

**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



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Document Number:
400133999

Oil and Gas Location Assessment

☐ New Location ☒ Amend Existing Location Location#: 335842

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:
335842
Expiration Date:
03/31/2014

☐ 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.com

4. Location Identification:

Name: Latham Number: CD-32 596
County: GARFIELD
QuarterQuarter: NWNW Section: 32 Township: 5S Range: 96W Meridian: 6 Ground Elevation: 8253
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: 1014 feet FNL, from North or South section line, and 1265 feet FWL, from East or West section line.
Latitude: 39.576075 Longitude: -108.197764 PDOP Reading: 1.9 Date of Measurement: 07/16/2008
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="8"/> | Production Pits: <input type="text" value="1"/> | Dehydrator Units: <input type="text" value="0"/> |
| Condensate Tanks: <input type="text" value="4"/> | Water Tanks: <input type="text" value="1"/> | Separators: <input type="text" value="2"/> | 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: _____

6. Construction:

Date planned to commence construction: 02/10/2011 Size of disturbed area during construction in acres: 6.37
Estimated date that interim reclamation will begin: 02/15/2013 Size of location after interim reclamation in acres: 1.59
Estimated post-construction ground elevation: 8253 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: Closed loop system

7. Surface Owner:

Name: _____ Phone: _____
Address: _____ Fax: _____
Address: _____ Email: _____
City: _____ State: _____ Zip: _____ Date of Rule 306 surface owner consultation: 02/16/2011
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 _____

8. Reclamation Financial Assurance:

☒ Well Surety ID: 20040105 ☒ Gas Facility Surety ID: 20040107 ☐ Waste Mgmt. Surety ID: _____

9. Cultural:

Is the location in a high density area (Rule 603.b.): Yes ☐ No ☒
Distance, in feet, to nearest building: 5103, public road: 24385, above ground utilit: 23364
, railroad: 47534, property line: 1249

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: 55 - Parachute-Irigul Complex - 5 to 30% 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: 07/21/2006

List individual species: See attached NRCS Rangeland Productivity and Plant Composition

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: 912, water well: 18149, depth to ground water: 321

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:

****This 2A is being submitted for permitting of a Production Pit. Please see Greg Deranleau.**** The closest water well did not have depth to ground water data available. The closest water well with depth to ground water data is the Unnamed Well operated by Exxon Oil Co. (Permit # 121346 / Receipt # 0215078C). I certify that there have been no changes on land use, lease description. Pad has been constructed. 8 wells have been drilled. (No additional wells to be drilled. No well APDs will be submitted.) Conductors have been set. No rig on site. Reference well used for footages is the Latham 32-21D 05-045-13686. The APD will NOT require expansion / additional surface disturbance of pad. The location does not require a variance from any of the rules listed in Rule 306.d. (1). (A). (ii). The location is in a restricted surface occupancy area. The location is not in a sensitive wildlife habitat area for Sage Grouse production and Elk production. Reference area pictures will be provided during the growing season.

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

Signed: _____ Date: 02/16/2011 Email: kmoran@bry.com

Print Name: Kallasandra M. Moran Title: Regulatory Compliance Spc

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: 4/1/2011

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 AND ROAN RIM COAs:

Operator must 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.

After installation of the uppermost liner and prior to operating the pit, the synthetic liner(s) shall be tested by filling the pit with at least 4 feet of fresh water, measured from the base of the pit (not to exceed the 2-foot freeboard requirement). The operator shall monitor the pit for leaks for a period of 72 hours prior to draining the pit and commencing operations. Operator shall notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) 48 hours prior to start of the hydrotest. Hydrotest monitoring results must be maintained by the operator for the life of the pit and provided to COGCC prior to using the pit.

Operator must ensure 110 percent secondary containment for any volume of fluids contained at the water handling facility site during natural gas development activities and 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.

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

Notify COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) and the COGCC Field Inspection Supervisor for Northwest Colorado (Shaun Kellerby; email shaun.kellerby@state.co.us) 48 hours prior to start of construction or use of existing pit.

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.

The completion/flowback fluids multi-well pit must be double-lined. The pit will also require a leak detection system (Rule 904.e).

Operator must submit a professional engineer (PE) approved/stamped as-built drawing (plan view and cross-sections) of the completion/flowback pit within 14 calendar days of construction.

The nearby hillside and fill-material bermed portions of the pit must be monitored for any day-lighting of fluids throughout pit operations.

The completion/flowback fluids multi-well pit must be fenced and netted. The operator must maintain the fencing and netting until the pit is closed in accordance with Rule 905. Closure of Pits, and Buried or Partially Buried Produced Water Vessels.

