

FORM
2

Rev
08/13

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:

400569094

APPLICATION FOR PERMIT TO:

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

Date Received:

04/11/2014

TYPE OF WELL OIL ☐ GAS ☐ COALBED ☐ OTHER CO2 ☐

Refilling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: CC Well Number: 3
Name of Operator: KINDER MORGAN CO2 CO LP COGCC Operator Number: 46685
Address: 17801 HWY 491
City: CORTEZ State: CO Zip: 81321
Contact Name: Paul Belanger Phone: (970)882-2464 Fax: (970)882-5520
Email: Paul_Belanger@kindermorgan.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20110027

WELL LOCATION INFORMATION

QtrQtr: L17 Sec: 6 Twp: 38N Rng: 18W Meridian: N

Latitude: 37.579900

Longitude: -108.882410

Footage at Surface: 2393 feet FNL/FSL FSL 799 feet FEL/FWL FWL

Field Name: MCELMO Field Number: 53674

Ground Elevation: 6884 County: MONTEZUMA

GPS Data:

Date of Measurement: 02/24/2014 PDOP Reading: 6.0 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
2508 FSL 1045 FWL 2259 FNL 2614 FWL
Sec: 6 Twp: 38N Rng: 18W Sec: 6 Twp: 38N Rng: 18W

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.)

see attached leases:

LEASE 1 (560 ACRES IS THE SURFACE to beginning of horizontal lease that includes: LOT 17 SECTION 6 39N, 18W along with other acreage not involved: SE1/4 and S1/2NE1/4 S29 39N, 18W and trk 44 of section 23 39N, 18W = 560 acres. 4 other leases (3 shared) for lots 14 and 15 for horizontal portions to the NE: 80 and 238.6 = 318.6 acres.

560 + 318.6 = 878.6 total ac.

Total Acres in Described Lease: 879 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: 0 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 619 Feet
Building Unit: 719 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 795 Feet
Above Ground Utility: 744 Feet
Railroad: 5280 Feet
Property Line: 238 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: 03/12/2014

SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 3600 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 Unit Number: 47653X

SPACING & FORMATIONS COMMENTS

no well currently within 5280 feet, but the CNE1 is currently being drilled and is about 3600 from maximum proposed horizontal of this APD (CNE-1 API 05-083-06708)

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: 10194 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 3600 Feet (Including plugged wells)

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: We recycle as much as we can; any excess will go to licensed UIC disposal facility. Cuttings are dewatered in a closed loop system and disposed of in the Montezuma County Land Fill

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	55	0	80	80	80	0
SURF	14+3/4	10+3/4	40	0	3039	2100	3039	0
1ST	9+1/2	7+5/8	30&34	0	8461	2600	8461	0
1ST LINER	6+1/8	4+1/2	13	8461	10194			

☐ 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 one-borehole horizontal apd application. Per drilling plan, p.10, casing will be some 25' into the Leadville at a MD of 8461', the depth used in survey to calculate top of producing interval. The lease for lot 17 is included but not likely needed in that casing is projected to end just over the line to lot 14. The nearest lease considering the leases for Lots 17 with the leases for lots 14 and 15 is zero feet. If casing does not land in lot 17 then the nearest lease will be just a few feet from where production begins in lot 14 to the edge of lots 14 and 15.

There are no water wells located within a .5 mile radius of the CC-3 Limit of Disturbance. A Form 4 will be filed accordingly.

A Surface Use Agreement will be provided once it becomes available.

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

Location ID: _____

Is this application being submitted with an Oil and Gas Location Assessment application? _____ Yes

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

Signed: _____ Print Name: Paul Belanger

Title: Regulatory Contractor Date: 4/11/2014 Email: Paul_Belanger@kindermorgan.

