

**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 _____	Refiling <input type="checkbox"/>
ZONE TYPE    SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input type="checkbox"/>

Date Received:  
10/01/2014

Well Name: SHULL      Well Number: 7-25-9-60

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: SWSE      Sec: 25      Twp: 9N      Rng: 60W      Meridian: 6

Latitude: 40.714690      Longitude: -104.036050

Footage at Surface: <u>265</u> feet	FNL/FSL	FEL/FWL
<u>FSL</u> <u>1584</u> feet	<u>FEL</u>	

Field Name: WILDCAT      Field Number: 99999

Ground Elevation: 4887      County: WELD

GPS Data:  
Date of Measurement: 09/17/2014    PDOP Reading: 1.9    Instrument Operator's Name: MARC WOODARD

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

Footage at Top of Prod Zone: <u>600</u> feet	FNL/FSL	FEL/FWL	Bottom Hole: <u>600</u> feet	FNL/FSL	FEL/FWL
<u>FSL</u> <u>1630</u> feet	<u>FEL</u>		<u>FNL</u> <u>1643</u> feet	<u>FEL</u>	

Sec: 25    Twp: 9N    Rng: 60W      Sec: 25    Twp: 9N    Rng: 60W

**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.)

TOWNSHIP 9 NORTH, RANGE 60W OF THE 6TH P.M., SECTION 25: E/2, E/2NW, SWNW, SW

Total Acres in Described Lease: 608 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: 600 Feet

**CULTURAL DISTANCE INFORMATION**

Distance to nearest:

Building: 3599 Feet

Building Unit: 3599 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 3730 Feet

Above Ground Utility: 3599 Feet

Railroad: 5280 Feet

Property Line: 265 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: 322 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 600 Feet (Enter 5280 for distance greater than 1 mile.)

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

**SPACING & FORMATIONS COMMENTS**

PRODUCTIVE INTERVAL OF THE WELLBORE TO BE LOCATED NO CLOSER THAN 600 FEET FROM UNIT BOUNDARIES AND NO CLOSER THAN 300 FEET FROM THE PRODUCTIVE INTERVAL OF ANY OTHER WELLBORE.

**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	535-437	640	SEC 25: ALL

**DRILLING PROGRAM**

Proposed Total Measured Depth: 10538 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 322 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	65	0	77	8	77	0
SURF	12+1/4	9+5/8	36	0	1400	534	1400	0
1ST	8+3/4	7	23	0	6200	566	6200	
1ST LINER	6+1/8	4+1/2	11.6	5468	10538			

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 \_\_\_\_\_

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

Location ID: 432177

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: 10/1/2014 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: *Matthew Lee* Director of COGCC Date: 10/30/2014

Expiration Date: 10/29/2016

**API NUMBER**

05 123 40495 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>
	Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.
	1) Provide 48 hour notice prior to spud via electronic Form 42. 2) Provide cement coverage to a minimum of 200' above Niobrara. Verify coverage with cement bond log. 3) 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.
	Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Storm Water/Erosion Control	Operator has designed the well pad with insloping and a storm water control ditch to prevent storm water run-on/run-off and the release of fluids from the location. See attached Construction Layout Drawing.
2	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 practes to contain any unintentional relelease of fluids.
3	Construction	The location will be fenced.
4	Drilling/Completion Operations	Operator will implement interim reclamation measures immediately after construction of the location to stabilize cut and fill slopes, stabilize the topsoil and spoil stockpiles, establish desirable vegetation and control weeds on the location.

Total: 4 comment(s)

## Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400699431	FORM 2 SUBMITTED
400699470	WELL LOCATION PLAT
400699471	DEVIATED DRILLING PLAN
400699473	OFFSET WELL EVALUATION
400699474	DIRECTIONAL DATA
400703822	OffsetWellEvaluations Data

Total Attach: 6 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	10/28/2014 8:06:39 AM
Engineer	Evaluated any existing wells within 1500' of proposed directional.	10/9/2014 4:17:20 PM
Permit	Imported updated Offset Wells Evaluation submitted by operator. Corrected distance to well producing and penetrating formation to 322 ft.	10/8/2014 11:37:48 AM
Permit	Passed Completeness	10/6/2014 10:36:53 AM

Total: 4 comment(s)