



COLORADO

Division of Reclamation,
Mining and Safety

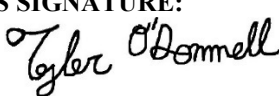
Department of Natural Resources

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: Belvedere Stone Quarry	MINE/PROSPECTING ID#: M-1991-147	MINERAL: Limestone (general)	COUNTY: Douglas
INSPECTION TYPE: Monitoring	INSPECTOR(S): Tyler V. O'Donnell	INSP. DATE: June 17, 2016	INSP. TIME: 14:00
OPERATOR: Belvedere Stone, LLC	OPERATOR REPRESENTATIVE: William Johannsen	TYPE OF OPERATION: 110c - Construction Limited Impact	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$5,000.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: July 8, 2016

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

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

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

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Financial Warranty

PROBLEM: The financial warranty is not adequate to reclaim the site in accordance with the approved reclamation plan. This is a failure to maintain the proper financial warranty amount to complete reclamation of the affected lands pursuant to C.R.S. 34-32.5-117(4)(b) of the Act. The new amount of required financial warranty will be \$41,800, which is \$36,800 more than the current required financial warranty of \$5,000.

CORRECTIVE ACTIONS: The deficit in financial warranty amount on deposit with the State is cited as a problem and must be corrected by September 6, 2016, by submitting the additional bond amount of \$36,800.

CORRECTIVE ACTION DUE DATE: 9/06/16

INSPECTION TOPIC: Revegetation

PROBLEM: Musk thistle and common mullein are present within or have volunteered into the permit area and are becoming established. This is a problem for failure to employ weed control methods for a state listed noxious weeds species within the permitted area, and to reduce the spread of weeds to nearby areas as required by Section 3.1.10 (6) of the Rule.

CORRECTIVE ACTIONS: The Operator shall either implement a weed control plan, provide photographic evidence demonstrating that the noxious weeds have been eradicated, OR develop a weed control and management plan in accordance with Rule 3.1.10 (6). This plan should be developed in consultation with the county extension agency, or weed control district office and should include specific control measures to be applied, a schedule for when control measures will be applied and a post-treatment monitoring plan. This weed control plan shall be submitted to the Division as a Technical Revision to the approved plan with the appropriate Technical Revision fee of \$216.00 by the corrective action date.

CORRECTIVE ACTION DUE DATE: 9/06/16

INSPECTION TOPIC: Signs & Markers

PROBLEM: The affected area boundary markers are missing or incorrectly placed or un-identifiable. This is a problem for failure to maintain boundary markers around the affected area as required by Section 3.1.12(2) of the rule.

CORRECTIVE ACTIONS: The approved affected land boundary must be marked in the field to adequately identify the boundary pursuant to Rule 3.1.12(2). Along with marking the approved affected land boundary in the field, the Operator shall submit a map showing the following; the approved affected land boundary, the disturbed lands, and the land owned by the Operator. The map must be prepared by a registered land surveyor. Upon receipt and review of the map the Division will follow up accordingly with the Operator properly to rectify any issues that may be raised by the mapping.

CORRECTIVE ACTION DUE DATE: 9/06/16

OBSERVATIONS

This normal routine monitoring inspection was conducted by Tyler O'Donnell of the Division of Reclamation, Mining and Safety (Division). Belvedere Stone, LLC (Operator), was represented by William Johannsen during the inspection.

The Belvedere Stone Quarry is located in Douglas County approximately 11 miles due north of Woodland Park, Colorado. The permit was issued in July 1992. The permit was issued over top of a pre-law quarry. The Quarry was being illegally mined until the permit was issued in 1992. The affected land boundary as approved in the permit application is located on top of a patented mining claim located in the middle of the Pike National Forest (See enclosed mine plan map). The primary commodity mined at the quarry is decorative rock. The approved post-mining land use at the quarry is residential.

During the inspection, the sky was clear and the ground was dry. The site was not operational during the inspection. The Operator had a grizzly on site for processing material. It appears that the recent mining related disturbance had taken place in the southeastern portion of the site. There was a shallow pit excavated on top of the current mining bench, where large slabs of stone have been recently removed. Based on a conversation the Division had with the operator's representative it appears that the site maybe active a few times a year to quarry rock.

