

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:

400562396

Date Received:

06/20/2014

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:

Expiration Date:

☒ 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: Keith Caplan

Phone: (720) 440-6100

Fax: (720) 279-2331

email: KCaplan@bonanzacrk.com

RECLAMATION FINANCIAL ASSURANCE

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

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

LOCATION IDENTIFICATION

Name: North Platte    Number: A-33 Pad

County: WELD

Quarter: NWNW    Section: 33    Township: 5N    Range: 63W    Meridian: 6    Ground Elevation: 4570

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: 382 feet FNL from North or South section line

458 feet FWL from East or West section line

Latitude: 40.362217    Longitude: -104.448806

PDOP Reading: 1.5    Date of Measurement: 10/28/2013

Instrument Operator's Name: Rob Wilson

## 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	7	Oil Tanks	28	Condensate Tanks	4	Water Tanks	7	Buried Produced Water Vaults	7
Drilling Pits		Production Pits		Special Purpose Pits		Multi-Well Pits		Temporary Large Volume Above Ground Tanks	2
Pump Jacks	7	Separators	7	Injection Pumps		Cavity Pumps			
Gas or Diesel Motors	7	Electric Motors	14	Electric Generators	4	Fuel Tanks		Gas Compressors	10
Dehydrator Units	1	Vapor Recovery Unit	6	VOC Combustor	8	Flare	1	LACT Unit	2
								Pigging Station	1

## OTHER FACILITIES

Other Facility Type

Number

Vapor Recovery Towers

4

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

Seven (7) 3-phase flowlines: 3" coated steel  
One (1) gas sales line connection: 6" coated steel  
Two (2) oil gathering lines: 4" coated steel  
Two (2) produced water gathering lines: 4" coated steel  
Vent/VRU lines: 4@6", 4@10", 4@12" steel

Temporary Large Volume Above Ground Storage Tanks are steel sided with new liner.

1) 40,000 bbl - 157' dia

1) 20,000 bbl - 105' dia

## CONSTRUCTION

Date planned to commence construction: 07/01/2014

Size of disturbed area during construction in acres: 6.80

Estimated date that interim reclamation will begin: 03/30/2015

Size of location after interim reclamation in acres: 3.00

Estimated post-construction ground elevation: 4569

## 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: Recycle/reuse

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: 70 Ranch LLC.

Phone: 303-775-1005

Address: 8301 E. Prentice Ave.

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

Address: Suite 100

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

City: Greenwood Village State: CO Zip: 80111

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

Distance to nearest:

Building: 590 Feet  
Building Unit: 590 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 15 Feet  
Above Ground Utility: 5 Feet  
Railroad: 5280 Feet  
Property Line: 15 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.

## 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: 01/29/2014

## 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: 21, Dacono clay loam, 0 to 1 percent slopes

NRCS Map Unit Name: 19, Colombo clay loam, 0 to 1 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: 10/28/2013

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): Crop

## WATER RESOURCES

Is this a sensitive area: ☒ No ☐ Yes

Distance to nearest

downgradient surface water feature: 272 Feet

water well: 347 Feet

Estimated depth to ground water at Oil and Gas Location 36 Feet

Basis for depth to groundwater and sensitive area determination:

Closest water well with permit# 13949-R used for groundwater elevation and corrected for pad elevation.

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: \_\_\_\_\_

## 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

Location is irrigated crop, no reference area designated.  
Cultural distances listed are from proposed production facilities.  
Certification of Operator Notice to Buffer Zone Building Unit Owners and subsequent consults or waivers is attached.

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

Signed: \_\_\_\_\_ Date: 06/20/2014 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: \_\_\_\_\_

