

Form 3160-5
(October 2024)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027

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.

5. Lease Serial No.	NMNM 0022636
6. If Indian, Allottee or Tribe Name	N/A

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No. Cato San Andres Unit
1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. Cato San Andres Unit #164
2. Name of Operator Shell Oil Company (Western Division)		9. API Well No. 30-005-20100
3a. Address P.O. Box 576, Houston, TX 77210	3b. Phone No. (include area code) (832) 337-2434	10. Field and Pool or Exploratory Area Cato; San Andres
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) M-27-08S-30E 660 FSL 660 FWL		11. Country or Parish, State Chaves County, New Mexico, USA

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA					
TYPE OF SUBMISSION		TYPE OF ACTION			
<input 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 checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<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 recompleate 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 perfonned 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 recompletion 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 detennined that the site is ready for final inspection.)

Please refer to the attached Plug and Abandonment End of Well Report.

Accepted for Record

Like approval by NMOCD

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) Samantha Baker	Title SGWS Legacy Program Manager
Signature Samantha Baker	Date 04/17/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by	Title Petroleum Engineer	Date 04/21/2025
	Office RFO	
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.		

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

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: March 25, 2025

Re: Plug and Abandonment – End of Well Report
Cato San Andres Unit #164 / API 30-005-20100
Section 27, Township 8S, Range 30E
Langan Project No.: 781014301

Work Summary:

August 4, 2024 - Step 7 conversation. Updated JSA and Hot Work Permit. NU pump truck. END NPT for HTT. Pumped 5 bbls down production casing. Prepped wellhead for Bell Nipple. Cut 5 1/2" stump, welded 5 1/2" BN onto stump, allowed to cool. NU flange, 5 1/8" 5K GV and nightcap. Move to #178.

August 5, 2024 - PJSM - Discussed LSRs, 7 Step Conversation, JSA review. Moved equipment from well #198. Spotted equipment RU WLU and crane. MU/PU WL lubricator and tools. Pressure tested lubricator 250 psi, 5 minutes/500 psi. 5 minutes - good WHP 0 psi, opened well RIH with 4.44". GRJB without restriction to 3476'KB (top perf) POOH, observed wet WL while POOH, closed gate valve. MU WL CBL, RIH, logged well LD lubricator and tools. RD WLU and crane. Moved to well #178.

January 30, 2025 - Arrived on location at El Paso Plant #001. PJSM - JSA review. Checked equipment, began to load trucks and equipment. Moved rig and equipment for travel to Cato well #164. Released production tbg to Drake. Arrived on location with WOR. Spotted base beam, pipe racks, offloaded forklift and workstring. Drake unable to RU WOR due to high winds. SDFN. NPT Wind.

January 31, 2025 - Crew travel. PJSM - Discussed Equipment Inspections, 7 Step, JSA review, overhead lifts and stop work authority. Discuss daily operations and safety goals for the day.

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Inspected equipment and work areas. Check pressures. 5.5"= 7 psi. 9-5/8"= 0 psi. Continue to move equipment in and rig up. Pressure test BOP. RU WOR. Continue to RU support equipment. Prep workstring. Pressure test BOP. Prep to RIH with 4.5" tri-cone bit and scraper. Pump 20 bbls down 5.5" casing. Well on a vacuum. Monitor for 30 minutes and nipple up BOP. Rig up work floor and tubing handling equipment. Prep to RIH. Make up 4.5" tri-cone bit and scraper. Begin RIH. EOT @ 3470'. POOH with 108 joints. Out of hole. LD bit and scraper. Swap tubing equipment to RIH in morning. Shut well in and SDFN.

