

COST SUMMARY WORK

Task description: 2024 Reclamation Cost Estimate

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 6/10/2024

County: Lake

Filename: M493-ACY

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
Open Pit					
B1001	Open Pit - Haul Overburden (waste rock removal)	TRUCK1	3	2,163.03	\$13,553,910
B1002	Open Pit - Grade Overburden	DOZER	8	947.20	\$3,735,023
B1003	Open Pit - Haul Topsoil	TRUCK1	1	81.02	\$122,400
B1004	Open Pit - Grade Topsoil	DOZER	1	52.83	\$16,992
B1005	Open Pit - Finish Grading	GRADER	1	8.90	\$1,351
B2001	Open Pit - Hydrologic Protection	NA	1	41.00	\$221,510
B4001	Open Pit - Signs	NA	1	41.00	\$7,218
Mine Mill Complex					
C1001	Mine Mill Complex - Grading	DOZER	4	646.87	\$1,275,386
C1002	Mine Mill Complex - Haul Topsoil	TRUCK1	3	726.45	\$2,555,593
C1003	Mine Mill Complex - Grade Topsoil	DOZER	4	587.67	\$488,415
C1004	Mine Mill Complex - Haul Bedding Material	TRUCK1	1	84.73	\$93,703
C1005	Mine Mill Complex - Finish Grading	GRADER	1	233.55	\$35,421
C1006	Mine Mill Complex - Rip Compacted Surfaces	RIPPER	3	133.65	\$89,106
C2001	Mine Mill Complex - Hydrologic Protection	NA	1	2,552.00	\$3,444,046
C3001	Reveg - Mine Mill Complex - Alpine	REVEGE	1	265.10	\$454,111
C4001	Disposal of Reagents	NA	1	213.00	\$91,459
North 40 OSF					
D1001	North 40 OSF - Grading	DOZER	4	741.97	\$1,462,883
D1002	North 40 OSF - Haul Topsoil SE	TRUCK1	3	584.46	\$1,682,566
D1003	North 40 OSF - Grade Topsoil	DOZER	4	323.67	\$269,000
D1004	North 40 OSF - Haul Topsoil Area L	TRUCK1	3	63.05	\$181,501
D1005	North 40 OSF - Grade Topsoil	DOZER	2	78.56	\$32,645
D1006	North 40 OSF - Haul Bedding Material	TRUCK1	1	56.70	\$62,702
D1007	North 40 OSF - Finish Grading	GRADER	1	106.88	\$16,210
D2001	North 40 OSF - Hydrologic Protection	NA	1	2,416.00	\$12,140,848
D3001	North 40 OSF - Reveg - Alpine	REVEGE	1	258.50	\$801,552
McNulty OSF					
E1001	McNulty OSF - Grading	DOZER	8	4,722.52	\$18,622,060
E1002	McNulty OSF - Finish Grading	GRADER	2	335.49	\$101,762
E1003	McNulty OSF - Haul Topsoil McNulty	TRUCK1	2	415.34	\$871,749
E1004	McNulty OSF - Grade Topsoil	DOZER	2	375.16	\$241,314
E1005	McNulty OSF - Haul Topsoil L Stockpile	TRUCK1	3	589.81	\$1,697,962
E1006	McNulty OSF - Grade Topsoil L	DOZER	2	710.32	\$456,899

Task	Description	Form Used	Fleet Size	Task Hours	Cost
E1007	McNulty OSF - Haul Topsoil N Stockpile	TRUCK1	3	989.33	\$3,480,411
E1008	McNulty OSF - Grade Topsoil N	DOZER	2	2,161.88	\$1,390,590
E1009	McNulty OSF - Haul Bedding Material	TRUCK1	1	114.85	\$175,941
E1010	McNulty OSF - Haul Road Grading	DOZER	5	151.91	\$244,288
E1011	McNulty OSF -Roads - Ripping	RIPPER	2	43.25	\$19,226
E2001	McNulty OSF - Hydrologic Protection	NA	1	4,690.00	\$20,072,509
E3001	North 40 OSF - Reveg - Alpine	REVEGE	1	751.30	\$2,409,944
Tenmile TSF					
F1001	Tenmile TSF - Hauling Topsoil 30	TRUCK1	3	425.23	\$1,224,175
F1002	Tenmile TSF - Topsoil Grading 30	DOZER	5	327.95	\$527,365
F1003	Tenmile TSF - Hauling Topsoil 36	TRUCK1	3	170.40	\$381,646
F1004	Tenmile TSF - Topsoil Grading 36	DOZER	2	369.64	\$237,764
F1005	Tenmile TSF - Hauling Topsoil 33	TRUCK1	3	891.90	\$3,707,635
F1006	Tenmile TSF - Topsoil Grading 33	DOZER	4	936.04	\$1,204,182
F1007	Tenmile TSF - Hauling Topsoil 17	TRUCK1	3	312.65	\$900,076
F1008	Tenmile TSF - Topsoil Grading 17	DOZER	3	448.46	\$432,693
F1009	Tenmile TSF - Hauling Topsoil 25, 26, 27, 17	TRUCK1	1	2.62	\$4,564
F1010	Tenmile TSF - Topsoil Grading 25, 26, 27, 17	DOZER	1	3.70	\$1,189
F1011	Tenmile OSF - Haul Bedding Material	TRUCK1	2	46.65	\$97,920
F1012	Tenmile OSF - Roads - Ripping	RIPPER	1	11.64	\$2,588
F2001	Tenmile TSF - Hydrologic Protection	NA	1	2,932.00	\$7,922,709
F3001	Tenmile TSF - Reveg - Upland	REVEGE	1	687.50	\$1,415,451
F3002	Tenmile TSF - Reveg - Trees	REVEGE	1	22.80	\$28,112
Tenmile Tunnel					
G4001	Tenmile Tunnel Sealing	MINESEAL	1	1,307.00	\$129,557
3 Dam					
H1001	3 Dam - Haul Topsoil	TRUCK1	2	120.13	\$296,746
H1002	3 Dam - Topsoil Grading	DOZER	2	88.70	\$36,860
H1003	3 Dam - Haul Bedding Material	TRUCK1	1	19.72	\$20,732
H2001	3 Dam - Hydrologic Protection	NA	1	530.00	\$569,843
H3001	3 Dam - Reveg - Upland	REVEGE	1	31.90	\$120,981
Pond Shop					
I1001	Pond Shop - Grading	DOZER	1	15.99	\$5,144
I1002	Pond Shop - Hauling Topsoil	TRUCK1	1	1.38	\$1,050
I1003	Pond Shop - Topsoil Grading	DOZER	1	1.63	\$338
I3001	Pond Shop - Reveg - Upland	REVEGE	1	2.00	\$1,649
Mayflower TSF					
J1001	Mayflower TSF - Haul Topsoil	TRUCK1	6	983.67	\$3,876,230
J1002	Mayflower TSF - Grade Topsoil	DOZER	5	1,368.22	\$2,200,210
J1003	Mayflower TSF - Haul Topsoil 33	TRUCK1	3	160.36	\$461,663
J1004	Mayflower TSF - Grade Topsoil 33	DOZER	2	347.88	\$223,766
J1005	Mayflower TSF - Haul Topsoil 30 Pool	TRUCK1	3	420.03	\$1,477,626
J1006	Mayflower TSF - Grade Topsoil 30 Pool	DOZER	5	364.47	\$586,088
J1007	Mayflower TSF - Haul Topsoil 16	TRUCK1	2	430.50	\$903,572
J1008	Mayflower TSF - Grade Topsoil 16	DOZER	2	622.59	\$400,471
J1009	Mayflower TSF - Haul Topsoil 30 Temp Sludge	TRUCK1	1	330.40	\$435,769
J1010	Mayflower TSF - Grade Topsoil 30 Temp Sludge	DOZER	2	358.67	\$230,704
J1011	McNulty OSF - Finish Grading	GRADER	2	415.15	\$125,926

Task	Description	Form Used	Fleet Size	Task Hours	Cost
J1012	Mayflower TSF - Haul Bedding Material	TRUCK1	3	48.85	\$137,972
J1013	Mayflower TSF - Roads - Ripping	RIPPER	2	24.12	\$10,722
J2001	Mayflower TSF - Hydrologic Protection	NA	1	3,394.00	\$12,175,620
J3001	Mayflower TSF - Reveg - Upland	REVEGE	1	771.10	\$1,587,570
J3002	Mayflower TSF - Reveg - Trees	REVEGE	1	25.20	\$31,072
J3003	Mayflower Pool/Sludge Cell - Reveg - Upland	REVEGE	1	201.30	\$399,199
J3004	Mayflower Pool/Sludge Cell - Reveg - Trees	REVEGE	1	6.00	\$7,398
Mayflower Seepage Collection					
L1001	Mayflower Seepage Bldg - Grading	DOZER	1	293.90	\$94,523
L1002	Mayflower Seepage Bldg - Haul Topsoil	TRUCK1	1	7.61	\$5,805
L1003	Mayflower Seepage Bldg - Grade Topsoil	DOZER	1	9.14	\$1,900
L1004	Mayflower TSF - Grading	GRADER	1	0.98	\$150
L3001	Mayflower Seepage Collection Bldgs - Reveg - Upland	REVEGE	1	1.10	\$2,265
Robinson TSF					
M1001	Robinson TSF - Haul Fill material 28	TRUCK1	2	413.32	\$1,395,811
M1002	Robinson TSF - Grade Fill Material 28	DOZER	2	481.61	\$309,789
M1003	Robinson TSF - Haul Topsoil 30	TRUCK1	4	677.38	\$3,055,602
M1004	Robinson TSF - Grade Topsoil 30	DOZER	4	979.62	\$1,260,247
M1005	Robinson TSF - Haul Topsoil 35	TRUCK1	5	280.50	\$946,321
M1006	Robinson TSF - Grade Topsoil 35	DOZER	2	968.71	\$623,107
M1007	Robinson TSF - Haul Bedding Material	TRUCK1	2	36.36	\$74,323
M1008	Robinson TSF - Roads - Ripping	RIPPER	1	9.98	\$2,218
M2001	Robinson TSF - Hydrologic Protection	NA	1	2,165.00	\$2,616,398
M3001	Robinson TSF - Reveg - Upland	REVEGE	1	502.70	\$1,034,978
M3002	Robinson TSF - Reveg - Trees	REVEGE	1	16.80	\$20,714
1 Dam					
N1001	1 Dam - Haul Topsoil 22	TRUCK1	1	0.70	\$734
N1002	1 Dam - Grade Topsoil 22	DOZER	1	0.63	\$202
N1003	1 Dam - Haul Topsoil 24	TRUCK1	1	2.56	\$2,687
N1004	1 Dam - Grade Topsoil 24	DOZER	1	2.31	\$743
N1005	1 Dam - Haul Topsoil 28	TRUCK1	3	356.17	\$1,233,491
N1006	1 Dam - Grade Topsoil 28	DOZER	2	470.74	\$302,794
N1007	1 Dam - Haul Bedding Material	TRUCK1	2	20.49	\$50,626
N2001	1 Dam - Hydrologic Protection	NA	1	1,118.00	\$1,200,709
N3001	1 Dam - Reveg - Upland	REVEGE	1	139.70	\$529,812
Roads					
O1001	Roads - Haul Topsoil - McNulty OSF	TRUCK1	3	181.89	\$486,107
O1002	Roads - Grade Topsoil - McNulty OSF	DOZER	4	146.94	\$122,123
O1003	Roads - Haul Topsoil - Tenmile	TRUCK1	2	38.58	\$89,450
O1004	Roads - Grade Topsoil - Tenmile	DOZER	2	40.79	\$16,952
O1005	Roads - Haul Topsoil - Robinson TSF	TRUCK1	1	51.26	\$78,864
O1006	Roads - Grade Topsoil - Robinson TSF	DOZER	2	33.99	\$14,126
O1007	Roads - Haul Topsoil - Robinson Lake	TRUCK1	2	76.68	\$210,453
O1008	Roads - Grade Topsoil - Robinson Lake	DOZER	2	101.98	\$42,379
O1009	Roads - Haul Topsoil - Mayflower	TRUCK1	2	122.26	\$387,659
O1010	Roads - Grade Topsoil - Mayflower	DOZER	2	161.47	\$67,100
O3001	Roads - Robinson Lake - Reveg - Hydric	REVEGE	1	21.00	\$37,355
O3002	Roads - McNulty OSF - Reveg - Alpine	REVEGE	1	58.00	\$183,480

Task	Description	Form Used	Fleet Size	Task Hours	Cost
O3003	Roads - Mayflower Tenmile Robinson TSF - Reveg - Upland	REVEGE	1	48.00	\$95,118
Robinson lake					
P1001	Robinson Lake - Haul Temp Platforms In	TRUCK1	2	50.43	\$128,315
P1002	Robinson Lake - Grade Temp Platforms In	DOZER	3	117.91	\$74,118
P1003	Robinson TSF - Haul Bedding Material	TRUCK1	1	25.19	\$29,156
P1004	Robinson Lake - Haul Topsoil 28	TRUCK1	3	132.81	\$408,958
P1005	Robinson Lake - Grade Topsoil 28	DOZER	3	170.03	\$164,057
P1006	Robinson Lake - Haul Sludge Removal	TRUCK1	3	661.92	\$2,038,272
P1007	Robinson Lake - Spread Sludge Removal	DOZER	5	1,015.32	\$1,632,715
P1008	Robinson Lake - Haul Temp Platforms Out	TRUCK1	2	46.23	\$157,026
P1009	Robinson Lake - Grade Temp Platforms Out	DOZER	3	117.91	\$74,118
P1010	Robinson Lake - Roads - Ripping	RIPPER	2	14.36	\$6,386
P2001	Robinson Lake - Hydrologic Protection	NA	1	656.00	\$765,669
P3001	Robinson Lake - Reveg - Hydric	REVEGE	1	47.30	\$39,165
P4001	Robinson Lake - Pre-Excavation Work & Water Mgmt	NA	1	1,087.00	\$519,326
P4002	Robinson Lake - Finish Work	NA	1	270.00	\$129,000
5 Dam					
Q1001	5 Dam - Haul Topsoil	TRUCK1	3	201.49	\$440,261
Q1002	5 Dam - Grade Topsoil	DOZER	1	452.89	\$145,657
Q1003	5 Dam - Haul Bedding Material	TRUCK1	1	20.49	\$38,997
Q2001	5 Dam - Hydrologic Protection	NA	1	877.00	\$1,232,537
Q3001	5 Dam - Reveg - Upland	REVEGE	1	67.10	\$254,477
Sealing Openings					
R4001	Seal Underground Openings	MINESEAL	1	834.00	\$38,989
R4002	Abandon Monitoring Wells	BOREHOLE	1	20.40	\$18,750
Water Treatment					
S4001	Impacted Water Treatment	NA	1	20,800.00	\$37,123,901
Maintenance and Monitoring					
U4001	Tailings Stewardship	NA	1	100.00	\$3,000,000
U4002	Operations and Maintenance first 10-year period	NA	1	45,000.00	\$3,696,300
U4003	Operations and Maintenance second 10-year period	NA	1	27,000.00	\$2,217,780
U4004	Operations and Maintenance first 10-year period	NA	1	13,500.00	\$1,108,890
U4005	Water Quality Monitoring for 30 Years	NA	1	3,000.00	\$523,511
Demolition					
X4001	Demolition of Structures	DEMOLISH	1	24,875.00	\$11,813,597
X4002	Demolition of Linear	DEMOLISH	1	367.00	\$1,275,930
Mobilization					
Z0001	Initial Mobilization	MOBILIZE	1	38.40	\$1,177,781
Z0002	Reveg Failure Mobilization	MOBILIZE	1	38.40	\$24,092
Z0003	Initial Mobilization	MOBILIZE	1	38.40	\$94,231
SUBTOTALS:				201120.92	\$224,151,830

INDIRECT COSTS**OVERHEAD AND PROFIT:**

Liability insurance:	2.02	Total =	<u>\$4,527,867</u>
Performance bond:	1.05	Total =	<u>\$2,353,594</u>
Job superintendent:	100,560.46	Total =	<u>\$7,971,428</u>
Profit:	10.00	Total =	<u>\$22,415,183</u>
		TOTAL O & P =	<u>\$37,268,072</u>
		CONTRACT AMOUNT (direct + O & P) =	<u>\$261,419,902</u>

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>\$500</u>	Total =	<u>\$500</u>
Engineering work and/or contract/bid preparation:	<u>2.00</u>	Total =	<u>\$5,228,398</u>
Reclamation management and/or administration:	<u>3.00</u>		<u>\$7,842,597</u>
CONTINGENCY: 3.00		Total =	<u>\$6,724,555</u>

TOTAL INDIRECT COST = \$57,064,122

TOTAL BOND AMOUNT (direct + indirect) = \$281,215,952

TRUCK/LOADER TEAM WORKTask description: Open Pit - Haul Overburden (waste rock removal)Site: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: B1001State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-B1001User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D9T - 9SU
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$253.16	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$164.35	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$456.10	NA	\$151.66	\$123.04
Number of Units:	24	3	1	0	1	1
Group Subtotals:	Work: \$5,535.36		Support: \$456.10		Maint: \$274.70	

Total work team cost/hour: \$6,266.16**MATERIAL QUANTITIES**Initial volume: 2,354,000

CCY

Swell factor: 1.320Loose volume: 3,107,280

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 2,800

Pounds/LCY

Description: Granite - BrokenRated Payload: 87,000

Pounds

Payload Capacity: 31.07

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.07	LCY

Final Truck Volume Based on Number of Loader Passes: 27.50 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	5.500	LCY

Job Condition Corrections:

Site Altitude (ft.): 12000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 5 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		1.860	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	1.860	Minutes	Adjusted for site altitude:	1.860	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	15840.00	-8.50	3.00	-5.50	2721	6.001

Haul Time: **6.001** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	15840.00	8.50	3.00	11.50	1444	11.032

Return Time: **11.032** minutesTotal Truck Cycle Time: **21.560** minutes

Loading Tool unit

Production 576.92 LCY/Hour Adjusted for job efficiency: 478.85 LCY/Hour
Truck Unit Production 76.53 LCY/Hour Adjusted for job efficiency: 63.52 LCY/Hour

Optimal No. of Trucks: 8 Truck(s) Selected Number of Trucks: 8 Truck(s)

Adjusted hourly truck team production: 508.17 LCY/Hour
Adjusted single truck/loader team production: 478.85 LCY/Hour
Adjusted multiple truck/loader team production: **1,436.54** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **2,163.03** HoursUnit cost: \$4.362 /LCY Total job cost: **\$13,553,910**

BULLDOZER WORKTask description: Open Pit - Grade OverburdenSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: B1002State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-B1002User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D10T - 10SUHorsepower: 574Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData 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 Cost/Hour: \$492.91Total Fleet Cost/Hour: \$3,943.24**MATERIAL QUANTITIES**Initial Volume: 3,060,200Swell factor: 1.000Loose volume: 3,060,200 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 754.3 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 12,000 feetMaterial weight: 2,800 lbs/LCYWeight description: Granite - Broken**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	0.970	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5354

Adjusted unit production: 403.85 LCY/hr

Adjusted fleet production: **3230.8** LCY/hr

JOB TIME AND COST

Fleet size: 8 Dozer(s)

Unit cost: \$1.221/LCY

Total job time: **947.20** Hours

Total job cost: **\$3,735,023**

TRUCK/LOADER TEAM WORKTask description: **Open Pit - Haul Topsoil**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **B1003**State: **Colorado**Abbreviation: **None**Date: **8/19/2024**County: **Lake**Filename: **M493-B1003**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D9T - 9SU
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$253.16	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$164.35	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$456.10	NA	\$151.66	\$123.04
Number of Units:	3	1	1	0	1	1
Group Subtotals:	Work: \$779.97		Support: \$456.10		Maint: \$274.70	

Total work team cost/hour: **\$1,510.77****MATERIAL QUANTITIES**Initial volume: **27,000**

CCY

Swell factor: **1.215**Loose volume: **32,805**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Other - moist loam (100-110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 12000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.040	minutes
Adjusted Loader Cycle Time:		0.460	minutes
Net Load Time per Truck:		2.400	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.400	Minutes	Adjusted for site altitude:	2.400	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7022.00	-7.30	3.00	-4.30	3005	2.409

Haul Time: **2.409** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	7022.00	7.30	3.00	10.30	1736	4.147

Return Time: **4.147** minutesTotal Truck Cycle Time: **11.623** minutes

Loading Tool unit

Production 555.88 LCY/Hour Adjusted for job efficiency: 461.38 LCY/Hour
Truck Unit Production 162.61 LCY/Hour Adjusted for job efficiency: 134.97 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 404.91 LCY/Hour
Adjusted single truck/loader team production: 404.91 LCY/Hour
Adjusted multiple truck/loader team production: **404.91** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **81.02** HoursUnit cost: \$3.731 /LCY Total job cost: **\$122,400**

BULLDOZER WORKTask description: **Open Pit - Grade Topsoil**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **B1004**State: **Colorado**Abbreviation: **None**Date: **8/19/2024**County: **Lake**Filename: **M493-B1004**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$321.62****MATERIAL QUANTITIES**Initial Volume: **32,400**Swell factor: **1.000**Loose volume: **32,400 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **150 feet**Unadjusted hourly production: **634.3 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **12,000 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9668

Adjusted unit production: 613.24 LCY/hr

Adjusted fleet production: **613.24** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.524/LCY

Total job time: **52.83** Hours

Total job cost: **\$16,992**

MOTOR GRADER WORK

Task description: Open Pit - Finish Grading

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: B1005

State: Colorado

Abbreviation: None

Date: 8/19/2024

County: Summit

Filename: M493-B1005

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 12M

Horsepower: 158

Ripper Attachment: _____

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$69.16	NA
Operating Cost/Hour:	\$54.74	100
Ripper Ownership Cost/Hour:	\$0.00	NA
Ripper Operating Cost/Hour:	\$0.00	
Operator Cost/Hour:	\$27.76	NA
Total Unit Cost/Hour:	\$151.66	
Total Fleet Cost/Hour:	\$151.66	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 9.00 acres

Source of estimated acreage: Climax Estimate TR-37

HOURLY PRODUCTION

Average Grader Speed:	<u>1.50</u>	mph
Selected Application:	<u>Finish grading (0-2.5 mph) - 1.5</u>	
Selected Blade Angle:	<u>45</u>	degrees
Effective Blade Length:	<u>8.50</u>	feet
Width of blade overlap per pass:	<u>2.00</u>	feet
Net grading or ripping width per pass:	<u>6.50</u>	feet
Unadjusted Hourly Unit Production:	<u>1.1818</u>	acres/hour

Job Condition Correction Factors

Site Altitude: 12000 feet

		Source
Altitude Adj:	<u>0.95</u>	(CAT HB)
Job Efficiency:	<u>0.90</u>	(1sh/d, fav.)
Net Correction:	<u>0.8550</u>	multiplier

Adjusted Hourly Unit Production: 1.0105 acres/Hour

Adjusted Hourly Fleet Production: **1.0105** acres/Hour

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **8.91** Hours

Unit cost: \$150.09 per acre Total job cost: **\$1,351**

Construct Water Conveyances

Task #	Area	Description	Task Type	Quant	Unit	Cost/Unit	Total Cost	Key Assumptions
	Open Pit	Pit Dewatering System	30" Corrugated HDPE Installed	2,800	LF	\$ 79.11	\$ 221,510	41 hrs
B2001	Open Pit	Hydrologic Protection					\$ 221,510	

Fence Installation & Safety Signs									
Task #	Description	Task	Length	Unit	Cost/Length ¹	Total Task Cost	Total hrs	Notes	
	Signs		41	Ea	\$ 74.25	\$ 3,044.25	41	RS Mean s10 14 53.20 0600	
	Posts		41	Ea	\$ 66.61	\$ 2,731.01	41	RS Mean s10 14 53.20 1500	
	Total Equipment		41	Hr	\$ 15.00	\$ 615.00	41	CMC #4	
	Total Labor		41	Hr	\$ 20.18	\$ 827.38	41	CMC #4	
B4001	Open Pit - Signs					\$ 7,217.64	41		

BULLDOZER WORKTask description: Mine Mill Complex - GradingSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: C1001State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-C1001User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D10T - 10SUHorsepower: 574Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData 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 Cost/Hour: \$492.91Total Fleet Cost/Hour: \$1,971.62**MATERIAL QUANTITIES**Initial Volume: 950,000Swell factor: 1.320Loose volume: 1,254,000 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 754.3 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 11,300 feetMaterial weight: 2,800 lbs/LCYWeight description: Granite - Broken**Job Condition Correction Factor**

		<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:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	0.970	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6425

Adjusted unit production: 484.64 LCY/hr

Adjusted fleet production: **1938.56** LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)

Unit cost: \$1.017/LCY

Total job time: **646.87** Hours

Total job cost: **\$1,275,386**

TRUCK/LOADER TEAM WORKTask description: Mine Mill Complex - Haul TopsoilSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: C1002State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-C1002User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	12	3	1	0	1	1
Group Subtotals:	Work: \$2,979.00		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$3,517.94****MATERIAL QUANTITIES**Initial volume: 778,000

CCY

Swell factor: 1.215Loose volume: **945,270**

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11300 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10666.00	-6.40	3.00	-3.40	3005	3.659

Haul Time: **3.659** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10666.00	6.40	3.00	9.40	1862	5.841

Return Time: **5.841** minutesTotal Truck Cycle Time: **14.467** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 130.65 LCY/Hour Adjusted for job efficiency: 108.44 LCY/Hour

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

Adjusted hourly truck team production: 433.74 LCY/Hour
Adjusted single truck/loader team production: 433.74 LCY/Hour
Adjusted multiple truck/loader team production: **1,301.23** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **726.45** HoursUnit cost: \$2.704 /LCY Total job cost: **\$2,555,593**

