

FORM  
2

Rev  
08/16

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:

401663560

Date Received:

06/22/2018

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☐ GAS ☐ COALBED ☒ OTHER Lateral 2

Refilling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☒

Well Name: Ross Well Number: 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)2321439 Fax: ( )  
Email: naomi.azulai@bpx.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20010158

WELL LOCATION INFORMATION

QtrQtr: NENE Sec: 13 Twp: 32N Rng: 6W Meridian: N

Latitude: 37.022044

Longitude: -107.443995

Footage at Surface: 1101 Feet FNL 444 Feet FWL

Field Name: IGNACIO BLANCO Field Number: 38300

Ground Elevation: 6224 County: ARCHULETA

GPS Data:

Date of Measurement: 05/24/2018 PDOP Reading: 2.4 Instrument Operator's Name: DEREK STODDARD

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

Footage at Top of Prod Zone: FNL/FSL 1315 FNL 784 FWL 1940 FNL 710 FEL 1315 FNL 784 FWL 1940 FNL 710 FEL 1315  
Sec: 18 Twp: 32N Rng: 5W Sec: 18 Twp: 32N Rng: 5W

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: No

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.)

The West Half (W/2) of the West Half (W/2) of Section 18, T32N-R5W NMPM

Total Acres in Described Lease: 160 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: 0 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 273 Feet  
Building Unit: 504 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 435 Feet  
Above Ground Utility: 367 Feet  
Railroad: 5280 Feet  
Property Line: 163 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: 04/19/2018

## 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: 407 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

## 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	112-215	320	N2

## DRILLING PROGRAM

Proposed Total Measured Depth: 6971 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: 315 Feet ☐ No well belonging to another operator within 1,500 feet

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? 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	12+1/4	9+5/8	36	0	350	187	350	0
1ST	8+3/4	7	23	0	3563	317	3563	0
1ST LINER	6+1/8	4+1/2	11.6	3083	6971			

☒ 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 For reference, a wellbore diagram is attached to the Pilot APD for this well.

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

Location ID: 456613

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

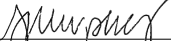
I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: \_\_\_\_\_ Print Name: Naomi Azulai

Title: Well Permitting Analyst Date: 6/22/2018 Email: naomi.azulai@bpx.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: 8/15/2018

Expiration Date: 08/14/2020

### API NUMBER

05 007 06334 02

## 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) The production casing string shall be cemented from the casing shoe to the surface by circulation methods. Verify production casing cement coverage with a cement bond log.</p> <p>2) The two closest water wells within 1/4 mile radius of the proposed lateral shall be sampled &amp; analyzed (Cause 112 Orders 156-157 and rule 608) if not done previously.</p> <p>3) If borehole problems occur while drilling and an unplanned sidetrack is required, the following shall apply: a.) Before proceeding, contact the COGCC Engineer for verbal approval and provide an explanation as to what happened to the original borehole and what the plan is for the sidetrack. Contact Information: Craig Burger – Area Engineer 970-625-2497 ext 2 office 970-319-4194 cell Craig.burger@state.co.us b.) Adhere to the instructions provided in the “UNPLANNED Sidetrack While Drilling: Approval and Reporting Process – Southwestern Colorado San Juan Basing ONLY” that can be found on the COGCC website at: Go to COGCC Web Site for more details if necessary Regulation, Forms, Form 2-Permit to Drill, Instructions</p> <p>4) Contact COGCC Engineer – Craig Burger when encountering kicks requiring a mud weight increase of 0.5 ppg to control the kick, unexpected water flows, and unexpected Hydrogen Sulfide.</p>
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## Best Management Practices

### No BMP/COA Type

### Description

1	Drilling/Completion Operations	Laterals will be logged with gamma ray only.
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Total: 1 comment(s)

## Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.  
[http://cogcc.state.co.us/documents/reg/Policies/Wildlife\\_Notice.pdf](http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf)

## Attachment Check List

### Att Doc Num

### Name

401663560	FORM 2 SUBMITTED
401681092	DIRECTIONAL DATA
401681093	OTHER
401681094	DEVIATED DRILLING PLAN
401681095	SURFACE AGRMT/SURETY
401681096	WELL LOCATION PLAT

Total Attach: 6 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	08/09/2018
Permit	Slight correction to TPZ footage to reflect well location plat.	08/09/2018
Engineer	<p><b>Alluvial Fresh Water</b> The proposed gas well is located within an area where fresh water aquifers are developed in an alluvial deposit of gravel and sandstone commonly found in river, stream, and ephemeral creek valleys. Water wells in alluvium can vary in depth from 10' to 200'. These aquifers are commonly identified as the San Jose and Nacimiento formations.</p> <p><b>Bedrock Aquifers</b> The proposed gas well is located within an area where unconfined fresh water aquifers are 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 can vary in depth from 100' to 650'. These aquifers are commonly identified as the Animas formation.</p> <p>A one 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 350' (includes a 50' margin of additional protection corrected for elevation differences). The operator proposed a depth of 350' which is adequate. The surface casing on the proposed well will be cemented from total depth to surface. The production casing on the gas well is planned to 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 steel casing strings and two concentric external cement sheaths extending from total depth to surface. There are no logs run shallow enough in offset gas wells within a 1500' radius to assist in determining the deepest fresh water aquifers.</p> <p>Offset Well Evaluation: Existing offset wells within 1500' meet standards. No mitigation required.</p> <p>San Juan Basin Operators Checklist attached as document labeled "other". Revised production casing cement quantity to 317 sacks per operator.</p>	07/18/2018
Permit	Passed Completeness.	06/28/2018

Total: 4 comment(s)