

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM 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.

5. Lease Serial No.
NMNM 0155254D

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
Shell Oil Company (Western Division)

3a. Address
P.O. Box 576, Houston, TX 77210

3b. Phone No. (include area code)
(832) 337-2434

7. If Unit of CA/Agreement, Name and/or No.
Cato San Andres Unit

8. Well Name and No.
Cato San Andres Unit #177

9. API Well No.
30-005-20179

10. Field and Pool or Exploratory Area
Cato; San Andres

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
I-33-08S-30E 1980 FSL 660 FEL

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"/> 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 attached Plug and Abandonment End of Well Report.

Accepted for Record

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)	
Samantha Baker	Title SGWS Legacy Program Manager
Signature <i>Samantha Baker</i>	Date 01/27/2025

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title Petroleum Engineer	Date 01/28/2025
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

LANGAN**Technical
Memorandum**

300 Union Boulevard, Suite 405 Lakewood, CO 80228 T: 303.262.2000 F: 303.262.2001

To: BLM

From: Langan

Info: Shell

Date: January 17, 2025

Re: Plug and Abandonment – End of Well Report
Cato San Andres Unit #177 / API 30-005-20179
Section 33, Township 8S, Range 30E
Langan Project No.: 781014301

Work Summary:

08/05/24 – Road equipment from well #138. Completed PJSM with JSA review, inspected equipment and work areas. Welded 2" coupling onto existing bullplug in 8 5/8" csg outlet. NU HTT, pressure tested HTT with N2, attempted to hot tap 8 5/8" through bullplug with 1/2" bit, hard drilling, broke bit off in bullplug. Hand dug cellar area, welded 2" coupling onto 8 5/8" wellhead. NU HTT, pressure tested HTT with N2, hot tapped 8 5/8" with 3/4" bit, 8 5/8" WHP = 0 psi.

08/06/24 - ND HTT, secured well, SDFN. PJSM covered Trenching, JSA review. Inspected equipment and work area, checked WHP at 0 psi, gas tested cellar area. Pumped 5 bbls of FW down 4.5", cut off 4.5" stump above wellhead, prep 4.5" production csg for Bell Nipple. Welded Bell Nipple onto 4.5". NU wellhead with dual barrier ball valves. Secured well for WL Eval. MIRU WLU and crane. MU/PU 5K gate valve, lubricator, and WL tools with 3.625" GRJB. Pressure tested lubricator 250 psi, 5 minutes/500 psi, 5 minutes - good, opened well. RIH with wl tools, tagged restriction at 1018' KB, POOH. MU 3.5" GRJB, RIH, tagged at 1018' KB, POOH.

08/07/24 – Secured well, SDFN. PJSM covered communication, contingencies, JSA review. MIRU WL video, crane. MU/PU lubricator and camera, did not pressure test lubricator due to camera in lubricator, opened well, RIH, lost video at 539' KB due to fluid in well, POOH. MU 3.625" Impression Block, tagged restriction at 943' KB, impressions of 3/4"L mark and misc smaller marks on block. RD WLU and crane. Travel to well #176.

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08/13/24 – PJSM confirmed 0 psi on wellhead, removed existing 2" bullplug from 8 5/8" csg outlet, replaced with dual barrier ball valves, secured well, SDFN.

10/31/24 – Completed PJSM. MIRU WOR and equipment, ran temporary iron for pump and tanks, MU wellhead. Attempted to land hanger to pressure test BOP, could not land hanger, began NPT Drake. Ended NPT Drake, pressure tested BOP on stump, 250 psi, 5 minutes/750 psi, 5 minutes - good. NU BOP, lunch. Began to RU WOR, half-masted derrick, Safety Stand down due to SRL recall, RD WOR, secured well. Racked and tallied tbg, SDFN, began NPT.