BULLDOZER WORKTask description: Mine Mill Complex - Grade TopsoilSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: C1003State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-C1003User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$207.78Total Fleet Cost/Hour: \$831.10**MATERIAL QUANTITIES**Initial Volume: 933,600Swell factor: 1.000Loose volume: 933,600 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 410.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 11,300 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9668

Adjusted unit production: 397.16 LCY/hr

Adjusted fleet production: **1588.64** LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)

Unit cost: \$0.523/LCY

Total job time: **587.67** Hours

Total job cost: **\$488,415**

TRUCK/LOADER TEAM WORKTask description: Mine Mill Complex - Haul Bedding MaterialSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: C1004State: ColoradoAbbreviation: NoneDate: 8/19/2024County: LakeFilename: M493-C1004User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	2	1	1	0	1	1
Group Subtotals:	Work: \$566.94		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$1,105.88****MATERIAL QUANTITIES**Initial volume: 26,408

CCY

Swell factor: 1.000Loose volume: **26,408**

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 2,600

Pounds/LCY

Description: Limestone - BrokenRated Payload: 87,000

Pounds

Payload Capacity: 33.46

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 28.88 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	4.125	LCY

Job Condition Corrections:

Site Altitude (ft.): 11300 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.740	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.740	Minutes	Adjusted for site altitude:	2.740	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4910.00	-2.40	3.00	0.60	3005	1.926

Haul Time: 1.926 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4910.00	2.40	3.00	5.40	3005	1.895

Return Time: 1.895 minutesTotal Truck Cycle Time: 9.228 minutes

Loading Tool unit

Production 463.24 LCY/Hour Adjusted for job efficiency: 384.49 LCY/Hour
Truck Unit Production 187.75 LCY/Hour Adjusted for job efficiency: 155.83 LCY/Hour

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

Adjusted hourly truck team production: 311.67 LCY/Hour
Adjusted single truck/loader team production: 311.67 LCY/Hour
Adjusted multiple truck/loader team production: 311.67 LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: 84.73 HoursUnit cost: \$3.548 /LCY Total job cost: \$93,703

MOTOR GRADER WORK

Task description: Mine Mill Complex - Finish Grading

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: C1005

State: Colorado

Abbreviation: None

Date: 9/9/2024

County: Summit

Filename: M493-C1005

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 12M

Horsepower: 158

Ripper Attachment: _____

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$69.16	NA
Operating Cost/Hour:	\$54.74	100
Ripper Ownership Cost/Hour:	\$0.00	NA
Ripper Operating Cost/Hour:	\$0.00	
Operator Cost/Hour:	\$27.76	NA
Total Unit Cost/Hour:	\$151.66	
Total Fleet Cost/Hour:	\$151.66	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 236.00 acres

Source of estimated acreage: Climax Estimate TR-37

HOURLY PRODUCTION

Average Grader Speed:	<u>1.50</u>	mph
Selected Application:	<u>Finish grading (0-2.5 mph) - 1.5</u>	
Selected Blade Angle:	<u>45</u>	degrees
Effective Blade Length:	<u>8.50</u>	feet
Width of blade overlap per pass:	<u>2.00</u>	feet
Net grading or ripping width per pass:	<u>6.50</u>	feet
Unadjusted Hourly Unit Production:	<u>1.1818</u>	acres/hour

Job Condition Correction Factors

Site Altitude: 11300 feet

		Source
Altitude Adj:	<u>0.95</u>	(CAT HB)
Job Efficiency:	<u>0.90</u>	(1sh/d, fav.)
Net Correction:	<u>0.8550</u>	multiplier

Adjusted Hourly Unit Production: 1.0105 acres/Hour

Adjusted Hourly Fleet Production: **1.0105** acres/Hour

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **233.56** Hours

Unit cost: \$150.09 per acre Total job cost: **\$35,421**

BULLDOZER RIPPING WORK

Task description: Mine Mill Complex - Rip Compacted Surfaces

Site: Climax Mine Permit Action: 2024-06 Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: C1006 State: Colorado Abbreviation: None
Date: 9/9/2024 County: Lake Filename: M493-C1006
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS Series II LGP Horsepower: 240
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$90.24</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$78.95</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$9.25</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$5.20</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$222.23</u>	
Total Fleet Cost/Hour:	<u>\$666.68</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 241.00 acres Rip Depth (ft): 1.00 Volume: 388,813 BCY or CCY

Source of estimated quantity: TR-37

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.45</u>	<u>feet/pass</u>
Average Ripping Width:	<u>6.50</u>	<u>feet/pass</u>
Average Ripping Length:	<u>250.00</u>	<u>feet/pass</u>
Average Dozer Speed:	<u>88.00</u>	<u>feet/minute</u>
Average Maneuver Time:	<u>0.25</u>	<u>minutes/pass</u>
Production per unit area:	<u>0.724</u>	<u>acres/hour</u>

Job Condition Correction Factors

Unadjusted Hourly Unit Production:	<u>0.724</u>	<u>Acres/hr</u>
Site Altitude:	<u>11,300</u>	<u>feet</u>
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.83</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 0.60 Acres/hr
Adjusted Hourly Fleet Production: 1.80 Acres/hr

JOB TIME AND COST

Fleet size: 3 Grader(s) Total job time: 133.66 Hours

Unit cost: \$369.738 Per acre Total job cost: \$89,106

Construct Water Conveyances

Task #	Area	Description	Task Type	Quant	Unit	Cost/Unit	Total Cost	Key Assumptions
110.9	Mill Mine Complex	Clean Water Surface Channel	Excavate diversion/spillway	26840	CY	\$ 3.66	\$ 98,234	10,110" LF install
110.9	Mill Mine Complex	Clean Water Surface Channel-Riprap	Rip Rap Armoring	12021	CY	\$ 74.40	\$ 894,362	
110.9	Mill Mine Complex	Beding for Riprap	Drain Rock	14387	CY	\$ 73.88	\$ 1,062,912	
110.12	Mine Mill Complex	Impacted Water Pipeline	30" Corrugated HDPE Installed	11,500	LF	\$ 78.33	\$ 900,795	
110.13	Mine Mill Complex	Impacted Water Collection Drains	Excavate Diversion/Spillway	4,800	CY	\$ 3.66	\$ 17,568	
	Mine Mill Complex	Geotextiles		16,755	SY	\$ 2.35	\$ 39,374	
	Mine Mill Complex	Collection Drain Gravel	Drain Rock	4,800	CY	\$ 73.88	\$ 354,624	
	Mine Mill Complex	Collection Drain Pipe	Perforated Pipe	4,800	LF	\$ 15.87	\$ 76,176	
C2001	Mine Mill Complex	Hydrologic Protection					\$ 3,444,046	

REVEGETATION WORKTask description: Reveg - Mine Mill Complex - AlpineSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: C3001State: ColoradoAbbreviation: NoneDate: 6/10/2024County: LakeFilename: M493-C3001User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	0.22	5.05	\$5.26
Alpine Fescue	0.65	19.40	\$11.75
Cinquefoil, Slender	0.03	2.92	\$14.72
Currant, Wax	0.20	0.69	\$13.87
Rocky Mountain Fescue	0.34	5.46	\$3.67
Lupine, Silver	0.35	0.21	\$41.85
Slender Wheatgrass - Native	1.37	5.00	\$9.68
Thurber's Fescue	0.09	0.93	\$7.06
Flax, Lewis Blue	0.43	2.85	\$18.19
Timothy, Alpine - Native	0.17	5.07	\$6.66

Tufted Hairgrass	0.17	9.76	\$4.84
Yarrow, White	0.05	3.18	\$3.67
Totals Seed Mix	4.07	60.52	\$141.23

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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

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: 241 Cost /Acre: \$1,723.67
 Estimated Failure Rate: 10% Cost /Acre*: \$1,606.06
 *Selected Replanting Work Items: SEEDING,MULCHING
 Initial Job Cost: \$415,404.47
 Reseeding Job Cost: \$38,706.05
 Total Job Cost: \$454,111
 Job Hours: 265.10

Disposal of Reagents

C4001

Assumptions
Reagents will be removed prior to closure.

Tasks
Disposal of reagents

Timing
LOM

Total Costs
\$91,459

Calculations

Specific Tasks	Work Type	Area	Description	Quantity	Units	Cost/Unit	Total Cost	Comment
Hydrocal 60	Trucking			pounds	100,795	\$ 0.02	\$ 2,016	
Hydrocal 60	Restocking			lump sum	7,000	\$ 1.00	\$ 7,000	
Tergitol NP -4	Trucking			pounds	1,415	\$ 0.02	\$ 28	
Tergitol NP -4	Restocking			lump sum	98	\$ 1.00	\$ 98	
Froth Pro 509	Trucking			pounds	91,548	\$ 0.02	\$ 1,831	
Froth Pro 509	Restocking			lump sum	6,358	\$ 1.00	\$ 6,358	
CorsiTech FrothPro 327	Trucking			pounds	5,906	\$ 0.02	\$ 118	
CorsiTech FrothPro 327	Restocking			lump sum	410	\$ 1.00	\$ 410	
Orfom D8	Trucking			pounds	107,615	\$ 0.02	\$ 2,152	
Orfom D8	Restocking			lump sum	7,474	\$ 1.00	\$ 7,474	
Nokes	Trucking			pounds	205,720	\$ 0.02	\$ 4,114	
Nokes	Restocking			lump sum	14,287	\$ 1.00	\$ 14,287	
FloatSil™ (sodium silicate)	Trucking			pounds	45,724	\$ 0.02	\$ 914	
FloatSil™ (sodium silicate)	Restocking			lump sum	3,175	\$ 1.00	\$ 3,175	
Lime	Trucking			pounds	450000	\$ 0.02	\$ 9,000	
Lime	Restocking			lump sum	31,251	\$ 1.00	\$ 31,251	
Polymer Ventures DAF-30	Trucking			pounds	8250	\$ 0.02	\$ 165	
Polymer Ventures DAF-30	Restocking			lump sum	573	\$ 1.00	\$ 573	
Nalco 7561	Trucking			pounds	24,651	\$ 0.02	\$ 493	
Nalco 7561	Restocking			lump sum	1,712	\$ 1.00	\$ 1,712	
TOTAL COSTS							Total Cost \$ 91,459	

Notes: Quantities assumed from storage capacity Table T-A-1 TR 28. Gallons converted to pounds using specific gravity from SDS.
Disosal cost estimated based on email estimated of \$0.02/pound trucking cost plus 25% restocking fee from Univar Solutions (July 29, 2024)

AR#4 17) Task hours associated with disposal (trucking and restocking).
Climax has assumed 22 T/truck load, 9 hours per trip, total weight of reagents is 521 tons, 213 hours

BULLDOZER WORKTask description: **North 40 OSF - Grading**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **D1001**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-D1001**User: **ACY**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 Cost/Hour: **\$492.91**Total Fleet Cost/Hour: **\$1,971.62****MATERIAL QUANTITIES**Initial Volume: **1,919,000**Swell factor: **1.000**Loose volume: **1,919,000 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **754.3 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **-30 %**Average site altitude: **11,500 feet**Material weight: **2,800 lbs/LCY**Weight description: **Granite - Broken****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.601	(CAT HB)
Altitude:	0.970	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8572

Adjusted unit production: 646.59 LCY/hr

Adjusted fleet production: **2586.36** LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)

Unit cost: \$0.762/LCY

Total job time: **741.97** Hours

Total job cost: **\$1,462,883**

TRUCK/LOADER TEAM WORKTask description: North 40 OSF - Haul Topsoil SESite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: D1002State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-D1002User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance -Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	9	3	1	0	1	1
Group Subtotals:	Work: \$2,339.91		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$2,878.85****MATERIAL QUANTITIES**Initial volume: 686,000

CCY

Swell factor: 1.215Loose volume: **833,490**

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11500 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	6600.00	-3.40	3.00	-0.40	3005	2.264

Haul Time: **2.264** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	6600.00	3.40	3.00	6.40	2742	2.650

Return Time: **2.650** minutesTotal Truck Cycle Time: **9.881** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 191.28 LCY/Hour Adjusted for job efficiency: 158.76 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 476.29 LCY/Hour
Adjusted single truck/loader team production: 475.36 LCY/Hour
Adjusted multiple truck/loader team production: **1,426.09** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **584.46** HoursUnit cost: \$2.019 /LCY Total job cost: **\$1,682,566**

BULLDOZER WORKTask description: North 40 OSF - Grade TopsoilSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: D1003State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-D1003User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$207.78Total Fleet Cost/Hour: \$831.10**MATERIAL QUANTITIES**Initial Volume: 823,200Swell factor: 1.000Loose volume: 823,200 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 410.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: -30 %Average site altitude: 11,500 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.5478

Adjusted unit production: 635.84 LCY/hr

Adjusted fleet production: **2543.36** LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)

Unit cost: \$0.327/LCY

Total job time: **323.67** Hours

Total job cost: **\$269,000**

TRUCK/LOADER TEAM WORKTask description: **North 40 OSF - Haul Topsoil Area L**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **D1004**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-D1004**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	9	3	1	0	1	1
Group Subtotals:	Work: \$2,339.91		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$2,878.85****MATERIAL QUANTITIES**Initial volume: **74,000**

CCY

Swell factor: **1.215**Loose volume: **89,910**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11500 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5280.00	1.20	3.00	4.20	2421	2.913

Haul Time: **2.913** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5280.00	-1.20	3.00	1.80	3005	1.899

Return Time: **1.899** minutesTotal Truck Cycle Time: **9.779** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 193.28 LCY/Hour Adjusted for job efficiency: 160.42 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 481.26 LCY/Hour
Adjusted single truck/loader team production: 475.36 LCY/Hour
Adjusted multiple truck/loader team production: **1,426.09** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **63.05** HoursUnit cost: \$2.019 /LCY Total job cost: **\$181,501**

BULLDOZER WORKTask description: North 40 OSF - Grade TopsoilSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: D1005State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-D1005User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$207.78Total Fleet Cost/Hour: \$415.55**MATERIAL QUANTITIES**Initial Volume: 88,800Swell factor: 1.000Loose volume: 88,800 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 410.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: -30 %Average site altitude: 11,500 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.3758

Adjusted unit production: 565.18 LCY/hr

Adjusted fleet production: **1130.36** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.368/LCY

Total job time: **78.56** Hours

Total job cost: **\$32,645**

TRUCK/LOADER TEAM WORKTask description: North 40 OSF - Haul Bedding MaterialSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: D1006State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-D1006User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	2	1	1	0	1	1
Group Subtotals:	Work: \$566.94		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$1,105.88****MATERIAL QUANTITIES**Initial volume: 21,800

CCY

Swell factor: 1.000Loose volume: **21,800**

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: 2,600

Pounds/LCY

Description: Limestone - BrokenRated Payload: 87,000

Pounds

Payload Capacity: 33.46

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 28.88 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	4.125	LCY

Job Condition Corrections:

Site Altitude (ft.): 11500 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.060	minutes
	Adjusted Loader Cycle Time:	0.440	minutes
	Net Load Time per Truck:	2.740	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.740	Minutes	Adjusted for site altitude:	2.740	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2112.00	-4.40	3.00	-1.40	3005	0.769

Haul Time: **0.769** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2112.00	4.40	3.00	7.40	2470	1.067

Return Time: **1.067** minutesTotal Truck Cycle Time: **7.243** minutes

Loading Tool unit

Production 463.24 LCY/Hour Adjusted for job efficiency: 384.49 LCY/Hour
Truck Unit Production 239.21 LCY/Hour Adjusted for job efficiency: 198.54 LCY/Hour

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

Adjusted hourly truck team production: 397.08 LCY/Hour
Adjusted single truck/loader team production: 384.49 LCY/Hour
Adjusted multiple truck/loader team production: **384.49** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **56.70** Hours

Unit cost: \$2.876 /LCY Total job cost: **\$62,702**

MOTOR GRADER WORK

Task description: North 40 OSF - Finish Grading

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: D1007

State: Colorado

Abbreviation: None

Date: 6/17/2024

County: Summit

Filename: M493-D1007

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 12M

Horsepower: 158

Ripper Attachment: _____

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$69.16	NA
Operating Cost/Hour:	\$54.74	100
Ripper Ownership Cost/Hour:	\$0.00	NA
Ripper Operating Cost/Hour:	\$0.00	
Operator Cost/Hour:	\$27.76	NA
Total Unit Cost/Hour:	\$151.66	
Total Fleet Cost/Hour:	\$151.66	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 108.00 acres

Source of estimated acreage: Climax Estimate TR-37

HOURLY PRODUCTION

Average Grader Speed:	<u>1.50</u>	mph
Selected Application:	<u>Finish grading (0-2.5 mph) - 1.5</u>	
Selected Blade Angle:	<u>45</u>	degrees
Effective Blade Length:	<u>8.50</u>	feet
Width of blade overlap per pass:	<u>2.00</u>	feet
Net grading or ripping width per pass:	<u>6.50</u>	feet
Unadjusted Hourly Unit Production:	<u>1.1818</u>	acres/hour

Job Condition Correction Factors

Site Altitude: 11500 feet

		Source
Altitude Adj:	<u>0.95</u>	(CAT HB)
Job Efficiency:	<u>0.90</u>	(1sh/d, fav.)
Net Correction:	<u>0.8550</u>	multiplier

Adjusted Hourly Unit Production: 1.0105 acres/Hour

Adjusted Hourly Fleet Production: **1.0105** acres/Hour

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **106.88** Hours

Unit cost: \$150.09 per acre Total job cost: **\$16,210**

Construct Water Conveyances							
Task #	Area	Description	Task Type	Quant	Unit	Cost/Unit	Total Cost
							Key Assumptions
108.8	North 40 OSF	Clean Water Channel	Excavate diversion/spillway	22,100	CY	\$ 3.66	\$ 80,886
108.8	North 40 OSF	Rip Rap	Rip Rap Armoring	9,900	CY	\$ 74.40	\$ 736,560
108.8	North 40 OSF	Bedding for Riprap Placed	Drain Rock	11,900	CY	\$ 73.88	\$ 879,172
	North 40 OSF	Impacted Water Pipeline	30" Corrugated HDPE Installed	3,200	LF	\$ 78.33	\$ 250,656
108.11	North 40 OSF	Impacted Water Drain	Excavate Diversion/Spillway	4,100	CY	\$ 3.66	\$ 15,006
108.13	North 40 OSF	Drain Gravel	Drain Rock	4,100	CY	\$ 73.88	\$ 302,908
108.11	North 40 OSF	Geotextiles	Geotextiles	14,312	SY	\$ 2.35	\$ 33,633
108.13	North 40 OSF	Drain Pipes	Perforated Pipe	4,100	LF	\$ 15.87	\$ 65,067
108.11	North 40 OSF	Downdrops	Excavate Diversion/Spillway	9,500	CY	\$ 3.66	\$ 34,770
108.13	North 40 OSF	ACB	ACB	151,100	SF	\$ 63.70	\$ 9,625,070
108.11	North 40 OSF	Outslope Channels	Excavate Diversion/Spillway	32,000	CY	\$ 3.66	\$ 117,120
D2001	North 40 OSF	Hydrologic Protection					\$ 12,140,848

REVEGETATION WORKTask description: North 40 OSF - Reveg - AlpineSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: D3001State: ColoradoAbbreviation: NoneDate: 6/10/2024County: LakeFilename: M493-D3001User: ACYAgency 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
Alpine Bluegrass	0.44	10.10	\$10.53
Alpine Fescue	1.30	38.80	\$23.51
Cinquefoil, Slender	0.06	5.85	\$29.44
Currant, Wax	0.40	1.38	\$27.75
Rocky Mountain Fescue	0.68	10.93	\$7.33
Lupine, Silver	0.70	0.41	\$83.69
Slender Wheatgrass - Native	2.74	10.00	\$19.36
Thurber's Fescue	0.18	1.86	\$14.13
Flax, Lewis Blue	0.86	5.70	\$36.38

Timothy, Alpine - Native	0.34	10.15	\$13.32
Tufted Hairgrass	0.34	19.51	\$9.68
Yarrow, White	0.10	6.36	\$7.34
Totals Seed Mix	8.14	121.05	\$282.45

Application

Description	Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)	\$1,359.07
Total Seed Application Cost/Acre	\$1,359.07

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hydromulch tackifier, >15 ac. {Materials Only}	1.00	ACRE	\$1,459.26	\$1,459.26
Total Mulch Materials Cost/Acre				\$1,459.26

Application

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

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 235 Cost /Acre: \$3,100.78
 Estimated Failure Rate: 10% Cost /Acre*: \$3,100.78
 *Selected Replanting Work Items: SEEDING,MULCHING

Initial Job Cost: \$728,683.30
 Reseeding Job Cost: \$72,868.33
 Total Job Cost: \$801,552
 Job Hours: 258.50

BULLDOZER WORKTask description: McNulty OSF - GradingSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: E1001State: ColoradoAbbreviation: NoneDate: 6/17/2024County: LakeFilename: M493-E1001User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D10T - 10SUHorsepower: 574Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData 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 Cost/Hour: \$492.91Total Fleet Cost/Hour: **\$3,943.24****MATERIAL QUANTITIES**Initial Volume: 9,253,000Swell factor: 1.320Loose volume: **12,213,960 LCY**Source of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 754.3 LCY/hrMaterials consistency description: Rock, poorly ripped or blasted 0.6Average push gradient: -30 %Average site altitude: 11,800 feetMaterial weight: 2,800 lbs/LCYWeight description: Granite - Broken**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.600	(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:	1.601	(CAT HB)
Altitude:	0.970	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4286

Adjusted unit production: 323.29 LCY/hr

Adjusted fleet production: **2586.32** LCY/hr

JOB TIME AND COST

Fleet size: 8 Dozer(s)

Unit cost: \$1.525/LCY

Total job time: **4,722.52** Hours

Total job cost: **\$18,622,060**

MOTOR GRADER WORK

Task description: McNulty OSF - Finish Grading

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: E1002

State: Colorado

Abbreviation: None

Date: 6/17/2024

County: Summit

Filename: M493-E1002

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 12M

Horsepower: 158

Ripper Attachment: _____

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$69.16</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$54.74</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$0.00</u>	
Operator Cost/Hour:	<u>\$27.76</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$151.66</u>	
Total Fleet Cost/Hour:	<u>\$303.32</u>	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 678.00 acres

Source of estimated acreage: Climax Estimate TR-37

HOURLY PRODUCTION

Average Grader Speed:	<u>1.50</u>	<u>mph</u>
Selected Application:	<u>Finish grading (0-2.5 mph) - 1.5</u>	
Selected Blade Angle:	<u>45</u>	<u>degrees</u>
Effective Blade Length:	<u>8.50</u>	<u>feet</u>
Width of blade overlap per pass:	<u>2.00</u>	<u>feet</u>
Net grading or ripping width per pass:	<u>6.50</u>	<u>feet</u>
Unadjusted Hourly Unit Production:	<u>1.1818</u>	<u>acres/hour</u>

Job Condition Correction Factors

Site Altitude: 11800 feet

		Source
Altitude Adj:	<u>0.95</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.90</u>	<u>(1sh/d, fav.)</u>
Net Correction:	<u>0.8550</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 1.0105 acres/Hour

Adjusted Hourly Fleet Production: **2.0209** acres/Hour

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: **335.49** Hours

Unit cost: \$150.09 per acre Total job cost: **\$101,762**

TRUCK/LOADER TEAM WORKTask description: McNulty OSF - Haul Topsoil McNultySite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: E1003State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-E1003User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	6	2	1	0	1	1
Group Subtotals:	Work: \$1,559.94		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: \$2,098.88**MATERIAL QUANTITIES**Initial volume: 325,000

CCY

Swell factor: 1.215Loose volume: 394,875

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11800 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4910.00	1.80	3.00	4.80	1845	2.958

Haul Time: **2.958** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4910.00	-1.80	3.00	1.20	3706	1.535

Return Time: **1.535** minutesTotal Truck Cycle Time: **9.460** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 199.80 LCY/Hour Adjusted for job efficiency: 165.83 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 497.49 LCY/Hour
Adjusted single truck/loader team production: 475.36 LCY/Hour
Adjusted multiple truck/loader team production: **950.73** LCY/Hour

JOB TIME AND COSTFleet size: 2 Team(s) Total job time: **415.34** HoursUnit cost: \$2.208 /LCY Total job cost: **\$871,749**

BULLDOZER WORKTask description: McNulty OSF - Grade TopsoilSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: E1004State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-E1004User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$643.23**MATERIAL QUANTITIES**Initial Volume: 390,000Swell factor: 1.000Loose volume: 390,000 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: -30 %Average site altitude: 11,800 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.3758

Adjusted unit production: 519.78 LCY/hr

Adjusted fleet production: **1039.56 LCY/hr**

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.619/LCY

Total job time: **375.16 Hours**

Total job cost: **\$241,314**

TRUCK/LOADER TEAM WORKTask description: McNulty OSF - Haul Topsoil L StockpileSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: E1005State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-E1005User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	9	3	1	0	1	1
Group Subtotals:	Work: \$2,339.91		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: \$2,878.85**MATERIAL QUANTITIES**Initial volume: 692,277

CCY

Swell factor: 1.215Loose volume: 841,117

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 31.50 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11800 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.060	minutes
	Adjusted Loader Cycle Time:	0.440	minutes
	Net Load Time per Truck:	2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3326.00	1.40	3.00	4.40	2421	2.256

Haul Time: 2.256 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3326.00	-1.40	3.00	1.60	3005	1.245

