COST SUMMARY WORK

Task description: **New Application**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: ACY State: Colorado Abbreviation: None
Date: 6/8/2023 County: Garfield Filename: M052-ACY
User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
2001B	Phase 1 - Backfill w Overburden	TRUCK1	1	25.46	$46,280
2002B	Phase 2 - Backfill w Overburden	TRUCK1	1	13.25	$24,084
2003B	Phase 3 - Backfill w Overburden	TRUCK1	1	30.87	$56,117
2004B	Misc. - Backfill w Overburden	TRUCK1	1	11.79	$21,439
2101B	Phase 1 - Grade Transported Overburden	DOZER	2	12.40	$10,578
2102B	Phase 2 - Grade Transported Overburden	DOZER	2	6.45	$5,505
2103b	Phase 3 - Grade Transported Overburden	DOZER	2	15.03	$12,826
2104B	Misc. - Grade Transported Overburden	DOZER	2	5.74	$4,901
3001B	Phase 1 - Decompaction	RIPPER	2	3.14	$2,817
3002B	Phase 2 - Decompaction	RIPPER	2	1.63	$1,466
3003B	Phase 3 - Decompaction	RIPPER	2	3.81	$3,416
3004B	Misc. - Decompaction	RIPPER	2	1.47	$1,320
4001B	Phase 1 - Topsoil Replacement	TRUCK1	1	5.55	$10,085
4002B	Phase 2 - Topsoil Replacement	TRUCK1	1	2.89	$5,247
4003B	Phase 3 - Topsoil Replacement	TRUCK1	1	6.73	$12,228
4004B	Misc, - Topsoil Replacement	TRUCK1	1	2.57	$4,671
4101B	Phase 1 - Grade Transported Topsoil	DOZER	2	2.06	$1,755
4102B	Phase 2 - Grade Transported Topsoil	DOZER	2	1.07	$913
4103B	Phase 3 - Grade Transported Topsoil	DOZER	2	2.49	$2,129
4104B	Misc. - Grade Transported Topsoil	DOZER	2	0.95	$813
5001B	Phase 1 - Reveg	REVEGE	1	5.00	$6,265
5002B	Phase 2 - Reveg	REVEGE	1	2.50	$3,260
5003B	Phase 3 - Reveg	REVEGE	1	6.00	$7,596
5004B	Misc. - Reveg	REVEGE	1	2.50	$2,936
5005	Phase 4 - Failure Seeding of Berms 30%	REVEGE	1	1.00	$1,129
9001	Initial Mobilization	MOBILIZE	1	2.62	$9,557
9002	Secondary Mobilization	MOBILIZE	1	2.62	$1,595
			SUBTOTALS:	**177.59**	**$260,928**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$5,271
Performance bond:	1.05	Total =	$2,740
Job superintendent:	88.80	Total =	$5,779
Profit:	10.00	Total =	$26,093
		TOTAL O & P =	$39,882
		CONTRACT AMOUNT (direct + O & P) =	$300,810

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$500	Total =	$500
Engineering work and/or contract/bid preparation:	4.25	Total =	$12,784
Reclamation management and/or administration:	5.00		$15,041
CONTINGENCY:	3.00	Total =	$7,828
		TOTAL INDIRECT COST =	$76,035
		TOTAL BOND AMOUNT (direct + indirect) =	**$336,963**

TRUCK/LOADER TEAM WORK

Task description: **Phase 1 - Backfill w Overburden**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 2001B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-2001B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 980H
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	30	30	50	50
Ownership cost/hour:	$108.06	$61.69	$241.38	$241.38	$212.21	$16.65
Operating cost/hour:	$71.88	$58.92	$43.18	$43.18	$62.44	$18.80
%Utilization-riper:	NA	0	100	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$14.11	$0.00	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	$7.45	$0.00	$0.00	$0.00
Operator cost/hour:	$32.54	$40.71	$41.30	$41.30	$28.56	$21.12
Unit Subtotals:	$212.48	$161.32	$333.31	$325.86	$303.21	$56.57
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	$798.76	Support:	$659.17	Maint:	$359.78

Total work team cost/hour: **$1,817.71**

MATERIAL QUANTITIES

Initial volume: 14,802 CCY Swell factor: 1.115
Loose volume: **16,504** LCY

Source of estimated volume: Exhibit L & Rec Plan
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: $0.00
Total Cost: $0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,100 Pounds/LCY
Description: Earth - Loam
Rated Payload: 62,000 Pounds
Payload Capacity: 29.52 LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **15.75** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	**7.875**	LCY

Job Condition Corrections: Site Altitude (ft.): 5380 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 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: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**0.610**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.610	Minutes	Adjusted for site altitude:	0.610	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2183	0.790

Haul Time: **0.790** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2936	0.546

Return Time: **0.546** minutes
Total Truck Cycle Time: **3.546** minutes

Loading Tool unit Production 780.99 LCY/Hour Adjusted for job efficiency: 648.22 LCY/Hour

Truck Unit Production 266.50 LCY/Hour Adjusted for job efficiency: 221.19 LCY/Hour

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

Adjusted hourly truck team production: 663.58 LCY/Hour
Adjusted single truck/loader team production: 648.22 LCY/Hour
Adjusted multiple truck/loader team production: **648.22** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **25.46** Hours

Unit cost: $2.804 /LCY Total job cost: **$46,280**

TRUCK/LOADER TEAM WORK

Task description: **Phase 2 - Backfill w Overburden**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 2002B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-2002B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 980H
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	30	30	50	50
Ownership cost/hour:	$108.06	$61.69	$241.38	$241.38	$212.21	$16.65
Operating cost/hour:	$71.88	$58.92	$43.18	$43.18	$62.44	$18.80
%Utilization-riper:	NA	0	100	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$14.11	$0.00	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	$7.45	$0.00	$0.00	$0.00
Operator cost/hour:	$32.54	$40.71	$41.30	$41.30	$28.56	$21.12
Unit Subtotals:	$212.48	$161.32	$333.31	$325.86	$303.21	$56.57
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	$798.76	Support:	$659.17	Maint:	$359.78

