

FORM  
2A

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:

401374577

(SUBMITTED)

Date Received:

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 320867

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

**320867**

Expiration Date:

☒ This location assessment is included as part of a permit application.

CONSULTATION

- ☐ This location is included in a Comprehensive Drilling Plan. CDP # \_\_\_\_\_
- ☒ This location is in a sensitive wildlife habitat area.
- ☐ This location is in a wildlife restricted surface occupancy area.
- ☐ This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 10000  
Name: BP AMERICA PRODUCTION COMPANY  
Address: 380 AIRPORT RD  
City: DURANGO State: CO Zip: 81303

Contact Information

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

RECLAMATION FINANCIAL ASSURANCE

- ☒ Plugging and Abandonment Bond Surety ID: 20010158 ☐ Gas Facility Surety ID: \_\_\_\_\_
- ☐ Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: KERRIGAN Number: 32-6-2  
County: ARCHULETA  
QuarterQuarter: SESW Section: 2 Township: 32N Range: 6W Meridian: N Ground Elevation: 6392  
Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.  
Footage at surface: 1178 feet FSL from North or South section line  
1439 feet FWL from East or West section line  
Latitude: 37.042452 Longitude: -107.473706  
PDOP Reading: 1.8 Date of Measurement: 09/29/2017  
Instrument Operator's Name: KENNETH E. REA

## RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID #

FORM 2A DOC #

## FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	2	Oil Tanks*		Condensate Tanks*		Water Tanks*	1	Buried Produced Water Vaults*	
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks	2	Separators*	2	Injection Pumps*		Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*		Electric Motors	2	Electric Generators*		Fuel Tanks*		LACT Unit*	
Dehydrator Units*		Vapor Recovery Unit*		VOC Combustor*		Flare*		Pigging Station*	

## OTHER FACILITIES\*

Other Facility Type

Number

Electric Control Box	2
Temporary Gas Powered Generator	1

\*Those facilities indicated by an asterisk (\*) shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Per well, up to two flow lines, a maximum of 4" steel in diameter from each wellhead to a separator skid and then to produced water tanks. A pipeline, up to 4" steel in diameter, from each separator to the main gas gathering line.

## CONSTRUCTION

Date planned to commence construction: 01/02/2018 Size of disturbed area during construction in acres: 1.29  
Estimated date that interim reclamation will begin: 07/02/2018 Size of location after interim reclamation in acres: 0.88  
Estimated post-construction ground elevation: 6392

## DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H<sub>2</sub>S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? Yes

Will oil based drilling fluids be used? No

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE

Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: OFFSITE

Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

Centralized E&P Waste Management Facility ID, if applicable:

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Patrick Kerrigan

Phone: 970-883-2225

Address: 3531 County Road 973

Fax:

Address:

Email:

City: Ignacio State: CO Zip: 81137

Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check all that apply. The Surface Owner: ☒ is the mineral owner

☒ 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 from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place: Surface Surety ID:

Date of Rule 306 surface owner consultation

## CURRENT AND FUTURE LAND USE

### Current Land Use (Check all that apply):

Crop Land: ☒ Irrigated ☐ Dry land ☒ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☐ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe):

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

### Future Land Use (Check all that apply):

Crop Land: ☒ Irrigated ☐ Dry land ☒ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☐ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe):

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

## CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	335 Feet	372 Feet
Building Unit:	335 Feet	372 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1135 Feet	1050 Feet
Above Ground Utility:	1079 Feet	998 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	210 Feet	210 Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- 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.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(\*) on the Facilities Tab.

## 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.
- Large UMA Facility - 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

## FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- ☒ Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- ☐ By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

This is an existing location to which a second well and associated equipment is proposed. A pad expansion is preferable in order to consolidate disturbance.

## SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: V7-B. Sili clay loam, 1 to 3 percent slopes

NRCS Map Unit Name: A6-B. Bayfield silty clay loam, 1 to 3 percent slopes

NRCS Map Unit Name:

## PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☐ No ☒

Plant species from: ☐ NRCS or, ☐ field observation Date of observation: \_\_\_\_\_

List individual species: \_\_\_\_\_

### Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- ☐ Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- ☐ Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- ☐ Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- ☐ Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- ☐ Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- ☐ Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- ☐ Alpine (above timberline)
- ☐ Other (describe): \_\_\_\_\_

## WATER RESOURCES

Is this a sensitive area: ☐ No ☒ Yes

Distance to nearest

downgradient surface water feature: 2232 Feet

water well: 310 Feet

Estimated depth to ground water at Oil and Gas Location 20 Feet

Basis for depth to groundwater and sensitive area determination:

Water well information from COGCC GIS map. Sensitive area due to shallow ground water depth.

Is the location in a riparian area: ☒ No ☐ Yes

Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer zone: No

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: \_\_\_\_\_

Is the Location within a Floodplain? ☒ No ☐ Yes Floodplain Data Sources Reviewed (check all that apply)

☒ Federal (FEMA)

☐ State

☐ County

☐ Local

☐ Other \_\_\_\_\_

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 608

## WILDLIFE

☒

This location is included in a Wildlife Mitigation Plan

☐ This location was subject to a pre-consultation meeting with CPW held on \_\_\_\_\_

### Operator Proposed Wildlife BMPs

No BMP

### DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area
- ☐ 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)

### RULE 502.b VARIANCE REQUEST

☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

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    This location is being amended to accommodate an additional well and associated equipment.

