

FORM 2A Rev 04/01

State of Colorado Oil and Gas Conservation Commission 1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109



Table with columns DE, ET, OE, ES

Document Number: 1635536

Oil and Gas Location Assessment

[X] 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...

Location ID: 423735 Expiration Date: 06/22/2014

[X] This location assessment is included as part of a permit application.

1. CONSULTATION

- This location is included in a Comprehensive Drilling Plan. CDP # \_\_\_\_\_
[X] 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 J. BERGSTROM Phone: (303) 322-6347 Fax: (303) 222-6358 email: MICHAEL.BERGSTROM@SHELL.COM

4. Location Identification:

Name: HARPER HILL Number: 1-29, 2-29 County: MOFFAT Quarter: SENW Section: 29 Township: 5N Range: 90W Meridian: 6 Ground Elevation: 6576
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: 1549 feet FNL, from North or South section line, and 1397 feet FWL, from East or West section line.
Latitude: 40.359458 Longitude: -107.523569 PDOP Reading: 2.2 Date of Measurement: 03/01/2011
Instrument Operator's Name: A. FLOYD

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

Special Purpose Pits: [ ] Drilling Pits: [ 1 ] Wells: [ 2 ] Production Pits: [ ] Dehydrator Units: [ ]
Condensate Tanks: [ 1 ] Water Tanks: [ 3 ] Separators: [ 2 ] Electric Motors: [ ] Multi-Well Pits: [ ]
Gas or Diesel Motors: [ 1 ] Cavity Pumps: [ 2 ] LACT Unit: [ ] Pump Jacks: [ 2 ] Pigging Station: [ ]
Electric Generators: [ 3 ] Gas Pipeline: [ ] Oil Pipeline: [ ] Water Pipeline: [ ] Flare: [ 1 ]
Gas Compressors: [ 2 ] VOC Combustor: [ ] Oil Tanks: [ 3 ] Fuel Tanks: [ 2 ]
Other: \_\_\_\_\_

6. Construction:

Date planned to commence construction: 06/01/2011 Size of disturbed area during construction in acres: 2.49  
Estimated date that interim reclamation will begin: 09/15/2011 Size of location after interim reclamation in acres: 1.37  
Estimated post-construction ground elevation: 6579 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: DON MYERS Phone: 970/824-9317  
Address: 6148 STATE HWY 317 Fax: \_\_\_\_\_  
Address: \_\_\_\_\_ Email: MYERSINC@AMIGO.NET  
City: HAMILTON State: CO Zip: 81638 Date of Rule 306 surface owner consultation: 03/01/2011  
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: 1988, public road: 1310, above ground utilit: 1242  
, railroad: 42240, property line: 1414

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.

**IMPORTANT: SOME DATA FIELDS HAVE BEEN MODIFIED.**

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: 99 HESPERUS FINE SANDY LOAM, DRY, 2 TO 15 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 ATTACHED RANGELAND PRODUCTIVITY, PLANT COMPOSITION, AND MAP UNIT DESCRIPTION.

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: 1839, water well: 5777, depth to ground water: 20

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:**

WELL SITE WILL INCLUDE TWO WELLS – HARPER HILL 1-29 AND HARPER HILL 2-29 PHOTOS WILL BE TAKEN AND SUBMITTED DURING THE GROWING SEASON OF VEGETATION. PROPOSED BMPS SHOWN ON CONSTRUCTION AND LAYOUT DRAWINGS. WILDLIFE BMPS AGREED UPON BY BOTH SWEPI AND CDOW ARE ATTACHED.

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

Signed: \_\_\_\_\_ Date: 04/15/2011 Email: MICHAEL.BERGSTROM@SHELL.COM

Print Name: MICHAEL BERGSTROM Title: SR 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. Neslin Director of COGCC Date: 6/23/2011

**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.**

**GENERAL SITE COAs:**

Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface pipelines or buried permanent pipelines.

Operator must ensure 110 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations; including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals, and maintained in good condition.

Based on information from the operator, fracing of these horizontal wells is not planned. However, if during the completion process, the operator decides that portions of the production zone will require fracing and stimulation; all flowback and stimulation fluids must be sent to tanks to allow the sand to settle out before the fluids can be placed into any pipeline or pit located on the well pad. The flowback and stimulation fluid tanks 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.

The surface soils and materials are fine-grained and highly unconsolidated; therefore the pad shall be constructed as quickly as possible and appropriate BMPs need to be in place both during, after well pad construction completion, as well as during all drilling and well completion operations. Standard stormwater BMPs must be implemented at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater runoff.

Berms or other containment devices shall be constructed to be sufficiently impervious to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.

**CONSTRUCTION/DRILLING COA:**

The drilling pit must be lined, or a closed loop system (which operator has indicated on the Form 2A) must be implemented during drilling.

**Attachment Check List**

Att Doc Num	Name
1635536	FORM 2A
1635537	LOCATION PICTURES
1635538	LOCATION PICTURES
1635539	LOCATION PICTURES
1635540	LOCATION DRAWING
1635541	HYDROLOGY MAP
1635542	ACCESS ROAD MAP
1635543	REFERENCE AREA MAP
1635544	NRCS MAP UNIT DESC
1635545	CONST. LAYOUT DRAWINGS
1635546	PROPOSED BMPs
2033858	CORRESPONDENCE
2089435	MULTI-WELL PLAN

Total Attach: 13 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
OGLA	Initiated/Completed OGLA Form 2A review on 05-11-11 by Dave Kubeczko; requested clarifications and acknowledgement of fluid containment, spill/release BMPs, lined pits/closed loop, no pit in fill, flowback to tanks, tank berming, access road and pad sediment control, and cuttings low moisture COAs from operator on 05-11-11; received acknowledgement of COAs from operator on 05-?-11; passed by CDOW on 05-06-11 with BMPs submitted by operator (with permit application) acceptable; passed OGLA Form 2A review on (TBD: 05-27-11) by Dave Kubeczko; fluid containment, spill/release BMPs, lined pits/closed loop, no pit in fill, flowback to tanks, tank berming, access road and pad sediment control, and cuttings low moisture COAs.	5/11/2011 2:18:33 PM
Permit	Corrected data entry errors Changed cultural distances to feet Missing multi-well plan	5/11/2011 10:08:02 AM
DOW	CDOW has consulted with the landowner and operator for this location. CDOW affirms that the operator supplied BMP's attached to the 2A permit to be conditions of approval for this location.  Submitted by: Ed Winters, Land Use Specialist  6 may 2011 @ 15:23	5/6/2011 3:24:51 PM
Permit	Corrected bonding information as directed by opr-Michael. sf	5/6/2011 2:42:10 PM

Total: 4 comment(s)

**BMP**

<u>Type</u>	<u>Comment</u>
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 Control Commission (COGCC) stormwater discharge permits.
Construction	The construction layout for Herring Draw #1-9 details Best Management Practices (BMP) to be installed during initial construction.
Construction	<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 Plans (SPCC) are in place to address material releases and to prescribe materials handling BMPs for the facility.
General Housekeeping	"Good house-keeping" measures will be taken to ensure proper waste disposal.

Total: 5 comment(s)