



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

February 10, 2023

Ronda Neumeister
Eastern Colorado Aggregates, R.L.L.P.
P.O. Box 580
Rye, CO 81069

Re: Potts Pit #2, DRMS File No. M-2006-013; Updated Cost Estimate

Dear Ms. Neumeister,

On January 26, 2023 the Colorado Division of Reclamation, Mining and Safety (DRMS/Division) conducted a monitoring inspection of the above referenced site. The Division has revised the cost estimate generated in April 2022, and has enclosed an updated estimate that reflects the current conditions of the site and the currently approved mining and reclamation plan.

Please respond by February 24, 2023 with any questions regarding the cost estimate. If no response is given, the Division will issue a Notice of Surety Increase (SI) for the amount of \$107,845 (an increase of \$4,645 from the current bond). The Operator will have 60 days from the date of notice to submit and obtain acceptance of the increase from the Division.

If you have any questions please contact me at amber.michels@state.co.us or (720) 836 -0967.

Sincerely,

Amber Michels
Environmental Protection Specialist

Enclosure: DRMS Cost Estimate February 2023

CC: Baxter Kirkland, Siete, Inc.
Brooke Boisvert, Eastern Colorado Aggregates, R.L.L.P.
Jared Ebert, DRMS



COST SUMMARY WORK

Task description: Reclaim Potts Pit #2

Site: Potts Pit #2

Permit Action: 2023 Inspection ANM

Permit/Job#: M2006013

PROJECT IDENTIFICATION

Task #: 006

State: Colorado

Abbreviation: None

Date: 2/8/2023

County: Huerfano

Filename: M013-006

User: ANM

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Spread overburden/waste	SCRAPER1	1	20.82	\$32,257
002	Spread Topsoil over 18.5 acres	SCRAPER1	1	11.88	\$13,878
003a	Reveg 18.5 acres	REVEGE	1	16.00	\$22,175
004	Weed Control	REVEGE	1	16.00	\$2,869
005a	Mob/Demob	MOBILIZE	1	8.40	\$13,291
<u>SUBTOTALS:</u>				73.1	\$84,470

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,706

Performance bond: 1.05

Total = \$887

Job superintendent: 36.55

Total = \$2,746

Profit: 10.00

Total = \$8,447

TOTAL O & P = \$13,786

CONTRACT AMOUNT (direct + O & P) = \$98,256

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$4,176

Reclamation management and/or administration: 5.00

\$4,913

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$23,375

TOTAL BOND AMOUNT (direct + indirect) = \$107,845

SCRAPER TEAM WORK

Task description: Spread overburden/waste

Site: Potts Pit #2

Permit Action: 2023 Inspection ANM

Permit/Job#: M2006013

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 2/7/2023

County: Huerfano

Filename: M013-001

User: ANM

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 627G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	25	25	25	25
Ownership cost/hour:	\$227.06	NA	\$124.85	\$124.85	\$57.51	\$37.19
Operating cost/hour:	\$252.32	NA	\$24.41	\$24.41	\$11.81	\$12.83
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	\$41.30	\$41.30	\$28.56	\$0.00
Unit Subtotals:	\$510.28	NA	\$190.56	\$190.56	\$97.88	\$50.02
Number of Units:	2	0	1	1	1	1
Group Subtotals:	Work:	\$1,020.56	Support:	\$381.12	Maint:	\$147.90

Total work team cost/hour: \$1,549.58

MATERIAL QUANTITIES

Initial volume: 16,703

CCY

Swell factor: 1.000

Loose volume: 16,703

LCY

Source of estimated volume: Exhibit L, M-2006-013 Amendment

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight:	<u>2,900 lbs/LCY</u>	Struck Volume:	<u>15.70</u>	LCY
Material description:	<u>Sand and gravel - Dry</u>	Heaped Volume:	<u>22.00</u>	LCY
Rated Payload:	<u>52,800 pounds</u>	Average Volume:	<u>18.85</u>	LCY
Payload Capacity:	<u>18.21 LCY</u>	Adjusted Capacity:	<u>18.21</u>	LCY

Cycle Time:

Scraper Loading Time: 0.90 Minutes
 Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6000 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0**Haul Route:**

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	2.00	3.00	5.00	2218	0.45

Haul Time: 0.45 minutes**Return Route:**

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-2.00	3.00	1.00	2913	0.31

Return Time: 0.31 minutes

Total Scraper team cycle time: 2.26 minutes
 Adjusted for job conditions: 802.39 LCY/Hour
 Selected Number of Scrapers: 2 Scraper(s)
 Adjusted single scraper team (unit) hourly production: 802.39 LCY/Hour
 Adjusted multiple scraper team (fleet) hourly production: 802.39 LCY/Hour

Unadjusted unit production/hour: 966.74 LCY/Hour
 Optimal Number of Scrapers per push
 dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: 20.82 HoursUnit cost: \$1.931 /LCY Total job cost: \$32,257

SCRAPER TEAM WORK

Task description: Spread Topsoil over 18.5 acres

Site: Potts Pit #2

Permit Action: 2023 Inspection ANM

Permit/Job#: M2006013

PROJECT IDENTIFICATION

Task #: 002

State: Colorado

Abbreviation: None

Date: 2/7/2023

County: Huerfano

Filename: M013-002

User: ANM

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 627G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	NA	25	25
Ownership cost/hour:	\$227.06	NA	NA	NA	\$57.51	\$37.19
Operating cost/hour:	\$252.32	NA	NA	NA	\$11.81	\$12.83
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.90	NA	NA	NA	\$28.56	\$0.00
Unit Subtotals:	\$510.28	NA	NA	NA	\$97.88	\$50.02
Number of Units:	2	0	0	0	1	1
Group Subtotals:	Work:	\$1,020.56	Support:	\$0.00	Maint:	\$147.90

