

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:

400675568

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Date Received:

11/17/2014

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 333163

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:

333163

Expiration Date:

01/04/2018

☒ 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: Toby Sachen
Phone: (720) 876-5845
Fax: (720) 876-6584
email: toby.sachen@encana.com

RECLAMATION FINANCIAL ASSURANCE

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

LOCATION IDENTIFICATION

Name: Sullivan Number: 26H-P268
County: WELD
QuarterQuarter: SESE Section: 26 Township: 2N Range: 68W Meridian: 6 Ground Elevation: 4964
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: 566 feet FSL from North or South section line
519 feet FEL from East or West section line
Latitude: 40.103839 Longitude: -104.962825
PDOP Reading: 1.5 Date of Measurement: 07/10/2014
Instrument Operator's Name: Ryan Christi

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 #

Well Site is served by Production Facilities

400702956

FACILITIES

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

Wells	14	Oil Tanks*		Condensate Tanks*		Water Tanks*		Buried Produced Water Vaults*	
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks		Separators*		Injection Pumps*		Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*		Electric Motors		Electric Generators*		Fuel Tanks*		LACT Unit*	
Dehydrator Units*		Vapor Recovery Unit*		VOC Combustor*		Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type

Number

Those facilities indicated by an asterisk () shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

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

Oil and water flowlines will run north from the well pad to the Sullivan Facilities pad.
Location of gas flowlines will be determined by KMG at a later date.
Oil, water and gas will flow combined north to the facilities pad from the well pad. The flowline is 3" FCA3 steel, epoxy coated, welded and pressure tested. It will be buried 4' deep.

CONSTRUCTION

Date planned to commence construction: 08/01/2015 Size of disturbed area during construction in acres: 8.00

Estimated date that interim reclamation will begin: 10/01/2016 Size of location after interim reclamation in acres: 0.50

Estimated post-construction ground elevation: 4965

DRILLING PROGRAM

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

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? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE

Drilling Fluids Disposal Method: Land application

Cutting Disposal: OFFSITE

Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

Land Application Bella 18 Facility ID 431606 and McDonald Farm Facility ID 431609.

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: Shadetree Eagle LLC.

Phone: _____

Address: 11829 Ridge Parkway #626

Fax: _____

Address: _____

Email: _____

City: Broomfield State: CO Zip: 80021

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: Surface Use Agreement

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): I

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

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	575 Feet	Feet
Building Unit:	618 Feet	Feet
High Occupancy Building Unit:	2996 Feet	Feet
Designated Outside Activity Area:	5280 Feet	Feet
Public Road:	440 Feet	Feet
Above Ground Utility:	390 Feet	Feet
Railroad:	5280 Feet	Feet
Property Line:	263 Feet	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.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

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: 08/30/2014

FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- ☒ Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (onll or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- ☒ By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

Production is located based on the CDSUA and the developer's plans for the land.

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: 40 - Nunn loam, 1 to 3 percent slopes

NRCS Map Unit Name: 47 - Olney fine sandy loam 1 to 3 percent slopes

NRCS Map Unit Name: 52 - Otero sandy loam 3 to 5 percent slopes

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: 08/13/2014

List individual species:

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): alfalfa, bindweed, perennial sow thistle, kochia, corn

WATER RESOURCES

Is this a sensitive area: ☐ No ☒ Yes

Distance to nearest

downgradient surface water feature: 1586 Feet

water well: 544 Feet

Estimated depth to ground water at Oil and Gas Location 10 Feet

Basis for depth to groundwater and sensitive area determination:

Sensitive area based on nearest well within 1/8 mile.
Depth to groundwater based on water well, permit #61085, with a static water level of 100'.
The area is sensitive based on shallow water table wells up to two mile away where the shallow water table is about 10 feet deep.
Permit number of the wells are: 41381 (12 feet deep), 15495 (10 feet deep), and 1518 (8 feet deep). The shallow groundwater table is likely to be the same depth as the referenced wells at the proposed site.

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

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 318A

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 Attached are drawings to help explain the land use. This land is subdivided and being developed now. A facility for the Town of Frederick's in the Western part of the business park and the recently purchased northern lot by Black Diamond will help also. Aerials don't show current land use as it has changed drastically over the past 6 months. This is no longer "crop" land as it is currently being developed.

