

Form 3160-5  
(August 2007)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.****SUBMIT IN TRIPLICATE** – Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator  
Shell Oil Company (Western Division)3a. Address  
P.O. Box 576, Houston, TX 772103b. Phone No. (include area code)  
(832)-337-24344. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Section 22 Township 8S Range 30E5. Lease Serial No.  
NM-0276225

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.  
Cato San Andres Unit8. Well Name and No.  
Cato San Andres Unit # 1409. API Well No.  
30-005-2008710. Field and Pool or Exploratory Area  
Cato; San Andres11. Country or Parish, State  
USA, Chaves County, New Mexico

## 12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input checked="" type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Please refer to the enclosed plugging and abandonment program and well bore diagram for review.

## See Conditions of Approval

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
Philip D. Ladner

Title Attorney-in-Fact

Signature

Date

5/31/2023

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title Petroleum Engineer

Date 06/14/2023

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

RFO

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.

(Instructions on page 2)

### GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

### SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13* - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment.

### NOTICES

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Cato San Andres Unit No. 140  
Abandonment Program v.5  
API Number: 30-005-20087-00-00  
Cato San Andres [10540]

Date: 5/23/2023

**Comments:**

6/1967: Spudded and drilled well to 3680'. Installed production casing at 3678' and cemented in-place. Perforated F/3503' – T/3462'.

4/1968: Sundry notice to frac well, no record in BLM history that fracture stimulation was completed.

**Notes:**

**Note 1:** Notify BLM when reaching final clean out depth of 3643' and any activity after that point as per BLM permit.

**Note 2:** Yates perforations and cement volumes can be adjusted as necessary.

**Note 3:** Surface plug perforations and cement volumes can be adjusted as necessary.

**Note 4:** Class "C" neat cement has slurry yield of 1.32 CF/sack.

**Note 5:** Abandonment mud shall be placed between all plugs. Minimum consistency of plugging mud shall be obtained by mixing at the rate of 25 sacks (50 pounds each) of gel per 100 barrels of brine water. Minimum of nine (9) pounds per gallon.

**Note 6:** Wireline lubricator system to be NU on BOP will be as follows:

- a. 3K lubricator with pump-in sub,
- b. 3K pack-off system with grease injector.

**Note 7:** Monitoring prior to wellhead removal (per Shell Well Abandonment Manual 4.6.2)

The wellhead shall only be removed when one (1) of the following conditions is met:

- a. Monitoring has been demonstrated absence of pressure build-up and/or bubbles.
- b. If the above cannot be met, a documented assessment is required to demonstrate that risk are ALARP (As Low As Reasonably Practicable)

**Note 8:** There is no record to indicate that tubing has been recovered from the well. If tubing is in the well, unlaid tubing, pull out of well with the tubing and lay down. If the tubing is not free, MIRU wireline unit with lubricator run in well with collar locator and determine if tubing is landed with a packer. Pull out of well collar locator. Attempt to unset packer. If unable to un-set packer, back-off tubing at top of "saver" sub. Pull out of well with tubing. Run in well with over shot, jars, accelerator jars, collars on work string and latch on to saver sub. Jar packer loose and pull out of well and recover packer.

**Note 9:** Bureau of Land Management, Interior, Subpart 3263 – Well Abandonment, 3261.11(2): Methods you will use to verify the plugs (Tagging, pressure, etc.).



