

FORM 2 Rev 05/22

State of Colorado Oil and Gas Conservation Commission

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APPLICATION FOR PERMIT TO

Drill, Deepen, Re-enter, Recomplete and Operate, Amend, Refile, Sidetrack, TYPE OF WELL, OIL, GAS, COALBED, OTHER, ZONE TYPE, SINGLE ZONE, MULTIPLE ZONES, COMMINGLE ZONES

Well Name: Sapphire, Well Number: 2, Name of Operator: BAYSWATER EXPLORATION & PRODUCTION LLC, COGCC 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

COGCC Financial Assurance, The Operator has provided or will provide Financial Assurance to the COGCC 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: SENW, Sec: 5, Twp: 6N, Rng: 65W, Meridian: 6, Footage at Surface: 2013 Feet FNL, 1390 Feet FWL, Latitude: 40.518610, Longitude: -104.691845, GPS Data: GPS Quality Value: 2.2, Type of GPS Quality Value: PDOP, Date of Measurement: 12/15/2022, Ground Elevation: 4817, Field Name: WATTENBERG, Field Number: 90750, Well Plan: is Directional, Horizontal (highly deviated), Vertical

Subsurface Locations, Top of Productive Zone (TPZ), Sec: 32, Twp: 7N, Rng: 65W, Footage at TPZ: 151 FSL, 670 FWL, Measured Depth of TPZ: 7663, True Vertical Depth of TPZ: 7084

Base of Productive Zone (BPZ)

Sec: 29 Twp: 7N Rng: 65W Footage at BPZ: 150 FNL 669 FWL
Measured Depth of BPZ: 17933 True Vertical Depth of BPZ: 7084 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 29 Twp: 7N Rng: 65W Footage at BHL: 150 FNL 669 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? [X] Yes [] No

[X] 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: 12/15/2020

Comments: 1041WOGLA20-0082 submitted 10/19/2020, approved 12/15/2020

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

Surface Owner of the land at this Well's Oil and Gas Location: [X] Fee [] State [] Federal [] Indian

Mineral Owner beneath this Well's Oil and Gas Location: [X] 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):

- [X] 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.)

W/2, Sec 29, 7N, 65W

Total Acres in Described Lease: 320 Described Mineral Lease is: [X] Fee [] State [] Federal [] Indian

Federal or State Lease #

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 860 Feet
Building Unit: 1390 Feet
Public Road: 1383 Feet
Above Ground Utility: 882 Feet
Railroad: 3406 Feet
Property Line: 303 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	2221000273	1280	7N-65W 29: All, 32: All

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: 150 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: 337 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: 17933 Feet

TVD at Proposed Total Measured Depth 7084 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: 10 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? _____

Reuse Facility ID: _____ or Document Number: _____



CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Grade	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	26	16	N/A	42	0	80	400	80	0
SURF	13+1/2	9+5/8	J-55	36	0	1500	354	1500	0
1ST	8+1/2	5+1/2	P-110	20	0	17933	2358	17933	2500

Conductor Casing is NOT planned

POTENTIAL FLOW AND CONFINING FORMATIONS

Zone Type	Formation /Hazard	Top M.D.	Top T.V.D.	Bottom M.D.	Bottom T.V.D.	TDS (mg/L)	Data Source	Comment
Confining Layer	Quaternary Alluvium	0	0	42	42			
Groundwater	Laramie/Fox Hills	42	42	437	437	1001-10000	Other	CSU - Domestic Water Analysis Report - Larry Moore Well - 176559
Groundwater	Upper Pierre	437	437	1600	1561	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	1600	1561	3900	3744			
Hydrocarbon	Parkman	3900	3744	4300	4141			
Confining Layer	Pierre Shale	4300	4141	4700	4503			
Hydrocarbon	Sussex	4700	4503	4800	4636			
Confining Layer	Pierre Shale	4800	4636	5200	5031			
Hydrocarbon	Shannon	5200	5031	5300	5150			
Confining Layer	Pierre Shale	5300	5150	7100	6854			
Confining Layer	Sharon Springs	7100	6854	7200	6888			
Hydrocarbon	Niobrara	7200	6888	17933	7084			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.

OPERATOR COMMENTS AND SUBMITTAL

Comments

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.

COA Type

Description

0 COA

Best Management Practices

No BMP/COA Type

Description

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

Att Doc Num

Name

403286933	WELL LOCATION PLAT
403286942	DEVIATED DRILLING PLAN
403286946	DIRECTIONAL DATA
403289861	OffsetWellEvaluations Data
403315165	STIMULATION SETBACK CONSENT

Total Attach: 5 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)