

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:

400713103

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Date Received:

12/10/2014

Oil and Gas Location Assessment

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

Submit signed original form. 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:

440761

Expiration Date:

02/02/2018

☒ 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: 10261

Name: BAYSWATER EXPLORATION AND PRODUCTION LLC

Address: 730 17TH ST STE 610

City: DENVER State: CO Zip: 80202

Contact Information

Name: Jeff Annable

Phone: (303) 928-7128

Fax: (303) 218-5678

email: regulatory@petro-fs.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20080034

☐ Gas Facility Surety ID: _____

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Arellano

Number: 10-L Pad

County: WELD

QuarterQuarter: NESE Section: 10 Township: 5N Range: 65W Meridian: 6 Ground Elevation: 4616

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: 1565 feet FSL from North or South section line

309 feet FEL from East or West section line

Latitude: 40.410889 Longitude: -104.641133

PDOP Reading: 1.5 Date of Measurement: 06/25/2014

Instrument Operator's Name: Owen Mckee

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 #

Well Site is served by Production Facilities

400713204

FACILITIES

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

Wells	10	Oil Tanks*		Condensate Tanks*		Water Tanks*		Buried Produced Water Vaults*	
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks		Separators*		Injection Pumps*		Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*		Electric Motors		Electric Generators*		Fuel Tanks*		LACT Unit*	
Dehydrator Units*		Vapor Recovery Unit*		VOC Combustor*		Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type

Number

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:

10 - 2" welded steel flowlines from wellheads to separators carrying oil, gas and water

CONSTRUCTION

Date planned to commence construction: 02/03/2015 Size of disturbed area during construction in acres: 3.16
Estimated date that interim reclamation will begin: 08/03/2015 Size of location after interim reclamation in acres: 1.00
Estimated post-construction ground elevation: 4616

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes
Is H₂S anticipated? No
Will salt sections be encountered during drilling: No
Will salt based mud (>15,000 ppm Cl) be used? No
Will oil based drilling fluids be used? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Land application
Cutting Disposal: OFFSITE Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

Reeves Mud Field COGCC Facility 435839 will be used for offsite disposal.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 435839 or Document Number:

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Judith Meyer

Phone:

Address: 2516 E 16th Street

Fax: _____

Address: _____

Email: _____

City: Greeley State: CO Zip: 80631

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:	300 Feet	Feet
Building Unit:	502 Feet	Feet
High Occupancy Building Unit:	4386 Feet	Feet
Designated Outside Activity Area:	5280 Feet	Feet
Public Road:	524 Feet	Feet
Above Ground Utility:	555 Feet	Feet
Railroad:	5280 Feet	Feet
Property Line:	151 Feet	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.

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: 09/08/2014

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 11/15/2014

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.

Bayswater Exploration & Production LLC designed the Arellano 10-L Facility to be a safe distance from neighboring houses and buildings and located efficiently for regular maintenance and access. Bayswater agreed upon an oil and gas operations area per the landowner/ operator Surface Use Agreement pertaining to the horizontal wells. And where possible, consolidation of existing facilities has been attempted to keep the disturbed area to a minimum. Bayswater feels this Facility's location is the best option given the property boundaries, utility easements and current COGCC setbacks. No other locations were available on the operator's leasehold that were feasible to drill the proposed wellbore spacing units and it is where the surface owners wanted it. Surface owner of the wellheads is actually different from the surface owner of the where the facilities are located, and the two of them mutually agreed on the location of each. Also see Siting Rationale attachments.

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: 3 -Aquolls and Aquepts - gravelly substratum

NRCS Map Unit Name:

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: 269 Feet

water well: 500 Feet

Estimated depth to ground water at Oil and Gas Location 7 Feet

Basis for depth to groundwater and sensitive area determination:

Distance to nearest downgradient water feature is a Marshland

Nearest water well is CDWR Permit #18539.

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: _____

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

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)

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 Letter to Director for COGCC Rule 303b.(3)J.iii. Building Unit Owner Pre-Application Notification receipts, attached as Correspondance. Letter to Director for COGCC Rule 303b.(3)K Local Government Pre-Application Notification receipt, attached as Correspondance.

Bayswater will be drilling and completing the wells on this pad for approximately 3 months. Interim reclamation will begin after the conclusion of drilling the wells, approximately an additional 3 months per COGCC Rule

Forrest V Straight Trust is no longer the Owner of one of the Building Units that was noticed, so a notice was sent to the new owner Ramon Loma which was received on 11/15/14. A waiver of the 30-Day notice requirement from Ramon Loma is attached as OTHER.