Return Time: 1.245 minutesTotal Truck Cycle Time: 8.468 minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 223.20 LCY/Hour Adjusted for job efficiency: 185.26 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 555.77 LCY/Hour
Adjusted single truck/loader team production: 475.36 LCY/Hour
Adjusted multiple truck/loader team production: 1,426.09 LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: 589.81 HoursUnit cost: \$2.019 /LCY Total job cost: \$1,697,962

BULLDOZER WORKTask description: McNulty OSF - Grade Topsoil LSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: E1006State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-E1006User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$643.23**MATERIAL QUANTITIES**Initial Volume: 830,732Swell factor: 1.000Loose volume: 830,732 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: -30 %Average site altitude: 11,800 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.5478

Adjusted unit production: 584.76 LCY/hr

Adjusted fleet production: **1169.52** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.550/LCY

Total job time: **710.32** Hours

Total job cost: **\$456,899**

TRUCK/LOADER TEAM WORKTask description: McNulty OSF - Haul Topsoil N StockpileSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: E1007State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-E1007User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	12	3	1	0	1	1
Group Subtotals:	Work: \$2,979.00		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: \$3,517.94**MATERIAL QUANTITIES**Initial volume: 1,169,723

CCY

Swell factor: 1.215Loose volume: 1,421,213

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 27.50 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	5.500	LCY

Job Condition Corrections:

Site Altitude (ft.): 11800 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 5 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		1.860	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	1.860	Minutes	Adjusted for site altitude:	1.860	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3643.00	8.90	3.00	11.90	764	4.834

Haul Time: 4.834 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3643.00	-8.90	3.00	-5.90	3706	1.013

Return Time: 1.013 minutesTotal Truck Cycle Time: 10.374 minutes

Loading Tool unit

Production 576.92 LCY/Hour Adjusted for job efficiency: 478.85 LCY/Hour
Truck Unit Production 159.06 LCY/Hour Adjusted for job efficiency: 132.02 LCY/Hour

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

Adjusted hourly truck team production: 528.07 LCY/Hour
Adjusted single truck/loader team production: 478.85 LCY/Hour
Adjusted multiple truck/loader team production: 1,436.54 LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: 989.33 HoursUnit cost: \$2.449 /LCY Total job cost: \$3,480,411

BULLDOZER WORKTask description: McNulty OSF - Grade Topsoil NSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: E1008State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-E1008User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$643.23**MATERIAL QUANTITIES**Initial Volume: 1,403,668Swell factor: 1.000Loose volume: 1,403,668 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 11,800 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **649.28** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **2,161.88** Hours

Total job cost: **\$1,390,590**

TRUCK/LOADER TEAM WORKTask description: McNulty OSF - Haul Bedding MaterialSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: E1009State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-E1009User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	4	1	1	0	1	1
Group Subtotals:	Work: \$993.00		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$1,531.94****MATERIAL QUANTITIES**Initial volume: 42,096

CCY

Swell factor: 1.000Loose volume: **42,096**

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 2,600

Pounds/LCY

Description: Limestone - BrokenRated Payload: 87,000

Pounds

Payload Capacity: 33.46

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 28.88 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	4.125	LCY

Job Condition Corrections:

Site Altitude (ft.): 11800 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.740	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.740	Minutes	Adjusted for site altitude:	2.740	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	12566.00	-4.90	3.00	-1.90	3005	4.311

Haul Time: **4.311** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	12566.00	4.90	3.00	7.90	2155	5.975

Return Time: **5.975** minutesTotal Truck Cycle Time: **15.693** minutes

Loading Tool unit

Production 463.24 LCY/Hour Adjusted for job efficiency: 384.49 LCY/Hour
Truck Unit Production 110.40 LCY/Hour Adjusted for job efficiency: 91.63 LCY/Hour

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

Adjusted hourly truck team production: 366.53 LCY/Hour
Adjusted single truck/loader team production: 366.53 LCY/Hour
Adjusted multiple truck/loader team production: **366.53** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **114.85** Hours

Unit cost: \$4.180 /LCY Total job cost: **\$175,941**

BULLDOZER WORKTask description: McNulty OSF - Haul Road GradingSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: E1010State: ColoradoAbbreviation: NoneDate: 6/17/2024County: LakeFilename: M493-E1010User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$1,608.08**MATERIAL QUANTITIES**Initial Volume: 60,000Swell factor: 1.320Loose volume: 79,200 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Rock, poorly ripped or blasted 0.6Average push gradient: 0 %Average site altitude: 11,800 feetMaterial weight: 2,800 lbs/LCYWeight description: Granite - Broken**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.600	(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:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2760

Adjusted unit production: 104.27 LCY/hr

Adjusted fleet production: **521.35** LCY/hr

JOB TIME AND COST

Fleet size: 5 Dozer(s)

Unit cost: \$3.084/LCY

Total job time: **151.91** Hours

Total job cost: **\$244,288**

BULLDOZER RIPPING WORK

Task description: McNulty OSF -Roads - Ripping

Site: Climax Mine Permit Action: 2024-06 Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: E1011 State: Colorado Abbreviation: None
Date: 6/17/2024 County: Lake Filename: M493-E1011
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS Series II LGP Horsepower: 240
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$90.24</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$78.95</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$9.25</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$5.20</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$222.23</u>	
Total Fleet Cost/Hour:	<u>\$444.45</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 52.00 acres Rip Depth (ft): 1.00 Volume: 83,893 BCY or CCY

Source of estimated quantity: TR-37

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.45 feet/pass
Average Ripping Width: 6.50 feet/pass
Average Ripping Length: 250.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.724 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.724 Acres/hr
Site Altitude: 11,800 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.60 Acres/hr
Adjusted Hourly Fleet Production: 1.20 Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: 43.26 Hours

Unit cost: \$369.738 Per acre Total job cost: \$19,226

Construct Water Conveyances								
Task #	Area	Description	Task Type	Quant	Unit	Cost/Unit	Total Cost	Key Assumptions
109.16	McNulty OSF	Outslope Channels	Excavate diversion/spillway	92,897	CY	\$ 3.66	\$ 340,003	Vegetated bench channels every 55 ft
		Clean Water Surface Channel	Excavate Diversion/Spillway	42,784	CY	\$ 3.66	\$ 156,589	
109.1	McNulty OSF	Rip Rap	Rip Rap Armoring	19,163	CY	\$ 74.40	\$ 1,425,727	Above McNulty to open channel to ESC
109.1	McNulty OSF	Bedding for Riprap Placed	Drain Rock	22,934	CY	\$ 73.88	\$ 1,694,364	Above McNulty to open channel to ESC
109.13	McNulty OSF	Impacted Water Pipeline	30" Corrugated HDPE Installed	1,300	LF	\$ 78.33	\$ 101,829	
109.14	McNulty OSF	Impacted Water Collection Drains	Excavate Diversion/Spillway	3,400	CY	\$ 3.66	\$ 12,444	
	McNulty OSF	Geotextiles		11,868	SY	\$ 2.35	\$ 27,890	
	McNulty OSF	Drain Rock	Drain Rock	3,400	CY	\$ 73.88	\$ 251,192	
	McNulty OSF	Impacted Water Drain Pipe	Perforated Pipe	3,400	LF	\$ 15.87	\$ 53,958	
	McNulty OSF	Downdrops	Excavate Diversion/Spillway	15,411	CY	\$ 3.66	\$ 56,404	
109.15	McNulty OSF	ACB		245,088	SF	\$ 63.70	\$ 15,612,106	
	McNulty OSF	Outslope Channels	Excavate Diversion/Spillway	92,897	CY	\$ 3.66	\$ 340,003	
E2001	McNulty OSF	Hydrologic Protection					\$ 20,072,509	

REVEGETATION WORKTask description: North 40 OSF - Reveg - AlpineSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: E3001State: ColoradoAbbreviation: NoneDate: 8/19/2024County: LakeFilename: M493-E3001User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	0.44	10.10	\$10.53
Alpine Fescue	1.30	38.80	\$23.51
Cinquefoil, Slender	0.06	5.85	\$29.44
Currant, Wax	0.40	1.38	\$27.75
Rocky Mountain Fescue	0.68	10.93	\$7.33
Lupine, Silver	0.70	0.41	\$83.69
Slender Wheatgrass - Native	2.74	10.00	\$19.36
Thurber's Fescue	0.18	1.86	\$14.13
Flax, Lewis Blue	0.86	5.70	\$36.38
Timothy, Alpine - Native	0.34	10.15	\$13.32

Tufted Hairgrass	0.34	19.51	\$9.68
Yarrow, White	0.10	6.36	\$7.34
Totals Seed Mix	8.14	121.05	\$282.45

Application

Description	Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)	\$1,359.07
Total Seed Application Cost/Acre	\$1,359.07

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hydromulch tackifier, >15 ac. {Materials Only}	1.00	ACRE	\$1,459.26	\$1,459.26
Total Mulch Materials Cost/Acre				\$1,459.26

Application

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

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres:	683	Cost /Acre:	\$3,218.39
Estimated Failure Rate:	10%	Cost /Acre*:	\$3,100.78
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$2,198,160.37		
Reseeding Job Cost:	\$211,783.27		
Total Job Cost:	\$2,409,944		
Job Hours:	751.30		

TRUCK/LOADER TEAM WORKTask description: Tenmile TSF - Hauling Topsoil 30Site: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: F1001State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-F1001User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	9	3	1	0	1	1
Group Subtotals:	Work: \$2,339.91		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: \$2,878.85**MATERIAL QUANTITIES**Initial volume: 499,109

CCY

Swell factor: 1.215Loose volume: 606,417

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4910.00	-0.09	3.00	2.91	3005	2.379

Haul Time: 2.379 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4910.00	0.09	3.00	3.09	3005	1.803

Return Time: 1.803 minutesTotal Truck Cycle Time: 9.149 minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 206.59 LCY/Hour Adjusted for job efficiency: 171.47 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 514.40 LCY/Hour
Adjusted single truck/loader team production: 475.36 LCY/Hour
Adjusted multiple truck/loader team production: 1,426.09 LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: 425.23 HoursUnit cost: \$2.019 /LCY Total job cost: \$1,224,175

BULLDOZER WORKTask description: **Tenmile TSF - Topsoil Grading 30**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **F1002**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-F1002**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$1,608.08****MATERIAL QUANTITIES**Initial Volume: **598,931**Swell factor: **1.000**Loose volume: **598,931 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,000 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9668

Adjusted unit production: 365.26 LCY/hr

Adjusted fleet production: **1826.3** LCY/hr

JOB TIME AND COST

Fleet size: 5 Dozer(s)

Unit cost: \$0.881/LCY

Total job time: **327.95** Hours

Total job cost: **\$527,365**

TRUCK/LOADER TEAM WORKTask description: **Tenmile TSF - Hauling Topsoil 36**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **F1003**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-F1003**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance -Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	6	3	1	0	1	1
Group Subtotals:	Work: \$1,700.82		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$2,239.76****MATERIAL QUANTITIES**Initial volume: **200,000**

CCY

Swell factor: **1.215**Loose volume: **243,000**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1478.00	-1.10	3.00	1.90	3005	0.936

Haul Time: **0.936** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1478.00	1.10	3.00	4.10	3005	0.692

Return Time: **0.692** minutesTotal Truck Cycle Time: **6.595** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 286.60 LCY/Hour Adjusted for job efficiency: 237.87 LCY/Hour

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

Adjusted hourly truck team production: 475.75 LCY/Hour
Adjusted single truck/loader team production: 475.36 LCY/Hour
Adjusted multiple truck/loader team production: **1,426.09** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **170.40** HoursUnit cost: \$1.571 /LCY Total job cost: **\$381,646**

BULLDOZER WORKTask description: **Tenmile TSF - Topsoil Grading 36**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **F1004**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-F1004**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$643.23****MATERIAL QUANTITIES**Initial Volume: **240,000**Swell factor: **1.000**Loose volume: **240,000 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,000 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **649.28** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **369.64** Hours

Total job cost: **\$237,764**

TRUCK/LOADER TEAM WORKTask description: Tenmile TSF - Hauling Topsoil 33Site: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: F1005State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-F1005User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	15	3	1	0	1	1
Group Subtotals:	Work: \$3,618.09		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: \$4,157.03**MATERIAL QUANTITIES**Initial volume: 1,012,923

CCY

Swell factor: 1.215Loose volume: 1,230,701

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.060	minutes
	Adjusted Loader Cycle Time:	0.440	minutes
	Net Load Time per Truck:	2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	14837.00	1.40	3.00	4.40	2421	7.010

Haul Time: **7.010** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	14837.00	-1.40	3.00	1.60	3005	5.076

Return Time: **5.076** minutesTotal Truck Cycle Time: **17.053** minutes

Loading Tool unit

Production	<u>572.73</u>	LCY/Hour	Adjusted for job efficiency:	<u>475.36</u>	LCY/Hour
Truck Unit Production	<u>110.83</u>	LCY/Hour	Adjusted for job efficiency:	<u>91.99</u>	LCY/Hour

Optimal No. of Trucks:	<u>5</u>	Truck(s)	Selected Number of Trucks:	<u>5</u>	Truck(s)
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Adjusted hourly truck team production:	<u>459.96</u>	LCY/Hour
Adjusted single truck/loader team production:	<u>459.96</u>	LCY/Hour
Adjusted multiple truck/loader team production:	<u>1,379.87</u>	LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **891.90** HoursUnit cost: \$3.013 /LCY Total job cost: **\$3,707,635**

BULLDOZER WORKTask description: **Tenmile TSF - Topsoil Grading 33**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **F1006**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-F1006**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$1,286.46****MATERIAL QUANTITIES**Initial Volume: **1,215,507**Swell factor: **1.000**Loose volume: **1,215,507 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,000 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **1298.56** LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **936.04** Hours

Total job cost: **\$1,204,182**

TRUCK/LOADER TEAM WORKTask description: Tenmile TSF - Hauling Topsoil 17Site: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: F1007State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-F1007User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	9	3	1	0	1	1
Group Subtotals:	Work: \$2,339.91		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: \$2,878.85**MATERIAL QUANTITIES**Initial volume: 363,968

CCY

Swell factor: 1.215Loose volume: 442,221

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.060	minutes
	Adjusted Loader Cycle Time:	0.440	minutes
	Net Load Time per Truck:	2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	6758.00	-3.20	3.00	-0.20	3005	2.318

Haul Time: **2.318** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	6758.00	3.20	3.00	6.20	2742	2.697

Return Time: **2.697** minutesTotal Truck Cycle Time: **9.982** minutes

Loading Tool unit
 Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
 Truck Unit Production
189.35 LCY/Hour Adjusted for job efficiency: 157.16 LCY/Hour
 Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 471.47 LCY/Hour
 Adjusted single truck/loader team production: 471.47 LCY/Hour
 Adjusted multiple truck/loader team production: **1,414.42** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **312.65** HoursUnit cost: \$2.035 /LCY Total job cost: **\$900,076**

BULLDOZER WORKTask description: **Tenmile TSF - Topsoil Grading 17**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **F1008**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-F1008**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$964.85****MATERIAL QUANTITIES**Initial Volume: **436,762**Swell factor: **1.000**Loose volume: **436,762 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,000 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **973.92** LCY/hr

JOB TIME AND COST

Fleet size: 3 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **448.46** Hours

Total job cost: **\$432,693**

TRUCK/LOADER TEAM WORKTask description: Tenmile TSF - Hauling Topsoil 25, 26, 27, 17Site: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: F1009State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-F1009User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	5	1	1	0	1	1
Group Subtotals:	Work: \$1,206.03		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: \$1,744.97**MATERIAL QUANTITIES**Initial volume: 1,000

CCY

Swell factor: 1.215Loose volume: 1,215

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	12672.00	3.30	3.00	6.30	1566	8.394

Haul Time: **8.394** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	12672.00	-3.30	3.00	-0.30	3706	3.525

Return Time: **3.525** minutesTotal Truck Cycle Time: **16.886** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 111.93 LCY/Hour Adjusted for job efficiency: 92.90 LCY/Hour

Optimal No. of Trucks: 5 Truck(s) Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 464.51 LCY/Hour
Adjusted single truck/loader team production: 464.51 LCY/Hour
Adjusted multiple truck/loader team production: **464.51** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **2.62** HoursUnit cost: \$3.757 /LCY Total job cost: **\$4,564**

BULLDOZER WORKTask description: Tenmile TSF - Topsoil Grading 25, 26, 27, 17Site: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: F1010State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-F1010User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$321.62**MATERIAL QUANTITIES**Initial Volume: 1,200Swell factor: 1.000Loose volume: 1,200 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 11,000 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **324.64** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **3.70** Hours

Total job cost: **\$1,189**

TRUCK/LOADER TEAM WORKTask description: Tenmile OSF - Haul Bedding MaterialSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: F1011State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-F1011User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	6	2	1	0	1	1
Group Subtotals:	Work: \$1,559.94		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: \$2,098.88**MATERIAL QUANTITIES**Initial volume: 35,875

CCY

Swell factor: 1.000Loose volume: 35,875

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 2,600

Pounds/LCY

Description: Limestone - BrokenRated Payload: 87,000

Pounds

Payload Capacity: 33.46

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 28.88 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	4.125	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.740	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.740	Minutes	Adjusted for site altitude:	2.740	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5333.00	-3.00	3.00	0.00	3005	2.027

Haul Time: **2.027** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5333.00	3.00	3.00	6.00	2742	2.167

Return Time: **2.167** minutesTotal Truck Cycle Time: **9.601** minutes

Loading Tool unit

Production 463.24 LCY/Hour Adjusted for job efficiency: 384.49 LCY/Hour
Truck Unit Production 180.46 LCY/Hour Adjusted for job efficiency: 149.78 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 449.34 LCY/Hour
Adjusted single truck/loader team production: 384.49 LCY/Hour
Adjusted multiple truck/loader team production: **768.97** LCY/Hour

JOB TIME AND COST

Fleet size: 2 Team(s) Total job time: **46.65** Hours

Unit cost: \$2.729 /LCY Total job cost: **\$97,920**

BULLDOZER RIPPING WORK

Task description: Tenmile OSF - Roads - Ripping

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: F1012

State: Colorado

Abbreviation: None

Date: 6/17/2024

County: Lake

Filename: M493-F1012

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS Series II LGP
Ripper Attachment: 3-Shank Ripper

Horsepower: 240

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper Ownership Cost/Hour:	\$9.25	NA
Ripper Operating Cost/Hour:	\$5.20	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$222.23	
Total Fleet Cost/Hour:	\$222.23	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 7.00 acres Rip Depth (ft): 1.00 Volume: 11,293 BCY or CCY

Source of estimated quantity: TR-37

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.45 feet/pass
Average Ripping Width: 6.50 feet/pass
Average Ripping Length: 250.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.724 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.724 Acres/hr
Site Altitude: 11,000 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.60 Acres/hr

Adjusted Hourly Fleet Production: **0.60** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **11.65** Hours

Unit cost: \$369.738 Per acre Total job cost: **\$2,588**

Construct Water Conveyances								
Task #	Area	Description	Task Type	Quant	Unit	Cost/Unit	Total Cost	Key Assumptions
105.12	Tenmile TSF	Clean Water Channel	Excavate diversion/spillway	35,875	CY	\$ 3.66	\$ 131,303	Into ESC
	Tenmile TSF	Rip Rap	Rip Rap Armoring	16,068	CY	\$ 74.40	\$ 1,195,459	
	105.7	Tenmile TSF	Bedding for Riprap Placed	19,230	CY	\$ 73.88	\$ 1,420,712	Clean surface water across 3Dam to ESC
	105.10	Tenmile TSF	Impacted Water Pipeline	30"	Corrugated HDPE Installed	7,000	LF	\$ 78.33 \$ 548,310
	Tenmile TSF	Decant Pool Spillways	Excavate Diversion/Spillway	7,052	CY	\$ 3.66	\$ 25,810	
	Tenmile TSF	ACB		72,231	SF	\$ 63.70	\$ 4,601,115	
F2001	Tenmile TSF	Hydrologic Protection					\$ 7,922,709	

REVEGETATION WORKTask description: Tenmile TSF- Reveg - UplandSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: F3001State: ColoradoAbbreviation: NoneDate: 6/10/2024County: LakeFilename: M493-F3001User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	0.11	2.53	\$2.63
Arizona Fescue - Redondo	0.45	5.17	\$6.78
Mountain Brome - Bromar	1.70	2.73	\$10.23
Cinquefoil, Slender	0.04	3.90	\$19.62
Currant, Wax	0.16	0.55	\$11.10
Rocky Mountain Fescue	0.17	2.73	\$1.83
Lupine, Silver	1.74	1.02	\$208.03
Slender Wheatgrass - Native	0.68	2.48	\$4.80
Vetch, American	1.33	0.60	\$163.74
Prairie Junegrass	0.09	4.78	\$4.39

Flax, Lewis Blue	0.45	2.99	\$19.03
Timothy, Alpine - Native	0.25	7.46	\$9.80
Tufted Hairgrass	0.17	9.76	\$4.84
Penstemon, Rocky Mountain	0.27	4.23	\$16.58
Yarrow, White	0.05	3.18	\$3.67
Totals Seed Mix	7.66	54.11	\$487.09

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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

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:	625	Cost /Acre:	\$2,069.53
Estimated Failure Rate:	10%	Cost /Acre*:	\$1,951.92
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$1,293,456.25		
Reseeding Job Cost:	\$121,995.00		
Total Job Cost:	\$1,415,451		
Job Hours:	687.50		

REVEGETATION WORKTask description: Tenmile TSF - Reveg - TreesSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: F3002State: ColoradoAbbreviation: NoneDate: 8/19/2024County: LakeFilename: M493-F3002User: ACYAgency 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
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre
	\$

Total Seed Application Cost/Acre	\$0.00
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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
Fir, Subalpine	225	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.74	\$0.00	\$616.50
Spruce, Englemann	225	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.74	\$0.00	\$616.50
Totals Nursery Stock Cost / Acre					\$1,233.00

JOB TIME AND COST

No. of Acres:	19	Cost /Acre:	\$1,233.00
Estimated Failure Rate:	20%	Cost /Acre*:	\$1,233.00
*Selected Replanting Work Items:	NURSERY		
Initial Job Cost:	\$23,427.00		
Reseeding Job Cost:	\$4,685.40		
Total Job Cost:	\$28,112		
Job Hours:	22.80		

SAFEGUARDING UNDERGROUND OPENINGS

Task description: Tenmile Tunnel Sealing

Site: Climax Mine Permit Action: 2024-06 Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: G4001 State: Colorado Abbreviation: None
Date: 6/18/2024 County: Lake Filename: M493-G4001
User: ACY

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Tenmile Tunnel	2@ 15'D x 10'H x 10'W	USER PROVIDED ITEM	111.00	CY	\$1,167.18	\$129,556.98

Job Hours: 1,307.00

Total Cost: \$129,556.98

TRUCK/LOADER TEAM WORKTask description: **3 Dam - Haul Topsoil**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **H1001**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-H1001**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$123.04
Number of Units:	8	2	1	0	1	1
Group Subtotals:	Work: \$1,986.00		Support: \$209.53		Maint: \$274.70	

Total work team cost/hour: **\$2,470.23****MATERIAL QUANTITIES**Initial volume: **94,000**

CCY

Swell factor: **1.215**Loose volume: **114,210**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5280.00	5.70	3.00	8.70	983	5.453

Haul Time: **5.453** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5280.00	-5.70	3.00	-2.70	3706	1.469

Return Time: **1.469** minutesTotal Truck Cycle Time: **11.889** minutes

Loading Tool unit
 Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
 Truck Unit Production
158.97 LCY/Hour Adjusted for job efficiency: 131.95 LCY/Hour
 Optimal No. of Trucks: 4 Truck(s) Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 527.80 LCY/Hour
 Adjusted single truck/loader team production: 475.36 LCY/Hour
 Adjusted multiple truck/loader team production: **950.73** LCY/Hour

JOB TIME AND COSTFleet size: 2 Team(s) Total job time: **120.13** HoursUnit cost: \$2.598 /LCY Total job cost: **\$296,746**

BULLDOZER WORKTask description: **3 Dam - Topsoil Grading**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **H1002**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-H1002**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**Horsepower: **240**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$207.78**Total Fleet Cost/Hour: **\$415.55****MATERIAL QUANTITIES**Initial Volume: **112,800**Swell factor: **1.000**Loose volume: **112,800 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **200 feet**Unadjusted hourly production: **410.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **-30 %**Average site altitude: **11,000 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.5478

Adjusted unit production: 635.84 LCY/hr

Adjusted fleet production: **1271.68** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.327/LCY

Total job time: **88.70** Hours

Total job cost: **\$36,860**

TRUCK/LOADER TEAM WORKTask description: **3 Dam - Haul Bedding Material**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **H1003**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-H1003**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$123.04
Number of Units:	2	1	1	0	1	1
Group Subtotals:	Work: \$566.94		Support: \$209.53		Maint: \$274.70	

Total work team cost/hour: **\$1,051.17****MATERIAL QUANTITIES**Initial volume: **7,321**

CCY

Swell factor: **1.000**Loose volume: **7,321**

LCY

Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **2,600**

Pounds/LCY

Description: **Limestone - Broken**Rated Payload: **87,000**

Pounds

Payload Capacity: **33.46**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 28.88 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	4.125	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.740	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.740	Minutes	Adjusted for site altitude:	2.740	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2676.00	-3.00	3.00	0.00	3005	1.143

Haul Time: **1.143** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2676.00	3.00	3.00	6.00	2742	1.198

Return Time: **1.198** minutesTotal Truck Cycle Time: **7.748** minutes

Loading Tool unit

Production 463.24 LCY/Hour Adjusted for job efficiency: 384.49 LCY/Hour
Truck Unit Production 223.62 LCY/Hour Adjusted for job efficiency: 185.60 LCY/Hour

