

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:

400916503

Date Received:

11/03/2015

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☐ GAS ☐ COALBED ☒ OTHER Pilot

Refiling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Horther 31-03

Well Number: 3

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)375-7511

Fax: ()

Email: naomi.azulai@bp.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20010158

WELL LOCATION INFORMATION

QtrQtr: Lot 3 Sec: 30 Twp: 33N Rng: 6W Meridian: N

Latitude: 37.071990

Longitude: -107.547554

Footage at Surface: 1547 feet FNL/FSL FSL 958 feet FEL/FWL FWL

Field Name: IGNACIO BLANCO

Field Number: 38300

Ground Elevation: 6469

County: LA PLATA

GPS Data:

Date of Measurement: 08/12/2015 PDOP Reading: 1.5 Instrument Operator's Name: Ryan Barthel

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

Footage at Top of Prod Zone: FNL/FSL FSL 1199 FSL 1306 FWL 1123 FSL 1382 FWL
Sec: 30 Twp: 33N Rng: 6W Sec: 30 Twp: 33N 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.)

S/2 SW/4, SW/4 SE/4 Sec. 30, T33N, R6W, N.M.P.M.
NW/4 NW/4 Sec. 31, T33N, R6W, N.M.P.M.

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: 122 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 1944 Feet
Building Unit: 2310 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 4328 Feet
Above Ground Utility: 2301 Feet
Railroad: 5280 Feet
Property Line: 227 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: 319 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 1306 Feet (Enter 5280 for distance greater than 1 mile.)

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

SPACING & FORMATIONS COMMENTS

Sections 30 of T33N R6W (Tiffany Unit)

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 | 112-249 | 9911 | Tiffany |

DRILLING PROGRAM

Proposed Total Measured Depth: 3270 Feet

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

2152 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 | 9+5/8 | 36 | 0 | 592 | 109 | 592 | 0 |
| 1ST | 8+3/4 | 7 | 23 | 0 | 3270 | 286 | 3270 | 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 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: 443983

Is this application being submitted with an Oil and Gas Location Assessment application? No

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: 11/3/2015 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: 11/25/2015

Expiration Date: 11/24/2017

API NUMBER

05 067 09963 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> |
|--|--|

Best Management Practices

No BMP/COA Type

Description

| | | |
|---|--------------------------------|---|
| 1 | Drilling/Completion Operations | <p>317.p BMP</p> <p>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 openhole 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> |
|---|--------------------------------|---|

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> |
|--------------------|------------------------|
| 1857674 | SELECTED ITEMS REPORT |
| 400916503 | FORM 2 SUBMITTED |
| 400918104 | OTHER |
| 400927081 | DIRECTIONAL DATA |
| 400927228 | DEVIATED DRILLING PLAN |
| 400927341 | WELL LOCATION PLAT |

Total Attach: 6 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|---|--------------------------|
| Permit | Final Review Completed. No LGD or public comment received. | 11/25/2015 7:35:11 AM |
| Permit | Corrected distance to nearest unit boundary from 1382' to 1306'. | 11/18/2015 2:58:58 PM |
| Permit | This permit is for the pilot hole of a pilot/lateral drilling plan and this permit should have a sidetrack designation (-00) in the API number. | 11/18/2015 2:41:07 PM |
| Engineer | There are no conventional gas wells within 1320' of the BHL of this well (see attached Selected Items Report). | 11/13/2015 2:42:04 PM |
| Engineer | All wells within 1500' of the BHL of this well are reported as adequately cased and cemented if the operator decides to fracture stimulate this well (see Selected Items Report). | 11/13/2015 2:39:54 PM |
| 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 329' (includes a 50' margin of additional protection). The operator proposed a depth of 350' which is 21' greater than the minimal requirement.</p> <p>The shallow resistivity log found in the adjacent BP Hott 30-02 #3 (API 067-06611) indicates a potential fresh water aquifer at a depth of 588'. Because of this the surface casing will be deepened to 592' when accounting for elevation differences between the two sites.</p> <p>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> | 11/13/2015 2:08:32 PM |
| Permit | Passed completeness. | 11/4/2015 2:17:14 PM |

Total: 7 comment(s)