

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:

401393236

Date Received:

10/25/2017

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☐ GAS ☐ COALBED ☒ OTHER Pilot

Refilling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Marquez A

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)3757511

Fax: ( )

Email: naomi.azulai@bp.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20010158

WELL LOCATION INFORMATION

QtrQtr: Lot 2 Sec: 7 Twp: 32N Rng: 5W Meridian: N

Latitude: 37.033074

Longitude: -107.439793

Footage at Surface: 2417 Feet FNL/FSL FNL 781 Feet FEL/FWL FWL

Field Name: IGNACIO BLANCO

Field Number: 38300

Ground Elevation: 6260

County: ARCHULETA

GPS Data:

Date of Measurement: 07/22/2017 PDOP Reading: 1.5 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  
1893 FNL 1011 FWL 1881 FNL 1475 FWL  
Sec: 7 Twp: 32N Rng: 5W Sec: 7 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: 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.)

TOWNSHIP 32 NORTH, RANGE 5 WEST, N.M.P.M.  
Section 7: Lots 1, 2, E1/2NW1/4, W1/2NE1/4

Total Acres in Described Lease: 239 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: 760 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 793 Feet  
Building Unit: 801 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 766 Feet  
Above Ground Utility: 694 Feet  
Railroad: 5280 Feet  
Property Line: 259 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: 08/11/2017

## 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: 1500 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 760 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: 3508 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: 817 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? 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	360	246	360	0
1ST	7+7/8	5+1/2	15.5	0	3508	360	3508	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

The box in the Offset Well Evaluation tab has not been clicked because, though this well within 1500' of another well, this well is directional/ not horizontal and is therefore not subject to the Interim Statewide Horizontal Offset Policy.

The property on which the pad is located is subject to an oil and gas lease, however, the current surface owner is not the mineral owner.

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: 10/25/2017 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: 1/11/2018

Expiration Date: 01/10/2020

API NUMBER

05 007 06327 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) Set at least 360' of surface casing per Rule 317 (g) cement to surface</p> <p>2) The two closest water wells within 1/4 mile radius of the proposed bottom hole shall be sampled (Cause 112 Orders 156-157, 180-181 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:</p> <p>a.) Before proceeding, contact the COGCC Regional Engineer for SW Colorado for verbal approval and 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 – Regional Engineer-SW Colorado 970-259-4587 off 970-749-0624 cell mark.weems@state.co.us</p> <p>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:</p> <p>Go to COGCC Web Site for more details if necessary Forms Form 2-Permit to Drill Instructions</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

### No BMP/COA Type

### Description

1	Drilling/Completion Operations	Open-hole resistivity and gamma-ray logs will be run from TD to the surface casing shoe and a Cement Bond Log will be run on production casing.
---	--------------------------------	---

Total: 1 comment(s)

## Applicable Policies and Notices to Operators

Policy
Notice Concerning Operating Requirements for Wildlife Protection. <a href="http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf">http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</a>

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401393236	FORM 2 SUBMITTED
401408408	DIRECTIONAL DATA
401408409	DEVIATED DRILLING PLAN
401408411	WELLBORE DIAGRAM
401408414	WELL LOCATION PLAT
401409029	OTHER

401440346	30 DAY NOTICE LETTER
401448223	SURFACE AGRMT/SURETY

Total Attach: 8 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Per operator, SUA is right to construct and "...is committed to an O&G lease" has been unchecked.  Final Review Completed. No LGD or public comment received.	01/11/2018
Permit	Corrected distance from completed portion of wellbore to nearest unit boundary (TPZ due S to centerline of section) per well location plat.	01/11/2018
Engineer	Spacing & Formations As for fracture stimulation, the distance from the completed portion of proposed wellbore to the nearest completed portion of an offset wellbore permitted or completed in the same formation is approximately 1500' (Southland Royalty-Quintana 32-5 7-3; API #007-06273). The Quintana 32-5 7-3 is a slanted straight line constant slope downward dipping directional well that is almost a lateral. The nearest point between both wells in the Fruitland formation is at TD on both wells and is about 1500'. In regards to fracture stimulation in the proposed well, the adjacent Quintana 32-5 7-3 directional well has been cemented to surface on both it's casing strings.  DRILLING AND WASTE PLANS TAB The Southland Royalty Jaramillo 32-6 12-3; API #007-06287 is 817' from this proposed well when considering any depth of each well.	01/08/2018
Engineer	Alluvial Fresh Water Reservoirs The proposed gas well is located within an area where fresh water aquifers are mostly developed in an alluvial deposit of gravel and sandstone commonly found in river, stream, and ephemeral creek valleys. Water wells found in these locations can vary in depth from 10' to 200'. These aquifers are commonly identified as the San Jose and Nacimiento formations.  Bedrock Aquifers 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 360' (includes a 50' margin of additional protection). The operator proposed a depth of 350' which is 10' less than the minimal requirement; so, the surface casing has been deepened to 360'. 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).	01/05/2018
Permit	Passed Completeness.	11/02/2017
Permit	Returned to draft for: - attachment "SURFACE AGRMT/SURETY" missing signatures - "Well Location" tab: QtrQtr/Lot listed as "SWNW", should be "Lot 2"	11/02/2017

Total: 6 comment(s)