

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

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

WELL API NO. 30-005-20040
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Cato San Andres Unit
8. Well Number 104
9. OGRID Number 330485
10. Pool name or Wildcat Cato; San Andres
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 4122

**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

2. Name of Operator  
Cano Petro of New Mexico, Inc.

3. Address of Operator  
801 Cherry Street Suite 3200 Unit 25 Fort Worth, TX 76102

4. Well Location  
Unit Letter J 1980 feet from the S line and 1980 feet from the E line  
Section 16 Township 08S Range 30E NMPM County Chaves

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

**NOTICE OF INTENTION TO:**

- PERFORM REMEDIAL WORK
- TEMPORARILY ABANDON
- PULL OR ALTER CASING
- DOWNHOLE COMMINGLE
- CLOSED-LOOP SYSTEM
- OTHER:
- PLUG AND ABANDON**
- CHANGE PLANS
- MULTIPLE COMPL

**SUBSEQUENT REPORT OF:**

- REMEDIAL WORK
- COMMENCE DRILLING OPNS.
- CASING/CEMENT JOB
- OTHER:
- ALTERING CASING
- P AND A

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.

NMOCD plans to plug this well in accordance with the attached procedure and any agreed modifications thereto.

ESTIMATED START DATE 1/25/21

**4" diameter 4' tall Above Ground Marker**

**SEE ATTACHED CONDITIONS OF APPROVAL**

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 Drake McCulloch TITLE Authorized Representative DATE 1/21/20

Type or print name Drake McCulloch E-mail address: drake@dwsrigs.com PHONE: 505 320 1180

**For State Use Only**

APPROVED BY: Kerry Fortner TITLE Compliance Officer A DATE 1/29/21  
Conditions of Approval (if any):

# Wellbore Diagram

Cato San Andres Unit #104  
API #: 30-005-20040  
Chaves County, New Mexico

**Plug 3 P&S**  
502 feet - Surface  
502 feet plug  
40 sacks of Class G Cement

**Plug 2 P&S**  
1595 feet - 972 feet  
623 feet plug  
50 sacks outside of casing

**Plug 1 P&S**  
3297 feet - 3247 feet  
50 feet plug  
6 sacks of Class G Cement

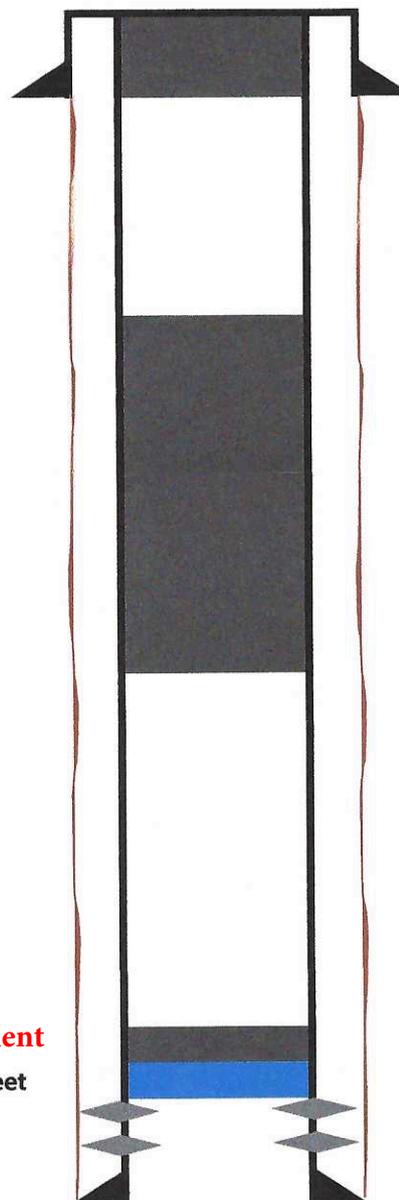
**Surface Casing**  
8.625" 20# @ 452 ft

