

STATE OF
COLORADO

Reilley - DNR, Robin <robin.reilley@state.co.us>

Re: RCE Kattenberg

1 message

Reilley - DNR, Robin <robin.reilley@state.co.us>

Tue, Jul 22, 2025 at 3:31 PM

To: Ben Langenfeld <benl@lewicki.biz>, Robin Reilley - DNR <robin.reilley@state.co.us>

Hi Ben,

Attached is the final RCE for Kattenberg. LMK if you have any questions. Thank you for filling in the blanks for me!

DRMS currently holds a bond of \$140,000 for the pit with this revision the new bond amount is calculated to be \$280,459.

Thank you

Robin Reilley, M.S. GISP
Environmental Protection Specialist II

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P [303.866.3567](tel:303.866.3567) |F [303.832.8106](tel:303.832.8106)

Physical Address: 1313 Sherman Street St., Suite 215, Denver, CO 80203

Mailing Address: DRMS Room 215, 1001 E 62nd Ave, Denver, CO 80216

robin.reilley@state.co.us | <http://mining.state.co.us>

On Tue, Jul 22, 2025 at 1:19 PM Ben Langenfeld <benl@lewicki.biz> wrote:

Robin

Thanks for the update. Let me know when you have final numbers for United.

1. Curtail is fine
2. Two tons per acre is what we have always used
3. The only thing with a foundation I know of is a scale, and that is 1200 sq. ft. Everything is portable.

-Ben Langenfeld
Lewicki and Associates
benl@lewicki.biz
3375 W Powers Circle
Littleton, CO 80123
(720) 842-5321, ex. 1
(303) 960-5613

From: Reilley - DNR, Robin <robin.reilley@state.co.us>**Sent:** Monday, July 21, 2025 12:58 PM**To:** Ben Langenfeld <benl@lewicki.biz>; Robin Reilley - DNR <robin.reilley@state.co.us>**Subject:** RCE Kattenberg

Hi Ben,

I've attached the updated RCE for your review.

A few questions for you as I'm wrapping up the Kattenberg cost estimate:

1. What weed control chemical would you expect to use? I used Curtail and there are other ops if you have a preference. I classified the area as non aquatic for weed spray. LMK if that is correct.
2. What would be your straw mulching rate per acre in tons? It appears that 2 tons per acre is common practice.
3. I also ran the topsoil task with 2 scrapers and it did reduce your costs. I did add a water truck.
4. Would you please let me know the dimensions of the facilities for demobilization (office, scale and whatever else is out there). I don't have any info on those items.

Let me know if you have any additional questions. If not, I'll finalize and propose a decision.

Thank you

Robin Reilley, M.S. GISP
Environmental Protection Specialist II

 image.png

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 **RCE_KattenbergTR2.pdf**
466K

COST SUMMARY WORK

Task description: _____

Site: Kattenberg Pit

Permit Action: TR2

Permit/Job#: M2004017

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 4/23/2025

County: Grand

Filename: M017-000

User: RAR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
024	Backfill 22,222 CY B/G FROM MINING TO FINAL CONDITION	DOZER	1	74.91	\$24,574
033	Debris Removal	DEMOLISH	1	30.00	\$4,973
043	Highwall Cut/Fill 28,000 CY	DOZER	1	67.81	\$22,245
053	Topsoil Replacement 7" - 33.9 Acres	SCRAPER1	1	29.60	\$59,976
064	Final Grading - 33.39 Acres	GRADER	1	33.23	\$5,121
073	Revegetate - 33.9 Acres	REVEGE	1	40.00	\$97,393
083	Mob / Demob	MOBILIZE	1	4.26	\$9,080
<u>SUBTOTALS:</u>				279.81	\$223,362

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$4,512

Performance bond: 1.05

Total = \$2,345

Job superintendent: 120.98

Total = \$9,089

Profit: 10.00

Total = \$22,336

TOTAL O & P = \$38,283

CONTRACT AMOUNT (direct + O & P) = \$261,645

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 2.00

Total = \$5,233

Reclamation management and/or administration: 5.00

\$13,082

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$57,098

TOTAL BOND AMOUNT (direct + indirect) = \$280,460

BULLDOZER WORK

Task description: **Backfill 22,222 CY B/G FROM MINING TO FINAL CONDITION**

Site: **Kattenberg Pit** Permit Action: **TR2** Permit/Job#: **M2004017**

PROJECT IDENTIFICATION

Task #: 024 State: Colorado Abbreviation: None
Date: 7/21/2025 County: Grand Filename: M017-024
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$179.60</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$110.45</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>0</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.02</u>	<u>NA</u>
<u>Total unit</u>	<u>\$328.07</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$328.07</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 22,222
Swell factor: 1.000
Loose
volume: 22,222 LCY

