

## COST SUMMARY WORK

Task description: Summary of Reclamation Tasks under Midterm Review No. 2

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: C087-000

User: HR1

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Haul Backfill Mat. from Coal Handling Fac. to Portal	TRUCK1	2	243.07	\$406,138
002	Haul Backfill Material from Utility Pad Area to Portal Face-	TRUCK1	3	102.12	\$230,032
003	Haul Backfill Material from South Facilities to Portal Face-	TRUCK1	2	182.31	\$370,597
004	Remove Coal Stockpile Footprint	TRUCK1	1	63.46	\$125,693
010	Regrade Cut Material Over 6.93 ROM Coal Area	DOZER	1	46.54	\$12,885
011	Regrade Cut Material Over covered Storage Pad Area	DOZER	1	6.94	\$1,921
012	Regrade Drill Pads COV11, CCU31, CCU47, CCU58, CCU67, CCU84,	DOZER	1	7.78	\$2,210
013	Regrade Drill Pads CCU087 and Septic Drainfield	DOZER	1	1.94	\$552
020	Remove Gravel from North Facilities Parking Area	TRUCK1	1	4.99	\$8,100
021	Remove Gravel from Main North Facilities Area	TRUCK1	1	11.51	\$18,692
022	Remove Gravel from North Facilities Electrical Shop Area	TRUCK1	1	3.07	\$4,984
023	Remove Gravel from North Office Parking Area	TRUCK1	1	0.58	\$935
024	Remove Gravel from South Powder Magazine Pad	TRUCK1	1	0.49	\$803
030	Rip North Facilities Parking Area	RIPPER	1	3.24	\$1,283
031	Rip North Facilities Area	RIPPER	1	7.48	\$2,962
032	Rip North Electrical Shop Facilities Area	RIPPER	1	1.99	\$790
033	Rip North Office Parking Area	RIPPER	1	0.37	\$148
034	Rip South Powder Magazine Pad	RIPPER	1	0.32	\$130
035	Rip South Covered Storage Area	RIPPER	1	3.74	\$1,481
040	Rip Haulroad A/A1 Reduction	RIPPER	1	8.85	\$3,505
041	Rip Haulroad B Reduction	RIPPER	1	5.98	\$2,370
042	Rip Haulroad D	RIPPER	1	2.61	\$1,037
045	Regrade Haulroad A/A1 Reduction	DOZER	2	32.94	\$26,070
046	Regrade Haulroad B Reduction	DOZER	2	22.27	\$17,624
047	Regrade Haulroad D	DOZER	2	9.93	\$7,856
050	Regrade Upper Sump	DOZER	1	10.36	\$3,984
051	Regrade Lower Sump	DOZER	1	7.40	\$2,846
052	Regrade Area Ditches	GRADER	1	1.03	\$237
053	Backfill and Regrade Microwave Tower Pad (MR22)	DOZER	1	0.16	\$31
054	Replace Topsoil on Microwave Tower Pad	DOZER	1	0.08	\$15
060	Replace Topsoil on Coal Handling Facilities Area	SCRAPER1	1	30.32	\$53,489
061	Replace Topsoil on Portal Face-Up Area	SCRAPER1	1	46.56	\$82,148

062	Replace Topsoil on South Utility Pads	SCRAPER1	1	17.86	\$31,505
063	Replace Topsoil on South Facilities Storage Areas	SCRAPER1	1	37.67	\$66,465
064	Replace Topsoil on Haulroad A/A-1 Reduction	SCRAPER1	1	24.94	\$48,749
065	Replace Topsoil on Haulroad B Reduction	SCRAPER1	1	15.32	\$29,948
066	Replace Topsoil on Haulroad D Location	SCRAPER1	1	6.35	\$12,405
068	Replace Topsoil on COV11, CCU31, CCU47, CCU58, CCU67, CCU84,	DOZER	1	6.64	\$2,555
069	Replace Topsoil on Upper Sump	DOZER	1	6.64	\$2,555
070	Replace Topsoil on Lower Sump	DOZER	1	4.74	\$1,825
080	Seal Mine Shafts and Portals	MINESEAL	1	32.00	\$56,563
090	Drillhole/Monitoring Well Sealing	BOREHOLE	1	233.00	\$170,005
100	Reseed North Facilities Areas	REVEGE	1	7.20	\$11,225
101	Reseed South Facilities Areas	REVEGE	1	38.40	\$52,437
102	Reseed Reclaimed Roads	REVEGE	1	7.10	\$10,378
103	Reseed Drill Pads and Geotechnical Hole Locations	REVEGE	1	3.00	\$990
104	Seed Remaining BRB-2 and BRB-3 Area	REVEGE	1	68.01	\$61,454
106	Seed Phase II Released BRB4	REVEGE	1	231.20	\$208,912
110	Demolish and Remove North Facilities and Materials	DEMOLISH	1	134.00	\$261,284
111	Demolish and Remove South Facilities and Structures	DEMOLISH	1	190.00	\$375,177
120	Mobilize/Demobilize Equipment from Hayden	MOBILIZE	1	3.33	\$38,407
126	Weed Managment Over Liability Period	REVEGE	1	0.00	\$10,930
127	Water Monitoring During Liability Period	SITEMAINT ENANCE	1	60.00	\$55,844
128	Clean Sediment from Upper and Lower Sumps	TRUCK1	1	60.46	\$39,738
<b><u>SUBTOTALS:</u></b>				<b>2058.29</b>	<b>\$2,940,899</b>

**INDIRECT COSTS****OVERHEAD AND PROFIT:**

Liability insurance:	2.02	Total =	\$59,406
Performance bond:	1.05	Total =	\$30,879
Job superintendent:	1,029.14	Total =	\$77,319
Profit:	10.00	Total =	\$294,090

TOTAL O &amp; P = \$461,695

CONTRACT AMOUNT (direct + O &amp; P) = \$3,402,594

**LEGAL - ENGINEERING - PROJECT MANAGEMENT:**

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.61	Total =	\$156,860
Reclamation management and/or administration:	3.58		\$121,813

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$740,867

**TOTAL BOND AMOUNT (direct + indirect) = \$3,681,766**

**TRUCK/LOADER TEAM WORK**Task description: **Haul Backfill Mat. from Coal Handling Fac. to Portal**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 001State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 001User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 988H
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	Water Tanker, 10,000 Gal.

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	95	100	NA	NA	25
Ownership cost/hour:	\$79.42	\$93.69	\$153.67	NA	NA	\$91.73
Operating cost/hour:	\$70.82	\$80.94	\$166.94	NA	NA	\$32.57
%Utilization-ripper:	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:	\$32.98	\$40.71	\$41.30	NA	NA	\$21.12
Unit Subtotals:	\$183.22	\$215.34	\$361.91	NA	NA	\$145.42
Number of Units:	4	2	1	0	0	1
Group Subtotals:	Work: \$1,163.56		Support: \$361.91		Maint: \$145.42	

Total work team cost/hour: **\$1,670.89****MATERIAL QUANTITIES**Initial volume: 291,017

CCY

Swell factor: 1.125Loose volume: **327,394**

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: 2,650 Pounds/LCYDescription: Decomposed rock - 25% Rock, 75% EarthRated Payload: 82,000 PoundsPayload Capacity: 30.94 LCY

Truck Bed (volume) Basis:

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	30.94	LCY

Final Truck Volume Based on Number of Loader Passes: 30.36 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	9.200	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	<b>7.590</b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6800 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 4 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): 0.575 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:		<b>0.515</b>	minutes
Net Load Time per Truck:		<b>1.645</b>	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.645	Minutes	Adjusted for site altitude:	1.645	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	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	950.00	-5.00	3.00	-2.00	3893	0.294

Haul Time: **0.294** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	950.00	5.00	3.00	8.00	2120	0.572

Return Time: **0.572** minutesTotal Truck Cycle Time: **4.111** minutes

Loading Tool unit  
 Production 811.40 LCY/Hour      Adjusted for job efficiency: 673.46 LCY/Hour  
 Truck Unit Production 443.10 LCY/Hour      Adjusted for job efficiency: 367.78 LCY/Hour  
 Optimal No. of Trucks: 2 Truck(s)      Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 735.55 LCY/Hour  
 Adjusted single truck/loader team production: 673.46 LCY/Hour  
 Adjusted multiple truck/loader team production: **1,346.93** LCY/Hour

**JOB TIME AND COST**Fleet size: 2 Team(s)      Total job time: **243.07** HoursUnit cost: \$1.241 /LCY      Total job cost: **\$406,138**

**TRUCK/LOADER TEAM WORK**Task description: **Haul Backfill Material from Utility Pad Area to Portal Face-**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 002User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 988H
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	Water Tanker, 10,000 Gal.

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	95	100	NA	NA	25
Ownership cost/hour:	\$79.42	\$93.69	\$153.67	NA	NA	\$91.73
Operating cost/hour:	\$70.82	\$80.94	\$166.94	NA	NA	\$32.57
%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:	\$32.98	\$40.71	\$41.30	NA	NA	\$21.12
Unit Subtotals:	\$183.22	\$215.34	\$361.91	NA	NA	\$145.42
Number of Units:	6	3	1	0	0	1
Group Subtotals:	Work: \$1,745.34		Support: \$361.91		Maint: \$145.42	

Total work team cost/hour: **\$2,252.67****MATERIAL QUANTITIES**Initial volume: 183,389

CCY

Swell factor: 1.125Loose volume: **206,313**

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: 2,650 Pounds/LCYDescription: Decomposed rock - 25% Rock, 75% EarthRated Payload: 82,000 PoundsPayload Capacity: 30.94 LCY

**Truck Bed (volume) Basis:**

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	30.94	LCY

Final Truck Volume Based on Number of Loader Passes: 30.36 LCY

**Loading Tool Capacity**

Bucket Size Class: NA

Rated Capacity:	9.200	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	<b>7.590</b>	LCY

**Job Condition Corrections:**

Site Altitude (ft.): 6800 feet

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

**Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill Truck: 4 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): 0.575 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:		<b>0.515</b>	minutes
Net Load Time per Truck:		<b>1.645</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.645	Minutes	Adjusted for site altitude:	1.645	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	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	500.00	0.00	3.00	3.00	2754	0.632

Haul Time: **0.632** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	0.00	3.00	3.00	4074	0.466

Return Time: **0.466** minutesTotal Truck Cycle Time: **4.343** minutes

## Loading Tool unit

Production	<u>811.40</u>	LCY/Hour	Adjusted for job efficiency:	<u>673.46</u>	LCY/Hour
Truck Unit Production	<u>419.43</u>	LCY/Hour	Adjusted for job efficiency:	<u>348.13</u>	LCY/Hour

Optimal No. of Trucks:	<u>2</u>	Truck(s)	Selected Number of Trucks:	<u>2</u>	Truck(s)
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Adjusted hourly truck team production:	<u>696.26</u>	LCY/Hour
Adjusted single truck/loader team production:	<u>673.46</u>	LCY/Hour
Adjusted multiple truck/loader team production:	<b><u>2,020.39</u></b>	LCY/Hour

**JOB TIME AND COST**

Fleet size:	<u>3</u>	Team(s)	Total job time:	<b><u>102.12</u></b>	Hours
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Unit cost:	<u>\$1.115</u>	/LCY	Total job cost:	<b><u>\$230,032</u></b>
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**TRUCK/LOADER TEAM WORK**Task description: **Haul Backfill Material from South Facilities to Portal Face-**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 003User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 988H
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	NA
-Water Truck:	Water Tanker, 10,000 Gal.