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

Signed: _____ Date: 12/10/2014 Email: regulatory@petro-fs.com

Print Name: Jeff Annable Title: Regulatory Technician

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: 2/3/2015

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

	Sole use of hay bails for sound mitigation will not be allowed. Hay bails cannot be stacked high enough to sufficiently mitigate light or noise.
	Operator's background noise survey shall be conducted based on the guidance for distances and methods described in Rules 802.c and 802.d. Measurements shall be collected (at the minimum) in the four cardinal directions from the proposed location as close to 350' from the wellheads as possible. COGCC recommends a minimum of 72 hours for the measurements. Provide the sound survey results to COGCC prior to construction.

Best Management Practices

No BMP/COA Type

Description

1	Planning	Multi-well Pads are located in a manner which allows for resource extraction while maintaining the highest distances possible from the offsetting residential areas and complies with the wishes of the surface owner. Operator will continue to be in close communication with Surface Owner with respect to livestock consideration and drilling rig move in date. A meeting with the surface owner will determine the fencing plan.
2	Community Outreach and Notification	Site Specific: Operator is holding an Open House and providing an information phone number for the property owners in this neighborhood.

3	Pre-Construction	<p>Anti-Collision: Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed wells. The anti-collision scan may include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed well path with its respective error of uncertainty. If current surveys do not exist for the offset wells, operators may have gyro surveys conducted to verify bottom hole location. The proposed well may only be drilled if the anti-collision review results indicate that the risk of collision is sufficiently low as defined by the anticollision plan, with separation factors greater than 1.5, or if the risk of collision has been mitigated through other means including shutting in wells, plugging wells, increased drilling fluid in the event of lost returns or as is appropriate for the specific situation. In the event of an increased risk of collision, that risk will be mitigated to prevent harm to people, the environment or property. For the proposed well, upon conclusion of drilling operations, an as-constructed directional survey will be submitted to the COGCC with the Form 5.</p> <p>Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5)</p>
4	Traffic control	<p>Access Roads: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times. Traffic will be routed to minimize local interruption. Access from the northeast was chosen as it is the least populated area of the surrounding neighborhood. The access road will have additional shrub and tree screening implemented in conjunction with the project.</p>
5	General Housekeeping	<p>Visual Impacts: Equipment, regardless of construction date, which are observable from any public highway shall be painted with uniform, non-contrasting, non-reflective color tones (similar to the Munsell Soil Color Coding System), and with colors matched to, but slightly darker than, the surrounding landscape.</p> <p>Maintain appearance with garbage clean-up; a trash bin will be located on site to accumulate waste by the personnel drilling the wells. Site will have unused equipment, trash and junk removed immediately. Operator shall keep the Surface Use Area as well as any roads or other areas used by Operator safe and in good order, including control of noxious weeds litter and debris.</p>
6	Storm Water/Erosion Control	<p>Use water bars, and other measures to prevent erosion and non-source pollution. Implement and maintain BMPs to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Co-locate gas and water gathering lines whenever feasible, and mitigate any erosion problems that arise due to the construction of any pipeline(s).</p>
7	Material Handling and Spill Prevention	<p>Leak Detention Plan: Pumper will visit the location daily and visually inspect all wellheads and fittings for leaks. Additionally, monthly documented SPCCP inspections are conducted pursuant to 40 CFR 112.</p> <p>Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25' from the wellhead. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code.</p> <p>Operator shall comply with state and federal laws, rules and regulations governing the presence of any petroleum products, toxic or hazardous chemicals or wastes on the Subject lands.</p>
8	Dust control	<p>Operator shall employ practices for control of fugitive dust caused by their operations. Such practices shall include but are not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during high- wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers, or automation of wells to reduce truck traffic may also be required if technologically feasible and economically reasonable to minimize fugitive dust emissions.</p>
9	Construction	<p>Guy line anchors: All guy line anchors shall be brightly marked pursuant to Rule 604.c.(2)Q.</p>

