

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:

400445943

Date Received:

12/31/2013

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 ☐

Well Name: North Hayden Well Number: 1-26

Name of Operator: SWEPI LP COGCC Operator Number: 78110

Address: 4582 S ULSTER ST PKWY #1400

City: DENVER State: CO Zip: 80237

Contact Name: Steve Compton Phone: (303)305-4017 Fax: (303)305-7554

Email: C-Steven.Compton@Shell.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20030028

WELL LOCATION INFORMATION

QtrQtr: SENE Sec: 26 Twp: 7N Rng: 88W Meridian: 6

Latitude: 40.537714 Longitude: -107.220483

Footage at Surface: 1927 feet FNL/FSL FNL 268 feet FEL/FWL FEL

Field Name: Wildcat Field Number: 99999

Ground Elevation: 6699 County: ROUTT

GPS Data:

Date of Measurement: 05/31/2013 PDOP Reading: 1.8 Instrument Operator's Name: G. McElroy

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: 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.)

Please see attached mineral ownership map and mineral lease description. Please note the that State of Colorado also owns the adjacent minerals to the east of this lease. SWEPI LP has a lease with the State of Colorado for the eastern minerals as well.

Total Acres in Described Lease: 640 Described Mineral Lease is: ☐ Fee ☒ State ☐ Federal ☐ Indian

Federal or State Lease # CO92785.001

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 268 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet

Building Unit: 5280 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 296 Feet

Above Ground Utility: 5280 Feet

Railroad: 5280 Feet

Property Line: 268 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 \_\_\_\_\_ Feet (Enter 5280 for distance greater than 1 mile.)

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

## SPACING & FORMATIONS COMMENTS

This well is within the 1st Expansion of the Otheos State Unit which was approved on October 31, 2013.

## 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: 9951 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 5280 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: Centralized E&P WMF

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Centralized E&P WMF

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	30	20	52.78	0	90		90	0
SURF	12+1/4	9+5/8	36	0	2300	1043	2300	0
1ST	8+1/2	7	29	0	8601	464	8601	2100

☐ 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: Steve Compton

Title: Environmental Engineer Date: 12/31/2013 Email: C-Steven.Compton@Shell.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: 6/26/2014

Expiration Date: 06/25/2016

### API NUMBER

05 107 06263 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

	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.
	(1) COMPLIANCE WITH THE MOST CURRENT REVISION OF THE NORTHWEST COLORADO NOTIFICATION POLICY IS REQUIRED. SEE ATTACHED NOTICE.  (2) PRODUCTION CASING (7" FIRST STRING) CEMENT MUST PROVIDE COVERAGE OF ALL CRETACEOUS FORMATIONS PENETRATED BY THE PRODUCTION HOLE, INCLUDING ANY PORTION OF THE MESAVERDE GROUP THAT IS PRESENT BELOW THE SURFACE CASING SHOE. PRODUCTION CASING (7" FIRST STRING) CEMENT SHALL LAP A MINIMUM OF 200' INTO THE SURFACE CASING, AND CEMENT COVERAGE VERIFICATION BY CBL IS REQUIRED.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Storm Water/Erosion Control	Storm Water management plans (SWMP) are in place to comply with both Colorado Department of Public Health and Environment (CDPHE) and Colorado Oil and Gas Conservation Commission (COGCC) storm water discharge permits. The construction layout for this location details Best Management Practices (BMP's) to be installed during the initial construction. Note that BMP's may be removed, altered, or replaced with the changing conditions in the field and the SWMP will be updated accordingly. The BMP's prescribed for the initial construction phase include, but are not limited to: <ul style="list-style-type: none"> <li>• Construct diversion ditch</li> <li>• Sediment Reservoirs</li> <li>• Check dams</li> <li>• Level spreaders</li> <li>• Stabilized construction entrance</li> <li>• Slash</li> <li>• Sediment Traps</li> <li>• Wattles</li> <li>• Terrace</li> <li>• Secondary containment berms</li> <li>• Detention ponds</li> </ul>
2	Material Handling and Spill Prevention	Spill Prevention Control and Countermeasure Plans (SPCC) are in place to address material releases and to prescribe materials handling BMP's for the facility. "Good Housekeeping" measures will be taken to ensure proper waste disposal.

