U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

06/10/2024

Well Name: MKL 7

Well Location: T26N / R7W / SEC 7 / SENE / 36.502934 / -107.609641

County or Parish/State: RIO ARRIBA / NM

Well Number: 3

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMSF079162

Unit or CA Name:

Unit or CA Number:

US Well Number: 300392668000S2

Operator: CROSS TIMBERS ENERGY LLC

Notice of Intent

Sundry ID: 2791094

Type of Submission: Notice of Intent

Type of Action: Plug and Abandonment

Date Sundry Submitted: 05/17/2024

Time Sundry Submitted: 09:34

Date proposed operation will begin: 10/15/2024

Procedure Description: Cross Timbers Energy requests approval of the attached Plugging Procedure for the MKL7 #3. Also attached are the WBDs.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

MKL_7_3_Proposed_PA_WBD_05.15.2024_20240517093314.pdf

MKL_7_3_Current_WBD_05.15.2024_20240517093259.pdf

MKL_7__3_Proposed_PA_Procedure_20240517093242.pdf

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Conditions of Approval

Additional

MKL_7_No_3_Geo_Rpt_20240607160143.pdf

Authorized

2791094_NOIA_7_3_3003926680_KR_06102024_20240610093255.pdf

General_Requirement_PxA_20240610093219.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: CONNIE BLAYLOCK

Signed on: MAY 17, 2024 09:33 AM

Name: CROSS TIMBERS ENERGY LLC

Title: Regulatory Technician

Street Address: 400 W 7th St.

City: Forth Worth **State:** TX

Phone: (817) 334-7882

Email address: CBLAYLOCK@MSPARTNERS.COM

Field

Representative Name: Amy Byars

Street Address:

City: **State:** **Zip:**

Phone:

Email address: abyars@mspartners.com

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5055647742

BLM POC Email Address: krennick@blm.gov

Disposition: Approved

Disposition Date: 06/10/2024

Signature: Kenneth Rennick

Proposed P&A Procedure

MKL 7 #3 - 3003926680

Notify Farmington BLM Office at least 24hrs in advance to plugging operations 505 564-7750

1. MIRU P&A services and ancillary equipment.
2. POOH tubing to rods. Latch rods and unseat pump. POOH rods and pump, LD.
3. COOH with tubing. LD TAC. Use tubing as workstring where able. Haul in workstring as necessary.
4. Run a bit and csg scraper to ~6550'.
5. Set CIBP @ 6526'.
6. Circulate hole with BLM/NMOCD approved P&A fluid.
7. Run CBL from ~6000' to surface. Send CBL to BLM/NMOCD and CTE Engineering for review.
8. Plug 1 (Dakota perfs)
    a. Spot **30sx** cement on top of CIBP.
    b. From 6526-6266'
9. Plug 2 (Gallup)
    a. Pump balanced plug **18sx** cement.
        i. From 5772-5622'
10. Plug 3 (Mesa Verde sqz'd Perfs/Mancos)
    a. Set CIBP 3904'
    b. Spot **31sx** cement on top of CIBP.
    c. From 3904-3638'
11. Plug 4 (Chacra)
    a. Pump balanced plug **18sx** cement.
        i. From 3035-2885'
12. Plug 5 (PC/Fruitland)
    a. Pump balanced plug **32sx** cement.
        i. From 2140-1866'
13. Plug 6 (Kirtland/Ojo Alamo)
    a. Pump balanced plug **43sx** cement.
        i. From 1506-1130'
14. Plug 7 (Surface shoe plug)

a. Perforate 433’.
b. Attempt to establish circulation…
    i. if none, spot plug to surface in 5.5” estimated **50sx** needed.
    ii. If established, estimated **171sx** required to fill annulus (including 100% excess in pipe/formation section) and inside 5.5” with excess as required.
c. Ensure cement at surface on all strings of casing, top off as needed.

15. Cut off wellhead below surface casing flange.
16. Install P&A Marker.

Estimated 222 sx to 343 sx cement needed in total.

Please make sure all excess volumes are as follows:

4.2 All cement plugs placed inside casing shall have sufficient volume to fill a minimum of 100' of the casing, or annular void(s) between casings, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.4 All cement plugs placed to fill annular void(s) between casing and the formation shall be of sufficient volume to fill a minimum of 100' of the annular space plus 100% excess, calculated using the bit size, or 100' of annular capacity, determined from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

Cross Timbers Energy, LLC

Current WBD

MKL 7 #3
Rio Arriba County, NM
H S7 T26N R07W

Prepared by: BBerry
Date: 02/28/2024
Updated: 05/15/2024

KB = Unk
GL = 6,132 ft
API# 30-039-26680

Spud Date: 04/10/2001
Ready to produce: 05/21/2001

Nacimiento: Surface
Ojo Alamo: 1180'
Kirtland: 1456'
Fruitland: 1906'
Pictured Cliffs: 2090'
Chacra: 2985'
Mesa Verde Group: 3688'
Mancos (est):4506'
Gallup (est): 5722'
Dakota (est): 6316'
Top Estimates based on Miles Fed 2 BLM Fluid Minerals Geologic Report for NOI to P&A - adj for Elev.

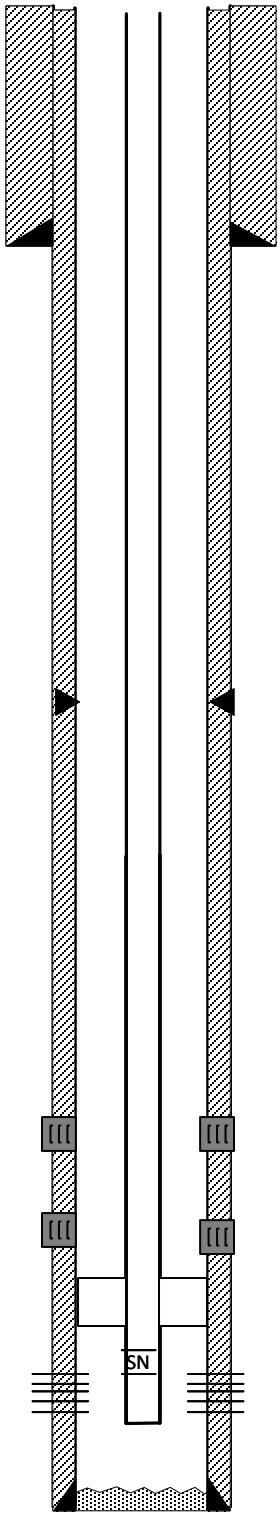
TD – 6,852 ft MD

12-1/4" hole
Surface Csg: 9 5.8" 36# J55 STC
Setting Depth: 383 ft

Cement
160sx Type III cmt w/2% CaCl2
Circ 13 bbls cmt to surface

7-7/8" hole to 6852'
Prod Csg: 5-1/2" 17# N-80 LTC
Setting Depth: 6,852 ft
DV tool @ ~2950'

