

**FORM  
2A**Rev  
04/01**State of Colorado  
Oil and Gas Conservation Commission**

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Document Number:

400327719

Date Received:

10/03/2012

**Oil and Gas Location Assessment**☐ New Location☒ Amend Existing Location Location#: 428533

Submit original plus one copy. This form is to be submitted to the COGCC prior to any ground disturbance activity associated with oil and gas development operations. This Assessment may be approved as a standalone application or submitted as an informational report accompanying an Application for Permit-To-Drill, Form 2. Approval of this Assessment will allow for the construction of the below specified location; however, it does not supersede any land use rules applied by the local land use authority. This form may serve as notice to land owners and other interested parties, please see the COGCC web site at <http://colorado.gov/cogcc/> for all accompanying information pertinent to this Oil and Gas Location Assessment.

Location ID:

**428533**

Expiration Date:

**10/30/2015**☒ This location assessment is included as part of a permit application.**1. CONSULTATION**☐ This location is included in a Comprehensive Drilling Plan. CDP # \_\_\_\_\_☒ This location is in a sensitive wildlife habitat area.☐ This location is in a wildlife restricted surface occupancy area.☐ This location includes a Rule 306.d.(1)A.ii. variance request.**2. Operator**Operator Number: 78110Name: SWEPI LPAddress: 4582 S ULSTER ST PKWY #1400City: DENVER State: CO Zip: 80237**3. Contact Information**Name: Nancy FeckPhone: (307) 367-7934Fax: (307) 367-4285email: N.Feck@shell.com**4. Location Identification:**Name: North Castor GulchNumber: 1-16County: MOFFATQuarterQuarter: TR 66 Section: 16 Township: 5N Range: 91W Meridian: 6 Ground Elevation: 6992

Define a single point as a location reference for the facility location. This point should be used as the point of measurement in the drawings to be submitted with this application. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 1294 feet FNL, from North or South section line, and 925 feet FEL, from East or West section line.Latitude: 40.392189 Longitude: -107.605392 PDOP Reading: 1.5 Date of Measurement: 10/05/2011Instrument Operator's Name: B.Hunting**5. Facilities (Indicate the number of each type of oil and gas facility planned on location):**

Special Purpose Pits: <input type="text"/>	Drilling Pits: <input type="text"/>	Wells: <input type="text" value="5"/>	Production Pits: <input type="text"/>	Dehydrator Units: <input type="text"/>
Condensate Tanks: <input type="text" value="10"/>	Water Tanks: <input type="text" value="2"/>	Separators: <input type="text" value="2"/>	Electric Motors: <input type="text"/>	Multi-Well Pits: <input type="text"/>
Gas or Diesel Motors: <input type="text" value="1"/>	Cavity Pumps: <input type="text"/>	LACT Unit: <input type="text"/>	Pump Jacks: <input type="text" value="5"/>	Pigging Station: <input type="text"/>
Electric Generators: <input type="text"/>	Gas Pipeline: <input type="text"/>	Oil Pipeline: <input type="text"/>	Water Pipeline: <input type="text"/>	Flare: <input type="text"/>
Gas Compressors: <input type="text"/>	VOC Combustor: <input type="text" value="2"/>	Oil Tanks: <input type="text"/>	Fuel Tanks: <input type="text" value="2"/>	
Other: _____				

**6. Construction:**

Date planned to commence construction: 07/01/2012 Size of disturbed area during construction in acres: 7.06  
Estimated date that interim reclamation will begin: 04/01/2013 Size of location after interim reclamation in acres: 1.38  
Estimated post-construction ground elevation: 6985 Will a closed loop system be used for drilling fluids: Yes ☒  
Will salt sections be encountered during drilling: Yes ☐ No ☒ Is H2S anticipated? Yes ☐ No ☒  
Will salt (>15,000 ppm TDS Cl) or oil based muds be used: Yes ☒ No ☐  
Mud disposal: Offsite ☒ Onsite ☐ Method: Land Farming ☐ Land Spreading ☐ Disposal Facility ☒  
Other: \_\_\_\_\_

## 7. Surface Owner:

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
Address: \_\_\_\_\_ Fax: \_\_\_\_\_  
Address: \_\_\_\_\_ Email: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Date of Rule 306 surface owner consultation: \_\_\_\_\_  
Surface Owner: ☐ Fee ☒ State ☐ Federal ☐ Indian  
Mineral Owner: ☐ Fee ☒ State ☐ Federal ☐ Indian  
The surface owner is: ☒ the mineral owner ☒ committed to an oil and gas lease  
☒ is the executer of the oil and gas lease ☐ the applicant  
The right to construct the location is granted by: ☒ oil and gas lease ☐ Surface Use Agreement ☐ Right of Way  
☐ applicant is owner  
Surface damage assurance if no agreement is in place: ☐ \$2000 ☐ \$5000 ☐ Blanket Surety ID \_\_\_\_\_

## 8. Reclamation Financial Assurance:

☒ Well Surety ID: 20030028 ☐ Gas Facility Surety ID: \_\_\_\_\_ ☐ Waste Mgnt. Surety ID: \_\_\_\_\_

## 9. Cultural:

Is the location in a high density area (Rule 603.b.): Yes ☐ No ☒  
Distance, in feet, to nearest building: 7550, public road: 3702, above ground utilit: 3700  
, railroad: 16737, property line: 925

## 10. Current Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP  
Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): \_\_\_\_\_  
Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

## 11. Future Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP  
Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): \_\_\_\_\_  
Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

## 12. Soils:

List all soil map units that occur within the proposed location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.gov/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 33-Clayburn loam, warm, 3 to 25 percent slopes

NRCS Map Unit Name: \_\_\_\_\_  
NRCS Map Unit Name: \_\_\_\_\_

### 13. Plant Community:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☐ No ☒

Plant species from: ☒ NRCS or, ☐ field observation Date of observation: \_\_\_\_\_

List individual species: Please see Rangeland Productivity and Plant Composition Report submitted with original Form 2A for this location.

