STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

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COLORADO DIVISION OF RECLAMATION MINING & SAFETY

May 21, 2014

Scott Calhoon
Winding Stair Resources, LLC
210 Park Avenue, Suite 2820
Oklahoma City, OK 73102

Re: Sag-Cal Project, NOI No. P-2014-004, Notice of Intent is Adequate for Approval, Additional Financial Warranty Required

Dear Mr. Calhoon,

On May 21, 2014 the Division found that all technical issues were adequate with your Notice of Intent to Conduct Prospecting. At the time of submitting your Notice of Intent you provided a $2,000.00 financial warranty, which has been accepted and is considered posted for this project. The Division has estimated the reclamation costs, which exceed the amount of financial warranty (bond) posted. The BLM office in Saguache, Colorado has agreed with the Division's estimate of reclamation costs.

The reclamation cost estimate is enclosed herewith for your information. Please review the costs and notify me promptly if you notice any errors or omissions.

At this time, the single remaining deficiency is the lack of sufficient bond. The Division has estimated the total reclamation costs to be $2,588.06. An additional bond of $588.06 must be provided before the Notice of Intent can be fully approved. No prospecting activity may commence until the Division has reviewed and accepted the additional bond.

Please contact me if you have any questions: phone 970-247-5193, or email bob.oswald@state.co.us.

Sincerely,

Bob Oswald
Environmental Protection Specialist

Encl: Reclamation cost estimate

Ec: Barbara Coria, DRMS Denver
Russ Means, DRMS Grand Junction
Andrew Archuleta, BLM Saguache

(c:\14-05 docs\Sag-Cal NOI fw-appr/rco)

COST SUMMARY WORK

Task description: **Cost summary**

Site: **Sag-Cal** Permit Action: New NOI Permit/Job#: P2014004

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 5/2/2014 County: Saguache Filename: P004-000
User: RCO

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Close drill hole	BOREHOLE	1	8.00	$161.21
002	Regrade drill pads	LOADER	1	4.04	$338.00
003	Respread topsoil on drill pads	LOADER	1	1.07	$90.00
004	Remove sediment controls (wattle, silt fence)	DEMOLISH	1	4.00	$477.60
005	Revegetate drill pads and temporary roads	REVEGE	1	8.00	$550.77
006	Haul reclamation equipment to and from site	MOBILIZE	1	5.60	$562.33
		SUBTOTALS:		**30.71**	**$2,179.91**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	$44.03
Performance bond:	1.05%	Total =	$22.89
Job superintendent:	0.00 hrs	Total =	$0.00
Profit:	10.00%	Total =	$217.99
		TOTAL O & P =	$284.91
		CONTRACT AMOUNT (direct + O & P) =	$2,464.82

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%		$123.24
CONTINGENCY:	0.00	Total =	$0.00
		TOTAL INDIRECT COST =	$408.15
		TOTAL BOND AMOUNT (direct + indirect) =	**$2,588.06**

Note: Figures assume that financial warranty will be in the form of cash bond, with no engineering work necessary.

BOREHOLE SEALING WORK

Task description:: **Close drill hole**

Site: **Sag-Cal** Permit Action: New NOI Permit/Job#: P2014004

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 5/1/2014 County: Saguache Filename: P004-001
User: RCO

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Backfill with cuttings	Manual backfill	5	na	1.00	EA	$100.00	$100.00
Set plug	PVC plug - 4 in. diameter borehole	5	na	1.00	EA	$28.45	$28.45
Cement grout	Portland cement grout - 6 in. (labor, equip, materials)	5	na	3.00	LF	$10.92	$32.76

Job Hours: **8.00** **Total Cost:** **$161.21**

Notes:

1. Task assumes that drill hole does not intercept aquifer and may be closed by backfilling cuttings and shallow plugging. Cuttings will not fill borehole due to volume of core removed.
2. Plug may consist of 3 column feet of polyurethane or cement, above a set PVC or steel plug.
3. Mixing and installation of plug materials will be done manually, with no additional equipment needed.
4. There will be only one drill hole open at a time.

WHEEL LOADER – LOAD AND CARRY WORK

Task description: **Regrade drill pads**

Site: **Sag-Cal** Permit Action: New NOI Permit/Job#: P2014004

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 5/2/2014 County: Saguache Filename: P004-002
User: RCO

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 446D Horsepower: 101
Attachment 1: ROPS Cab Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$17.31	NA
Operating Cost/Hour:	$30.37	100
Operator Cost/Hour:	$35.82	NA
Total Unit Cost/Hour:	$83.49	
Total Fleet Cost/Hour:	$83.49	

MATERIAL QUANTITIES

Initial volume: 400 CCY Swell factor: 1.000
Loose volume: **400** 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:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(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:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	0.040	minutes
	Adjusted Basic Cycle Time:	0.515	minutes

Rolling Resistance – Road Conditions

Haul: 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:	50	5.00	5.00	10.00	0.0563	(Cat HB)
Return Route:	50	5.00	5.00	10.00	0.0563	(Cat HB)

Total Travel Time:	0.1126	minutes
Total Cycle Time:	**0.6276**	minutes

Load Bucket Capacity

Rated Capacity:	1.50	LCY (heaped)
Bucket Fill Factor:	0.875	Loose material - 1/2" to 3/4" (85 - 90%) 0.875
Adjusted Capacity:	**1.31**	LCY

Job Condition Correction Factors
Site Altitude: 8500 feet

		Source
Altitude Adj:	0.95	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.79	multiplier

Unadjusted Hourly Unit Production:	125.48	LCY/Hour
Adjusted Hourly Unit Production:	98.94	LCY/Hour
Adjusted Hourly Fleet Production:	**98.94**	LCY/Hour

JOB TIME AND COST

Fleet size:	1	Loader(s)	Total job time:	**4.04**	Hours
Unit cost:	$0.844	/LCY	Total job cost:	**$338.00**	

Note: Task assumes light surface grading of pad areas as needed, at 12 inches average depth, by backdragging material with loader blade.

