

FORM

2

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:

400510308

APPLICATION FOR PERMIT TO:

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate
TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER _____Refilling ☒

Date Received:

11/13/2013

ZONE TYPE SINGLE ZONE ☐ MULTIPLE ZONES ☒ COMMINGLE ZONES ☒Sidetrack ☐

Well Name: MCU

Well Number: 22-14A (N22W)

Name of Operator: ENCANA OIL & GAS (USA) INC

COGCC Operator Number: 100185

Address: 370 17TH ST STE 1700

City: DENVER

State: CO

Zip: 80202-5632

Contact Name: Alexis Bidgood

Phone: (720)876-3074

Fax: ()

Email: Alexis.Bidgood@encana.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20100017

WELL LOCATION INFORMATION

QtrQtr: SESW Sec: 22 Twp: 7S Rng: 93W Meridian: 6

Latitude: 39.425629

Longitude: -107.761848

Footage at Surface: 556 feet FNL/FSL FSL 2133 feet FEL/FWL FWL

Field Name: MAMM CREEK

Field Number: 52500

Ground Elevation: 7026

County: GARFIELD

GPS Data:

Date of Measurement: 05/18/2011 PDOP Reading: 0.0 Instrument Operator's Name: Ted T. Taggart

If well is ☒ Directional ☐ Horizontal (highly deviated) **submit deviated drilling plan.**
 Footage at Top of Prod Zone: FNL/FSL FSL 2427 FWL 961 FSL 2427 FWL
 Sec: 22 Twp: 7S Rng: 93W Sec: 22 Twp: 7S Rng: 93W

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☐ Fee ☐ State ☒ Federal ☐ IndianThe Surface Owner is: ☒ is the mineral owner beneath the location.

(check all that apply)

☒ 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 by this Well: Yes

The right to construct the Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place:

Surface Surety ID:

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.)

T7S-R93W
Sec. 22: SWNW, S2SW
Sec. 26: W2NE, W2, W2SE
Sec. 27: SENE, W2NW, NWSW, SESW, E2SE, SWSE
COC-69616

Total Acres in Described Lease: 960 Described Mineral Lease is: ☐ Fee ☐ State ☒ Federal ☐ Indian

Federal or State Lease # COC69616

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 153 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 2680 Feet
Building Unit: 3423 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 2200 Feet
Above Ground Utility: 2100 Feet
Railroad: 5280 Feet
Property Line: 447 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: 320 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 2617 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): Middleton Creek Unit Number: COC0688997X

SPACING & FORMATIONS COMMENTS

Distances are being measured in WMFK formation.

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
ILES	ILES	191-83		
WILLIAMS FORK	WMFK	191-83		

DRILLING PROGRAM

Proposed Total Measured Depth: 9250 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 320 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? _____ (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? _____ No

Reuse Facility ID: _____ 324286 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	24+0/0	16+0/0	.25" Wall	0	60	100	60	0
SURF	12+1/4	9+5/8	36	0	1200	443	1200	0
1ST	7+7/8	4+1/2	11.6	0	9250	627	9250	6144

☐ 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

There have been no changes to the location.
I certify that there have been no changes on land use, lease description.
The pad has been built.
The pit has not been constructed.
There will be no additional surface disturbance.
The location does not require a variance from any of the rules listed in Rule 306.d.(1).(A).(ii).
The location is not within a wildlife Restricted Surface Occupancy Area.

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

Location ID: 324286

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 Bidgood

Title: Permitting Analyst Date: 11/13/2013 Email: Alexis.Bidgood@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: 2/23/2014

Expiration Date: 02/22/2016

API NUMBER

05 045 21273 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.