Cement
1st stage 974 sx 35/65 Poz Type III cmt
20 bbl cement to surface
2nd stage: lead 578 sx 35/65 Poz Type III cmt
2nd stage: tail 50 sx Type III cmt
25 bbl cmt to surface



DV Tool ~2950'

TAC

PBTD: 6,750 ft MD

Chacra Stimulation:
2000 gal 15% MCA acid and 75 ball sealers
Mesa Verde Stimulation:
1000 gal 15% HCl w/70 ball sealers
Dakota Stimulation:
1000 gal 15% NEFE w/90 ball sealers

Chacra Perfs (12/2002)
3054-3152' **(sqz'd w/100 sx cmt) 12/2002**
Mesa Verde Perfs (6/2001):
3954-4522' **(sqz'd w/200 sx cmt) 12/2002**
Dakota Perfs (5/2001): (currently open)
6,576'-6657' (overall)

05/01/2015 – attempt to POOH rods and tubing – TAC sticking at 4180' – unable to pull through tight spot – RBIH tubing and land – TAC not reset – LD all rods except left in hole – LD 69 7/8" and 69 ¾" rods – estimated rods LIH 134) ¾" rods? And DH pump left in hole (unable to work free)

Prod Tbg 05/01/2015:
Est. ~211 jts 2-3/8" 4.7# J-55 tbg:
Est. TAC ~6652' (does not appear to have been reset)
SN depth – not available
NMOCD shows EOT 6714'

Cross Timbers Energy, LLC

Proposed P&A

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Date: 02/28/2024
Update 05/15/2024

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Setting Depth: 6,852 ft
DV tool @ ~2950'

Cement
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2nd stage: lead 578 sx 35/65 Poz Type III cmt
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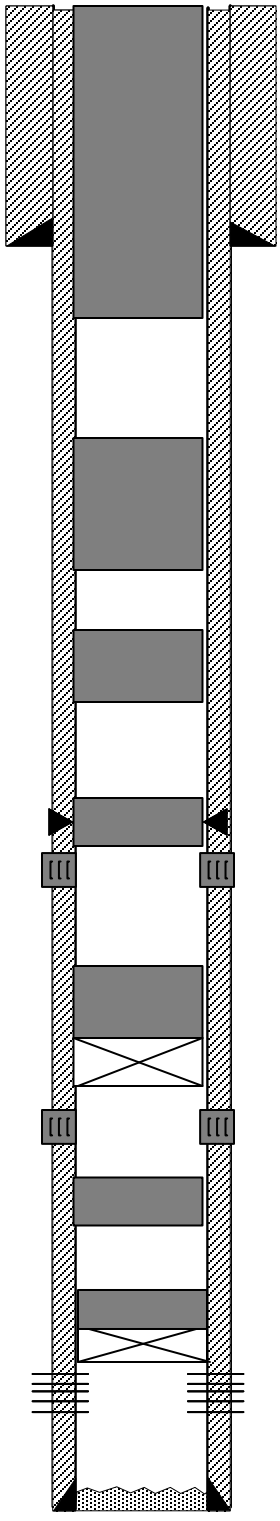

Plug 7 (Surface shoe plug) – Perf 433' Attempt to establish circulation – pump/circ cmt to surface ~171 sx cmt – if no circ, ~50 sx cmt to cap inside casing

Plug 6 (Kirtland/Ojo Alamo) – Balance Plug 43 sx cmt 1506-1130'

Plug 5 (PC/Fruitland) – Balance Plug 32 sx cmt 2140-1866'

Plug 4 (Chacra) – Balance Plug 18 sx cmt 3035-2885'

Plug 3 (Mesa Verde Perfs/Mancos) – CIBP Set @ ~3904' with 31 sx cmt on top (TOC ~3638')

Plug 2 (Gallup) – Balance Plug 18 sx cmt 5772-5622'

Plug 1 (Dakota Perfs) – CIBP Set @ ~6526' with 30 sx cmt on top (TOC ~6266')

PBTD: 6,750 ft MD

Proposed P&A Procedure

MKL 7 #3 - 3003926680

Notify Farmington BLM Office at least 24hrs in advance to plugging operations 505 564-7750

1. MIRU P&A services and ancillary equipment.
2. POOH tubing to rods. Latch rods and unseat pump. POOH rods and pump, LD.
3. COOH with tubing. LD TAC. Use tubing as workstring where able. Haul in workstring as necessary.
4. Run a bit and csg scraper to ~6550'.
5. Set CIBP @ 6526'.
6. Circulate hole with BLM/NMOCD approved P&A fluid.
7. Run CBL from ~6000' to surface. Send CBL to BLM/NMOCD and CTE Engineering for review.
8. Plug 1 (Dakota perfs)
    a. Spot **30sx** cement (1.15 Yield) on top of CIBP.
    b. From 6526-6266'
9. Plug 2 (Gallup)
    a. Pump balanced plug **18sx** cement (1.15 Yield)
        i. From 5780-5630'
10. Plug 3 (Mancos)
    a. Pump balanced plug **18sx** cement (1.15 Yield)
        i. From 4630-4480'
11. Plug 4 (Mesa Verde Group)
    a. Pump balanced plug **18sx** cement (1.15 Yield)
        i. From 3780-3630'
12. Plug 5 (Chacra)
    a. Pump balanced plug **18sx** cement (1.15 Yield).
        i. From 3110-2960'
13. Plug 6 (PC/Fruitland)
    a. Pump balanced plug **40sx** cement (1.15 Yield).
        i. From 2245-1894'
14. Plug 7 (Kirtland/Ojo Alamo)
    a. Pump balanced plug **54sx** cement (1.15 Yield)

i. From 1570-1100’

15. Plug 8 (Surface shoe plug)
    a. Perforate 433’.
    b. Attempt to establish circulation…
        i. if none, spot plug to surface in 5.5” estimated **50sx** (1.15 Yield) needed.
        ii. If established, estimated **171sx** (1.15 Yield) required to fill annulus (including 100% excess in pipe/formation section) and inside 5.5” with excess as required.
    c. Ensure cement at surface on all strings of casing, top off as needed.
16. Cut off wellhead below surface casing flange.
17. Install P&A Marker.

