

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
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.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM05912
2. Name of Operator BOPCO LP		6. If Indian, Allottee or Tribe Name
3a. Address MIDLAND, TX 79702		7. If Unit or CA/Agreement, Name and/or No. 891000303X
3b. Phone No. (include area code) Ph: 432-221-7307		8. Well Name and No. POKER LAKE UNIT 440H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 18 T24S R30E SWSE 1310FSL 2430FEL		9. API Well No. 30-015-41299-00-X1
		10. Field and Pool, or Exploratory NASH DRAW
		11. County or Parish, and State EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" 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 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 checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

BOPCO, L.P. respectfully requests to change the bottom hole location of Poker Lake Unit 440H to 744? FSL and 2,254? FEL Sec 19-24S-30E and change the intended target formation from the Avalon Shale to 2nd Bone Spring Shale. Please see the attached and updated plat. This will change our BHL lease number to NMNM 0002860.

BOPCO, L.P. respectfully requests to change plans for BOP testing due to the utilization of the Cameron MBS wellhead. BOPCO L.P. respectfully requests to nipple up and test BOPE on surface casing to 3,000 psi high and 250 psi low which will cover testing requirements for the duration of the well. Please find attached the schematic of the wellhead. The field report from the Cameron representative and the BOP test information will be provided in a subsequent report at the end of the well.

RECEIVED

OCT 23 2013

NMOCD ARTESIA

Accepted for record

LEDcode NMBCD 10/24/13

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #218012 verified by the BLM Well Information System For BOPCO LP, sent to the Carlsbad Committed to AFMSS for processing by KURT SIMMONS on 08/23/2013 (13KMS7109SE)	
Name (Printed/Typed) CHRISTOPHER VOLEK	Title DRILLING ENGINEER
Signature (Electronic Submission)	Date 08/23/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>WESLEY INGRAM</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>10/18/2013</u>
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 <u>Carlsbad</u>

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #218012 that would not fit on the form

32. Additional remarks, continued

BOPCO, L.P. also respectfully requests permission to amend the casing program for Poker Lake Unit #440H. This will be accomplished by drilling a 17-1/2" surface hole and setting a 13-3/8", 48 ppf, H-40, ST&C surface string at approximately 457'. The 13-3/8" surface casing will be cemented to surface. The salt string will be drilled with an 11" hole drilled to approximately 3,425' and then cased using an 8-5/8", 32 ppf, J-55, LTC intermediate string that will be cemented to surface. The production hole will be a 7-7/8" hole drilled to TD (15,533' MD/9,910'TVD). The production hole will be cased with 5-1/2", 17 ppf, HCP-110, BTC casing and cemented back to 500' inside the 8-5/8" intermediate string.

Please see attached BHL plat, Cameron MBS diagram, new directional plan and updated cement and casing program.

DISTRICT I
1025 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised July 18, 2010

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 47545	Pool Name NASH DRAW (DELAWARE, BS AVALON SD)
Property Code 306402	Property Name POKER LAKE UNIT	Well Number 440H
OGRID No. 260737	Operator Name BOPCO, L.P.	Elevation 3157'

Surface Location

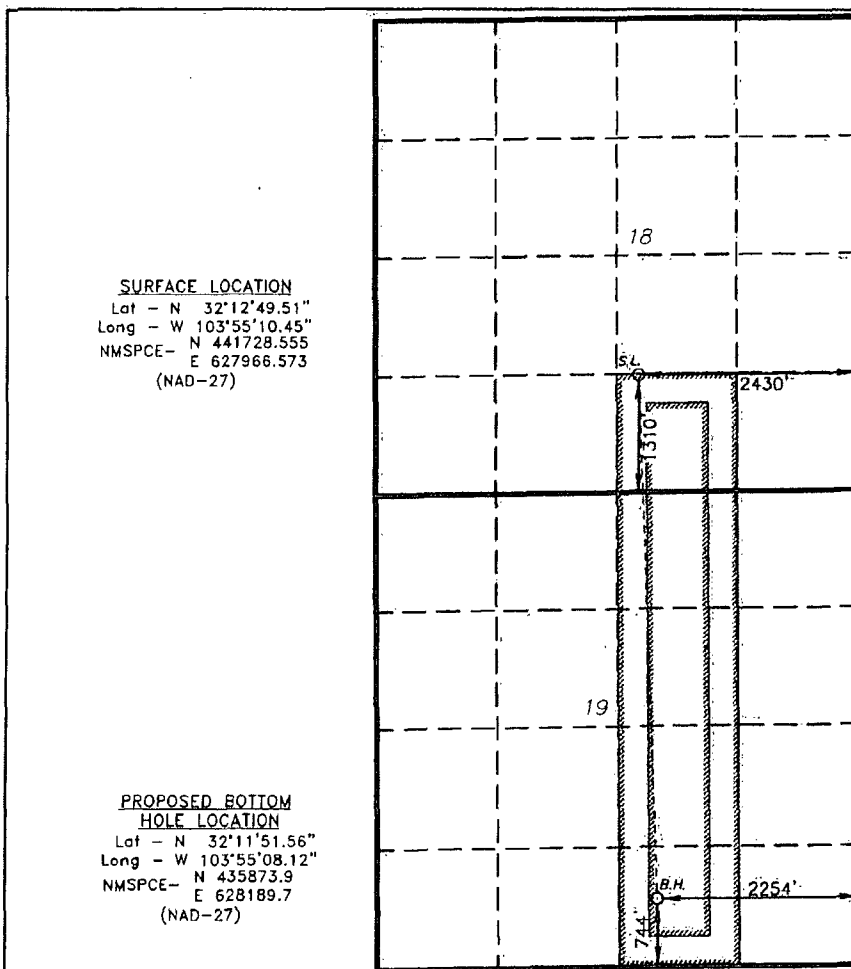
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	18	24 S	30 E		1310	SOUTH	2430	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	19	24 S	29 E		744	SOUTH	2254	EAST	EDDY

Dedicated Acres 200	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.

