

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:

403440945

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: 36-12HZ  
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

Footage at Surface: 2256 Feet FNL 1025 Feet FEL

Latitude: 40.008687 Longitude: -104.946217

GPS Data: GPS Quality Value: 1.9 Type of GPS Quality Value: PDOP Date of Measurement: 10/22/2022

Ground Elevation: 5114

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: 0 FSL 610 FWL  
Measured Depth of TPZ: 9390 True Vertical Depth of TPZ: 7926 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 24 Twp: 1N Rng: 68W Footage at BPZ: 185 FNL 611 FWL  
Measured Depth of BPZ: 19878 True Vertical Depth of BPZ: 7874 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 24 Twp: 1N Rng: 68W Footage at BHL: 185 FNL 611 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? [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: 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: [X] Fee [ ] State [ ] Federal [ ] Indian

Mineral Owner beneath this Well's Oil and Gas Location: [ ] Fee [X] 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
- [X] 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: 1371 Feet  
Building Unit: 2305 Feet  
Public Road: 1046 Feet  
Above Ground Utility: 993 Feet  
Railroad: 683 Feet  
Property Line: 393 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: 185 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: 341 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: 19878 Feet TVD at Proposed Total Measured Depth 7874 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: 703 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	2100	810	2100	0
1ST	7+7/8	5+1/2	HCP110	17	0	19868	2252	19868	

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	867	864	0-500	USGS	Depth estimates from DWR; TDS from USGS
Confining Layer	Pierre Shale	868	865	1185	1175			
Groundwater	Upper Pierre Aquifer	1186	1176	2017	1951	1001-10000	Electric Log Calculation	Controlled by water samples
Confining Layer	Pierre Shale	2018	1952	5319	4783			
Hydrocarbon	Sussex	5321	4784	5602	5025			Productive
Confining Layer	Pierre Shale	5603	5026	8446	7459			
Hydrocarbon	Niobrara	8447	7460	9294	7920			
Hydrocarbon	Codell	9295	7921	0	0			

### OPERATOR COMMENTS AND SUBMITTAL

Comments



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	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>3) Oil based drilling fluid can only be used after all groundwater has been isolated.</li> </ol>
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

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
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

<b>Att Doc Num</b>	<b>Name</b>
403440945	FORM 2 SUBMITTED
403489886	OTHER
403489887	DIRECTIONAL DATA
403489890	DEVIATED DRILLING PLAN
403489891	WELL LOCATION PLAT
403574596	OFFSET WELL EVALUATION

Total Attach: 6 Files

## General Comments

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
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.	10/10/2023
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)