



Base of Productive Zone (BPZ)

Sec: 16 Twp: 1N Rng: 64W Footage at BPZ: 460 FSL 2331 FEL
Measured Depth of BPZ: 18293 True Vertical Depth of BPZ: 7150 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 16 Twp: 1N Rng: 64W Footage at BHL: 370 FSL 2331 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? [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: 05/16/2017

Comments: WOGLA17-0020

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
[X] 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.)

Section 16 1N 64W: ALL

Total Acres in Described Lease: 620 Described Mineral Lease is: [ ] Fee [X] State [ ] Federal [ ] Indian

Federal or State Lease # OG-108620

**SAFETY SETBACK INFORMATION**

Distance from Well to nearest:

Building: 2052 Feet  
 Building Unit: 5052 Feet  
 Public Road: 234 Feet  
 Above Ground Utility: 210 Feet  
 Railroad: 5280 Feet  
 Property Line: 245 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	407-3467	1280	T1N,R64W, Sections 9 and 16: 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: 460 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: 617 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**

T1N,R64W, Sections 9 and 16: ALL

## DRILLING PROGRAM

Proposed Total Measured Depth: 18382 Feet

TVD at Proposed Total Measured Depth 7150 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: 274 Feet  No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If yes, attach an H<sub>2</sub>S 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	ASTM	65	0	80	92	80	0
SURF	13+1/2	9+5/8	J55	36	0	2471	671	6471	0
1ST	8+1/2	5+1/2	P110	20	0	18382	2268	18382	0

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	ARAPAHOE	0	0	606	605	501-1000	USGS	USGS-400202104335801 (1070mg/L)
Groundwater	FOX HILLS	606	605	1101	1090	501-1000	USGS	USGS-400537104320901 (649 mg/L)
Confining Layer	PIERRE	1101	1090	1673	1621			
Groundwater	UPPER PIERRE POROSITY	1673	1621	2414	2255	1001-10000	Other	CO DNR Report Project Number 2141
Confining Layer	PIERRE	2414	2255	4658	4165			
Hydrocarbon	PARKMAN	4658	4165	4963	4425			NON PRODUCTIVE HORIZON
Confining Layer	PIERRE	4963	4425	5080	4524			
Hydrocarbon	SUSSEX	5080	4524	5434	4825			NON PRODUCTIVE HORIZON
Confining Layer	PIERRE	5434	4825	5987	5295			
Hydrocarbon	SHANNON	5987	5295	6185	5465			NON PRODUCTIVE HORIZON
Confining Layer	PIERRE	6185	5465	7847	6868			
Hydrocarbon	SHARON SPRINGS	7847	6868	7865	6881			NON PRODUCTIVE HORIZON
Hydrocarbon	NIOBRARA	7865	6881	18382	7150			

## OPERATOR COMMENTS AND SUBMITTAL



## Best Management Practices

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
1	Drilling/Completion Operations	Operator will perform anti-collision evaluation of all active (producing, shut-in, of temporarily abandoned) offset wellbores that have the potential of being within 150' feet of the proposed well prior to drilling operations. Notice shall be given to all offset operators prior to drilling.
2	Drilling/Completion Operations	Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted on a daily basis when practicable.
3	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 openhole 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.
4	Drilling/Completion Operations	Operator will comply with COGCC policy on brandenhead monitoring during hydraulic fracturing treatments in the Greater Wattenberg Area per policy dated may 29 2012.
5	Drilling/Completion Operations	Operator will ensure the wellbore beyond the unit boundary setback is physically isolated and is not completed. IN the operator comments on the Form 5A the operator will 1. Report the footages from the section lines of the bottom of the completed interval 2. describe how the wellbore beyond the unit boundary setback is physically isolated and 3. certify that non of the wellbore beyond the setback was completed

Total: 5 comment(s)

### Attachment List

<b>Att Doc Num</b>	<b>Name</b>
403434663	OffsetWellEvaluations Data
403434666	WELL LOCATION PLAT
403434667	DEVIATED DRILLING PLAN
403434668	OTHER
403434671	DIRECTIONAL DATA

Total Attach: 5 Files

### General Comments

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
Permit	Emailed the SLB to notify them of this pending application. SLB has no concerns with this application.	08/03/2023

Total: 1 comment(s)