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

Adjusted hourly truck team production: 371.20 LCY/Hour
Adjusted single truck/loader team production: 371.20 LCY/Hour
Adjusted multiple truck/loader team production: **371.20** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **19.72** HoursUnit cost: \$2.832 /LCY Total job cost: **\$20,732**

Construct Water Conveyances								
Task #	Area	Description	Task Type	Quant	Unit	Cost/Unit	Total Cost	Key Assumptions
102.7	3 Dam	Clean Water Surface Channel		7,441	CY	\$ 3.66	\$ 27,234	Across 3Dam to ESC
	3 Dam	Rip Rap	Rip Rap Armoring	3,333	CY	\$ 74.40	\$ 247,975	Across 3Dam to ESC
	3 Dam	Bedding for Riprap Placed	Drain Rock	3,988	CY	\$ 73.88	\$ 294,633	Across 3Dam to ESC
H2001	3 Dam	Hydrologic Protection					\$ 569,843	

REVEGETATION WORKTask description: **3 Dam - Reveg - Upland**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **H3001**State: **Colorado**Abbreviation: **None**Date: **6/10/2024**County: **Lake**Filename: **M493-H3001**User: **ACY**Agency 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
Alpine Bluegrass	0.22	5.05	\$5.26
Arizona Fescue - Redondo	0.90	10.33	\$13.56
Mountain Brome - Bromar	3.40	5.46	\$20.46
Cinquefoil, Slender	0.08	7.80	\$39.25
Currant, Wax	0.32	1.10	\$22.20
Rocky Mountain Fescue	0.34	5.46	\$3.67
Lupine, Silver	3.48	2.04	\$416.06
Slender Wheatgrass - Native	1.36	4.96	\$9.61
Vetch, American	2.66	1.20	\$327.49

Prairie Junegrass	0.18	9.57	\$8.77
Flax, Lewis Blue	0.90	5.97	\$38.07
Timothy, Alpine - Native	0.50	14.92	\$19.59
Tufted Hairgrass	0.34	19.51	\$9.68
Penstemon, Rocky Mountain	0.54	8.46	\$33.16
Yarrow, White	0.10	6.36	\$7.34
Totals Seed Mix	15.32	108.21	\$974.17

Application

Description	Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)	\$1,359.07
Total Seed Application Cost/Acre	\$1,359.07

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hydromulch, 1 ton/ac. rate {Materials Only}	1.00	ACRE	\$1,459.26	\$1,459.26
Total Mulch Materials Cost/Acre				\$1,459.26

Application

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

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 29
 Estimated Failure Rate: 10%
 *Selected Replanting Work Items: SEEDING,MULCHING

Cost /Acre: \$3,792.50
 Cost /Acre*: \$3,792.50

Initial Job Cost: **\$109,982.50**
 Reseeding Job Cost: **\$10,998.25**
 Total Job Cost: **\$120,981**
 Job Hours: **31.90**

BULLDOZER WORKTask description: **Pond Shop - Grading**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **I1001**State: **Colorado**Abbreviation: **None**Date: **6/17/2024**County: **Lake**Filename: **M493-I1001**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$321.62****MATERIAL QUANTITIES**Initial Volume: **1,613**Swell factor: **1.165**Loose volume: **1,879 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **0 %**Average site altitude: **11,000 feet**Material weight: **2,900 lbs/LCY**Weight description: **Decomposed rock - 50% Rock, 50% Earth****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:	0.700	(FND-MF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3110

Adjusted unit production: 117.50 LCY/hr

Adjusted fleet production: **117.5** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$2.737/LCY

Total job time: **15.99** Hours

Total job cost: **\$5,144**

TRUCK/LOADER TEAM WORKTask description: **Pond Shop - Hauling Topsoil**Site: **Climax Mine**Permit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: I1002State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-I1002User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T XL
-Dump Area:	NA
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	NA
Ownership cost/hour:	\$108.25	\$57.78	\$90.43	NA	NA	NA
Operating cost/hour:	\$79.54	\$46.25	\$67.29	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	NA
Unit Subtotals:	\$213.03	\$140.88	\$196.31	NA	NA	NA
Number of Units:	2	1	1	0	0	0
Group Subtotals:	Work: \$566.94		Support: \$196.31		Maint: \$0.00	

Total work team cost/hour: **\$763.25****MATERIAL QUANTITIES**Initial volume: 538

CCY

Swell factor: 1.215Loose volume: **654**

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	917.00	7.30	3.00	10.30	918	1.104

Haul Time: **1.104** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	917.00	-7.30	3.00	-4.30	3706	0.304

Return Time: **0.304** minutesTotal Truck Cycle Time: **6.375** minutes

Loading Tool unit
 Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
 Truck Unit Production
296.49 LCY/Hour Adjusted for job efficiency: 246.08 LCY/Hour
 Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 492.17 LCY/Hour
 Adjusted single truck/loader team production: 475.36 LCY/Hour
 Adjusted multiple truck/loader team production: **475.36** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **1.38** HoursUnit cost: \$1.606 /LCY Total job cost: **\$1,050**

BULLDOZER WORKTask description: **Pond Shop - Topsoil Grading**Site: **Climax Mine** Permit Action: **2024-06** Permit/Job#: **M1977493****PROJECT IDENTIFICATION**

Task #: **I1003** State: **Colorado** Abbreviation: **None**
 Date: **6/13/2024** County: **Lake** Filename: **M493-I1003**
 User: **ACY**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D7R DS XR Series II**
 Horsepower: **240**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$207.78**
 Total Fleet Cost/Hour: **\$207.78**

MATERIAL QUANTITIES

Initial Volume: **646**
 Swell factor: **1.000**
 Loose volume: **646 LCY**

Source of estimated volume: **TR-37**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **200 feet**
 Unadjusted hourly production: **410.8 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **11,000 feet**

Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9668

Adjusted unit production: 397.16 LCY/hr

Adjusted fleet production: **397.16** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.523/LCY

Total job time: **1.63** Hours

Total job cost: **\$338**

REVEGETATION WORKTask description: Pond Shop - Reveg - UplandSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: I3001State: ColoradoAbbreviation: NoneDate: 6/11/2024County: LakeFilename: M493-I3001User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	0.11	2.53	\$2.63
Arizona Fescue - Redondo	0.45	5.17	\$6.78
Mountain Brome - Bromar	1.70	2.73	\$10.23
Cinquefoil, Slender	0.04	3.90	\$19.62
Currant, Wax	0.16	0.55	\$11.10
Rocky Mountain Fescue	0.17	2.73	\$1.83
Lupine, Silver	1.74	1.02	\$208.03
Slender Wheatgrass - Native	0.68	2.48	\$4.80
Vetch, American	1.33	0.60	\$163.74
Prairie Junegrass	0.09	4.78	\$4.39

Flax, Lewis Blue	0.45	2.99	\$19.03
Timothy, Alpine - Native	0.25	7.46	\$9.80
Tufted Hairgrass	0.17	9.76	\$4.84
Penstemon, Rocky Mountain	0.27	4.23	\$16.58
Yarrow, White	0.05	3.18	\$3.67
Totals Seed Mix	7.66	54.11	\$487.09

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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

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: 0.77 Cost /Acre: \$2,069.53
 Estimated Failure Rate: 10% Cost /Acre*: \$723.73
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: \$1,593.54
 Reseeding Job Cost: \$55.73
 Total Job Cost: \$1,649
 Job Hours: 2.00

TRUCK/LOADER TEAM WORKTask description: **Mayflower TSF - Haul Topsoil**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **J1001**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-J1001**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	12	6	1	0	1	1
Group Subtotals:	Work: \$3,401.64		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$3,940.58****MATERIAL QUANTITIES**Initial volume: **1,850,752**

CCY

Swell factor: **1.215**Loose volume: **2,248,664**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4023.00	-1.60	3.00	1.40	3005	1.709

Haul Time: **1.709** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4023.00	1.60	3.00	4.60	3005	1.559

Return Time: **1.559** minutesTotal Truck Cycle Time: **8.235** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 229.52 LCY/Hour Adjusted for job efficiency: 190.50 LCY/Hour

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

Adjusted hourly truck team production: 381.00 LCY/Hour
Adjusted single truck/loader team production: 381.00 LCY/Hour
Adjusted multiple truck/loader team production: **2,285.99** LCY/Hour

JOB TIME AND COSTFleet size: 6 Team(s) Total job time: **983.67** HoursUnit cost: \$1.724 /LCY Total job cost: **\$3,876,230**

BULLDOZER WORKTask description: Mayflower TSF - Grade TopsoilSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: J1002State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-J1002User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$1,608.08**MATERIAL QUANTITIES**Initial Volume: 2,220,902Swell factor: 1.000Loose volume: 2,220,902 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 11,000 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **1623.2** LCY/hr

JOB TIME AND COST

Fleet size: 5 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **1,368.22** Hours

Total job cost: **\$2,200,210**

TRUCK/LOADER TEAM WORKTask description: **Mayflower TSF - Haul Topsoil 33**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **J1003**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-J1003**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	9	3	1	0	1	1
Group Subtotals:	Work: \$2,339.91		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$2,878.85****MATERIAL QUANTITIES**Initial volume: **188,225**

CCY

Swell factor: **1.215**Loose volume: **228,693**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5914.00	-1.80	3.00	1.20	3005	2.315

Haul Time: **2.315** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5914.00	1.80	3.00	4.80	3005	2.197

Return Time: **2.197** minutesTotal Truck Cycle Time: **9.479** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 199.40 LCY/Hour Adjusted for job efficiency: 165.50 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 496.49 LCY/Hour
Adjusted single truck/loader team production: 475.36 LCY/Hour
Adjusted multiple truck/loader team production: **1,426.09** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **160.36** HoursUnit cost: \$2.019 /LCY Total job cost: **\$461,663**

BULLDOZER WORKTask description: Mayflower TSF - Grade Topsoil 33Site: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: J1004State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-J1004User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$643.23**MATERIAL QUANTITIES**Initial Volume: 225,870Swell factor: 1.000Loose volume: 225,870 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 11,000 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **649.28** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **347.88** Hours

Total job cost: **\$223,766**

TRUCK/LOADER TEAM WORKTask description: Mayflower TSF - Haul Topsoil 30 PoolSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: J1005State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-J1005User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	12	3	1	0	1	1
Group Subtotals:	Work: \$2,979.00		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$3,517.94****MATERIAL QUANTITIES**Initial volume: 493,000

CCY

Swell factor: 1.215Loose volume: **598,995**

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8395.00	-4.50	3.00	-1.50	3005	2.880

Haul Time: **2.880** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8395.00	4.50	3.00	7.50	2155	4.029

Return Time: **4.029** minutesTotal Truck Cycle Time: **11.876** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 159.15 LCY/Hour Adjusted for job efficiency: 132.09 LCY/Hour

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

Adjusted hourly truck team production: 528.37 LCY/Hour
Adjusted single truck/loader team production: 475.36 LCY/Hour
Adjusted multiple truck/loader team production: **1,426.09** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **420.03** HoursUnit cost: \$2.467 /LCY Total job cost: **\$1,477,626**

BULLDOZER WORKTask description: **Mayflower TSF - Grade Topsoil 30 Pool**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **J1006**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-J1006**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$1,608.08****MATERIAL QUANTITIES**Initial Volume: **591,600**Swell factor: **1.000**Loose volume: **591,600 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,000 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **1623.2** LCY/hr

JOB TIME AND COST

Fleet size: 5 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **364.47** Hours

Total job cost: **\$586,088**

TRUCK/LOADER TEAM WORKTask description: **Mayflower TSF - Haul Topsoil 16**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **J1007**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-J1007**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance -Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	6	2	1	0	1	1
Group Subtotals:	Work: \$1,559.94		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$2,098.88****MATERIAL QUANTITIES**Initial volume: **336,864**

CCY

Swell factor: **1.215**Loose volume: **409,290**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5227.00	-1.30	3.00	1.70	3005	2.151

Haul Time: **2.151** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5227.00	1.30	3.00	4.30	3005	1.947

Return Time: **1.947** minutesTotal Truck Cycle Time: **9.065** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
 Truck Unit Production 208.50 LCY/Hour Adjusted for job efficiency: 173.06 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 519.17 LCY/Hour
 Adjusted single truck/loader team production: 475.36 LCY/Hour
 Adjusted multiple truck/loader team production: **950.73** LCY/Hour

JOB TIME AND COSTFleet size: 2 Team(s) Total job time: **430.50** HoursUnit cost: \$2.208 /LCY Total job cost: **\$903,572**

BULLDOZER WORKTask description: **Mayflower TSF - Grade Topsoil 16**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **J1008**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-J1008**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$643.23****MATERIAL QUANTITIES**Initial Volume: **404,237**Swell factor: **1.000**Loose volume: **404,237 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,000 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **649.28** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **622.59** Hours

Total job cost: **\$400,471**

TRUCK/LOADER TEAM WORKTask description: Mayflower TSF - Haul Topsoil 30 Temp SludgeSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: J1009State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-J1009User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance -Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	3	1	1	0	1	1
Group Subtotals:	Work: \$779.97		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: \$1,318.91**MATERIAL QUANTITIES**Initial volume: 115,000

CCY

Swell factor: 1.135Loose volume: 130,525

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 2,700

Pounds/LCY

Description: Earth - Wet excavatedRated Payload: 87,000

Pounds

Payload Capacity: 32.22

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.900	Other - cemented materials (85 - 95%) 0.900
Adjusted Capacity:	4.500	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.050	minutes
Adjusted Loader Cycle Time:		0.450	minutes
Net Load Time per Truck:		2.800	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.800	Minutes	Adjusted for site altitude:	2.800	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8342.00	-4.30	3.00	-1.30	3005	2.862

Haul Time: **2.862** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	8342.00	4.30	3.00	7.30	2470	3.584

Return Time: **3.584** minutesTotal Truck Cycle Time: **11.913** minutes

Loading Tool unit

Production 497.37 LCY/Hour Adjusted for job efficiency: 412.82 LCY/Hour
Truck Unit Production 158.65 LCY/Hour Adjusted for job efficiency: 131.68 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 395.05 LCY/Hour
Adjusted single truck/loader team production: 395.05 LCY/Hour
Adjusted multiple truck/loader team production: **395.05** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **330.40** HoursUnit cost: \$3.339 /LCY Total job cost: **\$435,769**

BULLDOZER WORKTask description: Mayflower TSF - Grade Topsoil 30 Temp SludgeSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: J1010State: ColoradoAbbreviation: NoneDate: 6/17/2024County: LakeFilename: M493-J1010User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$643.23**MATERIAL QUANTITIES**Initial Volume: 138,000Swell factor: 1.000Loose volume: 138,000 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 11,000 feetMaterial weight: 2,700 lbs/LCYWeight description: Earth - Wet excavated**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.852	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5092

Adjusted unit production: 192.38 LCY/hr

Adjusted fleet production: **384.76** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$1.672/LCY

Total job time: **358.67** Hours

Total job cost: **\$230,704**

MOTOR GRADER WORK

Task description: McNulty OSF - Finish Grading

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: J1011

State: Colorado

Abbreviation: None

Date: 6/17/2024

County: Summit

Filename: M493-J1011

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 12M

Horsepower: 158

Ripper Attachment: _____

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$69.16	NA
Operating Cost/Hour:	\$54.74	100
Ripper Ownership Cost/Hour:	\$0.00	NA
Ripper Operating Cost/Hour:	\$0.00	
Operator Cost/Hour:	\$27.76	NA
Total Unit Cost/Hour:	\$151.66	
Total Fleet Cost/Hour:	\$303.32	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 839.00 acres

Source of estimated acreage: Climax Estimate TR-37

HOURLY PRODUCTION

Average Grader Speed:	<u>1.50</u>	mph
Selected Application:	<u>Finish grading (0-2.5 mph) - 1.5</u>	
Selected Blade Angle:	<u>45</u>	degrees
Effective Blade Length:	<u>8.50</u>	feet
Width of blade overlap per pass:	<u>2.00</u>	feet
Net grading or ripping width per pass:	<u>6.50</u>	feet
Unadjusted Hourly Unit Production:	<u>1.1818</u>	acres/hour

Job Condition Correction Factors

Site Altitude: 11000 feet

		Source
Altitude Adj:	<u>0.95</u>	(CAT HB)
Job Efficiency:	<u>0.90</u>	(1sh/d, fav.)
Net Correction:	<u>0.8550</u>	multiplier

Adjusted Hourly Unit Production: 1.0105 acres/Hour

Adjusted Hourly Fleet Production: 2.0209 acres/Hour

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: 415.16 Hours

Unit cost: \$150.09 per acre Total job cost: \$125,926

TRUCK/LOADER TEAM WORKTask description: **Mayflower TSF - Haul Bedding Material**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **J1012**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-J1012**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$123.04
Number of Units:	9	3	1	0	1	1
Group Subtotals:	Work: \$2,339.91		Support: \$209.53		Maint: \$274.70	

Total work team cost/hour: **\$2,824.14****MATERIAL QUANTITIES**Initial volume: **55,693**

CCY

Swell factor: **1.000**Loose volume: **55,693**

LCY

Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **2,600**

Pounds/LCY

Description: **Limestone - Broken**Rated Payload: **87,000**

Pounds

Payload Capacity: **33.46**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 28.88 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	4.125	LCY

Job Condition Corrections:

Site Altitude (ft.): 11000 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.740	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.740	Minutes	Adjusted for site altitude:	2.740	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5491.00	3.60	3.00	6.60	1281	4.419

Haul Time: **4.419** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5491.00	-3.60	3.00	-0.60	3706	1.527

Return Time: **1.527** minutesTotal Truck Cycle Time: **11.353** minutes

Loading Tool unit

Production 463.24 LCY/Hour Adjusted for job efficiency: 384.49 LCY/Hour
Truck Unit Production 152.61 LCY/Hour Adjusted for job efficiency: 126.66 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 379.99 LCY/Hour
Adjusted single truck/loader team production: 379.99 LCY/Hour
Adjusted multiple truck/loader team production: **1,139.98** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **48.85** HoursUnit cost: \$2.477 /LCY Total job cost: **\$137,972**

BULLDOZER RIPPING WORK

Task description: Mayflower TSF - Roads - Ripping

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: J1013

State: Colorado

Abbreviation: None

Date: 6/17/2024

County: Lake

Filename: M493-J1013

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS Series II LGP
Ripper Attachment: 3-Shank Ripper

Horsepower: 240

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper Ownership Cost/Hour:	\$9.25	NA
Ripper Operating Cost/Hour:	\$5.20	100
Operator Cost/Hour:	\$38.59	NA
Total Unit Cost/Hour:	\$222.23	
Total Fleet Cost/Hour:	\$444.45	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 29.00 acres Rip Depth (ft): 1.00 Volume: 46,787 BCY or CCY

Source of estimated quantity: TR-37

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.45 feet/pass
Average Ripping Width: 6.50 feet/pass
Average Ripping Length: 250.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.724 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.724 Acres/hr
Site Altitude: 11,000 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.60 Acres/hr

Adjusted Hourly Fleet Production: **1.20** Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: **24.12** Hours

Unit cost: \$369.738 Per acre Total job cost: **\$10,722**

Construct Water Conveyances								
Task #	Area	Description	Task Type	Quant	Unit	Cost/Unit	Total Cost	Key Assumptions
106.11	Mayflower TS	Rip Rap	Rip Rap Armoring	25,352	CY	\$ 74.40	\$ 1,886,189	Across TSF to East Side Channel Extension
	Mayflower TS	Bedding for Riprap Placed	Drain Rock	30,341	CY	\$ 73.88	\$ 2,241,593	Across TSF to East Side Channel Extension
106.14	Mayflower TSF	Impacted Water Pipeline	30" Corrugated HDPE Installed	26,300	LF	\$ 78.33	\$ 2,060,079	
106.16	Mayflower TSF	Decant Pool Spillways	Excavate Diversion/Spillway	9,126	CY	\$ 3.66	\$ 33,401	
106.16	Mayflower TSF	ACB		93,475	SF	\$ 63.70	\$ 5,954,358	
J2001	Mayflower TSF	Hydrologic Protection					\$ 12,175,620	

REVEGETATION WORKTask description: Mayflower TSF - Reveg - UplandSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: J3001State: ColoradoAbbreviation: NoneDate: 8/20/2024County: LakeFilename: M493-J3001User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	0.11	2.53	\$2.63
Arizona Fescue - Redondo	0.45	5.17	\$6.78
Mountain Brome - Bromar	1.70	2.73	\$10.23
Cinquefoil, Slender	0.04	3.90	\$19.62
Currant, Wax	0.16	0.55	\$11.10
Rocky Mountain Fescue	0.17	2.73	\$1.83
Lupine, Silver	1.74	1.02	\$208.03
Slender Wheatgrass - Native	0.68	2.48	\$4.80
Vetch, American	1.33	0.60	\$163.74
Prairie Junegrass	0.09	4.78	\$4.39

Flax, Lewis Blue	0.45	2.99	\$19.03
Timothy, Alpine - Native	0.25	7.46	\$9.80
Tufted Hairgrass	0.17	9.76	\$4.84
Penstemon, Rocky Mountain	0.27	4.23	\$16.58
Yarrow, White	0.05	3.18	\$3.67
Totals Seed Mix	7.66	54.11	\$487.09

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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

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:	701	Cost /Acre:	\$2,069.53
Estimated Failure Rate:	10%	Cost /Acre*:	\$1,951.92
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$1,450,740.53		
Reseeding Job Cost:	\$136,829.59		
Total Job Cost:	\$1,587,570		
Job Hours:	771.10		

REVEGETATION WORKTask description: Mayflower TSF - Reveg - TreesSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: J3002State: ColoradoAbbreviation: NoneDate: 8/20/2024County: LakeFilename: M493-J3002User: ACYAgency 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
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre
	\$

Total Seed Application Cost/Acre	\$0.00
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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
Fir, Subalpine	225	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.74	\$0.00	\$616.50
Spruce, Englemann	225	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.74	\$0.00	\$616.50
Totals Nursery Stock Cost / Acre					\$1,233.00

JOB TIME AND COST

No. of Acres:	21	Cost /Acre:	\$1,233.00
Estimated Failure Rate:	20%	Cost /Acre*:	\$1,233.00
*Selected Replanting Work Items:	NURSERY		
Initial Job Cost:	\$25,893.00		
Reseeding Job Cost:	\$5,178.60		
Total Job Cost:	\$31,072		
Job Hours:	25.20		

REVEGETATION WORKTask description: Mayflower Pool/Sludge Cell - Reveg - UplandSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: J3003State: ColoradoAbbreviation: NoneDate: 6/11/2024County: LakeFilename: M493-J3003User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	0.11	2.53	\$2.63
Arizona Fescue - Redondo	0.45	5.17	\$6.78
Mountain Brome - Bromar	1.70	2.73	\$10.23
Cinquefoil, Slender	0.04	3.90	\$19.62
Currant, Wax	0.16	0.55	\$11.10
Rocky Mountain Fescue	0.17	2.73	\$1.83
Lupine, Silver	1.74	1.02	\$208.03
Slender Wheatgrass - Native	0.68	2.48	\$4.80
Vetch, American	1.33	0.60	\$163.74
Prairie Junegrass	0.09	4.78	\$4.39

Flax, Lewis Blue	0.45	2.99	\$19.03
Timothy, Alpine - Native	0.25	7.46	\$9.80
Tufted Hairgrass	0.17	9.76	\$4.84
Penstemon, Rocky Mountain	0.27	4.23	\$16.58
Yarrow, White	0.05	3.18	\$3.67
Totals Seed Mix	7.66	54.11	\$487.09

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$272.56
Total Seed Application Cost/Acre	\$272.56

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

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: 183
 Estimated Failure Rate: 10%
 *Selected Replanting Work Items: SEEDING

Cost /Acre: \$2,105.45
 Cost /Acre*: \$759.65

Initial Job Cost: **\$385,297.35**
 Reseeding Job Cost: **\$13,901.60**
 Total Job Cost: **\$399,199**
 Job Hours: **201.30**

REVEGETATION WORKTask description: Mayflower Pool/Sludge Cell - Reveg - TreesSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: J3004State: ColoradoAbbreviation: NoneDate: 9/10/2024County: LakeFilename: M493-J3004User: ACYAgency 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
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre
	\$

Total Seed Application Cost/Acre	\$0.00
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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
Fir, Subalpine	225	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.74	\$0.00	\$616.50
Spruce, Englemann	225	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.74	\$0.00	\$616.50
Totals Nursery Stock Cost / Acre					\$1,233.00

JOB TIME AND COST

No. of Acres:	5	Cost /Acre:	\$1,233.00
Estimated Failure Rate:	20%	Cost /Acre*:	\$1,233.00
*Selected Replanting Work Items:	NURSERY		
Initial Job Cost:	\$6,165.00		
Reseeding Job Cost:	\$1,233.00		
Total Job Cost:	\$7,398		
Job Hours:	6.00		

BULLDOZER WORKTask description: Mayflower Seepage Bldg - GradingSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: L1001State: ColoradoAbbreviation: NoneDate: 6/17/2024County: LakeFilename: M493-L1001User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$321.62Total Fleet Cost/Hour: \$321.62**MATERIAL QUANTITIES**Initial Volume: 33,873Swell factor: 1.165Loose volume: 39,462 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 377.8 LCY/hrMaterials consistency description: Rock, well ripped or blasted 0.8Average push gradient: 0 %Average site altitude: 10,400 feetMaterial weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.800	(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:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3554

Adjusted unit production: 134.27 LCY/hr

Adjusted fleet production: **134.27** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$2.395/LCY

