

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:

400567666

Date Received:

03/10/2014

#### APPLICATION FOR PERMIT TO:

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER \_\_\_\_\_

Refilling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Horsetail

Well Number: 30F-3107

Name of Operator: WHITING OIL AND 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: SENW Sec: 30 Twp: 10N Rng: 57W Meridian: 6

Latitude: 40.810544

Longitude: -103.796031

Footage at Surface: 2373 feet FNL/FSL FNL 2039 feet FEL/FWL FWL

Field Name: WILDCAT

Field Number: 99999

Ground Elevation: 4781

County: WELD

GPS Data:

Date of Measurement: 01/09/2014 PDOP Reading: 1.5 Instrument Operator's Name: Dave Swanson

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

Footage at Top of Prod Zone: FNL/FSL FNL/FWL Bottom Hole: FNL/FSL FEL/FWL  
2131 FSL 2230 FWL 600 FSL 2145 FWL  
Sec: 30 Twp: 10N Rng: 57W Sec: 31 Twp: 10N 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: 3722 Feet  
Building Unit: 3722 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 3030 Feet  
Above Ground Utility: 5280 Feet  
Railroad: 5280 Feet  
Property Line: 280 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: 213 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 520 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	535-413	960	S.30:S2,S.31:ALL

## DRILLING PROGRAM

Proposed Total Measured Depth: 12700 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 175 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H<sub>2</sub>S 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: 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

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	16+1/16	16	65	0	80			
SURF	13+1/2	9+5/8	36	0	1550	689	1550	0
1ST	8+3/4	7	29	0	5822	391	5822	0
1ST LINER	6	4+1/2	11.6	5040	12700	528	12700	5040

☐ 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: 435694

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: 3/10/2014 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: 4/5/2014

Expiration Date: 04/04/2016

### API NUMBER

05 123 39201 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

	Operator acknowledges the proximity of the referenced offset well(s) of concern. Operator agrees to: comply with the DJ Basin Horizontal Offset Policy to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit Form 42(s) ("OFFSET MITIGATION COMPLETED") for the remediated wells, referencing the API Number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.
	1) Provide 48 hour notice prior to spud via electronic Form 42. 2) Provide cement coverage to a minimum of 200' above Niobrara. Verify coverage with cement bond log. 3) Run and submit Directional Survey from TD to base of surface casing. Ensure that the wellbore complies with setback requirements in commission orders or rules prior to producing the well.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Storm Water/Erosion Control	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.
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>Production equipment for this well will be at a centralized facility not related to a well drill site. A separate form 2A will be filed for the centralized facility.</p> <p>The conductor casing will be driven. Wells Planned within 1500 feet are shown on the multi-well plan map.</p>
4	Drilling/Completion Operations	Open hole resistivity log with gamma ray will be run on one of the wells on this pad to describe the stratigraphy of the vertical section of the wellbore and to adequately verify the setting depth of the surface casing and aquifer coverage. The Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.

Total: 4 comment(s)

## Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400567666	FORM 2 SUBMITTED
400567839	OffsetWellEvaluations Data
400567840	DIRECTIONAL DATA
400567841	DRILLING PLAN
400567842	DEVIATED DRILLING PLAN
400567843	WELL LOCATION PLAT
400567845	SURFACE AGRMT/SURETY

Total Attach: 7 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Corrected dist. to rd. to agree w/ 2A. No LGD or public comments. Final Review--passed.	4/1/2014 11:37:23 AM
Engineer	Operator replied: The Maddy #1 option 3 will be used and it is currently being re-plugged. The Maddy #2 will be mitigated during fracture operations but this is the well Whiting is looking into converting to a monitor well. We will isolate the well above the Niobrara and monitor bradenhead pressure during the frac. Removed Hold	3/31/2014 9:32:52 AM
Engineer	On Hold - Wells within 1500' of the proposed directional plan lack adequate formation isolation: 05-123-19491Maddy #1, DA: No Nbr isolation, Whiting has approved Form 6-noi. 05-123-23302Maddy #2, SI: No Nbr isolation Emailed operator rep (ml_brown@bresnan.net)	3/24/2014 9:12:23 AM
Permit	Corrected dist. to nearest well penetrating NBRR. Corrected dist. to unit boundary. Oper. submitted open hole logging BMP.	3/13/2014 8:49:04 AM
Permit	Form passes completeness.	3/11/2014 10:17:43 AM

Total: 5 comment(s)