.53
Estimated Failure Rate:	50%	Cost /Acre*:	\$2,164.53
*Selected Replanting Work Items:	FERTILIZING,SE		

Initial Job Cost: \$38,961.54

Reseeding Job Cost: \$19,480.77

Total Job Cost: \$58,442

16.00

REVEGETATION WORK

Т	Task descrip	otion:	Fertilize Mine S	Fertilize Mine Site During Year 2					
Site:	ite: Lorencito Canyon Min		Permit Action: RN5			Permit/.	Permit/Job#: C1996084		
<u>Pl</u>	ROJECT	IDENTIFIC	CATION						
	Task #:	052	State:	Colorado		Abbreviation:	None		
	Date:	6/23/2022	County:	County: Las Animas		Filename	A		
	User:	CJD							
Agency or organization name: DRMS FERTILIZING Materials									
	Descripti	on		Units Acre	/ Unit	Cost / Unit	Cost /Acre		
	10-34-0, 1	18-46-0, 5-10-	5	250.00) poun	d \$0.37	\$92.50		

Total Fertilizer Materials Cost/Acre

\$92.50

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
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

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	Cost /Acre
	\$
Total Mulch Application Cost/Acre	\$0.00

NURSERY STOCK PLANTING

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

Totals Nursery	y Stock Cost / Acre	\$0.00

JOB TIME AND COST

No. of Acres:	84	Cost /Acre:	\$131.27
Estimated Failure Rate:	0%	Cost /Acre*:	\$131.27
*Selected Replanting Work Items:	FERTILIZING		

Initial Job Cost:
Reseeding Job Cost:
Total Job Cost:
Job Hours:

\$11,026.68

\$0.00

\$11,027

84.00

REVEGETATION WORK

Task descrip	otion:	Fertilize Mine S	ite During Y	ear 3			
Site: Lorencit	o Canyon Min	e Pe	rmit Action:	RN5	Permit/Jo	b#: <u>C1996084</u>	
PROJECT Task #:	IDENTIFIC	ATION State:	Colorado		Abbreviation:	None	
Date:	6/23/2022 CJD	County:	Las Animas	S	Filename:	A	
Age	ency or organiz	ation name: DI	RMS				

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	250.00	pound	\$0.37 Total Fertilizer Materials	\$92.50
			Cost/Acre	\$92.50

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
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre
	\$
Total Seed Application Cost/Ac	re \$0.00

MULCHING and MISCELLANEOUS

Materials

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

Application

Description	Cost /Acre
	\$
Total Mulch Application Cost/Acre	\$0.00

NURSERY STOCK PLANTING

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

Totals Nurser	y Stock Cost / Acre	\$0.00

JOB TIME AND COST

No. of Acres:	84	Cost /Acre:	\$131.27
Estimated Failure Rate:	0%	Cost /Acre*:	\$131.27
*Selected Replanting Work Items:	FERTILIZING		

Initial Job Cost:
Reseeding Job Cost:
Total Job Cost:
Job Hours:

\$11,026.68

\$0.00

\$11,027

84.00

REVEGETATION WORK

e: Lorencit	o Canyon Mine	Pe	rmit Action: RN5	Permit/Jo	b#: <u>C1996084</u>
PROJECT	IDENTIFICA	TION			
Task #:	054	State:	Colorado	Abbreviation:	None
Date:	6/23/2022	County:	Las Animas	Filename:	A
User:	CJD				

FERTILIZING

Materials

Description 10-34-0, 18-46-0, 5-10-5	Units / Acre 250.00	Unit pound	Cost / Unit \$0.37	Cost /Acre \$92.50
			Total Fertilizer Materials Cost/Acre	\$92.50

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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.56
Total Tilling Cost/Acre	\$114.56

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	0.96	8.57	\$11.04
Blue Grama - Native	0.40	6.53	\$5.49
Little Bluestem - Native	0.56	3.34	\$7.60
Sideoats Grama - Butte	0.64	2.10	\$5.76
Orchardgrass - Shawnee	1.50	18.60	\$4.65
Alfalfa - Ranger (inoculated)	1.60	7.71	\$4.08
Sheep Fescue - Covar	0.48	7.49	\$2.93
Milk Vetch, Cicer - Monarch	1.50	4.99	\$12.30
Mahogany, Mountain	1.20	1.63	\$44.17
Western Wheatgrass - Arriba	6.00	15.15	\$39.00
Needlegrass, Green - Lodorm	2.00	8.31	\$23.55
Saltbush, Four Wing	0.80	1.10	\$10.00
Winter Fat	1.60	4.08	\$32.80
Penstemon, Rocky Mountain	0.50	7.84	\$14.75
Totals Seed Mix	19.74	97.44	\$218.11