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	95	100	100	NA	25
Ownership cost/hour:	\$79.42	\$93.69	\$153.67	\$153.67	NA	\$91.73
Operating cost/hour:	\$70.82	\$80.94	\$166.94	\$166.94	NA	\$32.57
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	\$0.00	NA	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	\$0.00	NA	\$0.00
Operator cost/hour:	\$32.98	\$40.71	\$41.30	\$41.30	NA	\$21.12
Unit Subtotals:	\$183.22	\$215.34	\$361.91	\$361.91	NA	\$145.42
Number of Units:	4	2	1	1	0	1
Group Subtotals:	Work: \$1,163.56		Support: \$723.82		Maint: \$145.42	

Total work team cost/hour: **\$2,032.80****MATERIAL QUANTITIES**Initial volume: 192,960

CCY

Swell factor: 1.125Loose volume: **217,080**

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: 2,650 Pounds/LCYDescription: Decomposed rock - 25% Rock, 75% EarthRated Payload: 82,000 PoundsPayload Capacity: 30.94 LCY

**Truck Bed (volume) Basis:**

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	30.94	LCY

Final Truck Volume Based on Number of Loader Passes: 30.36 LCY

**Loading Tool Capacity**

Bucket Size Class: NA

Rated Capacity:	9.200	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	<b>7.590</b>	LCY

**Job Condition Corrections:**

Site Altitude (ft.): 6800 feet

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

**Loading Tool Cycle Time:**

Number of Loading Tool Passes Required to Fill Truck: 4 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): 0.575 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:		<b>0.515</b>	minutes
Net Load Time per Truck:		<b>1.645</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.645	Minutes	Adjusted for site altitude:	1.645	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	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	1250.00	-1.00	3.00	2.00	3843	1.131

Haul Time: **1.131** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1250.00	1.00	3.00	4.00	3891	0.703

Return Time: **0.703** minutesTotal Truck Cycle Time: **5.079** minutes

## Loading Tool unit

Production 811.40 LCY/Hour      Adjusted for job efficiency: 673.46 LCY/Hour  
Truck Unit Production 358.65 LCY/Hour      Adjusted for job efficiency: 297.68 LCY/Hour

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

Adjusted hourly truck team production: 595.36 LCY/Hour  
Adjusted single truck/loader team production: 595.36 LCY/Hour  
Adjusted multiple truck/loader team production: **1,190.73** LCY/Hour

**JOB TIME AND COST**Fleet size: 2 Team(s)      Total job time: **182.31** HoursUnit cost: \$1.707 /LCY      Total job cost: **\$370,597**

**TRUCK/LOADER TEAM WORK**Task description: **Remove Coal Stockpile Footprint**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 004User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 988H
Support Equipment -Load Area:	Cat D10T - 10SU
-Dump Area:	Cat D10T - 10SU
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	95	100	100	25	25
Ownership cost/hour:	\$79.42	\$93.69	\$153.67	\$153.67	\$114.80	\$91.73
Operating cost/hour:	\$70.82	\$80.94	\$166.94	\$166.94	\$19.85	\$32.57
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$183.22	\$215.34	\$361.91	\$361.91	\$163.20	\$145.42
Number of Units:	4	1	1	1	1	1
Group Subtotals:	Work: \$948.22		Support: \$723.82		Maint: \$308.62	

Total work team cost/hour: **\$1,980.66****MATERIAL QUANTITIES**Initial volume: 48,400

CCY

Swell factor: 1.000Loose volume: **48,400**

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: Coal - Bituminous, RawRated Payload: 82,000

Pounds

Payload Capacity: 51.25

LCY

Truck Bed (volume) Basis:

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	31.70	LCY

Final Truck Volume Based on Number of Loader Passes: 25.53 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	9.200	LCY (heaped)
Bucket Fill Factor:	0.925	Loose material - 1/8" to 3/8" (90 - 95%) 0.925
Adjusted Capacity:	<b>8.510</b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6800 feet

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

Loading Tool Cycle Time:

Number of Loading Tool Passes Required to Fill Truck: 3 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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): 0.575 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 1/8" to 3/4" diameter -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:		-0.100	minutes
Adjusted Loader Cycle Time:		<b>0.475</b>	minutes
Net Load Time per Truck:		<b>1.050</b>	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.050	Minutes	Adjusted for site altitude:	1.050	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	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	365.00	-2.60	3.00	0.40	4254	0.622
2	525.00	-8.69	3.00	-5.69	1693	0.437
3	1760.00	-6.25	3.00	-3.25	3053	0.642
4	900.00	-5.30	3.00	-2.30	3893	0.286

Haul Time: **1.987** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	5.30	3.00	8.30	2120	0.555
2	1760.00	6.25	3.00	9.25	2000	0.878
3	525.00	8.69	3.00	11.69	1477	0.321
4	365.00	2.60	3.00	5.60	2851	0.277

Return Time: **2.031** minutesTotal Truck Cycle Time: **6.668** minutes

## Loading Tool unit

Production 928.36 LCY/Hour Adjusted for job efficiency: 770.54 LCY/HourTruck Unit Production 229.72 LCY/Hour Adjusted for job efficiency: 190.67 LCY/HourOptimal No. of Trucks: 4 Truck(s) Selected Number of Trucks: 4 Truck(s)Adjusted hourly truck team production: 762.68 LCY/HourAdjusted single truck/loader team production: 762.68 LCY/HourAdjusted multiple truck/loader team production: **762.68** LCY/Hour**JOB TIME AND COST**Fleet size: 1 Team(s) Total job time: **63.46** HoursUnit cost: \$2.597 /LCY Total job cost: **\$125,693**

**BULLDOZER WORK**Task description: **Regrade Cut Material Over 6.93 ROM Coal Area**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 010State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 010User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$13.10	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$276.88Total Fleet Cost/Hour: **\$276.88****MATERIAL QUANTITIES**Initial Volume: 16,770Swell factor: 1.125Loose volume: **18,866 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 852.6 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 6,800 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**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	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4755

Adjusted unit production: 405.41 LCY/hr

Adjusted fleet production: **405.41** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.683/LCY

Total job time: **46.54** Hours

Total job cost: **\$12,885**



**BULLDOZER WORK**Task description: **Regrade Cut Material Over covered Storage Pad Area**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 011State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 011User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$13.10	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$276.88Total Fleet Cost/Hour: **\$276.88****MATERIAL QUANTITIES**Initial Volume: 2,500Swell factor: 1.125Loose volume: **2,813 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 852.6 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 6,800 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**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	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4755

Adjusted unit production: 405.41 LCY/hr

Adjusted fleet production: **405.41** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.683/LCY

Total job time: **6.94** Hours

Total job cost: **\$1,921**

**BULLDOZER WORK**Task description: **Regrade Drill Pads COV11, CCU31, CCU47, CCU58, CCU67, CCU84,**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 012State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 012User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$13.10	NA
Ripper op. Cost/Hour:	\$7.30	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$284.18Total Fleet Cost/Hour: **\$284.18****MATERIAL QUANTITIES**Initial Volume: 3,388Swell factor: 1.250Loose volume: **4,235 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,400.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 6,800 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% 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:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3890

Adjusted unit production: 544.60 LCY/hr

Adjusted fleet production: **544.6** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.522/LCY

Total job time: **7.78** Hours

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

**BULLDOZER WORK**Task description: **Regrade Drill Pads CCU087 and Septic Drainfield**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 013State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 013User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$13.10	NA
Ripper op. Cost/Hour:	\$7.30	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$284.18Total Fleet Cost/Hour: **\$284.18****MATERIAL QUANTITIES**Initial Volume: 847Swell factor: 1.250Loose volume: **1,059 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,400.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 6,800 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% 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:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3890

Adjusted unit production: 544.60 LCY/hr

Adjusted fleet production: **544.6** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.522/LCY

Total job time: **1.94** Hours

Total job cost: **\$552**

**TRUCK/LOADER TEAM WORK**Task description: **Remove Gravel from North Facilities Parking Area**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 020State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 020User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 988H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	95	NA	NA	25	25
Ownership cost/hour:	\$79.42	\$93.69	NA	NA	\$114.80	\$91.73
Operating cost/hour:	\$70.82	\$80.94	NA	NA	\$19.85	\$32.57
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.71	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$183.22	\$215.34	NA	NA	\$163.20	\$145.42
Number of Units:	6	1	0	0	1	1
Group Subtotals:	Work: \$1,314.66		Support: \$0.00		Maint: \$308.62	

Total work team cost/hour: **\$1,623.28****MATERIAL QUANTITIES**Initial volume: 4,195

CCY

Swell factor: 1.090Loose volume: **4,573**

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: 2,400 Pounds/LCYDescription: Clay and gravel - DryRated Payload: 82,000 PoundsPayload Capacity: 34.17 LCY

**Truck Bed (volume) Basis:**

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	31.70	LCY

Final Truck Volume Based on Number of Loader Passes: 30.36 LCY

**Loading Tool Capacity**

Bucket Size Class: NA

Rated Capacity:	9.200	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<b>10.120</b>	LCY

**Job Condition Corrections:**

Site Altitude (ft.): 6800 feet

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

**Loading Tool Cycle Time:**

Number of Loading Tool Passes Required to Fill Truck: 3 passes

**Excavators and Front Shovels:**

Machine Cycle Time vs. Job Condition Rating: 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): 0.575 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 1/8" to 3/4" diameter -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:		-0.100	minutes
Adjusted Loader Cycle Time:		<b>0.475</b>	minutes
Net Load Time per Truck:		<b>1.050</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.050	Minutes	Adjusted for site altitude:	1.050	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time:  
penetration 1.2

Road Condition: Very hard, smooth, asphalt or concrete, no tire



## Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	0.00	1.20	1.20	4223	3.212

Haul Time: **3.212** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	0.00	1.20	1.20	4254	2.754

Return Time: **2.754** minutesTotal Truck Cycle Time: **8.616** minutes

## Loading Tool unit

Production 1,104.00 LCY/Hour      Adjusted for job efficiency: 916.32 LCY/Hour  
Truck Unit Production 211.42 LCY/Hour      Adjusted for job efficiency: 175.48 LCY/Hour

Optimal No. of Trucks: 5 Truck(s)      Selected Number of Trucks: 6 Truck(s)

Adjusted hourly truck team production: 1,052.87 LCY/Hour  
Adjusted single truck/loader team production: 916.32 LCY/Hour  
Adjusted multiple truck/loader team production: **916.32** LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: **4.99** Hours

Unit cost: \$1.772 /LCY      Total job cost: **\$8,100**

**TRUCK/LOADER TEAM WORK**Task description: **Remove Gravel from Main North Facilities Area**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 021State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 021User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 988H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	95	NA	NA	25	25
Ownership cost/hour:	\$79.42	\$93.69	NA	NA	\$114.80	\$91.73
Operating cost/hour:	\$70.82	\$80.94	NA	NA	\$19.85	\$32.57
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.71	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$183.22	\$215.34	NA	NA	\$163.20	\$145.42
Number of Units:	6	1	0	0	1	1
Group Subtotals:	Work: \$1,314.66		Support: \$0.00		Maint: \$308.62	

Total work team cost/hour: **\$1,623.28****MATERIAL QUANTITIES**Initial volume: 9,680

CCY

Swell factor: 1.090Loose volume: **10,551**

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: 2,400 Pounds/LCYDescription: Clay and gravel - DryRated Payload: 82,000 PoundsPayload Capacity: 34.17 LCY

**Truck Bed (volume) Basis:**

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	31.70	LCY

Final Truck Volume Based on Number of Loader Passes: 30.36 LCY

**Loading Tool Capacity**

Bucket Size Class: NA

Rated Capacity:	9.200	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<b>10.120</b>	LCY

**Job Condition Corrections:**

Site Altitude (ft.): 6800 feet

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

**Loading Tool Cycle Time:**

Number of Loading Tool Passes Required to Fill Truck: 3 passes

**Excavators and Front Shovels:**

Machine Cycle Time vs. Job Condition Rating: 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): 0.575 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 1/8" to 3/4" diameter -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:		-0.100	minutes
Adjusted Loader Cycle Time:		<b>0.475</b>	minutes
Net Load Time per Truck:		<b>1.050</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.050	Minutes	Adjusted for site altitude:	1.050	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time:  
penetration 1.2

Road Condition: Very hard, smooth, asphalt or concrete, no tire

## Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	0.00	1.20	1.20	4223	3.212

Haul Time: **3.212** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	0.00	1.20	1.20	4254	2.754

Return Time: **2.754** minutesTotal Truck Cycle Time: **8.616** minutes

## Loading Tool unit

Production 1,104.00 LCY/Hour      Adjusted for job efficiency: 916.32 LCY/Hour  
Truck Unit Production 211.42 LCY/Hour      Adjusted for job efficiency: 175.48 LCY/Hour

Optimal No. of Trucks: 5 Truck(s)      Selected Number of Trucks: 6 Truck(s)

Adjusted hourly truck team production: 1,052.87 LCY/Hour  
Adjusted single truck/loader team production: 916.32 LCY/Hour  
Adjusted multiple truck/loader team production: **916.32** LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: **11.51** Hours

Unit cost: \$1.772 /LCY      Total job cost: **\$18,692**

**TRUCK/LOADER TEAM WORK**Task description: **Remove Gravel from North Facilities Electrical Shop Area**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 022State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 022User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 988H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	95	NA	NA	25	25
Ownership cost/hour:	\$79.42	\$93.69	NA	NA	\$114.80	\$91.73
Operating cost/hour:	\$70.82	\$80.94	NA	NA	\$19.85	\$32.57
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.71	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$183.22	\$215.34	NA	NA	\$163.20	\$145.42
Number of Units:	6	1	0	0	1	1
Group Subtotals:	Work: \$1,314.66		Support: \$0.00		Maint: \$308.62	

Total work team cost/hour: **\$1,623.28****MATERIAL QUANTITIES**Initial volume: 2,581

CCY

Swell factor: 1.090Loose volume: **2,813**

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: 2,400 Pounds/LCYDescription: Clay and gravel - DryRated Payload: 82,000 PoundsPayload Capacity: 34.17 LCY

Truck Bed (volume) Basis:

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	31.70	LCY

Final Truck Volume Based on Number of Loader Passes: 30.36 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	9.200	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<b>10.120</b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6800 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 3 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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): 0.575 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 1/8" to 3/4" diameter -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:		-0.100	minutes
Adjusted Loader Cycle Time:		<b>0.475</b>	minutes
Net Load Time per Truck:		<b>1.050</b>	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.050	Minutes	Adjusted for site altitude:	1.050	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time:  
penetration 1.2

Road Condition: Very hard, smooth, asphalt or concrete, no tire

## Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	0.00	1.20	1.20	4223	3.212

Haul Time: **3.212** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	0.00	1.20	1.20	4254	2.754