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)  
☒ Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)  
☒ Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)  
☐ Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)  
☐ Mountain Riparian (Cottonwood, Willow, Blue Spruce)  
☐ Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)  
☐ Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)  
☐ Alpine (above timberline)  
☐ Other (describe): \_\_\_\_\_

### 14. Water Resources:

Rule 901.e. may require a sensitive area determination be performed. If this determination is performed the data is to be submitted with the Form 2A.

Is this a sensitive area: ☒ No ☐ Yes Was a Rule 901.e. Sensitive Areas Determination performed: ☒ No ☐ Yes

Distance (in feet) to nearest surface water: 943, water well: 5690, depth to ground water: 25

Is the location in a riparian area: ☒ No ☐ Yes Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes

Is the location within a Rule 317B Surface Water Supply Area buffer zone:

☒ No ☐ 0-300 ft. zone ☐ 301-500 ft. zone ☐ 501-2640 ft. zone

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: ☒ No ☐ Yes

### 15. Comments:

Proposed BMP's are shown on the construction and layout drawings.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: \_\_\_\_\_ Date: 10/03/2012 Email: N.Feck@shell.com

Print Name: Nancy Feck Title: Regulatory Technician

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: 10/31/2012

**CONDITIONS OF  
APPROVAL, IF ANY:**

**All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.**

**SITE SPECIFIC COA:**

A closed loop system must be implemented during drilling (which operator has indicated on the Form 2A); or, if a drilling is constructed, it must be lined. All cuttings generated during drilling with OBM must be kept in the lined drilling pit, or placed either in containers or on a lined/bermed portion of the well pad; prior to offsite disposal. The moisture content of any drill cuttings in a cuttings container or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts.

**Attachment Check List**

Att Doc Num	Name
400327719	FORM 2A SUBMITTED
400328825	CONST. LAYOUT DRAWINGS
400328826	MULTI-WELL PLAN
400328838	OTHER

Total Attach: 4 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit	No LGD or public comments. Final Review--passed.	10/30/2012 9:55:20 AM
OGLA	PREVIOUS FORM 2A#400254450 SITE SPECIFIC COA APPLIES TO THIS FORM 2A:  If the wells are to be hydraulically stimulated/treated, then flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or storage vessel located on the well pad or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material.	10/23/2012 4:07:11 PM
OGLA	Initiated/Completed OGLA Form 2A review on 10-23-12 by Dave Kubeczko; previously submitted and approved (04-13-12) Form 2A#400254450; OGCC Facility ID#428533; same COA applies, flowback to tanks and new COA applies due to use of salt/oil based muds, lined pit/closed loop and cuttings containment COA; changed disturbed area to 7.06 acres (only pad, not access road); passed by CPW on 10-19-12 with operator agreed to/submitted BMPs acceptable; passed OGLA Form 2A review on 10-25-12 by Dave Kubeczko; lined pit/closed loop and cuttings containment COA.	10/23/2012 4:07:10 PM
DOW	The attached BMPs agreed to by the operator in the Wildlife section are appropriate.  Jacob Davidson, 15:15, 10-19-2012	10/19/2012 3:12:07 PM
Permit	This form passed completeness.	10/4/2012 9:00:14 PM

Total: 5 comment(s)

## BMP

<u>Type</u>	<u>Comment</u>
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.
Wildlife	<ol style="list-style-type: none"> <li>1. Construct the pad and drill the wells outside of the period between December 1 and April 15 for Elk and mule deer.</li> <li>2. Construct and or drill any subsequent wells outside the period between December 1 and April 15 for elk and mule deer.</li> <li>3. Conduct post-development well site visitations between the hours of 10:00am and 3:00pm and reduce well site visitations between December 1 and April 15; emergencies exempted.</li> <li>4. Shell agrees to be in noise abatement compliance with COGCC Rule 802.c for the "Industrial" zone during construction, drilling, and completion of the well, and in compliance with the "Residential/Agricultural/Rural" zone during production operations.</li> <li>5. Interim and final reclamation will match existing vegetation.</li> <li>6. A weed management plan will be included in reclamation of the site.</li> <li>7. This is a multi well pad and interim reclamation will occur within 6 months of completion of all waeels and placement of production facilities.</li> </ol>
Site Specific	Operator has agreed to conduct baseline and follow up sampling in accordance with the attached Baseline Monitoring Program.
Storm Water/Erosion Control	<p>Stormwater Managment Plans (SWMP) are in place to comply with both Colorado Department of Public Health and Environment(CDPE) and Colorado Oil and Gas Conservation Commission(COGCC) stormwater discharge permits. The construction layout for the North Castor Gulch 1-16 that includes the North Castor Gulch 2-16, 3-16, 4-16 and 5-16 wells, details Best Managment Practices(BMP's) to be installed during 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:</p> <ul style="list-style-type: none"> <li>-Constuct 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>
General Housekeeping	Shell will follow the guidelines of the Moffat County Weed and Pest Managment Department.

Total: 5 comment(s)