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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
Revised July 18, 2013

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO. 30-003-20025
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. LH4728
7. Lease Name or Unit Agreement Name Cottonwood Canyon
8. Well Number CC-4
9. OGRID Number 34945
10. Pool name or Wildcat Abo Reef
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6845 GR

**SUNDRY NOTICES AND REPORTS ON WELLS**  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well  Gas Well  Other CO2

2. Name of Operator  
Kinder Morgan CO2 Company, L.P.

3. Address of Operator  
830 East Main, Suite 220, Springerville, AZ 85938

4. Well Location  
Unit Letter P : 1,043 feet from the South line and 660 feet from the East line  
Section 16 Township 01N Range 20W NMPM Catron County

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

<b>NOTICE OF INTENTION TO:</b>		<b>SUBSEQUENT REPORT OF:</b>	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input checked="" type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Plug and Abandonment Procedure and Reclamation Plan attached.

Proposed start date for Cottonwood Canyon Plug and Abandonment program (nine wells total): May 15, 2017.

Spud Date:  Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Michael Hannigan TITLE Senior EHS Engineer DATE 2/14/2017

Type or print name Michael Hannigan, P.E. E-mail address: michael\_hannigan@kindermorgan.com PHONE: 970-882-5532

For State Use Only

APPROVED BY: Will Jones TITLE Engineer / DIST IV DATE 3-6-17  
Conditions of Approval (if any):

January 30, 2017

A-Plus Well Service, Inc.  
**PLUG AND ABANDONMENT PROCEDURE**  
**Cottonwood Canyon Unit #4**

Unit P, 1043 FSL and 660' FEL, Section 16, T-01-N, R-20-W  
Catron County, New Mexico / API 30-003-20025  
Lat: N 34.3056400 / Lat: W -108.932110

**Note:** All cement volumes use 100% excess outside pipe and 50' excess inside. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures. All cement will be Class B, mixed at 15.6 ppg with a 1.18 cf/sx yield. This project will utilize a closed-loop system handle waste fluids circulated from the well and cement wash up.

1. Install and test location rig anchors or set a base beam. Comply with all NMOCD, BLM, and Operator safety regulations. MOL and RU daylight pulling unit. Conduct safety meeting for all personnel on location. Record casing, tubing and bradenhead pressures. NU relief line and blow down well.  
**Note:** Existing CIBP at 2780'. Load casing with water. Pressure test 5.5" casing to 800 PSI. Bleed off pressure. ND wellhead and NU BOP. Shell test the BOP.
2. Prepare and tally a 2.375" tubing workstring. **Note:** in 1998 it is reported that a Polybore liner was installed in the 5.5" casing from surface to 2650'; determine the appropriate mill / bit OD). TIH with a 4.75" junk mill and 2.375" tubing workstring to tag existing CIBP at 2780'. May need to use a smaller OD mill due to Polybore liner. Rig up drilling equipment and establish circulation with fresh water. Drill out CIBP and push to 2886' or as deep as possible. TOH and LD mill.
3. **Plug #1 (Precambrian perforations and Abo top, 2886' to 2460')**: TIH with 5.5" cement retainer and set at 2761'. Circulate well clean. *Pressure test the casing to 800 PSI, if the casing does not test then spot or tag subsequent plugs as appropriate.* Establish injection rate below the CR into Precambrian production perforations (2811' to 2886'). Mix 91 to 141 sxs Class B cement. Squeeze 50 to 100 sxs, based on injection rate and pressure, below the CR and into the production perforations. Leave 41 sxs inside the casing above the CR to cover the Abo top and isolate the Precambrian production zone. TOH.
4. **Plug #2 (8.625" Casing shoe and Amos top, 2245' to 2074')**: Perforate 3 HSC holes at 2245' and attempt to establish rate into these squeeze holes. Set a cement retainer at 2195'. Re-establish injection rate into squeeze holes. Mix and pump 60 sxs Class B cement, squeeze 34 sxs outside the 5.5" casing and leave 26 sxs inside to cover the intermediate casing shoe and Amos top. TOH
5. **Plug #3 (Glorieta and Yeso tops, 1360' to 1050')**: Perforate 6 HSC holes at 1360' and attempt to establish rate into squeeze holes. Set a cement retainer at 1310'. Re-establish injection rate in to squeeze holes. Mix and pump 259 sxs Class B cement, squeeze 217 sxs outside the 5.5" casing into the 8-5/8" annulus and leave 42 sxs inside to cover the Glorieta and Yeso tops. TOH
6. **Plug #4 (San Andres top, 920' to 820')**: Perforate 6 HSC holes at 920'. Attempt to establish rate into the squeeze holes. Set a 5-1/2" cement retainer at 870'. Re-establish injection rate into squeeze holes. Mix and pump 117 sxs Class B cement, squeeze 99 sxs outside the 5.5" casing into the 5-1/2" and 8-5/8" annuli leaving 18 sxs inside to cover the San Andres top. TOH

