

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:
400514110

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

TYPE OF WELL OIL GAS COALBED OTHER _____
ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES

Refiling
Sidetrack

Date Received:
11/18/2013

Well Name: Castor Well Number: 4-36-9-59
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: 40.713510 Longitude: -103.918960

Footage at Surface: 357 feet FNL/FSL FNL 711 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 650 FEL 600 FSL 650 FEL
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: N/2

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: 433 Feet

Railroad: 5280 Feet

Property Line: 711 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

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: 10789 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 40 Feet (Including plugged wells)

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? 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	1401	534	1401	0
1ST	8+3/4	7	23	0	6567	647	6567	
1ST LINER	6+1/4	4+1/2	11.6	5840	10789			

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

i. Well had to be sidetracked due to while drilling the curve in the Castor 4-36-9-59 at 5,976' MD / 5,904' TVD it was determined that the build rates were not effectively made after KOP it was determined that the drill bit would not land the curve into the Niobrara target at 5,965' TVD, but rather at a lower TVD of 6,430' TVD. Therefore, pumping a cement kick off plug was required to plug back the current portion of the curve in able to kick off higher at 5,354' TVD to re-drill the curve to 5,965' TVD.

ii. Total measured depth reached in the wellbore being plugged back 5,976'

iii. Casing set - size(s) and measured depth(s) 9-5/8" surface at 1,401'

iv. Description of fish in the hole (if any) - including top and bottom measured depths: No fish

v. Description of proposed plugs: setting measured depths, heights, and cement volumes
 Plug #1: 5,950'-5,305' 226 sx plus 20% excess
 Plug #2: 5,271'-4,665' 253 sx plus 20% excess vi. Type of cement to be used for all plugs, including slurry weight (ppg) and yield (cf/sk)
 Plug #1: Class G 14.4 ppg 1.21 cf/sk
 Plug #2: Class G 17 ppg .99 cf/sk

vi. Measured depth of proposed sidetrack kick-off point: 5,365' MD

vii. Proposed objective formation(s) for sidetrack hole - new or same as the wellbore being abandoned: Same

viii. BHL target for sidetrack hole - new or same as the wellbore being abandoned (NOTE: a change in the BHL must be reviewed and approved by COGCC Permitting prior to completing the sidetrack. Drilling a sidetrack to an unapproved BHL could result in an NOAV, plugging the well, or both): Same

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

Location ID: _____

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: Cynthia Pinel

Title: Regulatory Comp. Analyst Date: 11/18/2013 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: *Matthew Lee* Director of COGCC Date: 11/21/2013

Expiration Date: 11/20/2015

API NUMBER
05 123 38368 01

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>

Best Management Practices

No BMP/COA Type

Description

No BMP/COA Type	Description

Data retrieval failed for the subreport 'IntPolicy_NTC' located at: \\DnrDenSterling\FarmReports\policy_ntc.rdl. Please

Attachment Check List

Att Doc Num

Name

400514110	FORM 2 SUBMITTED
400514114	OffsetWellEvaluations Data
400514182	WELLBORE DIAGRAM

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

Permit	Eng.review complete. Final Review--passed.	11/21/2013 2:45:06 PM
Permit	Waived public and LGD comments: unplanned sidetrack. Corrected form: not a REFILE APD. Corrected API#. Corrected spacing order.	11/19/2013 8:14:37 AM
Permit	This form has passed completeness.	11/19/2013 8:11:49 AM

Total: 3 comment(s)