Estimated 246 sx to 367 sx cement needed in total.

Please make sure all excess volumes are as follows:

4.2 All cement plugs placed inside casing shall have sufficient volume to fill a minimum of 100' of the casing, or annular void(s) between casings, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.4 All cement plugs placed to fill annular void(s) between casing and the formation shall be of sufficient volume to fill a minimum of 100' of the annular space plus 100% excess, calculated using the bit size, or 100' of annular capacity, determined from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

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Updated with BLM Tops: 06/17/2024

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GL = 6,132 ft
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Spud Date: 04/10/2001
Ready to produce: 05/21/2001

Nacimiento (BLM): Surface
Ojo Alamo (BLM): 1150'
Kirtland (BLM): 1520'
Fruitland (BLM): 1944'
Pictured Cliffs (BLM): 2195'
Chacra (BLM): 3060'
Mesa Verde Group (BLM): 3370'
Mancos (BLM):4580'
Gallup (BLM): 5730'
Dakota (BLM): 6490'

TD – 6,852 ft MD

12-1/4" hole
Surface Csg: 9 5.8" 36# J55 STC
Setting Depth: 383 ft

Cement
160sx Type III cmt w/2% CaCl2
Circ 13 bbls cmt to surface

7-7/8" hole to 6852'
Prod Csg: 5-1/2" 17# N-80 LTC
Setting Depth: 6,852 ft
DV tool @ ~2950'

Cement
1st stage 974 sx 35/65 Poz Type III cmt
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2nd stage: lead 578 sx 35/65 Poz Type III cmt
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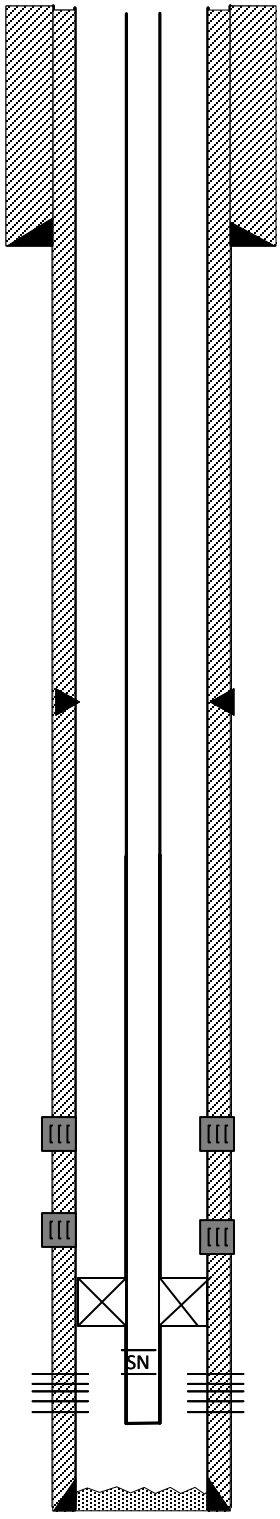
25 bbl cmt to surface



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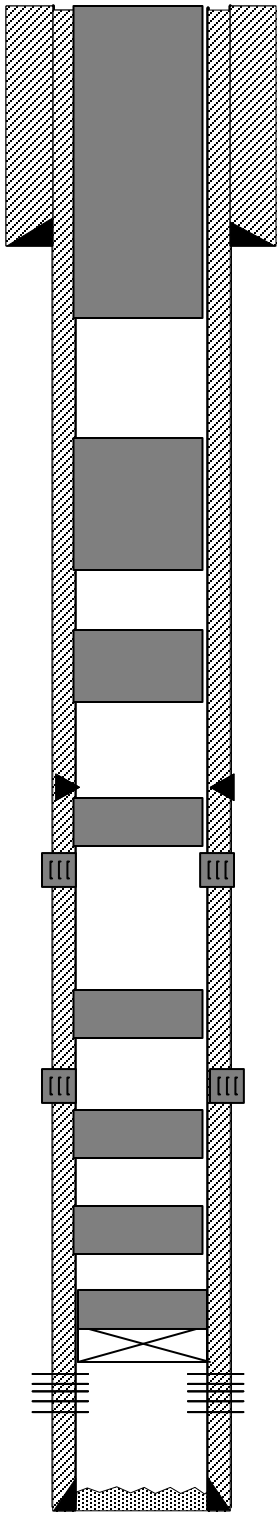

Plug 8 (Surface shoe plug) – Perf 433' Attempt to establish circulation – pump/circ cmt to surface ~171 sx cmt (1.15 yield) – if no circ, ~50 sx cmt (1.15 yield) to cap inside casing

Plug 7 (Kirtland/Ojo Alamo) – Balance Plug 54 sx cmt (1.15 yield) 1570-1100'

Plug 6 (PC/Fruitland) – Balance Plug 40 sx cmt (1.15 yield) 2245-1894'

Plug 5 (Chacra) – Balance Plug 18 sx cmt (1.15 yield) 3110-2960'

Plug 4 (Mesa Verde Group) – Balance Plug 18 sx cmt (1.15 yield) 3780-3630'

Plug 3 (Mancos) – Balance Plug 18 sx cmt (1.15 yield) 4630-4480'

Plug 2 (Gallup) – Balance Plug 18 sx cmt (1.15 yield) 5780-5630'

Plug 1 (Dakota Perfs) – CIBP Set @ ~6526' with 30 sx cmt (1.15 yield) on top (TOC ~6266')

PBTD: 6,750 ft MD

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE
6251 COLLEGE BLVD.
FARMINGTON, NEW MEXICO 87402

AFMSS 2 Sundry ID 2791094

Attachment to notice of Intention to Abandon

Well: MKL 7 3

CONDITIONS OF APPROVAL

1. Plugging operations must be completed by October 1, 2024.

2. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."

