

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:

400614072

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:

05/28/2014

Well Name: WELKER 6-92

Well Number: 1-2H11

Name of Operator: SOUTHWESTERN ENERGY PRODUCTION COMPANY

COGCC Operator Number: 10396

Address: 2350 N SAM HOUSTON PKWY EAST #125

City: HOUSTON

State: TX

Zip: 77032

Contact Name: KYLA HOWL

Phone: (505)330-3697

Fax: ( )

Email: KHOWL@LTENV.COM

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20110201

WELL LOCATION INFORMATION

QtrQtr: SESE Sec: 2 Twp: 6N Rng: 92W Meridian: 6

Latitude: 40.494361

Longitude: -107.680228

Footage at Surface: 660 feet FNL/FSL FSL 785 feet FEL/FWL FEL

Field Name: WILDCAT

Field Number: 99999

Ground Elevation: 6504

County: MOFFAT

GPS Data:

Date of Measurement: 03/24/2014

PDOP Reading: 1.3

Instrument Operator's Name: LOREN K SHANKS

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

87 FSL 1062 FEL 662 FSL 1257 FEL  
Sec: 2 Twp: 6N Rng: 92W Sec: 11 Twp: 6N 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: 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.)

T6N, R92W, SEC 2: S/2SE/4, SEC 11 E/2E/2, W/2NE/4, NW4/SE/4, SW/4SE/4, and other lands

Total Acres in Described Lease: 680 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: 662 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 3128 Feet  
Building Unit: 5280 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 4970 Feet  
Above Ground Utility: 3525 Feet  
Railroad: 5280 Feet  
Property Line: 660 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: 591 Feet

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

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

## SPACING & FORMATIONS COMMENTS

Order 549-49 800 acre unit: S/2SW Sec 1, S/2SE Sec 2, E/2 Sec 11, W/2 Sec 12 6N 92W

## OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
MANCOS	MNCS	540-49	800	S2SE Sec2,E2 Sec 11
NIOBRARA	NBRR	540-49	800	S2SE Sec2,E2 Sec 11

## DRILLING PROGRAM

Proposed Total Measured Depth: 12502 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 591 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)

Will salt sections be encountered during drilling? No

Will salt based (>15,000 ppm Cl) drilling fluids be used? Yes

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	24	20	84	0	60	100	60	0
SURF	17+1/2	13+3/8	54.5	0	1200	525	1200	0
1ST	12+1/4	9+5/8	40	0	6500	1340	6500	0
2ND	8+3/4	5+1/2	20	0	12502	1270	12502	6000

☐ 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 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: KYLA HOWL

Title: AGENT FOR SOUTHWESTERN Date: 5/28/2014 Email: KHOWL@LTENV.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: 8/16/2014

Expiration Date: 08/15/2016

### API NUMBER

05 081 07811 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) COMPLIANCE WITH THE MOST CURRENT REVISION OF THE NORTHWEST COLORADO NOTIFICATION POLICY IS REQUIRED. SEE ATTACHED NOTICE.  (2) CEMENT ON THE INTERMEDIATE CASING (9+5/8" FIRST STRING) MUST EXTEND INTO THE SURFACE CASING (MINIMUM 200' LAP ABOVE SURFACE CASING SHOE) TO PROVIDE ISOLATION OF ALL CRETACEOUS FORMATIONS (INCLUDING THE MESAVERDE GROUP AND THE LEWIS SHALE FORMATION) OIL, GAS, AND WATER-BEARING SANDSTONE AND COALBED FORMATIONS THAT ARE NOT OTHERWISE COVERED BY SURFACE CASING. VERIFY INTERMEDIATE CASING (9+5/8" FIRST STRING) CEMENT COVERAGE WITH A CBL.
	Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.

## **Best Management Practices**

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
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, litter and debris. Spray for noxious weeds, and implement dust control, as needed. Southwestern Energy Production Company (SWEPC) will not permit the release or discharge of any toxic or hazardous chemicals or wastes on Owner's Land. Construct and maintain gates where any roads used by (SWEPC) 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 stormwater 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 (s).
4	Construction	Remove only the minimum amount of vegetation necessary for the construction of roads and facilities. Conserve topsoil during excavation and reuse as a cover on disturbed areas to facilitate regrowth of 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 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.
6	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: 6 comment(s)

## **Applicable Policies and Notices to Operators**

NW Colorado Notification Policy.