Total job time: **293.90** Hours

Total job cost: **\$94,523**

TRUCK/LOADER TEAM WORKTask description: Mayflower Seepage Bldg - Haul TopsoilSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: L1002State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-L1002User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T XL
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	NA
Ownership cost/hour:	\$108.25	\$57.78	\$90.43	NA	NA	NA
Operating cost/hour:	\$79.54	\$46.25	\$67.29	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	NA
Unit Subtotals:	\$213.03	\$140.88	\$196.31	NA	NA	NA
Number of Units:	2	1	1	0	0	0
Group Subtotals:	Work: \$566.94		Support: \$196.31		Maint: \$0.00	

Total work team cost/hour: \$763.25**MATERIAL QUANTITIES**Initial volume: 2,690

CCY

Swell factor: 1.215Loose volume: 3,268

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 10400 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2640.00	-1.80	3.00	1.20	3005	1.226

Haul Time: **1.226** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2640.00	1.80	3.00	4.80	3005	1.108

Return Time: **1.108** minutesTotal Truck Cycle Time: **7.301** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 258.88 LCY/Hour Adjusted for job efficiency: 214.87 LCY/Hour

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

Adjusted hourly truck team production: 429.74 LCY/Hour
Adjusted single truck/loader team production: 429.74 LCY/Hour
Adjusted multiple truck/loader team production: **429.74** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **7.61** HoursUnit cost: \$1.776 /LCY Total job cost: **\$5,805**

BULLDOZER WORKTask description: Mayflower Seepage Bldg - Grade TopsoilSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: L1003State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-L1003User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: \$207.78Total Fleet Cost/Hour: \$207.78**MATERIAL QUANTITIES**Initial Volume: 3,228Swell factor: 1.000Loose volume: 3,228 LCYSource of estimated volume: TR-37Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 410.8 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 10,400 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 353.00 LCY/hr

Adjusted fleet production: 353 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.589/LCY

Total job time: 9.14 Hours

Total job cost: \$1,900

MOTOR GRADER WORK

Task description: Mayflower TSF - Grading

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: L1004

State: Colorado

Abbreviation: None

Date: 6/17/2024

County: Summit

Filename: M493-L1004

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 12M

Horsepower: 158

Ripper Attachment: _____

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$69.16	NA
Operating Cost/Hour:	\$54.74	100
Ripper Ownership Cost/Hour:	\$0.00	NA
Ripper Operating Cost/Hour:	\$0.00	
Operator Cost/Hour:	\$27.76	NA
Total Unit Cost/Hour:	\$151.66	
Total Fleet Cost/Hour:	\$151.66	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 1.00 acres

Source of estimated acreage: Climax Estimate TR-37

HOURLY PRODUCTION

Average Grader Speed:	<u>1.50</u>	mph
Selected Application:	<u>Finish grading (0-2.5 mph) - 1.5</u>	
Selected Blade Angle:	<u>45</u>	degrees
Effective Blade Length:	<u>8.50</u>	feet
Width of blade overlap per pass:	<u>2.00</u>	feet
Net grading or ripping width per pass:	<u>6.50</u>	feet
Unadjusted Hourly Unit Production:	<u>1.1818</u>	acres/hour

Job Condition Correction Factors

Site Altitude: 10400 feet

		Source
Altitude Adj:	<u>0.95</u>	(CAT HB)
Job Efficiency:	<u>0.90</u>	(1sh/d, fav.)
Net Correction:	<u>0.8550</u>	multiplier

Adjusted Hourly Unit Production: 1.0105 acres/Hour

Adjusted Hourly Fleet Production: **1.0105** acres/Hour

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **0.99** Hours

Unit cost: \$150.09 per acre Total job cost: **\$150**

REVEGETATION WORKTask description: Mayflower Seepage Collection Bldgs - Reveg - UplandSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: L3001State: ColoradoAbbreviation: NoneDate: 8/20/2024County: LakeFilename: M493-L3001User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	0.11	2.53	\$2.63
			\$
Totals Seed Mix			\$

Application

Description	Cost /Acre

	\$
Total Seed Application Cost/Acre	\$

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

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:	1	Cost /Acre:	\$2,069.53
Estimated Failure Rate:	10%	Cost /Acre*:	\$1,951.92
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$2,069.53		
Reseeding Job Cost:	\$195.19		
Total Job Cost:	\$2,265		
Job Hours:	1.10		

TRUCK/LOADER TEAM WORKTask description: **Robinson TSF - Haul Fill material 28**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **M1001**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-M1001**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

	Equipment Description
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	12	2	1	0	1	1
Group Subtotals:	Work: \$2,838.12		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$3,377.06****MATERIAL QUANTITIES**Initial volume: **324,328**

CCY

Swell factor: **1.165**Loose volume: **377,842**

LCY

Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **2,900** Pounds/LCYDescription: **Decomposed rock - 50% Rock, 50% Earth**Rated Payload: **87,000** PoundsPayload Capacity: **30.00** LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	30.00	LCY

Final Truck Volume Based on Number of Loader Passes: 26.25 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 5 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		1.860	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	1.860	Minutes	Adjusted for site altitude:	1.860	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	13622.00	1.90	3.00	4.90	1845	7.695

Haul Time: **7.695** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	13622.00	-1.90	3.00	1.10	3706	3.883

Return Time: **3.883** minutesTotal Truck Cycle Time: **16.105** minutes

Loading Tool unit

Production	<u>550.70</u>	LCY/Hour	Adjusted for job efficiency:	<u>457.08</u>	LCY/Hour
Truck Unit Production	<u>97.80</u>	LCY/Hour	Adjusted for job efficiency:	<u>81.17</u>	LCY/Hour

Optimal No. of Trucks:	<u>6</u>	Truck(s)	Selected Number of Trucks:	<u>6</u>	Truck(s)
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Adjusted hourly truck team production:	<u>487.03</u>	LCY/Hour
Adjusted single truck/loader team production:	<u>457.08</u>	LCY/Hour
Adjusted multiple truck/loader team production:	<u>914.16</u>	LCY/Hour

JOB TIME AND COST

Fleet size:	<u>2</u>	Team(s)	Total job time:	<u>413.32</u>	Hours
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Unit cost:	<u>\$3.694</u>	/LCY	Total job cost:	<u>\$1,395,811</u>
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BULLDOZER WORKTask description: **Robinson TSF - Grade Fill Material 28**Site: **Climax Mine** Permit Action: **2024-06** Permit/Job#: **M1977493****PROJECT IDENTIFICATION**

Task #: **M1002** State: **Colorado** Abbreviation: **None**
 Date: **6/17/2024** County: **Lake** Filename: **M493-M1002**
 User: **ACY**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**
 Total Fleet Cost/Hour: **\$643.23**

MATERIAL QUANTITIES

Initial Volume: **389,193**
 Swell factor: **1.000**
 Loose volume: **389,193 LCY**

Source of estimated volume: **TR-37**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **100 feet**
 Unadjusted hourly production: **852.6 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **11,100 feet**

Material weight: **2,900 lbs/LCY**Weight description: **Decomposed rock - 50% Rock, 50% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4739

Adjusted unit production: 404.05 LCY/hr

Adjusted fleet production: **808.1** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.796/LCY

Total job time: **481.61** Hours

Total job cost: **\$309,789**

TRUCK/LOADER TEAM WORKTask description: **Robinson TSF - Haul Topsoil 30**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **M1003**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-M1003**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	16	4	1	0	1	1
Group Subtotals:	Work: \$3,972.00		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$4,510.94****MATERIAL QUANTITIES**Initial volume: **1,060,082**

CCY

Swell factor: **1.215**Loose volume: **1,288,000**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	9557.00	-3.70	3.00	-0.70	3005	3.279

Haul Time: **3.279** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	9557.00	3.70	3.00	6.70	2470	4.050

Return Time: **4.050** minutesTotal Truck Cycle Time: **12.296** minutes

Loading Tool unit

Production	<u>572.73</u>	LCY/Hour	Adjusted for job efficiency:	<u>475.36</u>	LCY/Hour
Truck Unit Production	<u>153.71</u>	LCY/Hour	Adjusted for job efficiency:	<u>127.58</u>	LCY/Hour

Optimal No. of Trucks:	<u>4</u>	Truck(s)	Selected Number of Trucks:	<u>4</u>	Truck(s)
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Adjusted hourly truck team production:	<u>510.33</u>	LCY/Hour
Adjusted single truck/loader team production:	<u>475.36</u>	LCY/Hour
Adjusted multiple truck/loader team production:	<u>1,901.45</u>	LCY/Hour

JOB TIME AND COST

Fleet size:	<u>4</u>	Team(s)	Total job time:	<u>677.38</u>	Hours
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Unit cost:	<u>\$2.372</u>	/LCY	Total job cost:	<u>\$3,055,602</u>
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BULLDOZER WORKTask description: **Robinson TSF - Grade Topsoil 30**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **M1004**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-M1004**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$1,286.46****MATERIAL QUANTITIES**Initial Volume: **1,272,099**Swell factor: **1.000**Loose volume: **1,272,099 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,100 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **1298.56** LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **979.62** Hours

Total job cost: **\$1,260,247**

TRUCK/LOADER TEAM WORKTask description: **Robinson TSF - Haul Topsoil 35**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **M1005**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-M1005**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 7,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$73.42
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$83.21
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$177.75
Number of Units:	10	5	1	0	1	1
Group Subtotals:	Work: \$2,834.70		Support: \$209.53		Maint: \$329.41	

Total work team cost/hour: **\$3,373.64****MATERIAL QUANTITIES**Initial volume: **524,139**

CCY

Swell factor: **1.215**Loose volume: **636,829**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 31.50 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1478.00	0.00	3.00	3.00	3005	1.284

Haul Time: **1.284** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1478.00	0.00	3.00	3.00	3005	0.659

Return Time: **0.659** minutesTotal Truck Cycle Time: **6.910** minutes

Loading Tool unit
 Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
 Truck Unit Production
273.53 LCY/Hour Adjusted for job efficiency: 227.03 LCY/Hour
 Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 454.06 LCY/Hour
 Adjusted single truck/loader team production: 454.06 LCY/Hour
 Adjusted multiple truck/loader team production: **2,270.30** LCY/Hour

JOB TIME AND COSTFleet size: 5 Team(s) Total job time: **280.50** HoursUnit cost: \$1.486 /LCY Total job cost: **\$946,321**

BULLDOZER WORKTask description: **Robinson TSF - Grade Topsoil 35**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **M1006**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-M1006**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$643.23****MATERIAL QUANTITIES**Initial Volume: **628,967**Swell factor: **1.000**Loose volume: **628,967 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,100 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **649.28** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **968.71** Hours

Total job cost: **\$623,107**

TRUCK/LOADER TEAM WORKTask description: **Robinson TSF - Haul Bedding Material**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **M1007**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-M1007**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$123.04
Number of Units:	6	2	1	0	1	1
Group Subtotals:	Work: \$1,559.94		Support: \$209.53		Maint: \$274.70	

Total work team cost/hour: **\$2,044.17****MATERIAL QUANTITIES**Initial volume: **25,362**

CCY

Swell factor: **1.000**Loose volume: **25,362**

LCY

Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **2,600**

Pounds/LCY

Description: **Limestone - Broken**Rated Payload: **87,000**

Pounds

Payload Capacity: **33.46**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 28.88 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	4.125	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.740	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.740	Minutes	Adjusted for site altitude:	2.740	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	9610.00	-2.00	3.00	1.00	3005	3.525

Haul Time: 3.525 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	9610.00	2.00	3.00	5.00	3005	3.437

Return Time: 3.437 minutesTotal Truck Cycle Time: 12.369 minutes

Loading Tool unit

Production 463.24 LCY/Hour Adjusted for job efficiency: 384.49 LCY/Hour
Truck Unit Production 140.07 LCY/Hour Adjusted for job efficiency: 116.26 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 348.78 LCY/Hour
Adjusted single truck/loader team production: 348.78 LCY/Hour
Adjusted multiple truck/loader team production: 697.56 LCY/Hour

JOB TIME AND COSTFleet size: 2 Team(s) Total job time: 36.36 HoursUnit cost: \$2.930 /LCY Total job cost: \$74,323

BULLDOZER RIPPING WORK

Task description: Robinson TSF - Roads - Ripping

Site: Climax Mine Permit Action: 2024-06 Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: M1008 State: Colorado Abbreviation: None
Date: 6/17/2024 County: Lake Filename: M493-M1008
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS Series II LGP Horsepower: 240
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$90.24</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$78.95</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$9.25</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$5.20</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$222.23</u>	
Total Fleet Cost/Hour:	<u>\$222.23</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 6.00 acres Rip Depth (ft): 1.00 Volume: 9,680 BCY or CCY

Source of estimated quantity: TR-37

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.45 feet/pass
Average Ripping Width: 6.50 feet/pass
Average Ripping Length: 250.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.724 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.724 Acres/hr
Site Altitude: 11,100 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.60 Acres/hr
Adjusted Hourly Fleet Production: 0.60 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 9.98 Hours

Unit cost: \$369.738 Per acre Total job cost: \$2,218

Construct Water Conveyances									
					Cost/Unit		Total Cost		
Task #	Area	Description	Task Type	Quant	Unit				Key Assumptions
104.8	Robinson TSF	Clean Water Surface Channel	Excavate diversion/spillway	25,777	CY	\$ 3.66	\$ 94,344	To ECS	
104.8	Robinson TSF	Rip Rap	Rip Rap Armoring	11,545	CY	\$ 74.40	\$ 858,948	To ECS	
104.8	Robinson TSF	Bedding for Riprap Placed	Drain Rock	13,817	CY	\$ 73.88	\$ 1,020,800	To ECS	
104.11	Robinson TSF	Impacted Water Pipeline	30" Corrugated HDPE Installed	8,200	LF	\$ 78.33	\$ 642,306		
M2001	Robinson TSF	Hydrologic Protection					\$ 2,616,398		

REVEGETATION WORKTask description: Robinson TSF - Reveg - UplandSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: M3001State: ColoradoAbbreviation: NoneDate: 6/11/2024County: LakeFilename: M493-M3001User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	0.11	2.53	\$2.63
Arizona Fescue - Redondo	0.45	5.17	\$6.78
Mountain Brome - Bromar	1.70	2.73	\$10.23
Cinquefoil, Slender	0.04	3.90	\$19.62
Currant, Wax	0.16	0.55	\$11.10
Rocky Mountain Fescue	0.17	2.73	\$1.83
Lupine, Silver	1.74	1.02	\$208.03
Slender Wheatgrass - Native	0.68	2.48	\$4.80
Vetch, American	1.33	0.60	\$163.74
Prairie Junegrass	0.09	4.78	\$4.39

Flax, Lewis Blue	0.45	2.99	\$19.03
Timothy, Alpine - Native	0.25	7.46	\$9.80
Tufted Hairgrass	0.17	9.76	\$4.84
Penstemon, Rocky Mountain	0.27	4.23	\$16.58
Yarrow, White	0.05	3.18	\$3.67
Totals Seed Mix	7.66	54.11	\$487.09

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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

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>457</u>	Cost /Acre:	<u>\$2,069.53</u>
Estimated Failure Rate:	<u>10%</u>	Cost /Acre*:	<u>\$1,951.92</u>
*Selected Replanting Work Items:	<u>SEEDING,MULCHING</u>		
Initial Job Cost:	<u>\$945,775.21</u>		
Reseeding Job Cost:	<u>\$89,202.74</u>		
Total Job Cost:	<u>\$1,034,978</u>		
Job Hours:	502.70		

REVEGETATION WORKTask description: Robinson TSF - Reveg - TreesSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: M3002State: ColoradoAbbreviation: NoneDate: 8/20/2024County: LakeFilename: M493-M3002User: ACYAgency 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
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre
	\$

Total Seed Application Cost/Acre	\$0.00
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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
Fir, Subalpine	225	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.74	\$0.00	\$616.50
Spruce, Englemann	225	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.74	\$0.00	\$616.50
Totals Nursery Stock Cost / Acre					\$1,233.00

JOB TIME AND COST

No. of Acres:	14	Cost /Acre:	\$1,233.00
Estimated Failure Rate:	20%	Cost /Acre*:	\$1,233.00
*Selected Replanting Work Items:	NURSERY		
Initial Job Cost:	\$17,262.00		
Reseeding Job Cost:	\$3,452.40		
Total Job Cost:	\$20,714		
Job Hours:	16.80		

TRUCK/LOADER TEAM WORKTask description: **1 Dam - Haul Topsoil 22**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **N1001**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-N1001**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance -Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$123.04
Number of Units:	2	1	1	0	1	1
Group Subtotals:	Work: \$566.94		Support: \$209.53		Maint: \$274.70	

Total work team cost/hour: **\$1,051.17****MATERIAL QUANTITIES**Initial volume: **250**

CCY

Swell factor: **1.215**Loose volume: **304**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1531.00	0.10	3.00	3.10	3005	1.363

Haul Time: **1.363** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1267.00	8.40	3.00	11.40	1610	0.879

Return Time: **0.879** minutesTotal Truck Cycle Time: **7.209** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 262.18 LCY/Hour Adjusted for job efficiency: 217.61 LCY/Hour

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

Adjusted hourly truck team production: 435.23 LCY/Hour
Adjusted single truck/loader team production: 435.23 LCY/Hour
Adjusted multiple truck/loader team production: **435.23** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **0.70** HoursUnit cost: \$2.415 /LCY Total job cost: **\$734**

BULLDOZER WORKTask description: **1 Dam - Grade Topsoil 22**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **N1002**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-N1002**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$321.62****MATERIAL QUANTITIES**Initial Volume: **300**Swell factor: **1.000**Loose volume: **300 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Partly consolidated stockpile 1.1**Average push gradient: **-30 %**Average site altitude: **11,100 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<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:	0.800	(SSD-AC)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.2612

Adjusted unit production: 476.48 LCY/hr

Adjusted fleet production: **476.48** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.675/LCY

Total job time: **0.63** Hours

Total job cost: **\$202**

TRUCK/LOADER TEAM WORKTask description: **1 Dam - Haul Topsoil 24**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **N1003**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-N1003**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$123.04
Number of Units:	2	1	1	0	1	1
Group Subtotals:	Work: \$566.94		Support: \$209.53		Maint: \$274.70	

Total work team cost/hour: **\$1,051.17****MATERIAL QUANTITIES**Initial volume: **1,000**

CCY

Swell factor: **1.215**Loose volume: **1,215**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1267.00	-8.40	3.00	-5.40	2721	0.541

Haul Time: **0.541** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1267.00	8.40	3.00	11.40	1610	0.879

Return Time: **0.879** minutesTotal Truck Cycle Time: **6.387** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 295.93 LCY/Hour Adjusted for job efficiency: 245.62 LCY/Hour

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

Adjusted hourly truck team production: 491.24 LCY/Hour
Adjusted single truck/loader team production: 475.36 LCY/Hour
Adjusted multiple truck/loader team production: **475.36** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **2.56** HoursUnit cost: \$2.211 /LCY Total job cost: **\$2,687**

BULLDOZER WORKTask description: **1 Dam - Grade Topsoil 24**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **N1004**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-N1004**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$321.62****MATERIAL QUANTITIES**Initial Volume: **1,200**Swell factor: **1.000**Loose volume: **1,200 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **-30 %**Average site altitude: **11,100 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.3758

Adjusted unit production: 519.78 LCY/hr

Adjusted fleet production: **519.78** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.619/LCY

Total job time: **2.31** Hours

Total job cost: **\$743**

TRUCK/LOADER TEAM WORKTask description: **1 Dam - Haul Topsoil 28**Site: **Climax Mine**Permit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: N1005State: ColoradoAbbreviation: NoneDate: 6/12/2024County: LakeFilename: M493-N1005User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		CAT 12M
-Water Truck:		Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$123.04
Number of Units:	12	3	1	0	1	1
Group Subtotals:	Work: \$2,979.00		Support: \$209.53		Maint: \$274.70	

Total work team cost/hour: **\$3,463.23****MATERIAL QUANTITIES**Initial volume: 407,801

CCY

Swell factor: 1.215Loose volume: **495,478**

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	9926.00	1.80	3.00	4.80	1845	5.677

Haul Time: 5.677 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	9926.00	-1.80	3.00	1.20	3706	2.888

Return Time: 2.888 minutesTotal Truck Cycle Time: 13.532 minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 139.67 LCY/Hour Adjusted for job efficiency: 115.93 LCY/Hour

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

Adjusted hourly truck team production: 463.71 LCY/Hour
Adjusted single truck/loader team production: 463.71 LCY/Hour
Adjusted multiple truck/loader team production: 1,391.14 LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: 356.17 HoursUnit cost: \$2.489 /LCY Total job cost: \$1,233,491

BULLDOZER WORKTask description: **1 Dam - Grade Topsoil 28**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **N1006**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-N1006**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$643.23****MATERIAL QUANTITIES**Initial Volume: **489,362**Swell factor: **1.000**Loose volume: **489,362 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **-30 %**Average site altitude: **11,100 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.3758

Adjusted unit production: 519.78 LCY/hr

Adjusted fleet production: **1039.56 LCY/hr**

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.619/LCY

Total job time: **470.74 Hours**

Total job cost: **\$302,794**

TRUCK/LOADER TEAM WORKTask description: **1 Dam - Haul Bedding Material**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **N1007**State: **Colorado**Abbreviation: **None**Date: **6/12/2024**County: **Lake**Filename: **M493-N1007**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$123.04
Number of Units:	8	2	1	0	1	1
Group Subtotals:	Work: \$1,986.00		Support: \$209.53		Maint: \$274.70	

Total work team cost/hour: **\$2,470.23****MATERIAL QUANTITIES**Initial volume: **15,427**

CCY

Swell factor: **1.000**Loose volume: **15,427**

LCY

Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **2,600**

Pounds/LCY

Description: **Limestone - Broken**Rated Payload: **87,000**

Pounds

Payload Capacity: **33.46**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 28.88 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	4.125	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.740	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.740	Minutes	Adjusted for site altitude:	2.740	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	13939.00	-1.50	3.00	1.50	3005	5.022

Haul Time: **5.022** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	13939.00	1.50	3.00	4.50	3005	4.854

Return Time: **4.854** minutesTotal Truck Cycle Time: **15.283** minutes

Loading Tool unit

Production 463.24 LCY/Hour Adjusted for job efficiency: 384.49 LCY/Hour
Truck Unit Production 113.36 LCY/Hour Adjusted for job efficiency: 94.09 LCY/Hour

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

Adjusted hourly truck team production: 376.37 LCY/Hour
Adjusted single truck/loader team production: 376.37 LCY/Hour
Adjusted multiple truck/loader team production: **752.74** LCY/Hour

JOB TIME AND COSTFleet size: 2 Team(s) Total job time: **20.49** HoursUnit cost: \$3.282 /LCY Total job cost: **\$50,626**

Construct Water Conveyances									
Task #		Area	Description	Task Type	Quant	Unit	Cost/Unit	Total Cost	
								Key Assumptions	
	101.8	1 Dam	Clean Water Surface Channel	Excavate diversion/spillway	15,679	CY	\$ 3.66	\$	57,385
	101.8	1 Dam	Rip Rap	Rip Rap Armoring	7,022	CY	\$ 74.40	\$	522,437
	101.8	1 Dam	Bedding for Riprap Placed	Drain Rock	8,404	CY	\$ 73.88	\$	620,888
N2001		1 Dam	Hydrologic Protection					\$	1,200,709

REVEGETATION WORKTask description: 1 Dam - Reveg - UplandSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: N3001State: ColoradoAbbreviation: NoneDate: 8/20/2024County: LakeFilename: M493-N3001User: ACYAgency 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
Alpine Bluegrass	0.22	5.05	\$5.26
Arizona Fescue - Redondo	0.90	10.33	\$13.56
Mountain Brome - Bromar	3.40	5.46	\$20.46
Cinquefoil, Slender	0.08	7.80	\$39.25
Currant, Wax	0.32	1.10	\$22.20
Rocky Mountain Fescue	0.34	5.46	\$3.67
Lupine, Silver	3.48	2.04	\$416.06
Slender Wheatgrass - Native	1.36	4.96	\$9.61
Vetch, American	2.66	1.20	\$327.49

Prairie Junegrass	0.18	9.57	\$8.77
Flax, Lewis Blue	0.90	5.97	\$38.07
Timothy, Alpine - Native	0.50	14.92	\$19.59
Tufted Hairgrass	0.34	19.51	\$9.68
Penstemon, Rocky Mountain	0.54	8.46	\$33.16
Yarrow, White	0.10	6.36	\$7.34
Totals Seed Mix	15.32	108.21	\$974.17

Application

Description	Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)	\$1,359.07
Total Seed Application Cost/Acre	\$1,359.07

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hydromulch, 1 ton/ac. rate {Materials Only}	1.00	ACRE	\$1,459.26	\$1,459.26
Total Mulch Materials Cost/Acre				\$1,459.26

Application

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

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 127
 Estimated Failure Rate: 10%
 *Selected Replanting Work Items: SEEDING,MULCHING

Cost /Acre: \$3,792.50
 Cost /Acre*: \$3,792.50

Initial Job Cost: **\$481,647.50**
 Reseeding Job Cost: **\$48,164.75**
 Total Job Cost: **\$529,812**
 Job Hours: **139.70**

TRUCK/LOADER TEAM WORKTask description: Roads - Haul Topsoil - McNulty OSFSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: O1001State: ColoradoAbbreviation: NoneDate: 8/20/2024County: LakeFilename: M493-O1001User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance -Motor Grader:		NA
-Water Truck:		Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	NA	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	NA	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	NA	\$123.04
Number of Units:	9	3	1	0	0	1
Group Subtotals:	Work: \$2,339.91		Support: \$209.53		Maint: \$123.04	

Total work team cost/hour: \$2,672.48**MATERIAL QUANTITIES**Initial volume: 166,000

CCY

Swell factor: 1.215Loose volume: 201,690

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Other - moist loam (100-110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 13000 feet

