



COLORADO


Division of Reclamation,
Mining and Safety

Department of Natural Resources

MINERALS PROGRAM INSPECTION REPORT

PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Rocky Road Quarry	MINE/PROSPECTING ID#: M-1985-210	MINERAL: Sandstone	COUNTY: Larimer
INSPECTION TYPE: Monitoring	INSPECTOR(S): Jared L. Ebert	INSP. DATE: December 19, 2018	INSP. TIME: 13:00
OPERATOR: Rocky Road Investments	OPERATOR REPRESENTATIVE: Douglas Bachli	TYPE OF OPERATION: 112c - Construction Regular Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$57,224.56	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: January 4, 2019	

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>UR</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>NA</u>
(PW) PROCESSING WASTE/TAILING---- <u>NA</u>	(SF) PROCESSING FACILITIES----- <u>NA</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>Y</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>NA</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>NA</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(ST) STIPULATIONS----- <u>NA</u>
(AT) ACID OR TOXIC MATERIALS----- <u>NA</u>	(OD) OFF-SITE DAMAGE----- <u>Y</u>	

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited, UR= Under Review

OBSERVATIONS

This was a monitoring inspection of the Rocky Road Quarry, Division of Reclamation, Mining and Safety ("DRMS" or "Division") permit number M-1985-210, operated by Rocky Road Investments ("RRI"). I, Jared Ebert with DRMS conducted the inspection. Mr. Douglas Bachli accompanied me during the inspection.

This is a 106.5 acre 112c dimensional stone quarry operation located in Larimer County. The approved post-mining land use designated for this site is primarily wildlife habitat with limited residential development. The permit area consists of two distinct quarry areas separated by a draw, known as the north side and south side. Mining activity and the affected land is located on the north side of the draw in the north area. The south side of the draw has not been affected. The mine area is located on a hogback northwest of Loveland, Colorado. The site consists of many winding roads and benched works areas. Several stone cutting facilities are located throughout the site on various benches. Also product material is piled and/or placed on pallets stored along many of the roads and the in the benched work areas.

The affected land is split up and designated into various parcels designated as AL-1, 2, 3, 4, 5 and 6 totaling 17.71 acres. RRI has reclaimed several parcels designated as RL-1 and 2 consisting of 2.08 acres. Approximately 1.8 acres of Pre-law affected land also exists at the site. Please refer to the 2017-2018 annual report map that depicts the location of these areas.

Backfilling and Grading:

AL-1, 2, 3, 4, and 5 consists primarily of roads and benched work/stone storage areas. The top of the benched areas are relatively flat with steep out slopes that vary in angle but appear to be on average 1.5H:1V in slope.

AL-6 is the primary quarry area. This area consists of an open cut area with an exposed sandstone floor with a south, south-southwest and south-southeast aspect. The sandstone floor follows its natural dip and RRI takes off small slabs at a time for cutting purposes.

Financial Warranty:

The Division currently holds a \$57,224.56 cash bond for the reclamation of the site. The Division has conducted a reclamation cost estimate for the site based on the current status of the affected land. The Division estimates the reclamation liability to be \$76,033.32, this is \$18,808.76 more than the bond currently held for the site. A copy of the Division's cost estimate is enclosed for your review. **The Division requests that RRI review the cost estimate and provide the Division with any comments or concerns by January 18, 2019.** The Division may issue a surety increase revision and require RRI to provide the additional bond after January 18, 2019. RRI will have sixty days from the surety increase notice to provide the additional financial warranty.

Hydrologic Balance:

The fuel storage tanks on-site were observed. Each tank was located on a level surface within secondary containment. No problems were observed. The Division did not observe any significant off-site erosion or sedimentation.

Gen. Compliance With Mine Plan:

The quarry operation appears to be operating and located within the area approved for such activity in accordance with the mine plan approved with the conversion application number 1 (CN-01) and revised with

technical revision number 1 (TR01).