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. The flowback and stimulation fluid tanks must be placed on the 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)).

Submit additional disposal facilities (wells, pits, etc.) for pit contents to COGCC via a Form 4 Sundry prior to disposal.

IMPORTANT: SOME DATA FIELDS HAVE BEEN MODIFIED.

Surface water samples from Little Creek and the north tributary to Little Creek Operator shall be collected prior to pit use and every 12 months to evaluate potential impacts from pit operations. At a minimum, the surface water samples will be analyze for the following parameters: major cations/anions (chloride, fluoride, sulfate, sodium); total dissolved solids (TDS); and BTEX/DRO.

At the time of pit closure, operator must submit disposal information via a Form 4 Sundry Notice to the COGCC Location Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us). The disposal method will need to be approved prior to operator starting pit closure. In addition, operator will collect a pit water sample and, at a minimum, analyze for the following parameters: pH; alkalinity; specific conductance; major cations/anions (chloride, fluoride, sulfate, sodium); total dissolved solids (TDS); BTEX/DRO; TPH; PAH's (including benzo[a]pyrene); and metals (arsenic, barium, calcium, chromium, iron, magnesium, selenium). At the time of closure/disposal of pit water, COGCC may require additional analytes, as appropriate.

Attachment Check List

| Att Doc Num | Name |
|-------------|------------------------|
| 2033652 | CORRESPONDENCE |
| 2033653 | CORRESPONDENCE |
| 400133999 | FORM 2A SUBMITTED |
| 400134005 | NRCS MAP UNIT DESC |
| 400134006 | OTHER |
| 400134007 | OTHER |
| 400134010 | ACCESS ROAD MAP |
| 400134011 | CONST. LAYOUT DRAWINGS |
| 400134012 | HYDROLOGY MAP |
| 400134013 | LOCATION DRAWING |
| 400134015 | MULTI-WELL PLAN |
| 400134016 | REFERENCE AREA MAP |
| 400135403 | LOCATION PICTURES |

Total Attach: 13 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|--------------------------|--|---------------------------------|
| DOW | <p>This permit is for water storage and production pit. CDOW requests that Rule 902. D be fully enforced to include fencing and netting to protect wildlife at this site. This pit site is located in elk production and greater sage-grouse production habitat.</p> <p>by Michael Warren on Thursday, March 31, 2011 at 2:50 P.M.</p> | <p>3/31/2011 2:52:08 PM</p> |

IMPORTANT: SOME DATA FIELDS HAVE BEEN MODIFIED.

| | | |
|--------|--|--------------------------|
| OGLA | Initiated/Completed OGLA Form 2A review on 03-22-11 by Dave Kubeczko; requested acknowledgement of fluid containment, spill/release BMPs, lined pits/closed loop, no pit in fill, flowback to tanks, tank berming, surface water sampling, pit contents disposal options, fencing/netting of pit, berm/hillside monitoring, as-builts, hydrotesting, and Roan Rim COAs from operator on 03-22-11; received acknowledgement of COAs from operator on 03-23-10; passed Form 15 Permit on 03-23-11 by Dave Kubeczko; fluid containment, spill/release BMPs, lined pits/closed loop, no pit in fill, flowback to tanks, tank berming, surface water sampling, pit contents disposal options, fencing/netting of pit, berm/hillside monitoring, as-builts, hydrotesting, and Roan Rim COAs; passed by CDOW on 03-31-11 recommending Rule 902 be adhered to; passed OGLA Form 2A review on 03-31-11 by Dave Kubeczko; fluid containment, spill/release BMPs, lined pits/closed loop, no pit in fill, flowback to tanks, tank berming, surface water sampling, pit contents disposal options, fencing/netting of pit, berm/hillside monitoring, as-builts, hydrotesting, and Roan Rim COAs. | 3/22/2011 10:10:52 AM |
| OGLA | Operator states: "The location is in a restricted surface occupancy area. The location is not in a sensitive wildlife habitat area for Sage Grouse production and Elk production." Should read: "The location is not in a restricted surface occupancy area. The location is in a sensitive wildlife habitat area for Sage Grouse production and Elk production." | 3/16/2011 9:19:46 AM |
| Permit | changed the QtrQtr at the operators request. kk | 2/22/2011 1:25:54 PM |
| Permit | Back to draft location photos are marked incorrectly. kk | 2/18/2011 11:02:40 AM |
| Permit | Back to draft location photos are marked incorrectly. kk | 2/17/2011 12:07:19 PM |

Total: 6 comment(s)

BMPTypeComment

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Total: 0 comment(s)