

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:

400877700

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER _____

Refiling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Date Received:

10/29/2015

Well Name: Surprise Unit

Well Number: 6-09H

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: 20130007

WELL LOCATION INFORMATION

QtrQtr: NENW Sec: 9 Twp: 6N Rng: 80W Meridian: 6

Latitude: 40.510337

Longitude: -106.384140

Footage at Surface: 501 feet FNL/FSL FNL 1772 feet FEL/FWL FWL

Field Name: NORTH PARK HORIZONTAL
NIOBRARA

Field Number: 60120

Ground Elevation: 8263

County: JACKSON

GPS Data:

Date of Measurement: 05/21/2015 PDOP Reading: 1.1 Instrument Operator's Name: Randall R. Miller

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

118 FNL 1888 FWL 300 FNL 2307 FEL
Sec: 9 Twp: 6N Rng: 80W Sec: 4 Twp: 6N 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: 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.)

T6N R80W Sec. 9: NW, E2SW, NWSW

Total Acres in Described Lease: 280 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: 0 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 3962 Feet
Building Unit: 4425 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 300 Feet
Above Ground Utility: 221 Feet
Railroad: 5280 Feet
Property Line: 5280 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: 790 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): Surprise Unit Unit Number: COC75017X

SPACING & FORMATIONS COMMENTS

The distance to the nearest well was measured shortest productive interval between the Surprise Unit 3-09H and the Surprise Unit 6-09H which are being permitting concurrently.
Although this is in a federal unit, Order 531-20 approved 300' unit setbacks.

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	531-20		

DRILLING PROGRAM

Proposed Total Measured Depth: 13474 Feet

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

1054 Feet (Including plugged wells)

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? 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:

The cuttings will be sent offsite for Commercial disposal.

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
SURF	12+1/4	9+5/8	36	0	1400	900	1400	0
1ST	8+3/4	5+1/2	20	0	13474	1800	13474	1200

☒ 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

The distance to the nearest well was measured shortest productive interval between the Surprise Unit 3-09H and the Surprise Unit 6-09H which are being permitting concurrently. There are multiple leases that cover this location. The horizontal wellbore crosses the listed lease line and conforms to all unit setbacks. The well is in the North Park Horizontal Niobrara Field, Code 60120. The COGCC system will not accept the name stating, "Field name must be less than or equal to 20 characters." We request the COGCC change this internally. We have requested this issue be fixed previously. We cannot submit correctly until this issue is resolved. The well was submitted under a Wildcat field.

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

Location ID: _____

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: 10/29/2015 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: 2/29/2016

Expiration Date: 02/27/2018

API NUMBER

05 057 06552 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. See attached notice.
- 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. Operator shall increase cement volume accordingly to accomplish this objective. Production casing cement coverage verification by CBL is required. Changed production casing cement top from operator-proposed 2263' to COGCC-required 1200'.

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 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. 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
400877700	FORM 2 SUBMITTED
400924294	DIRECTIONAL DATA
400924295	WELL LOCATION PLAT
400924296	DEVIATED DRILLING PLAN
400924297	DRILLING PLAN
400924808	WASTE MANAGEMENT PLAN
400929483	OffsetWellEvaluations Data

Total Attach: 7 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Operator corrected distance to unit boundary to 300' (From BHL). Application changed to Sandridge from EE3. Final Review Complete.	2/29/2016 2:59:36 PM
Permit	Oper. corrected distance to nearest well permitted/producing from 1054' to 790'. Operator added Order 531-20 which authorized 300' federal unit setbacks.	2/5/2016 12:09:02 PM
Permit	Req'd corrected distance to nearest well permitted.	2/2/2016 11:47:25 AM
Permit	Per operator request, changed field name from Wildcat to North Park Horizontal Niobrara.	1/15/2016 10:24:10 AM
OGLA	Revised cuttings disposal to offsite commercial per operator on 01-05-16.	1/5/2016 1:27:50 PM
Engineer	<p>Offset oil and gas well evaluation for wells within 1500' of this proposed wellbore:</p> <p>Evaluated offset XX well Eureka #1-04H (057-06471), which has not been drilled (confirmed by COGCC Field Inspection Report #200311117, dated 5/5/2011), and the well's Form 2 Application for Permit to Drill #1991454 expired on 7/28/2009. 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 Eureka #1-04H 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 DA well Rich #21 (057-05012), Conductor (20 inch pipe) set and cemented with 15 sx at 55', Surface Casing (16 inch casing) set and cemented with 40 sx at 743', First String (13 inch intermediate casing) set and cemented with 200 sx at 1360', Second String (10+3/4 inch intermediate casing) set and cemented with 200 sx at 2975', Third String (8+5/8 inch production casing) set and cemented with 75 sx at 3893', open hole TD 4500'. Well was dry and abandoned on 9/5/1930. Casing strings below the conductor were reportedly set for "water shut-off," and "important water sands" were noted on well log records proximate to the following depths: 60' to 125', 1430' to 1485', 3045' to 3150', and 4065' to 4130'. There are no plugging details for this well available in COGCC's files. However, objective formations for this well appeared to be coals of the Coalmont Formation, and it appears that the well terminated in the Coalmont Formation or top of Pierre Shale, 1000' or more above the Sussex Formation. This well did not penetrate the Niobrara Formation, and therefore, no mitigation is required for offset wells with objectives in the Niobrara Formation or deeper.</p> <p>Requested and received Offset Evaluations Spreadsheet on 11/2/2015. Uploaded spreadsheet to this form on 11/3/2015.</p>	11/2/2015 12:48:15 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 well 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 150 feet.	11/2/2015 12:48:03 PM
Engineer	The Coalmont Formation is considered a principal bedrock aquifer in the North Park Basin (CGS Ground Water Atlas of Colorado, 2003). The proposed surface casing of 1400' will not cover the entire Coalmont Formation, based on the operator's geologic prognosis. Minimum cement coverage requirements are specified in Condition of Approval #2.	11/2/2015 12:47:50 PM
Permit	Passed completeness.	10/29/2015 8:43:30 AM

Total: 9 comment(s)