3. The following modifications to your plugging program are to be made:
   a. Modify Plug 2 to run from 5630' to 5780' to cover the BLM geologist's pick for the Gallup top.
   b. Add a plug from 4630' to 4480' to cover the BLM geologist's pick for the Mancos.
   c. Modify Plug 3 to run from 3630' to 3780' to cover the BLM geologist's pick for the Mesa Verde Group top.
   d. Modify Plug 4 to run from 2960' to 3110' to cover the BLM geologist's pick for the Chacra top.
   e. Modify Plug 5 to run from 1844' to 2245' to cover the BLM geologist's pick for the Pictured Cliffs and Fruitland tops
   f. Modify Plug 6 to run from 1050' to 1570' to cover the BLM geologist's pick for the Ojo Alamo and Kirtland tops.

4. Farmington Office is to be notified at least 24 hours before the plugging operations commence at (505) 564-7750.

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements.

Office Hours: 7:45 a.m. to 4:30 p.m.

K. Rennick 06/10/2024

BLM - FFO - Geologic Report

Date Completed 6/7/2024

Well No.	MKL 7 # 3			Surf. Loc.	1960	FNL	730	FEL
Lease No.	NMSF079162				Sec	7	T26N	R7W
Operator	Cross Timbers Energy LLC			County	Rio Arriba		State	New Mexico
TVD	6852	PBTD	6852	Formation	Dakota			
Elevation	GL	6132		Elevation	Est. KB	6147	(Estimated)	

Geologic Formations	Est. tops	Subsea Elev.	Remarks
Nacimiento Fm.	Surface		Surface /fresh water sands
Ojo Alamo Ss	1150	4997	Fresh water aquifer
Kirtland Fm.	1520	4627	
Fruitland Fm.	1944	4203	Coal/gas/possible water
Pictured Cliffs	2195	3952	Possible gas/water
Lewis Shale (Main)	2335	3812	Source rock
Huerfanito Bentonite	2630	3517	Reference bed
Chacra (lower)	3060	3087	Possible gas/water
Cliff House Ss	3730	2417	Possible gas/water
Menefee Fm.	3830	2317	Coal/water/possible gas
Point Lookout Fm.	4430	1717	Possible gas/water
Mancos Shale	4580	1567	Source rock
Tocito Ss Lentils	5650	497	Possible gas/water
Gallup	5730	417	Oil & gas
Mancos Stringer	5950	197	Source rock
Juana Lopez	6150	-3	
Brdge Crk/Grnhrn	6300	-153	
Graneros Shale	6380	-233	
Dakota Ss	6490	-343	Possible gas/water
DK Perfs	6576	-429	

Remarks:

-Vertical wellbore, all formation depths are TVD from KB at the wellhead.

-The plug volumes could not be evaluated because the procedure was missing the yield for all the plugs. The cement requirements for this job will be given as cement top depths.

-Modify Plug 2 to run from 5630' to 5780' to cover the BLM geologist's pick for the Gallup top.

-Add a plug from 4630' to 4480' to cover the BLM geologist's pick for the Mancos.

-Modify Plug 3 to run from 3630' to 3780' to cover the BLM geologist's pick for the Mesa Verde Group top.

Modify Plug 4 to run from 2960' to 3110' to cover the BLM geologist's pick for the Chacra top.

Modify Plug 5 to run from 1844' to 2245' to cover the BLM geologist's pick for the Pictured Cliffs and Fruitland tops.

Modify Plug 6 to run from 1050' to 1570' to cover the BLM geologist's pick for the Ojo Alamo and Kirtland tops.

Reference Well:

Cross Timbers Energy LLC.
MKL 7 # 3

Prepared by: Walter Gage

GENERAL REQUIREMENTS FOR PERMANENT ABANDONMENT OF WELLS ON FEDERAL AND INDIAN LEASES FARMINGTON FIELD OFFICE

1.0 The approved plugging plans may contain variances from the following minimum general requirements.

1.1 Modification of the approved plugging procedure is allowed only with the prior approval of the Authorized Officer, Farmington Field Office.

1.2 Requirements may be added to address specific well conditions.

2.0 Materials used must be accurately measured. (densometer/scales)

3.0 A tank or lined pit must be used for containment of any fluids from the wellbore during plugging operations and all pits are to be fenced with woven wire. These pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced.

3.1 Pits are not to be used for disposal of any hydrocarbons. If hydrocarbons are present in the pit, the fluids must be removed prior to filling in.

4.0 All cement plugs are to be placed through a work string. Cement may be bull-headed down the casing with prior approval. Cement caps on top of bridge plugs or cement retainers may be placed by dump bailer.

4.1 The cement shall be as specified in the approved plugging plan.

4.2 All cement plugs placed inside casing shall have sufficient volume to fill a minimum of 100' of the casing, or annular void(s) between casings, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.3 Surface plugs may be no less than 50' in length.

4.4 All cement plugs placed to fill annular void(s) between casing and the formation shall be of sufficient volume to fill a minimum of 100' of the annular space plus 100% excess, calculated using the bit size, or 100' of annular capacity, determined from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.5 All cement plugs placed to fill an open hole shall be of sufficient volume to fill a minimum of 100' of hole, as calculated from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug. In the absence of a caliper log, an excess of 100% shall be required.

4.6 **A cement bond log or other accepted cement evaluation tool is required to be run if one had not been previously ran or cement did not circulate to surface during the original casing cementing job or subsequent cementing jobs.**

5.0 All cement plugs spotted across, or above, any exposed zone(s), when; the wellbore is not full of fluid or the fluid level will not remain static, and in the case of lost circulation or partial returns during cement placement, shall be tested by tagging with the work string.

5.1 The top of any cement plug verified by tagging must be at or above the depth specified in the approved plan, without regard to any excess.

5.2 Testing will not be required for any cement plug that is mechanically contained by use of a bridge plug and/or cement retainer, if casing integrity has been established.

5.3 Any cement plug which is the only isolating medium, for a fresh water interval or a zone containing a prospectively valuable deposit of minerals, shall be tested by tagging.

