

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:

401056100

Date Received:

08/04/2016

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: Bona State

Well Number: N35-680

Name of Operator: NOBLE ENERGY INC

COGCC Operator Number: 100322

Address: 1625 BROADWAY STE 2200

City: DENVER State: CO Zip: 80202

Contact Name: Susan Miller

Phone: (303)228-4246

Fax: ()

Email: susan.miller@nblenergy.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20030009

WELL LOCATION INFORMATION

QtrQtr: NENE Sec: 36 Twp: 5N Rng: 67W Meridian: 6

Latitude: 40.360220

Longitude: -104.835080

Footage at Surface: 1125 Feet FNL/FSL FNL 850 Feet FEL/FWL FEL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 4891

County: WELD

GPS Data:

Date of Measurement: 03/29/2016 PDOP Reading: 1.5 Instrument Operator's Name: Brian Rottinghaus

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
660 FNL 460 FEL 660 FNL 535 FWL
Sec: 36 Twp: 5N Rng: 67W Sec: 35 Twp: 5N Rng: 67W

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: 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.)

T5N-R67W, Section 36: All.

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

Federal or State Lease # 06 81-6923-S

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

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 330 Feet
Building Unit: 983 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 843 Feet
Above Ground Utility: 822 Feet
Railroad: 5280 Feet
Property Line: 469 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: 04/08/2016

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: 26 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 460 Feet (Enter 5280 for distance greater than 1 mile.)

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

SPACING & FORMATIONS COMMENTS

Spacing Configuration: N/2N/2 Section 35, N/2N/2 Section 36, T5N-R67W.
Spacing Unit contains State minerals, Lease No. 06 81-6923-S.
Please see attached proposed spacing unit.

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		320	GWA

DRILLING PROGRAM

Proposed Total Measured Depth: 17181 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: 26 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	6	80	0
SURF	13+3/4	9+5/8	36	0	1850	535	1850	0
1ST	8+1/2	5+1/2	20	0	17181	1808		

☐ 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 4-well pad consists of: Bona State N35-690 Ref, doc no. 401055803, Bona State N35-685, doc no. 401055915, Bona State N35-680, doc no. 401056100, Bona State N35-675, doc no. 401056101. Noble Energy intends to permit this well as a monobore. No intermediate casing will be run. The surface casing will be set to cover the base of the Pierre Aquifer for Oil Based Mud considerations. Oil Based Mud will be planned for the production hole interval only. 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 Upper Pierre Aquifer to oil based mud. All cuttings will be taken to a certified disposal. Nearest well in same formation and the nearest well belonging to another Operator = Stroh 35-2, API No. 05-123-13886, Synergy Resources. The lateral path will be less than the 150' minimum distance from other wells as required by Rule 317.r. Noble is not the Operator of the encroached upon well(s), therefore please find attached a signed consent from the Offset Operator as required under Rule 317.s. Please see Page 4, Section 6, Paragraph A of the attached Surface Use Agreement for exception location waiver language to COGCC Rule 318A.a. to locate any well outside of the GWA window and COGCC Rule 318A.c. to locate any well greater than fifty (50) feet from an existing well.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 421086

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: Susan Miller

Title: Regulatory Analyst III Date: 8/4/2016 Email: Regulatorynotification@nblener

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: 1/7/2017

Expiration Date: 01/06/2019

API NUMBER

05 123 44059 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>
	This Permit to Drill is approved subject to all the BMPs and COAs on the most recently approved Form 2A and any subsequently approved Form 4 for the Oil and Gas Location (Location ID #421086). The most recently approved Form 2A and any subsequent Form 4s containing applicable COAs for this location shall be posted onsite during construction, drilling, and completions operations.
	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. VETTER 1 (API NO 123-1216)SCHNEIDER 12-35 (API NO 123-17943) EMC STATE 36-1 (API NO 123-15138)BERNHARDT 1-36 (API NO 123-15485) EMC STATE 2 (API NO 123-15579)
	Operator acknowledges the proximity of the following non-operated 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. STROH 35-1 (API NO 123-13883)STROH 35-2 (API NO 123-13886)
	Operator acknowledges the proximity of the listed non-operated wells: Operator agrees to: provide mitigation option 3 (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 these wells. BOOTH 24-26 (API NO 123-17942)BOOTH 34-26 (API NO 123-18230)
	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.
	Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test: 1) Within 60 days of rig release and prior to stimulation or 2) If a delayed completion, 6-7 months after rig release and prior to stimulation. 3) Within 30 days after first production, as reported on Form 5A.

