

FORM  
2A

Rev  
04/01

# 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:

400290359

Date Received:

06/08/2012

## Oil and Gas Location Assessment

New Location       Amend Existing Location      Location#: \_\_\_\_\_

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:

**429855**

Expiration Date:

**08/08/2015**

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: 78110  
 Name: SWEPI LP  
 Address: 4582 S ULSTER ST PKWY #1400  
 City: DENVER State: CO Zip: 80237

### 3. Contact Information

Name: Anne Baldrige  
 Phone: (303) 305-7555  
 Fax: (303) 222-6358  
 email: a.baldrige@shell.com

### 4. Location Identification:

Name: Dry Sage Number: 1-23  
 County: MOFFAT  
 Quarter: LOT 17 Section: 23 Township: 12N Range: 90W Meridian: 6 Ground Elevation: 6705

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: 1805 feet FSL, from North or South section line, and 920 feet FWL, from East or West section line.  
 Latitude: 40.978047 Longitude: -107.465867 PDOP Reading: 1.4 Date of Measurement: 07/11/2011  
 Instrument Operator's Name: B.H. (Uintah Surveying)

### 5. Facilities (Indicate the number of each type of oil and gas facility planned on location):

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

Other: \_\_\_\_\_

### 6. Construction:

Date planned to commence construction: 08/09/2012 Size of disturbed area during construction in acres: 11.47  
Estimated date that interim reclamation will begin: 11/15/2012 Size of location after interim reclamation in acres: 1.03  
Estimated post-construction ground elevation: 6704 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: 03/10/2012  
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: 5591, public road: 6123, above ground utilit: 1954  
, railroad: 166848, property line: 920

### 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 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: 80-Forelle-Evanot complex, 12 to 25 percent slopes

NRCS Map Unit Name: 216-Yamo loam, 3 to 15 percent slopes

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 attached Rangeland Productivity and Plant Composition report.

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: 397, water well: 4581, depth to ground water: 200

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 Suppl 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 BMPs are shown on the attached Construction Layout Diagrams. Facilities are estimated; permanent facilities will not be constructed until after approximately 6 months of operation when the exact facilities needed can be determined based on oil/gas production. Closest water well details are included on the Colorado Division of Water Resources well info attachment. According to the water well owner the depth to ground water is approximately 200 feet.

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

Signed: \_\_\_\_\_ Date: 06/08/2012 Email: michael.bergstrom@shell.com

Print Name: Michael Bergstrom Title: Senior Regulatory Advisor

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: 8/9/2012

**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 COAs:**

A closed loop system must be implemented during drilling (which operator has indicated on the Form 2A). All cuttings generated during drilling with oil based muds or high chloride/TDS mud must be kept or placed either in containers or on a lined and bermed portion of the well pad prior to offsite disposal. The moisture content of any drill cuttings managed onsite must be as low as practicable to prevent accumulation of liquids greater than de minimis amounts.

If the well is to be hydraulically stimulated, 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.

Any water well or surface water feature sampled in accordance with baseline & follow-up sampling BMP shall be surveyed in accordance with COGCC Rule 215.

**Attachment Check List**

Att Doc Num	Name
1533453	SURFACE AGRMT/SURETY
1642086	PROPOSED BMPs
1642087	CORRESPONDENCE
2034414	PROPOSED BMPs
2034431	CORRESPONDENCE
2034473	OTHER
400290359	FORM 2A SUBMITTED
400291283	HYDROLOGY MAP B, TOPO
400291284	CONST. LAYOUT DRAWINGS
400291286	LOCATION PICTURES
400291287	NRCS MAP UNIT DESC
400291288	REFERENCE AREA MAP
400291289	REFERENCE AREA PICTURES
400292213	ACCESS ROAD MAP
400293410	LOCATION DRAWING
400293438	HYDROLOGY MAP
400293931	SURFACE AGRMT/SURETY
400294026	CORRESPONDENCE

