



DEPARTMENT OF NATURAL RESOURCES

John W. Hickenlooper, Governor

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January 30, 2014

Ms. Naomi Azulai
Production Technician
Maralex Resources, Inc.
Phone: 970 563 4000

Re: Form 27 Remediation Work Plan
USA 1-20 JC spill
Spill Tracking Numbers 2147293 and 2147371
Maralex Resources, Inc.
Location ID # 312491
API # 077-08371
NWNE 20 9S 98W
Mesa County

Dear Ms. Azulai,

Colorado Oil and Gas Conservation Commission (COGCC) staff has received the Form 27 Remediation Work Plan that Maralex submitted on January 28, 2014. The Form 27 includes basic information about sampling and remediation which is considered insufficient considering the complexity and magnitude of the events which occurred at this location. COGCC requests that Maralex re-submit the Remediation Work Plan with a more comprehensive sampling and remediation plan. Please use a separate document attached to the Form 27, to expand on the sampling and remediation work plan. The updated Form 27 must satisfy the following conditions:

- 1) Include all the basic information in the first section of the Form 27 (Cause of condition being investigated and remediated): The cause is "Spill or Release"; please include the Facility name and number.
- 2) Maralex shall prepare an investigation plan which objective is to assess the vertical and aerial extent of the impact. There is also a potential groundwater impact that must be investigated. This will include a subsurface investigation with soil borings and/or groundwater monitoring wells. The investigation will include:
 - a) the pad, and particularly the areas around the well, pit and tanks; and
 - b) the land off site, downgradient of the pad, down to and beyond the ravine (natural drainage and creek).

This will require not only surface sampling but some borings to determine depth of the impact (i.e. near the well and at the bottom and perimeter of the pit). The work plan will specify the number of samples, locations (Site plan/map indicating the proposed sampling points), and depths, as well as the analyses to be conducted.

- 3) Maralex shall prepare a remediation plan that may consist of excavation and disposal of impacted soil in an approved landfill, landfarming (with BLM's approval), or any technology that effectively mitigates the impacts. If the impact reached groundwater, then remediation of groundwater will be necessary. This must be included in the work plan as well.

Notes:

DEPARTMENT OF NATURAL RESOURCES: Mike King, Executive Director

COGCC COMMISSION: Richard Alward – John Benton – Thomas L. Compton – DeAnn Craig – Tommy Holton – W. Perry Pearce – Andrew Spielman – Mike King – Chris Urbina
COGCC STAFF: Matt Lepore, Director – Margaret Ash, Field Inspection Manager – Jim Milne, Environmental Manager – Stuart Ellsworth, Engineering Manager


a) The investigation as well as the remediation plans must be comprehensive enough and specific (i.e. if landfarming is proposed to remediate the impacted soil, a description of the methodology must be included: size of the cells, use of lining or compacted soil, berms, drainage, use of nutrients or not, frequency of tillage, of watering, thickness of soil layers, etc.). The same applies to the sampling: how many? Where? At what depth? Please include a figure indicating sampling locations.

b) Although insufficient to assess the full extent and depth of the impact, some investigation has been conducted to date, some of it in coordination with the BLM. It would be useful to include investigation conducted to date so that it is known that work is in progress and what has been done.

c) Based on previous analytical results, Maralex may request that upcoming analyses use a reduced list of analytes, instead of the complete Table 910-1. It is Maralex' prerogative to include such request in the Form 27 for COGCC's review and approval.

Please submit the updated Form 27 by Friday, February 14, 2014. If you have questions or comments, feel free to contact me by phone or by email.

Sincerely,

A handwritten signature in blue ink, appearing to read "Carlos Luján", with a stylized flourish at the end.

Carlos Luján, Ph.D.
Environmental Protection Specialist
NW Region

Cc: Alex Fischer – COGCC Environmental Supervisor

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



FOR OGCC USE ONLY

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☒ Spill or Release ☒ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☐ Other (describe): _____

OGCC Employee:

☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV

Tracking No:

OGCC Operator Number: 53255

Name of Operator: Maralex Resources, Inc.

