

**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:  
11/17/2016

Well Name: Hebron 0781      Well Number: 4-12H

Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC      COGCC Operator Number: 10598

Address: 123 ROBERT S KERR AVE  
 City: OKLAHOMA CITY      State: OK      Zip: 73102

Contact Name: Laci Bevans      Phone: (405)429-5610      Fax: ( )  
 Email: lbevans@sandridgeenergy.com

**RECLAMATION FINANCIAL ASSURANCE**  
 Plugging and Abandonment Bond Surety ID: 20160010

**WELL LOCATION INFORMATION**

QtrQtr: NENE      Sec: 12      Twp: 7N      Rng: 81W      Meridian: 6  
 Latitude: 40.597736      Longitude: -106.425286

Footage at Surface: <u>710</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>26</u> Feet	<u>FNL</u> <u>26</u> Feet	<u>FEL</u> _____ Feet

Field Name: WILDCAT      Field Number: 99999  
 Ground Elevation: 8130      County: JACKSON

GPS Data:  
 Date of Measurement: 09/01/2016    PDOP Reading: 1.4    Instrument Operator's Name: Chad Meiers, D.S.

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

Footage at Top of Prod Zone: <u>1012</u> Feet	FNL/FSL	FEL/FWL	Bottom Hole: <u>300</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>1689</u> Feet	<u>FNL</u> <u>1689</u> Feet	<u>FEL</u> _____ Feet	<u>FSL</u> <u>1650</u> Feet	<u>FSL</u> <u>1650</u> Feet	<u>FEL</u> _____ Feet

Sec: 12    Twp: 7N    Rng: 81W      Sec: 12    Twp: 7N    Rng: 81W

**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: 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.)

All of Sec 12-7N-81W.

Total Acres in Described Lease: 640 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: 300 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 1852 Feet  
Building Unit: 4864 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 2884 Feet  
Above Ground Utility: 5015 Feet  
Railroad: 5280 Feet  
Property Line: 614 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: 375 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	531-28	640	All: Sec 12

## DRILLING PROGRAM

Proposed Total Measured Depth: 11764 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: \_\_\_\_\_ 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 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? No

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	26	16+1/4	42	0	90	189	90	0
SURF	12+1/4	9+5/8	36	0	2400	629	2400	0
1ST	8+3/4	5+1/2	20	0	11764	1910	11764	0

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: 448834

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: Laci Bevans

Title: Regulatory Analyst Date: 11/17/2016 Email: lbevans@sandridgeenergy.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: 1/18/2017

Expiration Date: 01/17/2019

**API NUMBER**

05 057 06595 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) Operator shall comply with the most current revision of the Northwest Notification Policy. 2) Operator shall provide cement coverage from the production casing shoe (5 1/2" First String) to a minimum of 200' above the surface casing shoe to provide full isolation of the Coalmont Formation. Verify production casing cement coverage with a cement bond log.
--	---

## Best Management Practices

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
1	Drilling/Completion Operations	One of the first wells drilled on the pad will be logged with openhole 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 openhole logs were run.

Total: 1 comment(s)

## Applicable Policies and Notices to Operators

Policy
NW Colorado Notification Policy. <a href="http://cogcc.state.co.us/documents/reg/Policies/nw_notification_procedures.pdf">http://cogcc.state.co.us/documents/reg/Policies/nw_notification_procedures.pdf</a>
Notice Concerning Operating Requirements for Wildlife Protection. <a href="http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf">http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</a>

## Attachment Check List

<b>Att Doc Num</b>	<b>Name</b>
401146575	FORM 2 SUBMITTED
401151702	DEVIATED DRILLING PLAN
401151704	DEVIATED DRILLING PLAN
401151705	DRILLING PLAN
401151710	WELL LOCATION PLAT
401156094	DIRECTIONAL DATA
401158524	OffsetWellEvaluations Data
401158571	SURFACE AGRMT/SURETY
401168848	OffsetWellEvaluations Data
401168850	DEVIATED DRILLING PLAN

Total Attach: 10 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Passes final permitting review.	01/18/2017
Permit	Passes initial review.	01/12/2017
Permit	The Deviated Drilling Plan attachments have the incorrect township and range however the critical data is correct. The distance provided (~375') from the completed portion of the proposed wellbore and the existing Hebron #3-12H well is a vertical separation between the center of each wellbore.	01/06/2017
Engineer	Uploaded revised Offset Well Evaluation spreadsheet provided by operator. Offset Well Evaluation: Offset wells within 1,500 feet of the wellbores planned on this pad are horizontal Niobrara wells. Evaluated offset horizontal PR well Hebron #3-12H (API # 057-06498). Completed in the Niobrara at a maximum total vertical depth of about 6390'. Remedial cementing performed to isolate Coalmont Formation. The horizontal wellbore of this planned well is about 460' deeper. No mitigation required. Removed Anticollision Summary Report (401151701) and added report provide by operator that includes Hebron #3-12H.	12/16/2016
Engineer	Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. This information was used in addition to locally-available geophysical logs and hydrogeologic information to evaluate the adequacy of the operator's proposed surface casing setting depth. The deepest water well within one mile is 140 feet.  The Coalmont Formation is considered a potential freshwater resource in the North Park Basin (CGS Ground Water Atlas of Colorado, 2003). The proposed surface casing setting depth of 2400' will not cover the entire Coalmont Formation, based on the operator's drilling prognosis in the drilling plan. Minimum cement isolation standards are specified in Condition of Approval #2.	12/16/2016
Permit	Passed completeness.	12/05/2016
Permit	Returned to Draft per Operator's Request.	11/28/2016
Permit	Returned to Draft: * Need Top of Prod zone instead of top of niobrara. * Need Offset Wells Evaluation Tab filled out, including wellbore integrity contact email. * Import and Attach Directional Data in Attachments Tab. * Uncheck Buffer Zone & remove Buffer Zone Notification Date.	11/18/2016
Permit	Returned to draft per Operator request.	11/18/2016

Total: 9 comment(s)