

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

TYPE OF WELL OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER <u>Sidetrack</u>	Refiling <input type="checkbox"/>	Date Received: 06/09/2014
ZONE TYPE SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input checked="" type="checkbox"/>	

Well Name: NMU Well Number: 11-12H

Name of Operator: BONANZA CREEK ENERGY OPERATING COMPANY LLC COGCC Operator Number: 8960

Address: 410 17TH STREET SUITE #1400

City: DENVER State: CO Zip: 80202

Contact Name: Andrea Gross Phone: (303)942-0506 Fax: ()

Email: agross@upstreampm.com

RECLAMATION FINANCIAL ASSURANCE
Plugging and Abandonment Bond Surety ID: 20120018

WELL LOCATION INFORMATION

QtrQtr: NWNE Sec: 11 Twp: 9N Rng: 79W Meridian: 6

Latitude: 40.771734 Longitude: -106.229966

Footage at Surface: 413 feet FNL/FSL 1886 feet FEL/FWL

Field Name: MCCALLUM Field Number: 53300

Ground Elevation: 8165 County: JACKSON

GPS Data:
Date of Measurement: 04/25/2014 PDOP Reading: 2.9 Instrument Operator's Name: Randall R. Miller

If well is Directional Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone:	FNL/FSL	FEL/FWL	Bottom Hole:	FNL/FSL	FEL/FWL
<u>407</u>	<u>FNL</u>	<u>1896</u>	<u>1547</u>	<u>FSL</u>	<u>264</u>
	<u>FEL</u>			<u>FWL</u>	
Sec: <u>11</u>	Twp: <u>9N</u>	Rng: <u>79W</u>	Sec: <u>2</u>	Twp: <u>9N</u>	Rng: <u>79W</u>

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: Fee State Federal Indian

The Surface Owner is: is the mineral owner beneath the location.
(check all that apply) 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 by this Well: Yes

The right to construct the Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place: Surface Surety ID: _____

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

T9N R79W Sec. 2: Lots 7-10, 15-20; Sec. 3: E2 of Lot 10, NE of Lot 19, Lots: 5-7, 11-14, 20; Sec. 11: NE, N2NW, N2SE, N2NESE, SENESE; Sec. 35: W2SW, SESW, SWSWNW, SWNESW

Total Acres in Described Lease: 1178 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # COD28963

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 1220 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 1542 Feet
 Building Unit: 5280 Feet
 High Occupancy Building Unit: 5280 Feet
 Designated Outside Activity Area: 5280 Feet
 Public Road: 896 Feet
 Above Ground Utility: 272 Feet
 Railroad: 5280 Feet
 Property Line: 5280 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).
 - 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: _____

SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 5280 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 2915 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): McCallum Unit Number: COC47650X

SPACING & FORMATIONS COMMENTS

This well is a unit well. This well conforms to federal unit spacing rules.

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR			

DRILLING PROGRAM

Proposed Total Measured Depth: 7295 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 5280 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H₂S Drilling Operations Plan)

Will salt sections be encountered during drilling? No
 Will salt based (>15,000 ppm Cl) drilling fluids be used? No
 Will oil based drilling fluids be used? No
 BOP Equipment Type: Annular Preventor Double Ram Rotating Head None

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	28	20	63	0	80	50	80	0
SURF	17+1/2	13+3/8	54.4	0	250	300	250	0
1ST	12+1/4	9+5/8	40	0	3000	850	3000	0
2ND	8+3/4	5+1/2	17	0	7200	702	7200	3930

Conductor Casing is NOT planned

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)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- Rule 318A.a. Exception Location (GWA Windows).
- Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number

OTHER LOCATION EXCEPTIONS

Check all that apply:

Rule 318.c. Exception Location from Rule or Spacing Order Number _____

Rule 603.a.(2) Exception Location (Property Line Setback).