5.4 If perforations are required below the surface casing shoe, a 30 minute minimum wait time will be required to determine if gas and/or water flows are present. If flow is present, the well will be shut-in for a minimum of one hour and the pressure recorded. Short or long term venting may be necessary to evacuate trapped gas. If only a water flow occurs with no associated gas, shut well in and record the pressures. Contact the Engineer as it may be necessary to change the cement weight and additives.

6.0 Before setting any cement plugs the hole needs to be rolled. All wells are to be controlled by means of a fluid that is to be of a weight and consistency necessary to stabilize the wellbore. This fluid shall be left in place as filler between all plugs.

6.1 Drilling mud may be used as the wellbore fluid in open hole plugging operations.

6.2 The wellbore fluid used in cased holes shall be of sufficient weight to balance known pore pressures in all exposed formations.

7.0 A blowout preventer and related equipment (BOPE) shall be installed and tested prior to working in a wellbore with any exposed zone(s); (1) that are over pressured, (2) where the pressures are unknown, or (3) known to contain H_2S.

8.0 Within 30 days after plugging work is completed, file a Sundry Notice, Subsequent Report of Abandonment (Form 3160-5), through the Automated Fluid Minerals Support System (AFMSS) with the Field Manager, Bureau of Land Management, 6251 College Blvd., Suite A, Farmington, NM 87402. The report should show the manner in which the plugging work was carried out, the extent, by depth(s), of cement plugs placed, and the size and location, by depth(s), of casing left in the well. Show date well was plugged.

9.0 All permanently abandoned wells are to be marked with a permanent monument as specified in 43 CFR 3162.6(d). Unless otherwise approved.

10.0 If this well is located in a Specially Designated Area (SDA), compliance with the appropriate seasonal closure requirements will be necessary.

All of the above are minimum requirements. Failure to comply with the above conditions of approval may result in an assessment for noncompliance and/or a Shut-in Order being issued pursuant to 43 CFR 3163.1. You are further advised that any instructions, orders or decisions issued by the Bureau of Land Management are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 and 43 CFR 4.700.

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
Standard Plugging Conditions

This document provides OCD's general plugging conditions of approval. It should be noted that the list below may not cover special plugging programs in unique and unusual cases, and OCD expressly reserves the right to impose additional requirements to the extent dictated by project conditions. The OCD also reserves the right to approve deviations from the below conditions if field conditions warrant a change. A C-103F NOI to P&A must be approved prior to plugging operations. Failure to comply with the conditions attached to a plugging approval may result in a violation of 19.15.5.11 NMAC, which may result in enforcement actions, including but not limited to penalties and a requirement that the well be re-plugged as necessary.

1. Notify OCD office at least 24 hours before beginning work and seek prior approval to implementing any changes to the C-103 NOI to PA.
    - North Contact, Monica Kuehling, 505-320-0243, monica.kuehling@emnrd.nm.gov
    - South Contact, Gilbert Cordero, 575-626-0830, gilbert.cordero@emnrd.nm.gov

2. A Cement Bond Log is required to ensure strata isolation of producing formations, protection of water and correlative rights. A CBL must be run or be on file that can be used to properly evaluate the cement behind the casing.

    Note: Logs must be submitted to OCD via OCD permitting. A copy of the log may be emailed to OCD inspector for faster review times, but emailing does not relieve the operators obligation to submit through OCD permitting.

3. Once Plugging operations have commenced, the rig must not rig down until the well is fully plugged without OCD approval. If gap in plugging operations exceeds 30 days, the Operator must file a subsequent sundry of work performed and revised NOI for approval on work remaining. At no time shall the rig be removed from location if it will result in waste or contamination of fresh water.

4. Insure all bradenheads have been exposed, identified and valves are operational prior to rig up.

5. Fluids must be placed between all cement plugs mixed at 25 sacks per 100 bbls of water.
    - North, water or mud laden fluids
    - South, mud laden fluids

6. Closed loop system is to be used for entire plugging operation. Upon completion, contents of steel pits are to be hauled to an OCD permitted disposal facility.

7. Class of cement shall be used in accordance with the below table for depth allowed.

Class	TVD Lower Limit (feet)
Class A/B	6,000
Class I/II	6,000
Class C or III	6,000
Class G and H	8,000
Class D	10,000

Class E	14,000
Class F	16,000

8. After cutting the well head any “top off cement jobs” must remain static for 30 minutes. Any gas bubbles or flow during this 30 minutes shall be reported to the OCD for approval of next steps.

9. Trucking companies being used to haul oilfield waste fluids (Commercial or Private) to a disposal facility shall have an approved OCD C-133 permit.
    - A copy of this permit shall be available in each truck used to haul waste products.
    - It is the responsibility of the Operator and Contractor to verify that this permit is in place prior to performing work.
    - Drivers shall be able to produce a copy upon request of an OCD Compliance Officer.

10. Filing a [C-103] Sub. Plugging (C-103P) will serve as notification that the well has been plugged.

11. A [C-103] Sub. Release After P&A (C-103Q) shall be filed no later than a year after plugging and a site inspection by OCD Compliance officer to determine if the location is satisfactorily cleaned, all equipment, electric poles and trash has been removed to meet OCD standards before bonding can be released.

12. Produced water or brine-based fluids may not be used during any part of plugging operations without prior OCD approval.

13. Cementing;
    - All cement plugs will be neat cement and a minimum of 100’ in length. 50’ of calculated cement excess required for inside casing plugs and 100% calculated cement excess required on outside casing plugs.
    - If cement does not exist between or behind the casing strings at recommended formation depths, the casing perforations will be shot at 50’ below the formation top and the cement retainer shall be set no more than 50’ from the perforations.
    - WOC (Wait on Cement) time will be:
        - 4 hours for accelerated (calcium chloride) cement.
        - 6 hours on regular cement.
    - Operator must tag all cement plugs unless it meets the below condition.
        - The operator has a passing pressure test for the casing annulus and the plug is only an inside plug.
    - If perforations are made operator must tag all plugs using the work string to tag unless given approval to tag with wireline by the correct contact from COA #1 of this document.
        - This includes plugs pumped underneath a cement retainer to ensure retainer seats properly after cement is pumped.
    - Cement can only be bull-headed with specific prior approval.
    - Squeeze pressures are not to exceed the exposed formations frac gradient or the burst pressure of the casing.