	Truck	Loader	Source
Altitude Adj:	0.390	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.324	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.060	minutes
	Adjusted Loader Cycle Time:	0.440	minutes
	Net Load Time per Truck:	2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.538	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	2.564	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4319.00	7.90	3.00	10.90	857	5.129

Haul Time: **5.129** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	4319.00	-7.90	3.00	-4.90	3706	1.201

Return Time: **1.201** minutesTotal Truck Cycle Time: **12.733** minutes

Loading Tool unit
 Production 492.38 LCY/Hour Adjusted for job efficiency: 408.68 LCY/Hour
 Truck Unit Production
148.44 LCY/Hour Adjusted for job efficiency: 123.20 LCY/Hour
 Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 369.61 LCY/Hour
 Adjusted single truck/loader team production: 369.61 LCY/Hour
 Adjusted multiple truck/loader team production: **1,108.83** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **181.89** HoursUnit cost: \$2.410 /LCY Total job cost: **\$486,107**

BULLDOZER WORKTask description: **Roads - Grade Topsoil - McNulty OSF**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **O1002**State: **Colorado**Abbreviation: **None**Date: **8/20/2024**County: **Lake**Filename: **M493-O1002**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**Horsepower: **240**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$207.78**Total Fleet Cost/Hour: **\$831.10****MATERIAL QUANTITIES**Initial Volume: **199,200**Swell factor: **1.000**Loose volume: **199,200 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **200 feet**Unadjusted hourly production: **410.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **13,000 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	0.960	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8250

Adjusted unit production: 338.91 LCY/hr

Adjusted fleet production: **1355.64** LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)

Unit cost: \$0.613/LCY

Total job time: **146.94** Hours

Total job cost: **\$122,123**

TRUCK/LOADER TEAM WORKTask description: Roads - Haul Topsoil - TenmileSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: O1003State: ColoradoAbbreviation: NoneDate: 8/20/2024County: LakeFilename: M493-O1003User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance -Motor Grader:		NA
-Water Truck:		Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	NA	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	NA	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	NA	\$123.04
Number of Units:	8	2	1	0	0	1
Group Subtotals:	Work: \$1,986.00		Support: \$209.53		Maint: \$123.04	

Total work team cost/hour: \$2,318.57**MATERIAL QUANTITIES**Initial volume: 24,000

CCY

Swell factor: 1.215Loose volume: 29,160

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 87,000

Pounds

Payload Capacity: 54.38

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Other - moist loam (100-110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 13000 feet

	Truck	Loader	Source
Altitude Adj:	0.390	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.324** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.538	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	2.564	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	13886.00	0.00	3.00	3.00	3005	5.413

Haul Time: **5.413** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	13886.00	0.00	3.00	3.00	3005	4.788

Return Time: **4.788** minutesTotal Truck Cycle Time: **16.604** minutes

Loading Tool unit

Production 492.38 LCY/Hour Adjusted for job efficiency: 408.68 LCY/Hour
Truck Unit Production 113.83 LCY/Hour Adjusted for job efficiency: 94.48 LCY/Hour

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

Adjusted hourly truck team production: 377.92 LCY/Hour
Adjusted single truck/loader team production: 377.92 LCY/Hour
Adjusted multiple truck/loader team production: **755.84** LCY/Hour

JOB TIME AND COST

Fleet size: 2 Team(s) Total job time: **38.58** Hours

Unit cost: \$3.068 /LCY Total job cost: **\$89,450**

BULLDOZER WORKTask description: **Roads - Grade Topsoil - Tenmile**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **O1004**State: **Colorado**Abbreviation: **None**Date: **8/21/2024**County: **Lake**Filename: **M493-O1004**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**Horsepower: **240**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$207.78**Total Fleet Cost/Hour: **\$415.55****MATERIAL QUANTITIES**Initial Volume: **28,800**Swell factor: **1.000**Loose volume: **28,800 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **200 feet**Unadjusted hourly production: **410.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,100 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 353.00 LCY/hr

Adjusted fleet production: **706** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.589/LCY

Total job time: **40.79** Hours

Total job cost: **\$16,952**

TRUCK/LOADER TEAM WORKTask description: **Roads - Haul Topsoil - Robinson TSF**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **O1005**State: **Colorado**Abbreviation: **None**Date: **8/20/2024**County: **Lake**Filename: **M493-O1005**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance –Motor Grader:		NA
-Water Truck:		Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	NA	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	NA	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	NA	\$123.04
Number of Units:	5	1	1	0	0	1
Group Subtotals:	Work: \$1,206.03		Support: \$209.53		Maint: \$123.04	

Total work team cost/hour: **\$1,538.60****MATERIAL QUANTITIES**Initial volume: **20,000**

CCY

Swell factor: **1.215**Loose volume: **24,300**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Other - moist loam (100-110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.060	minutes
	Adjusted Loader Cycle Time:	0.440	minutes
	Net Load Time per Truck:	2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	13622.40	1.90	3.00	4.90	1845	7.695

Haul Time: **7.695** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	13622.40	-1.90	3.00	1.10	3706	3.883

Return Time: **3.883** minutesTotal Truck Cycle Time: **16.545** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 114.24 LCY/Hour Adjusted for job efficiency: 94.82 LCY/Hour

Optimal No. of Trucks: 5 Truck(s) Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 474.08 LCY/Hour
Adjusted single truck/loader team production: 474.08 LCY/Hour
Adjusted multiple truck/loader team production: **474.08** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **51.26** HoursUnit cost: \$3.245 /LCY Total job cost: **\$78,864**

BULLDOZER WORKTask description: **Roads - Grade Topsoil - Robinson TSF**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **O1006**State: **Colorado**Abbreviation: **None**Date: **8/21/2024**County: **Lake**Filename: **M493-O1006**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**Horsepower: **240**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$207.78**Total Fleet Cost/Hour: **\$415.55****MATERIAL QUANTITIES**Initial Volume: **24,000**Swell factor: **1.000**Loose volume: **24,000 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **200 feet**Unadjusted hourly production: **410.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,100 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 353.00 LCY/hr

Adjusted fleet production: **706** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.589/LCY

Total job time: **33.99** Hours

Total job cost: **\$14,126**

TRUCK/LOADER TEAM WORKTask description: **Roads - Haul Topsoil - Robinson Lake**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **O1007**State: **Colorado**Abbreviation: **None**Date: **8/20/2024**County: **Lake**Filename: **M493-O1007**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance -Motor Grader:		NA
-Water Truck:		Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	NA	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	NA	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	NA	\$123.04
Number of Units:	10	2	1	0	0	1
Group Subtotals:	Work: \$2,412.06		Support: \$209.53		Maint: \$123.04	

Total work team cost/hour: **\$2,744.63****MATERIAL QUANTITIES**Initial volume: **60,000**

CCY

Swell factor: **1.215**Loose volume: **72,900**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Other - moist loam (100-110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	13866.00	0.00	3.00	3.00	3005	5.407

Haul Time: **5.407** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	13866.00	0.00	3.00	3.00	3005	4.782

Return Time: **4.782** minutesTotal Truck Cycle Time: **15.156** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 124.71 LCY/Hour Adjusted for job efficiency: 103.51 LCY/Hour

Optimal No. of Trucks: 5 Truck(s) Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 517.53 LCY/Hour
Adjusted single truck/loader team production: 475.36 LCY/Hour
Adjusted multiple truck/loader team production: **950.73** LCY/Hour

JOB TIME AND COST

Fleet size: 2 Team(s) Total job time: **76.68** Hours

Unit cost: \$2.887 /LCY Total job cost: **\$210,453**

BULLDOZER WORKTask description: **Roads - Grade Topsoil - Robinson Lake**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **O1008**State: **Colorado**Abbreviation: **None**Date: **8/21/2024**County: **Lake**Filename: **M493-O1008**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**Horsepower: **240**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$207.78**Total Fleet Cost/Hour: **\$415.55****MATERIAL QUANTITIES**Initial Volume: **72,000**Swell factor: **1.000**Loose volume: **72,000 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **200 feet**Unadjusted hourly production: **410.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,100 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 353.00 LCY/hr

Adjusted fleet production: **706** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.589/LCY

Total job time: **101.98** Hours

Total job cost: **\$42,379**

TRUCK/LOADER TEAM WORKTask description: **Roads - Haul Topsoil - Mayflower**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **O1009**State: **Colorado**Abbreviation: **None**Date: **8/20/2024**County: **Lake**Filename: **M493-O1009**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

		Equipment Description
Truck Loader Team -Truck:		Cat 740
-Loader:		CAT 966H high lift
Support Equipment -Load Area:		Cat D6T LGP
-Dump Area:		NA
Road Maintenance -Motor Grader:		NA
-Water Truck:		Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	NA	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	NA	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	NA	\$123.04
Number of Units:	12	2	1	0	0	1
Group Subtotals:	Work: \$2,838.12		Support: \$209.53		Maint: \$123.04	

Total work team cost/hour: **\$3,170.69****MATERIAL QUANTITIES**Initial volume: **95,000**

CCY

Swell factor: **1.215**Loose volume: **115,425**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Other - moist loam (100-110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 10400 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.060	minutes
	Adjusted Loader Cycle Time:	0.440	minutes
	Net Load Time per Truck:	2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	19219.00	0.60	3.00	3.60	2421	8.424

Haul Time: **8.424** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	19219.00	-0.60	3.00	2.40	3005	6.549

Return Time: **6.549** minutesTotal Truck Cycle Time: **19.940** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 94.79 LCY/Hour Adjusted for job efficiency: 78.67 LCY/Hour

Optimal No. of Trucks: 6 Truck(s) Selected Number of Trucks: 6 Truck(s)

Adjusted hourly truck team production: 472.03 LCY/Hour
Adjusted single truck/loader team production: 472.03 LCY/Hour
Adjusted multiple truck/loader team production: **944.07** LCY/Hour

JOB TIME AND COSTFleet size: 2 Team(s) Total job time: **122.26** HoursUnit cost: \$3.359 /LCY Total job cost: **\$387,659**

BULLDOZER WORKTask description: **Roads - Grade Topsoil - Mayflower**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **O1010**State: **Colorado**Abbreviation: **None**Date: **8/21/2024**County: **Lake**Filename: **M493-O1010**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**Horsepower: **240**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$90.24	NA
Operating Cost/Hour:	\$78.95	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$207.78**Total Fleet Cost/Hour: **\$415.55****MATERIAL QUANTITIES**Initial Volume: **114,000**Swell factor: **1.000**Loose volume: **114,000 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **200 feet**Unadjusted hourly production: **410.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **10,400 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 353.00 LCY/hr

Adjusted fleet production: **706** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.589/LCY

Total job time: **161.47** Hours

Total job cost: **\$67,100**

REVEGETATION WORKTask description: Roads - Robinson Lake - Reveg - HydricSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: O3001State: ColoradoAbbreviation: NoneDate: 8/12/2024County: LakeFilename: M493-O3001User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Baltic Rush	0.22	61.82	\$41.48
Aquatic Sedge	0.19	5.03	\$53.50
Merten's Rush	0.01	0.84	\$0.98
Cinquefoil, Slender	0.12	11.70	\$58.87
Idaho Fescue	0.09	1.14	\$1.28
Butterwort, Golden	0.08	2.55	\$17.68
Mannagrass, Northwest	0.11	0.92	\$1.70
Elephant Head	0.08	2.01	\$45.61
Reedgrass, Canadian (or Blue Joint)	0.06	6.17	\$24.75
Timothy, Alpine - Native	0.20	5.97	\$7.84

Tufted Hairgrass	0.13	7.46	\$3.70
Monkey Flower	0.12	12.22	\$20.49
Totals Seed Mix	1.41	117.82	\$277.89

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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 18.36 Cost /Acre: \$1,860.33
 Estimated Failure Rate: 10% Cost /Acre*: \$1,742.72
 *Selected Replanting Work Items: SEEDING,MULCHING

 Initial Job Cost: **\$34,155.66**
 Reseeding Job Cost: **\$3,199.63**
 Total Job Cost: **\$37,355**
 Job Hours: **21.00**

REVEGETATION WORKTask description: Roads - McNulty OSF - Reveg - AlpineSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: O3002State: ColoradoAbbreviation: NoneDate: 8/12/2024County: LakeFilename: M493-O3002User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	0.44	10.10	\$10.53
Alpine Fescue	1.30	38.80	\$23.51
Cinquefoil, Slender	0.06	5.85	\$29.44
Currant, Wax	0.40	1.38	\$27.75
Rocky Mountain Fescue	0.68	10.93	\$7.33
Lupine, Silver	0.70	0.41	\$83.69
Slender Wheatgrass - Native	2.74	10.00	\$19.36
Thurber's Fescue	0.18	1.86	\$14.13
Flax, Lewis Blue	0.86	5.70	\$36.38
Timothy, Alpine - Native	0.34	10.15	\$13.32

Tufted Hairgrass	0.34	19.51	\$9.68
Yarrow, White	0.10	6.36	\$7.34
Totals Seed Mix	8.14	121.05	\$282.45

Application

Description	Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)	\$1,359.07
Total Seed Application Cost/Acre	\$1,359.07

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hydromulch tackifier, >15 ac. {Materials Only}	1.00	ACRE	\$1,459.26	\$1,459.26
Total Mulch Materials Cost/Acre				\$1,459.26

Application

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

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres:	52	Cost /Acre:	\$3,218.39
Estimated Failure Rate:	10%	Cost /Acre*:	\$3,100.78
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$167,356.28		
Reseeding Job Cost:	\$16,124.06		
Total Job Cost:	\$183,480		
Job Hours:	58.00		

REVEGETATION WORKTask description: **Roads - Mayflower Tenmile Robinson TSF - Reveg - Upland**Site: **Climax Mine**Permit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: O3003State: ColoradoAbbreviation: NoneDate: 8/20/2024County: LakeFilename: M493-O3003User: ACYAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	0.11	2.53	\$2.63
Arizona Fescue - Redondo	0.45	5.17	\$6.78
Mountain Brome - Bromar	1.70	2.73	\$10.23
Cinquefoil, Slender	0.04	3.90	\$19.62
Currant, Wax	0.16	0.55	\$11.10
Rocky Mountain Fescue	0.17	2.73	\$1.83
Lupine, Silver	1.74	1.02	\$208.03
Slender Wheatgrass - Native	0.68	2.48	\$4.80
Vetch, American	1.33	0.60	\$163.74
Prairie Junegrass	0.09	4.78	\$4.39

Flax, Lewis Blue	0.45	2.99	\$19.03
Timothy, Alpine - Native	0.25	7.46	\$9.80
Tufted Hairgrass	0.17	9.76	\$4.84
Penstemon, Rocky Mountain	0.27	4.23	\$16.58
Yarrow, White	0.05	3.18	\$3.67
Totals Seed Mix	7.66	54.11	\$487.09

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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$492.78	\$985.56
Total Mulch Materials Cost/Acre				\$985.56

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Total Mulch Application Cost/Acre	\$242.63

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:	42	Cost /Acre:	\$2,069.53
Estimated Failure Rate:	10%	Cost /Acre*:	\$1,951.92
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$86,920.26		
Reseeding Job Cost:	\$8,198.06		
Total Job Cost:	\$95,118		
Job Hours:	48.00		

TRUCK/LOADER TEAM WORKTask description: **Robinson Lake - Haul Temp Platforms In**Site: **Climax Mine**Permit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: P1001State: ColoradoAbbreviation: NoneDate: 6/13/2024County: LakeFilename: M493-P1001User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 950H high lift
Support Equipment -Load Area:	Cat D6T XL
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	NA
Ownership cost/hour:	\$108.25	\$36.61	\$90.43	NA	NA	NA
Operating cost/hour:	\$79.54	\$35.43	\$67.29	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	NA
Unit Subtotals:	\$213.03	\$108.89	\$196.31	NA	NA	NA
Number of Units:	10	2	1	0	0	0
Group Subtotals:	Work: \$2,348.08		Support: \$196.31		Maint: \$0.00	

Total work team cost/hour: **\$2,544.39****MATERIAL QUANTITIES**Initial volume: 30,000

CCY

Swell factor: 1.320Loose volume: **39,600**

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: 2,800

Pounds/LCY

Description: Granite - BrokenRated Payload: 87,000

Pounds

Payload Capacity: 31.07

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.07	LCY

Final Truck Volume Based on Number of Loader Passes: **28.38** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	4.300	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	4.730	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	18002.00	-2.80	3.00	0.20	3005	6.255

Haul Time: 6.255 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	18002.00	2.80	3.00	5.80	2742	6.777

Return Time: 6.777 minutesTotal Truck Cycle Time: 17.999 minutes

Loading Tool unit

Production 516.00 LCY/Hour Adjusted for job efficiency: 428.28 LCY/Hour
Truck Unit Production 94.61 LCY/Hour Adjusted for job efficiency: 78.52 LCY/Hour

Optimal No. of Trucks: 5 Truck(s) Selected Number of Trucks: 5 Truck(s)

Adjusted hourly truck team production: 392.62 LCY/Hour
Adjusted single truck/loader team production: 392.62 LCY/Hour
Adjusted multiple truck/loader team production: 785.24 LCY/Hour

JOB TIME AND COSTFleet size: 2 Team(s) Total job time: 50.43 HoursUnit cost: \$3.240 /LCY Total job cost: \$128,315

BULLDOZER WORKTask description: **Robinson Lake - Grade Temp Platforms In**Site: **Climax Mine** Permit Action: **2024-06** Permit/Job#: **M1977493****PROJECT IDENTIFICATION**

Task #: **P1002** State: **Colorado** Abbreviation: **None**
 Date: **6/14/2024** County: **Lake** Filename: **M493-P1002**
 User: **ACY**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D6T LGP**
 Horsepower: **200**
 Blade Type: **Straight**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$99.72	NA
Operating Cost/Hour:	\$71.22	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$209.53**
 Total Fleet Cost/Hour: **\$628.58**

MATERIAL QUANTITIES

Initial Volume: **39,000**
 Swell factor: **1.000**
 Loose volume: **39,000 LCY**

Source of estimated volume: **Division of Reclamation, Mining & Safety**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **150 feet**
 Unadjusted hourly production: **212.5 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **11,100 feet**

Material weight: **2,800 lbs/LCY**Weight description: **Granite - Broken****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	0.940	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5188

Adjusted unit production: 110.25 LCY/hr

Adjusted fleet production: **330.75** LCY/hr

JOB TIME AND COST

Fleet size: 3 Dozer(s)

Unit cost: \$1.900/LCY

Total job time: **117.91** Hours

Total job cost: **\$74,118**

TRUCK/LOADER TEAM WORKTask description: **Robinson TSF - Haul Bedding Material**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **P1003**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-P1003**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 950H high lift
Support Equipment -Load Area:	Cat D6T XL
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	NA
Ownership cost/hour:	\$108.25	\$36.61	\$90.43	NA	NA	NA
Operating cost/hour:	\$79.54	\$35.43	\$67.29	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	NA
Unit Subtotals:	\$213.03	\$108.89	\$196.31	NA	NA	NA
Number of Units:	4	1	1	0	0	0
Group Subtotals:	Work: \$961.01		Support: \$196.31		Maint: \$0.00	

Total work team cost/hour: **\$1,157.32****MATERIAL QUANTITIES**Initial volume: **8,106**

CCY

Swell factor: **1.000**Loose volume: **8,106**

LCY

Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **2,600**

Pounds/LCY

Description: **Limestone - Broken**Rated Payload: **87,000**

Pounds

Payload Capacity: **33.46**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 28.38 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	4.300	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	3.548	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 8 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		3.180	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	3.180	Minutes	Adjusted for site altitude:	3.180	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	16738.00	-1.70	3.00	1.30	3005	5.928

Haul Time: **5.928** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	16738.00	1.70	3.00	4.70	3005	5.795

Return Time: **5.795** minutesTotal Truck Cycle Time: **17.570** minutes

Loading Tool unit

Production 407.37 LCY/Hour Adjusted for job efficiency: 338.12 LCY/Hour
Truck Unit Production 96.92 LCY/Hour Adjusted for job efficiency: 80.44 LCY/Hour

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

Adjusted hourly truck team production: 321.76 LCY/Hour
Adjusted single truck/loader team production: 321.76 LCY/Hour
Adjusted multiple truck/loader team production: **321.76** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **25.19** HoursUnit cost: \$3.597 /LCY Total job cost: **\$29,156**

TRUCK/LOADER TEAM WORKTask description: **Robinson Lake - Haul Topsoil 28**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **P1004**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-P1004**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 950H high lift
Support Equipment -Load Area:	Cat D6T XL
-Dump Area:	NA
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	NA
Ownership cost/hour:	\$108.25	\$36.61	\$90.43	NA	NA	NA
Operating cost/hour:	\$79.54	\$35.43	\$67.29	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	NA
Unit Subtotals:	\$213.03	\$108.89	\$196.31	NA	NA	NA
Number of Units:	12	3	1	0	0	0
Group Subtotals:	Work: \$2,883.03		Support: \$196.31		Maint: \$0.00	

Total work team cost/hour: **\$3,079.34****MATERIAL QUANTITIES**Initial volume: **138,000**

CCY

Swell factor: **1.215**Loose volume: **167,670**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.61** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	4.300	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	4.515	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.740	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.740	Minutes	Adjusted for site altitude:	2.740	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	9926.00	1.80	3.00	4.80	1845	5.677

Haul Time: 5.677 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	9926.00	-1.80	3.00	1.20	3706	2.888

Return Time: 2.888 minutesTotal Truck Cycle Time: 13.972 minutes

Loading Tool unit

Production 507.03 LCY/Hour Adjusted for job efficiency: 420.84 LCY/Hour
Truck Unit Production 135.72 LCY/Hour Adjusted for job efficiency: 112.65 LCY/Hour

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

Adjusted hourly truck team production: 450.61 LCY/Hour
Adjusted single truck/loader team production: 420.84 LCY/Hour
Adjusted multiple truck/loader team production: 1,262.51 LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: 132.81 HoursUnit cost: \$2.439 /LCY Total job cost: \$408,958

BULLDOZER WORKTask description: **Robinson Lake - Grade Topsoil 28**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **P1005**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-P1005**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$964.85****MATERIAL QUANTITIES**Initial Volume: **165,600**Swell factor: **1.000**Loose volume: **165,600 LCY**Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **11,100 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 324.64 LCY/hr

Adjusted fleet production: **973.92 LCY/hr**

JOB TIME AND COST

Fleet size: 3 Dozer(s)

Unit cost: \$0.991/LCY

Total job time: **170.03 Hours**

Total job cost: **\$164,057**

TRUCK/LOADER TEAM WORKTask description: **Robinson Lake - Haul Sludge Removal**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **P1006**State: **Colorado**Abbreviation: **None**Date: **6/13/2024**County: **Lake**Filename: **M493-P1006**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 950H high lift
Support Equipment -Load Area:	Cat D6T XL
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	NA
Ownership cost/hour:	\$108.25	\$36.61	\$90.43	NA	NA	NA
Operating cost/hour:	\$79.54	\$35.43	\$67.29	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	NA
Unit Subtotals:	\$213.03	\$108.89	\$196.31	NA	NA	NA
Number of Units:	12	3	1	0	0	0
Group Subtotals:	Work: \$2,883.03		Support: \$196.31		Maint: \$0.00	

Total work team cost/hour: **\$3,079.34****MATERIAL QUANTITIES**Initial volume: **645,333**

CCY

Swell factor: **1.135**Loose volume: **732,453**

LCY

Source of estimated volume: **TR-37**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **2,700**

Pounds/LCY

Description: **Earth - Wet excavated**Rated Payload: **87,000**

Pounds

Payload Capacity: **32.22**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 30.96 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	4.300	LCY (heaped)
Bucket Fill Factor:	0.900	Other - cemented materials (85 - 95%) 0.900
Adjusted Capacity:	3.870	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 8 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		3.180	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	3.180	Minutes	Adjusted for site altitude:	3.180	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10915.00	2.70	3.00	5.70	1566	7.191

Haul Time: **7.191** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10915.00	-2.70	3.00	0.30	3706	3.130

Return Time: **3.130** minutesTotal Truck Cycle Time: **16.168** minutes

Loading Tool unit

Production 444.40 LCY/Hour Adjusted for job efficiency: 368.85 LCY/Hour
Truck Unit Production 114.90 LCY/Hour Adjusted for job efficiency: 95.36 LCY/Hour

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

Adjusted hourly truck team production: 381.45 LCY/Hour
Adjusted single truck/loader team production: 368.85 LCY/Hour
Adjusted multiple truck/loader team production: **1,106.56** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **661.92** HoursUnit cost: \$2.783 /LCY Total job cost: **\$2,038,272**

BULLDOZER WORKTask description: **Robinson Lake - Spread Sludge Removal**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **P1007**State: **Colorado**Abbreviation: **None**Date: **6/14/2024**County: **Lake**Filename: **M493-P1007**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$1,608.08****MATERIAL QUANTITIES**Initial Volume: **732,453**Swell factor: **1.000**Loose volume: **732,453 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Wet, highly cohesive 0.8**Average push gradient: **0 %**Average site altitude: **11,100 feet**Material weight: **2,700 lbs/LCY**Weight description: **Earth - Wet excavated****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.800	(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:	0.852	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3819

Adjusted unit production: 144.28 LCY/hr

Adjusted fleet production: **721.4** LCY/hr

JOB TIME AND COST

Fleet size: 5 Dozer(s)