10	Noise mitigation	Baseline studies will be conducted prior to commencement of construction and dirt work, which includes both A and C scale measurements. A sound model will be developed with the drilling rig and completion operations noise signatures. A combination of 32' and 40' sound walls will be engineered with temporary I-beams installed in the ground. Sound walls themselves, a combination of STC-32 and STC-25 Acoustical Barrier Blankets, will be implemented. Both drilling and completion operations will be conducted within these sound walls. 10'-16' portable walls will be used to dampen gen-sets, if necessary, pursuant to sound model results. Additional sound mitigation measures will be considered and implemented pursuant to third party recommendations to address building units at higher ground elevation. Operator is investigating the possibility of powering the drill site by electricity.
11	Emissions mitigation	Green Completions - Emission Control System: Test separators and associated flow lines and sand traps shall be installed to accommodate green completions techniques pursuant to COGCC Rules. In the anticipated absence of a viable gas sales line, the flowback gas shall be thermally oxidized in an emissions control device (ECD), which will be installed and kept in operable condition for least the first 90-days of production pursuant to CDPHE rules. This ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10 mile radius, will be flanged to route gas to other or permanent oxidizing equipment and shall be provided with the equipment needed to maintain combustions where non-combustible gases are present.
12	Odor mitigation	Equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare. Oil and gas operations shall be in compliance with the Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII.
13	Drilling/Completion Operations	A closed –loop system will be used for drilling operations. Blowout Prevention Equipment (“BOPE”): A double ram and annular preventer will be used during drilling. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid. Lighting: Site lighting shall be directed downward and inward and shielded so as to avoid glare on public roads and Building Units within one thousand (1000) feet. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site. Bradenhead Monitoring: Operator acknowledges and will comply with COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.
14	Interim Reclamation	Operator shall be responsible for segregating the topsoil, backfilling, repacking, reseeding, and recontouring the surface of any disturbed area so as not to interfere with Owner's operations and shall reclaim such area to be returned to pre-existing conditions as best as possible with control of all noxious weeds.
15	Final Reclamation	Within 90 days subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site. The Operator shall restore the surface of the Land affected by such terminated operations as near as possible to the previous state that existed prior to operations.

Total: 15 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1733747	306.e CERTIFICATION LETTER
1733748	CORRESPONDENCE
2477491	CORRESPONDENCE
2477524	CORRESPONDENCE
2477525	SITING RATIONALE
2477526	SITING RATIONALE
2477527	SITING RATIONALE
2477528	OPEN HOUSE MEETING SUMMARY
2477529	SOUND WALL DRAWING
400713103	FORM 2A SUBMITTED
400743862	LOCATION DRAWING
400743866	LOCATION PICTURES
400743960	ACCESS ROAD MAP
400743961	HYDROLOGY MAP
400743963	MULTI-WELL PLAN
400743965	WASTE MANAGEMENT PLAN
400743968	NRCS MAP UNIT DESC
400743994	CORRESPONDENCE
400743996	CORRESPONDENCE
400749054	OTHER

Total Attach: 20 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	2/2/2015 3:34:39 PM
OGLA	Operator has provided a summary of their Open House meeting (see Attachment). Operator has also revised the BMPs and provided additional Siting Rationale information (see Attachments). Operator provided a drawing showing where the sound walls will be placed. OGLA task passed.	2/2/2015 11:38:52 AM
OGLA	Attached 306.e. meeting certification letter provided by operator. Attached email from Operator's consultant with description of Operator's interaction with the Building Unit owners that requested consultation and Building Unit owner concerns. J. Noto also discussed on phone with Ann Stephens of PFS. Public meeting will still be held on 1/27/15.	1/21/2015 11:25:02 AM
OGLA	Operator has indicated there have been several requests for consultation and they will hold a public meeting on 1/27/15 in Greeley. OGLA review will wait to hear the outcome of this meeting.	1/8/2015 4:14:36 PM
Permit	Changed the fluids disposal from "Commercial Disposal" to "Land Application" per the operator's instruction.	1/2/2015 12:39:44 PM
Permit	No production facilities are planned on this pad. Distances are to wellheads only.	12/26/2014 12:46:09 PM
OGLA	IN PROCESS - Operator provided information indicating the nearest Building is a livestock stable and not a Building Unit. OGLA review complete. Waiting on Public Comment period.	12/23/2014 9:28:40 AM
OGLA	ON HOLD - Requested additional information concerning the nearest Building. It appears it may be a Building Unit.	12/22/2014 10:59:33 AM
Permit	Passed completeness.	12/17/2014 2:43:37 PM
OGLA	Passed Buffer Zone Completeness check	12/17/2014 1:30:15 PM
Permit	Located within buffer zone; sent to OGLA for further review.	12/11/2014 7:22:57 AM

Total: 11 comment(s)