

State of Colorado  
Energy & Carbon Management Commission

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Report taken by:

## Site Investigation and Remediation Workplan (Supplemental Form)

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. However, this shall not preclude the Operator from taking immediate action to protect public health or safety, the environment, wildlife, or livestock.

This Form 27 describes site conditions as currently understood by the Operator; approval of this Form 27 by ECMC is based on the site conditions accurately described herein; any changes in site conditions identified during or subsequent to the performance of the approved workplan may necessitate additional investigation or remediation which shall be described on a supplemental Form 27. This Form 27 is intended to provide basic information regarding the proposed site investigation and remediation actions, but the workplan may be more fully described in attached documentation.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

## OPERATOR INFORMATION

Name of Operator: RED MESA HOLDINGS/O&G LLC	Operator No: 10254	Phone Numbers
Address: 5619 DTC PARKWAY - STE 800		Phone: (970) 946 3761
City: GREENWOOD VILLAGE	State: CO	Zip: 80111
Contact Person: Jacob Harter	Email: jharter@cottonwoodconsulting.com	Mobile: ( )

## PROJECT, PURPOSE &amp; SITE INFORMATION

## PROJECT INFORMATION

Remediation Project #: 17318 Initial Form 27 Document #: 402632978

## PURPOSE INFORMATION

- ☐ Rule 913.c.(1): Pit or Cuttings Trench closure.
- ☐ Rule 913.c.(2): Buried or partially buried vessel closure, which will be by removal.
- ☐ Rule 913.c.(3): Remediation of Spill and Releases pursuant to Rule 912.
- ☐ Rule 913.c.(4): Land treatment of Oily Waste pursuant to Rule 905.e.
- ☐ Rule 913.c.(5): Closure of Centralized E&P Waste Management Facilities pursuant to Rule 907.h.
- ☐ Rule 913.c.(6): Remediation of impacted Groundwater pursuant to Rule 915.e.(3).D, and the contaminant concentrations in Table 915-1.
- ☐ Rule 913.c.(7): Investigation and remediation of natural gas in soil or Groundwater.
- ☐ Rule 913.c.(8): When requested by the Director due to any potential risk to soil, Groundwater, or surface water.
- ☒ Rule 913.c.(9): Decommissioning of Oil and Gas Facilities.
- ☐ Rule 913.g: Changes of Operator.
- ☐ Rule 915.b: Request to leave elevated inorganics in situ.
- ☐ Other: \_\_\_\_\_

## SITE INFORMATION

Yes Multiple Facilities

Facility Type: WELL	Facility ID: _____	API #: 067-06932	County Name: LA PLATA
Facility Name: HAUN-DELANEY (OWP) 1	Latitude: 37.109480	Longitude: -108.116840	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNE	Sec: 14	Twp: 33N	Range: 12W
Meridian: N	Sensitive Area? Yes		

## SITE CONDITIONS

General soil type - USCS Classifications CH Most Sensitive Adjacent Land Use Livestock

Is domestic water well within 1/4 mile? Yes Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? No

**Other Potential Receptors within 1/4 mile**

Cannibal Canyon to the west.

# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- ☒ E&P Waste ☐ Other E&P Waste ☐ Non-E&P Waste
- ☐ Produced Water ☐ Workover Fluids
- ☒ Oil ☐ Tank Bottoms
- ☐ Condensate ☐ Pigging Waste
- ☐ Drilling Fluids ☐ Rig Wash
- ☐ Drill Cuttings ☐ Spent Filters
- ☐ Pit Bottoms
- ☐ Other (as described by EPA)

## DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
No	SOILS	NA	Laboratory analytical results

## INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

The ECMC Orphan Well Program plugged the Haun-Delaney (OWP) #1 well and decommissioned the associated on-location flowlines and production equipment during the summer of 2021. Initial soil samples were collected in accordance with the Initial Form 27 (DOC # 402632978) for the project and ECMC Rule 915.e(2)B. Initial soil sampling occurred on July 20, 2021, one soil sample was collected from the wellhead excavation and two samples from excavated flowline paths. Sample SS01 (wellhead) indicated impacts (SAR) above ECMC Table 915-1 standards and pH outside the range of ECMC Table 915-1 standards. No other production equipment was located on the wellsite at the time of plugging and site decommissioning. A reduced set of analytes was requested via a Supplemental Form 27 (Doc # 403535124) to include only the impacts (SAR and pH) identified during the initial sampling event. The area surrounding the plugged and abandoned (P&A) wellhead was excavated and impacted material was transported offsite. Following excavation, a confirmation soil sample was collected at the base of the excavation and submitted for analysis of the impacts identified during the initial sampling event as described in the Site Investigation Report below. Laboratory results of the sample collected from the plugged and abandoned (P&A) wellhead excavation indicated no impacts above ECMC Table 915-1 standards.

