

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

TYPE OF WELL OIL GAS COALBED OTHER _____ Refiling

ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES Sidetrack

Date Received:

Well Name: Carlson Well Number: I-15-16HN

Name of Operator: BAYSWATER EXPLORATION AND PRODUCTION LLC COGCC Operator Number: 10261

Address: 730 17TH ST STE 610

City: DENVER State: CO Zip: 80202

Contact 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

WELL LOCATION INFORMATION

QtrQtr: NENE Sec: 15 Twp: 5N Rng: 65W Meridian: 6

Latitude: 40.403697 Longitude: -104.641239

Footage at Surface: 1055 feet FNL/FSL FNL 354 feet FEL/FWL FEL _____

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 4621 County: WELD

GPS Data:

Date of Measurement: 03/20/2015 PDOP Reading: 1.4 Instrument Operator's Name: Ben Hardenbergh

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

Footage at Top of Prod Zone: FNL/FSL FEL/FWL Bottom Hole: FNL/FSL FEL/FWL

1900 FNL 470 FEL 1900 FNL 470 FWL

Sec: 15 Twp: 5N Rng: 65W Sec: 16 Twp: 5N Rng: 65W

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: Fee State Federal Indian

The Surface Owner is: is the mineral owner beneath the location.
(check all that apply) is committed to an Oil and Gas Lease.
 has signed the Oil and Gas Lease.
 is the applicant.

The Mineral Owner beneath this Oil and Gas Location is: Fee State Federal Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: No

The right to construct the Oil and Gas Location is granted by: Surface Use Agreement

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

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

Township 5 North, Range 65 West of the 6th PM
Section 16: Part of the S2NE4

See attached lease map.

Total Acres in Described Lease: 46 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 0 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 382 Feet
Building Unit: 535 Feet
High Occupancy Building Unit: 4044 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 332 Feet
Above Ground Utility: 325 Feet
Railroad: 5280 Feet
Property Line: 275 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: Buffer Zone
 Exception Zone
 Urban Mitigation Area

- Buffer Zone – as described in Rule 604.a.(2), within 1,000' of a Building Unit
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 04/23/2015

SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 38 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 470 Feet (Enter 5280 for distance greater than 1 mile.)

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

SPACING & FORMATIONS COMMENTS

Nearest wellbore permitted or completed in the same formation is the Sandusky 1 API #05-123-12218.

Niobrara: Proposed Spacing Unit is described as: T5N,R65W:
Sec 15 & 16 - S2N2

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR		320	GWA

DRILLING PROGRAM

Proposed Total Measured Depth: 16713 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 38 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H₂S Drilling Operations Plan)

Will salt sections be encountered during drilling? No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? No

BOP Equipment Type: Annular Preventor Double Ram Rotating Head None

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Land application

Cuttings 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: _____

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
SURF	12+1/4	9+5/8	36	0	800	355	800	0
1ST	8+3/4	7	29	0	7380	578	7380	400
1ST LINER	6+1/8	4+1/2	13.5	6680	16713	778	16713	6680

Conductor Casing is NOT planned

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- Rule 318A.a. Exception Location (GWA Windows).
- Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

OTHER LOCATION EXCEPTIONS

Check all that apply:

- Rule 318.c. Exception Location from Rule or Spacing Order Number _____
- Rule 603.a.(2) Exception Location (Property Line Setback).

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments

Letter to the Director for COGCC Rule 318A.a. and 318A.c. Exception Location Request, attached as Exception Loc Request.

Waiver for COGCC Rule 318A.a. GWA window and 318A.c. Twinning waiver, attached as Exception Loc Waiver.

Letter to Director for COGCC Rule 318A.e. Proposed Spacing Unit, attached as Proposed Spacing Unit.

Nearest permitted or existing wellbore penetrating objective formation is Sandusky 1 API #05-123-12218.

The treated interval of the Sandusky 1 API #05-123-12218 is less than 150' from the completed portion of the proposed wellbore. Please find 317.s. consent signed by Noble Energy, Inc. for the Sandusky 1 attached as STIMULATION SETBACK CONSENT.

The treated interval of the Fay 1 API #05-123-12802 is greater than 150' from the completed portion of the proposed wellbore.

Date of Rule 305.a.(2) notice was received on 4/23/15 for one BUO, but a signed waiver of the required 30-day notice period was received from this BUO. The Rule 305.a.(2) notices sent to the rest of the BUOs were received on 4/4/15.

The Minerals underneath the surface location (Lease: Part of the NENE Sec. 15) are not being produced by this lateral thus the right to construct is SUA.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: _____

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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

Signed: _____ Print Name: Jeff Annable

Title: Regulatory Technician Date: _____ Email: regulatory@petro-fs.com

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: _____

Expiration Date: _____

API NUMBER

05

Conditions Of Approval

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

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 2 mi laterals when possible to minimize the impact on 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 has looked 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 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.
2	Community Outreach and Notification	Operator plans to have a meeting with all buffer zone building unit owners to make sure that all concerns are addressed and to let them know they can call if they have any complaints. Operator will also provide a toll-free hotline to all Building Unit Owners in the area if they have any complaints.
3	Pre-Construction	Anti-collision: Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling. Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5)
4	Traffic control	Access Road: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times. Bayswater is utilizing the existing Access Road off of Fern Ave. to reduce the impact on the neighboring houses and lesson any construction activity. Traffic will be routed to minimize local interruption. Traffic activity concerns and routing have been noted in the Surface Damage and Release Agreement between Bayswater and the landowner. Access from the south is preferred as it is the least populated area of the surrounding neighborhood and has a direct route to business route 34 and also State Highway 34.
5	General Housekeeping	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. 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.
6	Storm Water/Erosion Control	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).
7	Material Handling and Spill Prevention	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. 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.

8	Dust control	Operator shall employ practices for control of fugitive dust caused by their operations. Bayswater has agreed to apply dust control along the length of Fern avenue between 18th St. and 24th streets. 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.
9	Construction	Guy line anchors: All guy line anchors shall be brightly marked pursuant to Rule 604.c. (2)Q.
10	Noise mitigation	<p>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 will be submitted to the COGCC. Various height sound walls will be engineered and installed where required and necessary. Temporary I-beams 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.</p> <p>Operator utilizes appropriately sized sounds walls for instillation around production facility compressors to dampen noise. These walls are based on a forecasted model with the production facilities' noise signature.</p>
11	Emissions mitigation	<p>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.</p> <p>Operator is working on ROW with land owners in the area to bring a new gas sales line along Fern Ave. from the north (Arellano site), as well as working with an operator of a sales line already in place. Bayswater will connect to one of these gas sales lines as soon as practical.</p>
12	Odor mitigation	<p>Equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare.</p> <p>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.</p>

13	Drilling/Completion Operations	<p>A closed –loop system will be used for drilling operations.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.</p>
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

<u>Att Doc Num</u>	<u>Name</u>
400832911	DIRECTIONAL DATA
400832914	DEVIATED DRILLING PLAN
400832918	WELL LOCATION PLAT
400840267	OffsetWellEvaluations Data
400840305	EXCEPTION LOC REQUEST
400840306	EXCEPTION LOC WAIVERS
400840308	STIMULATION SETBACK CONSENT
400840520	SURFACE AGRMT/SURETY
400840521	PROPOSED SPACING UNIT
400840522	LEASE MAP

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>

Total: 0 comment(s)