

U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

<b>Well Name:</b> POKER LAKE UNIT 28-21 BS	<b>Well Location:</b> T25S / R31E / SEC 28 / NENW /	<b>County or Parish/State:</b> /
<b>Well Number:</b> 154H	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMLC062140A	<b>Unit or CA Name:</b> POKER LAKE	<b>Unit or CA Number:</b> NMNM071016X
<b>US Well Number:</b> 3001553232	<b>Well Status:</b> Drilling Well	<b>Operator:</b> XTO PERMIAN OPERATING LLC

**Notice of Intent**

**Sundry ID:** 2726243

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 04/18/2023

**Time Sundry Submitted:** 11:43

**Date proposed operation will begin:** 04/18/2023

**Procedure Description:** While drilling the intermediate the BHA became stuck at 10583' MD on the Poker Lake Unit 28-21 BS 154H (API:30-015-53232). We attempted retrieving the fish and were unsuccessful. The drilling string was parted at 7818' MD, top of fish. Circulation was maintained down the drilling string until the drill string parted. XTO proposes to isolate the original wellbore and sidetrack from the intermediate hole. Attachments: Sidetrack Procedure Current WBD Proposed WBD Directional Plan

**NOI Attachments**

**Procedure Description**

Poker\_Lake\_Unit\_28\_21\_BS\_154H\_Attachments\_20230418135711.pdf

**Well Name:** POKER LAKE UNIT 28-21  
BS

**Well Location:** T25S / R31E / SEC 28 /  
NENW /

**County or Parish/State:** /

**Well Number:** 154H

**Type of Well:** CONVENTIONAL GAS  
WELL

**Allottee or Tribe Name:**

**Lease Number:** NMLC062140A

**Unit or CA Name:** POKER LAKE

**Unit or CA Number:**  
NMNM071016X

**US Well Number:** 3001553232

**Well Status:** Drilling Well

**Operator:** XTO PERMIAN  
OPERATING LLC

### Conditions of Approval

#### Specialist Review

Poker\_Lake\_Unit\_28\_21\_BS\_Sundry\_ID\_2726243\_20230419123939.pdf

### Operator

*I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a*

**Operator Electronic Signature:** JESSICA DOOLING

**Signed on:** APR 18, 2023 01:57 PM

**Name:** XTO PERMIAN OPERATING LLC

**Title:** Lead Regulatory Coordinator

**Street Address:** 6401 HOLIDAY HILL ROAD BLDG 5

**City:** MIDLAND

**State:** TX

**Phone:** (970) 769-6048

**Email address:** JESSICA.DOOLING@EXXONMOBIL.COM

### Field

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**

### BLM Point of Contact

**BLM POC Name:** LONG VO

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5752345972

**BLM POC Email Address:** LVO@BLM.GOV

**Disposition:** Approved

**Disposition Date:** 04/19/2023

**Signature:** Long Vo

**Poker Lake Unit 28-21 BS 154H Sidetrack**

**Current Status:** XTO has set surface casing with cement to surface at 1,145' MD. Intermediate drilled to 10,583' MD. Fish stuck at 7,818' to 10,583' MD. An initial isolation plug of 421 sks, 17.0 ppg Class H, was pumped 50' above the fish with TOC tagged at 7200'.

**Requested Proposal:** XTO Proposes to set a 1200' cement plug inside the 8.75" intermediate wellbore, sidetrack, and redrill the 8.75" intermediate section. Production hole of 6.75", 5.5" casing with TD of 26417' MD, no change to hole or casing type.

**Proposed Procedure:**

1. Set 1200' balanced plug at 6,750' MD, 525 sks Class H 17.5 ppg
2. RIH with 8.75" Intermediate sidetrack BHA
  - a. Tag TOC 5550' to 5950' MD
  - b. Planned KOP at 5950' MD
3. Drill to original planned intermediate TD of 12230' MD.
4. Production hole of 6.75", 5.5" casing with TD of 26417' MD, no change to hole or casing type.

**Current Well Information:**

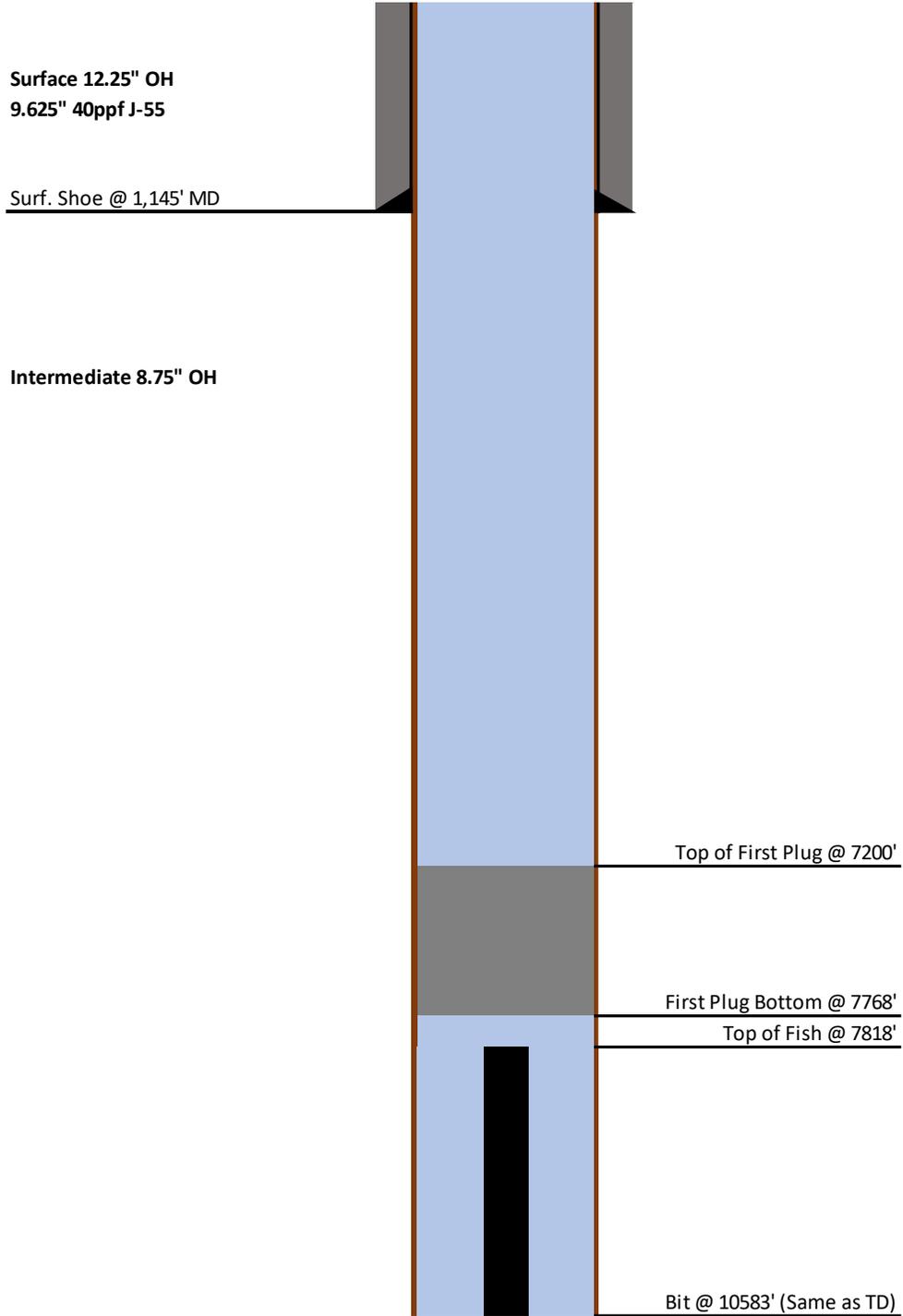
1. Surface: 12.25" hole at 1,155' MD, 9-5/8" casing at 1,145' MD. Cemented with Tail: 520sks 14.8 ppg Class C cement (1.33 yield). Circ to surface. 23 bbls returned to surface.
2. Intermediate: 8.75" hole @ 10,583' MD
  1. Cement balanced plug from 7200' to 7768' MD. Cemented with 421 sks Class H 17 ppg (0.99 yield)
  2. Fish: 7,818' to 10,583' MD (8.75" bit and drill sting)

**Formation Tops**

	Top TVD	Top MD
Rustler	977	977
Salado	1317	1317
Base Salt	3987	4100
Delaware	4206	4333
Cherry Canyon	5194	5385
Brushy Canyon	6401	6656

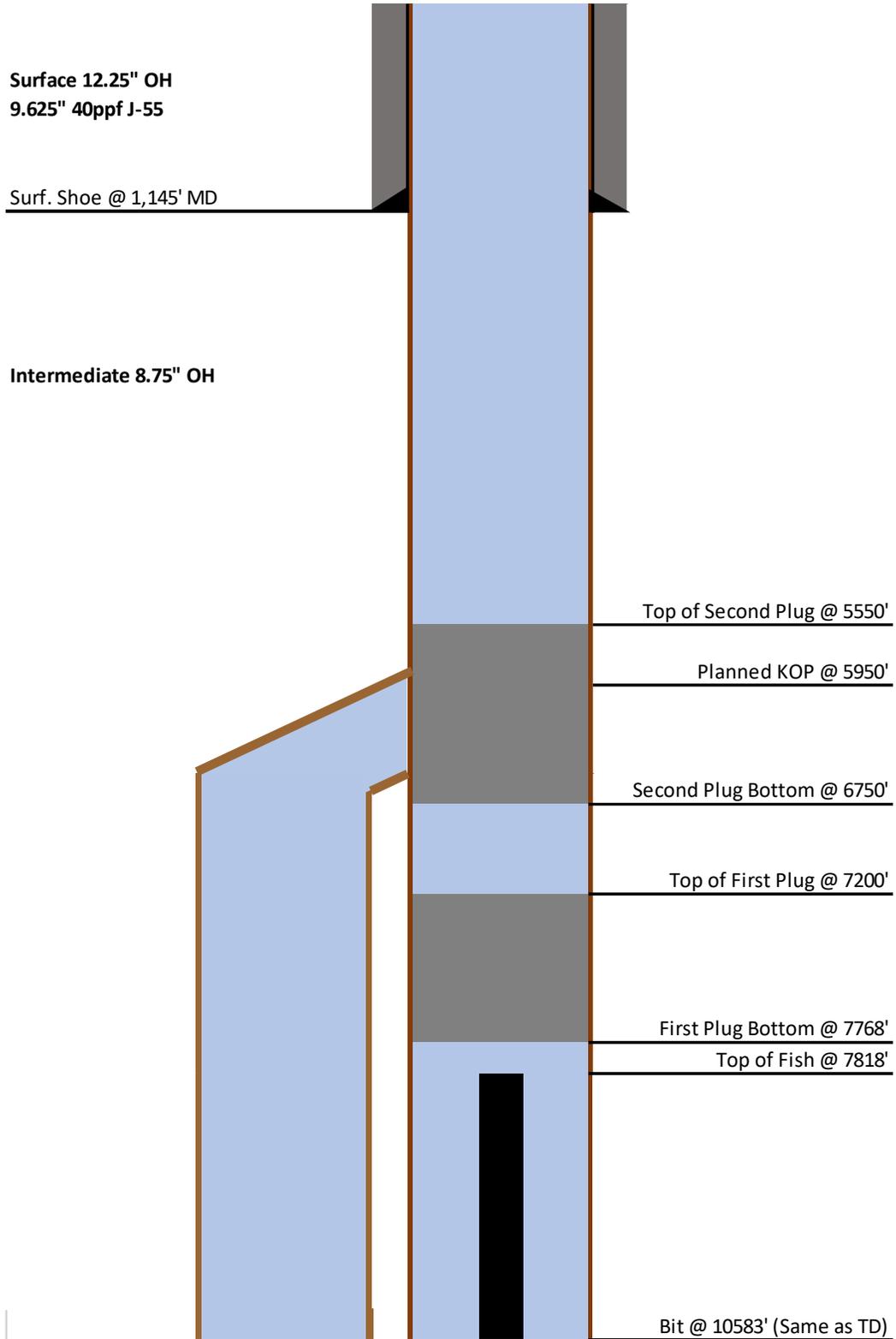
Poker Lake Unit 28-21 BS 154H

Current WBD



Poker Lake Unit 28-21 BS 154H

Proposed WBD



# **ROC**

**X39 - Eddy County, NMEZ NAD 27**

**X39 - PLU 28-21 BS - Plans**

**Poker Lake Unit 28-21 BS 154H**

**ST01**

**Plan: Plan 5**

## **Standard Planning Report**

**17 April, 2023**

## ExxonMobil Planning Report

<b>Database:</b>	LMRKPROD3	<b>Local Co-ordinate Reference:</b>	Well Poker Lake Unit 28-21 BS 154H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Project:</b>	X39 - Eddy County, NMEZ NAD 27	<b>MD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Site:</b>	X39 - PLU 28-21 BS - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	Poker Lake Unit 28-21 BS 154H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ST01		
<b>Design:</b>	Plan 5		

<b>Project</b> X39 - Eddy County, NMEZ NAD 27			
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

<b>Site</b> X39 - PLU 28-21 BS - Plans			
<b>Site Position:</b>		<b>Northing:</b>	402,096.80 usft
<b>From:</b>	Map	<b>Easting:</b>	668,754.10 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	32° 6' 15.51 N
		<b>Longitude:</b>	103° 47' 18.03 W

