

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.)

E1/4SE1/4SW1/4, W1/4SW1/4SE1/4, W1/2E1/2SE1/4SW1/4, W1/2E1/2SW1/4SE1/4 Section 24, T34N, R8W

Total Acres in Described Lease: 40 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 154 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 162 Feet
 Building Unit: 162 Feet
 High Occupancy Building Unit: 5280 Feet
 Designated Outside Activity Area: 5280 Feet
 Public Road: 1470 Feet
 Above Ground Utility: 921 Feet
 Railroad: 5280 Feet
 Property Line: 153 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: 11/05/2015

SPACING and UNIT INFORMATION

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 1448 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 711 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
FRUITLAND COAL	FRLDC	112-180	320	S/2

DRILLING PROGRAM

Proposed Total Measured Depth: 3498 Feet

Distance from proposed wellbore to nearest existing or permitted wellbore belonging to another operator:

2143 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 608

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Recycle/reuse

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
SURF	12+1/4	8+5/8	24	0	400	265	400	0
1ST	7+7/8	5+1/2	15.5	0	3498	365	3498	0

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 603.a.(1)

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 A separate DPW letter has not been sent. The CPW notification is covered by the San Juan Basin Colorado Wildlife Mitigation Plan (WMP), dated March, 2011.

This application is in a Comprehensive Drilling Plan No 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: Naomi Azulai

Title: Well Permitting Analyst Date: 12/10/2015 Email: naomi.azulai@bp.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:  Director of COGCC Date: 7/13/2016

Expiration Date: 07/12/2018

API NUMBER

05 067 09887 00

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.

COA Type

Description

	<p>1) Sample and test two closest water wells within a 1/4 mile of that portion of the wellbore pathway that cuts through the Fruitland Coal (Horizontal dimension – Top to bottom of pay) (Rule 608) (see Policy-Ignacio Blanco Field – Notice to Operators 7/10/2009 and revised on 2/17/2011).</p> <p>2) If borehole problems occur while drilling and an unplanned sidetrack is required, the following shall apply:</p> <p>Receive after the fact approval to start the sidetrack from the COGCC SW Regional Engineer, Mark Weems and only during normal business hours (when practicable & do not delay drilling if mishap occurs during nighttime or off time hours). Only during normal business hours is it necessary for a company representative to subsequently provide an explanation as to what happened to the original borehole and what the plan is for the sidetrack.</p> <p>Contact Information: Mark Weems 970-259-4587 off 970-749-0624 cell mark.weems@state.co.us</p> <p>3) Contact COGCC Regional Engineer – Mark Weems when encountering a well control issue, unexpected water flows, and unexpected Hydrogen Sulfide.</p>
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Best Management Practices

No BMP/COA Type

Description

1	Drilling/Completion Operations	<p>317.p BMP One of the first wells drilled on the pad will be logged with an open-hole resistivity log with gamma-ray from TD to into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on the production casing (or intermediate casing if production liner is run). All wells on the pad will have the horizontal portion of the wellbore logged with a measured-while-drilling log with gamma-ray. The Form 5, Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open-hole logs shall clearly state "No open-hole logs were run." The Form 5 for a well without open-hole logs shall clearly identify (by API#, well name & number) the well in which open-hole logs were run.</p>
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Total: 1 comment(s)

Applicable Policies and Notices to Operators

Policy
Notice Concerning Operating Requirements for Wildlife Protection. http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Attachment Check List

Att Doc Num	Name
901393	LEASE MAP
901461	VARIANCE APPROVAL CORRESPONDENCE
1857690	SELECTED ITEMS REPORT
2107841	VARIANCE REQUEST LETTER
400950253	FORM 2 SUBMITTED
400950565	DEVIATED DRILLING PLAN
400950595	DIRECTIONAL DATA
400951194	OTHER
400951346	SURFACE AGRMT/SURETY
400952026	WELL LOCATION PLAT

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	6/14/2016 4:21:16 PM
Permit	Per operator: 1) Lease description has been corrected. 2) Variance request checkbox has been corrected to match related Form 2A. 3) Distance to nearest lease line has been corrected. 4) Lease map has been attached.	1/26/2016 3:44:09 PM
Permit	1) Lease description needs clarification. 2) Variance request checkbox should match related Form 2A.	1/21/2016 1:59:33 PM
Engineer	A plat map was prepared depicting the planned straight line constant angle directional wellbore in relation to other gas wells. A 1500' envelope was drawn around the trajectory of directional well bore relative to the top & bottom of pay. A survey of the adjacent gas wells falling within the boundaries of the 1500' envelopes was conducted. The cement tops on the production casings in regards to the offsetting wells are deemed adequate for fracture stimulations in the proposed gas well (see attached SELECTED ITEMS REPORT).	1/4/2016 5:46:44 PM
Engineer	There are no PA wells within 1320' of this lateral (pay zone only).	1/4/2016 5:45:52 PM
Engineer	There are no conventional wells within 1320' of this lateral (pay zone only).	1/4/2016 5:45:21 PM
Engineer	The offset shallow logs run in the Anderson #C1 gas well (API#067-07771) which is located within a 1500' radius of this propose well (pay zone only) does not fully reveal any fresh water aquifers deeper than that found in the fresh water well survey in a one (1) mile radius of the surface location of this prospective well.	1/4/2016 5:36:31 PM
Engineer	The proposed gas well is located within an area where unconfined fresh water aquifers are mostly developed in bedrock formations consisting mainly of shale with intermittent sandstone stringers with limited areal extent or having pockets of isolated water reservoirs. Water wells found in these locations can vary in depth from 100' to 800'. These aquifers are commonly identified as the Animas formation. Respective to the proposed gas well, a one (1) mile radius of investigation of all offsetting fresh water wells has determined that the deepest surface casing required to protect the aquifers is a depth of 378' (includes a 50' margin of additional protection). The operator proposed a depth of 400' which is 22 ' more than the minimal requirement. The surface casing on the proposed well will be cemented from total depth to surface. The production casing on the proposed gas well will also be cemented from total depth to surface. This will serve two purposes (1) it will isolate and confine all hydrocarbon and brackish waters to their respective zones and (2) it will provide double protection for the fresh water aquifers which includes two concentric (2) steel casing strings and two concentric external (2) cement sheaths extending from total depth to surface (see attached SELECTED ITEMS REPORT).	1/4/2016 5:36:20 PM
Permit	Passed completeness.	12/18/2015 2:54:33 PM

Total: 9 comment(s)