Form 3160-5 (June 2015)

### UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPROVED OMB No. 1004-0137 Expires: January 31, 2018	8
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BUREAU OF LAND MANAGEMENT				5.	5. Lease Serial No. NMNM 0022636				
	IOTICES AND REPOR			6.	If Indian, Allottee	or Tribe	Name		
	form for proposals to Use Form 3160-3 (AP			,	N/A				
SUBMIT IN TRIPLICATE - Other instructions on page 2				7. If Unit of CA/Agreement, Name and/or No.					
1. Type of Well					Cato San Andres Unit				
✓ Oil Well Gas V	<del></del>			8.	8. Well Name and No. Cato San Andres Unit #148				
2. Name of Operator Shell Oil Compa	any (Western Division)			9.	9. API Well No. 30-005-20204				
3a. Address P.O. Box 576, Houston, TX 77210 3b. Phone No.			clude area code	e) 10	10. Field and Pool or Exploratory Area				
A Leasting of Well (France Co. T. I.		832) 337-2434			Cato; San Andres				
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) D-27-08S-30E 660 FNL 660 FWL					11. Country or Parish, State Chaves County, New Mexico, USA				
12. CHE	CK THE APPROPRIATE BOX	X(ES) TO INDIC	CATE NATURE	E OF NOTICE	E, REPORT OR OT	HER D	ATA		
TYPE OF SUBMISSION				PE OF ACTION					
	Acidize	Deepen		_	tion (Start/Resume)		Water Shut-Off		
Notice of Intent	Alter Casing	= -	lic Fracturing	Reclam			Well Integrity		
Subsequent Report	Casing Repair	New Co	nstruction	Recom	plete		Other		
	Change Plans	<b>✓</b> Plug and	d Abandon	Tempor	rarily Abandon				
Final Abandonment Notice	Convert to Injection	Plug Ba	ck	Water I	Disposal				
	Accepted	d for Reco	rd						
14. I hereby certify that the foregoing is	true and correct. Name (Print	ed/Typed)	Loggey Dr	rogram Man					
Samantha Baker		T	itle	rogram Mana	ay <del>c</del> ı				
Signature		D	ate	08/20/2025					
	THE SPACE	FOR FEDEF	RAL OR ST	ATE OFIC	E USE				
Approved by			Petro	oleum E	ingineer	Date	08/21/2025		
Conditions of approval, if any, are attac certify that the applicant holds legal or which would entitle the applicant to cor	equitable title to those rights in			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. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

#### **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

(Form 3160-5, page 2)

#### LANGAN

## Technical Memorandum

300 Union Boulevard, Suite 405

Lakewood, CO 80228

T: 303.262.2000

F: 303.262.2001

To:

Bureau of Land Management (BLM)

From:

Langan Engineering and Environmental Services

Info:

Shell Oil Company (Western Division)

Date:

August 8, 2025

Re:

Plug and Abandonment – End of Well Report Cato San Andres Unit #148 / API 30-005-20204

Section 22, Township 8S, Range 30E

Langan Project No.: 781014301

#### **Work Summary:**

03/13/25 - More WOR & All Support Equipment In.

03/14/25 - Lease Road Repairs.

03/15/25 - Lease Road Repairs.

**03/16/25** - Lease Road Repairs.

**03/17/25** - Lease Road Repairs.

03/18/25 - Lease Road Repairs.

03/19/25 - Lease Road Repairs.

**03/20/25** - NPT due to BLM Prairie Chicken Restrictions 0600-0800. Arrived onsite, Pre-Job Safety Meeting - discussed Zone Management, equipment inspections, JSA review. Inspected equipment & work areas, checked WHP = 4.5" 0 PSI, 8 5/8" 0 PSI, established buffer zones, racked/tallied 108 joints 2.375" EUE workstring. RU WOR, spotted in pump truck. RU TPW & pump truck walked lines to confirm TPW compliance. Pressure tested TPW to 890 PSI, 5 minutes, WHP = 0 PSI, pumped 10 bbls FW down 4.5" production casing (volume to restriction at 620'KB = 9.8 bbls), shut down pump, vacuum, monitored well, NU BOP onto test stump, removed/replaced corroded 2" bullplug from 8 5/8" casing. Function tested BOP, opened BOP

Plug and Abandonment – End of Well Report Cato San Andres Unit #148 / API 30-005-20204 Section 22, Township 8S, Range 30E Langan Project No.: 781014301 August 8, 2025 - Page 2 of 6

door to confirm no residual cement in BOP, pressure tested BOP blind rams 300 PSI, 5 minutes/800 PSI, 5 minutes - good, 2 3/8" pipe rams 300 PSI, 5 minutes/800 PSI, 5 minutes - good. NU wellhead onto 4.5" stump, NU BOP onto wellhead, torqued to specs. RU workfloor/handrails/tongs/slips/2.375" slip-type elevators. RIH w/ 3.75" Tri-cone Bit BHA and 2.375" 8RD EUE workstring, tagged restriction at 627'KB. Staked Geronimo line, POOH w/ workstring to derrick. Secured well, SDFN.