Courtney Lockhart 8-21-13
Signature Date

Courtney Lockhart
Printed Name

cjlockhart@basspet.com
Email Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 15, 2012
Date Surveyed
Signature of Professional Surveyor
7977
Certificate No. Gary L. Jones 7977
BASIN SURVEYS 27681

02. 197656

103. 918922

BOPCO, L.P. respectfully requests to change the bottom hole location of Poker Lake Unit 440H to 744' FSL and 2,254' FEL Sec 19-24S-30E and change the intended target formation from the Avalon Shale to 2nd Bone Spring Shale. Please see the attached and updated plat.

BOPCO, L.P. respectfully requests to change plans for BOP testing due to the utilization of the Cameron MBS wellhead. BOPCO L.P. respectfully requests to nipple up and test BOPE on surface casing to 3,000 psi high and 250 psi low which will cover testing requirements for the duration of the well. Please find attached the schematic of the wellhead. The field report from the Cameron representative and the BOP test information will be provided in a subsequent report at the end of the well.

BOPCO, L.P. also respectfully requests permission to amend the casing program for Poker Lake Unit #440H. This will be accomplished by drilling a 17-1/2" surface hole and setting a 13-3/8", 48 ppf, H-40, ST&C surface string at approximately 457'. The 13-3/8" surface casing will be cemented to surface. The salt string will be drilled with an 11" hole drilled to approximately 3,425' and then cased using an 8-5/8", 32 ppf, J-55, LTC intermediate string that will be cemented to surface. The production hole will be a 7-7/8" hole drilled to TD (15,533' MD/9,910'TVD). The production hole will be cased with 5-1/2", 17 ppf, HCP-110, BTC casing and cemented back to 500' inside the 8-5/8" intermediate string.

Revised Casing Program:

Type	Interval (MD)	Hole Size
20" (already set)	0-120'	24"
13-3/8", 48 ppf, H-40, STC	0-457'	17-1/2"
8-5/8", 32 ppf, J-55, LTC	0-3,425'	11"
5-1/2", 17 ppf, HCP-110, BTC	0 – 15,533	7-7/8"

Casing Program Safety Factors:

Type	Tension	Collapse	Burst
13-3/8", 48 ppf, H-40, STC	16.95	3.64	1.41
8-5/8", 32 ppf, J-55, LTC	4.04	1.39	1.27
5-1/2", 17 ppf, HCP-110, BTC	3.92	1.81	2.24

Cementing Program: Please see below for updates to cement program

13-3/8" Surface (gauge hole + 100% excess)

Primary Volume: 380 sacks

Primary Details: 13.7 ppg, 1.67 ft³/sk yield, H₂O 8.68 gal/sk

Top of Primary: Surface

Primary Slurry: Class "C" Cement + 2% PF1

8-5/8" Intermediate salt string (fluid caliper + 30% excess)

Lead Slurry: Class "C" Cement: 6% Bentonite Gel + 0.2% Retarder + 5 lb/sk Kol Seal + 0.25 lb/sk Antifoam + 5% Salt

Lead Volume: 650 sacks

Lead Details: 12.9 ppg, 1.85 ft³/sk yield, H₂O 9.81 gal/sk

Tail Slurry: Class "C" Cement: 0.2% Retarder

Tail Volume: 143 sacks

Tail Details: 14.8 ppg, 1.33 ft³/sk yield, H₂O 6.300 gal/sk

Tail Length: 500'

TOC: Surface

5-1/2" Production (caliper volume + 30% excess)

1st Stage

Lead Slurry: 65/35 Class "H": Poz Cement: 5% Salt + 6% Bentonite + 0.6% Retarder + 0.125 lb/sk Cellophane + 0.25 lb/sk Antifoam + 3 lb/sk Kol-Seal LCM

Lead Volume: 500 sacks

Lead Details: 11.50 ppg, 2.25 ft³/sk yield, H₂O 14.99 gal/sk

Top of Lead: DV Tool

Tail Slurry: PVL Cement: 1.3% Salt + 5% Expanding Cement + 0.5% Gel Suppressing Agent + 0.1% Antisettling agent + 0.6% Retarder + 0.25 pps Antifoam

Tail Volume: 614 sacks

Tail Details: 14.2 ppg, 2.62 ft³/sk yield, H₂O 6.17 gal/sk

Top of Tail: KOP (9,346')

TOC: +/- 5,000' (DV Tool)

2nd Stage

Lead Slurry: 65/35 Class "C": Poz Cement: 5% Salt + 6% Bentonite + 0.6% Retarder + 0.125 lb/sk Cellophane + 0.25 lb/sk Antifoam + 3 lb/sk Kol-Seal LCM

Lead Volume: 350 sacks

Lead Details: 11.50 ppg, 2.25 ft³/sk yield, H₂O 9.922 gal/sk

Top of Lead: Surface

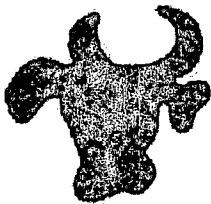
Tail Slurry: Class "C" Cement: 0.2% Retarder

Tail Volume: 100 sacks

Tail Details: 14.8 ppg, 1.33 ft³/sk yield, 6.320 gal/sk

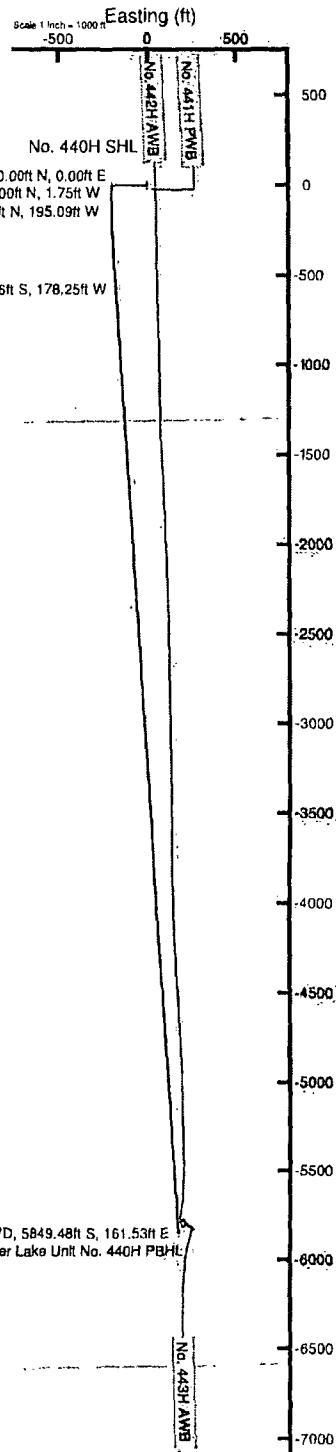
Tail Length: 500'

TOC: Surface



BOPCO, L.P.