Notice Concerning Operating Requirements for Wildlife Protection.

## **Attachment Check List**

<b>Att Doc Num</b>	<b>Name</b>
1638237	DEVIATED DRILLING PLAN
400614072	FORM 2 SUBMITTED
400615094	WELL LOCATION PLAT
400615095	TOPO MAP
400615339	DIRECTIONAL DATA
400615993	SURFACE AGRMT/SURETY

Total Attach: 6 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Received new deviated drilling plan and replaced original attachment; received lease description and corrected form; off hold.	8/13/2014 8:56:42 AM
Permit	Per Operator: corrected nearest well penetrating objective distance from 2620' to 591', corrected unit boundary distance from 5280' to 662', entered all spacing order information. Re-Requested a lease description and explanation and deviated drilling plan.	8/11/2014 7:17:09 AM
Permit	ON HOLD - asked operator for corrections: Deviated Drilling Plan does not match casing information; lease as described is identical to drilling and spacing unit; most information on Spacing tab is incorrect or missing	7/29/2014 12:15:08 PM
Engineer	<p>Offset Well Evaluation: Operator has four offset vertical well permits for proposed wells within 1,500' of this proposed horizontal wellbore. The four vertical well permits also list the Niobrara Formation as an objective, and all four permits also proposed intermediate casing cement tops lapping into the surface casing.</p> <p>EVALUATED OFFSET PA WELL SILVER #9-11 (05-081-06556), TD AT 9741' IN THE MORRISON FORMATION. PRODUCTION CASING CEMENTED, BUT PRODUCTION CASING CUT AND PULLED AT 5788' DURING PLUGGING. DOWNHOLE ENTRADA COMPLETION PLUGGED BACK WITH 30 SX CEMENT FROM 8974' TO 8722' IN CASING. PRODUCTION CASING STUB PLUG (35 SX) SET FROM 5865' TO 5723'. INTERMEDIATE CASING SHOE PLUG (35 SX) SET FROM 3520' TO 3427', WHICH ALSO ISOLATES THE MANCOS FORMATION TOP AT APPROXIMATELY 3365' (EVIDENT ON INDUCTION LOG). CEMENT (35 SX) SET IN INTERMEDIATE CASING ACROSS COMPLETED ILES INTERVAL FROM 2280' (CIBP) TO 2109'. CBL SHOWS GOOD INTERMEDIATE CASING CEMENT BOND FROM 2290' (BOTTOM OF LOGGED INTERVAL) TO APPROXIMATELY 1650' WITH SOME LOW-AMPLITUDE BOND UP TO THE TOP OF THE LOGGED INTERVAL AT 1200'. THERE IS NO PLUG IN THE INTERMEDIATE CASING ACROSS THE SURFACE CASING SHOE AT 327', BUT ADDITIONAL PLUGS ARE PRESENT IN THE CASING FROM 828' TO 726' (35 SX) AND 10 SX CMT AT SURFACE. CANNOT VERIFY THAT ALL OF THE MESAVERDE GROUP IS CEMENTED IN THE INTERMEDIATE ANNULUS, BUT ALL FORMATIONS BELOW THE MANCOS TOP ARE ADEQUATELY ISOLATED. NO MITIGATION REQUIRED.</p>	3/2/2014 2:11:56 PM
Engineer	THE PROPOSED SURFACE CASING IS MORE THAN 50' BELOW THE DEPTH OF THE DEEPEST WATER WELL WITHIN 1-MILE OF THE SURFACE LOCATION WHEN CORRECTED FOR ELEVATION DIFFERENCES. THE DEEPEST WATER WELL WITHIN 1-MILE IS 520 FEET DEEP.	3/2/2014 2:03:36 PM
Engineer	PROPOSED SURFACE CASING OF 1,200 FEET WILL NOT PROVIDE FULL COVERAGE OF MESAVERDE GROUP, BASED ON A MANCOS FORMATION TOP REPORTED IN AN OFFSET WELL. COGCC STAFF CONCURS WITH OPERATOR'S PLAN TO FULLY CEMENT THE 9+5/8" FIRST STRING (MINIMUM COVERAGE REQUIREMENTS ARE SPECIFIED IN CONDITION OF APPROVAL #2).	3/2/2014 2:02:40 PM
Permit	Passed completeness.	5/28/2014 4:16:11 PM

Total: 7 comment(s)