Return Time: **2.754** minutesTotal Truck Cycle Time: **8.616** minutes

## Loading Tool unit

Production 1,104.00 LCY/Hour      Adjusted for job efficiency: 916.32 LCY/Hour  
Truck Unit Production 211.42 LCY/Hour      Adjusted for job efficiency: 175.48 LCY/Hour

Optimal No. of Trucks: 5 Truck(s)      Selected Number of Trucks: 6 Truck(s)

Adjusted hourly truck team production: 1,052.87 LCY/Hour  
Adjusted single truck/loader team production: 916.32 LCY/Hour  
Adjusted multiple truck/loader team production: **916.32** LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: **3.07** Hours

Unit cost: \$1.772 /LCY      Total job cost: **\$4,984**

**TRUCK/LOADER TEAM WORK**Task description: **Remove Gravel from North Office Parking Area**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 023State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 023User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 988H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	95	NA	NA	25	25
Ownership cost/hour:	\$79.42	\$93.69	NA	NA	\$114.80	\$91.73
Operating cost/hour:	\$70.82	\$80.94	NA	NA	\$19.85	\$32.57
% Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.71	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$183.22	\$215.34	NA	NA	\$163.20	\$145.42
Number of Units:	6	1	0	0	1	1
Group Subtotals:	Work: \$1,314.66		Support: \$0.00		Maint: \$308.62	

Total work team cost/hour: **\$1,623.28****MATERIAL QUANTITIES**Initial volume: 484

CCY

Swell factor: 1.090Loose volume: **528**

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: 2,400

Pounds/LCY

Description: Clay and gravel - DryRated Payload: 82,000

Pounds

Payload Capacity: 34.17

LCY



Truck Bed (volume) Basis:

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	31.70	LCY

Final Truck Volume Based on Number of Loader Passes: 30.36 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	9.200	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<b>10.120</b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6800 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 3 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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): 0.575 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 1/8" to 3/4" diameter -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:		-0.100	minutes
Adjusted Loader Cycle Time:		<b>0.475</b>	minutes
Net Load Time per Truck:		<b>1.050</b>	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.050	Minutes	Adjusted for site altitude:	1.050	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time:  
penetration 1.2

Road Condition: Very hard, smooth, asphalt or concrete, no tire

## Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	0.00	1.20	1.20	4223	3.212

Haul Time: **3.212** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	0.00	1.20	1.20	4254	2.754

Return Time: **2.754** minutesTotal Truck Cycle Time: **8.616** minutes

## Loading Tool unit

Production 1,104.00 LCY/Hour      Adjusted for job efficiency: 916.32 LCY/Hour  
Truck Unit Production 211.42 LCY/Hour      Adjusted for job efficiency: 175.48 LCY/Hour

Optimal No. of Trucks: 5 Truck(s)      Selected Number of Trucks: 6 Truck(s)

Adjusted hourly truck team production: 1,052.87 LCY/Hour  
Adjusted single truck/loader team production: 916.32 LCY/Hour  
Adjusted multiple truck/loader team production: **916.32** LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: **0.58** Hours

Unit cost: \$1.772 /LCY      Total job cost: **\$935**

**TRUCK/LOADER TEAM WORK**Task description: **Remove Gravel from South Powder Magazine Pad**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 024State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 024User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 988H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	95	NA	NA	25	25
Ownership cost/hour:	\$79.42	\$93.69	NA	NA	\$114.80	\$91.73
Operating cost/hour:	\$70.82	\$80.94	NA	NA	\$19.85	\$32.57
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$32.98	\$40.71	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$183.22	\$215.34	NA	NA	\$163.20	\$145.42
Number of Units:	6	1	0	0	1	1
Group Subtotals:	Work: \$1,314.66		Support: \$0.00		Maint: \$308.62	

Total work team cost/hour: **\$1,623.28****MATERIAL QUANTITIES**Initial volume: 416

CCY

Swell factor: 1.090Loose volume: **453**

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: 2,400

Pounds/LCY

Description: Clay and gravel - DryRated Payload: 82,000

Pounds

Payload Capacity: 34.17

LCY

Truck Bed (volume) Basis:

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	31.70	LCY

Final Truck Volume Based on Number of Loader Passes: 30.36 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	9.200	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<b>10.120</b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 6800 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 3 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: 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): 0.575 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 1/8" to 3/4" diameter -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:		-0.100	minutes
Adjusted Loader Cycle Time:		<b>0.475</b>	minutes
Net Load Time per Truck:		<b>1.050</b>	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.050	Minutes	Adjusted for site altitude:	1.050	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time:  
penetration 1.2

Road Condition: Very hard, smooth, asphalt or concrete, no tire

## Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	0.00	1.20	1.20	4223	3.212

Haul Time: **3.212** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	10560.00	0.00	1.20	1.20	4254	2.754

Return Time: **2.754** minutesTotal Truck Cycle Time: **8.616** minutes

## Loading Tool unit

Production	<u>1,104.00</u>	LCY/Hour	Adjusted for job efficiency:	<u>916.32</u>	LCY/Hour
Truck Unit Production	<u>211.42</u>	LCY/Hour	Adjusted for job efficiency:	<u>175.48</u>	LCY/Hour

Optimal No. of Trucks:	<u>5</u>	Truck(s)	Selected Number of Trucks:	<u>6</u>	Truck(s)
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Adjusted hourly truck team production:	<u>1,052.87</u>	LCY/Hour
Adjusted single truck/loader team production:	<u>916.32</u>	LCY/Hour
Adjusted multiple truck/loader team production:	<b><u>916.32</u></b>	LCY/Hour

**JOB TIME AND COST**

Fleet size:	<u>1</u>	Team(s)	Total job time:	<b><u>0.49</u></b>	Hours
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Unit cost:	<u>\$1.772</u>	/LCY	Total job cost:	<b><u>\$803</u></b>
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## BULLDOZER RIPPING WORK

Task description: Rip North Facilities Parking Area

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 030

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 030

User: HR1

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 574  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper Ownership Cost/Hour:	\$22.74	NA
Ripper Operating Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$395.76	
Total Fleet Cost/Hour:	<b>\$395.76</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 2.60 acres Rip Depth (ft): 1.50 Volume: 6,292 BCY or CCY

Source of estimated quantity: Map 2.05.3 M1B

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.50 feet/pass  
Average Ripping Width: 8.67 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: 0.966 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.966 Acres/hr  
Site Altitude: 6,800 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.80 Acres/hr  
Adjusted Hourly Fleet Production: **0.80** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **3.24** Hours

Unit cost: \$493.648 Per acre Total job cost: **\$1,283**

## BULLDOZER RIPPING WORK

Task description: Rip North Facilities Area

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 031

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 031

User: HR1

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 574  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper Ownership Cost/Hour:	\$22.74	NA
Ripper Operating Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$395.76	
Total Fleet Cost/Hour:	<b>\$395.76</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 6.00 acres Rip Depth (ft): 1.50 Volume: 14,520 BCY or CCY

Source of estimated quantity: Map 2.05.3 M1B

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.50 feet/pass  
Average Ripping Width: 8.67 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: 0.966 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.966 Acres/hr  
Site Altitude: 6,800 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.80 Acres/hr  
Adjusted Hourly Fleet Production: **0.80** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **7.48** Hours

Unit cost: \$493.648 Per acre Total job cost: **\$2,962**

## BULLDOZER RIPPING WORK

Task description: Rip North Electrical Shop Facilities Area

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 032

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 032

User: HR1

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 574  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper Ownership Cost/Hour:	\$22.74	NA
Ripper Operating Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$395.76	
Total Fleet Cost/Hour:	<b>\$395.76</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 1.60 acres Rip Depth (ft): 1.50 Volume: 3,872 BCY or CCY

Source of estimated quantity: Map 2.05.3 M1B

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.50 feet/pass  
Average Ripping Width: 8.67 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: 0.966 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.966 Acres/hr  
Site Altitude: 6,800 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.80 Acres/hr  
Adjusted Hourly Fleet Production: **0.80** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **2.00** Hours

Unit cost: \$493.648 Per acre Total job cost: **\$790**



## BULLDOZER RIPPING WORK

Task description: Rip North Office Parking Area

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 033

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 033

User: HR1

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 574  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper Ownership Cost/Hour:	\$22.74	NA
Ripper Operating Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$395.76	
Total Fleet Cost/Hour:	<b>\$395.76</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.30 acres Rip Depth (ft): 1.50 Volume: 726 BCY or CCY

Source of estimated quantity: Map 2.05.3 M1B

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.50 feet/pass  
Average Ripping Width: 8.67 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: 0.966 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.966 Acres/hr  
Site Altitude: 6,800 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.80 Acres/hr  
Adjusted Hourly Fleet Production: **0.80** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **0.37** Hours

Unit cost: \$493.648 Per acre Total job cost: **\$148**

## BULLDOZER RIPPING WORK

Task description: Rip South Powder Magazine Pad

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 034

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 034

User: HR1

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 574  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper Ownership Cost/Hour:	\$22.74	NA
Ripper Operating Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$395.76	
Total Fleet Cost/Hour:	<b>\$395.76</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 0.25 acres Rip Depth (ft): 1.50 Volume: 605 BCY or CCY

Source of estimated quantity: Map 2.05.3 M1B

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.50 feet/pass  
Average Ripping Width: 8.67 feet/pass  
Average Ripping Length: 150.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.916 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.916 Acres/hr  
Site Altitude: 6,800 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.76 Acres/hr  
Adjusted Hourly Fleet Production: **0.76** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **0.33** Hours

Unit cost: \$520.266 Per acre Total job cost: **\$130**

## BULLDOZER RIPPING WORK

Task description: Rip South Covered Storage Area

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 035

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 035

User: HR1

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 574  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper Ownership Cost/Hour:	\$22.74	NA
Ripper Operating Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$395.76	
Total Fleet Cost/Hour:	<b>\$395.76</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 3.00 acres Rip Depth (ft): 1.50 Volume: 7,260 BCY or CCY

Source of estimated quantity: Map 2.05.3 M1B

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.50 feet/pass  
Average Ripping Width: 8.67 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: 0.966 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.966 Acres/hr  
Site Altitude: 6,800 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.80 Acres/hr  
Adjusted Hourly Fleet Production: **0.80** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **3.74** Hours

Unit cost: \$493.648 Per acre Total job cost: **\$1,481**

## BULLDOZER RIPPING WORK

Task description: Rip Haulroad A/A1 Reduction

Site: Peabody Sage Creek Mine Permit Action: MT3 Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 040 State: Colorado Abbreviation: None  
Date: 2/14/2023 County: Routt Filename: 040  
User: HR1

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

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

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper Ownership Cost/Hour:	\$22.74	NA
Ripper Operating Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$395.76	
Total Fleet Cost/Hour:	<b>\$395.76</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 7.10 acres Rip Depth (ft): 1.50 Volume: 17,182 BCY or CCY

Source of estimated quantity: Map 2.05.3 M1B and A

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.50 feet/pass  
Average Ripping Width: 8.67 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: 0.966 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.966 Acres/hr  
Site Altitude: 6,800 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.80 Acres/hr  
Adjusted Hourly Fleet Production: **0.80** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **8.86** Hours

Unit cost: \$493.648 Per acre Total job cost: **\$3,505**

## BULLDOZER RIPPING WORK

Task description: Rip Haulroad B Reduction

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 041

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 041

User: HR1

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 574  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper Ownership Cost/Hour:	\$22.74	NA
Ripper Operating Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$395.76	
Total Fleet Cost/Hour:	<b>\$395.76</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 4.80 acres Rip Depth (ft): 1.50 Volume: 11,616 BCY or CCY

Source of estimated quantity: Map 2.05.3 M1B and A

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.50 feet/pass  
Average Ripping Width: 8.67 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: 0.966 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.966 Acres/hr  
Site Altitude: 6,800 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.80 Acres/hr  
Adjusted Hourly Fleet Production: **0.80** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **5.99** Hours

Unit cost: \$493.648 Per acre Total job cost: **\$2,370**

## BULLDOZER RIPPING WORK

Task description: Rip Haulroad D

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 042

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 042

User: HR1

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 574  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper Ownership Cost/Hour:	\$22.74	NA
Ripper Operating Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$395.76	
Total Fleet Cost/Hour:	<b>\$395.76</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 2.10 acres Rip Depth (ft): 1.50 Volume: 5,082 BCY or CCY

Source of estimated quantity: Map 2.05.3 M1B and A

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 1.50 feet/pass  
Average Ripping Width: 8.67 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: 0.966 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.966 Acres/hr  
Site Altitude: 6,800 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.80 Acres/hr  
Adjusted Hourly Fleet Production: **0.80** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **2.62** Hours

Unit cost: \$493.648 Per acre Total job cost: **\$1,037**

**BULLDOZER WORK**Task description: **Regrade Haulroad A/A1 Reduction**Site: **Peabody Sage Creek Mine**Permit Action: **MT3**Permit/Job#: **C2009087****PROJECT IDENTIFICATION**Task #: **045**State: **Colorado**Abbreviation: **None**Date: **2/14/2023**County: **Routt**Filename: **045**User: **HR1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D10T - 10SU**Horsepower: **574**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper own. Cost/Hour:	\$22.74	NA
Ripper op. Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$395.76**Total Fleet Cost/Hour: **\$791.52****MATERIAL QUANTITIES**Initial Volume: **17,182**Swell factor: **1.000**Loose volume: **17,182 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: **754.3 LCY/hr**Materials consistency description: **Rock, well ripped or blasted 0.8**Average push gradient: **0 %**Average site altitude: **6,800 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% 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:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3458