11/01/24 – Ended NPT Drake due to Safety Stand Down. Arrived on location, completed PJSM with JSA review. Began NPT due to SRL recall. Ended NPT, RU WOR, RU workfloor. RIH with 3.75" Tri-cone bit BHA and 2.375" 8 RD EUE workstring (slim hole couplings) from working racks. Tagged restriction at 1017' KB, 10' down on jt #32, LD jt #32, lunch. RU power swivel, lined up pump to forward circulate down tbg, pumped 20 bbls of FW to break circulation (calculated hole volume 14.5 bbls), began rotating/washing down. Washed down to 1170' KB, jt #36, observed no U-tbg during connections, returns at open top were FW/black formation water with pipe scale residue. Washed down to 1525' KB, jt #47, lost circulation to open top tank, pumped 30 bbls FW to re-establish circulation. Washed down to 1622' KB, jt #50, returns at open top were 8.5 ppg FW/black formation water with pipe scale residue and trace of Red Bed formation. Washed down to 1720' KB, jt #53 at 6-7.5 fpm, continued to rotate/wash down to 1914' KB, no hard tags below 1017' KB, circulated wellbore. LD jt #59, hung back power swivel, POOH with workstring to derrick (29 std).

11/02/24 – NPT Shell due to flooding in the area. No activity - shut down due to flooding.

11/04/24 – Completed PJSM with JSA review. Inspected equipment and work areas, checked WHP = 0 psi. RIH with 3.75" Tri-cone bit BHA and 2.375" 8 RD EUE workstring (slim hole couplings) from derrick. RIH with 59 jts to EOT at 1914' KB, no tag, RU power swivel with jt 60, lined up pump to forward circulate down tbg, pumped 7 bbls of FW to break circulation, began rotating/washing down. Temporarily lost circulation with jt 62, temporarily plugged bit due to lost circulation, surged tbg with rig, unplugged bit, continued to clean wellbore to 3435' KB, no tags from 2010'-2967', soft tags from 2967'-3241', no tags to 2967'-3435'. Circulated wellbore with

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70 bbls FW until returns were clean, lunch. Began to RD power swivel. NPT due to lightning in the area. Ended NPT, RD power swivel, POOH to derrick. LD 3.75"-bit BHA, drain all pump lines for winterization.

11/05/24 – PJSM discussed SSE hazards, 7 Step conversation, LSRs, JSA review. Inspected equipment and work areas, checked WHP = 0 psi. MU 3.6" OD CIBP with ported sub-BHA, RIH with workstring from derrick, tagged restriction at 1853' KB. Attempted to free CIBP from restricted area without success, contacted office, discussed plan forward. Soft set and release from CIBP at restriction, backed off threads at ported sub (1850' KB), POOH, discussed plan forward with office. MU 3.75" Tri-cone bit BHA with 2-3.125" drill collars (20 ppf), RIH with workstring from derrick, RU power swivel, pushed CIBP without rotating to 2002' KB, lined up pump to forward circulate while rotating, broke circulation with 12 bbls of FW. Began rotating with WOB 3K, drilled or moved CIBP to 2004' KB, no plug debris observed at returns. Pumped bottoms up with 25 bbls of FW, no plug debris observed at returns, RD power swivel, POOH with 28 jts to racks, POOH with 30 jts and 2 drill collars to derrick.

11/06/24 – PJSM discussed Equipment Inspections, 7 Step, JSA review. Inspected equipment and work areas, checked WHP = 0 psi. RIH with 3.75" tri-cone bit BHA with 2-3.125" drill collars and 2.375" workstring, tagged and worked through restrictions at 1007' KB, 1460' KB, attempted to work through restriction at 1590' KB, RU power swivel, could not work past restriction, lined up pump to forward circulate, pressured tbg to 800 psi, could not unplug bit, POOH wet to derrick. LD drill collars, discussed plan forward with office and BLM. RIH with 3.75" tri-cone bit BHA and 20 stds (40 jts) from derrick, PU 9 jts from racks, tagged at 1095', 1340', 1520' and 1578', RU to pump down tbg, pressured tbg to 800 psi, worked to clear plug at bit, POOH wet to derrick with plugged bit BHA. Lunch, RIH with 3.75"-bit BHA and tbg from derrick, swivel down from 975', tagged 1000' KB, 1072', 1483' and 1525', plugged bit due to U-tbg during connection, worked to clear bit, could not clear plug from bit, RD power swivel, POOH wet to derrick.

11/07/24 – PJSM discussed Equipment Inspections, 7 Step, JSA review. Inspected equipment and work areas, checked WHP = 0 psi. NPT-Drake to repair hydraulic issue with rig. Made up

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3.06" mule shoe, RIH with 15 stands (30 joints) out of derrick. RU power swivel and began washing down from 970', broke circulation with 12 bbls away. Down to 1330', circulated wellbore before continuing RIH. Continued washing down. Tagged solid at 1583', continued washing down at 3 fpm, EOT at 1589', circulated wellbore clean. Continue washing down. EOT at 2010', no solid tag yet, circulated wellbore clean and continue washing down. EOT at 2524', solid tag with mule shoe, not making hole, circulated wellbore clean. Tagged again at 2524', RD power swivel, began POOH, stood back 6 stands, total in derrick 15 stands (30 joints), LD rest of tubing (66 joints). Out of hole, shut well in and drained all surface equipment.

11/08/24 – Discussed with Shell, Drake and state about the rain falling and current/future condition of Cato Road and lease road and the inability to get heavy equipment in when needed. Decision made to shut down and wait for road to dry for operations tomorrow. NPT - Wait on weather. Attempted to get to location. Cato road too wet, muddy, and slick with several deep-water areas across the road. Decision made to wait one more day to allow roads to dry up.

11/10/24 – PJSM discussed Equipment Inspections, 7 Step, JSA review. Inspected equipment and work areas, checked WHP = 0 psi. NPT-Drake due to rig not starting, turned on block heater and hooked up jumper cables. Made up 3.5" tri-cone bit (bored out), RIH with 30 joints out of derrick. RU power swivel and broke circulation with 13 bbls. Began rotating and washing down from 970', tagged at 1557' and drilled through it. Tagged plug at 2524', continued to wash/drill down. EOT at 2578', circulated wellbore clean, spotted in and RU cementers. Pumped cement plug #1: 10 bbls FW spacer + 46 sacks type 1/2 cement with 1.18 yield at 15.6 ppg + 7 bbls displacement, POOH with tubing (Estimated plug: 1970' - 2578', 608' plug). LD 31 joints and stood back 24 stands in derrick. Out of hole with tubing and bit, shut well in and SDFN.

11/11/24 – PJSM discussed Equipment Inspections, 7 Step, JSA review. Inspected equipment and work areas, checked WHP = 0 psi. Made up 3.06" mule shoe and RIH to tag TOC, tagged at 1310', picked up and rotated pipe with pipe wrench and fell through. Continued RIH, tagged solid at 1715', RU to circulate, got formation back, appeared to be outside casing, discussed with Shell and BLM, decision made to pump cement. RU cementers. Pumped cement plug #2: 10 bbls FW spacer + 46 sacks type 1/2 cement with 1.18 yield at 15.6 ppg with 2% calcium chloride + 4 bbls

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displacement, POOH with tubing (Estimated plug: 1107' - 1715', 608' plug). POOH with tubing and WOC. Made up 3.06" tag tool, RIH to tag TOC. Tagged TOC at 1705' (+10'), RU cementers. Pumped cement plug #2 Stage 2: 10 bbls FW spacer + 46 sacks type 1/2 cement with 1.18 yield at 15.6 ppg + 4 bbls displacement, POOH with tubing (Estimated plug: 1105' - 1705', 600' plug). POOH with tubing, shut well in, SDFN.

