

Submit 1 Copy To Appropriate District Office  
 District I - (575) 393-6161  
 1625 N. French Dr., Hobbs, NM 88240  
 District II - (575) 748-1283  
 811 S. First St., Artesia, NM 88210  
 District III - (505) 334-6178  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV - (505) 476-3460  
 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

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (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.)		WELL API NO. 30-003-20042
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other CO2		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator Kinder Morgan CO2 Company, L.P.		6. State Oil & Gas Lease No. LH4757
3. Address of Operator 830 East Main, Suite 220, Springerville, AZ 85938		7. Lease Name or Unit Agreement Name Cottonwood Canyon
4. Well Location Unit Letter <u>D</u> : <u>648</u> feet from the <u>South</u> line and <u>1,378</u> feet from the <u>West</u> line Section <u>27</u> Township <u>01N</u> Range <u>21W</u> NMPM Catron County		8. Well Number <u>CC-14X</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 7069 GR		9. OGRID Number 34945
10. Pool name or Wildcat Abo Reef		

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 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 checked="" 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.

See A-PLUS well plugging report (attached).

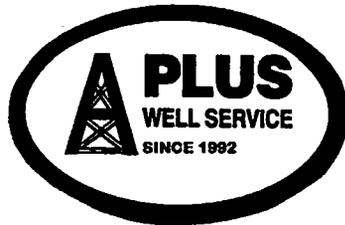
Spud Date: 2/12/2013      Rig Release Date:  

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

SIGNATURE Michael Hannigan TITLE EHS Supervisor DATE 8/17/2017

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 DATE 8/17/17  
 Conditions of Approval (if any):



Kinder Morgan  
17801 Hwy 491  
Cortez, CO 81321

P.O. Box 1979, Farmington, NM 87499  
(505) 325-2827

Cottonwood Canyon #14x

API:30-003-20042,  
July 31, 2017

## Well Plugging Report

---

### Cement Summary

**Plug #1**, Precambrian Open Hole interval, with CR at 2525 ft.; mix and pump 150 sxs Class B cement (15.6 ppg, 177.0 cf.), squeeze 120 sxs below CR and leave 20 sxs above inside 7" casing up to 2419' TOC. WOC overnight. Tag with packer at 2395'.

**Plug #2&3**, Abo and Amos Wash tops and 9-5/8" casing shoe; with 4 squeeze holes at 1922 ft.; with CR at 1871', inside / outside plug, mix and pump 120 sxs of Class B cement (15.6 ppg, 141.6 cf.) from 2241ft. to 1760 ft., squeeze 100 sxs below CR into bad casing and leave 20 sxs above CR at 1760'. No WOC or tag because the 7" casing PT above the CR to 800 PSI.

**Plug #4**, Yeso and Glorieta tops; inside casing only; mix and spot 92 sxs Class B cement (15.6 ppg, 108.6 cf.) from 1168 ft. to 730' TOC. WOC overnight. No tag, 7" casing PT good.

**Plug #5**, San Andreas top and 9-5/8" Surface casing shoe, with 3 squeeze holes at 630 ft.; inside 7" casing only, mix and spot 47 sxs Class B cement (15.6 ppg, 55.5 cf.) from 698 ft. to 448 ft.; WOC overnight; tagged with tubing at 498 ft.

**Plug #6**, Conductor Pipe Shoe and Surface, with 3 squeeze holes at 130 ft.; inside / outside; mix and pump 85 sxs Class B cement (15.6 ppg, 100.3 cf.) from 0 ft. to 130 ft.; pump down 7" with 25 sxs to fill and then squeeze 60 sxs outside the 7" with no circulation to surface. WOC and then saw off wellhead, found TOC: 7" at surface; 7"x 9-5/8" down 3 ft.; and 9-5/8" x 13-3/8" down 48'.

**DHM and Top Off**, Fill casing annuli and install P&A Marker with 33 sxs Class B cement.

### Work Detail

PUX	Activity
07/11/2017	
P	Rode Rig and Equipment to location.
P	HSM, dig out culvert around well head, and level area for Base Beam.
P	Spot in Base Beam tubing floats, Waste Pits, and Water Tank.
P	Spot in and RUSU, unload BOP and RU Pump Truck.
P	Check Well Head pressures, 7" SICP = 75 psi, 7" x 9-5/8" Annulus = 0 psi, 9-5/8" x 13-3/8" Annulus 0 psi, 13-3/8" BH = 0 psi. RU valves and blow down lines. Open well to steel pit and blow down.
P	ND well head, NU BOP and function test (good test). RU rig floor and tubing equipment.