Total Attach: 18 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Final Review	ON HOLD - needs SUA document	7/26/2012 3:28:21 PM
Permit	No LGD or public comments. Final Review--passed.	7/16/2012 7:22:02 AM
OGLA	Initiated/Completed OGLA Form 2A review on 06-14-12 by Dave Kubeczko; requested acknowledgement of cuttings containment/moisture content and flowback to tanks COAs from operator on 06-14-12; received acknowledgement of COAs from operator on 06-22-12; passed by CPW on 06-11-12 with operator agreed to (06-08-12) BMPs acceptable; location onsite on 05-18-12; changed to sensitive area due to close SW and shallow GW; passed OGLA Form 2A review on 07-13-12 by Dave Kubeczko; cuttings containment/moisture content and flowback to tanks COAs.	6/14/2012 2:23:39 PM
DOW	<p>The operator has agreed to the following BMPs:</p> <ol style="list-style-type: none"><li>1. Where oil and gas activities must occur near active Mule Deer Critical Winter Range, conduct these activities outside the time period from December 1 through April 15.</li><li>2. Where oil and gas activities must occur within 4 miles of active greater sage-grouse leks or within other mapped greater sage-grouse breeding or summer habitat, conduct these activities outside the time period from March 1 through June 30.</li><li>3. Restrict post-development well site visitations to between the hours of 9:00 a.m. and 4:00 p.m. from December 1 to June 1 for Mule Deer Critical Winter Range, and greater sage-grouse lekking season.</li><li>4. Muffle or otherwise control exhaust noise from pump jacks and compressors so that operational noise will not exceed 49 dB measured at 30 feet from the edge of the well pad.</li><li>5. Reclaim/restore greater sage-grouse habitats with native grasses and forbs conducive to optimal grouse habitat and other wildlife appropriate to the ecological site. Reclamation of production habitat should include a substantially higher percentage of forbs than other areas. CPW agreed to assist the Esyps (landowners) with reclamation seed mixes.</li><li>6. Gate single-purpose roads and restrict general public access to reduce traffic disruptions to wildlife.</li><li>7. Close and immediately reclaim all roads that are redundant, not used regularly, or have been abandoned to the maximum extent possible to minimize disturbance and habitat fragmentation.</li><li>8. Install and utilize bear-proof dumpsters and trash receptacles for all food-related trash on location following COGCC Rule 1204 a-1.</li><li>9. Shell will encourage car pooling to the work site</li><li>10. Shell will inform and hold accountable employees and contractors of their no pets, no firearms, no trash policies.</li><li>11. Shell will use a closed loop drilling system with tanks and no pits.</li></ol> <p>Jacob Davidson, 10:00, 6/11/2012</p>	6/11/2012 10:00:13 AM

Total: 4 comment(s)

## BMP

<u>Type</u>	<u>Comment</u>
Pre-Construction	Operator has agreed to conduct baseline and follow-up sampling in accordance with attached BMP (Document Number 1642086). Follow-up sampling beyond 1 year post-drill will not be required if dry hole.
Wildlife	<ol style="list-style-type: none"><li>1. Where oil and gas activities must occur near active Mule Deer Critical Winter Range, conduct these activities outside the time period from December 1 through April 15.</li><li>2. Where oil and gas activities must occur within 4 miles of active greater sage-grouse leks or within other mapped greater sage-grouse breeding or summer habitat, conduct these activities outside the time period from March 1 through June 30.</li><li>3. Restrict post-development well site visitations to between the hours of 9:00 a.m. and 4:00 p.m. from December 1 to June 1 for Mule Deer Critical Winter Range, and greater sage-grouse lekking season.</li><li>4. Muffle or otherwise control exhaust noise from pump jacks and compressors so that operational noise will not exceed 49 dB measured at 30 feet from the edge of the well pad.</li><li>5. Reclaim/restore greater sage-grouse habitats with native grasses and forbs conducive to optimal grouse habitat and other wildlife appropriate to the ecological site. Reclamation of production habitat should include a substantially higher percentage of forbs than other areas. CPW agreed to assist the Espys (landowners) with reclamation seed mixes.</li><li>6. Gate single-purpose roads and restrict general public access to reduce traffic disruptions to wildlife.</li><li>7. Close and immediately reclaim all roads that are redundant, not used regularly, or have been abandoned to the maximum extent possible to minimize disturbance and habitat fragmentation.</li><li>8. Install and utilize bear-proof dumpsters and trash receptacles for all food-related trash on location following COGCC Rule 1204 a-1.</li><li>9. Shell will encourage car pooling to the work site</li><li>10. Shell will inform and hold accountable employees and contractors of their no pets, no firearms, no trash policies.</li><li>11. Shell will use a closed loop drilling system with tanks and no pits.</li></ol>
Storm Water/Erosion Control	Stormwater 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) stormwater discharge permits. The construction layout for this well details Best Management Practices (BMP) to be installed during initial construction. Note that BMPs may be removed, altered, or replaced with changing conditions in the field and the SWMP will be updated accordingly. The BMPs prescribed for the initial construction phase include, but are not limited to <ul style="list-style-type: none"><li>• Construction 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 trap</li><li>• Wattle</li><li>• Terrace</li><li>• Secondary containment berms</li><li>• Detention ponds</li></ul>
Material Handling and Spill Prevention	Spill Prevention Control & Countermeasure Plans (SPCC) are in place to address material releases and to prescribe materials handling BMPs for the facility. "Good house-keeping" measures will be taken to ensure proper waste disposal.

Total: 4 comment(s)