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: 5/31/2014

Expiration Date: 05/30/2016

API NUMBER

05 083 06716 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

	<p>1) Provide 48 hour notice of spud to COGCC and submit via form 42</p> <p>2) Submit CBL on 7 5/8" production casing</p> <p>3) The operator shall comply with Rule 321 and it shall be the operator's responsibility to ensure that the well bore complies with setback requirements in Commission orders and/or rules prior to producing the well.</p> <p>4) Run and submit Directional Survey for primary well bore and for each lateral section</p> <p>5) Borehole problems while drilling that require an additional sidetrack: Contact & discuss w/ COGCC Regional Engineer – Mark Weems within 24 hours of occurrence</p> <p>970-259-4587 off 970-749-0624 cell mark.weems@state.co.us</p>
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Best Management Practices

No BMP/COA Type

Description

1	Planning	<p>A Kinder Morgan Fire Mitigation Plan is currently on file with the Montezuma County Planning Office.</p> <p>Any material not in use that might constitute a fire hazard will be removed a minimum of 25 feet from the wellhead, tanks and separator.</p> <p>Any electrical installations inside the bermed area will comply with API RP 500 classifications and comply with the current national electrical code as adopted by the State of Colorado.</p>
2	Traffic control	<p>A Road Use Plan, which addresses traffic concerns specific to the CC-3, is currently on file with Montezuma County. The Road Use Plan was produced after consulting with the county Road and Bridge Supervisor.</p> <p>All access roads are fully compliant with local county road standards. Access roads are composed of compacted gravel. In an effort to mitigate dust, magnesium-chloride applications to the road surface are performed at the request of Montezuma County.</p>
3	General Housekeeping	<p>Erosion control barriers, namely fiber wattles, will be placed at the edge of disturbance where necessary. Care will be taken to avoid disturbance outside of the project area unless it is deemed necessary for equipment stability and fire safety.</p> <p>During the construction, drilling, and completion phases, on-site trash dumpsters are emptied regularly by the local waste management company.</p> <p>Steel ranch fencing will be placed around the well head after the well is drilled. Once the well is tied in, the fencing will be removed. The proposed well location will be drilled using a closed loop system and will therefore not use open pits.</p> <p>During drilling and completion operations, safety officers are present on location to ensure that livestock, wildlife, and unauthorized personnel do not enter the location.</p> <p>Following completion, the only items present on the well pad are the well head and aboveground pipeline junction.</p>

4	Storm Water/Erosion Control	<p>Diversion ditches will be implemented to divert run-on and run-off around the well pad. Compacted earthen berms will also be utilized to control stormwater run-on and runoff.</p> <p>Tackifier will be added to the stored topsoil piles and all slopes to prevent erosion.</p> <p>Stockpiled soils will have slopes not greater than 3:1.</p> <p>Stormwater BMPs will be maintained/amended by Kinder Morgan as site conditions change throughout the construction and reclamation process.</p>
5	Material Handling and Spill Prevention	<p>The use of a closed-loop drilling system will reduce the amount of waste produced and water used during drilling operations. Solid cuttings will be disposed of at a solid waste facility.</p> <p>Water that can no longer be reused or recycled will be disposed of in a Class I disposal well.</p> <p>Sufficiently impervious containment devices will be constructed around any condensate and produced water tanks. The containment devices will be sufficiently impervious to contain any spilled or released material. All containment devices will be inspected at regular intervals and maintained in good condition.</p> <p>All loadlines are capped.</p> <p>Tanks are designed to meet all API 650 guidelines.</p>
6	Construction	<p>All equipment will be stored within the right-of-way (ROW) area of disturbance. Top soil will be removed to create a level pad for drilling and access road.</p> <p>Vegetation that does not need to be removed will be avoided during construction and removed vegetation will be cut near ground level, leaving the root system intact except where permanent facilities, roads, or ROWs, and wellpads require the complete removal of vegetation.</p>
7	Noise mitigation	<p>During normal operations, the well will remain within COGCC regulations for noise. However, during the construction phase of the project, this standard may be exceeded occasionally.</p>
8	Emissions mitigation	<p>Non-flammable CO₂ will be produced from the Leadville formation and thus green completion per rule 805 (3) does not apply.</p> <p>All CO₂ wells are equipped with a CO₂ leak detection monitor during drilling.</p>
9	Drilling/Completion Operations	<p>In the event that Kinder Morgan does not log the well with minimum open-hole resistivity and gamma ray log per Rule 317.0. then Kinder Morgan will, at a minimum, log the entire vertical well bore, or missing portion of the wellbore, with cased hole gamma ray and pulsed neutron to comply with COGCC Rule 317.o."</p>
10	Drilling/Completion Operations	<p>Blowout preventer equipment (BOPE) complies with COGCC equipment regulations.</p> <p>Mineral Management certification or Director approved training for blowout prevention has been conducted for at least one person at the well site during drilling operations.</p> <p>Kinder Morgan conducts a BOPE test and files a 24 hour notice (Form 42) at the initial rig-up time, after each casing emplacement, and/or every 30 days.</p> <p>KM standard operating protocol includes a check list for well-site clearance activities when a well is transferred from the Drilling Department to the Operations Department.</p> <p>Adequate blowout prevention equipment is used on all well servicing operations.</p> <p>Backup stabbing valves are used on well servicing operations during reverse circulation and are pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.</p> <p>No pits are present at the well site.</p>
11	Interim Reclamation	<p>Surface roughening, surface contouring, seeding, and weed control will be employed to facilitate vegetation reestablishment. Tackifier will be added to reclaimed areas.</p>

