



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

October 16, 2020

Peter Hurt  
Arkansas Valley Ranch, LLC.  
8351 E. Walker Springs Lane  
Knoxville, TN 37923

**RE: Adequacy Review No. 2; 112c Construction Materials Amendment Application (AM-01),  
Ordway Pit, Permit No. M-2006-054**

Dear Mr. Hurt:

On October 15, 2020, the Operator responded to the Division's Preliminary Adequacy Review dated September 3, 2020. After review of the responses the Division has additional items that need to be addressed or clarified. The following items will need to be addressed to the Division's satisfaction prior to the October 31, 2020 decision date. If you are unable to satisfactorily address any concerns identified in this review before the decision date, it will be your responsibility to request an extension of the review period. If there are outstanding issues that have not been adequately addressed prior to the end of the review period, and no extension has been requested, the Division may deny this application. In order to allow the Division sufficient time to review your responses to the adequacy issues. Subsequent to receipt and review of the Operator's response to these items the Division may identify additional adequacy items. Please respond to this Preliminary Adequacy Review with the requested additional/updated information on permit replacement pages and summarize each response in a cover letter titled "Adequacy No. 2 Response; M-2006-054".

**EXHIBIT E – Reclamation Plan (Rule 6.4.5):**

1. The Reclamation Plan states that mining will occur in 20 acre areas which is different from the revised Mining Plan, please clarify the discrepancy.
2. Please clarify if the haul roads will remain after mining is complete.

**EXHIBIT F – Reclamation Plan Map (Rule 6.4.6):**

3. All maps need to be signed and dated by a qualified person. Please sign and date all the Reclamation Plan maps.

**EXHIBIT L – Reclamation Costs (Rule 6.4.12):**

4. The Division calculated the required financial warranty associated with AM-01 and a copy is enclosed with this adequacy letter. Please review and provide any comments.



**Other Permits and Licenses (Rule 6.3.6):**

5. Pursuant to Rule 1.6.2(2), please demonstrate that the Applicant's response to these adequacy issues have been placed with the application materials previously placed with the County Clerk or Records Office, and made available for public review

Please respond to these adequacy issues no later than two weeks before the decision deadline, to ensure ample time for the Division to complete its review prior to its decision deadline. The decision deadline on this application is October 31, 2020. If additional time is required to respond to these adequacy issues please submit a written request for extension of the review period. The Division reserves the right to further supplement this document with additional adequacy issues and details as necessary.

If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at **303-866-3567 x8114**, or by email at [patrick.lennberg@state.co.us](mailto:patrick.lennberg@state.co.us).

Sincerely,



Patrick Lennberg  
Environmental Protection Specialist

Enclosure: Reclamation Cost Estimate

cc: Jared Ebert; Division of Reclamation, Mining & Safety

ec: Peter Hurt, Arkansas Valley Ranch, LLC, [peter@arkansasvalleyranch.com](mailto:peter@arkansasvalleyranch.com)  
Angela Bellantoni Ph.D., Environmental Alternatives, Inc., [angela@envalternatives.com](mailto:angela@envalternatives.com)

## COST SUMMARY WORK

Task description: Cost Summary

Site: Ordway Pit

Permit Action: AM-01

Permit/Job#: M2006054

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 10/16/2020

County: Crowley

Filename: M054-000

User: JPL

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Rip Processing Area 16 acres	GRADER	1	11.50	\$1,871
002	Grade10 Acre Mining Area	DOZER	1	15.36	\$2,880
003	Spread Topsoil 27.3 acres, 5 inches deep	SCRAPER1	1	12.23	\$13,349
004	Revegetate 27.3 acres	REVEGE	1	30.00	\$25,777
005	Re-Seed 3 acres	REVEGE	1	4.00	\$2,166
006	Mobilization/Demobilization	MOBILIZE	1	3.81	\$6,715
<b><u>SUBTOTALS:</u></b>				<b>76.9</b>	<b>\$52,758</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,066

