

FORM
2

Rev
12/05

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:

400256382

Date Received:

APPLICATION FOR PERMIT TO:

1. ☒ Drill, ☐ Deepen, ☐ Re-enter, ☐ Recomplete and Operate

2. TYPE OF WELL

OIL ☒ GAS ☐ COALBED ☐ OTHER ☐
SINGLE ZONE ☒ MULTIPLE ☐ COMMINGLE ☐

Refiling ☐

Sidetrack ☐

PluggingBond SuretyID

20030009

3. Name of Operator: NOBLE ENERGY INC

4. COGCC Operator Number: 100322

5. Address: 1625 BROADWAY STE 2200

City: DENVER State: CO Zip: 80202

6. Contact Name: SUSAN MILLER Phone: (303)228-4246 Fax: (303)228-4286

Email: smiller@nobleenergyinc.com

7. Well Name: THISTLE DOWN PC

Well Number: F36-63HN

8. Unit Name (if appl): Unit Number:

9. Proposed Total Measured Depth: 11413

WELL LOCATION INFORMATION

10. QtrQtr: SENE Sec: 36 Twp: 5N Rng: 65W Meridian: 6

Latitude: 40.356380 Longitude: -104.603040

Footage at Surface: 2360 feet FNL/FSL FNL 279 feet FEL/FWL FEL

11. Field Name: Wattenberg Field Number: 90750

12. Ground Elevation: 4770 13. County: WELD

14. GPS Data:

Date of Measurement: 08/31/2011 PDOP Reading: 1.7 Instrument Operator's Name: Brian Brinkman

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

Footage at Top of Prod Zone: FNL/FSL FEL/FWL Bottom Hole: FNL/FSL FEL/FWL
1663 FSL 745 FEL 1665 FSL 535 FWL
Sec: 36 Twp: 5N Rng: 65W Sec: 36 Twp: 5N Rng: 65W

16. Is location in a high density area? (Rule 603b)? ☐ Yes ☒ No

17. Distance to the nearest building, public road, above ground utility or railroad: 259 ft

18. Distance to nearest property line: 264 ft 19. Distance to nearest well permitted/completed in the same formation(BHL): 325 ft

20. LEASE, SPACING AND POOLING INFORMATION

| Objective Formation(s) | Formation Code | Spacing Order Number(s) | Unit Acreage Assigned to Well | Unit Configuration (N/2, SE/4, etc.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| Niobrara | NBRR | 407-87 | 320 | GWA |

21. Mineral Ownership: ☐ Fee ☒ State ☐ Federal ☐ Indian Lease #: 81/6053-S

22. Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian

23. Is the Surface Owner also the Mineral Owner? ☐ Yes ☒ No Surface Surety ID#:

23a. If 23 is Yes: Is the Surface Owner(s) signature on the lease? ☐ Yes ☐ No

23b. If 23 is No: ☒ Surface Owners Agreement Attached or ☐ \$25,000 Blanket Surface Bond ☐ \$2,000 Surface Bond ☐ \$5,000 Surface Bond

24. Using standard QtrQtr, Sec, Twp, Rng format enter entire mineral lease description upon which this proposed wellsite is located (attach separate sheet/map if you prefer):

T5N-R65W Section 36: All. Noble Energy Inc certifies that the lease(s) shall be committed to the unit.

25. Distance to Nearest Mineral Lease Line: 535 ft

26. Total Acres in Lease: 640

DRILLING PLANS AND PROCEDURES

27. Is H2S anticipated? ☐ Yes ☒ No If Yes, attach contingency plan.

28. Will salt sections be encountered during drilling? ☐ Yes ☒ No

29. Will salt (>15,000 ppm TDS CL) or oil based muds be used during drilling? ☐ Yes ☒ No

30. If questions 28 or 29 are yes, is this location in a sensitive area (Rule 901.e)? ☐ Yes ☒ No

31. Mud disposal: ☒ Offsite ☐ Onsite

If 28, 29, or 30 are "Yes" a pit permit may be required.

