

FORM
2A

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:

401277370

Date Received:

05/15/2017

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: _____

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

451951

Expiration Date:

08/29/2020

This location assessment is included as part of a permit application.

CONSULTATION

- This location is included in a Comprehensive Drilling Plan. CDP # _____
- This location is in a sensitive wildlife habitat area.
- This location is in a wildlife restricted surface occupancy area.
- This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 46685
 Name: KINDER MORGAN CO2 CO LP
 Address: 1001 LOUISIANA ST SUITE 1000
 City: HOUSTON State: TX Zip: 77002

Contact Information

Name: Chris Lopez
 Phone: (970) 882-5537
 Fax: ()
 email: christopher_lopez@kindermorgan.com

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: 20110027 Gas Facility Surety ID: _____
- Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: CB Number: 5
 County: MONTEZUMA
 Quarter: LOT 12 Section: 14 Township: 38N Range: 19W Meridian: N Ground Elevation: 6623

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 1693 feet FSL from North or South section line
75 feet FWL from East or West section line

Latitude: 37.549030 Longitude: -108.921480

PDOP Reading: 6.0 Date of Measurement: 04/16/2017

Instrument Operator's Name: R. J. Caffey

DRILLING WASTE MANAGEMENT PROGRAM

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

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

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

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ or Document Number: _____

Centralized E&P Waste Management Facility ID, if applicable: _____

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Bessie White

Phone: _____

Address: 8984 Road BB

Fax: _____

Address: _____

Email: _____

City: Pleasant View State: CO Zip: 81331

Surface Owner: Fee State Federal Indian

Check all that apply. The Surface Owner: is the mineral owner

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 from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: Surface Use Agreement

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

Date of Rule 306 surface owner consultation 05/02/2017

CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP

Non-Crop Land: Rangeland Timber Recreational Other (describe): _____

Subdivided: Industrial Commercial Residential

Future Land Use (Check all that apply):

Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP

Non-Crop Land: Rangeland Timber Recreational Other (describe): _____

Subdivided: Industrial Commercial Residential

CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	<u>3797</u> Feet	<u>3797</u> Feet
Building Unit:	<u>3797</u> Feet	<u>3797</u> Feet
High Occupancy Building Unit:	<u>5280</u> Feet	<u>5280</u> Feet
Designated Outside Activity Area:	<u>5280</u> Feet	<u>5280</u> Feet
Public Road:	<u>2052</u> Feet	<u>2052</u> Feet
Above Ground Utility:	<u>5196</u> Feet	<u>5196</u> Feet
Railroad:	<u>5280</u> Feet	<u>5280</u> Feet
Property Line:	<u>75</u> Feet	<u>75</u> Feet

INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- 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.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- Buffer Zone
 Exception Zone
 Urban Mitigation Area

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: _____

- 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.
- Large UMA Facility - as defined in 100-Series Rules.

FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 42. Gladel-Pulpit complex, 3 to 9 percent slopes
NRCS Map Unit Name: 144. Wetherill loam, 3 to 6 percent slopes
NRCS Map Unit Name: 145. Wetherill loam, 6 to 12 percent slopes

PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes No

Plant species from: NRCS or, field observation Date of observation: 05/01/2017

List individual species:

Check all plant communities that exist in the disturbed area.

- Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- Alpine (above timberline)
- Other (describe): Dry land crop

WATER RESOURCES

Is this a sensitive area: No Yes

Distance to nearest

downgradient surface water feature: 490 Feet

water well: 5280 Feet

Estimated depth to ground water at Oil and Gas Location 262 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to groundwater is determined by using depth recordings from nearby well permit applications on file with the Colorado Division of Water Resources.

Sensitive Area Determination:

The nearest perennial water source is approximately 10.3 miles South of the proposed CB-5 project location. The proposed CB-5 CO2 well is not within a local wellhead protection area, is greater than 1/8 mile from a domestic water well, and is greater than 1/4 mile from a public water supply well, ground water basin, or surface water supply area.

