

**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>HORIZONTAL</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:  
02/03/2015

Well Name: DIAMOND T SHEEP 7-92      Well Number: 2-26H35

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: NWNW    Sec: 26    Twp: 7N    Rng: 92W    Meridian: 6

Latitude: 40.534314      Longitude: -107.693108

Footage at Surface: <u>648</u> feet	FNL/FSL <u>FNL</u> <u>911</u> feet	FEL/FWL <u>FWL</u>
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Field Name: WILDCAT      Field Number: 99999

Ground Elevation: 6679      County: MOFFAT

GPS Data:  
Date of Measurement: 10/14/2014    PDOP Reading: 1.4    Instrument Operator's Name: JOHN FLOYD

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

Footage at Top of Prod Zone: <u>1220</u> feet	FNL/FSL <u>FNL</u> <u>914</u> feet	FEL/FWL <u>FWL</u>
Bottom Hole: <u>699</u> feet	FNL/FSL <u>FNL</u> <u>1080</u> feet	FEL/FWL <u>FWL</u>

Sec: 26    Twp: 7N    Rng: 92W      Sec: 35    Twp: 7N    Rng: 92W

**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.)

See attached lease map.

Total Acres in Described Lease: 960 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: 1080 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 2952 Feet

Building Unit: 2973 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 3282 Feet

Above Ground Utility: 2998 Feet

Railroad: 5280 Feet

Property Line: 911 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: 377 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 620 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

## SPACING & FORMATIONS COMMENTS

Spacing Unit Application submitted to COGCC, Docket #1503-00077. On COGCC March 2015 docket.

## 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	540-52	1200	S26 W/2; S35 N2NW/4

## DRILLING PROGRAM

Proposed Total Measured Depth: 14442 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 377 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is 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)



## 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 Spacing Unit Application on COGCC March 2015 Hearing Docket.  
Attached Logging Exception Request letter per Rule 317.o.  
This is the 2nd well on the pad. Form 2a, doc #400745961 filed to amend as a multi-well pad.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ CDP #: \_\_\_\_\_

Location ID: 438248

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: Cheryl Rowell

Title: Sr. Staff Reg. Analyst Date: 2/3/2015 Email: cheryl\_rowell@swm.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: 3/25/2015

Expiration Date: 03/24/2017

### API NUMBER

05 081 07817 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 intermediate casing shoe (9+5/8" First String) to a minimum of 200' above the surface casing shoe to provide isolation of all Cretaceous (including Mesa Verde Group, Lewis, Fox Hills [if present] and Lance) and Tertiary (including Fort Union, Wasatch, and Browns Park) 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.
- 3) Operator shall perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well.
- 4) Offset well mitigation pressure monitoring of Diamond T Sheep 7-92 #1-26 shall be continuous during stimulation of Diamond T Sheep 7-92 #2-26H35. Operator shall monitor the pressure on the tubing, casing, and all annuli, including the bradenhead annulus in the Diamond T Sheep 7-92 #1-26 well. Operator shall notify COGCC Engineering staff if anomalous pressures are observed in the Diamond T Sheep 7-92 #1-26 well.

## Best Management Practices

No	<u>BMP/COA Type</u>	<u>Description</u>
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	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 reseeded 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.
6	Final Reclamation	All surface restoration shall be accomplished to the satisfaction of Owner. All reseeded 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: 6 comment(s)

### Applicable Policies and Notices to Operators

NW Colorado Notification Policy.

Notice Concerning Operating Requirements for Wildlife Protection.

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2167973	OPEN HOLE LOGGING EXCEPTION
2167982	UNIT CONFIGURATION MAP
400777592	APD APPROVED
400784473	DIRECTIONAL DATA
400784477	DEVIATED DRILLING PLAN
400785221	WELL LOCATION PLAT
400785650	LEASE MAP
400815137	OFFSET WELL EVALUATION
400815138	FORM 2 SUBMITTED

Total Attach: 9 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Corrected distance from WELL to Public Road from 3803' (CR81) to 3282' (subdivision road to southeast) per operator and COGCC Online GIS Map.	3/25/2015 3:06:46 PM
Permit	Attached unit map as per opr. Distance to wellbore is measured from TOP of Diamond T Sheep 7-92 #1-26 to TOP of this well. Final review complete.	3/25/2015 10:14:42 AM
Permit	Attached corrected Open Hole Logging Exception as per opr.	3/3/2015 10:59:11 AM
Permit	Corrected the distance to the lease line from 620' to 1080' as per opr. Corrected Plugging bond from 20110200 to 20110201 as per opr. Logging exception is incorrect. Notified Opr.	2/10/2015 10:09:30 AM
Engineer	Evaluated offset well Diamond T Sheep 7-92 #1-26. Cement is reportedly absent in the interval from 2100' to 1296' behind the intermediate casing (9+5/8" First String), an interval that is a potential freshwater resource in the Mesa Verde Group or an overlying Tertiary Formation. Offset mitigation is required. COGCC notified the operator on 2/9/2015 to develop a mitigation measure. Operator responded on 2/10/2015, and agreed to Interim Statewide Horizontal Offset Policy Mitigation Option 4 (Alternate Measures). Mitigation will consist of pressure monitoring of Diamond T Sheep 7-92 #1-26 during stimulation and flowback of Diamond T Sheep 7-92 #2-26H35, as described in Condition of Approval #4.	2/9/2015 3:52:11 PM
Engineer	The operator reported formation tops of 4012' and 5700' for the Trout Creek Formation (member of the Mesa Verde Group) and the Mancos Formation, respectively, for the offset well (Diamond T Sheep 7-92 #1-26, API No. 081-07804), located on the same pad as this proposed well. Based on this information alone and the lack of nearby log tops for Tertiary formations, the operator's proposed surface casing setting depth of 1,300 feet may not provide full coverage across the Browns Park Formation, the Wasatch Formation, and the Fort Union Formation, which are possible fresh water aquifers. The 9-5/8" First String will likely provide full coverage of the Mesa Verde Group, based on the reported offset log top of 5700' for the Mancos Formation. COGCC concurs with the operator's plan to lap cement into larger casing strings for full cement isolation in this well. Minimum cement coverage requirements are specified in Conditions of Approval #2.	2/9/2015 3:09:55 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 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 500 feet.	2/9/2015 3:00:08 PM
Engineer	"Distance to nearest permitted or existing wellbore penetrating objective formation: 377 Feet (Including plugged wells)" appears to be the wellbore separation between the completed intervals. A second, existing wellbore is located on the same pad as this proposed well, and the wellbore separation in the shallow portion of the hole will be less than 150 feet.	2/9/2015 2:56:29 PM
Permit	Passed completeness.	2/5/2015 2:43:09 PM
Permit	Two formations listed on horizontal well. Return to draft.	2/5/2015 12:41:52 PM

Total: 10 comment(s)