<b>Well</b> Poker Lake Unit 28-21 BS 154H			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 403,156.80 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 670,012.01 usft
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b> usft
<b>Grid Convergence:</b>		0.29 °	<b>Ground Level:</b> 3,351.00 usft
			<b>Latitude:</b> 32° 6' 25.93 N
			<b>Longitude:</b> 103° 47' 3.34 W

<b>Wellbore</b> ST01					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/13/2023	6.42	59.70	47,213.49060749

<b>Design</b> Plan 5					
<b>Audit Notes:</b>					
<b>Version:</b>		<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	5,946.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	180.06	

<b>Plan Survey Tool Program</b>		<b>Date</b> 4/17/2023			
#	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	5,946.00	26,417.40	Plan 5 (ST01)	XOMR2_OWSG MWD+IFR OWSG MWD + IFR1 + Mult	

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<b>Well:</b>	Poker Lake Unit 28-21 BS 154H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ST01		
<b>Design:</b>	Plan 5		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
5,946.00	18.42	221.52	5,727.98	-1,113.87	-752.31	0.00	0.00	0.00	0.00	
5,950.00	18.41	221.53	5,731.78	-1,114.81	-753.15	0.26	-0.25	0.25	162.47	
6,045.76	17.50	227.00	5,822.88	-1,135.95	-773.71	2.00	-0.95	5.71	120.94	
6,545.76	17.50	227.00	6,299.74	-1,238.49	-883.67	0.00	0.00	0.00	0.00	
6,615.97	17.50	222.33	6,366.70	-1,253.50	-898.50	2.00	0.00	-6.65	-92.12	
7,416.76	17.50	222.33	7,130.42	-1,431.55	-1,060.68	0.00	0.00	0.00	0.00	
8,291.89	0.00	0.00	7,992.00	-1,529.60	-1,149.99	2.00	-2.00	0.00	180.00	
12,230.89	0.00	0.00	11,931.00	-1,529.60	-1,149.99	0.00	0.00	0.00	0.00	
13,360.89	90.40	170.40	12,647.18	-2,240.70	-1,029.72	8.00	8.00	0.00	170.40	
13,843.88	90.40	180.06	12,643.80	-2,721.44	-989.60	2.00	0.00	2.00	89.97	
26,417.46	90.40	180.06	12,556.21	-15,294.70	-1,002.80	0.00	0.00	0.00	0.00	BHL - PLU 28-21 B:

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<b>Project:</b>	X39 - Eddy County, NMEZ NAD 27	<b>MD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Site:</b>	X39 - PLU 28-21 BS - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	Poker Lake Unit 28-21 BS 154H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ST01		
<b>Design:</b>	Plan 5		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,946.00	18.42	221.52	5,727.98	-1,113.87	-752.31	1,114.66	0.30	-0.09	0.90	
<b>Tie-in</b>										
5,950.00	18.41	221.53	5,731.78	-1,114.81	-753.15	1,115.60	0.26	-0.25	0.25	
<b>SDTRK, Drop &amp; Turn 2°/100'</b>										
6,000.00	17.92	224.32	5,779.29	-1,126.23	-763.76	1,127.03	2.00	-0.99	5.58	
6,045.76	17.50	227.00	5,822.88	-1,135.95	-773.71	1,136.76	2.00	-0.91	5.86	
<b>Hold 17.50° Inc, 227.00° Azm</b>										
6,100.00	17.50	227.00	5,874.61	-1,147.08	-785.64	1,147.90	0.00	0.00	0.00	
6,200.00	17.50	227.00	5,969.98	-1,167.59	-807.63	1,168.43	0.00	0.00	0.00	
6,300.00	17.50	227.00	6,065.35	-1,188.09	-829.62	1,188.96	0.00	0.00	0.00	
6,400.00	17.50	227.00	6,160.73	-1,208.60	-851.61	1,209.49	0.00	0.00	0.00	
6,500.00	17.50	227.00	6,256.10	-1,229.11	-873.61	1,230.02	0.00	0.00	0.00	
6,545.76	17.50	227.00	6,299.74	-1,238.49	-883.67	1,239.42	0.00	0.00	0.00	
<b>Turn 2°/100'</b>										
6,600.00	17.49	223.39	6,351.47	-1,249.98	-895.24	1,250.92	2.00	-0.01	-6.65	
6,615.97	17.50	222.33	6,366.70	-1,253.50	-898.50	1,254.44	2.00	0.06	-6.65	
<b>Hold 222.33° Azm</b>										
6,700.00	17.50	222.33	6,446.84	-1,272.18	-915.52	1,273.14	0.00	0.00	0.00	
6,800.00	17.50	222.33	6,542.21	-1,294.42	-935.77	1,295.40	0.00	0.00	0.00	
6,900.00	17.50	222.33	6,637.58	-1,316.65	-956.02	1,317.65	0.00	0.00	0.00	
7,000.00	17.50	222.33	6,732.95	-1,338.89	-976.28	1,339.91	0.00	0.00	0.00	
7,100.00	17.50	222.33	6,828.32	-1,361.12	-996.53	1,362.16	0.00	0.00	0.00	
7,147.28	17.50	222.33	6,873.42	-1,371.63	-1,006.10	1,372.69	0.00	0.00	0.00	
<b>Brushy Canyon</b>										
7,200.00	17.50	222.33	6,923.69	-1,383.35	-1,016.78	1,384.42	0.00	0.00	0.00	
7,300.00	17.50	222.33	7,019.06	-1,405.59	-1,037.03	1,406.67	0.00	0.00	0.00	
7,400.00	17.50	222.33	7,114.43	-1,427.82	-1,057.28	1,428.93	0.00	0.00	0.00	
7,416.76	17.50	222.33	7,130.42	-1,431.55	-1,060.68	1,432.66	0.00	0.00	0.00	
<b>Drop 2°/100'</b>										
7,500.00	15.84	222.33	7,210.16	-1,449.20	-1,076.76	1,450.33	2.00	-2.00	0.00	
7,600.00	13.84	222.33	7,306.82	-1,468.13	-1,094.00	1,469.28	2.00	-2.00	0.00	
7,700.00	11.84	222.33	7,404.31	-1,484.56	-1,108.96	1,485.72	2.00	-2.00	0.00	
7,800.00	9.84	222.33	7,502.52	-1,498.46	-1,121.62	1,499.63	2.00	-2.00	0.00	
7,900.00	7.84	222.33	7,601.33	-1,509.81	-1,131.97	1,511.00	2.00	-2.00	0.00	
8,000.00	5.84	222.33	7,700.62	-1,518.62	-1,139.99	1,519.81	2.00	-2.00	0.00	
8,100.00	3.84	222.33	7,800.25	-1,524.85	-1,145.66	1,526.05	2.00	-2.00	0.00	
8,200.00	1.84	222.33	7,900.13	-1,528.51	-1,149.00	1,529.71	2.00	-2.00	0.00	
8,291.89	0.00	0.00	7,992.00	-1,529.60	-1,149.99	1,530.80	2.00	-2.00	0.00	
<b>Hold Vertical</b>										
8,300.00	0.00	0.00	8,000.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,100.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
8,472.20	0.00	0.00	8,172.31	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
<b>Bone Spring</b>										
8,500.00	0.00	0.00	8,200.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,300.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,400.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,500.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,600.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,700.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,800.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,900.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,000.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,100.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00	

