

State of Colorado
Oil and Gas Conservation Commission



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FOR OGCC USE ONLY
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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: <u>100185</u> | Contact Name and Telephone: <u>Chris Hines</u> |
| Name of Operator: <u>Encana Oil & Gas (USA) Inc.</u> | No: <u>970.285.2653</u> |
| Address: <u>143 Diamond Avenue</u> | Fax: <u>chris.hines@encana.com</u> |
| City: <u>Parachute</u> State: <u>CO</u> Zip: <u>81635</u> | |

| | |
|---|--|
| API Number: <u>05-103-09992</u> | County: <u>Rio Blanco</u> |
| Facility Name: <u>PMF-63S103W/6SWSW [Location Name/No]</u> | Facility Number: <u>316198 [Location ID]</u> |
| Well Name: <u>PMF #9030</u> | Well Number: <u>-</u> |
| Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWSW, Sec. 6, T3S, R103W, 6th PM</u> Latitude: <u>39.810419</u> Longitude: <u>-109.004467</u> | |

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): production fluids from flowline (produced water and condensate)

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

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Kobar silty clay loam, 3 to 8 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): According to the COGCC GIS Online mapping service there is one (1) surface water receptor and no water wells within 1/4 mile of the pad.

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>to be determined (TBD)</u> | <u>in-situ characterization with direct-push rig</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):
An eForm 19 [document number - 400763670] was submitted on 01/05/2014.

Describe how source is to be removed:
The flowline identified in the above-mentioned eForm 19 was removed during plugging and abandonment activities.

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.:
A track-mounted direct-push drill rig with hollow stem auger capability will be used to delineate the release area and install soil vapor extraction (SVE) wells. Vent turbines will be secured to the top of each SVE well in order to promote bioremediation of identified hydrocarbon impacts. Monthly operation and maintenance activities will consist of collecting field parameters of the headspace in each of the passive SVE wells. All O&M data will be reported upon successful completion of the remediation project with clearance sample results in the Form 4 (Notification of Completion).



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

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REMEDIATION WORKPLAN (Cont.)

OGCC Employee: _____

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

Groundwater was not encountered during initial excavation activities. Based on nearby water well data, groundwater is estimated to be at least 80 feet below ground surface.

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.

Final reclamation has been completed at this location. Any additional disturbance that occurs related to the in-situ remediation will be reclaimed to match existing grade upon closure of the remediation number.

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:

An eForm 19 [document number - 400763670] was submitted on 01/05/2014 detailing initial characterization sample results. A Site Diagram illustrating the location of soil sample 20141204 - PM 9030 (MOI) is included as an attachment. Additional sampling locations, SVE well locations, and laboratory analytical results verifying remediation of identified hydrocarbon impacts will be presented in a Form 4 (Report of Work Completed and Notification of Completion).

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

Final onsite disposition of E&P waste will be identified in the Form 4 (Report of Work Completed and Notification of Completion) submitted to the COGCC following receipt of clearance samples demonstrating remediation success. No offsite disposal of E&P waste is anticipated for this project.

*TBD - To Be Determined

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 12/04/2014 Date Site Investigation Completed: TBD* Date Remediation Plan Submitted: 01/08/2015
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: _____ Signed: _____
Title: _____ Date: _____

OGCC Approved: _____ Title: _____ Date: _____

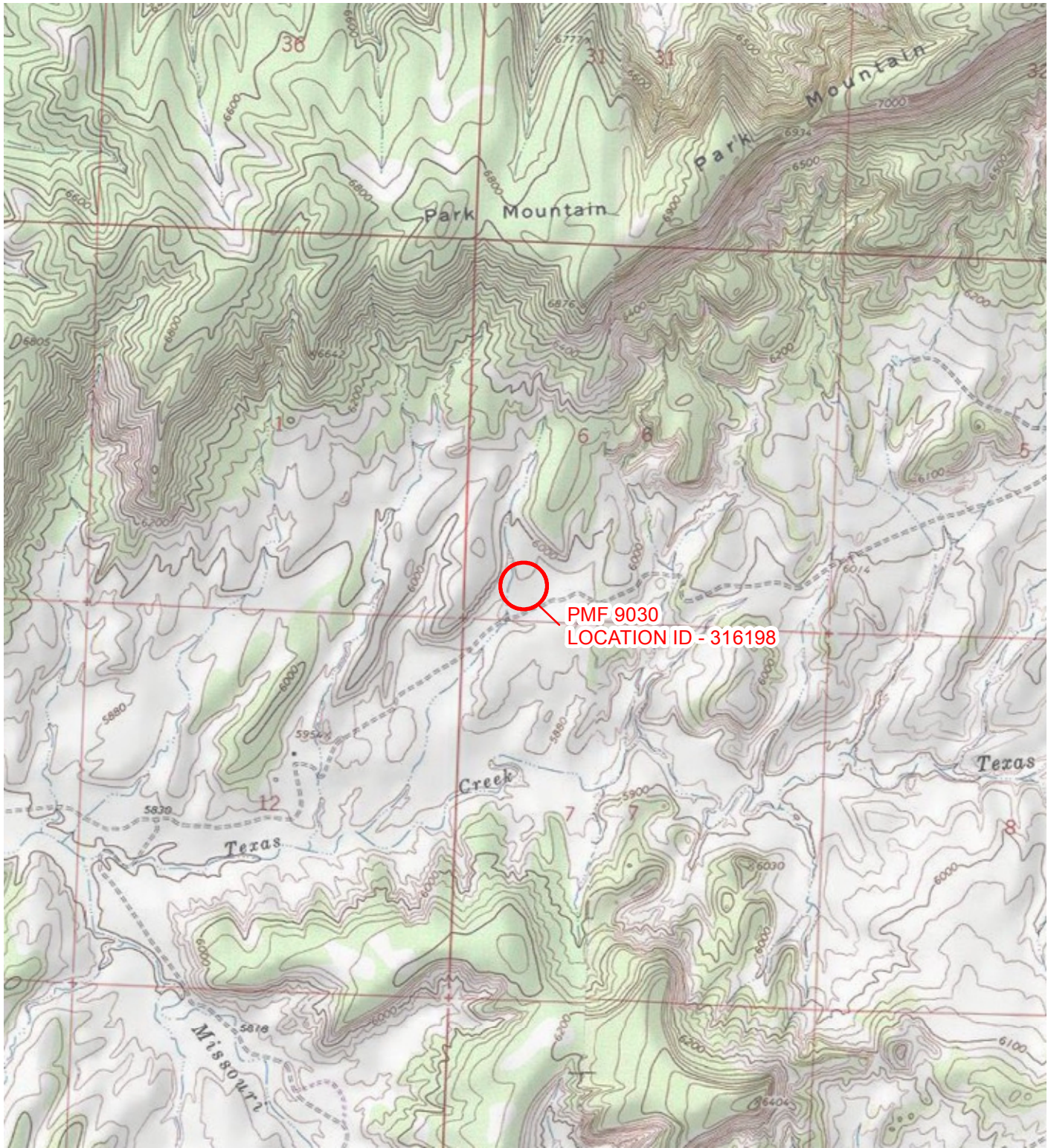
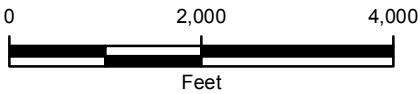


