

**APPLICATION FOR PERMIT TO:**

**Drill**       Deepen       Re-enter       Recomplete and Operate

TYPE OF WELL    OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER _____ ZONE TYPE       SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Refiling <input type="checkbox"/> Sidetrack <input type="checkbox"/>
---	---

Date Received:  
04/25/2018

Well Name: Duck Club      Well Number: 12W-20-6N

Name of Operator: EXTRACTION OIL & GAS INC      COGCC Operator Number: 10459

Address: 370 17TH STREET SUITE 5300

City: DENVER      State: CO      Zip: 80202

Contact Name: Bonnie Lamond      Phone: (720)557-8300      Fax: (    )

Email: blamond@extractionog.com

**RECLAMATION FINANCIAL ASSURANCE**  
Plugging and Abandonment Bond Surety ID: 20130028

**WELL LOCATION INFORMATION**

QtrQtr: NWSW      Sec: 12      Twp: 1S      Rng: 66W      Meridian: 6

Latitude: 39.979070      Longitude: -104.730950

Footage at Surface: <u>2463</u> Feet	FNL/FSL	FEL/FWL
<u>FSL</u> <u>689</u> Feet	<u>FSL</u>	<u>FWL</u>

Field Name: WATTENBERG      Field Number: 90750

Ground Elevation: 5037      County: ADAMS

GPS Data:  
Date of Measurement: 10/12/2017    PDOP Reading: 1.6    Instrument Operator's Name: Brian Pfohl

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

Footage at Top of Prod Zone: <u>2460</u> FNL	FNL/FSL	FEL/FWL	Bottom Hole: <u>2440</u> FNL	FEL/FWL
<u>2173</u> FWL	<u>FNL</u>	<u>FWL</u>	<u>2178</u> FEL	<u>FEL</u>
Sec: <u>12</u> Twp: <u>1S</u> Rng: <u>66W</u>			Sec: <u>10</u> Twp: <u>1S</u> Rng: <u>66W</u>	

**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: oil and gas lease

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.)

Please see attached mineral lease map attached.

Total Acres in Described Lease: 40 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: 1440 Feet

Building Unit: 1440 Feet

High Occupancy Building Unit: 4216 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 2460 Feet

Above Ground Utility: 717 Feet

Railroad: 889 Feet

Property Line: 268 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: 397 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

Drilling and Spacing Unit:  
Township 1 South, Range 66 West, 6th P.M.  
Section 10: E/2  
Section 11: All  
Section 12: W/2  
1280 acres

## 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	407-2422	1280	Sec 10,11&12

## DRILLING PROGRAM

Proposed Total Measured Depth: 17679 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: 1358 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:

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+1/2	9+5/8	36	0	1500	400	1500	0
1ST	8+1/2	5+1/2	20	0	17679	2357	17679	1500

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: Duck Club 12W-20-7N, operated by Extraction Oil and Gas.  
Nearest well belonging to another operator: Shaw E Unit 1, API 05-001-09193, operated by Great Western Oil and Gas.  
Interwell distances were determined using our in-house 3D anti-collision reports.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ CDP #: \_\_\_\_\_

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: Bonnie Lamond

Title: Regulatory Analyst Date: 4/25/2018 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: 7/22/2018

Expiration Date: 07/21/2020

<b>API NUMBER</b> 05 001 10161 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.

### COA Type

### Description

	<p>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 via Form 42 for all subsequent wells drilled on the pad.</p> <p>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.</p> <p>3) Oil-based drilling fluid is to be used only after setting surface casing.</p> <p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test:</p> <p>1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation.</p> <p>2) 6 months after rig release, prior to stimulation (delayed completions).</p> <p>3) Within 30 days of first production, as reported on Form 5A.</p>
--	---

## Best Management Practices

### No BMP/COA Type

### Description

1	Drilling/Completion Operations	317.p One of the first wells drilled on the pad will be logged with open-hole Resistivity Log and 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 clearly state "No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open-hole logs were run.
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	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.

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](http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf)

## Attachment Check List

### Att Doc Num

### Name

401619208	FORM 2 SUBMITTED
401619330	OffsetWellEvaluations Data
401619331	DIRECTIONAL DATA
401619332	DEVIATED DRILLING PLAN
401619333	WELL LOCATION PLAT
401619335	MINERAL LEASE MAP
401619336	SURFACE AGRMT/SURETY

401620720	EXCEPTION LOC REQUEST
401709746	OFFSET WELL EVALUATION

Total Attach: 9 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit	Final Review Completed.	07/20/2018
Engineer	Offset wells evaluated	07/19/2018
Permit	Open Hole Logging BMP submitted by operator. With operators concurrence added Spacing order, unit acreage & unit config. Permitting Review Complete.	07/03/2018
Permit	Passed Completeness.	05/02/2018

Total: 4 comment(s)