

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:

400550111

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 ☐

Date Received:

04/17/2014

Well Name: Heartland

Well Number: C31-78-1HN

Name of Operator: NOBLE ENERGY INC

COGCC Operator Number: 100322

Address: 1625 BROADWAY STE 2200

City: DENVER State: CO Zip: 80202

Contact Name: Andrea Rawson

Phone: (303)228-4253

Fax: (303)228-4286

Email: arawson@nobleenergyinc.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20030009

WELL LOCATION INFORMATION

QtrQtr: SESE Sec: 25 Twp: 4N Rng: 65W Meridian: 6

Latitude: 40.276730

Longitude: -104.603320

Footage at Surface: 282 feet FNL/FSL FSL 275 feet FEL/FWL FEL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 4846

County: WELD

GPS Data:

Date of Measurement: 09/30/2013 PDOP Reading: 1.6 Instrument Operator's Name: Antonio W. Smith

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

Footage at Top of Prod Zone: FNL/FSL FNL 550 FNL 804 FNL 75 FNL 808 FNL 75 FNL 808 FNL 75
FEL/FWL FEL/FWL FEL/FWL FEL/FWL FEL/FWL FEL/FWL FEL/FWL FEL/FWL
Sec: 31 Twp: 4N Rng: 64W Sec: 31 Twp: 4N Rng: 64W

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.)

see attached lease map

Total Acres in Described Lease: 5660 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: 75 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 1188 Feet
Building Unit: 1188 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 254 Feet
Above Ground Utility: 252 Feet
Railroad: 5280 Feet
Property Line: 275 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: 208 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 550 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

Unit Configuration = T4N- R64W, Sec. 31: W/2, T3N- R64W, Sec. 6:N/2NW/4.

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		372	GWA

DRILLING PROGRAM

Proposed Total Measured Depth: 11992 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 90 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 318A

DRILLING WASTE MANAGEMENT PROGRAM

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

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: _____ or Document Number: 2614238

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	18+1/2	16		0	100	6	100	0
SURF	13+3/4	9+5/8	36	0	650	310	650	0
1ST	8+3/4	7	26	0	7341	500	7341	0
1ST LINER	6+1/8	4+1/2	11.6	7191	11992			

☐ 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 First string top of cement = 200' above the Niobrara formation. The production liner will be hung off inside of the 7" casing string. 9 well pad includes Heartland State G36-75-1HN (REF), Heartland G25-73-1HN, Heartland State H01-74-1HN, Heartland State C31-79-1HN, Heartland C31-78-1HN, Heartland G25-72-1HN, Heartland C30-79-1HN, Heartland C30-79HN, Heartland State H01-73-1HN. Exception to rules 318A.a Exception location and 318A.c Twinning included in attached SUA on page 7 under Section 9.

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: Andrea Rawson

Title: Regulatory Analyst I Date: 4/17/2014 Email: Regulatorynotification@noble

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: 6/6/2014

Expiration Date: 06/05/2016

API NUMBER

05 123 39554 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>Operator acknowledges the proximity of the listed wells: Operator agrees to: provide mitigation option 1 or 2 (per 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 a Form 42 ("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.</p> <p>COLLINS 1-1 (API NO 123-13363),FARR 1 (API NO 123-11714), VICTOR C 19-13 (API NO 123-13508),VICTOR C 19-12 (API NO 123-13761), FREEDOM ONE C 19-5 (API NO 123-14300),FREEDOM TWO C 19-4 (API NO 123-14624), STEWART 30-1 (API NO 123-11797),JOHNSON A-30 (API NO 123-11961), STEWART 30-2 (API NO 123-13302),BROSNAHAN 13-30 (API NO 123-18990), OCOMA UPRR C31-13 (API NO 123-13400),OCOMA C 31-14 (API NO 123-13401), OCOMA-UPRR C 31-11 (API NO 123-13404),OCOMA-UPRR C31-12 (API NO 123-13405), HUNTSMAN G 13-16 (API NO 123-14665),MILLER 24-1 (API NO 123-14440), BURKE 24-3 (API NO 123-14522),API 24-1 (API NO 123-14684), CPC PLUSS 25-1 (API NO 123-12573),PLUSS G 25-8 (API NO 123-13149), OCOMA G25-8 (API NO 123-13149),OCOMA G 25-9 (API NO 123-13355), OCOMA G 25-16 (API NO 123-13356),OCOMA G25-23 (API NO 123-15626), GERRITY STATE G 36-01 (API NO 123-13291),GERRITY STATE G 36-9 (API NO 123-13292), GERRITY STATE G 36-08 (API NO 123-13313),STATE G 36-16 (API NO 123-13314)</p>
	<p>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU. 2) Comply with Rule 317.i and provide cement coverage from the bottom of the production casing 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. The operator shall comply with Rule 321, and it shall be the operator's responsibility to ensure that the wellbore complies with setback requirements in commission orders or rules prior to producing the well.</p>
	<p>Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore 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 Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.</p>
	<p>Operator must comply with COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.</p>