Adjusted unit production: 260.84 LCY/hr

Adjusted fleet production: **521.68** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$1.517/LCY

Total job time: **32.94** Hours

Total job cost: **\$26,070**



**BULLDOZER WORK**Task description: **Regrade Haulroad B Reduction**Site: **Peabody Sage Creek Mine**Permit Action: **MT3**Permit/Job#: **C2009087****PROJECT IDENTIFICATION**Task #: **046**State: **Colorado**Abbreviation: **None**Date: **2/14/2023**County: **Routt**Filename: **046**User: **HR1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D10T - 10SU**Horsepower: **574**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper own. Cost/Hour:	\$22.74	NA
Ripper op. Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$395.76**Total Fleet Cost/Hour: **\$791.52****MATERIAL QUANTITIES**Initial Volume: **11,616**Swell factor: **1.000**Loose volume: **11,616 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: **754.3 LCY/hr**Materials consistency description: **Rock, well ripped or blasted 0.8**Average push gradient: **0 %**Average site altitude: **6,800 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% 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:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3458

Adjusted unit production: 260.84 LCY/hr

Adjusted fleet production: **521.68** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$1.517/LCY

Total job time: **22.27** Hours

Total job cost: **\$17,624**

**BULLDOZER WORK**Task description: **Regrade Haulroad D**Site: **Peabody Sage Creek Mine**Permit Action: **MT3**Permit/Job#: **C2009087****PROJECT IDENTIFICATION**Task #: **047**State: **Colorado**Abbreviation: **None**Date: **2/14/2023**County: **Routt**Filename: **047**User: **HR1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D10T - 10SU**Horsepower: **574**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper own. Cost/Hour:	\$22.74	NA
Ripper op. Cost/Hour:	\$11.11	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$395.76**Total Fleet Cost/Hour: **\$791.52****MATERIAL QUANTITIES**Initial Volume: **5,178**Swell factor: **1.000**Loose volume: **5,178 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: **754.3 LCY/hr**Materials consistency description: **Rock, well ripped or blasted 0.8**Average push gradient: **0 %**Average site altitude: **6,800 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% 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:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3458

Adjusted unit production: 260.84 LCY/hr

Adjusted fleet production: **521.68** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$1.517/LCY

Total job time: **9.93** Hours

Total job cost: **\$7,856**

**BULLDOZER WORK**Task description: **Regrade Upper Sump**Site: **Peabody Sage Creek Mine**Permit Action: **MT3**Permit/Job#: **C2009087****PROJECT IDENTIFICATION**Task #: **050**State: **Colorado**Abbreviation: **None**Date: **2/14/2023**County: **Routt**Filename: **050**User: **HR1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D10T - 10SU**Horsepower: **574**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper own. Cost/Hour:	\$22.74	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$384.65**Total Fleet Cost/Hour: **\$384.65****MATERIAL QUANTITIES**Initial Volume: **3,388**Swell factor: **1.125**Loose volume: **3,812 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **200 feet**Unadjusted hourly production: **946.0 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **0 %**Average site altitude: **6,800 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% 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:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3890

Adjusted unit production: 367.99 LCY/hr

Adjusted fleet production: **367.99** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.045/LCY

Total job time: **10.36** Hours

Total job cost: **\$3,984**

**BULLDOZER WORK**Task description: **Regrade Lower Sump**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 051State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 051User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D10T - 10SUHorsepower: 574Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper own. Cost/Hour:	\$22.74	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$384.65Total Fleet Cost/Hour: **\$384.65****MATERIAL QUANTITIES**Initial Volume: 2,420Swell factor: 1.125Loose volume: **2,723 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 946.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 6,800 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% 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:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3890

Adjusted unit production: 367.99 LCY/hr

Adjusted fleet production: **367.99** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.045/LCY

Total job time: **7.40** Hours

Total job cost: **\$2,846**



## MOTOR GRADER WORK

Task description: Regrade Area Ditches

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 052 State: Colorado Abbreviation: None  
Date: 2/14/2023 County: Routt Filename: 052  
User: HR1

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 14M Horsepower: 259  
Ripper Attachment: Multi-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$114.80	NA
Operating Cost/Hour:	\$79.39	100
Ripper Ownership Cost/Hour:	\$5.34	NA
Ripper Operating Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$28.56	NA
Total Unit Cost/Hour:	\$228.09	
Total Fleet Cost/Hour:	<b>\$228.09</b>	

### MATERIAL QUANTITIES

Total Area to be graded or ripped: 2.00 acres

Source of estimated acreage: PAP Table 2.05.3-E2-6

### HOURLY PRODUCTION

Average Grader Speed: 1.75 mph  
Selected Application: Ditch building/cleaning (0-3 mph) - 1.75  
Selected Blade Angle: 30 degrees  
Effective Blade Length: 12.10 feet  
Width of blade overlap per pass: 2.00 feet  
Net grading or ripping width per pass: 10.10 feet  
Unadjusted Hourly Unit Production: 2.1424 acres/hour

#### Job Condition Correction Factors

Site Altitude: 6800 feet

Altitude Adj:	<u>1.00</u>	Source
Job Efficiency:	<u>0.90</u>	(CAT HB)
Net Correction:	<u>0.9000</u>	(1sh/d, fav.)
		multiplier

Adjusted Hourly Unit Production: 1.9282 acres/Hour  
Adjusted Hourly Fleet Production: **1.9282** acres/Hour

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **1.04** Hours

Unit cost: \$118.29 per acre Total job cost: **\$237**

**BULLDOZER WORK**Task description: **Backfill and Regrade Microwave Tower Pad (MR22)**Site: **Peabody Sage Creek Mine**Permit Action: **MT3**Permit/Job#: **C2009087****PROJECT IDENTIFICATION**Task #: **053**State: **Colorado**Abbreviation: **None**Date: **2/14/2023**County: **Routt**Filename: **053**User: **HR1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D6T LGP**  
 Horsepower: **200**  
 Blade Type: **Straight**  
 Attachment: **3-shank ripper**  
 Shift Basis: **1 per day**  
 Data Source: **(CRG)**

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$75.83	NA
Operating Cost/Hour:	\$66.34	100
Ripper own. Cost/Hour:	\$8.37	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$191.84**  
 Total Fleet Cost/Hour: **\$191.84**

**MATERIAL QUANTITIES**

Initial Volume: **24**  
 Swell factor: **1.125**  
 Loose volume: **27 LCY**

Source of estimated volume: **Division of Reclamation, Mining & Safety**  
 Source of estimated swell factor: **Cat Handbook**

**HOURLY PRODUCTION**

Average push distance: **50 feet**  
 Unadjusted hourly production: **444.6 LCY/hr**

Materials consistency description: **Compacted fill or embankment 0.9**

Average push gradient: **0 %**  
 Average site altitude: **6,500 feet**

Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	0.800	(POOR)

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:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3735

Adjusted unit production: 166.06 LCY/hr

Adjusted fleet production: **166.06** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.155/LCY

Total job time: **0.16** Hours

Total job cost: **\$31**

**BULLDOZER WORK**Task description: **Replace Topsoil on Microwave Tower Pad**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 054State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 054User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D6T LGPHorsepower: 200Blade Type: StraightAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$75.83</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$66.34</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$8.37</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$41.30</u>	<u>NA</u>

Total unit Cost/Hour: \$191.84Total Fleet Cost/Hour: **\$191.84****MATERIAL QUANTITIES**Initial Volume: 16Swell factor: 1.000Loose volume: **16 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 444.6 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 6,500 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.900</u>	<u>(AB.AVG.)</u>
Material consistency:	<u>1.100</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>0.800</u>	<u>(POOR)</u>

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:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4744

Adjusted unit production: 210.92 LCY/hr

Adjusted fleet production: **210.92** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.910/LCY

Total job time: **0.08** Hours

Total job cost: **\$15**

**SCRAPER TEAM WORK**Task description: **Replace Topsoil on Coal Handling Facilities Area**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 060State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 060User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

**Cost Breakdown:****Scraper Work Team****Support Equipment****Maintenance Equipment**

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	25	25
Ownership cost/hour:	\$287.19	\$124.85	NA	NA	\$114.80	\$91.73
Operating cost/hour:	\$277.83	\$97.63	NA	NA	\$19.85	\$32.57
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$595.92	\$263.78	NA	NA	\$163.20	\$145.42
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,455.62	Support:	\$0.00	Maint:	\$308.62

Total work team cost/hour: **\$1,764.24****MATERIAL QUANTITIES**Initial volume: 18,230

CCY

Swell factor: 1.125Loose volume: **20,509**

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: 2,550 lbs/LCY  
 Material description: Earth - Dry packed  
 Rated Payload: 81,600 pounds  
 Payload Capacity: 32.00 LCY

Struck Volume: 24.00 LCY  
 Heaped Volume: 34.00 LCY  
 Average Volume: 29.00 LCY  
 Adjusted Capacity: **29.00** LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 6800 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	-10.00	4.00	-6.00	2192	0.20
2	2550.00	-2.10	4.00	1.90	2939	0.91
3	450.00	-2.20	4.00	1.80	2939	0.15

Haul Time: 1.26 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	450.00	2.20	4.00	6.20	2638	0.35
2	2550.00	2.10	4.00	6.10	2638	0.97
3	300.00	10.00	4.00	14.00	1073	0.09

Return Time: 1.41 minutesTotal Scraper team cycle time: 4.27 minutesAdjusted for job conditions: 676.44 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 676.44 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 676.44 LCY/HourUnadjusted unit production/hour: 814.99 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 30.32 HoursUnit cost: \$2.608 /LCYTotal job cost: \$53,489

**SCRAPER TEAM WORK**Task description: **Replace Topsoil on Portal Face-Up Area**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 061  
Date: 2/14/2023  
User: HR1State: Colorado  
County: RouttAbbreviation: None  
Filename: 061Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

**Cost Breakdown:**

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	25	25
Ownership cost/hour:	\$287.19	\$124.85	NA	NA	\$114.80	\$91.73
Operating cost/hour:	\$277.83	\$97.63	NA	NA	\$19.85	\$32.57
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$595.92	\$263.78	NA	NA	\$163.20	\$145.42
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,455.62	Support:	\$0.00	Maint:	\$308.62

Total work team cost/hour: **\$1,764.24****MATERIAL QUANTITIES**Initial volume: 25,490 CCY      Swell factor: 1.125  
Loose volume: 28,676 LCYSource of estimated volume: Division of Reclamation, Mining & Safety  
Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY



Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 6800 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	-10.00	4.00	-6.00	2192	0.20
2	2550.00	-2.10	4.00	1.90	2939	0.91
3	750.00	-5.30	4.00	-1.30	2972	0.32

Haul Time: 1.43 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	750.00	5.30	4.00	9.30	1711	0.51
2	2550.00	2.10	4.00	6.10	2638	1.06
3	300.00	10.00	4.00	14.00	1073	0.09

Return Time: 1.66 minutesTotal Scraper team cycle time: 4.69 minutesAdjusted for job conditions: 615.86 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 615.86 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 615.86 LCY/HourUnadjusted unit production/hour: 742.00 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 46.56 HoursUnit cost: \$2.865 /LCYTotal job cost: \$82,148

**SCRAPER TEAM WORK**Task description: **Replace Topsoil on South Utility Pads**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 062  
Date: 2/14/2023  
User: HR1State: Colorado  
County: RouttAbbreviation: None  
Filename: 062Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

**Cost Breakdown:**

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	25	25
Ownership cost/hour:	\$287.19	\$124.85	NA	NA	\$114.80	\$91.73
Operating cost/hour:	\$277.83	\$97.63	NA	NA	\$19.85	\$32.57
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$595.92	\$263.78	NA	NA	\$163.20	\$145.42
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,455.62	Support:	\$0.00	Maint:	\$308.62

Total work team cost/hour: **\$1,764.24****MATERIAL QUANTITIES**Initial volume: 15,810 CCY      Swell factor: 1.125  
Loose volume: 17,786 LCYSource of estimated volume: Division of Reclamation, Mining & Safety  
Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 6800 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	750.00	-6.67	4.00	-2.67	2972	0.32
2	1050.00	0.00	4.00	4.00	2394	0.15

Haul Time: 0.47 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1050.00	0.00	4.00	4.00	2910	0.52
2	750.00	6.67	4.00	10.67	1434	0.31

Return Time: 0.83 minutesTotal Scraper team cycle time: 2.90 minutesAdjusted for job conditions: 996.00 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 996.00 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 996.00 LCY/HourUnadjusted unit production/hour: 1,200.00 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 17.86 HoursUnit cost: \$1.771 /LCYTotal job cost: \$31,505

**SCRAPER TEAM WORK**Task description: **Replace Topsoil on South Facilities Storage Areas**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 063  
Date: 2/14/2023  
User: HR1State: Colorado  
County: RouttAbbreviation: None  
Filename: 063Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