- P RU pump to 7" CSG load with 1/2 Bbl. water test to 800 psi for 30 minutes 0 psi bleed (good test).
- X Make Up 6-1/4" 6 blade mill, bit sub, PU one 3-1/2" DC, RIH tag at top of well head.
- X ND BOP found mandrel set in well head. Take pictures of mandrel to send to Cameron. NU BOP.
- P Secure well and location SDFD.
- P Travel to Motel.
- 07/12/2017
- P Travel to location.
- P HSM, JSA, and service rig and equipment. Check well pressures 0 PSI on well open to steel pit.
- P Spot in drilling equipment. PU power swivel and hang back.
- X ND BOP and bottom well head flange to expose 7" mandrel.
- X Attempt to back out mandrel unable to back off.
- X Wait on orders (NU BOP, and drill out CIBP with 6" blade mill).
- X NU BOP, RU rig floor and TBG equipment.
- P MU 6" 6 blade mill, bit sub, PU 4 - 3-1/2" DC, tally and PU 47 - 2-3/8" tubing joints and tag 7" CIBP at 1575' at top of joint 46. RU power swivel on joint # 47.
- P Start Drilling out 7" CIBP, drilled out 6" lost circulation slow pump rate to 1 BPM and continue drilling. Drilled out total of 9".
- P LD 1 tubing joint with power swivel. Pull 2 joints. Secure well and location.
- P Travel to Springerville.
- 07/13/2017
- P Travel to location
- P HSM, JSA, service rig and equipment. Check well head pressures, 0 psi on well; open casing to steel pit.
- P RIH with 2-tbg joints, PU power swivel with joint #47 and tag 7" CIBP.
- P Continue drilling CIBP and drill out. PU 4-tbg joints with swivel no tag.
- P Hang back power swivel unit. RU 2-3/8" tubing equipment.
- P PU 2-3/8" tubing and chase 7" CIBP to 2589' (open hole).
- P TOO H with 78 joints tubing, LD 4 - 3-1/2" DC, and 6" blade mill.
- P HSM, JSA, RU wireline RIH and set 7" PW CR at 2525'. POOH with setting tool.
- P MU 7" CR stinger; TIH with 80 joints tubing and tag CR at 2525'. Connect pump line to tubing and attempt to load circulate 7" casing. Pumped 110 BBLs with no circulation. Sting into CR est. rate at 1 BPM at 800 PSI into open hole interval.
- P **Plug #1** (Precambrian zone) with CR at 2525', mix and pump 150 sxs Class B cement (177 cf and 15.6 ppg) squeeze 130 sxs below CR into open hole and leave 20 sxs above CR, from 2830' to 2419' TOC.
- P TOO H with 76 tubing and LD 7" CR stinger.
- P Secure well and location. SDFD
- P Travel to Springerville.

07/14/2017

- P Travel to location
- P HSM, JSA, service rig and equipment. Check well head pressures 0 psi on well.
- X PU 7" Weatherford packer TIH with tubing to set packer at 1591'. RU pump line to 7" casing and top load annulus with 25 bbl. water. Pressure test casing from 1591' to surface to 800 PSI, good test. Release packer and re-set at 1876'. Load casing with 15 BBLS and pressure test annulus from 1876' to surface at 800 psi, good test. RU pump line to tubing and establish rate under packer at 4 BPM at 500 PSI into casing leaks between TOC and 1876'. Release packer and RIH to tag plug #1 TOC at 2395'. TOH with tubing and LD packer.
- P HSM, RU wireline unit perforate 4 HSC holes at 1922'. PU 7" PW wireline and set at 1871'. NOTE: procedure change for plug 2/3 approved by Pete McNeal thru NMOCD.
- P MU 7" CR stinger and TIH with tubing to tag CR at 1871'. RU pump to tubing and sting out of CR. Establish circulation out 7" casing valve with water.
- P **Plug #2&3** (Abo and Amos wash tops), with SQZ holes at 1922' and CR at 1871'; mix and pump 120 sxs Class B cement (141.6 cf and 15.6 ppg), squeeze 100 sxs below CR and leave 20 sxs above CR from 2241' to 1760' TOC.
- P TOH with tubing and LD till EOT at 1168'. Establish circulation out 7" casing valve with water.
- P **Plug #4** (Yeso and Glorieta tops), mix and pump 92 sxs Class B cement (108.6 cf and 15.6 ppg) inside 7" casing from 1168' to 730' TOC.
- P LD all tubing and 7" CR stinger.
- P Secure well and location, SDFWE.
- P Travel to Farmington NM.