03/21/25 - NPT due to BLM Prairie Chicken Restrictions 0600-0800. Arrived onsite, Pre-Job Safety Meeting - discussed PAUSE, equipment inspections, JSA review. RIH w/ 3.75" Tri-cone Bit BHA and 2.375" 8RD EUE workstring from derrick, tagged at 268'KB, worked through restriction, tagged restriction at 627 KB. RU power swivel, RU TPW, walked lines, pressure tested TPW to Kelly valve, 375 PSI, 5 minutes/1592 PSI, 5 minutes - good, bled to 0 PSI. Lined up pump to pump down tubing, pumped 22 bbls of FW to establish circulation, began cleanout w/ joint #20. Joint #23 Kelly Down @ 730'KB, returns are pipe scale. Joint #26 KD @ 826'KB, attempted to go downhole w/o rotating or pumping, plugged bit, worked to unplug bit, continued downhole while rotating and pumping. Joint #42 KD @ 1334'KB. Joint #51 KD @ 1617'KB. Joint #58 KD @ 1839'KB, pumped 29 bbls of FW to clean wellbore, returns were pipe scale residue, racked back power swivel. POOH w/ workstring to derrick. Began NPT, secured well, ND Drake BOP accumulator, waited for replacement from WFD. Replacement accumulator arrived onsite, spotted in accumulator, swapped hydraulic fittings from Drake accumulator, NU BOP accumulator, function tested BOP - failed, swapped hydraulic connections to align w/ proper accumulator valve handles, function tested BOP - passed, secured well, locked BOP blind rams, SDFN.

**03/22/25** - NPT due to BLM Prairie Chicken Restrictions 0600-0800. Arrived onsite, Pre-Job Safety Meeting - discussed PAUSE, equipment inspections, JSA review, inspected equipment, checked WHP = 17 PSI on 4.5" & 8 5/8". Completed Draw Down Test on WFD accumulator, RIH w/ 3.75" Tri-cone Bit BHA and 2.375" 8RD EUE workstring from derrick, tagged at 1839'KB. RU power swivel, walked lines, pressure tested TPW to Kelly valve, 250 PSI, 5 minutes/1500 PSI, 5 minutes - good, bled to 0 PSI. Lined up pump to pump down tubing, pumped 25 bbls of FW to establish circulation, noticed circulation through 8 5/8" x 4 1/2", closed 8 5/8" casing valves, 8 5/8"

Plug and Abandonment – End of Well Report Cato San Andres Unit #148 / API 30-005-20204 Section 22, Township 8S, Range 30E Langan Project No.: 781014301 August 8, 2025 - Page 3 of 6

SICP = 10 PSI while circulating, began cleanout w/ joint #58, joint #59 KD @ 1870'KB. Joint #65 Kelly Down @ 2061'KB, returns are pipe scale w/ oil trace. Joint #81 KD @ 2602'KB, continued downhole while rotating, reaming and pumping. JOINT #86 KD @ 2732'KB. JOINT #95 KD @ 3017'KB. JOINT #108 KD @ 3428'KB, pumped 20 bbls of FW to clean wellbore, returns were pipe scale residue, LD 2 joints, racked back power swivel. POOH w/ workstring to derrick, BD/LD 3.75" Tri-cone bit BHA. Secured well, SDFN.

**03/23/25** - NPT due to BLM Prairie Chicken Restrictions 0600-0800. Arrived on location, Pre-Job Safety Meeting - JSA review, equipment inspections, checked WHP, 4.5" 5 PSI, 8 5/8" 0 PSI, opened well. RIH w/ mule shoe BHA and workstring from derrick to 3400', broke circulation w/ 25 bbls FW. NPT due to BLM changing approval depth for plug #1, wait on orders, RU power swivel, RIH to tag at 3482'KB, wait on approval to pump plug #1 from 3460' to 3039'. Ended NPT, pumped plug #1, pumped 5 bbls FW spacer, pumped 6.9 bbls (35 SKS) @ 1.8 bpm w/ 28 PSI of 15.6 ppg type I/II cement 1.18 Yield w/ 2% CaCl2, pumped 11.7 bbls FW displacement @ 3.3 bpm w/ 43 PSI, 421' plug from 3460'KB-3039'KB. POOH w/ 15 joints to working racks, 94 joints to derrick, BD/LD mule shoe BHA, removed stripper head from rig BOP. Spotted in WL, RU WLU, NU 7 1/16" flange x Bowen, NU 3 ram WL BOP, torqued to specs, MU lubricator. Secured well, SDFN.

