



**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.)

Please see attached lease map.

Total Acres in Described Lease: 335 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: 830 Feet  
 Building Unit: 1085 Feet  
 High Occupancy Building Unit: 5280 Feet  
 Designated Outside Activity Area: 5280 Feet  
 Public Road: 267 Feet  
 Above Ground Utility: 300 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: 12/15/2016

**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: 193 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 955 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

**SPACING & FORMATIONS COMMENTS**

Unit Configuration = T6N-R63W Sec 19: W/2NW/4, S/2, Sec 20: S/2, Sec 21: W/2SW/4, T6N-R64W Sec 22: E/2E/2, Sec 23: All, Sec 24: All

**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           | 407-1939                | 2240                          | Sec19,20,21,22,23,24                 |

## DRILLING PROGRAM

Proposed Total Measured Depth: 17894 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: 105 Feet  No well belonging to another operator within 1,500 feet

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? 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:

Drilling waste disposal information added to address non-oil based mud and fluids used in non-producing portion of wellbore.

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   | 26           | 16             | 42    | 0             | 80            | 6         | 80      | 0       |
| SURF        | 13+3/4       | 9+5/8          | 36    | 0             | 1850          | 658       | 1850    | 0       |
| 1ST         | 8+1/2        | 5+1/2          | 20    | 0             | 17894         | 2328      |         |         |

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 Well is part of the eight well A24-16 Pad consisting of the proposed Larson A23-622 (Doc #401181753), Larson A23-627 (Doc #401181754), Larson A23-633 (Doc #401181755), Larson A23-639 – Ref. Well (Doc #401181756), Larson AA19-618 (Doc #401181757), Larson AA19-624 (Doc #401181758), Larson AA19-630 (Doc #401181759), & Larson AA19-635 (Doc #401181760). This pad will be produced by the proposed AA19-32 Multi (Doc #401181766). 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.

The Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation was measured to the Larson A23-639. Producing zone to producing zone distances were manually calculated from proposed footages.

Nearest non-op is the PDC operated Wells Ranch 23-20 (API: 123-22775) 105.7', as indicated in attached anti-collision. Request and signed consent attached. PDC operated Wells Ranch 13-20 114.5' (API: 123-25600) & PDC operated Cook 20D (API: 123-25530) 138.6' are also less than 150' and require 317.s consent. Waiver language is included in attached SUA (Page 4, Section 6, Paragraph A).

This application is in a Comprehensive Drilling Plan No CDP #: \_\_\_\_\_

Location ID: 451108

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: Justin Garrett

Title: Regulatory Analyst Date: 3/27/2017 Email: RegulatoryNotification@nblene

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: 9/27/2017

Expiration Date: 09/26/2019

**API NUMBER**  
05 123 45550 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. 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.   |
|                 | <ol style="list-style-type: none"> <li>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU for the first well activity with a rig on the pad and provide 48 hour spud notice for each subsequent well drilled on the pad.</li> <li>2) Comply with Rule 317.j and provide cement coverage from TD to a minimum of 200' above the Niobrara. Verify coverage with cement bond log.</li> <li>3) Oil-based drilling fluid is to be used only after all aquifers are covered.</li> </ol>   |
|                 | Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test: <ol style="list-style-type: none"> <li>1) Within 60 days of rig release and prior to stimulation and</li> <li>2) If a delayed completion, 6-7 months after rig release and prior to stimulation.</li> <li>3) Within 30 days after first production, as reported on Form 5A.</li> </ol>  |
|                 | Operator acknowledges the proximity of the listed non-producing well(s). Operator agrees to provide mitigation Option 3 (per the DJ Basin Horizontal Offset Policy, ensure all applicable documentation is submitted, and submit Form 42(s) "OFFSET MITIGATION COMPLETED" for the remediated well(s), referencing the API Number of the proposed horizontal wells stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of the proposed wells.<br><br>Champlin Amoco A 1 308 (API #123-08968)<br>Champlin 23-2 (API #123-10959)   |
|                 | Operator acknowledges the proximity of the listed non operated well(s). Operator agrees to provide mitigation Option 1 or 2 (per the DJ Basin Horizontal Offset Policy, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit Form 42(s) "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 the proposed wells.<br><br>J&L Farms 12-20 (API #123-21805)<br>J&L Farms 23-12 (API #123-20005)<br>J&L Farms 23-22 (API #123-19904)<br>J&L Farms 31-29 (API #123-21511)<br>McIntosh 33-23 (API #123-14710)<br>McIntosh 43-23 (API #123-21663)<br>Wells Ranch 13-20 (API #123-25600) |
|                 | Operator acknowledges the proximity of the listed well(s). Operator agrees to provide mitigation Option 1 or 2 (per the DJ Basin Horizontal Offset Policy, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit Form 42(s) "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 the proposed wells.<br><br>Carpio 22-1 (API #123-11786)<br>Carpio 22-41 (API #123-15668)<br>Carpio 22-45 (API #123-26079)<br>Cecil 23-13 (API #123-18514)  |

## 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 and maintained 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         | <p>Anti-collision:<br/>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:<br/>Noble Energy will comply with the COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated 5/29/12</p> |
| 5  | Drilling/Completion Operations         | <p>When Using an Existing Well's Log as an Exception:<br/>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>  |
| 6  | Drilling/Completion 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.   |

Total: 6 comment(s)

## Applicable Policies and Notices to Operators

|  |
|--|
| Policy   |
| Notice Concerning Operating Requirements for Wildlife Protection.<br><a href="http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf">http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</a>   |
| Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.<br><a href="http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf">http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf</a> |

### Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u>                 |
|--------------------|-----------------------------|
| 401181760          | APD APPROVED                |
| 401238732          | OffsetWellEvaluations Data  |
| 401238747          | SURFACE AGRMT/SURETY        |
| 401238750          | WELL LOCATION PLAT          |
| 401238751          | OPEN HOLE LOGGING EXCEPTION |
| 401238754          | EXCEPTION LOC REQUEST       |
| 401238756          | STIMULATION SETBACK CONSENT |
| 401238757          | DIRECTIONAL DATA            |
| 401239582          | LEASE MAP                   |
| 401241254          | DEVIATED DRILLING PLAN      |
| 401414477          | OFFSET WELL EVALUATION      |
| 401414490          | FORM 2 SUBMITTED            |
| 401414578          | PUBLIC COMMENT-0            |

Total Attach: 13 Files

### General Comments

| <u>User Group</u> | <u>Comment</u>   | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Permit            | Location in Buffer Zone. Checked box and added date.<br>Final Review Completed.  | 09/22/2017          |
| Permit            | Per operator changed the Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation 91' to 193'.<br>Per operator Added spacing order 407-1939 & Location ID # 451108<br>Permitting Review Complete.   | 06/30/2017          |
| Permit            | Operator requested Exception to Open Hole Logging Rule 317.p. See attached.<br>Surface Use Agreement has waivers for Rule 318A.a & 318A.c. See page 4, Section 6. Paragraph A.<br>ON HOLD: Requesting correction to Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation. | 05/30/2017          |
| Permit            | Passed Completeness  | 04/07/2017          |
| Permit            | Returned to Draft:<br>-Location listed as Buffer Zone but Building Unit distance is greater than Buffer Zone requirement   | 03/30/2017          |

Total: 5 comment(s)