14. A cement plug is required to be set from 50’ below to 50’ above (straddling) formation tops, casing shoes, casing stubs, any attempted casing cut offs, anywhere the casing is perforated, DV tools.
    - Perforation/Formation top plug. (When there is less than 100ft between the top perforation to the formation top.) These plugs are required to be started no greater than

50ft from the top perforation. However, the plug should be set below the formation top or as close to the formation top as possible for the maximum isolation between the formations. The plug is required to be a 100ft cement plug plus excess.

- Perforation Plug when a formation top is not included. These plugs are required to be started within 50ft of the top perforation. The plug is required to be a 100ft cement plug plus excess.
- Cement caps on top of bridge plugs or cement retainers for perforation plugs, that are not straddling a formation top, may be set using a bailer with a minimum of 35’ of cement in lieu of the 100’ plug. The bridge plug or retainer must be set within 50ft of the perforations.
- Perforations are required below the surface casing shoe if cement does not exist behind the casing, a 30-minute minimum wait time will be required immediately after perforating to determine if gas and/or water flows are present. If flow is present, the well will be shut-in for a minimum of one hour and the pressure recorded. If gas is detected contact the OCD office for directions.

15. No more than 3000 feet is allowed between cement plugs in cased hole and no more than 2000 feet is allowed in open hole.

16. Formation Tops to be isolated with cement plugs, but not limited to are:
    - Northwest See Figure A
    - South (Artesia) See Figure B
    - Potash See Figure C
        - In the R-111-P (Or as subsequently revised) Area a solid cement plug must be set across the salt section. Fluid used to mix the cement shall be saturated with the salts that are common to the section penetrated and in suitable proportions, not more than 3% calcium chloride (by weight of cement) will be considered the desired mixture whenever possible, woe 4 hours and tag, this plug will be 50' below the bottom and 50' above the top of the Formation.
    - South (Hobbs) See Figure D1 and D2
    - Areas not provided above will need to be reviewed with the OCD on a case by case basis.

17. Markers
    - Dry hole marker requirements 19.15.25.10.
      The operator shall mark the exact location of plugged and abandoned wells with a steel marker not less than four inches in diameter set in cement and extending at least four feet above mean ground level. The marker must include the below information:
        1. Operator name
        2. Lease name and well number
        3. API number
        4. Unit letter
        5. Section, Township and Range

    - AGRICULTURE (Below grade markers)
      In Agricultural areas a request can be made for a below ground marker. For a below ground marker the operator must file their request on a C-103 notice of intent, and it must include the following;
        A) Aerial photo showing the agricultural area
        B) Request from the landowner for the below ground marker.

C) Subsequent plugging report for a well using a below ground marker must have an updated C-102 signed by a certified surveyor for SHL.

Note: A below ground marker is required with all pertinent information mentioned above on a plate, set 3' below ground level, a picture of the plate will be supplied to OCD for record, the exact location of the marker (longitude and latitude by GPS) will be provided to OCD. OCD requires a current survey to verify the location of the below ground marker, however OCD will accept a GPS coordinate that were taken with a GPS that has an accuracy of within 15 feet.

18. If work has not commenced within 1 year of the approval of this procedure, the approval is automatically expired. After 1 year a new [C-103] NOI Plugging (C-103F) must be submitted and approved prior to work.

Figure A

North Formations to be isolated with cement plugs are:

- San Jose
- Nacimiento
- Ojo Alamo
- Kirtland
- Fruitland
- Picture Cliffs
- Chacra (if below the Chacra Line)
- Mesa Verde Group
- Mancos
- Gallup
- Basin Dakota (plugged at the top of the Graneros)
- Deeper formations will be reviewed on a case-by-case basis

Figure B

South (Artesia) Formations to be isolated with cement plugs are:

- Fusselman
- Montoya
- Devonian
- Morrow
- Strawn
- Atoka
- Permo-Penn
- Wolfcamp
- Bone Springs
- Delaware , in certain areas where the Delaware is subdivided into;
    - 1. Bell Canyon
    - 2. Cherry Canyon
    - 3. Brushy Canyon
- Any salt sections
- Abo
- Yeso
- Glorieta
- San Andres
- Greyburg
- Queen
- Yates

Figure C

Potash Area R-111-P

T 18S – R 30E
Sec 10 Unit P. Sec 11 Unit M,N. Sec 13 Unit L,M,N. Sec 14 Unit C -P. Sec 15 Unit A G,H,I,J,K,N,O,P. Sec 22 Unit All
except for M. Sec 23, Sec 24 Unit C,D,E,L, Sec 26 Unit A-G, Sec 27 Unit A,B,C

T 19S – R 29E
Sec 11 Unit P. Sec 12 Unit H-P. Sec 13. Sec 14 Unit A,B,F-P. Sec 15 Unit P. Sec 22 Unit A,B,C,F,G,H,I,J K,N,O,P. Sec 23.
Sec 24. Sec 25 Unit D. Sec 26 Unit A- F. Sec 27 Unit A,B,C,F,G,H.

T 19S – R 30E
Sec 2 Unit K,L,M,N. Sec 3 Unit I,L,M,N,O,P. Sec 4 Unit C,D,E,F,G,I-P. Sec 5 Unit A,B,C,E-P. Sec 6 Unit I,O,P. Sec 7 – Sec
10. Sec 11 Unit D, G—P. Sec 12 Unit A,B,E-P. Sec 13 Unit A-O. Sec 14-Sec 18. Sec 19 Unit A-L, P. Sec 20 – Sec 23. Sec
24 Unit C,D,E,F,L,M,N. Sec 25 Unit D. Sec 26 Unit A-G, I-P. Sec 27, Sec 28, Sec 29 Unit A,B,C,D,F,G,H,I,J,O,P. Sec 32
Unit A,B,G,H,I,J,N,O,P. Sec 33. Sec 34. Sec 35. Sec 36 Unit D,E,F,I-P.

T 19S – R 31E
Sec 7 Unit C,D,E,F,L. Sec 18 Unit C,D,E,F,G,K,L. Sec 31 Unit M. Sec 34 Unit P. Sec 35 Unit M,N,O. Sec 36 Unit O,P.

