

State of Colorado
Oil and Gas Conservation Commission

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



DE	ET	OE	ES
----	----	----	----

Document Number:

400114565

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 stand alone 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:

421108

Expiration Date:

01/07/2014
☒ 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: 10091

Name: BERRY PETROLEUM COMPANY

Address: 1999 BROADWAY STE 3700

City: DENVER State: CO Zip: 80202

3. Contact Information

Name: Kallasandra Moran

Phone: (303) 999-4225

Fax: (303) 999-4325

email: kmoran@bry-consultant.com

4. Location Identification:

Name: School House Point Number: OM B21 696

County: GARFIELD

Quarter: NENE Section: 21 Township: 6S Range: 96W Meridian: 6 Ground Elevation: 8286

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: 799 feet FNL, from North or South section line, and 1187 feet FEL, from East or West section line.

Latitude: 39.513564 Longitude: -108.108872 PDOP Reading: 2.1 Date of Measurement: 11/10/2010

Instrument Operator's Name: Robert Wood / Construction Surveys Inc.

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

Special Purpose Pits: <input type="text" value="0"/>	Drilling Pits: <input type="text" value="0"/>	Wells: <input type="text" value="10"/>	Production Pits: <input type="text" value="0"/>	Dehydrator Units: <input type="text" value="3"/>
Condensate Tanks: <input type="text" value="7"/>	Water Tanks: <input type="text" value="1"/>	Separators: <input type="text" value="1"/>	Electric Motors: <input type="text" value="0"/>	Multi-Well Pits: <input type="text" value="0"/>
Gas or Diesel Motors: <input type="text" value="0"/>	Cavity Pumps: <input type="text" value="0"/>	LACT Unit: <input type="text" value="0"/>	Pump Jacks: <input type="text" value="0"/>	Pigging Station: <input type="text" value="0"/>
Electric Generators: <input type="text" value="0"/>	Gas Pipeline: <input type="text" value="1"/>	Oil Pipeline: <input type="text" value="0"/>	Water Pipeline: <input type="text" value="1"/>	Flare: <input type="text" value="0"/>
Gas Compressors: <input type="text" value="0"/>	VOC Combustor: <input type="text" value="0"/>	Oil Tanks: <input type="text" value="0"/>	Fuel Tanks: <input type="text" value="0"/>	

Other: Separators proposed 2 quad dehydrators, 1 dual dehydrator, 1 separator. Drilling rig, temporary office and temporary housing on location for approximately 10 days per well.

6. Construction:

Date planned to commence construction: 05/01/2011 Size of disturbed area during construction in acres: 4.26
Estimated date that interim reclamation will begin: 05/15/2013 Size of location after interim reclamation in acres: 1.04
Estimated post-construction ground elevation: 8279 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: Total closed loop system

7. Surface Owner:

Name: _____ Phone: _____
Address: _____ Fax: _____
Address: _____ Email: _____
City: _____ State: _____ Zip: _____ Date of Rule 306 surface owner consultation: 12/09/2010
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: 20040105 ☒ Gas Facility Surety ID: 20040107 ☐ 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: 5587, public road: 4889, above ground utilit: 2306
, railroad: 15103, property line: 2347

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: 62 - Rock outcrop-Torriorthents complex, very steep

NRCS Map Unit Name: 36 - Irugul channery loam, 9 to 50 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: 11/10/2010

List individual species: See attached NRCS Plant Composition.

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
☒ Native Grassland (Bluestern, 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: 1131, water well: 6406, depth to ground water: 14

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 closest water well is an unnamed, private owner well (Permit # 144406 / Receipt # 0263277). Pad has not been built. Wells have not been drilled. Conductors have not been set. No rig on site. Reference well used for footages is the School House Point OM07C B21 696. The location does not require a variance from any of the rules listed in Rule 306.d. (1). (A). (ii). The location is not in a restricted surface occupancy area. The location is not in a sensitive wildlife habitat area. Location and Reference Area photos were taken during snow cover, Berry Petroleum will provide spring growth photos after snow melt.

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

Signed: _____ Date: 12/15/2010 Email: kmoran@bry-consultant.com

Print Name: Kallasandra M. Moran 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.

Daniel S. Neslin

COGCC Approved: _____

Director of COGCC

Date: 1/8/2011

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 nearby hillside must be monitored for any day-lighting of drilling fluids throughout the drilling of the surface casing interval.

No portion of any pit that will be used to hold liquids shall be constructed on fill material, unless the pit and fill slope are designed and certified by a professional engineer, subject to review and approval by the director prior to construction of the pit. The construction and lining of the pit shall be supervised by a professional engineer or their agent. The entire base of the pit must be in cut.

Since the operator will be running up to 10 percent (by volume) diesel oil in the water based drilling mud as a shale stabilization and friction reduction additive while drilling the production hole interval, any pit constructed to hold fluids must be permitted, and approved, prior to construction and use (a Form 15 [Earthen Pit Report/Permit] will need to be submitted). Additional COAs may be attached to the Form 15.

Berms or other containment devices shall be constructed in compliance with Rule 604.a.(4) around crude oil, condensate, and produced water storage tanks.

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.

Any pit constructed to hold fluids (reserve pit, production pit, frac pit; except for flare pit, if built) must be lined.

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 (per Rule 604.a.(4)). Under unforeseen upset conditions during flowback operations, operator may discharge flowback fluids directly into the pit, as needed (notice of intent to directly discharge into the pit must be sent to Dave Kubeczko; email dave.kubeczko@state.co.us).

Notice to Operators (NTO) Drilling Wells on the Roan Plateau in Garfield County: Comply with all provisions of the June 12, 2008 Notice to Operators (NTO) Drilling Wells Within $\frac{3}{4}$ Mile of the Rim of the Roan Plateau in Garfield County – Pit Design, Construction, and Monitoring Requirements. At a minimum, the following condition of approval (COA) will apply: COA 6 - All pits must be lined.

The moisture content of any drill cuttings in a cuttings pit, trench, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. At the time of closure, the drill cuttings must also meet the applicable standards of table 910-1.

Attachment Check List

Att Doc Num	Name
2033557	NRCS MAP UNIT DESC
2033565	CORRESPONDENCE
400114565	FORM 2A SUBMITTED
400117020	30 DAY NOTICE LETTER
400117021	REFERENCE AREA PICTURES
400117022	LOCATION PICTURES
400117023	NRCS MAP UNIT DESC
400117025	OTHER
400117027	OTHER
400117028	ACCESS ROAD MAP
400117029	CONST. LAYOUT DRAWINGS
400117030	HYDROLOGY MAP
400117031	LOCATION DRAWING
400117032	MULTI-WELL PLAN
400117033	REFERENCE AREA MAP

Total Attach: 15 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Initiated/Completed OGLA Form 2A review on 12-31-10 by Dave Kubeczko; requested clarifications and acknowledgement of fluid containment, spill/release BMPs, lined pits/closed loop, flowback to tanks only, no pit in fill, monitor hillside, tank berming, cuttings low moisture content, and Roan Rim NTO COAs from operator on 12-31-10; received clarifications and acknowledgement of COAs from operator on 01-03-10; no CDOW; passed OGLA Form 2A review on 01-06-11 by Dave Kubeczko; fluid containment, spill/release BMPs, lined pits/closed loop, flowback to tanks only, no pit in fill, monitor hillside, tank berming, cuttings low moisture content, and Roan Rim NTO COAs.	12/31/2010 5:46:02 PM

Total: 1 comment(s)

BMP

<u>Type</u>	<u>Comment</u>

Total: 0 comment(s)