

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:

400387403

Date Received:

03/04/2013

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:

432878

Expiration Date:

05/15/2016
☒ 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: 10454

Name: PETROSHARE CORPORATION

Address: 284 LARKSPUR DR

City: CASTLE ROCK State: CO Zip: 80104

3. Contact Information

Name: Kimberly Rodell

Phone: (303) 942-0506

Fax: ()

email: krodell@upstreampm.com

4. Location Identification:

Name: Voloshin Number: 3-25

County: MOFFAT

QuarterQuarter: LOT 11 Section: 25 Township: 6N Range: 90W Meridian: 6 Ground Elevation: 7469

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: 1794 feet FSL, from North or South section line, and 2280 feet FWL, from East or West section line.

Latitude: 40.444233 Longitude: -107.439836 PDOP Reading: 1.7 Date of Measurement: 01/25/2013

Instrument Operator's Name: Robert L. Kay

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="2"/>	Production Pits: <input type="text"/>	Dehydrator Units: <input type="text" value="1"/>
Condensate Tanks: <input type="text"/>	Water Tanks: <input type="text" value="1"/>	Separators: <input type="text"/>	Electric Motors: <input type="text"/>	Multi-Well Pits: <input type="text"/>
Gas or Diesel Motors: <input type="text"/>	Cavity Pumps: <input type="text"/>	LACT Unit: <input type="text"/>	Pump Jacks: <input type="text" value="2"/>	Pigging Station: <input type="text"/>
Electric Generators: <input type="text"/>	Gas Pipeline: <input type="text"/>	Oil Pipeline: <input type="text" value="1"/>	Water Pipeline: <input type="text" value="1"/>	Flare: <input type="text"/>
Gas Compressors: <input type="text"/>	VOC Combustor: <input type="text"/>	Oil Tanks: <input type="text" value="4"/>	Fuel Tanks: <input type="text"/>	

Other: 2 Heater Treaters with Meter Runs

6. Construction:

Date planned to commence construction: 05/20/2013 Size of disturbed area during construction in acres: 4.91
Estimated date that interim reclamation will begin: 10/21/2013 Size of location after interim reclamation in acres: 1.17
Estimated post-construction ground elevation: 7467 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: See comments.

7. Surface Owner:

Name: _____ Phone: _____
Address: _____ Fax: _____
Address: _____ Email: _____
City: _____ State: _____ Zip: _____ Date of Rule 306 surface owner consultation: 03/01/2013
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: 20130019 ☐ 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: 5280, public road: 10493, above ground utility: 2598,
railroad: 26894, property line: 357

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: 101. Hesperus Loam, 3 to 25 percent slopes, very stony

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: Elk sedge, Gambel oak, Mountain brome, Saskatoon serviceberry, Letterman's needlegrass,
Mountain snowberry, Nodding brome, Other perennial forbs, Other perennial grasses, Slender
wheatgrass

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: 170, water well: 1820, depth to ground water: 12

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:

The location is in a sensitive area due to the depth of groundwater. This closest water well lies to the southeast of the location in Section 25 T6N R90W. PetroShare will retake the reference photos during growing season when the ground is clear of snow. Fresh water mud cuttings onsite and landspread. Oil based cuttings disposed at approved disposal facility.

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

Signed: _____ Date: 03/04/2013 Email: krodell@upstreampm.com

Print Name: Kimberly J. Rodell Title: Permit Agent

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: 5/16/2013

**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.

PIPELINE COAs:

Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service.

Operator must implement best management practices to contain any unintentional release of fluids along all portions of the surface pipeline route where temporary pumps and other necessary equipment are located.

Operator must routinely inspect the entire length of the surface pipeline to ensure integrity.

Operator must ensure 110 percent secondary containment for any potential volume of fluids that may be released from the surface pipeline at all stream, intermittent stream, ditch, and drainage crossings.

Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.

SITE SPECIFIC COAs:

A closed loop system (which operator has indicated on the Form 2A) must be implemented during drilling. All cuttings generated during drilling with OBM/high chloride mud must be kept in containers or on a lined/bermed portion of the well pad; prior to analysis and/or offsite disposal.

