

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

TYPE OF WELL OIL GAS COALBED OTHER _____ Refilling

ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES Sidetrack

Date Received:
08/01/2017

Well Name: Booth Well Number: W-8-7HC

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@ascentgeomatics.com

RECLAMATION FINANCIAL ASSURANCE
Plugging and Abandonment Bond Surety ID: 20080034

WELL LOCATION INFORMATION

QtrQtr: SESE Sec: 8 Twp: 6N Rng: 66W Meridian: 6

Latitude: 40.498764 Longitude: -104.793338

Footage at Surface: 1231 Feet FNL/FSL FSL 248 Feet FEL/FWL FEL

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 4807 County: WELD

GPS Data:
Date of Measurement: 03/16/2017 PDOP Reading: 2.1 Instrument Operator's Name: Alan Hnizdo

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

335 FSL 470 FEL 330 FSL 2170 FEL

Sec: 8 Twp: 6N Rng: 66W Sec: 7 Twp: 6N Rng: 66W

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: Yes

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

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.)

See attached lease map.

Total Acres in Described Lease: 171 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: 289 Feet
Building Unit: 655 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 224 Feet
Above Ground Utility: 258 Feet
Railroad: 5280 Feet
Property Line: 237 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: 05/15/2017

SPACING and UNIT INFORMATION

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 150 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

CODL: Proposed Spacing Unit is described as:
T6N-R66W:
Sec 7 - S2SE4
Sec 8 - S2S2
Sec 17 - N2N2
Sec 18 - N2NE4

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
CODELL	CODL		480	GWA

DRILLING PROGRAM

Proposed Total Measured Depth: 14548 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: 121 Feet No well belonging to another operator within 1,500 feet

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? Yes

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:

Surface Hole: Drilling Fluids and Cuttings will be disposed of through land farming and beneficial reuse at the Harlan Hankins Beneficial Reuse Area.

Production Hole: Drilling Fluids and Cuttings will be disposed of at a commercial disposal location.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 451005 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
CONDUCTOR	26	16	42	0	80	400	80	0
SURF	13+1/2	9+5/8	36	0	1500	660	1500	0
1ST	8+1/2	5+1/2	20	0	14548	2445	14548	0

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. Exception Location Request, attached as Exception Loc Request.
Waiver for COGCC Rule 318A.a. GWA window, attached as Exception Loc Waiver.
Letter to Director for COGCC Rule 318A.e. Proposed Spacing Unit, attached as Proposed Spacing Unit.
Nearest wellbore permitted or completed in the same formation is the Hergert 8-33 API #05-123-22692 (NB-CD). Nearest permitted or existing wellbore belonging to another operator from a 3D perspective is the Hergert 8-33 API #05-123-22692.
Bayswater will not complete the wellbore at the following measured depths since a 317.s. Stimulation Setback Consent hasn't been obtained from the offset operators:
11,435'-11,612' (Hergert 8-33)
10,312'-10,439' (Hergert 8-34)
8,802'-8,919' (Hergert 8-43)

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 Analyst Date: 8/1/2017 Email: regulatory@ascentgeomatics.c

Operator must have a valid water right or permit allowing for industrial use or purchased water from a seller that has a valid water right or permit allowing for industrial use, otherwise an application for a change in type of use is required under Colorado law. Operator must also use the water in the location set forth in the water right decree or well permit, otherwise an application for a change in place of use is required under Colorado law. Section 37-92-103(5), C.R.S. (2011).

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: 9/29/2017

Expiration Date: 09/28/2019

API NUMBER
05 123 45589 00

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.

