

FORM
2
Rev
08/16

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:
401714407

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

Date Received:
09/07/2018

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

Refiling
Sidetrack

Well Name: Vogler State Well Number: D33-769
Name of Operator: NOBLE ENERGY INC COGCC Operator Number: 100322
Address: 1001 NOBLE ENERGY WAY
City: HOUSTON State: TX Zip: 77070
Contact Name: Holly Hill Phone: (303)228 4232 Fax: ()
Email: CDPNBLPermitting@nblenergy.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20030009

WELL LOCATION INFORMATION

QtrQtr: SWSW Sec: 21 Twp: 3N Rng: 64W Meridian: 6
Latitude: 40.206650 Longitude: -104.562090

Footage at Surface: 1065 Feet ^{FNL/FSL} FSL 1010 Feet ^{FEL/FWL} FWL

Field Name: WATTENBERG Field Number: 90750
Ground Elevation: 4796 County: WELD

GPS Data:
Date of Measurement: 03/27/2018 PDOP Reading: 1.3 Instrument Operator's Name: Alan Hnizdo

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

Footage at Top of Prod Zone: ^{FNL/FSL} 200 ^{FEL/FWL} FNL 1418 ^{FSL} FWL 200 ^{FEL/FWL} FSL 1320 ^{FWL} FWL
Sec: 28 Twp: 3N Rng: 64W Sec: 33 Twp: 3N 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.)

All, Sec 28, T3N, R64W

Total Acres in Described Lease: 640 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # OG 7886 70

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

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 4912 Feet
 Building Unit: 5147 Feet
 High Occupancy Building Unit: 5280 Feet
 Designated Outside Activity Area: 5280 Feet
 Public Road: 5157 Feet
 Above Ground Utility: 3310 Feet
 Railroad: 5280 Feet
 Property Line: 1010 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: 660 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 200 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 | 407-2605 | 1280 | 28&33: All |

DRILLING PROGRAM

Proposed Total Measured Depth: 17548 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: 844 Feet No well belonging to another operator within 1,500 feet

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? Yes

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: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

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 | 26 | 16 | 42 | 0 | 80 | 173 | 80 | 0 |
| SURF | 13+1/2 | 9+5/8 | 36 | 0 | 1850 | 663 | 1850 | 0 |
| 1ST | 8+1/2 | 5+1/2 | 20 | 0 | 17548 | 1823 | 17548 | |

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 CDP has been filed with COGCC (Docket #180700613) for October. CDP # will be provided at a later date.

Well is part of the 6-well D21-13 Pad (Doc #401715282), consisting of the proposed Vogler State D33-759 (Doc #401714384), Vogler State D33-769 (Doc #401714407), Vogler State D33-779 - Ref. Well (Doc #401714426), Vogler State D21-760 (Doc #401714265), Vogler State D21-770 (Doc #401714314), & Vogler State D21-780 (Doc #401714358). Wells will produce at the D22-13 Tank (Doc #401723218). Noble Energy shall isolate both the Fox Hills and Upper Pierre Aquifers with surface casing from hydrocarbon bearing zones and exposure to oil based drilling fluid. Noble Energy also agrees to not expose the UPAq to oil based mud.

Nearest well in unit (producing zone to producing zone) per manual calculation is the proposed Vogler State D33-779.

Nearest non-op is the HSR-Guttersen 4-33 (API: 05-123-19013) PA Status.

The following wells are all within 150'. All are Noble operated, therefore no 317.s is required:
Guttersen D State 28-29D (API: 05-123-34385) PR Status.

Wellbore to wellbore distances populated from attached anti-collision report unless otherwise indicated.

Exception Location waiver language is included in attached SUA.

