

FORM  
2A

Rev  
04/01

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109



DE ET OE ES

Document Number:

400194205

Oil and Gas Location Assessment

New Location  Amend Existing Location Location#: 335939

Submit original plus one copy. This form is to be submitted to the COGCC prior to any ground disturbance activity associated with oil and gas development operations. This Assessment may be approved as a standalone application or submitted as an informational report accompanying an Application for Permit-To-Drill, Form 2. Approval of this 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. This form may serve as notice to land owners and other interested parties, please see the COGCC web site at <http://colorado.gov/cogcc/> for all accompanying information pertinent to this Oil and Gas Location Assessment.

Location ID:

**335939**

Expiration Date:

**10/05/2014**

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

1. 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.

2. Operator

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

3. Contact Information

Name: Julia Carter  
 Phone: (720) 876.5240  
 Fax: (720) 876.6240  
 email: Julia.Carter@encana.com

4. Location Identification:

Name: SG Number: L27 496  
 County: GARFIELD  
 Quarter: NWSW Section: 27 Township: 4S Range: 96W Meridian: 6 Ground Elevation: 8110

Define a single point as a location reference for the facility location. This point should be used as the point of measurement in the drawings to be submitted with this application. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 2039 feet FSL, from North or South section line, and 1216 feet FWL, from East or West section line.  
 Latitude: 39.671661 Longitude: -108.159811 PDOP Reading: 1.2 Date of Measurement: 04/05/2007  
 Instrument Operator's Name: Greg Olsen

5. Facilities (Indicate the number of each type of oil and gas facility planned on location):

Special Purpose Pits: <input type="text" value="0"/>	Drilling Pits: <input type="text" value="0"/>	Wells: <input type="text" value="1"/>	Production Pits: <input type="text" value="0"/>	Dehydrator Units: <input type="text" value="0"/>
Condensate Tanks: <input type="text" value="2"/>	Water Tanks: <input type="text" value="10"/>	Separators: <input type="text" value="1"/>	Electric Motors: <input type="text" value="0"/>	Multi-Well Pits: <input type="text" value="1"/>
Gas or Diesel Motors: <input type="text" value="18"/>	Cavity Pumps: <input type="text" value="0"/>	LACT Unit: <input type="text" value="0"/>	Pump Jacks: <input type="text" value="0"/>	Pigging Station: <input type="text" value="1"/>
Electric Generators: <input type="text" value="0"/>	Gas Pipeline: <input type="text" value="1"/>	Oil Pipeline: <input type="text" value="0"/>	Water Pipeline: <input type="text" value="5"/>	Flare: <input type="text" value="0"/>
Gas Compressors: <input type="text" value="0"/>	VOC Combustor: <input type="text" value="1"/>	Oil Tanks: <input type="text" value="0"/>	Fuel Tanks: <input type="text" value="0"/>	

Other: \_\_\_\_\_

6. Construction:

Date planned to commence construction: 10/01/2011 Size of disturbed area during construction in acres: 10.27  
 Estimated date that interim reclamation will begin: 10/01/2014 Size of location after interim reclamation in acres: 2.50  
 Estimated post-construction ground elevation: 8011 Will a closed loop system be used for drilling fluids: Yes  No   
 Will salt sections be encountered during drilling: Yes  No  Is H2S anticipated? Yes  No   
 Will salt (>15,000 ppm TDS Cl) or oil based muds be used: Yes  No   
 Mud disposal: Offsite  Onsite  Method: Land Farming  Land Spreading  Disposal Facility   
 Other: No Drilling on this Location

**7. Surface Owner:**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Address: \_\_\_\_\_ Email: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Date of Rule 306 surface owner consultation: \_\_\_\_\_  
 Surface Owner:  Fee  State  Federal  Indian  
 Mineral Owner:  Fee  State  Federal  Indian  
 The surface owner is:  the mineral owner  committed to an oil and gas lease  
 is the executer of the oil and gas lease  the applicant  
 The right to construct the location is granted by:  oil and gas lease  Surface Use Agreement  Right of Way  
 applicant is owner  
 Surface damage assurance if no agreement is in place:  \$2000  \$5000  Blanket Surety ID \_\_\_\_\_