## Cato San Andres Unit No.140 Abandonment Program v.5

## Cato San Andres Unit No. 140 Abandonment Procedure

1. MIRU abandonment rig. Install Class II 2M BOPE with hydraulic controls on 5-1/2", 15.5 casing, during abandonment operations with 2" kill line rated to 2000 psi per permit instructions. It will be maintained in operating condition and meet the following minimum guidelines:
  - a. Class II 2M with hydraulic controls during abandonment operations.
  - b. A 3M lubricator for wireline operations.
  - c. BOPE prevention drills will be conducted and recorded on the tour sheet.
  - d. Hole fluid of a quality and in sufficient quantity to control subsurface conditions.
2. Un-land 2-3/8" tubing, release packer set at 3350'. Pull out of well with tubing and packer. Lay down tubing and packer. **See Note 8 regarding additional information to recover tubing and packer in the event they are in the well.**
3. Pick-up work string.
4. Run in well with bit for 5-1/2", 15.5# and casing scraper on work string, tag top of cement plug at 3643' (PBD). Circulate well clean. Pull out of well and lay down casing scraper and bit.
5. MIRU wireline equipment, install lubricator and test as necessary. Run in well with CIBP to 3410' (52' above top perforation at 3462'). Set CIBP at 3410'. Pull out of hole with wireline, RDMO wireline equipment.
6. Run in well with open ended work string tag top of CIBP at +/-3410'.
7. MIRU cementers, test lines. Place 28 sx cement plug F/3410' – T3133' with 37 CF of class "C" neat cmt (includes 10% excess). Pull out of well with work string to 2500', circulate tubing clean, estimated top of cement = 3133'. Wait on cement and tag top of cement plug notify BLM to witness cement tag (if required).
8. Lower and tag top of cement plug at 3133' with open ended work string. Shut well in and pressure test 5-1/2", 15.5# casing to 300 psi for 15 minutes, notify consultant of pressure test results. If pressure test fails pull out of well with open ended work string,
9. Run in well with test packer for 5-1/2", 15.5# casing on work string locate leak and establishing injection rate and pressure, notify consultant of injection rate results and review possible squeeze cementing operations.
10. Load well with 51 bbls of at least 9 lb/gal abandonment fluid F/3133' - T/1000'