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<b>Wellbore:</b>	ST01		
<b>Design:</b>	Plan 5		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,472.20	0.00	0.00	9,172.31	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
<b>1st Bone Spring Ss</b>									
9,500.00	0.00	0.00	9,200.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
9,600.00	0.00	0.00	9,300.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
9,700.00	0.00	0.00	9,400.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
9,800.00	0.00	0.00	9,500.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
9,900.00	0.00	0.00	9,600.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
10,000.00	0.00	0.00	9,700.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
10,100.00	0.00	0.00	9,800.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
10,200.00	0.00	0.00	9,900.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
10,222.20	0.00	0.00	9,922.31	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
<b>2nd Bone Spring Ss</b>									
10,300.00	0.00	0.00	10,000.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
10,400.00	0.00	0.00	10,100.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
10,500.00	0.00	0.00	10,200.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
10,578.20	0.00	0.00	10,278.31	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
<b>3rd Bone Spring Lm</b>									
10,600.00	0.00	0.00	10,300.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
10,700.00	0.00	0.00	10,400.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
10,800.00	0.00	0.00	10,500.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
10,900.00	0.00	0.00	10,600.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,000.00	0.00	0.00	10,700.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,100.00	0.00	0.00	10,800.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,200.00	0.00	0.00	10,900.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,300.00	0.00	0.00	11,000.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,395.20	0.00	0.00	11,095.31	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
<b>3rd Bone Spring Ss</b>									
11,400.00	0.00	0.00	11,100.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,500.00	0.00	0.00	11,200.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,600.00	0.00	0.00	11,300.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,700.00	0.00	0.00	11,400.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,800.00	0.00	0.00	11,500.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,828.20	0.00	0.00	11,528.31	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
<b>Wolfcamp</b>									
11,900.00	0.00	0.00	11,600.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
11,983.20	0.00	0.00	11,683.31	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
<b>Wolfcamp A</b>									
12,000.00	0.00	0.00	11,700.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
12,100.00	0.00	0.00	11,800.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
12,200.00	0.00	0.00	11,900.11	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
12,230.89	0.00	0.00	11,931.00	-1,529.60	-1,149.99	1,530.80	0.00	0.00	0.00
<b>Curve KOP, Build 8°/100'</b>									
12,250.00	1.53	170.40	11,950.11	-1,529.85	-1,149.95	1,531.05	8.00	8.00	0.00
12,300.00	5.53	170.40	12,000.00	-1,532.89	-1,149.43	1,534.09	8.00	8.00	0.00
12,350.00	9.53	170.40	12,049.56	-1,539.34	-1,148.34	1,540.55	8.00	8.00	0.00
12,400.00	13.53	170.40	12,098.54	-1,549.19	-1,146.68	1,550.39	8.00	8.00	0.00
12,417.13	14.90	170.40	12,115.15	-1,553.34	-1,145.97	1,554.54	8.00	8.00	0.00
<b>Wolfcamp B</b>									
12,450.00	17.53	170.40	12,146.71	-1,562.39	-1,144.44	1,563.59	8.00	8.00	0.00
12,500.00	21.53	170.40	12,193.82	-1,578.87	-1,141.66	1,580.06	8.00	8.00	0.00
12,550.00	25.53	170.40	12,239.66	-1,598.54	-1,138.33	1,599.74	8.00	8.00	0.00
12,600.00	29.53	170.40	12,283.99	-1,621.33	-1,134.48	1,622.51	8.00	8.00	0.00
12,643.92	33.04	170.40	12,321.52	-1,643.81	-1,130.67	1,645.00	8.00	8.00	0.00

