

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:

400923331

Date Received:

10/28/2015

APPLICATION FOR PERMIT TO:

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

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

Refiling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Horsetail

Well Number: 08C-1739

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: NENW Sec: 8 Twp: 10N Rng: 57W Meridian: 6

Latitude: 40.859925

Longitude: -103.777136

Footage at Surface: 330 feet FNL/FSL FNL 2291 feet FEL/FWL FWL

Field Name: WILDCAT

Field Number: 99999

Ground Elevation: 4913

County: WELD

GPS Data:

Date of Measurement: 12/09/2014 PDOP Reading: 1.9 Instrument Operator's Name: Dallas Nielsen

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 FNL/FWL  
656 FNL 2127 FWL 100 FSL 1980 FWL  
Sec: 8 Twp: 10N Rng: 57W Sec: 17 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: 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.)

Tract 1 6th PM T10N R57W  
Sec 7: Gr acs: 312.4500 Net acs: 312.4500  
L3(36.18), L4(36.27), E2SW, W2SE, E2SE  
Sec 18: Gr acs: 160.0000 Net acs: 160.0000  
NE  
Tract 2 6th PM T10N R57W  
Sec 7: Gr acs: 232.0900 Net acs: 232.0900  
L1(36.00), L2(36.09), E2NW, E2NE  
Tract 3 6th PM T10N R57W  
Sec 8: Gr acs: 480.0000 Net acs: 480.0000  
W2, W2E2  
Sec 17: Gr acs: 80.0000 Net acs: 80.0000  
N2NW

Total Acres in Described Lease: 1264 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: 5280 Feet  
Building Unit: 5280 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 330 Feet  
Above Ground Utility: 2340 Feet  
Railroad: 5280 Feet  
Property Line: 330 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: 256 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	535-658	1280	All S8, All S17

## DRILLING PROGRAM

Proposed Total Measured Depth: 16101 Feet

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

256 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	24	16	65	0	80	179	80	0
SURF	13+1/2	9+5/8	36	0	1790	711	1790	0
1ST	8+3/4	7	29	0	6224	417	6224	0
1ST LINER	6	4+1/2	11.6	5406	16101			

☐ 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 \_\_\_\_\_ 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: 10/28/2015 \_\_\_\_\_ 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: Matthew Lee \_\_\_\_\_ Director of COGCC Date: 3/1/2016 \_\_\_\_\_

Expiration Date: 02/28/2018 \_\_\_\_\_

### API NUMBER

05 123 42848 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**

	Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test.: 1) Within 30 days of rig release prior to stimulation. 2) Between 6 and 7 months after rig release. 3) Within 30 days of first production as reported on Form 5A.
	Note changes to submitted form. 1) Provide 48 hour notice of MIRU via electronic Form 42. 2) Set 1790' of surface casing, increase cement quantity accordingly. Cement to surface (base Upper Pierre aquifer 1760' in offset 123-05791, gs 4935'). 3) Provide cement coverage to a minimum of 200' above Niobrara. Verify coverage with cement bond log.

### **Best Management Practices**

#### **No BMP/COA Type**

#### **Description**

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	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. <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	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 & number) the well in which open-hole logs were run.

Total: 3 comment(s)

### **Attachment Check List**

<b>Att Doc Num</b>	<b>Name</b>
400923331	FORM 2 SUBMITTED
400926714	OffsetWellEvaluations Data
400926716	DIRECTIONAL DATA
400926717	WELL LOCATION PLAT
400926718	DEVIATED DRILLING PLAN
400926721	DRILLING PLAN

Total Attach: 6 Files

### **General Comments**

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
Permit	Distance to nearest completed portion of a wellbore was measured three dimensionally and does meet the minimum distance required by spacing order 535-658 when measured by standard plan view. Anit-collision report is not required as distance can be verified with the attached deviated drilling plan. Distance to nearest wellbore owned by another operator language reflects changes to Form 2s that occurred after this form was submitted.	3/1/2016 9:46:20 AM
Permit	Final review complete.	2/23/2016 10:26:23 AM
Permit	Deviated drilling plan attached as 2 separate attachments; permitter combined as one file and re-attached. Permitting task complete.	2/23/2016 10:03:22 AM
Engineer	Evaluated existing wells within 1500' of proposed directional.	11/17/2015 10:22:04 AM
Permit	Passed completeness.	10/30/2015 8:35:57 AM

Total: 5 comment(s)