## PROPOSED SAMPLING PLAN

### Proposed Soil Sampling

☒ Will soil samples be collected as part of this investigation? ( Number, type (grab/composite), analyses, and locations of samples ):

Initial soil samples were collected for laboratory analysis of ECMC Table 915-1 constituents. One sample was collected from the P&A wellhead excavation and two samples from the excavated flowline paths. No other production equipment was located on the wellsite at the time of plugging and site decommissioning. All samples were submitted for laboratory analysis of Table 915-1 constituents.

Following the initial soil sampling, excavation of the impacted soil occurred in September 2023. During field screening no obvious impacts were identified and one confirmation soil sample was collected from the base of the excavation area. The soil sample was submitted for laboratory analysis of the impacts identified during the initial sampling event as described in the Site Investigation Report below. The attached project map provides the location of all samples and excavation areas.

### Proposed Groundwater Sampling

☐ Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

No groundwater or pathways to groundwater were discovered during the plugging and decommissioning activities. No groundwater samples were collected for this project.

### Proposed Surface Water Sampling

☐ Will surface water samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

No surface water was discovered in the vicinity of the wellsite during the plugging and decommissioning activities. No surface water samples were collected for this project.

## Additional Investigative Actions

☐ Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 4

Number of soil samples exceeding 915-1 1

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 40

### NA / ND

-- Highest concentration of TPH (mg/kg) 18.3

-- Highest concentration of SAR 6.44

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 0

### Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet)

Number of groundwater monitoring wells installed

Number of groundwater samples exceeding 915-1

Highest concentration of Benzene (µg/l)

Highest concentration of Toluene (µg/l)

Highest concentration of Ethylbenzene (µg/l)

Highest concentration of Xylene (µg/l)

Highest concentration of Methane (mg/l)

### Surface Water

0 Number of surface water samples collected

Number of surface water samples exceeding 915-1

If surface water is impacted, other agency notification may be required.

## OTHER INVESTIGATION INFORMATION

☐ Were impacts to adjacent property or offsite impacts identified?

☒ Were background samples collected as part of this site investigation?

Background soil samples were collected from nearby, non-impacted native soil to establish background concentrations. Background samples were analyzed for Table 915-1 constituents. Background soil samples were collected in the Red Mesa area. A background soil sampling tables is provided in the attachments. Background samples indicated Arsenic values above the ECMC Table 915-1 standards. It is requested that background concentrations be considered when evaluating this site for final closure.

☒ Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 10

Volume of liquid waste (barrels) 0

☒ Is further site investigation required?

Initial assessment and sampling occurred on June 17, 2021, and indicated soil impacts above ECMC Table 915-1 standards. Soil sample SS01 (P&A wellhead), collected at a depth of seven feet below ground surface (bgs) indicated SAR values exceeding ECMC Table 915-1 standards and pH values outside the range of the Table 915-1 standards.

Following the initial sampling event, the area in the vicinity of the P&A wellhead was excavated (~10 yards) and material was transported and disposed of offsite. Following remediation, one soil sample was collected from the base of the P&A wellhead excavation at a depth of eight feet bgs. The soil sample was submitted for laboratory analysis of SAR and pH. Sample results did not indicate impacts above ECMC Table 915-1 standards.

It does not appear further remediation is necessary at this time. It is requested that background concentrations be considered and that this site be approved for final closure.

## REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? No

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Approximately 10 yards of impacted soils were excavated and transported offsite to an approved disposal facility

## REMEDATION SUMMARY

Describe how remediation of existing impacts to soil and groundwater is to be accomplished (i.e. summarize remedial action plan). Provide a brief narrative description including: technical justification, schedule for implementation, estimated time to attain NFA status, plus plans and specifications for the selected remedial action technology.

Remediation activities consisted of removal of impacted soil and backfilling with clean soils in the area of the P&A wellhead.

Soil Remediation Summary

☐ In Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ Air sparge / Soil vapor extraction

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Other \_\_\_\_\_

☒ Ex Situ

Yes \_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 10

\_\_\_\_\_ Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_ 0

\_\_\_\_\_ Excavate and onsite remediation

\_\_\_\_\_ Land Treatment

\_\_\_\_\_ Bioremediation (or enhanced bioremediation)

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ Other \_\_\_\_\_

Groundwater Remediation Summary

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ Air sparge / Soil vapor extraction

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Other \_\_\_\_\_

GROUNDWATER MONITORING

If groundwater has been impacted, describe proposed monitoring plan, including # of wells or sample points, monitoring schedule, analytical methods, points of compliance. Attach a groundwater monitoring location diagram.