## ExxonMobil Planning Report

<b>Database:</b>	LMRKPROD3	<b>Local Co-ordinate Reference:</b>	Well Poker Lake Unit 28-21 BS 154H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Project:</b>	X39 - Eddy County, NMEZ NAD 27	<b>MD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Site:</b>	X39 - PLU 28-21 BS - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	Poker Lake Unit 28-21 BS 154H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ST01		
<b>Design:</b>	Plan 5		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
<b>Wolfcamp C</b>									
12,650.00	33.53	170.40	12,326.60	-1,647.10	-1,130.12	1,648.28	8.00	8.00	0.00
12,700.00	37.53	170.40	12,367.28	-1,675.74	-1,125.27	1,676.92	8.00	8.00	0.00
12,750.00	41.53	170.40	12,405.84	-1,707.12	-1,119.97	1,708.29	8.00	8.00	0.00
12,800.00	45.53	170.40	12,442.08	-1,741.06	-1,114.22	1,742.23	8.00	8.00	0.00
12,850.00	49.53	170.40	12,475.83	-1,777.42	-1,108.07	1,778.58	8.00	8.00	0.00
12,861.96	50.49	170.40	12,483.52	-1,786.45	-1,106.55	1,787.61	8.00	8.00	0.00
<b>Wolfcamp D</b>									
12,900.00	53.53	170.40	12,506.93	-1,816.01	-1,101.55	1,817.16	8.00	8.00	0.00
12,950.00	57.53	170.40	12,535.23	-1,856.64	-1,094.67	1,857.79	8.00	8.00	0.00
13,000.00	61.53	170.40	12,560.58	-1,899.13	-1,087.49	1,900.26	8.00	8.00	0.00
13,050.00	65.53	170.40	12,582.86	-1,943.25	-1,080.03	1,944.38	8.00	8.00	0.00
13,100.00	69.53	170.40	12,601.97	-1,988.80	-1,072.32	1,989.92	8.00	8.00	0.00
13,150.00	73.53	170.40	12,617.81	-2,035.55	-1,064.42	2,036.66	8.00	8.00	0.00
13,153.39	73.80	170.40	12,618.76	-2,038.75	-1,063.87	2,039.87	8.00	8.00	0.00
<b>Wolfcamp E</b>									
13,200.00	77.53	170.40	12,630.30	-2,083.27	-1,056.34	2,084.38	8.00	8.00	0.00
13,250.00	81.53	170.40	12,639.38	-2,131.74	-1,048.15	2,132.84	8.00	8.00	0.00
13,300.00	85.53	170.40	12,645.02	-2,180.72	-1,039.86	2,181.81	8.00	8.00	0.00
13,350.00	89.53	170.40	12,647.17	-2,229.96	-1,031.53	2,231.04	8.00	8.00	0.00
13,360.89	90.40	170.40	12,647.18	-2,240.70	-1,029.72	2,241.77	8.00	8.00	0.00
<b>LP @ 90.40° Inc, Turn 2°/100'</b>									
13,400.00	90.40	171.18	12,646.91	-2,279.30	-1,023.46	2,280.37	2.00	0.00	2.00
13,500.00	90.40	173.18	12,646.21	-2,378.37	-1,009.86	2,379.42	2.00	0.00	2.00
13,600.00	90.40	175.18	12,645.51	-2,477.84	-999.72	2,478.89	2.00	0.00	2.00
13,700.00	90.40	177.18	12,644.81	-2,577.62	-993.06	2,578.65	2.00	0.00	2.00
13,800.00	90.40	179.18	12,644.11	-2,677.56	-989.89	2,678.59	2.00	0.00	2.00
13,843.88	90.40	180.06	12,643.80	-2,721.44	-989.60	2,722.47	2.00	0.00	2.00
<b>Hold 180.06° Azm</b>									
13,900.00	90.40	180.06	12,643.41	-2,777.55	-989.66	2,778.59	0.00	0.00	0.00
14,000.00	90.40	180.06	12,642.71	-2,877.55	-989.77	2,878.59	0.00	0.00	0.00
14,100.00	90.40	180.06	12,642.02	-2,977.55	-989.87	2,978.58	0.00	0.00	0.00
14,200.00	90.40	180.06	12,641.32	-3,077.55	-989.98	3,078.58	0.00	0.00	0.00
14,300.00	90.40	180.06	12,640.62	-3,177.54	-990.08	3,178.58	0.00	0.00	0.00
14,400.00	90.40	180.06	12,639.93	-3,277.54	-990.19	3,278.58	0.00	0.00	0.00
14,500.00	90.40	180.06	12,639.23	-3,377.54	-990.29	3,378.57	0.00	0.00	0.00
14,600.00	90.40	180.06	12,638.53	-3,477.54	-990.40	3,478.57	0.00	0.00	0.00
14,700.00	90.40	180.06	12,637.84	-3,577.53	-990.50	3,578.57	0.00	0.00	0.00
14,800.00	90.40	180.06	12,637.14	-3,677.53	-990.61	3,678.57	0.00	0.00	0.00
14,900.00	90.40	180.06	12,636.45	-3,777.53	-990.71	3,778.56	0.00	0.00	0.00
15,000.00	90.40	180.06	12,635.75	-3,877.53	-990.82	3,878.56	0.00	0.00	0.00
15,100.00	90.40	180.06	12,635.05	-3,977.52	-990.92	3,978.56	0.00	0.00	0.00
15,200.00	90.40	180.06	12,634.36	-4,077.52	-991.03	4,078.56	0.00	0.00	0.00
15,300.00	90.40	180.06	12,633.66	-4,177.52	-991.13	4,178.55	0.00	0.00	0.00
15,400.00	90.40	180.06	12,632.96	-4,277.52	-991.24	4,278.55	0.00	0.00	0.00
15,500.00	90.40	180.06	12,632.27	-4,377.51	-991.34	4,378.55	0.00	0.00	0.00
15,600.00	90.40	180.06	12,631.57	-4,477.51	-991.45	4,478.55	0.00	0.00	0.00
15,700.00	90.40	180.06	12,630.87	-4,577.51	-991.55	4,578.54	0.00	0.00	0.00
15,800.00	90.40	180.06	12,630.18	-4,677.51	-991.66	4,678.54	0.00	0.00	0.00
15,900.00	90.40	180.06	12,629.48	-4,777.50	-991.76	4,778.54	0.00	0.00	0.00
16,000.00	90.40	180.06	12,628.78	-4,877.50	-991.87	4,878.54	0.00	0.00	0.00
16,100.00	90.40	180.06	12,628.09	-4,977.50	-991.97	4,978.53	0.00	0.00	0.00
16,200.00	90.40	180.06	12,627.39	-5,077.50	-992.08	5,078.53	0.00	0.00	0.00
16,300.00	90.40	180.06	12,626.69	-5,177.49	-992.18	5,178.53	0.00	0.00	0.00

