

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:

400732657

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Date Received:

11/21/2014

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:

440714

Expiration Date:

01/26/2018

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: Whitetail

Number: F-4 Pad

County: WELD

Quarter: LOT 3 Section: 4 Township: 6N Range: 62W Meridian: 6 Ground Elevation: 4862

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: 363 feet FNL from North or South section line

1850 feet FWL from East or West section line

Latitude: 40.522250 Longitude: -104.330350

PDOP Reading: 1.4 Date of Measurement: 10/31/2014

Instrument Operator's Name: John Stodard

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

440295

400723381

FACILITIES

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

Wells	15	Oil Tanks*	36	Condensate Tanks*		Water Tanks*	16	Buried Produced Water Vaults*	10
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	2
Pump Jacks	15	Separators*	15	Injection Pumps*		Cavity Pumps*		Gas Compressors*	15
Gas or Diesel Motors*	15	Electric Motors	15	Electric Generators*	4	Fuel Tanks*		LACT Unit*	3
Dehydrator Units*	3	Vapor Recovery Unit*	7	VOC Combustor*	10	Flare*	2	Pigging Station*	2

OTHER FACILITIES*

Other Facility Type

Number

Vapor Recovery Unit

7

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:

Fifteen (15) 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

CONSTRUCTION

Date planned to commence construction: 02/01/2015 Size of disturbed area during construction in acres: 6.10

Estimated date that interim reclamation will begin: 08/01/2015 Size of location after interim reclamation in acres: 4.00

Estimated post-construction ground elevation: 4861

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: UIC Disposal

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: Jack & Shirley Degenhart

Phone: 970-867-5040

Address: 21255 US HWY 34

Fax: _____

Address: _____

Email: _____

City: Fort Morgan State: CO Zip: 80701

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:	2294 Feet	2045 Feet
Building Unit:	2294 Feet	2045 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	346 Feet	107 Feet
Above Ground Utility:	335 Feet	95 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	363 Feet	122 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 (on 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 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: 44 Olney fine sandy loam, 0 to 6 percent slopes
 NRCS Map Unit Name: 74 Vona loamy sand, 5 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: 825 Feet

water well: 1550 Feet

Estimated depth to ground water at Oil and Gas Location 133 Feet

Basis for depth to groundwater and sensitive area determination:

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

Manufacturer or vendor = HydroLogistics
 Size of tanks = 42,000 bbl
 Anticipated timeframe tanks will be on location = January 1, 2015 - February 28, 2018

Facilities were permitted on this location as well as a centralized production facility. BCEOC, Inc. does not intend to build out all of these facilities rather permit to allow flexibility and optimization of operations. Current plans are to build facilities for a single well drilled in 2015 on the Whitetail F4 Pad, from the 15 permitted. When subsequent operations of sufficient volume are in place our plans are to move production to the Crow Valley CPF O32 Pad. The single well on the Whitetail F-4 pad will be planned to have the following equipment sighted on the location, working off of expected performance parameters.

- 4 Oil Tanks
- 2 Water Tanks
- 1 Buried Produced Water Vault
- 2 Gas Compressor
- 2 Electric Generators
- 1 Pump Jack
- 2 Gas or Diesel Motors
- 1 Vapor Recovery Tower
- 2 Separators
- 4 VOC Combustor

Pipelines

- 1 3" Flowline
- 1 4" Gas Gathering Line

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

Signed: _____ Date: 11/21/2014 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: Matthew Lee Director of COGCC Date: 1/27/2015

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
	Operator shall submit a Form 4 Sundry to remove Production Facilities from this location if/when the related Crow Valley CPF O-32 location is built and production is moved to that location.
	Operator shall minimize post-completion disturbance per COGCC Rule 1003.
	Unnecessary or excessive flaring is prohibited. Operator shall direct all salable quality gas to a sales line as soon as practicable or be 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

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
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	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: 2 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2477510	LOCATION DRAWING
2477511	CORRESPONDENCE
2477514	CORRESPONDENCE
400732657	FORM 2A SUBMITTED
400736612	WASTE MANAGEMENT PLAN
400736618	MULTI-WELL PLAN
400736622	LOCATION PICTURES
400736624	ACCESS ROAD MAP
400736625	REFERENCE AREA MAP
400736626	REFERENCE AREA PICTURES
400736630	HYDROLOGY MAP
400737162	NRCS MAP UNIT DESC
400737165	NRCS MAP UNIT DESC
400737467	CONST. LAYOUT DRAWINGS

Total Attach: 14 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	1/27/2015 4:40:51 PM
OGLA	IN PROCESS - OGLA task passed.	1/27/2015 4:23:23 PM
OGLA	Operator responded via email regarding related remote location. COGCC added operator comments under Submit and also included them as an Attachment called CORRESPONDENCE.	1/21/2015 1:46:43 PM
OGLA	Operator agreed to revise distance to nearest Building Unit, provided a revised Location Drawing, and clarified the correct NRCS Soil Units. Still need to resolve the wells producing both Onsite and at the related Crow Valley CPF O-32 Pad location. No Public Comments received.	1/16/2015 11:15:05 AM
OGLA	ON HOLD - This 2A indicates the wells will produce both on location and at a related remote location. Operator to explain/clarify. Need to revise distance to nearest Building Unit, revise Location Drawing to show above ground utility, and provide missing NRCS Soil Unit Description attachment. Due by 1/8/15.	12/8/2014 11:30:15 AM
Permit	w/o spacing order submitted for the Jan. hearings docket.	12/4/2014 8:17:02 AM
Permit	Passed completeness.	11/25/2014 2:48:48 PM

Total: 7 comment(s)