

COST SUMMARY WORK

Task description: PR12 RCE

Site: Trapper Mine

Permit Action: PR12

Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 4/17/2025

County: Moffat

Filename: C010-000

User: RAR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Ash Disposal Pit Regrade (NW section)	DOZER	2	9.40	\$16,171
001B	Load/Haul Section E1,423,800	TRUCK1	1	40.89	\$295,196
002	Ash Disposal Pit Regrade (Section 1)	DOZER	2	20.21	\$34,776
002B	Ash Disposal Pit Regrade (Section 2)	DOZER	2	25.76	\$44,325
003	Ash Disposal Pit Regrade (Section 3-1)	DOZER	2	1.82	\$3,125
003B	Ash Disposal Pit Regrade (Section 3-2)	DOZER	2	51.54	\$88,682
004	Regrade Johnson Coal Stockpile	DOZER	1	13.37	\$11,503
004A	D/E Pit Regrade (Spoil Side East)	DOZER	8	73.31	\$504,589
005A	D/E Pit Regrade (West)	DOZER	6	93.81	\$484,239
030	Regrade BC Road	DOZER	4	46.08	\$90,852
031	Regrade D-Main Road	DOZER	4	33.70	\$66,453
032	Regrade East and West Ash Roads	DOZER	4	55.65	\$109,716
033	Regrade LOM Roads	DOZER	4	100.51	\$198,169
034	Regrade A Roads (Middle A and North A N pit)	DOZER	4	37.01	\$72,970
035	Regrade N Pit Roads (old LOM, cross-over, ash pit)	DOZER	4	15.36	\$52,856
036	Regrade C Pit Haul Road	DOZER	4	37.81	\$74,545
039	Regrade East A Haul Roads (East A and East ASplit, BridgeRd)	DOZER	4	35.90	\$70,773
040	Regrade I/J Roads (I/J Spoil, I Mid, I West)	DOZER	4	23.57	\$46,485
041	Regrade K Pit Haul Roads (K1 EPRL K3)	DOZER	4	41.10	\$81,040
042	Regrade Mine Access Road	DOZER	4	14.97	\$29,524
043	Regrade Explosive Storage Access Road	DOZER	4	3.99	\$7,874
044	Regrade No Name Access Roads #2, #4, 5R	DOZER	4	6.15	\$12,117
045	Regrade Potable Water Well Access Road	DOZER	4	1.13	\$2,237
046	Regrade West Pyeatt Access Road (1 and 2)	DOZER	4	5.77	\$11,383
047	Regrade Middle Pyeatt Access Road (1, 2 and 3)	DOZER	4	6.61	\$13,028
048	Regrade East Pyeatt Access Road (1, 2 and 3)	DOZER	4	5.87	\$11,564
049	Regrade Grouse Access Road	DOZER	4	2.90	\$5,726
050	Regrade West Flume Access Road	DOZER	4	1.70	\$3,355
051	Regrade East Flume Access Road	DOZER	4	1.70	\$3,355
052	Regrade Deal Access Road	DOZER	4	1.70	\$3,355
053	Regrade Horse Access Roads (Horse and Horse1)	DOZER	4	3.86	\$7,605
054	Regrade West Horse Access Road	DOZER	4	1.70	\$3,355
055	Regrade Middle Flume Access Roads (1 and 3)	DOZER	4	2.92	\$5,760
056	Regrade Oak Access Roads	DOZER	4	2.39	\$4,706
057	Regrade Sage Access Roads	DOZER	4	3.14	\$6,192
058	Regrade Johnson Access Road	DOZER	4	7.03	\$13,867
063	Rip BC Walk Road	RIPPER	4	2.24	\$4,755

064	Rip D-main Pit Haul Roads	RIPPER	4	8.40	\$17,814
065	Rip West Ash Haulroads (West Ash, West Ash1 and West Ash 2)	RIPPER	4	5.98	\$12,679
066	Rip LOM Haul Roads (F2 and F2-G5)	RIPPER	4	8.76	\$18,575
067	Rip A Pit Haul Roads (Middle A and North A)	RIPPER	4	6.43	\$13,630
068	Rip N Pit Haul Roads	RIPPER	4	5.38	\$11,411
072	Rip East A Haul Roads (East A and East A Split)	RIPPER	4	2.96	\$6,276
074	Rip Access Road (Tasks 042-059)	RIPPER	4	3.11	\$6,593
075	Rip K Pit Haul Roads (KMain, K1, K2 , K3)	RIPPER	4	2.12	\$4,501
077	Rip I/J Roads (I/J Spoil, I Mid, I West)	RIPPER	4	4.55	\$9,655
078	Regrade Coyote Impoundment	DOZER	2	224.13	\$220,954
079	Regrade Middle Pyeatt Impoundments Impoundment (1,2, 3)	DOZER	1	51.09	\$25,183
080	Regrade Far East Buzzard Impoundment	DOZER	1	0.44	\$216
081	Regrade Sage Impoundments (1 and 2)	DOZER	1	16.26	\$8,015
082	Regrade West Horse Impoundment	DOZER	1	2.73	\$1,346
083	Regrade Impoundment H	DOZER	1	5.66	\$2,788
084	Regrade Industrial Waste Pond	DOZER	1	5.80	\$2,859
085	Regrade Deal 1 and 2	DOZER	1	7.64	\$4,004
086	Regrade Deacon 1,2 and Jeffway 1,2 impoundments	DOZER	1	73.67	\$38,587
087	Regrade W. Buzzard #4 Impoundment	DOZER	1	5.34	\$2,796
088	Regrade E. Buzzard #3 Impoundment	DOZER	1	6.26	\$3,277
089	Regrade Diversions	DOZER	1	40.85	\$13,893
089M	Regrade Diversions	DOZER	1	0.84	\$284
R228					
090	Replace Topsoil on Ash Pits (ASH1)	SCRAPER1	1	5.20	\$32,014
090A	Replace Topsoil on Ash Pits (ASH2)	SCRAPER1	1	12.78	\$78,627
090B	Replace Topsoil on Ash Pits (A92-4 to Pit)	TRUCK1	1	107.16	\$307,455
091	Replace Topsoil on D/E Pits (Truck/Excavator)	TRUCK1	1	416.57	\$1,038,052
091A	Replace Topsoil on D/E Pits (D97-1)	SCRAPER1	1	14.75	\$85,470
091A	Replace Topsoil at L Pit K Knob L23-1 to K Knob	SCRAPER1	1	1.69	\$10,421
TR					
091B	Replace Topsoil on D/E Pits (D1-07)	SCRAPER1	1	1.99	\$11,545
091T	Replace Topsoil JPE 1 to J East	SCRAPER1	1	24.80	\$152,663
R135					
092A	Replace Topsoil at C Pit Future TS Pile TR134	SCRAPER1	1	36.50	\$224,660
TR					
096	Replace Topsoil at West Panel, BC rd, Shop (Scraper)	SCRAPER1	1	13.22	\$81,383
096A	Replace Topsoil at West Panel, BC rd, Shop (Truck/Excavator)	TRUCK1	1	147.14	\$366,648
097	Replace Topsoil at East Panel Ponds, A road (Scraper)	SCRAPER1	1	20.64	\$127,032
097A	Replace Topsoil at East Panel Ponds, A Rd (Truck/Excavator)	TRUCK1	1	209.29	\$521,528
098	Re-topsoil Johnson Coal Stockpile	SCRAPER1	1	4.14	\$25,488
098M	Re-topsoil aJ23-1 to J Pit	SCRAPER1	1	8.24	\$50,713
R229					
099	Replace Topsoil at Dragline Walk Road (ASH4)	TRUCK1	1	8.17	\$17,280
099A	Replace Topsoil at Dragline Walk Road (ASH1)	TRUCK1	1	33.14	\$70,092
100	Facilities Area	REVEGE	1	75.00	\$31,802
100A	Seed D Pit Range A-B	REVEGE	1	319.30	\$362,777
101	Roads (including BC road) below 6700'	REVEGE	1	196.00	\$83,236
103	Ponds below 6700' (Coyote, Sage, E Buzzard)	REVEGE	1	26.00	\$11,025

104	Johnson Coal Stockpile	REVEGE	1	12.00	\$5,343
105	topsoil piles below 6700'	REVEGE	1	27.00	\$11,491
107	Roads: >6700 ft.-Rangeland with Shrubs	REVEGE	1	54.00	\$58,694
108	Ash pit.-Rangeland with Shrubs	REVEGE	1	115.00	\$125,185
111	Ponds above 6700'(Deal, Deacon, Jeffways, West Horse)	REVEGE	1	19.00	\$20,261
112	topsoil piles above 6700'	REVEGE	1	5.00	\$5,523
113	Shrub Transplants as per Operator	NA	1	40.00	\$155,204
120	Seal Land Slide Monitoring Stations	BOREHOLE	1	4.00	\$8,143
121	Plug and Seal Exploration Drill Holes	BOREHOLE	1	80.00	\$38,730
122	Plug and Seal Monitoring Wells	BOREHOLE	1	185.00	\$168,156
128	Reveg for 20 x .3 acres drillholes	REVEGE	1	6.00	\$6,497
129	Regrade .3acres x 20 drill pads	DOZER	1	47.12	\$16,025
130	Demolish structures, remove materials and debris	DEMOLISH	1	100.00	\$1,009,908
131	Culvert Removal and Disposal	DEMOLISH	1	60.00	\$176,564
132	Mobilize and Demobilize from Hayden, CO	MOBILIZE	1	5.34	\$88,152
133	Drill and Blast L Pit 1,776,482 BCY	NA	3	407.00	\$640,555
134	Drill and Blast Ash Pit 106,474 BCY	NA	3	37.75	\$43,232
135	Drill and Blast J Pit 513,911 BCY	NA	3	142.00	\$193,985
91AT R	Replace Topsoil at L Pit K Knob L23-1 to K Knob	SCRAPER1	1	1.69	\$10,421
L01	Regrade L Pit X-sec:407,200	DOZER	4	23.78	\$81,844
L02	Regrade L Pit X-sec:406,700	DOZER	4	63.46	\$218,378
L03	Regrade L Pit X-sec:406,200	DOZER	4	28.02	\$96,438
L04	Regrade L Pit X-sec:405,700	DOZER	4	33.86	\$116,522
L05	Regrade L Pit X-sec:405,200	DOZER	4	198.18	\$682,027
L06	Regrade L Pit X-sec:404,700	DOZER	4	276.11	\$950,223
L07	Regrade L Pit X-sec:404,200	DOZER	4	76.15	\$262,076
L08	Regrade L Pit X-sec:403,700	DOZER	4	12.88	\$44,332
L09	Regrade L Pit X-sec:403,200	DOZER	4	10.08	\$34,677
L10	Regrade L Pit X-sec:402,700	DOZER	4	108.18	\$372,309
L11	Regrade L Pit X-sec:402,200	DOZER	4	220.52	\$758,896
L12	Regrade L Pit X-sec:401,700	DOZER	4	51.98	\$178,885
L13	Regrade L Pit X-sec:401,200	DOZER	4	35.26	\$121,358
L14	Regrade L Pit X-secs:400,700 and 400,200	DOZER	4	37.69	\$129,721
L15	Regrade L Pit (Truck/Excavator)	TRUCK1	1	459.83	\$1,607,039
L15A TR	Regrade Jennings Pit (Truck/Excavator)	TRUCK1	4	96.99	\$1,026,908
L15T R135	Regrade L Pit K Knob (Truck/Excavator)	TRUCK1	4	474.59	\$5,024,826
L16	Seed L Pit: Rangeland with Shrubs	REVEGE	1	804.00	\$870,556
L16M R228	Seed L Pit diversion: Rangeland with Shrubs	REVEGE	1	2.30	\$2,491
L17	Regrade L Pit North Haul road.6.5 ac X 9 ft th.	DOZER	2	26.56	\$45,684
L18	Replace Topsoil on L Pit (Scraper)	SCRAPER1	1	166.47	\$1,024,555
L19	Replace Topsoil on L Pit (Truck/Excavator)	TRUCK1	1	708.38	\$2,032,367
LN20	Site Maintenance; Rill and Gully Repair and Pond Cleaning	SITEMAINT ENANCE	1	600.00	\$226,300
LN20 ATR	Site Maintenance; Drainage Stabilization	SITEMAINT ENANCE	1	600.00	\$15,868
N01	Regrade N Pit	DOZER	2	1,011.00	\$1,739,638
N02	Backfill and Grading N Pit	TRUCK1	1	604.84	\$2,421,638
N02A	Backfill and Grading I Pit	TRUCK1	1	156.39	\$546,565
N02B	Backfill and Grading J Pit	DOZER	2	215.84	\$371,395

N13	Replace Topsoil on C Pit	SCRAPER1	1	90.64	\$557,880
N14	Replace Topsoil on N Pit (Scraper)	SCRAPER1	1	169.86	\$1,045,426
N14A	Replace Topsoil on N Pit (Truck/Excavator)	TRUCK1	1	147.82	\$365,087
N15	Replace Topsoil in I Pit	SCRAPER1	1	13.46	\$82,869
N16	Replace Topsoil on J Pit (Truck/Excavator)	TRUCK1	1	103.22	\$254,944
N16A	Replace Topsoil in J Pit (Scraper)	SCRAPER1	1	3.87	\$23,813
N16A	Replace Topsoil on J Pit ASH-1 to J Pit	TRUCK1	1	38.09	\$94,066
ATR					
N16A	Replace Topsoil on J Pit A91-8 to J Pit	TRUCK1	1	22.95	\$56,683
TR					
N16T	Seed L Pit, K Nob: >6700 ft.-Rangeland with	REVEGE	1	3.50	\$5,306
R135	Shrubs				
N17	Replace Topsoil on I/J Pit	TRUCK1	1	54.31	\$113,660
n18	Seed N Pit Rangeland w/o shrubs (<6700 ft.)	REVEGE	1	44.00	\$18,699
N18A	Seed N Pit: >6700 ft.-Rangeland with Shrubs	REVEGE	1	244.00	\$264,664
N19	Seed J Pit without shrubs (Range C)	REVEGE	1	66.00	\$27,901
N19T	Seed J Pit without shrubs (Range C)	REVEGE	1	66.00	\$14,714
R134					
N20	Seed I Pit without Shrubs	REVEGE	1	35.00	\$14,904
N21	Seed I/J Pits no shrubs (Range C)	REVEGE	1	31.00	\$13,047
N21A	Seed J Pits no shrubs (Range C) MR229	REVEGE	1	31.00	\$5,193
MR					
N22	Seed C Pit No Shrubs	REVEGE	1	189.00	\$79,673
RCN	Reclamation Not Bond Released	NA	1	1.00	\$213,391
BR					
<u>SUBTOTALS:</u>				12808.65	\$33,648,975

INDIRECT COSTS**OVERHEAD AND PROFIT:**

Liability insurance:	2.02	Total =	\$679,709
Performance bond:	1.05	Total =	\$353,314
Job superintendent:	6,404.63	Total =	\$507,695
Profit:	10.00	Total =	\$3,364,898
		TOTAL O & P =	\$4,905,616
		CONTRACT AMOUNT (direct + O & P) =	\$38,554,591

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.25	Total =	\$1,638,570
Reclamation management and/or administration:	2.50		\$963,865

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$7,508,551

TOTAL BOND AMOUNT (direct + indirect) = \$41,157,526

								39500000	
PR12 Estimate								\$540,610	bond increase
Phase Bond Release Area Cost Accounting			Liability	Acres	Cost /Acre	%	Phase Bond Release Acreage		
	Worst Case Bond		\$41,157,526.00	2953.10	\$13,937.06	100%	Phase 1	4585.9	
	Phase I Total Applicable Bond		\$4,411,078.86	316.50					
	Worst Case (-) TAB		\$36,746,447.14	2636.60					
	Phase I (Liability to hold)		\$ 1,790,633.21	321.20	\$5,574.82	40%	Phase 2	4264.7	
	Phase II (Liability to hold)		\$ 1,503,529.82	719.20	\$2,090.56	15%	Phase 3	3545.5	
Total		TOTAL	\$40,040,610	3677.0					

Current Required Surety \$ 38,550,205.38
 Required Surety Increase \$1,490,404.79
 4%

BULLDOZER WORK

Task description: Ash Disposal Pit Regrade (NW section)

Site: Trapper Mine

Permit Action: PR12

Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 4/20/2025

County: Mineral

Filename: C010-001

User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U

Horsepower: 850

Blade Type: Universal

Attachment: NA

Shift Basis: 3 per day

Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$496.62	NA
Operating Cost/Hour:	\$324.90	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.84	NA

Total unit Cost/Hour: \$860.36

Total Fleet Cost/Hour: \$1,720.71

MATERIAL QUANTITIES

Initial Volume: 43,722

Swell factor: 1.000

Loose volume: 43,722 LCY

Source of estimated volume: Permit Appendix A, Table A.4.1 and A-2.8

Source of estimated swell
factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 150 feet

Unadjusted hourly
production: 2,036.8 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push
gradient: -30 %

Average site altitude: 6,800 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition Correction Factor</u>		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	0.800	(POOR)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9137

Adjusted unit
production: 1,861.02 LCY/hr

Adjusted fleet
production: **3722.04** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.462/LCY

Total job time: **11.75** Hours

Total job cost: **\$20,213**

TRUCK/LOADER TEAM WORK

Task description: Load/Haul Section E1,423,800

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 001B State: Colorado Abbreviation: None
Date: 5/1/2025 County: Moffat Filename: 001B
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	KOMATSU 830E
-Loader:	CAT 6090
Support Equipment -Load Area:	NA
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 14,000 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Shovel	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	25	25	50
Ownership cost/hour:	\$209.47	\$302.35	NA	\$257.39	\$179.39	\$130.32
Operating cost/hour:	\$274.17	\$501.45	NA	\$49.23	\$29.91	\$70.88
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	NA	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$508.88	\$837.67	NA	\$345.21	\$237.06	\$201.20
Number of Units:	11	1	0	1	1	1
Group Subtotals:	Work: \$6,435.35	Support: \$345.21	Maint: \$438.26			

Total work team cost/hour: \$7,218.82

MATERIAL QUANTITIES

Initial volume: 128,454 CCY Swell factor: 1.000

Loose volume: 128,454 LCY

Source of estimated volume: Table A-4.1A

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:	<u>3,300</u>	Pounds/LCY
Description:	<u>Decomposed rock - 75% Rock, 25% Earth</u>	
Rated Payload:	<u>492,200</u>	Pounds
Payload Capacity:	<u>149.15</u>	LCY

Truck Bed (volume) Basis:

Struck Volume:	<u>153.00</u>	LCY
Heaped Volume:	<u>192.00</u>	LCY
Average Volume:	<u>172.50</u>	LCY
Adjusted Volume:	<u>149.15</u>	LCY

Final Truck Volume Based on Number of Loader Passes: 145.78 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	<u>58.900</u>	LCY (heaped)
Bucket Fill Factor:	<u>0.825</u>	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	<u>48.593</u>	LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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 Truck: 3 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition
 Rating:
 Selected Value within this Basic Rating:

ABOVE AVERAGE

AVERAGE

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, maneuver): NA minutes

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:		0.498	minutes
Net Load Time per Truck:		1.494	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>1.494</u>	Minutes	Adjusted for site altitude:	<u>1.494</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	11428.00	10.00	3.00	13.00	620	18.513

Haul Time: 18.513 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	11428.00	-10.00	3.00	-7.00	3450	3.415

Return Time: 3.415 minutes

Total Truck Cycle Time: 25.422 minutes

Loading Tool unit

Production 3,812.84 LCY/Hour Adjusted for job efficiency: 3,164.66 LCY/Hour

Truck Unit

Production 344.06 LCY/Hour Adjusted for job efficiency: 285.57 LCY/Hour

Optimal No. of Trucks: 11 Truck(s) Selected Number of Trucks: 11 Truck(s)

Adjusted hourly truck team production: 3,141.25 LCY/Hour

Adjusted single truck/loader team production: 3,141.25 LCY/Hour

Adjusted multiple truck/loader team production: 3,141.25 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 40.89 Hours

Unit cost: \$2.298 /LCY Total job cost: \$295,196

BULLDOZER WORK

Task description: Ash Disposal Pit Regrade (Section 1)

Site: Trapper Mine

Permit Action: PR12

Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 002

State: Colorado

Abbreviation: None

Date: 4/20/2025

County: Mineral

Filename: PR12

User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U

Horsepower: 850

Blade Type: Universal

Attachment: NA

Shift Basis: 3 per day

Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$496.62	NA
Operating Cost/Hour:	\$324.90	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.84	NA

Total unit Cost/Hour: \$860.36

Total Fleet Cost/Hour: **\$1,720.71**

MATERIAL QUANTITIES

Initial Volume: 24,907

Swell factor: 1.000

Loose volume: **24,907** LCY

Source of estimated volume: Permit Appendix A, Table A.4.1 and A-2.8

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 420 feet

Unadjusted hourly production: 774.7 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: -5 %

Average site altitude: 6,800 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition Correction Factor</u>		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	1.000	(AVG.)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7954

Adjusted unit production: 616.20 LCY/hr
Adjusted fleet production: **1232.4** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: \$1.396/LCY

Total job time: **20.21** Hours
Total job cost: **\$34,776**

BULLDOZER WORK

Task description: Ash Disposal Pit Regrade (Section 2)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 002B State: Colorado Abbreviation: None
Date: 4/20/2025 County: Mineral Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
Horsepower: 850
Blade Type: Universal
Attachment: NA
Shift Basis: 3 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$496.62	NA
Operating		
Cost/Hour:	\$324.90	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.84	NA
Total unit	\$860.36	
Cost/Hour:		
Total Fleet	\$1,720.71	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 35,685
Swell factor: 1.000

Loose volume: 35,685 LCY

Source of estimated volume: Permit Appendix A, Table A.4.1 and A-2.8

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 410 feet
Unadjusted hourly production: 792.6 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: -10 %
Average site altitude: 6,800 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	1.000	(AVG.)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8739

Adjusted unit production: 692.65 LCY/hr
Adjusted fleet production: 1385.3 LCY/hr

JOB TIME AND COST

Fleet size:	<u>2 Dozer(s)</u>
Unit cost:	<u>\$1.242/LCY</u>
Total job time:	<u>25.76 Hours</u>
Total job cost:	<u>\$44,325</u>

BULLDOZER WORK

Task description: Ash Disposal Pit Regrade (Section 3-1)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 4/20/2025 County: Mineral Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
Horsepower: 850
Blade Type: Universal
Attachment: NA
Shift Basis: 3 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$496.62	NA
Operating		
Cost/Hour:	\$324.90	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.84	NA
Total unit	\$860.36	
Cost/Hour:		
Total Fleet	\$1,720.71	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 7,833
Swell factor: 1.000

Loose volume: 7,833 LCY

Source of estimated volume: Permit Appendix A, Table A.4.1 and A-2.8

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 120 feet
Unadjusted hourly production: 2,467.4 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: -10 %
Average site altitude: 6,800 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	1.000	(AVG.)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8739

Adjusted unit production: 2,156.26 LCY/hr
Adjusted fleet production: 4312.52 LCY/hr

JOB TIME AND COST

Fleet size:	<u>2 Dozer(s)</u>
Unit cost:	<u>\$0.399/LCY</u>

Total job time:	<u>1.82 Hours</u>
Total job cost:	<u>\$3,125</u>

BULLDOZER WORK

Task description: Ash Disposal Pit Regrade (Section 3-2)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 003B State: Colorado Abbreviation: None
Date: 4/20/2025 County: Mineral Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
Horsepower: 850
Blade Type: Universal
Attachment: NA
Shift Basis: 3 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>0</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$1,720.71</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 64,667
Swell factor: 1.000
Loose volume: 64,667 LCY

Source of estimated volume: Permit Appendix A, Table A.4.1 and A-2.8
Source of estimated swell Cat Handbook
factor: _____

HOURLY PRODUCTION

Average push distance: 530 feet
Unadjusted hourly 616.7 LCY/hr
production: _____

Materials consistency Loose stockpile 1.2
description: _____

Average push -20 %
gradient: _____
Average site 6,800 feet
altitude: _____

Material weight: 2,475 lbs/LCY

Weight description: User Provided

Job Condition Correction Factor Source

<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>1.200</u>	<u>(CAT HB)</u>
<u>Dozing method:</u>	<u>1.200</u>	<u>(S-BY-S)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>1.426</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.929</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 1.0173

Adjusted unit
production: 627.37 LCY/hr

<u>Adjusted fleet production:</u>	<u>1254.74 LCY/hr</u>
---------------------------------------	------------------------------

JOB TIME AND COST

<u>Fleet size:</u>	<u>2 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$1.371/LCY</u>

<u>Total job time:</u>	<u>51.54 Hours</u>
<u>Total job cost:</u>	<u>\$88,682</u>

BULLDOZER WORK

Task description: Regrade Johnson Coal Stockpile

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
Horsepower: 850
Blade Type: Universal
Attachment: NA
Shift Basis: 3 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$496.62	NA
Operating		
Cost/Hour:	\$324.90	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.84	NA
Total unit	\$860.36	
Cost/Hour:		
Total Fleet	\$860.36	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 26,112
Swell factor: 1.000

Loose volume: 26,112 LCY

Source of estimated volume: Permit Appendix A, TableA-4.7

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 75 feet
Unadjusted hourly production: 3,584.2 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 7,000 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5449

Adjusted unit production: 1,953.03 LCY/hr
Adjusted fleet production: 1953.03 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost:	<u>\$0.441/LCY</u>
Total job time:	<u>13.37 Hours</u>
Total job cost:	<u>\$11,503</u>

BULLDOZER WORK

Task description: D/E Pit Regrade (Spoil Side East)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 004A State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
Horsepower: 850
Blade Type: Universal
Attachment: NA
Shift Basis: 3 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$496.62	NA
Operating		
Cost/Hour:	\$324.90	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.84	NA
Total unit	\$860.36	
Cost/Hour:		
Total Fleet	\$6,882.84	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 528,550
Swell factor: 1.000

Loose volume: 528,550 LCY

Source of estimated volume: Permit Appendix A, Table 1.4-2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 335 feet
Unadjusted hourly production: 956.8 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -20 %
Average site altitude: 7,000 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	1.000	(AVG.)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9419

Adjusted unit production: 901.21 LCY/hr
Adjusted fleet production: 7209.68 LCY/hr

JOB TIME AND COST

Fleet size:	<u>8 Dozer(s)</u>
Unit cost:	<u>\$0.955/LCY</u>
Total job time:	<u>73.31 Hours</u>
Total job cost:	<u>\$504,589</u>

BULLDOZER WORK

Task description: D/E Pit Regrade (West)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 005A State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
Horsepower: 850
Blade Type: Universal
Attachment: NA
Shift Basis: 3 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$496.62	NA
Operating		
Cost/Hour:	\$324.90	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.84	NA
Total unit	\$860.36	
Cost/Hour:		
Total Fleet	\$5,162.13	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 507,233
Swell factor: 1.000
Loose volume: **507,233** LCY

Source of estimated volume: Permit Appendix A, Table 1.4-2
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 335 feet
Unadjusted hourly production: 956.8 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -20 %
Average site altitude: 7,000 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750 (AVG.)
Material consistency:	1.000 (CAT HB)
Dozing method:	1.200 (S-BY-S)
Visibility:	1.000 (AVG.)
Job efficiency:	0.790 (3 SHIFTS/DAY)
Spoil pile:	1.000 (DOZ-OC)
Push gradient:	1.426 (CAT HB)
Altitude:	1.000 (CAT HB)
Material Weight:	0.929 (CAT HB)
Blade type:	1.000 (PAT)

Net correction: 0.9419

Adjusted unit production: 901.21 LCY/hr

Adjusted fleet production:	<hr/> 5407.26 LCY/hr <hr/>
-------------------------------	-----------------------------------

JOB TIME AND COST

Fleet size:	<hr/> 6 Dozer(s) <hr/>
Unit cost:	<hr/> \$0.955/LCY <hr/>

Total job time:	<hr/> 93.81 Hours <hr/>
Total job cost:	<hr/> \$484,239 <hr/>

BULLDOZER WORK

Task description: Regrade BC Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 030 State: Colorado Abbreviation: None
Date: 4/21/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$257.39</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$196.93</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>100</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.59</u>	<u>NA</u>
<u>Total unit</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$1,971.62</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 166,237
Swell factor: 1.250
Loose volume: 207,796 LCY

Source of estimated volume: Appendix A, Table A-6.1
Source of estimated swell Cat Handbook
factor: _____

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly 2,028.0 LCY/hr
production: _____

Materials consistency Partly consolidated stockpile 1.1
description: _____

Average push 0 %
gradient: _____
Average site 6,400 feet
altitude: _____

Material weight: 2,550 lbs/LCY _____

Weight description: Earth - Dry packed _____

Job Condition Correction Factor Source

<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>1.100</u>	<u>(CAT HB)</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.902</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.5559 _____

Adjusted unit
production: 1,127.37 LCY/hr _____

<u>Adjusted fleet production:</u>	<u>4509.48 LCY/hr</u>
---------------------------------------	------------------------------