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

HOURLY PRODUCTION

Average push distance: 150 feet
Unadjusted hourly 634.3 LCY/hr
production:

Materials consistency Consolidated stockpile 1.0
description:

Average push -10 %
gradient:
Average site 7,966 feet
altitude:

Material weight: 3,300 lbs/LCY

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

Job Condition Correction Factor Source

<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Dozing method:</u>	<u>1.100</u>	<u>(50% SL)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>0.800</u>	<u>(SSD-AC)</u>
<u>Push gradient:</u>	<u>1.225</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.697</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.4677

Adjusted unit
production: 296.66 LCY/hr

<u>Adjusted fleet production:</u>	<u>296.66 LCY/hr</u>
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JOB TIME AND COST

<u>Fleet size:</u>	<u>1 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$1.106/LCY</u>

<u>Total job time:</u>	<u>74.91 Hours</u>
<u>Total job cost:</u>	<u>\$24,574</u>

DEMOLITION WORK

Task description: **Debris Removal**

Site: **Kattenberg Pit**

Permit Action: **TR2**

Permit/Job#: **M2004017**

PROJECT IDENTIFICATION

Task #: **033**

State: **Colorado**

Abbreviation: **None**

Date: **7/21/2025**

County: **Grand**

Filename: **M017-033**

User: **RAR**

Agency or organization name: **DRMS**

UNIT COSTS

Location adjustment: 90.00 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Debris Removal	70 x 30 x 5	Loading and 2 mile haul, no salvage - Machine loading	210.00	CY	\$21.70	\$4,557.00
Pad Removal	60 x 20	Demo. and on-site disposal in existing pit, 4 in. thick - Max. 50 ft. push	1,200.00	SF	\$0.81	\$968.52

Job Hours: **30.00**

Subtotal
(unadjusted): **\$5,525.52**

Total Cost
(adjusted for location): **\$4,972.97**

BULLDOZER WORK

Task description: Highwall Cut/Fill 28,000 CY

Site: Kattenberg Pit Permit Action: TR2 Permit/Job#: M2004017

PROJECT IDENTIFICATION

Task #: 043 State: Colorado Abbreviation: None
Date: 7/21/2025 County: Grand Filename: AM2
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

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

Cost Breakdown:

		<u>Utilization %</u>
<u>Ownership</u>		
<u>Cost/Hour:</u>	<u>\$179.60</u>	<u>NA</u>
<u>Operating</u>		
<u>Cost/Hour:</u>	<u>\$110.45</u>	<u>100</u>
<u>Ripper own.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>NA</u>
<u>Ripper op.</u>		
<u>Cost/Hour:</u>	<u>\$0.00</u>	<u>0</u>
<u>Operator</u>		
<u>Cost/Hour:</u>	<u>\$38.02</u>	<u>NA</u>
<u>Total unit</u>	<u>\$328.07</u>	
<u>Cost/Hour:</u>		
<u>Total Fleet</u>	<u>\$328.07</u>	
<u>Cost/Hour:</u>		

MATERIAL QUANTITIES

Initial
Volume: 28,000
Swell factor: 1.124
Loose
volume: 31,461 LCY

Source of estimated volume: Division of Reclamation, Mining & Safety

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 100 feet

Unadjusted hourly production: 852.6 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -10 %

Average site altitude: 7,966 feet

Material weight: 2,900 lbs/LCY

Weight description: Sand and gravel - Dry

Job Condition Correction Factor Source

<u>Operator Skill:</u>	<u>0.750</u>	<u>(AVG.)</u>
<u>Material consistency:</u>	<u>0.900</u>	<u>(CAT HB))</u>
<u>Dozing method:</u>	<u>1.000</u>	<u>(GEN.)</u>
<u>Visibility:</u>	<u>1.000</u>	<u>(AVG.)</u>
<u>Job efficiency:</u>	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
<u>Spoil pile:</u>	<u>1.000</u>	<u>(DOZ-OC)</u>
<u>Push gradient:</u>	<u>1.225</u>	<u>(CAT HB)</u>
<u>Altitude:</u>	<u>1.000</u>	<u>(CAT HB)</u>
<u>Material Weight:</u>	<u>0.793</u>	<u>(CAT HB)</u>
<u>Blade type:</u>	<u>1.000</u>	<u>(PAT)</u>

Net correction: 0.5442

Adjusted unit production: 463.98 LCY/hr

Adjusted fleet production: **463.98 LCY/hr**

JOB TIME AND COST

<u>Fleet size:</u>	<u>1 Dozer(s)</u>
<u>Unit cost:</u>	<u>\$0.707/LCY</u>

<u>Total job time:</u>	<u>67.81 Hours</u>
<u>Total job cost:</u>	<u>\$22,245</u>

SCRAPER TEAM WORK

Task description: Topsoil Replacement 7" - 33.9 Acres

Site: Kattenberg Pit Permit Action: TR2 Permit/Job#: M2004017

PROJECT IDENTIFICATION

Task #: 053 State: Colorado Abbreviation: None
Date: 7/21/2025 County: Grand Filename: TR2
User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST Shift basis: 1 per day