Total work team cost/hour: **$1,817.71**

MATERIAL QUANTITIES

Initial volume: 7,703 CCY Swell factor: 1.115
Loose volume: **8,589** LCY

Source of estimated volume: Exhibit L & Rec Plan
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: $0.00
Total Cost: $0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,100 Pounds/LCY
Description: Earth - Loam
Rated Payload: 62,000 Pounds
Payload Capacity: 29.52 LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **15.75** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	**7.875**	LCY

Job Condition Corrections: Site Altitude (ft.): 5380 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 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: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**0.610**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.610	Minutes	Adjusted for site altitude:	0.610	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2183	0.790

Haul Time: **0.790** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2936	0.546

Return Time: **0.546** minutes
Total Truck Cycle Time: **3.546** minutes

Loading Tool unit Production 780.99 LCY/Hour Adjusted for job efficiency: 648.22 LCY/Hour

Truck Unit Production 266.50 LCY/Hour Adjusted for job efficiency: 221.19 LCY/Hour

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

Adjusted hourly truck team production: 663.58 LCY/Hour
Adjusted single truck/loader team production: 648.22 LCY/Hour
Adjusted multiple truck/loader team production: **648.22** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **13.25** Hours

Unit cost: $2.804 /LCY Total job cost: **$24,084**

TRUCK/LOADER TEAM WORK

Task description: **Phase 3 - Backfill w Overburden**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 2003B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-2003B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 980H
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	30	30	50	50
Ownership cost/hour:	$108.06	$61.69	$241.38	$241.38	$212.21	$16.65
Operating cost/hour:	$71.88	$58.92	$43.18	$43.18	$62.44	$18.80
%Utilization-riper:	NA	0	100	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$14.11	$0.00	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	$7.45	$0.00	$0.00	$0.00
Operator cost/hour:	$32.54	$40.71	$41.30	$41.30	$28.56	$21.12
Unit Subtotals:	$212.48	$161.32	$333.31	$325.86	$303.21	$56.57
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	$798.76	Support:	$659.17	Maint:	$359.78

Total work team cost/hour: **$1,817.71**

MATERIAL QUANTITIES

Initial volume: 17,948 CCY Swell factor: 1.115
Loose volume: **20,012** LCY

Source of estimated volume: Exhibit L & Rec Plan
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: $0.00
Total Cost: $0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,100 Pounds/LCY
Description: Earth - Loam
Rated Payload: 62,000 Pounds
Payload Capacity: 29.52 LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **15.75** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	**7.875**	LCY

Job Condition Corrections: Site Altitude (ft.): 5380 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 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: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**0.610**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.610	Minutes	Adjusted for site altitude:	0.610	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2183	0.790

Haul Time: **0.790** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2936	0.546

Return Time: **0.546** minutes
Total Truck Cycle Time: **3.546** minutes

Loading Tool unit Production 780.99 LCY/Hour Adjusted for job efficiency: 648.22 LCY/Hour

Truck Unit Production 266.50 LCY/Hour Adjusted for job efficiency: 221.19 LCY/Hour

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

Adjusted hourly truck team production: 663.58 LCY/Hour
Adjusted single truck/loader team production: 648.22 LCY/Hour
Adjusted multiple truck/loader team production: **648.22** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **30.87** Hours

Unit cost: $2.804 /LCY Total job cost: **$56,117**

TRUCK/LOADER TEAM WORK

Task description: **Misc. - Backfill w Overburden**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 2004B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-2004B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 980H
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	30	30	50	50
Ownership cost/hour:	$108.06	$61.69	$241.38	$241.38	$212.21	$16.65
Operating cost/hour:	$71.88	$58.92	$43.18	$43.18	$62.44	$18.80
%Utilization-riper:	NA	0	100	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$14.11	$0.00	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	$7.45	$0.00	$0.00	$0.00
Operator cost/hour:	$32.54	$40.71	$41.30	$41.30	$28.56	$21.12
Unit Subtotals:	$212.48	$161.32	$333.31	$325.86	$303.21	$56.57
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	$798.76	Support:	$659.17	Maint:	$359.78

Total work team cost/hour: **$1,817.71**

MATERIAL QUANTITIES

Initial volume: 6,857 CCY Swell factor: 1.115
Loose volume: **7,646** LCY

Source of estimated volume: Exhibit L & Rec Plan
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: $0.00
Total Cost: $0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,100 Pounds/LCY
Description: Earth - Loam
Rated Payload: 62,000 Pounds
Payload Capacity: 29.52 LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **15.75** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	**7.875**	LCY

Job Condition Corrections: Site Altitude (ft.): 5380 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 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: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**0.610**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.610	Minutes	Adjusted for site altitude:	0.610	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2183	0.790

Haul Time: **0.790** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2936	0.546

Return Time: **0.546** minutes
Total Truck Cycle Time: **3.546** minutes

Loading Tool unit Production 780.99 LCY/Hour Adjusted for job efficiency: 648.22 LCY/Hour

Truck Unit Production 266.50 LCY/Hour Adjusted for job efficiency: 221.19 LCY/Hour

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

Adjusted hourly truck team production: 663.58 LCY/Hour
Adjusted single truck/loader team production: 648.22 LCY/Hour
Adjusted multiple truck/loader team production: **648.22** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **11.79** Hours

Unit cost: $2.804 /LCY Total job cost: **$21,439**

BULLDOZER WORK

Task description: **Phase 1 - Grade Transported Overburden**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 2101B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-2101B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$41.30	NA

