

Base of Productive Zone (BPZ)

Sec: 1 Twp: 4N Rng: 68W Footage at BPZ: 1154 FNL 150 FEL
Measured Depth of BPZ: 19248 True Vertical Depth of BPZ: 7283 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 1 Twp: 4N Rng: 68W Footage at BHL: 1154 FNL 150 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: 07/28/2023

Comments: 1041WOGLA22-0026

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.)

Township 4 North Range 68 West
Section 1: S2NE

Total Acres in Described Lease: 66 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 972 Feet
Building Unit: 972 Feet
Public Road: 703 Feet
Above Ground Utility: 834 Feet
Railroad: 4979 Feet
Property Line: 314 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.)
CODELL	CODL	407-3538	698	T4N R68W SEC 1: N2, SEC 2: N2, SEC 3: E2NE4

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: 471 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: 19248 Feet

TVD at Proposed Total Measured Depth 7283 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: 71 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	36.95	0	80	105	80	0
SURF	13+1/2	9+5/8	J-55	36	0	1500	509	1500	0
1ST	8+1/2	5+1/2	P-110	20	0	19248	2806	19248	

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	Alluvium	24	24	104	104	501-1000	USGS	USGS DWQ Station - B00406704BCC1
Confining Layer	Pierre Formation	104	104	293	293			
Groundwater	Upper Pierre	293	293	1098	1083	501-1000	Other	COGCC UPWQ Report
Confining Layer	Base of Upper Pierre	1098	1083	4023	3533			
Hydrocarbon	Parkman Sandstone	4023	3533	4427	3863			Not productive in this area
Confining Layer	Pierre Formation	4427	3863	4636	4033			
Hydrocarbon	Sussex Sandstone	4636	4033	4851	4208			Not productive in this area
Confining Layer	Pierre Formation	4851	4208	5232	4519			
Hydrocarbon	Shannon Sandstone	5232	4519	5372	4633			Not productive in this area
Confining Layer	Pierre Formation	5372	4633	8175	6918			
Subsurface Hazard	Sharon Springs	8175	6918	8218	6953			Sloughing shales
Hydrocarbon	Niobrara	8218	6953	8709	7258			Not productive in this area
Hydrocarbon	Fort Hayes	8709	7258	8882	7283			Not productive in this area
Hydrocarbon	Codell Sandstone	8882	7283	19248	7283			

OPERATOR COMMENTS AND SUBMITTAL

Comments

The distance to the completed portion of the nearest well in the same unit on the "Spacing & Formation" tab is measured to the proposed Jesser East 3E-20-01 . This distance was measured in 2-dimensional space.

The nearest existing or proposed wellbore belonging to another operator is the Sealock 1, API #05-123-10765. A Stimulation Setback Consent is not required because the wellbore is plugged and abandoned. This distance was measured in 3-dimensional space.

The Avex 2A, API #05-123-35222 is within 150' of the proposed wellbore. A Stimulation Setback Consent is not required because the wellbore is plugged and abandoned. This distance was measured in 3-deminsional space.

Attached as OTHER, is the anti-collision analysis which factors in three dimensional measurements as well as gyro surveys performed on some of the offset wellbores. All measurements to offset wellbores were derived from this analysis.

This application is in a Comprehensive Area Plan _____ CAP #: _____
 Oil and Gas Development Plan Name JESSER 4N68W - EAST OGD ID#: 484943
 Location ID: 310632

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

Signed: _____

Print Name: Jeff Annable

Title: Manager, Regulatory

Date: 12/12/2023

Email: jannable@civiresources.com

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 COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  _____

Director of COGCC

Date: 2/5/2024

Expiration Date: 11/12/2026

API NUMBER

05 123 52411 00

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

Planning	Pursuant to Rule 702.b.(2), the approval of this Application for Permit to Drill constitutes a "change in circumstance" to the approved Financial Assurance Plan. The Operator must file a revised Form 3, Financial Assurance Plan, within 10 days of this approval.
Drilling/Completion Operations	Per ECMC 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 is observed or if there is continuous flow, Operator must contact ECMC engineering for approval prior to stimulation. 2) If a delayed completion, a second test is required between 6-9 months after rig release and must be conducted prior to stimulation. If any pressure greater than 200 psi is observed or if there is continuous flow, Operator must contact ECMC engineering for approval prior to stimulation. 3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.
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. Verify coverage with a cement bond log. 3) Oil based drilling fluid can only be used after all groundwater has been isolated.
Interim Reclamation	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).
Drilling/Completion Operations	If conductors are preset, operator shall comply with Notice to Operators: Procedures for Preset Conductors (dated September 1, 2016).
5 COAs	

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 during the first rig occupation will be logged with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for one of the stratigraphically deepest wells on the pad. 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 will state "Alternative Logging Program - No open-hole logs were run" and will 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

<u>Att Doc Num</u>	<u>Name</u>
403564407	FORM 2 SUBMITTED
403564725	WELL LOCATION PLAT
403607592	OTHER
403607595	DEVIATED DRILLING PLAN
403607602	DIRECTIONAL DATA
403622266	OffsetWellEvaluations Data
403676846	OFFSET WELL EVALUATION

Total Attach: 7 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	02/01/2024
Engineer	The Sealock #1 (123-10765) identified by the offset well evaluation was re-entered and re-plugged by the Orphaned Well Program in January 2024 after this form was submitted. Option 3 no longer required.	01/26/2024
Permit	Passes Permitting Order number on "Spacing & Formations" tab corrected from 407-3539 to 407-3538 (typo).	01/17/2024
OGLA	The Commission approved OGDG #484943 on November 8, 2023 for the Oil and Gas Location related to this Form 2. OGLA task passed.	11/29/2023

Total: 4 comment(s)