**Cost Breakdown:****Scraper Work Team****Support Equipment****Maintenance Equipment**

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	25	25
Ownership cost/hour:	\$287.19	\$124.85	NA	NA	\$114.80	\$91.73
Operating cost/hour:	\$277.83	\$97.63	NA	NA	\$19.85	\$32.57
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	NA	\$28.56	\$21.12
Unit Subtotals:	\$595.92	\$263.78	NA	NA	\$163.20	\$145.42
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$1,455.62	Support:	\$0.00	Maint:	\$308.62

Total work team cost/hour: **\$1,764.24****MATERIAL QUANTITIES**Initial volume: 22,759 CCY  
Loose volume: 25,604 LCYSwell factor: 1.125Source of estimated volume: Division of Reclamation, Mining & Safety  
Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 6800 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	-6.67	4.00	-2.67	2972	0.23
2	2500.00	-2.00	4.00	2.00	2939	0.85
3	1000.00	0.00	4.00	4.00	2394	0.13

Haul Time: 1.21 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	4.00	4.00	2910	0.51
2	2500.00	2.00	4.00	6.00	2638	0.75
3	500.00	6.67	4.00	10.67	1434	0.18

Return Time: 1.44 minutesTotal Scraper team cycle time: 4.25 minutesAdjusted for job conditions: 679.62 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 679.62 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 679.62 LCY/HourUnadjusted unit production/hour: 818.82 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 37.67 HoursUnit cost: \$2.596 /LCYTotal job cost: \$66,465

**SCRAPER TEAM WORK**Task description: **Replace Topsoil on Haulroad A/A-1 Reduction**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 064  
Date: 2/14/2023  
User: HR1State: Colorado  
County: RouttAbbreviation: None  
Filename: 064Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

**Cost Breakdown:**

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	25	25	25
Ownership cost/hour:	\$287.19	\$124.85	NA	\$124.85	\$114.80	\$91.73
Operating cost/hour:	\$277.83	\$97.63	NA	\$24.41	\$19.85	\$32.57
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$595.92	\$263.78	NA	\$190.56	\$163.20	\$145.42
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work:	\$1,455.62	Support:	\$190.56	Maint:	\$308.62

Total work team cost/hour: **\$1,954.80****MATERIAL QUANTITIES**Initial volume: 11,454 CCY      Swell factor: 1.125  
Loose volume: 12,886 LCYSource of estimated volume: Division of Reclamation, Mining & Safety  
Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 6800 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3728.00	2.00	4.00	6.00	1477	2.60

Haul Time: 2.60 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3728.00	-2.00	4.00	2.00	2960	1.39

Return Time: 1.39 minutesTotal Scraper team cycle time: 5.59 minutesAdjusted for job conditions: 516.71 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 516.71 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 516.71 LCY/HourUnadjusted unit production/hour: 622.54 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 24.94 HoursUnit cost: \$3.783 /LCYTotal job cost: \$48,749

**SCRAPER TEAM WORK**Task description: **Replace Topsoil on Haulroad B Reduction**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 065  
Date: 2/14/2023  
User: HR1State: Colorado  
County: RouttAbbreviation: None  
Filename: 065Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

**Cost Breakdown:**

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	25	25	25
Ownership cost/hour:	\$287.19	\$124.85	NA	\$124.85	\$114.80	\$91.73
Operating cost/hour:	\$277.83	\$97.63	NA	\$24.41	\$19.85	\$32.57
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$595.92	\$263.78	NA	\$190.56	\$163.20	\$145.42
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work:	\$1,455.62	Support:	\$190.56	Maint:	\$308.62

Total work team cost/hour: **\$1,954.80****MATERIAL QUANTITIES**Initial volume: 7,743 CCY Swell factor: 1.125  
Loose volume: 8,711 LCYSource of estimated volume: Division of Reclamation, Mining & Safety  
Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>2,550 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Earth - Dry packed</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>32.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY



Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 6800 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3753.00	-3.60	4.00	0.40	2965	1.45

Haul Time: 1.45 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3753.00	3.60	4.00	7.60	1931	2.03

Return Time: 2.03 minutesTotal Scraper team cycle time: 5.08 minutesAdjusted for job conditions: 568.58 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 568.58 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 568.58 LCY/HourUnadjusted unit production/hour: 685.04 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 15.32 HoursUnit cost: \$3.438 /LCYTotal job cost: \$29,948

**SCRAPER TEAM WORK**Task description: **Replace Topsoil on Haulroad D Location**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 066State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 066User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

**Cost Breakdown:****Scraper Work Team****Support Equipment****Maintenance Equipment**

	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	25	25	25
Ownership cost/hour:	\$287.19	\$124.85	NA	\$124.85	\$114.80	\$91.73
Operating cost/hour:	\$277.83	\$97.63	NA	\$24.41	\$19.85	\$32.57
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	\$41.30	NA	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$595.92	\$263.78	NA	\$190.56	\$163.20	\$145.42
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work: \$1,455.62		Support: \$190.56		Maint: \$308.62	

Total work team cost/hour: **\$1,954.80****MATERIAL QUANTITIES**Initial volume: 3,452

CCY

Swell factor: 1.125Loose volume: **3,884**

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: 2,550 lbs/LCY  
 Material description: Earth - Dry packed  
 Rated Payload: 81,600 pounds  
 Payload Capacity: 32.00 LCY

Struck Volume: 24.00 LCY  
 Heaped Volume: 34.00 LCY  
 Average Volume: 29.00 LCY  
 Adjusted Capacity: **29.00** LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 6800 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3560.00	-2.90	4.00	1.10	2952	1.41

Haul Time: 1.41 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	3560.00	2.90	4.00	6.90	2240	1.71

Return Time: 1.71 minutesTotal Scraper team cycle time: 4.72 minutesAdjusted for job conditions: 611.95 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 611.95 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 611.95 LCY/HourUnadjusted unit production/hour: 737.29 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 6.35 HoursUnit cost: \$3.194 /LCYTotal job cost: \$12,405

**BULLDOZER WORK**Task description: Replace Topsoil on COV11, CCU31, CCU47, CCU58, CCU67, CCU84,Site: Peabody Sage Creek Mine Permit Action: MT3 Permit/Job#: C2009087**PROJECT IDENTIFICATION**

Task #: 068 State: Colorado Abbreviation: None  
 Date: 2/14/2023 County: Routt Filename: 068  
 User: HR1

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

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

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$153.67</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$166.94</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$22.74</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$41.30</u>	<u>NA</u>

Total unit Cost/Hour: \$384.65  
 Total Fleet Cost/Hour: **\$384.65**

**MATERIAL QUANTITIES**

Initial Volume: 2,258  
 Swell factor: 1.125  
 Loose volume: **2,540 LCY**

Source of estimated volume: Division of Reclamation, Mining & Safety  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 200 feet  
 Unadjusted hourly production: 946.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %  
 Average site altitude: 6,800 feet

Material weight: 2,550 lbs/LCYWeight description: Earth - Dry packed

<u>Job Condition Correction Factor</u>	<u>Source</u>
Operator Skill: <u>0.750</u>	<u>(AVG.)</u>
Material consistency: <u>0.900</u>	<u>(CAT HB))</u>
Dozing method: <u>1.000</u>	<u>(GEN.)</u>
Visibility: <u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4043

Adjusted unit production: 382.47 LCY/hr

Adjusted fleet production: **382.47** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.006/LCY

Total job time: **6.64** Hours

Total job cost: **\$2,555**

**BULLDOZER WORK**Task description: **Replace Topsoil on Upper Sump**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 069State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 069User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D10T - 10SUHorsepower: 574Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper own. Cost/Hour:	\$22.74	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$384.65Total Fleet Cost/Hour: **\$384.65****MATERIAL QUANTITIES**Initial Volume: 2,258Swell factor: 1.125Loose volume: **2,540 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 946.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 6,800 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4043

Adjusted unit production: 382.47 LCY/hr

Adjusted fleet production: **382.47** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.006/LCY

Total job time: **6.64** Hours

Total job cost: **\$2,555**

**BULLDOZER WORK**Task description: **Replace Topsoil on Lower Sump**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 070State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 070User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D10T - 10SUHorsepower: 574Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$153.67	NA
Operating Cost/Hour:	\$166.94	100
Ripper own. Cost/Hour:	\$22.74	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$384.65Total Fleet Cost/Hour: **\$384.65****MATERIAL QUANTITIES**Initial Volume: 1,613Swell factor: 1.125Loose volume: **1,815 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 946.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 6,800 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)



Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4043

Adjusted unit production: 382.47 LCY/hr

Adjusted fleet production: **382.47** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$1.006/LCY

Total job time: **4.74** Hours

Total job cost: **\$1,825**

## SAFEGUARDING UNDERGROUND OPENINGS

Task description: Seal Mine Shafts and Portals

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 080

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 080

User: HR1

Agency or organization name: DRMS

### UNIT COSTS

Opening Description	Dimensions	Closure Method	Quantity	Unit	Unit Cost	Total Cost
Mine Portal Openings	20'X11' (4)	Aduit closure - bulkhead seal (per opening)	4.00	EA	\$7,213.62	\$28,854.48
Backfill Portal Openings	20'X11' (4)	Aduit closure - backfilling (per opening)	4.00	EA	\$2,173.29	\$8,693.16
Seal Portal Dewatering Well	3'X90'	Shaft closure - backfilling, by hand	30.00	CY	\$41.65	\$1,249.50
Portal Dewatering Well Bottom Plug	3'X90'	Shaft closure - monolithic plug (per opening)	1.00	EA	\$17,765.50	\$17,765.50

Job Hours: 32.00

Total Cost: \$56,562.64

## BOREHOLE SEALING WORK

Task description: Drillhole/Monitoring Well Sealing

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 090

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 090

User: HR1

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Seal Overburden Wells	Portland cement grout ( Bag, material cost only...94 lb. bag)	6"	5033	220.00	bag	\$19.95	\$4,389.00
Seal Coal Wells	Portland cement grout ( Bag, material cost only...94 lb. bag)	6"	3723	162.00	bag	\$19.95	\$3,231.90
Seal Underburden Wells	Portland cement grout ( Bag, material cost only...94 lb. bag)	6"	3973	173.00	bag	\$19.95	\$3,451.35
Seal Exploration Wells	Portland cement grout ( Bag, material cost only...94 lb. bag)	6"	8600	375.00	bag	\$19.95	\$7,481.25
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	6"	23'	23.00	LF	\$3.26	\$74.98
Borehole Plug	PVC plug - 6 in. diameter borehole	6"	NA	23.00	EA	\$61.43	\$1,412.89
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	23.00	EA	\$37.50	\$862.50
Seal Misc Borehole/Well	Portland cement grout ( Bag, material cost only...94 lb. bag)	12"	1000	175.00	bag	\$19.95	\$3,491.25
Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	12"	4'	4.00	LF	\$3.26	\$13.04
Borehole Plug	PVC plug - 12 in. diameter borehole	12"	NA	4.00	EA	\$157.96	\$631.84
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	4.00	EA	\$37.50	\$150.00
Drill Rig and Labor	SCHRAMM T450WS	NA	NA	233.00	EA	\$567.59	\$132,248.47
Water Truck	Water Tanker, 2,500 Gal.	NA	NA	233.00	EA	\$51.72	\$12,050.76
Seal Alluvial/Spoil Wells	Bentonite seal - 6 in. (labor, equip, materials)	6"	222.2	7.00	LF	\$6.32	\$44.24
Seal and Abandon 14" Water Pump	Portland cement grout ( Bag, material cost	14"	45	6.00	bag	\$19.95	\$119.70

Borehole (MR20)	only...94 lb. bag)						
Seal and Abandon 5.625" pump control hole	Portland cement grout ( Bag, material cost only...94 lb. bag)	5.625"	45	2.00	bag	\$19.95	\$39.90
Bottom Plug (MR20)	PVC plug - 12 in. diameter borehole	14"	NA	1.00	EA	\$157.96	\$157.96
Bottom Plug (MR20)	PVC plug - 6 in. diameter borehole	5.625"	NA	1.00	EA	\$61.43	\$61.43
Borehole Marker (MR20)	Borehole location/identification marker (EA, material cost only)	NA	NA	2.00	EA	\$37.50	\$75.00
Cut Casings (MR20)	Exposed casing removal - Calculate Circumference in Linear Feet	14 & 5.625"	NA	5.28	LF	\$3.26	\$17.21

**Job Hours:** 233.00

**Total Cost:** \$170,005.00

**REVEGETATION WORK**Task description: Reseed North Facilities AreasSite: Peabody Sage Creek MinePermit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 100State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 100User: HR1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Composted manure DRMS Survey	500.00	pound	\$0.02	\$11.85
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$11.85</b>

**Application**

Description	Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)	\$71.00
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$71.00</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
<b>Total Tilling Cost/Acre</b>	<b>\$117.18</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.50	0.62	\$35.10
Beardless Wheatgrass - Whitmar	0.50	1.63	\$5.86
Big Bluegrass - Sherman	0.10	2.07	\$0.85
Bitterbrush, Antelope	1.00	0.31	\$19.50
Aster, Engelman's	0.10	0.48	\$19.40
Mountain Brome - Bromar	1.00	1.61	\$3.80
Great Basin Wildrye - Magnar	1.00	4.06	\$11.55
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.26
Rocky Mountain Fescue	0.10	1.61	\$0.73
Slender Wheatgrass - Native	1.00	3.65	\$4.63
Coneflower, Prairie	1.00	27.18	\$33.00