Total unit Cost/Hour: $426.60
Total Fleet Cost/Hour: **$853.20**

MATERIAL QUANTITIES

Initial Volume: 16,504
Swell factor: 1.000
Loose volume: **16,504** LCY

Source of estimated volume: Transported Volume
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 75 feet
Unadjusted hourly production: 1,017.1 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 5,380 feet

Material weight: 2,100 lbs/LCY

Weight description: Earth - Loam

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6544

Adjusted unit production: 665.59 LCY/hr
Adjusted fleet production: **1331.18** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.641/LCY

Total job time: **12.40** Hours
Total job cost: **$10,578**

BULLDOZER WORK

Task description: **Phase 2 - Grade Transported Overburden**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 2102B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-2102B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$41.30	NA

Total unit Cost/Hour: $426.60
Total Fleet Cost/Hour: **$853.20**

MATERIAL QUANTITIES

Initial Volume: 8,589
Swell factor: 1.000
Loose volume: **8,589** LCY

Source of estimated volume: Transported Volume
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 75 feet
Unadjusted hourly production: 1,017.1 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 5,380 feet

Material weight: 2,100 lbs/LCY

Weight description: Earth - Loam

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6544

Adjusted unit production: 665.59 LCY/hr
Adjusted fleet production: **1331.18** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.641/LCY

Total job time: **6.45** Hours
Total job cost: **$5,505**

BULLDOZER WORK

Task description: **Phase 3 - Grade Transported Overburden**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 2103B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-2103b
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$41.30	NA

Total unit Cost/Hour: $426.60
Total Fleet Cost/Hour: **$853.20**

MATERIAL QUANTITIES

Initial Volume: 20,012
Swell factor: 1.000
Loose volume: **20,012** LCY

Source of estimated volume: Transported Volume
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 75 feet
Unadjusted hourly production: 1,017.1 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 5,380 feet

Material weight: 2,100 lbs/LCY

Weight description: Earth - Loam

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6544

Adjusted unit production: 665.59 LCY/hr
Adjusted fleet production: **1331.18** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.641/LCY

Total job time: **15.03** Hours
Total job cost: **$12,826**

BULLDOZER WORK

Task description: **Misc. - Grade Transported Overburden**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 2104B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-2104B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$41.30	NA

Total unit Cost/Hour: $426.60
Total Fleet Cost/Hour: **$853.20**

MATERIAL QUANTITIES

Initial Volume: 7,646
Swell factor: 1.000
Loose volume: **7,646** LCY

Source of estimated volume: Transported Volume
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 75 feet
Unadjusted hourly production: 1,017.1 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 5,380 feet

Material weight: 2,100 lbs/LCY

Weight description: Earth - Loam

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6544

Adjusted unit production: 665.59 LCY/hr
Adjusted fleet production: **1331.18** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.641/LCY

Total job time: **5.74** Hours
Total job cost: **$4,901**

BULLDOZER RIPPING WORK

Task description: **Phase 1 - Decompaction**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 3001B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-3001B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU Horsepower: 310
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper Ownership Cost/Hour:	$14.11	NA
Ripper Operating Cost/Hour:	$7.45	100
Operator Cost/Hour:	$41.30	NA
Total Unit Cost/Hour:	$448.16	

Total Fleet Cost/Hour: **$896.32**

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 3.67 acres Rip Depth (ft): 2.00 Volume: 11,842 BCY or CCY

Source of estimated quantity: Exhibit L & Rec Plan

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	2.56	feet/pass
Average Ripping Width:	7.08	feet/pass
Average Ripping Length:	100.00	feet/pass
Average Dozer Speed:	88.00	feet/minute
Average Maneuver Time:	0.25	minutes/pass
Production per unit area:	0.703	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.703 Acres/hr

Site Altitude:	5,380	feet
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

Adjusted Hourly Unit Production: 0.58 Acres/hr
Adjusted Hourly Fleet Production: **1.17** Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: **3.14** Hours

Unit cost: $767.601 Per acre Total job cost: **$2,817**

BULLDOZER RIPPING WORK

Task description: **Phase 2 - Decompaction**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 3002B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-3002B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU Horsepower: 310
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper Ownership Cost/Hour:	$14.11	NA
Ripper Operating Cost/Hour:	$7.45	100
Operator Cost/Hour:	$41.30	NA
Total Unit Cost/Hour:	$448.16	

Total Fleet Cost/Hour: **$896.32**

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 1.91 acres Rip Depth (ft): 2.00 Volume: 6,163 BCY or CCY

Source of estimated quantity: Exhibit L & Rec Plan

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	2.56	feet/pass
Average Ripping Width:	7.08	feet/pass
Average Ripping Length:	100.00	feet/pass
Average Dozer Speed:	88.00	feet/minute
Average Maneuver Time:	0.25	minutes/pass
Production per unit area:	0.703	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.703 Acres/hr

Site Altitude:	5,380	feet
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

Adjusted Hourly Unit Production: 0.58 Acres/hr
Adjusted Hourly Fleet Production: **1.17** Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: **1.64** Hours

Unit cost: $767.601 Per acre Total job cost: **$1,466**

BULLDOZER RIPPING WORK

Task description: **Phase 3 - Decompaction**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 3003B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-3003B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU Horsepower: 310
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper Ownership Cost/Hour:	$14.11	NA
Ripper Operating Cost/Hour:	$7.45	100
Operator Cost/Hour:	$41.30	NA
Total Unit Cost/Hour:	$448.16	

Total Fleet Cost/Hour: **$896.32**

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 4.45 acres Rip Depth (ft): 2.00 Volume: 14,359 BCY or CCY

Source of estimated quantity: Exhibit L & Rec Plan

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	2.56	feet/pass
Average Ripping Width:	7.08	feet/pass
Average Ripping Length:	100.00	feet/pass
Average Dozer Speed:	88.00	feet/minute
Average Maneuver Time:	0.25	minutes/pass
Production per unit area:	0.703	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.703 Acres/hr