## Cato San Andres Unit No.140 Abandonment Program v.5

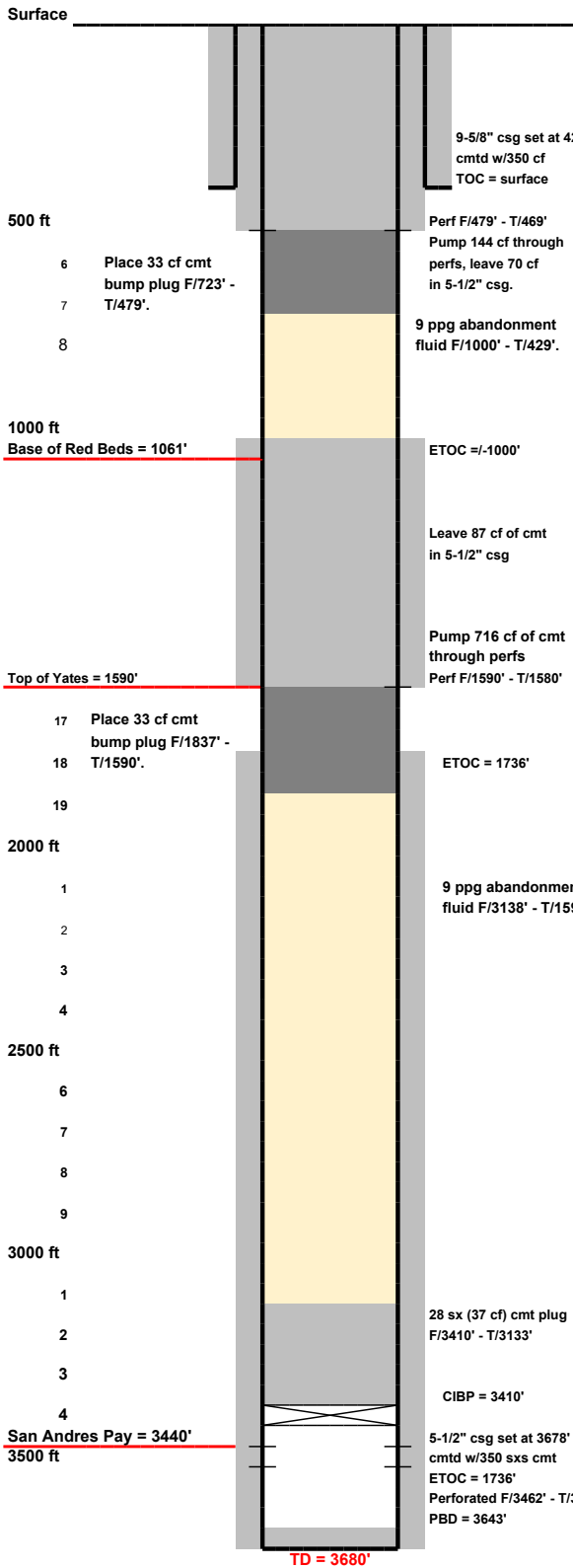
11. After tagging cement plug at 3133', and placing abandonment fluid F/3133 – T/1000' pull out of well with open ended work string to 1837' and place 247' cement "bump plug F/1837' – T/1590' with 33 cf of cement (no excess included). Allow cement to set, notify BLM to witness tagging of cement plug (if required).
  12. Run in well with bit for 5-1/2", 15.5# bit on workstring to tag depth, tag top of cement plug at 1590. Drill out cement as necessary F/tag depth – T/1590' notify BLM to witness tagging of cement plug (if required).
  13. Pull out of well with work string.
  14. MIRU wireline unit with lubricator. Run in well 10' perforating equipment to 1590' (top of Yates) and perforate F/1590' – T/1580'. Pull out of well with perforating equipment. RDMO wireline unit.
  15. Run in well with test packer for 5-1/2", 15.5# casing on work string to 600'. Set test packer at 600' and establish injection rate through perforations F/1590' – T/1580', notify consultant of injection rate and injection pressure results and review squeeze cementing operations.
  16. MIRU cementing equipment test lines. Pump 803 cf (includes 10% excess) of class "C" neat cement as follows:
    - a. Pump 716 cf (127.5 bbls) through perforations, should bring top of cement in 5-1/2" csg x 15.25" OH to +/-1000'.
    - b. Displace cement to 1000' with at 9 ppg abandonment fluid, leaving 87 cf of Class "C" neat cement in the 5-1/2, 15.5# casing. Leave 200 psi on work string and allow cement to set.
- Note: Annular cement volume is based on caliper log, The caliper reading was 15.25" through this section of the well.**
17. After allowing cement to set, release packer and pull out of well with work string and packer, lay down packer.
  18. Run in well with open ended work and tag top of cement plug at +/-1000'.
  19. After tagging cement plug at 1000', pull out of well with open ended work string to 726' and place 247' cement "bump plug F/726' – T/479' with 33 cf of cement (no excess included). Allow cement to set, notify BLM to witness tagging of cement plug (if required).
  20. Run in well with bit for 5-1/2", 15.5# bit on workstring to tag depth, tag top of cement plug at 479'. Drill out cement as necessary F/tag depth – T/479' notify BLM to witness tagging of cement plug (if required).

## Cato San Andres Unit No.140 Abandonment Program v.5

21. Surface casing is set 429'. MIRU wireline unit with lubricator. Run in well 10' of perforating equipment to 479' and perforate F/479' – T/469'. Pull out of well with perforating equipment. RDMO wireline unit.
22. MIRU cementing equipment, test lines. Tie on to 5-1/2", 15.5# casing and establish circulation to surface, notify consultant that circulation has been established.
23. After circulation has been established, pump 214 cf (includes 10% excess), pump 144 cf of class "C" neat cement through perforations F/479' – T/469', should bring cement in the 5-1/2" x 9-5/8" casing annulus to surface. And leave 70 cf of Class "C" neat cement in 5-1/2" casing at surface. Allow cement to set. RD cementing equipment.
24. Confirm cement at surface in 5-1/2" x 9-5/8" casing annulus and 5-1/2" casing. If cement has dropped make a arrangements to top off cement as necessary in the 5-1/2" and the 5-1/2" x 9-5/8" annulus.
25. Prior to nipping down BOP, monitor wellhead prior to removal. The wellhead shall only be removed when one of the following conditions is met:
  1. Monitoring has demonstrated absence of pressure build-up(s) and/or bubbles.
  2. If the above cannot be met, a documented assessment is required to demonstrate that risks are ALARP (As Low As Reasonably PRACTICABLE).
26. Rig down and move out workover rig.
27. All casing shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). Install surface cap and well marker.
  - a. Surface cap: the well bore shall be covered with a metal plate at least 1/4" thick and welded in place. A weep hole shall be left if a metal plate is welded in place.
  - b. The well bore shall then be capped with a 4" pipe, 10' in length, 4' above the ground and embedded in cement. The following information shall be permanently inscribe on the dry hole marker:
    - i. Well name
    - ii. Well number
    - iii. Name of Operator
    - iv. Lease serial number
    - v. Surveyed location (quarter-quarter section, Section, Township, Range – or other authorized survey designation acceptable to the authorized officer; such as metes and Bounds)
28. Backfill cellar