Backfilling and Grading:

There was a highwall around the entire northern perimeter of the affected land boundary. The highwall varied in height, there were sections of highwall 5 to 20 feet high. The average height of the highwall was approximately 10 feet high. The highwall was approximately 750 feet long. A lot of waste rock had been cast off the active working face into the drainage to the southwest (photos 4). The slope of the cast off rock was near 2H:1V. The waste rock cast off the bench was as high as approximately 40 feet in some areas. All slopes appeared to be structurally stable.

Financial Warranty:

The current amount of financial warranty the Operator has on deposit with the State is \$5,000. Based on the observations made during this inspection, the cost to reclaim the site is estimated to be \$41,830.83 (see attached reclamation cost estimate). The new required financial warranty will be set at \$41,800, resulting in a current deficit of financial warranty on deposit with the State in the amount of \$36,800. This deficit in bond amount is cited as a problem and must be corrected by September 6, 2016, by submitting the additional bond amount of \$36,800.

Hydrologic Balance:

There was no evidence of excessive erosion. There appeared to be no significant impacts to the prevailing hydrologic balance. No exposed groundwater was observed.

Revegetation:

There was some plant growth throughout the current affected areas. The plant growth in the current affected areas appeared to be volunteer vegetation, comprised of native vegetation and annual weeds. There was some plant growth on the stockpiles and a little vegetative growth elsewhere in the active mining area.

Musk thistle and common mullein are present within the affected lands. The musk thistle and mullein have begun to establish, given a few growing seasons, the site could become completely infested with noxious weeds. This is a problem for failure to implement weed control methods for a state listed noxious weed species within the permitted area, and to reduce the spread of weeds to nearby areas as required by Section 3.1.10 (6) of the rule.

Weed control is cited as a problem in the inspection report, and must be corrected by September 6, 2016.

Sediment Control:

There was no evidence of excessive erosion (rills, gullies, or sediment fans).

Signs and Markers:

A mine I.D. sign was located at the entrance to the mine site. The permit boundary was not marked during the inspection. This will be cited as a problem in this inspection report and will require a corrective action. Since the approved affected land boundary could not be field identified, the Division could not determine where the disturbed lands (all lands that have been affected by quarrying that have not been reclaimed) sit in relationship to the approved affected lands and the patented mining claim (private property). The Division has several concerns about the location of the affected lands in relationship to the; approved permit boundary, and private property/U.S. Forest service land. The approved affected land boundary must be marked in the field to adequately identify the boundary pursuant to Rule 3.1.12(2). Along with marking the approved affected land boundary in the field, the Operator shall submit a map showing the following; the approved affected land boundary, the disturbed lands, and the land owned by the Operator. The map must be prepared by a registered land surveyor. Upon receipt and review of the map the Division will follow up accordingly with the Operator properly to rectify any issues that may be raised by the mapping.

Topsoil:

There were a few topsoil stockpiles located around portions of the site. There was a large topsoil stockpile to the south east, there were also a few topsoil stockpiles around the perimeter of the highwall. It appears that topsoil had been salvaged in advance of mining. The topsoil stockpiles were well vegetated, thus providing good protection from erosion. There appeared to be an adequate amount of topsoil around the site to reclaim the current mining disturbance.

Inspection Contact Address

William Johannsen
Belvedere Stone, LLC
2635 Steel Dr.
Colorado Springs, CO 80907

Enclosure: Approved Mine Plan Map
 Approved Legal Description
 Financial Warranty calculation

cc: Wally Erickson, DRMS

PHOTOGRAPHS



Photo 1: Stockpiling area. Portions of the highwall are visible along the lefthand side of the photo.



Photo 2: Recent mining area in the southeast corner. The operator is beginning to form a shallow pit on the mined bench.