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description	Cost /Acre

Crimping, with tractor {DMG survey data}		\$71.57
Power mulcher (MEANS 32 91 13.16 0350)		\$106.29
	Total Mulch Application Cost/Acre	\$177.86

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres:	2.7	Cost /Acre:	\$1,523.06
Estimated Failure Rate:	50%	Cost /Acre*:	\$1,523.06
*Selected Replanting Work Items:	FERTILIZING,TII	LLING,SEEDING,MU	
	LCHING		

Initial Job Cost: \$4,112.26

Reseeding Job Cost: \$2,056.13

Total Job Cost: \$6,168

Job Hours: 405

REVEGETATION WORK

Lorenci	to Canyon Mir	ne Pe	rmit Action: RN5		Permit/Job	o#: <u>C1996084</u>
ROJECT	<u> IDENTIFIC</u>	<u>CATION</u>				
Task #:	055	State:	Colorado		Abbreviation:	None
Date:	6/23/2022	County:	Las Animas		Filename:	A
User:	CJD					
ERTILIZ	ZING					
	<u>ZING</u>					
ERTILIZ aterials Descript			Units / Acre	Unit	Cost / Unit	Cost /Acre
aterials				Unit	Cost / Unit	Cost /Acre

\$0.00

Cost/Acre

Application

Description		Cost /Acre
		\$
	Total Fertilizer Application Cost/Acre	\$0.00

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	0.50	0.15	\$9.75
Mahogany, Mountain	0.50	0.68	\$18.40
Rose, Wood's	2.00	0.00	\$41.00
Saltbush, Four Wing	1.00	1.38	\$12.50
Sumac, Skunkbrush	1.00	0.47	\$21.00
Winter Fat	0.50	1.27	\$10.25
Totals Seed Mix	5.50	3.95	\$112.90

Application

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		Cost /Acre
		\$
	Total Mulch Application Cost/Acre	\$0.00

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:	4.5	Cost /Acre:	\$112.90
Estimated Failure Rate:	50%	Cost /Acre*:	\$112.90
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:
Reseeding Job Cost:
Total Job Cost:
Job Hours:

\$508.05

\$254.03

\$762

9.00

TRUCK/LOADER TEAM WORK

lescription:	Clean S	ediment Po	onds at	Mine Site				
Site: Lorencito Canyon Mine		Perm	it Actio	on: RN5		Permit/Job#: C199608		
ECT IDENT	<u> </u>							
sk #: 060		State: 0	Colorad	lo	Abb	previation: No	one	
	2022						-	
Jser: CJD								
Agency or o	organization nam	ne: DRM	IS					
RLY EQUIP	MENT COST	1 -			Shift ba	sis: 1 per day		
Tr	ruck Loader Tear							
	· E · · · · · · ·			24D L 9'-8" St	ick			
Suppo				OT OCII				
Road Ma				001 - 000				
rtoud Win								
reakdown:	Truck/Loa	der Team			Equipment	Maintena	ance Equipment	
	Truck	Excavato	r	Load Area	Dump Area	Motor Grader	Water Truck	
n-machine:	100		100	NA	100	NA	NA	
cost/hour:	\$22.87	\$72	2.52	NA	\$97.46	NA	NA	
g cost/hour:	\$44.28	\$5	8.73	NA	\$97.63	NA	NA	
ation-riper:	NA		0	NA	NA	NA	NA	
Cipper own. cost/hour:	NA	\$0	0.00	NA	\$0.00	NA	NA	
. cost/hour:	NA	\$0	0.00	NA	\$0.00	NA	NA	
r cost/hour:	\$0.00	\$3′	7.32	NA	\$41.30	NA	NA	
t Subtotals:	\$67.15	\$16	8.57	NA	\$236.39	NA	NA	
er of Units:	4		1	0	1	0	0	
Subtotals:	Work:	\$437.17		Support:	\$236.39	Maint:	\$0.00	
ork team cost	/hour: \$673.56							
ERIAL QUA	ANTITIES							
nitial volume:	21.780		CCY	Swell	factor: 1.270			
oose volume:		1	LCY					
		_						
Source	of estimated swal	ll factor	Cat Ha	ındbook				
Source of	of estimated swell Material Purcha		\$0.00	ındbook				
	ECT IDENT Sk #: 060 Oate: 6/23/2 User: CJD Agency or o RLY EQUIP Tr Suppo Road Ma reakdown: n-machine: 0 cost/hour: g cost/hour: dipper own. cost/hour: cost/hour: t Subtotals: er of Units: 0 Subtotals: ork team cost CRIAL QUA nitial volume: cose volume: Sou	encito Canyon Mine ECT IDENTIFICATION Sk #: 060 Date: 6/23/2022 User: CJD Agency or organization name ELY EQUIPMENT COST Truck Loader Tear Support Equipment - Loan - Duar	ECT IDENTIFICATION Sk #: 060	ECT IDENTIFICATION Sk #: 060 State: Colorad Date: 6/23/2022 County: Las Ani Date: 6/23/2022 C	Permit Action: RN5 RN5	Permit Action: RN5 R	Permit Action: RN5	

