

FORM

2

Rev
05/22

State of Colorado

Energy & Carbon Management Commission

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

Document Number:

403440933

Date Received:

10/03/2023

APPLICATION FOR PERMIT TO

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

Well Name: LIZZY NORTH

Well Number: 36-9HZ

Name of Operator: KERR MCGEE OIL & GAS ONSHORE LP

COGCC Operator Number: 47120

Address: P O BOX 173779

City: DENVER

State: CO

Zip: 80217-3779

Contact Name: Loryn Spady

Phone: (720)9293504

Fax: ()

Email: Loryn_Spady@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: SENE Sec: 36 Twp: 1N Rng: 68W Meridian: 6

FNL/FSL

FEL/FWL

Footage at Surface: 2224 Feet FNL 993 Feet FEL

Latitude: 40.008774

Longitude: -104.946103

GPS Data:

GPS Quality Value: 1.9

Type of GPS Quality Value: PDOP

Date of Measurement: 10/22/2022

Ground Elevation: 5115

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: 25 Twp: 1N Rng: 68W

Footage at TPZ: 1 FSL 1772 FWL

Measured Depth of TPZ: 8912

True Vertical Depth of TPZ: 7905

FNL/FSL

FEL/FWL

Base of Productive Zone (BPZ)

Sec: 24 Twp: 1N Rng: 68W Footage at BPZ: 195 FNL 1715 FWL
Measured Depth of BPZ: 19373 True Vertical Depth of BPZ: 7861 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 24 Twp: 1N Rng: 68W Footage at BHL: 195 FNL 1715 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: WELD Municipality: Northglenn

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: 09/27/2023

Comments: Lizzy Oil & Gas Permit Resolution CR-115

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.)

Township 1 North, Range 68 West, 6th P.M.
Section 25: NE/4
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: 1340 Feet
Building Unit: 2301 Feet
Public Road: 1014 Feet
Above Ground Utility: 961 Feet
Railroad: 641 Feet
Property Line: 425 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	407-3512	2560	1N-68W: SEC 24: ALL; SEC 25: ALL; SEC 35:ALL; SEC 36: 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: 195 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: 408 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: 19373 Feet

TVD at Proposed Total Measured Depth 7861 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: 198 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? 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	2100	810	2100	0
1ST	7+7/8	5+1/2	HCP110	17	0	19363	2191	19363	

☐ 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	866	864	0-500	USGS	Depth estimates from DWR; TDS from USGS
Confining Layer	Pierre Shale	867	865	1183	1175			
Groundwater	Upper Pierre Aquifer	1184	1176	2008	1951	1001-10000	Electric Log Calculation	Controlled by water samples
Confining Layer	Pierre Shale	2009	1952	5103	4783			
Hydrocarbon	Sussex	5104	4784	5368	5025			Productive
Confining Layer	Pierre Shale	5369	5026	8029	7459			
Hydrocarbon	Niobrara	8030	7460	8820	7899			
Hydrocarbon	Codell	8821	7900	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: Lizzy North 36-8HZ, DOC ID#: 403440929.

This application is in a Comprehensive Area Plan No CAP #: _____

Oil and Gas Development Plan Name LIZZY OGD OGD ID#: 484466

Location ID: 485209

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

Signed: _____ Print Name: Loryn Spady

Title: Regulatory Analyst Date: 10/3/2023 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: 10/26/2023

Expiration Date: 09/26/2026

API NUMBER

05 123 52254 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	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 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.
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Drilling/Completion Operations	<p>Operator acknowledges the proximity of the listed wells. Operator assures that this offset list will be remediated per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document (option 4). Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") 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. Operator will actively monitor casing (surface and production) pressures 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.</p> <p>001-09945 Rio LC #12-366HN 001-09946 Rio LC #12-365HN 001-09949 Rio LC #12-363HN</p>
Drilling/Completion Operations	<p>Operator acknowledges the proximity of the listed non-operated wells. Operator assures that this offset list will be remediated per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document Operator using Option 3. Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>123-07235 UPRR 43 PAN AM C #1</p>
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>014-12156 CRANDELL E UNIT #2 014-12170 HELEN E UNIT #1 014-12407 BURY CRANDELL C UNIT #1 014-20636 ROBERTS #2 014-20685 BURY CRANDELL #42-23 014-20707 CRANDELL #0-8-26 014-20712 BURY CRANDELL #6-0-23 123-07665 JOHNSTON #14-24 123-14378 UPRR 43 PAN AM Y #1 123-24297 TALBOT #7-25 123-30981 NORTHGLENN STATE #8-36 123-30988 NORTHGLENN STATE #21-36 123-34464 NORTHGLENN STATE #33-36 123-34466 NORTHGLENN STATE #12-36</p>
Drilling/Completion Operations	<p>1) Submit Form 42 electronically to ECOM 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>
Drilling/Completion Operations	<p>Operator will log three (3) wells 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.</p>
6 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>
403440933	FORM 2 SUBMITTED
403489866	OTHER
403489868	DIRECTIONAL DATA
403489869	DEVIATED DRILLING PLAN
403489870	WELL LOCATION PLAT
403574593	OFFSET WELL EVALUATION

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	10/24/2023
Permit	Permitting review complete.	10/23/2023
Engineer	Emailed operator regarding surface casing depth. Feedback received 18-Oct-2023. Forms updated as per email.	10/19/2023
Permit	Open: Emailed the SLB to notify them of this pending application. Close: SLB has no concerns with this application. Permitting review complete.	10/09/2023
OGLA	The Commission approved OGDG #484466 on September 27, 2023 for the Oil and Gas Location related to this Form 2. OGLA task passed.	10/04/2023

Total: 5 comment(s)