

FORM
2A

Rev
08/13

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:

401524497

Date Received:

03/05/2018

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: 335867

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location 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. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

335867

Expiration Date:

04/04/2021

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

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.

Operator

Operator Number: 10091
Name: BERRY PETROLEUM COMPANY LLC
Address: 5201 TRUXTUN AVENUE #100
City: BAKERSFIELD State: CA Zip: 90339

Contact Information

Name: Andrea Gurr
Phone: (435) 722-0065
Fax: ()
email: agurr@bry.com

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: 20170029 Gas Facility Surety ID: _____
- Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: GRANLEE OM Number: G03 696
County: GARFIELD
Quarter: LOT 7 Section: 3 Township: 6S Range: 96W Meridian: 6 Ground Elevation: 8164
Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.
Footage at surface: 1981 feet FNL from North or South section line
1613 feet FEL from East or West section line
Latitude: 39.557611 Longitude: -108.091783
PDOP Reading: 2.0 Date of Measurement: 12/21/2017
Instrument Operator's Name: Ivan Martin

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID # FORM 2A DOC #

FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	<u>1</u>	Oil Tanks*	<u> </u>	Condensate Tanks*	<u>1</u>	Water Tanks*	<u>2</u>	Buried Produced Water Vaults*	<u> </u>
Drilling Pits	<u> </u>	Production Pits*	<u> </u>	Special Purpose Pits	<u> </u>	Multi-Well Pits*	<u> </u>	Modular Large Volume Tanks	<u> </u>
Pump Jacks	<u> </u>	Separators*	<u>1</u>	Injection Pumps*	<u> </u>	Cavity Pumps*	<u> </u>	Gas Compressors*	<u> </u>
Gas or Diesel Motors*	<u> </u>	Electric Motors	<u> </u>	Electric Generators*	<u> </u>	Fuel Tanks*	<u>2</u>	LACT Unit*	<u> </u>
Dehydrator Units*	<u> </u>	Vapor Recovery Unit*	<u> </u>	VOC Combustor*	<u>1</u>	Flare*	<u>1</u>	Pigging Station*	<u> </u>

OTHER FACILITIES*

Other Facility Type

Number

12' Production tanks	<u>3</u>
Production equipment	<u>1</u>

Those facilities indicated by an asterisk () shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Sub-grade (4' below ground surface) flowline from wellhead to separator to tanks will be 2" steel;
One 8" steel take away water line;
One 6" steel take away gas line;

CONSTRUCTION

Date planned to commence construction: 05/01/2018 Size of disturbed area during construction in acres: 7.97
Estimated date that interim reclamation will begin: 11/01/2018 Size of location after interim reclamation in acres: 2.58
Estimated post-construction ground elevation: 8168

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H₂S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: ONSITE Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

PLEASE SEE BMP CUTTINGS MANAGEMENT

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

Centralized E&P Waste Management Facility ID, if applicable:

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Caerus Piceance, LLC.

Phone: 303-623-2300

Address: 1001-17th Street, Suite 1600

Fax: _____

Address: _____

Email: atrevino@caerusoilandgas.com

City: Denver State: CO Zip: 80202

Surface Owner: Fee State Federal Indian

Check all that apply. The Surface Owner: is the mineral owner

is committed to an oil and Gas Lease

has signed the Oil and Gas Lease

is the applicant

The Mineral Owner beneath this Oil and Gas Location is: Fee State Federal Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place: _____ Surface Surety ID: _____

Date of Rule 306 surface owner consultation _____

CURRENT AND FUTURE LAND USE

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

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): Well Pad

Subdivided: Industrial Commercial Residential

CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	5280 Feet	5280 Feet
Building Unit:	5280 Feet	5280 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	5280 Feet	5280 Feet
Above Ground Utility:	5280 Feet	5280 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	4963 Feet	5280 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- Buffer Zone
- Exception Zone
- Urban Mitigation Area

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.
- Large UMA Facility - as defined in 100-Series Rules.

FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

SOIL

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.org/> 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: #36 Irigual Channery loam, 9 to 50 percent slopes. _____
- NRCS Map Unit Name: #53 Parachute-Rhone loans, 5 to 30 percent slopes. _____
- NRCS Map Unit Name: #63 Silas loam, 3 to 12 percent slopes. _____

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: 12/21/2017

List individual species:

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):

WATER RESOURCES

Is this a sensitive area: No Yes

Distance to nearest

downgradient surface water feature: 870 Feet

water well: 7024 Feet

Estimated depth to ground water at Oil and Gas Location 150 Feet

Basis for depth to groundwater and sensitive area determination:

Is the location in a riparian area: No Yes

Was an Army Corps of Engineers Section 404 permit filed No Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No 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

Is the Location within a Floodplain? No Yes Floodplain Data Sources Reviewed (check all that apply)

Federal (FEMA)

State

County

Local

Other

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

WILDLIFE

This location is included in a Wildlife Mitigation Plan

This location was subject to a pre-consultation meeting with CPW held on _____

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

RULE 502.b VARIANCE REQUEST

- Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments

Pad has been built. The location is not in a restricted surface occupancy area. The location is not in a sensitive wildlife habitat area. Berry plans to drill the OM07B G03 696 well on this pad in Q2 2018.
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I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: _____ Date: 03/05/2018 Email: agurr@bry.com

Print Name: Andrea Gurr Title: Regulatory Specialist 2

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:  _____ Director of COGCC Date: 4/5/2018

Conditions Of Approval

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.

