




**COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY**  
**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.

<b>MINE NAME:</b> Iron Mountain Road Gravel Pit	<b>MINE/PROSPECTING ID#:</b> M-1994-092	<b>MINERAL:</b> Gravel	<b>COUNTY:</b> Fremont
<b>INSPECTION TYPE:</b> Surety-Related Inspection	<b>INSPECTOR(S):</b> Timothy A. Cazier	<b>INSP. DATE:</b> July 22, 2015	<b>INSP. TIME:</b> 10:40
<b>OPERATOR:</b> Rocky Mountain Excavating, LLC	<b>OPERATOR REPRESENTATIVE:</b> Bennie Koch	<b>TYPE OF OPERATION:</b> 110c - Construction Limited Impact	

<b>REASON FOR INSPECTION:</b> Surety Related	<b>BOND CALCULATION TYPE:</b> Complete Bond	<b>BOND AMOUNT:</b> \$10,000.00
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> U.S.BLM	<b>JOINT INSP. AGENCY:</b> U.S.BLM
<b>WEATHER:</b> Clear	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> May 9, 2016

**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>Y</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>Y</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>	(SW) STORM WATER MGT PLAN---- <u>Y</u>	(CI) COMPLETE INSP---- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>NA</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>NA</u>
(AT) ACID OR TOXIC MATERIALS----- <u>NA</u>	(OD) OFF-SITE DAMAGE----- <u>Y</u>	(ST) STIPULATIONS----- <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

## **OBSERVATIONS**

This inspection was conducted as part of a Succession of Operator application. The new Operator (Rocky Mountain Excavating, LLC) was represented by Mr. Bennie Koch, Jr. who was present for the inspection. Also present representing the BLM were Ms. Stephanie Carter and Mr. William Jenkins.

The Iron Mountain Road Gravel Pit site entrance is located approximately 1.5 miles east of the intersection of Fremont County Roads 1 and 28 (Copper Gulch Rd), about 30 miles southwest of Cañon City. This is a 110c gravel mine. It was not operating at the time of the inspection.

### **Inspection:**

**Markers & Boundary** – A mine sign was displayed at the site entrance (see **Photo 1**), but it did not have the DRMS permit number on it. The Operator submitted photographic evidence (see **Photo 2**) of a new permit sign prior to the completion of this inspection report. Therefore, it will not be cited as a problem. Permit boundaries, including the access road were marked by fencing. The attached inspection map shows the location of the boundary markers and the disturbed area based on the September 24, 2013 Google Earth satellite image (see **Figure 1**).

**Mining Plan** – Working faces were observed in general to be 3H:1V or flatter (see **Photos 3 and 4**) with the exception of a near vertical highwall on the west side of the site (see **Photo 5**). Mr. Koch indicated this was performed by the previous operator and that he would mine at slopes closer to 3H:1V as required by the permit. Water was observed near this highwall but was assumed to be a result of the recent heavy rains and not exposed groundwater. One of three topsoil stockpiles was observed above this highwall and appeared stable. Product stockpiles (see **Photo 6**) were observed in the southeast portion of the site, along with a tanker trailer, utility trailer and various refuse/trash Mr. Koch indicated was left by the previous Operator. He indicated he was working with the previous Operator to get it removed. A pile of concrete rubble (see **Photo 7**) was also observed in this area and possibly intended to be used as backfill. This inspector informed Mr. Koch that if it was to be used as backfill, a certificate of inert fill would be required and the rebar would have to be removed.

**Reclamation** – No reclamation had been initiated on site. Mr. Koch was informed that the approved permit required final slopes to be graded to 3H:1V or flatter, except the south highwall – see “Commitments/Stipulations” in the “Records” section below.

**Environmental** – As mentioned above, some amount of standing water was observed in the active pit. Mr. Koch was informed that Colorado Division of Water Resources regulation may require standing water in the pit be pumped out if it does not infiltrate or evaporate within 72 hours. No noxious weeds were observed.

