

Base of Productive Zone (BPZ)

Sec: 21 Twp: 4N Rng: 64W Footage at BPZ: 1979 FNL 2211 FEL
Measured Depth of BPZ: 7600 True Vertical Depth of BPZ: 7598 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 21 Twp: 4N Rng: 64W Footage at BHL: 1979 FNL 2211 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: 03/17/2022

Comments: 1041WOGLA21-0007 CDP is approved

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):

- [] Fee
[] State
[] Federal
[] Indian
[X] 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.)

no mineral estate will be developed by this proposed monitoring well.

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

Federal or State Lease #

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 2057 Feet
Building Unit: 2184 Feet
Public Road: 1984 Feet
Above Ground Utility: 2012 Feet
Railroad: 5280 Feet
Property Line: 471 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.)

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: 1996 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: 5280 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

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DRILLING PROGRAM

Proposed Total Measured Depth: 7600 Feet

TVD at Proposed Total Measured Depth 7598 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: 311 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: _____

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-52	36.94	0	105	64	105	0
SURF	13+1/2	9+5/8	J-55	36	0	1850	775	1850	0
1ST	8+1/2	5+1/2	P-110	17	0	7600	1018	7600	

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	Fox Hills Sandstone	430	430	800	800	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Lower Fox Hills	800	800	855	855			
Confining Layer	Pierre Shale	855	855	900	900			
Groundwater	UPIR/Pawnee Aquifer	900	900	1418	1418	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	1418	1418	3545	3543			
Hydrocarbon	Parkman	3545	3543	3850	3848			
Confining Layer	Pierre Shale	3850	3848	3981	3979			
Hydrocarbon	Sussex	3981	3979	4353	4351			
Confining Layer	Pierre Shale	4353	4351	4824	4822			
Hydrocarbon	Shannon	4824	4822	5757	5755			
Confining Layer	Pierre Shale	5757	5755	6569	6567			
Subsurface Hazard	Sharon Springs	6569	6567	6614	6612			
Hydrocarbon	Niobrara	6614	6612	6859	6857			
Confining Layer	Nio Ft Hays	6859	6857	6874	6872			
Hydrocarbon	Codell	6874	6872	6889	6887			
Confining Layer	Carlile	6889	6887	6933	6931			
Hydrocarbon	Greenhorn	6933	6931	7048	7046			
Hydrocarbon	Graneros X-Bentonite	7048	7046	7253	7251			
Hydrocarbon	D Sand	7253	7251	7313	7311			
Hydrocarbon	J Sand	7313	7311	7398	7396			
Confining Layer	Skull Creek	7398	7396	7600	7598			

OPERATOR COMMENTS AND SUBMITTAL

Comments

The George 21N is located within the Rockies Business Unit in the Denver-Julesburg Basin. The 21N well slot was converted from a horizontal production well to a vertical monitoring well on the George pad. Asset Development requested that the 21N have whole coring from the Sharon Springs through the Niobrara, rotary sidewall cores in the Greenhorn and Graneros, MDT/microfracturing of 6 formations and permanent fiber, TEC line, and 10 monitoring gauges run on the outside of the production casing. The well is strictly designed to be a monitoring well and is not designed to be able to be converted to a production well later in life.

The nearest well belonging to another operator is the LEONARD #4, Operated by Noble Energy, PA, 311' measured in 3D form
Anti-collision report

This application is in a Comprehensive Area Plan No CAP #:
 Oil and Gas Development Plan Name Kenosha OGDID#: 481580

Location ID: 482391

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

Signed: _____

Print Name: Julie Webb

Title: Sr. Regulatory Analyst

Date: 4/25/2024

Email: denverregulatory@chevron.on

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: 5/3/2024

Expiration Date: 06/07/2025

API NUMBER
05 123 51778 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.

COA Type	Description
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 COGCC engineer prior to stimulation. 2) If a delayed completion, 6 months after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation.
Drilling/Completion Operations	1) Submit Form 42 electronically to ECMC 2 business days prior to MIRU (spud notice) for the first well activity with a rig on the pad and provide 2 business day spud notice via Form 42 for all subsequent wells drilled on the pad. 2) Comply with Rule 408.j. and provide cement coverage from TD to a minimum of 500' above Niobrara and from 500' below Sussex to 500' above Sussex. Verify coverage with a cement bond log. 3) Oil based drilling fluid can only be used after all groundwater has been isolated.
2 COAs	

Best Management Practices

No	BMP/COA Type	Description
1	Drilling/Completion Operations	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.
2	Drilling/Completion Operations	Open-hole resistivity log with gamma-ray log will be run from TD into the surface casing. A cement bond log with gamma-ray will be run on production casing, or on intermediate casing if a production liner is run. The Form 5, Completion Report, will list all logs run and have those logs attached.

Total: 2 comment(s)

ATTACHMENT LIST

<u>Att Doc Num</u>	<u>Name</u>
403769941	FORM 2 SUBMITTED
403769952	WELL LOCATION PLAT
403769954	DEVIATED DRILLING PLAN

Total Attach: 3 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Complete	05/02/2024
OGLA	PDC submitted Form 4 Sundry #403772960 for the George 1-24 Oil and Gas Location with a revised Directional Well Plat.	05/02/2024
OGLA	The change from a horizontal production well to a vertical stratigraphic well at the George 4N64W21 1-24 location is a change to the Kenosha OGD. PDC submitted Form 4 Sundry #403772933 for the changes to the Kenosha OGD as required by Rule 301.c. Per Rule 301.c Sundry #403772933 was posted to the ECMC website on 4/29/24 for 14 days	05/02/2024
Permit	Permitting Review Complete.	04/26/2024
Engineer	PFZ table typos. Corrected with operator input.	04/26/2024
Engineer	No new offset mitigation required. Previous offset review encompasses area. Monitoring well only.	04/26/2024

Total: 6 comment(s)