**8. Reclamation Financial Assurance:**

Well Surety ID: \_\_\_\_\_  Gas Facility Surety ID: \_\_\_\_\_  Waste Mgnt. Surety ID: \_\_\_\_\_

**9. Cultural:**

Is the location in a high density area (Rule 603.b.): Yes  No   
 Distance, in feet, to nearest building: 16281, public road: 3584, above ground utilit: 25911  
 , railroad: 74179, property line: 3584

**10. 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

**11. 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

**12. Soils:**

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 used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.gov/> 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: 53. Parachute - Rhone Loams, 5-30% slopes

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

### 13. 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: 06/28/2011  
List individual species: Houndstongue, Common Mullein, Downy Brome

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): \_\_\_\_\_

### 14. Water Resources:

Rule 901.e. may require a sensitive area determination be performed. If this determination is performed the data is to be submitted with the Form 2A.

Is this a sensitive area:  No  Yes Was a Rule 901.e. Sensitive Areas Determination performed:  No  Yes  
Distance (in feet) to nearest surface water: 509, water well: 13318, depth to ground water: 73  
Is the location in a riparian area:  No  Yes Was an Army Corps of Engineers Section 404 permit filed  No  Yes  
Is the location within a Rule 317B Surface Water Suppl Area buffer zone:  
 No  0-300 ft. zone  301-500 ft. zone  501-2640 ft. 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:  No  Yes

### 15. Comments:

Encana Oil & Gas (USA) Inc. owns surface. This is an existing location built by ConocoPhillips, now owned by Encana, with one producing well. Onsite was held November 8, 2011 with the BLM and a frac pad was discussed at that time. This location is planned with one pit (used to hold frac water) to service nearby drilling pads for remote completion operations. This will greatly reduce truck traffic in the area. Also, please note that the area directly north of the pad will serve as the reference area for reclamation.

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

Signed: \_\_\_\_\_ Date: 08/11/2011 Email: Julia.Carter@encana.com

Print Name: Julia M. Carter 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: David S. Nashin Director of COGCC Date: 10/6/2011

**CONDITIONS OF APPROVAL, IF ANY:**  
\_\_\_\_\_

**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.**

**GENERAL MULTI-WELL PIT AND ROAN RIM COAs:**

Notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) and the COGCC Field Inspection Supervisor for Northwest Colorado (Shaun Kellerby; email shaun.kellerby@state.co.us) 48 hours prior to construction of the pit.

A Form 15 Earthen Pit Permit must be submitted to the COGCC Location Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) and approval must be obtained prior to construction of the completion/flowback fluids pit.

Notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) and the COGCC Field Inspection Supervisor for Northwest Colorado (Shaun Kellerby; email shaun.kellerby@state.co.us) 48 hours prior to start of pit and fracing operations.

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 (at least every 14 days), and maintained in good condition.

No portion of any pit that will be used to hold liquids shall be constructed on fill material, unless the pit and fill slope are designed and certified by a professional engineer, subject to review and approval by the director prior to construction of the pit. The construction and lining of the pit shall be supervised by a professional engineer or their agent. The entire base of the pit must be in cut.

If there are changes to the pit construction (i.e. changes from the submitted construction layout drawings), then the operator must submit a professional engineer (PE) approved/stamped as-built drawing (plan view and cross-sections) of the completion/flowback pit within 30 calendar days of construction.

The completion/flowback fluids multi-well pit must be double-lined. The pit will also require a leak detection system (Rule 904.e).

