

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:

400731743

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Date Received:

05/07/2015

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:

442024

Expiration Date:

06/12/2018

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 Seventy Holes

Number: J-18 Pad

County: WELD

Quarter: SESW Section: 18 Township: 4N Range: 62W Meridian: 6 Ground Elevation: 4564

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: 610 feet FSL from North or South section line

1455 feet FWL from East or West section line

Latitude: 40.306861 Longitude: -104.371342

PDOP Reading: 1.4 Date of Measurement: 02/09/2015

Instrument Operator's Name: Marc Mayer

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

 441912

FACILITIES

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

Wells	<u>26</u>	Oil Tanks*	<u>60</u>	Condensate Tanks*	<u> </u>	Water Tanks*	<u>20</u>	Buried Produced Water Vaults*	<u>13</u>
Drilling Pits	<u> </u>	Production Pits*	<u> </u>	Special Purpose Pits	<u> </u>	Multi-Well Pits*	<u> </u>	Modular Large Volume Tanks	<u>3</u>
Pump Jacks	<u>26</u>	Separators*	<u>26</u>	Injection Pumps*	<u> </u>	Cavity Pumps*	<u> </u>	Gas Compressors*	<u>26</u>
Gas or Diesel Motors*	<u>20</u>	Electric Motors	<u>26</u>	Electric Generators*	<u>8</u>	Fuel Tanks*	<u> </u>	LACT Unit*	<u>26</u>
Dehydrator Units*	<u>4</u>	Vapor Recovery Unit*	<u>10</u>	VOC Combustor*	<u>20</u>	Flare*	<u>2</u>	Pigging Station*	<u>3</u>

OTHER FACILITIES*

Other Facility Type

Number

Vapor Recovery Towers

8

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:

26 three phase 10" coated steel flowlines
One (1) 10" coated steel gas sales line connection
Eight (8) 8" coated steel oil gathering lines
Eight (8) 8" coated steel produced water gathering
Vent/VRU lines: 4@6", 4@10", 4@12", 4@16" steel.

CONSTRUCTION

Date planned to commence construction: 10/01/2015 Size of disturbed area during construction in acres: 9.50

Estimated date that interim reclamation will begin: 04/01/2016 Size of location after interim reclamation in acres: 6.90

Estimated post-construction ground elevation: 4565

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: Tim Kelly

Phone: (303) 866-3454

Address: 1127 Sherman Street

Fax: (303) 866-3152

Address: Suite 300

Email: timothy.kelly@state.co.us

City: Denver State: CO Zip: 80203-2206

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:	2290 Feet	2300 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:	670 Feet	450 Feet
Above Ground Utility:	607 Feet	380 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	610 Feet	190 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: 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: The following noxious weeds were located in the area: Cheat Grass Russian Thistle Kochia Spiney Cocklebur

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: 630 Feet

water well: 2043 Feet

Estimated depth to ground water at Oil and Gas Location 32 Feet

Basis for depth to groundwater and sensitive area determination:

State of Colorado Water Resources Board Permit #172113

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 or Rockwater
 Size of tanks = 40,000 bbl - 157' dia
 Anticipated timeframe tanks will be on location = October 2015 - October 2018

The current plan is to build out and utilize the State Seventy Holes CPF 24-18 Pad to receive production from State Seventy Holes J-18 Pad Horizontal wells and possibly future well pads. Wells on this pad will be drilled in batches of multiple wells, and the equipment on this pad will be installed on an incremental basis as each batch of wells is put on production. If economic conditions and/or logistical concerns around takeaway options warrant the reduction of wells and or well pads in the area, there is a possibility that the CPF will not be constructed, and the production facilities will be built on the individual well pads. It is not the intention of Bonanza Creek to build the full amount of permitted equipment on all locations, rather it is the desire to minimize disturbance and optimize our operations to ensure excellent stewardship that we are requesting this flexibility.

