

FORM

2

Rev  
05/22

## State of Colorado

## Oil and Gas Conservation Commission

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

Document Number:

403279488

Date Received:

02/22/2023

## 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: HETHCOCK

Well Number: 5-7HZ

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

COGCC Operator Number: 47120

Address: P O BOX 173779

City: DENVER

State: CO

Zip: 80217-3779

Contact Name: RYAN SEASTROM

Phone: (720)929-3139

Fax: ( )

Email: RYAN\_SEASTROM@OXY.COM

## FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

## COGCC Financial Assurance

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

Surety ID Number (if applicable): 20010124

## 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: SENW Sec: 5 Twp: 3N Rng: 65W Meridian: 6

FNL/FSL

FEL/FWL

Footage at Surface: 1689 Feet FNL 2396 Feet FWL

Latitude: 40.257038

Longitude: -104.688094

GPS Data:

GPS Quality Value: 1.5

Type of GPS Quality Value: PDOP

Date of Measurement: 03/03/2022

Ground Elevation: 4900

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: 5 Twp: 3N Rng: 65W

Footage at TPZ: 780 FNL 2488 FWL

Measured Depth of TPZ: 7877

True Vertical Depth of TPZ: 7172

FNL/FSL

FEL/FWL

**Base of Productive Zone (BPZ)**Sec: 17 Twp: 3N Rng: 65WFootage at BPZ: 180 FSL 2480 FWLMeasured Depth of BPZ: 22760True Vertical Depth of BPZ: 7148 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 17 Twp: 3N Rng: 65WFootage at BHL: 180 FSL 2480 FWL

FNL/FSL

FEL/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: 09/29/2022Comments: WOGLA Permit #: 1041WOGLA22-0004**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 65 West, 6th P.M.  
Section 18: ALL  
Weld County, Colorado

Total Acres in Described Lease: 640

Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

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

## SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 2462 Feet  
Building Unit: 2675 Feet  
Public Road: 1676 Feet  
Above Ground Utility: 2369 Feet  
Railroad: 5280 Feet  
Property Line: 366 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	407-3412	6160	T3N R65W; 04: All; 05: All; 08: All; 09: All; 16: All; 17: All; 18: All; 19: All; 20: W2W2, E2; 29: N2NE; 30: W2, NE

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: 180 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: 312 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: 22760 Feet TVD at Proposed Total Measured Depth 7148 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: 352 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 A53 B	36.94	0	80	64	80	0
SURF	13+1/2	9+5/8	L80	36	0	1717	670	1717	0
1ST	7+7/8	5+1/2	HCP110	17	0	22750	2605	22750	

☐ 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	17	17	546	546	501-1000	USGS	Depth estimates from DWR; TDS from USGS
Confining Layer	Pierre Shale	547	547	698	698			
Groundwater	Upper Pierre Aquifer	699	699	1638	1617	1001-10000	Electric Log Calculation	
Confining Layer	Pierre Shale	1639	1618	4552	4303			
Hydrocarbon	Sussex	4553	4304	4869	4596			Productive
Confining Layer	Pierre Shale	4870	4597	7316	6964			
Hydrocarbon	Niobrara	7317	6965	0	0			

### OPERATOR COMMENTS AND SUBMITTAL

Comments PLEASE ENSURE ALL CORRESPONDENCE ASSOCIATED WITH THIS PERMIT GOES TO ANALYST AND DJREGULATORY 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: Hethcock 5-6HZ: DOC ID# 403279346

This application is in a Comprehensive Area Plan No CAP #: \_\_\_\_\_  
Oil and Gas Development Plan Name PIKES PEAK OGD OGD ID#: 482770  
Location ID: 483362  
I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.  
Signed: \_\_\_\_\_ Print Name: RYAN SEASTROM  
Title: REGULATORY ANALYST Date: 2/22/2023 Email: DJREGULATORY@OXY.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: 4/10/2023  
Expiration Date: 11/29/2025

**API NUMBER**

05 123 52111 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**

Drilling/Completion Operations	Operator will log two (2) wells during the first rig occupation with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for the two stratigraphically deepest wells on each side of the pad.
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 is observed or if there is continuous flow, Operator must contact COGCC 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 COGCC 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	Operator acknowledges the proximity of the listed wells. Operator assures that this offset will be remediated per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document (option 4). Operator will submit a Form 42 ("OTHER – AS SPECIFIED BY PERMIT CONDITION") stating that appropriate mitigation will be completed, during the hydraulic stimulation of this well. This Form 42 shall be filed 48 hours prior to stimulation. Surface and production casing pressures of this offset well will be actively monitored during stimulation of this well. Operator will assure that the offset well's bradenhead is monitored via pressure transducer during the entire stimulation treatment of this pad. If there is indication of communication between the stimulation treatment and an offset well, treatment will be stopped and COGCC Engineering notified. 123-48520 Harvey #4N

Drilling/Completion Operations	<p>Operator acknowledges the proximity of the listed wells. Operator agrees to: provide mitigation option 1 or 2 (per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document) to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating that appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>123-14205 BEEBE DRAW UPRR #42-17  123-08284 ARISTOCRAT ANGUS#1  123-12844 WARDELL B #1  123-13094 WARDELL UPRR #42-7  123-14203 BEEBE DRAW UPRR #32-17  123-16582 ARISTOCRAT ANGUS#22-8  123-16583 ARISTOCRAT ANGUS#21-8  123-16449 ARISTOCRAT ANGUS#13-4  123-22833 ARISTOCRAT ANGUS#1-2-8  123-16450 ARISTOCRAT ANGUS#31-8  123-16577 ARISTOCRAT ANGUS#32-8  123-17306 HSR-RAFALOVICH #14-5  123-17304 HSR-OBORNE #9-5  123-17330 HSR-NILAND #6-5  123-17307 HSR-REAM #15-5  123-14204 BEEBE DRAW UPRR #41-17  123-20502 HSR-REI #3-17A  123-21448 ARISTOCRAT ANGUS#12-8  123-35347 REI H #17-21D  123-35346 REI H #17-30D  123-25886 WARDELL #29-20  123-27291 WARDELL #6-4-7  123-32819 REI #27-17  123-29814 REI H #9-32D  123-18460 UPRC #9-12J5  123-14560 UPRR 22 PAN AM UT/S#2</p>
Drilling/Completion Operations	<p>1) Submit Form 42 electronically to COGCC 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.</p> <p>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.</p> <p>3) Oil based drilling fluid can only be used after all groundwater has been isolated.</p>
5 COAs	

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Kerr-McGee acknowledges and will comply with the COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.
2	Drilling/Completion Operations	Anti-Collision: Kerr-McGee will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within one hundred fifty (150) feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators within one hundred fifty (150) feet prior to drilling.
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 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.

Total: 3 comment(s)

## Attachment List

<u>Att Doc Num</u>	<u>Name</u>
403279488	FORM 2 SUBMITTED
403310062	DEVIATED DRILLING PLAN
403310063	WELL LOCATION PLAT
403310064	DIRECTIONAL DATA
403310065	OTHER
403368815	OFFSET WELL EVALUATION

Total Attach: 6 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	04/05/2023
Permit	Permitting review complete.	03/29/2023
Permit	Open: Emailed the SLB to notify them of this pending application. Close: SLB has no concerns with this application.	03/02/2023
OGLA	The Commission approved OGDG #482770 on November 30, 2022 for the Oil and Gas Location related to this Form 2. OGLA task passed.	02/23/2023

Total: 4 comment(s)