

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:

401156218

Date Received:

12/29/2016

Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: 320858

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:

**320858**

Expiration Date:

**03/02/2020**

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: CARMELITA GALLEGOS A

Number: 1

County: ARCHULETA

Quarter: SWSE    Section: 17    Township: 32N    Range: 5W    Meridian: N    Ground Elevation: 6144

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: 824 feet FSL from North or South section line

1602 feet FEL from East or West section line

Latitude: 37.013091    Longitude: -107.411816

PDOP Reading: 2.0    Date of Measurement: 10/17/2016

Instrument Operator's Name: CONNER MAHOSKEY



Name: Arboles Series of Cruz Pr Phone: 801-918-7058

Address: 2987 Melanie Ann Ct. Fax: \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

City: Magna State: UT Zip: 84044

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:	688 Feet	482 Feet
Building Unit:	951 Feet	829 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1667 Feet	1856 Feet
Above Ground Utility:	369 Feet	140 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	300 Feet	176 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

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: 11/16/2016

- 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.

## 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.

Distances listed under production equipment in the Cultural Distance Information section include equipment that exists on site from the permitted/producing well and associated equipment.

## 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: EO-CD. Arboles Clay, 3 to 12 percent slopes.

NRCS Map Unit Name: R6-B. Wetherill 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: 906 Feet

water well: 276 Feet

Estimated depth to ground water at Oil and Gas Location 40 Feet

Basis for depth to groundwater and sensitive area determination:

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 No zone:

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 \_\_\_\_\_

## 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	<p>On 12/22/2016 Archuleta County approved the permit for this oil and gas location.</p> <p>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.</p> <p>Reference area photos will be taken during the growing season and submitted via sundry within 12 months.</p> <p>This location is being amended to accommodate an additional well and associated equipment.</p>
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I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: \_\_\_\_\_ Date: 12/29/2016 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: Matthew Lee Director of COGCC Date: 3/3/2017

## 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
	Final Review Completed. No LGD or public comment received.
	In addition to the notifications required by Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (a. Notice of Intent to Conduct Hydraulic Fracturing Treatment; b. Notice of Spud; and c. Notice of Construction or Major Change); operator shall notify the COGCC 48 hours prior to rig mobilization and pipeline testing (flowlines from wellheads to separators to tanks; and/or any temporary surface lines used for hydraulic stimulation and/or flowback operations) using the Form 42 (as described in Rule 316C.m. Notice of Completion of Form 2/2A Permit Conditions). The appropriate COGCC individuals will automatically be email notified.

	<p>Operator must ensure secondary containment for any volume of fluids contained at the well site during drilling and completion operations (as shown on the Proposed BMPs attachment); including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices [BMPs] associated with fluid containment/control as well as stormwater management for the control of run-on and run-off) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals as required by CDPHE (at least every 14 days and after precipitation events), and maintained in good condition. The design/build of any perimeter berm shall be sized, constructed, and compacted sufficiently to contain fluids during drilling operations, as well as all fluids contained in temporary frac tanks during completion operations.</p> <p>Based on the recent onsite (02-22-17) conducted by COGCC and the operator, additional stormwater controls will be required for the existing well pad portion (primarily the downgradient western and southern edges) of this oil and gas location.</p> <p>The access road will be maintained as to not allow sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.</p> <p>Strategically apply fugitive dust control measures, including encouraging established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.</p> <p>Berms or other containment devices shall be constructed to be sufficiently impervious (corrugated steel with poly liner or equivalent protection) to contain any spilled or released material around permanent produced water storage tanks.</p>
	<p>A closed loop system must be implemented during drilling (as indicated on the Form 2 and Form 2A). The moisture content of all drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. All cuttings generated during drilling with salt-based mud (SBM) must be segregated from water/bentonite based mud-(WBM-) generated drill cuttings and placed separately on the well pad. All SBM-generated drill cuttings must be kept in tanks/containers, or placed on a lined/bermed portion of the well pad; prior to disposition. The operator has indicated that 'Cuttings Disposal' will be "OFFSITE" and that the 'Cuttings Disposal Method' will be "COMMERCIAL DISPOSAL" (as shown in the 'DRILLING WASTE MANAGEMENT PROGRAM SECTION' of the Form 2A). All liners associated with salt-based drilling mud and SBM-generated drill cuttings must be disposed of offsite per CDPHE rules and regulations. Any changes to drill cuttings management and disposal at this location will require submittal (via a Form 4 Sundry Notice) and approval of a Waste Management Plan detailing the changes (specifying cuttings characterization methods, cuttings management, amendment, and onsite disposal location[s]).</p> <p>Flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or storage vessel located on the well pad; or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material.</p> <p>Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated.</p>
	<p>Operator shall pressure test pipelines (flowlines from wellheads to separators to tanks; pipelines from onsite separators to offsite storage tanks, and any temporary surface lines used for hydraulic stimulation and/or flowback operations) in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network, and tested annually, unless agreed to by both parties that the flowlines can be managed under an approved COGCC variance.</p>