**03/24/25** - NPT due to BLM Prairie Chicken Restrictions 0600-0800. Arrived onsite, Pre-Job Safety Meeting - discussed potential pressure, spotting equipment, JSA review, checked equipment, checked WHP = 0 PSI. Ended NPT, PU/NU Hunting 15K WL PCE package, attempted to pressure test WL PCE, leaked at top Bowen, LD lubricator, tightened Bowen connection, PU Lubricator, leaked at top Bowen, LD lubricator, replaced O-ring, PU lubricator, pressure tested to 250 PSI, 5 minutes/950 PSI, 5 minutes - good. Pumped 17 bbls FW (fluid level 1070') down 4.5" casing to load casing, opened well, RIH w/ CBL BHA, tagged TOC at 2978'KB, Log up, est. TOC behind 4.5" production casing at 2470'KB. Bumped up tools, confirmed 0 PSI, BD/LD WL lubricator and CBL BHA, Began NPT to wait for CBL interpretation. Ended NPT, RIH w/ mule shoe BHA & 2.375" workstring, tagged TOC at 2993'KB, LD 1 joint, EOT @ 2984'KB. Walked lines, pressure tested surface TPW to 1500 PSI, pumped 13 bbls FW to break circulation, pumped plug #2, pumped 11.25 bbls (54 SKS) @ 3.3 bpm w/ 55 PSI of 15.6 ppg type I/II cement, 1.18

Plug and Abandonment – End of Well Report Cato San Andres Unit #148 / API 30-005-20204 Section 22, Township 8S, Range 30E Langan Project No.: 781014301 August 8, 2025 - Page 4 of 6

Yield, pumped 8.81 bbls FW displacement @ 4.5 bpm w/ 35 PSI, 706' plug from 2993'KB-2287'KB. POOH w/ 24 joints to racks, 70 joints to derrick. Secured well, SDFN.

**03/25/25** - NPT due to BLM Prairie Chicken Restrictions 0600-0800. Arrived on location, Pre-Job Safety Meeting - JSA review, checked equipment and work areas, checked WHP = 0 PSI. Ended NPT, RIH w/ tubing from derrick to tag TOC at 2153'KB, set EOT at 2150'KB to pump plug #3. Lined up pump to tubing, walked lines, pressure tested TPW to 1500 PSI - good, opened plug valve, pumped 19 bbls of FW to establish circulation, attempted to begin mixing cement, pump truck could not load cement, RD TPW from tubing, pulled tubing off bottom. Began NPT for Drake to troubleshoot and resolve the issue, a loose bolt from the bulk truck was found in the mixing head. Ended NPT, lowered tubing to EOT 2150', RU TPW, pressure tested TPW to 1500 PSI - good, pumped 15 bbls of FW to break circulation, pumped plug #3, pumped 8 bbls (38 SKS) @ 2.2 bpm w/ 55 PSI of 15.6 ppg type I/II cement, 1.18 Yield, pumped 6.3 bbls FW displacement @ 3.5 bpm w/ 58 PSI, 505' plug from 2153'KB-1648'KB. POOH w 16 joints to racks, RU TPW to reverse circulate w/ EOT 1648'KB, reversed 6 bbls to break circulation, pumped 20 bbls FW total until returns were clean (NOTE; some formation in returns), RD TPW. POOH w/ 52 joints to derrick. Secured well, SDFN.