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$0.437/LCY</u>

<u>Total job time:</u>	<u>46.08 Hours</u>
<u>Total job cost:</u>	<u>\$90,852</u>

BULLDOZER WORK

Task description: Regrade D-Main Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 031 State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	100
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 121,593
Swell factor: 1.250

Loose volume: 151,991 LCY

Source of estimated volume: Appendix A, Table A-6.1

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr
Adjusted fleet production: 4509.48 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>33.70 Hours</u>
Total job cost:	<u>\$66,453</u>

BULLDOZER WORK

Task description: Regrade East and West Ash Roads

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 032 State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	100
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 200,753
Swell factor: 1.250

Loose volume: 250,941 LCY

Source of estimated volume: Appendix A, Table A-6.1

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr
Adjusted fleet production: 4509.48 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>55.65 Hours</u>
Total job cost:	<u>\$109,716</u>

BULLDOZER WORK

Task description: Regrade LOM Roads

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 033 State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	100
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 362,600
Swell factor: 1.250
Loose volume: **453,250** LCY

Source of estimated volume: Appendix A, Table A-6.1
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>	<u>Source</u>	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr

Adjusted fleet production:	<hr/> 4509.48 LCY/hr <hr/>
-------------------------------	-----------------------------------

JOB TIME AND COST

Fleet size:	<hr/> 4 Dozer(s) <hr/>
Unit cost:	<hr/> \$0.437/LCY <hr/>

Total job time:	<hr/> 100.51 Hours <hr/>
Total job cost:	<hr/> \$198,169 <hr/>

BULLDOZER WORK

Task description: Regrade A Roads (Middle A and North A N pit)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 034 State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	100
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 133,517
Swell factor: 1.250
Loose volume: **166,896** LCY

Source of estimated volume: Appendix A, Table A-6.1
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>	<u>Source</u>	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr

Adjusted fleet production:	<hr/> 4509.48 LCY/hr <hr/>
-------------------------------	-----------------------------------

JOB TIME AND COST

Fleet size:	<hr/> 4 Dozer(s) <hr/>
Unit cost:	<hr/> \$0.437/LCY <hr/>

Total job time:	<hr/> 37.01 Hours <hr/>
Total job cost:	<hr/> \$72,970 <hr/>

BULLDOZER WORK

Task description: Regrade N Pit Roads (old LOM, cross-over, ash pit)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 035 State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
Horsepower: 850
Blade Type: Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$496.62	NA
Operating		
Cost/Hour:	\$324.90	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	100
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$860.11	
Cost/Hour:		
Total Fleet	\$3,440.42	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 105,283
Swell factor: 1.150

Loose volume: 121,075 LCY

Source of estimated volume: Table A-6.1

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet

Unadjusted hourly production: 3,441.4 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %

Average site altitude: 6,600 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5725

Adjusted unit production: 1,970.20 LCY/hr

Adjusted fleet production: 7880.8 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>15.36 Hours</u>
Total job cost:	<u>\$52,856</u>

BULLDOZER WORK

Task description: Regrade C Pit Haul Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 036 State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 136,400
Swell factor: 1.250
Loose volume: **170,500 LCY**

Source of estimated volume: Appendix A, Table a-6.1
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>	<u>Source</u>	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr

Adjusted fleet production:	<hr/> 4509.48 LCY/hr <hr/>
-------------------------------	-----------------------------------

JOB TIME AND COST

Fleet size:	<hr/> 4 Dozer(s) <hr/>
Unit cost:	<hr/> \$0.437/LCY <hr/>

Total job time:	<hr/> 37.81 Hours <hr/>
Total job cost:	<hr/> \$74,545 <hr/>

BULLDOZER WORK

Task description: Regrade East A Haul Roads (East A and East A Split, Bridge Rd)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 039 State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	100
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 155,400
Swell factor: 1.250

Loose volume: 194,250 LCY

Source of estimated volume: Appendix A, Table A-6.1

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6671

Adjusted unit production: 1,352.88 LCY/hr
Adjusted fleet production: 5411.52 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.364/LCY</u>
Total job time:	<u>35.90 Hours</u>
Total job cost:	<u>\$70,773</u>

BULLDOZER WORK

Task description: Regrade I/J Roads (I/J Spoil, I Mid, I West)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 040 State: Colorado Abbreviation: None
Date: 4/21/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 3 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$257.39</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$196.93</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>25</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$493.16</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$1,972.62</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 111,117
Swell factor: 1.250
Loose volume: 138,896 LCY

Source of estimated volume: Permit Appendix A, Tables A-2.3, A.6.1
Source of estimated swell
factor: Operator, Appendix
A Table A-6.1

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly
production: 2,028.0 LCY/hr

Materials consistency
description: Partly consolidated stockpile 1.1

Average push
gradient: 0 %
Average site
altitude: 6,725 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

Job Condition Correction Factor Source

<u>Operator Skill:</u>	<u>1.000</u>	<u>(EXCL.)</u>
<u>Material consistency:</u>	<u>1.100</u>	<u>(CAT HB)</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.929</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.7266

Adjusted unit
production: 1,473.54 LCY/hr

<u>Adjusted fleet production:</u>	<u>5894.16 LCY/hr</u>
---------------------------------------	------------------------------

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$0.335/LCY</u>

<u>Total job time:</u>	<u>23.57 Hours</u>
<u>Total job cost:</u>	<u>\$46,485</u>

BULLDOZER WORK

Task description: Regrade K Pit Haul Roads (K1 EPRL K3)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #:	<u>041</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/20/2025</u>	County:	<u>Moffat</u>	Filename:	<u>PR12</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine:	<u>Cat D10T - 10SU</u>
Horsepower:	<u>574</u>
Blade Type:	<u>Semi-Universal</u>
Attachment:	<u>NA</u>
Shift Basis:	<u>1 per day</u>
Data Source:	<u>(CRG)</u>

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating		
Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper own.		
Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op.		
Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator		
Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit	<u>\$492.91</u>	
Cost/Hour:		
Total Fleet	<u>\$1,971.62</u>	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 148,283
Swell factor: 1.250
Loose volume: **185,354 LCY**

Source of estimated volume: Appendix A, Table A-6.1
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750 (AVG.)
Material consistency:	1.100 (CAT HB)
Dozing method:	1.000 (GEN.)
Visibility:	1.000 (AVG.)
Job efficiency:	0.830 (1 SHIFT/DAY)
Spoil pile:	0.900 (SSD-FC)
Push gradient:	1.000 (CAT HB)
Altitude:	1.000 (CAT HB)
Material Weight:	0.902 (CAT HB)
Blade type:	1.000 (PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr

Adjusted fleet production:	<hr/> 4509.48 LCY/hr <hr/>
-------------------------------	-----------------------------------

JOB TIME AND COST

Fleet size:	<hr/> 4 Dozer(s) <hr/>
Unit cost:	<hr/> \$0.437/LCY <hr/>

Total job time:	<hr/> 41.10 Hours <hr/>
Total job cost:	<hr/> \$81,040 <hr/>

BULLDOZER WORK

Task description: Regrade Mine Access Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 042 State: Colorado Abbreviation: None
Date: 4/20/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 54,022
Swell factor: 1.250
Loose volume: **67,528 LCY**

Source of estimated volume: Appendix A, Table a-6.1
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>	<u>Source</u>	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr

Adjusted fleet production:	<hr/> 4509.48 LCY/hr <hr/>
-------------------------------	-----------------------------------

JOB TIME AND COST

Fleet size:	<hr/> 4 Dozer(s) <hr/>
Unit cost:	<hr/> \$0.437/LCY <hr/>

Total job time:	<hr/> 14.97 Hours <hr/>
Total job cost:	<hr/> \$29,524 <hr/>

BULLDOZER WORK

Task description: Regrade Explosive Storage Access Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 043 State: Colorado Abbreviation: None
Date: 3/26/2025 County: Moffat Filename: 043
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$257.39</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$196.93</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>0</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.59</u>	<u>NA</u>
<u>Total unit</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$1,971.62</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 13,096
Swell factor: 1.250
Loose volume: **16,370 LCY**

Source of estimated volume: Appendix A, Table A-6.2
Source of estimated swell Cat Handbook
factor: _____

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly 2,028.0 LCY/hr
production: _____

Materials consistency Consolidated stockpile 1.0
description: _____

Average push 0 %
gradient: _____
Average site 6,400 feet
altitude: _____

Material weight: 2,550 lbs/LCY _____

Weight description: _____ Earth - Dry packed _____

Job Condition Correction Factor Source

<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.902</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.5053 _____

Adjusted unit
production: 1,024.75 LCY/hr
Adjusted fleet
production: **4099 LCY/hr**

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$0.481/LCY</u>

<u>Total job time:</u>	<u>3.99 Hours</u>
<u>Total job cost:</u>	<u>\$7,874</u>

BULLDOZER WORK

Task description: Regrade No Name Access Roads #2, #4, 5R

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #:	<u>044</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/20/2025</u>	County:	<u>Moffat</u>	Filename:	<u>PR12</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine:	<u>Cat D10T - 10SU</u>
Horsepower:	<u>574</u>
Blade Type:	<u>Semi-Universal</u>
Attachment:	<u>NA</u>
Shift Basis:	<u>1 per day</u>
Data Source:	<u>(CRG)</u>

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating		
Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper own.		
Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op.		
Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator		
Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit	<u>\$492.91</u>	
Cost/Hour:		
Total Fleet	<u>\$1,971.62</u>	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 24,719
Swell factor: 1.250
Loose volume: **30,899** LCY

Source of estimated volume: Appendix A, Table A- 6.2
Source of estimated swell
factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly
production: 2,028.0 LCY/hr

Materials consistency
description: Partly consolidated stockpile 1.1

Average push
gradient: -5 %
Average site
altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>	<u>Source</u>	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6198

Adjusted unit
production: 1,256.95 LCY/hr

Adjusted fleet production:	<hr/> 5027.8 LCY/hr <hr/>
-------------------------------	----------------------------------

JOB TIME AND COST

Fleet size:	<hr/> 4 Dozer(s) <hr/>
Unit cost:	<hr/> \$0.392/LCY <hr/>

Total job time:	<hr/> 6.15 Hours <hr/>
Total job cost:	<hr/> \$12,117 <hr/>

BULLDOZER WORK

Task description: Regrade Potable Water Well Access Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 045 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 4,093
Swell factor: 1.250

Loose volume: 5,116 LCY

Source of estimated volume: Appendix A, Table 1.4-5

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr
Adjusted fleet production: 4509.48 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>1.13 Hours</u>
Total job cost:	<u>\$2,237</u>

BULLDOZER WORK

Task description: Regrade West Pyeatt Access Road (1 and 2)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 046 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 16,370
Swell factor: 1.250

Loose volume: 20,463 LCY

Source of estimated volume: Appendix A, Table A-6.2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 10 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4369

Adjusted unit production: 886.03 LCY/hr
Adjusted fleet production: 3544.12 LCY/hr

J

OB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.556/LCY</u>
Total job time:	<u>5.77 Hours</u>
Total job cost:	<u>\$11,383</u>

BULLDOZER WORK

Task description: Regrade Middle Pyeatt Access Road (1, 2 and 3)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #:	<u>047</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>PR12</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine:	<u>Cat D10T - 10SU</u>
Horsepower:	<u>574</u>
Blade Type:	<u>Semi-Universal</u>
Attachment:	<u>NA</u>
Shift Basis:	<u>1 per day</u>
Data Source:	<u>(CRG)</u>

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating		
Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper own.		
Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op.		
Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator		
Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit	<u>\$492.91</u>	
Cost/Hour:		
Total Fleet	<u>\$1,971.62</u>	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 15,142
Swell factor: 1.250
Loose volume: **18,928 LCY**

Source of estimated volume: Appendix A, Table A-6.2
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: 10 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>	<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:	0.800	(SSD-AC)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3531

Adjusted unit production: 716.09 LCY/hr

Adjusted fleet production:	<hr/> 2864.36 LCY/hr <hr/>
-------------------------------	-----------------------------------

JOB TIME AND COST

Fleet size:	<hr/> 4 Dozer(s) <hr/>
Unit cost:	<hr/> \$0.688/LCY <hr/>

Total job time:	<hr/> 6.61 Hours <hr/>
Total job cost:	<hr/> \$13,028 <hr/>

BULLDOZER WORK

Task description: Regrade East Pyeatt Access Road (1, 2 and 3)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 048 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 21,159
Swell factor: 1.250

Loose volume: 26,449 LCY

Source of estimated volume: Appendix A, Table 1.4-5

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr
Adjusted fleet production: 4509.48 LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)

Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>5.87 Hours</u>
Total job cost:	<u>\$11,564</u>

BULLDOZER WORK

Task description: Regrade Grouse Access Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 049 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 10,477
Swell factor: 1.250

Loose volume: 13,096 LCY

Source of estimated volume: Appendix A, Table 1.4-5

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr
Adjusted fleet production: 4509.48 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>2.90 Hours</u>
Total job cost:	<u>\$5,726</u>

BULLDOZER WORK

Task description: Regrade West Flume Access Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 050 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 6,139
Swell factor: 1.250

Loose volume: 7,674 LCY

Source of estimated volume: Appendix A, Table A-6.2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr
Adjusted fleet production: 4509.48 LCY/hr

J

OB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>1.70 Hours</u>
Total job cost:	<u>\$3,355</u>

BULLDOZER WORK

Task description: Regrade East Flume Access Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 051 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 6,139
Swell factor: 1.250

Loose volume: 7,674 LCY

Source of estimated volume: Appendix A, Table A-6.2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr
Adjusted fleet production: 4509.48 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>1.70 Hours</u>
Total job cost:	<u>\$3,355</u>

BULLDOZER WORK

Task description: Regrade Deal Access Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 052 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 6,139
Swell factor: 1.250
Loose volume: **7,674 LCY**

Source of estimated volume: Appendix A, Table A-6.2
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>	<u>Source</u>	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr

Adjusted fleet production:	<hr/> 4509.48 LCY/hr <hr/>
-------------------------------	-----------------------------------

JOB TIME AND COST

Fleet size:	<hr/> 4 Dozer(s) <hr/>
Unit cost:	<hr/> \$0.437/LCY <hr/>

Total job time:	<hr/> 1.70 Hours <hr/>
Total job cost:	<hr/> \$3,355 <hr/>

BULLDOZER WORK

Task description: Regrade Horse Access Roads (Horse and Horse1)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 053 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 13,915
Swell factor: 1.250

Loose volume: 17,394 LCY

Source of estimated volume: Appendix A, Table A-6.2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr
Adjusted fleet production: 4509.48 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>3.86 Hours</u>
Total job cost:	<u>\$7,605</u>

BULLDOZER WORK

Task description: Regrade West Horse Access Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 054 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 6,139
Swell factor: 1.250

Loose volume: 7,674 LCY

Source of estimated volume: Appendix A, Table A-6.2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr
Adjusted fleet production: 4509.48 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>1.70 Hours</u>
Total job cost:	<u>\$3,355</u>

BULLDOZER WORK

Task description: Regrade Middle Flume Access Roads (1 and 3)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 055 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 10,539
Swell factor: 1.250

Loose volume: 13,174 LCY

Source of estimated volume: Appendix A, Table A-6.2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr
Adjusted fleet production: 4509.48 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.437/LCY</u>
Total job time:	<u>2.92 Hours</u>
Total job cost:	<u>\$5,760</u>

BULLDOZER WORK

Task description: Regrade Oak Access Roads

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 056 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 7,776
Swell factor: 1.250

Loose volume: 9,720 LCY

Source of estimated volume: Appendix A, Table A-6.2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 5 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5020

Adjusted unit production: 1,018.06 LCY/hr
Adjusted fleet production: **4072.24 LCY/hr**

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.484/LCY</u>
Total job time:	<u>2.39 Hours</u>
Total job cost:	<u>\$4,706</u>

BULLDOZER WORK

Task description: Regrade Sage Access Roads

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 057 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR 12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 10,231
Swell factor: 1.250

Loose volume: 12,789 LCY

Source of estimated volume: Appendix A, Table A-6.2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 5 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5020

Adjusted unit production: 1,018.06 LCY/hr
Adjusted fleet production: 4072.24 LCY/hr

JOB TIME AND COST

Fleet size:	<u>4 Dozer(s)</u>
Unit cost:	<u>\$0.484/LCY</u>
Total job time:	<u>3.14 Hours</u>
Total job cost:	<u>\$6,192</u>

BULLDOZER WORK

Task description: Regrade Johnson Access Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 058 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$257.39	NA
Operating		
Cost/Hour:	\$196.93	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	0
Operator		
Cost/Hour:	\$38.59	NA
Total unit	\$492.91	
Cost/Hour:		
Total Fleet	\$1,971.62	
Cost/Hour:		

MATERIAL QUANTITIES

Initial
Volume: 25,374
Swell factor: 1.250
Loose volume: **31,718 LCY**

Source of estimated volume: Appendix A, Table A-6.2
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly production: 2,028.0 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>	<u>Source</u>	
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5559

Adjusted unit production: 1,127.37 LCY/hr

Adjusted fleet production:	<hr/> 4509.48 LCY/hr <hr/>
-------------------------------	-----------------------------------

JOB TIME AND COST

Fleet size:	<hr/> 4 Dozer(s) <hr/>
Unit cost:	<hr/> \$0.437/LCY <hr/>

Total job time:	<hr/> 7.03 Hours <hr/>
Total job cost:	<hr/> \$13,867 <hr/>

BULLDOZER RIPPING WORK

Task description: Rip BC Walk Road

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 063 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 063
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU Horsepower: 574
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$11.73</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$529.66</u>	
Total Fleet Cost/Hour:	<u>\$2,118.62</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic:	<u>NA</u>	Bank Volume:	<u>NA</u>	BCY	<u>NA</u>		
Area:	<u>7.50</u>	acres	Rip Depth (ft):	<u>2.50</u>	Volum e:	<u>30,250</u>	BCY or CCY

Source of estimated quantity: Appendix A Table 1.4-5

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.50 feet/pass
Average Ripping Width: 8.67 feet/pass
Average Ripping Length: 500.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 1.007 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 1.007 Acres/hr

Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.84 Acres/hr
Adjusted Hourly Fleet Production: **3.34** Acres/hr

JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **2.24** Hours
Unit cost: \$633.949 Per acre Total job cost: **\$4,755**

BULLDOZER RIPPING WORK

Task description: Rip D-main Pit Haul Roads

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 064 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 064
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU Horsepower: 574
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$11.73</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$529.66</u>	
Total Fleet Cost/Hour:	<u>\$2,118.62</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 28.10 acres Rip Depth (ft): 2.50 Volume: 113,337 BCY or CCY

Source of estimated quantity: Appendix A Table 1.4-5

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.50 feet/pass
Average Ripping Width: 8.67 feet/pass
Average Ripping Length: 500.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 1.007 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 1.007 Acres/hr

Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.84 Acres/hr
Adjusted Hourly Fleet Production: **3.34** Acres/hr

JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **8.41** Hours

Unit cost: \$633.949 Per acre Total job cost: **\$17,814**

BULLDOZER RIPPING WORK

Task description: Rip West Ash Haulroads (West Ash, West Ash1 and West Ash 2)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 065 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 065
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU Horsepower: 574
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$11.73</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$529.66</u>	
Total Fleet Cost/Hour:	<u>\$2,118.62</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic:	<u>NA</u>	Bank Volume:	<u>NA</u>	BCY	<u>NA</u>		
Area:	<u>20.00</u>	acres	Rip Depth (ft):	<u>2.50</u>	Volume:	<u>80,667</u>	BCY or CCY

Source of estimated quantity: Appendix A Table 1.4-5

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.50 feet/pass
Average Ripping Width: 8.67 feet/pass
Average Ripping Length: 500.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 1.007 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 1.007 Acres/hr

Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.84 Acres/hr
Adjusted Hourly Fleet Production: **3.34** Acres/hr

JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **5.98** Hours

Unit cost: \$633.949 Per acre Total job cost: **\$12,679**

BULLDOZER RIPPING WORK

Task description: Rip LOM Haul Roads (F2 and F2-G5)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 066 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 066
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU Horsepower: 574
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$11.73</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$529.66</u>	
Total Fleet Cost/Hour:	<u>\$2,118.62</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 29.30 acres Rip Depth (ft): 2.50 Volume: 118,177 BCY or CCY

Source of estimated quantity: Appendix A Table 1.4-5

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.50 feet/pass
Average Ripping Width: 8.67 feet/pass
Average Ripping Length: 500.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 1.007 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 1.007 Acres/hr

Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.84 Acres/hr
Adjusted Hourly Fleet Production: **3.34** Acres/hr

JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **8.77** Hours

Unit cost: \$633.949 Per acre Total job cost: **\$18,575**

BULLDOZER RIPPING WORK

Task description: Rip A Pit Haul Roads (Middle A and North A)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 067 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 067
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU Horsepower: 574
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$11.73</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$529.66</u>	
Total Fleet Cost/Hour:	<u>\$2,118.62</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 21.50 acres Rip Depth (ft): 2.50 Volume: 86,717 BCY or CCY

Source of estimated quantity: Appendix A Table 1.4-5

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.50 feet/pass
Average Ripping Width: 8.67 feet/pass
Average Ripping Length: 500.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 1.007 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 1.007 Acres/hr

Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.84 Acres/hr
Adjusted Hourly Fleet Production: **3.34** Acres/hr

JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **6.43** Hours
Unit cost: \$633.949 Per acre Total job cost: **\$13,630**

BULLDOZER RIPPING WORK

Task description: Rip N Pit Haul Roads

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 068 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 068
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU Horsepower: 574
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$11.73</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$529.66</u>	
Total Fleet Cost/Hour:	<u>\$2,118.62</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 18.00 acres Rip Depth (ft): 2.50 Volume: 72,600 BCY or CCY

Source of estimated quantity: Appendix A Table 1.4-5

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.50 feet/pass
Average Ripping Width: 8.67 feet/pass
Average Ripping Length: 500.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 1.007 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 1.007 Acres/hr

Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.84 Acres/hr
Adjusted Hourly Fleet Production: **3.34** Acres/hr

JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **5.39** Hours
Unit cost: \$633.949 Per acre Total job cost: **\$11,411**

BULLDOZER RIPPING WORK

Task description: Rip East A Haul Roads (East A and East A Split)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 072 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 072
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU Horsepower: 574
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$11.73</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$529.66</u>	
Total Fleet Cost/Hour:	<u>\$2,118.62</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 9.90 acres Rip Depth (ft): 2.50 Volume: 39,930 BCY or CCY

Source of estimated quantity: Appendix A Table 1.4-5

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.50 feet/pass
Average Ripping Width: 8.67 feet/pass
Average Ripping Length: 500.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 1.007 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 1.007 Acres/hr

Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.84 Acres/hr
Adjusted Hourly Fleet Production: **3.34** Acres/hr

JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **2.96** Hours

Unit cost: \$633.949 Per acre Total job cost: **\$6,276**

BULLDOZER RIPPING WORK

Task description: Rip Access Road (Tasks 042-059)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 074 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 074
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU Horsepower: 574
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$11.73</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$529.66</u>	
Total Fleet Cost/Hour:	<u>\$2,118.62</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 10.40 acres Rip Depth (ft): 2.50 Volume: 41,947 BCY or CCY

Source of estimated quantity: Appendix A Table 1.4-5

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.50 feet/pass
Average Ripping Width: 8.67 feet/pass
Average Ripping Length: 500.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 1.007 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 1.007 Acres/hr

Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.84 Acres/hr
Adjusted Hourly Fleet Production: **3.34** Acres/hr

JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **3.11** Hours
Unit cost: \$633.949 Per acre Total job cost: **\$6,593**

BULLDOZER RIPPING WORK

Task description: Rip K Pit Haul Roads (KMain, K1, K2 , K3)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 075 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 075
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU Horsepower: 574
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$11.73</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$529.66</u>	
Total Fleet Cost/Hour:	<u>\$2,118.62</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 7.10 acres Rip Depth (ft): 2.50 Volume: 28,637 BCY or CCY

Source of estimated quantity: Appendix A Table 1.4-5

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.50 feet/pass
Average Ripping Width: 8.67 feet/pass
Average Ripping Length: 500.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 1.007 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 1.007 Acres/hr

Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.84 Acres/hr
Adjusted Hourly Fleet Production: **3.34** Acres/hr

JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: **2.12** Hours
Unit cost: \$633.949 Per acre Total job cost: **\$4,501**

BULLDOZER RIPPING WORK

Task description: Rip I/J Roads (I/J Spoil, I Mid, I West)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 077 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 077
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU Horsepower: 574
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$11.73</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$529.66</u>	

Total Fleet Cost/Hour: \$2,118.62

MATERIAL QUANTITIES

Selected estimating
method:

Area

Alternate Methods:

Seismic:	<u>NA</u>		Bank Volume:	<u>NA</u>	BCY	<u>NA</u>	
Area:	<u>15.23</u>	acres	Rip Depth (ft):	<u>2.50</u>	Volum e:	<u>61,428</u>	BCY or CCY

Source of estimated quantity: Appendix A Table 6.2

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.50 feet/pass
Average Ripping Width: 8.67 feet/pass
Average Ripping Length: 500.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 1.007 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 1.007 Acres/hr

Site Altitude: 6,400 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.84 Acres/hr
Adjusted Hourly Fleet Production: 3.34 Acres/hr

JOB TIME AND COST

Fleet size: 4 Grader(s) Total job time: 4.56 Hours
Unit cost: \$633.949 Per acre Total job cost: \$9,655

BULLDOZER WORK

Task description: Regrade Coyote Impoundment

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 078 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$257.39</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$196.93</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>0</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.59</u>	<u>NA</u>
<u>Total unit</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$985.81</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 83,750
Swell factor: 1.000
Loose
volume: 83,750 LCY

<u>Source of estimated volume:</u>	<u>Appendix A Table A-7.2</u>
<u>Source of estimated swell factor:</u>	<u>Operator Estimate</u>

HOURLY PRODUCTION

<u>Average push distance:</u>	<u>500 feet</u>
<u>Unadjusted hourly production:</u>	<u>410.8 LCY/hr</u>

<u>Materials consistency description:</u>	<u>Compacted fill or embankment 0.9</u>
---	---

<u>Average push gradient:</u>	<u>0 %</u>
<u>Average site altitude:</u>	<u>6,400 feet</u>

<u>Material weight:</u>	<u>2,550 lbs/LCY</u>
-------------------------	----------------------

<u>Weight description:</u>	<u>User Provided</u>
----------------------------	----------------------

<u>Job Condition Correction Factor</u>	<u>Source</u>	
<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>0.900</u>	<u>(CAT HB))</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.902</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

<u>Net correction:</u>	<u>0.4548</u>
------------------------	---------------

<u>Adjusted unit production:</u>	<u>186.83 LCY/hr</u>
<u>Adjusted fleet production:</u>	<u>373.66 LCY/hr</u>

JOB TIME AND COST

<u>Fleet size:</u>	<u>2 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$2.638/LCY</u>
<u>Total job time:</u>	<u>224.13 Hours</u>
<u>Total job cost:</u>	<u>\$220,954</u>

BULLDOZER WORK

Task description: Regrade Middle Pyeatt Impoundments Impoundment (1,2, 3)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 079 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$257.39</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$196.93</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>0</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.59</u>	<u>NA</u>
<u>Total unit</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 15,381
Swell factor: 1.000
Loose
volume: 15,381 LCY

Source of estimated volume: Appendix A Table A-7.2

Source of estimated swell factor: Operator Estimate

HOURLY PRODUCTION

Average push distance: 225 feet

Unadjusted hourly production: 842.1 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 10 %

Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: User Provided

<u>Job Condition Correction Factor</u>	<u>Source</u>	
<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>0.900</u>	<u>(CAT HB))</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>0.786</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.902</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.3575

Adjusted unit production: 301.05 LCY/hr

Adjusted fleet production: 301.05 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$1.637/LCY

Total job time: 51.09 Hours

Total job cost: \$25,183

BULLDOZER WORK

Task description: Regrade Far East Buzzard Impoundment

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 080 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$257.39</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$196.93</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>0</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.59</u>	<u>NA</u>
<u>Total unit</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 342
Swell factor: 1.000
Loose
volume: 342 LCY

Source of estimated volume: Appendix A Table A-7.2

Source of estimated swell factor: Operator Estimate

HOURLY PRODUCTION

Average push distance: 100 feet

Unadjusted hourly production: 1,718.9 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %

Average site altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight description: User Provided

<u>Job Condition Correction Factor</u>	<u>Source</u>	
<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>0.900</u>	<u>(CAT HB))</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.902</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.4548

Adjusted unit production: 781.76 LCY/hr

Adjusted fleet production: **781.76 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.631/LCY

Total job time: **0.44 Hours**

<u>Total job cost:</u>	<u>\$216</u>
------------------------	---------------------

BULLDOZER WORK

Task description: Regrade Sage Impoundments (1 and 2)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 081 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$257.39</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$196.93</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>0</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.59</u>	<u>NA</u>
<u>Total unit</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 8,302
Swell factor: 1.000
Loose
volume: 8,302 LCY

Source of estimated Appendix A Table 1.4-6
volume:
Source of estimated swell Operator Estimate
factor:

HOURLY PRODUCTION

Average push distance: 150 feet
Unadjusted hourly 1,243.2 LCY/hr
production:

Materials consistency Compacted fill or embankment 0.9
description:

Average push 5 %
gradient:
Average site 6,400 feet
altitude:

Material weight: 2,550 lbs/LCY

Weight User Provided
description:

Job Condition Correction Factor Source

<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>0.900</u>	<u>(CAT HB))</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>0.903</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.902</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.4107

Adjusted unit 510.58 LCY/hr
production:

<u>Adjusted fleet production:</u>	<u>510.58 LCY/hr</u>
---------------------------------------	-----------------------------

JOB TIME AND COST

<u>Fleet size:</u>	<u>1 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$0.965/LCY</u>

<u>Total job time:</u>	<u>16.26 Hours</u>
<u>Total job cost:</u>	<u>\$8,015</u>

BULLDOZER WORK

Task description: **Regrade West Horse Impoundment**

Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010**

PROJECT IDENTIFICATION

Task #: 082 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$257.39</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$196.93</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>0</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.59</u>	<u>NA</u>
<u>Total unit</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 3,315
Swell factor: 1.000
Loose
volume: 3,315 LCY

Source of estimated Appendix A Table A-7.2
volume:
Source of estimated swell Operator Estimate
factor:

HOURLY PRODUCTION

Average push distance: 55 feet
Unadjusted hourly 2,670.0 LCY/hr
production:

Materials consistency Compacted fill or embankment 0.9
description:

Average push 0 %
gradient:
Average site 6,400 feet
altitude:

Material weight: 2,550 lbs/LCY

Weight User Provided
description:

Job Condition Correction Factor Source

<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material</u>	<u>0.900</u>	<u>(CAT HB))</u>
<u>consistency:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Visibility:</u>	<u>0.830</u>	<u>(1</u>
<u>Job efficiency:</u>	<u>0.900</u>	<u>SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>1.000</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.902</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>
<u>Net correction:</u>	<u>0.4548</u>	

Adjusted unit
production:
Adjusted fleet
production:

1,214.32 LCY/hr

1214.32 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.406/LCY

Total job time: **2.73 Hours**
Total job cost: **\$1,346**

BULLDOZER WORK

Task description: Regrade Impoundment H

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 083 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>	<u>\$257.39</u>	<u>NA</u>
<u>Cost/Hour:</u>		
<u>Operating</u>	<u>\$196.93</u>	<u>100</u>
<u>Cost/Hour:</u>		
<u>Ripper own.</u>	<u>\$0.00</u>	<u>NA</u>
<u>Cost/Hour:</u>		
<u>Ripper op.</u>	<u>\$0.00</u>	<u>0</u>
<u>Cost/Hour:</u>		
<u>Operator</u>	<u>\$38.59</u>	<u>NA</u>
<u>Cost/Hour:</u>		
<u>Total unit</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 3,198
Swell factor: 1.000
Loose
volume: **3,198 LCY**

Source of estimated
volume: Appendix A Table A-7.2
Source of estimated swell
factor: Operator Estimate

HOURLY PRODUCTION

Average push distance: 150 feet
Unadjusted hourly
production: 1,243.2 LCY/hr

Materials consistency
description: Compacted fill or embankment 0.9

Average push
gradient: 0 %
Average site
altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight
description: User Provided

Job Condition	Correction Factor	Source
<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>0.900</u>	<u>(CAT HB))</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.902</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.4548

Adjusted unit
production: 565.41 LCY/hr

<u>Adjusted fleet production:</u>	<u>565.41 LCY/hr</u>
---------------------------------------	-----------------------------

JOB TIME AND COST

<u>Fleet size:</u>	<u>1 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$0.872/LCY</u>

<u>Total job time:</u>	<u>5.66 Hours</u>
<u>Total job cost:</u>	<u>\$2,788</u>

BULLDOZER WORK

Task description: Regrade Industrial Waste Pond

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 084 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>	<u>\$257.39</u>	<u>NA</u>
<u>Cost/Hour:</u>		
<u>Operating</u>	<u>\$196.93</u>	<u>100</u>
<u>Cost/Hour:</u>		
<u>Ripper own.</u>	<u>\$0.00</u>	<u>NA</u>
<u>Cost/Hour:</u>		
<u>Ripper op.</u>	<u>\$0.00</u>	<u>0</u>
<u>Cost/Hour:</u>		
<u>Operator</u>	<u>\$38.59</u>	<u>NA</u>
<u>Cost/Hour:</u>		
<u>Total unit</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$492.91</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 3,279
Swell factor: 1.000
Loose
volume: 3,279 LCY

Source of estimated
volume: Appendix A Table A-7.2
Source of estimated swell
factor: Operator Estimate

HOURLY PRODUCTION

Average push distance: 150 feet
Unadjusted hourly
production: 1,243.2 LCY/hr

Materials consistency
description: Compacted fill or embankment 0.9

Average push
gradient: 0 %
Average site
altitude: 6,400 feet

Material weight: 2,550 lbs/LCY

Weight
description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>0.900</u>	<u>(CAT HB))</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.902</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.4548

Adjusted unit
production: 565.41 LCY/hr

<u>Adjusted fleet production:</u>	<u>565.41 LCY/hr</u>
---------------------------------------	-----------------------------

JOB TIME AND COST

<u>Fleet size:</u>	<u>1 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$0.872/LCY</u>

<u>Total job time:</u>	<u>5.80 Hours</u>
<u>Total job cost:</u>	<u>\$2,859</u>

BULLDOZER WORK

Task description: Regrade Deal 1 and 2

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 085 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$5.87</u>	<u>50</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$523.79</u>	
Total Fleet Cost/Hour:	<u>\$523.79</u>	

MATERIAL QUANTITIES

Initial
Volume: 9,555
Swell factor: 1.000

Loose
volume: 9,555 LCY

Source of estimated
volume: A-7.2

Source of estimated swell
factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 50 feet
Unadjusted hourly
production: 2,748.7 LCY/hr

Materials consistency
description: Compacted fill or embankment 0.9

Average push
gradient: 0 %
Average site
altitude: 7,500 feet

Material weight: 2,550 lbs/LCY

Weight
description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
Spoil pile:	<u>0.900</u>	<u>(SSD-FC)</u>
Push gradient:	<u>1.000</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.902</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.4548

Adjusted unit
production: 1,250.11 LCY/hr
Adjusted fleet
production: 1250.11 LCY/hr

JOB TIME AND COST

Fleet size:	<u>1 Dozer(s)</u>
Unit cost:	<u>\$0.419/LCY</u>

Total job time:	<u>7.64 Hours</u>
Total job cost:	<u>\$4,004</u>

BULLDOZER WORK

Task description: Regrade Deacon 1, 2 and Jeffway 1, 2 impoundments

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 086 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$5.87</u>	<u>50</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$523.79</u>	
Total Fleet Cost/Hour:	<u>\$523.79</u>	

MATERIAL QUANTITIES

Initial
Volume: 92,093
Swell factor: 1.000

Loose
volume: 92,093 LCY

Source of estimated
volume: A-7.2

Source of estimated swell
factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 50 feet
Unadjusted hourly
production: 2,748.7 LCY/hr

Materials consistency
description: Compacted fill or embankment 0.9

Average push
gradient: 0 %
Average site
altitude: 7,500 feet

Material weight: 2,550 lbs/LCY

Weight
description: Earth - Dry packed

Job Condition Correction Factor **Source**

Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
Spoil pile:	<u>0.900</u>	<u>(SSD-FC)</u>
Push gradient:	<u>1.000</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.902</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.4548

Adjusted unit
production: 1,250.11 LCY/hr
Adjusted fleet
production: 1250.11 LCY/hr

JOB TIME AND COST

Fleet size:	<u>1 Dozer(s)</u>
Unit cost:	<u>\$0.419/LCY</u>

Total job time:	<u>73.67 Hours</u>
Total job cost:	<u>\$38,587</u>

BULLDOZER WORK

Task description: Regrade W. Buzzard #4 Impoundment

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 087 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$257.39</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$196.93</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$25.02</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$5.87</u>	<u>50</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$523.79</u>	
Total Fleet Cost/Hour:	<u>\$523.79</u>	

MATERIAL QUANTITIES

Initial
Volume: 4,923
Swell factor: 1.000

Loose
volume: 4,923 LCY

Source of estimated
volume: A-7.2

Source of estimated swell
factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly
production: 2,028.0 LCY/hr

Materials consistency
description: Compacted fill or embankment 0.9

Average push
gradient: 0 %
Average site
altitude: 7,500 feet

Material weight: 2,550 lbs/LCY

Weight
description: Earth - Dry packed

Job Condition Correction Factor **Source**

Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
Spoil pile:	<u>0.900</u>	<u>(SSD-FC)</u>
Push gradient:	<u>1.000</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.902</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.4548

Adjusted unit
production: 922.33 LCY/hr
Adjusted fleet
production: **922.33 LCY/hr**

JOB TIME AND COST

Fleet size:	<u>1 Dozer(s)</u>
Unit cost:	<u>\$0.568/LCY</u>

Total job time:	<u>5.34 Hours</u>
Total job cost:	<u>\$2,796</u>

BULLDOZER WORK

Task description: Regrade E. Buzzard #3 Impoundment

Site: Trapper Mine Permit
Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 088 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$257.39	NA
Operating Cost/Hour:	\$196.93	100
Ripper own. Cost/Hour:	\$25.02	NA
Ripper op. Cost/Hour:	\$5.87	50
Operator Cost/Hour:	\$38.59	NA

Total unit	\$523.79
Cost/Hour:	
Total Fleet	\$523.79
Cost/Hour:	

MATERIAL QUANTITIES

Initial	
Volume:	6,414
Swell	
factor:	1.000
Loose	
volume:	6,414 LCY

Source of estimated	A-7.2
volume:	
Source of estimated	Cat Handbook
swell factor:	

HOURLY PRODUCTION

Average push	70 feet
distance:	
Unadjusted hourly	2,253.9 LCY/hr
production:	

Materials consistency	Compacted fill or embankment 0.9
description:	

Average push	0 %
gradient:	
Average site	7,500 feet
altitude:	

Material weight:	2,550 lbs/LCY
------------------	---------------

Weight	Earth - Dry packed
description:	

<u>Job Condition Correction Factor</u>		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4548

Adjusted unit production: 1,025.07 LCY/hr
Adjusted fleet production: **1025.07** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.511/LCY

Total job time: **6.26** Hours
Total job cost: **\$3,277**

BULLDOZER WORK

Task description: Regrade Diversions

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 089 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic
Machine: Cat D8T - 8SU
Horsepower: 310
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>	<u>\$173.32</u>	<u>NA</u>
<u>Cost/Hour:</u>		
<u>Operating</u>	<u>\$109.71</u>	<u>100</u>
<u>Cost/Hour:</u>		
<u>Ripper own.</u>	<u>\$14.53</u>	<u>NA</u>
<u>Cost/Hour:</u>		
<u>Ripper op.</u>	<u>\$3.98</u>	<u>50</u>
<u>Cost/Hour:</u>		
<u>Operator</u>	<u>\$38.59</u>	<u>NA</u>
<u>Cost/Hour:</u>		
<u>Total unit</u>	<u>\$340.12</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$340.12</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 33,374
Swell factor: 1.000

Loose
volume: 33,374 LCY

Source of estimated A-8.2
volume:
Source of estimated swell Cat Handbook
factor:

HOURLY PRODUCTION

Average push distance: 50 feet
Unadjusted hourly 1,400.0 LCY/hr
production:

Materials consistency Compacted fill or embankment 0.9
description:

Average push 0 %
gradient:
Average site 7,500 feet
altitude:

Material weight: 2,650 lbs/LCY

Weight Decomposed rock - 25% Rock, 75% Earth
description:

Job Condition	Correction Factor	Source
<u>Operator Skill:</u>	<u>1.000</u>	<u>(EXCL.)</u>
<u>Material consistency:</u>	<u>0.900</u>	<u>(CAT HB))</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>0.900</u>	<u>(SSD-FC)</u>
<u>Push gradient:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.868</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.5836

Adjusted unit 817.04 LCY/hr
production:
Adjusted fleet 817.04 LCY/hr
production:

JOB TIME AND COST

<u>Fleet size:</u>	<u>1 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$0.416/LCY</u>

<u>Total job time:</u>	<u>40.85 Hours</u>
<u>Total job cost:</u>	<u>\$13,893</u>

BULLDOZER WORK

Task description: Regrade Diversions

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 089MR228 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: PR12 F
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU
Horsepower: 310
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$14.53	NA
Ripper op. Cost/Hour:	\$3.98	50
Operator Cost/Hour:	\$38.59	NA
Total unit Cost/Hour:	\$340.12	
Total Fleet Cost/Hour:	\$340.12	

MATERIAL QUANTITIES

Initial Volume: 532
Swell factor: 1.000
Loose volume: **532** LCY

Source of estimated volume: A-8.2

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 50 feet
Unadjusted hourly production: 1,400.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %

Average site altitude: 7,500 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4548

Adjusted unit production: 636.72 LCY/hr

Adjusted fleet production: **636.72 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.534/LCY

Total job time: **0.84 Hours**

Total job cost: **\$284**

SCRAPER TEAM WORK

Task description: Replace Topsoil on Ash Pits (ASH1)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 090 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 090
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: \$6,154.65

MATERIAL QUANTITIES

Initial volume: 11,254 CCY Swell factor: 1.000
Loose volume: 11,254 LCY

Source of estimated volume: Appendix A, Table A-9.1
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1978.00	10.00	4.00	14.00	657	3.02

Haul Time: **3.02** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1978.00	-10.00	4.00	-6.00	2972	0.72

Return Time: **0.72** minutes

Total Scraper team cycle time:	<u>5.34</u>	minutes
Adjusted for job conditions:	<u>540.90</u>	LCY/Hour
Selected Number of Scrapers:	<u>8</u>	Scraper(s)
Adjusted single scraper team (unit) hourly production:	<u>2,163.60</u>	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	<u>2,163.60</u>	LCY/Hour

Unadjusted unit production/hour: 651.69 LCY/Hour
 Optimal Number of Scrapers per
 push dozer: _____

JOB TIME AND COST

Fleet size:	<u>1</u>	Team(s)	Total job time:	<u>5.20</u>	Hours
Unit cost:	<u>\$2.845</u>	/LCY	Total job cost:	<u>\$32,014</u>	

SCRAPER TEAM WORK

Task description: Replace Topsoil on Ash Pits (ASH2)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 090A State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 90A
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: \$6,154.65

MATERIAL QUANTITIES

Initial volume: 60,000 CCY Swell factor: 1.000
Loose volume: 60,000 LCY

Source of estimated volume: Appendix A, Table A-10.1
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	711.00	-12.00	4.00	-8.00	1628	0.56

Haul Time: **0.56** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	711.00	-12.00	4.00	-8.00	2972	0.30

Return Time: **0.30** minutes

Total Scraper team cycle time:	<u>2.46</u>	minutes
Adjusted for job conditions:	<u>1,174.15</u>	LCY/Hour
Selected Number of Scrapers:	<u>8</u>	Scraper(s)
Adjusted single scraper team (unit) hourly production:	<u>4,696.59</u>	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	<u>4,696.59</u>	LCY/Hour

Unadjusted unit production/hour: 1,414.63 LCY/Hour
Optimal Number of Scrapers per
push dozer: _____

JOB TIME AND COST

Fleet size:	<u>1</u>	Team(s)	Total job time:	<u>12.78</u>	Hours
Unit cost:	<u>\$1.310</u>	/LCY	Total job cost:	<u>\$78,627</u>	

TRUCK/LOADER TEAM WORK

Task description: Replace Topsoil on Ash Pits (A92-4 to Pit)

Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 090B State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 090B
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-ripper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$44.95
Number of Units:	4	1	1	1	1	1
Group Subtotals:	Work: \$1,894.70		Support: \$692.32		Maint: \$282.01	

Total work team cost/hour: **\$2,869.03**

MATERIAL QUANTITIES

Initial volume: 115,215 CCY Swell factor: 1.000
Loose volume: 115,215 LCY

Source of estimated volume: TR124 Appendix A Table A-3.1
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: 1,600 Pounds/LCY
Description: Top Soil
Rated Payload: 200,000 Pounds
Payload Capacity: 125.00 LCY

Truck Bed (volume) Basis:

Struck Volume: 60.60 LCY
Heaped Volume: 78.80 LCY
Average Volume: 69.70 LCY
Adjusted Volume: 78.80 LCY

Final Truck Volume Based on Number of Loader Passes: 77.72 LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity: 7.850 LCY (heaped)
Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity: 8.635 LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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	

Number of Loading Tool Passes Required
to Fill Truck: 9 passes

Loading Tool Cycle Time:

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition
Rating:

ABOVE AVERAGE

Selected Value within this Basic Rating:

AVERAGE

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, maneuver): NA minutes

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:		0.302	minutes
Net Load Time per Truck:		2.516	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>2.516</u>	Minutes	Adjusted for site altitude:	<u>2.516</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5147.00	10.00	3.00	13.00	620	8.345

Haul Time: **8.345** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5147.00	-10.00	3.00	-7.00	3450	1.538

Return Time: 1.538 minutes
Total Truck Cycle Time: 14.399 minutes

Loading Tool unit

Production 1,406.18 LCY/Hour Adjusted for job efficiency: 1,167.13 LCY/Hour

Truck Unit

Production 323.83 LCY/Hour Adjusted for job efficiency: 268.78 LCY/Hour

Optimal No. of Trucks: 4 Truck(s) Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 1,075.13 LCY/Hour
Adjusted single truck/loader team production: 1,075.13 LCY/Hour
Adjusted multiple truck/loader team production: 1,075.13 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 107.16 Hours

Unit cost: \$2.669 /LCY Total job cost: \$307,455

TRUCK/LOADER TEAM WORK

Task description: **Replace Topsoil on D/E Pits (Truck/Excavator)**

Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010

PROJECT IDENTIFICATION

Task #: 091 State: Colorado Abbreviation: None
 Date: 4/19/2025 County: Moffat Filename: 091
 User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST Shift basis: 1 per day

<u>Equipment Description</u>	
<u>Truck Loader Team -Truck:</u>	<u>Cat 777F</u>
<u>-Loader:</u>	<u>Cat 385C L 18'-1" Stick</u>
<u>Support Equipment -Load Area:</u>	<u>Cat D10T - 10SU</u>
<u>-Dump Area:</u>	<u>Cat D10T - 10SU</u>
<u>Road Maintenance –Motor Grader:</u>	<u>CAT 16M</u>
<u>-Water Truck:</u>	<u>Water Tanker, 2,500 Gal.</u>

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	<u>Truck</u>	<u>Excavator</u>	<u>Load Area</u>	<u>Dump Area</u>	<u>Motor Grader</u>	<u>Water Truck</u>
<u>%Utilization-machine:</u>	<u>100</u>	<u>100</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>50</u>
<u>Ownership cost/hour:</u>	<u>\$199.47</u>	<u>\$220.92</u>	<u>\$257.39</u>	<u>\$257.39</u>	<u>\$179.39</u>	<u>\$11.65</u>
<u>Operating cost/hour:</u>	<u>\$152.44</u>	<u>\$131.31</u>	<u>\$49.23</u>	<u>\$49.23</u>	<u>\$29.91</u>	<u>\$11.23</u>
<u>%Utilization-riper:</u>	<u>NA</u>	<u>0</u>	<u>15</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>Ripper own. cost/hour:</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$20.05</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Ripper op. cost/hour:</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$1.90</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Operator cost/hour:</u>	<u>\$25.24</u>	<u>\$33.87</u>	<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$22.07</u>
<u>Unit Subtotals:</u>	<u>\$377.15</u>	<u>\$386.10</u>	<u>\$347.11</u>	<u>\$345.21</u>	<u>\$237.06</u>	<u>\$44.95</u>
<u>Number of Units:</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
<u>Group Subtotals:</u>	<u>Work:</u>	<u>\$1,517.55</u>	<u>Support:</u>	<u>\$692.32</u>	<u>Maint:</u>	<u>\$282.01</u>

Total work team cost/hour: **\$2,491.88**

MATERIAL QUANTITIES

Initial volume: 470,723 CCY Swell factor: 1.000
Loose volume: **470,723** LCY

Source of estimated volume: TR124 Appendix A Table A-3.1
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: 1,600 Pounds/LCY
Description: Top Soil
Rated Payload: 200,000 Pounds
Payload Capacity: 125.00 LCY

Truck Bed (volume) Basis:

Struck Volume: 60.60 LCY
Heaped Volume: 78.80 LCY
Average Volume: 69.70 LCY
Adjusted Volume: 78.80 LCY

Final Truck Volume Based on Number of Loader Passes: **77.72** LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity: 7.850 LCY (heaped)
Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity: **8.635** LCY

Job Condition Corrections: Site Altitude (ft.): 6400 feet

	<u>Truck</u>	<u>Loader</u>	<u>Source</u>
<u>Altitude Adj:</u>	<u>1.000</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Job Efficiency:</u>	<u>0.830</u>	<u>0.830</u>	<u>(CAT HB)</u>
<u>Net Correction:</u>	<u>0.830</u>	<u>0.830</u>	

Number of Loading Tool Passes Required to Fill
Truck: 9 passes

Loading Tool Cycle Time:**Excavators and Front Shovels:**

Machine Cycle Time vs. Job Condition Rating: ABOVE AVERAGE
Selected Value within this Basic Rating: AVERAGE

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, maneuver): NA minutes

<u>Cycle Time Factors</u>		<u>Factor (min.)</u>	<u>Source</u>
<u>Material:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Stockpile:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Truck Ownership:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Operation:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Dump Target:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Net Cycle Time Adjustment:</u>		<u>NA</u>	<u>minutes</u>
<u>Adjusted Loader Cycle Time:</u>		<u>0.302</u>	<u>minutes</u>
<u>Net Load Time per Truck:</u>		<u>2.516</u>	<u>minutes</u>

Truck Cycle Time:

<u>Truck Exchange Time:</u>	<u>0.80</u>	<u>Minutes</u>	<u>Adjusted for site altitude:</u>	<u>0.800</u>	<u>Minutes</u>
<u>Truck Load Time:</u>	<u>2.516</u>	<u>Minutes</u>	<u>Adjusted for site altitude:</u>	<u>2.516</u>	<u>Minutes</u>
<u>Truck Maneuver and Dump Time:</u>	<u>1.20</u>	<u>Minutes</u>	<u>Adjusted for site altitude:</u>	<u>1.200</u>	<u>Minutes</u>

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

<u>Seg #</u>	<u>Haul Distance</u> <u>(Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res</u> <u>(%)</u>	<u>Total Res</u> <u>(%)</u>	<u>Velocity</u> <u>(fpm)</u>	<u>Travel</u> <u>Time</u> <u>(min)</u>
<u>1</u>	<u>4788.00</u>	<u>-8.60</u>	<u>3.00</u>	<u>-5.60</u>	<u>1870</u>	<u>2.695</u>

Haul Time: **2.695** minutes

Return Route:

<u>Seg #</u>	<u>Haul Distance</u> <u>(Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res</u> <u>(%)</u>	<u>Total Res</u> <u>(%)</u>	<u>Velocity</u> <u>(fpm)</u>	<u>Travel</u> <u>Time</u> <u>(min)</u>
<u>1</u>	<u>4788.00</u>	<u>8.60</u>	<u>3.00</u>	<u>11.60</u>	<u>1628</u>	<u>3.064</u>

Return Time: **3.064** minutes
Total Truck Cycle Time: **10.275** minutes

Loading Tool unit

<u>Production</u>	<u>1,406.18</u>	<u>LCY/Hour</u>	<u>Adjusted for job efficiency:</u>	<u>1,167.13</u>	<u>LCY/Hour</u>
<u>Truck Unit Production</u>	<u>453.81</u>	<u>LCY/Hour</u>	<u>Adjusted for job efficiency:</u>	<u>376.66</u>	<u>LCY/Hour</u>

<u>Optimal No. of Trucks:</u>	<u>3</u>	<u>Truck(s)</u>	<u>Selected Number of Trucks:</u>	<u>3</u>	<u>Truck(s)</u>
-------------------------------	----------	-----------------	-----------------------------------	----------	-----------------

<u>Adjusted hourly truck team production:</u>	<u>1,129.99</u>	<u>LCY/Hour</u>
<u>Adjusted single truck/loader team production:</u>	<u>1,129.99</u>	<u>LCY/Hour</u>
<u>Adjusted multiple truck/loader team production:</u>	<u>1,129.99</u>	<u>LCY/Hour</u>

JOB TIME AND COST

<u>Fleet size:</u>	<u>1</u>	<u>Team(s)</u>	<u>Total job time:</u>	<u>416.57</u>	<u>Hours</u>
<u>Unit cost:</u>	<u>\$2.205</u>	<u>/LCY</u>	<u>Total job cost:</u>	<u>\$1,038,052</u>	

SCRAPER TEAM WORKTask description: **Replace Topsoil on D/E Pits (D97-1)**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #:	<u>091A</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>091A</u>
User:	<u>RAR</u>				

Agency or organization name: **DRMS****HOURLY EQUIPMENT** COSTShift basis: **1 per day****Equipment Description**

-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	OBSOLETE - Cat D10T - 10U
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$10.00	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$5.00	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$631.57	NA	\$394.44	\$53.59	\$266.97	\$25.12
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$448.03	Maint:	\$292.09

Total work team cost/hour: **\$5,792.68**

MATERIAL QUANTITIES

Initial volume: 62,216 CCY Swell factor: 1.000
 Loose volume: 62,216 LCY

Source of estimated volume: Appendix A, Table 1.4-9

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION**Scraper Bowl (volume) Basis:**

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes

Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1496.00	0.00	4.00	4.00	2394	0.79

Haul Time: 0.79 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	-3.00	4.00	1.00	2963	0.35

a

Return Time: 0.35 minutes

Total Scraper team cycle time:	<u>2.74</u>	minutes
Adjusted for job conditions:	<u>1,054.16</u>	LCY/Hour
Selected Number of Scrapers:	<u>8</u>	Scraper(s)
Adjusted single scraper team (unit) hourly production:	<u>4,216.64</u>	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	<u>4,216.64</u>	LCY/Hour

Unadjusted unit production/hour: 1,270.07 LCY/HourOptimal Number of Scrapers per push
dozer: _____**JOB TIME AND COST**Fleet size: 1 Team(s) Total job time: 14.75 HoursUnit cost: \$1.374 /LCY Total job cost: \$85,470

SCRAPER TEAM WORKTask description: **Replace Topsoil at L Pit K Knob L23-1 to K Knob**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #: 091ATR State: Colorado Abbreviation: None
 Date: 4/25/2025 County: Moffat Filename: 091 ATR
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT COST** Shift basis: 1 per day

<u>Equipment Description</u>	
<u>-Scraper:</u>	<u>Cat 637G w/push-pull</u>
<u>-Dozer:</u>	<u>NA</u>
<u>Support Equipment -Load Area:</u>	<u>Cat D10T - 10SU</u>
<u>-Dump Area:</u>	<u>Cat D10T - 10SU</u>
<u>Road Maintenance –Motor Grader:</u>	<u>CAT 16M</u>
<u>-Water Truck:</u>	<u>Water Tanker, 2,500 Gal.</u>

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	<u>Scraper</u>	<u>Dozer</u>	<u>Load Area</u>	<u>Dump Area</u>	<u>Motor Grader</u>	<u>Water Truck</u>
<u>%Utilization-machine:</u>	<u>100</u>	<u>NA</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>60</u>
<u>Ownership cost/hour:</u>	<u>\$281.32</u>	<u>NA</u>	<u>\$257.39</u>	<u>\$257.39</u>	<u>\$179.39</u>	<u>\$11.65</u>
<u>Operating cost/hour:</u>	<u>\$319.35</u>	<u>NA</u>	<u>\$98.47</u>	<u>\$98.47</u>	<u>\$59.82</u>	<u>\$13.47</u>
<u>%Utilization-ripper:</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>Ripper own. cost/hour:</u>	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Ripper op. cost/hour:</u>	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Operator cost/hour:</u>	<u>\$30.90</u>	<u>NA</u>	<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$21.12</u>
<u>Unit Subtotals:</u>	<u>\$631.57</u>	<u>NA</u>	<u>\$394.44</u>	<u>\$394.44</u>	<u>\$266.97</u>	<u>\$46.24</u>
<u>Number of Units:</u>	<u>8</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
<u>Group Subtotals:</u>	<u>Work:</u>	<u>\$5,052.56</u>	<u>Support:</u>	<u>\$788.88</u>	<u>Maint:</u>	<u>\$313.21</u>

Total work team cost/hour: **\$6,154.65****MATERIAL QUANTITIES**

Initial volume: 7,920 CCY Swell factor: 1.000
 Loose volume: 7,920 LCY

Source of estimated volume: Appendix A, Table A-10.7
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