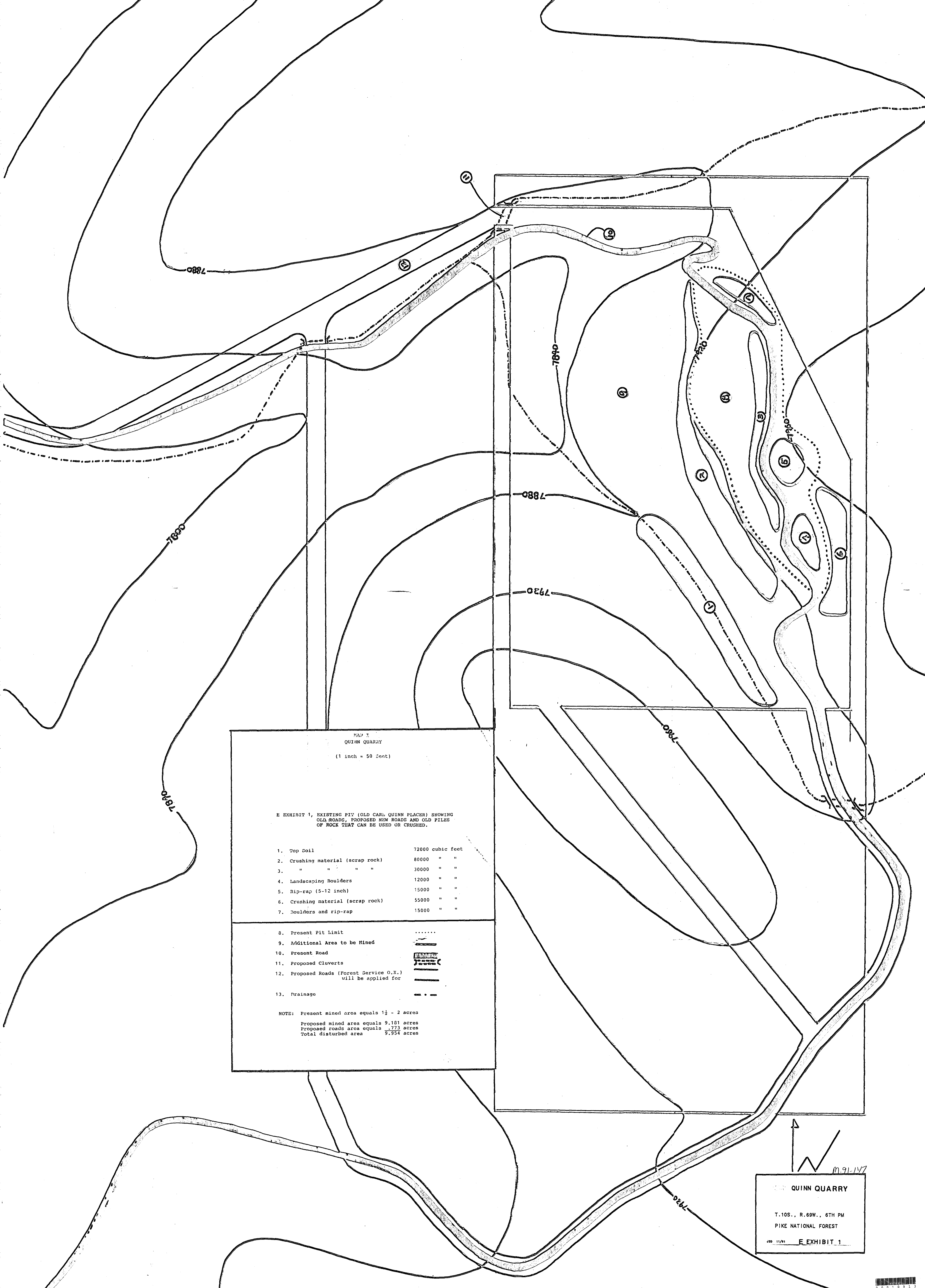
Photo 3: Highwall along the northern portion of the disturbed lands.



Photo 4: Wasterock cast from the quarry to the drainage to the south.



Photo 5: Mush thistle and common mullien on top of the active mining bench.



PLAN I
QUINN QUARRY
(1 inch = 50 feet)

E EXHIBIT 1, EXISTING PIT (OLD CARL QUINN PLACER) SHOWING
OLD ROADS, PROPOSED NEW ROADS AND OLD FILES
OF ROCK THAT CAN BE USED OR CRUSHED.