11/12/24 – PJSM discussed Equipment Inspections, 7 Step, JSA review. Inspected equipment and work areas, checked WHP = 0 psi. Made up 3.06" tag tool and RIH to tag TOC. Tagged TOC at 1650' (+55'), attempted to break circulation before pumping more cement, 2 bbls away and pressured up due to plugged tubing. POOH with wet string. Tag tool plugged with formation, made up 3.06" mule shoe and RIH to 1650'. Pumped cement plug #2 stage 3: 10 bbls FW spacer + 61 sacks 12.6 bbls type 1/2 cement with 1.18 yield at 15.6 ppg with 2% calcium chloride + 2.7 bbls displacement, POOH with tubing (Estimated plug: 850' - 1650', 800' plug). POOH with tubing, LD 26 joints and standback 12 stands, WOC. RIH with 3.06" mule shoe, tagged TOC at 1100' (+550'). Pumped cement plug #2 Stage 4: 10 bbls FW spacer + 46 sacks 9.6 bbls type 1/2 cement with 1.18 yield at 15.6 ppg + 1.5 bbls displacement, POOH with tubing (Estimated plug: 492' - 1100', 608' plug). POOH with mule shoe and tubing, shut well in and WOC, SDFN.

11/13/24 – PJSM discussed Equipment Inspections, 7 Step, JSA review. Inspected equipment and work areas, checked WHP = 0 psi 4.5" on a vacuum. Made up 3.06" mule shoe and RIH to tag TOC, 14 joints out of derrick and picked up singles to tag. Tagged TOC at 969' (+131'), waited on orders. NPT-Drake Energy due to cement crew accident in town. Pumped cement plug #2 stage 5: 10 bbls FW spacer + 46 sacks 12.6 bbls type 1/2 cement with 1.18 yield at 15.6 ppg with 2% calcium chloride + 1 bbl displacement, POOH with tubing (Estimated plug: 361' - 969', 608' plug). WOC and POOH with tubing, LD 30 joints. Made up 3.06" mule shoe and RIH to tag TOC, tagged at 400', POOH with tubing. RD power swivel and prepped to perforate and pump surface plug in morning. Shut well in and SDFN, H2S training for Drake crew.

11/14/24 – Completed H2S training. PJSM discussed Equipment Inspections, 7 Step, JSA review. Inspected equipment and work areas, checked WHP = 0 psi 4.5" on a vacuum. RU WL and RIH with (3) 1' guns at 6 spf, 18 shots total, WL tag at 315' WLM, perforated at 312'-315',

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POOH and RD WL. RIH with tubing and tagged at 360' KB, adjusted TOC to 360' versus 400'. Began pumping down tubing with 4.5" closed and up 8-5/8", broke circulation with 8 bbls away, pumped additional 25 bbls to clean up behind the 4.5" casing. Pumped cement surface plug between 4.5" and 8-5/8" with 96 sacks (20 bbls) to surface and down 2.375" tubing and up 4.5" casing with 16 sacks (3.3 bbls) to surface with type 1/2 cement with 1.18 yield at 15.6+ ppg, POOH with tubing to 1 joint in hole, topped off well with cement, total sacks pumped: 112 sacks, 23.3 bbls of cement, witnessed by BLM. Began RD of WOR, all auxiliary/support equipment and ND BOP, began moving equipment to next well #176.

12/06/24 – Completed PJSM with Drake and personnel on location, conducted spiral gas check. Checked gas and well pressure. Excavated cellar to 3 ft depth using backhoe. RU welder, cut off wellhead. Found cement 2.9' low in 4.5" and at surface in 8.6". Installed P&A marker per all local regulations. Backfilled location.