Site Altitude:	5,380	feet
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

Adjusted Hourly Unit Production: 0.58 Acres/hr
Adjusted Hourly Fleet Production: **1.17** Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: **3.81** Hours

Unit cost: $767.601 Per acre Total job cost: **$3,416**

BULLDOZER RIPPING WORK

Task description: **Misc. - Decompaction**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 3004B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-3004B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU Horsepower: 310
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper Ownership Cost/Hour:	$14.11	NA
Ripper Operating Cost/Hour:	$7.45	100
Operator Cost/Hour:	$41.30	NA
Total Unit Cost/Hour:	$448.16	

Total Fleet Cost/Hour: **$896.32**

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 1.72 acres Rip Depth (ft): 2.00 Volume: 5,550 BCY or CCY

Source of estimated quantity: Exhibit L & Rec Plan

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	2.56	feet/pass
Average Ripping Width:	7.08	feet/pass
Average Ripping Length:	100.00	feet/pass
Average Dozer Speed:	88.00	feet/minute
Average Maneuver Time:	0.25	minutes/pass
Production per unit area:	0.703	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.703 Acres/hr

Site Altitude:	5,380	feet
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

Adjusted Hourly Unit Production: 0.58 Acres/hr
Adjusted Hourly Fleet Production: **1.17** Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: **1.47** Hours

Unit cost: $767.601 Per acre Total job cost: **$1,320**

TRUCK/LOADER TEAM WORK

Task description: **Phase 1 - Topsoil Replacement**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 4001B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-4001B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 980H
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	30	30	50	50
Ownership cost/hour:	$108.06	$61.69	$241.38	$241.38	$212.21	$16.65
Operating cost/hour:	$71.88	$58.92	$43.18	$43.18	$62.44	$18.80
%Utilization-riper:	NA	0	100	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$14.11	$0.00	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	$7.45	$0.00	$0.00	$0.00
Operator cost/hour:	$32.54	$40.71	$41.30	$41.30	$28.56	$21.12
Unit Subtotals:	$212.48	$161.32	$333.31	$325.86	$303.21	$56.57
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	$798.76	Support:	$659.17	Maint:	$359.78

Total work team cost/hour: **$1,817.71**

MATERIAL QUANTITIES

Initial volume: 2,960 CCY Swell factor: 1.215
Loose volume: **3,596** LCY

Source of estimated volume: Exhibit L & Rec Plan
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: $0.00
Total Cost: $0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 1,600 Pounds/LCY
Description: Top Soil
Rated Payload: 62,000 Pounds
Payload Capacity: 38.75 LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **15.75** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	**7.875**	LCY

Job Condition Corrections: Site Altitude (ft.): 5380 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 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: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**0.610**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.610	Minutes	Adjusted for site altitude:	0.610	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2183	0.790

Haul Time: **0.790** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2936	0.546

Return Time: **0.546** minutes
Total Truck Cycle Time: **3.546** minutes

Loading Tool unit Production 780.99 LCY/Hour Adjusted for job efficiency: 648.22 LCY/Hour

Truck Unit Production 266.50 LCY/Hour Adjusted for job efficiency: 221.19 LCY/Hour

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

Adjusted hourly truck team production: 663.58 LCY/Hour
Adjusted single truck/loader team production: 648.22 LCY/Hour
Adjusted multiple truck/loader team production: **648.22** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **5.55** Hours

Unit cost: $2.804 /LCY Total job cost: **$10,085**

TRUCK/LOADER TEAM WORK

Task description: **Phase 2 - Topsoil Replacement**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 4002B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-4002B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 980H
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	30	30	50	50
Ownership cost/hour:	$108.06	$61.69	$241.38	$241.38	$212.21	$16.65
Operating cost/hour:	$71.88	$58.92	$43.18	$43.18	$62.44	$18.80
%Utilization-riper:	NA	0	100	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$14.11	$0.00	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	$7.45	$0.00	$0.00	$0.00
Operator cost/hour:	$32.54	$40.71	$41.30	$41.30	$28.56	$21.12
Unit Subtotals:	$212.48	$161.32	$333.31	$325.86	$303.21	$56.57
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	$798.76	Support:	$659.17	Maint:	$359.78

Total work team cost/hour: **$1,817.71**

MATERIAL QUANTITIES

Initial volume: 1,540 CCY Swell factor: 1.215
Loose volume: **1,871** LCY

Source of estimated volume: Exhibit L & Rec Plan
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: $0.00
Total Cost: $0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 1,600 Pounds/LCY
Description: Top Soil
Rated Payload: 62,000 Pounds
Payload Capacity: 38.75 LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **15.75** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	**7.875**	LCY

Job Condition Corrections: Site Altitude (ft.): 5380 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 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: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**0.610**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.610	Minutes	Adjusted for site altitude:	0.610	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2183	0.790

Haul Time: **0.790** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2936	0.546

Return Time: **0.546** minutes
Total Truck Cycle Time: **3.546** minutes

Loading Tool unit Production 780.99 LCY/Hour Adjusted for job efficiency: 648.22 LCY/Hour
Truck Unit Production 266.50 LCY/Hour Adjusted for job efficiency: 221.19 LCY/Hour

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

Adjusted hourly truck team production: 663.58 LCY/Hour
Adjusted single truck/loader team production: 648.22 LCY/Hour
Adjusted multiple truck/loader team production: **648.22** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **2.89** Hours

