

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:

400728893

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Date Received:

12/19/2014

Oil and Gas Location Assessment

☒ New Location ☐ Refile ☐ Amend Existing Location Location#: \_\_\_\_\_

Submit signed original form. 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:

**441005**

Expiration Date:

**03/03/2018**

☐ 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: 8960

Name: BONANZA CREEK ENERGY OPERATING COMPANY LLC

Address: 410 17TH STREET SUITE #1400

City: DENVER State: CO Zip: 80202

Contact Information

Name: Julie Vigil

Phone: (303) 803-1718

Fax: (720) 279-2331

email: JVigil@bonanzacrk.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20120018 ☐ Gas Facility Surety ID: \_\_\_\_\_

☐ Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Pronghorn Number: D-28 Pad

County: WELD

QuarterQuarter: SWSW Section: 28 Township: 5N Range: 61W Meridian: 6 Ground Elevation: 4597

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: 1250 feet FSL from North or South section line

389 feet FWL from East or West section line

Latitude: 40.368010 Longitude: -104.222190

PDOP Reading: 1.3 Date of Measurement: 10/13/2014

Instrument Operator's Name: John Stoddard

## 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 #**

Well Site is served by Production Facilities

438946

## FACILITIES

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

Wells	13	Oil Tanks*	32	Condensate Tanks*	0	Water Tanks*	14	Buried Produced Water Vaults*	7
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	1
Pump Jacks	13	Separators*	13	Injection Pumps*		Cavity Pumps*		Gas Compressors*	12
Gas or Diesel Motors*	13	Electric Motors	13	Electric Generators*	4	Fuel Tanks*		LACT Unit*	2
Dehydrator Units*	2	Vapor Recovery Unit*	6	VOC Combustor*	10	Flare*	1	Pigging Station*	1

## OTHER FACILITIES\*

**Other Facility Type**

**Number**

Vapor Recovery Towers

6

\*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:

Thirteen (13) 3-phase flowlines: 3" coated steel  
One (1) gas sales line connection: 6" coated steel  
Four (4) oil gathering lines: 4" coated steel  
Four (4) produced water gathering lines: 4" coated steel  
Vent/VRU lines: 4@6", 4@10", 4@12" steel

Manufacturer or vendor = Hydrologistics

Number of tanks = 1

Size of tanks = 30,000 bbl - 135' dia

Anticipated timeframe tanks will be on location = 2/15/15 to 2/15/16

BMP-Bonanza Creek Energy acknowledges and will comply with the "COGCC Policy On the Use of Modular Large Volume Tanks in Colorado" dated June 13, 2014.

## CONSTRUCTION

Date planned to commence construction: 02/11/2015

Size of disturbed area during construction in acres: 6.10

Estimated date that interim reclamation will begin: 08/11/2015

Size of location after interim reclamation in acres: 4.00

Estimated post-construction ground elevation: 4595

## DRILLING PROGRAM

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

Is H<sub>2</sub>S 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: OFFSITE

Drilling Fluids Disposal Method: Land application

Cutting Disposal: OFFSITE

Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 427606 or Document Number: \_\_\_\_\_

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Burke Family Trust

Phone: 630-918-5119

Address: 29 West 140 Batavia

Fax: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

City: Warrenville State: IL Zip: 60555

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): \_\_\_\_\_

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:	2370 Feet	2320 Feet
Building Unit:	2370 Feet	2320 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	375 Feet	115 Feet
Above Ground Utility:	5280 Feet	5280 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	389 Feet	130 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

- 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.

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: \_\_\_\_\_

## 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 (onll 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 be 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: 69 Valent sand, 0 to 3 percent slopes

NRCS Map Unit Name: 70 Valent sand, 3 to 9 percent slopes

NRCS Map Unit Name: \_\_\_\_\_

## 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): \_\_\_\_\_

## WATER RESOURCES

Is this a sensitive area: ☐ No ☒ Yes

Distance to nearest

downgradient surface water feature: 5280 Feet

water well: 2249 Feet

Estimated depth to ground water at Oil and Gas Location 22 Feet

Basis for depth to groundwater and sensitive area determination:

Static Water Level is listed as 22 feet, however, well logs show water around 80 with a potential confining layer overlying the water table. Static Water Level may be due to artesian effect.