This application is in a Comprehensive Drilling Plan Yes CDP #: 11984

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: Ann Feldman

Title: Regulatory Manager Date: 9/7/2018 Email: CDPNBLPermitting@nblenergy

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: 11/9/2018

Expiration Date: 10/28/2024

| |
|--------------------------------------|
| API NUMBER 05 123 48559 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>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"> 1) Within 60 days of rig release, prior to stimulation. 2) 6 months after rig release, prior to stimulation. 3) Within 30 days of first production, as reported on Form 5A. |
| | <ol style="list-style-type: none"> 1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (Spud Notice), for the first well/activity on the pad and provide 48 hour spud notice for all subsequent wells drilled on the pad. 2) Comply with Rule 317.j and provide cement coverage from the end of production casing to a minimum of 200' above Niobrara. Verify coverage with cement bond log. 3) Oil-based drilling fluid is to be used only after all aquifers are covered. |
| | <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>Duncan D 20-16 (API NO 123-15648) Spike ST GWS D 28-13J (API NO 123-07617) Spike State GWS D 28-4 (API NO 123-15988) Spike State GWS D 28-6 (API NO 123-15990) Spike State GWS D 28-11 (API NO 123-15991) Spike State GWS D 28-12 (API NO 123-15992) Kate White D 29-1 (API NO 123-16415) Kate White D 29-8 (API NO 123-16417) Kate White D 29-9 (API NO 123-16891) Kate White D 29-16 (API NO 123-16893) Cydney White D 33-2 (API NO 123-16849) Cydney White D 33-7 (API NO 123-16850) Casey Blue D21-3J (API NO 123-16957) Casey Blue D 21-14 (API NO 123-16964) O'sh D 28-2 (AOI NO 123-17186) Norris D 32-1 (API NO 123-17393) Norris D 32-9 (API NO 123-17399) HSR Gutteresen 13-33 (API NO 123-19116) HSR Gutteresen 3-4 (API NO 123-19152) HSR Gutteresen State 10-28 (API NO 123-19170) Gutteresen D33-10 (API NO 123-22899)</p> |

Best Management Practices

| No | BMP/COA Type | Description |
|-----------|--------------------------------|---|
| 1 | 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 wellpath 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. |
| 2 | Drilling/Completion Operations | During and Post stimulation: Noble Energy will comply with the COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated 5/29/12. |
| 3 | Drilling/Completion Operations | One of the first wells drilled on the pad will be logged with cased-hole neutron log with gamma-ray, from the kick-off point into the surface casing. All wells on the pad will have a Cement Bond Log (CBL) with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The horizontal portion of every well will be logged with a measured-while-drilling gamma-ray log. The Form 5, Completion Report, for each well on the pad will list all logs run in that well and have those logs attached. The Form 5 for each well will state "No open-hole logs were run", will clearly identify the type of log and the well (by API#) in which open-hole logs were run, and will reference the Rule 317.p Exception granted for the well. |

Total: 3 comment(s)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.
http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.
<http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf>

Attachment Check List

| Att Doc Num | Name |
|--------------------|-----------------------------|
| 401714407 | FORM 2 SUBMITTED |
| 401731881 | DEVIATED DRILLING PLAN |
| 401731882 | DIRECTIONAL DATA |
| 401745755 | WELL LOCATION PLAT |
| 401745756 | OffsetWellEvaluations Data |
| 401749654 | SURFACE AGRMT/SURETY |
| 401752455 | OPEN HOLE LOGGING EXCEPTION |
| 401752456 | EXCEPTION LOC REQUEST |
| 401833951 | OFFSET WELL EVALUATION |

Total Attach: 9 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Final Review | <ul style="list-style-type: none">•Added CDP# to the submit tab.•With concurrence from operator, removed 318.c exception request, as the requested 317.p exception is not a location exception.•State Land Board (SLB) has no objection to the permitting of this well.•Final permitting review is complete. Sent to Final Approval. | 11/07/2018 |
| Permit | <ul style="list-style-type: none">•Emailed the State Land Board (SLB) for verification of Surface Restoration Bond. W/O SLB 10/17/2018.•Removed docket# in Spacing & Formations tab and added spacing order#.•Operator requested Exception to Open Hole Logging Rule 317.p. See attached.•Surface Use Agreement has waivers for Rule 318A.a & 318A.c. See page 1. | 10/17/2018 |
| Engineer | Offset Wells Evaluated | 10/03/2018 |
| Permit | Passed Completeness | 09/18/2018 |

Total: 4 comment(s)