

FORM

2

Rev
05/22

State of Colorado

Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number:

403697042

Date Received:

02/27/2024

APPLICATION FOR PERMIT TO

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate
Amend ☐TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: _____Refile ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: Opal Well Number: 5

Name of Operator: BAYSWATER EXPLORATION & PRODUCTION LLC ECMC Operator Number: 10261

Address: 730 17TH ST STE 500

City: DENVER State: CO Zip: 80202

Contact Name: Lauren Walsh Phone: (720)881-4502 Fax: ()

Email: lwalsh@bayswater.us

FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

ECMC Financial Assurance

☒ The Operator has provided or will provide Financial Assurance to the ECMC for this Well.Surety ID Number (if applicable): 20080034

Federal Financial Assurance

☐ In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for this Well. (Per Rule702.a.)

Amount of Federal Financial Assurance \$ _____

WELL LOCATION INFORMATION

Surface Location

QtrQtr: NESE Sec: 6 Twp: 7N Rng: 66W Meridian: 6

Footage at Surface: 2455 Feet FSL 584 Feet FEL

Latitude: 40.603128 Longitude: -104.813097GPS Data: GPS Quality Value: 1.9 Type of GPS Quality Value: PDOP Date of Measurement: 10/30/2022Ground Elevation: 5129Field Name: DJ HORIZONTAL NBRR-FH-CODL-CL Field Number: 16952Well Plan: is ☐ Directional ☒ Horizontal (highly deviated) ☐ Vertical

If Well plan is Directional or Horizontal attach Deviated Drilling Plan and Directional Data.

Subsurface Locations

Top of Productive Zone (TPZ)

Sec: 6 Twp: 7N Rng: 66W Footage at TPZ: 2018 FNL 160 FEL

Measured Depth of TPZ: 7847 True Vertical Depth of TPZ: 7352 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 1 Twp: 7N Rng: 67W Footage at BPZ: 2010 FNL 160 FWL
Measured Depth of BPZ: 18598 True Vertical Depth of BPZ: 6992 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 1 Twp: 7N Rng: 67W Footage at BHL: 2010 FNL 160 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: WELD Municipality: N/A

Is the Surface Location of this Well in an area designated as one of State interest and subject to the requirements of §
24-65.1-108 C.R.S.? Yes

Per § 34-60-106(1)(f)(I)(A) C.R.S., the following questions pertain to the Relevant Local Government approval of the siting of the
proposed Oil and Gas Location.

SB 19-181 provides that when "applying for a permit to drill," operators must include proof that they sought a local government siting
permit and the disposition of that permit application, or that the local government does not have siting regulations. § 34-60-106(1)(f)(I)
(A) C.R.S.

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this Location? ☒ Yes ☐ No

☒ If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve
the siting of the proposed oil and gas location.

The disposition of the application filed with the Relevant Local Government is: Approved Date of Final Disposition: 05/05/2023

Comments: 1041WOGLA22-0018 submitted 12/9/2022, approved 5/5/2023.

**SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS
LOCATION**

Surface Owner of the land at this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Mineral Owner beneath this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Surface Owner Protection Bond (if applicable): _____ Surety ID Number (if applicable): _____

**MINERALS DEVELOPED BY
WELL**

The ownership of all the minerals that will be developed by this Well is (check all that apply):

- ☒ Fee
☐ State
☐ Federal
☐ Indian
☐ N/A

LEASE INFORMATION

Using standard QtrQtr, Section, Township, Range format describe one entire mineral lease as follows:

* If this Well is within a unit, describe a lease that will be developed by the Well.

* If this Well is not subject to a unit, describe the lease that will be produced by the Well.

(Attach a Lease Map or Lease Description or Lease if necessary.)