February 1, 2025 - Crew travel. PJSM - Discussed Equipment Inspections, 7 Step, JSA review, overhead lifts and stop work authority. Discuss daily operations and safety goals for the day. Inspected equipment and work areas. Check pressures. 5.5"= 0 psi. 9-5/8"= 0 psi. Make up bridge plug with stinger for 5.5" casing. RIH with workstring and bridge plug. Set bridge plug @ 3424' KB. Sting out and RIH to tag plug. Good tag. RU pump to circulate hole. Circulate wellbore clean. 23 bbls to catch circulation. Circulated back 80 bbls of solid thick oil. Pressure test 5.5" with 9-5/8" open to 590 psi for 5 minutes. (GOOD TEST) POOH with workstring and setting tool. Make up 3.06" mule shoe and RIH to top of bridge plug at 3424' KB. Pump cement plug #1. 41 sacks (8.5 bbls) type 1/2 cement with 1.18 yield @ 15.6 ppg + 11.5 bbls displacement. POOH with 13 joints of tubing and reverse out with 18 bbls @ 3013'. Continue POOH. Estimated cement plug: 3064'-3424' (360' plug). Out of hole with workstring. Secure well and SDFN to WOC. Crew travel.

February 2, 2025 - Crew travel. PJSM - Discussed Equipment Inspections, 7 Step, JSA review, overhead lifts and stop work authority. Discuss daily operations and safety goals for the day. Inspected equipment and work areas. Check pressures. 5.5"= 0 psi. 9-5/8"= 0 psi. Make up 3.06" mule shoe and RIH to tag TOC for plug #1. Tag TOC @ 3060' KB. (4' high). Break circulation and prep to pump cement plug #2 stage 1. Pump cement plug #2 stage 1. Pump 5 bbls. FW spacer + Pump. 46 sacks (9.5 bbls) type 1/2 cement with 1.18 yield @ 15.6 ppg with 2% Calcium Chloride + 10 bbls displacement. POOH with tubing (13 joints.) and reverse out with 15 bbls @ 2626'. Continue POOH with 5 more stands. Estimated cement plug depth: 2657'-3060'. Wait on cement. RIH to tag TOC. Tag TOC @ 2650'. Pump cement plug #2 stage 2. Pump 5 bbls FW spacer + Pump 63 sacks (13 bbls) type 1/2 cement with 1.18 yield @ 15.6 ppg + 7.8 bbls

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displacement. POOH with tubing (17 joints) and reverse out with 13 bbls @ 2085'. Continue POOH with 32 stands +1 joint. Estimated cement plug depth: 2100'-2650'. Out of hole. Shut well in and WOC overnight. Crew travel.

February 3, 2025 - Crew travel. PJSM - Discussed Equipment Inspections, 7 Step, JSA review, overhead lifts and stop work authority. Discuss daily operations and safety goals for the day. Inspected equipment and work areas. Check pressures. 5.5"= 0 psi. 9-5/8"= 0 psi. Make up 3.06" mule shoe and RIH to tag TOC for plug #2 stage #2. Tag @ 2084'. Pumped 10 ppg, 45 viscosity spacer fluid from 2084' - 1705'. With 9 bbls and displaced with 6.2 bbls. LD 7 joints and placed EOT @ 1855'. Pump cement plug #3 (bump plug). Pump 5 bbls FW spacer + Pump 12 sacks (2.3 bbls) type 1/2 cement with 1.18 yield @ 15.6 ppg with 2% Calcium Chloride + 6.5 bbls displacement. POOH with tubing (5 joints) and reverse out with 10 bbls @ 1699'. Continue POOH with 26 stands and a single. Estimated cement plug depth: 1755'-1855'. Out of hole. WOC. Rig up wireline with pump in sub, lubricator, single ram and pack off. Pressure test to 1500 psi. NPT-Drake wireline. Warrior system is not working. WL RIH tag TOC @1720'. Pick up and perforate at 1655'. POOH. Perforate 1652' - 1655'. WL out pf hole. Verified all shots fired. Shut blind rams and attempt injection test through perforations. Could not get any injection. Pump 1.5 bbls total and pressured up to 750 psi and held solid for 5 minutes. Discuss with Shell engineer and BLM. Decision to pump plug inside 5.5" to 1200'. Then perforate at 1110'. And attempt injection there. RD wireline. Prep to RIH with workstring. Make up 3.06" mule shoe and RIH to a depth of Pump cement plug #4. Pump 5 bbls FW spacer + Pump 58 sacks (12.3 bbls) type 1/2 cement with 1.18 yield @ 15.6 ppg w + 4.3 bbls displacement. POOH with tubing (16 joints) and reverse out with 15 bbls @ 1217'. Continue POOH with 19 stands. Estimated cement plug depth: 1217'-1720'. Continue POOH. Out of hole with workstring. Shut well in and SDFN. Crew travel.

