

**FORM  
2A**Rev  
04/01State 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:

2095449

**Oil and Gas Location Assessment**☐ New Location ☒ Amend Existing Location Location#: 322121

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:

**322121**

Expiration Date:

**07/31/2013**☒ 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: 10071

Name: BARRETT CORPORATION\* BILL

Address: 1099 18TH ST STE 2300

City: DENVER State: CO Zip: 80202

**3. Contact Information**

Name: TRACEY FALLANG

Phone: (303) 312-8134

Fax: (303) 291-0420

email: TFALLANG@BILLBARRETTCORP.COM

**4. Location Identification:**

Name: JOHNSON Number: 1H-13-39-18

County: DOLORES

QuarterQuarter: NENE Section: 13 Township: 39N Range: 18W Meridian: N Ground Elevation: 6814

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: 660 feet, from North or South section line: FNL and 661 feet, from East or West section line: FEL

Latitude: 37.644483 Longitude: -108.776081 PDOP Reading: 2.3 Date of Measurement: 08/25/2008

Instrument Operator's Name: MCCOY ANDERSON

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

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

Other: GAS MOTOR RUNNING A SMALL FRESH WATER PUMP

## 6. Construction:

Date planned to commence construction: 08/01/2010 Size of disturbed area during construction in acres: 5.10  
Estimated date that interim reclamation will begin: 02/01/2011 Size of location after interim reclamation in acres: 1.20  
Estimated post-construction ground elevation: 6814 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: EVAP AND BACKFILL

## 7. Surface Owner:

Name: DEETTA JOHNSON Phone: 970/565-8688  
Address: 10953 CR 23 Fax: \_\_\_\_\_  
Address: \_\_\_\_\_ Email: \_\_\_\_\_  
City: CORTEZ State: CO Zip: 81321 Date of Rule 306 surface owner consultation: \_\_\_\_\_  
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: 20040060 ☐ 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: 817, public road: 650, above ground utilit: 632  
, railroad: 283536, property line: 659

## 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: MAP UNIT SYMBOL: #143, WETHERILL LOAM, 1-3% 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: \_\_\_\_\_  
\_\_\_\_\_

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: 1106, water well: 2690, depth to ground water: 65

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 IS AN EXISTING WELL LOCATION THAT IS BEING EXPANDED TO ACCOMMODATE HORIZONTAL DRILLING OPERATIONS WITH APPROXIMATELY 380' OF NEW ACCESS ROAD PROPOSED AND 175' OF EXISTING ROAD (32' ROW WITH AN 18' RUNNING SURFACE). PIPELINE WILL BE BUILT WITHIN THE ROAD ROW. WELL LOCATION IS WITHIN SENSITIVE WILDLIFE HABITAT AREA: ELK WINTER CONCENTRATION AREA. final BMP's attached. 6/23/10 plg.

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

Signed: \_\_\_\_\_ Date: 02/03/2010 Email: TFALLANG@BILLBARRETTCORP.COM

Print Name: TRACEY FALLANG Title: REGULATORY

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

*David S. Neslin*

COGCC Approved: \_\_\_\_\_

Director of COGCC

Date: 8/1/2010

**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.**

Operator must ensure 110 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations. If fluids are conveyed via pipeline, operator must implement best management practices to contain any unintentional release of fluids.

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.

Pits in fill must be lined.

No fencing or netting is required for inactive cuttings pits where free liquids are removed.

A minimum six-foot high fence is required for active (fracturing/flowback operations are ongoing) completion/water management pits and inactive cuttings pits containing free liquids.

If completion operations are delayed for more than 10 days from the end of 24 hour drilling operation then any completion/water management pit shall be fenced with a minimum six foot high fence and netting shall be installed to prevent access by birds.

Within 30 days after completion flowback ends, the operator will do one of the following to comply with Rule 902.d.: (1) initiate removal of liquids from all pits for final closure and remediation (2) submit a Sundry Notice, Form 4, with appropriate water quality documentation demonstrating that any liquids remaining in the pit will not harm wildlife; or (3) install a minimum six-foot fence with netting, to prevent access by birds, and a one-foot exclusionary fence (e.g. minimum one-foot height silt fencing or fine mesh) along the base of the fence anchored to the ground (not buried). In the event that circumstances preclude the operator from selecting one of these options within 30 days after completion flowback ends, then the operator may seek a variance to extend this 30-day period.