<u>Material weight:</u>	<u>1,600 lbs/LCY</u>	<u>Struck Volume:</u>	<u>24.00</u>	<u>LCY</u>
<u>Material description:</u>	<u>Top Soil</u>	<u>Heaped Volume:</u>	<u>34.00</u>	<u>LCY</u>
<u>Rated Payload:</u>	<u>81,600 pounds</u>	<u>Average Volume:</u>	<u>29.00</u>	<u>LCY</u>
<u>Payload Capacity:</u>	<u>51.00 LCY</u>	<u>Adjusted Capacity:</u>	<u>29.00</u>	<u>LCY</u>

Cycle Time:

<u>Scraper Loading Time:</u>	<u>1.00 Minutes</u>
<u>Maneuver and Spread Time:</u>	<u>0.60 Minutes</u>

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

<u>Seg #</u>	<u>Haul Distance (Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res (%)</u>	<u>Total Res (%)</u>	<u>Velocity (fpm)</u>	<u>Travel Time (min)</u>
<u>2</u>	<u>732.00</u>	<u>-3.40</u>	<u>4.00</u>	<u>0.60</u>	<u>2952</u>	<u>0.41</u>

Haul Time: 0.41 minutes

Return Route:

<u>Seg #</u>	<u>Haul Distance (Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res (%)</u>	<u>Total Res (%)</u>	<u>Velocity (fpm)</u>	<u>Travel Time (min)</u>
<u>1</u>	<u>732.00</u>	<u>3.40</u>	<u>4.00</u>	<u>7.40</u>	<u>2240</u>	<u>0.46</u>

Return Time: 0.46 minutes

<u>Total Scraper team cycle time:</u>	<u>2.47</u>	<u>minutes</u>
<u>Adjusted for job conditions:</u>	<u>1,169.39</u>	<u>LCY/Hour</u>
<u>Selected Number of Scrapers:</u>	<u>8</u>	<u>Scraper(s)</u>
<u>Adjusted single scraper team (unit) hourly production:</u>	<u>4,677.57</u>	<u>LCY/Hour</u>
<u>Adjusted multiple scraper team (fleet) hourly production:</u>	<u>4,677.57</u>	<u>LCY/Hour</u>

Unadjusted unit production/hour: 1,408.91 LCY/Hour

Optimal Number of Scrapers per push
dozer:

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **1.69** Hours

Unit cost: \$1.316 /LCY Total job cost: **\$10,421**

SCRAPER TEAM WORKTask description: **Replace Topsoil on D/E Pits (D1-07)**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: 091B State: Colorado Abbreviation: None
 Date: 4/19/2025 County: Moffat Filename: C010-091B
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT COST** Shift basis: 1 per day

<u>Equipment Description</u>	
<u>-Scraper:</u>	<u>Cat 637G w/push-pull</u>
<u>-Dozer:</u>	<u>NA</u>
<u>Support Equipment -Load Area:</u>	<u>Cat D10T - 10SU</u>
<u>-Dump Area:</u>	<u>OBSOLETE - Cat D10T - 10U</u>
<u>Road Maintenance -Motor Grader:</u>	<u>CAT 16M</u>
<u>-Water Truck:</u>	<u>Water Tanker, 2,500 Gal.</u>

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	<u>Scraper</u>	<u>Dozer</u>	<u>Load Area</u>	<u>Dump Area</u>	<u>Motor Grader</u>	<u>Water Truck</u>
<u>%Utilization-machine:</u>	<u>100</u>	<u>NA</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>60</u>
<u>Ownership cost/hour:</u>	<u>\$281.32</u>	<u>NA</u>	<u>\$257.39</u>	<u>\$10.00</u>	<u>\$179.39</u>	<u>\$11.65</u>
<u>Operating cost/hour:</u>	<u>\$319.35</u>	<u>NA</u>	<u>\$98.47</u>	<u>\$5.00</u>	<u>\$59.82</u>	<u>\$13.47</u>
<u>%Utilization-ripper:</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>Ripper own. cost/hour:</u>	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Ripper op. cost/hour:</u>	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Operator cost/hour:</u>	<u>\$30.90</u>	<u>NA</u>	<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$0.00</u>
<u>Unit Subtotals:</u>	<u>\$631.57</u>	<u>NA</u>	<u>\$394.44</u>	<u>\$53.59</u>	<u>\$266.97</u>	<u>\$25.12</u>
<u>Number of Units:</u>	<u>8</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
<u>Group Subtotals:</u>	<u>Work:</u>	<u>\$5,052.56</u>	<u>Support:</u>	<u>\$448.03</u>	<u>Maint:</u>	<u>\$292.09</u>

Total work team cost/hour: **\$5,792.68****MATERIAL QUANTITIES**

Initial volume: 7,476 CCY Swell factor: 1.000
 Loose volume: 7,476 LCY

Source of estimated volume: Appendix A, Table 1.4-9
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

<u>Material weight:</u>	<u>1,600 lbs/LCY</u>	<u>Struck Volume:</u>	<u>24.00</u>	<u>LCY</u>
<u>Material description:</u>	<u>Top Soil</u>	<u>Heaped Volume:</u>	<u>34.00</u>	<u>LCY</u>
<u>Rated Payload:</u>	<u>81,600 pounds</u>	<u>Average Volume:</u>	<u>29.00</u>	<u>LCY</u>
<u>Payload Capacity:</u>	<u>51.00 LCY</u>	<u>Adjusted Capacity:</u>	<u>29.00</u>	<u>LCY</u>

Cycle Time:

<u>Scraper Loading Time:</u>	<u>1.00 Minutes</u>
<u>Maneuver and Spread Time:</u>	<u>0.60 Minutes</u>

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

<u>Seg #</u>	<u>Haul Distance (Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res (%)</u>	<u>Total Res (%)</u>	<u>Velocity (fpm)</u>	<u>Travel Time (min)</u>
<u>1</u>	<u>1221.00</u>	<u>3.00</u>	<u>4.00</u>	<u>7.00</u>	<u>1362</u>	<u>0.95</u>

Haul Time: 0.95 minutes

Return Route:

<u>Seg #</u>	<u>Haul Distance (Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res (%)</u>	<u>Total Res (%)</u>	<u>Velocity (fpm)</u>	<u>Travel Time (min)</u>
<u>1</u>	<u>1221.00</u>	<u>-3.00</u>	<u>4.00</u>	<u>1.00</u>	<u>2963</u>	<u>0.53</u>

Return Time: 0.53 minutes

<u>Total Scraper team cycle time:</u>	<u>3.08</u>	<u>minutes</u>
<u>Adjusted for job conditions:</u>	<u>937.79</u>	<u>LCY/Hour</u>
<u>Selected Number of Scrapers:</u>	<u>8</u>	<u>Scraper(s)</u>
<u>Adjusted single scraper team (unit) hourly production:</u>	<u>3,751.17</u>	<u>LCY/Hour</u>
<u>Adjusted multiple scraper team (fleet) hourly production:</u>	<u>3,751.17</u>	<u>LCY/Hour</u>

<u>Unadjusted unit production/hour:</u>	<u>1,129.87</u>	<u>LCY/Hour</u>
<u>Optimal Number of Scrapers per push dozer:</u>	<u> </u>	

JOB TIME AND COST

<u>Fleet size:</u>	<u>1</u>	<u>Team(s)</u>	<u>Total job time:</u>	<u>1.99</u>	<u>Hours</u>
<u>Unit cost:</u>	<u>\$1.544</u>	<u>/LCY</u>	<u>Total job cost:</u>	<u>\$11,545</u>	

SCRAPER TEAM WORKTask description: Replace Topsoil JPE 1 to J EastSite: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: 091TR135 State: Colorado Abbreviation: None
 Date: 2/25/2025 County: Moffat Filename: 091 TR135
 User: RAR

Agency or organization name: DRMSHOURLY EQUIPMENT COST Shift basis: 1 per day

<u>Equipment Description</u>	
-Scraper:	<u>Cat 637G w/push-pull</u>
-Dozer:	<u>NA</u>
Support Equipment -Load Area:	<u>Cat D10T - 10SU</u>
-Dump Area:	<u>Cat D10T - 10SU</u>
Road Maintenance –Motor Grader:	<u>CAT 16M</u>
-Water Truck:	<u>Water Tanker, 2,500 Gal.</u>

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	<u>Scraper</u>	<u>Dozer</u>	<u>Load Area</u>	<u>Dump Area</u>	<u>Motor Grader</u>	<u>Water Truck</u>
%Utilization-machine:	<u>100</u>	<u>NA</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>60</u>
Ownership cost/hour:	<u>\$281.32</u>	<u>NA</u>	<u>\$257.39</u>	<u>\$257.39</u>	<u>\$179.39</u>	<u>\$11.65</u>
Operating cost/hour:	<u>\$319.35</u>	<u>NA</u>	<u>\$98.47</u>	<u>\$98.47</u>	<u>\$59.82</u>	<u>\$13.47</u>
%Utilization-ripper:	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Ripper own. cost/hour:	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
Ripper op. cost/hour:	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
Operator cost/hour:	<u>\$30.90</u>	<u>NA</u>	<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$21.12</u>
Unit Subtotals:	<u>\$631.57</u>	<u>NA</u>	<u>\$394.44</u>	<u>\$394.44</u>	<u>\$266.97</u>	<u>\$46.24</u>
Number of Units:	<u>8</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Group Subtotals:	<u>Work:</u>	<u>\$5,052.56</u>	<u>Support:</u>	<u>\$788.88</u>	<u>Maint:</u>	<u>\$313.21</u>

Total work team cost/hour: \$6,154.65MATERIAL QUANTITIES

Initial volume: 74,052 CCY Swell factor: 1.000
 Loose volume: 74,052 LCY

Source of estimated volume: Appendix A, Table A-10.7
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTIONScraper Bowl (volume) Basis:

<u>Material weight:</u>	<u>1,600 lbs/LCY</u>	<u>Struck Volume:</u>	<u>24.00</u>	<u>LCY</u>
<u>Material description:</u>	<u>Top Soil</u>	<u>Heaped Volume:</u>	<u>34.00</u>	<u>LCY</u>
<u>Rated Payload:</u>	<u>81,600 pounds</u>	<u>Average Volume:</u>	<u>29.00</u>	<u>LCY</u>
<u>Payload Capacity:</u>	<u>51.00 LCY</u>	<u>Adjusted Capacity:</u>	<u>29.00</u>	<u>LCY</u>

Cycle Time:

<u>Scraper Loading Time:</u>	<u>1.00 Minutes</u>
<u>Maneuver and Spread Time:</u>	<u>0.60 Minutes</u>

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

<u>Seg #</u>	<u>Haul Distance (Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res (%)</u>	<u>Total Res (%)</u>	<u>Velocity (fpm)</u>	<u>Travel Time (min)</u>
<u>2</u>	<u>400.00</u>	<u>6.25</u>	<u>4.00</u>	<u>10.25</u>	<u>922</u>	<u>0.46</u>
<u>3</u>	<u>764.00</u>	<u>-3.90</u>	<u>4.00</u>	<u>0.10</u>	<u>2965</u>	<u>0.36</u>
<u>4</u>	<u>1053.00</u>	<u>-6.70</u>	<u>4.00</u>	<u>-2.70</u>	<u>2972</u>	<u>0.42</u>

Haul Time: 1.24 minutes

Return Route:

<u>Seg #</u>	<u>Haul Distance</u> <u>(Ft)</u>	<u>Grade</u> <u>(%)</u>	<u>Roll. Res</u> <u>(%)</u>	<u>Total Res</u> <u>(%)</u>	<u>Velocity</u> <u>(fpm)</u>	<u>Travel Time</u> <u>(min)</u>
<u>2</u>	<u>400.00</u>	<u>-6.25</u>	<u>4.00</u>	<u>-2.25</u>	<u>2972</u>	<u>0.19</u>
<u>3</u>	<u>764.00</u>	<u>3.90</u>	<u>4.00</u>	<u>7.90</u>	<u>1931</u>	<u>0.19</u>
<u>4</u>	<u>1053.00</u>	<u>6.70</u>	<u>4.00</u>	<u>10.70</u>	<u>1434</u>	<u>0.65</u>

Return Time: 1.03 minutes

Total Scraper team cycle time: 3.87 minutes
Adjusted for job conditions: 746.36 LCY/Hour
Selected Number of Scrapers: 8 Scraper(s)
Adjusted single scraper team (unit) hourly production: 2,985.43 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: 2,985.43 LCY/Hour

Unadjusted unit production/hour: 899.22 LCY/Hour
Optimal Number of Scrapers per push
dozer: _____

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 24.80 Hours
Unit cost: \$2.062 /LCY Total job cost: \$152,663

SCRAPER TEAM WORKTask description: **Replace Topsoil at C Pit Future TS Pile TR134**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #: 092ATR State: Colorado Abbreviation: None
 Date: 2/25/2025 County: Moffat Filename: 092A TR134
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT COST** Shift basis: 1 per day

<u>Equipment Description</u>	
<u>-Scraper:</u>	<u>Cat 637G w/push-pull</u>
<u>-Dozer:</u>	<u>NA</u>
<u>Support Equipment -Load Area:</u>	<u>Cat D10T - 10SU</u>
<u>-Dump Area:</u>	<u>Cat D10T - 10SU</u>
<u>Road Maintenance –Motor Grader:</u>	<u>CAT 16M</u>
<u>-Water Truck:</u>	<u>Water Tanker, 2,500 Gal.</u>

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	<u>Scraper</u>	<u>Dozer</u>	<u>Load Area</u>	<u>Dump Area</u>	<u>Motor Grader</u>	<u>Water Truck</u>
<u>%Utilization-machine:</u>	<u>100</u>	<u>NA</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>60</u>
<u>Ownership cost/hour:</u>	<u>\$281.32</u>	<u>NA</u>	<u>\$257.39</u>	<u>\$257.39</u>	<u>\$179.39</u>	<u>\$11.65</u>
<u>Operating cost/hour:</u>	<u>\$319.35</u>	<u>NA</u>	<u>\$98.47</u>	<u>\$98.47</u>	<u>\$59.82</u>	<u>\$13.47</u>
<u>%Utilization-ripper:</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>Ripper own. cost/hour:</u>	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Ripper op. cost/hour:</u>	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Operator cost/hour:</u>	<u>\$30.90</u>	<u>NA</u>	<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$21.12</u>
<u>Unit Subtotals:</u>	<u>\$631.57</u>	<u>NA</u>	<u>\$394.44</u>	<u>\$394.44</u>	<u>\$266.97</u>	<u>\$46.24</u>
<u>Number of Units:</u>	<u>8</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
<u>Group Subtotals:</u>	<u>Work:</u>	<u>\$5,052.56</u>	<u>Support:</u>	<u>\$788.88</u>	<u>Maint:</u>	<u>\$313.21</u>

Total work team cost/hour: **\$6,154.65****MATERIAL QUANTITIES**

Initial volume: 122,242 CCY Swell factor: 1.000
 Loose volume: 122,242 LCY

Source of estimated volume: Appendix A, Table A-10.2
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

<u>Material weight:</u>	<u>1,600 lbs/LCY</u>	<u>Struck Volume:</u>	<u>24.00</u>	<u>LCY</u>
<u>Material description:</u>	<u>Top Soil</u>	<u>Heaped Volume:</u>	<u>34.00</u>	<u>LCY</u>
<u>Rated Payload:</u>	<u>81,600 pounds</u>	<u>Average Volume:</u>	<u>29.00</u>	<u>LCY</u>
<u>Payload Capacity:</u>	<u>51.00 LCY</u>	<u>Adjusted Capacity:</u>	<u>29.00</u>	<u>LCY</u>

Cycle Time:

<u>Scraper Loading Time:</u>	<u>1.00 Minutes</u>
<u>Maneuver and Spread Time:</u>	<u>0.60 Minutes</u>

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

<u>Seg #</u>	<u>Haul Distance (Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res (%)</u>	<u>Total Res (%)</u>	<u>Velocity (fpm)</u>	<u>Travel Time (min)</u>
<u>1</u>	<u>2000.00</u>	<u>-4.50</u>	<u>4.00</u>	<u>-0.50</u>	<u>2972</u>	<u>0.72</u>

Haul Time: 0.72 minutesReturn Route:

<u>Seg #</u>	<u>Haul Distance (Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res (%)</u>	<u>Total Res (%)</u>	<u>Velocity (fpm)</u>	<u>Travel Time (min)</u>
<u>1</u>	<u>2000.00</u>	<u>4.50</u>	<u>4.00</u>	<u>8.50</u>	<u>1931</u>	<u>1.13</u>

Return Time: 1.13 minutes

<u>Total Scraper team cycle time:</u>	<u>3.45</u>	<u>minutes</u>
<u>Adjusted for job conditions:</u>	<u>837.22</u>	<u>LCY/Hour</u>
<u>Selected Number of Scrapers:</u>	<u>8</u>	<u>Scraper(s)</u>
<u>Adjusted single scraper team (unit) hourly production:</u>	<u>3,348.87</u>	<u>LCY/Hour</u>
<u>Adjusted multiple scraper team (fleet) hourly production:</u>	<u>3,348.87</u>	<u>LCY/Hour</u>

<u>Unadjusted unit production/hour:</u>	<u>1,008.70</u>	<u>LCY/Hour</u>
<u>Optimal Number of Scrapers per push dozer:</u>	<u> </u>	

JOB TIME AND COST

<u>Fleet size:</u>	<u>1</u>	<u>Team(s)</u>	<u>Total job time:</u>	<u>36.50</u>	<u>Hours</u>
<u>Unit cost:</u>	<u>\$1.838</u>	<u>/LCY</u>	<u>Total job cost:</u>	<u>\$224,660</u>	

SCRAPER TEAM WORKTask description: **Replace Topsoil at West Panel, BC rd, Shop (Scraper)**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #:	<u>096</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>096</u>
User:	<u>RAR</u>				

Agency or organization name: **DRMS****HOURLY EQUIPMENT** COSTShift basis: **1 per day**

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: **\$6,154.65****MATERIAL QUANTITIES**

Initial volume:	<u>66,713</u>	CCY	Swell factor:	<u>1.000</u>
Loose volume:	<u>66,713</u>	LCY		

Source of estimated volume:	<u>A-9.1</u>
Source of estimated swell factor:	<u>Cat Handbook</u>

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	498.00	1.00	4.00	5.00	1867	0.37

Haul Time: 0.37 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	498.00	-1.00	4.00	3.00	2949	0.32

Return Time: 0.32 minutes

Total Scraper team cycle time:	<u>2.29</u>	minutes
Adjusted for job conditions:	<u>1,261.31</u>	LCY/Hour
Selected Number of Scrapers:	<u>8</u>	Scraper(s)
Adjusted single scraper team (unit) hourly production:	<u>5,045.24</u>	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	<u>5,045.24</u>	LCY/Hour

Unadjusted unit production/hour: 1,519.65 LCY/Hour
Optimal Number of Scrapers per push
dozer: _____

JOB TIME AND COST

Fleet size:	<u>1</u>	Team(s)	Total job time:	<u>13.22</u>	Hours
Unit cost:	<u>\$1.220</u>	/LCY	Total job cost:	<u>\$81,383</u>	

TRUCK/LOADER TEAM WORKTask description: **Replace Topsoil at West Panel, BC rd, Shop (Truck/Excavator)**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #:	<u>096A</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>096A</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS**HOURLY EQUIPMENT COST** Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$44.95
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$1,517.55	Support:	\$692.32	Maint:	\$282.01

Total work team cost/hour: **\$2,491.88**

MATERIAL QUANTITIES

Initial volume: 171,625 CCY Swell factor: 1.000
 Loose volume: 171,625 LCY

Source of estimated volume: TR124 Appendix A Table A-3.1
 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: 1,600 Pounds/LCY
 Description: Top Soil
 Rated Payload: 200,000 Pounds
 Payload Capacity: 125.00 LCY

Truck Bed (volume) Basis:

Struck Volume: 60.60 LCY
 Heaped Volume: 78.80 LCY
 Average Volume: 69.70 LCY
 Adjusted Volume: 78.80 LCY

Final Truck Volume Based on Number of Loader Passes: 77.72 LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity: 7.850 LCY (heaped)
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
 Adjusted Capacity: 8.635 LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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
 Truck: 9 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: ABOVE AVERAGESelected Value within this Basic Rating: AVERAGE

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

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:		0.302	minutes
Net Load Time per Truck:		2.516	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>2.516</u>	Minutes	Adjusted for site altitude:	<u>2.516</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7375.00	-1.00	3.00	2.00	3328	2.961

Haul Time: 2.961 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7375.00	1.00	3.00	4.00	3411	2.477

Return Time: 2.477 minutes
Total Truck Cycle Time: 9.954 minutes

Loading Tool unit
Production 1,406.18 LCY/Hour Adjusted for job efficiency: 1,167.13 LCY/Hour
Truck Unit Production
468.44 LCY/Hour Adjusted for job efficiency: 388.81 LCY/Hour
Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 1,166.43 LCY/Hour
Adjusted single truck/loader team production: 1,166.43 LCY/Hour
Adjusted multiple truck/loader team production: 1,166.43 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 147.14 Hours
Unit cost: \$2.136 /LCY Total job cost: \$366,648

SCRAPER TEAM WORKTask description: **Replace Topsoil at East Panel Ponds, A road (Scraper)**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #:	<u>097</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>097</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS**HOURLY EQUIPMENT** COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: **\$6,154.65****MATERIAL QUANTITIES**

Initial volume:	<u>114,647</u>	CCY	Swell factor:	<u>1.000</u>
Loose volume:	<u>114,647</u>	LCY		

Source of estimated volume:	<u>Appendix A, Table 1.4-9</u>
Source of estimated swell factor:	<u>Cat Handbook</u>

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	390.00	-5.50	3.00	-2.50	2972	0.18

Haul Time: 0.18 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	390.00	5.50	3.00	8.50	1931	0.30

Return Time: 0.30 minutes

Total Scraper team cycle time:	<u>2.08</u>	minutes
Adjusted for job conditions:	<u>1,388.65</u>	LCY/Hour
Selected Number of Scrapers:	<u>8</u>	Scraper(s)
Adjusted single scraper team (unit) hourly production:	<u>5,554.62</u>	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	<u>5,554.62</u>	LCY/Hour

Unadjusted unit production/hour: 1,673.08 LCY/Hour
 Optimal Number of Scrapers per push
 dozer: _____

JOB TIME AND COST

Fleet size:	<u>1</u>	Team(s)	Total job time:	<u>20.64</u>	Hours
Unit cost:	<u>\$1.108</u>	/LCY	Total job cost:	<u>\$127,032</u>	

TRUCK/LOADER TEAM WORKTask description: Replace Topsoil at East Panel Ponds, A Rd (Truck/Excavator)Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: 097A State: Colorado Abbreviation: None
 Date: 4/19/2025 County: Moffat Filename: 097A
 User: RAR

Agency or organization name: DRMSHOURLY EQUIPMENT COST Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$44.95
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work: \$1,517.55	Support: \$692.32	Maint: \$282.01			

Total work team cost/hour: \$2,491.88

MATERIAL QUANTITIES

Initial volume: 244,270 CCY Swell factor: 1.000
 Loose volume: 244,270 LCY

Source of estimated volume: TR124 Appendix A Table A-3.1
 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: 1,600 Pounds/LCY
 Description: Top Soil
 Rated Payload: 200,000 Pounds
 Payload Capacity: 125.00 LCY

Truck Bed (volume) Basis:

Struck Volume: 60.60 LCY
 Heaped Volume: 78.80 LCY
 Average Volume: 69.70 LCY
 Adjusted Volume: 78.80 LCY

Final Truck Volume Based on Number of Loader Passes: 77.72 LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity: 7.850 LCY (heaped)
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
 Adjusted Capacity: 8.635 LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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
 Truck: 9 passes

Excavators and Front Shovels:Machine Cycle Time vs. Job Condition Rating: ABOVE AVERAGESelected Value within this Basic Rating: AVERAGE

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

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:		0.302	minutes
Net Load Time per Truck:		2.516	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>2.516</u>	Minutes	Adjusted for site altitude:	<u>2.516</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4345.00	-1.00	3.00	2.00	3328	2.050

Haul Time: 2.050 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7375.00	1.00	3.00	4.00	3411	2.477

Return Time: 2.477 minutes
Total Truck Cycle Time: 9.043 minutes

Loading Tool unit
Production 1,406.18 LCY/Hour Adjusted for job efficiency: 1,167.13 LCY/Hour
Truck Unit Production
515.64 LCY/Hour Adjusted for job efficiency: 427.98 LCY/Hour
Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 1,283.93 LCY/Hour
Adjusted single truck/loader team production: 1,167.13 LCY/Hour
Adjusted multiple truck/loader team production: 1,167.13 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 209.29 Hours
Unit cost: \$2.135 /LCY Total job cost: \$521,528

SCRAPER TEAM WORKTask description: Re-topsoil Johnson Coal StockpileSite: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #:	<u>098</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>098</u>
User:	<u>RAR</u>				

Agency or organization name: DRMSHOURLY EQUIPMENT COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: \$6,154.65MATERIAL QUANTITIES

Initial volume:	<u>20,360</u>	CCY	Swell factor:	<u>1.000</u>
Loose volume:	<u>20,360</u>	LCY		

Source of estimated volume: Division EstimateSource of estimated swell factor: Cat HandbookHOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	29.00	LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	625.00	3.20	3.00	6.20	1477	0.48

Haul Time: 0.48 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	625.00	-3.20	3.00	-0.20	2972	0.27

Return Time: 0.27 minutes

Total Scraper team cycle time:	<u>2.35</u>	minutes
Adjusted for job conditions:	<u>1,229.11</u>	LCY/Hour
Selected Number of Scrapers:	<u>8</u>	Scraper(s)
Adjusted single scraper team (unit) hourly production:	<u>4,916.43</u>	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	<u>4,916.43</u>	LCY/Hour

Unadjusted unit production/hour: 1,480.85 LCY/Hour
 Optimal Number of Scrapers per push
 dozer: _____

JOB TIME AND COST

Fleet size:	<u>1</u>	Team(s)	Total job time:	<u>4.14</u>	Hours
Unit cost:	<u>\$1.252</u>	/LCY	Total job cost:	<u>\$25,488</u>	

SCRAPER TEAM WORKTask description: **Re-topsoil aJ23-1 to J Pit MR 229**Site: **Trapper Mine**Permit Action: PR12Permit/Job#: C1981010**PROJECT IDENTIFICATION**Task #: 098MR229State: ColoradoAbbreviation: NoneDate: 2/25/2025County: MoffatFilename: C010-098MR229User: RARAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day**Equipment Description**

-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown:**Scraper Work Team****Support Equipment****Maintenance Equipment**

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.
%Utilization-ripper:	NA	NA	NA	NA	NA	N
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.
Number of Units:	8	0	1	1	1	
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: **\$6,154.65****MATERIAL QUANTITIES**Initial volume: 29,657

CCY

Swell factor: 1.000Loose volume: **29,657**

LCY

Source of estimated volume: Division EstimateSource of estimated swell factor: Cat Handbook

HOURLY PRODUCTIONScraper Bowl (volume) Basis:

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time:	<u>1.00</u> Minutes
Maneuver and Spread Time:	<u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 6400 feet

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

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	950.00	7.80	3.00	10.80	786	1.22

Haul Time: 1.22 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	950.00	-7.80	3.00	-4.80	2972	0.39

Return Time: 0.39 minutesTotal Scraper team cycle time: 3.21 minutesAdjusted for job conditions: 899.81 LCY/HourSelected Number of Scrapers: 8 Scraper(s)Adjusted single scraper team (unit) hourly production: 3,599.25 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 3,599.25 LCY/HourUnadjusted unit production/hour: 1,084.11 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 8.24 HoursUnit cost: \$1.710 /LCYTotal job cost: \$50,713

TRUCK/LOADER TEAM WORKTask description: **Replace Topsoil at Dragline Walk Road (ASH4)**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: 099 State: Colorado Abbreviation: None
 Date: 4/19/2025 County: Moffat Filename: 099
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT COST** Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$44.95
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work: \$1,140.40	Support: \$692.32		Maint: \$282.01		

Total work team cost/hour: **\$2,114.73****MATERIAL QUANTITIES**

Initial volume: 8,695 CCY Swell factor: 1.000
 Loose volume: 8,695 LCY

Source of estimated volume:	TR124 Appendix A Table A-3.1
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:	1,600	Pounds/LCY
Description:	Top Soil	
Rated Payload:	200,000	Pounds
Payload Capacity:	125.00	LCY

Truck Bed (volume) Basis:

Struck Volume:	60.60	LCY
Heaped Volume:	78.80	LCY
Average Volume:	69.70	LCY
Adjusted Volume:	78.80	LCY

Final Truck Volume Based on Number of Loader Passes: 77.72 LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity:	7.850	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	8.635	LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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 Truck: 9 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: ABOVE AVERAGE
 Selected Value within this Basic Rating: AVERAGE

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, maneuver): NA minutes

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:		0.302	minutes
Net Load Time per Truck:		2.516	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>2.516</u>	Minutes	Adjusted for site altitude:	<u>2.516</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2288.00	2.80	3.00	5.80	1266	1.932

Haul Time: **1.932** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2288.00	-2.80	3.00	0.20	3503	0.826