February 4, 2025 - Crew travel. PJSM - Discussed Equipment Inspections, 7 Step, JSA review, overhead lifts and stop work authority. Discuss daily operations and safety goals for the day. Inspected equipment and work areas. Check pressures. 5.5"= 0 psi. 9-5/8"= 0 psi. NPT-Drake wireline. Wait on wireline truck. Spot in WL unit. RU all PCE. Prep guns. Pressure test lubricator and get ready to RIH to tag TOC and perforate. RIH with 3 perforation guns. (6spf). Tag TOC @

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1209' wlm. (GOOD TAG). Pull up and perforate 5.5" casing at 1110'-1107'. WL POOH Out of hole. Verify all shots fired. Perform injection test. 1.8 bpm at 600-800 psi. Pumped 9 bbls. Team not comfortable running packer with that rate and pressure. Discuss with Shell engineer and BLM for plan forward. RD wireline and prep to RIH with 3.06" mule shoe. RIH with workstring to 1209'. Pump cement plug #5. Pump 5 bbls FW spacer + Pump 69 sacks (14.4 bbls) type 1/2 cement with 1.18 yield @ 15.6 ppg w + 2.1 bbls displacement. POOH with tubing (19 joints) and reverse out with 5 bbls @ 580'. Continue POOH with 9 stands. Estimated cement plug depth in 5.5" if perforations do not take any: 600'-1209'. Out of hole. Shut blind rams and pressure 5.5" to 500 psi. Continue applying pressure of 500 psi until it locks up or 12 bbls pumped away. Squeezed 6 bbls of the 14.4 bbls of cement behind 5.5" casing. Lock 500 psi on well and SDFN. Crew travel.

February 5, 2025 - NPT - Weather. Wait on fog to lift. Crew travel. PJSM - Discussed Equipment Inspections, 7 Step, JSA review, overhead lifts and stop work authority. Discuss daily operations and safety goals for the day. Inspected equipment and work areas. Check pressures. 5.5" = 0 psi. 9-5/8" = 0 psi. Make up 3.06" mule shoe and RIH to tag TOC. Tag TOC @ 920'. Pump 10bbls of spacer fluid from 920'-500'. 1.6 bbls displacement. POOH with tubing. Out of hole. RU WL prep to RIH with guns. pressure test to 800 psi. RIH with WL and perforate 505'-508'. POOH. Pump 14 bbls to break circulation down 5.5" x 9-5/8". Pump 22 bbls after circulation to clean up backside. RD WL. Prep to RIH with workstring. Make up 3.06" mule shoe and RIH to place EOT @ 550'. Pump 22 bbls down 2.375" tubing and up 5.5" x 9-5/8" to ensure backside is clean. Pump surface plug 6 down 2.375" tubing and up 5.5" x 9-5/8" casing with 131 sacks (27.5 bbls) type 1/2 cement with 1.18 yield @ 15.6 ppg cement slurry. After estimated volume pumped, began to slowly pressure up and lose circulation. Did not see cement to surface. Field decision, since we had already pumped estimated volume and high pressure with no circulation. We swapped over to pumping down 2.375" x 5.5". Pump surface plug down 2.375" tubing and up 5.5" casing with 58 sacks (12 bbls) type 1/2 cement with 1.18 yield @ 15.6 ppg cement slurry. Pumped cement to surface. 191 sacks total pumped (47.5 bbls of slurry). POOH and topped of 5.5" casing. RD WOR and all aux. equipment. ND BOP and prep all equipment to move to CATU #163. Crew travel.

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March 20, 2025 - Arrived at Well #164 and held a safety meeting with Langan and on-site personnel. Completed a spiral gas check. Dug the cellar 3 feet down using the backhoe. Rigged up the welder and cut off the wellhead. Cement was to the surface in the 5.5" casing and 100 feet low in the surface casing. Rigged up cementing services and topped off the surface casing using poly-pipe from 100 feet to the surface with 16 sacks. Rigged down cementers. Installed the P&A marker per all local regulations and backfilled the location.