Best Management Practices

No	BMP/COA Type	Description
1	Planning	<p>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.</p> <p>Bradenhead Monitoring: Operator will comply with the COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012. The Colorado Oil and Gas Conservation Commission has established this Policy regarding Bradenhead monitoring during Hydraulic Fracturing Treatments ("Treatment") in the Greater Wattenberg Area ("GWA") pursuant to COGCC Rule 207.a. Policy. This Policy applies to oil and gas operations in the GWA as defined by the COGCC Rules of Practice and Procedure.</p>
2	Drilling/Completion Operations	<p>When Using an Existing Well's Log as an Exception: One of the first wells drilled on the pad will be logged with cased-hole pulsed neutron log with gamma ray log from kick-off point to into the surface casing. All wells on the pad will have a cement bond log 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 and have those logs attached. The Form 5 for a well shall clearly state "No open-hole logs were run" and shall reference the Rule 317.p Exception granted for the well.</p>
3	Drilling/Completion Operations	<p>COGCC Rule 604.c.(2)I. BOPE testing for drilling operations.</p> <p>Planning:</p> <ul style="list-style-type: none"> • Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted on a daily basis when practicable.
4	Drilling/Completion Operations	<p>COGCC Rule 604.c.(2)J. BOPE for well servicing operations.</p> <p>Planning:</p> <ul style="list-style-type: none"> • Adequate blowout prevention equipment shall be used on all well servicing operations. • Backup stabbing valves shall be required on well servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.
5	Drilling/Completion Operations	<p>COGCC Rule 604.c.(2)L. Drill stem tests.</p> <p>Planning:</p> <ul style="list-style-type: none"> • Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director.
6	Drilling/Completion Operations	<p>COGCC Rule 604.c.(2)Q. Guy line anchors.</p> <p>Drilling/Completion Operations:</p> <ul style="list-style-type: none"> • All guy line anchors left buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor.

7	Drilling/Completion Operations	BOPE testing for drilling operations. If a skid is performed for the subject well, then the only required BOPE tests are for the BOPE connection bonnet seal breaks, as long as a full BOPE test was performed at the beginning of the pad, and as long as all necessary BOPE tests are completed at least every 30 days during the pad operations. If a skid is performed for the subject well, then the only required BOPE tests are for the BOPE connection bonnet seal breaks, as long as a full BOPE test was performed at the beginning of the pad, and as long as all necessary BOPE tests are completed at least every 30 days during the pad operations.
8	Drilling/Completion Operations	COGCC Rule 604.c.(2)H. Blowout preventer equipment ("BOPE"). Drilling/Completion Operations: <ul style="list-style-type: none"> • Blowout prevention equipment for drilling operations in a Designated Setback Location shall consist of (at a minimum): <ul style="list-style-type: none"> o Rig with Kelly. Double ram with blind ram and pipe ram; annular preventer or a rotating head. o Rig without Kelly. Double ram with blind ram and pipe ram. Mineral Management certification or Director approved training for blowout prevention shall be required for at least one (1) person at the well site during drilling operations
9	Drilling/Completion Operations	COGCC Rule 604.c.(2)B. Closed Loop Drilling Systems – Pit Restrictions. Drilling/Completion Operations: <ul style="list-style-type: none"> • Closed loop drilling systems are required within the Buffer Zone Setback. • Pits are not allowed on Oil and Gas Locations within the Buffer Zone Setback, except fresh water storage pits, reserve pits to drill surface casing, and emergency pits as defined in the 100-Series Rules. • Fresh water pits within the Exception Zone shall require prior approval of a Form 15 pit permit. In the Buffer Zone, fresh water pits shall be reported within 30-days of pit construction. • Fresh water storage pits within the Buffer Zone Setback shall be conspicuously posted with signage identifying the pit name, the operator's name and contact information, and stating that no fluids other than fresh water are permitted in the pit. Produced water, recycled E&P waste, or flowback fluids are not allowed in fresh water storage pits. • Fresh water storage pits within the Buffer Zone Setback shall include emergency escape provisions for inadvertent human access.

Total: 9 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
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
401056100	FORM 2 SUBMITTED
401070863	DEVIATED DRILLING PLAN
401070864	WELL LOCATION PLAT
401070866	DIRECTIONAL DATA
401078033	OPEN HOLE LOGGING EXCEPTION
401080434	OffsetWellEvaluations Data
401087936	SURFACE AGRMT/SURETY
401087939	PROPOSED SPACING UNIT
401093437	EXCEPTION LOC REQUEST
401098368	STIMULATION SETBACK CONSENT

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	01/05/2017
Permit	SLB confirmed operator's lease, 06 81-6923-S is in good order. Permitting Review Complete.	01/05/2017
Permit	Operator requested Exception to Open Hole Logging Rule 317.p. See attached.	01/05/2017
Permit	Deleted beneficial reuse information for waste management; this was removed from the 2A during the OGLA review. Deleted all non drilling and completion BMPs. Req'd SLB review of lease.	12/23/2016
Engineer	Offset Wells Evaluated	11/15/2016
Permit	Passed completeness.	08/24/2016
Permit	Returned to draft: -- Attached "anti-collision waiver" needs to include the distance between the encroached upon well and the proposed well; -- "Anti-collision waiver" must be relabeled "Stimulation Setback Consent"; -- Delete the attached "Stimulation Setback Consent" letter to the Director.	08/23/2016
Permit	Returned to draft: -- Missing required Exception Location Request -- Delete "Other" 305.a certification	08/12/2016

Total: 8 comment(s)