Reclamation Success:

The reclaimed areas RL-1 and RL-2 were observed. These areas are well vegetated and stable. Native grasses, forbs and shrubs have established within these areas and many trees planted within the area have survived and appear to be thriving. Ponderosa pine was the primary species of tree planted at the site, however pinons and rocky mountain juniper trees were also observed.

Topsoil:

The Operator has stockpiled a large pile of soil material in the AL-06 area.

PHOTOGRAPHS



Figure 1. Fuel storage



Figure 2. RI-2, Reclaimed area from the south end looking north.



Figure 3. AL-6, main quarry area from the north end looking southwest.



Figure 4. AL-6, main quarry area from the north end looking south east.



Figure 5. RL-1 area from the west end looking east.

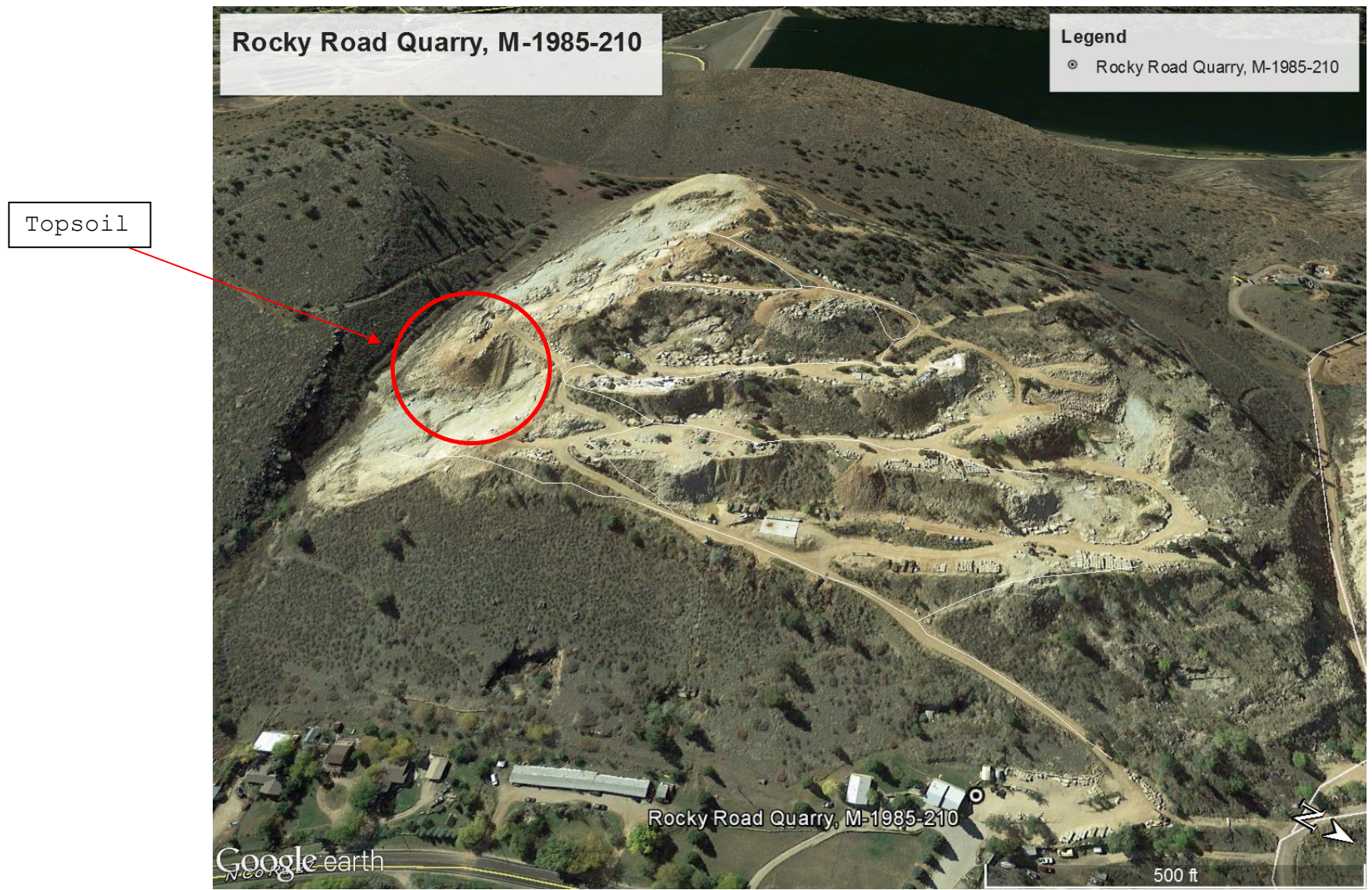


Figure 6. Google Earth image, October 14, 2017. Very similar to current conditions.

Inspection Contact Address

Douglas Bachli
Rocky Road Investments
P.O. Box 63
Masonville, CO 80541

Enclosure: CIRCES Cost Estimate, January 4, 2019

COST SUMMARY WORK

Task description: Cost Summary

Site: Rocky Road Quarry Permit Action: December 2018
Estimate Permit/Job#: M1985210

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 1/4/2019 County: Larimer Filename: M210-000
User: JLE

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Grade Steep Road/Work Bench Areas (non-pre-law or AR01 Area)	DOZER	1	2.38	\$618.00
002	Rip Affected Lands	RIPPER	1	6.64	\$1,772.00
003	Replace Soil	TRUCK1	1	12.27	\$15,263.00
004	Revegetation of Affected Land	REVEGE	1	14.59	\$37,868.00
005	Mobilization	MOBILIZE	1	2.29	\$4,797.00
<u>SUBTOTALS:</u>				38.17	\$60,318

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$1,218.42
Performance bond:	1.05	Total =	\$633.34
Job superintendent:	19.09	Total =	\$1,394.16
Profit:	10.00	Total =	\$6,031.80
		TOTAL O & P =	\$9,277.72
		CONTRACT AMOUNT (direct + O & P) =	\$69,595.72

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	0.00	Total =	0.00
Engineering work and/or contract/bid preparation:	4.25	Total =	\$2,957.82
Reclamation management and/or administration:	5.00		\$3,479.79
CONTINGENCY:		Total =	\$0.00

TOTAL INDIRECT COST = \$15,715.32

