

FORM

2

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:

400892105

## APPLICATION FOR PERMIT TO:

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate

Date Received:

09/11/2015

TYPE OF WELL OIL ☐ GAS ☐ COALBED ☒ OTHER \_\_\_\_\_Refiling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: Ford H

Well Number: 2

Name of Operator: BP AMERICA PRODUCTION COMPANY

COGCC Operator Number: 10000

Address: 501 WESTLAKE PARK BLVD

City: HOUSTON State: TX Zip: 77079

Contact Name: Patricia Campbell

Phone: (970)335-3828

Fax: ( )

Email: patricia.campbell@bp.com

## RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20010158

## WELL LOCATION INFORMATION

QtrQtr: SENW Sec: 10 Twp: 33N Rng: 8W Meridian: N

Latitude: 37.121108

Longitude: -107.707927

Footage at Surface: 1738 feet FNL/FSL FNL 1706 feet FEL/FWL FWL

Field Name: IGNACIO BLANCO

Field Number: 38300

Ground Elevation: 6702

County: LA PLATA

GPS Data:

Date of Measurement: 07/27/2015 PDOP Reading: 1.8 Instrument Operator's Name: Brian Boniface

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

Footage at Top of Prod Zone: FNL/FSL FNL/FWL Bottom Hole: FNL/FSL FNL/FWL

 1933 FNL 2248 FWL 1933 FNL 2248 FWL  
 Sec: 10 Twp: 33N Rng: 8W Sec: 10 Twp: 33N Rng: 8W

## LOCATION SURFACE &amp; MINERALS &amp; RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ IndianThe 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: Surface Use Agreement

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.)

W/2 Sec. 10, T33N, R8W N.M.P.M. plus additional acreage (see attached lease map).

Total Acres in Described Lease: 1120 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: 830 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 935 Feet

Building Unit: 1039 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 2511 Feet

Above Ground Utility: 914 Feet

Railroad: 5280 Feet

Property Line: 373 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: 1363 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 726 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	112-190	320	N/2

## DRILLING PROGRAM

Proposed Total Measured Depth: 3214 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 645 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H<sub>2</sub>S 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	165	400	0
1ST LINER	7+7/8	5+1/2	15.5	0	3214	330	3214	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

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

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: Patricia Campbell

Title: Regulatory Analyst Date: 9/11/2015 Email: patricia.campbell@bp.com

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: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

API NUMBER

05

### **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**

Drilling/Completion Operations

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).

2) If borehole problems occur while drilling and an unplanned sidetrack is required, the following shall apply:

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.

Contact Information:  
Mark Weems  
970-259-4587 off  
970-749-0624 cell  
mark.weems@state.co.us

3) Contact COGCC Regional Engineer – Mark Weems when encountering a well control issue, unexpected water flows, and unexpected Hydrogen Sulfide.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	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.

Total: 1 comment(s)

## Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
901330	LEASE MAP
1857652	SELECTED ITEMS REPORT
400897367	OTHER
400897368	WELL LOCATION PLAT
400897370	DEVIATED DRILLING PLAN
400897374	DIRECTIONAL DATA
400898707	SURFACE AGRMT/SURETY

Total Attach: 7 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	<p>Per operator, corrected distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation from 1880' to 1363'.</p> <p>Minor correction to SHL longitude to reflect well location plat. Distance to nearest lease line corrected from 1714' to 830'. Attached lease map, per operator request.</p>	10/7/2015 8:24:55 AM
Engineer	<p>There are no PA wells within a quarter mile of the pay zone in the prospective well being permitted.</p> <p>There are two conventional gas wells within a quarter mile of the pay zone of the prospective well being permitted.</p>	10/6/2015 9:07:44 PM
Engineer	A plat map was prepared depicting the planned S-shaped 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 the two offset wells do indicate a minimal of 200' of cement above the Fruitland formation. The Braden head tests show very little pressure on the two offset wells which is another indication of zonal isolation. (see attached SELECTED ITEMS REPORT).	10/6/2015 9:07:22 PM
Engineer	<p><b>Bedrock Aquifers</b> 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 650'. 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 402' (includes a 50' margin of additional protection). The operator proposed a depth of 400' which is 2' less than the minimal requirement; so, the surface casing has been deepened to 402'. 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>	10/6/2015 9:06:47 PM
Engineer	There are no offset logs within 1500' to assess potential shallow fresh water aquifers.	10/6/2015 9:06:16 PM
Permit	Pass completeness	9/15/2015 9:46:51 AM
Permit	Returned to draft per operator request.	9/11/2015 1:24:11 PM

Total: 7 comment(s)