Best Management Practices

No	BMP/COA Type	Description
1	General Housekeeping	Housekeeping will consist of neat and orderly storage of materials and fluids. Wastes will be temporarily stored in sealed containers and regularly collected and disposed of at offsite, suitable facilities. If spills occur prompt cleanup is required to minimize any commingling of waste materials with stormwater runoff. Routine maintenance will be limited to fueling and lubrication of equipment. Drip pans will be used during routine fueling and maintenance to contain spills or leaks. Any waste product from maintenance will be containerized and transported offsite for disposal or recycling. There will be no major equipment overhauls conducted onsite. Equipment will be transported offsite for major overhauls. Cleanup of trash and discarded materials will be conducted at the end of each work day. Cleanup will consist of patrolling the roadway, access areas, and other work areas to pickup trash, scrap debris, other discarded materials, and any contaminated soil. These materials will be disposed of properly.
2	Storm Water/Erosion Control	Stormwater management plans (SWMP) are in place to address construction, drilling and operations associated with Oil & Gas development throughout the state of Colorado in accordance with Colorado Department of Public Health and Environment (CDPHE) General Permit No. COR-038637. BMP's will be constructed around the perimeter of the site prior to, or at the beginning of construction. BMP's used will vary according to the location, and will remain in place until the pad reaches final reclamation.
3	Material Handling and Spill Prevention	Spill prevention Control and Countermeasures (SPCC) plans are in place to address any possible spill associated with Oil & Gas operations throughout the state of Colorado in accordance with CFR 112.
4	Drilling/Completion Operations	Anti-collision: Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed well. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed well path with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify bottomhole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment. For the proposed well, upon conclusion of drilling operations, an as-constructed gyro survey will be submitted to COGCC with the Form 5.

Total: 4 comment(s)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2114623	LEGAL/LEASE DESCRIPTION
2114639	EXCEPTION LOC REQUEST
2114660	ANTI-COLLISION WAIVER
400550111	FORM 2 SUBMITTED
400558296	DIRECTIONAL DATA
400583508	SURFACE AGRMT/SURETY
400589924	OffsetWellEvaluations Data
400590944	WELL LOCATION PLAT
400591451	PROPOSED SPACING UNIT
400591919	DEVIATED DRILLING PLAN

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Received Anti-Collision Waiver Passes Permit review.	3/3/2014 2:53:58 PM
Permit	Received Exception Location Request letter. WO Anti-Collision Waiver.	5/14/2014 1:19:30 PM
Permit	Attached lease map and corrected lease acreage to 5660.	5/9/2014 10:11:58 AM
Permit	Operator requests approval of a Rule 318A.m exception location: Wellbore is to be located less than 150' from an existing wellbore. Request and waivers attached	5/8/2014 10:28:46 AM
Permit	Corrected TPZ location to R64W. Surface Owner is not Mineral Owner, and is not committed to an oil and gas lease. Unchecked the 'committed to an oil and gas lease box.' Distance to Building cannot be greater than distance to Building Unit. Corrected the distance to Building to be equal to distance to Building Unit. Lease description does not match acreage of 456. Nearest well permitted/completed in same formation is Ocoma UPRR C31-12 at 208' Operator agrees. Well within 150'. Requires 318A.m waiver. Missing Exception Location Request letter (Waiver is in SUA).	5/8/2014 10:28:44 AM
Permit	Passed completeness.	4/21/2014 9:08:41 AM

Total: 6 comment(s)