HOURLY PRODUCTION Truck Capacity: Truck Payload (weight) Basis: Material weight: 2,700 Pounds/LCY Description: Earth - Wet excavated Rated Payload: 35,400 Pounds Payload Capacity: 13.11 LCY Truck Bed (volume) Basis: 10.00 Struck Volume: LCY Heaped Volume: 12.00 **LCY** Average Volume: 11.00 LCY Adjusted Volume: 12.00 LCY Final Truck Volume Based on Number of Loader Passes: LCY 11.87 **Loading Tool Capacity** Bucket Size Class: Medium Rated Capacity: 2.260 LCY (heaped) Loose material - 1/2" to 3/4" (85 - 90%) 0.875 Bucket Fill Factor: 0.875 Adjusted Capacity: 1.978 **LCY Job Condition Corrections:** Site Altitude (ft.): 7100 feet Truck Loader Source Altitude Adj: 1.000 1.000 (CAT HB) Job Efficiency: 0.830 0.830 (CAT HB) 0.830 0.830 Net Correction: **Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill passes 6 Truck: **Excavators and Front Shovels:** Machine Cycle Time vs. Job Condition Rating: **SEVERE** Selected Value within this Basic Rating: SEVERE Track Loaders – Material Description: Cycle Time Elements (min.): Load: NA Maneuver: NA Dump: 0.100 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, minutes NA maneuver):

		1	<u> </u>	
Cycle Time Factors			Factor (min.)	Source
Material:	NA		NA	(Cat HB)
Stockpile:	NA		NA	(Cat HB)
Truck Ownership:	NA		NA	(Cat HB)
Operation:	NA		NA	(Cat HB)
Dump Target:	NA		NA	(Cat HB)
		Net Cycle Time Adjustment:	NA	minutes
		Adjusted Loader Cycle Time:	0.403	minutes
		Net Load Time per Truck:	2.115	minutes

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	2.115	Minutes	Adjusted for site altitude:	2.115	Minutes
Truck Maneuver and Dump Time:	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes

<u>Truck Travel (Haul & Return) Time:</u> penetration 5.0

Road Condition: Rutted dirt, little maintenance, no water, 2" tire

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5000.00	5.00	5.00	10.00	1068	4.695

,	D. (D.					Haul Time:	4.695	minutes	
	Return Rou Seg #	Haul Dis (Ft)	stance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)	
	1	5000.00		-5.00	5.00	0.00	2938	1.727	
					Total True	Return Time: ck Cycle Time:			
	oading Toc Produ Unit Produ	action	272.24	LCY/Hour		Adjusted for jo	ob efficiency:	225.96	LCY/Hour
110011			71.64	LCY/Hour		Adjusted for jo	ob efficiency:	59.46	LCY/Hour
Optima	ıl No. of Tı	rucks:	4	Truck(s)		Selected Numb	er of Trucks:	4	Truck(s)

LCY/Hour Adjusted hourly truck team production: 237.85 Adjusted single truck/loader team production:
Adjusted multiple truck/loader team production: 225.96 LCY/Hour 225.96 LCY/Hour

JOB TIME AND COST

Fleet size:	1	_ Team(s)	Total job time:	122.42	Hours
Unit cost:	\$2.981	_ /LCY	Total job cost:	\$82,454	-

SITE MAINTENANCE

lite:	Lorencito	Canyon Mine	Pe	ermit Action:	RN5	P	ermit/Job#:	C1996084
	PROJECT:	Γ IDENTIFIC	<u>CATION</u>					
	Task #:	061	State:	Colorado		Abbreviation:	None	
	Date: User:	6/23/2022 CJD	County:	Las Animas	3	Filename:	A	

UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Miscellaneous	40.00	Cat D3K LGP - 3P	400.00	EA	\$101.29	\$40,516.00
Maintenance						
Road and Ditch	24.00	CAT 14M	240.00	EA	\$174.76	\$41,942.40
Maintenance						
Miscellaneous	40.00	Cat 315D L 8'-6"	400.00	EA	\$129.85	\$51,940.00
Maintenance		Stick				

Job Hours: 40.00 Total Cost: \$134,398.40

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Τ	Task description: M	obilize/Demol	oilize for Init	ial Recla	mation				
Site: Lorencito Canyon Mine		Pe	rmit Action:	RN5		Permit/Jo	b#: C1996084		
<u>Pl</u>	PROJECT IDENTIFICATION								
	Task #: 070	State:	Colorado		Al	breviation:	None		
	Date: 6/23/2022	County:	Las Anima	S		Filename:	A		
	User: CJD	_ ;							
	Agency or organization	on name: DF	RMS						
E	<u>QUIPMENT TRANSPOI</u>	RT RIG COS	<u>ST</u>						
					Shif	t basis:	1 per day		
					Cost Data S		CRG Data		
	Truck Tractor Des	arintian: CI	ENEDIC ON	шсим	AV TDUCK TDAA	OTOD 6V4	DIESEL POWERED,		
	Truck Tractor Des	cription. Gr	ENERIC OIN-		400 HP (2ND HA		DIESEL FOWEKED,		
	Truck Trailer Des	cription:	GENERIC		IG GOOSENECK		K EOUIPMENT		
		P			AILER (25T, 50T				
C-	t D 1 . d								
	ost Breakdown:					=			
	Available Rig Capacities	0-25 Tons		Tons	51+ Tons	_			
	Ownership Cost/Hour:	\$21.28		7.94	\$47.67	_			
	Operating Cost/Hour:	\$26.55	\$50).48	\$56.21	=			
	Operator Cost/Hour:	\$20.54).54	\$20.54	=			
	Helper Cost/Hour:	\$0.00	\$23	3.53	\$23.53	=			

NON ROADABLE EQUIPMENT:

Total Unit Cost/Hour:

\$68.37

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D9T - 9SU	60.01	\$126.01	\$147.95	4	\$1,095.84	\$591.80	\$1,000.00
Cat 773F	49.74	\$122.05	\$132.49	4	\$1,018.16	\$529.96	\$1,000.00

\$147.95

\$132.49

Cat 336D L 10'-	32.23	\$83.42	\$132.49	1	\$215.91	\$132.49	\$250.00
6" Stick							
CAT 14M	23.57	\$85.80	\$68.37	1	\$154.17	\$68.37	\$250.00
Water Tanker,	15.00	\$33.45	\$68.37	1	\$101.82	\$68.37	\$250.00
5,000 Gal.							
CAT 990H high	83.34	\$116.41	\$147.95	1	\$264.36	\$147.95	\$250.00
lift							
SCHRAMM	0.00	\$247.95	\$68.37	1	\$316.32	\$68.37	\$250.00
T145EX							
Drill/Broadcast	25.00	\$7.98	\$68.37	1	\$76.35	\$68.37	\$250.00
Seeder with							
Tractor							
Power Mulcher	6.00	\$14.98	\$68.37	1	\$83.35	\$68.37	\$250.00
(Bowie LD-90)							
Hydroseeder with	28.00	\$13.97	\$132.49	1	\$146.46	\$132.49	\$250.00
Tractor							

Subtotals: \$3,472.74 \$1,876.54 \$4,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Fuel Tanker, 6x4, 210 HP	\$46.35	1	\$46.35	\$46.35
Lube Truck, 6x4, 250 HP	\$46.35	1	\$46.35	\$46.35
Flatbed Truck, 6x4, 45K GVW	\$49.15	1	\$49.15	\$49.15
Light Duty Pickup, 4x4, 1 T.	\$20.51	1	\$20.51	\$20.51
Crew				

~		
Subtotals:	\$162.36	\$162.36

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	TRINIDAD	
Total one-way travel distance:	20.00	miles
Average Travel Speed:	35.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig: Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$21,058.94 \$185.55	

Transportation Cycle Time:

*		
	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.57	0.57
Return Time (Hours):	0.57	0.57
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	2.14	1.14