Well #: Cato San Andres Unit 140  
Status: Idle  
API#: 30-005-20087

Date: 5/8/2023  
Field: Cato San Andres Unit  
Unit J, 1980 FEL, 1980 FSL, Sec 22, T08S, R30E, Chaves County



Elevation of casing head: 4153'

DF	4160'	ASL
TD	3680'	

Completion Date: 7/9/1967  
Directional Drilled: Vertical

Junk/Plugs		
Original drill well (1967)		
Drill 12-1/4" hole, set 9-5/8" conductor set at 429' cmt w/350 sxs, cmt at surface		
Drilled 7-5/8" hole to 3680', 5-1/2", 15.5# csg set at 3678', cmt w/350sxs of cmt, ETOC = 1736'.		
Well work (1968)		
4/1968: Sundry notice to frac well, no record in BLM history that fracture stimulation was completed.		

Current Hole and Casing Information								
Hole	Casing	WPF	Top	Bottom	CF	Sacks	ETOC	Comments
12-1/4"	9-5/8"	36#	0'	429'		350	Surface	
7-7/8"	5-1/2"	15-1/2#	0'	3678'		350	1736'	

Zones of Interest		
Formation	Top	Base
Base of Red Beds	+/- 250'	1061'
Yates	1590'	1690'
San Andres	2343'	
Slaughter A (SA)*	3449'	3580'

SA - San Andres

Perforations			
	Top	Bottom	Comments
San Andres	3462'	3503'	

**BUREAU OF LAND MANAGEMENT**  
**Roswell Field Office**  
**2909 W. Second Street**  
**Roswell, New Mexico 88201**  
**575-627-0272**

**General Requirements for Plug Backs**

Failure to comply with the following Conditions of Approval may result in a Notice of Incidents of Noncompliance (INC) in accordance with 43 CFR 3163.1.

1. Plugging operations shall commence within **ninety (90)** days from this approval.

**If you are unable to plug back the well by the 90<sup>th</sup> day provide this office, prior to the 90<sup>th</sup> day, with the reason for not meeting the deadline and a date when we can expect the well to be plugged back. Failure to do so will result in enforcement action.**

2. **Notification:** Contact the appropriate BLM office at least 24 hours prior to the commencing of any plug back operations. Call 575-627-0205.

3. **Blowout Preventers:** A blowout preventer (BOP), as appropriate, shall be installed before commencing any plugging operation. The BOP must be installed and maintained as per API and manufacturer recommendations. The minimum BOP requirement is a 2M system for a well not deeper than 9,090 feet; a 3M system for a well not deeper than 13,636 feet; and a 5M system for a well not deeper than 22,727 feet.

4. **Mud Requirement:** Mud shall be placed between all plugs. Minimum consistency of plugging mud shall be obtained by mixing at the rate of 25 sacks (50 pounds each) of gel per 100 barrels of **brine** water. Minimum nine (9) pounds per gallon.

5. **Cement Requirement:** Sufficient cement shall be used to bring any required plug to the specified depth and length. Any given cement volumes on the proposed plugging procedure are merely estimates and are not final. Unless specific approval is received, no plug except the surface plug shall be less than 25 sacks of cement. Any plug that requires a tag will have a minimum WOC time of 4 hours.

In lieu of a cement plug across perforations in a cased hole (not for any other plugs), a bridge plug set within 50 feet to 100 feet above the perforations shall be capped with 25 sacks of cement.

