

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:

400958467

### APPLICATION FOR PERMIT TO:

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER \_\_\_\_\_

Refiling ☐

Date Received:

12/23/2015

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Hebron

Well Number: 0780 02-18H

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: Kimberly Rodell

Phone: (303)942-0506

Fax: ( )

Email: krodell@upstreampm.com

### RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20150119

### WELL LOCATION INFORMATION

QtrQtr: NWNE Sec: 18 Twp: 7N Rng: 80W Meridian: 6

Latitude: 40.584269

Longitude: -106.415828

Footage at Surface: 240 feet FNL/FSL FNL 2419 feet FEL/FWL FEL

Field Name: NORTH PARK HORIZONTAL  
NIOBRARA

Field Number: 60120

Ground Elevation: 8153

County: JACKSON

GPS Data:

Date of Measurement: 11/19/2015 PDOP Reading: 1.4 Instrument Operator's Name: Chad Meiers

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

Footage at Top of Prod Zone: FNL/FSL FNL/FWL Bottom Hole: FNL/FSL FEL/FWL  
588 FNL 1685 FEL 300 FSL 1650 FEL  
Sec: 18 Twp: 7N Rng: 80W Sec: 18 Twp: 7N Rng: 80W

### 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.)

Please see attached lease description.

Total Acres in Described Lease: 2948 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: 1113 Feet

Building Unit: 1165 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 2419 Feet

Above Ground Utility: 230 Feet

Railroad: 5280 Feet

Property Line: 240 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: 670 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	531-21	640	Sec. 18: All

## DRILLING PROGRAM

Proposed Total Measured Depth: 11820 Feet

Distance from proposed wellbore to nearest existing or permitted wellbore belonging to another operator:

719 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? 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	2500	576	2500	0
1ST	8+3/4	5+1/2	20	0	11820	1983	11820	2300

☐ 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 Distance from completed portion of the wellbore to nearest wellbore permitted or completed in the same formation was measured to the Hebron 0780 3-18. The distance from the proposed wellbore to nearest existing or permitted wellbore belonging to another operator was taken from the Hebron 5-18H, API No. 05-057-16502, currently owned and operated by EE3 LLC.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ No \_\_\_\_\_ CDP #: \_\_\_\_\_

Location ID: 414127

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: Kimberly Rodell

Title: Permit Agent Date: 12/23/2015 Email: krodell@upstreampm.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: 2/17/2016

Expiration Date: 02/16/2018

### API NUMBER

05 057 06540 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. Changed First String cement top from a null value to 2300' (200' above proposed surface casing shoe depth of 2500').

## **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 open-hole 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 open-hole 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>
400958467	FORM 2 SUBMITTED
400958725	DIRECTIONAL DATA
400958726	OTHER
400958728	DRILLING PLAN
400958729	DEVIATED DRILLING PLAN
400958730	LEGAL/LEASE DESCRIPTION
400959410	WELL LOCATION PLAT
400959411	OffsetWellEvaluations Data
400960373	SURFACE AGRMT/SURETY

Total Attach: 9 Files

## **General Comments**

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
Permit	Final review complete.	2/17/2016 11:24:37 AM
Permit	Operator provided revised distance from completed portion of well to the nearest well from 799' to 670'.  Permit task passed.	2/17/2016 11:18:24 AM
Engineer	Operator (Spence Laird) requested a change of the surface casing setting depth and cement volume via email on 2/11/2016, as follows:  Please correct the surface casing depth to 2500' Top of cement – surface Estimated volume gauge hole + 50% excess Lead: 376 sx Halliburton SwiftCem @ 2.18 ft³/sk Tail: 200 sx Halliburton SwiftCem @ 1.76 ft³/sk Top Out (if needed): 100 sx @ 1.76 ft³/sk  COGCC Engineering staff changed this form as follows: Surface Casing Setting Depth and Cement Bottom = 2500', and Surface Casing Cement Volume = 576 sacks.	2/16/2016 5:51:09 PM

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 101 feet.	1/4/2016 3:49:40 PM
Engineer	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 2500' may or may not cover the entire formation. Minimum cement isolation standards are specified in Condition of Approval #2.	1/4/2016 3:47:09 PM
Engineer	<p>Offset Well Evaluation: The completion of the proposed well is planned to be within 1,500 feet of three permitted (XX) wells and two producing (PR) wells. No mitigation required, as shown below.</p> <p>Evaluated offset XX well Mutual #01-17H (057-06534) Form 2 Application for Permit to Drill # 400591335. The design of this well meets standards; no offset mitigation required.</p> <p>Evaluated offset XX well Hebron #01-18HR (057-06536) Form 2 Application for Permit to Drill # 400596809. The design of this well meets standards; no offset mitigation required.</p> <p>Evaluated offset XX well Mutual #03-19H (057-06470), which has not been drilled (confirmed by COGCC Field Inspection Report #200290286, dated 11/18/2010), and the well's Form 2 Application for Permit to Drill #1990947, expired on 6/17/2009. The design of this well would not meet current standards, which require full isolation of the Coalmont Formation. Any refile of a Permit to Drill for the Mutual #03-19H well would require full isolation of the Coalmont Formation. No offset mitigation required because this well has an expired Permit to Drill, and the well was not drilled.</p> <p>Evaluated offset horizontal PR well Hebron #1-18H (057-06501), TD at 9994' and completed in NBRR. First String cement coverage appears to extend above the surface casing shoe (set at 1054'), with adequate isolation of the Coalmont Formation and the NBRR production zone (top perforation at 7441'). No mitigation required.</p> <p>Evaluated offset horizontal PR well Hebron #5-18H (057-06502), TD at 11408' and completed in NBRR. First String cement coverage appears to extend above the surface casing shoe (set at 1028'), with adequate isolation of the Coalmont Formation and the NBRR production zone (top perforation at 7161'). No mitigation required.</p>	1/4/2016 2:43:43 PM
Permit	Passed completeness.	12/28/2015 12:35:45 PM
Permit	Returned to draft. SUA needs to be attached. Need open hole logging BMP per rule 317.p.	12/28/2015 10:45:17 AM

Total: 8 comment(s)