TOTAL BOND AMOUNT (direct + indirect) = \$76,033.32

BULLDOZER WORK

Task description: Grade Steep Road/Work Bench Areas (non-pre-law or AR01 Area)

Site: Rocky Road Quarry Permit Action: December 2018 Estimate Permit/Job#: M1985210

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 1/4/2019 County: Larimer Filename: M210-001
User: JLE

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU
Horsepower: 405
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$110.70</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$95.46</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$12.36</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.79</u>	<u>10</u>
Operator Cost/Hour:	<u>\$40.23</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$259.54</u>	
Total Fleet Cost/Hour:	<u>\$259.54</u>	

MATERIAL QUANTITIES

Initial Volume: 3,000
Swell factor: 1.125
Loose volume: 3,375 LCY

Source of estimated volume: Based on Six Benches
Source of estimated swell
factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 80 feet
Unadjusted hourly
production: 1,460.1 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push
gradient: -30 %
Average site altitude: 5,500 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>

Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9709

Adjusted unit
production: 1,417.61 LCY/hr

Adjusted fleet
production: **1417.61** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.183/LCY

Total job time: **2.38** Hours

Total job cost: **\$618**

BULLDOZER RIPPING WORK

Task description: Rip Affected Lands

Site: Rocky Road Quarry Permit Action: December 2018
Estimate Permit/Job#: M1985210

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 1/4/2019 County: Larimer Filename: M210-002
User: JLE

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$110.70</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$95.46</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$12.36</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$7.88</u>	<u>100</u>
Operator Cost/Hour:	<u>\$40.23</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$266.63</u>	
Total Fleet Cost/Hour:	<u>\$266.63</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 4.86 acres Rip Depth (ft): 1.00 Volume: 7,841 BCY or CCY

