

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"/>
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Date Received: 10/19/2016

Well Name: Grizzly 0881 Well Number: 2-1H36

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: 40.598147 Longitude: -106.425233

Footage at Surface: <u>560</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>11</u> Feet	<u>FNL</u>	<u>FEL</u>

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

GPS Data:
 Date of Measurement: 09/01/2016 PDOP Reading: 1.6 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>FNL/FSL</u> <u>FEL/FWL</u> Bottom Hole: <u>FNL/FSL</u> <u>FEL/FWL</u>
<u>248</u> <u>FSL</u> <u>838</u> <u>FEL</u> <u>100</u> <u>FNL</u> <u>990</u> <u>FEL</u>
Sec: <u>1</u> Twp: <u>7N</u> Rng: <u>81W</u> Sec: <u>36</u> Twp: <u>8N</u> Rng: <u>81W</u>

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.)

ALL OF SEC 1-7N-81W, ALL OF SEC 36-8N-81W

Total Acres in Described Lease: 1280 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: 100 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 1741 Feet

Building Unit: 4730 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 3003 Feet

Above Ground Utility: 5008 Feet

Railroad: 5280 Feet

Property Line: 763 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: 520 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 100 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	531-43	1280	Sec 1 & 36: ALL

DRILLING PROGRAM

Proposed Total Measured Depth: 18008 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 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? 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	20	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	18008	3114	18008	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: 10/19/2016 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 06593 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.
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Best Management Practices

No	BMP/COA Type	Description
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. http://cogcc.state.co.us/documents/reg/Policies/nw_notification_procedures.pdf
Notice Concerning Operating Requirements for Wildlife Protection. http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Attachment Check List

Att Doc Num	Name
401131487	FORM 2 SUBMITTED
401131507	DIRECTIONAL DATA
401131508	DEVIATED DRILLING PLAN
401131509	DEVIATED DRILLING PLAN
401131510	DEVIATED DRILLING PLAN
401131511	DRILLING PLAN
401133613	SURFACE AGRMT/SURETY
401152453	WELL LOCATION PLAT
401157926	OffsetWellEvaluations Data
401168812	OffsetWellEvaluations Data

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 incorrect Well Location Plat is attached. Requested the correct attachment. *Corrected Well Location Plat was attached. The distance from a Building seems incorrect. Corrected the distance from "829" to "1,741" per Operator guidance. Waiting on an update from the Operator. There is a slight difference between the Directional Data & Directional Survey depths(~1').	01/06/2017
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
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.	12/16/2016
Engineer	Offset well evaluation is incorrect.	12/15/2016
Permit	Passed completeness.	12/05/2016
Permit	Return to Draft to update wellname on attachments.	11/30/2016
Permit	Returned to Draft per Operator Request.	11/28/2016
Permit	Returned to Draft: * Need Offset Wells Evaluation Tab filled out. * Need View/Modify Detail imported in Offset Wells Evaluation Tab. * Need Operator's Wellbore Integrity Contact Email if not populated by import of Offset Wells import. * Uncheck Buffer Zone & remove Buffer Zone Notification Date.	11/18/2016
Permit	Returned to Draft: * Need Buffer Zone Setback Checked (829'). * Need Buffer Zone Notification to Building Owners Date entered. * Need Offset Wells Evaluation Tab filled out along with Operator's Wellbore Integrity Contact Email. * Need View/Modify Detail imported in Offset Wells Evaluation Tab. * Should change "is being submitted with an Oil and Gas Location Assesment Application" to yes since 2A referenced in the Related forms tab.	10/27/2016

Total: 11 comment(s)