T 20S – R 29E
Sec 1 Unit H,I,P. Sec 13 Unit E,L,M,N. Sec 14 Unit B-P. Sec 15 Unit A,H,I,J,N,O,P. Sec 22 Unit A,B,C,F,G,H,I,J,O,P. Sec
23. Sec 24 Unit C,D,E,F,G,J-P. Sec 25 Unit A-O. Sec 26. Sec 27 Unit A,B,G,H,I,J,O,P. Sec 34 Unit A,B,G,H. Sec 35 Unit
A-H. Sec 36 Unit B-G.

T 20S – R 30E
Sec 1 – Sec 4. Sec 5 Unit A,B,C,E-P. Sec 6 Unit E,G-P. Sec 7 Unit A-H,I,J,O,P. Sec 8 – 17. Sec 18 Unit A,B,G,H,I,J,O,P.
Sec 19 Unit A,B,G,H,I,J,O,P. Sec 20 – 29. Sec 30 Unit A-L,N,O,P. Sec 31 Unit A,B,G,H,I,P. Sec 32 – Sec 36.

T 20S – R 31E
Sec 1 Unit A,B,C,E-P. Sec 2. Sec 3 Unit A,B,G,H,I,J,O,P. Sec 6 Unit D,E,F,J-P. Sec 7. Sec 8 Unit E-P. Sec 9 Unit E,F,J-P.
Sec 10 Unit A,B,G-P. Sec 11 – Sec 36.

T 21S – R 29E
Sec 1 – Sec 3. Sec 4 Unit L1 – L16,I,J,K,O,P. Sec 5 Unit L1. Sec 10 Unit A,B,H,P. Sec 11 – Sec 14. Sec 15 Unit A,H,I. Sec
23 Unit A,B. Sec 24 Unit A,B,C,D,F,G,H,I,J,O,P. Sec 25 Unit A,O,P. Sec 35 Unit G,H,I,J,K,N,O,P. Sec 36 A,B,C,F – P.

T 21S – R 30E
Sec 1 – Sec 36

T 21S – R 31E

Sec 1 – Sec 36

T 22S – R 28E
Sec 36 Unit A,H,I,P.

T 22S – R 29E
Sec 1. Sec2. Sec 3 Unit I,J,N,O,P. Sec 9 Unit G – P. Sec 10 – Sec 16. Sec 19 Unit H,I,J. Sec 20 – Sec 28. Sec 29 Unit
A,B,C,D,G,H,I,J,O,P. Sec 30 Unit A. Section 31 Unit C – P. Sec 32 – Sec 36

T 22S – R 30E
Sec 1 – Sec 36

T 22S – R 31E
Sec 1 – Sec 11. Sec 12 Unit B,C,D,E,F,L. Sec 13 Unit E,F,K,L,M,N. Sec 14 – Sec 23. Sec 24 Unit
C,D,E,F,K,L,M,N. Sec 25
Unit A,B,C,D. Sec 26 Unit A,BC,D,G,H. Sec 27 – Sec 34.

T 23S – R 28E
Sec 1 Unit A

T 23S – R 29E
Sec 1 – Sec 5. Sec 6 Unit A – I, N,O,P. Sec 7 Unit A,B,C,G,H,I,P. Sec 8 Unit A – L, N,O,P. Sec 9 – Sec 16. Sec 17 Unit
A,B,G,H,I,P. Sec 21 – Sec 23. Sec 24 Unit A – N. Sec 25 Unit D,E,L. Sec 26. Sec 27. Sec 28 Unit A – J, N,O,P. Sec 33
Unit A,B,C. Sec 34 Unit A,B,C,D,F,G,H. Sec 35. Sec 36 Unit B,C,D,E,F,G,K,L.

T 23S – R 30E
Sec 1 – Sec 18. Sec 19 Unit A – I,N,O,P. Sec 20, Sec 21. Sec 22 Unit A – N, P. Sec 23, Sec 24, Sec 25. Sec 26 Unit
A,B,F-P. Sec 27 Unit C,D,E,I,N,O,P. Sec 28 Unit A – H, K,L,M,N. Sec 29 Unit A – J, O,P. Sec 30 Unit A,B. Sec 32 A,B. Sec
33 Unit C,D,H,I,O,P. Sec 34, Sec 35, Sec 36.

T 23S – R 31E
Sec 2 Unit D,E,J,O. Sec 3 – Sec 7. Sec 8 Unit A – G, K – N. Sec 9 Unit A,B,C,D. Sec 10 Unit D,P. Sec 11 Unit G,H,I,J,M,N,O,P. Sec 12 Unit E,L,K,M,N. Sec 13 Unit C,D,E,F,G,J,K,L,M,N,O. Sec 14. Sec 15 Unit A,B,E – P. Sec 16 Unit
I, K – P. Sec 17 Unit B,C,D,E, I – P. Sec 18 – Sec 23. Sec 24 Unit B – G, K,L,M,N. Sec 25 Unit B – G, J,K,L. Sec 26 – Sec
34. Sec 35 Unit C,D,E.

T 24S – R 29E
Sec 2 Unit A, B, C, D. Sec 3 Unit A

T 24S – R 30E
Sec 1 Unit A – H, J – N. Sec 2, Sec 3. Sec 4 Unit A,B,F – K, M,N,O,P. Sec 9 Unit A – L. Sec 10 Unit A – L, O,P. Sec 11.
Sec 12 Unit D,E,L. Sec 14 Unit B – G. Sec 15 Unit A,B,G,H.

T 24S – R 31E
Sec 3 Unit B – G, J – O. Sec 4. Sec 5 Unit A – L, P. Sec 6 Unit A – L. Sec 9 Unit A – J, O,P. Sec 10 Unit B – G, K – N. Sec
35 Unit E – P. Sec 36 Unit E,K,L,M,N.

T 25S – R 31E
Sec 1 Unit C,D,E,F. Sec 2 Unit A – H.

