



COLORADO

Division of Reclamation, Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

July 9, 2019

Jay Wagner
Wagner Construction, Inc.
1850 E. 1st Street
Craig, CO 81625

Re: Wagner Rock Pit, Permit No. M-1999-018, Objections to Surety Increase (SI-3) Response-1

Dear Mr. Daehling,

The Division of Reclamation Mining and Safety (Division) issued a Surety Increase (SI-3) as the result of a site inspection conducted on June 12, 2019. The additional financial warranty amount of \$25,520 for a total bond amount of \$73,827 is due September 2, 2019. This 60-day deadline is pursuant to C.R.S. 34-32.5-117(4) and may not be extended at a staff level.

Included with the reclamation cost estimate summary was a table summarizing factors that were changed as compared to the CN-1 calculation in fall of 2018. This summary table does not take into account changes resulting from inflation or other RS Means cost changes. Also note that recently our CIRCES program has had the second of four annual installments to phase-in the net cost increase which is in addition to the standard inflation increases.

On July 8, 2019 the Division received email correspondence which indicated that you may wish to object to the financial warranty increase, SI-3 for your mining permit, M-1999-018. The calculations are based on what it would cost the State to hire a contractor to complete reclamation if an operator was unable to do so. Therefore, it is inherent that the costs will be more than what it costs the company to complete the required work. The Division will review specific tasks, equipment used, quantities, and volumes. However, staff will not review equipment efficiencies and labor costs as they are determined by using nationally accepted sources and values within the bonding program that are updated regularly. Please remember that estimates are based on a combination of current site conditions and worst case scenario of the mining plan.

Please be advised that in order to officially object to the noticed increase the following documentation must be submitted to the Division's Denver office no later than the compliance date for the revisions, which is September 2, 2019.



Required Documentation

1. A cover letter identifying the permit and financial warranty increase you are objecting to as well as an explanation the justification for your objection
2. Any new reclamation cost estimate, including all calculations, figures, diagrams, and totals for the specific tasks you are objecting too.

These materials must be received by the Division's Denver office no later than September 2, 2019. Please note that the objection for the increase must be sent under a separate cover, and clearly identified as to which site the objection is in reference to.

Any objections to the financial warranty increase must be received by the Division's Denver office by the compliance date of September 2, 2019. Failure to submit the objection with the sufficient supporting documents by this date may result in the Division issuing a "Reason to Believe" a violation exists letter and scheduling for a hearing before the Mined Land Reclamation Board for failure to post a financial warranty increase after being noticed.

Please feel free to contact me with any further questions. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 303-866-3567 Ext 8183 or via email at amy.yeldell@ state.co.us

Sincerely,



Amy Yeldell

Environmental Protection Specialist
Department of Natural Resources
Division of Reclamation, Mining and Safety

Enclosures:

Notice of Surety Increase (SI-3) w/ attachments
Jay Wagner's email received 7-8-19

Ec:

Travis Marshall, Senior EPS, Grand Junction DRMS



STATE OF
COLORADO

Yeldell - DNR, Amy <amy.yeldell@state.co.us>

Wagner rock pit 1999

1 message

JayWagner <wagnercorp@q.com>
To: amy <amy.yeldell@state.co.us>

Mon, Jul 8, 2019 at 2:46 PM

Amy,

I am in receipt of your proposed increase in bond for the Wagner rock pit #1999. Since the last evaluation this pit has only sold 21,000 tons of material and has not changed in mine surface area. The excavation has extended to 40' deep over a 2025 square foot area.

Your increase is out of range!

I request 6 months to reevaluate and compile our own reclamation costs. I am completely booked up through November.

--

Jay L. Wagner
The WAGNER Corporation
[1850 E. 1st.](#)
[Craig, Co. 81625](#)
970-824-2709 office
970-629-2709 cell



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

July 2, 2019

Jay Wagner
Wagner Construction, Inc.
1850 E. 1st Street
Craig, CO 81625

RE: Wagner Rock Pit, Permit No. M-1999-018, Notice of Surety Increase (SI-3)

Dear Mr. Wagner:

In an effort to ensure the Financial Warranty for the above referenced site adequately reflects the actual current costs of fulfilling the requirements of the approved reclamation plan, the Colorado Division of Reclamation, Mining and Safety (Division) has updated the reclamation cost estimate (copy enclosed).