Return Time:	<u>0.826</u>	minutes
Total Truck Cycle Time:	<u>7.274</u>	minutes

Loading Tool unit					
Production	<u>1,406.18</u>	LCY/Hour	Adjusted for job efficiency:	<u>1,167.13</u>	LCY/Hour
Truck Unit Production	<u>641.04</u>	LCY/Hour	Adjusted for job efficiency:	<u>532.06</u>	LCY/Hour
Optimal No. of Trucks:	<u>2</u>	Truck(s)	Selected Number of Trucks:	<u>2</u>	Truck(s)

Adjusted hourly truck team production:	<u>1,064.12</u>	LCY/Hour
Adjusted single truck/loader team production:	<u>1,064.12</u>	LCY/Hour
Adjusted multiple truck/loader team production:	<u>1,064.12</u>	LCY/Hour

JOB TIME AND COST

Fleet size:	<u>1</u>	Team(s)	Total job time:	<u>8.17</u>	Hours
Unit cost:	<u>\$1.987</u>	/LCY	Total job cost:	<u>\$17,280</u>	

TRUCK/LOADER TEAM WORKTask description: **Replace Topsoil at Dragline Walk Road (ASH1)**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #: 099A State: Colorado Abbreviation: None
 Date: 4/19/2025 County: Moffat Filename: 099A
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT COST** Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$44.95
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work: \$1,140.40		Support: \$692.32		Maint: \$282.01	

Total work team cost/hour: **\$2,114.73**

MATERIAL QUANTITIES

Initial volume:	<u>38,684</u>	CCY	Swell factor:	<u>1.000</u>
Loose volume:	<u>38,684</u>	LCY		

Source of estimated volume:	<u>TR124 Appendix A Table A-3.1</u>
Source of estimated swell factor:	<u>Cat Handbook</u>
Material Purchase Cost:	<u>\$0.00</u>
Total Cost:	<u>\$0.00</u>

HOURLY PRODUCTION**Truck Capacity:****Truck Payload (weight) Basis:**

Material weight:	<u>1,600</u>	Pounds/LCY
Description:	<u>Top Soil</u>	
Rated Payload:	<u>200,000</u>	Pounds
Payload Capacity:	<u>125.00</u>	LCY

Truck Bed (volume) Basis:

Struck Volume:	<u>60.60</u>	LCY
Heaped Volume:	<u>78.80</u>	LCY
Average Volume:	<u>69.70</u>	LCY
Adjusted Volume:	<u>78.80</u>	LCY

Final Truck Volume Based on Number of Loader Passes:	<u>77.72</u>	LCY
--	---------------------	-----

Loading Tool Capacity

Bucket Size Class:	<u>Large</u>
--------------------	--------------

Rated Capacity:	<u>7.850</u>	LCY (heaped)
Bucket Fill Factor:	<u>1.100</u>	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<u>8.635</u>	LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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 Truck:	<u>9</u>	passes
---	----------	--------

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: ABOVE AVERAGE
 Selected Value within this Basic Rating: AVERAGE

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, maneuver): NA minutes

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:		0.302	minutes
Net Load Time per Truck:		2.516	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>2.516</u>	Minutes	Adjusted for site altitude:	<u>2.516</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2130.00	-3.80	3.00	-0.80	3503	0.688

Haul Time: 0.688 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2130.00	3.80	3.00	6.80	2398	1.082

Return Time: 1.082 minutes
Total Truck Cycle Time: 6.286 minutes

Loading Tool unit
Production 1,406.18 LCY/Hour Adjusted for job efficiency: 1,167.13 LCY/Hour
Truck Unit Production
741.79 LCY/Hour Adjusted for job efficiency: 615.69 LCY/Hour
Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 1,231.37 LCY/Hour
Adjusted single truck/loader team production: 1,167.13 LCY/Hour
Adjusted multiple truck/loader team production: 1,167.13 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 33.14 Hours
Unit cost: \$1.812 /LCY Total job cost: \$70,092

REVEGETATION WORKTask description: **Facilities Area**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #: 100 State: Colorado Abbreviation: None
 Date: 4/19/2025 County: Moffat Filename: 100
 User: RAR

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
-------------	------------

Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	75	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING,SEEDING		

Initial Job Cost:	\$27,065.25
Reseeding Job Cost:	\$4,736.42
Total Job Cost:	\$31,802
Job Hours:	75.00

REVEGETATION WORKTask description: Seed D Pit Range A-BSite: Trapper MinePermit Action: PR12Permit/Job#: C1981010**PROJECT IDENTIFICATION**Task #: 100AState: ColoradoAbbreviation: NoneDate: 4/25/2025County: MoffatFilename: 100AUser: RARAgency or organization name: DRMS**FERTILIZING****Materials**

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

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
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78

Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

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 Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	<u>335</u>	Cost /Acre:	<u>\$921.63</u>
Estimated Failure Rate:	<u>17.5%</u>	Cost /Acre*:	<u>\$921.63</u>
*Selected Replanting Work Items:	<u>TILLING,SEEDING</u>		
Initial Job Cost:	<u>\$308,746.05</u>		
Reseeding Job Cost:	<u>\$54,030.56</u>		
Total Job Cost:	<u>\$362,777</u>		
Job Hours:	<u>319.30</u>		

REVEGETATION WORKTask description: Roads (including BC road) below 6700'Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010**PROJECT IDENTIFICATION**Task #: 101State: ColoradoAbbreviation: NoneDate: 4/25/2025County: MoffatFilename: 101User: RARAgency or organization name: DRMS**FERTILIZING****Materials**

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

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
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94

Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

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 Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres: 196.3 Cost /Acre: \$360.87
 Estimated Failure Rate: 17.5% Cost /Acre*: \$360.87
 *Selected Replanting Work Items: TILLING,SEEDING
 Initial Job Cost: \$70,838.78
 Reseeding Job Cost: \$12,396.79

Total Job Cost:	<u>\$83,236</u>
Job Hours:	<u>196.00</u>

REVEGETATION WORKTask description: **Ponds below 6700' (Coyote, Sage, E Buzzard)**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #:	<u>103</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>103</u>
User:	<u>RAR</u>				

Agency or organization name: **DRMS****SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
-------------	------------

Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	26	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$9,382.62
Reseeding Job Cost:	\$1,641.96
Total Job Cost:	\$11,025
Job Hours:	26.00

REVEGETATION WORKTask description: **Johnson Coal Stockpile**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #:	<u>104</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>104</u>
User:	<u>RAR</u>				

Agency or organization name: **DRMS****SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

MULCHING and MISCELLANEOUS**JOB TIME AND COST**

No. of Acres:	12.6	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$4,546.96
Reseeding Job Cost:	\$795.72
Total Job Cost:	\$5,343
Job Hours:	12.00

REVEGETATION WORKTask description: **Topsoil piles below 6700'**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: 105 State: Colorado Abbreviation: None
 Date: 4/19/2025 County: Moffat Filename: 105
 User: RAR

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
--------------------	-------------------

Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	27.1	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$9,779.58
Reseeding Job Cost:	\$1,711.43
Total Job Cost:	\$11,491
Job Hours:	27.00

REVEGETATION WORKTask description: **Roads: >6700 ft.-Rangeland with Shrubs**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #:	<u>107</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>107</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80

Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	54.2	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$49,952.35
Reseeding Job Cost:	\$8,741.66
Total Job Cost:	\$58,694
Job Hours:	54.00

REVEGETATION WORKTask description: **Ash pit.-Rangeland with Shrubs**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #:	<u>108</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>108</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80

Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	115.6	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63

*Selected Replanting Work Items: TILLING, SEEDING

Initial Job Cost:	\$106,540.43
Reseeding Job Cost:	\$18,644.57
Total Job Cost:	\$125,185
Job Hours:	115.00

REVEGETATION WORKTask description: Topsoil piles above 6700'Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #:	<u>112</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>112</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80

Goldeneye, Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	5.1	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$4,700.31
Reseeding Job Cost:	\$822.55
Total Job Cost:	\$5,523
Job Hours:	5.00

BOREHOLE SEALING WORKTask description: **Seal Land Slide Monitoring Stations**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #: 120 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 120
User: RAR

Agency or organization name: **DRMS****UNIT COSTS**

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Plug and Seal Station 8	Portland cement grout - 6 in. (labor, equip, materials)	6	172	841.00	LF	\$9.68	\$8,142.90

Job Hours: **4.00** **Total Cost:** **\$8,143.00**

BOREHOLE SEALING WORKTask description: **Plug and Seal Exploration Drill Holes**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #: 121 State: Colorado Abbreviation: None
Date: 4/19/2025 County: Moffat Filename: 121
User: RAR

Agency or organization name: DRMS**UNIT COSTS**

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Plug and Seal Boreholes	Portland cement grout - 6 in. (labor, equip, materials)	6	4000	4,000.00	LF	\$9.68	\$38,729.60

Job Hours: **80.00** **Total Cost:** **\$38,730.00**

BOREHOLE SEALING WORKTask description: **Plug and Seal Monitoring Wells**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #: 122 State: Colorado Abbreviation: None
 Date: 4/19/2025 County: Moffat Filename: 122
 User: RAR

Agency or organization name: DRMS**UNIT COSTS**

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
81-03A	Portland cement grout - 2 in. (labor, equip, materials)	2	650	650.00	LF	\$8.57	\$5,571.15
COY-A	Portland cement grout - 2 in. (labor, equip, materials)	2	59	59.00	LF	\$8.57	\$505.69
COY-B	Portland cement grout - 2 in. (labor, equip, materials)	2	49	49.00	LF	\$8.57	\$419.98
COY	Portland cement grout - 4 in. (labor, equip, materials)	4	54	54.00	LF	\$8.71	\$470.51
GC1	Portland cement grout - 4 in. (labor, equip, materials)	2.5	180	180.00	LF	\$8.71	\$1,568.38
GC2	Portland cement grout - 4 in. (labor, equip, materials)	2.5	165	165.00	LF	\$8.71	\$1,437.68
GC3	Portland cement grout - 4 in. (labor, equip, materials)	2.5	64	64.00	LF	\$8.71	\$557.64
GC3A	Portland cement grout - 2 in. (labor, equip, materials)	2	50	50.00	LF	\$8.57	\$428.55
GC3B	Portland cement grout - 2 in. (labor, equip, materials)	2	67	67.00	LF	\$8.57	\$574.26
GD2	Portland cement grout - 4 in. (labor, equip, materials)	4	210	210.00	LF	\$8.71	\$1,829.77

GD3	Portland cement grout - 4 in. (labor, equip, materials)	4	198	198.00	LF	\$8.71	\$1,725.21
GF1	Portland cement grout - 4 in. (labor, equip, materials)	4	640	640.00	LF	\$8.71	\$5,576.45
GF4	Portland cement grout - 4 in. (labor, equip, materials)	4	270	270.00	LF	\$8.71	\$2,352.56
GF5	Portland cement grout - 6 in. (labor, equip, materials)	4.25	153.5	153.50	LF	\$9.68	\$1,486.25
GF6	Portland cement grout - 4 in. (labor, equip, materials)	4	200	200.00	LF	\$8.71	\$1,742.64
GF7	Portland cement grout - 6 in. (labor, equip, materials)	4.25	127	127.00	LF	\$9.68	\$1,229.66
GF8	Portland cement grout - 6 in. (labor, equip, materials)	4.25	220	220.00	LF	\$9.68	\$2,130.13
GP2	Portland cement grout - 4 in. (labor, equip, materials)	4	307	307.00	LF	\$8.71	\$2,674.95
GP3	Portland cement grout - 4 in. (labor, equip, materials)	4	154	154.00	LF	\$8.71	\$1,341.83
GP3A	Portland cement grout - 2 in. (labor, equip, materials)	2	143	143.00	LF	\$8.57	\$1,225.65
GP4	Portland cement grout - 4 in. (labor, equip, materials)	4	281	281.00	LF	\$8.71	\$2,448.41
GP5	Portland cement grout - 4 in. (labor, equip, materials)	4	284	284.00	LF	\$8.71	\$2,474.55
GP7	Portland cement grout - 4 in. (labor, equip, materials)	4	99	99.00	LF	\$8.71	\$862.61
GP8	Portland cement grout - 4 in. (labor, equip, materials)	4	198	198.00	LF	\$8.71	\$1,725.21
GP9	Portland cement grout - 4 in. (labor, equip, materials)	4	202	202.00	LF	\$8.71	\$1,760.07
J1	Portland cement grout - 4 in. (labor, equip, materials)	4	30	30.00	LF	\$8.71	\$261.40

P1	Portland cement grout - 4 in. (labor, equip, materials)	4	21	21.00	LF	\$8.71	\$182.98
P2	Portland cement grout - 4 in. (labor, equip, materials)	4	21	21.00	LF	\$8.71	\$182.98
P4	Portland cement grout - 4 in. (labor, equip, materials)	4	80	80.00	LF	\$8.71	\$697.06
P5	Portland cement grout - 4 in. (labor, equip, materials)	4	21	21.00	LF	\$8.71	\$182.98
P6	Portland cement grout - 4 in. (labor, equip, materials)	4	51	51.00	LF	\$8.71	\$444.37
P7	Portland cement grout - 4 in. (labor, equip, materials)	4	37	37.00	LF	\$8.71	\$322.39
P8	Portland cement grout - 4 in. (labor, equip, materials)	4	33	33.00	LF	\$8.71	\$287.54
GMP-1	Portland cement grout - 4 in. (labor, equip, materials)	4	200	200.00	LF	\$8.71	\$1,742.64
GD1	Portland cement grout - 6 in. (labor, equip, materials)	6	1132	1,132.00	LF	\$9.68	\$10,960.48
GD1(2)	Portland cement grout - 6 in. (labor, equip, materials)	6	1144	1,144.00	LF	\$9.68	\$11,076.67
GLEV-1	Portland cement grout - 6 in. (labor, equip, materials)	4.25	238	238.00	LF	\$9.68	\$2,304.41
GLEV-2	Portland cement grout - 6 in. (labor, equip, materials)	4.25	27	27.00	LF	\$9.68	\$261.42
GLEV-3	Portland cement grout - 6 in. (labor, equip, materials)	4.25	45	45.00	LF	\$9.68	\$435.71
CY-A	Portland cement grout - 6 in. (labor, equip, materials)	4.25	35	35.00	LF	\$9.68	\$338.88
CY-1	Portland cement grout - 6 in. (labor, equip, materials)	4.25	165	165.00	LF	\$9.68	\$1,597.60
CY-2	Portland cement grout - 6 in. (labor, equip, materials)	4.25	285	285.00	LF	\$9.68	\$2,759.48

CY-3	Portland cement grout - 6 in. (labor, equip, materials)	4.25	430	430.00	LF	\$9.68	\$4,163.43
GX1	Portland cement grout - 6 in. (labor, equip, materials)	4.25	318	318.00	LF	\$9.68	\$3,079.00
GW-23	Portland cement grout - 6 in. (labor, equip, materials)	4.25	280	280.00	LF	\$9.68	\$2,711.07
GW-26	Portland cement grout - 6 in. (labor, equip, materials)	4.25	321	321.00	LF	\$9.68	\$3,108.05
GW-29	Portland cement grout - 6 in. (labor, equip, materials)	4.25	320	320.00	LF	\$9.68	\$3,098.37
GW-30	Portland cement grout - 6 in. (labor, equip, materials)	4.25	320	320.00	LF	\$9.68	\$3,098.37
GW-31	Portland cement grout - 6 in. (labor, equip, materials)	4.25	320	320.00	LF	\$9.68	\$3,098.37
Ks_DW-1A	Portland cement grout - 6 in. (labor, equip, materials)	4.25	188	188.00	LF	\$9.68	\$1,820.29
NP-1	Portland cement grout - 6 in. (labor, equip, materials)	4.25	185	185.00	LF	\$9.68	\$1,791.24
NP-2	Portland cement grout - 6 in. (labor, equip, materials)	4.25	135	135.00	LF	\$9.68	\$1,307.12
NP-3	Portland cement grout - 6 in. (labor, equip, materials)	4.25	299	299.00	LF	\$9.68	\$2,895.04
East Pyeatt Well #1	Portland cement grout - 6 in. (labor, equip, materials)	5	700	700.00	LF	\$9.68	\$6,777.68
05-LW-17	Portland cement grout - 4 in. (labor, equip, materials)	2.375	816	816.00	LF	\$8.71	\$7,109.97
05-LW-21	Portland cement grout - 4 in. (labor, equip, materials)	2.375	1325.4	1,325.40	LF	\$8.71	\$11,548.48
05-LW-25	Portland cement grout - 4 in. (labor, equip, materials)	2.375	1358	1,358.00	LF	\$8.71	\$11,832.53
05-LW-27	Portland cement grout - 4 in. (labor, equip, materials)	2.375	1594	1,594.00	LF	\$8.71	\$13,888.84

95-LW-09	Portland cement grout - 4 in. (labor, equip, materials)	4	695	995.00	LF	\$8.71	\$8,669.63
----------	---	---	-----	--------	----	--------	------------

Job Hours:**185.00****Total Cost:****\$168,156.00**

REVEGETATION WORKTask description: Reveg for 20 x .3 acres drillholesSite: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #:	<u>128</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>128</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80

Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	6	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$5,529.78
Reseeding Job Cost:	\$967.71
Total Job Cost:	\$6,497
Job Hours:	6.00

BULLDOZER WORK INSERT REVEG TASKSTask description: **Regrade .3acres x 20 drill pads**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #:	<u>129</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>3/21/2025</u>	County:	<u>Moffat</u>	Filename:	<u>PR12 F</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS**HOURLY EQUIPMENT COST**

Basic Machine:	<u>Cat D8T - 8SU</u>
Horsepower:	<u>310</u>
Blade Type:	<u>Semi-Universal</u>
Attachment:	<u>3-shank ripper</u>
Shift Basis:	<u>1 per day</u>
Data Source:	<u>(CRG)</u>

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$14.53</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$3.98</u>	<u>50</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour:	<u>\$340.12</u>
Total Fleet Cost/Hour:	<u>\$340.12</u>

MATERIAL QUANTITIES

Initial Volume:	<u>30,000</u>
Swell factor:	<u>1.000</u>
Loose volume:	<u>30,000 LCY</u>

Source of estimated volume:	<u>A-7.2</u>
Source of estimated swell factor:	<u>Cat Handbook</u>

HOURLY PRODUCTIONAverage push distance: 50 feet

Unadjusted hourly
production: 1,400.0 LCY/hr

Materials consistency
description: Compacted fill or embankment 0.9

Average push
gradient: 0 %
Average site altitude: 7,500 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4548

Adjusted unit
production: 636.72 LCY/hr
Adjusted fleet
production: **636.72** LCY/hr

JOB TIME AND COST

Fleet size:	<u>1 Dozer(s)</u>
Unit cost:	<u>\$0.534/LCY</u>

Total job time:	<u>47.12 Hours</u>
Total job cost:	<u>\$16,025</u>

DEMOLITION WORKTask description: **Demolish structures, remove materials and debris**Site: **Trapper Mine**Permit Action: PR12Permit/Job#: C1981010**PROJECT IDENTIFICATION**Task #: 130
Date: 5/1/2025
User: RARState: Colorado
County: MoffatAbbreviation: None
Filename: C010-130Agency or organization name: DRMS**UNIT COSTS****Location adjustment: 91.30 %**

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Main office	31,7548 CF	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	317,548.00	CF	\$0.33	\$104,346.27
Office bldg. floor	15,288 SF	Floor, concrete, demolition only, average reinforcing - 10 in. thick	15,288.00	SF	\$1.84	\$28,094.76
Reinforced concrete floor office bldg.	251 SF	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	251.00	SF	\$2.31	\$580.59
Office footers	804 SF	Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft. - Max. 10,000 ft. haul	804.00	LF	\$6.94	\$5,579.12
Remove fencing	700 LF	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	700.00	LF	\$3.53	\$2,471.00
Shop\Warehouse	1,925,700 CF	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,925,700.00	CF	\$0.33	\$632,785.02
Warehouse concrete floor	9,270 SF	Floor, concrete, demolition only, average reinforcing - 12 in. thick	9,270.00	SF	\$2.21	\$20,442.20
Warehouse 4" Concrete floor	7,925 SF	Floor, concrete, demolition only, average reinforcing - 4 in. thick	7,925.00	SF	\$0.74	\$5,825.67
Warehouse Footers	1,822 LF	Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft. - Max. 10,000 ft. haul	1,822.00	LF	\$6.94	\$12,643.22

Silver storage trailer	40 X10X10	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	4,000.00	CF	\$0.24	\$973.60
Ble caterpillar parts trailer	35X10X8	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,800.00	CF	\$0.24	\$681.52
Wash/Lube Bay	173,500 CF	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	173,500.00	CF	\$0.33	\$57,012.10
Wash bay concrete floor	9,275 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	9,275.00	SF	\$1.10	\$10,226.62
Wash bay footers	480 LF	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	480.00	LF	\$4.63	\$2,220.53
Shop concrete floor	2,400 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	2,400.00	SF	\$1.10	\$2,646.24
Shop Footers	290 LF	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	290.00	LF	\$4.63	\$1,341.57
Seed Trailer	30X10X8	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,400.00	CF	\$0.33	\$788.64
Pump House	4,840 CF	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	4,840.00	CF	\$0.33	\$1,590.42
Pump House floor	484 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	484.00	SF	\$1.10	\$533.66
Pump House footers	88 LF	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	88.00	LF	\$4.63	\$407.10
Old cars and equipment at water tanks	120X10X4	Bldg. (SC) demo./on-site disposal in existing	4,800.00	CF	\$0.29	\$1,380.96

		pit or cut - Max. 10,000 ft. haul				
Light Duty and Electrical Shop	94,500 CF	Bldg. (SC) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	94,500.00	CF	\$0.29	\$27,187.65
Concrete floor	5,250 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	5,250.00	SF	\$1.10	\$5,788.65
Footers	348 LF	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	348.00	LF	\$4.63	\$1,609.88
Break Up and Bury Parking Lot Asphalt	2,448 SY	Pavement, bituminous, demolition only - 4 in. to 6 in. thick	2,448.00	SY	\$8.66	\$21,199.68
Water Tank	80,000 Gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	10,667.00	CF	\$0.24	\$2,596.35
Water Tank	80,000 Gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	10,667.00	CF	\$0.24	\$2,596.35
Diesel Tank	100,000 Gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	13,333.00	CF	\$0.24	\$3,245.25
Diesel Tank	100,000 Gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	13,333.00	CF	\$0.24	\$3,245.25
Diesel Tank	20,000 Gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,667.00	CF	\$0.24	\$649.15
Diesel Tank	20,000 Gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,667.00	CF	\$0.24	\$649.15
Diesel Tank	20,000 Gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,667.00	CF	\$0.24	\$649.15

Diesel Tank -- Removed but onsite	20,000 Gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,667.00	CF	\$0.24	\$649.15
Diesel Tank -- Removed but onsite	20,000 Gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,667.00	CF	\$0.24	\$649.15
Gasoline Tank	15,000 Gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,000.00	CF	\$0.24	\$486.80
Concrete Pads for Storage Tank	6,500 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	6,500.00	SF	\$1.10	\$7,166.90
Fuel Tank Sludge Removal - 8 Tanks	6,300 Gallons	Remove sludge, water, and rem. product from tank - 6,000 to 8,000 gal.	1.00	EA	\$324.00	\$324.00
Disposal of Tank Sludge	26 Tons	Hazardous waste removal - Bulk liquids, large quantities (over 2,500 gal.)	6,300.00	GAL	\$1.98	\$12,480.93
Powerlines	75 330 LF	Utility Poles, Wood 35' - 45' high (each pole)	75.00	EA	\$325.00	\$24,375.00
Tire Shed-Skid Mounted	6,000 CF	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	6,000.00	CF	\$0.24	\$1,460.40
Main Substation	6,000 CF	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	6,000.00	CF	\$0.24	\$1,460.40
Concrete Pads	1,200 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	1,200.00	SF	\$1.10	\$1,323.12
4 Portables	4,200 CF	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	4,200.00	CF	\$0.24	\$1,022.28
ANFO Silos and Emulsion Tank	10,940 CF	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	10,940.00	CF	\$0.24	\$2,662.80

New 2007 Emulsion tank	15,000 gal	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,600.00	CF	\$0.24	\$389.44
Concrete Pad	1,642 SF	Floor, concrete, demolition only, average reinforcing - 6 in. thick	1,642.00	SF	\$1.10	\$1,810.47
Footers	52 LF	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	52.00	LF	\$4.63	\$240.56
Explosive storage- 2 magazines	2 X 853.3 CF	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,707.00	CF	\$0.24	\$415.48
Explosive Storage Trailer	2,560 CF	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,560.00	CF	\$0.24	\$623.10
2 Large Explosives Magazines	2 X 22.5. 8X6	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,160.00	CF	\$0.24	\$525.74
Tub Pad railroad Track	2 X 312	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	624.00	CF	\$0.24	\$151.88
5 Cargo Containers	5 X 25 and 8x8	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	8,000.00	CF	\$0.24	\$1,947.20
Queen Anne Dragline Repair Pad	70'Lx70'wx.067'h	Floor, concrete, demolition only, average reinforcing - 8 in. thick	4,900.00	SF	\$1.47	\$7,203.49
Bury boneyard storage material	84,000 CF	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	84,000.00	CF	\$0.24	\$20,445.60
Waste oil and Anit-Freeze drum disposal	50 used oil, 20 Solvent	Solid pickup - 55 gal. drums	70.00	EA	\$240.00	\$16,800.00
Waterlines and Waste Solvent Lines	Shop to waste oil pad	Pipe, sewer/water - 12 in. diameter pipe	100.00	LF	\$5.24	\$524.00
Transformer Pad	225 SF	Floor, concrete, demolition only,	225.00	SF	\$0.74	\$165.40

		average reinforcing - 4 in. thick				
4 skid mounted substations	4'x10', 8'x20'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	6,400.00	CF	\$0.24	\$1,557.76
3x50,000 Tanks	20,040 CF	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	20,040.00	CF	\$0.24	\$4,877.74
2x20,000 Tanks	5,348 CF	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	5,348.00	CF	\$0.24	\$1,301.70
MgCl Tank @ H Impoundment	10,000 gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,005.00	CF	\$0.24	\$244.62
Red silo @ used oil storage area	15,000 gallons	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,600.00	CF	\$0.24	\$389.44
Blasters Equipment Building	45X85X22	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	76,021.88	CF	\$0.24	\$17,956.37
-Blasters Equipment Building Foundation	146 CY	Slab on grade, concrete, demolition only - No reinforcing	106.00	CY	\$104.00	\$11,024.00
Radio Tower Skid Mounted	NA	USER PROVIDED ITEM	1.00	EA	\$1,500.00	\$1,500.00

Job Hours:	100.00	Subtotal	(unadjusted):	\$1,106,142.24	Total Cost	(adjusted for	location):	\$1,009,907.87
-------------------	---------------	-----------------	----------------------	-----------------------	-------------------	----------------------	-------------------	-----------------------

DEMOLITION WORKTask description: **Culvert Removal and Disposal**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task 131 State: Colorado Abbreviation: None
 #: _____
 Date: 4/19/2025 County: Moffat Filename: 131
 User: RAR

Agency or organization name: **DRMS****UNIT COSTS** **Location adjustment: 91.30 %**

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
A-1	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
A-2	60" Diam	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	240.00	LF	\$33.06	\$7,935.02
ASH-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	190.00	LF	\$10.60	\$2,013.07
A-3	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
A-4	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	210.00	LF	\$24.52	\$5,149.75
A-5	2 @ 48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	480.00	LF	\$24.52	\$11,770.85
A-7	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	210.00	LF	\$16.96	\$3,561.66
A9	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	180.00	LF	\$24.52	\$4,414.07

A-10	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
A-11	18" Diam	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	180.00	LF	\$8.10	\$1,457.50
A-12	36"Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	210.00	LF	\$16.96	\$3,561.66
A-14	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	210.00	LF	\$16.96	\$3,561.66
AE-4	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	210.00	LF	\$10.60	\$2,224.97
AE-7	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	300.00	LF	\$10.60	\$3,178.53
AE-10	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
AE-11	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
BC-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	540.00	LF	\$10.60	\$5,721.35
BC-2	60" Diam	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	240.00	LF	\$33.06	\$7,935.02
BC-5	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
BC-6	36"Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	210.00	LF	\$16.96	\$3,561.66
*FEB-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
D-9	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	210.00	LF	\$10.60	\$2,224.97
D-10	18" Diam	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	180.00	LF	\$8.10	\$1,457.50

D-12	18" Diam	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	180.00	LF	\$8.10	\$1,457.50
D-15	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	180.00	LF	\$16.96	\$3,052.85
D-16	2 @ 24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	360.00	LF	\$10.60	\$3,814.24
D-17	2 @ 24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	360.00	LF	\$10.60	\$3,814.24
FT-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	110.00	LF	\$10.60	\$1,165.46
EMF-1	2 @ 36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	120.00	LF	\$16.96	\$2,035.24
GRS-1	24"Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
GRS-2	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
RW-1	12" Diam	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	180.00	LF	\$5.91	\$1,063.55
SA-1	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
SA-7	30" Diam	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	180.00	LF	\$13.98	\$2,516.35
SAH-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
AE-8	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	240.00	LF	\$24.52	\$5,885.42
AE-12	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	130.00	LF	\$16.96	\$2,204.84
AX-3	60" Diam	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	240.00	LF	\$33.06	\$7,935.02

