STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106

COLORADO DIVISION OF RECLAMATION MINING & SAFETY

May 2, 2013

Mr. Rory Williams
Star Mine Operations LLC
1675 Larimer St., Suite 820
Denver, CO 80202

Re: Revenue Mine, NOI File P-2013-006, Technical Issues Adequate, Financial Warranty Required

Dear Mr. Williams,

I have reviewed the Revenue Mine NOI technical adequacy responses you submitted on April 22, 2013, and I found them to be adequately addressed. The final deficient item remaining is the issue of providing the financial warranty for this project.

Enclosed is the Division's reclamation cost estimate, based on the plan originally filed and on the clarifications you provided in your subsequent response letter. The financial warranty amount has been estimated to be $7,720. Please review the figures in the enclosed packet carefully and notify me promptly if you see any errors or omissions. To submit a financial warranty for this NOI, please complete one of the forms found on our website (http://mining.state.co.us/) and send it directly to our assurance specialist Barbara Coria, at the Division's Denver office (see address in letterhead). If you have any questions, you can contact her at 303-866-3467 x 8148.

Please be reminded that no prospecting activity under this NOI may begin until you have been notified that the financial warranty has been accepted by the Division.

If you have questions about the reclamation costs, please contact me at the Division's Durango Field Office: 691 CR 233, Room A-2, Durango, CO 81301; telephone 970-247-5193.

Sincerely,

Bob Oswald
Environmental Protection Specialist

Encl: reclamation cost estimate

Ec: Barbara Coria, DRMS Denver

(c:\13-05 docs\Revenue NOI appr&fw/rco)

COST SUMMARY WORK

Task description: **Cost summary**

Site: **Revenue Mine** Permit Action: New NOI Permit/Job#: P2013006

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 5/3/2013 County: Ouray Filename: P006-000
User: RCO

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Close and seal drill holes	BOREHOLE	1	30.00	$1,191.97
002	Grade drill pads and replace topsoil	LOADER	1	2.89	$233.00
003	Revegetate drill pads	REVEGE	1	40.00	$1,060.85
004	Haul reclamation equipment to and from site	MOBILIZE	1	7.14	$1,702.13
		SUBTOTALS:		**80.03**	**$4,187.95**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	$84.60
Performance bond:	1.05%	Total =	$43.97
Job superintendent:	40.01 hrs	Total =	$2,617.05
Profit:	10.00%	Total =	$418.80
		TOTAL O & P =	$3,164.42
		CONTRACT AMOUNT (direct + O & P) =	$7,352.37

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%		$367.62
CONTINGENCY:	0.00	Total =	$0.00
		TOTAL INDIRECT COST =	$3,532.04
		TOTAL BOND AMOUNT (direct + indirect) =	**$7,719.99**

BOREHOLE SEALING WORK

Task description: **Close and seal drill holes**

Site: **Revenue Mine** Permit Action: New NOI Permit/Job#: P2013006

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 5/3/2013 County: Ouray Filename: P006-001
User: RCO

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Drill holes, max qty 4	Manual backfill cuttings	3.0	635	1,000.00	LF	$1.00	$1,000.00
Plug drill holes, cement	Portland cement grout - 4 in. (labor, equip, materials)	4	3	10.00	LF	$7.82	$78.17
Set PVC plugs, 4 max	PVC plug - 4 in. diameter borehole	4	4	4.00	EA	$28.45	$113.80

Job Hours: **30.00** **Total Cost:** **$1,191.97**

Notes about task assumptions:
Maximum of 4 drill holes open at one time, which will all be on one drill pad.
Drill hole depths used in estimate are for deepest group of 4 drill holes.
Cuttings will not remain on surface, and will be manually backfilled into borehole.
Since core drilling removes volume, backfill of cuttings accounts for approx 40% of drill hole depth.
Drill holes will most likely be dry, so drill hole sealing cost will not include bentonite.
Drill hole sealing will involve PVC plug, followed by 2.5-ft cement plug up to within 12 inches of surface.