Location: Eddy County, NM Slot: No. 440H SHL
Field: Poker Lake Unit Well: No. 440H
Facility: Poker Lake Unit No. 440H and No. 441H Wellbore: No. 440H PWB

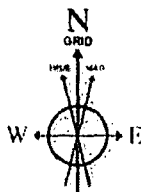


Well Profile Data

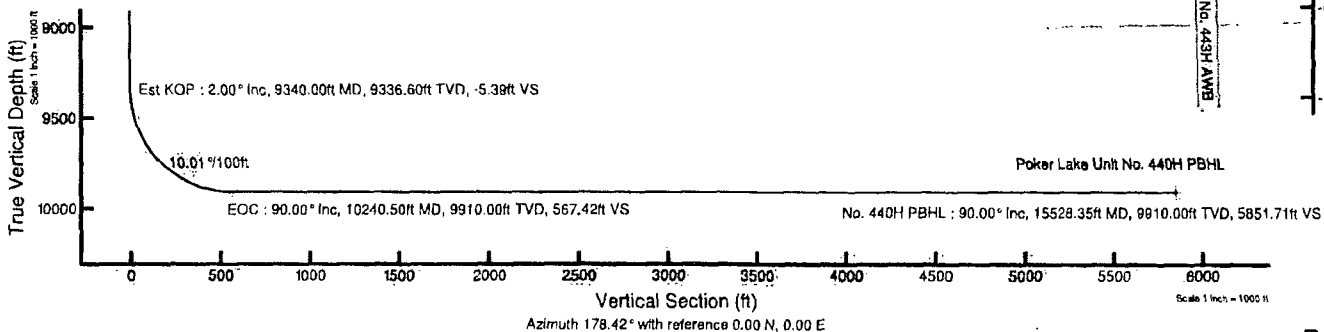
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	22.00	0.000	270.000	22.00	0.00	0.00	0.00	0.00
Nudge	3700.00	0.000	270.000	3700.00	0.00	0.00	0.00	0.00
EOB	3800.00	2.000	270.000	3799.98	0.00	-1.75	2.00	-0.05
Est KOP	9340.00	2.000	270.000	9336.60	0.00	-195.09	0.00	-5.39
EOC	10240.50	90.000	178.318	9910.00	-572.56	-178.25	10.01	587.42
No. 440H PBHL	15528.35	90.000	178.318	9910.00	-5848.48	-161.53	0.00	5851.71

Plot reference wellbore is Rev-D.0.

True vertical depths are referenced to Rig on No. 440H SHL (KOP)	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US foot
Measured depths are referenced to Rig on No. 440H SHL (KOP)	North Reference: Grid north
Rig on No. 440H SHL (KOP) to Mean Sea Level: 3179 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No. 440H SHL): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gentry on 08/13/2013



BGGM (1945.0 to 2015.0) Dip: 60.05° Field: 48349.3 nT
Magnetic North is 7.60 degrees East of True North (at 07/24/2013)
Grid North is 0.22 degrees East of True North
To correct azimuth from True to Grid subtract 0.22 degrees
To correct azimuth from Magnetic to Grid add 7.37 degrees
For example: If the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.37 = 97.37



Rev-D.0



Planned Wellpath Report

Rev-D.0

Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 440H SHL
Area	Eddy County, NM	Well	No. 440H
Field	Poker Lake Unit	Wellbore	No. 440H PWB
Facility	Poker Lake Unit No. 440H and No. 441H		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Gentbry
Scale	0.999928	Report Generated	08/13/2013 at 1:56:16 PM
Convergence at slot	0.22° East	Database/Source file	WA Midland/No. 440H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W
Facility Reference Pt			627966.57	441728.55	32°12'49.506"N	103°55'10.451"W
Field Reference Pt			630272.49	405347.85	32°06'49.387"N	103°54'45.266"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 440H SHL (KB) to Facility Vertical Datum	3179.00ft
Horizontal Reference Pt	Slot	Rig on No. 440H SHL (KB) to Mean Sea Level	3179.00ft
Vertical Reference Pt	Rig on No. 440H SHL (KB)	Rig on No. 440H SHL (KB) to Mud Line at Slot (No. 440H SHL)	3179.00ft
MD Reference Pt	Rig on No. 440H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	178.42°



Planned Wellpath Report

Rev-D.0

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 440H SHL
Area	Eddy County, NM	Well	No. 440H
Field	Poker Lake Unit	Wellbore	No. 440H PWB
Facility	Poker Lake Unit No. 440H and No. 441H		