1. Top Soil	72000 cubic feet
2. Crushing material (scrap rock)	80000 " "
3. " " " "	30000 " "
4. Landscaping Boulders	12000 " "
5. Rip-rap (5-12 inch)	15000 " "
6. Crushing material (scrap rock)	55000 " "
7. Boulders and rip-rap	15000 " "

8. Present Pit Limit
9. Additional Area to be Mined	=====
10. Present Road	=====
11. Proposed Ciuverts	=====
12. Proposed Roads (Forest Service O.K.) will be applied for	=====
13. Drainage	-----

NOTE: Present mined area equals 1 1/2 - 2 acres
Proposed mined area equals 9.101 acres
Proposed roads area equals .773 acres
Total disturbed area 9.954 acres

QUINN QUARRY

T.10S., R.69W., 6TH PM
PIKE NATIONAL FOREST

MSB 11/91 E EXHIBIT 1

3/25/92



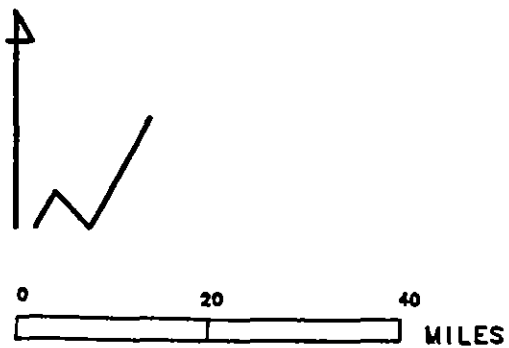
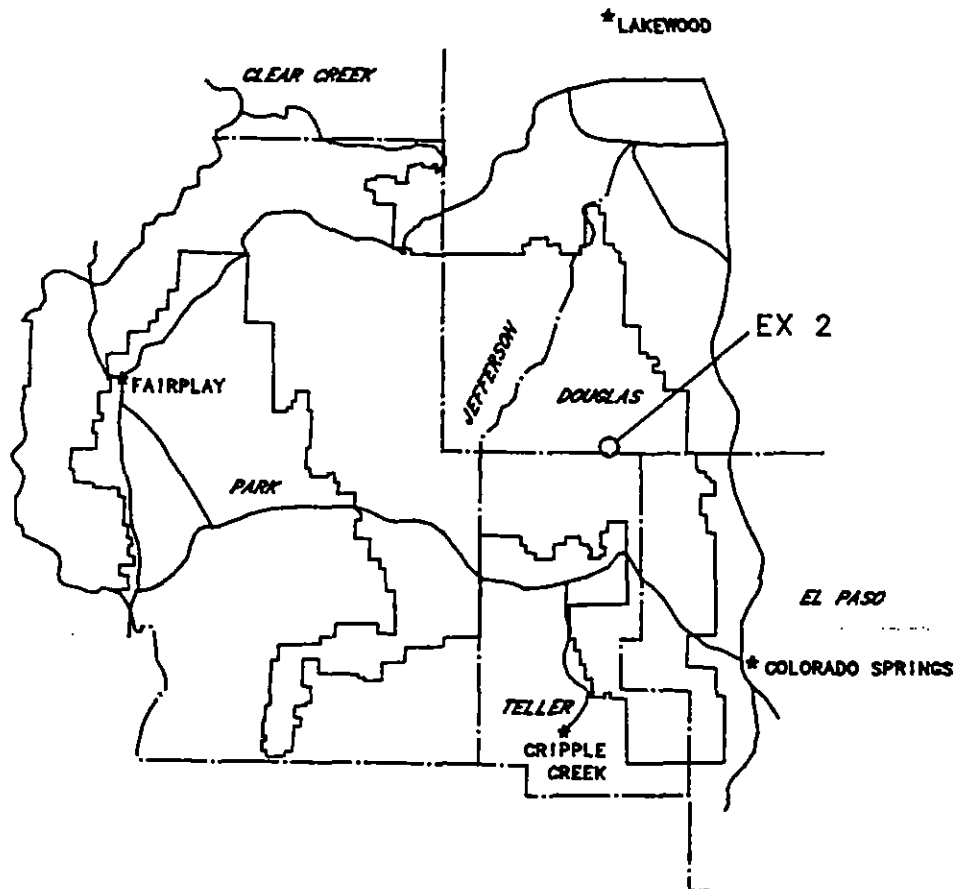
A EXHIBIT, LEGAL DESCRIPTION AND LOCATION MAPS (pages 2,3)

