

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

T1S R100W SEC 27: ALL

Total Acres in Described Lease: 640 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # COC056052

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 0 Feet

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: 293 Feet

Above Ground Utility: 5280 Feet

Railroad: 5280 Feet

Property Line: 253 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).

- 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: _____

SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 1208 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 5280 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): Cathedral Bluff Unit Number: COC76070X

SPACING & FORMATIONS COMMENTS

Measurement are being made to CBU DHN8B1 A11 2100

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
MANCOS	MNCS			

DRILLING PROGRAM

Proposed Total Measured Depth: 19361 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 1208 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H₂S Drilling Operations Plan)

Will salt sections be encountered during drilling? No

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

Will oil based drilling fluids be used? No

BOP Equipment Type: Annular Preventor Double Ram Rotating Head None

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

DRILLING WASTE MANAGEMENT PROGRAM

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

Cuttings Disposal: ONSITE Cuttings Disposal Method: Cuttings trench

Other Disposal Description:

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	30+0/0	20+0/0	Line Pipe	0	120	198	120	0
SURF	17+1/2	10+3/4	40.5	0	2000	1103	2000	0
2ND	9+7/8	7+5/8	26.4	0	9500	853	9500	2700
3RD	6+1/2	5+0/0	23.20	0	19361	615	19361	9000

Conductor Casing is NOT planned

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)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- Rule 318A.a. Exception Location (GWA Windows).
- Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number

OTHER LOCATION EXCEPTIONS

Check all that apply:

- Rule 318.c. Exception Location from Rule or Spacing Order Number
- Rule 603.a.(2) Exception Location (Property Line Setback).

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 application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: _____

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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

Signed: _____ Print Name: Alexis Kubat

Title: Regulatory Analyst Date: 7/16/2014 Email: Alexis.Kubat@encana.com

Operator must have a valid water right or permit allowing for industrial use or purchased water from a seller that has a valid water right or permit allowing for industrial use, otherwise an application for a change in type of use is required under Colorado law. Operator must also use the water in the location set forth in the water right decree or well permit, otherwise an application for a change in place of use is required under Colorado law. Section 37-92-103(5), C.R.S. (2011).

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: *Matthew Lee* Director of COGCC Date: 10/3/2014

Expiration Date: 10/02/2016

API NUMBER
05 103 12144 00

Conditions Of Approval

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

COA Type

Description

	(1) COMPLIANCE WITH THE MOST CURRENT REVISION OF THE NORTHWEST COLORADO NOTIFICATION POLICY IS REQUIRED. SEE ATTACHED NOTICE. (2) PROVIDE CEMENT COVERAGE FROM THE INTERMEDIATE CASING (7+5/8" SECOND STRING) SHOE TO A MINIMUM OF 200 FEET ABOVE ALL MESAVERDE GROUP (AND OHIO CREEK, IF PRESENT) OIL, GAS, AND WATER-BEARING SANDSTONE AND COALBED FORMATIONS. VERIFY PRODUCTION CASING CEMENT COVERAGE WITH A CEMENT BOND LOG.
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Best Management Practices

No	BMP/COA Type	Description
1	General Housekeeping	<ul style="list-style-type: none"> • Prohibit Encana employees and contractors from carrying projectile weapons on Encana property, except during company organized events. • Prohibit pets on Encana property.
2	Wildlife	<ul style="list-style-type: none"> • 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. • Perform biological surveys (on-site) for each new development, using the most recent data sets for wildlife and aquatic resources. • 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. • 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. • Use enclosed, locking garbage receptacles or implement a strict daily trash removal regime on each temporary or permanent work location
3	Dust control	<ul style="list-style-type: none"> • 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
4	Construction	<ul style="list-style-type: none"> • Use solar panels as an alternative energy source for on-location production equipment, where appropriate, economically and technically feasible. • Use multiple gathering lines placed in a single trench to minimize disturbance and construction, where appropriate, economically and technically feasible. • Install pipeline crossings at right angles to the drainages, wetlands, and perennial water bodies, where appropriate, economically and technically feasible. • Maintain a minimum of five feet of soil cover between the pipeline and the lowest point of the drainage or water body channel.

Total: 4 comment(s)

Applicable Policies and Notices to Operators

NW Colorado Notification Policy.

Notice Concerning Operating Requirements for Wildlife Protection.

Attachment Check List

Att Doc Num	Name
2167888	WELL LOCATION PLAT
400614800	FORM 2 SUBMITTED
400645591	DIRECTIONAL DATA
400645594	DEVIATED DRILLING PLAN
400645959	FED. DRILLING PERMIT

Total Attach: 5 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Attached correct well locaiton plat as per opr. Final review complete.	9/30/2014 4:09:25 PM
Permit	The horizontal wellbore crosses section 22 to reach the BHL in section 27, but section 22 was not supplied with the Well location plat. Requested operator provide such.	9/19/2014 8:47:23 AM
Permit	Operator corrected the lease number and distance to the nearest lease line.	8/19/2014 10:02:53 AM
Permit	Well location plat is missing section 22 through which the wellbore passes. The lease number is invalid for this horizontal it does pretain to the directional location. The minerals on the Federal layer says "other", haven't been able to determine what that means.	8/14/2014 10:47:24 AM
Engineer	THE PROPOSED SURFACE CASING IS MORE THAN 50' BELOW THE DEPTH OF THE DEEPEST WATER WELL WITHIN 1-MILE OF THE SURFACE LOCATION WHEN CORRECTED FOR ELEVATION DIFFERENCES. THE DEEPEST WATER WELL WITHIN 1-MILE SHOWS A DEPTH OF 00 FEET DEEP. Evaluated existing offset wells within 1,500 feet of this wellbore. No mitigation required.	7/22/2014 3:29:26 PM

Total: 5 comment(s)