<u>COA Type</u>	<u>Description</u>
	<p>Operator has stated that they will not complete the wellbore at the following measured depths unless a 317.s. Stimulation Setback Consent has been obtained from the offset operators: 11,435'-11,612' (Hergert 8-33) 10,312'-10,439' (Hergert 8-34) 8,802'-8,919' (Hergert 8-43)</p> <p>In the operator comment box of the Form 5A, operator must certify that the operator did not stimulate within 150' of an existing wellbore operated by a different operator without a signed waiver from that operator and documentation exists to demonstrate this fact. This will include existing wellbores from a different operator that were not originally within 150' of the planned wellbore, but did end up within 150' of the as-drilled wellbore. Operator agrees to provide this documentation within two business days via email if requested by COGCC staff.</p> <p>Additionally for the wells below, operator must provide in that same operator comment box, the name and API of the well, nearest perforation to that well, and final separation (wellbore to wellbore distance) from that well: 11,435'-11,612' (Hergert 8-33) 10,312'-10,439' (Hergert 8-34) 8,802'-8,919' (Hergert 8-43)</p>
	<p>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU for the first well activity with a rig on the pad and provide 48 hour spud notice for each subsequent well drilled on the pad. 2) Comply with Rule 317.j and provide cement coverage from TD to a minimum of 200' above the Niobrara. Verify coverage with cement bond log. 3) Oil-based drilling fluid is to be used only after all aquifers are covered.</p>
	<p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test: 1) Within 60 days of rig release and prior to stimulation and 2) If a delayed completion, 6-7 months after rig release and prior to stimulation. 3) Within 30 days after first production, as reported on Form 5A.</p>
	<p>Operator acknowledges the proximity of the listed non operated well(s). Operator agrees to provide mitigation Option 1 or 2 (per the DJ Basin Horizontal Offset Policy, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit Form 42(s) "OFFSET MITIGATION COMPLETED" for the remediated wells, referencing the API Number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of the proposed wells.</p> <p>Tigges 31-18 (API #123-11131)</p>
	<p>This Permit to Drill is approved subject to all the BMPs and COAs on the most recently approved Form 2A and any subsequently approved Form 4 for the Oil and Gas Location. The most recently approved Form 2A and any subsequent Form 4s containing applicable COAs for this location shall be posted onsite during construction, drilling, and completions operations.</p>

Best Management Practices

No	BMP/COA Type	Description
1	Planning	Plugged and abandoned wells will be identified pursuant to 319.a.(5)
2	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. Operator is working with midstream operators in the area. Operator will connect to a gas sales line prior to flowback and immediately direct salable quality gas down 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 combustion where non-combustible gases are present.
3	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.
4	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. 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.
5	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 TD 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 measured while-drilling gamma-ray log. The Form 5, Completion Report, for each well on the pad will list all logs run in that well and have those logs attached. The Form 5 for each well shall clearly state "No open-hole logs were run" and shall reference the Rule 317.p Exception granted for the well.
6	Drilling/Completion Operations	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.

Total: 6 comment(s)

Applicable Policies and Notices to Operators

Policy
Notice Concerning Operating Requirements for Wildlife Protection. http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf
Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area. http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf

Attachment Check List

Att Doc Num	Name
401358095	FORM 2 SUBMITTED
401361357	OffsetWellEvaluations Data
401361382	DEVIATED DRILLING PLAN
401361383	DIRECTIONAL DATA

401361385	WELL LOCATION PLAT
401361386	MINERAL LEASE MAP
401361388	EXCEPTION LOC WAIVERS
401361389	EXCEPTION LOC REQUEST
401361401	PROPOSED SPACING UNIT
401372701	OPEN HOLE LOGGING EXCEPTION
401414344	OffsetWellEvaluations Data
401417438	OFFSET WELL EVALUATION

Total Attach: 12 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Final Review	Added stimulation consent certification COA in final approval.	09/29/2017
Permit	Final Review Completed.	09/29/2017
Engineer	No non op wells within 150'. No consent required.	09/28/2017
Permit	Operator requested Exception to Open Hole Logging Rule 317.p. See attached. Permitting Review Complete.	09/26/2017
Permit	Passed Completeness.	08/17/2017
Permit	Returned to draft for: - attachment "OPEN HOLE LOGGING EXCEPTION" is not complete	08/09/2017

Total: 6 comment(s)