The moisture content of any drill cuttings in a cuttings area or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. At the time of closure, if the freshwater mud generated drill cuttings are to remain/disposed of onsite, they must also meet the applicable standards of table 910-1.

Notify the COGCC 48 hours prior to start of pad construction, rig mobilization, spud, and start of hydraulic stimulation operations using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).

Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface 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 (at least every 14 days), and maintained in good condition.

The location is in an area of moderate run-on/run-off potential; therefore 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 run-off, as well as sufficient diversion of the nearby drainage.

The access road will be constructed to prevent sediment migration from the access road to nearby surface water or any drainages leading to other nearby surface waters.

Flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline, storage vessel, or lined pit (only if an amended Form 2A has been submitted/approved and a Form 15 Earthen Pit Permitted has been submitted/approved) 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.

Berms or other containment devices shall be constructed to be sufficiently impervious (preferably corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.

Prior to drilling, operator shall collect surface water samples from the two ponds identified during the May 10, 2013 field consultation, as well as the two nearby water wells located downgradient from the well pad location. After 90 days, but less than 180 days of completion of the proposed wells a "post-completion" test shall be performed for the same analytical parameters listed below and repeated once between 60- and 72- months. If the wells are non-producing wells, then the 60- to 72-month sample will not be required. If no significant changes from the baseline have been identified after the 60- to 72-month sample, no further testing shall be required. Additional "post-completion" test(s) may be required if changes in water quality are identified during follow-up testing. At a minimum, the groundwater and surface water samples will be analyze for the following parameters: pH, specific conductance, total dissolved solids (TDS), dissolved gases (methane, ethane, propane), alkalinity (total bicarbonate and carbonate as CaCO₃), major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, phosphorus), major cations (calcium, iron, magnesium, manganese, potassium, sodium), other elements (barium, boron, selenium and strontium), total petroleum hydrocarbons (TPH) and BTEX compounds (benzene, toluene, ethylbenzene and xylenes). Field observations such as odor, water color, sediment, bubbles, and effervescence shall also be documented. The location of the sampled Water Sources shall be surveyed in accordance with Rule 215. Copies of all test results described above shall be provided to the COGCC Director and the landowner where the water quality testing is located within three (3) months of collecting the samples used for the test. The analytical data and surveyed locations shall also be submitted to the Director in an electronic data deliverable format. Documented refusal to grant access by well owner or surface owner (for surface water and spring sampling) shall not constitute a violation of this COA.

Attachment Check List

Att Doc Num	Name
2106601	PROPOSED BMPs
2106602	CORRESPONDENCE
400387403	FORM 2A SUBMITTED
400387509	TOPO MAP
400387510	CONST. LAYOUT DRAWINGS
400387511	HYDROLOGY MAP
400387512	LOCATION DRAWING
400387513	LOCATION PICTURES
400387515	NRCS MAP UNIT DESC
400387624	SURFACE AGRMT/SURETY
400387730	ACCESS ROAD MAP
400387731	REFERENCE AREA MAP
400387732	REFERENCE AREA PICTURES

Total Attach: 13 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	No LGD or public comments. Final Review--passed.	5/15/2013 3:04:18 PM
OGLA	CPW/PETROSHARE MUTUALLY AGREED UPON WILDLIFE BMP: In emergency situations or if the well experiences mechanical failures and were in need of a completion rig or other service equipment to bring the well back on production and avoid environmental concerns and maintain the wellbore integrity, PetroShare will provide reasonable notice (24 to 48 hours) to COGCC that it will need to bring in such equipment and will make every reasonable effort to accommodate Elk Winter Concentration Area timing stipulations. If such repairs are needed during this timing limitation, PetroShare will make every reasonable effort to proceed with the work during the hours of 9:00 a.m. to 4:00 p.m. from December 1 through April 15.	5/15/2013 8:50:30 AM

