

State of Colorado
Oil and Gas Conservation Commission



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

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REM 8664
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OGCC Employee:

Spill Complaint
 Inspection NOAV

Tracking No:

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): Pit Closure

OGCC Operator Number: <u>53255</u> Name of Operator: <u>Maralex Resources, Inc.</u> Address: <u>PO Box 338</u> City: <u>Ignacio</u> State: <u>CO</u> Zip: <u>81137</u>	Contact Name and Telephone: <u>Naomi Azulai</u> No: <u>970-563-4000</u> Fax: <u>970-5634116</u>
API Number: _____ County: <u>Rio Blanco</u> Facility Name: <u>Soldier Canyon 33-1</u> Facility Number: <u>109343</u> Well Name: _____ Well Number: _____ Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWNW, 33, 4S, 100W, 6th</u> Latitude: <u>39.6578</u> Longitude: <u>-108.6275</u>	

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, undeveloped

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Irigul-parachute complex 5 to 30, percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): 1530' from Left Fork Lake Creek

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

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>surface soils in pit</u>	<u>Lab Analysis</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

REMEDIATION WORKPLAN

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

The use of the pit has been discontinued. The pit was sampled on 8/4/2014 by Intertech and the lab report is attached to this form.

Describe how source is to be removed:

Once the work plan is approved, the pit will be excavated to a depth at which no visual evidence of contamination nor hydrocarbon smell is apparent. The soils remaining in the pit will be analysed to verify that they do not exceed Table 910-1 parameter limits for TPH and Mercury. The analysis of the soil in the pit shows that aside from DRO and Mercury, only Arsenic tested above allowable limits. The Arsenic level found in the pit is typical of soil in the area and is below the levels found in the background sample.

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.:

One of the following options will be utilized to remediate the contaminated soils in the pit:

1. The contaminated soils that will be removed from the pit will be landfarmed on site, according to the following parameters and with the approval of the landowner: The affected soil will be placed on plastic sheeting to a loose depth no greater than 3' as indicated by using a device on the surface of the liner designating depth. The area required will be determined by the volume of soil excavated from the pit. The area is calculated by dividing the volume of soil by 3' deep. A composite sample of the landfarmed soil will be analyzed for TPH and Mercury when it is likely that the concentrations have dropped below the Table 910-1 limit. The soil will be cultivated monthly with a small tracked backhoe or by manually operated equipment and the facility will be regularly inspected during routine site visits as weather allows.
2. Soil amendment based on the concentration and volume of soil excavated from the pit.
3. Disposal to a licensed facility.



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

It is not believed that groundwater has been impacted; however, if it is determined through the process of remediating/reclaiming the pit that groundwater has been impacted, a ground water monitoring plan will be developed.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeded program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

Once analytical results indicate that TPH and Mercury concentrations are within regulatory parameters, the pit will be back filled. The pit will be filled using the soil from the earthen berm surrounding the pit. The top three feet of the pit will be filled with clean native soil with a SAR < 12. Any materials associated with the pit such as netting will be removed from the site.

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? [X] Y [] N If yes, describe:

Further sampling will be required after the excavation to verify that the TPH and Mercury are below the table 910-1 limits.

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

If E&P waste is encountered, it will be disposed of in accordance with applicable local, State and Federal requirements. The preferred treatment method for any impacted soils removed from the pit will be to landtreat and use the soil onsite for grading once parameters test under the Table 910-1 limits.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 8/4/2014 Date Site Investigation Completed: TBD Date Remediation Plan Submitted: 10/1/2014 Remediation Start Date: TBD Anticipated Completion Date: TBD Actual Completion Date: TBD

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: [Signature] Title: Production Technician Date: 9/30/2014

OGCC Approved: Title: Date: