

**APPLICATION FOR PERMIT TO:**

**Drill**
     
  Deepen
     
  Re-enter
     
  Recomplete and Operate

TYPE OF WELL    OIL <input type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER <u>CO2</u>	Refiling <input type="checkbox"/>
ZONE TYPE    SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input type="checkbox"/>

Date Received:  
03/15/2016

Well Name: <u>DC</u>	Well Number: <u>29</u>
Name of Operator: <u>KINDER MORGAN CO2 CO LP</u>	COGCC Operator Number: <u>46685</u>
Address: <u>17801 HWY 491</u>	
City: <u>CORTEZ</u>	State: <u>CO</u>
	Zip: <u>81321</u>
Contact Name: <u>Andy Antipas</u>	Phone: <u>(970)882-5534</u>
	Fax: <u>(970)882-5521</u>
Email: <u>Andrew_Antipas@kindermorgan.com</u>	

**RECLAMATION FINANCIAL ASSURANCE**  
 Plugging and Abandonment Bond Surety ID: 20110027

**WELL LOCATION INFORMATION**

QtrQtr: Lot 3    Sec: 10    Twp: 40N    Rng: 18W    Meridian: N  
 Latitude: 37.746630    Longitude: -108.830460

Footage at Surface: 2220 feet    FNL/FSL FSL 1577 feet    FEL/FWL FEL

Field Name: DOE CANYON    Field Number: 17210  
 Ground Elevation: 7176    County: DOLORES

GPS Data:  
 Date of Measurement: 10/28/2015    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: oil and gas lease

Surface damage assurance if no agreement is in place: \_\_\_\_\_    Surface Surety ID: \_\_\_\_\_

**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.)

40N18W: S10: lots 2, 3 and 6, SESE (133 ac) ; S11: N1/2SW,SWSW (120 ac); S15: NE1/4(160ac)

The Surface owners Blackham and Miller, own an undivided 100% of both the surface AND minerals of Lot 3, Section 10 in equal shares. Both of their mineral interests are under lease, which is owned by Kinder Morgan.

Total Acres in Described Lease: 413 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: 180 Feet

**CULTURAL DISTANCE INFORMATION**

Distance to nearest:

Building: 3130 Feet

Building Unit: 4590 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 2750 Feet

Above Ground Utility: 3350 Feet

Railroad: 5280 Feet

Property Line: 180 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: 2370 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): Doe Canyon Unit Number: 47612X

**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			

**DRILLING PROGRAM**

Proposed Total Measured Depth: 8826 Feet

Distance from proposed wellbore to nearest existing or permitted wellbore belonging to another operator:

5280 Feet (Including plugged wells)

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? Yes (If Yes, attach an H<sub>2</sub>S 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	55	0	80	100	80	0
SURF	12+1/4	9+5/8	36	0	2197	1500	2197	0
1ST	8+3/4	7	29&32	0	8451	1900	8451	0
1ST LINER	6	4+1/2	12.6	8301	8826	100	8826	8301

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 There are no water wells, seeps or springs located within a 1/2 mile radius of the DC-29 well location. A Form 4 will be filed accordingly per Rule 609.  
An SUA is in process of being signed and will email and/or submit sundry asap.  
Procedures for drilling through salt formations are described within drilling plans; H2S procedures attached

This application is in a Comprehensive Drilling Plan       No       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: 3/15/2016 Email: PEBelanger@glassdesignresou

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: 5/25/2016

Expiration Date: 05/24/2018

<b>API NUMBER</b>
05 033 06181 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.