Unit cost: $2.804 /LCY Total job cost: **$5,247**

TRUCK/LOADER TEAM WORK

Task description: **Phase 3 - Topsoil Replacement**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 4003B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-4003B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 980H
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	30	30	50	50
Ownership cost/hour:	$108.06	$61.69	$241.38	$241.38	$212.21	$16.65
Operating cost/hour:	$71.88	$58.92	$43.18	$43.18	$62.44	$18.80
%Utilization-riper:	NA	0	100	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$14.11	$0.00	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	$7.45	$0.00	$0.00	$0.00
Operator cost/hour:	$32.54	$40.71	$41.30	$41.30	$28.56	$21.12
Unit Subtotals:	$212.48	$161.32	$333.31	$325.86	$303.21	$56.57
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	$798.76	Support:	$659.17	Maint:	$359.78

Total work team cost/hour: **$1,817.71**

MATERIAL QUANTITIES

Initial volume: 3,589 CCY Swell factor: 1.215
Loose volume: **4,361** LCY

Source of estimated volume: Exhibit L & Rec Plan
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: $0.00
Total Cost: $0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 1,600 Pounds/LCY
Description: Top Soil
Rated Payload: 62,000 Pounds
Payload Capacity: 38.75 LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **15.75** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	**7.875**	LCY

Job Condition Corrections: Site Altitude (ft.): 5380 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 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: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**0.610**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.610	Minutes	Adjusted for site altitude:	0.610	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2183	0.790

Haul Time: **0.790** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2936	0.546

Return Time: **0.546** minutes
Total Truck Cycle Time: **3.546** minutes

Loading Tool unit Production 780.99 LCY/Hour Adjusted for job efficiency: 648.22 LCY/Hour

Truck Unit Production 266.50 LCY/Hour Adjusted for job efficiency: 221.19 LCY/Hour

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

Adjusted hourly truck team production: 663.58 LCY/Hour
Adjusted single truck/loader team production: 648.22 LCY/Hour
Adjusted multiple truck/loader team production: **648.22** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **6.73** Hours

Unit cost: $2.804 /LCY Total job cost: **$12,228**

TRUCK/LOADER TEAM WORK

Task description: **Misc, - Topsoil Replacement**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 4004B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-4004B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 980H
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	30	30	50	50
Ownership cost/hour:	$108.06	$61.69	$241.38	$241.38	$212.21	$16.65
Operating cost/hour:	$71.88	$58.92	$43.18	$43.18	$62.44	$18.80
%Utilization-riper:	NA	0	100	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$14.11	$0.00	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	$7.45	$0.00	$0.00	$0.00
Operator cost/hour:	$32.54	$40.71	$41.30	$41.30	$28.56	$21.12
Unit Subtotals:	$212.48	$161.32	$333.31	$325.86	$303.21	$56.57
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	$798.76	Support:	$659.17	Maint:	$359.78

Total work team cost/hour: **$1,817.71**

MATERIAL QUANTITIES

Initial volume: 1,371 CCY Swell factor: 1.215
Loose volume: **1,666** LCY

Source of estimated volume: Exhibit L & Rec Plan
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: $0.00
Total Cost: $0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 1,600 Pounds/LCY
Description: Top Soil
Rated Payload: 62,000 Pounds
Payload Capacity: 38.75 LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **15.75** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	**7.875**	LCY

Job Condition Corrections: Site Altitude (ft.): 5380 feet

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

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 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: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**0.610**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.610	Minutes	Adjusted for site altitude:	0.610	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2183	0.790

Haul Time: **0.790** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1150.00	0.00	3.00	3.00	2936	0.546

Return Time: **0.546** minutes
Total Truck Cycle Time: **3.546** minutes

Loading Tool unit Production 780.99 LCY/Hour Adjusted for job efficiency: 648.22 LCY/Hour

Truck Unit Production 266.50 LCY/Hour Adjusted for job efficiency: 221.19 LCY/Hour

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

Adjusted hourly truck team production: 663.58 LCY/Hour
Adjusted single truck/loader team production: 648.22 LCY/Hour
Adjusted multiple truck/loader team production: **648.22** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **2.57** Hours

Unit cost: $2.804 /LCY Total job cost: **$4,671**

BULLDOZER WORK

Task description: **Phase 1 - Grade Transported Topsoil**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #:	4101B	State:	Colorado	Abbreviation:	None
Date:	7/19/2023	County:	Garfield	Filename:	M052-4101B
User:	ACY				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$41.30	NA

Total unit Cost/Hour: $426.60
Total Fleet Cost/Hour: **$853.20**

MATERIAL QUANTITIES

Initial Volume:	3,596
Swell factor:	1.000
Loose volume:	**3,596** LCY

Source of estimated volume: Transported Volume
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 75 feet
Unadjusted hourly production: 1,017.1 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 5,380 feet

Material weight: 1,600 lbs/LCY

Weight description: Top Soil

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

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

Net correction: 0.8593

Adjusted unit production: 873.99 LCY/hr
Adjusted fleet production: **1747.98** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.488/LCY

Total job time: **2.06** Hours
Total job cost: **$1,755**

BULLDOZER WORK

Task description: **Phase 2 - Grade Transported Topsoil**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 4102B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-4102B
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$41.30	NA

Total unit Cost/Hour: $426.60
Total Fleet Cost/Hour: **$853.20**

MATERIAL QUANTITIES

Initial Volume: 1,871
Swell factor: 1.000
Loose volume: **1,871** LCY

Source of estimated volume: Transported Volume
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 75 feet
Unadjusted hourly production: 1,017.1 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 5,380 feet

Material weight: 1,600 lbs/LCY

Weight description: Top Soil

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

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

Net correction: 0.8593

Adjusted unit production: 873.99 LCY/hr
Adjusted fleet production: **1747.98** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.488/LCY

Total job time: **1.07** Hours
Total job cost: **$913**

BULLDOZER WORK

Task description: **Phase 3 - Grade Transported Topsoil**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #:	4103B	State:	Colorado	Abbreviation:	None
Date:	7/19/2023	County:	Garfield	Filename:	M052-4103B
User:	ACY				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$41.30	NA

