

September 23, 2021

Sean C. Muller  
Grand Island Resources LLC  
4803 Caribou Road  
P.O. Box 3395  
Nederland, CO 80466

**RE: Wasterock Exploration Core Drilling, File No. P-2021-016, 2<sup>nd</sup> Notice of Deficiencies in a Notice of Intent to Conduct Prospecting Operations Application**

Mr. Muller:

The Division of Reclamation, Mining and Safety (Division) has completed its review of your deficiency response received on September 15, 2021. The Division's review indicates the NOI application contains additional deficiencies that need to be addressed before the application can be approved. Please respond to the following deficiency items:

- 1) On Page 2 of the application, under Section I – General Information, Item 5 - General Description, the text states the site is located “5 miles ENE of the town of Nederland”. This is not correct, as the proposed site is actually located WNW of the town of Nederland. It is very important the location information in the application be accurate. Please correct this description to “5 miles ENE to the town of Nederland” or “5 miles WNW from the town of Nederland”.
- 2) On Page 6 of the application, under Section III – Project Description, Item 5, the text mentions an “emergent wetland” below the proposed site. However, there is no other mention of existing wetlands in the application. In fact, under Item 6(K), it states “no surface water or wetlands are within ½ mile of either wasterock area”. Please remove this reference to wetlands if none exist near the proposed sites.
- 3) On Page 7 of the application, under Section III – Project Description, Item 6(H), the total project area to be disturbed is said to be “16,000 sq ft or 0.312 acres”. Firstly, 16,000 square feet is equal to 0.367 acres, and not 0.312 acres. Secondly, other portions of the application state each proposed drill pad will be approximately 80 feet x 100 feet in size with a disturbance of 0.184 acre. This would correspond with a total disturbance of 0.367 acre. Therefore, please correct the disturbance acreage from 0.312 acres to 0.367 acres.
- 4) The application proposes drilling 6-10 (2.5 inch diameter) holes into the tops of two existing waste rock piles to a total depth of approximately 1,500 feet. Please provide an estimated depth of waste rock the operation will need to drill through to get to the natural ground surface beneath each pile.



- 5) Please provide a general description of the type of material present in each waste rock pile. Does this material have the potential to produce acid rock drainage?
- 6) The Division has calculated a required financial warranty for the site (see enclosed bond estimate) based on the proposed reclamation plan. Please review this estimate and provide any comments or questions with your response. The Division reserves the right to adjust this estimate as needed if the proposed reclamation plan is changed in any way through the adequacy review process. If no comments are provided (and the proposed reclamation plan is not revised), the total amount in the enclosed bond estimate (\$40,300) will be the set financial warranty amount for issuance of this NOI.

All deficiency items must be addressed by **November 9, 2021**. Please title your response with "Response to Deficiencies for NOI, File No. P-2021-016". Since no information in the application was designated as confidential per Rule 5.1.2(h), you may submit only a revised Form 2 (Public File) to address the deficiencies.

If you have any questions, you may contact me by telephone at 303-866-3567, ext. 8129, or by email at [amy.eschberger@state.co.us](mailto:amy.eschberger@state.co.us).

Sincerely,



Amy Eschberger  
Environmental Protection Specialist

Encl: Division's bond estimate

Cc: Daniel Pollock, Grand Island Resources LLC  
Michael Cunningham, DRMS

## COST SUMMARY WORK

Task description: Cost Summary

Site: Wasterock Exploration Core  
Drilling

Permit Action: New NOI 2021

Permit/Job#: P2021016

### PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None  
Date: 9/22/2021 County: Boulder Filename: P016-000  
User: AME

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Seal boreholes	BOREHOLE	1	40.00	\$26,074
002	Regrade 0.184 acre (Caribou drill pad)	DOZER	1	1.81	\$362
003	Regrade 0.184 (Silver Point drill pad)	DOZER	1	1.81	\$362
004	Mobilization/Demobilization	MOBILIZE	1	7.55	\$5,236
<b><u>SUBTOTALS:</u></b>				<b>51.17</b>	<b>\$32,034</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$647
Performance bond:	1.05	Total =	\$336
Job superintendent:	30.00	Total =	\$2,161
Profit:	10.00	Total =	\$3,203

TOTAL O & P = \$6,348

CONTRACT AMOUNT (direct + O & P) = \$38,382

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>\$0</u>	Total =	<u>\$0</u>
Engineering work and/or contract/bid preparation:	<u>0.00</u>	Total =	<u>\$0</u>
Reclamation management and/or administration:	<u>5.00</u>		<u>\$1,919</u>

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$8,267

**TOTAL BOND AMOUNT (direct + indirect) = \$40,300**

## BOREHOLE SEALING WORK

Task description: Seal boreholes

Wasterock Exploration Core  
Site: Drilling

Permit Action:  
New NOI 2021

Permit/Job#: P2021016

### PROJECT IDENTIFICATION

Task #: 001  
Date: 9/22/2021  
User: AME

State: Colorado  
County: Boulder

Abbreviation: None  
Filename: P016-001

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Seal (10) 2.5 in x 1,500 ft boreholes (Caribou drill pad)	Portland cement grout ( Bag, material cost only...94 lb. bag)	2.5	15,000	430.00	bag	\$19.95	\$8,578.50
Seal (10) 2.5 in x 1,500 ft boreholes (Silver Point drill pad)	Portland cement grout ( Bag, material cost only...94 lb. bag)	2.5	15,000	430.00	bag	\$19.95	\$8,578.50
Drill rig with mud pump	ATLAS COPCO ROC D3-01,3.0 in.	NA	NA	40.00	EA	\$179.25	\$7,170.00
Truck with crew	Light Duty Pickup, 4x4, 1 T. Crew	NA	NA	40.00	EA	\$20.51	\$820.40
Water tanker	Water Tanker, 3,500 Gal.	NA	NA	20.00	EA	\$46.35	\$927.00