Address: PO Box 338

City: Ignacio State: CO Zip: 81137

Contact Name and Telephone:

Naomi Azulai

No: 970-563-4000

Fax: 970-563-4116

API Number: 05-077-08371

County: Mesa

Facility Name:

Facility Number:

Well Name: USA

Well Number: 1-20 JC

Location: (QtrQtr, Sec, Twp, Rng, Meridian): NWNE Sec 20 T9S R98W 6 Latitude: 39.26309 Longitude: -108.351182

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Produced Water

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☐ Y ☒ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Non-cropland (recreational - currently under use ban)

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Travesilla - rock outcrop complex, 10 to 35 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Dry creek bed 1175' North of the site

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):



Soils



Vegetation



Groundwater



Surface Water

Extent of Impact:

to be determined - see form 19 Doc # 2147293

none

none

none

How Determined:

soil testing underway

visually

bedrock & hard clays on and around site

no surface water - creek bed is dry

REMEDIAL WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

See document # 2147293. Spill/release tracking # 2147293.

Booms have also been placed in the dry creek bed and a catch basin at the "ravine" to catch/prevent flow of possibly contaminated water.

Describe how source is to be removed:

Well was plugged. Plugging operations completed on 1/27/2014.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Specific remediation plans will be determined after results are available from testing samples collected on 1/21/2014. If soil requires remediation, then it will be landfarmed on site if BLM allows. Soil will be tested (and retested if required) in the summer until it meets standards. Once standards are met then the soil will be use on site.

FORM
27
Rev 6/99

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80203
(303)894-2100 Fax: (303)894-2109



Page 2

REMEDIATION WORKPLAN (Cont.)

Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):
n/a

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. Use additional sheet for description if required.

The soil that had been landfarmed will be used on site including to back fill the pit once allowable. The site will be reseeded according to the BLM's requirements.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☐ N If yes, describe:

If soil needs to be remediated (pending sample analysis results) then testing will be conducted until standards are met. See attached schematic prepared by the BLM showing sampling locations.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Affected soils will be landfarmed on site pending BLM approval. Once the soil meets standards, it will be used on site.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: _____ Date Site Investigation Completed: _____ Date Remediation Plan Submitted: _____
Remediation Start Date: _____ Anticipated Completion Date: _____ Actual Completion Date: _____

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

Print Name: Naomi Azulai Signed: _____
Title: Production Technician Date: 1/28/2014

OGCC Approved: _____ Title: _____ Date: _____

This form 27 was not approved. A more comprehensive and detailed form 27 was requested.
Naomi Azulai EPS NW Region
01/30/2014

Maralex's "Figure 1-Vicinity Map" depicts the Visual Extent of Contamination at Intermittent Creek Bed at about this point, rather than at the GPS point reported in their Remediation Proposal. Based on site visits, this more northerly of the two points appears more likely to be correct. Both are included and labeled in this map.

Sample Point 2
Estimated location
BLM monitor will determine on-site

Soil smells of hydrocarbons
BLM, 12-31-2013

Sample Point 1
39.266972; -108.34722
Estimated beyond contamination, 12-31-13

Sample Point 5
Soil background characterization
Estimated location
BLM monitor will determine on-site

Sample Point 3
Estimated location
BLM monitor will determine on-site

Sample Point 4
Estimated location
BLM monitor will determine on-site

Maralex-reported Visual Extent of Contamination at Intermittent Creek Bed. Decimal degrees 39.26419; -108.35226 provided in Maralex Remediation Proposal. (Note that Maralex Figure 1–Vicinity Map contradicts this, locating it instead at a point north of this, about 1000' downstream.)

Sample Point 6
Estimated location
BLM monitor will determine on-site

Earthen catch basin

**Maralex-reported Visual Extent of Surface Contamination
at Pad cross gradient to NE. 39.26325; -108.35110**

Emergency Trench

Maralex-reported Visual Extent of Surface Contamination at Pad, cross gradient to NW.
39.26299; -108.35139

**Maralex well
USA 1-20JC**