## REMEDIATION PROGRESS UPDATE

### PERIODIC REPORTING

#### Approved Reporting Schedule:

☐ Quarterly☐ Semi-Annually☐ Annually☐ Other

#### ☐ Request Alternative Reporting Schedule:

☐ Semi-Annually☐ Annually☐ Other

Rule 913.e:

After initial approval of a Form 27, the Operator will provide quarterly update reports in a Supplemental Form 27 to document progress of site investigation and remediation, unless an alternative reporting schedule has been requested by the Operator and approved by the Director. The Director may request a more frequent reporting schedule based on site-specific conditions.

#### Report Type:

☐ Groundwater Monitoring☐ Land Treatment Progress Report☐ O&M Report☒ Other Facility closure

### Adequacy of Operator's General Liability Insurance and Financial Assurance

Describe the adequacy of the Operator's general liability insurance and Financial Assurance to fully address the anticipated costs of Remediation, including the estimated remaining cost for this project (below).

If this information has been provided on a Form 27 within the last 12 months, provide the Document Number of that form.

Operator anticipates the remaining cost for this project to be: \$ \_\_\_\_\_

### WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? Yes \_\_\_\_\_

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Impacted soil was excavated and transported offsite to an approved disposal facility.

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_ 10

E&P waste (solid) description \_\_\_\_\_ Impacted soils

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: Envirotech Landfarm (NM permit # NM01-0011)

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_ 0

E&P waste (liquid) description \_\_\_\_\_ No liquid E&P waste was generated during remediation activities.

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: \_\_\_\_\_

## REMEDIATION COMPLETION REPORT

### REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? Yes \_\_\_\_\_

If YES:

☒ Compliant with Rule 913.h.(1).

☐ Compliant with Rule 913.h.(2).

☐ Compliant with Rule 913.h.(3).

Do all soils meet Table 915-1 standards? Yes \_\_\_\_\_

Does the previous reply indicate consideration of background concentrations? Yes \_\_\_\_\_

Does Groundwater meet Table 915-1 standards? Yes

Is additional groundwater monitoring to be conducted? \_\_\_\_\_

Operator shall comply with the ECMC 1000-Series Reclamation Requirements for all impacted and disturbed areas.

## RECLAMATION PLAN

### **RECLAMATION PLANNING**

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing.

Reclamation will be in accordance with ECMC 1000 Series Rules.

Is the described reclamation complete? No

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

☐ Interim

☐ Final

Did the Surface Owner provide the seed mix? \_\_\_\_\_

If YES, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

Did the local soil conservation district provide the seed mix? \_\_\_\_\_

### **SITE RECLAMATION DATES**

Proposed date of commencement of Reclamation. 05/01/2024

Proposed date of completion of Reclamation. 12/31/2024

## IMPLEMENTATION SCHEDULE

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

### **PRIOR DATES**

Date of Surface Owner notification/consultation, if required. \_\_\_\_\_

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 05/03/2021

Proposed site investigation commencement. 06/01/2021

Proposed completion of site investigation. 09/30/2021

### **REMEDIAL ACTION DATES**

Proposed start date of Remediation. 09/20/2023

Proposed date of completion of Remediation. 10/01/2023

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

☐ Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

**OPERATOR COMMENT**

Initial soil sampling events indicated SAR above ECMC Table 915-1 standards and pH outside the range of ECMC Table 915-1 standards in the vicinity of the P&A wellhead. Impacted material was excavated and disposed of at an approved disposal facility. Confirmation soil sampling was conducted following excavation and did not indicate soil impacts above ECMC Table 915-1 standards in the vicinity of the P&A wellhead.

Final reclamation will be conducted per ECMC reclamation rules and prioritized based on OWP funding and staff availability. The OWP requests closure based on remediation efforts and confirmation soil sampling results.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: Jacob Harter

Title: Consultant

Submit Date: 03/14/2024

Email: jharter@cottonwoodconsulting.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECMC Rules and applicable orders and is hereby approved.

ECMC Approved: \_\_\_\_\_

Date: \_\_\_\_\_

Remediation Project Number: 17318

**COA Type****Description**

0 COA	

**Attachment Check List**

Upon approval, the approved Form 27 and all listed attachments will be indexed to the Remediation Project file. Only the approved Form 27 will also be indexed to the related Facilities.

**Att Doc Num****Name**

403655642	PHOTO DOCUMENTATION
403655643	SOIL SAMPLE LOCATION MAP
403655644	ANALYTICAL RESULTS
403655645	ANALYTICAL RESULTS
403655646	ANALYTICAL RESULTS
403700233	ANALYTICAL RESULTS

Total Attach: 6 Files

**General Comments****User Group****Comment****Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)