

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:

400702956

(SUBMITTED)

Date Received:

11/17/2014

Oil and Gas Location Assessment

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

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:

Expiration Date:

☐ 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: ()

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 Facil

County: WELD

QuarterQuarter: NESE Section: 26 Township: 2N Range: 68W Meridian: 6 Ground Elevation: 4969

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: 2246 feet FSL from North or South section line

862 feet FEL from East or West section line

Latitude: 40.108449 Longitude: -104.963999

PDOP Reading: 1.8 Date of Measurement: 08/15/2014

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 #

Production Facilities Location serves Well(s)

400675568

FACILITIES

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

Wells	Oil Tanks*	28	Condensate Tanks*		Water Tanks*	6	Buried Produced Water Vaults*	
Drilling Pits	Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks	Separators*	13	Injection Pumps*		Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*	Electric Motors		Electric Generators*		Fuel Tanks*		LACT Unit*	
Dehydrator Units*	Vapor Recovery Unit*	8	VOC Combustor*	13	Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type

Number

Buffer Vessel	1
Meter	13
Vapor Recovery Tower	1

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 from the south from the well pad to the Sullivan Facilities pad.
Gas will be sold from the well pad, pipeline determined by KMG.

CONSTRUCTION

Date planned to commence construction: 08/01/2015

Size of disturbed area during construction in acres: 12.50

Estimated date that interim reclamation will begin: 10/01/2016

Size of location after interim reclamation in acres: 5.50

Estimated post-construction ground elevation: 4971

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: _____

Drilling Fluids Disposal Method: _____

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: Shadetree Eagle, LLC

Phone: _____

Address: 11829 Ridge Pkwy #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): Subdivided Commercial

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 Commercial

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:	Feet	296 Feet
Building Unit:	Feet	370 Feet
High Occupancy Building Unit:	Feet	1584 Feet
Designated Outside Activity Area:	Feet	5280 Feet
Public Road:	Feet	700 Feet
Above Ground Utility:	Feet	660 Feet
Railroad:	Feet	5280 Feet
Property Line:	Feet	180 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: 09/05/2014

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.

The facilities placement is due to the land being subject to a prior CDSUA dated March 1, 2006. The CDSUA locked us into this area and the new surface owners (developers) did not want the facilities anywhere else because of their development plans. Additionally, as you move west from this location it gets closer to Godding Hollow Ditch and a flood plain area, which we need to stay clear of for obvious reasons. The main reason for the choice of facilities location is 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: 1393 Feet

water well: 1137 Feet

Estimated depth to ground water at Oil and Gas Location 140 Feet

Basis for depth to groundwater and sensitive area determination:

According to visual inspection, water well, permit #7912, has not been drilled. The next closest drilled well at 1137' has a static water level of 140'.
Sensitive area due to shallow groundwater.

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 zone: 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 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 Modular Large Volume Tanks (MLVTs) will be in service at this facility. Encana certifies that we will comply with the MLVT Policy and that records will be made available to the COGCC upon request. A&W Water Service, Inc. is the vendor that provides water services to Encana in the DJ Basin. Two to three 40,000 barrel tanks will be on site for approximately 2 months or until the duration of completion operations have been finalized. A Location Drawing showing the location of these MLVTs is attached. The temporarily disturbed land will be fully reclaimed after completion operations are done.

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.

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: 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: _____

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.

Best Management Practices

No	BMP/COA Type	Description
1	Traffic control	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 per Rule 604c.2.D .
2	General Housekeeping	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.
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	Material Handling and Spill Prevention	<ul style="list-style-type: none"> • Annual hydrostatic test on the oil dump line from the separator to the tank battery. • Annual hydrostatic “static” tests on our oil tanks. • Annual hydrostatic “static” tests on our produced water tank and water dump line from the separator to the produced water tank. • Lease Operator inspections of all equipment not to exceed 48 hours. • Monthly documented inspections (EU). • Annual environmental inspections of all battery and well equipment and pads. • Annual UT inspections of the pressure vessels and input into Encana’s RIPL Predictive Integrity Maintenance Program. (HLP separators and fuel gas separators)”
6	Material Handling and Spill Prevention	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.
7	Construction	The pad will be constructed in such a manner that noise mitigation may be installed and removed without disturbing the site or landscaping.
8	Construction	Subject pad will have all weather access roads to allow for operator and emergency response.
9	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".)
10	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.
11	Noise mitigation	The subject location will be constructed to allow potential future noise mitigation installation without disturbance.
12	Emissions mitigation	Flow lines, separators, and sand traps capable of supporting green completions as described in Rule 805 will be installed on subject location at which commercial quantities of gas are reasonably expected to be produced based on existing adjacent wells within 1 mile.
13	Emissions mitigation	Temporary flowback flaring and oxidizing equipment will include: adequately sized equipment to handle 1.5 times the largest flowback volume of gas experienced in a ten mile radius. If there is overrun, Encana will shut in the well versus freely venting
14	Emissions mitigation	Encana will follow and comply with all leak detection and repair and storage tank emission management plan conditions as required by Colorado Air Quality Control Commission Regulation Number 7. This will include at least monthly Audible, Visual and Olfactory (AVO) inspections of the components and tanks at our Production Facilities at most weekly or at least monthly starting on January 1, 2015. In addition, Encana will perform infra-red camera inspections of these components and the storage tanks at most monthly or at least annually.

15	Drilling/Completion Operations	Encana utilizes 24" tall corrugated galvanized metal berm walls with a capacity in excess of 150% of the largest tank contained within the wall. In addition, Encana best practices mandates the use of impervious liners that extends under each storage tank and up the walls, permanently affixed to the top of the metal berm wall. Protrusions of piping that come through the liner include a fully sealed "boot" to prevent leakage.
16	Drilling/Completion Operations	All newly installed or replaced crude oil and condensate storage tanks will be designed, constructed, and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). Encana will maintain written records verifying proper design, construction, and maintenance, and will make these records available for inspection by the Director. In addition, onsite inspections are conducted internally to insure guidelines are met.

Total: 16 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400702956	FORM 2A SUBMITTED
400703028	ACCESS ROAD MAP
400703036	LOCATION DRAWING
400703037	LOCATION PICTURES
400703044	WASTE MANAGEMENT PLAN
400703108	NRCS MAP UNIT DESC
400703109	NRCS MAP UNIT DESC
400703110	NRCS MAP UNIT DESC
400703111	NRCS MAP UNIT DESC
400707279	HYDROLOGY MAP
400713403	OTHER
400713613	FACILITY LAYOUT DRAWING
400741529	OTHER
400741531	OTHER
400741538	SURFACE AGRMT/SURETY

Total Attach: 15 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Returned to Draft: For the reasons outlined by OGLA.	11/25/2014 8:25:04 AM
OGLA	Buffer Zone Completeness Review identified the following issues: MLVTs planned but not listed on Facilities count No 303.b.(3)C pipeline description Current listed land use on form - not consistent with Location Drawing or Photos Please attach SUA Please describe plans for the existing Encana well and facilities south of the proposed location.	11/24/2014 11:51:56 AM
Permit	Within exception zone, sent to OGLA for further review.	11/18/2014 7:30:19 AM

Total: 3 comment(s)