

FORM  
2ARev  
04/01State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109



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Document Number:

400190332

## 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:

**425278**

Expiration Date:

**09/07/2014**☒ 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: Michael L. Bergstrom

Phone: (303) 222-6347

Fax: (303) 222-6258

email: Michael.Bergstrom@shell.com

## 4. Location Identification:

Name: Gnat Hill Number: 1-29

County: ROUTT

QuarterQuarter: LOT 9 Section: 29 Township: 6N Range: 89W Meridian: 6 Ground Elevation: 6656

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: 2374 feet FSL, from North or South section line, and 360 feet FEL, from East or West section line.

Latitude: 40.445739 Longitude: -107.392506 PDOP Reading: 2.1 Date of Measurement: 06/28/2011

Instrument 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" value="1"/>	Wells: <input type="text" value="1"/>	Production Pits: <input type="text"/>	Dehydrator Units: <input type="text"/>
Condensate Tanks: <input type="text" value="1"/>	Water Tanks: <input type="text" value="3"/>	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" value="2"/>	LACT Unit: <input type="text"/>	Pump Jacks: <input type="text" value="1"/>	Pigging Station: <input type="text"/>
Electric Generators: <input type="text" value="3"/>	Gas Pipeline: <input type="text"/>	Oil Pipeline: <input type="text"/>	Water Pipeline: <input type="text"/>	Flare: <input type="text" value="1"/>
Gas Compressors: <input type="text" value="2"/>	VOC Combustor: <input type="text"/>	Oil Tanks: <input type="text" value="2"/>	Fuel Tanks: <input type="text" value="2"/>	

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

## 6. Construction:

Date planned to commence construction: 09/05/2011 Size of disturbed area during construction in acres: 2.50  
Estimated date that interim reclamation will begin: 10/15/2011 Size of location after interim reclamation in acres: 1.15  
Estimated post-construction ground elevation: 6655 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 20030020

## 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: 23760, public road: 308, above ground utilit: 260  
, railroad: 19536, property line: 2272

## 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: 10C—Bulkley silty clay, 3 to 12 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: 08/03/2011

List individual species: Please see attached Rangeland Productivity and Plant Composition Report. Plant Species from soil survey and visual observation of photos include : western wheatgrass, Wyoming big sagebrush, bottlebrush squirreltail, prairie Junegrass, etc.

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: 453, water well: 10262, depth to ground water: 15

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:

A Surface Use Agreement is currently being negotiated with the surface owner. Proposed BMPs shown on Construction & Layout Drawings. Wildlife BMPs agreed upon by both SWEPI and Colorado Division of Parks & Wildlife are attached. A Form 15 pit permit is being submitted concurrently with the Form 2 & 2A for Gnat Hill 1-29.

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

Signed: \_\_\_\_\_ Date: 08/05/2011 Email: Michael.Bergstrom@shell.com

Print Name: Michael L 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: David S. Nashin Director of COGCC Date: 9/8/2011

**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.**

The drilling pit must be lined, or a closed loop system must be implemented during drilling. 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
2033968	CORRESPONDENCE
152033869	OTHER
400190332	FORM 2A SUBMITTED
400190758	ACCESS ROAD MAP
400190759	CONST. LAYOUT DRAWINGS
400190760	HYDROLOGY MAP
400190761	LOCATION DRAWING
400190762	LOCATION PICTURES
400190763	NRCS MAP UNIT DESC
400190764	REFERENCE AREA MAP
400190766	REFERENCE AREA PICTURES
400190767	PROPOSED BMPs
400190768	SENSITIVE AREA DATA