7: **Plug #5 (13.375" Surface casing shoe, 170' to Surface):** Perforate 6 HSC squeeze holes at 170'. Establish circulation out 5-1/2" casing valve with water and circulate the 5-1/2" annulus clean. Mix and pump approximately 45 sxs Class B cement to circulate good cement to surface. Shut in well and WOC.

8: ND the BOP and dig out the wellhead. Complete a hot work permit and cut off the wellhead. Fill annuli with cement as necessary. Install P&A marker to comply with regulations. Record GPS coordinate for P&A marker on tower report. Photograph P&A marker in place. RD, MOL and cut off anchors.

# Cottonwood Canyon Unit #4

## Current Wellbore Diagram

Unit P, 1043' FSL & 660' FEL, Section 16, T-01-N, R-20-W

Catron County, NM / API #30-003-20025

Lat: N 34.3056400 / Lat: W -108.932110

Today's Date: 1/24/2017

Spud: 3/15/1998

Completion:

Elevation: 6892' GL

17.25" hole

San Andres at 870'

Glorieta at 1100'

Yeso at 1310'

Amos Wash at 2195'

Abo at 2510'

Precambrian @ 2886'

Note: Encountered strong water flow at 2220' when drilling.

Note: Ran a Polybore liner in the 5-1/2" casing to 2650' in 1998.

12-1/4" Hole

7-7/8" Hole

TD 2955'  
PBDT 2850'

Pumped 140 sxs into 8-5/8" x 13-3/8" BH annulus.

13-3/8" 48# Casing set at 120'  
Cement: 450 sxs; Circulated.

8-5/8" TOC from top Unknown

5-1/2" x 8-5/8" TOC @ 1060' (CBL 1998)

8-5/8" TOC - Unknown

8-5/8" 36#, casing set at 2124  
Cement with 600 sxs;  
Pumped 140 sxs "on top out"  
Sundry reported.

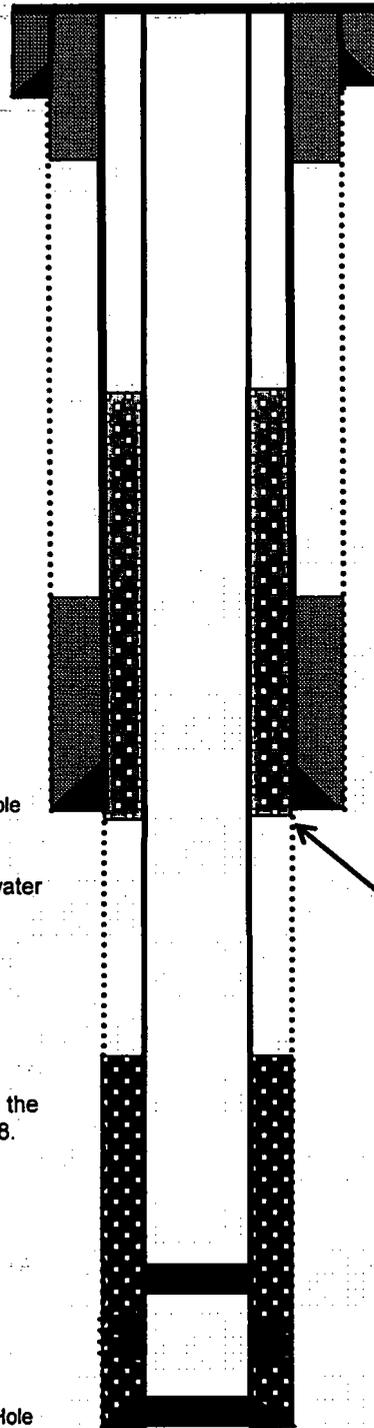
5-1/2" BOC @ 2130' (CBL 1998)  
(174 sxs "top off")