Figure D1 and D2

South (Hobbs) Formations to be isolated with cement plugs are:

The plugging requirements in the Hobbs Area are based on the well location within specific areas of the Area (See Figure D1). The Formations in the Hobbs Area to be isolated with cement plugs are (see Figure D2)

Figure D1 Map

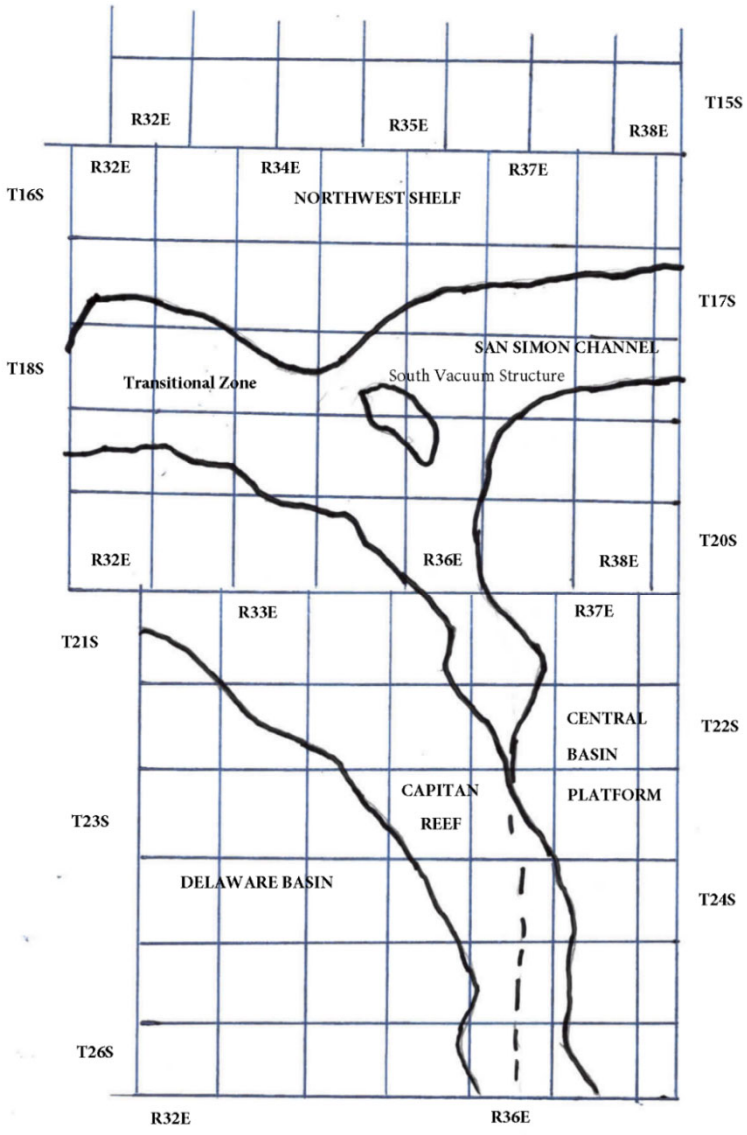

Figure D2 Formation Table

100' Plug to isolate upper and lower fresh water zones (typically 250' to 350')						
Northwest Shelf	**Captan Reef Area**	**Transition Zone**	**San Simon Channel**	**South Vacuum Structure**	**Delaware Basin**	**Central Basin Platform**
Granit Wash (Detrital basement material and fractured pre-Cambrian basement rock)	Siluro-Devonian	Morrow	Siluro-Devonian	Ellenburger	Siluro-Devonian	Granit Wash (Detrital basement material, fractured pre-Cambrian basement rock and fracture Mafic Volcanic intrusives).
Montoya	Mississippian	Atoka	Morrow	Mckee	Morrow	Ellenburger
Fusselman	Morrow	Strawn	Wolfcamp	Siluro-Devonian	Atoka	Connell
Woodford	Atoka	Cisco	Abo Reef	Woodford	Strawn	Waddell
Siluro-Devonian	Strawn	Pennsylvanian	Bone Spring	Mississippian	Pennsylvanian	Mckee
Chester	Pennsylvanian	Wolfcamp	Delaware	Barnett Shale	Lower Wolfcamp	Simpson Group
Austin	Wolfcamp	Bone Spring	San Andres	Morrow	Upper Wolfcamp	Montoya
Mississippian	Abo Reef, if present	Delaware	Queen	Atoka	Wolfcamp	Fusselman
Morrow	Abo, if present	San Andres	Yates	Strawn	Third Bone Spring Sand (Top of Wolfbone)	Silurian
Atoka	Queen, if present	Grayburg-San Andres	Base of Salt	Canyon	First Bone Spring Sand (Top of Lower Bone Spring)	Devonian
Lower Pennsylvanian	Bone Spring	Queen	Rustler	Pennsylvanian	Bone Spring	Strawn
Cisco-Canyon	Delaware	Seven Rivers		Blinebry	Brushy Canyon	Pennsylvanian
Pennsylvanian	Base Capitan Reef	Yates		Bone Spring	Delaware (Base of Salt)	Wolfcamp
Bough	Seven Rivers	Base of Salt		San Andres	Rustler	Abo
Wolfcamp	Yates	Rustler		Queen		Abo Reef
Abo	Top Capitan Reef			Base of Salt		Drinkard
Abo Reef, if present	Base of Salt			Rustler		Tubb
Yeso (Township 15 South to Township 17 South)	Rustler					Blinebry
Drinkard or Lower Yeso (Township 15 South to Township 17 South)						Paddock
Tubb (Township 15 South to Township 17 South)						Glorieta
Blinebry (Township 15 South to Township 17 South)						San Andres
Paddock (Township 15 South to Township 17 South)						Grayburg
Glorieta						Grayburg-San Andres
San Andres						Queen
Queen (Township 15 South to Township 17 South)						Seven Rivers
Seven Rivers (Township 15 South to Township 17 South)						Yates
Yates (Township 15 South to Township 17 South)						Base of Salt
Base of Salt						Rustler
Rustler						

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 355574

CONDITIONS

Operator: CROSS TIMBERS ENERGY, LLC 400 West 7th Street Fort Worth, TX 76102	OGRID: 298299
	Action Number: 355574
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	NMOCD agrees with BLM call on formation tops -extend BLM plug 4 chacra to cover DV tool at 2950 - 3110 to 2850- Notify NMOCD 24 hours prior to moving on. Submit all logs through OCD permitting prior to subsequent - Monitor string pressures daily - report on subsequent. Cement type not stated in procedure	6/26/2024