Job Hours: 40.00

Total Cost: \$26,074.00

**BULLDOZER WORK**Task description: **Regrade 0.184 acre (Caribou drill pad)**Site: **Wasterock Exploration Core  
Drilling**Permit Action: **New NOI 2021**Permit/Job#: **P2021016****PROJECT IDENTIFICATION**Task #: **002**  
Date: **9/22/2021**  
User: **AME**State: **Colorado**  
County: **Boulder**Abbreviation: **None**  
Filename: **P016-002**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**  
Horsepower: **240**  
Blade Type: **Semi-Universal**  
Attachment: **NA**  
Shift Basis: **1 per day**  
Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$81.02	NA
Operating Cost/Hour:	\$79.33	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: **\$200.39**  
Total Fleet Cost/Hour: **\$200.39****MATERIAL QUANTITIES**Initial Volume: **600**  
Swell factor: **1.125**  
Loose volume: **675 LCY**Source of estimated volume: **80ft x 100ft drill pad = 0.184 ac x 1 ft deep**  
Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**  
Unadjusted hourly production: **714.3 LCY/hr**Materials consistency description: **Partly consolidated stockpile 1.1**Average push gradient: **0 %**  
Average site altitude: **10,079 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% Earth****Job Condition Correction Factor**

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

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5230

Adjusted unit production: 373.58 LCY/hr

Adjusted fleet production: **373.58** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.536/LCY

Total job time: **1.81** Hours

Total job cost: **\$362**

**BULLDOZER WORK**Task description: **Regrade 0.184 (Silver Point drill pad)**Site: **Wasterock Exploration Core  
Drilling**Permit Action: **New NOI 2021**Permit/Job#: **P2021016****PROJECT IDENTIFICATION**Task #: **003**  
Date: **9/22/2021**  
User: **AME**State: **Colorado**  
County: **Boulder**Abbreviation: **None**  
Filename: **P016-003**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**  
Horsepower: **240**  
Blade Type: **Semi-Universal**  
Attachment: **NA**  
Shift Basis: **1 per day**  
Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$81.02	NA
Operating Cost/Hour:	\$79.33	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: **\$200.39**  
Total Fleet Cost/Hour: **\$200.39****MATERIAL QUANTITIES**Initial Volume: **600**  
Swell factor: **1.125**  
Loose volume: **675 LCY**Source of estimated volume: **80ft x 100ft drill pad = 0.184 ac x 2 ft deep**  
Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**  
Unadjusted hourly production: **714.3 LCY/hr**Materials consistency description: **Partly consolidated stockpile 1.1**Average push gradient: **0 %**  
Average site altitude: **10,144 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% Earth****Job Condition Correction Factor**

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

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5230

Adjusted unit production: 373.58 LCY/hr

Adjusted fleet production: **373.58** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.536/LCY

Total job time: **1.81** Hours

Total job cost: **\$362**



**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mobilization/Demobilization**Site: **Wasterock Exploration Core**  
**Drilling**Permit Action: New NOI 2021Permit/Job#: P2021016**PROJECT IDENTIFICATION**

Task #: 004 State: Colorado Abbreviation: None  
 Date: 9/22/2021 County: Boulder Filename: P016-004  
 User: AME

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:	\$21.28	\$37.94	\$47.67
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

**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
ATLAS COPCO ROC D3-01,3.0 in.	1.25	\$95.30	\$68.37	1	\$163.67	\$68.37	\$250.00
Cat D7R DS XR Series II	32.01	\$81.02	\$132.49	2	\$427.02	\$264.98	\$250.00
Subtotals:					<b>\$590.69</b>	<b>\$333.35</b>	<b>\$500.00</b>

**ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 3,500 Gal.	\$46.35	1	\$46.35	\$46.35
Light Duty Pickup, 4x4, 1 T. Crew	\$20.51	1	\$20.51	\$20.51
Subtotals:			<b>\$66.86</b>	<b>\$66.86</b>

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>BOULDER</u>	
Total one-way travel distance:	<u>23.50</u>	miles
Average Travel Speed:	<u>40.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$5,157.34</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$78.56</u>
** one round trip, no haul rig:	

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.59</u>	<u>0.59</u>
Return Time (Hours):	<u>0.59</u>	<u>0.59</u>
Loading Time (Hours):	<u>1.30</u>	<u>NA</u>
Unloading Time (Hours):	<u>1.30</u>	<u>NA</u>
Subtotals:	<u>3.78</u>	<u>1.18</u>

**JOB TIME AND COST**

Total job time:	<u>7.55</u>	Hours
-----------------	-------------	-------

Total job cost:	<u>\$5,236</u>
-----------------	----------------