

**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:

400470065

Date Received:

08/26/2013

Oil and Gas Location Assessment☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 335460

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:

335460

Expiration Date:

10/31/2016☐ 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: Heather Mitchell

Phone: (720) 876-3070

Fax: (720) 876-4070

email: heather.mitchell@encana.com

RECLAMATION FINANCIAL ASSURANCE

☐ Plugging and Abandonment Bond Surety ID: 20100017 ☐ Gas Facility Surety ID: _____

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Pitman Number: (O22NW)

County: GARFIELD

QuarterQuarter: SWSE Section: 22 Township: 6S Range: 93W Meridian: 6 Ground Elevation: 6242

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: 1074 feet FSL from North or South section line

1637 feet FEL from East or West section line

Latitude: 39.507551 Longitude: -107.758265

PDOP Reading: 1.5 Date of Measurement: 03/25/2013

Instrument Operator's Name: C.D. Slaugh

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	<u>24</u>	Oil Tanks	<u> </u>	Condensate Tanks	<u>12</u>	Water Tanks	<u> </u>	Buried Produced Water Vaults	<u> </u>
Drilling Pits	<u> </u>	Production Pits	<u> </u>	Special Purpose Pits	<u> </u>	Multi-Well Pits	<u> </u>	Temporary Large Volume Above Ground Tanks	<u> </u>
Pump Jacks	<u> </u>	Separators	<u>24</u>	Injection Pumps	<u> </u>	Cavity Pumps	<u> </u>		
Gas or Diesel Motors	<u> </u>	Electric Motors	<u> </u>	Electric Generators	<u> </u>	Fuel Tanks	<u> </u>	Gas Compressors	<u> </u>
Dehydrator Units	<u> </u>	Vapor Recovery Unit	<u> </u>	VOC Combustor	<u>1</u>	Flare	<u> </u>	LACT Unit	<u> </u>
								Pigging Station	<u> </u>

OTHER FACILITIES

Other Facility Type

Number

<input type="text"/>	<input type="text"/>
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Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Encana will use existing gas line and will install an 8" steel temporary water line for completions

CONSTRUCTION

Date planned to commence construction: 10/14/2013 Size of disturbed area during construction in acres: 8.75
Estimated date that interim reclamation will begin: 06/15/2015 Size of location after interim reclamation in acres: 2.44
Estimated post-construction ground elevation: 6237

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: No

Is H₂S 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?

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: ONSITE Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: Cuttings Disposal Method:

Other Disposal Description:

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: Phone:

Address: _____

Fax: _____

Address: _____

Email: _____

City: _____ State: _____ Zip: _____

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: _____

The right to construct this Oil and Gas Location is granted by: Surface Use Agreement

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

Date of Rule 306 surface owner consultation 04/29/2013

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: 1024 Feet
Building Unit: 1155 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 764 Feet
Above Ground Utility: 1024 Feet
Railroad: 5280 Feet
Property Line: 247 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: 68. Vale Silt Loam, 3 to 6 percent slopes.

NRCS Map Unit Name: 45. Morval-Tridell complex, 6 to 25 percent slopes.

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: 08/13/2013

List individual species: Cheatgrass, Field bindweed and scotch 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: 641 Feet

water well: 412 Feet

Estimated depth to ground water at Oil and Gas Location 120 Feet

Basis for depth to groundwater and sensitive area determination:

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 _____

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

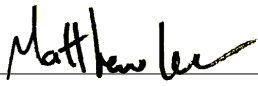
Comments This pad will be reclaimed to the adjacent vegetation to the north

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

Signed: _____ Date: 08/26/2013 Email: heather.mitchell@encana.com

Print Name: Heather Mitchell 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: 11/1/2013

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

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.

Operator must ensure secondary containment for any volume of fluids contained at well site during drilling and completion operations (as shown on the Construction Layout Drawings attachment); 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.

The access road will be constructed and maintained as to not allow any sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.

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.

Berms or other containment devices shall be constructed to be sufficiently impervious (preferably corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.

