

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:

400717455

Date Received:

03/26/2015

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 ☐

Well Name: SONIC STAR

Well Number: 1-12-8-60

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: SESE Sec: 11 Twp: 8N Rng: 60W Meridian: 6

Latitude: 40.670329

Longitude: -104.048989

Footage at Surface: 180 feet FNL/FSL FSL 195 feet FEL/FWL FEL

Field Name: WILDCAT

Field Number: 99999

Ground Elevation: 4877

County: WELD

GPS Data:

Date of Measurement: 08/22/2014 PDOP Reading: 1.3 Instrument Operator's Name: RAYMUND COOK

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

Footage at Top of Prod Zone: FNL/FSL FSL 600 FSL 600 FWL 2094 FSL 600 FWL
Sec: 12 Twp: 8N Rng: 60W Sec: 1 Twp: 8N 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: No

The right to construct the Oil and Gas Location is granted by: Surface Use Agreement

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 8 NORTH, RANGE 60W OF THE 6TH P.M., SECTION 1: S2, SECTION 12:ALL. SURFACE LOCATION OUTSIDE OF PRODUCING UNIT THEREFORE RIGHT TO CONSTRUCT WILL BE BY SURFACE USE AGREEMENT, NOT OIL & GAS LEASE.

Total Acres in Described Lease: 960 Described Mineral Lease is: ☐ Fee ☐ State ☒ Federal ☐ Indian

Federal or State Lease # COC-71628

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 600 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 4318 Feet
Building Unit: 5280 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 843 Feet
Above Ground Utility: 5280 Feet
Railroad: 5280 Feet
Property Line: 180 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: 5000 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

1920 ACRE DRILLING & SPACING UNIT. WELLBORE NO CLOSER THAN 300 FEET FROM UNIT BOUNDARIES AND NO CLOSER THAN 300 FEET FROM PRODUCTIVE INTERVAL.

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	535-647	1920	SEC 12 & 1: ALL

DRILLING PROGRAM

Proposed Total Measured Depth: 13419 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 2315 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	65	0	65	8	65	0
SURF	12+1/4	9+5/8	36	0	1500	585	1500	0
1ST	8+3/4	7	23	0	6476	582	6476	
2ND	6+1/8	4+1/2	11.6	0	13419			

☐ 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: _____

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: 3/26/2015 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: 7/10/2015

Expiration Date: 07/09/2017

API NUMBER

05 123 41858 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) Provide 48 hour notice of MIRU via electronic Form 42.
- 2) Set at least 1500' of surface casing (Upper Pierre aquifer 850'-1450' in offset 123-14241, gs 4879').
- 3) Provide cement coverage to a minimum of 200' above Niobrara. Verify coverage with cement bond log.
- 4) 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.

Best Management Practices

No	<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 practices to contain any unintentional release 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. Jet pump used at the initial start-up of the well then replaced with pump jack.
5	Drilling/Completion Operations	Drilling/Completion Operations – An open-hole Resistivity Log with Gamma Ray log run from TD into the surface casing in addition a Cement Bond Log run on production casing or on intermediate casing if production liner is run. Form 5 will list all logs run in the well and attach all logs run.

Total: 5 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>
400717455	FORM 2 SUBMITTED
400802895	WELL LOCATION PLAT
400802896	CONST. LAYOUT DRAWINGS
400802897	DEVIATED DRILLING PLAN
400802898	DIRECTIONAL DATA
400845181	SURFACE AGRMT/SURETY

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.	7/8/2015 10:58:25 AM
Permit	Replaced 317.p BMP per the operator.	7/8/2015 8:07:20 AM
Permit	Requested corrected 317.p BMP from the operator.	6/30/2015 7:52:49 AM
Permit	Corrected Spacing order unit configuration from "Sec 12; All" to "Sec 12 All"	6/24/2015 8:28:14 AM
Permit	Revised cultural distances to building and building unit per the operator's request.	6/11/2015 4:01:11 PM
Permit	Added link to the related 2A. Requested corrected cultural distances. Requested corrected 317.p BMP	3/9/2015 1:15:46 PM
Engineer	Evaluated any existing wells within 1500' of proposed directional. There are none.	6/5/2015 11:15:34 AM
Permit	Passed completeness.	3/3/2015 2:13:12 PM
Permit	1.) Surface Use Agreement is named incorrectly and should be name "SURFACE AGRMT/SURETY". 2.) Missing Open Hole Logging Exception letter.	5/28/2015 12:17:05 PM
Permit	1.) Surface Use Agreement is missing per comment in the Lease Information section. 2.) Based on the Well Location Plat the minerals beneath the well are not going to be developed. 3.) Missing Open Hole Logging Exception letter. Returned to draft.	5/27/2015 9:48:25 AM
Permit	Changed BHL section location from "12" to "1" to match the Well Location Plat.	5/21/2015 1:04:09 PM
Permit	1.) Well Location Plat attachment states BHL location as 2094'-FSL & 600'-FWL. Returned to draft.	5/20/2015 3:10:21 PM
Permit	1.) BHL section location does not match the Well Location Plat. Returned to draft.	5/7/2015 7:46:57 AM
Permit	1.) Surface Use Agreement is missing. 2.) Under the Cultural Setbacks tab the Above Ground Utility is blank. Returned to draft.	4/24/2015 9:35:11 AM
Permit	Missing 317.p exception request attachment as stated on Submit tab. Comment on Submit tab references wrong rule. Return to draft.	4/10/2015 12:11:22 PM
Permit	Missing 317.p. BMP. Missing 317.p exception request attachment as stated on Submit tab. Comment on Submit tab references wrong rule. Return to draft.	3/27/2015 10:39:33 AM

Total: 16 comment(s)