The final equipment listing for this location will be reported to the COGCC on a sundry to accurately reflect as-built conditions.

The discrepancy between the CPF permitted facilities and dedicated production facilities is because of timing. If BCEI uses a CPF they would be producing smaller more continuous batches over a longer period of time, therefore needing less production facilities. If dedicated production is used, they will be producing larger batches over a shorter period of time, requiring more production storage capability.

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

Signed: _____ Date: 05/07/2015 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: 6/13/2015

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
	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.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Construction	Operator shall submit a Form 42 to the COGCC 48 hours prior to commencement of construction activities.
2	Construction	The following procedure describes BCEOC 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	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

<u>Att Doc Num</u>	<u>Name</u>
400731743	FORM 2A SUBMITTED
400808545	LOCATION PICTURES
400808548	CONST. LAYOUT DRAWINGS
400808549	REFERENCE AREA MAP
400808551	REFERENCE AREA PICTURES
400808553	HYDROLOGY MAP
400809866	NRCS MAP UNIT DESC
400836957	WASTE MANAGEMENT PLAN
400836958	LOCATION DRAWING
400838646	ACCESS ROAD MAP
400838649	CONST. LAYOUT DRAWINGS
400840241	MULTI-WELL PLAN

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.	6/12/2015 9:25:13 AM
OGLA	Discrepancy between number of tanks on CPF versus a dedicated production facility was identified. Per discussion with the Operator, added "The discrepancy between the CPF permitted facilities and dedicated production facilities is because of timing. If BCEI uses a CPF they would be producing smaller more continuous batches over a longer period of time, therefore needing less production facilities. If dedicated production is used, they will be producing larger batches over a shorter period of time, requiring more production storage capability" under the submit tab.	6/11/2015 5:42:53 PM
OGLA	Changed Distance to the Nearest Surface Water Feature to 630 feet based on the COGIS Map and the Hydrology Map submitted by the Operator.	6/11/2015 4:54:33 PM
OGLA	Changed the Form 2A Document # under the Related Facilities tab to the Location ID #.	6/11/2015 4:50:11 PM
OGLA	Per Operator email, added Contingency Statement: "The current plan is to build out and utilize the State Seventy Holes CPF 24-18 Pad to receive production from State Seventy Holes J-18 Pad Horizontal wells and possibly future well pads. Wells on this pad will be drilled in batches of multiple wells, and the equipment on this pad will be installed on an incremental basis as each batch of wells is put on production. If economic conditions and/or logistical concerns around takeaway options warrant the reduction of wells and or well pads in the area, there is a possibility that the CPF will not be constructed, and the production facilities will be built on the individual well pads. It is not the intention of Bonanza Creek to build the full amount of permitted equipment on all locations, rather it is the desire to minimize disturbance and optimize our operations to ensure excellent stewardship that we are requesting this flexibility. The final equipment listing for this location will be reported to the COGCC on a sundry to accurately reflect as-built conditions."	6/11/2015 10:25:58 AM
OGLA	Missing Contingency Statement	6/10/2015 4:56:28 PM
Permit	Permitting Review Complete.	5/21/2015 2:33:55 PM
Permit	Passed Completeness	5/19/2015 1:46:20 PM
Permit	1.) Multi-Well Plan shows 25 planned wells however 26 wells are listed in the Facilities tab. Please add an inset to the Multi-Well Plan to provide more detail. Returned to draft.	5/15/2015 8:25:17 AM
Permit	1.) The Proposed Access is not labeled on the Access Road Map attachment. 2.) The Location Drawing is missing labels for the planned facilities on the proposed well pad (Please include all MLVT's, water tanks, oil tanks, etc.)-Please provide a legend to describe all facilities. 3.) Multi-Well Plan shows 25 planned wells however 26 wells are listed in the Facilities tab. Returned to draft.	5/11/2015 9:06:49 AM

Total: 10 comment(s)