

FORM  
2A

Rev  
04/01

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:

400316239

Date Received:

08/17/2012

Oil and Gas Location Assessment

☐ New Location

☒ Amend Existing Location Location#: 421165

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:

**421165**

Expiration Date:

**09/20/2015**

☒ 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: 8960

Name: BONANZA CREEK ENERGY OPERATING COMPANY LLC

Address: 410 17TH STREET SUITE #1400

City: DENVER State: CO Zip: 80202

3. Contact Information

Name: Keith Caplan

Phone: (720) 440-6100

Fax: (720) 279-2331

email: KCaplan@bonanzacrk.com

4. Location Identification:

Name: Antelope Number: 41-31

County: WELD

QuarterQuarter: NENE Section: 31 Township: 5N Range: 62W Meridian: 6 Ground Elevation: 4604

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: 777 feet FNL, from North or South section line, and 578 feet FEL, from East or West section line.

Latitude: 40.361270 Longitude: -104.359020 PDOP Reading: 1.4 Date of Measurement: 08/08/2012

Instrument Operator's Name: Wyatt Hall

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

|  |   |  |   |  |
|--|---|--|---|--|
| Special Purpose Pits: <input type="checkbox"/>       | Drilling Pits: <input type="checkbox"/>       | Wells: <input type="text" value="3"/>  | Production Pits: <input type="checkbox"/>       | Dehydrator Units: <input type="checkbox"/> |
| Condensate Tanks: <input type="text" value="4"/>     | Water Tanks: <input type="text" value="2"/>   | Separators: <input type="checkbox"/>   | Electric Motors: <input type="text" value="1"/> | Multi-Well Pits: <input type="checkbox"/>  |
| Gas or Diesel Motors: <input type="text" value="1"/> | Cavity Pumps: <input type="checkbox"/>        | LACT Unit: <input type="checkbox"/>    | Pump Jacks: <input type="text" value="1"/>      | Pigging Station: <input type="checkbox"/>  |
| Electric Generators: <input type="text" value="1"/>  | Gas Pipeline: <input type="text" value="1"/>  | Oil Pipeline: <input type="checkbox"/> | Water Pipeline: <input type="checkbox"/>        | Flare: <input type="checkbox"/>            |
| Gas Compressors: <input type="checkbox"/>            | VOC Combustor: <input type="text" value="1"/> | Oil Tanks: <input type="checkbox"/>    | Fuel Tanks: <input type="checkbox"/>            |  |

Other: 1 40-bbl cement water vault, 2 3-phase flowlines to Antelope 42-31 (Loc ID 421167) for production of existing 41-1 and 31-1 wells.

6. Construction:

Date planned to commence construction: 09/05/2012 Size of disturbed area during construction in acres: 3.00  
 Estimated date that interim reclamation will begin: 03/04/2013 Size of location after interim reclamation in acres: 1.50  
 Estimated post-construction ground elevation: 4604 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: \_\_\_\_\_

## 7. Surface Owner:

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Address: \_\_\_\_\_ Email: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Date of Rule 306 surface owner consultation: 01/19/2012  
 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: 20120018 ☐ 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: 5280, above ground utilit: 5280  
   , railroad: 5280, property line: 578

## 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: 70: Valent sand, 3-9% 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 (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: 5030, water well: 3260, depth to ground water: 18  
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:

Closest water well not a MH permit is Allard stock well, permit 36913. The following wells have already been drilled from this pad: Antelope 41-31, Antelope 31-31. The following well will be drilled from this pad: Antelope 41-44-31HZ.

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

Signed: \_\_\_\_\_ Date: 08/17/2012 Email: kcaplan@bonanzacrk.com

Print Name: Keith Caplan Title: Sr. Regulatory Specialist

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: 9/21/2012

**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.

**Attachment Check List**

| Att Doc Num | Name                    |
|-------------|-------------------------|
| 2086136     | LOCATION DRAWING        |
| 400316239   | FORM 2A SUBMITTED       |
| 400316253   | NRCS MAP UNIT DESC      |
| 400316254   | ACCESS ROAD MAP         |
| 400316255   | HYDROLOGY MAP           |
| 400316260   | LOCATION PICTURES       |
| 400316263   | REFERENCE AREA MAP      |
| 400316265   | REFERENCE AREA PICTURES |
| 400316268   | WASTE MANAGEMENT PLAN   |
| 400317225   | MULTI-WELL PLAN         |

Total Attach: 10 Files

**General Comments**

| <b><u>User Group</u></b> | <b><u>Comment</u></b>  | <b><u>Comment Date</u></b> |
|--------------------------|--|----------------------------|
| Permit                   | Final Review Completed. No LGD or public comment received. Received sundry to update Antelope 41-31's SHL. | 9/17/2012<br>8:17:28 AM    |
| OGLA                     | Uploaded revised Location Drawing, added interim reclamation BMP.  | 9/14/2012<br>12:45:02 PM   |
| Permit                   | The SHL of this well does not match any of the form 2's.   | 8/23/2012<br>9:23:08 AM    |

Total: 3 comment(s)

## **BMP**

| <b><u>Type</u></b>  | <b><u>Comment</u></b>  |
|---------------------|--|
| Interim Reclamation | <p>Bonanza will immediately reclaim the disturbed area that lies outside of the planned 360'*360' drilling pad as follows:</p> <ul style="list-style-type: none"><li>o Mechanically lower gradient of well pad's steep shoulders and smooth out disturbed eroded soil</li><li>o Spread by manure slinger and tractor, a dairy cow bedding which is a combination of long stem straw and manure. This combination dilutes the concentration of nitrogen which is detrimental to native grass germination growth while enhancing opportunistic weed populations. Manure acts as a binder and shades the soil for moisture retention and from wind abrasion. Application level .25-.5 inch thick where possible to form a mat over exposed soil.</li><li>o Drill seed over the top of the bedding. This allows seed to be placed at a proper depth for small native seed to germinate (have moisture and nutrients to grow) under the adverse conditions found on well sites. The seed planted is a combination of approximately 12-15 pounds per acre of small grain-oats a cool season annual which will grow in the fall, provide stubble to protect the soil and native plants against spring winds. Along with the oats 14-18 pounds per acre of native grass (Sharp Bros. 70 Ranch Sandy Soil Mix requested by ranch manager and owner).</li><li>o Irrigate using water applied by an agricultural reel gun. Water will be applied as long as possible (cold weather, winds, seed germination, natural moisture, etc influencing decisions).</li><li>o The reclamation area will be fenced off to prohibit disturbance by construction or wildlife/cattle.</li></ul> <ul style="list-style-type: none"><li>• Following completion and flowback of the proposed new well, the same procedures will be used to perform interim reclamation within the 360' * 360' pad, with the exception of the production facility, area immediately surrounding the wellheads, and road. The size of location following interim reclamation will be 1.5 acres.</li><li>• Mowing, re-seeding, and watering will be conducted on an as-needed basis and as seasonally appropriate, until interim reclamation has been successfully achieved.</li></ul> |

Total: 1 comment(s)