Division calculations estimate the cost to reclaim the above referenced site to be \$73,827. This is an increase of \$25,520 over the \$48,307 currently held by the Division. This estimate is based on conditions observed during the June 12, 2018 inspection. ***Therefore, pursuant to Section 34-32.5-117(4) of the Colorado Land Reclamation Act, adequate Financial Warranty must be submitted to the Division within 60 days of the mailing date of this letter.*** The additional amount needs to be accepted prior to **Monday, September 02, 2019**. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

Please make arrangements with Gabriel Benvenuti at the Division of Reclamation, Mining and Safety Denver Office, phone no. 303.866.3567, ext. 8148 for submittal of the financial warranty. Any questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Gabriel Benvenuti.

If you require additional information, or have questions or concerns, please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 303-866-3567 Ext 8183 or via email at amy.yeldell@state.co.us

Sincerely,

Amy Yeldell
Environmental Protection Specialist

Ec: Travis Marshall, Senior EPS, Grand Junction DRMS



COST SUMMARY WORK

Task description: Post inspection update 6-12-2019

Site: Wagner Rock

Permit Action: 2019-06

Permit/Job#: M1999018

PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 6/19/2019

County: Moffat

Filename: M018-ACY

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Demolition of scale house	DEMOLISH	1	8.00	\$278
02a	Grade highwalls to 2H:1V	DOZER	2	65.71	\$31,799
03a	Transport topsoil	LOADER	1	17.20	\$2,460
03b	Spread topsoil	DOZER	2	4.54	\$2,065
04a	Rip compacted areas	RIPPER	2	3.40	\$1,678
05a	Reveg disturbed areas	REVEGE	1	16.00	\$9,677
06a	Hay storage- grade graveled areas	DOZER	2	8.23	\$3,741
07a	Equipment storage- grade graveled areas	DOZER	2	3.08	\$1,403
08a	Initial Mobilization	MOBILIZE	1	2.57	\$3,904
08b	Secondary Mobilization	MOBILIZE	1	2.57	\$729
<u>SUBTOTALS:</u>				131.3	\$57,734

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,166

Performance bond: 1.05

Total = \$606

Job superintendent: 65.65

Total = \$4,555

Profit: 10.00

Total = \$5,773

TOTAL O & P = \$12,101

CONTRACT AMOUNT (direct + O & P) = \$69,835

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$3,492

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$16,093

TOTAL BOND AMOUNT (direct + indirect) = \$73,827

DEMOLITION WORK

Task description: Demolition of scale house

Site: Wagner Rock Pit

Permit Action: 2019-06

Permit/Job#: M1999018

PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 6/19/2019

County: Moffat

Filename: M018-01a

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 95.50 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Scale house	8' x 10' x 20'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	1,600.00	CF	\$0.18	\$291.20

Job Hours: 8.00

Subtotal
(unadjusted): \$291.20

Total Cost
(adjusted for location): \$278.10

BULLDOZER WORKTask description: **Grade highwalls to 2H:1V**Site: **Wagner Rock Pit** Permit Action: **2019-06** Permit/Job#: **M1999018****PROJECT IDENTIFICATION**

Task #: **02A** State: **Colorado** Abbreviation: **None**
 Date: **6/19/2019** County: **Moffat** Filename: **M018-02a**
 User: **ACY**

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

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **3-shank ripper**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$103.86	NA
Operating Cost/Hour:	\$82.26	100
Ripper own. Cost/Hour:	\$10.43	NA
Ripper op. Cost/Hour:	\$4.19	50
Operator Cost/Hour:	\$41.24	NA

Total unit Cost/Hour: **\$241.98**
 Total Fleet Cost/Hour: **\$483.95**

MATERIAL QUANTITIES

Initial Volume: **12,667**
 Swell factor: **1.490**
 Loose volume: **18,874 LCY**

Source of estimated volume: **400'L 60'H near vertical to 2H:1V slope**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **135 feet**
 Unadjusted hourly production: **689.5 LCY/hr**

