

FORM  
2A

Rev  
08/13

State of Colorado  
Oil and Gas Conservation Commission

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



Document Number:

400696893

Date Received:

09/29/2014

Oil and Gas Location Assessment

☐ New Location ☒ Refile ☐ Amend Existing Location Location#: 414231

Submit signed original form. This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

**414231**

Expiration Date:

**11/05/2017**

☒ This location assessment is included as part of a permit application.

CONSULTATION

- ☐ This location is included in a Comprehensive Drilling Plan. CDP # \_\_\_\_\_
- ☒ This location is in a sensitive wildlife habitat area.
- ☐ This location is in a wildlife restricted surface occupancy area.
- ☐ This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 100185  
Name: ENCANA OIL & GAS (USA) INC  
Address: 370 17TH ST STE 1700  
City: DENVER State: CO Zip: 80202-5632

Contact Information

Name: Kelly Hamden  
Phone: (720) 876-5185  
Fax: (720) 876-6185  
email: Kelly.Hamden@encana.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20100017 ☐ Gas Facility Surety ID: \_\_\_\_\_  
☐ Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: N. Parachute Number: MF O04 696  
County: GARFIELD  
QuarterQuarter: LOT 9 Section: 4 Township: 6S Range: 96W Meridian: 6 Ground Elevation: 6024  
Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.  
Footage at surface: 1515 feet FSL from North or South section line  
1486 feet FEL from East or West section line  
Latitude: 39.550864 Longitude: -108.107636  
PDOP Reading: 2.0 Date of Measurement: 02/11/2008  
Instrument Operator's Name: Robert Kay

## RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID # FORM 2A DOC #

## FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	32	Oil Tanks	0	Condensate Tanks	1	Water Tanks	1	Buried Produced Water Vaults	0
Drilling Pits	0	Production Pits	0	Special Purpose Pits	0	Multi-Well Pits	0	Temporary Large Volume Above Ground Tanks	0
Pump Jacks	0	Separators	8	Injection Pumps	0	Cavity Pumps	0		
Gas or Diesel Motors	0	Electric Motors	0	Electric Generators	0	Fuel Tanks	0	Gas Compressors	0
Dehydrator Units	0	Vapor Recovery Unit	0	VOC Combustor	0	Flare	0	LACT Unit	0
								Pigging Station	0

## OTHER FACILITIES

Other Facility Type

Number

Meter houses

6

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

2 - 6" to 10" buried steel gas lines to tie into existing gas line approximately 14,500'.  
1 - 4" to 6" buried flex steel produced water line to run down road to existing infrastructure approximately 14,500'.  
Flowlines from the wellheads to the separators will be 2" steel. The produced water and condensate flowlines from the separators to the one (1) produced water tank and one (1) condensate tank will be 2" steel. All disturbance will be within pad boundaries and existing pipeline right-of-ways. All flowlines will be buried 4' deep.

## CONSTRUCTION

Date planned to commence construction: 05/16/2016 Size of disturbed area during construction in acres: 5.50  
Estimated date that interim reclamation will begin: 05/01/2017 Size of location after interim reclamation in acres: 1.70  
Estimated post-construction ground elevation: 6011

## DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H<sub>2</sub>S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? No

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: ONSITE

Drilling Fluids Disposal Method: Other

Cutting Disposal: ONSITE

Cuttings Disposal Method: Other

Other Disposal Description:

Recycle and bury

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

Centralized E&P Waste Management Facility ID, if applicable:

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Encana

Phone: 303-623-2300

Address: 370 17th Street Suite 1700

Fax: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

City: Denver State: CO Zip: 80202

Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check all that apply. The Surface Owner: ☒ is the mineral owner

☐ is committed to an oil and Gas Lease

☐ has signed the Oil and Gas Lease

☒ is the applicant

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: applicant is owner

Surface damage assurance if no agreement is in place: \_\_\_\_\_ Surface Surety ID: \_\_\_\_\_