QUINN QUARRY

COLORADO

Sixth Principal Meridian,
T. 10S., R. 69 W., S. 34,
W $\frac{1}{2}$ W $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ and E $\frac{1}{2}$ E $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$,
containing 20.00 acres

VICINITY MAP



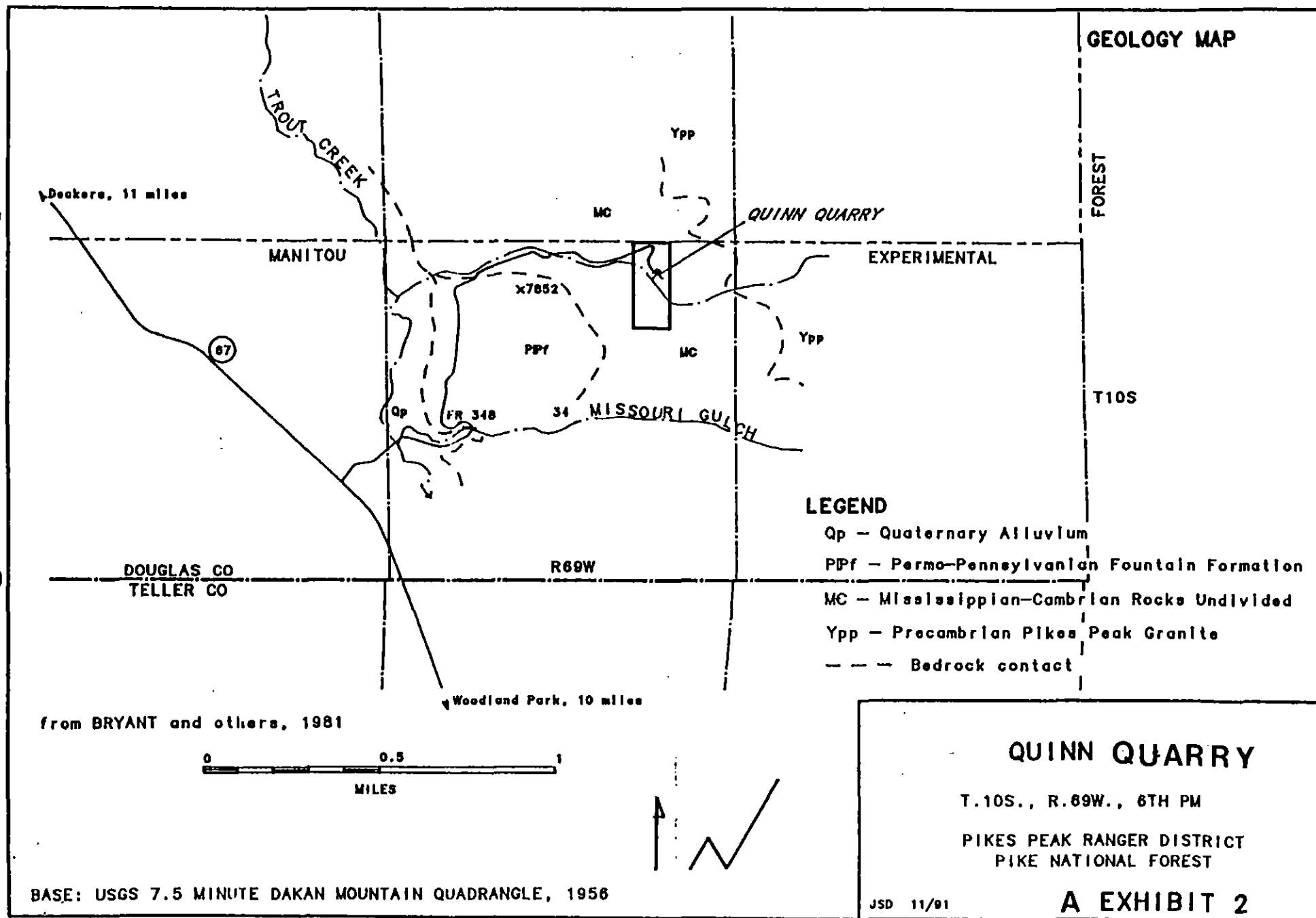
QUINN QUARRY

T.10S., R.69W., 6TH PM

PIKE NATIONAL FOREST

JSD 11/01

A EXHIBIT 1



COST SUMMARY WORK

Task description: Reclaim the Belvedere Quarry

Site: Belvedere Stone Quarry

Permit Action: 2016 inspection

Permit/Job#: M1991147

PROJECT IDENTIFICATION

Task #: 999

State: Colorado

Abbreviation: None

Date: 6/23/2016

County: Douglas

Filename: M147-999

User: TOD

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Create Bench	EXCAVATE	1	33.61	\$6,476.00
002	Backfill and Grade Highwall	DOZER	1	69.91	\$8,972.00
003	Spread 4 inches of topsoil over 4 acres	DOZER	1	56.19	\$7,211.00
004	Revegetation of the quarry	REVEGE	1	36.00	\$6,299.00
005	Mobilization and demobilization	MOBILIZE	1	4.84	\$3,641.00
<u>SUBTOTALS:</u>				200.55	\$32,599

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$658.50

Performance bond: 1.05

Total = \$342.29

Job superintendent: 40.00

Total = \$2,979.20

Profit: 10.00

Total = \$3,259.90

TOTAL O & P = \$7,239.89

CONTRACT AMOUNT (direct + O & P) = \$39,838.89

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 5.00

\$1,991.94

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$9,231.83

TOTAL BOND AMOUNT (direct + indirect) = \$41,830.83

HYDRAULIC EXCAVATOR WORK

Task description: Create Bench

Site: Belvedere Stone Quarry

Permit Action: 2016 inspection

Permit/Job#: M1991147

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 6/23/2016

County: Douglas

Filename: M147-001

User: TOD

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat 345D L 12'-10"

 Stick

Horsepower: 380

Attachment 1: ROPS Cab

Weight (MT): 49.37

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$62.71	NA
Operating Cost/Hour:	\$89.30	100
Operator Cost/Hour:	\$40.67	NA
Total Unit Cost/Hour:	\$192.68	