AX-4	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	240.00	LF	\$16.96	\$4,070.47
AX-5	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	210.00	LF	\$16.96	\$3,561.66
IH-1	18"Diam	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	180.00	LF	\$8.10	\$1,457.50
IWP-1	6" Diam	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	180.00	LF	\$4.51	\$811.22
Jgag-1	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
JG-2	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
NN-5	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
OH-3	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
OH-5	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
MC-1	15" Diam	Pipe, corrugated metal (CMP) - 15 in. diameter pipe	180.00	LF	\$6.97	\$1,254.15
MC-3	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	180.00	LF	\$10.60	\$1,907.12
MC-5	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	120.00	LF	\$8.10	\$971.66
A-15	48" Diam	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	223.00	LF	\$24.52	\$5,468.54
AE-13A	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	175.00	LF	\$10.60	\$1,854.14
AE-13B	36" Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	170.00	LF	\$16.96	\$2,883.25

BC-7	36"Diam	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	192.00	LF	\$16.96	\$3,256.38
OH-6	18" Diam	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	78.00	LF	\$8.10	\$631.58
A-13	24" Diam	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	210.00	LF	\$10.60	\$2,224.97

Job		Subtotal		Total Cost	
Hours:	<u>60.00</u>	(unadjusted):	<u>\$193,388.61</u>	(adjusted for location):	<u>\$176,563.80</u>

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilize and Demobilize from Hayden, CO**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #:	<u>132</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>132</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**

Shift basis:	<u>1 per day</u>
Cost Data Source:	<u>CRG Data</u>

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL
POWERED, 400 HP (2ND HALF, 2006)Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT
TRAILER (25T, 50T, AND 100T)**Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

NON ROADABLE EQUIPMENT:

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 D11T - 11U	134.12	\$496.62	\$125.64	10	\$6,222.60	\$1,256.40	\$2,000.00
Cat D10T - 10SU	84.53	\$257.39	\$125.64	4	\$1,532.12	\$502.56	\$1,000.00
Light plant, 30 ft. tower, 4	1.46	\$4.76	\$59.44	4	\$256.80	\$237.76	\$1,000.00

lights - 13.5 HP							
Cat 637G w/push-pull	59.59	\$281.32	\$125.64	8	\$3,255.68	\$1,005.12	\$2,500.00
Altas Capco DM25SP - 6-3/4"	0.00	\$394.50	\$59.44	1	\$453.94	\$59.44	\$250.00
KOM45.00U 830E	244.00	\$209.47	\$125.64	4	\$1,340.44	\$502.56	\$1,500.00
CAT 16M	28.73	\$179.39	\$122.78	4	\$1,208.68	\$491.12	\$1,000.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
CAT 6090	1,078.00	\$302.35	\$125.64	1	\$427.99	\$125.64	\$250.00
Water Tanker, 5,000 Gal.	15.00	\$51.70	\$59.44	1	\$111.14	\$59.44	\$250.00

Subtotals:

\$14,909.85	\$4,299.48	\$10,000.00
--------------------	-------------------	--------------------

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 2,500 Gal.	\$55.22	2	\$110.44	\$110.44
Fuel Tanker, 6x4, 210 HP	\$75.02	1	\$75.02	\$75.02
Lube Truck, 6x4, 250 HP	\$75.02	1	\$75.02	\$75.02

Subtotals:

\$260.48	\$260.48
-----------------	-----------------

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

HAYDEN

Total one-way travel distance:

25.00

miles

Average Travel Speed:

45.00

mph

Total Non-Roadable Mob/Demob Cost *

\$87,862.43

** two round trips with haul rig:

Total Roadable Mob/Demob Cost **

\$289.42

** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.56	0.56
Return Time (Hours):	0.56	0.56
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	0.56	NA
Subtotals:	2.67	1.11

JOB TIME AND COST

Total job time: 5.34 Hours

Total job cost: \$88,152

BULLDOZER WORKTask description: Regrade L Pit X-sec:407,200Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATIONTask #: L01State: ColoradoAbbreviation: NoneDate: 3/21/2025County: MoffatFilename: PR12 FUser: RARAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D11T - 11UHorsepower: 850Blade Type: UniversalAttachment: NAShift Basis: 3 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIESInitial 93,302Volume:Swell factor: 1.000

Loose volume: 93,302 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 305 feet

Unadjusted hourly production: 1,041.3 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -20 %

Average site altitude: 6,950 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.000</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.200</u>	<u>(SLOT)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.426</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.9419

Adjusted unit production: 980.80 LCY/hr

Adjusted fleet production: 3923.2 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$0.877/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>23.78 Hours</u>
------------------------	---------------------------

<u>Total job cost:</u>	<u>\$81,844</u>
------------------------	------------------------

BULLDOZER WORKTask description: **Regrade L Pit X-sec:406,700**Site: **Trapper Mine**Permit Action: **PR12**Permit/Job#: **C1981010****PROJECT IDENTIFICATION**Task #: **L02**State: **Colorado**Abbreviation: **None**Date: **3/21/2025**County: **Moffat**Filename: **PR12 F**User: **RAR**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D11T - 11U**Horsepower: **850**Blade Type: **Universal**Attachment: **NA**Shift Basis: **3 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIESInitial **222,222**Volume:Swell factor: **1.000**

Loose volume: 222,222 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 345 feet

Unadjusted hourly production: 929.5 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -20 %

Average site altitude: 7,050 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.000</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.426</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.9419

Adjusted unit production: 875.50 LCY/hr

Adjusted fleet production: 3502 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$0.983/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>63.46 Hours</u>
------------------------	---------------------------

<u>Total job cost:</u>	<u>\$218,378</u>
------------------------	-------------------------

BULLDOZER WORKTask description: **Regrade L Pit X-sec:406,200**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: L03 State: Colorado Abbreviation: None
 Date: 3/21/2025 County: Moffat Filename: PR12 F
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT COST**

Basic Machine: Cat D11T - 11U
 Horsepower: 850
 Blade Type: Universal
 Attachment: NA
 Shift Basis: 3 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 141,481
Swell factor: 1.000

Loose volume: 141,481 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 200 feet

Unadjusted hourly production: 1,560.0 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -10 %

Average site altitude: 7,050 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.000</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.225</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.8091

Adjusted unit production: 1,262.20 LCY/hr

Adjusted fleet production: 5048.8 LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)

<u>Unit cost:</u>	<u>\$0.682/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>28.02 Hours</u>
------------------------	---------------------------

<u>Total job cost:</u>	<u>\$96,438</u>
------------------------	------------------------

BULLDOZER WORKTask description: Regrade L Pit X-sec:405700Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATIONTask #: L04State: ColoradoAbbreviation: NoneDate: 3/21/2025County: MoffatFilename: PR12 FUser: RARAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D11T - 11UHorsepower: 850Blade Type: UniversalAttachment: NAShift Basis: 3 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIESInitial
Volume: 148,574Swell factor: 1.000

Loose volume: 148,574 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 290 feet
 Unadjusted hourly production: 1,095.6 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -25 %
 Average site altitude: 7,000 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition Correction Factor</u>	<u>Source</u>	
<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Dozing method:</u>	<u>1.200</u>	<u>(S-BY-S)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
<u>Spoil pile:</u>	<u>1.000</u>	<u>(DOZ-OC)</u>
<u>Push gradient:</u>	<u>1.516</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.929</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 1.0013

Adjusted unit production: 1,097.02 LCY/hr

Adjusted fleet production: 4388.08 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$0.784/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>33.86 Hours</u>
------------------------	---------------------------

<u>Total job cost:</u>	<u>\$116,522</u>
------------------------	-------------------------

BULLDOZER WORKTask description: Regrade L Pit X-sec:405,200Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: L05 State: Colorado Abbreviation: None
 Date: 3/21/2025 County: Moffat Filename: PR12 F
 User: RAR

Agency or organization name: DRMSHOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
 Horsepower: 850
 Blade Type: Universal
 Attachment: NA
 Shift Basis: 3 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 402,666
Swell factor: 1.000

Loose volume: 402,666 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 520 feet

Unadjusted hourly production: 627.8 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -10 %

Average site altitude: 7,150 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.000</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.225</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.8091

Adjusted unit production: 507.95 LCY/hr

Adjusted fleet production: 2031.8 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$1.694/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>198.18 Hours</u>
------------------------	----------------------------

<u>Total job cost:</u>	<u>\$682,027</u>
------------------------	-------------------------

BULLDOZER WORKTask description: **Regrade L Pit X-sec:404,700**Site: **Trapper Mine**Permit Action: **PR12**Permit/Job#: **C1981010****PROJECT IDENTIFICATION**Task #: **L06**State: **Colorado**Abbreviation: **None**Date: **3/21/2025**County: **Moffat**Filename: **PR12 F**User: **RAR**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D11T - 11U**Horsepower: **850**Blade Type: **Universal**Attachment: **NA**Shift Basis: **3 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIESInitial 718,834Volume:Swell factor: 1.000

Loose volume: 718,834 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 500 feet

Unadjusted hourly production: 650.0 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -25 %

Average site altitude: 7,050 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.000</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.516</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 1.0013

Adjusted unit production: 650.85 LCY/hr

Adjusted fleet production: 2603.4 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$1.322/LCY</u>
<u>Total job time:</u>	<u>276.11 Hours</u>
<u>Total job cost:</u>	<u>\$950,223</u>

BULLDOZER WORKTask description: **Regrade L Pit X-sec:404,200**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: L07 State: Colorado Abbreviation: None
 Date: 3/21/2025 County: Moffat Filename: PR12 F
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT COST**

Basic Machine: Cat D11T - 11U
 Horsepower: 850
 Blade Type: Universal
 Attachment: NA
 Shift Basis: 3 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 475,815
Swell factor: 1.000

Loose volume: 475,815 LCY

Source of estimated volume: Table A-4.5

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 200 feet

Unadjusted hourly production: 1,560.0 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -25 %

Average site altitude: 7,200 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.000</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.516</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 1.0013

Adjusted unit production: 1,562.03 LCY/hr

Adjusted fleet production: 6248.12 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$0.551/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>76.15 Hours</u>
------------------------	---------------------------

<u>Total job cost:</u>	<u>\$262,076</u>
------------------------	-------------------------

BULLDOZER WORKTask description: Regrade L Pit X-sec:403,700Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATIONTask #: L08State: ColoradoAbbreviation: NoneDate: 3/21/2025County: MoffatFilename: PR12 FUser: RARAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D11T - 11UHorsepower: 850Blade Type: UniversalAttachment: NAShift Basis: 3 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIESInitial 102,185Volume:Swell factor: 1.000

Loose volume: 102,185 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 165 feet

Unadjusted hourly production: 1,875.3 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -30 %

Average site altitude: 7,250 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.000</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.601</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 1.0575

Adjusted unit production: 1,983.13 LCY/hr

Adjusted fleet production: 7932.52 LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)

<u>Unit cost:</u>	<u>\$0.434/LCY</u>
<u>Total job time:</u>	<u>12.88 Hours</u>
<u>Total job cost:</u>	<u>\$44,332</u>

BULLDOZER WORKTask description: **Regrade L Pit X-sec:403,200**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #:	<u>L09</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>3/21/2025</u>	County:	<u>Moffat</u>	Filename:	<u>PR12 F</u>
User:	<u>RAR</u>				

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine:	<u>Cat D11T - 11U</u>
Horsepower:	<u>850</u>
Blade Type:	<u>Universal</u>
Attachment:	<u>NA</u>
Shift Basis:	<u>3 per day</u>
Data Source:	<u>(CRG)</u>

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

<u>Initial</u>	<u>101,945</u>
<u>Volume:</u>	
<u>Swell factor:</u>	<u>1.000</u>

Loose volume: 101,945 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 100 feet

Unadjusted hourly production: 2,870.3 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -30 %

Average site altitude: 7,250 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.000</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.601</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.8812

Adjusted unit production: 2,529.31 LCY/hr

Adjusted fleet production: 10117.24 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$0.340/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>10.08 Hours</u>
------------------------	---------------------------

<u>Total job cost:</u>	<u>\$34,677</u>
------------------------	------------------------

BULLDOZER WORKTask description: Regrade L Pit X-sec:402,700Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: L10 State: Colorado Abbreviation: None
 Date: 3/21/2025 County: Moffat Filename: PR12 F
 User: RAR

Agency or organization name: DRMSHOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
 Horsepower: 850
 Blade Type: Universal
 Attachment: NA
 Shift Basis: 3 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 430,259
Swell factor: 1.000

Loose volume: 430,259 LCY

Source of estimated volume: Table A-4.5

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 300 feet

Unadjusted hourly production: 1,055.6 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -20 %

Average site altitude: 7,350 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.000</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.426</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.9419

Adjusted unit production: 994.27 LCY/hr

Adjusted fleet production: 3977.08 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$0.865/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>108.18 Hours</u>
------------------------	----------------------------

<u>Total job cost:</u>	<u>\$372,309</u>
------------------------	-------------------------

BULLDOZER WORKTask description: Regrade L Pit X-sec:402,200Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATIONTask #: L11State: ColoradoAbbreviation: NoneDate: 3/21/2025County: MoffatFilename: PR12 FUser: RARAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D11T - 11UHorsepower: 850Blade Type: UniversalAttachment: NAShift Basis: 3 per dayData Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIESInitial
Volume: 572,536Swell factor: 1.000

Loose volume: 572,536 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 425 feet

Unadjusted hourly production: 765.7 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -20 %

Average site altitude: 7,400 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.426</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.8477

Adjusted unit production: 649.08 LCY/hr

Adjusted fleet production: 2596.32 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$1.325/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>220.52 Hours</u>
------------------------	----------------------------

<u>Total job cost:</u>	<u>\$758,896</u>
------------------------	-------------------------

BULLDOZER WORKTask description: Regrade L Pit X-sec:401,700Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: L12 State: Colorado Abbreviation: None
 Date: 3/21/2025 County: Moffat Filename: PR12
 User: RAR

Agency or organization name: DRMSHOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
 Horsepower: 850
 Blade Type: Universal
 Attachment: NA
 Shift Basis: 3 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 173,389
Swell factor: 1.000

Loose volume: 173,389 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 300 feet
 Unadjusted hourly production: 1,055.6 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -15 %
 Average site altitude: 7,400 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.329</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.7900

Adjusted unit production: 833.92 LCY/hr
 Adjusted fleet production: 3335.68 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$1.032/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>51.98 Hours</u>
------------------------	---------------------------

<u>Total job cost:</u>	<u>\$178,885</u>
------------------------	-------------------------

BULLDOZER WORKTask description: Regrade L Pit X-sec:401,200Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: L13 State: Colorado Abbreviation: None
 Date: 3/24/2025 County: Moffat Filename: PR12 F
 User: RAR

Agency or organization name: DRMSHOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
 Horsepower: 850
 Blade Type: Universal
 Attachment: NA
 Shift Basis: 3 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 273,425
Swell factor: 1.000

Loose volume: 273,425 LCY

Source of estimated volume: Table A-4.5

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 150 feet

Unadjusted hourly production: 2,036.8 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -30 %

Average site altitude: 7,500 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.601</u>	<u>(CAT HB)</u>
Altitude:	<u>1.000</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.9517

Adjusted unit production: 1,938.42 LCY/hr

Adjusted fleet production: 7753.68 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$0.444/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>35.26 Hours</u>
------------------------	---------------------------

<u>Total job cost:</u>	<u>\$121,358</u>
------------------------	-------------------------

BULLDOZER WORKTask description: Regrade L Pit X-secs:400,700 and 400,200Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: L14 State: Colorado Abbreviation: None
 Date: 3/24/2025 County: Moffat Filename: PR12 F
 User: RAR

Agency or organization name: DRMSHOURLY EQUIPMENT COST

Basic Machine: Cat D11T - 11U
 Horsepower: 850
 Blade Type: Universal
 Attachment: NA
 Shift Basis: 3 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$496.62</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$324.90</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>10</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.84</u>	<u>NA</u>
<u>Total unit</u>	<u>\$860.36</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$3,441.42</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 271,815
Swell factor: 1.000

Loose volume: 271,815 LCY

Source of estimated volume: Table A-4.3

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 150 feet

Unadjusted hourly production: 2,036.8 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -30 %

Average site altitude: 7,550 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.200</u>	<u>(S-BY-S)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.790</u>	<u>(3 SHIFTS/DAY)</u>
Spoil pile:	<u>1.000</u>	<u>(DOZ-OC)</u>
Push gradient:	<u>1.601</u>	<u>(CAT HB)</u>
Altitude:	<u>0.930</u>	<u>(CAT HB)</u>
Material Weight:	<u>0.929</u>	<u>(CAT HB)</u>
Blade type:	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.8851

Adjusted unit production: 1,802.77 LCY/hr

Adjusted fleet production: 7211.08 LCY/hr

JOB TIME AND COST

<u>Fleet size:</u>	<u>4 Dozer(s)</u>
--------------------	-------------------

<u>Unit cost:</u>	<u>\$0.477/LCY</u>
-------------------	--------------------

<u>Total job time:</u>	<u>37.69 Hours</u>
------------------------	---------------------------

<u>Total job cost:</u>	<u>\$129,721</u>
------------------------	-------------------------

TRUCK/LOADER TEAM WORKTask description: **Regrade L Plt (Truck/Excavator)**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #:	<u>L15</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>L15</u>
User:	<u>RAR</u>				

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST** Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	KOMATSU 830E
-Loader:	CAT 6090
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 14,000 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Shovel	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$209.47	\$302.35	\$257.39	\$257.39	\$179.39	\$130.32
Operating cost/hour:	\$274.17	\$501.45	\$49.23	\$49.23	\$29.91	\$70.88
%Utilization-ripper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$508.88	\$837.67	\$347.11	\$345.21	\$237.06	\$201.20
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work: \$2,364.31		Support: \$692.32		Maint: \$438.26	

Total work team cost/hour: **\$3,494.89**

MATERIAL QUANTITIES

Initial volume: 1,647,275 CCY Swell factor: 1.000
 Loose volume: 1,647,275 LCY

Source of estimated volume: TR124 Appendix A Table A-3.1
 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: 3,300 Pounds/LCY
 Description: Decomposed rock - 75% Rock, 25% Earth
 Rated Payload: 492,200 Pounds
 Payload Capacity: 149.15 LCY

Truck Bed (volume) Basis:

Struck Volume: 153.00 LCY
 Heaped Volume: 192.00 LCY
 Average Volume: 172.50 LCY
 Adjusted Volume: 149.15 LCY

Final Truck Volume Based on Number of Loader Passes: 129.58 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity: 58.900 LCY (heaped)
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
 Adjusted Capacity: 64.790 LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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	

Number of Loading Tool Passes Required to Fill Truck: 2 passes

Loading Tool Cycle Time:**Excavators and Front Shovels:**

Machine Cycle Time vs. Job Condition

Rating:

ABOVE AVERAGE

Selected Value within this Basic Rating:

AVERAGE

Track Loaders – Material Description: _____

Cycle Time Elements (min.):Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

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:		0.498	minutes
Net Load Time per Truck:		0.996	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>0.996</u>	Minutes	Adjusted for site altitude:	<u>0.996</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0**Haul Route:**

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1841.00	-8.00	3.00	-5.00	1870	1.139

Haul Time: **1.139** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1502.00	8.00	3.00	11.00	1734	1.269

Return Time: 1.269 minutes
Total Truck Cycle Time: 5.404 minutes

Loading Tool unit

Production 4,328.95 LCY/Hour Adjusted for job efficiency: 3,593.03 LCY/Hour

Truck Unit

Production 1,438.71 LCY/Hour Adjusted for job efficiency: 1,194.13 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 3,582.39 LCY/Hour
Adjusted single truck/loader team production: 3,582.39 LCY/Hour
Adjusted multiple truck/loader team production: 3,582.39 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 459.83 Hours

Unit cost: \$0.976 /LCY Total job cost: \$1,607,039

TRUCK/LOADER TEAM WORKTask description: **Regrade Jennings Pit (Truck/Excavator)**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #: **L15ATR** State: **Colorado** Abbreviation: **None**
 Date: **4/29/2025** County: **Moffat** Filename: **PR12**
 User: **RAR**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST** Shift basis: 1 per day

<u>Equipment Description</u>	
<u>Truck Loader Team -Truck:</u>	<u>KOMATSU 830E</u>
<u>-Loader:</u>	<u>CAT 6090</u>
<u>Support Equipment -Load Area:</u>	<u>Cat D10T - 10SU</u>
<u>-Dump Area:</u>	<u>Cat D10T - 10SU</u>
<u>Road Maintenance –Motor Grader:</u>	<u>CAT 16M</u>
<u>-Water Truck:</u>	<u>Water Tanker, 14,000 Gal.</u>

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	<u>Truck</u>	<u>Shovel</u>	<u>Load Area</u>	<u>Dump Area</u>	<u>Motor Grader</u>	<u>Water Truck</u>
<u>%Utilization-machine:</u>	<u>100</u>	<u>100</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>50</u>
<u>Ownership cost/hour:</u>	<u>\$209.47</u>	<u>\$302.35</u>	<u>\$257.39</u>	<u>\$257.39</u>	<u>\$179.39</u>	<u>\$130.32</u>
<u>Operating cost/hour:</u>	<u>\$274.17</u>	<u>\$501.45</u>	<u>\$49.23</u>	<u>\$49.23</u>	<u>\$29.91</u>	<u>\$70.88</u>
<u>%Utilization-ripper:</u>	<u>NA</u>	<u>0</u>	<u>15</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>Ripper own. cost/hour:</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$20.05</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Ripper op. cost/hour:</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$1.90</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Operator cost/hour:</u>	<u>\$25.24</u>	<u>\$33.87</u>	<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$0.00</u>
<u>Unit Subtotals:</u>	<u>\$508.88</u>	<u>\$837.67</u>	<u>\$347.11</u>	<u>\$345.21</u>	<u>\$237.06</u>	<u>\$201.20</u>
<u>Number of Units:</u>	<u>12</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
<u>Group Subtotals:</u>	<u>Work: \$9,457.24</u>		<u>Support: \$692.32</u>		<u>Maint: \$438.26</u>	

Total work team cost/hour: **\$10,587.82****MATERIAL QUANTITIES**

Initial volume: 1,227,754 CCY Swell factor: 1.000
 Loose volume: 1,227,754 LCY

Source of estimated volume: TR135 Appendix A Table A-1.1
 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: 3,300 Pounds/LCY
 Description: Decomposed rock - 75% Rock, 25% Earth
 Rated Payload: 492,200 Pounds
 Payload Capacity: 149.15 LCY

Truck Bed (volume) Basis:

Struck Volume: 153.00 LCY
 Heaped Volume: 192.00 LCY
 Average Volume: 172.50 LCY
 Adjusted Volume: 149.15 LCY

Final Truck Volume Based on Number of Loader Passes: 145.78 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity: 58.900 LCY (heaped)
 Bucket Fill Factor: 0.825 Blasted rock - avg. blasted (75 - 90%) 0.825
 Adjusted Capacity: 48.593 LCY

Job Condition Corrections: Site Altitude (ft.): 6400 feet

	<u>Truck</u>	<u>Loader</u>	<u>Source</u>
Altitude Adj:	<u>1.000</u>	<u>1.000</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.830</u>	<u>0.830</u>	<u>(CAT HB)</u>
Net Correction:	<u>0.830</u>	<u>0.830</u>	

Loading Tool Cycle Number of Loading Tool Passes Required 3 passes
Time: to Fill Truck:

Excavators and Front Shovels:

Machine Cycle Time vs. Job ConditionRating:ABOVE AVERAGESelected Value within this Basic Rating:AVERAGETrack 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, maneuver): NA minutes

<u>Cycle Time Factors</u>		<u>Factor (min.)</u>	<u>Source</u>
<u>Material:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Stockpile:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Truck Ownership:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Operation:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Dump Target:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Net Cycle Time Adjustment:</u>		<u>NA</u>	<u>minutes</u>
<u>Adjusted Loader Cycle Time:</u>		<u>0.498</u>	<u>minutes</u>
<u>Net Load Time per Truck:</u>		<u>1.494</u>	<u>minutes</u>

Truck Cycle Time:

<u>Truck Exchange Time:</u>	<u>0.80</u>	<u>Minutes</u>	<u>Adjusted for site altitude:</u>	<u>0.800</u>	<u>Minutes</u>
<u>Truck Load Time:</u>	<u>1.494</u>	<u>Minutes</u>	<u>Adjusted for site altitude:</u>	<u>1.494</u>	<u>Minutes</u>
<u>Truck Maneuver and Dump Time:</u>	<u>1.20</u>	<u>Minutes</u>	<u>Adjusted for site altitude:</u>	<u>1.200</u>	<u>Minutes</u>

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

<u>Seg #</u>	<u>Haul Distance</u> <u>(Ft)</u>	<u>Grade</u> <u>(%)</u>	<u>Roll.</u> <u>Res (%)</u>	<u>Total</u> <u>Res (%)</u>	<u>Velocity</u> <u>(fpm)</u>	<u>Travel</u> <u>Time</u> <u>(min)</u>
<u>1</u>	<u>3448.00</u>	<u>-1.80</u>	<u>3.00</u>	<u>1.20</u>	<u>3503</u>	<u>1.633</u>

Haul Time: **1.633** minutes

Return Route:

<u>Seg #</u>	<u>Haul Distance</u> <u>(Ft)</u>	<u>Grade</u> <u>(%)</u>	<u>Roll.</u> <u>Res (%)</u>	<u>Total</u> <u>Res (%)</u>	<u>Velocity</u> <u>(fpm)</u>	<u>Travel</u> <u>Time</u> <u>(min)</u>
<u>1</u>	<u>3448.00</u>	<u>1.80</u>	<u>3.00</u>	<u>4.80</u>	<u>3296</u>	<u>1.636</u>

Return Time: **1.636** minutes

Total Truck Cycle Time: **6.763** minutes

Loading Tool unit

<u>Production</u>	<u>3,812.84</u>	<u>LCY/Hour</u>	<u>Adjusted for job efficiency:</u>	<u>3,164.66</u>	<u>LCY/Hour</u>
<u>Truck Unit</u>					
<u>Production</u>	<u>1,293.31</u>	<u>LCY/Hour</u>	<u>Adjusted for job efficiency:</u>	<u>1,073.45</u>	<u>LCY/Hour</u>

<u>Optimal No. of Trucks:</u>	<u>3</u>	<u>Truck(s)</u>	<u>Selected Number of Trucks:</u>	<u>3</u>	<u>Truck(s)</u>
-------------------------------	----------	-----------------	-----------------------------------	----------	-----------------

<u>Adjusted hourly truck team production:</u>	<u>3,220.34</u>	<u>LCY/Hour</u>
<u>Adjusted single truck/loader team production:</u>	<u>3,164.66</u>	<u>LCY/Hour</u>
<u>Adjusted multiple truck/loader team production:</u>	<u>12,658.62</u>	<u>LCY/Hour</u>

JOB TIME AND COST

Fleet size: 4 Team(s) Total job time: **96.99** Hours

Unit cost: \$0.836 /LCY Total job cost: **\$1,026,908**

TRUCK/LOADER TEAM WORKTask description: **Regrade L Pit K Knob (Truck/Excavator) TR135**Site: **Trapper Mine**Permit Action: PR12Permit/Job#: C1981010**PROJECT IDENTIFICATION**Task #: L15TR135State: ColoradoAbbreviation: NoneDate: 2/25/2025County: MoffatFilename: C010-
L15TR135User: RARAgency or organization name: DRMS**HOURLY EQUIPMENT COST** Shift basis: 1 per day

<u>Equipment Description</u>	
<u>Truck Loader Team -Truck:</u>	<u>KOMATSU 830E</u>
<u>-Loader:</u>	<u>CAT 6090</u>
<u>Support Equipment -Load Area:</u>	<u>Cat D10T - 10SU</u>
<u>-Dump Area:</u>	<u>Cat D10T - 10SU</u>
<u>Road Maintenance -Motor Grader:</u>	<u>CAT 16M</u>
<u>-Water Truck:</u>	<u>Water Tanker, 14,000 Gal.</u>

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	<u>Truck</u>	<u>Shovel</u>	<u>Load Area</u>	<u>Dump Area</u>	<u>Motor Grader</u>	<u>Water Truck</u>
<u>%Utilization-machine:</u>	<u>100</u>	<u>100</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>50</u>
<u>Ownership cost/hour:</u>	<u>\$209.47</u>	<u>\$302.35</u>	<u>\$257.39</u>	<u>\$257.39</u>	<u>\$179.39</u>	<u>\$130.32</u>
<u>Operating cost/hour:</u>	<u>\$274.17</u>	<u>\$501.45</u>	<u>\$49.23</u>	<u>\$49.23</u>	<u>\$29.91</u>	<u>\$70.88</u>
<u>%Utilization-riper:</u>	<u>NA</u>	<u>0</u>	<u>15</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>Ripper own. cost/hour:</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$20.05</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Ripper op. cost/hour:</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$1.90</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Operator cost/hour:</u>	<u>\$25.24</u>	<u>\$33.87</u>	<u>\$38.59</u>	<u>\$38.59</u>	<u>\$27.76</u>	<u>\$0.00</u>
<u>Unit Subtotals:</u>	<u>\$508.88</u>	<u>\$837.67</u>	<u>\$347.11</u>	<u>\$345.21</u>	<u>\$237.06</u>	<u>\$201.20</u>
<u>Number of Units:</u>	<u>12</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
<u>Group Subtotals:</u>	<u>Work: \$9,457.24</u>		<u>Support: \$692.32</u>		<u>Maint: \$438.26</u>	