### **Records:**

- **Revisions:** None.
- **Commitments/Stipulations:** Commitment No. 1 provides for an exception to the 3H:1V reclamation slope as follows: *“The final pit walls will be re-contoured to a slope of 3:1 (H:V) or lower, with the possible exception of the south wall where resistant bedrock may force a highwall. This south wall will be benched or backfilled with material so that a slope at least as low as 2:1 (H:V) can be achieved”.*
- **Other Records**
  - a) The total permitted area is 9.9 acres.

- b) The previous inspection was performed on 5/17/2011. No problems were cited.
- c) The anniversary date is January 23. Annual reports and fees are current through 2016.
- d) The post-mine land use is wildlife habitat.

**Bond:**

The Division currently holds a \$10,000 bond. This was recalculated as part of the SO process. The revised bond (\$14,500) was discussed with Mr. Koch during the inspection. A new bond calculation is attached. A surety increase letter will be sent under separate cover.

**Summary and Recommendations:**

1. If the Operator wishes to use the concrete rubble for backfill, a certificate of inert fill will need to be submitted to the DRMS as a Technical Revision, along with the required \$216 fee and the rebar must be removed from the concrete. Otherwise the material must be removed upon reclamation.
2. A problem was to be cited for the permit sign, but was resolved prior to the completion of this report.
3. A surety increase letter for an additional \$4,500 will be sent under separate cover.

Please contact Tim Cazier (303-866-3567, ext. 8169) if you have any questions regarding this report.

**PHOTOGRAPHS**



Photo 1. Mine sign at time of inspection.



**PHOTOGRAPHS (cont.)**



Photo 2. Permit identification sign (photo submitted by Operator).



Photo 3. Sloped highwalls southwest corner of the pit (south side looking west).



**PHOTOGRAPHS (cont.)**



Photo 4. Sloped highwalls northwest corner of the pit (looking north).

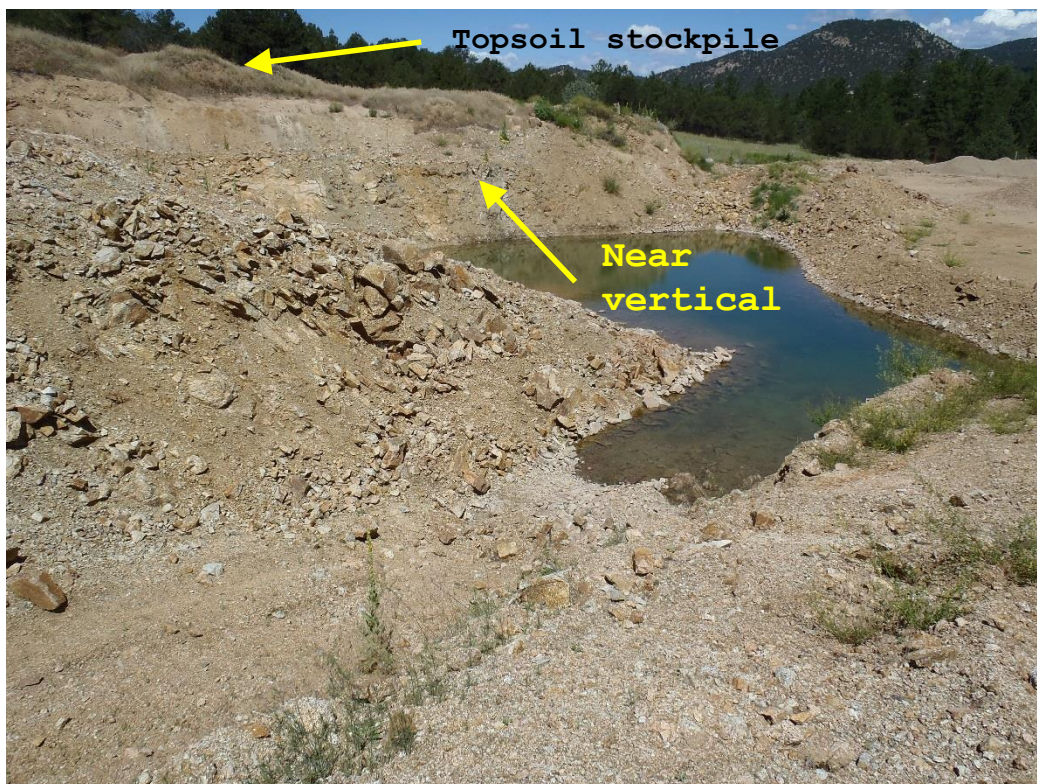


Photo 5. Working highwalls and topsoil stockpile (looking west).