Is the location in a riparian area: No Yes

Was an Army Corps of Engineers Section 404 permit filed No Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: _____

Is the Location within a Floodplain? No Yes Floodplain Data Sources Reviewed (check all that apply)

Federal (FEMA)

State

County

Local

Other _____

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

WILDLIFE

This location is included in a Wildlife Mitigation Plan

This location was subject to a pre-consultation meeting with CPW held on _____

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area

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)

RULE 502.b VARIANCE REQUEST

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

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 Kinder Morgan CO2 Company, LP may install glycol skid injection equipment on the well location to address hydrate formation/line obstruction due to freezing. The tanks would be filled by a supply truck every 7 to 10 days, and would be operated between mid-October and June as weather conditions dictate. When not in operation, the skids would either remain installed on location, or be removed from the well location and stored during the off-season to protect them from potential vandalism as determined necessary by Kinder Morgan. The pumps are fairly quiet and should not be audible outside of the well pad area. A plot plan of glycol skid equipment is attached.

There are no water wells, seeps or springs located within a 1/2 mile radius of the proposed CB-5 well location. A Form 4 will be filed accordingly per Rule 609.

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

Signed: _____ Date: 05/15/2017 Email: christopher_lopez@kindermorgan.com

Print Name: Chris Lopez Title: EHS Specialist

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: 8/30/2017

Surface Owner Information

Owner Name	Address	Phone	Fax	Email
Bessie White	8984 Road BB Pleasant View, CO 81331			
Brad E. & Pamela K. White	9136 Road BB Pleasant View, CO 81331			
Michael & Lori Orlander	9136 Road BB Pleasant View, CO 81331			

3 Surface Owner(s)

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

COA Type	Description
	<p>In addition to the notifications required by COGCC listed in Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (a. Notice of Intent to Conduct Hydraulic Fracturing Treatment; b. Notice of Spud; and c. Notice of Construction or Major Change); operator shall notify the COGCC 48 hours prior to pipeline testing (flowline from wellhead to take away pipeline; and/or any temporary surface line used for hydraulic stimulation and/or flowback operations) using the Form 42 (as described in Rule 316C.m. Notice of Completion of Form 2/2A Permit Conditions). The appropriate COGCC individuals will automatically be email notified.</p> <p>All personnel must be H2S trained and proper air monitoring for H2S must be implemented during drilling, completion, and production operations. Emergency response plan for H2S must be onsite at all times.</p>
	<p>Strategically apply fugitive dust control measures, including enforcing established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.</p>
	<p>The moisture content of water/bentonite based mud (WBM) generated drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts.</p> <p>A closed loop system must be implemented during drilling (as indicated on the Form 2 and Form 2A). The moisture content of all drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. All cuttings generated during drilling with salt-based mud (SBM) must be segregated from water/bentonite based mud-(WBM-) generated drill cuttings and placed separately on the well pad. All SBM-generated drill cuttings must be kept in tanks/containers, or placed on a lined/bermed portion of the well pad; prior to disposition. The operator has indicated that 'Cuttings Disposal' will be "OFFSITE" and that the 'Cuttings Disposal Method' will be "COMMERCIAL DISPOSAL" (as shown in the 'DRILLING WASTE MANAGEMENT PROGRAM SECTION' of the Form 2A). All liners associated with salt-based drilling mud and SBM-generated drill cuttings must be disposed of offsite per CDPHE rules and regulations. Any changes to drill cuttings management and disposal at this location will require submittal (via a Form 4 Sundry Notice) and approval of a Waste Management Plan detailing the changes (specifying cuttings characterization methods, cuttings management, amendment, and onsite disposal location[s]).</p> <p>Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated.</p>
	<p>Operator shall pressure test pipelines (flowlines from wellheads to separators to tanks; pipelines from onsite separators to offsite storage tanks, and any temporary surface lines used for hydraulic stimulation and/or flowback operations) in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network, and tested annually, unless agreed to by both parties that the flowlines can be managed under an approved COGCC variance.</p>