### ExxonMobil Planning Report

<b>Database:</b>	LMRKPROD3	<b>Local Co-ordinate Reference:</b>	Well Poker Lake Unit 28-21 BS 154H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Project:</b>	X39 - Eddy County, NMEZ NAD 27	<b>MD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Site:</b>	X39 - PLU 28-21 BS - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	Poker Lake Unit 28-21 BS 154H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ST01		
<b>Design:</b>	Plan 5		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
16,400.00	90.40	180.06	12,626.00	-5,277.49	-992.29	5,278.53	0.00	0.00	0.00	
16,500.00	90.40	180.06	12,625.30	-5,377.49	-992.39	5,378.53	0.00	0.00	0.00	
16,600.00	90.40	180.06	12,624.60	-5,477.49	-992.50	5,478.52	0.00	0.00	0.00	
16,700.00	90.40	180.06	12,623.91	-5,577.48	-992.60	5,578.52	0.00	0.00	0.00	
16,800.00	90.40	180.06	12,623.21	-5,677.48	-992.71	5,678.52	0.00	0.00	0.00	
16,900.00	90.40	180.06	12,622.51	-5,777.48	-992.81	5,778.52	0.00	0.00	0.00	
17,000.00	90.40	180.06	12,621.82	-5,877.48	-992.92	5,878.51	0.00	0.00	0.00	
17,100.00	90.40	180.06	12,621.12	-5,977.47	-993.02	5,978.51	0.00	0.00	0.00	
17,200.00	90.40	180.06	12,620.42	-6,077.47	-993.13	6,078.51	0.00	0.00	0.00	
17,300.00	90.40	180.06	12,619.73	-6,177.47	-993.23	6,178.51	0.00	0.00	0.00	
17,400.00	90.40	180.06	12,619.03	-6,277.47	-993.34	6,278.50	0.00	0.00	0.00	
17,500.00	90.40	180.06	12,618.33	-6,377.46	-993.44	6,378.50	0.00	0.00	0.00	
17,600.00	90.40	180.06	12,617.64	-6,477.46	-993.55	6,478.50	0.00	0.00	0.00	
17,700.00	90.40	180.06	12,616.94	-6,577.46	-993.65	6,578.50	0.00	0.00	0.00	
17,800.00	90.40	180.06	12,616.24	-6,677.46	-993.76	6,678.49	0.00	0.00	0.00	
17,900.00	90.40	180.06	12,615.55	-6,777.45	-993.86	6,778.49	0.00	0.00	0.00	
18,000.00	90.40	180.06	12,614.85	-6,877.45	-993.97	6,878.49	0.00	0.00	0.00	
18,100.00	90.40	180.06	12,614.15	-6,977.45	-994.07	6,978.49	0.00	0.00	0.00	
18,200.00	90.40	180.06	12,613.46	-7,077.45	-994.18	7,078.48	0.00	0.00	0.00	
18,300.00	90.40	180.06	12,612.76	-7,177.44	-994.28	7,178.48	0.00	0.00	0.00	
18,400.00	90.40	180.06	12,612.06	-7,277.44	-994.39	7,278.48	0.00	0.00	0.00	
18,500.00	90.40	180.06	12,611.37	-7,377.44	-994.49	7,378.48	0.00	0.00	0.00	
18,600.00	90.40	180.06	12,610.67	-7,477.44	-994.60	7,478.47	0.00	0.00	0.00	
18,700.00	90.40	180.06	12,609.97	-7,577.43	-994.70	7,578.47	0.00	0.00	0.00	
18,800.00	90.40	180.06	12,609.28	-7,677.43	-994.81	7,678.47	0.00	0.00	0.00	
18,900.00	90.40	180.06	12,608.58	-7,777.43	-994.91	7,778.47	0.00	0.00	0.00	
19,000.00	90.40	180.06	12,607.88	-7,877.43	-995.01	7,878.46	0.00	0.00	0.00	
19,100.00	90.40	180.06	12,607.19	-7,977.42	-995.12	7,978.46	0.00	0.00	0.00	
19,200.00	90.40	180.06	12,606.49	-8,077.42	-995.22	8,078.46	0.00	0.00	0.00	
19,300.00	90.40	180.06	12,605.79	-8,177.42	-995.33	8,178.46	0.00	0.00	0.00	
19,400.00	90.40	180.06	12,605.10	-8,277.42	-995.43	8,278.45	0.00	0.00	0.00	
19,500.00	90.40	180.06	12,604.40	-8,377.41	-995.54	8,378.45	0.00	0.00	0.00	
19,600.00	90.40	180.06	12,603.70	-8,477.41	-995.64	8,478.45	0.00	0.00	0.00	
19,700.00	90.40	180.06	12,603.01	-8,577.41	-995.75	8,578.45	0.00	0.00	0.00	
19,800.00	90.40	180.06	12,602.31	-8,677.41	-995.85	8,678.45	0.00	0.00	0.00	
19,900.00	90.40	180.06	12,601.61	-8,777.40	-995.96	8,778.44	0.00	0.00	0.00	
20,000.00	90.40	180.06	12,600.92	-8,877.40	-996.06	8,878.44	0.00	0.00	0.00	
20,100.00	90.40	180.06	12,600.22	-8,977.40	-996.17	8,978.44	0.00	0.00	0.00	
20,200.00	90.40	180.06	12,599.52	-9,077.40	-996.27	9,078.44	0.00	0.00	0.00	
20,300.00	90.40	180.06	12,598.83	-9,177.39	-996.38	9,178.43	0.00	0.00	0.00	
20,400.00	90.40	180.06	12,598.13	-9,277.39	-996.48	9,278.43	0.00	0.00	0.00	
20,500.00	90.40	180.06	12,597.43	-9,377.39	-996.59	9,378.43	0.00	0.00	0.00	
20,600.00	90.40	180.06	12,596.74	-9,477.39	-996.69	9,478.43	0.00	0.00	0.00	
20,700.00	90.40	180.06	12,596.04	-9,577.38	-996.80	9,578.42	0.00	0.00	0.00	
20,800.00	90.40	180.06	12,595.34	-9,677.38	-996.90	9,678.42	0.00	0.00	0.00	
20,900.00	90.40	180.06	12,594.65	-9,777.38	-997.01	9,778.42	0.00	0.00	0.00	
21,000.00	90.40	180.06	12,593.95	-9,877.38	-997.11	9,878.42	0.00	0.00	0.00	
21,100.00	90.40	180.06	12,593.25	-9,977.37	-997.22	9,978.41	0.00	0.00	0.00	
21,200.00	90.40	180.06	12,592.56	-10,077.37	-997.32	10,078.41	0.00	0.00	0.00	
21,300.00	90.40	180.06	12,591.86	-10,177.37	-997.43	10,178.41	0.00	0.00	0.00	
21,400.00	90.40	180.06	12,591.16	-10,277.37	-997.53	10,278.41	0.00	0.00	0.00	
21,500.00	90.40	180.06	12,590.47	-10,377.36	-997.64	10,378.40	0.00	0.00	0.00	
21,600.00	90.40	180.06	12,589.77	-10,477.36	-997.74	10,478.40	0.00	0.00	0.00	
21,700.00	90.40	180.06	12,589.07	-10,577.36	-997.85	10,578.40	0.00	0.00	0.00	