After installation of the uppermost liner and prior to operating the pit, the synthetic liner(s) shall be tested by filling the pit with at least 4 feet of water, measured from the base of the pit (not to exceed the 2- foot freeboard requirement). The operator shall monitor the pit for leaks for a period of 72 hours prior to draining the pit and commencing operations. Operator shall notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) 48 hours prior to start of the hydrotest. Hydrotest monitoring results must be maintained by the operator for the life of the pit and provided to COGCC prior to using the pit.

The nearby hillside and and fill-material bermed portions (if present) of the pit must be monitored for any day-lighting of fluids throughout pit operations.

The completion/flowback fluids multi-well pit must be fenced and netted. The operator must maintain the fencing and netting until the pit is closed in accordance with Rule 905. Closure of Pits, and Buried or Partially Buried Produced Water Vessels.

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.

Surface water samples from the unnamed stream located to the north on Dry Fork (at the location identified as ENPR23ST on attached map, approximately 1.6 miles north of the SG L27 pad) shall be collected prior to pit use and every 12 months to evaluate potential impacts from pit operations. At a minimum, the surface water samples will be analyze for the following parameters: major cations/anions (chloride, fluoride, sulfate, sodium); total dissolved solids (TDS); and BTEX/DRO.

Prior to pit closure, operator must submit E&P waste disposal information (if different from original Form 15 submittal) via a Form 4 Sundry Notice to the COGCC Location Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) and the COGCC Environmental Supervisor for Western Colorado (alex.fischer@state.co.us)for approval.

### Attachment Check List

Att Doc Num	Name
2034024	HYDROLOGY MAP
2034025	CORRESPONDENCE
400194205	FORM 2A SUBMITTED
400194213	LOCATION PICTURES
400194215	HYDROLOGY MAP
400194216	ACCESS ROAD MAP
400194217	NRCS MAP UNIT DESC
400194940	REFERENCE AREA PICTURES
400194994	LOCATION DRAWING
400195002	CONST. LAYOUT DRAWINGS

Total Attach: 10 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Passed by DOW; waived by LGD/Public. Final Comprehensive Review Status- -passed.	10/6/2011 7:33:39 AM
Permit	OPERATOR REFERENCED CONOCO SGU #CP12D-27, AN ABANDONED LOC. FOR FOOTAGES. WO OGLA TO PASS; THIS LOC. READY TO PASS BY PERMITTING.	9/21/2011 8:09:11 AM
Permit	Operator did not know how facilities tab info for number of wells got changed to "4"; requested change back to "1".	9/19/2011 10:03:05 AM
Permit	Req'd input from operator regarding plans for site including any future APD's & as drilled footages for existing well.	9/19/2011 9:50:36 AM
OGLA	Initiated/Completed OGLA Form 2A review on 08-25-11 by Dave Kubeczko; requested acknowledgement of fluid containment, spill/release BMPs, double lined pit, leak detection, fluid containment spill/release BMPs, monitoring hillside, no pit in fill, flowback to tanks, hydrotesting of pit, and stream sampling COAs from operator on 08-25-11; received acknowledgement of COAs from operator on 10-03-11; passed by CDOW on 08-12-11 with operator WMP acceptable; passed OGLA Form 2A review on (TBD: 10-05-11 by Dave Kubeczko; fluid containment, spill/release BMPs, double lined pit, leak detection, fluid containment spill/release BMPs, monitoring hillside, no pit in fill, flowback to tanks, hydrotesting of pit, and stream sampling COAs.	8/25/2011 2:05:26 PM
DOW	This well pad is located within the boundary of the Encana - CPW Wildlife Mitigation Plan. The BMPs and terms and conditions of the Wildlife Mitigation Plan are applicable.  Friday, August 12, 2011 at 10:50 A.M.	8/12/2011 10:51:11 AM

Total: 6 comment(s)

## BMP

<u>Type</u>	<u>Comment</u>
Construction	<ul style="list-style-type: none"><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>
Wildlife	<ul style="list-style-type: none"><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><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></ul>
Site Specific	<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>• 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><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>

Total: 3 comment(s)