	<p>The moisture content of any 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, if the drill cuttings are to be left onsite, they must also meet the applicable standards of table 910-1.</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, storage vessel, or lined pit (only if an amended Form 2A has been submitted/approved and a Form 15 Earthen Pit Permitted has been submitted/approved) 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>Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network. Operator shall notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeckzo; email dave.kubeckzo@state.co.us) and the COGCC Field Inspection Supervisor for Northwest Colorado (Shaun Kellerby; email shaun.kellerby@state.co.us) 48 hours prior to testing surface poly/sterel or buried poly/steel pipelines.</p> <p>Operator must implement best management practices to contain any unintentional release of fluids along all portions of any surface pipeline route, if constructed, where temporary pumps and other necessary equipment are located.</p> <p>Operator must routinely inspect the entire length of any surface pipeline, if constructed) to ensure integrity. Operator shall conduct daily inspections of surface poly pipeline routes for leaks during active transfer of fluids. Inspections shall be conducted by viewing the length of the pipeline; operator will endeavor to minimize surface disturbance during pipeline monitoring. The operator shall maintain records of inspections, findings and repairs, if necessary, for the life of the pipelines.</p> <p>Operator must ensure appropriate secondary containment for volume of fluids that may be released before pump shut down from the surface pipeline at all stream, intermittent stream, ditch, and drainage crossings. Catchment basins, if needed, should be sized to contain the volume between pump stations or between the nearest pump station and the frac pad being used for this well pad location. Pump stations along the surface poly or steel pipeline route will be continuously monitored when operating in order to swiftly respond to such a failure.</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 any surface or buried pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.</p>
	<p>Notify the COGCC 48 hours prior to start of pad construction, rig mobilization, spud, and start of hydraulic stimulation operations using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).</p> <p>As required for Groundwater Baseline Sampling; Operator shall comply with Rule 609. STATEWIDE GROUNDWATER BASELINE SAMPLING AND MONITORING:</p>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Pre-Construction	Wattles, Silt Fence, Vegetation Buffers, Slash, Topsoil Windrows (diversions & ROP's), Scheduling, Phased Construction
2	Wildlife	<p>Minimize the number, length and footprint of oil & gas development roads Use existing routes where possible Combine utility infrastructure planning (gas, electric & water) when possible with roadway planning to avoid separate utility corridors Coordinate Employee transport when possible</p> <p>Reduce visits to well-sites through remote monitoring (i.e. SCADA) and the use of multi-function contractors. Maximize use of state-of-the-art drilling technology (e.g., high efficiency rigs, coiled-tubing unit rigs, closed-loop or pitless drilling, etc.) to minimize disturbance.</p>
3	Construction	<p>(Not all are used all the time) Terminal Containment, Diversions, Run-On Protection, Tracking, Benching, Terracing, ECM (Erosion Control Mulch), ECB (Erosion Control Blanket), Check Dams, Seeding, Mulching, Water Bars, Stabilized Unpaved Surfaces (Gravel), Stormwater & Snow Storage Containment, Scheduling, Phased Construction, Temporary Flumes, Culverts with inlet & outlet protection, Rip Rap, TRM (Turf Reinforcement Mats), Maintenance, Scheduling, Phased Construction, Fueling BMP's, Waste Management BMP's, Materials Handling BMP's</p>
4	Interim Reclamation	<p>Maintenance Revegetation Monitoring BMP maintenance & monitoring Weed Management</p>

Total: 4 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2106768	NRCS MAP UNIT DESC
2106778	CORRESPONDENCE
400470065	FORM 2A SUBMITTED
400470911	ACCESS ROAD MAP
400470912	CONST. LAYOUT DRAWINGS
400470915	NRCS MAP UNIT DESC
400470917	HYDROLOGY MAP
400470918	LOCATION DRAWING
400470919	MULTI-WELL PLAN
400470920	LOCATION PICTURES
400471035	REFERENCE AREA PICTURES
400471042	SURFACE AGRMT/SURETY

Total Attach: 12 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Passed completeness. No LGD or public comments.	10/31/2013 6:33:03 AM
Permit	Correction by the operator to say the surface owner is NOT the mineral owner beneath the location, therefore no commitment to an oil & gas lease.	10/11/2013 1:48:19 PM
OGLA	Initiated/Completed OGLA Form 2A review on 09-18-13 by Dave Kubeczko; requested acknowledgement of notification, GW baseline sampling, fluid containment, spill/release BMPs, sediment control access road, dust control, tank berming, cuttings low moisture content, pipeline, and flowback to tanks COAs from operator on 09-18-13; received acknowledgement of COAs from operator on 09-19-13; changed to sensitive area due to proximity to water well (716' to the east); changed distance to nearest downgradient surface water from 2530' to 641' to intermittent drainage (aerial photo) to the north; changed depth to groundwater from 0' below ground surface (bgs) to 120' bgs based on interpolation of surrounding water well data; passed by CPW on 08-27-13 with operator submitted wildlife BMPs acceptable; passed Form 2A review on 09-23-13 by Dave Kubeczko; notification, GW baseline sampling, fluid containment, spill/release BMPs, sediment control access road, dust control, tank berming, cuttings low moisture content, pipeline, and flowback to tanks COAs.	9/18/2013 5:19:56 PM
LGD	pass, gdb	9/16/2013 3:35:41 PM
DOW	After reviewing the proposed ammendments to the existing pad and facilities, CPW affirms that the BMPs provided by the operator on the submitted Form 2A suffice to address wildlife concerns at this location. Approved by: Taylor Elm, 8/27/2013, 16:07	8/27/2013 4:46:54 PM
Permit	Passes Completeness.	8/27/2013 10:41:31 AM

Total: 6 comment(s)