**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 – The existing access road will be rerouted around the proposed wellhead to maintain full access to the site. 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	General Housekeeping	<p>Nuisance mitigation measures are not an issue for this well since BP has a surface use agreement with the property owner who owns the only building unit within the buffer zone. The surface use agreement is attached to this form 2A.</p>
3	Wildlife	<p>Covered in the San Juan Basin Wildlife Mitigation Plan (WMP) dated March 2011.</p>

4	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.
5	Interim Reclamation	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.  Weeds will be inspected and treated annually, when necessary, by a certified weed control contractor.

Total: 5 comment(s)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2108072	ARCHULETA COUNTY APPROVED PERMIT
2108074	RULE 306.e. CERTIFICATION LETTER
2108075	SURFACE OWNER NOTIFICATION AND MEETINGS WAIVER
2108076	RULE 604.c.(2) MITIGATION MEASURES
2108077	1000' BUFFER ZONE MAP
2108078	CORRESPONDENCE
401156218	FORM 2A SUBMITTED
401156353	NRCS MAP UNIT DESC
401156356	NRCS MAP UNIT DESC
401174839	PROPOSED BMPS
401174840	PROPOSED BMPS
401174842	REFERENCE AREA MAP
401174844	LOCATION PICTURES
401174845	HYDROLOGY MAP
401174847	ACCESS ROAD MAP
401174848	CONST. LAYOUT DRAWINGS
401174849	CONST. LAYOUT DRAWINGS
401174851	LOCATION DRAWING
401174857	30 DAY NOTICE LETTER
401174933	FACILITY LAYOUT DRAWING
401174935	WASTE MANAGEMENT PLAN
401174937	SURFACE AGRMT/SURETY

Total Attach: 22 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Per operator, 1) Current surface owner inherited the minerals but is not the signee of the mineral lease. 2) Salt-based mud will be used during drilling of lateral wellbores.	03/02/2017
OGLA	Initiated/Completed OGLA Form 2A review on 02-23-17 by Dave Kubeczko; conducted an operator, LGD, and COGCC onsite on 02-22-17; requested Rule 604.c.(2). Mitigation Measures, Multi-Well Plan, Rule 306.e. Certification Letter, and acknowledgement of notification, fluid containment, spill/release BMPs, additional existing well pad stormwater controls, cuttings containment and management, flowback to tanks, tank berming, access road sediment and dust control, odor control, and pipeline testing COAs from operator on 02-23-17; received copies of the Archuleta County approved permits for the wells from operator on 02-09-17; received 604.c.(2). Mitigation Measures, Multi-Well Plan, Rule 306.e. Certification Letter, and concurrence of COAs from operator on 03-02-17; revised: Date planned to commence construction: from 04/01/2017 to 03/06/2017; passed by CPW on 02-07-17 with this location being included in the existing WMP with the operator being acceptable; passed OGLA Form 2A review on 03-02-17 by Dave Kubeczko; notification, fluid containment, spill/release BMPs, additional existing well pad stormwater controls, cuttings containment and management, flowback to tanks, tank berming, access road sediment and dust control, odor control, and pipeline testing COAs.	02/23/2017
DOW	The Operator has agreed to incorporate this well into BPs existing San Juan Basin Colorado Wildlife Mitigation Plan (dated March 2011). The well will be subject to the BMPs specified in the Plan, including pre-construction biological surveys, compliance with raptor nest guidelines, and screening of planned day rig activity for conflicts with known eagle nests and roosts prior to commencing rig work. In addition, any new surface disturbance associated with this well pad, access road, and gathering pipeline will be incorporated into Tables 1 and 2 of the Plan and mitigated off-site per the standards identified in the plan.	02/07/2017
Permit	Passed completeness review.	01/30/2017
OGLA	Passed Buffer Zone completeness review.	01/27/2017
OGLA	Did not pass Buffer Zone completeness review. Rule 604.c.(2) mitigation measures are not on form. Spoke with operator and pushed the form to Draft.	01/20/2017
Permit	Referred to OGLA Supervisor for Buffer Zone Review.	01/18/2017
Permit	Returned to Draft per Operator Request.	01/03/2017
Permit	Referred to OGLA Supervisor for Buffer Zone Review.	12/30/2016

Total: 9 comment(s)