### **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.**

### **Best Management Practices**

#### **No BMP/COA Type**

#### **Description**

1	Traffic control	Signage will be placed ahead of all intersections warning motorists of truck traffic entering/exiting the location.
2	Dust control	<p>Oil and gas facilities and equipment will be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare.</p> <p>If drilling mud is to sit stagnant for any lengthy period of time, biocides will be added to prevent the build-up of nuisance odors.</p> <p>The location, the access road coming off of CR 50, and CR 50 will be watered, as needed, to prevent the formation of fugitive dust due to truck traffic and equipment operations. Additionally, exceptionally sandy locations will be plated with up to 4-inches of cohesive soils or Class V Roadbase.</p> <p>During frac'ing operations, dust control socks will be placed on the mountain movers/sand masters and storage bins to control the spread of fugitive silica dust.</p> <p>During hydraulic fracturing operations, a Sierra Frac Sand, LLC Total Dust Control System, or equivalent, will be implemented in order to control the release of fugitive dust from inspection hatches on top of the bulk storage movers, transfer belts, "T" or "V" belts leading to the blender hopper, and drop points throughout the activities of unloading, storing, transfer or conveying of sand used in hydraulic fracturing operations.</p>
3	Construction	<p>The following procedure describes BCEI standard construction practices for setting a partially buried pre-cast cement water vault and new tank battery construction.</p> <p>1) The excavation will first be lined with 4" of clay or other low permeability soil.</p> <p>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.</p> <p>3) The tank battery / water vault liner will be keyed into a galvanized steel containment ring installed surrounding the tank battery.</p> <p>4) Sand bedding will be installed to protect the synthetic liner prior to placing equipment in the containment area.</p>

4	Noise mitigation	A noise study conducted by Behrens and Associates, Inc. has been conducted on the proposed drill rig for this location while the referenced rig was in full operation. The results of the noise study were used to model the drill rig at the proposed drilling location, relative to the residences located 590' and 630' North of the proposed well. As a result of the modeling, 32' high sound walls will be installed along the West, North, and East perimeter of the drilling location. Additionally, 16' high acoustical panels will be set along the West, North, and East perimeter of the mud pumps/boiler area.
5	Drilling/Completion Operations	To the extent practicable, site lighting will be directed downward and inward and shielded so as to avoid glare affecting vehicles travelling on CR65 and the residences located to the North.
6	Drilling/Completion Operations	• COGCC Rules 604.a and 605.a (2,3,5,6,7, and 8), as applicable to tank setbacks at the time of installation shall apply to the siting of MLVTs.
7	Drilling/Completion Operations	• Signs shall be posted on each MLVT to indicate contents are freshwater and that no E&P Waste fluids are allowed. Location and additional signage shall conform to Rule 210.
8	Drilling/Completion Operations	• MLVTs may only be utilized for the storage of freshwater. E&P wastes, including produced water, treated E&P wastes, and flowback from hydraulic fracturing operations will not be allowed.
9	Drilling/Completion Operations	• MLVTs shall not be located on non-engineered fill material. Subgrade preparation shall be verified by proof-rolling prior to MLVT installation.
10	Drilling/Completion Operations	• All MLVT liners seams shall be welded at the liner manufacturer's facility. Field welded liners shall not be used. Liners shall not be reused.
11	Drilling/Completion Operations	• Bonanza will develop a Contingency Plan specific to the location for any LVST leak or catastrophic failure of the tank integrity and resulting loss of fluid. The plan includes a notification process to the COGCC and local Emergency authority (municipality, county, or both) for any failure resulting in loss of fluid.
12	Drilling/Completion Operations	• A minimum of 1 foot of freeboard will be maintained in all MLVTs.
13	Drilling/Completion Operations	• Should a failure of MLVT integrity occur, Bonanza will notify COGCC upon discovery, report the incident to COGCC on a Form 22-Accident Report within 10 days of discovery, and conduct a root cause analysis. The results of the root cause analysis will be reported to COGCC on a Sundry-Form 4 within 30 days of discovery of the failure.
14	Drilling/Completion Operations	• MLVTs will be constructed and operated in accordance with a design certified by a Colorado Licensed Professional Engineer.
15	Drilling/Completion Operations	• Once in operation, MLVTs will be inspected daily and any deficiencies repaired as soon as practicable.
16	Drilling/Completion Operations	• Access to the tanks shall be limited to operational personnel.
17	Drilling/Completion Operations	• Bonanza will use only MLVTs supplied by Rockwater or other contractors that are knowingly complying with COGCC inspection, maintenance, and record keeping policies

Total: 17 comment(s)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400562396	FORM 2A SUBMITTED
400562452	NRCS MAP UNIT DESC
400565970	WASTE MANAGEMENT PLAN
400629838	MULTI-WELL PLAN
400629839	FACILITY LAYOUT DRAWING
400629840	ACCESS ROAD MAP
400629842	CONST. LAYOUT DRAWINGS
400629843	HYDROLOGY MAP
400629844	LOCATION DRAWING
400629845	LOCATION PICTURES
400629934	RULE 306.E. CERTIFICATION
400631213	NRCS MAP UNIT DESC

Total Attach: 12 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Return to draft. Appears to be in Colombo clay loam 0 to 1 percent slopes (no. 19) but not listed in Soil & Plant community.	6/20/2014 3:03:13 PM

Total: 1 comment(s)