



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

December 6, 2022

Bryan Clappe
Bureau of Land Management
Tres Rios Field Office
29211 HWY 184
Dolores, CO 81323

Re: Stateline Exploratory Drilling Project, File No. P-2022-018, Notice of Intent to Conduct Prospecting Operations (NOI), Request for Concurrence

Dear Mr. Clappe,

On November 8, 2022 the Division of Reclamation, Mining and Safety received the above listed application for the Stateline Exploratory Drilling Project Notice of Intent to Conduct Prospecting Operations (NOI) located on Bureau of Land Management Lands (BLM) within San Miguel County. During the Division's technical Adequacy Review period a Reclamation Cost Estimate was performed. Based on the details of the project, Division Staff has estimated the total Reclamation Cost to ensure reclamation of all affected lands at \$13,888.00. The Reclamation Cost Estimate Worksheets are enclosed. Per the Memorandum of Understanding, please review these calculations and provide documentation of concurrence for the Financial Warranty amount.

Upon receiving concurrence, the calculation will be provided to the applicant so they may submit the appropriate Financial Warranty for the site. Please note the application will not be granted the final Authorization to Proceed from our office until all necessary permits are also obtained from the BLM and copies are provided to the Division. If you have any questions please feel free to contact me at the Division's Grand Junction Field Office, by phone at 303-866-3567 Ext. 8187 or by email at lucas.west@state.co.us.

Sincerely,

Lucas West
Environmental Protection Specialist
Division of Reclamation, Mining and Safety

Encl: Reclamation Cost Estimate Worksheets

Ec: Gabriel Sweet, Big Rock Exploration LLC.



COST SUMMARY WORK

Task description: Cost Summary

Stateline Exploratory Drilling
Site: Project

Permit Action:
New App

Permit/Job#: P2022018

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 12/6/2022 County: San Miguel Filename: P018-000
User: LJW

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	P & A drill hole (hole reclaimed before next is drilled)	BOREHOLE	1	6.00	\$3,387
002	Regrade drill pads and laydown yard	DOZER	1	2.58	\$573
003	Regrade newly constructed access roads	DOZER	1	3.42	\$759
004	Rip Compacted Areas as needed	RIPPER	1	2.20	\$499
005	Replace Topsoil	DOZER	1	4.38	\$971
006	Reveg reclaimed areas	REVEGE	1	12.00	\$703
007	Secondary Seeding	REVEGE	1	6.00	\$377
008	Mobilization	MOBILIZE	1	6.76	\$4,429
<u>SUBTOTALS:</u>				43.34	\$11,698

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$236
Performance bond:	1.05	Total =	\$123
Job superintendent:	0.00	Total =	\$0
Profit:	10.00	Total =	\$1,170

TOTAL O & P =

CONTRACT AMOUNT (direct + O & P) =

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$0	Total =	\$0
Engineering work and/or contract/bid preparation:	0.00	Total =	\$0
Reclamation management and/or administration:	5.00		\$661

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$2,190

TOTAL BOND AMOUNT (direct + indirect) = \$13,888

BOREHOLE SEALING WORK

Task description: P & A drill hole (hole reclaimed before next is drilled)

Stateline Exploratory Drilling Permit Action:
Site: Project New App Permit/Job#: P2022018

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 12/6/2022 County: San Miguel Filename: P018-001
User: LJW
Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bentonite Seal	Bentonite seal - 4 in. (labor, equip, materials)	3.75	570	570.00	LF	\$5.65	\$3,220.50
Concrete Seal	Portland cement grout - 4 in. (labor, equip, materials)	3.75	30	30.00	LF	\$5.55	\$166.50

Job Hours: 6.00 Total Cost: \$3,387.00

BULLDOZER WORKTask description: **Regrade drill pads and laydown yard**Site: **Stateline Exploratory Drilling
Project**Permit Action: **New App**Permit/Job#: **P2022018****PROJECT IDENTIFICATION**Task #: **002**State: **Colorado**Abbreviation: **None**Date: **12/6/2022**County: **San Miguel**Filename: **P018-002**User: **LJW**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS Series II LGP**Horsepower: **240**Blade Type: **Straight**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$92.78</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$79.33</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$8.37</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$41.30</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$221.78</u>	
Total Fleet Cost/Hour:	<u>\$221.78</u>	

