



## 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.)

Total Acres in Described Lease: \_\_\_\_\_ 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: \_\_\_\_\_ Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 2783 Feet  
Building Unit: 2792 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 683 Feet  
Above Ground Utility: 433 Feet  
Railroad: 5280 Feet  
Property Line: 703 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: \_\_\_\_\_ Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary \_\_\_\_\_ 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.)
FRONTIER	FRTR			

## DRILLING PROGRAM

Proposed Total Measured Depth: 7580 Feet

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

987 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
OPEN HOLE	8+3/4			2500	7580			

☐ 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 have attached the wellbore diagram and a drilling program that describes the plug back procedure for this pilot hole. This well will be a pilot hole and will not be completed or produced.

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

Location ID: 324757

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: Spence Laird

Title: Regulatory Supervisor Date: 2/4/2016 Email: slaird@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: 3/1/2016

Expiration Date: 02/28/2018

### API NUMBER

05 057 06553 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

	317.p Open-hole Resistivity Log with Gamma Ray Log will be run from TD into the surface casing. A Cement Bond Log with Gamma-Ray will be run on production casing, or on intermediate casing if a production liner is run. The Form 5, Completion Report, will list all logs run and have those logs attached.
	1) Operator shall comply with the most current revision of the Northwest Notification Policy.  2) Additional 200' plugs required in open hole with the base of the first plug at the Frontier top and the base of the second plug at the Niobrara top. Operator proposes to set a third plug near the lateral kickoff point from 4425' to 3925' (above Sussex Formation, expected at approximately 4828'). Open hole plugs shall be set prior to drilling the lateral sidetrack wellbore.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	This well will be on a pad with multiple wells and one of the first wells drilled on the pad will be logged with an 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 on production casing or on intermediate casing if production liner is ran. The form 5, Completion report, for this well will list all logs run and will have logs attached.

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

<u>Att Doc Num</u>	<u>Name</u>
400984089	FORM 2 SUBMITTED
400984233	WELLBORE DIAGRAM
400984274	DRILLING PLAN
400984277	WELL LOCATION PLAT
400984306	SURFACE AGRMT/SURETY

Total Attach: 5 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Corrected field name to North Park Horizontal Niobrara Final Review Complete.	3/1/2016 1:43:40 PM
Engineer	Final Approval: This is the 00 wellbore. Approve this Pilot Hole Form 2 for assignment of API Number prior to approving the horizontal lateral Form 2 #400959455.	3/1/2016 10:42:08 AM
Permit	Permit task passed.	2/23/2016 3:29:48 PM
Permit	With the operator's approval, answered no to minerals beneath location will be developed, the right to construct changed to surface use agreement, removed lease description and spacing order information & corrected disposal methods to be consistent with the rest of the wells on the pad and the Form 2A.	2/23/2016 3:25:56 PM

Engineer	<p>Excerpt from operator's 2/10/2016 email: "We originally submitted the Hebron 0780 [4]-18H (horizontal / producer) form 2 [Document Number 400959455] as simply a horizontal well that will produce....then last week Sandridge geologist wanted some more science/data/logs for this area and wanted to see what the Frontier formation looked like below the Niobrara so they asked me to permit a pilot hole for the Hebron 0780 [4]-18; therefore, that is the reason for an addition form 2 submission. The Pilot hole will have surface casing set (1500') [SandRidge subsequently requested a surface casing change to 2500'], then a vertical section drilled down to the Frontier (7,580'), logs ran, then we'd set a cement plug at point that would be below our kickoff point for the horizontal. The cement plug for the open hole pilot hole would be from 4425-3925'. Next we'd reenter the well and drill from the planned kickoff point and lateral then set casing just like what was submitted in the original form 2 for the horizontal producer (doc# 400959455). We will never complete or produce from the pilot hole, simply run logs/science then set the cement plug to block of the deeper vertical section and drill horizontally like originally planned."</p> <p>COGCC Engineering staff informed SandRidge that additional 200' plugs will be required in this pilot hole with the base of the first plug at the Frontier top and the base of the second plug at the Niobrara top to isolate these formations from overlying formations in the pilot hole (see Condition of Approval #2).</p>	2/17/2016 10:02:40 AM
Engineer	<p>Operator (Spence Laird) requested a change of the surface casing setting depth and cement volume via email on 2/11/2016, as follows:</p> <p>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</p> <p>COGCC Engineering staff changed this form as follows: Surface Casing Setting Depth and Cement Bottom = 2500', and Surface Casing Cement Volume = 576 sacks.</p>	2/17/2016 10:02:00 AM
Engineer	Offset Well Evaluation: This is a vertical pilot hole that will not be stimulated. Refer to the Offset Well Evaluation on the lateral sidetrack permit for this well, Form 2 #400959455.	2/17/2016 10:01:08 AM
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.	2/17/2016 10:00:31 AM
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 for the lateral sidetrack First String (not shown on this form) are specified on the lateral sidetrack permit for this well, Form 2 #400959455.	2/17/2016 9:58:40 AM
Engineer	Conductor details copied from lateral sidetrack Form 2 #400959455 for this well. Unchecked "Conductor Casing is NOT Planned" box on this Form 2. Planned hole size for pilot hole is 8+3/4", per operator (Tyler McCullar) via email on 2/17/2016.	2/17/2016 9:44:52 AM
Permit	Passed completeness.	2/9/2016 3:29:28 PM
Permit	<p>Returned to draft:</p> <p>Indicate type of well on well name tab -oil or gas?</p> <p>Spacing and formation tab is missing data - please fill out first two questions.</p> <p>A BMP addressing Rule 317.p Open Hole Logging is required.</p>	2/8/2016 2:54:30 PM

Total: 12 comment(s)