Streambank Wheatgrass - Sodar	0.50	1.63	\$2.85
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Native	1.00	2.53	\$6.00
Needlegrass, Green - Lodorm	1.00	4.16	\$11.78
Sagebrush, Mountain or Big	0.25	13.20	\$4.94
Flax, Lewis Blue	0.50	3.32	\$8.25
Sagebrush, Wyoming Big	0.25	14.78	\$5.81
Snowberry, Mountain	0.50	0.86	\$25.25
Penstemon, Palmer	0.10	2.21	\$5.45
Penstemon, Rocky Mountain	0.25	3.92	\$7.38
Yarrow, White	0.10	6.36	\$4.00
<b>Totals Seed Mix</b>	<b>11.35</b>	<b>98.42</b>	<b>\$219.80</b>

**Application**

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

**MULCHING and MISCELLANEOUS****Materials**

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

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 14.35 Cost /Acre: \$651.83  
Estimated Failure Rate: 20% Cost /Acre\*: \$651.83  
\*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING

Initial Job Cost: \$9,353.76  
Reseeding Job Cost: \$1,870.75  
Total Job Cost: \$11,225

Job Hours: 7.20

**REVEGETATION WORK**Task description: Reseed South Facilities AreasSite: Peabody Sage Creek MinePermit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 101State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 101User: HR1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
<b>Total Tilling Cost/Acre</b>	<b>\$117.18</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.50	0.62	\$35.10
Beardless Wheatgrass - Whitmar	0.50	1.63	\$5.86
Big Bluegrass - Sherman	0.10	2.07	\$0.85
Bitterbrush, Antelope	1.00	0.31	\$19.50
Aster, Engelman's	0.10	0.48	\$19.40
Mountain Brome - Bromar	1.00	1.61	\$3.80
Great Basin Wildrye - Magnar	1.00	4.06	\$11.55
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.26
Rocky Mountain Fescue	0.10	1.61	\$0.73
Slender Wheatgrass - Native	1.00	3.65	\$4.63



Coneflower, Prairie	1.00	27.18	\$33.00
Streambank Wheatgrass - Sodar	0.50	1.63	\$2.85
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Native	1.00	2.53	\$6.00
Needlegrass, Green - Lodorm	1.00	4.16	\$11.78
Sagebrush, Mountain or Big	0.25	13.20	\$4.94
Flax, Lewis Blue	0.50	3.32	\$8.25
Sagebrush, Wyoming Big	0.25	14.78	\$5.81
Snowberry, Mountain	0.50	0.86	\$25.25
Penstemon, Palmer	0.10	2.21	\$5.45
Penstemon, Rocky Mountain	0.25	3.92	\$7.38
Yarrow, White	0.10	6.36	\$4.00
<b>Totals Seed Mix</b>	<b>11.35</b>	<b>98.42</b>	<b>\$219.80</b>

**Application**

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

**MULCHING and MISCELLANEOUS****Materials**

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

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 76.8                      Cost /Acre: \$568.98  
 Estimated Failure Rate: 20%                      Cost /Acre\*: \$568.98  
 \*Selected Replanting Work Items: TILLING,SEEDING  
 Initial Job Cost: \$43,697.66  
 Reseeding Job Cost: \$8,739.53

Total Job Cost:	<b>\$52,437</b>
Job Hours:	<b>38.40</b>

**REVEGETATION WORK**Task description: **Reseed Reclaimed Roads**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 102State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 102User: HR1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
<b>Total Tilling Cost/Acre</b>	<b>\$117.18</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.50	0.62	\$35.10
Beardless Wheatgrass - Whitmar	0.50	1.63	\$5.86
Big Bluegrass - Sherman	0.10	2.07	\$0.85
Bitterbrush, Antelope	1.00	0.31	\$19.50
Aster, Engelman's	0.10	0.48	\$19.40
Mountain Brome - Bromar	1.00	1.61	\$3.80
Great Basin Wildrye - Magnar	1.00	4.06	\$11.55
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.26
Rocky Mountain Fescue	0.10	1.61	\$0.73
Slender Wheatgrass - Native	1.00	3.65	\$4.63

Coneflower, Prairie	1.00	27.18	\$33.00
Streambank Wheatgrass - Sodar	0.50	1.63	\$2.85
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Native	1.00	2.53	\$6.00
Needlegrass, Green - Lodorm	1.00	4.16	\$11.78
Sagebrush, Mountain or Big	0.25	13.20	\$4.94
Flax, Lewis Blue	0.50	3.32	\$8.25
Sagebrush, Wyoming Big	0.25	14.78	\$5.81
Snowberry, Mountain	0.50	0.86	\$25.25
Penstemon, Palmer	0.10	2.21	\$5.45
Penstemon, Rocky Mountain	0.25	3.92	\$7.38
Yarrow, White	0.10	6.36	\$4.00
<b>Totals Seed Mix</b>	11.35	98.42	<b>\$219.80</b>

**Application**

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

**MULCHING and MISCELLANEOUS****Materials**

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

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 15.2                      Cost /Acre: \$568.98  
 Estimated Failure Rate: 20%                      Cost /Acre\*: \$568.98  
 \*Selected Replanting Work Items: TILLING,SEEDING  
 Initial Job Cost: \$8,648.50  
 Reseeding Job Cost: \$1,729.70

Total Job Cost:	<b>\$10,378</b>
Job Hours:	<b>7.10</b>

**REVEGETATION WORK**Task description: **Reseed Drill Pads and Geotechnical Hole Locations**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 103State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 103User: HR1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
<b>Total Tilling Cost/Acre</b>	<b>\$117.18</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.50	0.62	\$35.10
Beardless Wheatgrass - Whitmar	0.50	1.63	\$5.86
Big Bluegrass - Sherman	0.10	2.07	\$0.85
Bitterbrush, Antelope	1.00	0.31	\$19.50
Aster, Engelman's	0.10	0.48	\$19.40
Mountain Brome - Bromar	1.00	1.61	\$3.80
Great Basin Wildrye - Magnar	1.00	4.06	\$11.55
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.26
Rocky Mountain Fescue	0.10	1.61	\$0.73
Slender Wheatgrass - Native	1.00	3.65	\$4.63

Coneflower, Prairie	1.00	27.18	\$33.00
Streambank Wheatgrass - Sodar	0.50	1.63	\$2.85
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Native	1.00	2.53	\$6.00
Needlegrass, Green - Lodorm	1.00	4.16	\$11.78
Sagebrush, Mountain or Big	0.25	13.20	\$4.94
Flax, Lewis Blue	0.50	3.32	\$8.25
Sagebrush, Wyoming Big	0.25	14.78	\$5.81
Snowberry, Mountain	0.50	0.86	\$25.25
Penstemon, Palmer	0.10	2.21	\$5.45
Penstemon, Rocky Mountain	0.25	3.92	\$7.38
Yarrow, White	0.10	6.36	\$4.00
<b>Totals Seed Mix</b>	<b>11.35</b>	<b>98.42</b>	<b>\$219.80</b>

**Application**

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

**MULCHING and MISCELLANEOUS****Materials**

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

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 1.45 Cost /Acre: \$568.98  
Estimated Failure Rate: 20% Cost /Acre\*: \$568.98  
\*Selected Replanting Work Items: TILLING,SEEDING

Initial Job Cost: \$825.02  
Reseeding Job Cost: \$165.00

Total Job Cost:	<u><b>\$990</b></u>
Job Hours:	<u><b>3.00</b></u>



**REVEGETATION WORK**Task description: Seed Remaining BRB-2 and BRB-3 AreaSite: Peabody Sage Creek MinePermit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 104State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 104User: HR1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.50	0.62	\$35.10
Beardless Wheatgrass - Whitmar	0.50	1.63	\$5.86
Big Bluegrass - Sherman	0.10	2.07	\$0.85
Bitterbrush, Antelope	1.00	0.31	\$19.50
Aster, Engelman's	0.10	0.48	\$19.40
Mountain Brome - Bromar	1.00	1.61	\$3.80
Great Basin Wildrye - Magnar	1.00	4.06	\$11.55
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.26
Rocky Mountain Fescue	0.10	1.61	\$0.73

Slender Wheatgrass - Native	1.00	3.65	\$4.63
Coneflower, Prairie	1.00	27.18	\$33.00
Streambank Wheatgrass - Sodar	0.50	1.63	\$2.85
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Native	1.00	2.53	\$6.00
Needlegrass, Green - Lodorm	1.00	4.16	\$11.78
Sagebrush, Mountain or Big	0.25	13.20	\$4.94
Flax, Lewis Blue	0.50	3.32	\$8.25
Sagebrush, Wyoming Big	0.25	14.78	\$5.81
Snowberry, Mountain	0.50	0.86	\$25.25
Penstemon, Palmer	0.10	2.21	\$5.45
Penstemon, Rocky Mountain	0.25	3.92	\$7.38
Yarrow, White	0.10	6.36	\$4.00
<b>Totals Seed Mix</b>	<b>11.35</b>	<b>98.42</b>	<b>\$219.80</b>

**Application**

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

**MULCHING and MISCELLANEOUS****Materials**

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

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 136.02                      Cost /Acre: \$451.80  
 Estimated Failure Rate: 0%                      Cost /Acre\*: \$451.80  
 \*Selected Replanting Work Items: SEEDING  
 Initial Job Cost: \$61,453.84

Reseeding Job Cost:	<b>\$0.00</b>
Total Job Cost:	<b>\$61,454</b>
Job Hours:	<b>68.01</b>

**REVEGETATION WORK**Task description: Seed Phase II Released BRB4Site: Peabody Sage Creek MinePermit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 106State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 106User: HR1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arrowleaf Balsamroot	0.50	0.62	\$35.10
Beardless Wheatgrass - Whitmar	0.50	1.63	\$5.86
Big Bluegrass - Sherman	0.10	2.07	\$0.85
Bitterbrush, Antelope	1.00	0.31	\$19.50
Aster, Engelman's	0.10	0.48	\$19.40
Mountain Brome - Bromar	1.00	1.61	\$3.80
Great Basin Wildrye - Magnar	1.00	4.06	\$11.55
Alfalfa - Ladak (inoculated)	0.10	0.48	\$0.26
Rocky Mountain Fescue	0.10	1.61	\$0.73

Slender Wheatgrass - Native	1.00	3.65	\$4.63
Coneflower, Prairie	1.00	27.18	\$33.00
Streambank Wheatgrass - Sodar	0.50	1.63	\$2.85
Thickspike Wheatgrass - Critana	0.50	1.77	\$3.44
Western Wheatgrass - Native	1.00	2.53	\$6.00
Needlegrass, Green - Lodorm	1.00	4.16	\$11.78
Sagebrush, Mountain or Big	0.25	13.20	\$4.94
Flax, Lewis Blue	0.50	3.32	\$8.25
Sagebrush, Wyoming Big	0.25	14.78	\$5.81
Snowberry, Mountain	0.50	0.86	\$25.25
Penstemon, Palmer	0.10	2.21	\$5.45
Penstemon, Rocky Mountain	0.25	3.92	\$7.38
Yarrow, White	0.10	6.36	\$4.00
<b>Totals Seed Mix</b>	<b>11.35</b>	<b>98.42</b>	<b>\$219.80</b>

**Application**

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

**MULCHING and MISCELLANEOUS****Materials**

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

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 462.4                      Cost /Acre: \$451.80  
 Estimated Failure Rate: 0%              Cost /Acre\*: \$451.80  
 \*Selected Replanting Work Items: SEEDING  
 Initial Job Cost: \$208,912.32

Reseeding Job Cost:	<b>\$0.00</b>
Total Job Cost:	<b>\$208,912</b>
Job Hours:	<b>231.20</b>

## DEMOLITION WORK

Task description: Demolish and Remove North Facilities and Materials

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 110

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 110

User: HR1

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 98.20 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Security Building	12'X40'X10'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	4,800.00	CF	\$0.22	\$1,046.40
Bathhouse	42'X40'X10'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	16,800.00	CF	\$0.22	\$3,662.40
Bathhouse Floor	42'X40'	Demo. and on-site disposal in existing pit, 4 in. thick - Max. 10,000 ft. haul	1,680.00	SF	\$0.77	\$1,286.88
Bathhouse Footers	84'X76'	Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft. - Max. 10,000 ft. haul	160.00	LF	\$6.89	\$1,102.40
Temporary Bathhouse	24'X70'X10'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	16,800.00	CF	\$0.22	\$3,662.40
Temporary Bathhouse Floor	24'X70'	Demo. and on-site disposal in existing pit, 4 in. thick - Max. 10,000 ft. haul	1,680.00	SF	\$0.77	\$1,286.88
Diesel Tank Removal	20,000g	Haul tank to certified salvage dump - 9,000 to 12,000 gal. tank	2.00	EA	\$1,050.00	\$2,100.00
Diesel Tank Sludge Removal	5% of 20,000g	Remove sludge, water, and rem. product from tank - 3,000 to 5,000 gal.	1.00	EA	\$245.00	\$245.00
Diesel Tank Dry Ice	20,000g	Insert dry ice (CO2) into tank to produce inert gas - 1.5 lbs./100 gal.	300.00	LB	\$1.99	\$597.00
Unleaded Fuel Tank Removal	2,000g	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	1.00	EA	\$760.00	\$760.00
Unleaded Fuel Tank Sludge Removal	5% of 2,000g	Remove sludge, water, and rem. product from tank - 3,000 to 5,000 gal.	1.00	EA	\$245.00	\$245.00
Unleaded Fuel Tank Dry Ice	2,000g	Insert dry ice (CO2) into tank to produce inert gas - 1.5 lbs./100 gal.	30.00	LB	\$1.99	\$59.70