Materials consistency description: **Rock, poorly ripped or blasted 0.6**

Average push gradient: **0 %**
 Average site altitude: **6,490 feet**

Material weight: **3,300 lbs/LCY**Weight description: **Basalt****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.600	(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:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2083

Adjusted unit production: 143.62 LCY/hr

Adjusted fleet production: **287.24** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$1.685/LCY

Total job time: **65.71** Hours

Total job cost: **\$31,799**

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Transport topsoil**Site: **Wagner Rock Pit**Permit Action: **2019-06**Permit/Job#: **M1999018****PROJECT IDENTIFICATION**Task #: **03A**State: **Colorado**Abbreviation: **None**Date: **6/19/2019**County: **Moffat**Filename: **M018-03a**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **CAT 972H**Attachment 1: **ROPS Cab**Horsepower: **287**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$46.54	NA
Operating Cost/Hour:	\$55.81	100
Operator Cost/Hour:	\$40.65	NA
Total Unit Cost/Hour:	\$143.00	
Total Fleet Cost/Hour:	\$143.00	

MATERIAL QUANTITIESInitial volume: **3,710**

CCY

Swell factor: **1.125**Loose volume: **4,174**

LCY

Source of estimated volume: **6" topsoil over 4.6 ac**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Loader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): **0.525** minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(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:		-0.050	minutes
Adjusted Basic Cycle Time:		0.475	minutes

Rolling Resistance – Road ConditionsHaul: **Rutted dirt, little maintenance, no water, 2" tire penetration 5.0**Return: **Rutted dirt, little maintenance, no water, 2" tire penetration 5.0****Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	450	0.00	5.00	5.00	0.4150	(Cat HB)
Return Route:	450	0.00	5.00	5.00	0.3744	(Cat HB)

Total Travel Time: 0.7894 minutes
 Total Cycle Time: 1.2644 minutes

Load Bucket Capacity

Rated Capacity: 5.60 LCY (heaped)
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
 Adjusted Capacity: 6.16 LCY

Job Condition Correction Factors

Site Altitude: 6490 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 292.32 LCY/Hour
 Adjusted Hourly Unit Production: 242.62 LCY/Hour
 Adjusted Hourly Fleet Production: 242.62 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 17.20 Hours
 Unit cost: \$0.589 /LCY Total job cost: \$2,460

BULLDOZER WORKTask description: Spread topsoilSite: Wagner Rock Pit Permit Action: 2019-06 Permit/Job#: M1999018**PROJECT IDENTIFICATION**

Task #: 03B State: Colorado Abbreviation: None
 Date: 6/19/2019 County: Moffat Filename: M018-03b
 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:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$103.86</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$82.26</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$41.24</u>	<u>NA</u>

Total unit Cost/Hour: \$227.36
 Total Fleet Cost/Hour: **\$454.72**

MATERIAL QUANTITIES

Initial Volume: 4,174
 Swell factor: 1.000
 Loose volume: **4,174 LCY**

Source of estimated volume: Transported volume, 6" over 4.6 ac
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 100 feet
 Unadjusted hourly production: 852.6 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
 Average site altitude: 6,490 feet

Material weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**Job Condition Correction Factor**

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

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:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5390

Adjusted unit production: 459.55 LCY/hr

Adjusted fleet production: **919.1** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.495/LCY

Total job time: **4.54** Hours

Total job cost: **\$2,065**

BULLDOZER RIPPING WORK

Task description: Rip compacted areas

Site: Wagner Rock Pit Permit Action: 2019-06 Permit/Job#: M1999018

PROJECT IDENTIFICATION

Task #: 04A State: Colorado Abbreviation: None
Date: 6/19/2019 County: Moffat Filename: M018-04a
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:	<u>\$103.86</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$82.26</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$10.43</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$8.38</u>	<u>100</u>
Operator Cost/Hour:	<u>\$41.24</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$246.17</u>	
Total Fleet Cost/Hour:	<u>\$492.33</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 3.98 acres Rip Depth (ft): 2.00 Volume: 12,842 BCY or CCY

Source of estimated quantity: Rec Plan

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

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

Job Condition Correction Factors

Unadjusted Hourly Unit Production:	<u>0.703</u>	<u>Acres/hr</u>
Site Altitude:	<u>6,490</u>	<u>feet</u>
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.83</u>	<u>multiplier</u>