WELLPATH DATA (174 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	270.000	0.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
22.00	0.000	270.000	22.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	Tie On
122.00†	0.000	270.000	122.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
200.00†	0.000	270.000	200.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	Rustler
222.00†	0.000	270.000	222.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
322.00†	0.000	270.000	322.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
422.00†	0.000	270.000	422.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
480.00†	0.000	270.000	480.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	Salado
522.00†	0.000	270.000	522.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
622.00†	0.000	270.000	622.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
722.00†	0.000	270.000	722.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
822.00†	0.000	270.000	822.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
922.00†	0.000	270.000	922.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
1022.00†	0.000	270.000	1022.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
1122.00†	0.000	270.000	1122.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
1222.00†	0.000	270.000	1222.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
1322.00†	0.000	270.000	1322.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
1422.00†	0.000	270.000	1422.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
1522.00†	0.000	270.000	1522.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
1622.00†	0.000	270.000	1622.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
1722.00†	0.000	270.000	1722.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
1822.00†	0.000	270.000	1822.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
1922.00†	0.000	270.000	1922.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
2022.00†	0.000	270.000	2022.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
2122.00†	0.000	270.000	2122.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
2222.00†	0.000	270.000	2222.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
2322.00†	0.000	270.000	2322.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
2422.00†	0.000	270.000	2422.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
2522.00†	0.000	270.000	2522.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
2622.00†	0.000	270.000	2622.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
2722.00†	0.000	270.000	2722.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
2822.00†	0.000	270.000	2822.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
2922.00†	0.000	270.000	2922.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
3022.00†	0.000	270.000	3022.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
3122.00†	0.000	270.000	3122.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
3222.00†	0.000	270.000	3222.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
3322.00†	0.000	270.000	3322.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
3422.00†	0.000	270.000	3422.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
3426.00†	0.000	270.000	3426.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	Lamar
3436.00†	0.000	270.000	3436.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	Delaware Sands
3522.00†	0.000	270.000	3522.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
3622.00†	0.000	270.000	3622.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	
3700.00	0.000	270.000	3700.00	0.00	0.00	0.00	627966.57	441728.55	32°12'49.506"N	103°55'10.451"W	0.00	Nudge
3722.00†	0.440	270.000	3722.00	0.00	0.00	-0.08	627966.49	441728.55	32°12'49.506"N	103°55'10.452"W	2.00	
3800.00	2.000	270.000	3799.98	-0.05	0.00	-1.75	627964.82	441728.55	32°12'49.506"N	103°55'10.471"W	2.00	EOB



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REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 440H SHL
Area	Eddy County, NM	Well	No. 440H
Field	Poker Lake Unit	Wellbore	No. 440H PWB
Facility	Poker Lake Unit No. 440H and No. 441H		

WELLPATH DATA (174 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3822.00†	2.000	270.000	3821.97	-0.07	0.00	-2.51	627964.06	441728.55	32°12'49.506"N	103°55'10.480"W	0.00	
3922.00†	2.000	270.000	3921.91	-0.17	0.00	-6.00	627960.57	441728.55	32°12'49.507"N	103°55'10.521"W	0.00	
4022.00†	2.000	270.000	4021.84	-0.26	0.00	-9.49	627957.08	441728.55	32°12'49.507"N	103°55'10.561"W	0.00	