<u>COA Type</u>	<u>Description</u>
	<p>1) Submit CBL on both the 7" O.D. production casing and 4 1/2" OD liner.</p> <p>2) 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.</p> <p>3) If borehole problems occur while drilling and an unplanned sidetrack is required, the following shall apply:</p> <p>a.) Before proceeding, contact the COGCC Regional Engineer for SW Colorado for verbal approval and provide an explanation as to what happened to the original borehole and what the plan is for the sidetrack.</p> <p>Contact Information:            Mark Weems – Regional Engineer-SW Colorado            970-259-4587 off            970-749-0624 cell            mark.weems@state.co.us</p> <p>b.) Adhere to the instructions provided in the "UNPLANNED Sidetrack While Drilling: Approval and Reporting Process – Southwestern Colorado San Juan Basing ONLY" that can be found on the COGCC website.</p> <p>At the COGCC Web Site            Forms            Form 2-Permit to Drill            Instructions</p> <p>4) Contact COGCC Regional Engineer – Mark Weems when encountering a well control issue, unexpected water flows, and unexpected Hydrogen Sulfide.</p>

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	<p>A Kinder Morgan Wildfire Mitigation Plan is currently on file with the Dolores County Planning Office.</p> <p>Any material not in use that might constitute a fire hazard will be moved 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 DC-29, has been agreed upon between Kinder Morgan and Dolores County Road and Bridge. Kinder Morgan has consulted with Dolores County Road and Bridge to ensure that all county related traffic concerns are addressed.</p> <p>All access roads are fully compliant with local county road standards. Access roads are composed of compacted gravel.</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>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>
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>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>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 occasionally exceeded.</p>
8	Emissions mitigation	<p>Non-flammable CO<sub>2</sub> will be produced from the Leadville formation and thus green completion per rule 805 (3) does not apply.</p> <p>All CO<sub>2</sub> wells are equipped with a CO<sub>2</sub> leak detection monitor during drilling.</p>
9	Drilling/Completion Operations	<p>Open-hole Resistivity Log with Gamma Ray Log will be run from TD into the production or intermediate casing . A cased hole Pulsed Neutron log will be run on production casing, or on intermediate casing into the surface casing. A CBL log will be run to surface. Kinder Morgan will use a muddlogger and produce a mudlog from the surface to TD. The Form 5, Completion Report, will list all logs run and have those logs attached.</p> <p>317.p. waiver request letter attached</p>
10	Drilling/Completion Operations	<p>Blowout preventer equipment (BOPE) complies with COGCC equipment regulations.</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>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	Surface roughening, surface contouring, seeding, and weed control will be employed to facilitate vegetation reestablishment. Tackifier will be added to reclaimed areas.
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.

Total: 12 comment(s)

### **Applicable Policies and Notices to Operators**

Policy
Notice Concerning Operating Requirements for Wildlife Protection. <a href="http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf">http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</a>

### **Attachment Check List**

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
400937121	FORM 2 SUBMITTED
400971405	WELL LOCATION PLAT
400993498	DRILLING PLAN
400995696	OIL & GAS LEASE
401004644	OPEN HOLE LOGGING EXCEPTION
401005110	H2S CONTINGENCY PLAN

Total Attach: 6 Files

### **General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit	Final Review Completed.	5/13/2016 8:59:09 AM
OGLA	Corrected distance from Wellhead to Public Road (from 3080" to 2750') on this Form 2#400937121 and the associated Form 2A#400935588 per review of COGCC's Online GIS Map showing the corner of County Road 12 approximately 2750' to the southeast - and per operator's verbal concurrence on 05-12-16.	5/12/2016 4:39:41 PM
Engineer	This is a vertically drilled well.  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 1683'-2096'. The deepest water well within a mile of this proposed well is 145 feet deep. Also, the operator is setting their surface casing well into the Cutler formation or at a depth of 2137' which is 101' deeper than base of the Chinle. The surface casing will be cemented to surface as a measure to isolate and protect all shallow water aquifers.  There are no other oil and gas wells within 1500' of the operator's well.	4/8/2016 11:03:35 AM
Permit	Verify distance from completed portion of wellbore to nearest unit boundary.  Per operator, 4/8/2016, unit boundary on COGIS map is inaccurate, as there are no holes within the unit (i.e. it is contiguous).	4/7/2016 10:26:55 AM
Permit	Passed completeness.	3/18/2016 9:56:21 AM
Permit	On surface and minerals tab, surface damage assurance and surface surety ID are only needed when right to construct is bond. Please remove.	3/17/2016 2:18:08 PM

Total: 6 comment(s)