<u>Equipment Description</u>	
<u>-Scraper:</u>	<u>Cat 631G</u>
<u>-Dozer:</u>	<u>NA</u>
<u>Support Equipment -Load Area:</u>	<u>Cat D8T - 8SU</u>
<u>-Dump Area:</u>	<u>NA</u>
<u>Road Maintenance –Motor Grader:</u>	<u>CAT 140M</u>
<u>-Water Truck:</u>	<u>Water Tanker, 2,500 Gal.</u>

Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment

	<u>Scraper</u>	<u>Dozer</u>	<u>Load Area</u>	<u>Dump Area</u>	<u>Motor Grader</u>	<u>Water Truck</u>
<u>%Utilization-machine:</u>	<u>100</u>	<u>NA</u>	<u>50</u>	<u>NA</u>	<u>100</u>	<u>100</u>
<u>Ownership cost/hour:</u>	<u>\$462.75</u>	<u>NA</u>	<u>\$179.60</u>	<u>NA</u>	<u>\$51.45</u>	<u>\$12.20</u>
<u>Operating cost/hour:</u>	<u>\$260.25</u>	<u>NA</u>	<u>\$55.23</u>	<u>NA</u>	<u>\$42.62</u>	<u>\$21.48</u>
<u>%Utilization-ripper:</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>Ripper own. cost/hour:</u>	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Ripper op. cost/hour:</u>	<u>NA</u>	<u>NA</u>	<u>\$0.00</u>	<u>NA</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Operator cost/hour:</u>	<u>\$59.78</u>	<u>NA</u>	<u>\$38.02</u>	<u>NA</u>	<u>\$60.00</u>	<u>\$0.00</u>
<u>Unit Subtotals:</u>	<u>\$782.78</u>	<u>NA</u>	<u>\$272.84</u>	<u>NA</u>	<u>\$154.07</u>	<u>\$33.68</u>
<u>Number of Units:</u>	<u>2</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>
<u>Group Subtotals:</u>	<u>Work:</u>	<u>\$1,565.56</u>	<u>Support:</u>	<u>\$272.84</u>	<u>Maint:</u>	<u>\$187.75</u>

Total work team cost/hour: \$2,026.15

MATERIAL QUANTITIES

Initial volume: 31,903 CCY Swell factor: 1.000
Loose volume: 31,903 LCY

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

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

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

Cycle Time:

<u>Scraper Loading Time:</u>	<u>0.80 Minutes</u>
<u>Maneuver and Spread Time:</u>	<u>0.70 Minutes</u>

Job Condition Correction: Site Altitude: 7966 feet

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

Travel Time:

Road Condition: Hard, smooth, stabilized, surfaced, watered, maintained 2.0

Haul Route:

<u>Seg #</u>	<u>Haul Distance</u> <u>(Ft)</u>	<u>Grade</u> <u>(%)</u>	<u>Roll. Res</u> <u>(%)</u>	<u>Total Res</u> <u>(%)</u>	<u>Velocity</u> <u>(fpm)</u>	<u>Travel Time</u> <u>(min)</u>
<u>1</u>	<u>1000.00</u>	<u>0.00</u>	<u>2.00</u>	<u>2.00</u>	<u>2806</u>	<u>0.65</u>

Haul Time: 0.65 minutes

Return Route:

<u>Seg #</u>	<u>Haul Distance</u> <u>(Ft)</u>	<u>Grade</u> <u>(%)</u>	<u>Roll. Res</u> <u>(%)</u>	<u>Total Res</u> <u>(%)</u>	<u>Velocity</u> <u>(fpm)</u>	<u>Travel</u> <u>Time (min)</u>
<u>1</u>	<u>1000.00</u>	<u>0.00</u>	<u>2.00</u>	<u>2.00</u>	<u>2914</u>	<u>0.53</u>

Return Time: 0.53 minutes

Unadjusted unit production/hour:	649.25	LCY/Hour
Optimal Number of Scrapers per push dozer:		

JOB TIME AND COST

<u>Fleet size:</u>	<u>1</u>	<u>Team(s)</u>	<u>Total job time:</u>	<u>29.60</u>	<u>Hours</u>
<u>Unit cost:</u>	<u>\$1.880</u>	<u>/LCY</u>	<u>Total job cost:</u>	<u>\$59,976</u>	