Total Attach: 13 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
DOW	<p>CPW and Shell have agreed to the following list of BMPs:</p> <p>Pad construction and drilling will occur outside of the greater sage-grouse and sharp-tail grouse breeding and nesting period (March 1 to July 30)</p> <p>Shell agrees to conduct drilling activities - reentry for additional wells outside the period of March 1 to July 30.</p> <p>Shell agrees to conduct post-development well site visitations to between the hours of 10:00 A.M. and 3:00 P.M. and to reduce well site visitations between March 1 - July 30.</p> <p>Shell will use hospital grade mufflers for compressors, pump jacks or other motors necessary to run operations at the site as applicable. Mufflers will be pointed upward to dissipate potential vibration.</p> <p>Shell agrees to conduct post-development well site visitations to between the hours of 10:00 A.M. and 3:00 P.M. and to reduce well site visitations between December 1 and April 15 in elk winter concentration areas.</p> <p>CPW is open to the idea of flexibility/amending the elk winter concentration timing stipulation in order to protect sage and sharp tailed grouse habitat and lekking activities. On-going and future discussions between CPW and Shell will be necessary to determine if the elk timing stipulation can be amended at this site.</p> <p>Friday, August 19, 2011 at 3:51 P.M.</p>	8/19/2011 3:50:32 PM
LGD	<p>This site is located off of CR 65 which is classified as a remote/minimal maintenance road. There is no winter maintenance (closed) and access is not recommended and at times not possible in wet conditions. This road will have to be constructed to standards acceptable to Routt County before any drilling operations are to occur. Routt County will not maintain this road and a winter access/maintenance permit will be required along with access permits and GE permits. Continued maintenance of the road will be the responsibility of the operator during the life of operations.</p> <p>This site has wildlife concerns for severed elk winter range; Sage Grouse and Columbian Sharpe-tailed Grouse lekking and brooding areas. Drilling restrictions from Dec 1st - July 30th and access restrictions after drilling should be adhered to.</p>	8/11/2011 10:31:24 AM
OGLA	<p>Initiated/Completed OGLA Form 2A review on 08-08-11 by Dave Kubeczko; lined pit/closed loop COA from operator on 08-08-11; received acknowledgement of COAs from operator on 08-08-11; passed by CDOW on 08-19-11 with operator agreed to/submitted BMPs acceptable; passed OGLA Form 2A review on 08-26-11 by Dave Kubeczko; lined pit/closed loop and cuttings containment COA.</p>	3/8/2011 9:21:07 AM

Total: 3 comment(s)

## BMP

<u>Type</u>	<u>Comment</u>
Wildlife	<p>1) Pad construction and drilling will occur outside of the greater sage-grouse and sharp-tailed breeding and nesting period (March 1 – July 30).</p> <p>2) Shell agrees to conduct drilling activities –re entry for additional wells outside the period of March 1 to July 30.</p> <p>3) Conduct post-development well site visitations to between the hours of 10:00 a.m. and 3:00 p.m. and reduce well site visitations between March 1 and July 30.</p> <p>4) Shell will use hospital grade mufflers for compressors, pump jacks or other motors necessary to run operations at the site as applicable – if compressors, pump jacks, etc. are necessary. Mufflers will be pointed upward to dissipate potential vibration.</p> <p>5) Conduct post-development well site visitations to between the hours of 10:00 a.m. and 3:00 p.m. and reduce well site visitations between December 1 and April 15 in elk winter concentration areas.</p> <p>6) CDOW is open to the idea of flexibility/amending the elk winter concentration timing stipulations in order to protect sage and sharp-tailed grouse habitat and lekking activities. On-going and future discussions between CDOW and Shell will be necessary to determine if the elk timing stipulation can be amended for this site.</p> <p>7) Ingress, egress and all oil and gas traffic for this site will be taken from Moffat County Road 394 on to Routt County Road 65 to the pad.</p> <p>8) The scheduled time for drilling this well is still undetermined.</p>
Storm Water/Erosion Control	<p>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 Gnat Hill 1-29 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.</p> <p>The BMPs prescribed for the initial construction phase include, but are not limited to</p> <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	<p>Spill Prevention Control &amp; 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.</p>

Total: 3 comment(s)