MATERIAL QUANTITIESInitial Volume: **1,032**Swell factor: **1.000**Loose volume: **1,032 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell
factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly
production: **800.0 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push
gradient: **0 %**Average site altitude: **6,450 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% Earth****Job Condition Correction Factor****Source**

Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4993

Adjusted unit
production: 399.44 LCY/hr
Adjusted fleet
production: **399.44** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.555/LCY

Total job time: **2.58** Hours
Total job cost: **\$573**

BULLDOZER WORKTask description: **Regrade newly constructed access roads**Site: **Stateline Exploratory Drilling
Project**Permit Action: **New App**Permit/Job#: **P2022018****PROJECT IDENTIFICATION**Task #: **003**State: **Colorado**Abbreviation: **None**Date: **12/6/2022**County: **San Miguel**Filename: **P018-003**User: **LJW**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS Series II LGP**Horsepower: **240**Blade Type: **Straight**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$92.78</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$79.33</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$8.37</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$41.30</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$221.78</u>	
Total Fleet Cost/Hour:	<u>\$221.78</u>	

MATERIAL QUANTITIESInitial Volume: **1,242**Swell factor: **1.000**Loose volume: **1,242 LCY**Source of estimated volume: **3359 LF rd, assume 10'W, avg 1' depth**Source of estimated swell
factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly
production: **800.0 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push
gradient: **0 %**Average site altitude: **6,450 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% Earth****Job Condition Correction Factor****Source**

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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4539

Adjusted unit
production: 363.12 LCY/hr
Adjusted fleet
production: **363.12** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.611/LCY

Total job time: **3.42** Hours
Total job cost: **\$759**

BULLDOZER RIPPING WORK

Task description: Rip Compacted Areas as needed

Stateline Exploratory Drilling
Site: Project

Permit Action:
New App

Permit/Job#: P2022018

PROJECT IDENTIFICATION

Task #: 004
Date: 12/6/2022
User: LJW

State: Colorado
County: San Miguel

Abbreviation: None
Filename: P018-004

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D7R DS Series II LGP
Ripper Attachment: 3-Shank Ripper

Horsepower: 240
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$92.78	NA
Operating Cost/Hour:	\$79.33	100
Ripper Ownership Cost/Hour:	\$8.37	NA
Ripper Operating Cost/Hour:	\$4.99	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$226.77	
Total Fleet Cost/Hour:	\$226.77	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 1.00 acres Rip Depth (ft): 1.00 Volume: 1,613 BCY or CCY

Source of estimated quantity: Assume 1 Ac out of total project, 1' deep

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.45 feet/pass
Average Ripping Width: 6.50 feet/pass
Average Ripping Length: 50.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.547 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.547 Acres/hr
Site Altitude: 6,450 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.45 Acres/hr
Adjusted Hourly Fleet Production: 0.45 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 2.20 Hours

Unit cost: \$499.356 Per acre

Total job cost: \$499

BULLDOZER WORKTask description: **Replace Topsoil**Site: **Stateline Exploratory Drilling Project**

Permit Action:

New AppPermit/Job#: **P2022018****PROJECT IDENTIFICATION**Task #: **005**State: **Colorado**Abbreviation: **None**Date: **12/6/2022**County: **San Miguel**Filename: **P018-005**User: **LJW**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS Series II LGP**Horsepower: **240**Blade Type: **Straight**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$92.78	NA
Operating Cost/Hour:	\$79.33	100
Ripper own. Cost/Hour:	\$8.37	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA
Total unit Cost/Hour:	\$221.78	
Total Fleet Cost/Hour:	\$221.78	

MATERIAL QUANTITIESInitial Volume: **2,258**Swell factor: **1.000**Loose volume: **2,258 LCY**Source of estimated volume: **New Roads + Pads + Laydown= 1.4 Ac, 1' Deep**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **800.0 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **0 %**Average site altitude: **6,450 feet**Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor****Source**