Total work team cost/hour: \$1,168.46

MATERIAL QUANTITIES

Initial volume: 8,849

CCY

Swell factor: 1.000

Loose volume: 8,849

LCY

Source of estimated volume: Exhibit L, M-2006-013 Amendment

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>15.70</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>22.00</u>	LCY
Rated Payload:	<u>52,800 pounds</u>	Average Volume:	<u>18.85</u>	LCY
Payload Capacity:	<u>33.00 LCY</u>	Adjusted Capacity:	<u>18.85</u>	LCY

Cycle Time:

Scraper Loading Time: 0.90 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction:

Site Altitude: 6000 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0**Haul Route:**

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	1.00	3.00	4.00	2665	0.56

Haul Time: 0.56 minutes**Return Route:**

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	-1.00	3.00	2.00	2905	0.46

Return Time: 0.46 minutes

Total Scraper team cycle time: 2.52 minutes
Adjusted for job conditions: 745.02 LCY/Hour
Selected Number of Scrapers: 2 Scraper(s)
Adjusted single scraper team (unit) hourly production: 745.02 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: 745.02 LCY/Hour

Unadjusted unit production/hour: 897.62 LCY/Hour
Optimal Number of Scrapers per push
dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: 11.88 HoursUnit cost: \$1.568 /LCY Total job cost: \$13,878

REVEGETATION WORK

Task description: Reveg 18.5 acres

Site: Potts Pit #2

Permit Action: 2023 Inspection ANM

Permit/Job#: M2006013

PROJECT IDENTIFICATION

Task #: 003A

State: Colorado

Abbreviation: None

Date: 2/8/2023

County: Huerfano

Filename: M013-003a

User: ANM

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	76.00	pound	\$0.37	\$28.12
Triple superphosphate, 0-46-0	54.00	pound	\$0.47	\$25.38
			Total Fertilizer Materials Cost/Acre	\$53.50

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$39.64
Total Fertilizer Application Cost/Acre	\$39.64

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$98.43
Total Tilling Cost/Acre	\$98.43

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Lovington	0.88	14.36	\$14.06
Indian Ricegrass - Paloma	0.74	2.40	\$8.23
Sand Dropseed	0.05	5.97	\$0.49
Sideoats Grama - Vaughn	3.19	10.47	\$26.72
Western Wheatgrass - Arriba	1.60	4.04	\$10.40
Totals Seed Mix	6.46	37.24	\$59.89

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00

Total Seed Application Cost/Acre	\$232.00
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MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	1.25	TON	\$421.36	\$526.70
Total Mulch Materials Cost/Acre				\$526.70

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Total Mulch Application Cost/Acre	\$73.00

JOB TIME AND COST

No. of Acres:	18.5	Cost /Acre:	\$1,083.16
Estimated Failure Rate:	30%	Cost /Acre*:	\$385.03
*Selected Replanting Work Items:	FERTILIZING,SEEDING		

Initial Job Cost:	\$20,038.46
Reseeding Job Cost:	\$2,136.92
Total Job Cost:	\$22,175
Job Hours:	16.00

REVEGETATION WORK

Task description: Weed Control

Site: Potts Pit #2 Permit Action: 2023 Inspection ANM Permit/Job#: M2006013

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 2/7/2023 County: Huerfano Filename: M013-004
User: ANM

Agency or organization name: DRMS

TILLING

Description	Cost /Acre
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$290.40

JOB TIME AND COST

No. of Acres:	7.6	Cost /Acre:	\$290.40
Estimated Failure Rate:	30%	Cost /Acre*:	\$290.40
*Selected Replanting Work Items:	TILLING		

Initial Job Cost: **\$2,207.04**
Reseeding Job Cost: **\$662.11**
Total Job Cost: **\$2,869**
Job Hours: **16.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mob/Demob**

Site: **Potts Pit #2**

Permit Action: 2023 Inspection ANM

Permit/Job#: M2006013

PROJECT IDENTIFICATION

Task #: 005A

State: Colorado

Abbreviation: None

Date: 2/8/2023

County: Huerfano

Filename: M013-005a

User: ANM

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 12M	16.01	\$57.51	\$68.22	1	\$125.73	\$68.22	\$250.00
Cat 627G w/push-pull	43.48	\$227.06	\$101.82	2	\$657.76	\$203.64	\$500.00
Cat D8T - 8SU	47.71	\$124.85	\$101.82	1	\$226.67	\$101.82	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.25	\$68.22	2	\$148.94	\$136.44	\$500.00
Power Mulcher (Bowie LD-90)	6.00	\$14.79	\$68.22	1	\$83.01	\$68.22	\$250.00

Subtotals: **\$1,242.11** **\$578.34** **\$1,750.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$87.03	1	\$87.03	\$87.03
Fuel Tanker, 4x2, 170 HP	\$51.72	1	\$51.72	\$51.72
Water Tanker, 5,000 Gal.	\$109.61	1	\$109.61	\$109.61
Lube Truck, 4x2, 190 HP	\$58.40	1	\$58.40	\$58.40

Subtotals: **\$306.76** **\$306.76**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: PUEBLO
Total one-way travel distance: 45.00 miles
Average Travel Speed: 50.00 mph

Total Non-Roadable Mob/Demob Cost * \$12,738.94
** two round trips with haul rig:
Total Roadable Mob/Demob Cost ** \$552.17
** one round trip, no haul rig:

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):	1.20	NA
Unloading Time (Hours):	1.20	NA
Subtotals:	4.20	1.80

JOB TIME AND COST

Total job time: 8.40 Hours

Total job cost: \$13,291