Total unit Cost/Hour: $426.60
Total Fleet Cost/Hour: **$853.20**

MATERIAL QUANTITIES

Initial Volume:	4,361
Swell factor:	1.000
Loose volume:	**4,361** LCY

Source of estimated volume: Transported Volume
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 75 feet
Unadjusted hourly production: 1,017.1 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 5,380 feet

Material weight: 1,600 lbs/LCY

Weight description: Top Soil

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

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

Net correction: 0.8593

Adjusted unit production: 873.99 LCY/hr
Adjusted fleet production: **1747.98** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.488/LCY

Total job time: **2.49** Hours
Total job cost: **$2,129**

BULLDOZER WORK

Task description: **Misc. - Grade Transported Topsoil**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #:	4104B	State:	Colorado	Abbreviation:	None
Date:	7/19/2023	County:	Garfield	Filename:	M052-4104B
User:	ACY				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$241.38	NA
Operating Cost/Hour:	$143.92	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$41.30	NA

Total unit Cost/Hour: $426.60
Total Fleet Cost/Hour: **$853.20**

MATERIAL QUANTITIES

Initial Volume:	1,666
Swell factor:	1.000
Loose volume:	**1,666** LCY

Source of estimated volume: Transported Volume
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 75 feet
Unadjusted hourly production: 1,017.1 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 5,380 feet

Material weight: 1,600 lbs/LCY

Weight description: Top Soil

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

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

Net correction: 0.8593

Adjusted unit production: 873.99 LCY/hr
Adjusted fleet production: **1747.98** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.488/LCY

Total job time: **0.95** Hours
Total job cost: **$813**

REVEGETATION WORK

Task description: **Phase 1 - Reveg**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 5001B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-5001B
User: ACY

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			$	$
			Total Fertilizer Materials Cost/Acre	**$0.00**

Application

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

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	$112.82
Total Tilling Cost/Acre	**$112.82**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Meadow Brome - Paddock	7.20	6.61	$28.62
Orchardgrass - Potomac	2.70	33.47	$11.52
Intermediate Wheatgrass - Tegmar	2.70	5.76	$8.10
Rabbitbrush, Rubber	0.05	0.74	$3.21
Western Wheatgrass - Barton	2.70	6.82	$18.90
Timothy - Climax	2.70	77.48	$4.32
Totals Seed Mix	18.05	130.89	**$74.67**

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	1.50	TON	$429.79	$644.68
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	$4.01	$4.01
Total Mulch Materials Cost/Acre				**$648.69**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$74.46
Power mulcher (MEANS 32 91 13.16 0350)	$147.67
Weed spray, truck, non-aquatic areas, ann. [DMG]	$22.81
Total Mulch Application Cost/Acre	**$244.94**

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 3.67 Cost /Acre: $1,313.12
Estimated Failure Rate: 30% Cost /Acre*: $1,313.12
*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **$4,819.15**
Reseeding Job Cost: **$1,445.75**
Total Job Cost: **$6,265**
Job Hours: **5.00**

REVEGETATION WORK

Task description: **Phase 2 - Reveg**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 5002B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-5002B
User: ACY

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			$	$
			Total Fertilizer Materials Cost/Acre	**$0.00**

Application

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

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	$112.82
Total Tilling Cost/Acre	**$112.82**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Meadow Brome - Paddock	7.20	6.61	$28.62
Orchardgrass - Potomac	2.70	33.47	$11.52
Intermediate Wheatgrass - Tegmar	2.70	5.76	$8.10
Rabbitbrush, Rubber	0.05	0.74	$3.21
Western Wheatgrass - Barton	2.70	6.82	$18.90
Timothy - Climax	2.70	77.48	$4.32
Totals Seed Mix	18.05	130.89	**$74.67**

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	1.50	TON	$429.79	$644.68
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	$4.01	$4.01
Total Mulch Materials Cost/Acre				**$648.69**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$74.46
Power mulcher (MEANS 32 91 13.16 0350)	$147.67
Weed spray, truck, non-aquatic areas, ann. [DMG]	$22.81
Total Mulch Application Cost/Acre	**$244.94**

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 1.91 Cost /Acre: $1,313.12
Estimated Failure Rate: 30% Cost /Acre*: $1,313.12
*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **$2,508.06**
Reseeding Job Cost: **$752.42**
Total Job Cost: **$3,260**
Job Hours: **2.50**

REVEGETATION WORK

Task description: **Phase 3 - Reveg**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 5003B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-5003B
User: ACY

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			$	$
			Total Fertilizer Materials Cost/Acre	**$0.00**

Application

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

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	$112.82
Total Tilling Cost/Acre	**$112.82**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Meadow Brome - Paddock	7.20	6.61	$28.62
Orchardgrass - Potomac	2.70	33.47	$11.52
Intermediate Wheatgrass - Tegmar	2.70	5.76	$8.10
Rabbitbrush, Rubber	0.05	0.74	$3.21
Western Wheatgrass - Barton	2.70	6.82	$18.90
Timothy - Climax	2.70	77.48	$4.32
Totals Seed Mix	18.05	130.89	**$74.67**

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	1.50	TON	$429.79	$644.68
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	$4.01	$4.01
Total Mulch Materials Cost/Acre				**$648.69**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$74.46
Power mulcher (MEANS 32 91 13.16 0350)	$147.67
Weed spray, truck, non-aquatic areas, ann. [DMG]	$22.81
Total Mulch Application Cost/Acre	**$244.94**

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 4.45 Cost /Acre: $1,313.12
Estimated Failure Rate: 30% Cost /Acre*: $1,313.12
*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **$5,843.38**
Reseeding Job Cost: **$1,753.02**
Total Job Cost: **$7,596**
Job Hours: **6.00**

REVEGETATION WORK

Task description: **Misc. - Reveg**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 5004B State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-5004B
User: ACY

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			$	$
			Total Fertilizer Materials Cost/Acre	**$0.00**