COA Type	Description
	<p>In addition to the notifications required by COGCC listed in the Northwest Notification Policy (Notice of Intent to Construct a New Location, Notice of Intent to Spud Surface Casing, and Notice of Intent to Commence Hydraulic Fracturing Operations) and Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (a. Notice of Intent to Conduct Hydraulic Fracturing Treatment and c. Notice of Construction or Major Change); operator shall notify the COGCC 48 hours prior to pipeline testing (flowlines from wellheads to separators to tanks; permanent buried take away pipelines; and/or any temporary surface lines used for hydraulic stimulation and/or flowback operations) using the Form 42 (as described in Rule 316C.m. Notice of Completion of Form 2/2A Permit Conditions). The appropriate COGCC individuals will automatically be email notified.</p> <p>Operator shall comply with all provisions of the NOTICE TO OPERATORS (NTO) DRILLING WELLS WITHIN ¼ MILE OF THE RIM OF THE ROAN PLATEAU IN GARFIELD COUNTY - PIT DESIGN, CONSTRUCTION, AND MONITORING REQUIREMENTS, dated June 12, 2008.</p>
	<p>Operator must ensure secondary containment for any volume of fluids contained at the well site during drilling and completion operations; including, but not limited to, construction (if necessary) of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading (as needed), or other comparable measures (i.e., best management practices [BMPs] associated with fluid containment/control as well as stormwater management for the control of run-on and run-off) sufficiently protective of nearby surface water. Any berm reconstructed at the well pad location will be stabilized, inspected at regular intervals, and maintained in good condition.</p> <p>The access road will be reconstructed and maintained as to not allow sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.</p> <p>Strategically apply fugitive dust control measures to access roads to reduce fugitive dust and coating of vegetation and deposition in water sources. Operator shall employ practices for control of fugitive dust caused by other operations, including, but not limited to the use of speed restrictions, regular road maintenance, restriction of construction and/or grading activities during high wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices (road surfacing, wind breaks and barriers) may be used.</p> <p>Due to the highly fractured nature of the surface and shallow subsurface geologic materials (within the Uinta Formation), the nearby hillsides below the well pad shall be monitored for any day-lighting of drilling fluids throughout the drilling of the surface casing intervals for all wells.</p>
	<p>A closed loop system must be implemented during drilling (as indicated on the Form 2 and Form 2A). The moisture content of water/bentonite based mud (WBM) generated drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. After drilling and completion operations have been completed, if any of the WBM drill cuttings will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), they must be sampled and meet the applicable standards of Table 910-1. No liners (if used) are allowed to be disposed of with the drill cuttings. After the drill cuttings have been amended (if necessary) and placed on the well pad, sampling frequency of the drill cuttings (to be determined by the operator) shall be representative of the material left on location. No offsite disposal of cuttings to another oil and gas location shall occur without prior approval of a Form 4 Sundry Notice specifying disposal location and waste characterization method.</p> <p>Flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or open top containment located on the well pad; or into tanker trucks for offsite disposal. No open top tanks can be used for initial flowback fluids containment. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material.</p>

	Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated.
	Operator shall pressure test pipelines (flowlines from wellheads to separators to tanks; and any temporary surface lines used for hydraulic stimulation and/or flowback operations) in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network, and tested annually, unless agreed to by both parties that the flowlines can be managed under an approved COGCC variance.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Cuttings Management: During drilling, Berry Petroleum Company, LLC. will keep the drill cuttings segregated on the well pad. Cuttings will not be in contact with the fill material or topsoil on location. After drilling and completion operations have completed, soil amendments such as phosphorus and nitrogen will be utilized to expedite the amendment process (if necessary). Berry will be utilizing closed-loop drilling. Amended cuttings that meet the table 910-1 levels will be covered with 3' of clean material during reclamation activities
2	CPW-Wildlife - Avoidance-RAPTORS	Prior to commencement of oil and gas operations, the operator agrees to survey suitable nesting habitat (cliffs, large trees, snags, old growth forest, ect) within 1/2 mile of the proposed activity for nests. See CPW Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (August 2009)
3	CPW-Wildlife - Avoidance-RAPTORS	The operator will provide raptor survey data for incorporation into the CPW raptor database which is used to update COGCC Wildlife Maps

Total: 3 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401524497	FORM 2A SUBMITTED
401557190	LOCATION PICTURES
401557657	ACCESS ROAD MAP
401557658	CONST. LAYOUT DRAWINGS
401557662	LOCATION DRAWING
401557668	HYDROLOGY MAP
401557687	PROPOSED BMPS
401557840	REFERENCE AREA MAP
401557844	REFERENCE AREA PICTURES
401559235	LOCATION DRAWING
401559245	NRCS MAP UNIT DESC

Total Attach: 11 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete. Removed waste management surety bond.	04/05/2018
OGLA	03/27/18 - location does not fall within 'Sensitive Wildlife Habitat' (SWH) or 'Restricted Surface Occupancy' RSO areas; therefore no CPW Wildlife Consultation is required; however, operator has agreed to conduct raptor surveys; 03/27/18 - Initiated/Completed Form 2A review by Dave Kubeczko; placed the following COAs on the Form 2A - notification, applicable Roan Rim NTO requirements, fluid containment, spill/release BMPs, flowback to tanks only, cuttings low moisture content, hillside monitoring, sediment control, dust control, odor control, and pipeline testing COAs; changed date on interim reclamation from 05-15-18 to 11-01-18, corrected distance to nearest downgradient surface water feature from 2628' to 870' (intermittent stream to the northwest), marked Federal (FEMA) as source for floodplain review (per operator verbal concurrence); 04/02/18 - passed OGLA Form 2A review by Dave Kubeczko; notification, applicable Roan Rim NTO requirements, fluid containment, spill/release BMPs, flowback to tanks only, cuttings low moisture content, hillside monitoring, sediment control, dust control, odor control, and pipeline testing COAs.	03/27/2018
Permit	Deleted unnecessary multi-well plan with operator concurrence. Form passes completeness.	03/12/2018

Total: 3 comment(s)