

FORM  
2

Rev  
08/13

## 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:

400506496

#### 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 ☐

Date Received:

11/04/2013

Well Name: Castor

Well Number: 7-36-9-59

Name of Operator: CARRIZO NIOBRARA LLC

COGCC Operator Number: 10439

Address: 500 DALLAS STREET #2300

City: HOUSTON

State: TX

Zip: 77002

Contact Name: Cynthia Pinel

Phone: (713)358-6210

Fax: ( )

Email: cynthia.pinel@crzo.net

#### RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20120105

#### WELL LOCATION INFORMATION

QtrQtr: NENE Sec: 36 Twp: 9N Rng: 59W Meridian: 6

Latitude: 40.713570

Longitude: -103.919040

Footage at Surface: 336 feet FNL/FSL FNL 732 feet FEL/FWL FEL

Field Name: WILDCAT

Field Number: 99999

Ground Elevation: 4890

County: WELD

GPS Data:

Date of Measurement: 07/24/2013

PDOP Reading: 1.9

Instrument Operator's Name: MARK WOODARD

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

Footage at Top of Prod Zone: FNL/FSL 300 FNL 975 FEL 600 FSL 975 FEL 600  
Sec: 36 Twp: 9N Rng: 59W Sec: 36 Twp: 9N Rng: 59W

#### 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: Bond

Surface damage assurance if no agreement is in place: Blanket

Surface Surety ID: 20120106

## 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.)

Township 9 North, Range 59W of the 6th P.M., Section 36: N2

Total Acres in Described Lease: 320 Described Mineral Lease is: ☐ Fee ☒ State ☐ Federal ☐ Indian

Federal or State Lease # 9821.8

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

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet

Building Unit: 5280 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 5280 Feet

Above Ground Utility: 412 Feet

Railroad: 5280 Feet

Property Line: 732 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 Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 300 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 300 Feet (Enter 5280 for distance greater than 1 mile.)

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

## SPACING & FORMATIONS COMMENTS

Hearing for spacing approved on 10/28/2013 #1309-AW-54

## 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           | 535-424                 | 640                           | Sec.36:All                           |

## DRILLING PROGRAM

Proposed Total Measured Depth: 10873 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 215 Feet (Including plugged wells)

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? No

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 609

## 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   | 18           | 16             | 64    | 0             | 70            | 10        | 70      | 0       |
| SURF        | 12+1/4       | 9+5/8          | 36    | 0             | 1400          | 334       | 1400    | 0       |
| 1ST         | 8+3/4        | 7              | 23    | 0             | 6568          | 647       | 6568    |         |
| 1ST LINER   | 6+1/8        | 4+1/2          | 11.6  | 6430          | 10873         |           |         |         |

☐ 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: Swell packer will be set beyond 300' from the section line to keep wellbore from 7" casing unproduced. Spacing order number has not been issued. Hearign for spacing approved on 10/28/2013 #1309-AW-54. Form 2A submitted (doc no. 400506418)

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

Location ID: 434893

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: Cynthia Pinel

Title: Regulatory Comp. Analyst Date: 11/4/2013 Email: cynthia.pinel@crzo.net

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: 12/5/2013

Expiration Date: 12/04/2015

**API NUMBER**

05 123 38577 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**

|  |  |
|--|--|
|  | 1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU.<br>2) Comply with Rule 317.i and provide cement coverage from end of 7" casing to a minimum of 200' above Niobrara. Verify coverage with cement bond log.<br>3) Comply with Rule 321. Run and submit Directional Survey from TD to base of surface casing. Ensure that the wellbore complies with setback requirements in commission orders or rules prior to producing the well. The Drilling Completion Report, Form 5 and the Completed Interval Report, Form 5A will explicitly detail how those portions of the well outside of the legal setback are isolated from production. |
|  | Operator acknowledges the proximity of the following wells: State #1 (123-05006), McCaffery #16-36 (123-13992). 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 ("OTHER – AS SPECIFIED BY PERMIT CONDITION") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.   |

## Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u>                    | <u>Description</u>   |
|-----------|--|--|
| 1         | Pre-Construction                       | The COGCC to be notified 48 hours prior to construction of the Fresh Water Storage Pit.  |
| 2         | Storm Water/Erosion Control            | Operator has designed the well pad with insloping and a storm water control ditch to prevent storm water run-on/runoff and the release of fluids from the location. See attached Construction Layout Drawing.  |
| 3         | Material Handling and Spill Prevention | Operator will ensure 110 percent secondary containment for any volume of fluids contained at the well site during drilling and completion. Operator will implement best management practices to contain any unintentional release of fluids. Operator shall not allow any fluids to flow back to the Fresh Water Storage Pit/Pond. |
| 4         | Construction                           | The location will be fenced.   |

Total: 4 comment(s)

Data retrieval failed for the subreport 'IntPolicy\_NTO' located at: \\DorDonSterling\oFarmReports\policy\_nto.rdl. Please

## Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u>            |
|--------------------|------------------------|
| 2157335            | OFFSET WELL EVALUATION |
| 400506496          | FORM 2 SUBMITTED       |
| 400506617          | DIRECTIONAL DATA       |
| 400506618          | DEVIATED DRILLING PLAN |
| 400506619          | WELL LOCATION PLAT     |
| 400506620          | CONST. LAYOUT DRAWINGS |

Total Attach: 6 Files

## General Comments

| <u>User Group</u> | <u>Comment</u>  | <u>Comment Date</u>       |
|-------------------|---|---------------------------|
| Permit            | Removed BMP's relating to fresh water storage pit. Related 2A has no pit on this location.<br>No LGD or public tasks.<br>Final Review--passed.  | 12/3/2013<br>9:45:21 AM   |
| Engineer          | Existing wells of concern within 1500':<br>State #1 (123-05006), DA, (lacks Nbr isolation)<br>McCaffery #16-36 (123-13992), DA, (lacks Nbr and aquifer isolation)<br>Attached Well Evaluation states Carrizo will Re-enter these 2 wells and plug to provide adequate protection. | 11/26/2013<br>11:39:24 AM |
| Permit            | Oper. sub. offset well eval.  | 11/25/2013<br>7:49:41 AM  |
| Permit            | Req'd offset well eval.   | 11/21/2013<br>2:40:55 PM  |
| Permit            | This form has passed completeness.  | 11/6/2013<br>9:55:46 AM   |

Total: 5 comment(s)