**03/26/25** - NPT due to BLM Prairie Chicken Restrictions 0600-0800. Arrived on location, Pre-Job Safety Meeting - discussed pinch points, impact gloves, proper lifting techniques, JSA review, inspected equipment & work areas, checked WHP = 0 PSI. Ended NPT, NU WL PCE, torqued to specs, pumped 15 bbls FW to load 4.5" casing, well did not load, pressure tested lubricator and single ram PCE to 250 PSI, 5 minutes/800 PSI, 5 minutes - good. RIH w/ WL gun BHA (gun 3' x 3'' w/ 6 spf), tagged TOC at 1640'KB WLM, perforated the 4.5" casing at 1636'-1639', well went on a vacuum. POOH w/ WL tools, RD WL. RIH w/ tubing & mule shoe BHA from derrick, tagged TOC at 1649'KB. RU pump & TPW to tubing, pumped 15 bbls of FW to break circulation, pressure tested TPW to 1500 PSI, pumped plug #4, pumped 12 bbls (57 SKS) @ 1.8 bpm w/ 35 PSI of 15.6 ppg type I/II cement, 1.18 Yield, pumped 3.5 bbls FW displacement @ 2.4 bpm w/ 50 PSI, 750' plug from 1649'KB-899'KB. WOC, POOH w/ 24 joints to racks, 28 joints to derrick, swap out accumulators, Function tested/Draw down tested Drake accumulator. RIH w/ tubing to tag TOC at 1645'KB, LD 1 joint, EOT 1617'KB. RU pump & TPW to tubing, pumped 1 bbl of FW, pressure

Plug and Abandonment – End of Well Report Cato San Andres Unit #148 / API 30-005-20204 Section 22, Township 8S, Range 30E Langan Project No.: 781014301 August 8, 2025 - Page 5 of 6

tested TPW to 1500 PSI, pumped 11.5 bbls to break circulation, pumped plug #4 stg 2, pumped 11.92 bbls (57 SKS) @ 2.6 bpm w/ 34 PSI of 15.6 ppg type I/II cement, 1.18 Yield, pumped 3.4 bbls FW displacement @ 1.6 bpm w/ 15 PSI, 750' plug from 1645'KB-895'KB. RD TPW from tubing, POOH. Secured well w/ 1 joint & Mule shoe, closed pipe rams, installed TIW, closed TIW, closed casing outlet valves.

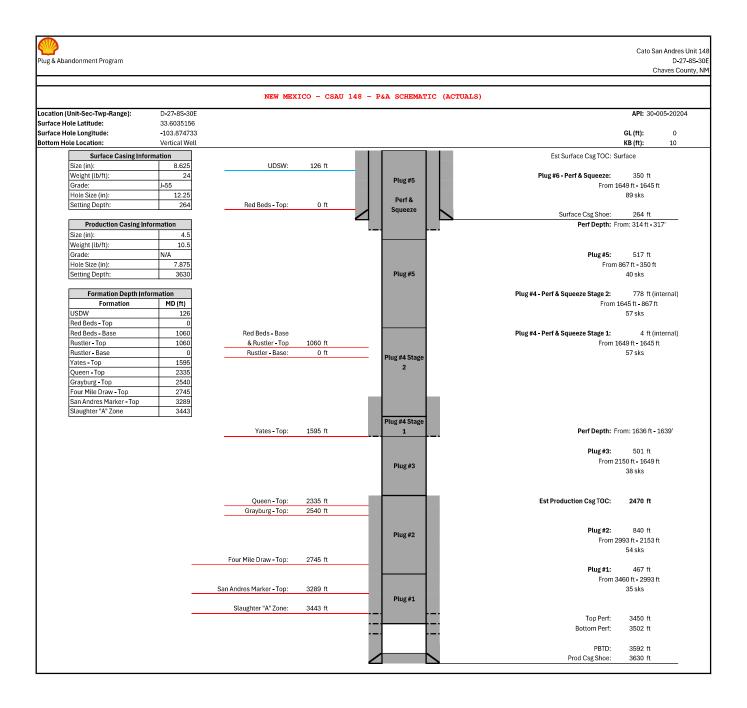
**03/27/25** - Crew travel. Pre-Job Safety Meeting - Discussed Equipment Inspections, 7 Step, JSA review, overhead lifts & stop work authority. Discuss daily operations and safety goals for the day. Discussed BOP ram replacement and test. Inspected equipment & work areas. Prepped to install test plug to test BOP. Run hanger with TWCV. Open doors on BOP to inspect rams and carriers. All look good. Replace rubber elements while BOP is open. Prep to pressure test BOP. NPT- WSI- Attempt to pressure test. WSI test unit is leaking and cannot get a test. Wait on new unit or figure out how to test with cement truck. Pressure test blind and pipe rams to 250 & 800 PSI for 5 minutes. Make up 3.06" mule shoe. RIH and tag TOC at 867'. Break circulation with 4.5 bbls. NPT-Drake-Welder repairing bulk truck. Pump cement plug #5. Pump 10 bbls FW spacer + 40 sacks. 8.4 bbls type 1/2 cement w/1.18 yield @ 15.6 ppg + 1.3 bbls displacement. POOH with tubing. Reverse out with EOT @ 350' w/8.5 bbls. Estimated plug: 350'-867'. 517' plug after reversing out at 350'. Continue POOH w/ last 11 joints. Out of hole. Secure well. SDFN to WOC. Crew travel.