**Before pumping cement on top of CIBP, tag will be required to verify depth. Based on depth, a tag of the cement may be deemed necessary.**

Unless otherwise specified in the approved procedure, the cement plug shall consist of either **Neat Class "C"**, for up to 7,500 feet of depth or **Neat Class "H"**, for deeper than 7,500 feet plugs.

6. **Subsequent Plug back Reporting:** Within 30 days after plug back work is completed, file one original and three copies of the Subsequent Report, Form 3160-5 to BLM. The report should give in detail the manner in which the plug back work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. **Show date work was completed.**

7. **Trash:** All trash, junk and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.



Well Bore Diagram  
for  
Cato San Andres Unit No. 140  
(30-005-20087-00-00)

Hole Information

Casing Information

**Surface Hole**  
12-1/4'  
Depth 274'

**Surface Casing**  
9-5/8" Weight 36#  
Set Depth 429'

**Top of Cement - Surface**  
350 Sacks

Base Red Beds 1061'

Yates 1590'

**Top of Cement - 1736'**  
350 Sacks

**Production Hole**  
7-7/8"  
Depth 3680'

**Production Casing**  
5-1/2" Weight 15.5#  
Depth 3678'

**Top of Pay** San Andres 3440'  
Depth 3440'

Packer set at 3350'

Perforations  
3462, 3465, 3466,  
3477, 3480, 3482,  
3485, 3490, 3494,  
3496, 3498, 3503

**Tubing**  
2"  
Depth 3643'

**Top of Cement - 3643'**

**Total Depth 3680'**

**Cato San Andres Unit No. 140**

**API # 30-005-20087**

**Sec. 22, T08S, R30E**

**Chavez County, NM**

**Conditions of Approval**

The following COAs are added to the previous COAs from the BLM regarding the P&A of the above - mentioned well.

1. A CBL is to be run on this well from CIBP to surface after the first CIBP is set and prior to any cement operations are to commence.
2. The Plug 1 is to be pumped to cover the top of the San Andres (picked at 2745') from CIBP at 3410' to 2695', plus excess.
3. A Plug 2 is to be added to cover the Grayburg / Queen formation tops from 2445' up to 2240', plus excess.

Thank you,

Loren Diede

Petroleum Specialist Advanced

Oil Conservation Division

1220 South St. Francis Drive

Santa Fe, New Mexico 87505



**Cato San Andres Unit 140  
30-005-20087  
Shell Oil Company  
June 14, 2023  
Conditions of Approval**

- 1. Operator shall place CIBP at 3,410' (50'-100' above top most perf) and place a minimum of 25 sx of Class C cement on top. WOC and TAG.**
- 2. Operator shall place a balanced Class C cement plug from 1,837' to 1,590' as proposed. WOC and TAG.**
- 3. Operator shall perf at 1,590' and squeeze Class C cement to 1,000' to seal the Yates and the Salt Formations. WOC and TAG.**
- 4. Operator shall perf at 479' and squeeze class c cement to surface to seal the 9-5/8" casing shoe.**
- 5. Dry hole marker must be below ground.**
- 6. Surface reclamation will need to be completed once the well bore has been plugged. Please contact [rflores@blm.gov](mailto:rflores@blm.gov) for additional information.**
- 7. See Attached for general plugging stipulations.**

**JAM 06142023**

**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 321727

CONDITIONS

Operator: CANO PETRO OF NEW MEXICO, INC. 801 Cherry Street Fort Worth, TX 76102	OGRID: 248802
	Action Number: 321727
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

CONDITIONS

Created By	Condition	Condition Date
jagarcia	A CBL is to be run on this well from CIBP to surface after the first CIBP is set and prior to any cement operations are to commence.	3/8/2024
jagarcia	The Plug 1 is to be pumped to cover the top of the San Andres (picked at 2745') from CIBP at 3410' to 2695', plus excess.	3/8/2024
jagarcia	A Plug 2 is to be added to cover the Grayburg / Queen formation tops from 2445' up to 2240', plus excess.	3/8/2024