Lot 1-7, S2NE, SENW, NESW, NESE; Sec 6, T7N, R66W

Total Acres in Described Lease: 545 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 2518 Feet
Building Unit: 2643 Feet
Public Road: 2445 Feet
Above Ground Utility: 618 Feet
Railroad: 5280 Feet
Property Line: 190 Feet

INSTRUCTIONS:

- Specify all distances per Rule 308.b.(1).
- 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 – as defined in 100 Series Rules.

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	407-3551	1280	7N-67W: Sec 1;7N-66W: Sec 6

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

SUBSURFACE MINERAL SETBACKS

Enter 5280 for distance greater than 1 mile.

Is this Well within a unit? Yes

If YES:

Enter the minimum distance from the Completed Zone of this Well to the Unit Boundary: 160 Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well within the same unit permitted or completed in the same formation: 415 Feet

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well producing from the same lease and permitted or completed in the same formation: Feet

Exception Location

☐ If this Well requires the approval of a Rule 401.c Exception Location, enter the Rule or spacing order number and attach the Exception Location Request and Waivers.

SPACING & FORMATIONS COMMENTS

DRILLING PROGRAM

Proposed Total Measured Depth: 18598 Feet

TVD at Proposed Total Measured Depth 6992 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: 13 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 Plan unless a plan was already submitted with the Form 2A per Rule 304.c.(10).

Will there be hydraulic fracture treatment at a depth less than 2,000 feet in this well? No

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

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ or Document Number: _____

<u>Casing Type</u>	<u>Size of Hole</u>	<u>Size of Casing</u>	<u>Grade</u>	<u>Wt/Ft</u>	<u>Csg/Liner Top</u>	<u>Setting Depth</u>	<u>Sacks Cmt</u>	<u>Cmt Btm</u>	<u>Cmt Top</u>
CONDUCTOR	26	16	N/A	42	0	80	400	80	0
SURF	13+1/2	9+5/8	J55	36	0	1500	354	1500	0
1ST	8+1/2	5+1/2	P110	20	0	18598	2467	18598	2500

POTENTIAL FLOW AND CONFINING FORMATIONS

<u>Zone Type</u>	<u>Formation /Hazard</u>	<u>Top M.D.</u>	<u>Top T.V.D.</u>	<u>Bottom M.D.</u>	<u>Bottom T.V.D.</u>	<u>TDS (mg/L)</u>	<u>Data Source</u>	<u>Comment</u>
Confining Layer	Quaternary Alluvium	0	0	19	19			
Groundwater	Laramie/Fox Hills	19	19	320	320	1001-10000	Other	CSU - Domestic Water Analysis Report - Larry Moore Well - 176559
Groundwater	Upper Pierre	320	320	1444	1444	1001-10000	Other	Water Quality and the Presence and Origin of Methane in the Upper Pierre Aquifer in Northeastern Weld County, Morgan County and Logan County, Colorado COGCC Project Number 2141 October 2017
Confining Layer	Pierre Shale	1444	1444	3900	3808			
Hydrocarbon	Parkman	3900	3808	4200	4098			
Confining Layer	Pierre Shale	4200	4098	4500	4382			
Hydrocarbon	Sussex	4500	4382	4600	4515			
Confining Layer	Pierre Shale	4600	4515	5000	4917			
Hydrocarbon	Shannon	5000	4917	5100	5036			
Confining Layer	Pierre Shale	5100	5036	7200	7109			
Confining Layer	Sharon Springs	7200	7109	7300	7148			
Hydrocarbon	Niobrara	7300	7148	18598	6992			The TVD of the deepest hydrocarbon zone is the bottom of the well and not the bottom of the formation. The formation is not planned to be exited.

Comments	<p>The nearest well in unit per 2-D calculation is the Opal 6 @ 415'. The nearest outside operated well per anti-collision is the FRANK BAIAMONTE #2 (API: 05-123-05433) PA Status @ 13'. Also within 175': BAIAMONTE #4 (API: 05-123-05434) PA Status @ 96'. Wells are PA Status; no 408.u is required.</p>
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I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Title: Sr. Regulatory Analyst Date: 2/27/2024 Email: regulatory@ascentgeomatrics.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 ECMC Rules, applicable orders, and SB 19-181 and is hereby approved.