Date of Rule 306 surface owner consultation \_\_\_\_\_

## CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): \_\_\_\_\_

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

Future Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): \_\_\_\_\_

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet  
Building Unit: 5280 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 2550 Feet  
Above Ground Utility: 2694 Feet  
Railroad: 5280 Feet  
Property Line: 2222 Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.  
- Enter 5280 for distance greater than 1 mile.  
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.  
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

## DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: ☐ Buffer Zone  
☐ Exception Zone  
☐ Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.  
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.  
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: \_\_\_\_\_

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: \_\_\_\_\_

## SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 47. Nihill channery loam, 6 to 25% slopes.

NRCS Map Unit Name: 62. Rock outcrop- torriorthents complex, very steep.

NRCS Map Unit Name: \_\_\_\_\_

## PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☒ No ☐

Plant species from: ☐ NRCS or, ☒ field observation Date of observation: 06/29/2011

List individual species: Musk Thistle

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)  
☐ Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)  
☒ Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)  
☐ Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)  
☐ Mountain Riparian (Cottonwood, Willow, Blue Spruce)  
☒ Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)  
☐ Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)  
☐ Alpine (above timberline)  
☐ Other (describe): \_\_\_\_\_

## WATER RESOURCES

Is this a sensitive area: ☐ No ☒ Yes

Distance to nearest

downgradient surface water feature: 20 Feet

water well: 2471 Feet

Estimated depth to ground water at Oil and Gas Location 29 Feet

Basis for depth to groundwater and sensitive area determination:

Nearby water well permit #275085 and extrapolated to location.

Is the location in a riparian area: ☒ No ☐ Yes

Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: \_\_\_\_\_

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

## DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- ☐ Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- ☐ Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- ☐ Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- ☐ Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

## RULE 502.b VARIANCE REQUEST

- ☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

## OPERATOR COMMENTS AND SUBMITTAL

Comments

This is a Form 2A refile. The pad has not been built and changes have not occurred from the last 2A Amendment at this location. Please note Encana is the surface and mineral owner.

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

Signed: \_\_\_\_\_ Date: 09/29/2014 Email: Kelly.Hamden@encana.com

Print Name: Kelly Hamden Title: Regulatory Analyst

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved:  \_\_\_\_\_ Director of COGCC Date: 11/6/2014

### **Conditions Of Approval**

**All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.**

COA Type	Description
	<p>PREVIOUS FORM 2A#400192549 SITE-SPECIFIC COAs:</p> <p>Operator must ensure 110 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations; including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals, and maintained in good condition.</p> <p>The access road will be constructed and maintained to prevent sediment migration from the access road to nearby surface water or any drainages leading to other nearby surface waters. Strategically apply fugitive dust control measures, including enforcing established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.</p> <p>Well pad and access road to the well pad will be gravel surfaced. Operator must install adequately sized culverts that cross any drainages leading to the stream. Operator must ensure secondary containment for any potential volume of fluids that may be released from the pad/access road in the vicinity of all stream, intermittent stream, ditch, and drainage crossings.</p> <p>The location is in an area of high runoff/run-on potential from the proposed pad area to the north; therefore the pad shall be constructed as quickly as possible and appropriate BMPs need to be in place both during and after well pad construction, as well as during all drilling and well completion operations. Standard stormwater BMPs must be implemented at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater runoff. Slopes with potential for runoff should be stabilized immediately following pad construction.</p> <p>Because of proximity of the well pad to both nearby surface water and steep slopes to the north, operator will grade the well pad surface to slope away from the stream towards a central collection point on the well pad.</p> <p>Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface pipelines or buried permanent pipelines.</p> <p>Flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or pit located on the well pad or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material.</p> <p>The moisture content of any drill cuttings in a cuttings pit, trench, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. At the time of closure, the drill cuttings must also meet the applicable standards of table 910-1.</p>

	<p>Operator shall pressure test pipelines/flowlines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines/flowlines and following any reconfiguration of the pipeline network.</p> <p>Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing pipelines. This will reduce surface disturbance.</p>
	Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated.
	Berms or other containment devices shall be constructed to be sufficiently impervious (corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.
	Notify the COGCC 48 hours prior to start of pad construction, rig mobilization, spud, pipeline testing, start of hydraulic stimulation operations, and start of flowback operations (if different than hydraulic stimulation operations) using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).