4122.00†	2.000	270.000	4121.78	-0.36	0.00	-12.98	627953.59	441728.55	32°12'49.507"N	103°55'10.602"W	0.00	
4222.00†	2.000	270.000	4221.72	-0.45	0.00	-16.47	627950.10	441728.55	32°12'49.507"N	103°55'10.643"W	0.00	
4322.00†	2.000	270.000	4321.66	-0.55	0.00	-19.96	627946.61	441728.55	32°12'49.507"N	103°55'10.683"W	0.00	
4422.00†	2.000	270.000	4421.60	-0.65	0.00	-23.45	627943.12	441728.55	32°12'49.507"N	103°55'10.724"W	0.00	
4522.00†	2.000	270.000	4521.54	-0.74	0.00	-26.94	627939.63	441728.55	32°12'49.507"N	103°55'10.764"W	0.00	
4622.00†	2.000	270.000	4621.48	-0.84	0.00	-30.43	627936.14	441728.55	32°12'49.507"N	103°55'10.805"W	0.00	
4722.00†	2.000	270.000	4721.42	-0.94	0.00	-33.92	627932.65	441728.55	32°12'49.508"N	103°55'10.846"W	0.00	
4822.00†	2.000	270.000	4821.36	-1.03	0.00	-37.41	627929.16	441728.55	32°12'49.508"N	103°55'10.886"W	0.00	
4922.00†	2.000	270.000	4921.30	-1.13	0.00	-40.90	627925.67	441728.55	32°12'49.508"N	103°55'10.927"W	0.00	
5022.00†	2.000	270.000	5021.24	-1.23	0.00	-44.39	627922.18	441728.55	32°12'49.508"N	103°55'10.968"W	0.00	
5122.00†	2.000	270.000	5121.17	-1.32	0.00	-47.88	627918.69	441728.55	32°12'49.508"N	103°55'11.008"W	0.00	
5222.00†	2.000	270.000	5221.11	-1.42	0.00	-51.37	627915.20	441728.55	32°12'49.508"N	103°55'11.049"W	0.00	
5322.00†	2.000	270.000	5321.05	-1.51	0.00	-54.86	627911.71	441728.55	32°12'49.508"N	103°55'11.089"W	0.00	
5422.00†	2.000	270.000	5420.99	-1.61	0.00	-58.35	627908.22	441728.55	32°12'49.509"N	103°55'11.130"W	0.00	
5522.00†	2.000	270.000	5520.93	-1.71	0.00	-61.84	627904.73	441728.55	32°12'49.509"N	103°55'11.171"W	0.00	
5622.00†	2.000	270.000	5620.87	-1.80	0.00	-65.33	627901.24	441728.55	32°12'49.509"N	103°55'11.211"W	0.00	
5722.00†	2.000	270.000	5720.81	-1.90	0.00	-68.82	627897.75	441728.55	32°12'49.509"N	103°55'11.252"W	0.00	
5822.00†	2.000	270.000	5820.75	-2.00	0.00	-72.31	627894.26	441728.55	32°12'49.509"N	103°55'11.293"W	0.00	
5922.00†	2.000	270.000	5920.69	-2.09	0.00	-75.80	627890.77	441728.55	32°12'49.509"N	103°55'11.333"W	0.00	
6022.00†	2.000	270.000	6020.63	-2.19	0.00	-79.29	627887.28	441728.55	32°12'49.509"N	103°55'11.374"W	0.00	
6122.00†	2.000	270.000	6120.57	-2.29	0.00	-82.78	627883.79	441728.55	32°12'49.509"N	103°55'11.414"W	0.00	
6222.00†	2.000	270.000	6220.50	-2.38	0.00	-86.27	627880.30	441728.55	32°12'49.510"N	103°55'11.455"W	0.00	
6322.00†	2.000	270.000	6320.44	-2.48	0.00	-89.76	627876.81	441728.55	32°12'49.510"N	103°55'11.496"W	0.00	
6422.00†	2.000	270.000	6420.38	-2.57	0.00	-93.25	627873.33	441728.55	32°12'49.510"N	103°55'11.536"W	0.00	
6522.00†	2.000	270.000	6520.32	-2.67	0.00	-96.74	627869.84	441728.55	32°12'49.510"N	103°55'11.577"W	0.00	
6622.00†	2.000	270.000	6620.26	-2.77	0.00	-100.23	627866.35	441728.55	32°12'49.510"N	103°55'11.617"W	0.00	
6722.00†	2.000	270.000	6720.20	-2.86	0.00	-103.72	627862.86	441728.55	32°12'49.510"N	103°55'11.658"W	0.00	
6822.00†	2.000	270.000	6820.14	-2.96	0.00	-107.21	627859.37	441728.55	32°12'49.510"N	103°55'11.699"W	0.00	
6922.00†	2.000	270.000	6920.08	-3.06	0.00	-110.70	627855.88	441728.55	32°12'49.511"N	103°55'11.739"W	0.00	
6975.96†	2.000	270.000	6974.00	-3.11	0.00	-112.58	627853.99	441728.55	32°12'49.511"N	103°55'11.761"W	0.00	Lower Brushy Canyon
7022.00†	2.000	270.000	7020.02	-3.15	0.00	-114.19	627852.39	441728.55	32°12'49.511"N	103°55'11.780"W	0.00	
7122.00†	2.000	270.000	7119.96	-3.25	0.00	-117.68	627848.90	441728.55	32°12'49.511"N	103°55'11.821"W	0.00	
7222.00†	2.000	270.000	7219.90	-3.35	0.00	-121.17	627845.41	441728.55	32°12'49.511"N	103°55'11.861"W	0.00	
7228.11†	2.000	270.000	7226.00	-3.35	0.00	-121.38	627845.19	441728.55	32°12'49.511"N	103°55'11.864"W	0.00	Bones Spring LS
7322.00†	2.000	270.000	7319.83	-3.44	0.00	-124.66	627841.92	441728.55	32°12'49.511"N	103°55'11.902"W	0.00	
7422.00†	2.000	270.000	7419.77	-3.54	0.00	-128.15	627838.43	441728.55	32°12'49.511"N	103°55'11.942"W	0.00	
7423.23†	2.000	270.000	7421.00	-3.54	0.00	-128.19	627838.39	441728.55	32°12'49.511"N	103°55'11.943"W	0.00	Upper Avalon Shale
7522.00†	2.000	270.000	7519.71	-3.63	0.00	-131.64	627834.94	441728.55	32°12'49.511"N	103°55'11.983"W	0.00	
7622.00†	2.000	270.000	7619.65	-3.73	0.00	-135.13	627831.45	441728.55	32°12'49.511"N	103°55'12.024"W	0.00	
7722.00†	2.000	270.000	7719.59	-3.83	0.00	-138.62	627827.96	441728.55	32°12'49.512"N	103°55'12.064"W	0.00	
7822.00†	2.000	270.000	7819.53	-3.92	0.00	-142.11	627824.47	441728.55	32°12'49.512"N	103°55'12.105"W	0.00	
7834.48†	2.000	270.000	7832.00	-3.94	0.00	-142.55	627824.03	441728.55	32°12'49.512"N	103°55'12.110"W	0.00	Lower Avalon Shale