**Class C Cement**

**Formation**  
Rustler - 1072 ft  
Yates - 1545 ft

**25 sx Class C Cement**  
Retainer @ 3297 feet

**Production Casing**  
4.5" 9.5# @ 3540 ft



## **Cano Petro/NMOCD OWP**

### **Plug And Abandonment Procedure**

#### **Cato San Andres Unit #104**

1980' FSL & 1980' FEL, Section 16, T8S, R30E

Chaves County, NM / API 30-005-20040

1. Hold pre-job safety meeting. Comply with all NMOCD, BLM safety and environmental regulations. Test rig anchors prior to moving in rig if not rigged to base beam.
2. Check casing, tubing, and Bradenhead pressures.
3. Remove existing piping on casing valve. RU blow lines from casing valves and begin blowing down casing pressure. Kill well as necessary. Ensure well is dead or on a vacuum.
4. ND wellhead and NU BOP. Function test BOP.
5. Un-set packer at 3294'. TOOH with 2-3/8" tubing.
6. P/U 4-1/2" bit or casing scraper on 2-3/8" work string and round trip as deep as possible above top perforation at 3347'.
7. P/U 4-1/2" CR, RIH and set CR at +/- 3297'. Pressure test tubing to 1000 psi. Sting out of CR. Load hole, and pressure test casing to 800 psi. If casing does not test, then spot or tag subsequent plugs as appropriate. POOH w/ tubing.

8. RU wireline and run CBL with 500 psi on casing from CR at 3297' to surface to identify TOC. Adjust plugs as necessary for new TOC. Email log copy to Brandon Powell at [Brandon.powell@state.nm.us](mailto:Brandon.powell@state.nm.us) upon completions of logging operations.
9. Rig up to pump cement down tubing. Pump water to establish rate down tubing.
10. Circulate wellbore with 9.5 ppg salt gel.

**NOTE: All Plugs Include 100% excess outside casing and 50% Excess inside casing**

11. Plug 1 (San Andres Perforations and Formation Top 3297'-3247', ~~6~~ <sup>25 sx</sup> Sacks Class ~~G~~ <sup>C</sup> Cement)  
<sup>25 sx Class C</sup> Mix ~~6~~ <sup>25 sx Class C</sup> cement and spot a balanced plug inside casing to cover the San Andres perforations and formation top.
12. Plug 2 (Yates and Rustler Formation Tops 1595'-972', 50 Sacks Class ~~G~~ <sup>C</sup> Cement)  
<sup>P&S</sup> Mix 50 sx Class ~~G~~ <sup>C</sup> cement and spot a balanced plug inside casing to cover the Yates and Rustler formation tops.
13. Plug 3 (Surface Casing Shoe 502'-Surface, 40 Sacks Class ~~G~~ <sup>C</sup> Cement)  
<sup>P&S</sup>

Attempt to pressure test the bradenhead annulus to 300 psi; note the volume to load. If BH annulus holds pressure, then establish circulation out casing valve with water. Mix approximately 40 sx cement and spot a balanced plug from 502' to surface, circulate good cement out of casing valve. TOH and LD tubing. Shut well in and WOC. If BH annulus does not test, then perforate at the appropriate depth and attempt to circulate cement to surface filling the casing from 502' and the annulus from the squeeze holes to surface. Shut in well and WOC.

14. ND cementing valves and cut off 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 restore location per BLM stipulations.

**CONDITIONS OF APPROVAL  
FOR PLUGGING AND ABANDONMENT  
OCD - Southern District**

The following is a guide or checklist in preparation of a plugging program, this is not all inclusive and care must be exercised in establishing special plugging programs in unique and unusual cases, Notify NMOCD District Office I (Hobbs) at **(575)-263-6633** at least 24 hours before beginning work. After MIRU rig will remain on well until it is plugged to surface. OCD is to be notified before rig down.