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: 3.41 Hours

Unit cost: \$421.636 Per acre Total job cost: \$1,678

REVEGETATION WORKTask description: Reveg disturbed areasSite: Wagner Rock PitPermit Action: 2019-06Permit/Job#: M1999018**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 6/19/2019County: MoffatFilename: M018-05aUser: ACYAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	200.00	pound	\$0.34	\$68.00
			Total Fertilizer Materials Cost/Acre	\$68.00

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$36.15
Total Fertilizer Application Cost/Acre	\$36.15

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$101.93
Total Tilling Cost/Acre	\$101.93

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Nespar	0.19	0.62	\$1.69
Prairie Clover, Purple - Kaneb	0.06	0.41	\$3.39
Sandberg Bluegrass - VNS	0.20	4.25	\$1.68
Lupine, Silver	0.56	0.33	\$39.19
Thickspike Wheatgrass - Critana	0.57	2.02	\$3.92
Muttongrass	0.03	0.62	\$1.03
Western Wheatgrass - Arriba	2.40	6.06	\$15.60
Rabbitbrush, Rubber	0.03	0.45	\$1.93
Sweetvetch, Utah or Northern	0.22	0.10	\$16.50
Needle and Thread	0.27	0.71	\$11.30
Sagebrush, Mountain or Big	0.10	5.28	\$1.98

Prairie Junegrass	0.04	2.13	\$1.04
Flax, Lewis Blue	0.06	0.40	\$0.99
Serviceberry, Utah	0.02	0.04	\$1.35
Penstemon, Palmer	0.03	0.66	\$1.64
Totals Seed Mix	4.78	24.06	\$103.21

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
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.74	\$2.74
Herbicide - Escort @ 1.0 pt/ac	1.00	ACRE	\$179.00	\$179.00
Herbicide - Plateau @ 1.0 pt/ac	1.00	ACRE	\$10.11	\$10.11
Herbicide - Tordon 22K @ 1.0 pt/ac	1.00	ACRE	\$12.15	\$12.15
Herbicide - Transline @ 1.0 pt/ac	2.00	ACRE	\$9.34	\$18.68
Total Mulch Materials Cost/Acre				\$222.68

Application

Description	Cost /Acre
Weed spray, truck, non-aquatic area, nox. [DMG]	\$71.50
Total Mulch Application Cost/Acre	\$71.50

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:	8.58	Cost /Acre:	\$835.47
Estimated Failure Rate:	35%	Cost /Acre*:	\$835.47
*Selected Replanting Work Items:	FERTILIZING,TILLING,SEEDING,MU LCHING		
Initial Job Cost:	\$7,168.33		
Reseeding Job Cost:	\$2,508.92		
Total Job Cost:	\$9,677		
Job Hours:	16.00		

BULLDOZER WORKTask description: **Hay storage- grade graveled areas**Site: **Wagner Rock Pit**Permit Action: **2019-06**Permit/Job#: **M1999018****PROJECT IDENTIFICATION**Task #: **06A**State: **Colorado**Abbreviation: **None**Date: **6/19/2019**County: **Moffat**Filename: **M018-06a**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:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$103.86	NA
Operating Cost/Hour:	\$82.26	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.24	NA

Total unit Cost/Hour: **\$227.36**Total Fleet Cost/Hour: **\$454.72****MATERIAL QUANTITIES**Initial Volume: **4,302**Swell factor: **1.245**Loose volume: **5,356 LCY**Source of estimated volume: **8 ac @ 4" depth**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**Unadjusted hourly production: **852.6 LCY/hr**Materials consistency description: **Partly consolidated stockpile 1.1**Average push gradient: **0 %**Average site altitude: **6,490 feet**Material weight: **3,300 lbs/LCY**Weight description: **Basalt****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(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:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3818

Adjusted unit production: 325.52 LCY/hr

Adjusted fleet production: **651.04** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.698/LCY

Total job time: **8.23** Hours

Total job cost: **\$3,741**

BULLDOZER WORKTask description: Equipment storage- grade graveled areasSite: Wagner Rock PitPermit Action: 2019-06Permit/Job#: M1999018**PROJECT IDENTIFICATION**Task #: 07AState: ColoradoAbbreviation: NoneDate: 6/19/2019County: MoffatFilename: M018-07aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$103.86	NA
Operating Cost/Hour:	\$82.26	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.24	NA

