

FORM
2

Rev
08/16

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:

401153645

Date Received:

11/21/2016

APPLICATION FOR PERMIT TO:

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

TYPE OF WELL OIL ☐ GAS ☐ COALBED ☐ OTHER CO2

Refiling ☒

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: CX Well Number: 2
Name of Operator: KINDER MORGAN CO2 CO LP COGCC Operator Number: 46685
Address: 1001 LOUISIANA ST SUITE 1000
City: HOUSTON State: TX Zip: 77002
Contact Name: Chris Lopez Phone: (970)8825537 Fax: ()
Email: christopher_lopez@kindermorgan.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20110027

WELL LOCATION INFORMATION

QtrQtr: Lot 8 Sec: 12 Twp: 38N Rng: 19W Meridian: N

Latitude: 37.563230

Longitude: -108.902360

Footage at Surface: 1606 Feet FNL/FSL FSL 337 Feet FEL/FWL FWL

Field Name: MCELMO Field Number: 53674

Ground Elevation: 6686 County: MONTEZUMA

GPS Data:

Date of Measurement: 09/15/2014 PDOP Reading: 5.9 Instrument Operator's Name: R J Caffey

If well is ☐ Directional ☐ Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: FNL/FSL FEL/FWL Bottom Hole: FNL/FSL FEL/FWL

Sec: Twp: Rng: Sec: Twp: Rng:

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Surface Owner is: ☐ is the mineral owner beneath the location.
(check all that apply) ☐ is committed to an Oil and Gas Lease.

☐ has signed the Oil and Gas Lease.

☐ is the applicant.

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: Yes

The right to construct the Oil and Gas Location is granted by: Bond

Surface damage assurance if no agreement is in place: Blanket Surface Surety ID: 20080051

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

S2NE S11; SWNW and NWSW S12 38N 19W

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

Federal or State Lease #

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 337 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet

Building Unit: 5280 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 2372 Feet

Above Ground Utility: 282 Feet

Railroad: 5280 Feet

Property Line: 362 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).
- 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, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: ☐ Buffer Zone ☐ Exception Zone ☐ Urban Mitigation Area

- Buffer Zone – as described in Rule 604.a.(2), within 1,000' of a Building Unit
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

SPACING and UNIT INFORMATION

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 3430 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 5280 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): McElmo Dome Unit Number: 47653X

SPACING & FORMATIONS COMMENTS

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
LEADVILLE	LDVLL	389-1		

DRILLING PROGRAM

Proposed Total Measured Depth: 8667 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: _____ 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? Yes (If Yes, attach an H₂S Drilling Operations Plan)

Will salt sections be encountered during drilling? Yes

Will salt based (>15,000 ppm Cl) drilling fluids be used? Yes

Will oil based drilling fluids be used? No

BOP Equipment Type: ☒ Annular Preventor ☒ Double Ram ☒ Rotating Head ☐ None

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Recycle/reuse

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Fluids: Recycle as much as possible; any excess will go to licensed UIC disposal facility. Cuttings are dewatered in a closed loop system and disposed of at a permitted E&P commercial solid waste facility.

Beneficial reuse or land application plan submitted? _____

Reuse Facility ID: _____ or Document Number: _____

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	20	16	65	0	80	100	80	0
SURF	12+1/4	9+5/8	36	0	2625	1200	2625	0
1ST	8+3/4	7	29/32	0	8213	2200	8213	0
OPEN HOLE	6			8213	8667			

☐ Conductor Casing is NOT planned

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- ☐ Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- ☐ Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- ☐ Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- ☐ Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 318A.a. Exception Location (GWA Windows).
- ☐ Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

OTHER LOCATION EXCEPTIONS

Check all that apply:

☐ Rule 318.c. Exception Location from Rule or Spacing Order Number _____

☐ Rule 603.a.(2) Exception Location (Property Line Setback).

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments This is a refile of the original CX-2 Form 2 (Doc #400696337) that is set to expire on 12/8/2016. No changes have been made to the original plan/submittal and no horizontal is currently being planned. All the original attachments are still valid.

The well pad location and associated access road have been constructed. Work is expected to begin as soon as possible; January 2017. The drilling process will take approximately 60 days. Interim reclamation will begin approximately six months after the rig is removed from the location.

No hydraulic fracturing is being planned.

There are no water wells located within a .5 mile radius of the CX-2 Limit of Disturbance.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 440304

Is this application being submitted with an Oil and Gas Location Assessment application? No

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

Signed: _____ Print Name: Chris Lopez

Title: EHS Specialist Date: 11/21/2016 Email: christopher_lopez@kindermorg

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 and applicable orders and is hereby approved.

COGCC Approved:  Director of COGCC Date: 12/30/2016

Expiration Date: 12/29/2018

API NUMBER

05 083 06720 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

	Submit CBL on 7" O.D. production casing Follow CO2 venting and monitoring procedures as per procedure prepared by KM, dated June 26, 2014 REV3 and approved by the COGCC Field Inspection Unit. Borehole problems while drilling that require an additional sidetrack: Contact & discuss w/ COGCC Regional Engineer – Mark Weems within 24 hours of occurrence 970-259-4587 off 970-749-0624 cell mark.weems@state.co.us
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Best Management Practices

No BMP/COA Type

Description

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Applicable Policies and Notices to Operators

Policy
Notice Concerning Operating Requirements for Wildlife Protection. http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Attachment Check List

Att Doc Num

Name

901549	OPEN HOLE LOGGING EXCEPTION
401153645	FORM 2 SUBMITTED

Total Attach: 2 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	12/30/2016
Permit	Per operator, corrected casing tab information and added open hole logging exception letter attachment.	12/30/2016
Permit	Per operator, corrected distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation from 2215' to 3430' (NW to 083-06715).	12/20/2016
Engineer	<p>This is a vertically drilled well or a pilot hole.</p> <p>Fresh water zones have been depicted in the lower cretaceous and into the upper triassic or the windgate sandstone (CGS Ground Water Atlas). Of late, the BLM fluids/minerals geologist has expressed an interest and concern for deeper formations or at least 150' into the Chinle formation (<10,000 ppm TDS). The Chinle formation is estimated to be at a depth of 1816'-2525'. The operator plans to set the surface casing at a depth of 2625 or 100' into the Cutler formation. The surface casing will be cemented to surface as a measure to isolate and protect all shallow water aquifers. The deepest water well within a mile of this proposed well is 282' feet deep.</p> <p>There are no other oil and gas wells within 1500' of the operator's well.</p>	12/14/2016
Engineer	This is a re-filing of an expired APD. There are no changes in the drilling and completion plan. The Drilling Prognosis, H2S Operations Plan, and the SELECTED ITEMS REPORT are available in the original approved APD and do apply to this renewed permit.	12/07/2016
Permit	Passed completeness.	11/28/2016
Permit	Corrected typo on Submit Tab (2016 to 2017) per Operator's Request.	11/28/2016

Total: 7 comment(s)