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 This well will be drilled as a horizontal sidetrack from the pilot into the Niobrara. The vertical APD is being submitted concurrently (Doc. 400615075). Please see the attached Drilling Program for plug back information. The location drawing is incorrect, there is no high occupancy building within 1-mile.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: _____

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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

Signed: _____ Print Name: Andrea Gross

Title: Permit Agent Date: 6/9/2014 Email: agross@upstreampm.com

Operator must have a valid water right or permit allowing for industrial use or purchased water from a seller that has a valid water right or permit allowing for industrial use, otherwise an application for a change in type of use is required under Colorado law. Operator must also use the water in the location set forth in the water right decree or well permit, otherwise an application for a change in place of use is required under Colorado law. Section 37-92-103(5), C.R.S. (2011).

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: 7/29/2014

Expiration Date: 07/28/2016

API NUMBER
05 057 06532 01

Conditions Of Approval

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

<u>COA Type</u>	<u>Description</u>
	<p>(1) COMPLIANCE WITH THE MOST CURRENT REVISION OF THE NORTHWEST COLORADO NOTIFICATION POLICY IS REQUIRED. SEE ATTACHED NOTICE.</p> <p>(2) INTERMEDIATE CASING (9+5/8" FIRST STRING) CEMENT SHALL EXTEND FROM THE INTERMEDIATE CASING SHOE TO 200' ABOVE THE SURFACE CASING SHOE TO PROVIDE FULL ISOLATION OF ALL CRETACEOUS OIL, GAS, OR WATER-BEARING HORIZONS BEHIND THE INTERMEDIATE CASING. INTERMEDIATE CASING (9+5/8" FIRST STRING) CEMENT COVERAGE VERIFICATION BY CBL IS REQUIRED.</p> <p>(3) MINIMUM REQUIRED ISOLATION FOR PILOT HOLE PLUG-BACK PRIOR TO DRILLING LATERAL: OPEN-HOLE CEMENT ISOLATION PLUGS SHALL BE SET IN THE PILOT HOLE (00 WELLBORE) FROM THE DAKOTA GROUP TOP TO 100' ABOVE THE DAKOTA GROUP TOP AND FROM THE FRONTIER FORMATION TOP TO 100' ABOVE THE FRONTIER FORMATION TOP, IN ADDITION TO THE LATERAL KICK-OFF PLUG IN THE NIOBRARA FORMATION.</p>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>

Applicable Policies and Notices to Operators

NW Colorado Notification Policy.
Notice Concerning Operating Requirements for Wildlife Protection.
Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400613901	FORM 2 SUBMITTED
400621267	DEVIATED DRILLING PLAN
400623616	DRILLING PLAN
400624607	WELL LOCATION PLAT
400624608	DIRECTIONAL DATA
400636740	OffsetWellEvaluations Data
400636919	OffsetWellEvaluations Data

Total Attach: 7 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	7/29/2014 10:11:33 AM

