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

Oil and Gas Location Assessment

Document Number: 401021302 **(SUBMITTED)**

Date Received: 06/24/2016

Location ID:

Expiration Date:

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

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.

☒ 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: Ward Number: 20-M Pad

County: WELD

QuarterQuarter: SESE Section: 20 Township: 6N Range: 66W Meridian: 6 Ground Elevation: 4728

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: 349 feet FSL from North or South section line

213 feet FEL from East or West section line

Latitude: 40.467356 Longitude: -104.793156

PDOP Reading: 1.5 Date of Measurement: 10/19/2015

Instrument Operator's Name: Ben Milius

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		401066087

FACILITIES

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

Wells	12	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:

12 - 2” welded steel flowlines from wellheads to separators carrying oil, gas and water.
2" welded steel gas supply line from compressors to wellheads.

CONSTRUCTION

Date planned to commence construction: 09/15/2016 Size of disturbed area during construction in acres: 3.52

Estimated date that interim reclamation will begin: 03/15/2017 Size of location after interim reclamation in acres: 1.76

Estimated post-construction ground elevation: 4728

DRILLING PROGRAM

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

Is H_2S 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:

Cockroft Farms COGCC Facility 441086 will be used for offsite disposal.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 441086 or Document Number:

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Sherri A. Hood Phone:
Address: 32171 CR 29 Fax:
Address: Email:
City: Greeley State: CO Zip: 80631-9349

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: Surface Use Agreement

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:	540 Feet	Feet
Building Unit:	540 Feet	Feet
High Occupancy Building Unit:	5280 Feet	Feet
Designated Outside Activity Area:	5280 Feet	Feet
Public Road:	201 Feet	Feet
Above Ground Utility:	236 Feet	Feet
Railroad:	4377 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

- 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.

Check all that apply. This location is within a:

- [x] 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: 11/04/2015

FOR MULTI-WELL PADS AND PRODUCTION FACILTIES 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.

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 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: 32 - Kim Loam, 1 to 3 percent slopes

NRCS Map Unit Name: 47 - Olney fine sandy 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 [x]

Plant species from: [ ] NRCS or, [x] field observation Date of observation: 10/19/2015

List individual species:

Check all plant communities that exist in the disturbed area.

- [x] 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 [x] Yes

Distance to nearest

downgradient surface water feature: 5 Feet

water well: 1031 Feet

Estimated depth to ground water at Oil and Gas Location 24 Feet

Basis for depth to groundwater and sensitive area determination:

Distance to nearest downgradient water feature is a Wetland.

Nearest water well is CDWR Permit #35.

Is the location in a riparian area: [x] No [ ] Yes

Was an Army Corps of Engineers Section 404 permit filed [x] 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? [x] No [ ] Yes

Floodplain Data Sources Reviewed (check all that apply)

- [x] Federal (FEMA)
- [x] State
- [x] County
- [ ] Local
- [ ] Other

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 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: Letter to Director for COGCC Rule 303b.(3)J.iii. Building Unit Owner Pre-Application Notification receipts, attached as Correspondence.

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

Signed: _____ Date: 06/24/2016 Email: regulatory@petro-fs.com

Print Name: Jeff Annable Title: Regulatory 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

Best Management Practices

No	BMP/COA Type	Description
1	Planning	Multi-well Pads are selected in a manner which allows for resource extraction while maintaining the highest and equidistant measurements from offsetting residential areas while also honoring the wishes of the surface owner. Bayswater utilizes flood plain information, COGCC setbacks, development strategies, economics, mechanical and well bore integrity, safety, traffic, geology and operations life cycles among other items when planning horizontal sites. Bayswater plans extended reach laterals when possible to minimize the number of disturbance areas and the number of multi-well sites. The use of existing pad sites, access roads and the proximity to pipelines all play important roles in site selection. Additionally, Bayswater looks at the torque and drag on drilling operations to see what the limitations are on site selection compared to landing points of the laterals. Bayswater will continue to be in close communication with Surface Owner(s) with respect to land use consideration, construction and drilling rig move in date. A meeting with the surface owner will determine the fencing and sound wall plan. During drilling operations, the well sites and any pits shall be fenced if requested by Owner. A meeting with the land owner will help determine any changes to fencing or culverts. Unless otherwise requested by the Surface Owner, well sites constructed within Designated Setback Locations shall be adequately fenced to restrict access by unauthorized persons.
2	Community Outreach and Notification	Operator will also provide a toll-free hotline to all Building Unit Owners in the area if they have any complaints.