ECMC Approved: _____



Director of ECMC

Date: 4/25/2024

Expiration Date: 12/12/2026

API NUMBER

05 123 52532 00

CONDITIONS OF APPROVAL, IF ANY LIST

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>
Planning	Pursuant to Rule 702.b.(2), the approval of this Application for Permit to Drill constitutes a "change in circumstance" to the approved Financial Assurance Plan. The Operator must file a revised Form 3, Financial Assurance Plan, within 10 days of this approval.
Drilling/Completion Operations	Operator will log three (3) additional wells during the first/second rig occupation with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for the stratigraphically deepest wells on each side/for each wellbore orientation of the pad for a total of four wells logged.
Drilling/Completion Operations	Per COGCC Order 1-232, Bradenhead tests shall be performed according to the following schedule and Form 17 submitted within 10 days of each test: 1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact ECMC engineer prior to stimulation. 2) If a delayed completion, a second test is required between 6-9 months, or if there is pressure above 200 psi, after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact ECMC engineer prior to stimulation. 3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.
Drilling/Completion Operations	1) Submit Form 42 electronically to ECMC 2 business days prior to MIRU (Spud Notice), for the first well/activity on the pad and provide 2 business days spud notice for all subsequent wells drilled on the pad. 2) Comply with Rule 408.j and provide cement coverage from the end of production casing to a minimum of 500' above Niobrara. Verify coverage with cement bond log. 3) Oil-based drilling fluid is to be used only after all aquifers are covered.
Drilling/Completion Operations	Operator acknowledges the proximity of the listed non-producing well(s). Operator agrees to provide mitigation Option 3 (per the DJ Basin Horizontal Offset Policy, ensure all applicable documentation is submitted , and submit Form 42(s) "OFFSET MITIGATION COMPLETED" for the remediated well(s), referencing the API Number of the proposed horizontal wells stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of the proposed wells. UPRR 4 (API NO 123-05421) UPRR 3 (API NO 123-05422) Frank Baimonte 2 (API NO 123-05433) Baimonte 4 (API NO 123-05434) UPRR 12 (API NO 123-05436) Black Hollow-F Biamonte 3 (API NO 123-05441) Baimonts 1 (API NO 123-05442) UPRR 1 (API NO 123-05451) UPRR 11 (API NO 123-05453) UPRR 1-A (API NO 123-07006) Lindblad 1-12 (API NO 123-11263)
Drilling/Completion Operations	Operator acknowledges the proximity of the following listed non-operated wells: Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 ("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 this well. Colorado State 2 (API NO 123-05454)
6 COAs	

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Alternative Logging Program - One of the first wells drilled on the pad will be logged with Open Hole Resistivity Log and Gamma Ray Log from the 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 measured while-drilling gamma-ray log. The Form 5, Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open hole logs shall clearly state "Alternative Logging Program - No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open hole logs were run.`
2	Drilling/Completion 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.`
3	Drilling/Completion Operations	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.`
4	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: 4 comment(s)

ATTACHMENT LIST

<u>Att Doc Num</u>	<u>Name</u>
403697042	FORM 2 SUBMITTED
403697180	OffsetWellEvaluations Data
403697192	WELL LOCATION PLAT
403697194	DEVIATED DRILLING PLAN
403697195	DIRECTIONAL DATA
403769579	OFFSET WELL EVALUATION

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	04/23/2024
Permit	Made the following changes with concurrence from the operator: - Revised Unit Configuration Permit Review Complete	04/18/2024
Permit	Emailed operator for the following: - Confirm revising unit configuration	04/11/2024
Engineer	Offset Wells Evaluated.	04/05/2024
OGLA	The Commission approved OGDG #485055 on December 13, 2023 for the Oil and Gas Location related to this Form 2. OGLA task passed.	02/28/2024

Total: 5 comment(s)