

Base of Productive Zone (BPZ)

Sec: 26 Twp: 1N Rng: 68W Footage at BPZ: 460 FSL 2380 FWL

Measured Depth of BPZ: 18942 True Vertical Depth of BPZ: 7730 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 26 Twp: 1N Rng: 68W Footage at BHL: 460 FSL 2380 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: 10/26/2020

Comments: The WOGLA 1041WOGLA20-0018 was approved on October 26, 2020.

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.)

T1N R67W Sec. 19: Lots 1, 2; E/2W/2, SE/4; Sec. 29: NW/4, S/2; T1N R68W Sec. 3: Lot 2, S/2NW/4, SW/4, SE/4; Sec. 10: NW/4; S/2; Sec. 11: NW/4; S/2; Sec. 13: NW/4; S/2; Sec. 14: NW/4; S/2; Sec. 15: NW/4; S/2; Sec. 23: NW/4; S/2; Sec. 25; NW/4; S/2; Sec. 27: NW/4; S/2; Sec. 35: NW/4; S/2.

Total Acres in Described Lease: 5753 Described Mineral Lease is: Fee State Federal Indian
Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 620 Feet
Building Unit: 1014 Feet
Public Road: 583 Feet
Above Ground Utility: 877 Feet
Railroad: 4217 Feet
Property Line: 307 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	407-2533	1920	T1N R68W Sec. 22: E/2; Sec. 23: All; Sec. 26: All; Sec. 27: 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: 320 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

The OGDG Order No. 407-3397 approved the expansion of the Cosslett pad and approved the COGCC Form 2A.

DRILLING PROGRAM

Proposed Total Measured Depth: 18942 Feet

TVD at Proposed Total Measured Depth 7730 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: 85 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	A53B	42.09	0	100	114	100	0
SURF	13+1/2	9+5/8	J55	36	0	2500	833	2500	0
1ST	8+1/2	5+1/2	P110	17	0	18942	2954	18942	

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	Denver	0	0	154	154	501-1000	Groundwater Atlas	USGS HA-646 (Robson & Romero, 1981)
Groundwater	Laramie	154	154	641	631	501-1000	Groundwater Atlas	USGS HA-646 (Robson & Romero, 1981)
Groundwater	Fox Hills	641	631	803	803	501-1000	Groundwater Atlas	USGS HA-646 (Robson & Romero, 1981)
Confining Layer	Pierre Shale	803	803	1049	1049			
Groundwater	Upper Pierre Aquifer	1049	1049	2022	1985	1001-10000	Electric Log Calculation	Coslett B Unit 1X (05-123-12630)
Confining Layer	Base of Upper Pierre Aq	2022	1985	4868	4363			
Hydrocarbon	Larimer	4868	4363	5361	4771			
Hydrocarbon	Sussex	5361	4771	6055	5346			
Hydrocarbon	Shannon	6055	5346	6288	5539			
Confining Layer	Pierre Shale	6288	5539	8829	7613			
Confining Layer	Sharon Springs	8829	7613	8838	7618			
Hydrocarbon	Niobrara	8838	7618	9231	7731			

OPERATOR COMMENTS AND SUBMITTAL

Comments

Distance from completed zone of this wellbore to nearest completed zone of an offset well within the same unit permitted or completed in the same formation was measured to the proposed Cosslett East 1F-22H-H168 operated by Crestone Peak Resources Operating LLC in 2D.

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells was measured to the producing Ranchview 28C-11HZ (05-123-39971) operated by Kerr-McGee Oil & Gas Onshore LP. This distance was determined by the Anticollision report.

This application is in a Comprehensive Area Plan _____ CAP #: _____
Oil and Gas Development Plan Name Cosslett East 22H-H168 OGDP ID#: 482207
Location ID: 323151

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

Signed: _____ Print Name: Andrea Gross

Title: Permit Tech Date: 11/10/2022 Email: agross@upstreampm.com

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.

COA Type

Description

<u>COA Type</u>	<u>Description</u>
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 openhole 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 state "Alternative Logging Program - No open-hole logs were run" and shall clearly identify the type of log and the well (by API#) in which open-hole logs were run.
2	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: 2 comment(s)

Attachment List

Att Doc Num	Name
403220956	WELL LOCATION PLAT
403220968	DIRECTIONAL DATA
403225004	OffsetWellEvaluations Data
403225013	DEVIATED DRILLING PLAN
403225021	OTHER

Total Attach: 5 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)