

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:  
400950877

APPLICATION FOR PERMIT TO:

Drill       Deepen       Re-enter       Recomplete and Operate

Date Received:  
12/30/2015

TYPE OF WELL    OIL     GAS     COALBED     OTHER \_\_\_\_\_  
ZONE TYPE      SINGLE ZONE     MULTIPLE ZONES     COMMINGLE ZONES

Refiling   
Sidetrack

Well Name: Horsetail      Well Number: 30E-3104  
Name of Operator: WHITING OIL & GAS CORPORATION      COGCC Operator Number: 96155  
Address: 1700 BROADWAY STE 2300  
City: DENVER      State: CO      Zip: 80290  
Contact Name: Michael Brown      Phone: (307)237-9310      Fax: ( )  
Email: ml\_brown@bresnan.net

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20030110

WELL LOCATION INFORMATION

QtrQtr: Lot 2      Sec: 30      Twp: 10N      Rng: 57W      Meridian: 6  
Latitude: 40.810567      Longitude: -103.800800

Footage at Surface:      2372 feet      FNL/FSL      FNL      719 feet      FEL/FWL      FWL

Field Name: WILDCAT      Field Number: 99999  
Ground Elevation: 4812      County: WELD

GPS Data:  
Date of Measurement: 04/24/2015    PDOP Reading: 1.2    Instrument Operator's Name: Jared Christopher

If well is     Directional     Horizontal (highly deviated)    **submit deviated drilling plan.**

Footage at Top of Prod Zone:    FNL/FSL      FEL/FWL      Bottom Hole:    FNL/FSL      FEL/FWL  
2543    FSL      1307    FWL      100    FSL      1155    FWL  
Sec: 30    Twp: 10N    Rng: 57W      Sec: 31    Twp: 10B    Rng: 57W

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership:     Fee     State     Federal     Indian

The 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:    No

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

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.)

T10N R57W, 6TH P.M.  
SECTION 5: SW/4NW/4, W/2SW/4  
SECTION 6: LOTS 4(36.53),5(35.80),6(35.86),7(35.93),S/2NE/4,SE/4NW/4,  
E/2SW/4,SE/4  
SECTION 31: L1 (37.16), L2 (37.21), E2NW, NE (A/K/A N2)

Total Acres in Described Lease: 938 Described Mineral Lease is:  Fee  State  Federal  Indian

Federal or State Lease # \_\_\_\_\_

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

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 3150 Feet  
Building Unit: 3150 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 5280 Feet  
Above Ground Utility: 594 Feet  
Railroad: 5280 Feet  
Property Line: 281 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 proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 209 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 100 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

## SPACING & FORMATIONS COMMENTS

\_\_\_\_\_

## OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR	535-508	960	S/2 S30, All S31

## DRILLING PROGRAM

Proposed Total Measured Depth: 13743 Feet

Distance from proposed wellbore to nearest existing or permitted wellbore belonging to another operator: \_\_\_\_\_

1515 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: [X] Annular Preventor [X] 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: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

Bio-remediation

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

CASING PROGRAM

Table with 9 columns: Casing Type, Size of Hole, Size of Casing, Wt/Ft, Csg/Liner Top, Setting Depth, Sacks Cmt, Cmt Btm, Cmt Top. Rows include CONDUCTOR, SURF, and 1ST.

[ ] 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

The well will be drilled to a KOP at 5085' TVD. A curve will be built to landed in the Niobrara at 5606' TVD. The lateral will be drilled with a 7-7/8" bit to TD at 13743 MD. A 5-1/2" casing string will be run with a marker joint to isolate the legal productive interval and cemented to surface. If hole issues occur during the drilling operation we will revert to the outlined contingency drilling program.

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation has been determined in a 3D distance.