Total: 2 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>
1949206	WELLBORE DIAGRAM
1949207	DRILLING PLAN
400445943	FORM 2 SUBMITTED
400446386	OTHER
400446391	MINERAL LEASE MAP
400446398	WELL LOCATION PLAT
400446400	TOPO MAP

Total Attach: 7 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review completed. LGD comments.	6/26/2014 5:24:44 AM
Permit	The State Land Board has the proper bonding in place and is within the Otheos State Unit.	6/26/2014 5:21:39 AM
Permit	Issue with 318.a. as the whether the State Land Board is allowing the SHL to be only 268' from the lease line separating the two SLB leases.	5/5/2014 10:15:25 AM
Permit	Operator and Route county confiring on this APD.	2/3/2014 1:24:21 PM
LGD	LGD Comments	1/31/2014 3:16:38 PM

<p>Shell Exploration</p> <p>North Hayden 1-26 well site</p> <p>Secs 25 26 T7N R88W</p> <p>There is an un-named stream and drainage in this area. The well pad is proposed to be constructed within this drainage. Routt County has been in negotiations for mitigation of this site, but discussions have not been finalized. At this time Routt County may not accept the location of the well pad site and requests that approval of this application be placed on hold until the site location review is completed.</p> <p>The access road is proposed to cross this stream. Any access roads and the well pad must have a comprehensive BMP plan and continually monitored for protection of these water sources from erosion and contaminants. Routt County requires permits for waterbody setbacks.</p> <p>Routt County requests information from the COGCC after drilling operations are complete for the location of aquifers to confirm that casing was completed per minimum requirements of the COGCC regulations to protect all aquifers.</p> <p>The site is located approximately 3.8 miles NE of the Yampa Valley Regional Airport. The operator is required to file with the FAA an evaluation and receive approval for drilling operations.</p> <p>The site is mapped for geologic concerns for unstable slopes. The access road and site should be designed to accommodate the specific geologic conditions and not adversely affect slope stability. It is recommended that a qualified geologic or geotechnical engineer review the proposed design and construction.</p> <p>The site is mapped for wildlife concerns for Elk winter range, Elk severe winter range and Elk Winter Concentration area. The site is also within mapped production area for Columbian Sharp-tailed Grouse and Greater Sage Grouse Production area. Recommended DPW wildlife restrictions should be placed on the permit to avoid disturbance to affected wildlife.</p> <p>The site is mapped in a high wildfire area. Fire extinguishers or fire suppression equipment should be on-site at all times during operations and maintenance.</p> <p>The petitioner has previously submitted in their applications and agreed to the following COA's in the Routt County Special Use Permit. Routt County requests that this COA be placed in the COGCC permit:</p> <p>a. The petitioner will be in compliance with CDPHE, Air Quality Control Commission, Regulation No. 2 (Odor Emission), 5 C.C.R. 1001-4.</p> <p>b. The petitioner agrees to install, maintain and operate VOC capture equipment on major equipment including tanks, wellheads, dehydrators and heater treaters, and to route captured emissions through a combustion device (flare, incinerator, heater, internal combustion engine).</p> <p>c. With regard to the impact of flares on air quality, the petitioner production flares will be smokeless in design, will include a flame arrester, and the flame will not be directly visible from buildings or land beyond the site, Emergency flares are exempted from this requirements.</p> <p>d. Transport Truck Air Emissions: Transport trucks shall meet all Federal DOT vehicles guidelines and the petitioner will request that vendors use their newest low-emissions equipment for transport to well sites. The petitioner will require vendor use of Ultra-Low Sulfur Diesel (ULSD) while hauling for the operator. On-site idling time shall be traced by the vendor with results made available to the County upon request to the petitioner.</p> <p>Additionally, Routt County requests that the COGCC permit require permit holder to comply with air quality standards now under consideration when those standards</p>		
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	are adopted.	
Engineer	OFSET WELL EVALUATION: OFFSET WELL EVALUATION: NO EXISTING OFFSET WELLS W/IN 1500' OF THIS PROPOSED WELLBORE	1/24/2014 8:27:14 AM
Engineer	THE PROPOSED SURFACE CASING IS MORE THAN 50 FEET 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 1,000 FEET DEEP.	1/24/2014 8:20:55 AM
Permit	Comment Period extended 10 days from 1-23 to 2-2 per LGD request.	1/21/2014 12:21:15 PM
Permit	This form has passed completeness.	1/3/2014 9:20:18 AM

Total: 9 comment(s)