

FORM

2

Rev  
05/22

## State of Colorado

## Energy &amp; Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number:

403840876

(SUBMITTED)

Date Received:

06/30/2024

## APPLICATION FOR PERMIT TO

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate
Amend ☐TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: \_\_\_\_\_Refill ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☒

Well Name: RADEMACHER SOUTH

Well Number: 30-16HZ

Name of Operator: KERR MCGEE OIL &amp; GAS ONSHORE LP

ECMC Operator Number: 47120

Address: P O BOX 173779

City: DENVER

State: CO

Zip: 80217-3779

Contact Name: Christina Hirtler

Phone: (720)929-6301

Fax: ( )

Email: christian\_hirtler@oxy.com

## FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

## ECMC Financial Assurance

☒ The Operator has provided or will provide Financial Assurance to the ECMC for this Well.

Surety ID Number (if applicable): 20230087

## Federal Financial Assurance

☐ In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for this Well. (Per Rule702.a.)

Amount of Federal Financial Assurance \$ \_\_\_\_\_

## WELL LOCATION INFORMATION

## Surface Location

QtrQtr: SESW Sec: 30 Twp: 3N Rng: 67W Meridian: 6

FNL/FSL

FEL/FWL

Footage at Surface: 507 Feet FSL 2009 Feet FWL

Latitude: 40.191311

Longitude: -104.934577

GPS Data:

GPS Quality Value: 1.4

Type of GPS Quality Value: PDOP

Date of Measurement: 04/11/2023

Ground Elevation: 4821

Field Name: WATTENBERG

Field Number: 90750

Well Plan: is ☐ Directional ☒ Horizontal (highly deviated) ☐ Vertical

If Well plan is Directional or Horizontal attach Deviated Drilling Plan and Directional Data.

## Subsurface Locations

Top of Productive Zone (TPZ)

Sec: 31 Twp: 3N Rng: 67W

Footage at TPZ: 1594 FNL 2156 FWL

Measured Depth of TPZ: 7725

True Vertical Depth of TPZ: 7112

FNL/FSL

FEL/FWL

**Base of Productive Zone (BPZ)**Sec: 18 Twp: 2N Rng: 67WFootage at BPZ: 1822 FNL 1697 FWLMeasured Depth of BPZ: 24067True Vertical Depth of BPZ: 7236 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 18 Twp: 2N Rng: 67WFootage at BHL: 1822 FNL 1697 FWLFNL/FSLFEL/FWL**LOCAL GOVERNMENT PERMITTING INFORMATION**County: WELDMunicipality: 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: 11/18/2023Comments: WOGLA#: 1041WOGLA23-0013**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 ☐ IndianMineral 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.)

Township 3 North, Range 67 West, 6th P.M.  
Section 31: NW  
Weld County, Colorado

Total Acres in Described Lease: 160 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # \_\_\_\_\_

## SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 1317 Feet  
Building Unit: 1408 Feet  
Public Road: 1997 Feet  
Above Ground Utility: 1934 Feet  
Railroad: 5280 Feet  
Property Line: 507 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	407-3582	1760	3N-67W-31: ALL; 2N-67W-6: ALL; 7: W2; 18: NW

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: 630 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: 496 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: 24067 Feet

TVD at Proposed Total Measured Depth 7236 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: 53 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? Yes

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 A 53B	36.94	0	80	64	80	0
SURF	13+1/2	8+5/8	L80	36	0	1500	590	1500	0
1ST	7+7/8	5+1/2	HCP110	17	0	24067	2795	24067	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	Fox Hills and Shallower	17	17	142	142	501-1000	USGS	Depth data from DWR
Confining Layer	Pierre Shale	143	143	381	391			
Groundwater	Upper Pierre Aquifer	382	382	1226	1220	501-1000	Electric Log Calculation	Controlled by samples
Confining Layer	Pierre Shale	1227	1221	4114	4067			
Hydrocarbon	Sussex	4115	4068	4306	4257			Productive
Confining Layer	Pierre Shale	4307	4258	4653	4599			
Hydrocarbon	Shannon	4654	4600	4703	4648			Non-productive
Confining Layer	Pierre Shale	4704	4649	7240	7000			
Hydrocarbon	Niobrara	7241	7001	24321	7191			*Niobrara base is 1' shallower than corresponding Codell topWe changed the numbers. Remove 0s and add the BTM of the well.

## OPERATOR COMMENTS AND SUBMITTAL

Comments

PLEASE ENSURE ALL CORRESPONDENCE ASSOCIATED WITH THIS PERMIT GOES TO ANALYST ANDDJREGULATORY EMAIL ADDRESSES, AS LISTED ON THIS PERMIT.

Offset well buffer description for the subject well has been included on this permit for review as an attachment labeled "Other."

Base of Productive Zone is the same as Bottom Hole Location

The nearest offset wellbore permitted or completed in the same formation is RADEMACHER SOUTH 30-15HZ, DOC ID: 403671733.

This application is in a Comprehensive Area Plan No CAP #: \_\_\_\_\_  
Oil and Gas Development Plan Name SPROUT OGDID#: 485787  
Location ID: 486288

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

Signed: \_\_\_\_\_ Print Name: Christina Hirtler  
Title: Sr. Regulatory Date: 6/30/2024 Email: christian\_hirtler@oxy.com

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: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

**API NUMBER**

05 123 52569 01

**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**

0 COA	

**Best Management Practices**

**No BMP/COA Type** **Description**

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**ATTACHMENT LIST**

**Att Doc Num** **Name**

403840887	CORRESPONDENCE
403840889	WELLBORE DIAGRAM
403840940	DEVIATED DRILLING PLAN



Total Attach: 4 Files

**General Comments**

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