This application is in a Comprehensive Drilling Plan No 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: Michael Brown

Title: Agent Date: 12/30/2015 Email: ml\_brown@bresnan.net

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:  Director of COGCC Date: 3/4/2016

Expiration Date: 03/03/2018

### API NUMBER

05 123 42872 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

	<p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test.:</p> <ol style="list-style-type: none"> <li>1) Within 30 days of rig release prior to stimulation.</li> <li>2) Between 6 and 7 months after rig release.</li> <li>3) Within 30 days of first production as reported on Form 5A.</li> </ol>
	<ol style="list-style-type: none"> <li>1) Provide 48 hour notice of MIRU via electronic Form 42.</li> <li>2) Set 1580' of surface casing. (base of Upper Pierre aquifer).</li> <li>3) Provide cement coverage to a minimum of 200' above Niobrara. Verify coverage with cement bond log.</li> </ol>

## Best Management Practices

### No BMP/COA Type

### Description

1	Storm Water/Erosion Control	<p>Stormwater management plans (SWMP) are in place to address construction, drilling and operations associated with oil and gas development throughout the State of Colorado. BMPs will be constructed as necessary to prevent stormwater from leaving the construction site. BMPs used will vary according to the location, and will remain until the pad is reclaimed.</p>
2	Material Handling and Spill Prevention	<p>Spill Prevention Control and Countermeasures (SPCC) plans are in place to address any possible spill associated with oil and gas operations throughout the State of Colorado.</p> <ul style="list-style-type: none"> <li>• Materials and fluids will be stored in a neat and orderly fashion.</li> <li>• Waste will be collected regularly and disposed of at an offsite facility.</li> <li>• Prompt cleanup is required of spills to minimize waste materials entering the stormwater runoff.</li> <li>• Drip pans will be used during fueling and maintenance to contain spills or leaks.</li> <li>• Cleanup of trash and discarded material will be done at the end of the work day.</li> <li>• Cleanup will consist of monitoring the road, location and any other work areas.</li> <li>• Material to be cleaned up includes trash, scrap, and contaminated soil.</li> </ul>
3	Drilling/Completion Operations	<p>One of the first wells drilled on the pad will be logged with an open-hole resistivity log with gamma-ray from TD to into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on the production casing (or intermediate casing if production liner is run). All wells on the pad will have the horizontal portion of the wellbore logged with a measured-while-drilling log with gamma-ray. The Form 5, Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open-hole logs shall clearly state "No open-hole logs were run." The Form 5 for a well without open-hole logs shall clearly identify (by API#, well name &amp; number) the well in which open-hole logs were run.</p>

Total: 3 comment(s)

## Applicable Policies and Notices to Operators

### Policy

Notice Concerning Operating Requirements for Wildlife Protection.  
[http://cogcc.state.co.us/documents/reg/Policies/Wildlife\\_Notice.pdf](http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf)

## Attachment Check List

<b>Att Doc Num</b>	<b>Name</b>
400950877	FORM 2 SUBMITTED
400961899	OffsetWellEvaluations Data
400961905	DIRECTIONAL DATA
400961908	WELL LOCATION PLAT
400961910	OTHER
400961911	DEVIATED DRILLING PLAN
400961913	SURFACE AGRMT/SURETY
400973849	DRILLING PLAN

Total Attach: 8 Files

### General Comments

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
Permit	Final review complete.	3/3/2016 12:30:35 PM
Permit	Anti-collision report is attached as "OTHER". Permitting task complete.	3/3/2016 12:24:09 PM
Engineer	Operator sent new drilling plan without OBM in the mud program.	1/19/2016 10:36:45 AM
Engineer	Operator agent called to acknowledge increased surface casing and to advise they will not be using OBM specified in the contingency mud program in the drilling plan.	1/15/2016 1:55:13 PM
Data Entry	Evaluated existing wells within 1500' of proposed directional.	1/11/2016 11:31:26 AM
Permit	Passed completeness.	12/30/2015 3:40:33 PM

Total: 6 comment(s)