WHEEL LOADER – LOAD AND CARRY WORK

Task description: **Respread topsoil on drill pads**

Site: **Sag-Cal** Permit Action: New NOI Permit/Job#: P2014004

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 5/2/2014 County: Saguache Filename: P004-003
User: RCO

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 446D Horsepower: 101
Attachment 1: ROPS Cab Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$17.31	NA
Operating Cost/Hour:	$30.37	100
Operator Cost/Hour:	$35.82	NA
Total Unit Cost/Hour:	$83.49	
Total Fleet Cost/Hour:	$83.49	

MATERIAL QUANTITIES

Initial volume: 100 CCY Swell factor: 1.000
Loose volume: **100** 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:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(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:	0.080	minutes
	Adjusted Basic Cycle Time:	0.555	minutes

Rolling Resistance – Road Conditions

Haul: 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:	50	5.00	5.00	10.00	0.0563	(Cat HB)
Return Route:	50	5.00	5.00	10.00	0.0563	(Cat HB)

Total Travel Time:	0.1126	minutes
Total Cycle Time:	**0.6676**	minutes

Load Bucket Capacity

Rated Capacity:	1.50	LCY (heaped)
Bucket Fill Factor:	0.875	Loose material - 1/2" to 3/4" (85 - 90%) 0.875
Adjusted Capacity:	**1.31**	LCY

Job Condition Correction Factors
Site Altitude: 8500 feet

		Source
Altitude Adj:	0.95	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.79	multiplier

Unadjusted Hourly Unit Production:	117.97	LCY/Hour
Adjusted Hourly Unit Production:	93.02	LCY/Hour
Adjusted Hourly Fleet Production:	**93.02**	LCY/Hour

JOB TIME AND COST

Fleet size:	1	Loader(s)	Total job time:	**1.08**	Hours
Unit cost:	$0.898	/LCY	Total job cost:	**$90.00**	

Note: Task assumes topsoil is respread on drill pads, at 4 inches average depth, by backdragging material with loader blade.

DEMOLITION WORK

Task description: **Remove sediment controls (wattle, silt fence)**

Site: **Sag-Cal** Permit Action: New NOI Permit/Job#: P2014004

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 5/2/2014 County: Saguache Filename: P004-004
User: RCO

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 91.60 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Hand load wattle/silt fence	150 LF	Loading and 2 mile haul, no salvage - Hand loading	5.00	CY	$34.28	$171.40
Haul and dispose wattle/silt fence	5 CY	Dump fees - Rubbish only	5.00	CY	$70.00	$350.00

Job Hours: **4.00** **Subtotal (unadjusted):** **$521.40** **Total Cost (adjusted for location):** **$477.60**

Note: Task assumes no contaminants or additional debris left onsite to dispose of.

REVEGETATION WORK

Task description: **Revegetate drill pads and temporary roads**

Site: **Sag-Cal** Permit Action: New NOI Permit/Job#: P2014004

PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None
Date: 5/2/2014 County: Saguache Filename: P004-005
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
Weed control spraying (MEANS 31 31 16.13 3100)	$145.20
Total Tilling Cost/Acre	**$145.20**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	1.00	16.32	$10.35
Indian Ricegrass - Native	5.00	16.18	$33.70
Sand Dropseed	0.10	11.94	$0.70
Western Wheatgrass - Native	5.00	12.63	$15.20
Flax, Lewis Blue	2.00	13.27	$33.04
Spike Muhly	0.20	7.35	$1.84
Yarrow, Western	0.10	6.08	$3.07
Totals Seed Mix	13.40	83.76	**$97.89**

Application

Description	Cost /Acre
Broadcast seeding [DMG]	$261.28
Total Seed Application Cost/Acre	**$261.28**

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: 0.84
Estimated Failure Rate: 30%
*Selected Replanting Work Items: TILLING,SEEDING

Cost /Acre: $504.37
Cost /Acre*: $504.37

Initial Job Cost: **$423.67**
Reseeding Job Cost: **$127.10**
Total Job Cost: **$550.77**
Job Hours: **8.00**

Notes:

1. Seed mix species are according to BLM recommendations. Seeding rates are lower than recommended, in order to approximate the standard for broadcast seeding: 80 pure live seeds/square foot.
2. Seed application is by manual broadcasting, followed by light dragging to incorporate seed.
3. Acreage figure (0.84 acres) for seeding includes 4 drill pads plus adjacent topsoil berm areas, plus 2456 LF of temporary access trails.
4. Seeding failure rate (30%) is standard for high rangeland.

EQUIPMENT MOBILIZATION/DEMOBILIZATION

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

Site: **Sag-Cal** Permit Action: New NOI Permit/Job#: P2014004

PROJECT IDENTIFICATION

Task #: 006 State: Colorado Abbreviation: None
Date: 5/2/2014 County: Saguache Filename: P004-006
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 446D	9.80	$17.31	$88.67	1	$105.98	$88.67	$0.00
				Subtotals:	**$105.98**	**$88.67**	**$0.00**

ROADABLE EQUIPMENT:

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

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	MONTE VISTA	
Total one-way travel distance:	45.00	miles
Average Travel Speed:	50.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$562.33	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$0.00	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.90	0.90
Return Time (Hours):	0.90	0.90
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	2.80	1.80

JOB TIME AND COST

Total job time:	**5.60**	Hours
Total job cost:	**$562.33**	

Note: Task assumes mobilization includes sufficient labor and truck capacity to load and haul sediment control debris offsite for disposal.