Used Oil Tank Removal	2,000g(3)	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	3.00	EA	\$760.00	\$2,280.00
Used Oil Tank Sludge Removal	5% of 2,000g	Remove sludge, water, and rem. product from tank - 3,000 to 5,000 gal.	3.00	EA	\$245.00	\$735.00
Unleaded Fuel Tank Dry Ice	2,000g	Insert dry ice (CO2) into tank to produce inert gas - 1.5 lbs./100 gal.	90.00	LB	\$1.99	\$179.10
Mag Cholide Tank Removal	2,500g	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	1.00	EA	\$760.00	\$760.00
North Facilities Tank Pads	120 CY	Slab on grade, concrete, demolition only - Mesh reinforcing	120.00	CY	\$131.00	\$15,720.00
North Facilities Septic Tank	1,000G	Comprehensive storage tank removal, non-leaking - 3,000 to 5,000 gal. tank	1.00	EA	\$3,522.20	\$3,522.20
North Facilities Dosing Tank	1,000G	Comprehensive storage tank removal, non-leaking - 3,000 to 5,000 gal. tank	1.00	EA	\$3,522.20	\$3,522.20
Vehicle Maintenance Shop	140'X80'X20'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	224,000.00	CF	\$0.22	\$49,728.00
Vehicle Maintenance Shop Floor	140'X80'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	11,200.00	SF	\$1.15	\$12,868.80
Parts Building	110'X70'X20'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	154,000.00	CF	\$0.22	\$34,188.00
Parts Building Floor	110'X70'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	7,700.00	SF	\$1.15	\$8,847.30
Electrical Parts Building	30'X22'X10'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	6,600.00	CF	\$0.22	\$1,438.80
Electrical Parts Building Floor	30'X22'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	660.00	SF	\$1.15	\$758.34
Lean-To Building	100'X12'X10'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,200.00	CF	\$0.22	\$261.60
Office Building	60'X50'X10'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	30,000.00	CF	\$0.22	\$6,540.00
Office Building Floor	60'X50'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000	3,000.00	SF	\$1.15	\$3,447.00



		ft. haul				
Engineering Trailer	55'X10'X10'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	5,500.00	CF	\$0.22	\$1,199.00
Engineering Trailer Floor	55'X10'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	550.00	SF	\$1.15	\$631.95
Welding Shop	90'X56'X15'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	75,600.00	CF	\$0.22	\$16,783.20
Welding Shop Floor	90'X56'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	5,040.00	SF	\$1.15	\$5,790.96
PM Shop	120'X42'X15'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	75,600.00	CF	\$0.22	\$16,783.20
PM Shop Floor	120'X42'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	5,040.00	SF	\$1.15	\$5,790.96
Lube Storage Building	44'X18'X10'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	7,920.00	CF	\$0.22	\$1,726.56
Lube Storage Building Floor	44'X18'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	792.00	SF	\$1.15	\$910.01
Wadge Pond 002 Pump Facility	20'X10'X8'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,600.00	CF	\$0.22	\$348.80
Wadge Pond 002 Pump Facility Pad	20'X10'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	200.00	SF	\$2.30	\$459.40
Wadge Pond 002 Pump Facility Precast Blocks	20'X20'	Wall, block, demolition only, 12 in. thick - No reinforcing	400.00	SF	\$1.20	\$480.00
Electrical Substation Pads	12'X30'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	360.00	SF	\$1.15	\$413.64
North Facilities Propane Tanks	1,000g (5)	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	5.00	EA	\$760.00	\$3,800.00
North Facilities Propane Tank Saddles	4'X8'X1'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	160.00	SF	\$3.79	\$606.40
Remove Fencing	20,000LF	Fencing, barbed wire, - 3 strand	20,000.00	LF	\$1.65	\$33,000.00
Remove Fencing	1100LF	Fencing, chain link, including posts and	1,100.00	LF	\$2.68	\$2,948.00

		fabric - to 6 ft. high				
Remove Powerlines	5 Miles	Utility Poles, Wood 35' - 45' high (each pole)	26.00	EA	\$297.50	\$7,735.00
Culvert 52A	30"	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	40.00	LF	\$10.15	\$406.04
Culvert SC-23	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	20.00	LF	\$7.68	\$153.56
Culvert 64A	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	40.00	LF	\$7.68	\$307.12
Culvert 53A	12"	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	40.00	LF	\$4.34	\$173.72
Culvert 54A	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	40.00	LF	\$5.90	\$236.08
Culvert 55A	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	40.00	LF	\$5.90	\$236.08
Culvert 13A	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	60.00	LF	\$5.90	\$354.12
Culvert 59A	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	40.00	LF	\$5.90	\$236.08
Culvert 9A	48"	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	80.00	LF	\$17.76	\$1,420.88
Culvert 12A	30"	Pipe, corrugated metal (CMP) - 30 in. diameter pipe	60.00	LF	\$10.15	\$609.06
Culvert A8	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	40.00	LF	\$5.90	\$236.08
Culvert 31A	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	60.00	LF	\$5.90	\$354.12
Pond 002 Valve Building (MR17)	20'X12'X10'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 10,000 ft. haul	2,400.00	CF	\$0.22	\$523.20
Pond 002 Valve Building floor (MR17)	20'X12'X6"	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	240.00	SF	\$1.15	\$275.76
Pond 002 Valve Building Foundation	8'X10"	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	64.00	LF	\$4.59	\$293.76

<b>Job Hours:</b>	<b>134.00</b>	<b>Subtotal (unadjusted):</b>	<b>\$266,073.14</b>	<b>Total Cost (adjusted for location):</b>	<b>\$261,283.82</b>
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## DEMOLITION WORK

Task description: Demolish and Remove South Facilities and Structures

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 111

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 111

User: HR1

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 98.20 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Million Gallon Water Tank	85'dX24'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	133,600.00	CF	\$0.22	\$29,659.20
Million Gallon Water Tank Pad	85'dX1'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	5,682.00	SF	\$2.30	\$13,051.55
Million Gallon Water Tank Footer	85'd	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	85.00	LF	\$4.59	\$390.15
Remove 20,000g Diesel Tank	20,000	Haul tank to certified salvage dump - 9,000 to 12,000 gal. tank	1.00	EA	\$1,050.00	\$1,050.00
Remove 20,000g Diesel Tank Sludge	5% of 20,000g	Remove sludge, water, and rem. product from tank - 9,000 to 12,000 gal.	1.00	EA	\$409.00	\$409.00
Dry Ice for Inert Transport 20,000g Diesel Tank	20,000g	Insert dry ice (CO2) into tank to produce inert gas - 1.5 lbs./100 gal.	300.00	LB	\$1.99	\$597.00
Remove 10,000g Diesel Tanks	10,000g(2)	Haul tank to certified salvage dump - 9,000 to 12,000 gal. tank	2.00	EA	\$1,050.00	\$2,100.00
Remove 10,000g Diesel Tank Sludge	5% of 10,000g(2)	Remove sludge, water, and rem. product from tank - 9,000 to 12,000 gal.	2.00	EA	\$409.00	\$818.00
Dry Ice for Inert Transport 10,000g Diesel Tanks	10,000g(2)	Insert dry ice (CO2) into tank to produce inert gas - 1.5 lbs./100 gal.	300.00	LB	\$1.99	\$597.00
Remove 5,000g Diesel Tank	5,000g	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	1.00	EA	\$760.00	\$760.00
Remove 5,000g Diesel Tank Sludge	5% of 5,000	Remove sludge, water, and rem. product from tank - 3,000 to 5,000 gal.	1.00	EA	\$245.00	\$245.00
Dry Ice for Inert Transport 5,000g Diesel Tank	5,000g	Insert dry ice (CO2) into tank to produce inert gas - 1.5 lbs./100 gal.	75.00	LB	\$1.99	\$149.25
Remove 2,000g Unleaded Fuel Tank	2,000g	Haul tank to certified salvage dump - 3,000 to	1.00	EA	\$760.00	\$760.00

		5,000 gal. tank				
Remove 2,000g Unleaded Tank Sludge	5% of 2,000	Remove sludge, water, and rem. product from tank - 3,000 to 5,000 gal.	1.00	EA	\$245.00	\$245.00
Dry Ice for Inert Transport 2,000g Unleaded Tank	2,000g	Insert dry ice (CO2) into tank to produce inert gas - 1.5 lbs./100 gal.	30.00	LB	\$1.99	\$59.70
Remove 2,000 Oil Tanks	2,000g (6)	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	6.00	EA	\$760.00	\$4,560.00
Remove 2,000g Oil Tank Sludge	5% of 2,000g(6)	Remove sludge, water, and rem. product from tank - 3,000 to 5,000 gal.	6.00	EA	\$245.00	\$1,470.00
Dry Ice for Inert Transport 2,000g Oil Tank	2,000g(6)	Insert dry ice (CO2) into tank to produce inert gas - 1.5 lbs./100 gal.	180.00	LB	\$1.99	\$358.20
Remove Mag Chloride Tanks	2,500g(2)	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	2.00	EA	\$760.00	\$1,520.00
Remove Propane Tank	20,000g	Haul tank to certified salvage dump - 9,000 to 12,000 gal. tank	1.00	EA	\$1,050.00	\$1,050.00
Remove Propane Tank Saddles	8'X4'X1'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	64.00	SF	\$3.79	\$242.56
Fuel Storage and Oil Storage Tank Pads	120 CY	Slab on grade, concrete, demolition only - Mesh reinforcing	120.00	CY	\$131.00	\$15,720.00
Portal Entry Fan Housing	30'X30'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 50 ft. push	18,000.00	CF	\$0.22	\$3,960.00
Pad Fan Housing	30'X30'X20'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 50 ft. push	18,000.00	CF	\$0.22	\$3,960.00
Pad Fan Pad	31'X70'X2'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 50 ft. push	2,170.00	SF	\$2.26	\$4,906.37
Pad Fan Footers	7'X7'X11'	Demo. and on-site disposal in excavated pit, 2.0 ft. x 3 ft. - Max. 50 ft. push	92.00	LF	\$14.14	\$1,300.88
Pad Fan Motor	10'X10'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 50 ft. push	1,000.00	CF	\$0.19	\$194.00
Electrical Substation Pad	160'X160'	Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul	25,600.00	SF	\$1.53	\$39,219.20
Electrical Substation Fencing	600 LF	Fencing, chain link, including posts and fabric - to 6 ft. high	600.00	LF	\$2.68	\$1,608.00
Utility Building	30'X40'X12'	Bldg. (SN) demo./on-	14,400.00	CF	\$0.22	\$3,139.20

		site disposal in existing pit or cut - Max. 10,000 ft. haul				
Utility Building Floor	30'X40'	Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul	1,200.00	SF	\$1.53	\$1,838.40
Compressor Building	140'X40'X16'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	89,600.00	CF	\$0.22	\$19,891.20
Compressor Building Floor	140'X40'	Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul	5,600.00	SF	\$1.53	\$8,579.20
Waste Handling and Recycle Area	250'X8'X6"	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	2,000.00	SF	\$2.60	\$5,200.00
Waste Handling and Recycle Area Pad	100'X150'	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 10,000 ft. haul	15,000.00	SF	\$1.15	\$17,235.00
Waste Handling and Recycle Area Roof	50'X150'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	7,500.00	CF	\$0.22	\$1,635.00
Portal Conveyor	100LF	OBSOLETE-Conveyor, overland, including supports - 5 ft. W x 6 ft. H housing	100.00	LF	\$17.60	\$1,760.00
Transfer Conveyor	700LF	OBSOLETE-Conveyor, overland, including supports - 5 ft. W x 6 ft. H housing	700.00	LF	\$17.60	\$12,320.00
Radial Staker Conveyor	150LF	OBSOLETE-Conveyor, elevated, including supports - 5 ft. W x 6 ft. H housing	150.00	LF	\$44.51	\$6,676.35
Temporary Conveyor Supports	67 CY	Slab on grade, concrete, demolition only - No reinforcing	67.00	CY	\$96.00	\$6,432.00
Mine Portal Heaters (Bury in Pit)	2 Each	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 50 ft. push	10.00	CF	\$0.19	\$1.94
Rock Dust Tanks (2)	1131 SF	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	1,131.00	CF	\$0.22	\$251.08
Rock Dust Tank Pads (2)	22 CY	Slab on grade, concrete, demolition only - Rod reinforcing	22.00	CY	\$172.50	\$3,795.00
Electrical Metering Station	30'X30'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	900.00	CF	\$0.22	\$196.20
Electrical Metering Station Pad	30'X30'	Demo. and on-site disposal in existing pit, 6	900.00	SF	\$1.15	\$1,034.10

		in. thick - Max. 10,000 ft. haul				
Portal Pump Station (Buried in Pit)	36.5'X36'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 50 ft. push	10.00	CF	\$0.19	\$1.94
Covered Storage Building	150'X30'X20'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	90,000.00	CF	\$0.22	\$19,980.00
Covered Storage Pylons	2'd	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	160.00	LF	\$4.59	\$734.40
Covered Storage Building	200'X30'X20'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	120,000.00	CF	\$0.22	\$26,640.00
Covered Storage Pylons	2'D	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	180.00	LF	\$4.59	\$826.20
Covered Storage Buildings (2)	200'X50'X20'	Bldg. (MN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	400,000.00	CF	\$0.22	\$88,800.00
Covered Storage Pylons	2'D	Demo. and on-site disposal in existing pit, 1.0 ft. x 2 ft. - Max. 10,000 ft. haul	360.00	LF	\$4.59	\$1,652.40
South Facilities Powerlines	9100LF	Utility Poles, Wood 35' - 45' high (each pole)	10.00	EA	\$297.50	\$2,975.00
Powder Magazines (2)	16'X12'X10'(2)	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	3,840.00	CF	\$0.22	\$837.12
Powder Magazine Fence	450 LF	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	450.00	LF	\$3.08	\$1,386.00
Culvert 15A	54"(2)	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	120.00	LF	\$23.89	\$2,866.68
Culvert SC-20	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	60.00	LF	\$7.68	\$460.68
Culvert SC-19	54"	Pipe, corrugated metal (CMP) - 60 in. diameter pipe	90.00	LF	\$23.89	\$2,150.01
Culvert SC-17	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	60.00	LF	\$12.24	\$734.52
Culvert SC-9 (Buried in Pit)	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	1.00	LF	\$12.24	\$12.24
Culvert SC-24 (Buried in Pit)	6"	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	1.00	LF	\$3.31	\$3.31
Culvert SC-22	36"	Pipe, corrugated metal	60.00	LF	\$12.24	\$734.52