07/17/2017

- P Travel to location
- P Held SFTY meeting on the JSA, service and start equipment.
- P Check PSI on the well, all at 0 PSI. Open the well to the pit.
- P RIH and perforate 3 HSC holes at 630'. Connect pump line to CSG; load casing with 1/2 bbl. water. Pressured up to 2500 PSI, and bled down to 2300 PSI in 5 minutes and then slowly. Unable to establish injection rate. Repeat pressure up 4 times with the same results. WOO; Note: Pete received approval from Will Jones with NMOCD on 7-17-17 to pump an inside plug over the perfs at 630'; plug from 698' to 448' )
- P **Plug #5**, San Andreas top, with 3 HSC holes at 630 ft.; inside only; mix and pump 47 sxs Class B cement (15.6 ppg. 55.46 cf.) from 698 ft. to 448 ft.; WOC overnight. TIH and tag TOC with at 498'. Clean and secure location and SDFD.
- P TOH with tubing.
- P Return to Springerville.

07/18/2017

- P Travel to location
- P Held SFTY meeting on the JSA, service and start equipment. Check PSI on the well, 0 PSI on the well. Open the well to the pit.
- P TIH with plugging sub and tag the TOC at 498'. TOH LD all TBG.

- P RIH with HSC gun and perforate 3 squeeze holes at 130'. Establish injection rate into the squeeze holes at 2 BPM at 1800 PSI. After pumping 7 bbl. the well started bubbling around the outside of the 30" conductor pipe. Connect pump line to 9-5/8" x 13-3/8" intermediate annulus valve and pressure up to 2000 PSI; with a slow bleed off. Connect to the 7" casing and establish rate at 2 BPM with water bubbling around the conductor pipe.
- P **Plug #6**, Surface, with 3 HSC holes at 130 ft.; inside / outside with no CR; mix and pump 85 sxs Class B cement (15.6 ppg, 100.3 cf.) down the 7" casing into squeeze holes with no circulation to surface.
- P Wash up BOP and equipment, RD TBG equipment and the work floor.
- P RD the daylight pulling unit.
- P Remove the cage from around the well head and remove the cellar protection. Move equipment and spot in on the CC-14. Move spot and level up the rig.
- P Cut off the well head, found the 9-5/8" X 13-3/8" down 48', the 7" x 9-5/8" down 3' and the 7" at surface. Cut and prep the DHM.
- P **Plug #7**, DHM and top off; fill the annuli with 33 sxs Class B cement (38.94 cf. at 15.6 ppg.) mixed and pumped at surface; and set p&a marker.
- P RD CMT equipment, clean and secure location. SDFD
- P Return to Springerville.

\* P - Procedure Planned; U - Unplanned A+ issue; X - COA, Well Conditions

## Comments

Date	Job	Comment
7/14/17	Plug #2/3	NOTE: procedure change for plug 2/3 approved by Pete McNeal thru Will Jones with NMOCD because packer work found holes in 7" casing from 1876' to 2395'; unable to set CR in this bad casing interval.
07/17/2017	Plug #5	Unable to EIR into squeeze holes at 630'. Pete McNeil received approval from Will Jones with NMOCD on 7-17-17 to pump an inside plug over the squeeze holes from 698' to 448'.
07/18/2017	Plug #6	Established injection rate 2 BPM into squeeze holes at 130' with only bubble to surface outside the conductor pipe; no cement to surface.

# Cottonwood Canyon #14x

## As Plugged Diagram

Abo Reef Pool

Unit D, 648' FNL & 1378' FWL, Section 27, T-1-N, R-21-W

Catron County, NM / API #30-003-20042

LAT: 34° 17' 12.62" LONG: -109° 01' 55"

13-3/8" BH Annulus TOC Surface (CBL)

9-5/8" x 13-3/8" Annulus, Circ. 8 bbl. & CBL

Today's Date: 7/28/17

Spud: 5/07/13

Completion: 5/28/13

Elevation: 7416' GL

7430' KB

San Andres at 580'

13-3/8" 54# Casing set at 780'

Cement with 200 sxs  
Circulate 72 bbl. to surface & CBL.

7" x 9-5/8" Annulus TOC at 800' (CBL)

17-1/2" Hole

Glorieta at 910'

Yeso at 1118'

7" ECP & DV Tool at 1640'  
Cement with 100 sxs

9-5/8" 36# Casing set at 1871'

Cmt 1<sup>st</sup> stage with 904 cf; Cir. 60 bbl. & CBL  
Cmt 2<sup>nd</sup> stage with 364 cf; Cir. 8 bbl. & CBL

12-1/4" Hole

Amos Wash at 1873'

Abo at 2191'

TOC at 2200' (CBL)