12	Final Reclamation	All disturbed areas that are not necessary for operational procedures will be restored to at least 80 percent of pre-disturbance vegetative cover.
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Total: 12 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400569094	FORM 2 SUBMITTED
400588218	WELL LOCATION PLAT
400588220	H2S CONTINGENCY PLAN
400588222	OTHER
400588223	DEVIATED DRILLING PLAN
400588228	DIRECTIONAL DATA
400588229	DRILLING PLAN
400588239	OIL & GAS LEASE
400588242	OIL & GAS LEASE
400588243	OIL & GAS LEASE
400588245	OIL & GAS LEASE
400588246	OIL & GAS LEASE

Total Attach: 12 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Operator provided an BMP regarding logging (Rule 317.o.)	5/27/2014 11:36:05 AM
Permit	Final review completed; no public comment received.	5/27/2014 10:36:18 AM
Engineer	<p>Comments & Questions to operator: (1) The MTD=10194' in the Drilling & Waste Plans section and the MTD=10461' w/ O.H. 10194'-10461'. Is that true and do I need to change the MTD=10461' in the Drilling & Waste Plans section? (2) What material will be used to expand the swellable packers attached to the 4 1/2" production casing? (3) Please provide more of a description of the acid stimulation for the production zone in the Drilling Plan.</p> <p>Response from the operator's drilling engineer is shown below:</p> <p>The MTD = 10194'. The open hole section will be from 8461' to 10194' MD.</p> <p>The packers on the 4-1/2" liner use fresh water to swell.</p> <p>After drilling the lateral the open hole will be logged and tested to determine flow capabilities. If it is determined that the flow is not sufficient for an open hole completion, the liner will be run and selectively perforated based on logs and mud logging. The perforations will be stimulated with 15-28% HCl. Volumes will be determined based on lateral length and amount of perforations along with reservoir quality. If the flow is sufficient, the open hole will either be acid stimulated with 15-28% HCl (washed with coil tubing) or left to produce without stimulation. The open hole stimulation volume will be based on lateral length.</p>	5/1/2014 10:01:40 AM
Permit	Operator revised distance to building unit.	4/28/2014 12:31:14 PM
LGD	Local Applications have been applied for and are going through the review process. Montezuma County is still working out agreements with Kinder Morgan regarding impacts to the County Road System. Any permits issued by the County will address infrastructure impacts.	4/15/2014 4:19:31 PM
Permit	Top of production measured from the wrong section line. Corrected to south line.	4/14/2014 7:21:04 AM

Total: 6 comment(s)