Total work team cost/hour: **\$10,587.82**

MATERIAL QUANTITIES

Initial volume: 6,083,510 CCY Swell factor: 1.000
 Loose volume: **6,083,510** LCY

Source of estimated volume: TR135 Appendix A Table A-1.1
 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: 3,300 Pounds/LCY
 Description: Decomposed rock - 75% Rock, 25% Earth
 Rated Payload: 492,200 Pounds
 Payload Capacity: 149.15 LCY

Truck Bed (volume) Basis:

Struck Volume: 153.00 LCY
 Heaped Volume: 192.00 LCY
 Average Volume: 172.50 LCY
 Adjusted Volume: 149.15 LCY

Final Truck Volume Based on Number of Loader Passes: **129.58** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity: 58.900 LCY (heaped)
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
 Adjusted Capacity: **64.790** LCY

Job Condition Corrections: Site Altitude (ft.): 6400 feet

	<u>Truck</u>	<u>Loader</u>	<u>Source</u>
Altitude Adj:	<u>1.000</u>	<u>1.000</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.830</u>	<u>0.830</u>	<u>(CAT HB)</u>
Net Correction:	<u>0.830</u>	<u>0.830</u>	

Loading Tool Cycle Time:

Number of Loading Tool Passes Required to Fill
 Truck:

2

passes

Excavators and Front Shovels:Machine Cycle Time vs. Job Condition Rating: ABOVE AVERAGESelected Value within this Basic Rating: AVERAGETrack Loaders – Material Description:Cycle Time Elements (min.):Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

<u>Cycle Time Factors</u>		<u>Factor (min.)</u>	<u>Source</u>
<u>Material:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Stockpile:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Truck Ownership:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Operation:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Dump Target:</u>	<u>NA</u>	<u>NA</u>	<u>(Cat HB)</u>
<u>Net Cycle Time Adjustment:</u>		<u>NA</u>	<u>minutes</u>
<u>Adjusted Loader Cycle Time:</u>		<u>0.498</u>	<u>minutes</u>
<u>Net Load Time per Truck:</u>		<u>0.996</u>	<u>minutes</u>

Truck Cycle Time:

<u>Truck Exchange Time:</u>	<u>0.80</u>	<u>Minutes</u>	<u>Adjusted for site altitude:</u>	<u>0.800</u>	<u>Minutes</u>
<u>Truck Load Time:</u>	<u>0.996</u>	<u>Minutes</u>	<u>Adjusted for site altitude:</u>	<u>0.996</u>	<u>Minutes</u>
<u>Truck Maneuver and Dump Time:</u>	<u>1.20</u>	<u>Minutes</u>	<u>Adjusted for site altitude:</u>	<u>1.200</u>	<u>Minutes</u>

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

<u>Seg #</u>	<u>Haul Distance (Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res (%)</u>	<u>Total Res (%)</u>	<u>Velocity (fpm)</u>	<u>Travel Time (min)</u>
<u>1</u>	<u>3711.00</u>	<u>-3.15</u>	<u>3.00</u>	<u>-0.15</u>	<u>3503</u>	<u>1.144</u>

Haul Time: 1.144 minutesReturn Route:

<u>Seg #</u>	<u>Haul Distance (Ft)</u>	<u>Grade (%)</u>	<u>Roll. Res (%)</u>	<u>Total Res (%)</u>	<u>Velocity (fpm)</u>	<u>Travel Time (min)</u>
<u>1</u>	<u>3711.00</u>	<u>3.15</u>	<u>3.00</u>	<u>6.15</u>	<u>2853</u>	<u>1.901</u>

Return Time: 1.901 minutes

Total Truck Cycle Time: **6.041** minutes

Loading Tool unit

Production 4,328.95 LCY/Hour Adjusted for job efficiency: 3,593.03 LCY/Hour

Truck Unit Production 1,287.01 LCY/Hour Adjusted for job efficiency: 1,068.21 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 3,204.64 LCY/Hour

Adjusted single truck/loader team production: 3,204.64 LCY/Hour

Adjusted multiple truck/loader team production: **12,818.57** LCY/Hour

JOB TIME AND COST

Fleet size: 4 Team(s) Total job time: **474.59** Hours

Unit cost: \$0.826 /LCY Total job cost: **\$5,024,826**

REVEGETATION WORKTask description: **Seed L Pit: Rangeland with Shrubs**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #:	<u>L16</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/20/2025</u>	County:	<u>Moffat</u>	Filename:	<u>L16</u>
User:	<u>RAR</u>				

Agency or organization name: **DRMS****SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80

Goldeneye, Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	803.9	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63

*Selected Replanting Work Items: TILLING, SEEDING

Initial Job Cost:	\$740,898.36
Reseeding Job Cost:	\$129,657.21
Total Job Cost:	\$870,556
Job Hours:	804.00

REVEGETATION WORKTask description: **Seed L Pit diversion: Rangeland with Shrubs MR228**Site: **Trapper Mine** Permit Action: **PR12** Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #:	<u>L16MR228</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>2/24/2025</u>	County:	<u>Moffat</u>	Filename:	<u>C010-L16MR228</u>
User:	<u>RAR</u>				

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31

Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	2.3	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$2,119.75
Reseeding Job Cost:	\$370.96
Total Job Cost:	\$2,491
Job Hours:	2.30

BULLDOZER WORKTask description: Regrade L Pit North Haul road.6.5 ac X 9 ft th.Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #:	<u>L17</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>3/24/2025</u>	County:	<u>Moffat</u>	Filename:	<u>PR12 F</u>
User:	<u>RAR</u>				

Agency or organization name: DRMSHOURLY EQUIPMENT COST

Basic Machine:	<u>Cat D11T - 11U</u>
Horsepower:	<u>850</u>
Blade Type:	<u>Universal</u>
Attachment:	<u>NA</u>
Shift Basis:	<u>1 per day</u>
Data Source:	<u>(CRG)</u>

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$496.62</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$324.90</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>10</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$860.11</u>	
Total Fleet Cost/Hour:	<u>\$1,720.21</u>	

MATERIAL QUANTITIES

Initial Volume: 94,772
 Swell factor: 1.150
 Loose volume: **108,988** LCY

Source of estimated volume: Map M9 sh.3/3
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 75 feet
 Unadjusted hourly production: 3,584.2 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
 Average site altitude: 7,000 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5725

Adjusted unit production: 2,051.95 LCY/hr
 Adjusted fleet production: **4103.9** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost:	<u>\$0.419/LCY</u>
Total job time:	<u>26.56 Hours</u>
Total job cost:	<u>\$45,684</u>

SCRAPER TEAM WORKTask description: **Replace Topsoil on L Pit (Scraper)**Site: **Trapper Mine** Permit Action: L18PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: L18 State: Colorado Abbreviation: None
 Date: 4/20/2025 County: Moffat Filename: L18
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT** COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: **\$6,154.65****MATERIAL QUANTITIES**

Initial volume: 470,247 CCY Swell factor: 1.000
 Loose volume: **470,247** LCY

Source of estimated volume: A-9.1
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION**Scraper Bowl (volume) Basis:**

Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

Road Condition: Hard, smooth, stabilized, surfaced, watered, maintained 2.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2334.00	4.20	2.00	6.20	1477	1.66

Haul Time: **1.66** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2334.00	-4.20	2.00	-2.20	2972	0.83

Return Time: **0.83** minutes

Total Scraper team cycle time: **4.09** minutes
 Adjusted for job conditions: 706.21 LCY/Hour
 Selected Number of Scrapers: 8 Scraper(s)
 Adjusted single scraper team (unit) hourly production: 2,824.84 LCY/Hour
 Adjusted multiple scraper team (fleet) hourly production: **2,824.84** LCY/Hour

850.86 LCY/Hour

Unadjusted unit production/hour: _____

Optimal Number of Scrapers per push
dozer: _____**JOB TIME AND COST**Fleet size: 1 Team(s) Total job time: **166.47** HoursUnit cost: \$2.179 /LCY Total job cost: **\$1,024,555**

TRUCK/LOADER TEAM WORKTask description: Replace Topsoil on L Pit (Truck/Excavator)Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #:	<u>L19</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/19/2025</u>	County:	<u>Moffat</u>	Filename:	<u>L19</u>
User:	<u>RAR</u>				

Agency or organization name: DRMSHOURLY EQUIPMENT COST Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$22.07
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$44.95
Number of Units:	4	1	1	1	1	1
Group Subtotals:	Work:	\$1,894.70	Support:	\$692.32	Maint:	\$282.01

Total work team cost/hour: \$2,869.03

MATERIAL QUANTITIES

Initial volume:	<u>826,774</u>	CCY	Swell factor:	<u>1.000</u>
Loose volume:	<u>826,774</u>	LCY		

Source of estimated volume:	<u>TR124 Appendix A Table A-3.1</u>
Source of estimated swell factor:	<u>Cat Handbook</u>
Material Purchase Cost:	<u>\$0.00</u>
Total Cost:	<u>\$0.00</u>

HOURLY PRODUCTION**Truck Capacity:****Truck Payload (weight) Basis:**

Material weight:	<u>1,600</u>	Pounds/LCY
Description:	<u>Top Soil</u>	
Rated Payload:	<u>200,000</u>	Pounds
Payload Capacity:	<u>125.00</u>	LCY

Truck Bed (volume) Basis:

Struck Volume:	<u>60.60</u>	LCY
Heaped Volume:	<u>78.80</u>	LCY
Average Volume:	<u>69.70</u>	LCY
Adjusted Volume:	<u>78.80</u>	LCY

Final Truck Volume Based on Number of Loader Passes:	<u>77.72</u>	LCY
--	---------------------	-----

Loading Tool Capacity

Bucket Size Class:	<u>Large</u>
--------------------	--------------

Rated Capacity:	<u>7.850</u>	LCY (heaped)
Bucket Fill Factor:	<u>1.100</u>	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<u>8.635</u>	LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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	

Number of Loading Tool Passes Required to Fill Truck:	<u>9</u>	passes
---	----------	--------

Loading Tool Cycle Time:**Excavators and Front Shovels:**Machine Cycle Time vs. Job Condition Rating: ABOVE AVERAGESelected Value within this Basic Rating: AVERAGE

Track Loaders – Material Description: _____

Cycle Time Elements (min.):Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

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:		0.302	minutes
Net Load Time per Truck:		2.516	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>2.516</u>	Minutes	Adjusted for site altitude:	<u>2.516</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0**Haul Route:**

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5925.00	4.40	3.00	7.40	1160	5.267

Haul Time: 5.267 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4788.00	8.60	3.00	11.60	1628	3.064

Return Time: 3.064 minutes
Total Truck Cycle Time: 12.847 minutes

Loading Tool unit

Production 1,406.18 LCY/Hour Adjusted for job efficiency: 1,167.13 LCY/Hour

Truck Unit Production 362.96 LCY/Hour Adjusted for job efficiency: 301.25 LCY/Hour

Optimal No. of Trucks: 4 Truck(s) Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 1,205.02 LCY/Hour
Adjusted single truck/loader team production: 1,167.13 LCY/Hour
Adjusted multiple truck/loader team production: 1,167.13 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 708.38 Hours

Unit cost: \$2.458 /LCY Total job cost: \$2,032,367

SITE MAINTENANCETask description: Site Maintenance; Rill and Gully Repair and Pond CleaningSite: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: LN20 State: Colorado Abbreviation: None
 Date: 4/30/2025 County: Moffat Filename: LN20
 User: RAR

Agency or organization name: DRMSUNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Rill/Gully Repair 32hrs/year for 1st 5 years	32.00	Cat D7R DS Series II LGP	160.00	EA	\$207.78	\$33,244.80
Rill/Gully Repair 32hrs/year for 1st 5 years	32.00	Cat 324D L 9'-8" Stick	160.00	EA	\$151.12	\$24,179.20
Rill/Gully Repair 16hrs/year for last 5 years	15.00	Cat D3K XL - 3P	80.00	EA	\$84.69	\$6,775.20
Pond Cleaning 1st Year, 8 Weeks	320.00	Cat 324D L 9'-8" Stick	320.00	EA	\$151.12	\$48,358.40
Pond Cleaning 2nd Year, 3 Weeks	120.00	Cat 324D L 9'-8" Stick	120.00	EA	\$151.12	\$18,134.40
Haul Truck Cleaning 1st Year	320.00	Cat 725	320.00	EA	\$217.29	\$69,532.80
Haul Truck Cleaning 2nd Year	320.00	Cat 725	120.00	EA	\$217.29	\$26,074.80

Job**Hours:** 600.00**Total Cost:** \$226,299.60

BULLDOZER WORKTask description: **Regrade N Pit**Site: **Trapper Mine**Permit Action: **PR12**Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #: **N01** State: **Colorado** Abbreviation: **None**
 Date: **3/24/2025** County: **Moffat** Filename: **PR12 F**
 User: **RAR**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic
 Machine: **Cat D11T - 11U**
 Horsepower: **850**
 Blade Type: **Universal**
 Attachment: **NA**
 Shift Basis: **3 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$496.62	NA
Operating Cost/Hour:	\$324.90	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	10
Operator Cost/Hour:	\$38.84	NA
Total unit Cost/Hour:	\$860.36	
Total Fleet Cost/Hour:	\$1,720.71	

MATERIAL QUANTITIES

Initial
 Volume: **1,364,789**
 Swell factor: **1.000**
 Loose
 volume: **1,364,789 LCY**

Source of estimated
volume: Table A-4.5

Source of estimated swell
factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 455 feet

Unadjusted hourly
production: 716.6 LCY/hr

Materials consistency
description: Consolidated stockpile 1.0

Average push
gradient: -20 %

Average site
altitude: 6,700 feet

Material weight: 2,475 lbs/LCY

Weight
description: User Provided

Job Condition Correction Factor Source

Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	1.000	(AVG.)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9419

Adjusted unit
production: 674.97 LCY/hr

Adjusted fleet
production: **1349.94 LCY/hr**

JOB TIME AND COSTFleet size: 2 Dozer(s)Unit cost: \$1.275/LCYTotal job time: **1,011.00** HoursTotal job cost: **\$1,739,638**

TRUCK/LOADER TEAM WORKTask description: Backfill and Grading N PitSite: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: N02 State: Colorado Abbreviation: None
 Date: 4/19/2025 County: Moffat Filename: N02
 User: RAR

Agency or organization name: DRMSHOURLY EQUIPMENT COST Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	KOMATSU 830E
-Loader:	CAT 6090
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 14,000 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Shovel	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$209.47	\$302.35	\$257.39	\$257.39	\$179.39	\$130.32
Operating cost/hour:	\$274.17	\$501.45	\$49.23	\$49.23	\$29.91	\$70.88
%Utilization-ripper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$508.88	\$837.67	\$347.11	\$345.21	\$237.06	\$201.20
Number of Units:	4	1	1	1	1	1
Group Subtotals:	Work: \$2,873.19	Support: \$692.32	Maint: \$438.26			

Total work team cost/hour: \$4,003.77

MATERIAL QUANTITIES

Initial volume: 2,519,470 CCY Swell factor: 1.000
 Loose volume: 2,519,470 LCY

Source of estimated volume: TR124 Appendix A Table A-3.1
 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: 1 Pounds/LCY
 Description: User Provided
 Rated Payload: 492,200 Pounds
 Payload Capacity: 492,200.00 LCY

Truck Bed (volume) Basis:

Struck Volume: 153.00 LCY
 Heaped Volume: 192.00 LCY
 Average Volume: 172.50 LCY
 Adjusted Volume: 192.00 LCY

Final Truck Volume Based on Number of Loader Passes: 194.37 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity: 58.900 LCY (heaped)
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
 Adjusted Capacity: 64.790 LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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 3 passes
to Fill Truck:

Excavators and Front

Shovels:

Machine Cycle Time vs. Job Condition

Rating:

ABOVE AVERAGE

Selected Value within this Basic Rating:

AVERAGE

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, maneuver): NA minutes

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:		0.498	minutes
Net Load Time per Truck:		1.494	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>1.494</u>	Minutes	Adjusted for site altitude:	<u>1.494</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4737.00	-8.00	3.00	-5.00	1870	2.666

Haul Time: 2.666 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4737.00	8.00	3.00	11.00	1734	3.135

Return Time: 3.135 minutes
Total Truck Cycle Time: 9.295 minutes

Loading Tool unit

Production 5,083.78 LCY/Hour Adjusted for job efficiency: 4,219.54 LCY/Hour

Truck Unit

Production 1,254.67 LCY/Hour Adjusted for job efficiency: 1,041.38 LCY/Hour

Optimal No. of Trucks: 4 Truck(s) Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 4,165.52 LCY/Hour
Adjusted single truck/loader team production: 4,165.52 LCY/Hour
Adjusted multiple truck/loader team production: 4,165.52 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 604.84 Hours

Unit cost: \$0.961 /LCY Total job cost: \$2,421,638

TRUCK/LOADER TEAM WORKTask description: **Backfill and Grading I Pit**Site: **Trapper Mine**Permit Action: **PR12**Permit/Job#: **C1981010****PROJECT IDENTIFICATION**Task #: **N02A**State: **Colorado**Abbreviation: **None**Date: **4/19/2025**County: **Moffat**Filename: **N02A**User: **RAR**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST** Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	KOMATSU 830E
-Loader:	CAT 6090
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 14,000 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Shovel	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$209.47	\$302.35	\$257.39	\$257.39	\$179.39	\$130.32
Operating cost/hour:	\$274.17	\$501.45	\$49.23	\$49.23	\$29.91	\$70.88
%Utilization-ripper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$508.88	\$837.67	\$347.11	\$345.21	\$237.06	\$201.20
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$2,364.31	Support:	\$692.32	Maint:	\$438.26

Total work team cost/hour: **\$3,494.89**

MATERIAL QUANTITIES

Initial volume: 477,772 CCY Swell factor: 1.000
 Loose volume: 477,772 LCY

Source of estimated volume: Appendix A Tables A-3.1
 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: 3,300 Pounds/LCY
 Description: Decomposed rock - 75% Rock, 25% Earth
 Rated Payload: 492,200 Pounds
 Payload Capacity: 149.15 LCY

Truck Bed (volume) Basis:

Struck Volume: 153.00 LCY
 Heaped Volume: 192.00 LCY
 Average Volume: 172.50 LCY
 Adjusted Volume: 149.15 LCY

Final Truck Volume Based on Number of Loader Passes: 145.78 LCY

Loading Tool Capacity

Rated Capacity: 58.900 LCY (heaped) Bucket Size Class: NA
 Bucket Fill Factor: 0.825 Blasted rock - avg. blasted (75 - 90%) 0.825
 Adjusted Capacity: 48.593 LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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	

Number of Loading Tool Passes Required
 to Fill Truck: 3 passes

Loading Tool Cycle Time:**Excavators and Front Shovels:**

Machine Cycle Time vs. Job Condition

Rating:

ABOVE AVERAGE

Selected Value within this Basic Rating:

AVERAGE

Track Loaders – Material Description: _____

Cycle Time Elements (min.):Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

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:		0.498	minutes
Net Load Time per Truck:		1.494	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>1.494</u>	Minutes	Adjusted for site altitude:	<u>1.494</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4063.00	-2.00	3.00	1.00	3503	1.751

Haul Time: **1.751** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4063.00	2.00	3.00	5.00	3296	1.884

Return Time: 1.884 minutes
Total Truck Cycle Time: 7.129 minutes

Loading Tool unit

Production 3,812.84 LCY/Hour Adjusted for job efficiency: 3,164.66 LCY/Hour

Truck Unit

Production 1,226.91 LCY/Hour Adjusted for job efficiency: 1,018.34 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 3,055.01 LCY/Hour
Adjusted single truck/loader team production: 3,055.01 LCY/Hour
Adjusted multiple truck/loader team production: 3,055.01 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 156.39 Hours

Unit cost: \$1.144 /LCY Total job cost: \$546,565

BULLDOZER WORKTask description: **Backfill and Grading J Pit**Site: **Trapper Mine**Permit Action: **PR12**Permit/Job#: **C1981010****PROJECT IDENTIFICATION**Task #: **N02B**State: **Colorado**Abbreviation: **None**Date: **3/24/2025**County: **Moffat**Filename: **PR12 F**User: **RAR**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic

Machine:

Cat D11T - 11U

Horsepower:

850

Blade Type:

Universal

Attachment:

NA

Shift Basis:

3 per day

Data Source:

(CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership		
Cost/Hour:	\$496.62	NA
Operating		
Cost/Hour:	\$324.90	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op.		
Cost/Hour:	\$0.00	10
Operator		
Cost/Hour:	\$38.84	NA
Total unit	\$860.36	
Cost/Hour:		
Total Fleet	\$1,720.71	
Cost/Hour:		

MATERIAL QUANTITIES

Initial

Volume:

668,037

Swell factor:

1.000

Loose

volume:

668,037 LCY

Source of estimated volume: Table A-4.5

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 190 feet

Unadjusted hourly production: 1,643.0 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -20 %

Average site altitude: 6,700 feet

Material weight: 2,475 lbs/LCY

Weight description: User Provided

Job Condition Correction Factor **Source**

Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(S-BY-S)
Visibility:	1.000	(AVG.)
Job efficiency:	0.790	(3 SHIFTS/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.929	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9419

Adjusted unit production: 1,547.54 LCY/hr

Adjusted fleet production: **3095.08 LCY/hr**

JOB TIME AND COSTFleet size: 2 Dozer(s)Unit cost: \$0.556/LCYTotal job time: **215.84** HoursTotal job cost: **\$371,395**

SCRAPER TEAM WORKTask description: **Replace Topsoil on C Pit**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: N13 State: Colorado Abbreviation: None
 Date: 4/30/2025 County: Moffat Filename: N13
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT** COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work: \$5,052.56		Support: \$788.88		Maint: \$313.21	

Total work team cost/hour: **\$6,154.65****MATERIAL QUANTITIES**

Initial volume: 304,436 CCY Swell factor: 1.000
 Loose volume: **304,436** LCY

Source of estimated volume: A-10.2
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION**Scraper Bowl (volume) Basis:**

Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	-4.50	3.00	-1.50	2972	0.72

Haul Time: 0.72 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	4.50	3.00	7.50	1931	1.12

Return Time: 1.12 minutes

Total Scraper team cycle time:	<u>3.44</u>	minutes
Adjusted for job conditions:	<u>839.65</u>	LCY/Hour
Selected Number of Scrapers:	<u>8</u>	Scraper(s)
Adjusted single scraper team (unit) hourly production:	<u>3,358.60</u>	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	<u>3,358.60</u>	LCY/Hour

Unadjusted unit production/hour: 1,011.63 LCY/Hour
 Optimal Number of Scrapers per
 push dozer: _____

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 90.64 Hours
 Unit cost: \$1.833 /LCY Total job cost: \$557,880

SCRAPER TEAM WORKTask description: **Replace Topsoil on N Pit (Scraper)**Site: **Trapper Mine**Permit Action: **PR12**Permit/Job#: **C1981010****PROJECT IDENTIFICATION**Task #: **N14**State: **Colorado**Abbreviation: **None**Date: **4/20/2025**County: **Moffat**Filename: **N14**User: **RAR**Agency or organization name: **DRMS****HOURLY EQUIPMENT** COSTShift basis: **1 per day**

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: **\$6,154.65**

MATERIAL QUANTITIES

Initial volume: 329,830 CCY Swell factor: 1.000
 Loose volume: 329,830 LCY

Source of estimated volume: A-9.1
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTIONScraper Bowl (volume) Basis:

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2667.00	8.00	3.00	11.00	786	3.41

Haul Time: 3.41 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2667.00	-8.00	3.00	-5.00	2972	0.94

Return Time: 0.94 minutes

Total Scraper team cycle time:	<u>5.95</u>	minutes
Adjusted for job conditions:	<u>485.45</u>	LCY/Hour
Selected Number of Scrapers:	<u>8</u>	Scraper(s)
Adjusted single scraper team (unit) hourly production:	<u>1,941.78</u>	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	<u>1,941.78</u>	LCY/Hour

Unadjusted unit production/hour: 584.87 LCY/HourOptimal Number of Scrapers per
push dozer: _____**JOB TIME AND COST**Fleet size: 1 Team(s) Total job time: 169.86 HoursUnit cost: \$3.170 /LCY Total job cost: \$1,045,426

TRUCK/LOADER TEAM WORKTask description: Replace Topsoil on N Pit (Truck/Excavator)Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATIONTask #: N14AState: ColoradoAbbreviation: NoneDate: 4/20/2025County: MoffatFilename: C010-N14AUser: RARAgency or organization name: DRMSHOURLY EQUIPMENT COST Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-ripper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$22.88
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work: \$1,517.55	Support: \$692.32	Maint: \$259.94			

Total work team cost/hour: \$2,469.81

MATERIAL QUANTITIES

Initial volume: 135,503 CCY Swell factor: 1.000
 Loose volume: 135,503 LCY

Source of estimated volume: Appendix A Tables A-10.8
 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: 1,600 Pounds/LCY
 Description: Top Soil
 Rated Payload: 200,000 Pounds
 Payload Capacity: 125.00 LCY

Truck Bed (volume) Basis:

Struck Volume: 60.60 LCY
 Heaped Volume: 78.80 LCY
 Average Volume: 69.70 LCY
 Adjusted Volume: 78.80 LCY

Final Truck Volume Based on Number of Loader Passes: 77.72 LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity: 7.850 LCY (heaped)
 Bucket Fill Factor: 0.825 Blasted rock - avg. blasted (75 - 90%) 0.825
 Adjusted Capacity: 6.476 LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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 Truck: 12 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition

Rating:

ABOVE AVERAGE

Selected Value within this Basic Rating:

AVERAGE

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

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:		0.302	minutes
Net Load Time per Truck:		3.422	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>3.422</u>	Minutes	Adjusted for site altitude:	<u>3.422</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4114.00	7.00	3.00	10.00	795	5.237

Haul Time: 5.237 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4114.00	-7.00	3.00	-4.00	3450	1.229

1.229 minutes

Return Time:
 Total Truck Cycle Time: 11.888 minutes

Loading Tool unit

Production 1,104.43 LCY/Hour Adjusted for job efficiency: 916.68 LCY/Hour

Truck Unit

Production 392.24 LCY/Hour Adjusted for job efficiency: 325.56 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 976.67 LCY/Hour

Adjusted single truck/loader team production: 916.68 LCY/Hour

Adjusted multiple truck/loader team production: 916.68 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 147.82 Hours

Unit cost: \$2.694 /LCY Total job cost: \$365,087

SCRAPER TEAM WORKTask description: **Replace Topsoil in I Pit**Site: **Trapper Mine**Permit Action: **PR12**Permit/Job#: **C1981010****PROJECT IDENTIFICATION**Task #: **N15**State: **Colorado**Abbreviation: **None**Date: **4/20/2025**County: **Moffat**Filename: **N15**User: **RAR**Agency or organization name: **DRMS****HOURLY EQUIPMENT** COSTShift basis: **1 per day**

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: **\$6,154.65**

MATERIAL QUANTITIES

Initial volume: 56,983 CCY Swell factor: 1.000
 Loose volume: 56,983 LCY

Source of estimated volume: PR10 Tables A-9.1, A-10.4 and TALPACS Summary (TMI)

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION**Scraper Bowl (volume) Basis:**

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	958.00	2.70	3.00	5.70	1477	0.70

Haul Time: 0.70 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	958.00	-2.70	3.00	0.30	2965	0.43

Return Time: 0.43 minutes

Total Scraper team cycle time: 2.73 minutes
Adjusted for job conditions: 1,058.02 LCY/Hour
Selected Number of Scrapers: 8 Scraper(s)
Adjusted single scraper team (unit) hourly production: 4,232.09 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: 4,232.09 LCY/Hour

Unadjusted unit production/hour: 1,274.73 LCY/Hour

Optimal Number of Scrapers per
push dozer: _____

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 13.46 Hours

Unit cost: \$1.454 /LCY Total job cost: \$82,869

TRUCK/LOADER TEAM WORKTask description: Replace Topsoil on J Pit (Truck/Excavator)Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: N16 State: Colorado Abbreviation: None
 Date: 4/20/2025 County: Moffat Filename: N16
 User: RAR

Agency or organization name: DRMSHOURLY EQUIPMENT COST Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-ripper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$22.88
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work: \$1,517.55	Support: \$692.32	Maint: \$259.94			