Application

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

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	$112.82
Total Tilling Cost/Acre	**$112.82**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Meadow Brome - Paddock	7.20	6.61	$28.62
Orchardgrass - Potomac	2.70	33.47	$11.52
Intermediate Wheatgrass - Tegmar	2.70	5.76	$8.10
Rabbitbrush, Rubber	0.05	0.74	$3.21
Western Wheatgrass - Barton	2.70	6.82	$18.90
Timothy - Climax	2.70	77.48	$4.32
Totals Seed Mix	18.05	130.89	**$74.67**

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	1.50	TON	$429.79	$644.68
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	$4.01	$4.01
Total Mulch Materials Cost/Acre				**$648.69**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$74.46
Power mulcher (MEANS 32 91 13.16 0350)	$147.67
Weed spray, truck, non-aquatic areas, ann. [DMG]	$22.81
Total Mulch Application Cost/Acre	**$244.94**

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 1.72 Cost /Acre: $1,313.12
Estimated Failure Rate: 30% Cost /Acre*: $1,313.12
*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **$2,258.57**
Reseeding Job Cost: **$677.57**
Total Job Cost: **$2,936**
Job Hours: **2.50**

REVEGETATION WORK

Task description: **Phase 4 - Failure Seeding of Berms 30%**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 5005 State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-5005
User: ACY

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			$	$
			Total Fertilizer Materials Cost/Acre	**$0.00**

Application

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

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	$112.82
Total Tilling Cost/Acre	**$112.82**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Meadow Brome - Paddock	7.20	6.61	$28.62
Orchardgrass - Potomac	2.70	33.47	$11.52
Intermediate Wheatgrass - Tegmar	2.70	5.76	$8.10
Rabbitbrush, Rubber	0.05	0.74	$3.21
Western Wheatgrass - Barton	2.70	6.82	$18.90
Timothy - Climax	2.70	77.48	$4.32
Totals Seed Mix	18.05	130.89	**$74.67**

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	1.50	TON	$429.79	$644.68
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	$4.01	$4.01
Total Mulch Materials Cost/Acre				**$648.69**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$74.46
Power mulcher (MEANS 32 91 13.16 0350)	$147.67
Weed spray, truck, non-aquatic areas, ann. [DMG]	$22.81
Total Mulch Application Cost/Acre	**$244.94**

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 0.86
Estimated Failure Rate: 0%
*Selected Replanting Work Items: NONE

Cost /Acre: $1,313.12
Cost /Acre*: $0.00

Initial Job Cost: **$1,129.28**
Reseeding Job Cost: **$0.00**
Total Job Cost: **$1,129**
Job Hours: **1.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Initial Mobilization**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 9001 State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-9001
User: ACY

Agency or organization name: DRMS

EQUIPMENT TRANSPORT RIG COST

Shift basis: 1 per day
Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED, 400 HP (2ND HALF, 2006)

Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T)

Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	$20.26	$36.04	$47.05
Operating Cost/Hour:	$39.51	$76.08	$82.85
Operator Cost/Hour:	$22.52	$22.52	$22.52
Helper Cost/Hour:	$0.00	$23.53	$23.53
Total Unit Cost/Hour:	$82.29	$158.17	$175.95

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 730	25.19	$108.06	$82.29	3	$571.05	$246.87	$750.00
CAT 980H	33.12	$61.69	$158.17	1	$219.86	$158.17	$250.00
Cat D8T - 8SU	53.08	$255.49	$175.95	2	$862.88	$351.90	$250.00
CAT 16M	28.73	$212.21	$158.17	1	$370.38	$158.17	$250.00
Drill/Broadcast Seeder with Tractor	25.00	$6.73	$82.29	1	$89.02	$82.29	$250.00
Power Mulcher (Bowie LD-90)	6.00	$25.94	$82.29	1	$108.23	$82.29	$250.00
Subtotals:					**$2,221.42**	**$1,079.69**	**$2,000.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 3,500 Gal.	$75.37	1	$75.37	$75.37
Flatbed Truck, 4x2, 30K GVW	$63.90	1	$63.90	$63.90
Light Duty Pickup, 4x4, 3/4 T.	$71.19	2	$142.38	$142.38
Subtotals:			**$281.65**	**$281.65**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	RIFLE	
Total one-way travel distance:	7.00	miles
Average Travel Speed:	45.00	mph

Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$9,469.85
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$87.62

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.16	0.16
Return Time (Hours):	0.16	0.16
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.31	0.31

JOB TIME AND COST

Total job time:	**2.62**	Hours
Total job cost:	**$9,557**	

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Secondary Mobilization**

Site: **Rifle Gravel Pit #1** Permit Action: New App Permit/Job#: M2021052

PROJECT IDENTIFICATION

Task #: 9002 State: Colorado Abbreviation: None
Date: 7/19/2023 County: Garfield Filename: M052-9002
User: ACY

Agency or organization name: DRMS

EQUIPMENT TRANSPORT RIG COST

Shift basis: 1 per day
Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED, 400 HP (2ND HALF, 2006)

Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T)

Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	$20.26	$36.04	$47.05
Operating Cost/Hour:	$39.51	$76.08	$82.85
Operator Cost/Hour:	$22.52	$22.52	$22.52
Helper Cost/Hour:	$0.00	$23.53	$23.53
Total Unit Cost/Hour:	$82.29	$158.17	$175.95

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Drill/Broadcast Seeder with Tractor	25.00	$6.73	$82.29	1	$89.02	$82.29	$250.00
Power Mulcher (Bowie LD-90)	6.00	$25.94	$82.29	1	$108.23	$82.29	$250.00
Subtotals:					**$197.25**	**$164.58**	**$500.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 3,500 Gal.	$75.37	1	$75.37	$75.37
Flatbed Truck, 4x2, 30K GVW	$63.90	1	$63.90	$63.90
Light Duty Pickup, 4x4, 3/4 T.	$71.19	2	$142.38	$142.38
Subtotals:			**$281.65**	**$281.65**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	RIFLE	
Total one-way travel distance:	7.00	miles
Average Travel Speed:	45.00	mph

Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$1,507.07
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$87.62

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.16	0.16
Return Time (Hours):	0.16	0.16
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.31	0.31

JOB TIME AND COST

Total job time:	**2.62**	Hours
Total job cost:	**$1,595**	

Upon Completeion of Mining by Phase

Form	Task #	Phase	Task		$	AC	CY	
User Provided	1000A	Phase 3	Slope verification set-up fee		$2,500			
User Provided	1001A	Mining Phase 1	Slope verification		$3,750			
Ripper	3001A	Mining Phase 1	Decompact Slopes			0.3		
Loader	4001A	Mining Phase 1	Topsoil Replacement	6"		0.3	275	CCY
Dozer	4101A	Mining Phase 1	Grade Transported Topsoil				334	LCY
Reveg	5001A	Mining Phase 1	Reveg	Wetland		0.3		
User Provided	1002A	Mining Phase 2	Slope verification		$3,750			
Ripper	3002A	Mining Phase 2	Decompact Slopes			0.18		
Loader	4002A	Mining Phase 2	Topsoil Replacement	6"		0.18	129	CCY
Dozer	4102A	Mining Phase 1	Grade Transported Topsoil				157	LCY
Reveg	5002A	Mining Phase 2	Reveg	Wetland		0.18		
User Provided	1003A	Mining Phase 3	Slope verification		$3,750			
Ripper	3003A	Mining Phase 3	Decompact Slopes			0.22		
Loader	4003A	Mining Phase 3	Topsoil Replacement	6"		0.22	162	CCY
Dozer	4103A	Mining Phase 1	Grade Transported Topsoil				197	LCY
Reveg	5003A	Mining Phase 3	Reveg	Wetland		0.22		
		Phase 3 Total	Decompact Slopes			0.7		
		Phase 3 Total	Topsoil Greenbelt	6"		0.7	566	CCY
		Phase 3 Total	Reveg green belt	Wetland		0.7		

Form	Task #	Phase	Task		$	AC	CY	
Ripper	3004A	Phase 4**	Decompact Soil			0.7		
Loader	4004A	Phase 4**	Topsoil btwn berm	6"		0.7	566	CCY
Dozer	4104A	Phase 4**	Grade Transported Topsoil				676	LCY
Reveg	5004A	Phase 4**	Reveg btwn berm	Upland		0.7		
User Provided	1004A	Phase 4	Slope verification-Final		$3,750			
Reveg	5005	Phase 4	Berm seeding Failure 30% of 2.87	Upland		0.861		
	9001		Initial Mobilization					
	9002		Secondary Mobilization					

** 0.7 total Between Berm Area, use 0.23 per phase

Stripped Not Yet Mined (New App)

Form	Task #	Phase	Task		$	AC	CY	
Truck	2001B	Mining Phase 1	Backfill w overburden	30"		3.67	14,802	CCY
Dozer	2101B	Mining Phase 1	Grade Transported Overburden				16,504	LCY
Ripper	3001B	Mining Phase 1	Decompact Soil			3.67		
Truck	4001B	Mining Phase 1	Topsoil Replacement	6"		3.67	2,960	CCY
Dozer	4101B	Mining Phase 1	Grade Transported Topsoil				3,596	LCY
Reveg	5001B	Mining Phase 1	Reveg	Upland		3.67		
Truck	2002B	Mining Phase 2	Backfill w overburden	30"		1.91	7,703	CCY
Dozer	2102B	Mining Phase 2	Grade Transported Overburden				8,589	LCY
Ripper	3002B	Mining Phase 2	Decompact Soil			1.91		
Truck	4002B	Mining Phase 2	Topsoil Replacement	6"		1.19	1,540	CCY
Dozer	4102B	Mining Phase 2	Grade Transported Topsoil				1,871	LCY
Reveg	5002B	Mining Phase 2	Reveg	Upland		1.91		
Truck	2003B	Mining Phase 3	Backfill w overburden	30"		4.45	17,948	CCY
Dozer	2103B	Mining Phase 3	Grade Transported Overburden				20,012	LCY
Ripper	3003B	Mining Phase 3	Decompact Soil			4.45		
Truck	4003B	Mining Phase 3	Topsoil Replacement	6"		4.45	3,589	CCY
Dozer	4103B	Mining Phase 3	Grade Transported Topsoil				4,361	LCY
Reveg	5003B	Mining Phase 3	Reveg	Upland		4.45		
Truck	2004B	Misc**	Backfill w overburden	30"		1.72	6,857	CCY
Dozer	2104B	Misc**	Grade Transported Overburden				7,646	LCY
Ripper	3004A	Misc**	Decompact Soil			1.72		
Truck	4004B	Misc**	Topsoil Replacement	6"		1.72	1,371	CCY
Dozer	4104B	Misc**	Grade Transported Topsoil				1,666	LCY
Reveg	5004B	Misc**	Reveg	Upland		1.72		

**11.8 ac stripped, mining phases 1-3 only accounts for 10.03 ac, use 0.57 extra per phase remaining

Form	Task #	Phase	Task		$	AC	CY	
Reveg	5005	Phase 4	Berm seeding Failure 30% of 2.87	Upland		0.861		
	9001		Initial Mobilization					
	9002		Secondary Mobilization					

1000s	Slope verification
2000s	Overburden
3000s	Decompaction
4000's	topsoil
5000's	Reveg
9000's	Mob

3 x Truck ** If any Truck tasks
1 X loader
2 x Dozer
16m ** If any Truck tasks
2500 water ** If any Truck tasks
Tractor
Power Mulcher
Flatbeed
2x Crew truck