**Attachment Check List**

Att Doc Num	Name	Doc Description
1693354	PROPOSED BMPs	LF@2494931 1693354
2032877	CORRESPONDENCE	LF@2425147 2032877
2032878	LOCATION DRAWING	LF@2425148 2032878
2032879	CORRESPONDENCE	LF@2425152 2032879
2032880	FORM 2A SUBMITTED	LF@2425153 2032880
2095449	FORM 2A	LF@2243536 2095449
2095455	LOCATION PICTURES	LF@2243532 2095455
2095456	LOCATION PICTURES	LF@2243533 2095456
2095457	LOCATION PICTURES	LF@2243534 2095457
2095458	LOCATION DRAWING	LF@2243537 2095458
2095459	HYDROLOGY MAP	LF@2243538 2095459
2095460	ACCESS ROAD MAP	LF@2243530 2095460
2095461	ACCESS ROAD MAP	LF@2243531 2095461
2095462	NRCS MAP UNIT DESC	LF@2243539 2095462
2095463	CONST. LAYOUT DRAWINGS	LF@2243540 2095463
2095464	PROPOSED BMPs	LF@2243541 2095464
400035024	FORM 2A SUBMITTED	LF@2396596 400035024

Total Attach: 17 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit	Spoke with Deetta Johnson, the surface owner, on 7/28/2009. She did not object to the COGCC proposed requirement to fence the pit. She did voice some concerns about requiring too many environmental protections that the well would not be drilled, but felt that there were migratory birds there and the netting and fencing would be alright.	7/31/2010 9:52:51 PM

DOW	<p>CDOW continues to be concerned about the reserve pit mortality risk to birds, bats, and other wildlife at the locations referenced in our original June 2009 e-mail, and at this well location proposed in Montezuma County, the Johnson 1H-13-39-17, and as such, we recommend that the reserve pits at these new locations be fenced and netted to avoid significant adverse impacts to wildlife per COGCC Rule 902.a. and d.</p> <p>Our concern about open reserve pits at these new proposed well locations stems from the following information:</p> <p>1)The proposed wells are located in extreme southwestern Colorado in one of the most arid areas of the State.Any source of standing water is an attractant to wildlife in this part of Colorado due to the extreme environmental conditions.The situation at these well locations is exasperated by the fact that in addition to the reserve pit, the operator is permitting a large fresh water pond adjacent to each reserve pit to hold up to 100,000 barrels of fresh water for fracing the wells.The volume of water that will be available to attract wildlife at these locations is significant compared to the surrounding area;</p> <p>2)The risk to wildlife from exposure to water in the reserve pits is dependent on the quality of water, and the only information we have on the reserve pits in this area indicates high levels of arsenic.The only information we have on the quality of water within reserve pits in this area comes from a COGCC Form 27 for the Johnson 16H-12-39-18, which indicates levels of arsenic in soil samples that significantly exceed COGCC's standards in Table 910-1 (20.5 mg/kg sampled vs. a COGCC Table 910-1 standard of 0.39 mg/kg).Note that the Table 910-1 standard was exceeded even though the sample taken was a composite soil sample for reclamation which allows for mixing of soils in order to meet the standard.Pre soil mixing arsenic concentrations in the reserve pit were likely higher than those observed.The source of the arsenic at this pit location may be the geologic formation, but note that arsenic is also a constituent of "Soltex," a brand name shale stabilizer.We do not know whether the operator in this area is using this product, and if they are, in what quantities;</p> <p>3)Arsenic's acute and chronic toxicity to wildlife has been well documented (Eisler 1988).The deleterious effects to wildlife (including death) from acute or chronic arsenic exposure at these locations may not be detectable as individuals exposed are likely to move away from the reserve pit locations prior to becoming sick enough to detect poisoning;</p> <p>4)The proposed wells are located in an area known to contain the only population of Columbian sharp-tailed grouse in southwestern Colorado, as well as known occurrences of Townsend's big-eared bat (a State Species of Special Concern, Federal Candidate Species for the Endangered Species Act, and BLM-designated Sensitive Species), and spotted bat (a BLM-designated Sensitive Species).Documented spotted bat occurrences in Colorado are extremely rare, and only several records have been reported – including one within the Gothic Shale development area in Montezuma County.In addition, the proposed wells are located in an area known for high densities of mule deer, elk, and raptors.Until further information on arsenic concentrations in the reserve pit water is available, fencing and netting to exclude these species is appropriate to avoid significant adverse impacts to wildlife;</p> <p>5) The operator of these wells is currently installing streamers with flagging on reserve pits in an attempt to keep birds (and presumably other wildlife) out of the pit water.Streamers with flagging have been shown to be ineffective at keeping birds out of pits containing fluids (see USFWS Pit Risk);</p> <p>6) The USFWS has documented migratory bird morality at reserve pits in Colorado and demonstrated that reserve pits in Colorado pose a significant risk to birds ( USFWS Reserve Pit ).In the Statement of Facts for the Exxon-Mobile case settled</p>	<p>7/28/2010 11:43:58 AM</p>
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DOW	<p>in August 2009, USFWS documented 85 migratory bird mortalities – many of them caused by exposure to un-netted reserve pits in Colorado;</p> <p>7) The operator has demonstrated that fencing and netting the reserve pit is economically and technically feasible. The operator is currently required to fence and net reserve pits to exclude wildlife on adjacent Federal lands in this area of Colorado.</p> <p>Note that the toxicity risk to wildlife is only present when there is water in the reserve pit that leads to exposure to wildlife. If the operator removes all fluids from the reserve pit immediately after drilling and pumps off any stormwater that collects in the pit prior to reclamation, there would be no need to net the pit to prevent access by birds and bats. Fencing may still be required to prevent entrapment of wildlife due to the pit liner and slope of the pit walls.</p>	<p>7/28/2010 11:43:58 AM</p>
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Total: 2 comment(s)