Total Fleet Cost/Hour:	\$192.68	

MATERIAL QUANTITIES

Initial volume: 3,611

CCY

Swell factor: 1.215

Loose volume: 4,387

LCY

Source of estimated volume: Curent slope 2H:1V 20ft bench at a 1H:1V length 650

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: SEVERE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.479 minutes

Load Bucket Capacity

Bucket Size Class: Small

Rated Capacity: 2.09 LCY (heaped)

Bucket Fill Factor: 0.675 Rock - Well blasted (60% - 75%) 0.675

Adjusted Capacity: 1.41 LCY

Job Condition Correction Factors

Site Altitude: 7950 feet

Altitude Adj:	<u> 0.89 </u>	Source (CAT HB)
Job Efficiency:	<u> 0.83 </u>	(1 shift/day)
Net Correction:	<u> 0.74 </u>	multiplier

Unadjusted Hourly Unit Production: 176.71 LCY/Hour

Adjusted Hourly Unit Production: 130.54 LCY/Hour

Adjusted Hourly Fleet Production: 130.54 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 33.61 Hours

Unit cost: \$1.476 /LCY Total job cost: \$6,476

BULLDOZER WORKTask description: **Backfill and Grade Highwall**Site: **Belvedere Stone Quarry**Permit Action: **2016 inspection**Permit/Job#: **M1991147****PROJECT IDENTIFICATION**Task #: **002**State: **Colorado**Abbreviation: **None**Date: **6/23/2016**County: **Douglas**Filename: **M147-002**User: **TOD**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D6T XL**Horsepower: **185**Blade Type: **Semi-Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$41.63	NA
Operating Cost/Hour:	\$46.82	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$39.87	NA
Total unit Cost/Hour:	\$128.32	
Total Fleet Cost/Hour:	\$128.32	

MATERIAL QUANTITIESInitial Volume: **3,611**Swell factor: **1.000**Loose volume: **3,611 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: **303.3 LCY/hr**Materials consistency description: **Dry, non-cohesive 0.8**Average push gradient: **20 %**Average site altitude: **7,950 feet**Material weight: **3,300 lbs/LCY**Weight description: **Decomposed rock - 75% Rock, 25% Earth****Job Condition Correction Factor**Operator Skill: **0.750****Source****(AVG.)**