IMAGE COURTESY OF ESRI/USGS

LEGEND

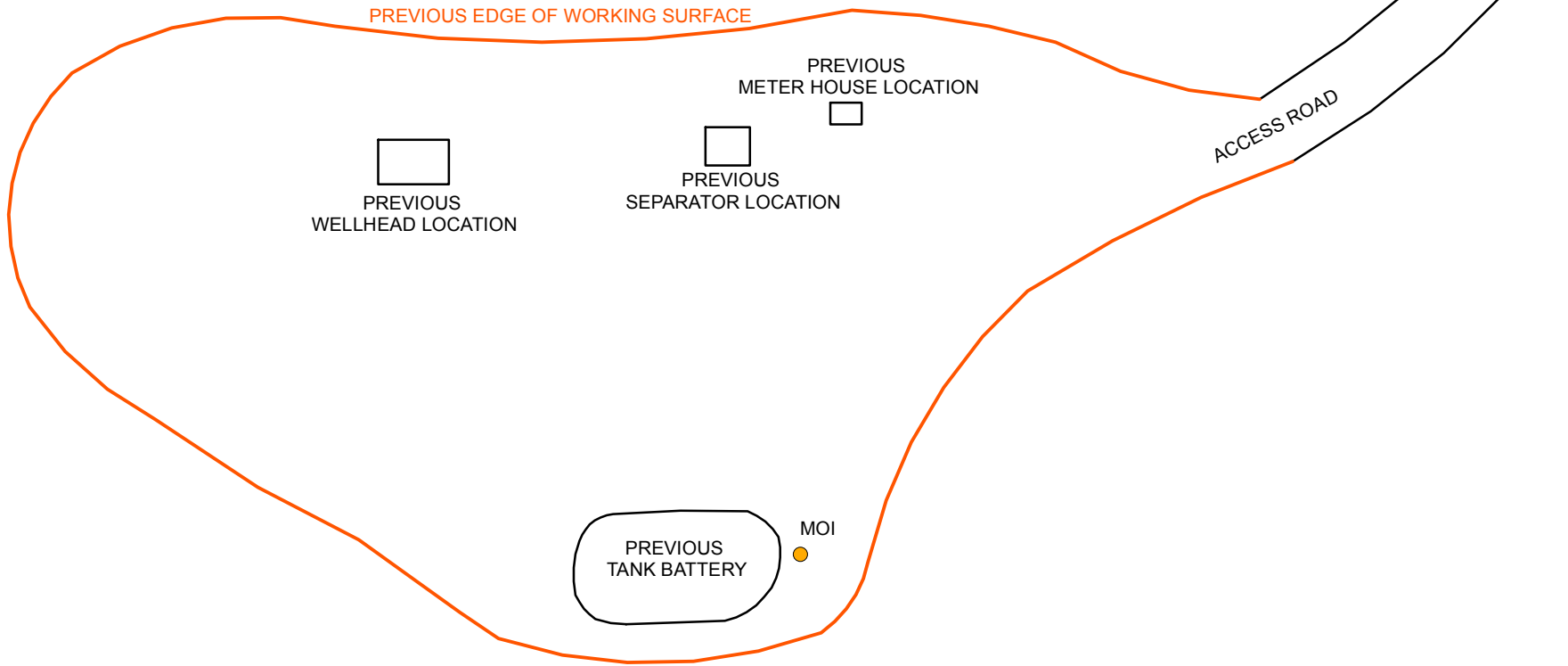
 SITE LOCATION



SITE LOCATION MAP
 PMF 9030
 RIO BLANCO COUNTY, COLORADO

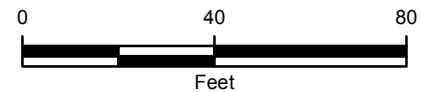
ENCANA OIL & GAS (USA) INC.





LEGEND

● SOIL SAMPLE



*SITE HAS BEEN RECLAIMED

SITE DIAGRAM
 PMF 9030
 RIO BLANCO COUNTY, COLORADO



ENCANA OIL & GAS (USA) INC.