

**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 <u>PILOT HOLE</u>	Refiling <input type="checkbox"/>	Date Received: 05/06/2015
ZONE TYPE    SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input type="checkbox"/>	

Well Name: Flanders 7-88      Well Number: 1-34

Name of Operator: SWN PRODUCTION COMPANY LLC      COGCC Operator Number: 10396

Address: PO BOX 12359

City: SPRING      State: TX      Zip: 77391

Contact Name: Cheryl Rowell      Phone: (832)796-7439      Fax: (832)796-8817

Email: cheryl\_rowell@swn.com

**RECLAMATION FINANCIAL ASSURANCE**  
Plugging and Abandonment Bond Surety ID: 20110201

**WELL LOCATION INFORMATION**

QtrQtr: NWSW    Sec: 34    Twp: 7N    Rng: 88W    Meridian: 6

Latitude: 40.518292      Longitude: -107.254092

Footage at Surface:    1566 feet    FNL/FSL    953 feet    FEL/FWL

Field Name: WILDCAT      Field Number: 99999

Ground Elevation: 6567      County: ROUTT

GPS Data:  
Date of Measurement: 10/29/2014    PDOP Reading: 1.6    Instrument Operator's Name: NATHAN FISHER

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

Sec: \_\_\_\_\_ Twp: \_\_\_\_\_ Rng: \_\_\_\_\_    Sec: \_\_\_\_\_ Twp: \_\_\_\_\_ Rng: \_\_\_\_\_

**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:    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.)

Section 34, T7N, R88W: S2SW, SWSE, N2S2, N2  
See attached Lease Map.

Total Acres in Described Lease: 1000 Described Mineral Lease is:  Fee  State  Federal  Indian

Federal or State Lease # 8620.5

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 1021 Feet

**CULTURAL DISTANCE INFORMATION**

Distance to nearest:

Building: 1677 Feet  
 Building Unit: 1677 Feet  
 High Occupancy Building Unit: 5280 Feet  
 Designated Outside Activity Area: 5280 Feet  
 Public Road: 732 Feet  
 Above Ground Utility: 5280 Feet  
 Railroad: 5280 Feet  
 Property Line: 953 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 Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 5280 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 1580 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): Otheos State Unit Number: 8620

**SPACING & FORMATIONS COMMENTS**

THIS WELL IS WITHIN THE 1ST EXPANSION OF THE OTHEOS STATE WHICH WAS APPROVED ON OCTOBER 31, 2013.  
 See attached Otheos State Unit Map.  
 Section 34 7N 88W, N2, SW, E2SE, NESE State Lease #8620  
 Section 35 7N 88W, N2, N2SW – State Lease #8621

**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			

**DRILLING PROGRAM**Proposed Total Measured Depth: 10000 FeetDistance to nearest permitted or existing wellbore penetrating objective formation: 5280 Feet (Including plugged wells)Will a closed-loop drilling system be used? YesIs 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? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? YesWill oil based drilling fluids be used? YesBOP 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 DisposalCuttings 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**

<u>Casing Type</u>	<u>Size of Hole</u>	<u>Size of Casing</u>	<u>Wt/Ft</u>	<u>Csg/Liner Top</u>	<u>Setting Depth</u>	<u>Sacks Cmt</u>	<u>Cmt Btm</u>	<u>Cmt Top</u>
CONDUCTOR	30	20	104	0	60	270	60	0
SURF	17+1/2	13+3/8	54.5	0	1200	626	1200	0
1ST	12+1/4	9+5/8	40	0	8400	1394	8400	1000
OPEN HOLE	8+3/4			8400	10000			

 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 is being drilled for informational purposes only. This pilot hole will be drilled to 10,000'. Intermediate casing (1st string) will be run to 8400', cemented, TOC 1200', 200' behind surface casing. A whipstock will be set 8365', the well sidetracked and completed as a horizontal. Refer to Doc #400803417 Form 2 Application to Drill horizontal/lateral.  
  