### ExxonMobil Planning Report

<b>Database:</b>	LMRKPROD3	<b>Local Co-ordinate Reference:</b>	Well Poker Lake Unit 28-21 BS 154H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Project:</b>	X39 - Eddy County, NMEZ NAD 27	<b>MD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Site:</b>	X39 - PLU 28-21 BS - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	Poker Lake Unit 28-21 BS 154H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ST01		
<b>Design:</b>	Plan 5		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
21,800.00	90.40	180.06	12,588.38	-10,677.36	-997.95	10,678.40	0.00	0.00	0.00
21,900.00	90.40	180.06	12,587.68	-10,777.36	-998.06	10,778.39	0.00	0.00	0.00
22,000.00	90.40	180.06	12,586.98	-10,877.35	-998.16	10,878.39	0.00	0.00	0.00
22,100.00	90.40	180.06	12,586.29	-10,977.35	-998.27	10,978.39	0.00	0.00	0.00
22,200.00	90.40	180.06	12,585.59	-11,077.35	-998.37	11,078.39	0.00	0.00	0.00
22,300.00	90.40	180.06	12,584.89	-11,177.35	-998.48	11,178.38	0.00	0.00	0.00
22,400.00	90.40	180.06	12,584.20	-11,277.34	-998.58	11,278.38	0.00	0.00	0.00
22,500.00	90.40	180.06	12,583.50	-11,377.34	-998.69	11,378.38	0.00	0.00	0.00
22,600.00	90.40	180.06	12,582.80	-11,477.34	-998.79	11,478.38	0.00	0.00	0.00
22,700.00	90.40	180.06	12,582.11	-11,577.34	-998.90	11,578.37	0.00	0.00	0.00
22,800.00	90.40	180.06	12,581.41	-11,677.33	-999.00	11,678.37	0.00	0.00	0.00
22,900.00	90.40	180.06	12,580.71	-11,777.33	-999.11	11,778.37	0.00	0.00	0.00
23,000.00	90.40	180.06	12,580.02	-11,877.33	-999.21	11,878.37	0.00	0.00	0.00
23,100.00	90.40	180.06	12,579.32	-11,977.33	-999.32	11,978.37	0.00	0.00	0.00
23,200.00	90.40	180.06	12,578.62	-12,077.32	-999.42	12,078.36	0.00	0.00	0.00
23,300.00	90.40	180.06	12,577.93	-12,177.32	-999.53	12,178.36	0.00	0.00	0.00
23,400.00	90.40	180.06	12,577.23	-12,277.32	-999.63	12,278.36	0.00	0.00	0.00
23,500.00	90.40	180.06	12,576.53	-12,377.32	-999.74	12,378.36	0.00	0.00	0.00
23,600.00	90.40	180.06	12,575.84	-12,477.31	-999.84	12,478.35	0.00	0.00	0.00
23,700.00	90.40	180.06	12,575.14	-12,577.31	-999.95	12,578.35	0.00	0.00	0.00
23,800.00	90.40	180.06	12,574.44	-12,677.31	-1,000.05	12,678.35	0.00	0.00	0.00
23,900.00	90.40	180.06	12,573.75	-12,777.31	-1,000.16	12,778.35	0.00	0.00	0.00
24,000.00	90.40	180.06	12,573.05	-12,877.30	-1,000.26	12,878.34	0.00	0.00	0.00
24,100.00	90.40	180.06	12,572.35	-12,977.30	-1,000.37	12,978.34	0.00	0.00	0.00
24,200.00	90.40	180.06	12,571.66	-13,077.30	-1,000.47	13,078.34	0.00	0.00	0.00
24,300.00	90.40	180.06	12,570.96	-13,177.30	-1,000.58	13,178.34	0.00	0.00	0.00
24,400.00	90.40	180.06	12,570.26	-13,277.29	-1,000.68	13,278.33	0.00	0.00	0.00
24,500.00	90.40	180.06	12,569.57	-13,377.29	-1,000.79	13,378.33	0.00	0.00	0.00
24,600.00	90.40	180.06	12,568.87	-13,477.29	-1,000.89	13,478.33	0.00	0.00	0.00
24,700.00	90.40	180.06	12,568.17	-13,577.29	-1,001.00	13,578.33	0.00	0.00	0.00
24,800.00	90.40	180.06	12,567.48	-13,677.28	-1,001.10	13,678.32	0.00	0.00	0.00
24,900.00	90.40	180.06	12,566.78	-13,777.28	-1,001.21	13,778.32	0.00	0.00	0.00
25,000.00	90.40	180.06	12,566.08	-13,877.28	-1,001.31	13,878.32	0.00	0.00	0.00
25,100.00	90.40	180.06	12,565.39	-13,977.28	-1,001.42	13,978.32	0.00	0.00	0.00
25,200.00	90.40	180.06	12,564.69	-14,077.27	-1,001.52	14,078.31	0.00	0.00	0.00
25,300.00	90.40	180.06	12,563.99	-14,177.27	-1,001.63	14,178.31	0.00	0.00	0.00
25,400.00	90.40	180.06	12,563.30	-14,277.27	-1,001.73	14,278.31	0.00	0.00	0.00
25,500.00	90.40	180.06	12,562.60	-14,377.27	-1,001.84	14,378.31	0.00	0.00	0.00
25,600.00	90.40	180.06	12,561.90	-14,477.26	-1,001.94	14,478.30	0.00	0.00	0.00
25,700.00	90.40	180.06	12,561.21	-14,577.26	-1,002.05	14,578.30	0.00	0.00	0.00
25,800.00	90.40	180.06	12,560.51	-14,677.26	-1,002.15	14,678.30	0.00	0.00	0.00
25,900.00	90.40	180.06	12,559.82	-14,777.26	-1,002.26	14,778.30	0.00	0.00	0.00
26,000.00	90.40	180.06	12,559.12	-14,877.25	-1,002.36	14,878.29	0.00	0.00	0.00
26,100.00	90.40	180.06	12,558.42	-14,977.25	-1,002.47	14,978.29	0.00	0.00	0.00
26,200.00	90.40	180.06	12,557.73	-15,077.25	-1,002.57	15,078.29	0.00	0.00	0.00
26,300.00	90.40	180.06	12,557.03	-15,177.25	-1,002.68	15,178.29	0.00	0.00	0.00
26,400.00	90.40	180.06	12,556.33	-15,277.24	-1,002.78	15,278.29	0.00	0.00	0.00
26,417.46	90.40	180.06	12,556.21	-15,294.70	-1,002.80	15,295.74	0.00	0.00	0.00
<b>PBHL</b>									

## ExxonMobil Planning Report

<b>Database:</b>	LMRKPROD3	<b>Local Co-ordinate Reference:</b>	Well Poker Lake Unit 28-21 BS 154H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Project:</b>	X39 - Eddy County, NMEZ NAD 27	<b>MD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Site:</b>	X39 - PLU 28-21 BS - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	Poker Lake Unit 28-21 BS 154H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ST01		
<b>Design:</b>	Plan 5		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL - PLU 28-21 BS - hit/miss target - Shape - Rectangle (sides W100.00 H12,757.18 D0.00)	0.40	0.06	12,556.21	-15,294.70	-1,002.80	387,862.10	669,009.20	32° 3' 54.63 N	103° 47' 15.90 W
LTP - PLU 28-21 BS 1 - plan misses target center by 0.06usft at 26287.45usft MD (12557.12 TVD, -15164.70 N, -1002.66 E) - Point	0.00	0.00	12,557.12	-15,164.70	-1,002.60	387,992.10	669,009.40	32° 3' 55.91 N	103° 47' 15.89 W
FTP - PLU 28-21 BS - plan misses target center by 5.61usft at 13660.19usft MD (12645.08 TVD, -2537.87 N, -995.30 E) - Point	0.00	0.00	12,645.27	-2,537.50	-989.70	400,619.30	669,022.30	32° 6' 0.87 N	103° 47' 15.00 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
900.00	899.95	5 1/2"	5.500	6.000	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,013.13	1,013.07	Rustler		-0.40	180.06
1,313.19	1,313.09	Salado (Top Salt)		-0.40	180.06
4,135.49	4,018.49	Base Salt		-0.40	180.06
4,352.24	4,225.07	Delaware		-0.40	180.06
5,365.79	5,176.16	Cherry Canyon		-0.40	180.06
7,147.28	6,873.42	Brushy Canyon		-0.40	180.06
8,472.20	8,172.31	Bone Spring		-0.40	180.06
9,472.20	9,172.31	1st Bone Spring Ss		-0.40	180.06
10,222.20	9,922.31	2nd Bone Spring Ss		-0.40	180.06
10,578.20	10,278.31	3rd Bone Spring Lm		-0.40	180.06
11,395.20	11,095.31	3rd Bone Spring Ss		-0.40	180.06
11,828.20	11,528.31	Wolfcamp		-0.40	180.06
11,983.20	11,683.31	Wolfcamp A		-0.40	180.06
12,417.13	12,115.15	Wolfcamp B		-0.40	180.06
12,643.92	12,321.52	Wolfcamp C		-0.40	180.06
12,861.96	12,483.52	Wolfcamp D		-0.40	180.06
13,153.39	12,618.76	Wolfcamp E		-0.40	180.06