Unit cost: \$2.229/LCY

Total job time: **1,015.32** Hours

Total job cost: **\$1,632,715**

TRUCK/LOADER TEAM WORKTask description: **Robinson Lake - Haul Temp Platforms Out**Site: **Climax Mine**Permit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: P1008State: ColoradoAbbreviation: NoneDate: 8/21/2024County: LakeFilename: M493-P1008User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 950H high lift
Support Equipment -Load Area:	Cat D6T XL
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	NA	NA
Ownership cost/hour:	\$108.25	\$36.61	\$90.43	NA	NA	NA
Operating cost/hour:	\$79.54	\$35.43	\$67.29	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	NA	NA
Unit Subtotals:	\$213.03	\$108.89	\$196.31	NA	NA	NA
Number of Units:	14	2	1	0	0	0
Group Subtotals:	Work: \$3,200.20		Support: \$196.31		Maint: \$0.00	

Total work team cost/hour: **\$3,396.51****MATERIAL QUANTITIES**Initial volume: 30,000

CCY

Swell factor: 1.320Loose volume: **39,600**

LCY

Source of estimated volume: TR-37Source of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: 2,800

Pounds/LCY

Description: Granite - BrokenRated Payload: 87,000

Pounds

Payload Capacity: 31.07

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.07	LCY

Final Truck Volume Based on Number of Loader Passes: 28.38 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	4.300	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	4.730	LCY

Job Condition Corrections:

Site Altitude (ft.): 11100 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	18002.00	2.80	3.00	5.80	1566	11.727

Haul Time: **11.727** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	18002.00	-2.80	3.00	0.20	3706	5.040

Return Time: **5.040** minutesTotal Truck Cycle Time: **21.734** minutes

Loading Tool unit

Production 516.00 LCY/Hour Adjusted for job efficiency: 428.28 LCY/Hour
Truck Unit Production 78.35 LCY/Hour Adjusted for job efficiency: 65.03 LCY/Hour

Optimal No. of Trucks: 7 Truck(s) Selected Number of Trucks: 7 Truck(s)

Adjusted hourly truck team production: 455.20 LCY/Hour
Adjusted single truck/loader team production: 428.28 LCY/Hour
Adjusted multiple truck/loader team production: **856.56** LCY/Hour

JOB TIME AND COSTFleet size: 2 Team(s) Total job time: **46.23** HoursUnit cost: \$3.965 /LCY Total job cost: **\$157,026**

BULLDOZER WORKTask description: **Robinson Lake - Grade Temp Platforms Out**Site: **Climax Mine** Permit Action: **2024-06** Permit/Job#: **M1977493****PROJECT IDENTIFICATION**

Task #:	<u>P1009</u>	State:	<u>Colorado</u>	Abbreviation:	<u>None</u>
Date:	<u>8/21/2024</u>	County:	<u>Lake</u>	Filename:	<u>M493-P1009</u>
User:	<u>ACY</u>				

Agency or organization name: DRMS**HOURLY EQUIPMENT COST**

Basic Machine:	<u>Cat D6T LGP</u>
Horsepower:	<u>200</u>
Blade Type:	<u>Straight</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>\$99.72</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$71.22</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 Cost/Hour:	<u>\$209.53</u>
Total Fleet Cost/Hour:	<u>\$628.58</u>

MATERIAL QUANTITIES

Initial Volume:	<u>39,000</u>
Swell factor:	<u>1.000</u>
Loose volume:	<u>39,000 LCY</u>

Source of estimated volume:	<u>Division of Reclamation, Mining & Safety</u>
Source of estimated swell factor:	<u>Cat Handbook</u>

HOURLY PRODUCTION

Average push distance:	<u>150 feet</u>
Unadjusted hourly production:	<u>212.5 LCY/hr</u>

Materials consistency description: Loose stockpile 1.2

Average push gradient:	<u>0 %</u>
Average site altitude:	<u>11,100 feet</u>

Material weight: 2,800 lbs/LCYWeight description: Granite - Broken

<u>Job Condition Correction Factor</u>		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.200</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	0.940	(CAT HB)
Material Weight:	0.821	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5188

Adjusted unit production: 110.25 LCY/hr

Adjusted fleet production: **330.75** LCY/hr

JOB TIME AND COST

Fleet size: 3 Dozer(s)

Unit cost: \$1.900/LCY

Total job time: **117.91** Hours

Total job cost: **\$74,118**

BULLDOZER RIPPING WORK

Task description: Robinson Lake - Roads - Ripping

Site: Climax Mine Permit Action: 2024-06 Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: P1010 State: Colorado Abbreviation: None
Date: 8/21/2024 County: Lake Filename: M493-P1010
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS Series II LGP Horsepower: 240
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$90.24</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$78.95</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$9.25</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$5.20</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$222.23</u>	
Total Fleet Cost/Hour:	<u>\$444.45</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 18.00 acres Rip Depth (ft): 1.00 Volume: 29,040 BCY or CCY

Source of estimated quantity: TR-37

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.45 feet/pass
Average Ripping Width: 6.50 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: 0.755 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.755 Acres/hr
Site Altitude: 11,100 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.63 Acres/hr
Adjusted Hourly Fleet Production: 1.25 Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: 14.37 Hours

Unit cost: \$354.785 Per acre Total job cost: \$6,386

Construct Water Conveyances								
Task #	Area	Description	Task Type	Quant	Unit	Cost/Unit	Total Cost	Key Assumptions
107.10	Robinson Lake	Clean Water Surface Channel	Excavate diversion/spillway	8,238	CY	\$ 3.66	\$ 30,151	
	Robinson Lake	Rip Rap	Rip Rap Armoring	3,690	CY	\$ 74.40	\$ 274,536	
	Robinson Lake	Bedding for Riprap Placed	Drain Rock	4,416	CY	\$ 73.88	\$ 326,254	
	Robinson lake	Impacted Water Pipeline	Pipeline	1,720	LF	\$ 78.33	\$ 134,728	Bwtn 1 Dam to Tims Pond
P2001	Robinson lake	Hydrologic Protection					\$ 765,669	

REVEGETATION WORKTask description: Robinson Lake - Reveg - HydricSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: P3001State: ColoradoAbbreviation: NoneDate: 6/11/2024County: LakeFilename: M493-P3001User: ACYAgency 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
Baltic Rush	0.44	123.64	\$82.95
Aquatic Sedge	0.38	10.05	\$106.99
Merten's Rush	0.01	1.40	\$1.64
Cinquefoil, Slender	0.24	23.40	\$117.75
Idaho Fescue	0.18	2.27	\$2.56
Butterwort, Golden	0.16	5.10	\$35.37
Mannagrass, Northwest	0.22	1.83	\$3.41
Elephant Head	0.16	4.02	\$91.22
Reedgrass, Canadian (or Blue Joint)	0.12	12.34	\$49.51

Timothy, Alpine - Native	0.40	11.94	\$15.67
Tufted Hairgrass	0.26	14.92	\$7.40
Monkey Flower	0.24	24.44	\$40.98
Totals Seed Mix	2.81	235.35	\$555.45

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$272.56
Total Seed Application Cost/Acre	\$272.56

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: 43 Cost /Acre: \$828.01
 Estimated Failure Rate: 10% Cost /Acre*: \$828.01
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$35,604.43**
 Reseeding Job Cost: **\$3,560.44**
 Total Job Cost: **\$39,165**
 Job Hours: **47.30**

P4001-P4002 Lower Robinson Lake Cleanout								
Task #	Description		Quantity	Units	Cost	EPS Sign Off	Source	Key Assumptions
P4001		Robinson Lake- Pre-Excavation Work & Water Mgmt	1,087.00	Hrs	\$ 519,326	CVS	CVS	
P4002		Robinson Lake - Finish Work	270.00	Hrs	\$ 129,000	CVS	CVS	

TRUCK/LOADER TEAM WORKTask description: **5 Dam - Haul Topsoil**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **Q1001**State: **Colorado**Abbreviation: **None**Date: **8/21/2024**County: **Lake**Filename: **M493-Q1001**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$123.04
Number of Units:	6	3	1	0	1	1
Group Subtotals:	Work: \$1,700.82		Support: \$209.53		Maint: \$274.70	

Total work team cost/hour: **\$2,185.05****MATERIAL QUANTITIES**Initial volume: **196,170**

CCY

Swell factor: **1.215**Loose volume: **238,347**

LCY

Source of estimated volume: **TR-37**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: **87,000**

Pounds

Payload Capacity: **54.38**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **31.50** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	5.250	LCY

Job Condition Corrections:

Site Altitude (ft.): 10400 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.498	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 6 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.300	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.300	Minutes	Adjusted for site altitude:	2.300	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3693.00	-4.30	3.00	-1.30	3005	1.288

Haul Time: **1.288** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3693.00	4.30	3.00	7.30	2470	1.702

Return Time: **1.702** minutesTotal Truck Cycle Time: **7.957** minutes

Loading Tool unit

Production 572.73 LCY/Hour Adjusted for job efficiency: 475.36 LCY/Hour
Truck Unit Production 237.54 LCY/Hour Adjusted for job efficiency: 197.16 LCY/Hour

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

Adjusted hourly truck team production: 394.31 LCY/Hour
Adjusted single truck/loader team production: 394.31 LCY/Hour
Adjusted multiple truck/loader team production: **1,182.93** LCY/Hour

JOB TIME AND COSTFleet size: 3 Team(s) Total job time: **201.49** HoursUnit cost: \$1.847 /LCY Total job cost: **\$440,261**

BULLDOZER WORKTask description: **5 Dam - Grade Topsoil**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **Q1002**State: **Colorado**Abbreviation: **None**Date: **8/21/2024**County: **Lake**Filename: **M493-Q1002**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **NA**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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**Total Fleet Cost/Hour: **\$321.62****MATERIAL QUANTITIES**Initial Volume: **235,404**Swell factor: **1.000**Loose volume: **235,404 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **250 feet**Unadjusted hourly production: **377.8 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **-30 %**Average site altitude: **10,400 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.3758

Adjusted unit production: 519.78 LCY/hr

Adjusted fleet production: **519.78 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.619/LCY

Total job time: **452.89** Hours

Total job cost: **\$145,657**

TRUCK/LOADER TEAM WORKTask description: **5 Dam - Haul Bedding Material**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **Q1003**State: **Colorado**Abbreviation: **None**Date: **8/21/2024**County: **Lake**Filename: **M493-Q1003**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	Cat D6T LGP
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	NA	100	100
Ownership cost/hour:	\$108.25	\$57.78	\$99.72	NA	\$69.16	\$51.70
Operating cost/hour:	\$79.54	\$46.25	\$71.22	NA	\$54.74	\$50.22
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$25.24	\$36.85	\$38.59	NA	\$27.76	\$21.12
Unit Subtotals:	\$213.03	\$140.88	\$209.53	NA	\$151.66	\$123.04
Number of Units:	6	1	1	0	1	1
Group Subtotals:	Work: \$1,419.06		Support: \$209.53		Maint: \$274.70	

Total work team cost/hour: **\$1,903.29****MATERIAL QUANTITIES**Initial volume: **7,583**

CCY

Swell factor: **1.000**Loose volume: **7,583**

LCY

Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **2,600**

Pounds/LCY

Description: **Limestone - Broken**Rated Payload: **87,000**

Pounds

Payload Capacity: **33.46**

LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: 28.88 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	4.125	LCY

Job Condition Corrections:

Site Altitude (ft.): 10400 feet

	Truck	Loader	Source
Altitude Adj:	0.600	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.498** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 7 passes

Excavators and Front Shovels:

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

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.440	minutes
Net Load Time per Truck:		2.740	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	1.000	Minutes
Truck Load Time:	2.740	Minutes	Adjusted for site altitude:	2.740	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.667	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	16738.00	4.40	3.00	7.40	1281	13.250

Haul Time: **13.250** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	16738.00	-4.40	3.00	-1.40	3706	4.656

Return Time: **4.656** minutesTotal Truck Cycle Time: **23.313** minutes

Loading Tool unit

Production 463.24 LCY/Hour Adjusted for job efficiency: 384.49 LCY/Hour
Truck Unit Production 74.32 LCY/Hour Adjusted for job efficiency: 61.68 LCY/Hour

Optimal No. of Trucks: 6 Truck(s) Selected Number of Trucks: 6 Truck(s)

Adjusted hourly truck team production: 370.09 LCY/Hour
Adjusted single truck/loader team production: 370.09 LCY/Hour
Adjusted multiple truck/loader team production: **370.09** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **20.49** Hours

Unit cost: \$5.143 /LCY Total job cost: **\$38,997**

Construct Water Conveyances								
Task #	Area	Description	Task Type	Quant	Unit	Cost/Unit	Total Cost	Key Assumptions
103.7	5 Dam	Clean Water Surface Channel	Excavate diversion/spillway	7,706	CY	\$ 3.66	\$ 28,204	Inot tenmile creek
104.7	5 Dam	Rip Rap	Rip Rap Armoring	3,452	CY	\$ 74.40	\$ 256,829	Inot tenmile creek
105.7	5 Dam	Bedding for Riprap Placed	Drain Rock	4,131	CY	\$ 73.88	\$ 305,198	Inot tenmile creek
103.10	5 Dam	Impacted Water Pipeline	30" Corrugated HDPE Installed	8,200	LF	\$ 78.33	\$ 642,306	
Q2001	5 Dam	Hydrologic Protection					\$ 1,232,537	

REVEGETATION WORKTask description: **5 Dam - Reveg - Upland**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **Q3001**State: **Colorado**Abbreviation: **None**Date: **8/20/2024**County: **Lake**Filename: **M493-Q3001**User: **ACY**Agency 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
Alpine Bluegrass	0.22	5.05	\$5.26
Arizona Fescue - Redondo	0.90	10.33	\$13.56
Mountain Brome - Bromar	3.40	5.46	\$20.46
Cinquefoil, Slender	0.08	7.80	\$39.25
Currant, Wax	0.32	1.10	\$22.20
Rocky Mountain Fescue	0.34	5.46	\$3.67
Lupine, Silver	3.48	2.04	\$416.06
Slender Wheatgrass - Native	1.36	4.96	\$9.61
Vetch, American	2.66	1.20	\$327.49

Prairie Junegrass	0.18	9.57	\$8.77
Flax, Lewis Blue	0.90	5.97	\$38.07
Timothy, Alpine - Native	0.50	14.92	\$19.59
Tufted Hairgrass	0.34	19.51	\$9.68
Penstemon, Rocky Mountain	0.54	8.46	\$33.16
Yarrow, White	0.10	6.36	\$7.34
Totals Seed Mix	15.32	108.21	\$974.17

Application

Description	Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)	\$1,359.07
Total Seed Application Cost/Acre	\$1,359.07

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hydromulch, 1 ton/ac. rate {Materials Only}	1.00	ACRE	\$1,459.26	\$1,459.26
Total Mulch Materials Cost/Acre				\$1,459.26

Application

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

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 61
 Estimated Failure Rate: 10%
 *Selected Replanting Work Items: SEEDING,MULCHING

Cost /Acre: \$3,792.50

Cost /Acre*: \$3,792.50

Initial Job Cost: **\$231,342.50**
 Reseeding Job Cost: **\$23,134.25**
 Total Job Cost: **\$254,477**
 Job Hours: **67.10**

SAFEGUARDING UNDERGROUND OPENINGS

Task description: **Seal Underground Openings**

Site: **Climax Mine** Permit Action: 2024-06 Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: R4001 State: Colorado Abbreviation: None
Date: 6/18/2024 County: Lake Filename: M493-R4001
User: ACY

Agency or organization name: DRMS

UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
No. 3 Gallery - Bulkhead	8' x 8'	USER PROVIDED ITEM	4.74	CY	\$1,377.77	\$6,532.01
Storke Portal - Bulkhead	12' x 14'	USER PROVIDED ITEM	12.44	CY	\$1,378.38	\$17,147.05
Phillipson Portal - Bulkhead	10' x15'	USER PROVIDED ITEM	11.11	CY	\$1,378.04	\$15,310.02

Job Hours: 834.00

Total Cost: \$38,989.08

BOREHOLE SEALING WORK

Task description: Abandon Monitoring Wells

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: R4002

State: Colorado

Abbreviation: None

Date: 6/11/2024

County: Lake

Filename: M493-R4002

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
13 Monitoring Wells	Portland cement grout - 4 in. (labor, equip, materials)	4	156.9	2,040.00	LF	\$8.71	\$17,774.93
Water Truck	Water Tanker, 3,500 Gal.	1	1	13.00	EA	\$75.02	\$975.26

Job Hours: 20.40

Total Cost: \$18,750.00

S4001 Impacted Water Treatment										
Specific Tasks	Quantity	Units	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost	Comment
Existing WTP Annual Treatment cost (10 years)	12,820	Mgal				\$ -	\$ 730.00	\$ 9,358,600	\$ 9,358,600	Current 2022 cost = \$2.34 million. 3,206 MG/Yr. Assume 60% reduction in volume post-closure.
Projected additional cost for Molybdenum WTP										
Labor (water/maintenance/electrician) (8 FTE for 10 years)	80	FTE			73,049.60	\$ 5,843,968		\$ -	\$ 5,843,968	Assumes 8 water/maintenance operators on rotating shifts
Site Supervisor (1 FTE for 10 years)	10	FTE			198,265.60	\$ 1,982,656		\$ -	\$ 1,982,656	Assumes 1 Site Supervisor for the management of the crew and site
Lime 273 tons/year for 10 years)	2,730	tons				\$ -	\$ 206.00	\$ 562,380	\$ 562,380	Assumes consistent lime usage for treatment post mining
Sulfuric Acid (67,200 lbs each year for 10 years)	672,000	Lbs				\$ -	\$ 0.31	\$ 208,320	\$ 208,320	Assumes consistent acid usage for treatment post mining
Ferric sulfate (410 tons/year for 10 years)	4,100	tons				\$ -	\$ 0.31	\$ 1,271	\$ 1,271	Assumes consistent usage for treatment post mining
Other Reagents (polymer) (67k lbs per year for 10 years)	670,000	Lbs				\$ -	\$ 3.55	\$ 2,378,500	\$ 2,378,500	Assumes consistent polymer usage for treatment post mining
Power	10	year				\$ -	\$ 142,500.00	\$ 1,425,000	\$ 1,425,000	\$0.285M per year currently- assume 50% post closure for treatment systems
Natural Gas	10	year				\$ -	\$ 76,500.00	\$ 765,000	\$ 765,000	\$153K per year (2022)- assume 50% post closure for remaining buildings
Vehicles	10	units	\$ 7,500	\$ 75,000		\$ -		\$ -	\$ 75,000	Pickups for access to remote water system check points
Loader (1 loader for 10 years)	10	year	\$ 303,493	\$ 3,034,930		\$ -		\$ -	\$ 3,034,930	Loader for road maintenance, snow plowing and general maintenance
Outside Services	10	year			359,560.00	\$ 3,595,600			\$ 3,595,600	\$719K per year currently- assume 50% post closure
Sampling and maintenance	10	year	\$ 660,500	\$ 6,605,000		\$ -		\$ -	\$ 6,605,000	Regular maintenance, service of installed pump sets and sampling 2022. assume 50% reduction.
Sludge disposal	10	year				\$ -	\$ 128,767.60	\$ 1,287,676	\$ 1,287,676	
									Total Cost	
TOTAL COSTS			\$ 9,714,930		\$ 11,422,224		\$ 15,986,747		\$ 37,123,901	

Notes: Cost per MG from actual 2022 Climax cost plus estimated unit cost for Molybdenum Water Treatment Plant.
Annual treatment volume (2022) 3,206 MG/year. Based on Wheeler 2023. Assume 50% reduction in flows post-closure.
Sludge disposal estimate December 2023 from RADPROS. Based on approximately 1 million gallons/year 2022 - 2023. Assume 40% post-closure.

U4001-U4005 Monitoring -Site Maintenance						
Task #	Description	Quantity	Units	Cost	Revision #/ EPS Sign Off Source	Key Assumptions
U4001	Tailings stewardship	100.00		\$ 3,000,000.00	CVS	
U4002	Operations and Maintenance first 10-year period	45000.00	Hrs	\$ 3,696,300.00	CVS Mtnc&Envi	
U4003	Operations and Maintenance second 10-year period	27000.00	Hrs	\$ 2,217,780.00	CVS Mtnc&Envi	
U4004	Operations and Maintenance first 10-year period	13500.00	Hrs	\$ 1,108,890.00	CVS Mtnc&Envi	
	Water Quality Monitoring Yr 1 (2024)	100.00	Hrs	\$ 9,245.48	CVS	
	Water Quality Monitoring Yr 2	100.00	Hrs	\$ 9,620.58	CVS	
	Water Quality Monitoring Yr 3	100.00	Hrs	\$ 10,010.91	CVS	
	Water Quality Monitoring Yr 4	100.00	Hrs	\$ 10,417.06	CVS	
	Water Quality Monitoring Yr 5	100.00	Hrs	\$ 10,839.70	CVS	
	Water Quality Monitoring Yr 6	100.00	Hrs	\$ 11,279.49	CVS	
	Water Quality Monitoring Yr 7	100.00	Hrs	\$ 11,737.11	CVS	
	Water Quality Monitoring Yr 8	100.00	Hrs	\$ 12,213.31	CVS	
	Water Quality Monitoring Yr 9	100.00	Hrs	\$ 12,708.82	CVS	
	Water Quality Monitoring Yr 10	100.00	Hrs	\$ 13,224.44	CVS	
	Water Quality Monitoring Yr 11	100.00	Hrs	\$ 13,760.97	CVS	
	Water Quality Monitoring Yr 12	100.00	Hrs	\$ 14,319.28	CVS	
	Water Quality Monitoring Yr 13	100.00	Hrs	\$ 14,900.23	CVS	
	Water Quality Monitoring Yr 14	100.00	Hrs	\$ 15,504.76	CVS	
	Water Quality Monitoring Yr 15	100.00	Hrs	\$ 16,133.81	CVS	
	Water Quality Monitoring Yr 16	100.00	Hrs	\$ 16,788.39	CVS	
	Water Quality Monitoring Yr 17	100.00	Hrs	\$ 17,469.52	CVS	
	Water Quality Monitoring Yr 18	100.00	Hrs	\$ 18,178.28	CVS	
	Water Quality Monitoring Yr 19	100.00	Hrs	\$ 18,915.81	CVS	
	Water Quality Monitoring Yr 20	100.00	Hrs	\$ 19,683.25	CVS	
	Water Quality Monitoring Yr 21	100.00	Hrs	\$ 20,481.83	CVS	
	Water Quality Monitoring Yr 22	100.00	Hrs	\$ 21,312.81	CVS	
	Water Quality Monitoring Yr 23	100.00	Hrs	\$ 22,177.51	CVS	
	Water Quality Monitoring Yr 24	100.00	Hrs	\$ 23,077.28	CVS	
	Water Quality Monitoring Yr 25	100.00	Hrs	\$ 24,013.57	CVS	
	Water Quality Monitoring Yr 26	100.00	Hrs	\$ 24,987.83	CVS	
	Water Quality Monitoring Yr 27	100.00	Hrs	\$ 26,001.63	CVS	
	Water Quality Monitoring Yr 28	100.00	Hrs	\$ 27,056.56	CVS	
	Water Quality Monitoring Yr 29	100.00	Hrs	\$ 28,154.29	CVS	
	Water Quality Monitoring Yr 30	100.00	Hrs	\$ 29,296.55	CVS	
U4005	Water Quality Monitoring for 30 Years	3000.00	Hrs	\$ 523,511.05		

DEMOLITION WORK

Task description: Demolition of Structures

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: X4001

State: Colorado

Abbreviation: None

Date: 6/18/2024

County: Lake

Filename: M493-X4001

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 87.90 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
6 CRUSHER SWCH HSE - SUPERSTRUCTURE	80Lx38Wx15H (-30%)	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	31,920.00	CF	\$0.24	\$7,769.33
6 CRUSHER SWCH HSE - Floor	10" @ 80Lx38W	Floor, concrete, demolition only, average reinforcing - 10 in. thick	3,040.00	SF	\$1.84	\$5,586.61
6 CRUSHER SWCH HSE - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	236.00	LF	\$6.62	\$1,561.28
MILL LIME SILO - SUPERSTRUCTURE	60Lx16Wx16H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	15,360.00	CF	\$0.24	\$3,738.62
MILL LIME SILO - Floor	8" @ 60Lx16W	Floor, concrete, demolition only, average reinforcing - 8 in. thick	960.00	SF	\$1.47	\$1,411.30
MILL LIME SILO - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	152.00	LF	\$6.62	\$1,005.57
DOMESTIC WATER PLANT - SUPERSTRUCTURE	45Lx81Wx24H (-30%)	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	61,236.00	CF	\$0.33	\$20,122.15
DOMESTIC WATER PLANT - Floor	12"@ 45Wx81L	Floor, concrete, demolition only, average reinforcing - 12 in. thick	3,645.00	SF	\$2.21	\$8,037.95
DOMESTIC WATER PLANT - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	252.00	LF	\$6.62	\$1,667.13
3 MILL - SUPERSTRUCTURE	725Lx180Wx80H (-30%)	Plant (3S) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	7,308,000.00	CF	\$0.48	\$3,535,610.40
3 MILL - Floor	12"@ 725Lx180W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	130,500.00	SF	\$2.21	\$287,778.60