Open-Hole logs with Resistivity and Gamma-ray will be run from TD into the surface casing.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ 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: Cheryl Rowell \_\_\_\_\_

Title: Sr. Staff Reg. Analyst \_\_\_\_\_ Date: 5/6/2015 \_\_\_\_\_ Email: cheryl\_rowell@swn.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: 11/18/2015 \_\_\_\_\_

Expiration Date: 11/17/2017 \_\_\_\_\_

**API NUMBER**  
05 107 06266 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. See attached notice.</p> <p>2) Operator shall provide cement coverage from the intermediate casing shoe (9+5/8" First String to a minimum of 200' above the surface casing shoe to provide isolation of all Mesaverde Group and Lewis Formation oil, gas, and water-bearing sandstone and coalbed formations that are not otherwise covered by surface casing. Verify intermediate casing cement coverage with a cement bond log.</p>
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## Best Management Practices

### No BMP/COA Type

### Description

1	Planning	When feasible develop multiple well sites by using directional drilling to reduce cumulative impacts and adverse impacts on wildlife resources.
2	General Housekeeping	Fence the well site after drilling to restrict public and wildlife access. Keep well site location, the road, and the pipeline easement free of noxious weeds, liter and debris. Spray for noxious weeds, and implement dust control, as needed. Southwestern Energy Production Company (SEPCO) will not permit the release or discharge of any toxic or hazardous chemicals or chemicals or wastes on Owners' land. Construct and maintain gates where any roads used by SEPCO cross through fences on the leased premises.
3	Storm Water/Erosion Control	Use water bars and other measures to prevent erosion and non-source pollution. Implement and maintain BMP's to control storm water runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Co-locate gas and water gathering lines whenever feasible and mitigate any erosion problems that arise due to the construction of any pipeline.
4	Construction	Remove only the minimum amount of vegetation necessary for the construction of roads and facilities. Conserve topsoil during excavation and reuse as cover on disturbed areas to facilitate regrowth or vegetation. No construction or routine maintenance activities will be performed during periods when the soil is too wet to adequately support construction equipment.
5	Drilling/Completion Operations	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.
6	Interim Reclamation	Utilize only such area around each producing well as is reasonably necessary. Restore the remainder of the well site location to its original condition within a reasonable time after the completion of operations. All reseeding shall be done with grasses consistent with the Rocky Mountain native mix or other grasses reasonably requested by surface owner and during planting period suggested by Owner.
7	Final Reclamation	All surface restoration shall be accomplished to the satisfaction of Owner. All reseeding shall be done with grasses consistent with the Rocky Mountain native mix or other grasses reasonably requested by surface owner and during planting period suggested by Owner. Final reclamation shall be completed to the reasonable satisfaction of the owner as soon as practical after installation (weather permitting) and in accordance with regulatory agency standards.

Total: 7 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>
2168042	SURFACE AGRMT/SURETY
2168043	WELL LOCATION PLAT
2168044	CORRESPONDENCE
400804474	FORM 2 SUBMITTED
400831950	MINERAL LEASE MAP
400832312	UNIT CONFIGURATION MAP

Total Attach: 6 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Added state unit number to box for unit number on spacing & formations tab with operator approval. Final review complete.	11/17/2015 3:17:03 PM
Permit	Attached new well location plat; SUA; and correspondance from operator requesting changes to Lat/Long; footage at surf; ground elevation; right to construct; and cultural distances. See Correspondance attachment.	11/5/2015 7:40:43 AM
Permit	Requested status of progress from operator.	11/4/2015 7:39:14 AM
Permit	On hold as per operator.	9/3/2015 11:20:52 AM
Engineer	Changed open hole top depth from zero to 8400' (bottom of intermediate casing).	5/18/2015 11:33:07 AM
Engineer	Offset Well Evaluation: There are no existing offset oil and gas wells within 1,500 feet of this wellbore.	5/18/2015 11:18:18 AM
Engineer	Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. All permitted water wells within the search radius show zero for reported depths. Depths to formation tops in offset oil and gas wells, locally-available geophysical logs, and hydrogeologic information to evaluate the adequacy of the operator's proposed surface casing setting depth.	5/18/2015 11:13:59 AM
Engineer	The Lewis Formation outcrops at surface at this location. The underlying Mesaverde Group is considered a potential freshwater resource in the Sand Wash Basin (CGS Ground Water Atlas of Colorado, 2003). The proposed surface casing setting depth of 1200' will not cover the entire Mesaverde Group, based on log tops in offset wells. COGCC concurs with operator's plan to lap the intermediate casing cement into the surface casing. Condition of Approval #2 specifies minimum cement coverage requirements for the intermediate casing.	5/18/2015 11:08:51 AM
Permit	Added mineral lease description and adjusted total acres in lease from 600 to 1000 as per opr. Corrected well location from NWSW to SWNW as per plats and notified opr. Surface Restoration Bond on file with SLB; per Tim Kelly they are okay with this location. Ready to pass pending 2A approval and LGD comment period.	5/14/2015 1:48:28 PM
Permit	Extended the public and LGD comment period to 6/10/2015 at the request of the LGD.	5/13/2015 3:29:58 PM
Permit	Passed Completeness	5/8/2015 10:07:45 AM

Total: 11 comment(s)