**03/28/25** - Crew travel. Pre-Job Safety Meeting - Discussed Equipment Inspections, 7 Step, JSA review, overhead lifts & stop work authority. Discuss daily operations and safety goals for the day. Discussed Wireline and surface plug operations. Inspected equipment & work areas. Prepped to RU wireline. RU wireline equipment. Torque WL flange to specs. PU perf guns w/ CCL. Pressure test lubricator to 1500 PSI. RIH w/ wireline to tag TOC @ 379' WLM. POOH and perforate 18 shots / 6spf at 314' - 317' WLM. POOH. Break circulation down 4.5" and up 8-5/8". 4 bbls to break circulation. Pump an additional 10 bbls until clean. RD wireline. Make up 3.06" mule shoe and RIH to tag TOC @ 383' KB. RU cementers. Pressure test surface iron to 1500 PSI. Break circulation down 4.5" and up 8-5/8" again. Begin batch up cement. Pump surface cement plug. Pump 10 bbls FW spacer + 73 sacks. 15.3 bbls type 1/2 cement w/1.18 yield @ 15.6 ppg down tubing and up 8-5/8" until good cement at surface. Shut in 8-5/8" and pump down tubing

Plug and Abandonment – End of Well Report Cato San Andres Unit #148 / API 30-005-20204 Section 22, Township 8S, Range 30E Langan Project No.: 781014301 August 8, 2025 - Page 6 of 6

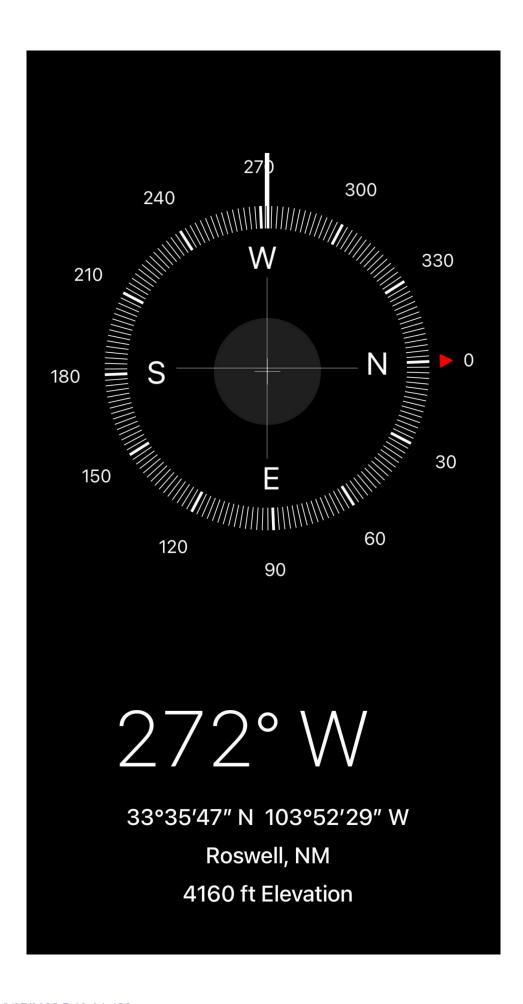
and up 4.5" casing with 16 sacks. 3.4 bbls type 1/2 cement w/1.18 yield @ 15.6 ppg until good cement at surface. POOH with tubing and top off 4.5" casing. total sacks pumped: 89 sacks. Total cement slurry pumped: 18.7 bbls. Out of hole. Secure well. Begin RDMO. Equipment ready to move. SDFN. Crew travel.

**07/23/2025** - Traveled to 148 and held safety meeting with on-site personnel. R/U welder. Preformed WH cutoff. Cement was at surface in both strings. Installed P&A marker. Backfilled cellar.









Sante Fe Main Office Phone: (505) 476-3441

General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Action 499419

#### **CONDITIONS**

Operator:	OGRID:
CANO PETRO OF NEW MEXICO, INC.	248802
801 Cherry Street	Action Number:
Fort Worth, TX 76102	499419
	Action Type:
	[C-103] Sub. Plugging (C-103P)

#### CONDITIONS

Created E		Condition Date
loren.d	e None	8/27/2025