Performance bond: 1.05

Total = \$554

Job superintendent: 41.54

Total = \$2,889

Profit: 10.00

Total = \$5,276

TOTAL O & P = \$9,785

CONTRACT AMOUNT (direct + O & P) = \$62,543

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$2,658

Reclamation management and/or administration: 5.00

\$3,127

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$16,070

**TOTAL BOND AMOUNT (direct + indirect) = \$68,828**

## MOTOR GRADER WORK

Task description: Rip Processing Area 16 acres

Site: Ordway Pit

Permit Action: AM-01

Permit/Job#: M2006054

### PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 10/16/2020

County: Crowley

Filename: M054-001

User: JPL

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: CAT 14M

Horsepower: 259

Ripper Attachment: Multi-Shank Ripper

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$65.89	NA
Operating Cost/Hour:	\$58.96	100
Ripper Ownership Cost/Hour:	\$4.83	NA
Ripper Operating Cost/Hour:	\$4.40	100
Operator Cost/Hour:	\$28.56	NA
Total Unit Cost/Hour:	\$162.64	
Total Fleet Cost/Hour:	<b>\$162.64</b>	

### MATERIAL QUANTITIES

Total Area to be graded or ripped: 16.00 acres

Source of estimated acreage: Map C-2A AM-01

### HOURLY PRODUCTION

Average Grader Speed:	<u>1.50</u>	mph
Selected Application:	<u>Ripping (0-3 mph) - 1.50</u>	
Selected Blade Angle:	<u>-1</u>	degrees
Effective Blade Length:	<u>0.00</u>	feet
Width of blade overlap per pass:	<u>2.00</u>	feet
Net grading or ripping width per pass:	<u>8.50</u>	feet
Unadjusted Hourly Unit Production:	<u>1.5455</u>	acres/hour

#### Job Condition Correction Factors

Site Altitude: 4200 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.90</u>	(1sh/d, fav.)
Net Correction:	<u>0.9000</u>	multiplier

Adjusted Hourly Unit Production: 1.3909 acres/Hour

Adjusted Hourly Fleet Production: **1.3909** acres/Hour

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **11.50** Hours

Unit cost: \$116.93 per acre Total job cost: **\$1,871**

**BULLDOZER WORK**Task description: Grade10 Acre Mining AreaSite: Ordway PitPermit Action: AM-01Permit/Job#: M2006054**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 10/16/2020County: CrowleyFilename: M054-002User: JPLAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS XR Series IIHorsepower: 240Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$74.64	NA
Operating Cost/Hour:	\$71.55	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	5
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$187.49Total Fleet Cost/Hour: **\$187.49****MATERIAL QUANTITIES**Initial Volume: 8,100Swell factor: 1.000Loose volume: **8,100 LCY**Source of estimated volume: 10 acre area grading 6-inchesSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,022.9 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 4,250 feetMaterial weight: 3,300 lbs/LCYWeight description: Decomposed rock - 75% Rock, 25% Earth**Job Condition Correction Factor**Operator Skill: 0.750Source  
(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:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5155

Adjusted unit  
production: 527.30 LCY/hr  
Adjusted fleet  
production: **527.3** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)  
Unit cost: \$0.356/LCY

Total job time: **15.36** Hours  
Total job cost: **\$2,880**

**SCRAPER TEAM WORK**Task description: Spread Topsoil 27.3 acres, 5 inches deepSite: Ordway PitPermit Action: AM-01Permit/Job#: M2006054**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 10/16/2020County: CrowleyFilename: M054-003User: JPLAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G
-Dozer:	Cat D7R DS XR Series II
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

**Cost Breakdown:**

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	NA	NA
Ownership cost/hour:	\$206.99	\$74.64	NA	NA	NA	NA
Operating cost/hour:	\$213.97	\$71.55	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$30.90	\$41.30	NA	NA	NA	NA
Unit Subtotals:	\$451.85	\$187.49	NA	NA	NA	NA
Number of Units:	2	1	0	0	0	0
Group Subtotals:	Work:	\$1,091.19	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$1,091.19**MATERIAL QUANTITIES**Initial volume: 16,444

CCY

Swell factor: 1.125Loose volume: 18,500

LCY

Source of estimated volume: 27.3 ac x 5 in = 18,500 CYSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: 2,650 lbs/LCY  
 Material description: Decomposed rock - 25% Rock, 75% Earth  
 Rated Payload: 81,600 pounds  
 Payload Capacity: 30.79 LCY

Struck Volume: 24.00 LCY  
 Heaped Volume: 34.00 LCY  
 Average Volume: 29.00 LCY  
 Adjusted Capacity: 29.00 LCY

Cycle Time:Scraper Loading Time: 0.80 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 4250 feet