Total unit Cost/Hour: \$227.36Total Fleet Cost/Hour: **\$454.72****MATERIAL QUANTITIES**Initial Volume: 1,613Swell factor: 1.245Loose volume: **2,008 LCY**Source of estimated volume: 3 ac @ 4" depthSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 852.6 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 6,490 feetMaterial weight: 3,300 lbs/LCYWeight description: Basalt**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(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:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3818

Adjusted unit production: 325.52 LCY/hr

Adjusted fleet production: **651.04** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.698/LCY

Total job time: **3.08** Hours

Total job cost: **\$1,403**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial Mobilization**Site: **Wagner Rock Pit**Permit Action: **2019-06**Permit/Job#: **M1999018****PROJECT IDENTIFICATION**Task #: **08A**State: **Colorado**Abbreviation: **None**Date: **6/19/2019**County: **Moffat**Filename: **M018-08a**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:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

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	53.08	\$114.29	\$141.54	2	\$511.66	\$283.08	\$500.00
CAT 972H	28.00	\$46.54	\$123.81	1	\$170.35	\$123.81	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00
Subtotals:					\$767.55	\$474.28	\$1,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$48.58	1	\$48.58	\$48.58
Subtotals:			\$48.58	\$48.58

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: CRAIG, CO
 Total one-way travel distance: 5.00 miles
 Average Travel Speed: 35.00 mph

Total Non-Roadable Mob/Demob Cost * \$3,889.91
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$13.88
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

JOB TIME AND COST

Total job time: 2.57 Hours

Total job cost: \$3,904

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Secondary Mobilization**Site: **Wagner Rock Pit**Permit Action: **2019-06**Permit/Job#: **M1999018****PROJECT IDENTIFICATION**Task #: **08B**State: **Colorado**Abbreviation: **None**Date: **6/19/2019**County: **Moffat**Filename: **M018-08b**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:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

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	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00

Subtotals: **\$85.54** **\$67.39** **\$250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$48.58	1	\$48.58	\$48.58

Subtotals: **\$48.58** **\$48.58**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: CRAIG, CO
 Total one-way travel distance: 5.00 miles
 Average Travel Speed: 35.00 mph

Total Non-Roadable Mob/Demob Cost * \$714.77
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$13.88
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

JOB TIME AND COST

Total job time: 2.57 Hours

Total job cost: \$729

Wagner Rock Pit M-1999-018

Task: 2016-06 -Post inspection 6-12-19 update

Updates from CN-1 calculation **Changes**

Elevation: 6,490 ft.

CIRCES program was last updated on 7/1/2019

-	01a	Demo Scale & Scale house, push into pit Corrected volumes and demo selection
+	02a	Highwall Reduction 400' long slope max 60'D, vertical->2:1, cut and fill 12,667 CCY, slopes will be approx. 135', poorly blasted mostly consolidated material. If use of excavator w/o blasting add ~20k.
-	03a	Transport 6" of topsoil for 4.6 ac, 3,710 CCY, Loader only avg of approx. 450', mostly flat no slope, not existing road
+	03b	Grade topsoil 4.6 ac @ 6" deep, 4,174 LCY, 100' push
	04a	Rip compacted stockpile 24" deep areas 3.98 ac
+	05a	Reveg 8.58 ac, 35% failure Disk harrow Fertilizer 18-46-0 @ 200 lbs Drill seed USDA mix provided-all seeds no nursery No mulching at this time Weed treatments, increase application types (Transline x2 for Scotch Thistle, Tordon for Dalmatian Toadflax, Escort + 2,4-D for Black Henbane, Plateau for White top)
	06a	Grade existing graveled surface 8 ac @ 4", 100' push no slope 4,302 cy
	07a	Grade existing graveled surface 3 ac @ 4", 100' push no slope 1,613 cy
-	08a	Initial Mobilization 2 x D-8 w ripper, 1x 972 wheel loader, 1x drill seeder/tractor, crew truck
	09a	Secondary Mobilization 1x drill seeder/tractor, crew truck