Best Management Practices

No	BMP/COA Type	Description
1	Planning	<p>A Kinder Morgan Wildfire 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 moved a minimum of 25 feet from the wellhead.</p> <p>Any electrical installations inside bermed areas (if required) 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 CB-5 well, has been agreed upon between Kinder Morgan and the Montezuma County Road and Bridge Department. Kinder Morgan will consult with the County Road and Bridge Supervisor 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> <p>This well is covered by Kinder Morgan's Cow Canyon State Highway Access Permit and Method of Handling Traffic plan currently on file with CDOT.</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, above ground pipeline junction and possible glycol skid.</p>
4	Storm Water/Erosion Control	<p>Diversion ditches will be implemented to divert stormwater run-on and run-off around the well pad. Compacted earthen berms will also be utilized to control stormwater run-on and run-off.</p> <p>Tackifier will be added to the stored topsoil piles and all slopes to prevent erosion. Stockpiled soils will have slopes not greater than 3:1.</p> <p>Stormwater BMP's 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 permitted commercial solid waste facility.</p> <p>Water that can no longer be reused or recycled will be disposed of in a licensed 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 ROW's, and well pads 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 CO₂ will be produced from the Leadville formation and thus green completion per Rule 805.b.(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>Blowout preventer equipment (BOPE) complies with COGCC equipment regulations. 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>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>
10	Interim Reclamation	<p>This location is currently classified as 'Dry-land Crop'. Surface roughening, surface contouring, seeding and weed control will be employed to facilitate vegetation reestablishment. A standard stabilized "Working Area" 150 feet by 250 feet in size will be maintained as level, graveled and weed-free for maintenance/workover activities. The area surrounding the Working Area will be returned to dry-land crop or re-seeded with a surface owner approved seed mix.</p>
11	Final Reclamation	<p>All disturbed areas that are not necessary for operational procedures will be restored to at least 80 percent of pre-disturbance vegetative cover.</p>

Total: 11 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401277370	FORM 2A SUBMITTED
401277694	ACCESS ROAD MAP
401277695	CONST. LAYOUT DRAWINGS
401277696	CONST. LAYOUT DRAWINGS
401277697	CONST. LAYOUT DRAWINGS
401277698	CONST. LAYOUT DRAWINGS
401277699	REFERENCE AREA MAP
401277703	LOCATION DRAWING
401277712	HYDROLOGY MAP
401278410	SENSITIVE AREA MAP
401278414	NRCS MAP UNIT DESC
401278417	EQUIPMENT LIST
401280427	PROPOSED BMPS
401280430	LOCATION PICTURES
401280432	REFERENCE AREA PICTURES
401280433	SURFACE AGRMT/SURETY
401285761	WELL LOCATION PLAT
401295624	EXCEPTION LOC REQUEST
401295625	EXCEPTION LOC WAIVERS

Total Attach: 19 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	08/30/2017
OGLA	Initiated/Completed OGLA Form 2A review on 07-18-17 by Dave Kubeczko; placed notification, H2S training, closed loop, cuttings low moisture, management, and containment, access road dust control, odor control, and pipeline testing COAs on Form 2A; operator submitted BMPs are sufficient; location is cropland, removed references to timber; changed distance to nearest downgradient surface water from 3083' to 490' based on COGCC's review of the Hydrology Map and COGCC's Online GIS Topo Map layer; location was onsite by COGCC and the operator on 06-27-17; location does not fall within 'Sensitive Wildlife Habitat (SWH)' or 'Restricted Surface Occupancy (RSO)' areas, no CPW consultation required; passed OGLA Form 2A review on 07-18-17 by Dave Kubeczko; notification, H2S training, closed loop, cuttings low moisture, management, and containment, access road dust control, odor control, and pipeline testing COAs.	07/18/2017
Permit	-Checked Plugging & Abandonment Surety ID on Consultation & Contact Info Tab per operator. Passed Completeness.	06/05/2017
Permit	Returned to draft for: -Missing New location designation on Consultation & Contact Info Tab. -Missing 603.a.(2) Exception Location Waiver and Request.	05/26/2017
Permit	Returned to draft per operator request.	05/17/2017

Total: 5 comment(s)