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

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	2.00	4.00	6.00	1477	0.28

Haul Time: 0.28 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	-2.00	4.00	2.00	2960	0.23

Return Time: 0.23 minutesTotal Scraper team cycle time: 1.91 minutesAdjusted for job conditions: 756.13 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,512.25 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,512.25 LCY/HourUnadjusted unit production/hour: 910.99 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 12.23 HoursUnit cost: \$0.722 /LCYTotal job cost: \$13,349



**REVEGETATION WORK**Task description: Revegetate 27.3 acresSite: Ordway PitPermit Action: AM-01Permit/Job#: M2006054**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 10/16/2020County: CrowleyFilename: M054-004User: JPLAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Manure, delivery (average cost), per ton	10.00	ton	\$0.34	\$3.37
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$3.37</b>

**Application**

Description	Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)	\$65.78
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$65.78</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
<b>Total Tilling Cost/Acre</b>	<b>\$300.76</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	3.00	48.97	\$47.93
Sand Dropseed	1.00	119.38	\$9.75
Little Bluestem - Pastura	7.00	41.78	\$94.38
Sideoats Grama - El Reno	9.00	29.55	\$75.38
<b>Totals Seed Mix</b>	<b>20.00</b>	<b>239.67</b>	<b>\$227.43</b>

**Application**

Description	Cost /Acre
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Drill Seeding (DRMS Survey Cost)	\$232.00
<b>Total Seed Application Cost/Acre</b>	<b>\$232.00</b>

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
<b>Total Mulch Materials Cost/Acre</b>				<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres: 27.3  
 Estimated Failure Rate: 25%  
 \*Selected Replanting Work Items: SEEDING

Cost /Acre: \$829.34  
 Cost /Acre\*: \$459.43

Initial Job Cost: **\$22,640.98**  
 Reseeding Job Cost: **\$3,135.61**  
 Total Job Cost: **\$25,777**  
 Job Hours: **30.00**

**REVEGETATION WORK**Task description: Re-Seed 3 acresSite: Ordway PitPermit Action: AM-01Permit/Job#: M2006054**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 10/16/2020County: CrowleyFilename: M054-005User: JPLAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

**TILLING**

Description	Cost /Acre
	\$
<b>Total Tilling Cost/Acre</b>	<b>\$0.00</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	6.00	97.93	\$95.85
Sand Dropseed	2.00	238.75	\$19.50
Little Bluestem - Pastura	14.00	83.56	\$188.77
Sideoats Grama - El Reno	18.00	59.09	\$150.75
<b>Totals Seed Mix</b>	<b>40.00</b>	<b>479.34</b>	<b>\$454.87</b>

**Application**

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Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
<b>Total Seed Application Cost/Acre</b>	<b>\$267.22</b>

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
<b>Total Mulch Materials Cost/Acre</b>				<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</b>

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres:	3	Cost /Acre:	\$722.09
Estimated Failure Rate:	0%	Cost /Acre*:	\$0.00
*Selected Replanting Work Items:	NONE		

Initial Job Cost:	<b>\$2,166.27</b>
Reseeding Job Cost:	<b>\$0.00</b>
Total Job Cost:	<b>\$2,166</b>
Job Hours:	<b>4.00</b>

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: Mobilization/DemobilizationSite: Ordway PitPermit Action: AM-01Permit/Job#: M2006054**PROJECT IDENTIFICATION**Task #: 006State: ColoradoAbbreviation: NoneDate: 10/16/2020County: CrowleyFilename: M054-006User: JPLAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

**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 XR Series II	32.01	\$74.64	\$123.81	1	\$198.45	\$123.81	\$500.00
Cat 637G	57.28	\$206.99	\$141.54	2	\$697.06	\$283.08	\$500.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.72	\$67.39	1	\$74.11	\$67.39	\$250.00
CAT 14M	23.57	\$70.72	\$67.39	1	\$138.11	\$67.39	\$250.00

Subtotals: **\$1,107.73** **\$541.67** **\$1,500.00****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:	LA JUNTA	
Total one-way travel distance:	25.00	miles
Average Travel Speed:	55.00	mph

Total Non-Roadable Mob/Demob Cost *	\$6,714.91
** 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):	0.45	0.45
Return Time (Hours):	0.45	0.45
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.91	0.91

**JOB TIME AND COST**

Total job time:	3.82	Hours
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Total job cost:	\$6,715
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