3	Traffic control	Access Roads: The access road will be constructed to accommodate local emergency vehicle access requirements. Bayswater plans to utilize an existing farm field entrance. The access can be improved upon to accommodate drilling and completions operations trucks as wells as local emergency vehicles. Bayswater has implemented traffic signs at our entrances and exits from pads to suggest traffic patterns and also for speed control. Traffic from this pad will be directed north.
4	General Housekeeping	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.
5	Storm Water/Erosion Control	Use water bars, and other measures to prevent erosion and non-source pollution. Implement and maintain BMPs to control storm water 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). Operator will install culverts on the Lands that may be necessary to maintain present drainage and irrigation otherwise affected by its operations on the Lands.
6	Material Handling and Spill Prevention	Leak Detention Plan: Pumper will visit the location daily and visually inspect all wellheads and fittings for leaks. Additionally, annual documented SPCCP inspections are conducted pursuant to 40 CFR 112. 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. 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.
7	Dust control	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. Bayswater additionally has implemented the use of traffic signs when leaving the location to remind drivers of specific routes to utilize. 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.
8	Construction	Guy line anchors: All guy line anchors shall be brightly marked pursuant to Rule 604.c. (2)Q. Lighting: Lights on location will be installed to ensure safety around the site. Lights will have on/off capability. All lighting will be diverted downward and inward, and shielded so as to avoid glare on public roads and Building Units.
9	Noise mitigation	Operator will provide engineered noise abatement sound walls to comply with COGCC requirements. Sound walls will be installed for the duration of drilling and completion activities per third party sound modeling studies. 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. Bayswater has recently acquired a new rig signature for the Frontier # 8 rig with hospital grade mufflers. This signature information is available upon request. Various height sound walls will be engineered and installed where required and necessary. Temporary Ibeams will be installed for walls 20’ and higher. 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. Additionally, sound blankets may be utilized in and around the rig floor to dampen noise from the draw works. Operator is investigating the possibility of powering the drill site by electricity.

10	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 at 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. Operator is working is working with midstream operators in the area. Bayswater will connect to a gas sales lines as soon as practical.
11	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.
12	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 where possible. 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.
13	Drilling/Completion Operations	One of the first wells drilled on the pad will be logged with Cased hole Pulsed Neutron Log with Gamma Ray Log from kick-off point to into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The horizontal portion of every well will be logged with a measuredwhile-drilling gamma-ray log. The Form 5, Completion Report, for each well on tAhe pad will list all logs run in that well and have those logs attached. The Form 5 for each well shall clearly state “No openhole logs were run” and shall reference the Rule 317.p Exception granted for the well.
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 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

Att Doc Num	Name
401021302	FORM 2A SUBMITTED
401025036	ACCESS ROAD MAP
401025138	HYDROLOGY MAP
401025141	LOCATION PICTURES
401025143	MULTI-WELL PLAN
401066116	NRCS MAP UNIT DESC
401066119	NRCS MAP UNIT DESC
401066996	CORRESPONDENCE
401067315	SURFACE AGRMT/SURETY
401068440	LOCATION DRAWING
401068441	REFERENCE AREA MAP
401068442	REFERENCE AREA PICTURES
401070666	WASTE MANAGEMENT PLAN
401070879	FACILITY LAYOUT DRAWING

Total Attach: 14 Files

General Comments

User Group	Comment	Comment Date

Total: 0 comment(s)