**Company representative will be on location during plugging procedures.**

1. A notice of intent to plug and abandon a wellbore is required to be approved before plugging operations are conducted. A cement evaluation tool is required in order to ensure isolation of producing formations, protection of water and correlative rights. A cement bond log or other accepted cement evaluation tool is to be provided to the division for evaluation if one has not been previously run or if the well did not have cement circulated to surface during the original casing cementing job or subsequent cementing jobs. Insure all bradenheads have been exposed, identified and valves are operational prior to rig up.
2. Closed loop system is to be used for entire plugging operation. Upon completion, contents of steel pits are to be hauled to a permitted disposal location.
3. Trucking companies being used to haul oilfield waste fluids to a disposal - commercial or private- shall have an approved NMOCD 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 as well as the 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 NMOCD Field inspector.
4. Filing a subsequent C-103 will serve as notification that the well has been plugged.
5. A final C-103 shall be filed (and a site inspection by NMOCD Inspector to determine if the location is satisfactorily cleaned, all equipment, electric poles and trash has been removed to Meet NMOCD standards) before bonding can be released.
6. If work has not begun within 1 Year of the approval of this procedure, an extension request must be file stating the reason the well has not been plugged.
7. Squeeze pressures are not to exceed 500 psi, unless approval is given by NMOCD.
8. Produced water will not be used during any part of the plugging operation.
9. Mud laden fluids must be placed between all cement plugs mixed at 25 sacks per 100 bbls of water.
10. All cement plugs will be a minimum of 100' in length or a minimum of 25 sacks of cement, whichever is greater. 50' of calculated cement excess required for inside casing plugs and 100% calculated cement excess required on outside casing plugs.
11. Class 'C' cement will be used above 7500 feet.
12. Class 'H' cement will be used below 7500 feet.
13. A cement plug is required to be set 50' above and 50' below, casing stubs, DV tools, attempted casing cut offs, cement tops outside casing, salt sections and anywhere the casing is perforated, these plugs require a 4 hour WOC and then will be tagged
14. All Casing Shoes Will Be Perforated 50' below shoe depth and Attempted to be Squeezed, cement needs to be 50' above and 50' Below Casing Shoe inside the Production Casing.
16. When setting the top out cement plug in production, intermediate and surface casing, wellbores should remain full at least 30 minutes after plugs are set
17. A CIBP is to be set within 100' of production perforations, capped with 100' of cement, WOC 4 hours and tag.
18. A CIBP with 35' of cement may be used in lieu of the 100' plug if set with a bailer. This plug will be placed within 100' of the top perforation, (WOC 4 hrs and tag).

19. No more than 3000' is allowed between cement plugs in cased hole and 2000' in open hole.
20. Some of the Formations to be isolated with cement plugs are: These plugs to be set to isolate formation tops
- A) Fusselman
  - B) Devonian
  - C) Morrow
  - D) Wolfcamp
  - E) Bone Springs
  - F) Delaware
  - G) Any salt sections
  - H) Abo
  - I) Glorieta
  - J) Yates.
  - K) Potash---(In the R-111-P Area (Potash Mine 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 SO' below the bottom and 50' above the top of the Formation.

21. If cement does not exist behind casing strings at recommended formation depths, the casing can be cut and pulled with plugs set at recommended depths. If casing is not pulled, perforations will be shot and cement squeezed behind casing, woe and tagged. These plugs will be set SO' below formation bottom to 50' above formation top inside the casing.

### **DRY HOLE MARKER REQ.UIRMENTS**

The operator shall mark the exact location of the plugged and abandoned well with a steel marker not less than four inches in diameter, 3' below ground level with a plate of at least 1/4" welded to the top of the casing and the dry hole marker welded on the plate with the following information welded on the dry hole marker:

1. Operator name
2. Lease and Well Number
3. API Number
4. Unit letter
5. Quarter Section (feet from the North, South, East or West)
6. Section, Township and Range
7. Plugging Date
8. County

### **SPECIAL CASES -----AGRICULTURE OR PRARIE CHICKEN BREEDING AREAS**

In these areas, 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 NMOCD for record, the exact location of the marker (longitude and latitude by GPS) will be provided to NMOCD (We typically require a current survey to verify the GPS)

### **SITE REMEDIATION DUE WITHIN ONE YEAR OF WELL PLUGGING COMPLETION**

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9. Rig up to pump cement down tubing. Pump water to establish rate down tubing.
10. Circulate wellbore with 9.5 ppg salt gel.

**NOTE: All Plugs Include 100% excess outside casing and 50% Excess inside casing**

**11. Plug 1 (San Andres Perforations and Formation Top 3297'-3247', 6 Sacks Class G Cement)**

Mix 6 sx Class G cement and spot a balanced plug inside casing to cover the San Andres perforations and formation top.

**12. Plug 2 (Yates and Rustler Formation Tops 1595'-972', 50 Sacks Class G Cement)**

Mix 50 sx Class G cement and spot a balanced plug inside casing to cover the Yates and Rustler formation tops.