<u>COA Type</u>	<u>Description</u>
	<p>(1) COMPLIANCE WITH THE MOST CURRENT REVISION OF THE NORTHWEST COLORADO NOTIFICATION POLICY IS REQUIRED. SEE ATTACHED NOTICE</p> <p>(2) COMPLIANCE WITH THE MOST CURRENT REVISION OF THE GARFIELD COUNTY RULISON FIELD NOTICE TO OPERATORS IS REQUIRED, WITH THE FOLLOWING EXCEPTION: ALL FIELD NOTICE REQUIREMENTS SPECIFIED IN THIS NOTICE TO OPERATORS ARE SUPERSEDED BY THE REQUIREMENTS OF THE MOST CURRENT REVISION OF THE NORTHWEST COLORADO NOTIFICATION POLICY (SEE CONDITION OF APPROVAL #1). SEE ATTACHED NOTICE.</p> <p>(3) COMPLIANCE WITH THE MOST CURRENT REVISION OF THE MAMM CREEK FIELD NOTICE TO OPERATORS IS REQUIRED, WITH THE FOLLOWING EXCEPTION: ALL FIELD NOTICE REQUIREMENTS SPECIFIED IN THIS NOTICE TO OPERATORS ARE SUPERSEDED BY THE REQUIREMENTS OF THE MOST CURRENT REVISION OF THE NORTHWEST COLORADO NOTIFICATION POLICY (SEE CONDITION OF APPROVAL #1). SEE ATTACHED NOTICE.</p> <p>(4) COMPLIANCE WITH THE NOTICE TO OPERATORS DRILLING WELLS IN THE BUZZARD, MAMM CREEK, AND RULISON FIELDS, GARFIELD COUNTY AND MESA COUNTY IS REQUIRED. (PROCEDURES AND SUBMITTAL REQUIREMENTS FOR COMPLIANCE WITH COGCC ORDERS NOS. 1-107, 139-56, 191-22, AND 369-2 (JULY 8, 2010)). SEE ATTACHED NOTICE.</p> <p>(5) CEMENT ON PRODUCTION CASING MUST BE A MINIMUM OF 200' ABOVE THE TOP OF THE MESA VERDE FORMATION (OR 200' ABOVE THE OHIO CREEK FORMATION IF PRESENT). CEMENT TOP VERIFICATION BY CBL IS REQUIRED. THIS REQUIREMENT SHALL SUPERSEDE THE TOP OF CEMENT REQUIREMENTS IN THE MAMM CREEK FIELD NOTICE TO OPERATORS.</p>
	<p>Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire wellbore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Form 5 for every well on the pad shall identify which well was logged.</p>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Pre-Construction	PRECONSTRUCTION Wattles, Silt Fence, Vegetation Buffers, Slash, Topsoil Windrows (diversions & ROP's), Scheduling, Phased Construction
2	Wildlife	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 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. Reclaim mule deer and elk habitats with native shrubs, grasses, and forbs appropriate to the ecological site disturbed.
3	Construction	CONSTRUCTION/RECLAMATION (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
4	Interim Reclamation	POST CONSTRUCTION/RECLAMATION Maintenance Revegetation Monitoring BMP maintenance & monitoring Weed Management

Total: 4 comment(s)

Applicable Policies and Notices to Operators

Mamm Creek Field Area Notice to Operators.
Piceance Rulison Field - Notice to Operators.
NW Colorado Notification Policy.
Bradenhead Pressure Reporting-Garfield County (Mamm Creek & Rulison Fields) Mesa County (Buzzard Field).
Notice Concerning Operating Requirements for Wildlife Protection.

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400510308	FORM 2 SUBMITTED
400512455	DEVIATED DRILLING PLAN
400512456	DIRECTIONAL DATA
400512458	WELL LOCATION PLAT

Total Attach: 4 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Requested refile statement. Operator requested the submittal of refile statements.	2/11/2014 12:59:36 PM
Permit	Final review completed on this refile. No LGD comments.	1/17/2014 10:30:16 AM
Permit	The was an amended and approved 2A at the location.	1/17/2014 10:29:05 AM
Engineer	THE PROPOSED SURFACE CASING IS MORE THAN 50 FEET 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 IS 000 FEET DEEP (NO DEPTH DATA FOR WATER WELLS WITHIN ONE MILE).	11/18/2013 2:39:02 PM
Permit	Form passes completeness	11/14/2013 8:32:07 AM

Total: 5 comment(s)