Plug & Abandonment Program
Revision: 0

Cato San Andres Unit 177

I-33-8S-30E

Chaves County, NM

NEW MEXICO - CSAU 177 - WELLBORE SCHEMATIC

Location (Unit-Sec-Twp-Range): I-33-8S-30E
Surface Hole Latitude: 33.6035156
Surface Hole Longitude: -103.8794022
Bottom Hole Location: Vertical Well

API: 30-005-20179

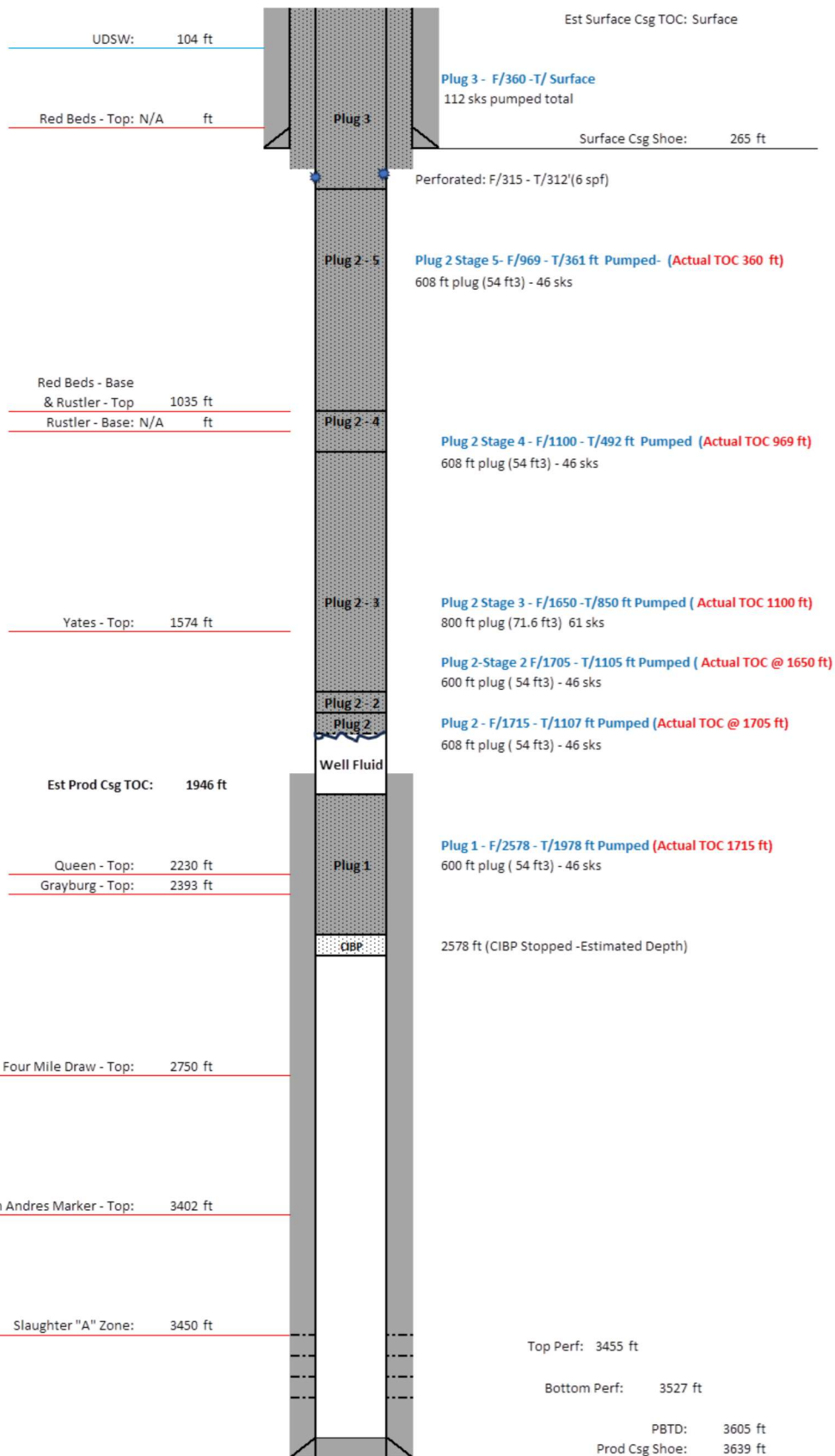
GL (ft): 4157

KB (ft): 10

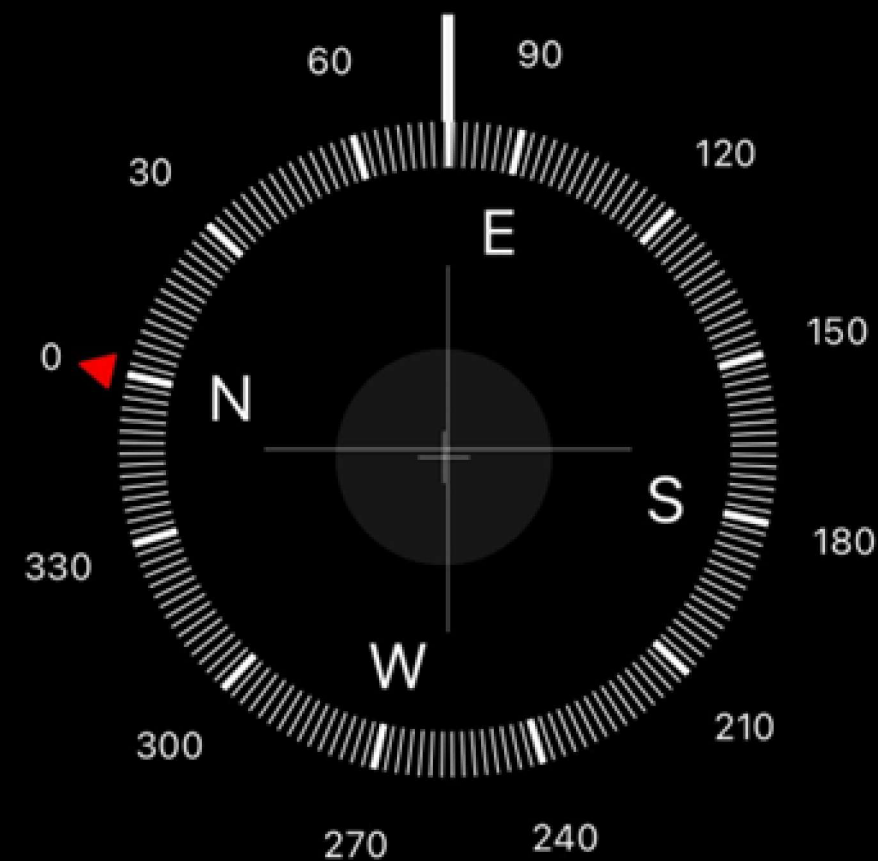
Surface Casing Information	
Size (in):	8.625
Weight (lb/ft):	24
Grade:	0
Hole Size (in):	12.25
Setting Depth:	265

Production Casing Information	
Size (in):	4.5
Weight (lb/ft):	10.5
Grade:	N/A
Hole Size (in):	7.875
Setting Depth:	3639

Formation Depth Information	
Formation	MD (ft)
UDSW	104
Red Beds - Top	N/A
Red Beds - Base	1035
Rustler - Top	1035
Rustler - Base	N/A
Yates - Top	1574
Queen - Top	2230
Grayburg - Top	2393
Four Mile Draw - Top	2750
San Andres Marker - Top	3402
Slaughter "A" Zone	3450



C.S.A.U # 177
Shell
API 30-005-20179
I 660 FEL-1980 FSL
Sec 33 T08S R30E
Chaves County



76° E

33°34'28" N 103°52'47" W

4150 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 428361

CONDITIONS

Operator: CANO PETRO OF NEW MEXICO, INC. 801 Cherry Street Fort Worth, TX 76102	OGRID: 248802
	Action Number: 428361
	Action Type: [C-103] Sub. Plugging (C-103P)

CONDITIONS

Created By	Condition	Condition Date
loren.diede	None	2/6/2025