**ExxonMobil**  
Planning Report

<b>Database:</b>	LMRKPROD3	<b>Local Co-ordinate Reference:</b>	Well Poker Lake Unit 28-21 BS 154H
<b>Company:</b>	ROC	<b>TVD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Project:</b>	X39 - Eddy County, NMEZ NAD 27	<b>MD Reference:</b>	RKB 32.5 @ 3383.50usft (Nabors X39)
<b>Site:</b>	X39 - PLU 28-21 BS - Plans	<b>North Reference:</b>	Grid
<b>Well:</b>	Poker Lake Unit 28-21 BS 154H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ST01		
<b>Design:</b>	Plan 5		

**Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,946.00	5,727.98	-1,113.87	-752.31	Tie-in
5,950.00	5,731.78	-1,114.81	-753.15	SDTRK, Drop & Turn 2°/100'
6,045.76	5,822.88	-1,135.95	-773.71	Hold 17.50° Inc, 227.00° Azm
6,545.76	6,299.74	-1,238.49	-883.67	Turn 2°/100'
6,615.97	6,366.70	-1,253.50	-898.50	Hold 222.33° Azm
7,416.76	7,130.42	-1,431.55	-1,060.68	Drop 2°/100'
8,291.89	7,992.00	-1,529.60	-1,149.99	Hold Vertical
12,230.89	11,931.00	-1,529.60	-1,149.99	Curve KOP, Build 8°/100'
13,360.89	12,647.18	-2,240.70	-1,029.72	LP @ 90.40° Inc, Turn 2°/100'
13,843.88	12,643.80	-2,721.44	-989.60	Hold 180.06° Azm
26,417.46	12,556.21	-15,294.70	-1,002.80	PBHL

U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

<b>Well Name:</b> POKER LAKE UNIT 28-21 BS	<b>Well Location:</b> T25S / R31E / SEC 28 / NENW /	<b>County or Parish/State:</b> /
<b>Well Number:</b> 154H	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMLC062140A	<b>Unit or CA Name:</b> POKER LAKE	<b>Unit or CA Number:</b> NMNM071016X
<b>US Well Number:</b> 3001553232	<b>Well Status:</b> Drilling Well	<b>Operator:</b> XTO PERMIAN OPERATING LLC

**Notice of Intent**

**Sundry ID:** 2726243

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 04/18/2023

**Time Sundry Submitted:** 11:43

**Date proposed operation will begin:** 04/18/2023

**Procedure Description:** While drilling the intermediate the BHA became stuck at 10583' MD on the Poker Lake Unit 28-21 BS 154H (API:30-015-53232). We attempted retrieving the fish and were unsuccessful. The drilling string was parted at 7818' MD, top of fish. Circulation was maintained down the drilling string until the drill string parted. XTO proposes to isolate the original wellbore and sidetrack from the intermediate hole. Attachments: Sidetrack Procedure Current WBD Proposed WBD Directional Plan

**NOI Attachments**

**Procedure Description**

Poker\_Lake\_Unit\_28\_21\_BS\_154H\_Attachments\_20230418135711.pdf

<b>Well Name:</b> POKER LAKE UNIT 28-21 BS	<b>Well Location:</b> T25S / R31E / SEC 28 / NENW /	<b>County or Parish/State:</b> /
<b>Well Number:</b> 154H	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMLC062140A	<b>Unit or CA Name:</b> POKER LAKE	<b>Unit or CA Number:</b> NMNM071016X
<b>US Well Number:</b> 3001553232	<b>Well Status:</b> Drilling Well	<b>Operator:</b> XTO PERMIAN OPERATING LLC

**Operator**

*I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a*

**Operator Electronic Signature:** JESSICA DOOLING

**Signed on:** APR 18, 2023 01:57 PM

**Name:** XTO PERMIAN OPERATING LLC

**Title:** Lead Regulatory Coordinator

**Street Address:** 6401 HOLIDAY HILL ROAD BLDG 5

**City:** MIDLAND

**State:** TX

**Phone:** (970) 769-6048

**Email address:** JESSICA.DOOLING@EXXONMOBIL.COM

**Field**

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**

Re: [EXTERNAL] PLU 28-21 BS 154H Bradenhead Squeeze

Vo, Long T <lvo@blm.gov>

Mon 4/17/2023 10:05 PM

To: Ashcraft, Katelyn W <katelyn.w.ashcraft@exxonmobil.com>

Cc: Espinoza, Gilberto J <gespinoza@blm.gov>

Katelyn,

You have verbal approval to proceed. Please follow up with a formal sundry (SR) within 5 business days.

Regards,

Long Vo

Get [Outlook for iOS](#)

---

**From:** Ashcraft, Katelyn W <katelyn.w.ashcraft@exxonmobil.com>

**Sent:** Monday, April 17, 2023 10:03:07 PM

**To:** Vo, Long T <lvo@blm.gov>

**Subject:** [EXTERNAL] PLU 28-21 BS 154H Bradenhead Squeeze

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good Evening,

Per our conversation earlier I wanted to confirm that Nabors X39 is good to perform our planned Bradenhead squeeze. This will be on the PLU 28 21 BS 154H once we TD the intermediate sidetrack and run casing given that the wellbore sidetrack will re-penetrate the Brushy Canyon and have that as the loss zone.

Thanks,

Katelyn

4325573753

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	XTO Permian Operating
<b>WELL NAME &amp; NO.:</b>	Poker Lake Unit 28-21 BS 154H
<b>LOCATION:</b>	Sec 28-25S-31E-NMP
<b>COUNTY:</b>	Eddy County, New Mexico

*Updated COAs from Sundry 2713719 approved through engineering on 03/02/2023. Any previous COAs not addressed within the updated COAs still apply.*

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input type="radio"/> Low	<input checked="" type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input type="checkbox"/> Fluid Filled	<input type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit

Break Testing	<input checked="" type="radio"/> Yes	<input type="radio"/> No
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### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

### B. CASING

1. The **9-5/8** inch surface casing shall be set at approximately 1003 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of

six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
  - b. Second stage above DV tool:
    - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**
- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

### C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

#### **D. SPECIAL REQUIREMENT (S)**

##### **Unit Wells**

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

##### **Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months. (This is not necessary for secondary recovery unit wells)

##### **BOPE Break Testing Variance (Note: For 5M BOPE or less)**

- BOPE Break Testing is ONLY permitted for 5M BOPE or less.
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required.
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.

## GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)  
689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

## A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin

after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

### C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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

CONDITIONS

Action 209098

**CONDITIONS**

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 209098
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
ward.rikala	If a bradenhead squeeze was used during the cementing of the intermediate casing, then a CBL is required to verify the integrity of the cement behind the intermediate casing.	9/27/2023