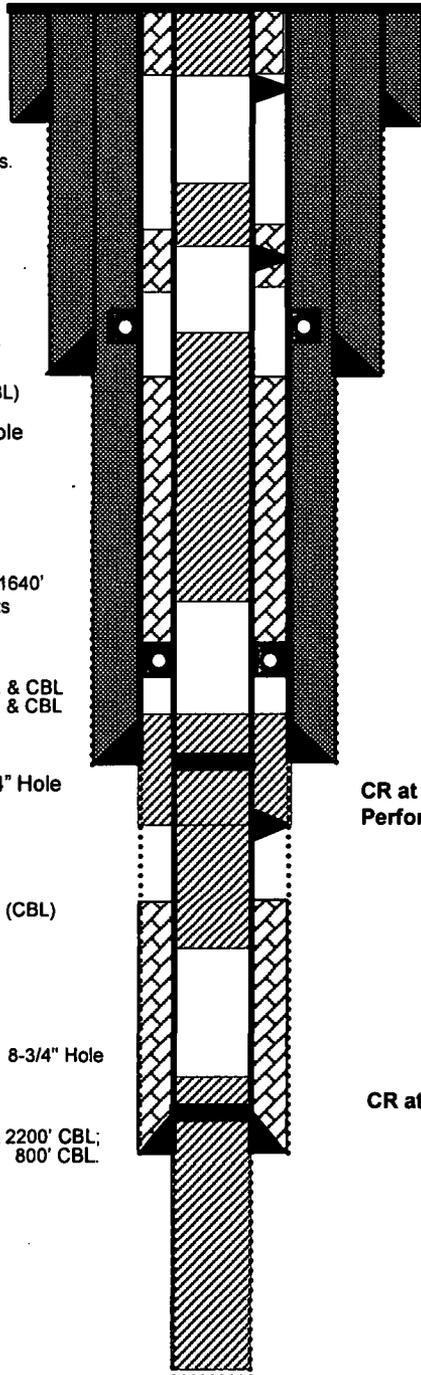
8-3/4" Hole

7" 23# Casing set at 2583'

Cmt 1<sup>st</sup> stage -140 sxs; TOC at 2200' CBL;  
Cmt 2<sup>nd</sup> stage -100 sxs; TOC at 800' CBL.

Precambrian at 2609'

Fractured CO<sub>2</sub> Reservoir



Perforate at 130'

Plug #6: 130' to Surface

85 sxs Class B cement,  
pump down 7" casing with no  
circulation to surface;  
Cut off and found: 7" at surface;  
7" x 9-5/8" - down 3';  
9-5/8" x 13-3/8" - down 48'.

Perforate at 630'

Plug #5: 698' to 448'

47 sxs Class B cement,  
all inside 7" casing; unable to  
establish injection rate into  
7" x 9-5/8" annulus. WOC  
overnight and tag TOC at 498'.

Plug #4: 1168' to 730'

92 sxs Class B cement,  
all inside the 7" casing; no tag.

CR at 1871'

Perforate at 19232

Plug #2 & 3: 2241' to 1760'

120 sxs Class B cement,  
100 sxs below CR and  
20 sxs above, TOC at 1760';  
No WOC; 7" casing PT good.

CR at 2525'

Plug #1: 2830' to 2419'

150 sxs Class B cement,  
130 below CR and 20 above;  
WOC overnight, tag TOC at  
2395'.

6-1/8" Open hole to TD at 2830'

TD 2830'

**Jones, William V, EMNRD**

---

**From:** Hannigan, Michael <Michael\_Hannigan@kindermorgan.com>  
**Sent:** Thursday, August 17, 2017 4:07 PM  
**To:** Jones, William V, EMNRD  
**Cc:** Lowe, Leonard, EMNRD; White, Thomas  
**Subject:** CC-14X, CC-14, CC-6X & CC-5 P&A Reporting  
**Attachments:** CC-14X - P&A Report.pdf; CC-14X Form C-103 P&A (signed) 081717.pdf; CC-14 - P&A Report.pdf; CC-14 Form C-103 P&A 081717.pdf; CC-6x - P&A Report.pdf; CC-6X Form C-103 P&A (signed) 081717.pdf; CC-5 - P&A Report.pdf; CC-5 Form C-103 P&A (signed) 081717.pdf

Will,

Attached please find electronic copies of Form C-103 and the A-PLUS well plugging reports for Cottonwood Canyon wells CC-14X, CC-14, CC-6X and CC-5. This submittal completes the reporting of plugged and abandoned wells in the Cottonwood Canyon Unit. We have been in contact with Ed Martin at the New Mexico State Land Office and, per his instructions, we will reclaim the CC-14/14X location in accordance with the plan submitted to your office along with the Form C-103 Notice of Intention on February 14, 2017. Mr. Martin has determined that reclamation beyond what currently exists at the other Cottonwood Canyon well locations is not required. After reclamation of the CC-14/14X location is complete, I'll send you a Form C-103 for each well that was plugged and abandoned indicating that the locations are ready for inspection. Please contact me if you have any questions or need additional information. Thanks,

Mike

*Michael Hannigan, P.E.*  
EHS Supervisor



Cortez Field Office  
17801 U.S. Highway 491  
Cortez, CO 81321  
Office (970) 882-5532  
Mobile (970) 403-9501

*Will  
8/17/17*