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

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

## DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)  
☐ 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

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

Signed: \_\_\_\_\_ Date: 12/19/2014 Email: JVigil@bonanzacrk.com

Print Name: Julie L. Vigil 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: 3/4/2015

## 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

	If, in the event, the listed Production Facilities are removed from this Location, Operator shall submit a Form 4 Sundry updating the changes to the permitted facilities list at this Location.
	Unnecessary or excessive flaring is prohibited. Operator shall direct all salable quantity gas to a sales line as soon as practicable or shut in and conserved.  Operator Concurrence via email 01/08/2015
	Operator shall provide notice to COGCC 48 hours prior to commencing construction of this Oil and Gas Location via Form 42.  Operator Concurrence via email 01/08/2015

## **Best Management Practices**

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
1	Construction	The following procedure describes BCEI standard construction practices for setting a partially buried pre-cast cement water vault and new tank battery construction. 1) The excavation will first be lined with 4" of clay or other low permeability soil. 2) A 30 mil liner will be installed on top of the low permeability soil. The 30 mil liner will be a contiguous liner which will underlay the entire tank battery. 3) The tank battery / water vault liner will be keyed into a galvanized steel containment ring installed surrounding the tank battery. 4) Sand bedding will be installed to protect the synthetic liner prior to placing equipment in the containment area.
2	Construction	Bonanza is working to consolidate its oil and gas facilities for the multiple benefits incurred and our plan is not to build excessive facilities on this location. Upon approval, Bonanza will be constructing a drilling pad which will have production going to the State Pronghorn CPF 41-32 Location ID# 438946. There will be some facility equipment on the Pronghorn D-28 pad, however it is the intention of Bonanza to minimize surface disturbance and excessive construction.
3	Drilling/Completion Operations	BMP-Bonanza Creek Energy acknowledges and will comply with the "COGCC Policy On the Use of Modular Large Volume Tanks in Colorado" dated June 13, 2014.

Total: 3 comment(s)

## **Attachment Check List**

<b>Att Doc Num</b>	<b>Name</b>
1009746	REFERENCE AREA MAP
1009747	REFERENCE AREA PICTURES
1009748	LOCATION PICTURES
400728893	FORM 2A SUBMITTED
400728912	CONST. LAYOUT DRAWINGS
400728918	MULTI-WELL PLAN
400728933	HYDROLOGY MAP
400728937	ACCESS ROAD MAP
400729278	WASTE MANAGEMENT PLAN
400729976	NRCS MAP UNIT DESC
400729977	NRCS MAP UNIT DESC
400756608	LOCATION DRAWING

Total Attach: 12 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	3/4/2015 12:21:03 PM
	Added "Bonanza is working to consolidate its oil and gas facilities for the multiple benefits incurred and our plan is not to build excessive facilities on this location. Upon approval, Bonanza will be constructing a drilling pad which will have production going to the State Pronghorn CPF 41-32 Location ID# 438946. There will be some facility equipment on the Pronghorn D-28 pad, however it is the intention of Bonanza to minimize surface disturbance and excessive construction". to the Operator BMPs per Operator 02/26/2015 email request.	3/3/2015 9:28:22 AM
Permit	Per operator Changed Right-to-Construct from Bond to Oil & Gas Lease. Permitting Review Complete.	2/17/2015 9:29:06 AM
Permit	Operator corrected surface and minerals tab check boxes to match the Form 2's.	2/5/2015 4:34:33 PM
Permit	Surface and minerals tab check boxes do not match the Form 2's. Emailed operator to correct check boxes.	2/5/2015 4:05:25 PM
OGLA	Changed Estimated Depth to Groundwater to 80 feet based on Well Logs for DWR Permit #64751. Static Water Level is listed as 22 feet, however, well logs show water around 80 with a potential confining layer overlying the water table. Static Water Level may be due to artesian effect.  Operator BMPs address Spill Prevention, additional Conditions of Approval are not required at this time.	1/7/2015 3:27:04 PM
OGLA	Changed distance to nearest Building and Building Unit to 2370 feet from 3350 feet (wellhead) and to 2320 feet from 3300 feet (production facilities) based on the building located to the northwest of the proposed Location.  Operator Concurrence via email 01/08/2015	1/7/2015 2:49:38 PM
OGLA	Location and Reference Area Pictures are all labeled the same? Received revised Pictures - 01/08/2015	1/7/2015 2:00:41 PM
OGLA	Copied Operator BMP to BMP Tab - "BMP-Bonanza Creek Energy acknowledges and will comply with the "COGCC Policy On the Use of Modular Large Volume Tanks in Colorado" dated June 13, 2014."	1/7/2015 1:39:55 PM
OGLA	This Location is producing to an Approved CPF (Location ID #438946). Production Facilities on this site should be removed.	1/7/2015 12:41:17 PM
Permit	Passed Completeness	12/22/2014 1:10:27 PM

Total: 11 comment(s)