3 MILL - Footings	2ft x 3ft	Footing, concrete, average reinforcing - 2.0 ft. x 3 ft.	1,810.00	LF	\$13.23	\$23,948.47
TAILING DIST HOUSE - SUPERSTRUCTURE	60Lx40Wx14H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	34,160.00	CF	\$0.24	\$8,314.54
TAILING DIST HOUSE - Floor	12" @ 61Lx40W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	2,440.00	SF	\$2.21	\$5,380.69
MILL TANK VALVE HSE1 - SUPERSTRUCTURE	21Lx29Wx10H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	6,090.00	CF	\$0.24	\$1,482.31
MILL TANK VALVE HSE1 - Floor	12" @ 21Lx29W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	609.00	SF	\$2.21	\$1,342.97
MILL TANK VALVE HSE2 - SUPERSTRUCTURE	20Lx20Wx10H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	4,000.00	CF	\$0.24	\$973.60
MILL TANK VALVE HSE2 - Floor	12" @ 20Lx20W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	400.00	SF	\$2.21	\$882.08
6 CRUSHER SECONDARY - SUPERSTRUCTURE	160Lx90Wx87H	Plant (3S) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,252,800.00	CF	\$0.48	\$606,104.64
6 CRUSHER SECONDARY - Floor	12"@ 160Lx90W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	14,400.00	SF	\$2.21	\$31,754.88
6 CRUSHER SECONDARY - Footing	2ft x 3ft	Footing, concrete, average reinforcing - 2.0 ft. x 3 ft.	500.00	LF	\$13.23	\$6,615.60
6 CRUSHER PRIMARY - SUPERSTRUCTURE	60Lx110Wx72H	Plant (3S) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	475,200.00	CF	\$0.48	\$229,901.76
6 CRUSHER PRIMARY - Floor	12"@ 60Lx110W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	6,600.00	SF	\$2.21	\$14,554.32
6 CRUSHER OFFICE - SUPERSTRUCTURE	30Lx72Wx16H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	34,560.00	CF	\$0.24	\$8,411.90
6 CRUSHER OFFICE - Floor	12"@ 30Lx72W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	2,160.00	SF	\$2.21	\$4,763.23
6 CRUSHER	1.5ft x 2ft	Footing, concrete,	204.00	LF	\$6.62	\$1,349.58

OFFICE - Footings		average reinforcing - 1.5 ft. x 2 ft.				
GATEHOUSE - SUPERSTRUCTURE	64Lx40Wx10H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	25,600.00	CF	\$0.24	\$6,231.04
GATEHOUSE - Floor	12"@ 64Lx40W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	2,560.00	SF	\$2.21	\$5,645.31
GATEHOUSE - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	206.00	LF	\$6.62	\$1,362.81
COVERED STORAGE - SUPERSTRUCTURE	60Lx25Wx14H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	21,000.00	CF	\$0.24	\$5,111.40
COVERED STORAGE - Floor	12"@ 60Lx25W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	1,500.00	SF	\$2.21	\$3,307.80
COVERED STORAGE - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	170.00	LF	\$6.62	\$1,124.65
NEW SCALE HOUSE - SUPERSTRUCTURE	80Lx16Wx16H (-30%)	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	14,336.00	CF	\$0.33	\$4,710.81
NEW SCALE HOUSE - Floor	12" @ 80Lx16W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	1,280.00	SF	\$2.21	\$2,822.66
PHLLPSN MAPP GAS HSE - SUPERSTRUCTURE	20Lx45Wx8H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	7,200.00	CF	\$0.24	\$1,752.48
PHLLPSN MAPP GAS HSE - Floor	12"@ 40Lx45W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	900.00	SF	\$2.21	\$1,984.68
PHLLPSN MAPP GAS HSE - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	130.00	LF	\$6.62	\$860.03
OPEN PIT FUEL TANKS - SUPERSTRUCTURE	100Lx25Wx8H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	20,000.00	CF	\$0.24	\$4,868.00
OPEN PIT FUEL TANKS - Floor	12"@ 100Lx25W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	2,500.00	SF	\$2.21	\$5,513.00
OPEN PIT FUEL TANKS - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	250.00	LF	\$6.62	\$1,653.90

DOMESTIC WATER TANK - SUPERSTRUCTURE	44Lx44Wx40H	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	77,440.00	CF	\$0.33	\$25,446.78
DOMESTIC WATER TANK - Floor	12"@ 44Lx44W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	1,936.00	SF	\$2.21	\$4,269.27
DOMESTIC WATER TANK - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	176.00	LF	\$6.62	\$1,164.35
OPEN PIT FUEL PUMP HSE - SUPERSTRUCTURE	40Lx20Wx12H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	9,600.00	CF	\$0.24	\$2,336.64
OPEN PIT FUEL PUMP HSE - Floor	12" @ 40Lx20W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	800.00	SF	\$2.21	\$1,764.16
PHILLIPSON WAREHOUSE - SUPERSTRUCTURE	76Lx94Wx42H (-30%)	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	210,034.00	CF	\$0.33	\$69,017.17
PHILLIPSON WAREHOUSE - Floor	12"@ 76Lx94W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	7,144.00	SF	\$2.21	\$15,753.95
PHILLIPSON WAREHOUSE - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	340.00	LF	\$6.62	\$2,249.30
OPEN PIT PHASE 1 SHOP - SUPERSTRUCTURE	146Lx56Wx52H (-30%)	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	297,606.00	CF	\$0.33	\$97,793.33
OPEN PIT PHASE 1 SHOP - Floor	12"@ 146Lx56W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	8,176.00	SF	\$2.21	\$18,029.72
OPEN PIT PHASE 1 SHOP - Footing	2ft x 3ft	Footing, concrete, average reinforcing - 2.0 ft. x 3 ft.	404.00	LF	\$13.23	\$5,345.40
OPEN PIT OFFICES - SUPERSTRUCTURE	48Lx80Wx25H (-30%)	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	67,200.00	CF	\$0.33	\$22,081.92
OPEN PIT OFFICES - Floor	12"@ 48Lx80W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	3,840.00	SF	\$2.21	\$8,467.97
OPEN PIT OFFICES - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	240.00	LF	\$6.62	\$1,587.74
OPEN PIT PHASE 2 SHOP -	400Lx80Wx70H (-30%)	Bldg. (MN) demo./on-site	1,724,800.00	CF	\$0.33	\$566,769.28

SUPERSTRUCTURE		disposal in existing pit or cut - Max. 10,000 ft. haul				
OPEN PIT PHASE 2 SHOP - Floor	12"@ 400Lx80W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	35,200.00	SF	\$2.21	\$77,623.04
OPEN PIT PHASE 2 SHOP - Footing	2ft x 3ft	Footing, concrete, average reinforcing - 2.0 ft. x 3 ft.	1,040.00	LF	\$13.23	\$13,760.45
OPEN PIT WASH BAY - SUPERSTRUCTURE	90Lx105Wx60H (-30%)	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	396,900.00	CF	\$0.33	\$130,421.34
OPEN PIT WASH BAY - Floor	12"@ 90Lx105W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	9,450.00	SF	\$2.21	\$20,839.14
OPEN PIT WASH BAY - Footing	2ft x 3 ft	Footing, concrete, average reinforcing - 2.0 ft. x 3 ft.	390.00	LF	\$13.23	\$5,160.17
TENMILE TUNNEL SHOP - SUPERSTRUCTURE	34Lx26Wx16H (-30%)	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	9,901.00	CF	\$0.24	\$2,409.90
TENMILE TUNNEL SHOP - Floor	12"@ 34Lx26W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	884.00	SF	\$2.21	\$1,949.40
TENMILE TUNNEL SHOP - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	120.00	LF	\$6.62	\$793.87
TENMILE TUNL OFC - SUPERSTR. (trailer)	50Lx20Wx12H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	12,000.00	CF	\$0.24	\$2,920.80
TENMILE TUNL OFC - SUPERSTR. - Foundations	12" @ 50Lx20W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	1,000.00	SF	\$2.21	\$2,205.20
TENMILE TUNL CMP HSE - SUPERSTRUCTURE	18Lx18Wx12H (-30%)	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,722.00	CF	\$0.24	\$662.53
TENMILE TUNL CMP HSE - Floor	12"@ 10Lx18W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	324.00	SF	\$2.21	\$714.48
TENMILE TUNL CMP HSE - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	72.00	LF	\$6.62	\$476.32
TENMILE TUNL DMP HSE - SUPERSTRUCTURE	40Lx12Wx10H (-30%)	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max.	3,360.00	CF	\$0.24	\$817.82

		10,000 ft. haul				
TENMILE TUNL DMP HSE - Floor	8"@ 40Lx12W	Floor, concrete, demolition only, average reinforcing - 8 in. thick	480.00	SF	\$1.47	\$705.65
TENMILE TUNL DMP HSE - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	104.00	LF	\$6.62	\$688.02
TENMILE BARGE - SUPERSTRUCTURE	36Lx36Wx10H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	12,960.00	CF	\$0.24	\$3,154.46
TENMILE BARGE - Floor	12" @ 36Lx36W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	1,296.00	SF	\$2.21	\$2,857.94
POND SHOP - SUPERSTRUCTURE	60Lx40Wx20H	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	48,000.00	CF	\$0.33	\$15,772.80
POND SHOP - Floor	12"@ 60Lx40W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	2,400.00	SF	\$2.21	\$5,292.48
POND SHOP - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	200.00	LF	\$6.62	\$1,323.12
POND SHOP DOCKS - SUPERSTRUCTURE	200Lx20Wx3H (- 30%)	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	8,400.00	CF	\$0.24	\$2,044.56
POND SHOP DOCKS - Floor	12" @ 200Lx20W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	4,000.00	SF	\$2.21	\$8,820.80
TENMILE COHEREX STA - SUPERSTRUCTURE	22Lx40Wx10H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	8,800.00	CF	\$0.24	\$2,141.92
TENMILE COHEREX STA - Floor	12"@ 22Lx40W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	880.00	SF	\$2.21	\$1,940.58
TENMILE COHEREX STA - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	124.00	LF	\$6.62	\$820.33
Decommissioning - Mine Mill	-	USER PROVIDED ITEM	1.00	EA	\$250,000.00	\$250,000.00
Abate Asbestos and Remove Regulated Materials	-	USER PROVIDED ITEM	1.00	EA	\$450,000.00	\$450,000.00
Explosives Shed (Powder Storage)	13Hx8Wx8H (- 30%)	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max.	582.00	CF	\$0.24	\$141.66

		10,000 ft. haul				
New Mill Building	1105Lx805Wx13H (-30%)	Plant (3S) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	8,094,678.00	CF	\$0.48	\$3,916,205.22
New Mill Building - Floor	15"@ 1108x805	Floor, concrete, demolition only, average reinforcing - 12 in. thick	889,525.00	SF	\$2.21	\$1,961,580.53
Train Shack at Ten Mile North Portal	50Lx20Wx14H (-30%)	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	9,800.00	CF	\$0.24	\$2,385.32
Train Shack at Ten Mile North Portal - Floor	6" @ 50x20	Floor, concrete, demolition only, average reinforcing - 6 in. thick	1,000.00	SF	\$1.10	\$1,102.60
Mayflower Coherex Station - Building	7Lx8Wx19H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,064.00	CF	\$0.24	\$258.98
Mayflower Coherex Station - Floor	12"@ 36Lx30Wx2H	Floor, concrete, demolition only, average reinforcing - 12 in. thick	1,080.00	SF	\$2.21	\$2,381.62
Mayflower Coherex Station - Floor 2	12"@ 50Lx30W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	1,500.00	SF	\$2.21	\$3,307.80
Supply Canal No. 2 Pipeline - Grouting	5Lx3W	USER PROVIDED ITEM	565.00	CF	\$30.13	\$17,023.45
Mill Return Pipeline - Grouting	5L x 1W	USER PROVIDED ITEM	31.00	CF	\$30.13	\$934.03
Supply Canal No. 2 Pipeline - Footing	80Lx2Wx2H	USER PROVIDED ITEM	1,280.00	LF	\$18.64	\$23,859.20
Mayflower Flood Bypass Tunnel	10Lx10Wx35H	USER PROVIDED ITEM	1.00	EA	\$530,000.00	\$530,000.00
Decommissioning	-	USER PROVIDED ITEM	1.00	EA	\$150,000.00	\$150,000.00
Remove Regulated Materials	-	USER PROVIDED ITEM	1.00	EA	\$100,000.00	\$100,000.00
Chalk Mountain / Robinson Lake Sub	20Lx8Wx8H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,280.00	CF	\$0.24	\$311.55
4 Dam Seep Pump Shack	15Lx12Wx13W	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	2,340.00	CF	\$0.24	\$569.56
4 Dam Sep Pump Shack - floor	12" @ 15Lx12W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	180.00	SF	\$2.21	\$396.94
Robinson Lake Seep Pump Shack	14Lx12Wx13H	Bldg. (SN) demo./on-site	2,184.00	CF	\$0.24	\$531.59

		disposal in existing pit or cut - Max. 10,000 ft. haul				
Robinson Lake Seep Pump Shack - floor	12" @ 14Lx12W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	168.00	SF	\$2.21	\$370.47
3 Dam Pumpstation	36Lx30Wx30H (- 30%)	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	39,690.00	CF	\$0.33	\$13,042.13

Job Hours: 24,875.00

Subtotal
(unadjusted): \$13,439,814.83

Total Cost
(adjusted for
location): \$11,813,597.24

DEMOLITION WORK

Task description:

Demolition of Linear

Site: Climax Mine

Permit Action: 2024-06

Permit/Job#: M1977493

PROJECT IDENTIFICATION

Task #: X4002

State: Colorado

Abbreviation: None

Date: 6/20/2024

County: Lake

Filename: M493-X4002

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 87.90 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
MAYFLOWER HLDNG TANK - SUPERSTRUCTURE	28Lx28Wx18H	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	14,112.00	CF	\$0.33	\$4,637.20
MAYFLOWER HLDNG TANK - Floor	5ft@ 28x28	Floor, concrete, demolition only, average reinforcing - 12 in. thick	3,920.00	SF	\$2.21	\$8,644.38
CHALK MTN PUMP HOUSE - SUPERSTRUCTURE	25Lx25Wx20H)-30%	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	8,750.00	CF	\$0.33	\$2,875.25
CHALK MTN PUMP HOUSE - Floor	12"@ 25Lx25W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	625.00	SF	\$2.21	\$1,378.25
CHALK MTN PUMP HOUSE - Footing	1.5ft x 2ft	Footing, concrete, average reinforcing - 1.5 ft. x 2 ft.	100.00	LF	\$6.62	\$661.56
3 MILL SUBSTATION - SUPERSTRUCTURE	155Lx30Wx15H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	69,750.00	CF	\$0.24	\$16,977.15
3 MILL SUBSTATION - Floor	12" @ 155Lx30W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	4,650.00	SF	\$2.21	\$10,254.18
OPEN PIT SHOP SUB - SUPERSTRUCTURE	25Lx25Wx15H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	9,375.00	CF	\$0.24	\$2,281.88
OPEN PIT SHOP SUB - Floor	12"@ 25Lx25W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	625.00	SF	\$2.21	\$1,378.25
DOMESTIC WATER SUB - WOOD STRUCTURE	20Lx20Wx8H	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	3,200.00	CF	\$0.24	\$778.88
DOMESTIC WATER SUB - Floor	12"@ 8Lx4W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	32.00	SF	\$2.21	\$70.57
IRECO PLANT SUB	20Lx20Wx8H	Bldg. (SN) demo./on-	3,200.00	CF	\$0.24	\$778.88

- SUPERSTRUCTURE		site disposal in existing pit or cut - Max. 10,000 ft. haul				
IRECO PLANT SUB - Floor	12"@ 12Lx12W	Floor, concrete, demolition only, average reinforcing - 12 in. thick	144.00	SF	\$2.21	\$317.55
OPEN PIT UTIL LINES - 21 POLES	21@ 35'-45' Wood	Utility Poles, Wood 35' - 45' high (each pole)	21.00	EA	\$325.00	\$6,825.00
OPEN PIT UTIL LINES - Line	4977 LF	Disposal of utility pole and hardware surplus material	4,977.00	LF	\$0.02	\$99.54
TAILING UTILITY LINE - 25 POLES	25@ 35'-45' Wood	Utility Poles, Wood 35' - 45' high (each pole)	25.00	EA	\$325.00	\$8,125.00
TAILING UTILITY LINE - Line	5925 LF	Disposal of utility pole and hardware surplus material	5,925.00	LF	\$0.02	\$118.50
Decommissioning - Water Control Structures	-	USER PROVIDED ITEM	1.00	EA	\$30,000.00	\$30,000.00
Remove Regulated Materials - Subs & Utility	-	USER PROVIDED ITEM	1.00	EA	\$30,000.00	\$30,000.00
Remove TDL Pipe RCP	42-48"	Pipe, reinforced concrete (RCP) - 42 in. diameter pipe	12,808.00	LF	\$76.25	\$976,592.07
Remove TDL Pipe HDPE	20-36"	Pipe, sewer/water - 27 to 36 in. diameter pipe	10,531.00	LF	\$7.86	\$82,773.66
Haul TDL HDPE pipe to landfill-Load	133mi	Loading and 2 mile haul, no salvage - Machine loading	3,753.00	CY	\$21.15	\$79,375.95
Haul TDL HDPE pipe to landfill-haul	208 Trips @131mi	Hauling only, per mile, 12-18 CY truck - 50 mph average speed	27,314.00	MI	\$4.43	\$121,096.62
HDPE pipe to landfill-disposal fee	3753 CY	Dump fees - Building construction materials.	3,753.00	CY	\$11.10	\$41,658.30
CMP 18" culvert	18"x215LF	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	215.00	LF	\$8.10	\$1,740.90
CMP 24" culvert	24"x205LF	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	205.00	LF	\$10.60	\$2,172.00
CMP 36" culvert	36"x170LF	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	170.00	LF	\$16.96	\$2,883.25
CMP 42" culvert	42"@25LF	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	25.00	LF	\$16.96	\$424.01
Wood 34" culvert	120LF	USER PROVIDED ITEM	120.00	LF	\$13.62	\$1,634.40
Plastic 18" culvert	18"@552LF	Pipe, sewer/water - 15 to 18 in. diameter pipe	552.00	LF	\$5.24	\$2,892.48
Plastic 24" culvert	24"@230LF	Pipe, sewer/water - 21 to 24 in. diameter pipe	552.00	LF	\$7.86	\$4,338.72
Plastic 42" culvert	42"@811LF	Pipe, sewer/water - 27 to 36 in. diameter pipe	552.00	LF	\$7.86	\$4,338.72
Haul culverts to pit	33Hr	USER PROVIDED ITEM	33.00	HR	\$104.45	\$3,446.85

Job Hours:	367.00	Subtotal		Total Cost	
		(unadjusted):	\$1,451,569.95	(adjusted for	
				location):	\$1,275,929.99

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial Mobilization**Site: **Climax Mine**Permit Action: **2024-06**Permit/Job#: **M1977493****PROJECT IDENTIFICATION**Task #: **Z0001**State: **Colorado**Abbreviation: **None**Date: **9/12/2024**County: **Summit**Filename: **M493-Z0001**User: **ACY**Agency or organization name: **DRMS****EQUIPMENT TRANSPORT RIG COST**Shift basis: **1 per day**Cost Data Source: **CRG Data**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 D6T LGP	28.63	\$108.97	\$122.78	9	\$2,085.75	\$1,105.02	\$3,750.00
Cat D7R DS XR Series II	35.93	\$99.49	\$122.78	6	\$1,333.62	\$736.68	\$750.00
Cat D8T - 8SU	47.71	\$173.32	\$122.78	10	\$2,961.00	\$1,227.80	\$750.00
Cat D10T - 10SU	84.53	\$257.39	\$125.64	8	\$3,064.24	\$1,005.12	\$1,000.00
Cat 315D L 8'-6" Stick	19.05	\$244.29	\$59.44	2	\$607.46	\$118.88	\$1,000.00
Cat 320D L 9'-6" Stick	23.70	\$244.29	\$59.44	4	\$1,214.92	\$237.76	\$1,250.00
Cat 336D L 10'-6" Stick	32.23	\$244.29	\$122.78	4	\$1,468.28	\$491.12	\$250.00
CAT 966H high lift	25.80	\$57.78	\$59.44	12	\$1,406.64	\$713.28	\$750.00
CAT 973D	29.07	\$120.46	\$122.78	6	\$1,459.44	\$736.68	\$250.00
CAT 450E	9.80	\$78.06	\$59.44	1	\$137.50	\$59.44	\$1,000.00
Atlas Capco DM45/LP - 7-7/8"	1.25	\$311.69	\$59.44	1	\$371.13	\$59.44	\$500.00
Grove GMK3055, 141', 54.4 MT	39.30	\$167.54	\$122.78	6	\$1,741.92	\$736.68	\$750.00
Grove RT650E, 105', 45.4 MT	28.74	\$189.03	\$122.78	6	\$1,870.86	\$736.68	\$750.00
Cat 740	36.49	\$108.25	\$122.78	35	\$8,086.05	\$4,297.30	\$8,750.00
Water Tanker, 5,000 Gal.	15.00	\$51.70	\$59.44	3	\$333.42	\$178.32	\$750.00

Water Tanker, 7,000 Gal.	29.65	\$73.42	\$122.78	3	\$588.60	\$368.34	\$750.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	8	\$803.68	\$475.52	\$2,000.00
Power Mulcher (Bowie LD-90)	6.00	\$27.21	\$59.44	8	\$693.20	\$475.52	\$2,000.00

Subtotals:

\$30,227.71	\$13,759.58	\$27,000.00
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ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Hydroseeder with Tractor	\$133.22	4	\$532.88	\$532.88
Light Duty Pickup, 4x4, 3/4 T.	\$57.91	10	\$579.10	\$579.10
Light Duty Pickup, 4x4, 1 T. Crew	\$130.54	3	\$391.62	\$391.62
Flatbed Truck, 6x4, 45K GVW	\$103.84	8	\$830.72	\$830.72
Generic 15-18 cy, 6x4	\$129.15	20	\$2,583.00	\$2,583.00

Subtotals:

\$4,917.32	\$4,917.32
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EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	DENVER	
Total one-way travel distance:	88.00	miles
Average Travel Speed:	55.00	mph

Total Non-Roadable Mob/Demob Cost *	\$1,162,046.05
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 ** two round trips with haul rig:

Total Roadable Mob/Demob Cost **	\$15,735.42
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 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.60	1.60
Return Time (Hours):	1.60	1.60
Loading Time (Hours):	8.00	NA
Unloading Time (Hours):	8.00	NA
Subtotals:	19.20	3.20

JOB TIME AND COST

Total job time:	38.40	Hours
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Total job cost:	\$1,177,781
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EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Reveg Failure Mobilization**Site: **Climax Mine**Permit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: Z0002State: ColoradoAbbreviation: NoneDate: 9/12/2024County: SummitFilename: M493-Z0002User: ACYAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	2	\$200.92	\$118.88	\$2,000.00
Power Mulcher (Bowie LD-90)	6.00	\$27.21	\$59.44	2	\$173.30	\$118.88	\$2,000.00

Subtotals: **\$374.22** **\$237.76** **\$4,000.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Hydroseeder with Tractor	\$133.22	2	\$266.44	\$266.44
Light Duty Pickup, 4x4, 3/4 T.	\$57.91	3	\$173.73	\$173.73
Light Duty Pickup, 4x4, 1 T. Crew	\$130.54	1	\$130.54	\$130.54
Flatbed Truck, 6x4, 45K GVW	\$103.84	1	\$103.84	\$103.84

Subtotals: **\$674.55** **\$674.55**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: DENVER
 Total one-way travel distance: 88.00 miles
 Average Travel Speed: 55.00 mph

Total Non-Roadable Mob/Demob Cost * \$21,933.38
 ** two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$2,158.56
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.60</u>	<u>1.60</u>
Return Time (Hours):	<u>1.60</u>	<u>1.60</u>
Loading Time (Hours):	<u>8.00</u>	<u>NA</u>
Unloading Time (Hours):	<u>8.00</u>	<u>NA</u>
Subtotals:	<u>19.20</u>	<u>3.20</u>

JOB TIME AND COST

Total job time: 38.40 Hours

Total job cost: \$24,092

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Mayflower TSF Sludge Cell MobilizationSite: Climax MinePermit Action: 2024-06Permit/Job#: M1977493**PROJECT IDENTIFICATION**Task #: Z0003State: ColoradoAbbreviation: NoneDate: 9/12/2024County: SummitFilename: M493-Z0003User: ACYAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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 D7R DS XR Series II	35.93	\$99.49	\$122.78	1	\$222.27	\$122.78	\$750.00
Cat D8T - 8SU	47.71	\$173.32	\$122.78	2	\$592.20	\$245.56	\$750.00
Water Tanker, 5,000 Gal.	15.00	\$51.70	\$59.44	3	\$333.42	\$178.32	\$750.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	2	\$200.92	\$118.88	\$2,000.00
Power Mulcher (Bowie LD-90)	6.00	\$27.21	\$59.44	2	\$173.30	\$118.88	\$2,000.00
Cat 336D L 10'-6" Stick	32.23	\$244.29	\$122.78	1	\$367.07	\$122.78	\$250.00
CAT 973D	29.07	\$120.46	\$122.78	1	\$243.24	\$122.78	\$250.00

Subtotals: **\$2,132.42** **\$1,029.98** **\$6,750.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Hydroseeder with Tractor	\$133.22	1	\$133.22	\$133.22
Light Duty Pickup, 4x4, 3/4 T.	\$57.91	2	\$115.82	\$115.82

Light Duty Pickup, 4x4, 1 T. Crew	\$130.54	1	\$130.54	\$130.54
Flatbed Truck, 6x4, 45K GVW	\$103.84	1	\$103.84	\$103.84
Generic 15-18 cy, 6x4	\$129.15	2	\$258.30	\$258.30

Subtotals: **\$741.72** **\$741.72**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: DENVER
 Total one-way travel distance: 88.00 miles
 Average Travel Speed: 55.00 mph

Total Non-Roadable Mob/Demob Cost * \$91,857.12
 '* two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$2,373.50
 '** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.60	1.60
Return Time (Hours):	1.60	1.60
Loading Time (Hours):	8.00	NA
Unloading Time (Hours):	8.00	NA
Subtotals:	19.20	3.20

JOB TIME AND COST

Total job time: 38.40 Hours

Total job cost: \$94,231