JOB TIME AND COST

Total job time:	4.29	Hours
Total job cost:	\$21.244	

EQUIPMENT MOBILIZATION/DEMOBILIZATION

7	Task description: Mobilize/Demobilize Equipment for Pond Cleaning							
Site: Lorencito Canyon Mine		Per	Permit Action: RN5		it/Job#: C1996084			
<u>P</u>	PROJECT IDENTIFICATION							
	Task #: 071	State:	Colorado	Abbreviation	on: None			
	Date: 6/23/2022	County:	Las Animas	Filenan	ne: A			
	User: CJD	_						
	Agency or organization	n name: DR	MS					
F	QUIPMENT TRANSPOI	Դ ԵՐԵ ՀՆՏ	т					
<u>10</u>	QUII MENT TRANSFOL	KI KIG COB	<u> </u>					
				Shift basis:	1 per day			
				Cost Data Source:	CRG Data			
	Truck Tractor Des	cription: GE	NERIC ON-HIGHW	AY TRUCK TRACTOR, 62 400 HP (2ND HALF, 2006				
	Truck Trailer Des	cription:	GENERIC FOLDI	NG GOOSENECK, DROP I	DECK EQUIPMENT			
			T	RAILER (25T, 50T, AND 10	00T)			
<u>C</u>	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				

NON ROADABLE EQUIPMENT:

Total Unit Cost/Hour:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D8T - 8SU	47.71	\$97.46	\$132.49	1	\$229.95	\$132.49	\$250.00
Cat 324D L 9'-8"	27.33	\$72.52	\$132.49	1	\$205.01	\$132.49	\$250.00
Stick							

\$132.49

\$147.95

\$68.37

Subtotals:	\$434.96	\$264.98	\$500.00	

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 10-12 cy, 6x4	\$99.06	4	\$396.24	\$396.24
Flatbed Truck, 6x4, 45K GVW	\$49.15	1	\$49.15	\$49.15

Subtotals:	\$445.39	\$445.39

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	TRINIDAD	
Total one-way travel distance:	20.00	miles
Average Travel Speed:	35.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig: Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$2,669.85 \$509.02	_
		_

<u>Transportation Cycle Time:</u>

Non-	
Roadable	Roadable
Equipment	Equipment
0.57	0.57
0.57	0.57
0.50	NA
0.50	NA
2.14	1.14
	Roadable Equipment 0.57 0.57 0.50 0.50

JOB TIME AND COST

Total job time:	4.29	Hours
Total job cost:	\$3,179	

EQUIPMENT MOBILIZATION/DEMOBILIZATION

7	Task description: Me	obilize/Demobi	lize Equipment for	r Site Maintenance		
Site:	Lorencito Canyon Mine	Peri	mit Action: RN5		Permit/Jo	b#: C1996084
<u>P</u> :	ROJECT IDENTIFICAT	<u>ION</u>				
	Task #: 072	State:	Colorado	At	breviation:	None
	Date: 6/23/2022	County: _	Las Animas		Filename:	A
	User: CJD	=				
	Agency or organizatio	n name: DRI	MS			
\mathbf{E}	QUIPMENT TRANSPOR	T RIG COST	<u>r</u>			
				Shift	basis:	1 per day
				Cost Data S		CRG Data
						
	Truck Tractor Desc	cription: GE	NERIC ON-HIGHV			DIESEL POWERED,
	Truck Trailer Desc	mintion:	CENEDIC EOL DI	400 HP (2ND HA) ING GOOSENECK,		V EOUIDMENT
	Truck Trailer Desc	лірион.		RAILER (25T, 50T,		~
			-	14 11221 (231, 301,	11112 1001)	
<u>C</u>	ost Breakdown:					
	Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons	-	
	Ownership Cost/Hour:	\$21.28	\$37.94	\$47.67	<u>-</u>	
	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	_	

NON ROADABLE EQUIPMENT:

Total Unit Cost/Hour:

\$68.37

Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/unit	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
_	(TONS)				fleet		
Cat D3K LGP - 3P	9.20	\$30.26	\$68.37	10	\$986.30	\$683.70	\$2,500.00
Cat 315D L 8'-6"	19.05	\$51.47	\$68.37	10	\$1,198.40	\$683.70	\$2,500.00
Stick							
CAT 14M	23.57	\$85.80	\$68.37	10	\$1,541.70	\$683.70	\$2,500.00

\$132.49

\$147.95

Subtotals: \$3,726.40 \$2,051.10 \$7,500.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 6x4, 45K GVW	\$49.15	1	\$49.15	\$49.15

Subtotals: \$49.15 \$49.15

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	TRINIDAD	
Total one-way travel distance:	20.00	miles
Average Travel Speed:	35.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig: Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$29,055.66 \$56.17	

<u>Transportation Cycle Time:</u>

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.57	0.57
Return Time (Hours):	0.57	0.57
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	2.14	1.14
Subtotals:	2.14	1.14

JOB TIME AND COST

Total job time:	4.29	Hours
Total job cost:	\$29,112	