Method: ☒ Land Farming ☐ Land Spreading ☐ Disposal Facility

Other: CLOSED LOOP

Note: The use of an earthen pit for Recompletion fluids requires a pit permit (Rule 905b). If air/gas drilling, notify local fire officials.

| 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 | 550 | 276 | 550 | 0 |
| 1ST | 8+3/4 | 7 | 26 | 0 | 7,424 | 519 | 7,424 | |
| 1ST LINER | 6+1/8 | 4+1/2 | 11.6 | 7236 | 11,413 | | | |

32. BOP Equipment Type: ☒ Annular Preventer ☒ Double Ram ☒ Rotating Head ☐ None

33. Comments First string top of cement will be 200' above the Niobrara formation. The production liner will be hung off inside of the 7" casing. This is part of a 3-well pad which will include the proposed THISTLE DOWN PC F36-67HC, THISTLE DOWN PC F36-63HN, THISTLE DOWN PC F36-65HN. See 2A doc. no. 400256365 which includes all 3 proposed wells. Unit Configuration: S/2.

34. Location ID: _____

35. Is this application in a Comprehensive Drilling Plan ? ☐ Yes ☐ No

36. Is this application part of submitted Oil and Gas Location Assessment ? ☒ Yes ☐ No

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: _____

Email: smiller@nobleenergyinc.com

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: _____

API NUMBER

05

Permit Number: _____ Expiration Date: _____

CONDITIONS OF APPROVAL, IF ANY:

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.

Attachment Check List

| Att Doc Num | Name |
|-------------|------------------------|
| 400256386 | 30 DAY NOTICE LETTER |
| 400256388 | EXCEPTION LOC WAIVERS |
| 400256389 | EXCEPTION LOC REQUEST |
| 400261634 | WELL LOCATION PLAT |
| 400261635 | DEVIATED DRILLING PLAN |
| 400261636 | DIRECTIONAL DATA |
| 400279079 | PROPOSED SPACING UNIT |
| 400279081 | PROPOSED SPACING UNIT |
| 400279083 | PROPOSED SPACING UNIT |
| 400279084 | SURFACE AGRMT/SURETY |

Total Attach: 10 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | |

Total: 0 comment(s)

BMP

| Type | Comment |
|--|---|
| 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) and 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. |
| General Housekeeping | General 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 pick up trash, scrap debris, other discarded materials, and any contaminated soil. These materials will be disposed of properly. |
| Drilling/Completion Operations | <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 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.</p> <p>During and Post stimulation: 1. At least seven (7) days prior to fracture stimulation, the Operator is to notify all operators of non-operated wells within 300 feet of the wellbore to be fracture stimulated of the anticipated date stimulation date and the recommended best management practice to shut-in all wells within 300' of the stimulated wellbore completed in the same formation.</p> <p>2. The Operator will monitor the bradenhead pressure of all wells operated by the Operator within 300 feet of the well to be fracture stimulated.</p> <p>3. Bradenhead pressure gauges are to be installed 24 hours prior to stimulation. The gauges are to read at least once during every 24-hour period until 24-hours after stimulation is completed (post flowback). The gauges are to be of the type able to read current pressure and record the maximum encountered pressure in a 24-hour period. The gauge is to be reset between each 24-hour period. The pressures are to be recorded and saved. Alternate electronic measurement may be used to record the prescribed pressures. Data shall be kept for a period of one year.</p> <p>4. If at any time during stimulation or the 24-hour post-stimulation period, the bradenhead annulus pressure of the treatment well or offset wells increases more than 200 psig, as per Rule 341, the Operator of the well being stimulated shall verbally notify the Director as soon as practicable, but no later than twenty-four (24) hours following the incident. Within fifteen (15) days after the occurrence, the Operator shall submit a Sundry Notice, Form 4, giving all details, including corrective actions taken.</p> |
| 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. |
| Total: 4 comment(s) | |