Plug & Abandonment Program

Revision: 0

NEW MEXICO - CSAU 164 - P&A SCHEMATIC

Location (Unit-Sec-Twp-Range): M-27-8S-30E
 Surface Hole Latitude: 33.6035156
 Surface Hole Longitude: -103.8749466
 Bottom Hole Location: Vertical Well

Surface Casing Information

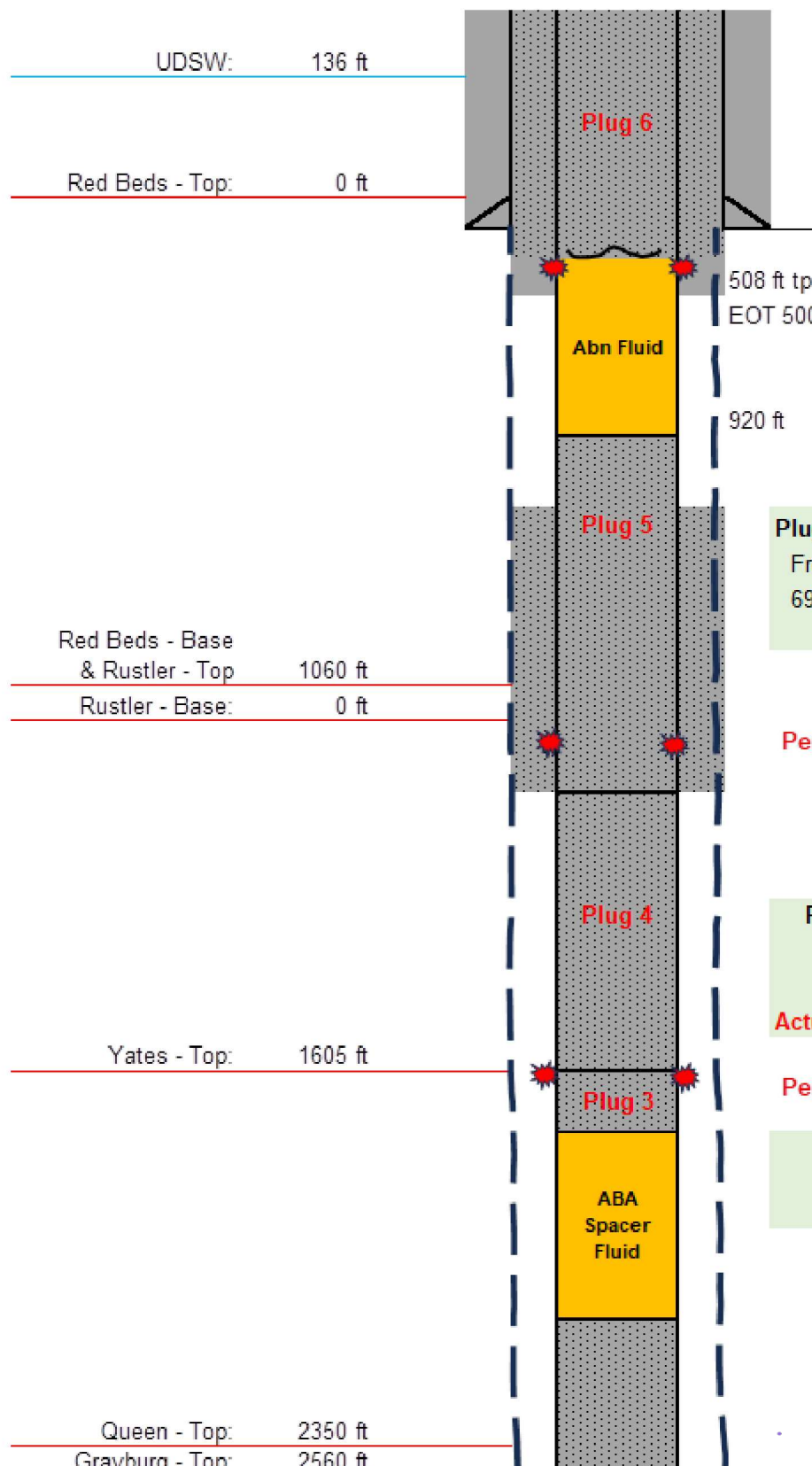
Size (in):	9.625
Weight (lb/ft):	53.5
Grade:	0
Hole Size (in):	12.25
Setting Depth:	458