**PHOTOGRAPHS (cont.)**



Photo 6. Stockpiled product, trailers and refuse/trash (looking east).



Photo 7. Working highwalls and topsoil stockpile (looking SW).

**Inspection Contact Address**

Bennie Koch  
Rocky Mountain Excavating, LLC  
2976 L Path  
Cotopaxi, CO 81223

Enclosure





EC: Wally Erickson, DRMS  
Stephanie Carter, BLM  
DRMS file

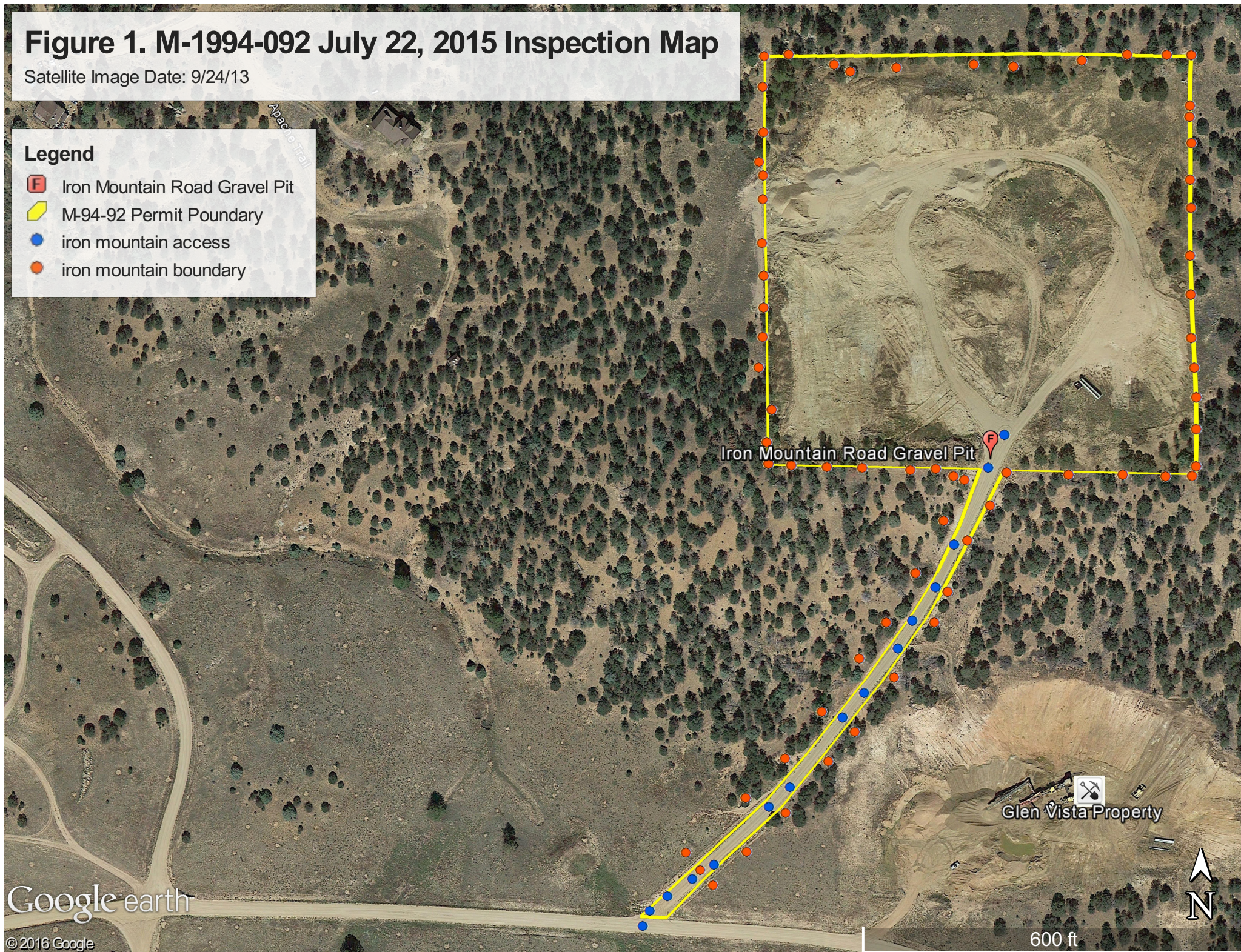


# Figure 1. M-1994-092 July 22, 2015 Inspection Map

Satellite Image Date: 9/24/13

## Legend

-  Iron Mountain Road Gravel Pit
-  M-94-92 Permit Boundary
-  iron mountain access
-  iron mountain boundary



Google earth

© 2016 Google



## COST SUMMARY WORK

Task description: \_\_\_\_\_

Site: Iron Mountain Road Gravel Pit Permit Action: SO-02 Permit/Job#: M1994092

### PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None  
Date: 6/4/2015 County: Fremont Filename: M092-000  
User: TC1

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill/re-grading	DOZER	1	8.94	\$1,467.00
002	Topsoil Replacement	DOZER	1	8.02	\$1,317.00
003	Revegetation	REVEGE	1	8.00	\$7,363.00
004	Mobilization	MOBILIZE	1	3.54	\$1,118.00
<b><u>SUBTOTALS:</u></b>				<b>28.5</b>	<b>\$11,265</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	<u>\$227.55</u>
Performance bond:	1.05%	Total =	<u>\$118.28</u>
Job superintendent:	14.25 hrs	Total =	<u>\$1,071.03</u>
Profit:	10.00%	Total =	<u>\$1,126.50</u>
		TOTAL O & P =	<u>\$2,543.36</u>
		CONTRACT AMOUNT (direct + O & P) =	<u>\$13,808.36</u>

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>0.00</u>	Total =	<u>0.00</u>
Engineering work and/or contract/bid preparation:	<u>0.00%</u>	Total =	<u>\$0.00</u>
Reclamation management and/or administration:	<u>5.00%</u>		<u>\$690.42</u>
CONTINGENCY: 0.00		Total =	<u>\$0.00</u>

TOTAL INDIRECT COST = \$3,233.78

**TOTAL BOND AMOUNT (direct + indirect) = \$14,498.78**

**BULLDOZER WORK**Task description: **Backfill/re-grading**Site: **Iron Mountain Road Gravel Pit**Permit Action: **SO-02**Permit/Job#: **M1994092****PROJECT IDENTIFICATION**Task #: **001**  
Date: **6/4/2015**  
User: **TC1**State: **Colorado**  
County: **Fremont**Abbreviation: **None**  
Filename: **M092-001**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**  
Horsepower: **238**  
Blade Type: **Semi-Universal**  
Attachment: **3-shank ripper**  
Shift Basis: **1 per day**  
Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$46.88	NA
Operating Cost/Hour:	\$79.23	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: **0**  
Total Fleet Cost/Hour: **\$164.12****MATERIAL QUANTITIES**Initial Volume: **4,000**  
Swell factor: **1.000**  
Loose volume: **4,000 LCY**Source of estimated volume: **DRMS**  
Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**  
Unadjusted hourly production: **714.3 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **-25 %**  
Average site altitude: **7,550 feet**Material weight: **2,400 lbs/LCY**Weight description: **Clay and gravel - Dry****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)



Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6265

Adjusted unit production: 447.51 LCY/hr

Adjusted fleet production: **447.51** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.367/LCY

Total job time: **8.94** Hours

Total job cost: **\$1,467**

**BULLDOZER WORK**Task description: **Topsoil Replacement**

Site: **Iron Mountain Road Gravel Pit** Permit Action: **SO-02** Permit/Job#: **M1994092**

**PROJECT IDENTIFICATION**

Task #: **002** State: **Colorado** Abbreviation: **None**  
 Date: **6/4/2015** County: **Fremont** Filename: **M092-002**  
 User: **TC1**

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

Basic Machine: **Cat D7R DS XR Series II**  
 Horsepower: **238**  
 Blade Type: **Semi-Universal**  
 Attachment: **3-shank ripper**  
 Shift Basis: **1 per day**  
 Data Source: **(CRG)**