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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 440H SHL
Area	Eddy County, NM	Well	No. 440H
Field	Poker Lake Unit	Wellbore	No. 440H PWB
Facility	Poker Lake Unit No. 440H and No. 441H		

WELLPATH DATA (174 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7922.00†	2.000	270.000	7919.47	-4.02	0.00	-145.60	627820.98	441728.55	32°12'49.512"N	103°55'12.146"W	0.00	
8022.00†	2.000	270.000	8019.41	-4.12	0.00	-149.09	627817.49	441728.55	32°12'49.512"N	103°55'12.186"W	0.00	
8122.00†	2.000	270.000	8119.35	-4.21	0.00	-152.58	627814.00	441728.55	32°12'49.512"N	103°55'12.227"W	0.00	
8204.70†	2.000	270.000	8202.00	-4.29	0.00	-155.47	627811.11	441728.55	32°12'49.512"N	103°55'12.260"W	0.00	1st Bone Spring Sand
8222.00†	2.000	270.000	8219.29	-4.31	0.00	-156.07	627810.51	441728.55	32°12'49.512"N	103°55'12.267"W	0.00	
8322.00†	2.000	270.000	8319.23	-4.40	0.00	-159.56	627807.02	441728.55	32°12'49.512"N	103°55'12.308"W	0.00	
8413.83†	2.000	270.000	8411.00	-4.49	0.00	-162.77	627803.82	441728.55	32°12'49.513"N	103°55'12.345"W	0.00	1st Bone Spring Shale
8422.00†	2.000	270.000	8419.16	-4.50	0.00	-163.05	627803.53	441728.55	32°12'49.513"N	103°55'12.349"W	0.00	
8522.00†	2.000	270.000	8519.10	-4.60	0.00	-166.54	627800.04	441728.55	32°12'49.513"N	103°55'12.389"W	0.00	
8622.00†	2.000	270.000	8619.04	-4.69	0.00	-170.03	627796.55	441728.55	32°12'49.513"N	103°55'12.430"W	0.00	
8722.00†	2.000	270.000	8718.98	-4.79	0.00	-173.52	627793.06	441728.55	32°12'49.513"N	103°55'12.470"W	0.00	
8822.00†	2.000	270.000	8818.92	-4.89	0.00	-177.01	627789.57	441728.55	32°12'49.513"N	103°55'12.511"W	0.00	
8922.00†	2.000	270.000	8918.86	-4.98	0.00	-180.50	627786.08	441728.55	32°12'49.513"N	103°55'12.552"W	0.00	
9022.00†	2.000	270.000	9018.80	-5.08	0.00	-183.99	627782.59	441728.55	32°12'49.513"N	103°55'12.592"W	0.00	
9046.22†	2.000	270.000	9043.00	-5.10	0.00	-184.84	627781.75	441728.55	32°12'49.513"N	103°55'12.602"W	0.00	2nd Bone Spring Sand
9122.00†	2.000	270.000	9118.74	-5.18	0.00	-187.48	627779.10	441728.55	32°12'49.513"N	103°55'12.633"W	0.00	
9222.00†	2.000	270.000	9218.68	-5.27	0.00	-190.97	627775.61	441728.55	32°12'49.514"N	103°55'12.674"W	0.00	
9322.00†	2.000	270.000	9318.62	-5.37	0.00	-194.46	627772.12	441728.55	32°12'49.514"N	103°55'12.714"W	0.00	
9340.00	2.000	270.000	9336.60	-5.39	0.00	-195.09	627771.50	441728.55	32°12'49.514"N	103°55'12.722"W	0.00	Est KOP
9422.00†	8.320	190.102	9418.29	-0.39	-5.85	-197.56	627769.02	441722.70	32°12'49.456"N	103°55'12.751"W	10.01	
9522.00†	18.193	182.403	9515.51	23.11	-28.63	-199.49	627767.09	441699.92	32°12'49.231"N	103°55'12.774"W	10.01	
9622.00†	28.161	180.049	9607.32	62.37	-67.92	-200.17	627766.42	441660.63	32°12'48.842"N	103°55'12.784"W	10.01	
9722.00†	38.149	178.859	9690.94	116.98	-122.54	-199.57	627767.01	441606.02	32°12'48.301"N	103°55'12.779"W	10.01	
9727.18†	38.667	178.812	9695.00	120.20	-125.76	-199.51	627767.08	441602.80	32°12'48.269"N	103°55'12.779"W	10.01	2nd Bone Spring Shale
9822.00†	48.145	178.105	9763.81	185.28	-190.81	-197.72	627768.86	441537.75	32°12'47.626"N	103°55'12.761"W	10.01	
9922.00†	58.144	177.557	9823.71	265.19	-270.67	-194.67	627771.91	441457.90	32°12'46.835"N	103°55'12.729"W	10.01	
10022.00†	68.145	177.117	9868.83	354.28	-359.67	-190.52	627776.07	441368.90	32°12'45.954"N	103°55'12.684"W	10.01	
10122.00†	78.147	176.735	9897.79	449.83	-455.12	-185.38	627781.20	441273.47	32°12'45.010"N	103°55'12.629"W	10.01	
10222.00†	88.149	176.381	9909.70	548.93	-554.10	-179.42	627787.16	441174.49	32°12'44.030"N	103°55'12.564"W	10.01	
10240.50†	90.000	176.316	9910.00	567.42	-572.56	-178.25	627788.34	441156.03	32°12'43.847"N	103°55'12.551"W	10.01	EOC
10322.00†	90.000	176.316	9910.00	648.86	-653.89	-173.01	627793.57	441074.71	32°12'43.042"N	103°55'12.494"W	0.00	
10422.00†	90.000	176.316	9910.00	748.80	-753.68	-166.58	627800.00	440974.92	32°12'42.055"N	103°55'12.423"W	0.00	
10522.00†	90.000	176.316	9910.00	848.73	-853.48	-160.16	627806.42	440875.14	32°12'41.067"N	103°55'12.353"W	0.00	
10622.00†	90.000	176.316	9910.00	948.66	-953.27	-153.73	627812.85	440775.35	32°12'40.079"N	103°55'12.283"W	0.00	
10722.00†	90.000	176.316	9910.00	1048.60	-1053.06	-147.31	627819.27	440675.56	32°12'39.091"N	103°55'12.213"W	0.00	
10822.00†	90.000	176.316	9910.00	1148.53	-1152.86	-140.88	627825.70	440575.78	32°12'38.104"N	103°55'12.142"W	0.00	
10922.00†	90.000	176.316	9910.00	1248.46	-1252.65	-134.46	627832.12	440475.99	32°12'37.116"N	103°55'12.072"W	0.00	
11022.00†	90.000	176.316	9910.00	1348.39	-1352.44	-128.03	627838.55	440376.21	32°12'36.128"N	103°55'12.002"W	0.00	
11122.00†	90.000	176.316	9910.00	1448.33	-1452.24	-121.61	627844.97	440276.42	32°12'35.140"N	103°55'11.931"W	0.00	
11222.00†	90.000	176.316	9910.00	1548.26	-1552.03	-115.18	627851.40	440176.64	32°12'34.153"N	103°55'11.861"W	0.00	
11322.00†	90.000	176.316	9910.00	1648.19	-1651.82	-108.76	627857.82	440076.85	32°12'33.165"N	103°55'11.791"W	0.00	
11422.00†	90.000	176.316	9910.00	1748.12	-1751.62	-102.33	627864.25	439977.06	32°12'32.177"N	103°55'11.720"W	0.00	
11522.00†	90.000	176.316	9910.00	1848.06	-1851.41	-95.90	627870.67	439877.28	32°12'31.190"N	103°55'11.650"W	0.00	
11622.00†	90.000	176.316	9910.00	1947.99	-1951.20	-89.48	627877.10	439777.49	32°12'30.202"N	103°55'11.580"W	0.00	
11722.00†	90.000	176.316	9910.00	2047.92	-2051.00	-83.05	627883.52	439677.71	32°12'29.214"N	103°55'11.509"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 440H SHL
Area	Eddy County, NM	Well	No. 440H
Field	Poker Lake Unit	Wellbore	No. 440H PWB
Facility	Poker Lake Unit No. 440H and No. 441H		