DOW	<p>The proposed pad location is within an Elk Winter Concentration Area. Based on the above wildlife concerns, CPW recommended the following best management practices (BMPs):</p> <ol style="list-style-type: none"> 1. Where oil and gas activities must occur in Elk Winter Concentration Areas, conduct these activities outside the time period from December 1 through April 15. 2. Restrict post-development well site visitations to between the hours of 9:00 a.m. and 4:00 p.m. from December 1 to April 15, to accommodate Elk Winter Concentration Areas. 3. Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads. Slow speeds and increased awareness among employees and contractors traveling to and from the site should help to reduce impacts. 4. Install and utilize bear-proof dumpsters and trash receptacles for all food-related trash on location, following COGCC Rule 1204 a-1. <p>PetroShare responded with a request that the following be added as a COA to the approved Form2A:</p> <p>"In emergency situations or if the well experiences mechanical failures and were in need of a completion rig or other service equipment to bring the well back on production and avoid environmental concerns and maintain the wellbore integrity, PetroShare will provide reasonable notice to COGCC that it will need to bring in such equipment and will make every reasonable effort to accommodate Elk Winter Concentration Area timing stipulations. If such repairs are needed during this timing limitation, PetroShare will make every reasonable effort to proceed with the work during the hours of 9:00 a.m. to 4:00 p.m. from December 1 through April 15."</p> <p>CPW finds PetroShare's COA to be appropriate.</p> <p>Jacob Davidson, 5-14-2013, 14:29</p>	5/14/2013 2:30:00 PM
OGLA	Initiated/Completed OGLA Form 2A review on 05-12-13 by Dave Kubeczko; placed fluid containment, spill/release BMPs, tank berming, flowback to tanks, cuttings low moisture content, OBM cuttings containment, sediment control access road, SW and GW sampling, notification, and pipeline COAs on Form 2A; passed by CPW on 05-14-13 with operator submitted BMPs acceptable; passed OGLA Form 2A review on 05-15-13 by Dave Kubeczko; fluid containment, spill/release BMPs, tank berming, flowback to tanks, cuttings low moisture content, OBM cuttings containment, sediment control access road, SW and GW sampling, notification, and pipeline COAs.	5/12/2013 9:58:25 AM
Permit	Operator advised that oil-based mud will be used.	4/10/2013 9:39:09 AM
OGLA	Petroshare Corporation gave verbal approval (to be followed up with written approval) to extend the CPW consultation timeframe as long as necessary (05-14-13 at this time) until the site can be accessed without snow cover. OGLA, permitting, and final approval have been extended until 06-07-13.	4/8/2013 11:56:33 AM
Permit	Oper. extending comment period for CPW to accomodate onsite first part of May.	4/2/2013 12:41:40 PM
Permit	Oper. advised that hearing application will be made for this exception location. Related APD's on hold pending Commission hearing.	3/12/2013 8:40:18 AM
Permit	Operator made corrections. Reference Area Pictures still need to be retaken.	3/5/2013 11:40:26 AM
Permit	Returned to draft. Missing Access Road Map. Reference area pictures were taken in snow. These need to be reshot in the growing season. Reference map and the reference area pictures should be separate attachments.	3/5/2013 9:00:18 AM

Total: 10 comment(s)

BMP

<u>Type</u>	<u>Comment</u>
Wildlife	<p>1. Where oil and gas activities must occur in Elk Winter Concentration Areas, conduct these activities outside the time period from December 1 through April 15.</p> <p>2. Restrict post-development well site visitations to between the hours of 9:00 a.m. and 4:00 p.m. from December 1 to April 15, to accommodate Elk Winter Concentration Areas.</p> <p>3. Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads. Slow speeds and increased awareness among employees and contractors traveling to and from the site should help to reduce impacts.</p> <p>4. Install and utilize bear-proof dumpsters and trash receptacles for all food-related trash on location, following COGCC Rule 1204 a-1.</p>
Storm Water/Erosion Control	PetroShare Corp. will implement a storm water and erosion plan to prevent sedimentation and erosion.

Total: 2 comment(s)