Material consistency:	0.800	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	0.545	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.1703

Adjusted unit production: 51.65 LCY/hr

Adjusted fleet production: **51.65** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$2.484/LCY

Total job time: **69.91** Hours

Total job cost: **\$8,972**

BULLDOZER WORKTask description: Spread 4 inches of topsoil over 4 acresSite: Belvedere Stone QuarryPermit Action: 2016 inspectionPermit/Job#: M1991147**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 6/23/2016County: DouglasFilename: M147-003User: TODAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D6T XLHorsepower: 185Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$41.63	NA
Operating Cost/Hour:	\$46.82	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$39.87	NA

Total unit Cost/Hour: \$128.32Total Fleet Cost/Hour: \$128.32**MATERIAL QUANTITIES**Initial Volume: 2,151Swell factor: 1.330Loose volume: 2,861 LCYSource of estimated volume: 4 inches over 4 acresSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 250 feetUnadjusted hourly production: 119.6 LCY/hrMaterials consistency description: Dry, non-cohesive 0.8Average push gradient: -10 %Average site altitude: 7,950 feetMaterial weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor**Operator Skill: 0.750Source
(AVG.)

Material consistency:	0.800	(CAT HB)
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4257

Adjusted unit
production: 50.91 LCY/hr
Adjusted fleet
production: **50.91** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$2.521/LCY

Total job time: **56.19** Hours
Total job cost: **\$7,211**

REVEGETATION WORKTask description: Revegetation of the quarrySite: Belvedere Stone QuarryPermit Action: 2016 inspectionPermit/Job#: M1991147PROJECT IDENTIFICATIONTask #: 004State: ColoradoAbbreviation: NoneDate: 6/23/2016County: DouglasFilename: M147-004User: TODAgency or organization name: DRMSFERTILIZING**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
Hard Fescue - Discovery	3.00	38.91	\$6.27
Intermediate Wheatgrass - Rush	6.00	12.81	\$13.44
Yellow Sweet Clover - Madrid	1.00	5.97	\$2.56
Pubescent Wheatgrass - Manska	6.00	12.40	\$14.10
Slender Wheatgrass - Native	8.00	29.20	\$18.00
Western Wheatgrass - Native	6.00	15.15	\$18.30
Timothy, Alpine - Native	1.50	44.77	\$40.68
Totals Seed Mix	31.50	159.21	\$113.35

Application

Description	Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)	\$936.54
Total Seed Application Cost/Acre	\$936.54

MULCHING and MISCELLANEOUS

Materials

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

Application

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

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:	<u>4</u>	Cost /Acre:	<u>\$1,049.89</u>
Estimated Failure Rate:	<u>50%</u>	Cost /Acre*:	<u>\$1,049.89</u>
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$4,199.56
Reseeding Job Cost:	\$2,099.78
Total Job Cost:	\$6,299
Job Hours:	36.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilization and demobilization**Site: **Belvedere Stone Quarry**Permit Action: **2016 inspection**Permit/Job#: **M1991147****PROJECT IDENTIFICATION**Task #: **005**State: **Colorado**Abbreviation: **None**Date: **6/24/2016**County: **Douglas**Filename: **M147-005**User: **TOD**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 D6T XL	23.25	\$41.63	\$88.67	1	\$130.30	\$88.67	\$250.00
Cat 345D L 12'- 10" Stick	54.31	\$62.71	\$125.45	1	\$188.16	\$125.45	\$250.00
Hydroseeder with Tractor	28.00	\$51.65	\$117.55	1	\$169.20	\$117.55	\$250.00

Subtotals: **\$487.66** **\$331.67** **\$750.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
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Subtotals: **\$0.00** **\$0.00**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>COLORADO SPRINGS</u>	
Total one-way travel distance:	<u>32.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$3,640.59</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$0.00</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.71</u>	<u>0.71</u>
Return Time (Hours):	<u>0.71</u>	<u>0.71</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>2.42</u>	<u>1.42</u>

JOB TIME AND COST

Total job time:	<u>4.84</u>	Hours
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Total job cost:	<u>\$3,641</u>
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