

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.)

1N68W: Sec 33 All

Total Acres in Described Lease: 631 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: 1431 Feet

Building Unit: 1431 Feet

High Occupancy Building Unit: 4679 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 1222 Feet

Above Ground Utility: 1722 Feet

Railroad: 5280 Feet

Property Line: 373 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: 15 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

T1N-R68W
 Section 33: E/2NW/4, W/2NE/4, E/2SW/4, W/2SE/4
 T1S-R68W
 Sec 4: E/2W/2, Sec 9: NENW

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 | | 520 | GWA |

DRILLING PROGRAM

Proposed Total Measured Depth: 17872 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: 535 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 | 24 | 16 | 42 | 0 | 80 | 100 | 80 | 0 |
| SURF | 12+1/4 | 9+5/8 | 36 | 0 | 1500 | 400 | 1500 | 0 |
| 1ST | 8+1/2 | 5+1/2 | 20 | 0 | 17872 | 2386 | 17872 | |

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: Nearest well to the proposed wellbore completed in the same formation: 15' from proposed Coyote Trails 33W-15-1N, operated by Extraction Oil and Gas, Inc.
Interwell distances were determined using in-house anti-collision reports.
The surface owner has waived Rules 318A.a. & 318A.c., which is highlighted on p.12 of the SUA.
An open-hole log was run on the Coyote Trails 34S-20-11C (API 05-123-45991).

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

Location ID: 319094

Is this application being submitted with an Oil and Gas Location Assessment application? No

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Bonnie Lamond

Title: Regulatory Analyst Date: 1/11/2019 Email: blamond@extractionog.com

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: 3/5/2019

Expiration Date: 03/04/2021

| |
|--------------------------------------|
| API NUMBER 05 123 49914 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> |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operation (dated January 5, 2017). |
| | If conductors are preset, Operator shall comply with Notice to Operators: Procedures for Preset Conductors (dated September 1, 2016, revised October 6, 2016). |
| | <p>Bradenhead tests shall be performed according to the following schedule and the Form 17 submitted within 10 days of each test:</p> <ol style="list-style-type: none"> 1) Within 60 days of rig release and prior to stimulation and 2) If a delayed completion, 6 months after rig release and prior to stimulation. 3) Within 60 days after first production, as reported on Form 5A. <p>If a bradenhead test reports a surface casing pressure greater than 200 psig stimulation is not allowed until the Engineering Supervisor has been consulted.</p> <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 with a rig on the pad and provide 48 hour spud notice via Form 42 for all subsequent wells drilled on the pad. 2) Comply with Rule 317.j. and provide cement coverage from TD 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 fresh water aquifers are covered. |
| | <p>Operator acknowledges the proximity of the listed non-operated wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (option 3). Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>ASHER 1 (API 05-014-05579)</p> |

Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u> | <u>Description</u> |
|-----------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Drilling/Completion Operations | Anti-collision: Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling. |
| 2 | Drilling/Completion Operations | Operator acknowledges and will comply with COGCC policy for Bradenhead Monitoring during Hydraulic Fracturing treatments in the Greater Wattenberg Area dated May 29, 2012. |
| 3 | Drilling/Completion Operations | Alternative Logging Program: An existing well on the pad was logged with open-hole resistivity log with gamma-ray log from the kick-off point 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 without open-hole logs shall state "Alternative Logging Program - No open-hole logs were run", and shall clearly identify the type of log and the well (by API#) in which open-hole logs were run. |

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

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|----------------------------|
| 401901367 | FORM 2 SUBMITTED |
| 401901452 | WELL LOCATION PLAT |
| 401901453 | SURFACE AGRMT/SURETY |
| 401901456 | PROPOSED SPACING UNIT |
| 401901509 | EXCEPTION LOC REQUEST |
| 401902250 | DIRECTIONAL DATA |
| 401902252 | DEVIATED DRILLING PLAN |
| 401902256 | OffsetWellEvaluations Data |
| 401961554 | OFFSET WELL EVALUATION |

Total Attach: 9 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Permit | Status Active - corrections made with operator concurrence: - updated open hole logging BMP per new guidance - added submit tab comment for existing open hole log - corrected distance to nearest unit boundary from 150' to 460' Final review complete. 2A approved 11/20/217; location built. | 02/21/2019 |
| Permit | IN PROCESS - no valid objection. Added OGLA task to review this form. Revised open hole logging BMP with operator concurrence. Permitting review complete. | 02/20/2019 |
| Permit | ON HOLD - pending review of 318.A objection. | 02/08/2019 |
| Permit | Status Active - corrections made with operator concurrence: - changed mineral lease description and acreage. - revised distance to nearest well in same formation and updated comment. Permitting review complete. | 01/31/2019 |
| Permit | Status Pending - described lease is outside PSU. Contacted operator for correction. | 01/29/2019 |
| Permit | Passed completeness. | 01/15/2019 |

Total: 6 comment(s)