Merideth #1 well is not part of the surface use agreement Encana has with the surface owner. KPK has a separate agreement with the surface owners as it pertains to surface use. This well is not an inclusion in Encana's Oil & Gas operations area as it was agreed to with the surface owner.

A new access road is going north south due to the Town of Frederick does not want CR 11 used as it is near the Frederick HS intersection.

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

Signed: _____ Date: 11/17/2014 Email: toby.sachen@encana.com

Print Name: Toby Sachen Title: Permitting 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: 1/5/2015

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 shall provide notice to COGCC 48 hours prior to commencing construction of this Oil and Gas Location via Form 42.
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Best Management Practices

No BMP/COA Type

Description

1	Planning	Per Rule 604.c.(2)E.i. Where technologically feasible and economically practicable, operators shall consolidate wells to create multi-well pads, including shared locations with other operators. Multi-well production facilities shall be located as far as possible from Building Units.
2	Traffic control	Under Rule 604.c.(2).D, if required by the local government, a traffic plan shall be coordinated with the local jurisdiction prior to commencement of move in and rig up. Any subsequent modification to the traffic plan must be coordinated with the local jurisdiction.
3	General Housekeeping	All surface trash, debris, scrap or discarded material connected with the operations of the property shall be removed from the premises or disposed of in a legal manner.
4	General Housekeeping	The well site will be cleared of all non-essential equipment, trash and debris after ninety days of a well P&A.

5	General Housekeeping	Encana will identify plugged and abandoned wellbores according to Rule 319.a.(5). including the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). Encana will also inscribe or imbed the well number and date of plugging upon the permanent monument.
6	General Housekeeping	Per Rule 604.c.(2)N. Any material not in use that might constitute a fire hazard will be removed a minimum of twenty-five (25) feet from the wellhead, tanks and separator. Any electrical equipment installations inside the bermed area will comply with API RP 500 classifications and comply with the current national electrical code as adopted by the State of Colorado.
7	General Housekeeping	Per Rule 803, to the extent practicable, Encana shall direct site lighting downward and inward, and lighting shall be shielded so as to avoid glare on public roads and Building Units within one thousand (1000) feet.
8	Dust control	Per Rule 805.c, Encana shall employ practices for control of fugitive dust caused by operations, such practices to include, but not limited to use of speed restrictions, regular road maintenance, restriction of construction activity during high wind days and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers, or automation of wells to reduce truck traffic may also be required if technologically feasible and economically reasonable to minimize fugitive dust emissions.
9	Construction	The pad will be constructed in such a manner that noise mitigation may be installed and removed without disturbing the site or landscaping.
10	Construction	Subject pad will have all weather access roads to allow for operator and emergency response.
11	Construction	Encana will install fencing to restrict access to wellheads and equipment. (If in a town, "Fencing style will be installed as required by the town".)
12	Construction	At the time of construction, all leasehold roads will be constructed to accommodate local emergency vehicle access requirements, and will be maintained in a reasonable condition.
13	Construction	Production facilities, observable from any public highway shall be painted with uniform, non-contrasting, non-reflective color tones and with colors matched to but slightly darker than the surrounding landscape.
14	Noise mitigation	Encana will perform a baseline noise survey prior to any operational activity measuring dBA at a distance 350 feet from the noise source (unless there is an occupied structure closer than that – then measurement will be taken 25 feet from the structure). If low frequency noise is a concern, measurement of dBC will be taken 25 feet from the occupied structure towards the noise source. As necessary, based on the survey, Encana will install temporary sound walls to minimize noise and light impacts during drilling and completions and will install permanent noise mitigation at the facility location as necessary to meet all COGCC regulations.
15	Noise mitigation	The subject location will be constructed to allow potential future noise mitigation installation without disturbance.
16	Odor mitigation	Per Rule 805.b.(3)B.iii. Well effluent containing more than ten (10) barrels per day of condensate or within two (2) hours after first encountering hydrocarbon gas of salable quality will be directed to a combination of sand traps, separators, surge vessels, and tanks as needed to ensure safe separation of sand, hydrocarbon liquids, water, and gas and to ensure salable products are efficiently recovered for sale or conserved and that non-salable products are disposed of in a safe and environmentally responsible manner.
17	Drilling/Completion Operations	Guy line anchors in the DJ Basin are not installed. Encana will use an engineered base beam that we guy wire anchor the derricks to.
18	Drilling/Completion Operations	Encana will utilize a closed-loop system for drilling operations at this location.

