

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:

400719136

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Date Received:

11/11/2014

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:

440840

Expiration Date:

02/09/2018

☒ 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: Randy Edelen
Phone: (720) 440-6100
Fax: (720) 279-2331
email: REdelen@BonanzaCrk.com

RECLAMATION FINANCIAL ASSURANCE

- ☐ Plugging and Abandonment Bond Surety ID: 20120018 ☐ Gas Facility Surety ID: _____
- ☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: State Antelope Number: J-1 Pad
County: WELD
QuarterQuarter: SESW Section: 1 Township: 5N Range: 62W Meridian: 6 Ground Elevation: 4670
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: 418 feet FSL from North or South section line
1413 feet FWL from East or West section line
Latitude: 40.423910 Longitude: -104.275650
PDOP Reading: 1.4 Date of Measurement: 09/21/2014
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

400715012

FACILITIES

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

Wells	9	Oil Tanks*	24	Condensate Tanks*		Water Tanks*	10	Buried Produced Water Vaults*	7
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	3
Pump Jacks	9	Separators*	9	Injection Pumps*		Cavity Pumps*		Gas Compressors*	9
Gas or Diesel Motors*	9	Electric Motors	9	Electric Generators*	4	Fuel Tanks*		LACT Unit*	2
Dehydrator Units*	2	Vapor Recovery Unit*	6	VOC Combustor*	7	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:

MLVT vendor: Hydrologistics

MLVT size: 42,000 bbl

MLVT duration will coincide with this permit, approximately January 15, 2015 - January 15, 2018

CONSTRUCTION

Date planned to commence construction: 02/12/2015

Size of disturbed area during construction in acres: 6.30

Estimated date that interim reclamation will begin: 08/15/2015

Size of location after interim reclamation in acres: 4.00

Estimated post-construction ground elevation: 4667

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: 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: <u>State of Colorado</u>	Phone: <u>(303) 866-345</u>
Address: <u>1127 Sherman Street</u>	Fax: <u>(303) 866-3152</u>
Address: <u>Suite 300</u>	Email: _____
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80203-2206</u>	

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: <input type="checkbox"/> Irrigated <input type="checkbox"/> Dry land <input type="checkbox"/> Improved Pasture <input type="checkbox"/> Hay Meadow <input type="checkbox"/> CRP
Non-Crop Land: <input checked="" type="checkbox"/> Rangeland <input type="checkbox"/> Timber <input type="checkbox"/> Recreational <input type="checkbox"/> Other (describe): _____
Subdivided: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential

Future Land Use (Check all that apply):

Crop Land: <input type="checkbox"/> Irrigated <input type="checkbox"/> Dry land <input type="checkbox"/> Improved Pasture <input type="checkbox"/> Hay Meadow <input type="checkbox"/> CRP
Non-Crop Land: <input checked="" type="checkbox"/> Rangeland <input type="checkbox"/> Timber <input type="checkbox"/> Recreational <input type="checkbox"/> Other (describe): _____
Subdivided: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> 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:	4702 Feet	4542 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	3832 Feet	3672 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: 70 Valent sand, 3 to 9 percent slopes
NRCS Map Unit Name: _____
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: 4059 Feet

water well: 4551 Feet

Estimated depth to ground water at Oil and Gas Location 8 Feet

Basis for depth to groundwater and sensitive area determination:

State of Colorado Division of Water Resources
Permit # 200327

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 All cultural distances are measured from the nearest pad edge.

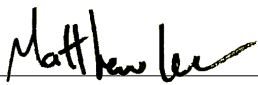
Facilities were permitted on this Location as well as a centralized production facility. Per Operator email, Bonanza does not at this time, nor have we ever, plan on fully building out all of the requested facilities (overlap) but using this flexibility to optimize our operations and ensure excellent stewardship of this opportunity to work in Colorado.

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

Signed: _____ Date: 11/11/2014 Email: REdelen@BonanzaCrk.com

Print Name: Randy Edelen Title: 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: 2/10/2015

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 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 shall provide notice to COGCC 48 hours prior to commencing construction of this Oil and Gas Location via Form 42.

Best Management Practices

No BMP/COA Type

Description

1	Pre-Construction	Operator shall provide notice to COGCC 48 hours prior to commencing construction of this Oil and Gas Location via Form 42.
2	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.
3	Drilling/Completion Operations	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

<u>Att Doc Num</u>	<u>Name</u>
1009763	CORRESPONDENCE
400719136	FORM 2A SUBMITTED
400719692	HYDROLOGY MAP
400719693	LOCATION PICTURES
400719696	ACCESS ROAD MAP
400719700	REFERENCE AREA MAP
400719701	REFERENCE AREA PICTURES
400719703	LOCATION DRAWING
400719704	MULTI-WELL PLAN
400719706	WASTE MANAGEMENT PLAN
400719916	NRCS MAP UNIT DESC
400723960	CONST. LAYOUT DRAWINGS

Total Attach: 12 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Added BMP Per operator's request "Operator shall provide notice to COGCC 48 hours prior to commencing construction of this Oil and Gas Location via Form 42." Surface Restoration Bond on file and in good order with SLB; per Tim Kelly. Final Review Completed. No LGD or public comment received.	2/10/2015 8:33:01 AM
OGLA	Added: "Facilities were permitted on this Location as well as a centralized production facility. Per Operator email, Bonanza does not at this time, nor have we ever, plan on fully building out all of the requested facilities (overlap) but using this flexibility to optimize our operations and ensure excellent stewardship of this opportunity to work in Colorado." To the Submit tab.	2/6/2015 1:52:12 PM
OGLA	Changed Sensitive Area to YES based on the potential for shallow groundwater. Operator has provided BMPs for secondary containment. No additional COAs are necessary.	12/5/2014 5:07:52 PM
OGLA	On Hold - This Location is listed as producing to the State Antelope CPF O-1 yet it has its own dedicated production facilities. Added Form 2A Document #400715012 to the Remote Locations per Operator telephone call. Placed back In Process - 01/06/2015.	12/5/2014 5:05:10 PM
Permit	Operator requested well count be changed from 13 to 9 on the facilities tab. Verify with Operator - production facilities should be updated to correlate with the number of wells - MMH if the facility is NOT producing to a Remote Location Production Facilities updated per telephone call with Randy Edelen - 01/16/2015	12/3/2014 8:59:40 AM
Permit	Requested clarification or change from operator addressing 13 wells on facilities tab vs. 9 on the multi-well plan.	11/25/2014 11:12:21 AM
Permit	Emailed Tim Kelly at SLB for verification of Surface Restoration Bond	11/25/2014 9:15:00 AM
Permit	Passed Completeness	11/13/2014 12:54:58 PM

Total: 8 comment(s)