

Base of Productive Zone (BPZ)

Sec: 16 Twp: 6N Rng: 64W Footage at BPZ: 2274 FNL 200 FEL

Measured Depth of BPZ: 17458 True Vertical Depth of BPZ: 6858 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 16 Twp: 6N Rng: 64W Footage at BHL: 2274 FNL 200 FEL

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: 01/08/2020

Comments: CDP WOGLA 1041WOGLA19-0042 filed 12/10/2019, recorded 1/8/2020. A site-specific WOGLA will be filed prior to commencement of operations.

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.)

T6N-R64W, 6th P.M., Sec. 17: W/2NW/4, SE/4, all formations; Sec. 17: NE, E/2NW/4, SW/4, all formations below the base of the Codell formation

Total Acres in Described Lease: 240 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 533 Feet
Building Unit: 725 Feet
Public Road: 826 Feet
Above Ground Utility: 811 Feet
Railroad: 5280 Feet
Property Line: 301 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	407-3384	1280	6N-64W-16: ALL; 17: 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: 200 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: 635 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. _____

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	A-52A	36.94	0	80	175	80	0
SURF	13+1/2	9+5/8	J-55	36	0	1850	640	1850	0
1ST	8+1/2	5+1/2	P-110	17	0	17458	2022	17458	

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
Groundwater	Surface Alluvium	0	0	205	205	1001-10000	Groundwater Sample	COGCC Environmental Sample Site #755613
Groundwater	Laramie Fox Hills	205	205	360	360	1001-10000	Groundwater Sample	COGCC Environmental Sample Site #752419 & 754475
Confining Layer	Pierre Shale	360	360	590	590			
Groundwater	Upper Pierre Aquifer	590	590	1610	1610	1001-10000	Other	COGCC Project #2141, Figure 5
Confining Layer	Pierre Shale	1610	1610	3700	3650			
Hydrocarbon	Parkman	3700	3650	4200	4125			
Confining Layer	Pierre Shale	4200	4125	4300	4200			
Hydrocarbon	Sussex	4300	4200	4700	4670			
Confining Layer	Pierre Shale	4700	4670	5100	5000			
Hydrocarbon	Shannon	5100	5000	5200	5170			
Confining Layer	Pierre Shale	5200	5170	6100	6030			
Hydrocarbon	Tepee Buttes	6100	6030	6700	6590			
Confining Layer	Pierre Shale	6700	6590	6900	6735			
Hydrocarbon	Niobrara	6900	6735	17458	6858			Potential Flow Formation Table: 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

Noble Energy shall isolate both the Fox Hills and Upper Pierre Aquifers with surface casing from hydrocarbon bearing zones and exposure to oil-based drilling fluid. Noble Energy also agrees to not expose the Upper Pierre Aquifers to oil-based mud.

The nearest well in unit per 2-D calculation is the Foose State A17-647 @ 635'.
 The nearest outside operated well per anti-collision is the State 8461 12-16 (API: 05-123-21675) PA Status @ 176'.
 Wells also within 150':
 Amigo 17-24 (API: 05-123-18485) PR Status @ 75'. Well is Noble operated; no 408.u is required.
 Gully 12-17 (API: 05-123-23040) PR Status @ 98'. Well is Noble operated; no 408.u is required.

Well had a name change from Foose A16-656 to Foose State A17-656 late in the preparation of the attachments to this permit.

This application is in a Comprehensive Area Plan No CAP #:

Oil and Gas Development Plan Name WR OGDP 1 OGDP ID#: 481728

Location ID: 483511

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

Signed:

Print Name: Ann Feldman

Title: Regulatory Manager Date: 3/31/2023 Email: regulatory@ascentgeomatics.c

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules, applicable orders, and SB 19-181 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.

<u>COA Type</u>	<u>Description</u>
0 COA	

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	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 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	If a skid is performed for the subject well, then the only required BOPE tests are for the BOPE connection bonnet seal breaks, as long as a full BOPE test was performed at the beginning of the pad, and as long as all necessary BOPE tests are completed at least every 30 days during the pad operations.
3	Drilling/Completion Operations	Anti-collision: Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed well. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument and compared against the proposed well path with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify bottom hole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment. For the proposed well, upon conclusion of drilling operations, an as constructed gyro survey will be submitted to COGCC with the Form 5.
4	Drilling/Completion Operations	Operator will log two (2) wells during the first rig occupation with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for the two stratigraphically deepest wells on each side of the pad.

Total: 4 comment(s)

Attachment List

<u>Att Doc Num</u>	<u>Name</u>
403295752	OffsetWellEvaluations Data
403295754	DEVIATED DRILLING PLAN
403295756	DIRECTIONAL DATA
403295757	WELL LOCATION PLAT

Total Attach: 4 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	<p>ON HOLD: This application has been reviewed by COGCC staff and cannot be approved based on the information submitted; therefore, the COGCC is placing this form ON HOLD until additional information is received from the applicant. If the information is not received by June 15, 2023 these applications will be withdrawn.</p> <p>In compliance with § 24-65.1-108(1), C.R.S., the COGCC is providing this written request for all additional information necessary for the COGCC to respond to this application. The applicant may provide all requested additional information to COGCC via email. Upon receipt of all requested information, the COGCC will have 60 days in which to approve, deny, or request all additional information necessary to complete the regulatory review. If the applicant no longer requires this application be approved, the applicant may request to withdraw the application.</p> <p>In addition to all standard required information and attachments, the COGCC hereby confirms the following information is necessary for review.</p> <ol style="list-style-type: none"> 1. Remove Open Hole Logging Exception request letter. 2. Add the standard COA for Open Hole Logging: 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 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." 3. Add the additional COA for Open Hole Logging: Operator will log two (2) wells during the first rig occupation with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for the two stratigraphically deepest wells on each side of the pad. 4. Correct the Drilling and Spacing Unit number 5. Correct the Footage at BPZ for each APD 6. Correct the Footage at BHL for each APD 	03/17/2023

Total: 1 comment(s)