Production Casing Information

Size (in):	5.5
Weight (lb/ft):	15.5
Grade:	N/A
Hole Size (in):	7.625
Setting Depth:	3700

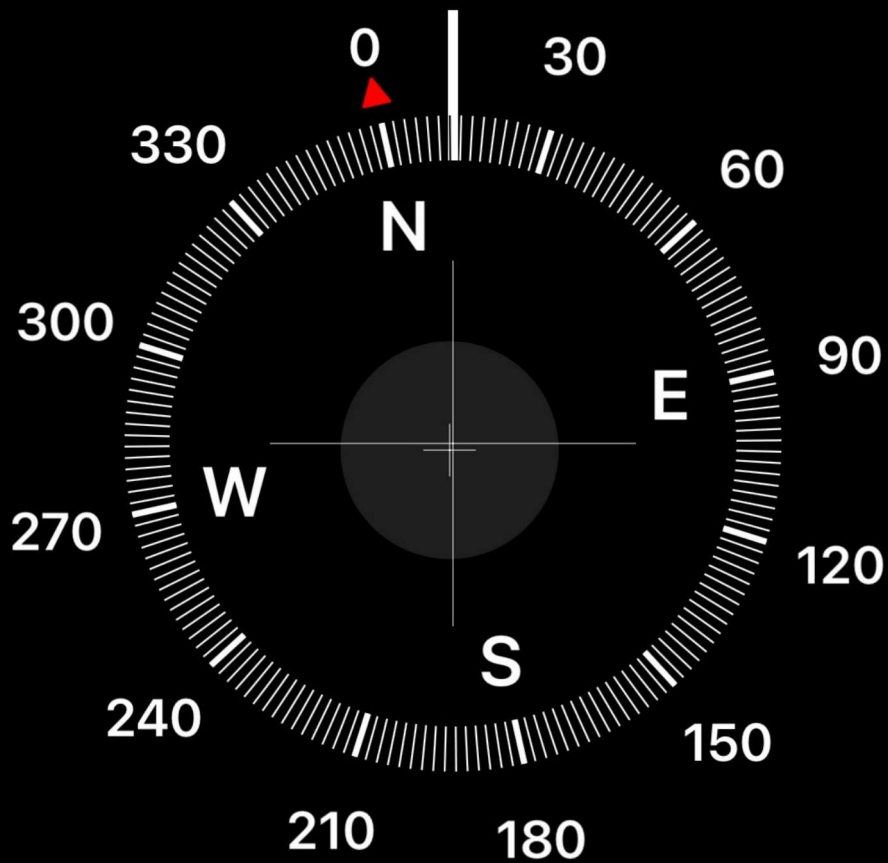
Formation Depth Information

Formation	MD (ft)
USDW	136
Red Beds - Top	0
Red Beds - Base	1060
Rustler - Top	1060
Rustler - Base	0
Yates - Top	1605
Queen - Top	2350
Grayburg - Top	2560
Four Mile Draw - Top	2770
San Andres Marker - Top	3314
Slaughter "A" Zone	3468





CS ALU. Well #184
30-005-Z0100
Shell NAO276225
Sec 27 T85 R30E
UNIT M



12° N

33°35'8" N 103°52'30" W

4160 ft Elevation

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

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/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 454369

CONDITIONS

Operator: CANO PETRO OF NEW MEXICO, INC. 801 Cherry Street Fort Worth, TX 76102	OGRID: 248802
	Action Number: 454369
	Action Type: [C-103] Sub. Plugging (C-103P)

CONDITIONS

Created By	Condition	Condition Date
loren.diede	None	4/23/2025