WHEEL LOADER – LOAD AND CARRY WORK

Task description: **Grade drill pads and replace topsoil**

Site: **Revenue Mine** Permit Action: New NOI Permit/Job#: P2013006

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 5/3/2013 County: Ouray Filename: P006-002
User: RCO

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 924H Horsepower: 128
Attachment 1: ROPS Cab Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$15.45	NA
Operating Cost/Hour:	$29.08	100
Operator Cost/Hour:	$35.82	NA
Total Unit Cost/Hour:	$80.34	

Total Fleet Cost/Hour: $80.34

MATERIAL QUANTITIES

Initial volume: 417 CCY Swell factor: 1.270
Loose volume: **530** LCY

Source of estimated volume: Division of Reclamation, Mining & Safety
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Loader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.475 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:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Operation:	Inconsistent operation 0.04	0.040	(Cat HB)
Dump Target:	Small target 0.04	0.040	(Cat HB)
	Net Cycle Time Adjustment:	0.110	minutes
	Adjusted Basic Cycle Time:	0.585	minutes

Rolling Resistance – Road Conditions

Haul: Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0
Return: Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	30	0.00	8.00	8.00	0.0285	(Cat HB)
Return Route:	30	0.00	8.00	8.00	0.0285	(Cat HB)

Total Travel Time:	0.0571	minutes
Total Cycle Time:	**0.6421**	minutes

Load Bucket Capacity

Rated Capacity:	2.70	LCY (heaped)
Bucket Fill Factor:	0.900	Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity:	**2.43**	LCY

Job Condition Correction Factors
Site Altitude: 11500 feet

		Source
Altitude Adj:	0.97	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.81	multiplier

Unadjusted Hourly Unit Production:	227.08	LCY/Hour
Adjusted Hourly Unit Production:	182.82	LCY/Hour
Adjusted Hourly Fleet Production:	**182.82**	LCY/Hour

JOB TIME AND COST

Fleet size:	1	Loader(s)	Total job time:	**2.90**	Hours
Unit cost:	$0.439	/LCY	Total job cost:	**$233.00**	

Task assumptions:
Job time does not include moving loader between drill pads.
Grading earthwork is minimal as sites are mostly level; most earthwork is topsoil replacement.
All topsoil work is done by loader (backdragging bucket) so disturbance remains on drill pad.

REVEGETATION WORK

Task description: **Revegetate drill pads**

Site: **Revenue Mine** Permit Action: New NOI Permit/Job#: P2013006

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 5/3/2013 County: Ouray Filename: P006-003
User: RCO

Agency 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
Hand raking (MEANS 32 91 13.23 0250)	$1,219.68
Total Tilling Cost/Acre	**$1,219.68**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alpine Bluegrass	4.00	91.83	$61.28
Timothy, Alpine - Native	1.00	29.84	$27.07
Totals Seed Mix	5.00	121.67	**$88.35**

Application

Description	Cost /Acre
Broadcast seeding [DMG]	$261.28
	$261.28

Total Seed Application Cost/Acre	

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: 0.52
Estimated Failure Rate: 30%
*Selected Replanting Work Items: TILLING, SEEDING

Cost /Acre: $1,569.31
Cost /Acre*: $1,569.31

Initial Job Cost: **$816.04**
Reseeding Job Cost: **$244.81**
Total Job Cost: **$1,060.85**
Job Hours: **40.00**

Notes:
Task assumes seed bed is prepared sufficiently after respreading (backdragging) by loader.
Seed are hand broadcast, and raked in by hand.

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Haul reclamation equipment to and from site**

Site: **Revenue Mine** Permit Action: New NOI Permit/Job#: P2013006

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 5/3/2013 County: Ouray Filename: P006-004
User: RCO

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 924H	12.69	$15.45	$88.67	1	$104.12	$88.67	$250.00
Subtotals:					**$104.12**	**$88.67**	**$250.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
4x4 pickup	$96.86	2	$193.72	$193.72
Subtotals:			**$193.72**	**$193.72**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	MONTROSE	
Total one-way travel distance:	45.00	miles
Average Travel Speed:	35.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$1,203.99	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$498.14	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.29	1.29
Return Time (Hours):	1.29	1.29
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	3.57	2.57

JOB TIME AND COST

Total job time:	**7.14**	Hours
Total job cost:	**$1,702.13**	

Notes:
4x4 pickups required for access to drill pad sites, carrying crew, and reclamation materials (bore hole plugs and cement, and seed), and daily fuel for loader.