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$46.88	NA
Operating Cost/Hour:	\$79.23	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: **0**  
 Total Fleet Cost/Hour: **\$164.12**

**MATERIAL QUANTITIES**

Initial Volume: **4,000**  
 Swell factor: **1.000**  
 Loose volume: **4,000 LCY**

Source of estimated volume: **DRMS**  
 Source of estimated swell factor: **Cat Handbook**

**HOURLY PRODUCTION**

Average push distance: **175 feet**  
 Unadjusted hourly production: **464.9 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **-20 %**  
 Average site altitude: **7,500 feet**

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

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

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.0723

Adjusted unit production: 498.51 LCY/hr

Adjusted fleet production: **498.51** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.329/LCY

Total job time: **8.02** Hours

Total job cost: **\$1,317**



**REVEGETATION WORK**Task description: **Revegetation**Site: **Iron Mountain Road Gravel  
Pit**Permit Action: **SO-02**Permit/Job#: **M1994092****PROJECT IDENTIFICATION**Task #: **003**  
Date: **6/4/2015**  
User: **TC1**State: **Colorado**  
County: **Fremont**Abbreviation: **None**  
Filename: **M092-003**Agency or organization name: **DRMS****FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	75.00	pound	\$0.33	\$24.53
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$24.53</b>

**Application**

Description	Cost /Acre
Truck whirlwind spreader (MEANS 32 01 90.13 0140)	\$22.22
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$22.22</b>

**TILLING**

Description	Cost /Acre
Chisel plowing {DMG}	\$88.58
<b>Total Tilling Cost/Acre</b>	<b>\$88.58</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.75	12.24	\$7.99
Indiangrass - Cheyenne	1.25	3.81	\$11.49
Little Bluestem - Pastura	0.70	4.18	\$11.07
Sideoats Grama - El Reno	2.70	8.86	\$30.35
Western Wheatgrass - Barton	4.00	10.10	\$14.72
<b>Totals Seed Mix</b>	<b>9.40</b>	<b>39.20</b>	<b>\$75.61</b>

**Application**

Description	Cost /Acre
-------------	------------

Drill seeding (DRMS Cost Data)	\$88.20
<b>Total Seed Application Cost/Acre</b>	<b>\$88.20</b>

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

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
<b>Total Mulch Materials Cost/Acre</b>				<b>\$530.00</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Power mulcher (MEANS 32 91 13.16 0250)	\$86.68
<b>Total Mulch Application Cost/Acre</b>	<b>\$152.57</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 6 Cost /Acre: \$981.71  
 Estimated Failure Rate: 25% Cost /Acre\*: \$981.71  
 \*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,  
MULCHING  
 Initial Job Cost: \$5,890.26  
 Reseeding Job Cost: \$1,472.57  
 Total Job Cost: \$7,363  
 Job Hours: 8.00

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mobilization**Site: **Iron Mountain Road Gravel Pit**Permit Action: **SO-02**Permit/Job#: **M1994092****PROJECT IDENTIFICATION**

Task #: **004** State: **Colorado** Abbreviation: **None**  
 Date: **6/4/2015** County: **Fremont** Filename: **M092-004**  
 User: **TC1**

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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
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 D7R DS XR Series II	32.01	\$46.88	\$117.55	1	\$164.43	\$117.55	\$250.00

Subtotals: **\$164.43** **\$117.55** **\$250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Drill/Broadcast Seeder with Tractor	\$52.78	1	\$52.78	\$52.78
Power Mulcher (Reinco M90)	\$26.19	1	\$26.19	\$26.19

Subtotals: **\$78.97** **\$78.97**

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>CANON CITY</u>	
Total one-way travel distance:	<u>25.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,030.36</u>
* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$87.74</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.56</u>	<u>0.56</u>
Return Time (Hours):	<u>0.56</u>	<u>0.56</u>
Loading Time (Hours):	<u>0.33</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.33</u>	<u>NA</u>
Subtotals:	<u>1.77</u>	<u>1.11</u>

**JOB TIME AND COST**

Total job time:	<u>3.54</u>	Hours
-----------------	-------------	-------

Total job cost:	<u>\$1,118</u>
-----------------	----------------