		(CMP) - 36 in. diameter pipe				
Culvert SC-21	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	40.00	LF	\$7.68	\$307.12
Culvert SC-13	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	40.00	LF	\$5.90	\$236.08
Culvert SC-18	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	20.00	LF	\$7.68	\$153.56
Culvert SC-25	8"	Pipe, corrugated metal (CMP) - 8 in. diameter pipe	10.00	LF	\$3.31	\$33.07
Culvert SC-16	48"	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	100.00	LF	\$17.76	\$1,776.10
Culvert SC-10	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	240.00	LF	\$12.24	\$2,938.08
Culvert SC-15	36"	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	60.00	LF	\$12.24	\$734.52
Culvert SC-11	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	80.00	LF	\$5.90	\$472.16
Culvert SC-12	18"	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	40.00	LF	\$5.90	\$236.08
Culvert SC-14	48"(2)	Pipe, corrugated metal (CMP) - 48 in. diameter pipe	160.00	LF	\$17.76	\$2,841.76
Pumphouse Pad (MR20)	6'X6'X1'	Demo. and on-site disposal in existing pit, 12 in. thick - Max. 10,000 ft. haul	36.00	SF	\$2.30	\$82.69
Pumphouse Building (MR20)	4'X4'X8'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	128.00	CF	\$0.21	\$26.24
Remove Culvert SC-27	24"	Pipe, corrugated metal (CMP) - 24 in. diameter pipe	25.00	LF	\$7.68	\$191.95
Demolish and Remove Microwave Tower Foundation	8'x8'x8'	Demo. and on-site disposal in existing pit, 8 in. thick - Max. 10,000 ft. haul	64.00	SF	\$1.53	\$98.05
Demolish and Remove Microwave Tower	10'x25'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	250.00	CF	\$0.22	\$54.50
Demo temporary tent MR32	30x50	Cat D8T - 8SU	0.50	EA	\$263.78	\$131.89

Job Hours: 190.00Subtotal  
(unadjusted): \$382,053.60Total Cost  
(adjusted for location): \$375,176.64

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mobilize/Demobilize Equipment from Hayden**Site: **Peabody Sage Creek Mine**Permit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 120State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 120User: HR1Agency 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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
Ownership Cost/Hour:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

**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 D10T - 10SU	84.53	\$153.67	\$136.92	6	\$1,743.54	\$821.52	\$1,500.00
Cat 637G w/push-pull	59.59	\$287.19	\$136.92	4	\$1,696.44	\$547.68	\$1,000.00
CAT 972H	28.00	\$53.96	\$101.82	1	\$155.78	\$101.82	\$250.00
CAT 980H	33.12	\$54.58	\$101.82	2	\$312.80	\$203.64	\$500.00
Cat D9T - 9SU	60.01	\$146.30	\$136.92	2	\$566.44	\$273.84	\$500.00
Cat D8T - 8SU	47.71	\$124.85	\$101.82	1	\$226.67	\$101.82	\$250.00
Cat 772	36.80	\$95.99	\$101.82	1	\$197.81	\$101.82	\$250.00
SCHRAMM T450WS	35.00	\$258.41	\$101.82	1	\$360.23	\$101.82	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.25	\$68.22	1	\$74.47	\$68.22	\$250.00
Water Tanker, 10,000 Gal.	41.10	\$91.73	\$101.82	1	\$193.55	\$101.82	\$250.00
Cat 324D L 9'-8" Stick	27.33	\$84.48	\$101.82	1	\$186.30	\$101.82	\$250.00
Cat 770D	37.54	\$79.42	\$101.82	8	\$1,449.92	\$814.56	\$2,000.00
CAT 14M	23.57	\$114.80	\$68.22	2	\$366.04	\$136.44	\$500.00

Subtotals: **\$7,529.99** **\$3,476.82** **\$7,750.00**



**ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 10-12 cy, 6x4	\$107.03	6	\$642.18	\$642.18
Flatbed Truck, 4x2, 15K GVW	\$25.32	1	\$25.32	\$25.32
Fuel Tanker, 6x4, 210 HP	\$48.30	1	\$48.30	\$48.30
Lube Truck, 6x4, 250 HP	\$48.30	1	\$48.30	\$48.30

Subtotals:	<b>\$764.10</b>	<b>\$764.10</b>
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**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: HAYDEN  
 Total one-way travel distance: 10.00 miles  
 Average Travel Speed: 30.00 mph

Total Non-Roadable Mob/Demob Cost \* \$37,897.85

\* two round trips with haul rig:

Total Roadable Mob/Demob Cost \*\* \$509.40  
 \*\* one round trip, no haul rig:

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.33	0.33
Return Time (Hours):	0.33	0.33
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.67	0.67

**JOB TIME AND COST**

Total job time: 3.33 Hours

Total job cost: \$38,407

## SITE MAINTENANCE

Task description: Site Maintenance During Liability Period

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 125

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 125

User: HR1

Agency or organization name: DRMS

### UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Rill and Gully Repair	40.00	CAT 14M	400.00	EA	\$222.75	\$89,100.00

Job Hours: 400.00

Total Cost: \$89,100.00

**REVEGETATION WORK**Task description: Weed Managment Over Liability PeriodSite: Peabody Sage Creek MinePermit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 126  
Date: 2/14/2023  
User: HR1State: Colorado  
County: RouttAbbreviation: None  
Filename: 126Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			\$
<b>Totals Seed Mix</b>	<b>0.00</b>	<b>0.00</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$

<b>Total Seed Application Cost/Acre</b>	<b>\$0.00</b>
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**MULCHING and MISCELLANEOUS****Materials**

<b>Description</b>	<b>Units / Acre</b>	<b>Unit</b>	<b>Cost / Unit</b>	<b>Cost /Acre</b>
Herbicide - 2,4D @ 1.0 pt/ac	150.00	ACRE	\$3.04	\$456.00
<b>Total Mulch Materials Cost/Acre</b>				<b>\$456.00</b>

**Application**

<b>Description</b>	<b>Cost /Acre</b>
Weed spray, hand, aquatic area, nox. [DMG]	\$183.16
<b>Total Mulch Application Cost/Acre</b>	<b>\$183.16</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres:	17.1	Cost /Acre:	\$639.16
Estimated Failure Rate:	0%	Cost /Acre*:	\$639.16
*Selected Replanting Work Items:	MULCHING		

Initial Job Cost:	<b>\$10,929.64</b>
Reseeding Job Cost:	<b>\$0.00</b>
Total Job Cost:	<b>\$10,930</b>
Job Hours:	<b>0.00</b>

## SITE MAINTENANCE

Task description: Water Monitoring During Liability Period

Site: Peabody Sage Creek Mine

Permit Action: MT3

Permit/Job#: C2009087

### PROJECT IDENTIFICATION

Task #: 127

State: Colorado

Abbreviation: None

Date: 2/14/2023

County: Routt

Filename: 127

User: HR1

Agency or organization name: DRMS

### UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
NPDES Site 003 - Sampling \$/Hr	0.25	USER PROVIDED ITEM	2.50	EA	\$48.60	\$121.50
NPDES Site 004 - Sampling \$/Hr	0.50	USER PROVIDED ITEM	5.00	EA	\$48.60	\$243.00
NPDES Site 002 - Sampling \$/Hr	0.25	USER PROVIDED ITEM	2.50	EA	\$48.60	\$121.50
GW Monitoring Wells (15)	2.00	USER PROVIDED ITEM	300.00	EA	\$57.40	\$17,220.00
Grassy Creek Upstream - Sampling \$/Hr	0.50	USER PROVIDED ITEM	5.00	EA	\$48.60	\$243.00
Grassy Creek Downstream - Sampling \$/Hr	0.50	USER PROVIDED ITEM	5.00	EA	\$48.60	\$243.00
Sampling Containers - 7 Sets	1.00	USER PROVIDED ITEM	7.00	EA	\$36.00	\$252.00
Lab Analysis - for 20 Sites/year	1.00	USER PROVIDED ITEM	200.00	EA	\$187.00	\$37,400.00

Job Hours: 60.00

Total Cost: \$55,844.00

**TRUCK/LOADER TEAM WORK**Task description: Clean Sediment from Upper and Lower SumpsSite: Peabody Sage Creek MinePermit Action: MT3Permit/Job#: C2009087**PROJECT IDENTIFICATION**Task #: 128State: ColoradoAbbreviation: NoneDate: 2/14/2023County: RouttFilename: 128User: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 10-12 cy, 6x4
-Loader:		CAT 973D
Support Equipment -Load Area:		NA
-Dump Area:		NA
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

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

	Truck	Track Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	20	NA	NA	NA	NA
Ownership cost/hour:	\$20.03	\$147.66	NA	NA	NA	NA
Operating cost/hour:	\$55.09	\$18.15	NA	NA	NA	NA
% Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$0.00	\$40.71	NA	NA	NA	NA
Unit Subtotals:	\$75.12	\$206.51	NA	NA	NA	NA
Number of Units:	6	1	0	0	0	0
Group Subtotals:	Work:	\$657.23	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$657.23**MATERIAL QUANTITIES**Initial volume: 5,485

CCY

Swell factor: 1.090Loose volume: 5,979

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: 2,600 Pounds/LCYDescription: Clay and gravel - WetRated Payload: 35,400 PoundsPayload Capacity: 13.62 LCY

**Truck Bed (volume) Basis:**

Struck Volume:	10.00	LCY
Heaped Volume:	12.00	LCY
Average Volume:	11.00	LCY
Adjusted Volume:	12.00	LCY

Final Truck Volume Based on Number of Loader Passes: 9.22 LCY

**Loading Tool Capacity**

Bucket Size Class: NA

Rated Capacity:	4.190	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<b>4.609</b>	LCY

**Job Condition Corrections:**

Site Altitude (ft.): 6800 feet

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

**Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill Truck: 2 passes

**Excavators and Front Shovels:**

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

Track Loaders – Material Description: \_\_\_\_\_

Cycle Time Elements (min.):

Load: 0.050 Maneuver: 0.200 Dump: 0.055

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.305 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Inconsistent operation 0.04	0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		0.020	minutes
Adjusted Loader Cycle Time:		<b>0.325</b>	minutes
Net Load Time per Truck:		<b>0.380</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	0.380	Minutes	Adjusted for site altitude:	0.380	Minutes
Truck Maneuver and Dump Time:	0.90	Minutes	Adjusted for site altitude:	0.900	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	36960.00	0.00	3.00	3.00	2824	13.189

Haul Time: **13.189** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	36960.00	0.00	3.00	3.00	2874	12.886

Return Time: **12.886** minutesTotal Truck Cycle Time: **27.855** minutes

## Loading Tool unit

Production 628.50 LCY/Hour      Adjusted for job efficiency: 521.66 LCY/Hour  
Truck Unit Production 19.86 LCY/Hour      Adjusted for job efficiency: 16.48 LCY/Hour

Optimal No. of Trucks: 32 Truck(s)      Selected Number of Trucks: 6 Truck(s)

Adjusted hourly truck team production: 98.88 LCY/Hour  
Adjusted single truck/loader team production: 98.88 LCY/Hour  
Adjusted multiple truck/loader team production: **98.88** LCY/Hour

**JOB TIME AND COST**Fleet size: 1 Team(s)      Total job time: **60.46** HoursUnit cost: \$6.647 /LCY      Total job cost: **\$39,738**