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:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6445

Adjusted unit production: 515.60 LCY/hr
Adjusted fleet production: **515.6** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.430/LCY

Total job time: **4.38** Hours
Total job cost: **\$971**

REVEGETATION WORKTask description: Reveg reclaimed areasSite: Stateline Exploratory Drilling ProjectPermit Action: New AppPermit/Job#: P2022018**PROJECT IDENTIFICATION**Task #: 006
Date: 12/6/2022
User: LJWState: Colorado
County: San MiguelAbbreviation: None
Filename: P018-006Agency 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
Blue Grama - Native	0.48	7.83	\$6.59
Indian Ricegrass - Native	3.71	12.01	\$24.12
Galleta	2.47	9.02	\$55.20
Western Wheatgrass - Arriba	2.50	6.31	\$16.25
Needle and Thread	2.60	6.86	\$108.81
Saltbush, Four Wing	0.25	0.34	\$3.13
Winter Fat	0.25	0.64	\$5.13
Basin Wildrye - Trailhead	1.03	4.19	\$15.87

Totals Seed Mix	13.29	47.20	\$235.09
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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
			\$	\$
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: 1.4 Cost /Acre: \$502.31
 Estimated Failure Rate: 30% Cost /Acre*: \$0.00
 *Selected Replanting Work Items: NONE

Initial Job Cost: **\$703.23**
 Reseeding Job Cost: **\$0.00**
 Total Job Cost: **\$703**
 Job Hours: **12.00**

REVEGETATION WORKTask description: Secondary SeedingSite: Stateline Exploratory Drilling ProjectPermit Action: New AppPermit/Job#: P2022018**PROJECT IDENTIFICATION**Task #: 007
Date: 12/6/2022
User: LJWState: Colorado
County: San MiguelAbbreviation: None
Filename: P018-007Agency 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
Blue Grama - Native	0.48	7.83	\$6.59
Indian Ricegrass - Native	3.71	12.01	\$24.12
Galleta	2.47	9.02	\$55.20
Western Wheatgrass - Arriba	2.50	6.31	\$16.25
Needle and Thread	2.60	6.86	\$108.81
Saltbush, Four Wing	0.25	0.34	\$3.13
Winter Fat	0.25	0.64	\$5.13
Basin Wildrye - Trailhead	1.03	4.19	\$15.87

Totals Seed Mix	13.29	47.20	\$235.09
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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
			\$	\$
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: 0.75 Cost /Acre: \$502.31
 Estimated Failure Rate: 30% Cost /Acre*: \$0.00
 *Selected Replanting Work Items: NONE

Initial Job Cost: **\$376.73**
 Reseeding Job Cost: **\$0.00**
 Total Job Cost: **\$377**
 Job Hours: **6.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilization**Site: **Stateline Exploratory Drilling
Project**Permit Action: **New App**Permit/Job#: **P2022018****PROJECT IDENTIFICATION**

Task #: **008** State: **Colorado** Abbreviation: **None**
 Date: **12/6/2022** County: **San Miguel** Filename: **P018-008**
 User: **LJW**

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:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

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 Series II LGP	38.49	\$101.15	\$101.82	1	\$202.97	\$101.82	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.25	\$68.22	1	\$74.47	\$68.22	\$250.00
ATLAS COPCO ROC D7-11,4.0 in.	0.00	\$137.40	\$68.22	1	\$205.62	\$68.22	\$250.00

Subtotals: **\$483.06** **\$238.26** **\$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:	DOVE CREEK	
Total one-way travel distance:	38.00	miles
Average Travel Speed:	55.00	mph

Total Non-Roadable Mob/Demob Cost *	\$4,428.97
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$0.00
'** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.69	0.69
Return Time (Hours):	0.69	0.69
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	1.00	NA
Subtotals:	3.38	1.38

JOB TIME AND COST

Total job time:	6.76	Hours
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Total job cost:	\$4,429
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