19	Drilling/Completion Operations	Encana will not utilize pits.
20	Drilling/Completion Operations	Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections will be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing will be conducted and the documented results will be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing will be conducted on a daily basis when practicable.
21	Drilling/Completion Operations	Adequate blowout prevention equipment will be used on all well servicing operations.
22	Drilling/Completion Operations	Backup stabbing valves will be used on well servicing operations during reverse circulation. Valves will be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.

Total: 22 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1668637	RULE 306.E. CERTIFICATION
2451156	SURFACE AGRMT/SURETY
400675568	FORM 2A SUBMITTED
400686781	NRCS MAP UNIT DESC
400686782	NRCS MAP UNIT DESC
400686783	NRCS MAP UNIT DESC
400698004	ACCESS ROAD MAP
400698008	LOCATION DRAWING
400698010	MULTI-WELL PLAN
400699976	WASTE MANAGEMENT PLAN
400703007	LOCATION PICTURES
400708335	HYDROLOGY MAP
400713395	OTHER
400741515	OTHER
400741517	OTHER

Total Attach: 15 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Changed distance to nearest High Occupancy Building to 2996 per the operator's instruction.	1/5/2015 8:09:33 AM
Permit	Final Review Completed. No LGD or public comment received.	1/2/2015 2:52:18 PM
OGLA	OGLA review is complete. No public comments received. OGLA task passed.	1/2/2015 12:22:28 PM
OGLA	Operator provided land application information via email. "We currently have two sites that are being used for land application. Both are approved through the COGCC and have facility IDs: Bella 18, #431606 and McDonald Farm, #431609." Added information under Other Disposal Description.	1/2/2015 12:20:40 PM
OGLA	Operator has Land application and Benifical reuse for Drilling waste checked, but no facility ID, plan or checklist meeting COGCC policy. Email correspondance with operator to update WMP with a COA or add a E&P facility ID. Waiting for response from the operator.	12/30/2014 4:34:23 PM
OGLA	Operator emailed additional BMPs	12/24/2014 10:38:44 AM
OGLA	Emailed operator regarding new location vs. amended location, flow line information, adding 2 more wells to the facility list, future land use to be changed to commercial, cultural distances zone information not complete, why building a new access road, and update pictures. Operator agreed to the above changes, added flow line info, added comments on access road and added BMPs. Checked cultural set back boxes and added description with concurrence from operator and information on prodction facility 2A doc. no 400702956.	12/16/2014 5:37:53 PM
Permit	Attached executed SUA from operator.	12/8/2014 3:10:12 PM
Permit	Pending-Requested SUA executed by all parties.	12/8/2014 8:51:20 AM
Permit	Production facilities are on a different pad. The cultural distances are from wellheads only.	12/8/2014 8:19:09 AM
Permit	The Certification of Compliance with Rule 305.a Pre-Application Notice is under other.	12/8/2014 8:02:10 AM
Permit	Passed Completeness	11/28/2014 8:34:15 AM
OGLA	Passed Buffer Zone completeness review	11/26/2014 12:30:47 PM
Permit	Returned to Draft: For issues described by OGLA	11/25/2014 7:53:44 AM
OGLA	Issues identified during Buffer Zone completeness review: MLVT description in operator comments is incorrect No 303.b.(3)C pipeline description Current listed land use on form Subdivided Commercial - not consistent with Location Drawing or Photos Please attach SUA The planned disturbed area overlaps the existing Meredith #1 Well. Please describe plans for the Well and if the existing Well will be included into the proposed Oil and Gas Location.	11/24/2014 1:13:49 PM
Permit	Within buffer zone, sent to OGLA for further review.	11/18/2014 7:28:59 AM

Total: 16 comment(s)