

FORM

2

Rev
08/16

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:

401763458

APPLICATION FOR PERMIT TO:

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

Date Received:

10/10/2018

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER _____Refilling ☒ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: Marr 0780

Well Number: 1-6H31

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: Diane Overbey

Phone: (405)429-5828

Fax: ()

Email: doverbey@sandridgeenergy.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20170015

WELL LOCATION INFORMATION

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

Latitude: 40.598400

Longitude: -106.415608

Footage at Surface: 386 Feet FNL/FSL FNL 2400 Feet FEL/FWL FEL

Field Name: NORTH PARK HORIZONTAL
NIOBRARA

Field Number: 60120

Ground Elevation: 8130

County: JACKSON

GPS Data:

Date of Measurement: 07/27/2018 PDOP Reading: 1.2 Instrument Operator's Name: James Freshwater

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 FNL/FWL
 550 FSL 350 FWL 100 FNL 404 FWL
 Sec: 6 Twp: 7N Rng: 80W Sec: 31 Twp: 8N 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: No

The right to construct the Oil and Gas Location is granted by: oil and gas lease

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.)

See Attached Lease Map

Total Acres in Described Lease: 8382 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: 2194 Feet
Building Unit: 2239 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 1658 Feet
Above Ground Utility: 2269 Feet
Railroad: 5280 Feet
Property Line: 386 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: 310 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

T7N R80W Sec. 6: W/2; W/2E/2; T8N R80W Sec. 31: W/2; W/2E/2

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	531-60	930	S.6&31:W2,W2E2

DRILLING PROGRAM

Proposed Total Measured Depth: 17636 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? _____

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	20	16	65	0	90	63	90	0
SURF	12+1/4	9+5/8	36	0	2400	630	2400	0
1ST	8+3/4	5+1/2	20	0	17636	3300	17636	

☐ 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 well name is being changes from the Marr 0780 3-6H31 to the Marr 0780 1-6H31, and location changed accordingly to comply with the Spacing Order 531-60.

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation was measured to the proposed Marr 0780 2-6H31 formerly known as the Marr 0780 3-6H31 (API# 05-057-06608).

Please contact Angela Callaway at 303-942-0506 or at acallaway@upstreampm.com for questions regarding this permit.

Thank you.

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

Location ID: 413754

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: Angela Callaway

Title: Permit Agent Date: 10/10/2018 Email: acallaway@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: 3/3/2019

Expiration Date: 03/02/2021

API NUMBER

05 057 06608 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
	<p>1)Operator shall comply with the most current revision of the Northwest Notification Policy.</p> <p>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.</p> <p>3)Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.</p> <p>4)Operator acknowledges the proximity of the listed wells. Operator assures that this offset list will be remediated per the Interim Statewide Horizontal Offset Policy (option 4). Operator will submit a Form 42 ("OTHER – AS SPECIFIED BY PERMIT CONDITION") stating that appropriate mitigation will be completed, during the hydraulic stimulation of this well. This Form 42 shall be filed 48 hours prior to stimulation. Operator will assure that the well's Bradenhead is open and monitored during the entire stimulation treatment – a person will monitor for any evidence of fluid, a Bradenhead test will be performed prior to the beginning of stimulation. Peters 0781 13-13H12 (API 05-057-06582) Peters 0781 11-13H12 (API 05-057-06583) HEBRON 02-07H (API 05-057-06499)</p> <p>5)The Operator shall monitor the bradenhead pressure of all wells under Operator's control within 300 feet of the well which is to be treated, provided such other wells penetrate the productive zone which is to be treated. This offset monitoring will be required for any well stimulated on this pad.</p> <p>If at any time during the Treatment or the 24-hour post-stimulation period, the bradenhead annulus pressure of the Treatment well or any of the monitored offset wells increases by more than 200 psig, the Operator of the well being treated shall notify the Director by Form 42, as soon as practicable, but no later than twenty-four (24) hours following such incident. Within fifteen (15) days after the occurrence, the Operator or Adjacent Operator(s), as the case may be, shall submit a Sundry Notice, Form 4, giving all details, including corrective actions taken.</p>

Drilling/Completions: The following conditions of approval (COAs) will apply:

- A closed loop system must be implemented during drilling (as indicated on this Form 2 and previously submitted / approved Form 2A). All cuttings generated during drilling with oil based mud (OBM) must be segregated from water/bentonite based mud- (WBM-) generated drill cuttings and placed separately on the well pad. All OBM-generated drill cuttings must be kept in tanks/containers, or placed on a lined/bermed portion of the well pad; prior to disposition. The moisture content of any OBM-generated drill cuttings in a tank, cuttings containment area, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. The operator has indicated that 'Cuttings Disposal' will be "Offsite" and that the 'Cuttings Disposal Method' will be "Commercial Disposal" (as shown in the 'Drilling Waste Management Program' sections of the Form 2A and this Form 2). Any liners associated with oil-based drilling mud and OBM-generated drill cuttings must be disposed of offsite per CDPHE rules and regulations. Any changes to drill cuttings management and disposal at this location will require submittal (via a Form 4 Sundry Notice) and approval of a Waste Management Plan detailing the changes (specifying cuttings characterization methods, cuttings management, amendment, and onsite disposal location[s]).
- The moisture content of water/bentonite-based drilling mud (WBM) drill cuttings, generated during drilling of the surface casing intervals and intermediate intervals, and managed onsite; shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. The operator has indicated that 'Cuttings Disposal' will be "Offsite" and that the 'Cuttings Disposal Method' will be "Commercial Disposal" (as shown in the 'Drilling Waste Management Program' sections of the Form 2A and the Form 2). After drilling and completion operations have been completed, if any of the WBM-generated drill cuttings will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit, or utilized in onsite interim reclamation activities), they must be sampled and meet the applicable standards of Table 910-1. No liners (if used) are allowed to be disposed of with the drill cuttings.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	A subsequent well on this pad will be logged with open-hole Resistivity Log and Gamma Ray Log from the kick-off point into the surface casing. All proposed wells related to this permit 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

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

<u>Att Doc Num</u>	<u>Name</u>
401763458	FORM 2 SUBMITTED
401781261	WELL LOCATION PLAT
401781262	DEVIATED DRILLING PLAN
401781359	OIL & GAS LEASE
401781734	MINERAL LEASE MAP
401936084	OffsetWellEvaluations Data

401946988	DIRECTIONAL DATA
401957891	OFFSET WELL EVALUATION

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	Req'd new OWE. Rec'd and attached.	02/11/2019
Engineer	317.r No active non-op wellbores within 150'. 317.s No stimulation setback consents required.	02/11/2019
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 152 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.	02/11/2019
Engineer	OWE complete, no non-op wells within 1500'. Engineering review is complete.	02/11/2019
Permit	-Mineral lease was not signed until after the form 2A was approved. 2A RTC was SUA. Grizzly Land LLC, is now the mineral owner, committed and signed to lease. -Corrected distance to nearest lease line from 0 to 100 -Corrected BMP to say a subsequent well. Well that was referenced to have ran open hole logs did not have them. -Corrected Unit config box -All corrections made with operator concurrence	01/17/2019
Permit	Per the orders issued in Dkt. Nos. 170900625 and 170900626, these forms must be processed and the subject wells moved out of the DSU created by Order No. 531-46 before we issue the order vacating Order No. 531-46. Because the Refile Forms have not yet been processed, Dkt. No. 180900686 is continued to the December hearing.	10/24/2018
Permit	Form passes completeness.	10/23/2018

Total: 7 comment(s)