

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter **Recomplete and Operate**

TYPE OF WELL OIL <input type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER <u>Salt Water</u>	Refiling <input type="checkbox"/>
ZONE TYPE SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input type="checkbox"/>

Date Received: 11/13/2017

Well Name: Pintail SWD 0780 Well Number: 1-16D

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: Spence Laird Phone: (405)420-8415 Fax: ()

Email: slaird@sandridgeenergy.com

RECLAMATION FINANCIAL ASSURANCE
Plugging and Abandonment Bond Surety ID: 20170015

WELL LOCATION INFORMATION

QtrQtr: SESW Sec: 16 Twp: 7N Rng: 80W Meridian: 6

Latitude: 40.573810 Longitude: -106.382210

Footage at Surface: 1296 Feet FSL 1632 Feet FWL

Field Name: WILDCAT Field Number: 99999

Ground Elevation: 8139 County: JACKSON

GPS Data:
Date of Measurement: 06/16/2016 PDOP Reading: 1.4 Instrument Operator's Name: LRK

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

Footage at Top of Prod Zone:	FNL/FSL	FEL/FWL	Bottom Hole:	FNL/FSL	FEL/FWL
<u>244</u>	<u>FNL</u>	<u>1900</u>	<u>131</u>	<u>FNL</u>	<u>1908</u>
	<u>FWL</u>			<u>FWL</u>	
Sec: <u>16</u>	Twp: <u>7N</u>	Rng: <u>80W</u>	Sec: <u>16</u>	Twp: <u>7N</u>	Rng: <u>80W</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.)

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: 4022 Feet
 Building Unit: 5280 Feet
 High Occupancy Building Unit: 5280 Feet
 Designated Outside Activity Area: 5280 Feet
 Public Road: 5280 Feet
 Above Ground Utility: 1236 Feet
 Railroad: 5280 Feet
 Property Line: 1297 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: 5197 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

This is for an injection well into the Entrada formation. Spacing does not apply.

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
ENTRADA	ENRD			

DRILLING PROGRAM

Proposed Total Measured Depth: 10803 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	26	20	106.5	0	51		51	0
SURF	12+1/4	9+5/8	36	0	2314	585	2314	0
1ST	8+3/4	7	29	0	10803	1515	10803	

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 name of this well has been changed from the Evans 0780 5-21H to the Pintail SWD 0780 1-16D.
The distance from the completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation was measured to the permitted Pintail SWD 0780 2-16D (fka Evans 0780 6-21H).
A Form 31 and Form 33 have been prepared for this well and are linked.
Surface Casing has been set on this well. The Form 33 has been prepared using the only available data at this time. The form will be completed after drilling, completion, logging, and water sampling has been done. The Form 33 will include the current wellbore diagram, logs, and water analysis. The Form 5A will be completed and submitted prior to the submission of the completed Form 33.
Please contact Angela Callaway at 214-364-3713, or e-mail both Angela Callaway and Kim Rodell at acallaway@upstreampm.com and krodell@upstreampm.com, respectively, for questions regarding this permit.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 446527

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: 11/13/2017 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: *Matthew Lee* Director of COGCC Date: 12/9/2017

Expiration Date: 12/08/2019

API NUMBER
05 057 06562 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.

<u>COA Type</u>	<u>Description</u>
	<p>1. Injection is not authorized until approval of Subsequent Forms 31 and 33.</p> <p>2. PRIOR TO PERFORMING OPERATIONS: Operator is required to contact COGCC to discuss Step Rate Test or Injectivity Test criteria for Maximum Surface Injection Pressure determination. Prior approval of Form 4 is required for step rate and injectivity tests.</p> <p>3. PRIOR TO PERFORMING OPERATIONS: Approval of Form 4 is required for acid and fracturing jobs. (New as of 4/13/2016).</p> <p>4. Retrieve water sample(s) from injection zone(s) before stimulating formation. Samples must be analyzed for Total Dissolved Solids at a minimum.</p> <p>5. For ALL NEW DRILL UNDERGROUND INJECTION WELLS a suite of open-hole Resistivity/Gamma Ray and Density/Neutron logs IS REQUIRED from Surface Casing shoe to TD. A PDF, TIFF, or PDS visual image and a LAS or DILS file version of each log is required.</p> <p>6. See Engineering COA #3 for Cement Coverage and Cement Bond Log requirement.</p> <p>7. Operator must provide all tops of formations encountered from surface to TD on the Form 5 when submitted.</p>
	<p>1) Operator shall comply with the most current revision of the Northwest Notification Policy.</p> <p>2) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.</p> <p>3) Operator shall provide cement coverage from the production casing shoe (7" 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>

Best Management Practices

<u>No BMP/COA Type</u>	<u>Description</u>

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

<u>Att Doc Num</u>	<u>Name</u>
401451748	FORM 2 SUBMITTED
401451910	WELL LOCATION PLAT
401451952	DEVIATED DRILLING PLAN
401451959	OTHER
401451968	WELLBORE DIAGRAM
401451972	DIRECTIONAL DATA
401457316	OffsetWellEvaluations Data
401457627	SURFACE AGRMT/SURETY

Total Attach: 9 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Removed Surprise Federal Unit and unit number from form. Wells do not fall within a Federal Unit, and removed distance to unit boundary. Operator concurs. Removed the logging BMP. The COA for underground injection control contains the logging requirements with operator concurrence. Final review complete.	12/04/2017
UIC	Added Conductor Casing information from Preliminary Form 5 (#401129071) In Process. Form 5 did not contain sacks of cement for the conductor.	11/21/2017
Engineer	Minor discrepancy: Form 5 preliminary in process states surface casing set at 2314' with 585 sacks. Emailed operator. (Koehler 11/20/2017: FYI-Cement Job Summary on Form 5 (Doc # 401129071) says 2314 ft-Doc # 401129084) 11/22: Corrected surface casing depth per operator. 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 150 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 2000' will not cover the entire Coalmont Formation, based on offset wells to the east. Minimum cement isolation standards are specified in Condition of Approval #2. Offset Well Evaluation: Existing offset oil and gas wells within 1,500 feet of this wellbore meet standards. No mitigation required.	11/21/2017
Permit	Replaced 317.p BMP as sent by operator. Removed lease information with operator concurrence. Added UIC Engineering review task. Preliminary review complete.	11/15/2017
Permit	GIS data has been corrected. Operator will send new BMP to upload. Passing form through completeness.	11/14/2017
Permit	Returning form to draft. SHL and well location plat don't match the GIS data. 317.p BMP is not correct. Returning the form to draft.	11/14/2017

Total: 6 comment(s)