WELLPATH DATA (174 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11822.00†	90.000	176.316	9910.00	2147.85	-2150.79	-76.63	627889.95	439577.92	32°12'28.226"N	103°55'11.439"W	0.00	
11922.00†	90.000	176.316	9910.00	2247.79	-2250.58	-70.20	627896.37	439478.13	32°12'27.239"N	103°55'11.369"W	0.00	
12022.00†	90.000	176.316	9910.00	2347.72	-2350.38	-63.78	627902.80	439378.35	32°12'26.251"N	103°55'11.298"W	0.00	
12122.00†	90.000	176.316	9910.00	2447.65	-2450.17	-57.35	627909.22	439278.56	32°12'25.263"N	103°55'11.228"W	0.00	
12222.00†	90.000	176.316	9910.00	2547.59	-2549.96	-50.93	627915.65	439178.78	32°12'24.275"N	103°55'11.158"W	0.00	
12322.00†	90.000	176.316	9910.00	2647.52	-2649.76	-44.50	627922.07	439078.99	32°12'23.288"N	103°55'11.087"W	0.00	
12422.00†	90.000	176.316	9910.00	2747.45	-2749.55	-38.08	627928.50	438979.20	32°12'22.300"N	103°55'11.017"W	0.00	
12522.00†	90.000	176.316	9910.00	2847.38	-2849.34	-31.65	627934.92	438879.42	32°12'21.312"N	103°55'10.947"W	0.00	
12622.00†	90.000	176.316	9910.00	2947.32	-2949.14	-25.22	627941.35	438779.63	32°12'20.324"N	103°55'10.877"W	0.00	
12722.00†	90.000	176.316	9910.00	3047.25	-3048.93	-18.80	627947.77	438679.85	32°12'19.337"N	103°55'10.806"W	0.00	
12822.00†	90.000	176.316	9910.00	3147.18	-3148.72	-12.37	627954.20	438580.06	32°12'18.349"N	103°55'10.736"W	0.00	
12922.00†	90.000	176.316	9910.00	3247.11	-3248.52	-5.95	627960.62	438480.27	32°12'17.361"N	103°55'10.666"W	0.00	
13022.00†	90.000	176.316	9910.00	3347.05	-3348.31	0.48	627967.05	438380.49	32°12'16.373"N	103°55'10.595"W	0.00	
13122.00†	90.000	176.316	9910.00	3446.98	-3448.10	6.90	627973.47	438280.70	32°12'15.386"N	103°55'10.525"W	0.00	
13222.00†	90.000	176.316	9910.00	3546.91	-3547.90	13.33	627979.90	438180.92	32°12'14.398"N	103°55'10.455"W	0.00	
13322.00†	90.000	176.316	9910.00	3646.85	-3647.69	19.76	627986.32	438081.13	32°12'13.410"N	103°55'10.384"W	0.00	
13422.00†	90.000	176.316	9910.00	3746.78	-3747.48	26.18	627992.75	437981.34	32°12'12.422"N	103°55'10.314"W	0.00	
13522.00†	90.000	176.316	9910.00	3846.71	-3847.28	32.61	627999.17	437881.56	32°12'11.435"N	103°55'10.244"W	0.00	
13622.00†	90.000	176.316	9910.00	3946.64	-3947.07	39.03	628005.60	437781.77	32°12'10.447"N	103°55'10.173"W	0.00	
13722.00†	90.000	176.316	9910.00	4046.58	-4046.86	45.46	628012.02	437681.99	32°12'09.459"N	103°55'10.103"W	0.00	
13822.00†	90.000	176.316	9910.00	4146.51	-4146.66	51.88	628018.45	437582.20	32°12'08.471"N	103°55'10.033"W	0.00	
13922.00†	90.000	176.316	9910.00	4246.44	-4246.45	58.31	628024.87	437482.41	32°12'07.484"N	103°55'09.963"W	0.00	
14022.00†	90.000	176.316	9910.00	4346.37	-4346.24	64.73	628031.30	437382.63	32°12'06.496"N	103°55'09.892"W	0.00	
14122.00†	90.000	176.316	9910.00	4446.31	-4446.04	71.16	628037.73	437282.84	32°12'05.508"N	103°55'09.822"W	0.00	
14222.00†	90.000	176.316	9910.00	4546.24	-4545.83	77.59	628044.15	437183.06	32°12'04.520"N	103°55'09.752"W	0.00	
14322.00†	90.000	176.316	9910.00	4646.17	-4645.62	84.01	628050.58	437083.27	32°12'03.533"N	103°55'09.681"W	0.00	
14422.00†	90.000	176.316	9910.00	4746.10	-4745.42	90.44	628057.00	436983.48	32°12'02.545"N	103°55'09.611"W	0.00	
14522.00†	90.000	176.316	9910.00	4846.04	-4845.21	96.86	628063.43	436883.70	32°12'01.557"N	103°55'09.541"W	0.00	
14622.00†	90.000	176.316	9910.00	4945.97	-4945.00	103.29	628069.85	436783.91	32°12'00.570"N	103°55'09.470"W	0.00	
14722.00†	90.000	176.316	9910.00	5045.90	-5044.80	109.71	628076.28	436684.13	32°11'59.582"N	103°55'09.400"W	0.00	
14822.00†	90.000	176.316	9910.00	5145.84	-5144.59	116.14	628082.70	436584.34	32°11'58.594"N	103°55'09.330"W	0.00	
14922.00†	90.000	176.316	9910.00	5245.77	-5244.38	122.57	628089.13	436484.56	32°11'57.606"N	103°55'09.259"W	0.00	
15022.00†	90.000	176.316	9910.00	5345.70	-5344.18	128.99	628095.55	436384.77	32°11'56.619"N	103°55'09.189"W	0.00	
15122.00†	90.000	176.316	9910.00	5445.63	-5443.97	135.42	628101.98	436284.98	32°11'55.631"N	103°55'09.119"W	0.00	
15222.00†	90.000	176.316	9910.00	5545.57	-5543.76	141.84	628108.40	436185.20	32°11'54.643"N	103°55'09.049"W	0.00	
15322.00†	90.000	176.316	9910.00	5645.50	-5643.56	148.27	628114.83	436085.41	32°11'53.655"N	103°55'08.978"W	0.00	
15422.00†	90.000	176.316	9910.00	5745.43	-5743.35	154.70	628121.25	435985.63	32°11'52.668"N	103°55'08.908"W	0.00	
15522.00†	90.000	176.316	9910.00	5845.36	-5843.14	161.12	628127.68	435885.84	32°11'51.680"N	103°55'08.838"W	0.00	
15528.35	90.000	176.316	9910.00	5851.71	-5849.48	161.53	628128.09	435879.50	32°11'51.617"N	103°55'08.833"W	0.00	No. 440H PBHL