**13. Plug 3 (Surface Casing Shoe 502'-Surface, 40 Sacks Class G Cement)**

Attempt to pressure test the bradenhead annulus to 300 psi; note the volume to load. If BH annulus holds pressure, then establish circulation out casing valve with water. Mix approximately 40 sx cement and spot a balanced plug from 502' to surface, circulate good cement out of casing valve. TOH and LD tubing. Shut well in and WOC. If BH annulus does not test, then perforate at the appropriate depth and attempt to circulate cement to surface filling the casing from 502' and the annulus from the squeeze holes to surface. Shut in well and WOC.

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623 feet plug  
50 sacks outside of casing

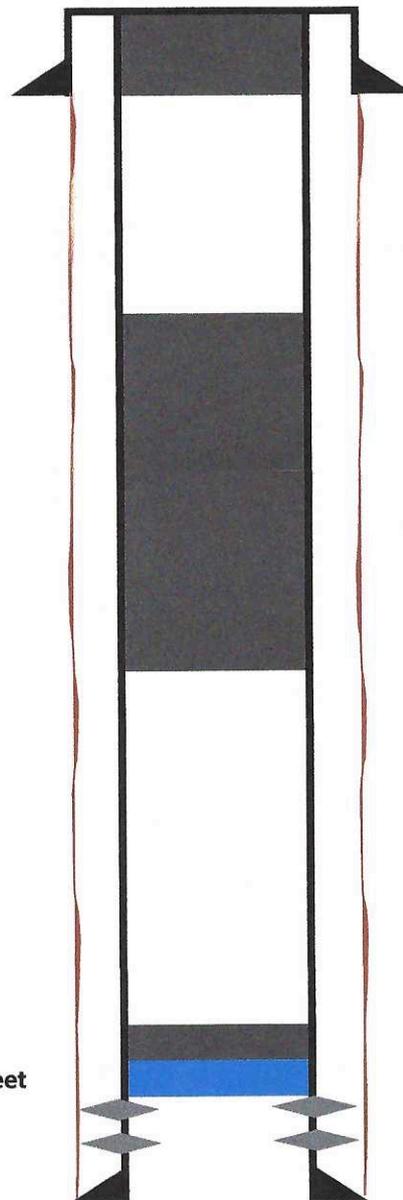
**Plug 1**  
3297 feet - 3247 feet  
50 feet plug  
6 sacks of Class G Cement

**Surface Casing**  
8.625" 20# @ 452 ft

**Formation**  
Rustler - 1072 ft  
Yates - 1545 ft

**Retainer @ 3297 feet**

**Production Casing**  
4.5" 9.5# @ 3540 ft



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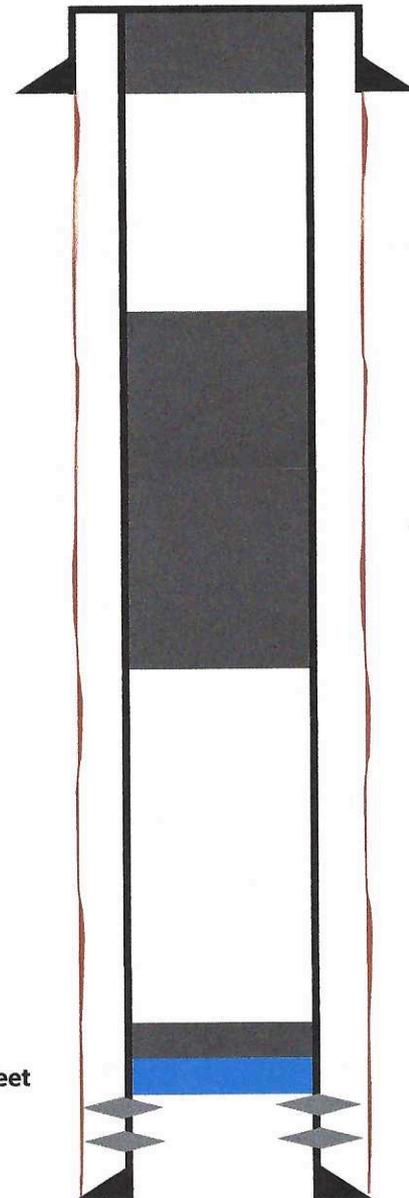
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 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 15888

**CONDITIONS OF APPROVAL**

Operator:	J.A. DRAKE WELL SERVICE INC.	607 W Pinon	Farmington, NM87401	OGRID:	330485	Action Number:	15888	Action Type:	C-103F
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OCD Reviewer	Condition
kfortner	See Attached Conditions of approval Note changes to procedure