MOTOR GRADER WORK

Task description: Final Grading - 33.39 Acres

Site: Kattenberg Pit

Permit Action: TR2

Permit/Job#: M2004017

PROJECT IDENTIFICATION

Task #: 064

State: Colorado

Abbreviation: None

Date: 5/28/2025

County: Grand

Filename: M017-064

User: RAR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 140M

Horsepower: 183

Ripper Attachment: _____

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$51.45	NA
Operating Cost/Hour:	\$42.62	100
Ripper Ownership Cost/Hour:	\$0.00	NA
Ripper Operating Cost/Hour:	\$0.00	
Operator Cost/Hour:	\$60.00	NA
Total Unit Cost/Hour:	\$154.07	
Total Fleet Cost/Hour:	\$154.07	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 33.39 acres

Source of estimated acreage: TR2 APPLICATION

HOURLY PRODUCTION

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

Job Condition Correction Factors

Site Altitude: 7966 feet

Altitude Adj:	<u>1.00</u>	Source (CAT HB)
Job Efficiency:	<u>0.85</u>	(1sh/d, mod.)
Net Correction:	<u>0.8500</u>	multiplier

Adjusted Hourly Unit Production: 1.0045 acres/Hour

Adjusted Hourly Fleet Production: **1.0045** acres/Hour

JOB TIME AND COST

Fleet size: 1 Grader(s)

Total job time: 33.24 Hours

Unit cost: \$153.37 per acre

Total job cost: \$5,121

REVEGETATION WORK

Task description: Revegetate - 33.9 Acres

Site: Kattenberg Pit Permit Action: TR2 Permit/Job#: M2004017

PROJECT IDENTIFICATION

Task #: 073 State: Colorado Abbreviation: None
Date: 4/23/2025 County: Grand Filename: TR2
User: RAR

Agency or organization name: DRMS

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.13
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$452.93

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Smooth Brome - Lincoln	3.50	11.65	\$17.40
Pubescent Wheatgrass - Luna	3.00	6.20	\$15.37
Slender Wheatgrass - Native	1.50	5.48	\$10.85
Totals Seed Mix	8.00	23.32	\$43.63

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$242.30
Total Seed Application Cost/Acre	\$242.30

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	4.00	ACRE	\$38.14	\$152.54
Straw, delivered	2.00	TON	\$504.56	\$1,009.12
Total Mulch Materials Cost/Acre				\$1,161.66

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$239.35
Weed spray, truck, non-aquatic area, nox. [DMG]	\$249.08
Total Mulch Application Cost/Acre	\$488.43

JOB TIME AND COST

No. of Acres:	33.9	Cost /Acre:	\$2,388.95
Estimated Failure Rate:	25%	Cost /Acre*:	\$1,936.02
*Selected Replanting Work Items:	SEEDING, MULCHING		

Initial Job Cost:	\$80,985.41
Reseeding Job Cost:	\$16,407.77
Total Job Cost:	\$97,393
Job Hours:	40.00

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mob / Demob**

Site: **Kattenberg Pit** Permit Action: TR2 Permit/Job#: M2004017

PROJECT IDENTIFICATION

Task #: 083 State: Colorado Abbreviation: None
Date: 7/21/2025 County: Grand Filename: TR2
User: RAR

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:	\$21.47	\$38.32	\$48.96
Operating Cost/Hour:	\$31.47	\$60.11	\$65.86
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$22.25	\$22.25
Total Unit Cost/Hour:	\$75.46	\$143.20	\$159.59

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 D8T - 8SU	47.71	\$179.60	\$143.20	1	\$322.80	\$143.20	\$250.00
CAT 140M	16.68	\$51.45	\$75.46	1	\$126.91	\$75.46	\$250.00
Cat 631G	52.50	\$462.75	\$159.59	2	\$1,244.68	\$319.18	\$500.00

Subtotals:

\$1,694.39	\$537.84	\$1,000.00
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ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 2,500 Gal.	\$33.68	1	\$33.68	\$33.68

Subtotals:

\$33.68**\$33.68****EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>GRANBY, CO</u>	
Total one-way travel distance:	<u>2.00</u>	miles
Average Travel Speed:	<u>30.00</u>	mph
 Total Non-Roadable Mob/Demob Cost *	 <u>\$9,075.19</u>	
‘* two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	<u>\$4.49</u>	
** one round trip, no haul rig:		

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.07</u>	<u>0.07</u>
Return Time (Hours):	<u>0.07</u>	<u>0.07</u>
Loading Time (Hours):	<u>1.00</u>	<u>NA</u>
Unloading Time (Hours):	<u>1.00</u>	<u>NA</u>
Subtotals:	<u>2.13</u>	<u>0.13</u>

JOB TIME AND COSTTotal job time: 4.27 HoursTotal job cost: \$9,080