

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

TYPE OF WELL OIL <input type="checkbox"/> GAS <input type="checkbox"/> COALBED <input checked="" type="checkbox"/> OTHER _____ ZONE TYPE SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Refiling <input type="checkbox"/> Sidetrack <input type="checkbox"/>
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Date Received:
12/21/2016

Well Name: East Sauls Creek 35 Well Number: 3-2

Name of Operator: BP AMERICA PRODUCTION COMPANY COGCC Operator Number: 10000

Address: 380 AIRPORT RD
 City: DURANGO State: CO Zip: 81303

Contact Name: Naomi Azulai Phone: (970)3757511 Fax: ()
 Email: naomi.azulai@bp.com

RECLAMATION FINANCIAL ASSURANCE
 Plugging and Abandonment Bond Surety ID: 20010158

WELL LOCATION INFORMATION

QtrQtr: SWNE Sec: 34 Twp: 35N Rng: 6W Meridian: N
 Latitude: 37.260097 Longitude: -107.510914

Footage at Surface: <u>1790</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>1390</u> Feet	<u>FNL</u>	<u>FEL</u>

Field Name: IGNACIO BLANCO Field Number: 38300
 Ground Elevation: 7326 County: LA PLATA

GPS Data:
 Date of Measurement: 10/18/2016 PDOP Reading: 1.9 Instrument Operator's Name: KENNETH E. REA

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

Footage at Top of Prod Zone: <u>1790</u> Feet	FNL/FSL	FEL/FWL	Bottom Hole: <u>1491</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>1390</u> Feet	<u>FNL</u>	<u>FEL</u>	<u>FNL</u> <u>710</u> Feet	<u>FNL</u>	<u>FEL</u>

Sec: 34 Twp: 35N Rng: 6W Sec: 35 Twp: 35N Rng: 6W

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.)

See attached mineral lease map.

Total Acres in Described Lease: 2480 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # COC17340

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 151 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 3897 Feet

Building Unit: 3945 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 1049 Feet

Above Ground Utility: 4139 Feet

Railroad: 5280 Feet

Property Line: 3316 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 proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 0 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 710 Feet (Enter 5280 for distance greater than 1 mile.)

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

SPACING & FORMATIONS COMMENTS

Application to modify the spacing has been filed with the COGCC for the January 2017 hearing.

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	112-266	480	N/2 S.35 & NE/4 S.34

DRILLING PROGRAM

Proposed Total Measured Depth: 8820 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: _____ Feet No well belonging to another operator within 1,500 feet

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? Yes

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	16	13+3/8	54	0	356	251	356	0
1ST	12+1/4	9+5/8	36	0	2700	493	2700	0
2ND	8+3/4	5+1/2	17	0	8820	1090	8820	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 _____

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 Although the East Sauls Creek 35 3-2 well will produce some gas from the Fruitland Coal, it is intended primarily as a dewatering well for East Sauls Creek 35 3-1 well. As a result, the goal is for these two wells to intersect near their toes either directly or indirectly. Since intersection of these two wells is an acceptable outcome, we have proposed a 0' distance between these well completions. Anti-collision evaluations will be conducted on all other portions of the wellbores to prevent unintended intersections or collisions.

This application is in a Comprehensive Drilling Plan No CDP #: _____

Location ID: 326646

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: 12/21/2016 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: *Matthew Lee* Director of COGCC Date: 4/28/2017

Expiration Date: 04/27/2019

API NUMBER
05 067 09998 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.

<u>COA Type</u>	<u>Description</u>
	<p>1) Set at least 356' of surface casing per Rule 317 (g) cement to surface</p> <p>2) Sample and test two closest water wells within a 1/4 mile of that portion of the wellbore pathway that cuts through only the Fruitland Coal (Horizontal dimension – Top to bottom of pay) (see Cause 112 Orders 180-181) (see Policy-Ignacio Blanco Field – Notice to Operators 7/10/2009 and revised on 2/17/2011).</p> <p>3) If borehole problems occur while drilling and an unplanned sidetrack is required, the following shall apply:</p> <p>4) The two closest water wells within 1/4 mile radius of the proposed bottom hole shall be sampled (Cause 112 Orders 156-157 and rule 608 if not done previously).</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>4) Contact COGCC Regional Engineer – Mark Weems when encountering kicks requiring a mud weight increase of 0.5 ppg to control the kick, unexpected water flows, and unexpected Hydrogen Sulfide</p>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	One of the first wells drilled on the multi-well location will be logged with open-hole resistivity and gamma-ray logs from TD into the surface casing. The intermediate string for this well on the multi-well location will be logged with a cement bond log with cased-hole gamma-ray log from intermediate TD or the deepest depth possible using conventional wireline conveyance into the surface casing.

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

<u>Att Doc Num</u>	<u>Name</u>
401171481	FORM 2 SUBMITTED
401172270	DIRECTIONAL DATA
401172272	WELL LOCATION PLAT
401172273	WELLBORE DIAGRAM
401172274	MINERAL LEASE MAP
401172275	DEVIATED DRILLING PLAN
401172276	OTHER
401195452	SELECTED ITEMS REPORT
401195454	SELECTED ITEMS REPORT

Total Attach: 9 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	04/27/2017
Permit	Added drilling and spacing unit order, unit acreage, and unit configuration.	04/27/2017
Engineer	<p>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.</p> <p>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 356' (includes a 50' margin of additional protection). The operator proposed a depth of 350' which is 6' less than the minimal requirement; so, the surface casing has been deepened to 356'. 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).</p> <p>No logs run shallow enough in offset gas wells within a 1500' radius to assist in determining the deepest fresh water aquifers.</p> <p>The operator submitting this permit for a constant angle straight line wellbore has other planned horizontal directional wellbores in a totally different well they recently permitted (East Saul's Creek 35 3-1 Doc #4011475) that is within 1500' of this permit currently under review and in the same Fruitland coal formation. All wells are adequately designed to maintain their mechanical integrity if the operator chooses to fracture stimulate this current wellbore under review for this permit.</p>	01/26/2017
Permit	Waiting on drilling and spacing unit designation.	01/17/2017
Permit	Passes completeness.	01/05/2017

Total: 5 comment(s)