Engineer	<p>OFFSET WELL EVALUATION - NO MITIGATION REQUIRED. ALL EXISTING WELLS WITHIN 1,500 FEET OF THIS WELLBORE ARE SHALLOW PIERRE B WELLS, EXCEPT FOR THE FOLLOWING FOUR WELLS, WHICH PENETRATE THE OBJECTIVE FORMATION OF THIS PROPOSED HORIZONTAL WELL:</p> <p>EVALUATED OFFSET PR WELL MCCALLUM UNIT #2 (057-05108), TD AT 5129' IN LKTA OR UNDERLYING SHALE, DKTA-LKTA COMPLETION PLUGGED BACK WITH 807 SX CEMENT FROM PACKER AND TUBING STUB FISH AT 4937' TO 1211' (CURRENT PBTD). PRODUCTION CASING PRIMARY TOC IS CALCULATED AT 3700', BELOW THE NBRR FORMATION (REPORTED TOP AT 2650' IN AN OFFSET WELL), BUT A CEMENT SQUEEZE OF UNKNOWN VOLUME PROVIDES PRODUCTION CASING CEMENT COVERAGE FROM 430' TO 695', ABOVE THE NBRR AND ACROSS THE PRREB. THE WELL IS CURRENTLY COMPLETED FROM 622' TO 647' IN THE PRREB. SURFACE CASING SET AT 424'. NO MITIGATION REQUIRED.</p> <p>EVALUATED OFFSET SI WELL MCCALLUM UNIT #12 (057-05109), TD AT 6180' IN GRANITE, MRSN COMPLETION PLUGGED BACK WITH A BRIDGE PLUG AT 5200'. ADDITIONAL BRIDGE PLUG SET AT 1110' (BELOW THE PRREB COMPLETION). PRODUCTION CASING PRIMARY TOC IS CALCULATED BY COGCC AT APPROXIMATELY 3820', BELOW THE NBRR FORMATION (REPORTED TOP AT 2650'). HOWEVER, MULTIPLE REMEDIAL CEMENT SQUEEZES WERE PERFORMED FROM 2284' TO SURFACE TO ISOLATE CASING LEAKS AND AN HISTORIC WATER FLOW FROM THE PRREB. THE WELL IS CURRENTLY COMPLETED FROM 900' TO 987' IN THE PRREB. SURFACE CASING SET AT 201'. NO MITIGATION REQUIRED.</p> <p>EVALUATED OFFSET PR WELL MCCALLUM #154 (057-06409), TD AT 3514' IN FRTR OR UNDERLYING SHALE, PLUGGED BACK TO 795', PRREB PRODUCER, PRIMARY FIRST STRING CEMENTED TO SURFACE TO ISOLATE ALL FORMATIONS ABOVE THE NBRR, SURFACE CASING SET AT 424'. NO MITIGATION REQUIRED.</p> <p>EVALUATED OFFSET PA WELL MCCALLUM UNIT #3 (05-057-60006), TD AT 5387' IN LKTA OR UNDERLYING SHALE, LKTA PRODUCER, FRTR AND PRREB TESTED BUT DID NOT PRODUCE, PRIMARY TOC N/A (SOME UNCEMENTED NBRR AND MNCS POSSIBLE, BUT REMEDIAL SQUEEZES LIKELY ISOLATED THE MNCS TOP), LKTA, FRTR, AND PRREB COMPLETIONS ISOLATED INDIVIDUALLY WITH PLUGS, SURFACE CASING SET AT 503', MULTIPLE REMEDIAL SQUEEZES PROVIDE ANNULAR ISOLATION FROM THE MNCS TOP TO SURFACE. NO MITIGATION REQUIRED.</p>	7/2/2014 2:56:15 PM
Permit	Well is in Federal Unit covering entire wellbore, spaced to PRREB. Niobrara formation is experimental. Ready to pass pending public comment 7/3/14.	7/2/2014 1:55:04 PM
Engineer	Changed Sidetrack to "Yes" and changed "Directional" to "Horizontal." Changed Cement Bottom on 5+1/2" Second String from 7,295' (PTMD) to 7,200' (casing setting depth). Corrected offset well top of production casing cement values on the offset well evaluation table. Operator was reporting casing setting depth instead of top of cement.	6/30/2014 4:18:33 PM
Engineer	THE PROPOSED SURFACE CASING IS MORE THAN 50' BELOW THE DEPTH OF THE DEEPEST WATER WELL WITHIN 1-MILE OF THE SURFACE LOCATION WHEN CORRECTED FOR ELEVATION DIFFERENCES. THE DEEPEST WATER WELL WITHIN 1-MILE IS 150 FEET DEEP.	6/30/2014 3:30:27 PM
Permit	Passed completeness. SHL and lat/long corrected. Directional data imported.	6/11/2014 10:23:48 AM
Permit	Return to draft. lat/long and SHL do not match the attached well plat. Directional data template is missing.	6/10/2014 12:44:28 PM

Total: 7 comment(s)