Total work team cost/hour: \$2,469.81

MATERIAL QUANTITIES

Initial volume: 94,623 CCY Swell factor: 1.000
 Loose volume: 94,623 LCY

Source of estimated volume: Appendix A Tables A-10.5A
 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: 1,600 Pounds/LCY
 Description: Top Soil
 Rated Payload: 200,000 Pounds
 Payload Capacity: 125.00 LCY

Truck Bed (volume) Basis:

Struck Volume: 60.60 LCY
 Heaped Volume: 78.80 LCY
 Average Volume: 69.70 LCY
 Adjusted Volume: 78.80 LCY

Final Truck Volume Based on Number of Loader Passes: 77.72 LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity: 7.850 LCY (heaped)
 Bucket Fill Factor: 0.825 Blasted rock - avg. blasted (75 - 90%) 0.825
 Adjusted Capacity: 6.476 LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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 Truck: 12 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition

Rating:

ABOVE AVERAGE

Selected Value within this Basic Rating:

AVERAGE

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

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:		<u>NA</u>	minutes
Adjusted Loader Cycle Time:		<u>0.302</u>	minutes
Net Load Time per Truck:		<u>3.422</u>	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>3.422</u>	Minutes	Adjusted for site altitude:	<u>3.422</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7866.00	-3.30	3.00	-0.30	3503	2.364

Haul Time: **2.364** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7866.00	3.30	3.00	6.30	2853	3.080

Return Time:	<u>3.080</u>	minutes
Total Truck Cycle Time:	<u>10.866</u>	minutes

Loading Tool unit					
Production	<u>1,104.43</u>	LCY/Hour	Adjusted for job efficiency:	<u>916.68</u>	LCY/Hour
Truck Unit					
Production	<u>429.13</u>	LCY/Hour	Adjusted for job efficiency:	<u>356.18</u>	LCY/Hour
Optimal No. of Trucks:	<u>3</u>	Truck(s)	Selected Number of Trucks:	<u>3</u>	Truck(s)

Adjusted hourly truck team production:	<u>1,068.53</u>	LCY/Hour
Adjusted single truck/loader team production:	<u>916.68</u>	LCY/Hour
Adjusted multiple truck/loader team production:	<u>916.68</u>	LCY/Hour

JOB TIME AND COST

Fleet size:	<u>1</u>	Team(s)	Total job time:	<u>103.22</u>	Hours
Unit cost:	<u>\$2.694</u>	/LCY	Total job cost:	<u>\$254,944</u>	

SCRAPER TEAM WORKTask description: **Replace Topsoil in J Pit (Scraper)**Site: **Trapper Mine** Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: N16A State: Colorado Abbreviation: None
 Date: 4/20/2025 County: Moffat Filename: C010-N16A
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT** COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	50	50	50	60
Ownership cost/hour:	\$281.32	NA	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$319.35	NA	\$98.47	\$98.47	\$59.82	\$13.47
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$38.59	\$38.59	\$27.76	\$21.12
Unit Subtotals:	\$631.57	NA	\$394.44	\$394.44	\$266.97	\$46.24
Number of Units:	8	0	1	1	1	1
Group Subtotals:	Work:	\$5,052.56	Support:	\$788.88	Maint:	\$313.21

Total work team cost/hour: **\$6,154.65**

MATERIAL QUANTITIES

Initial volume: 11,260 CCY Swell factor: 1.000
 Loose volume: 11,260 LCY

Source of estimated volume: PR10 Tables A-9.1, A-10.4 and TALPACS Summary (TMI)

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION**Scraper Bowl (volume) Basis:**

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 6400 feet

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

Travel Time:

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2938.00	-1.50	3.00	1.50	2939	1.18

Haul Time: 1.18 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2938.00	1.50	3.00	4.50	2910	1.19

Return Time: 1.19 minutes

Total Scraper team cycle time: 3.97 minutes
 Adjusted for job conditions: 727.56 LCY/Hour
 Selected Number of Scrapers: 8 Scraper(s)
 Adjusted single scraper team (unit) hourly production: 2,910.23 LCY/Hour
 Adjusted multiple scraper team (fleet) hourly production: 2,910.23 LCY/Hour

Unadjusted unit production/hour: 876.57 LCY/HourOptimal Number of Scrapers per
push dozer: _____**JOB TIME AND COST**Fleet size: 1 Team(s) Total job time: 3.87 HoursUnit cost: \$2.115 /LCY Total job cost: \$23,813

TRUCK/LOADER TEAM WORKTask description: Replace Topsoil on J Pit A91-8 to J Pit TR134Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: N16ATR State: Colorado Abbreviation: None
 Date: 2/25/2025 County: Moffat Filename: N16A TR134
 User: RAR

Agency or organization name: DRMSHOURLY EQUIPMENT COST Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-ripper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$22.88
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work: \$1,517.55	Support: \$692.32	Maint: \$259.94			

Total work team cost/hour: \$2,469.81

MATERIAL QUANTITIES

Initial volume: 21,038 CCY Swell factor: 1.000
 Loose volume: **21,038** LCY

Source of estimated volume: Appendix A Tables A-10.5A
 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: 1,600 Pounds/LCY
 Description: Top Soil
 Rated Payload: 200,000 Pounds
 Payload Capacity: 125.00 LCY

Truck Bed (volume) Basis:

Struck Volume: 60.60 LCY
 Heaped Volume: 78.80 LCY
 Average Volume: 69.70 LCY
 Adjusted Volume: 78.80 LCY

Final Truck Volume Based on Number of Loader Passes: **77.72** LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity: 7.850 LCY (heaped)
 Bucket Fill Factor: 0.825 Blasted rock - avg. blasted (75 - 90%) 0.825
 Adjusted Capacity: **6.476** LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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	

Number of Loading Tool Passes Required
to Fill Truck: 12 passes

Loading Tool Cycle Time:**Excavators and Front Shovels:**

Machine Cycle Time vs. Job Condition

Rating:

ABOVE AVERAGE

Selected Value within this Basic Rating:

AVERAGE

Track Loaders – Material Description: _____

Cycle Time Elements (min.):Load: NA Maneuver: NA Dump: 0.100Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): NA minutes

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:		0.302	minutes
Net Load Time per Truck:		3.422	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>3.422</u>	Minutes	Adjusted for site altitude:	<u>3.422</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0**Haul Route:**

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7749.00	-2.60	3.00	0.40	3503	2.639

Haul Time: **2.639** minutes**Return Route:**

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7749.00	2.60	3.00	5.60	2853	2.981

Return Time:	<u>2.981</u>	minutes
Total Truck Cycle Time:	<u>11.042</u>	minutes

Loading Tool unit

Production	<u>1,104.43</u>	LCY/Hour	Adjusted for job efficiency:	<u>916.68</u>	LCY/Hour
------------	-----------------	----------	------------------------------	---------------	----------

Truck Unit

Production	<u>422.29</u>	LCY/Hour	Adjusted for job efficiency:	<u>350.50</u>	LCY/Hour
------------	---------------	----------	------------------------------	---------------	----------

Optimal No. of Trucks:	<u>3</u>	Truck(s)	Selected Number of Trucks:	<u>3</u>	Truck(s)
------------------------	----------	----------	----------------------------	----------	----------

Adjusted hourly truck team production:	<u>1,051.50</u>	LCY/Hour
--	-----------------	----------

Adjusted single truck/loader team production:	<u>916.68</u>	LCY/Hour
---	---------------	----------

Adjusted multiple truck/loader team production:	<u>916.68</u>	LCY/Hour
---	---------------	----------

JOB TIME AND COST

Fleet size:	<u>1</u>	Team(s)	Total job time:	<u>22.95</u>	Hours
-------------	----------	---------	-----------------	--------------	-------

Unit cost:	<u>\$2.694</u>	/LCY	Total job cost:	<u>\$56,683</u>
------------	----------------	------	-----------------	-----------------

TRUCK/LOADER TEAM WORKTask description: **Replace Topsoil on J Pit ASH-1 to J Pit TR134**Site: **Trapper Mine**Permit Action: **PR12**Permit/Job#: **C1981010****PROJECT IDENTIFICATION**

Task #: N16AATR State: Colorado Abbreviation: None
 Date: 2/25/2025 County: Moffat Filename: N16AA TR134
 User: RAR

Agency or organization name: DRMS**HOURLY EQUIPMENT COST** Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-ripper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$22.88
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work: \$1,517.55		Support: \$692.32		Maint: \$259.94	

Total work team cost/hour: **\$2,469.81**

MATERIAL QUANTITIES

Initial volume: 34,913 CCY Swell factor: 1.000
 Loose volume: **34,913** LCY

Source of estimated volume: Appendix A Tables A-10.5A
 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: 1,600 Pounds/LCY
 Description: Top Soil
 Rated Payload: 200,000 Pounds
 Payload Capacity: 125.00 LCY

Truck Bed (volume) Basis:

Struck Volume: 60.60 LCY
 Heaped Volume: 78.80 LCY
 Average Volume: 69.70 LCY
 Adjusted Volume: 78.80 LCY

Final Truck Volume Based on Number of Loader Passes: **77.72** LCY

Loading Tool Capacity

Bucket Size Class: Large

Rated Capacity: 7.850 LCY (heaped)
 Bucket Fill Factor: 0.825 Blasted rock - avg. blasted (75 - 90%) 0.825
 Adjusted Capacity: **6.476** LCY

Job Condition Corrections: Site Altitude (ft.): 6400 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 Truck: 12 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition

Rating:

ABOVE AVERAGE

Selected Value within this Basic Rating:

AVERAGE

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, maneuver): NA minutes

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:		0.302	minutes
Net Load Time per Truck:		3.422	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>3.422</u>	Minutes	Adjusted for site altitude:	<u>3.422</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7908.00	-3.50	3.00	-0.50	3503	2.376

Haul Time: 2.376 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7908.00	3.50	3.00	6.50	2853	3.115

Return Time: 3.115 minutes

Total Truck Cycle Time: 10.913 minutes

Loading Tool unit

Production 1,104.43 LCY/Hour Adjusted for job efficiency: 916.68 LCY/Hour

Truck Unit

Production 427.28 LCY/Hour Adjusted for job efficiency: 354.64 LCY/Hour

Optimal No. of Trucks: _____

3

Truck(s)

Selected Number of Trucks:

3

Truck(s)

Adjusted hourly truck team production:

1,063.93 LCY/Hour

Adjusted single truck/loader team production:

916.68 LCY/Hour

Adjusted multiple truck/loader team production:

916.68 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 38.09 Hours

Unit cost: \$2.694 /LCY Total job cost: \$94,066

REVEGETATION WORKTask description: Seed L Pit, K Nob: >6700 ft.-Rangeland with Shrubs TR135Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: N16TR135 State: Colorado Abbreviation: None
 Date: 2/25/2025 County: Moffat Filename: C010-N16TR135
 User: RAR

Agency or organization name: DRMSSEEDING

<u>Seed Mix</u>	<u>Rate – PLS LBS / Acre</u>	<u>Seeds per SQ. FT</u>	<u>Cost /Acre</u>
<u>Arrowleaf Balsamroot</u>	<u>0.40</u>	<u>0.50</u>	<u>\$39.81</u>
<u>Beardless Wheatgrass - Whitmar</u>	<u>0.31</u>	<u>1.01</u>	<u>\$4.29</u>
<u>Bitterbrush, Antelope</u>	<u>4.40</u>	<u>1.35</u>	<u>\$248.66</u>
<u>Mountain Brome - Bromar</u>	<u>0.72</u>	<u>1.16</u>	<u>\$4.33</u>
<u>Great Basin Wildrye - Magnar</u>	<u>0.92</u>	<u>3.74</u>	<u>\$10.75</u>
<u>Kentucky Bluegrass - Ginger</u>	<u>0.06</u>	<u>2.96</u>	<u>\$0.25</u>
<u>Alfalfa - Ladak (inoculated)</u>	<u>0.10</u>	<u>0.48</u>	<u>\$0.40</u>
<u>Chokecherry</u>	<u>3.00</u>	<u>0.21</u>	<u>\$148.37</u>
<u>Burnett, Small (or Little) - Delar</u>	<u>0.40</u>	<u>0.51</u>	<u>\$1.78</u>
<u>Sheep Fescue - Covar</u>	<u>0.15</u>	<u>2.34</u>	<u>\$0.92</u>
<u>Milk Vetch, Cicer - Lutana</u>	<u>0.30</u>	<u>1.00</u>	<u>\$2.94</u>
<u>Slender Wheatgrass - San Luis</u>	<u>0.28</u>	<u>1.02</u>	<u>\$1.69</u>
<u>Streambank Wheatgrass - Sodar</u>	<u>0.26</u>	<u>0.85</u>	<u>\$2.16</u>
<u>Thickspike Wheatgrass - Critana</u>	<u>0.28</u>	<u>0.99</u>	<u>\$2.28</u>
<u>Western Wheatgrass - Arriba</u>	<u>0.38</u>	<u>0.96</u>	<u>\$3.43</u>
<u>Rabbitbrush, Rubber</u>	<u>0.26</u>	<u>3.87</u>	<u>\$21.68</u>
<u>Needlegrass, Green - Lodorm</u>	<u>0.24</u>	<u>1.00</u>	<u>\$2.07</u>
<u>Rose, Wood's</u>	<u>0.96</u>	<u>0.00</u>	<u>\$51.24</u>
<u>Sagebrush, Mountain or Big</u>	<u>0.07</u>	<u>3.70</u>	<u>\$5.79</u>
<u>Flax, Lewis Blue</u>	<u>0.30</u>	<u>1.99</u>	<u>\$12.69</u>
<u>Red Top</u>	<u>0.02</u>	<u>2.29</u>	<u>\$0.21</u>
<u>Sagebrush, Silver</u>	<u>0.10</u>	<u>1.94</u>	<u>\$6.81</u>
<u>Saltbush, Four Wing</u>	<u>0.62</u>	<u>0.85</u>	<u>\$12.32</u>
<u>Serviceberry</u>	<u>0.29</u>	<u>0.53</u>	<u>\$31.62</u>
<u>Snowberry, Mountain</u>	<u>0.58</u>	<u>1.00</u>	<u>\$34.25</u>
<u>Penstemon, Rocky Mountain</u>	<u>0.14</u>	<u>2.19</u>	<u>\$8.60</u>

<u>Yarrow, Western</u>	<u>0.07</u>	<u>4.26</u>	<u>\$3.38</u>
<u>Globemallow, Munro</u>	<u>0.08</u>	<u>0.91</u>	<u>\$10.31</u>
<u>Aster, Pacific</u>	<u>0.02</u>	<u>0.35</u>	<u>\$2.80</u>
<u>Goldeneye - Showy</u>	<u>0.08</u>	<u>0.92</u>	<u>\$9.13</u>
<u>Totals Seed Mix</u>	<u>15.79</u>	<u>44.87</u>	<u>\$684.99</u>

Application

<u>Description</u>	<u>Cost /Acre</u>
<u>Drill Seeding (DRMS Survey Cost)</u>	<u>\$236.64</u>
<u>Total Seed Application Cost/Acre</u>	<u>\$236.64</u>

JOB TIME AND COST

<u>No. of Acres:</u>	<u>4.9</u>	<u>Cost /Acre:</u>	<u>\$921.63</u>
<u>Estimated Failure Rate:</u>	<u>17.5%</u>	<u>Cost /Acre*:</u>	<u>\$921.63</u>
<u>*Selected Replanting Work Items:</u>	<u>SEEDING</u>		

<u>Initial Job Cost:</u>	<u>\$4,515.99</u>
<u>Reseeding Job Cost:</u>	<u>\$790.30</u>
<u>Total Job Cost:</u>	<u>\$5,306</u>
<u>Job Hours:</u>	<u>3.50</u>

TRUCK/LOADER TEAM WORKTask description: Replace Topsoil on I/J PitSite: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #:	<u>N17</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>4/20/2025</u>	County:	<u>Moffat</u>	Filename:	<u>N17</u>
User:	<u>RAR</u>				

Agency or organization name: DRMSHOURLY EQUIPMENT COST Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 777F
-Loader:	Cat 385C L 18'-1" Stick
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment

	Truck	Excavator	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	50
Ownership cost/hour:	\$199.47	\$220.92	\$257.39	\$257.39	\$179.39	\$11.65
Operating cost/hour:	\$152.44	\$131.31	\$49.23	\$49.23	\$29.91	\$11.23
%Utilization-riper:	NA	0	15	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$20.05	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$1.90	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$33.87	\$38.59	\$38.59	\$27.76	\$0.00
Unit Subtotals:	\$377.15	\$386.10	\$347.11	\$345.21	\$237.06	\$22.88
Number of Units:	2	1	1	1	1	1
Group Subtotals:	Work: \$1,140.40		Support: \$692.32		Maint: \$259.94	

Total work team cost/hour: \$2,092.66

MATERIAL QUANTITIES

Initial volume:	<u>49,788</u>	CCY	Swell factor:	<u>1.000</u>
Loose volume:	<u>49,788</u>	LCY		

Source of estimated volume:	<u>Appendix A Tables A-10.6</u>
Source of estimated swell factor:	<u>Cat Handbook</u>
Material Purchase Cost:	<u>\$0.00</u>
Total Cost:	<u>\$0.00</u>

HOURLY PRODUCTION**Truck Capacity:****Truck Payload (weight) Basis:**

Material weight:	<u>1,600</u>	Pounds/LCY
Description:	<u>Top Soil</u>	
Rated Payload:	<u>200,000</u>	Pounds
Payload Capacity:	<u>125.00</u>	LCY

Truck Bed (volume) Basis:

Struck Volume:	<u>60.60</u>	LCY
Heaped Volume:	<u>78.80</u>	LCY
Average Volume:	<u>69.70</u>	LCY
Adjusted Volume:	<u>78.80</u>	LCY

Final Truck Volume Based on Number of Loader Passes:	<u>77.72</u>	LCY
--	---------------------	-----

Loading Tool Capacity

		Bucket Size Class:	<u>Large</u>
Rated Capacity:	<u>7.850</u>	LCY (heaped)	
Bucket Fill Factor:	<u>0.825</u>	Blasted rock - avg. blasted (75 - 90%)	<u>0.825</u>
Adjusted Capacity:	<u>6.476</u>	LCY	

Job Condition Corrections: Site Altitude (ft.): 6400 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 Truck:	<u>12</u>	passes
---	-----------	--------

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition

Rating:

ABOVE AVERAGE

Selected Value within this Basic Rating:

AVERAGE

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, maneuver):

NA

minutes

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:		0.302	minutes
Net Load Time per Truck:		3.422	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.80</u>	Minutes	Adjusted for site altitude:	<u>0.800</u>	Minutes
Truck Load Time:	<u>3.422</u>	Minutes	Adjusted for site altitude:	<u>3.422</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.20</u>	Minutes	Adjusted for site altitude:	<u>1.200</u>	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3851.00	-4.00	3.00	-1.00	3503	1.180

Haul Time: 1.180 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3851.00	4.00	3.00	7.00	2398	1.809

Return Time: 1.809 minutes
Total Truck Cycle Time: 8.411 minutes

Loading Tool unit

Production 1,104.43 LCY/Hour Adjusted for job efficiency: 916.68 LCY/Hour

Truck Unit

Production 554.38 LCY/Hour Adjusted for job efficiency: 460.14 LCY/Hour

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

Adjusted hourly truck team production: 920.27 LCY/Hour

Adjusted single truck/loader team production: 916.68 LCY/Hour

Adjusted multiple truck/loader team production: 916.68 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 54.31 Hours

Unit cost: \$2.283 /LCY Total job cost: \$113,660

REVEGETATION WORKTask description: Seed N Pit Rangeland w/o shrubs (<6700 ft.)Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: N18 State: Colorado Abbreviation: None
 Date: 4/20/2025 County: Moffat Filename: C010-N18
 User: RAR

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	44.1	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$15,914.37
Reseeding Job Cost:	\$2,785.01
Total Job Cost:	\$18,699
Job Hours:	44.00

REVEGETATION WORKTask description: Seed N Pit: >6700 ft.-Rangeland with ShrubsSite: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: N18A State: Colorado Abbreviation: None
 Date: 4/20/2025 County: Moffat Filename: C010-N18A
 User: RAR

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Bitterbrush, Antelope	4.40	1.35	\$248.66
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Chokecherry	3.00	0.21	\$148.37
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Rabbitbrush, Rubber	0.26	3.87	\$21.68
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Rose, Wood's	0.96	0.00	\$51.24
Sagebrush, Mountain or Big	0.07	3.70	\$5.79
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Sagebrush, Silver	0.10	1.94	\$6.81
Saltbush, Four Wing	0.62	0.85	\$12.32
Serviceberry	0.29	0.53	\$31.62
Snowberry, Mountain	0.58	1.00	\$34.25
Penstemon, Rocky Mountain	0.14	2.19	\$8.60

Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	15.79	44.87	\$684.99

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	244.4	Cost /Acre:	\$921.63
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$921.63
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$225,246.37
Reseeding Job Cost:	\$39,418.12
Total Job Cost:	\$264,664
Job Hours:	244.00

REVEGETATION WORKTask description: Seed J Pit without shrubs (Range C)Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: N19 State: Colorado Abbreviation: None
 Date: 4/20/2025 County: Moffat Filename: N19
 User: RAR

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	65.8	Cost /Acre:	\$360.87
Estimated Failure Rate:	17.5%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$23,745.25
Reseeding Job Cost:	\$4,155.42
Total Job Cost:	\$27,901
Job Hours:	66.00

REVEGETATION WORKTask description: Seed J Pit without shrubs (Range C) TR135Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: N19TR134 State: Colorado Abbreviation: None
 Date: 2/25/2025 County: Moffat Filename: N19 TR134
 User: RAR

Agency or organization name: DRMSSEEDING

<u>Seed Mix</u>	<u>Rate – PLS LBS / Acre</u>	<u>Seeds per SQ. FT</u>	<u>Cost /Acre</u>
<u>Arrowleaf Balsamroot</u>	<u>0.40</u>	<u>0.50</u>	<u>\$39.81</u>
<u>Beardless Wheatgrass - Whitmar</u>	<u>0.31</u>	<u>1.01</u>	<u>\$4.29</u>
<u>Mountain Brome - Bromar</u>	<u>0.72</u>	<u>1.16</u>	<u>\$4.33</u>
<u>Great Basin Wildrye - Magnar</u>	<u>0.92</u>	<u>3.74</u>	<u>\$10.75</u>
<u>Kentucky Bluegrass - Ginger</u>	<u>0.06</u>	<u>2.96</u>	<u>\$0.25</u>
<u>Alfalfa - Ladak (inoculated)</u>	<u>0.10</u>	<u>0.48</u>	<u>\$0.40</u>
<u>Burnett, Small (or Little) - Delar</u>	<u>0.40</u>	<u>0.51</u>	<u>\$1.78</u>
<u>Sheep Fescue - Covar</u>	<u>0.15</u>	<u>2.34</u>	<u>\$0.92</u>
<u>Milk Vetch, Cicer - Lutana</u>	<u>0.30</u>	<u>1.00</u>	<u>\$2.94</u>
<u>Slender Wheatgrass - San Luis</u>	<u>0.28</u>	<u>1.02</u>	<u>\$1.69</u>
<u>Streambank Wheatgrass - Sodar</u>	<u>0.26</u>	<u>0.85</u>	<u>\$2.16</u>
<u>Thickspike Wheatgrass - Critana</u>	<u>0.28</u>	<u>0.99</u>	<u>\$2.28</u>
<u>Western Wheatgrass - Arriba</u>	<u>0.38</u>	<u>0.96</u>	<u>\$3.43</u>
<u>Needlegrass, Green - Lodorm</u>	<u>0.24</u>	<u>1.00</u>	<u>\$2.07</u>
<u>Flax, Lewis Blue</u>	<u>0.30</u>	<u>1.99</u>	<u>\$12.69</u>
<u>Red Top</u>	<u>0.02</u>	<u>2.29</u>	<u>\$0.21</u>
<u>Penstemon, Rocky Mountain</u>	<u>0.14</u>	<u>2.19</u>	<u>\$8.60</u>
<u>Yarrow, Western</u>	<u>0.07</u>	<u>4.26</u>	<u>\$3.38</u>
<u>Globemallow, Munro</u>	<u>0.08</u>	<u>0.91</u>	<u>\$10.31</u>
<u>Aster, Pacific</u>	<u>0.02</u>	<u>0.35</u>	<u>\$2.80</u>
<u>Goldeneye - Showy</u>	<u>0.08</u>	<u>0.92</u>	<u>\$9.13</u>
<u>Totals Seed Mix</u>	<u>5.51</u>	<u>31.41</u>	<u>\$124.23</u>

Application

<u>Description</u>	<u>Cost /Acre</u>
<u>Drill Seeding (DRMS Survey Cost)</u>	<u>\$236.64</u>
<u>Total Seed Application Cost/Acre</u>	<u>\$236.64</u>

JOB TIME AND COST

<u>No. of Acres:</u>	<u>34.7</u>	<u>Cost /Acre:</u>	<u>\$360.87</u>
<u>Estimated Failure Rate:</u>	<u>17.5%</u>	<u>Cost /Acre*:</u>	<u>\$360.87</u>
<u>*Selected Replanting Work Items:</u>	<u>TILLING, SEEDING</u>		

<u>Initial Job Cost:</u>	<u>\$12,522.19</u>
<u>Reseeding Job Cost:</u>	<u>\$2,191.38</u>
<u>Total Job Cost:</u>	<u>\$14,714</u>
<u>Job Hours:</u>	<u>66.00</u>

REVEGETATION WORKTask description: Seed I Pit without ShrubsSite: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010**PROJECT IDENTIFICATION**

Task #: N20 State: Colorado Abbreviation: None
 Date: 4/20/2025 County: Moffat Filename: N20
 User: RAR

Agency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	35.3	Cost /Acre:	\$360.87
Estimated Failure Rate:	17%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$12,738.71
Reseeding Job Cost:	\$2,165.58
Total Job Cost:	\$14,904
Job Hours:	35.00

REVEGETATION WORKTask description: Seed I/J Pits no shrubs (Range C)Site: Trapper MinePermit Action: PR12Permit/Job#: C1981010**PROJECT IDENTIFICATION**Task #: N21 State: Colorado Abbreviation: NoneDate: 4/20/2025 County: Moffat Filename: N21User: RARAgency or organization name: DRMS**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye, Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	30.9	Cost /Acre:	\$360.87
Estimated Failure Rate:	17%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$11,150.88
Reseeding Job Cost:	\$1,895.65
Total Job Cost:	\$13,047
Job Hours:	31.00

REVEGETATION WORKTask description: Seed J Pits no shrubs (Range C) MR229Site: Trapper Mine Permit Action: PR12 Permit/Job#: C1981010PROJECT IDENTIFICATION

Task #: N21AMR State: Colorado Abbreviation: None
 Date: 2/24/2025 County: Moffat Filename: MR229
 User: RAR

Agency or organization name: DRMSSEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	12.3	Cost /Acre:	\$360.87
Estimated Failure Rate:	17%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$4,438.70
Reseeding Job Cost:	\$754.58
Total Job Cost:	\$5,193
Job Hours:	31.00

REVEGETATION WORKTask description: Seed C Pit No ShrubsSite: Trapper MinePermit Action: PR12Permit/Job#: C1981010PROJECT IDENTIFICATIONTask #: N22 State: Colorado Abbreviation: NoneDate: 4/20/2025 County: Moffat Filename: N22User: RARAgency or organization name: DRMSSEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.40	0.50	\$39.81
Beardless Wheatgrass - Whitmar	0.31	1.01	\$4.29
Mountain Brome - Bromar	0.72	1.16	\$4.33
Great Basin Wildrye - Magnar	0.92	3.74	\$10.75
Kentucky Bluegrass - Ginger	0.06	2.96	\$0.25
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.40
Burnett, Small (or Little) - Delar	0.40	0.51	\$1.78
Sheep Fescue - Covar	0.15	2.34	\$0.92
Milk Vetch, Cicer - Lutana	0.30	1.00	\$2.94
Slender Wheatgrass - San Luis	0.28	1.02	\$1.69
Streambank Wheatgrass - Sodar	0.26	0.85	\$2.16
Thickspike Wheatgrass - Critana	0.28	0.99	\$2.28
Western Wheatgrass - Arriba	0.38	0.96	\$3.43
Needlegrass, Green - Lodorm	0.24	1.00	\$2.07
Flax, Lewis Blue	0.30	1.99	\$12.69
Red Top	0.02	2.29	\$0.21
Penstemon, Rocky Mountain	0.14	2.19	\$8.60
Yarrow, Western	0.07	4.26	\$3.38
Globemallow, Munro	0.08	0.91	\$10.31
Aster, Pacific	0.02	0.35	\$2.80
Goldeneye - Showy	0.08	0.92	\$9.13
Totals Seed Mix	5.51	31.41	\$124.23

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

JOB TIME AND COST

No. of Acres:	188.7	Cost /Acre:	\$360.87
Estimated Failure Rate:	17%	Cost /Acre*:	\$360.87
*Selected Replanting Work Items:	TILLING, SEEDING		

Initial Job Cost:	\$68,096.17
Reseeding Job Cost:	\$11,576.35
Total Job Cost:	\$79,673
Job Hours:	189.00