Source of estimated quantity: 1 Foot over 7.98 acres (AL1, 2, 3, 4 and 5)

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.63 mph
Average Ripping Width: 7.67 degrees
Average Ripping Length: 400.00 feet
Average Dozer Speed: 88.00 feet
Average Maneuver Time: 0.25 feet
Production per unit area: 0.881 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.881 Acres/hr
Site Altitude: 5,500 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.73 Acres/hr
Adjusted Hourly Fleet Production: 0.73 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 6.64 Hours

Unit cost: \$364.537 Per acre

Total job cost: \$1,772

TRUCK/LOADER TEAM WORK

Task description: Replace Soil

Site: Rocky Road Quarry Permit Action: December 2018
Estimate

Permit/Job#: M1985210

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 1/4/2019 County: Larimer Filename: M210-003
User: JLE

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 990H
Support Equipment -Load Area:	Cat D9T - 9SU
-Dump Area:	Cat D9T - 9SU
Road Maintenance -Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	25	25	25	25
Ownership cost/hour:	\$66.13	\$132.84	\$110.70	\$110.70	\$30.73	\$25.30
Operating cost/hour:	\$55.75	\$125.20	\$23.87	\$23.87	\$7.65	\$9.15
%Utilization-riper:	NA	0	0	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$12.36	\$12.36	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.65	\$36.13	\$40.23	\$40.23	\$45.64	\$39.10
Unit Subtotals:	\$147.53	\$294.17	\$174.80	\$174.80	\$84.03	\$73.55
Number of Units:	3	1	1	1	1	1
Group Subtotals:	Work:	\$736.76	Support:	\$349.60	Maint:	\$157.58

Total work team cost/hour: **\$1,243.94**

MATERIAL QUANTITIES

Initial volume: 11,769 CCY Swell factor: 1.000
Loose volume: **11,769** LCY

Source of estimated volume: Division of Reclamation, Mining & Safety
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: \$0.00
Total Cost: \$0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 1,600 Pounds/LCY
Description: Top Soil

Rated Payload:	<u>87,000</u>	Pounds
Payload Capacity:	<u>54.38</u>	LCY

Truck Bed (volume) Basis:

Struck Volume:	<u>24.20</u>	LCY
Heaped Volume:	<u>31.40</u>	LCY
Average Volume:	<u>27.80</u>	LCY
Adjusted Volume:	<u>31.40</u>	LCY

Final Truck Volume Based on Number of Loader Passes: 24.75 LCY

Loading Tool Capacity

		Bucket Size Class: <u>NA</u>
Rated Capacity:	<u>11.250</u>	LCY (heaped)
Bucket Fill Factor:	<u>1.100</u>	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<u>12.375</u>	LCY

Job Condition Corrections:

Site Altitude (ft.): 5500 feet

	Truck	Loader	Source
Altitude Adj:	0.960	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.797	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): 0.600 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:		0.560	minutes
Net Load Time per Truck:		0.660	minutes

Truck Cycle Time:

Truck Exchange Time:	<u>0.60</u>	Minutes	Adjusted for site altitude:	<u>0.625</u>	Minutes
Truck Load Time:	<u>0.660</u>	Minutes	Adjusted for site altitude:	<u>0.660</u>	Minutes
Truck Maneuver and Dump Time:	<u>1.00</u>	Minutes	Adjusted for site altitude:	<u>1.042</u>	Minutes

Truck Travel (Haul & Return) Time:
maintained 2.0

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

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	530.00	0.00	2.00	2.00	3005	0.639

Haul Time: 0.639 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	530.00	0.00	2.00	2.00	3005	0.322

Return Time: 0.322 minutes

Total Truck Cycle Time: 3.288 minutes

Loading Tool unit

Production 1,155.64 LCY/Hour

Adjusted for job efficiency: 959.18 LCY/Hour

Truck Unit Production

451.69 LCY/Hour

Adjusted for job efficiency: 374.90 LCY/Hour

Optimal No. of Trucks: 3 Truck(s)

Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 1,124.70 LCY/Hour

Adjusted single truck/loader team production: 959.18 LCY/Hour

Adjusted multiple truck/loader team production: 959.18 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s)

Total job time: 12.27 Hours

Unit cost: \$1.297 /LCY

Total job cost: \$15,263

REVEGETATION WORK

Task description: Revegetation of Affected Land

Site: Rocky Road Quarry Permit Action: December 2018
Estimate Permit/Job#: M1985210

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 1/4/2019 County: Larimer Filename: M210-004
User: JLE
Agency or organization name: DRMS

FERTILIZING

Materials

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

Application

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

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Big Bluestem - Native	3.40	10.15	\$35.70
Blue Grama - Lovington	1.60	26.12	\$26.62
Little Bluestem - Pastura	2.00	11.94	\$34.48
Sand Bluestem - Garden Co.	0.40	1.04	\$10.10
Sideoats Grama - Vaughn	4.60	15.10	\$47.10
Smooth Brome - Lincoln	3.00	9.99	\$13.08
Sheep Fescue - Bighorn	1.20	18.73	\$5.82
Rabbitbrush, Rubber	12.90	192.20	\$849.34
Western Wheatgrass - Barton	8.00	20.20	\$62.16
Flax, Lewis Blue	0.59	3.91	\$9.97

Spike Muhly	0.40	14.69	\$3.94
Penstemon, Rocky Mountain	0.59	9.25	\$17.82
Yarrow, White	0.06	3.82	\$2.46
Canada Bluegrass - Reubens	1.00	57.39	\$5.76
Totals Seed Mix	39.74	394.52	\$1,124.36

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$288.00	\$576.00
Total Mulch Materials Cost/Acre				\$576.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$68.78
Total Mulch Application Cost/Acre	\$68.78

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Pine, Ponderosa	240	Tubling, 3 cu. in. container (MEANS)	\$1.17	\$0.00	\$280.80
Totals Nursery Stock Cost / Acre					\$280.80

JOB TIME AND COST

No. of Acres:	14.59	Cost /Acre:	\$2,317.16
Estimated Failure Rate:	20%	Cost /Acre*:	\$1,391.58
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$33,807.36
Reseeding Job Cost:	\$4,060.63
Total Job Cost:	\$37,868
Job Hours:	14.59

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: Mobilization

Site: Rocky Road Quarry Permit Action: December 2018
Estimate Permit/Job#: M1985210

PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None
Date: 1/4/2019 County: Larimer Filename: M210-005
User: JLE

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:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

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 D9T - 9SU	66.13	\$123.06	\$125.45	2	\$497.02	\$250.90	\$500.00
CAT 990H	83.34	\$132.84	\$125.45	1	\$258.29	\$125.45	\$250.00
CAT 12M	16.01	\$30.73	\$88.67	1	\$119.40	\$88.67	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$8.33	\$88.67	1	\$97.00	\$88.67	\$250.00

Subtotals: **\$971.71** **\$553.69** **\$1,250.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Cat 740	\$147.53	3	\$442.59	\$442.59
Water Tanker, 5,000 Gal.	\$101.00	1	\$101.00	\$101.00
Light Duty Pickup, 4x4, 3/4 T.	\$40.58	2	\$81.16	\$81.16

Subtotals: **\$624.75** **\$624.75**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>LOVELAND</u>	
Total one-way travel distance:	<u>8.50</u>	miles
Average Travel Speed:	<u>55.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$4,603.96</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$193.10</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.15</u>	<u>0.15</u>
Return Time (Hours):	<u>0.15</u>	<u>0.15</u>
Loading Time (Hours):	<u>0.42</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.42</u>	<u>NA</u>
Subtotals:	<u>1.15</u>	<u>0.31</u>

JOB TIME AND COST

Total job time:	<u>2.30</u>	Hours
Total job cost:	<u>\$4,797</u>	