5-1/2" TOC @ 2490' (CBL 1998)  
Logged down to 2710'

CIBP @ 2780' set in 2002 for TA

Perforations:  
2886' to 2811'

5-1/2" 15.5# Casing set @ 2955'  
Cement with 75 sxs lead & 174 tail;  
Sundry reports "top off with 174  
sxs, did not circulate to surface".



# Cottonwood Canyon Unit #4

## Proposed Plugged Well

Unit P, 1043' FSL & 660' FEL, Section 16, T-01-N, R-20-W

Catron County, NM / API #30-003-20025

Lat: N 34.3056400 / Lat: W -108.932110

Today's Date: 1/24/2017

Spud: 3/15/1998

Completion:

Elevation: 6892' GL

Pumped 140 sxs into 8-5/8" x 13-3/8" BH annulus.

**Plug #5** 170' to 0'  
45 sxs, Class B cement

17.25" hole

13-3/8" 48# Casing set at 120'  
Cement: 450 sxs; Circulated.

Perf @ 170'

8-5/8" TOC from top Unknown

San Andres at 870'

CR @ 870'  
Perf @ 920'

**Plug #4** 920' to 820'  
117 sxs, Class B cement  
18 inside, 99 outside

5-1/2" x 8-5/8" TOC @ 1060'  
(CBL 1998)

Glorieta at 1100'

**Plug #3** 1360' to 1050'  
259 sxs, Class B cement  
42 inside, 217 outside

Yeso at 1310'

8-5/8" TOC - Unknown

CR @ 1310'  
Perf @ 1360'

5-1/2" BOC @ 2130' (CBL 1998)  
(174 sxs "top off job")

12-1/4" Hole

8-5/8" 36# casing set at 2124.  
Cement with 600 sxs;  
Pumped 140 sxs "on top out"  
Sundry reported.

Amos Wash at 2195'

CR @ 2195'  
Perf @ 2245'

**Plug #2** 2245' to 2074'  
60 sxs, Class B cement  
26 inside, 34 outside

Note: Encountered strong water  
flow at 2220' when drilling.

Abo at 2510'

5-1/2" TOC @ 2490' (CBL 1998)  
Logged down to 2710'

Note: Ran a Polybore liner in the  
5-1/2" casing to 2650' in 1998.

Precambrian @ 2886'

CR @ 2761'

**Plug #1** 2886' to 2460'  
141 sxs, Class B cement  
41 above CR and 100 under.

Perforations:  
2811' to 2886'

7-7/8" Hole

TD 2955'  
PBD 2850'

5-1/2" 15.5# Casing set @ 2955'  
Cement with 75 sxs lead & 174 tail;  
Sundry reports "top off with 174 sxs,  
did not circulate to surface".

**PROPOSED RECLAMATION PLAN  
Cottonwood Canyon Unit #4  
API 30-003-20025**

Final site reclamation and revegetation of the CC-4 location will consist of re-grading the location to match, as closely as possible, the surrounding contours followed by scarification of previously disturbed areas and the broadcast application of an appropriate seed mix. Any compacted portions of the location will be scarified to a minimum depth of 12 inches while all other areas of disturbance will be scarified to a minimum depth of 6 inches. Following scarification all disturbed areas of the location, including access roads, will be seeded with a mix of plant species appropriate for an arid sandy environment.