As noted in the Facilities section, a temporary gas powered generator may be installed in the event that LPEA is delayed in providing service upgrade to the site.

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

Signed: \_\_\_\_\_ Date: \_\_\_\_\_ Email: naomi.azulai@bp.com

Print Name: Naomi Azulai Title: Well Permitting Analyst

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: \_\_\_\_\_

### Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

#### COA Type

#### Description

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## Best Management Practices

No	BMP/COA Type	Description
1	Planning	<p>Rule 604.c.(2). A. Noise – The type of equipment planned for this site during the production operations phase is expected to remain below COGCC’s acceptable noise limits. Noise levels will be tested at the request of nearby property owners. Sound levels will be measured in accordance with COGCC Rule 802.c. If the noise levels are found to exceed COGCC permissible levels, then BP will implement measures such as mufflers or sound walls. Production operations phase includes the permanent equipment set on location once drilling and completions has concluded.</p> <p>Rule 604.c.(2). B. Closed-loop Drilling Systems – Addressed in the APDs submitted for the proposed well planned on this site. No pits are planned.</p> <p>Rule 604.c.(2). C. Green Completions/Emission Control Systems - Coal wells do not utilize a flowback process. A post frac clean out is performed to prepare the well for production. During the cleanout procedure, fluids are routed to a temporary tank. Once gas starts to flow, the well is shut in so that gas is not released and can be routed to production. BP does not anticipate venting or flaring. In the unlikely event the well cannot be shut in in a timely manner, the gas would be vented through the temporary tank.</p> <p>Rule 604.c.(2). F. Leak Detection Plan – A wellsite-based monitoring system can automatically shut-in the wells upon the occurrence of anomalous conditions such as pressures outside of normal operating range in the water/gas pipelines on the downstream side of a well’s water/gas separator vessel or high water levels in tanks monitored by float switches. In addition, locations are continuously monitored by remote SCADA system. In the event of an unintentional release, BP will report the event as required by COGCC regulations, Rule 906, Spills and Releases. Immediate actions will be taken to stop the source and minimize potential offsite impact. If necessary, clean-up will be initiated as soon as possible, consistent with COGCC 1000 series regulations.</p> <p>Rule 604.c.(2). G. Berm Construction – All secondary containment requirements will be met for buffer/exception zone setback.</p> <p>Rule 604.c.(2). M. Fencing – Cattle panels around equipment or adequate fencing such as to support interim reclamation will be installed.</p> <p>Rule 604.c.(2). N. Control of Fire Hazards – Any material not in use that might constitute a fire hazard will be removed a minimum of 25 feet from the wellhead, tanks and separator. Any electrical equipment installations inside the bermed area will comply with API RP 500 classifications and comply with the current national electrical code as adopted by the State of Colorado.</p> <p>Rule 604.c.(2). P. Removal of Surface Trash – All surface trash, debris, scrap or discarded material connected with the operation will be removed from the premises and disposed of in a legal manner.</p> <p>Rule 604.c.(2). R. Tank Specifications – No crude oil or condensate storage is planned as a result of this operation.</p> <p>Rule 604.c.(2). S. Access Roads – Access roads will accommodate emergency vehicle access and will be maintained in a reasonable condition.</p> <p>Rule 604.c.(2). W. Site Specific Measures – During drilling/completions operations the site lighting shall be directed downward and inward and shielded (to the extent practicable) so as to avoid glare on public roads and building units within 1000’. Once the well is in production operations phase, no permanent lighting will be installed on the pad.</p>
2	Wildlife	Covered in the San Juan Basin Wildlife Mitigation Plan (WMP) dated March 2011 with an extension dated May 2017.
3	Storm Water/Erosion Control	Covered in the Field Wide Storm Water management Plan. Site specific SWMPs have been developed for this location including sediment control logs and rock rundowns. See attached Construction and Reclamation SWMP drawings for details.
4	Interim Reclamation	<p>All of the disturbed areas not used for routine operations will be reclaimed. This will include re-contouring slopes to 3:1 or greater and seeding/mulching. The seed will be drilled or broadcasted where machinery cannot access. Straw mulch will be spread and crimped over the seeded areas to retain moisture and limit erosion.</p> <p>Weeds will be inspected and treated annually, when necessary, by a certified weed control contractor.</p>

Total: 4 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401374976	NRCS MAP UNIT DESC
401374977	NRCS MAP UNIT DESC
401422886	PROPOSED BMPS
401422895	MULTI-WELL PLAN
401422897	WAIVERS
401422908	CONST. LAYOUT DRAWINGS
401422916	ACCESS ROAD MAP
401422919	LOCATION DRAWING
401422922	WASTE MANAGEMENT PLAN
401422925	LOCATION PICTURES
401422930	SURFACE AGRMT/SURETY
401422959	30 DAY NOTICE LETTER
401423009	CONST. LAYOUT DRAWINGS
401423239	HYDROLOGY MAP
401423241	FACILITY LAYOUT DRAWING

Total Attach: 15 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

## **Public Comments**

No public comments were received on this application during the comment period.