Planned Wellpath Report

Rev-D.0

Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 440H SHL
Area	Eddy County, NM	Well	No. 440H
Field	Poker Lake Unit	Wellbore	No. 440H PWB
Facility	Poker Lake Unit No. 440H and No. 441H		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) Poker Lake Unit No. 440H PBHL	15528.35	9910.00	5849.48	16154	628128.10	435879.50	32°11'51.617"N	103°55'08.833"W	point

SURVEY PROGRAM - Ref Wellbore: No. 440H PWB Ref Wellpath: Rev-D.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	15528.35	NaviTrak (Standard)		No. 440H PWB

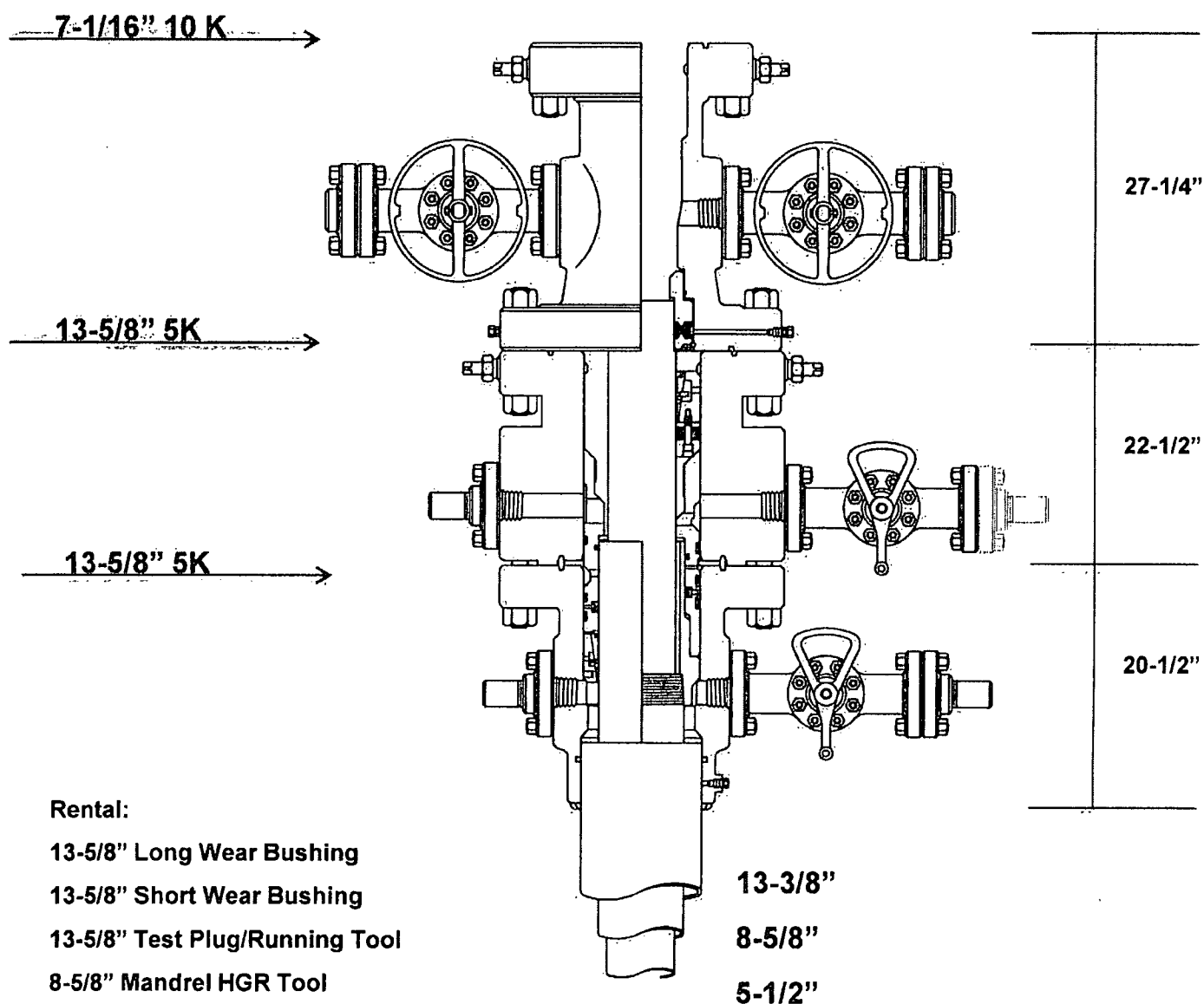


CUSTOMER: BOPCO

PROJECT: Poker Lake Unit 440H

RIG: Latshaw #4

CASING PROGRAM: 13-3/8" x 8-5/8" x 5-1/2"



Rental:

13-5/8" Long Wear Bushing

13-5/8" Short Wear Bushing

13-5/8" Test Plug/Running Tool

8-5/8" Mandrel HGR Tool

Packoff Support Bushing Running Tool

Jetting/Wash Tool

Poker Lake Unit 440H
30-015-41299
BOPCO, L.P.
October 15, 2013
Conditions of Approval

The existing COA will remain in effect with the following modifications:

Casing

1. Operator will use a plant blend for the surface casing cement that has a weight of 14.8 ppg and a yield of 1.33 cubic feet/sack.
2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

3. The minimum required fill of cement behind the 5-1/2" inch production casing is:

Operator has proposed DV tool at depth of +/- 5000'. If DV tool is moved over +/- 100', operator shall submit a sundry.

- a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation or approved top of cement on the next stage.

- b. Second stage above DV tool:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Confirmed with Chris Volek since it varies from documents attached to sundry.**

Pressure Control

1. Operator shall not perform any BOP test against the casing since operator has proposed a multi-bowl wellhead.

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 3000 (3M) 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. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
 - 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.**

WWI 101513