### **Best Management Practices**

<b><u>No</u></b>	<b><u>BMP/COA Type</u></b>	<b><u>Description</u></b>
1	General Housekeeping	<ul style="list-style-type: none"> <li>• Prohibit Encana employees and contractors from carrying projectile weapons on Encana property, except during company organized events.</li> <li>• Prohibit pets on Encana property.</li> </ul>
2	Wildlife	<ul style="list-style-type: none"> <li>• Install trench plugs (sloped to allow wildlife or livestock to exit the trench should they enter) at known wildlife or livestock trails to allow safe crossing on long spans of open trench, where appropriate, economically and technically feasible.</li> <li>• Perform biological surveys (on-site) for each new development, using the most recent data sets for wildlife and aquatic resources.</li> <li>• Perform pre-disturbance surveys when the on-site inspection and commencement of disturbance occur in different field seasons using the most recent data sets for wildlife and aquatic resources.</li> <li>• Utilize the Encana Wildlife Resources Matrix to identify and document (where appropriate) potential impacts or concerns during the project planning phase for proposed drilling operations and construction of roads, pads and pipelines.</li> <li>• Use enclosed, locking garbage receptacles or implement a strict daily trash removal regime on each temporary or permanent work location.</li> </ul>
3	Dust control	<ul style="list-style-type: none"> <li>• Strategically apply fugitive dust control measures, including enforcing established speed limits on Encana private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.</li> </ul>
4	Construction	<ul style="list-style-type: none"> <li>• Use solar panels as an alternative energy source for on-location production equipment, where appropriate, economically and technically feasible.</li> <li>• Use multiple gathering lines placed in a single trench to minimize disturbance and construction, where appropriate, economically and technically feasible.</li> <li>• Install pipeline crossings at right angles to the drainages, wetlands, and perennial water bodies, where appropriate, economically and technically feasible.</li> <li>• Maintain a minimum of five feet of soil cover between the pipeline and the lowest point of the drainage or water body channel.</li> </ul>

Total: 4 comment(s)



## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400696893	FORM 2A SUBMITTED
400698013	FORM 2A SUBMITTED

Total Attach: 2 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	11/6/2014 9:18:00 AM
Permit	Ready to pass.	10/21/2014 2:27:05 PM
OGLA	Initiated/Completed OGLA Form 2A review on 10-21-14 by Dave Kubeczko; previously submitted Form 2A#400192549 and approved (09-14-11) OGCC#414231; same COAs apply - fluid containment, spill/release BMPs, lined pits/closed loop, flowback to tanks only, access road/pad gravelled and sediment control, slope control, and cuttings low moisture content; added notification, tank berming, and pipeline testing COAs; extended Public and LGD comment period 10 days to 11-02-14, no comments made; passed by CPW on 10-02-14 with WMP acceptable; passed OGLA Form 2A review on 11-04-14 by Dave Kubeczko; fluid containment, spill/release BMPs, lined pits/closed loop, flowback to tanks only, access road/pad gravelled and sediment control, slope control, cuttings low moisture content, notification, tank berming, and pipeline testing COAs.	10/21/2014 11:59:16 AM
LGD	LGD requests standard time extension to review application. Awaiting additional facility details from Encana which may not be available till after 10/22/14 comment deadline. Number and volume of tanakage and planned headcount for man camp.	10/21/2014 10:58:44 AM
DOW	The well pad depicted on this application lies within the boundary of the CPW-EnCana Wildlife Mitigation Plan (WMP). The terms and conditions of the WMP including BMPs and COAs are applicable to this site.  By: Taylor Elm, 10/2/2014, 9:55 a.m.	10/2/2014 9:58:28 AM
Permit	Passed completeness.	10/2/2014 9:10:18 AM
Permit	Sent back to draft as per operator's request.	9/29/2014 3:05:33 PM

Total: 7 comment(s)