OCD-ARTESIA

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OM B No 1004-0137
Expires March 31, 2007

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.

5 Lease Serial No
LC 068430, LC 068431

6. If Indian, Allottee or Tribe Name

7 If Unit or CA/Agreement, Name and/or No
Poker Lake Unit NMNM 71016X

1 Type of Well
☑ Oil Well ☐ ☐ Gas Well ☐ ☐ Other

8 Well Name and No.
Poker Lake Unit 326H

2 Name of Operator **BOPCO, L. P.**

9 API Well No
30-015-39479

3a Address
P. O. Box 2760 Midland, TX 79702

3b Phone No *(include area code)*
432-683-2277

10 Field and Pool, or Exploratory Area
Poker Lake NW (Delaware)

4 Location of Well *(Footage, Sec., T, R, M., or Survey Description)*

SESE, UL P, 200' FSL, 1025' FEL, Sec 22, T24S,R30E, Lat N32.196533,Long W103.863122
1760' FNL, 1070' FWL, Sec 22, T24S,R30E,Lat N32.205561, Long 103.873642

11. County or Parish, State
Eddy County, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☑ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete 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 recompletion 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 wishes to change the surface location for the Poker Lake Unit 326H. The new surface location will be located at 345' FNL & 450' FEL of Sec 27, T24S-R30E. Attached is a copy of the new C-102 and an updated 8pt drilling program. The updated drilling program reflects new casing set depths and directional plans. COB 000050

Accepted for record
NMOCD
DEC 02 2011

RECEIVED
NOV - 9 2011
NMOCD ARTESIA

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Engr. Review & New COA by EBF 11/2/11

14 I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Jeremy Braden

Title **Engineering Assistant**

Signature Jeremy Braden

Date 10-11-11

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by /s/ Don Peterson

Title

Date NOV 03 2011

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 **CARLSBAD FIELD OFFICE**

Title 18 U S C Section 1001 and Title 43 U S C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)

Witness Surface & Intermediate Casing

CARLSBAD CONTROLLED WATER BASIN

DISTRICT I
1625 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

OIL CONSERVATION DIVISION

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

Form C-102
Revised July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-39479	96046	Poker Lake, NW (Delaware)

Property Code	Property Name	Well Number
306402	POKER LAKE UNIT	326H

OGRID No.	Operator Name	Elevation
260737	BOPCO, L.P.	3388'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	27	24 S	30 E		345	NORTH	450	EAST	EDDY

Bottom Hole Location If Different From Surface

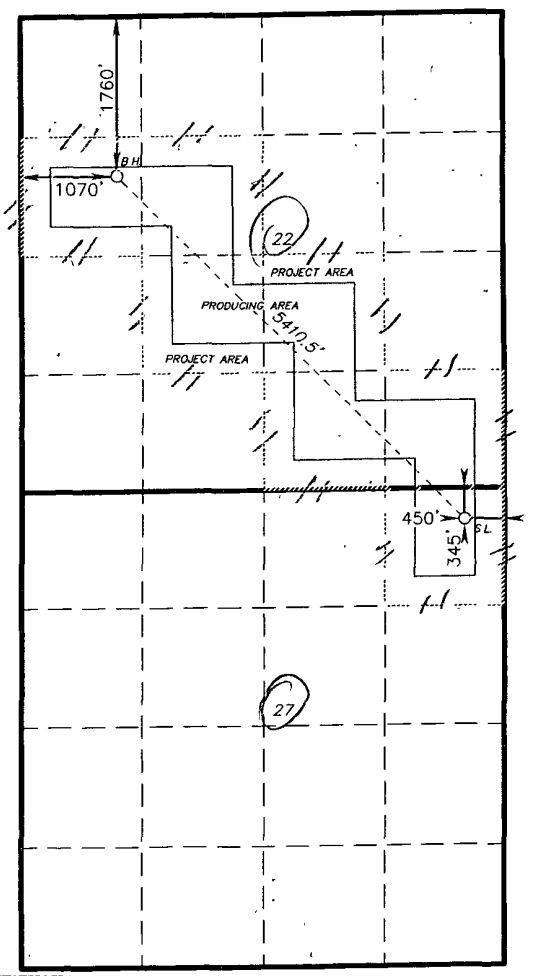
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	22	24 S	30 E		1760	NORTH	1070	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
~~280~~ 320 ~~280~~			

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

PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°12'20.02"
Long - W 103°52'25.11"
NMSPCE- N 438807.430
E 642183.779
(NAD-27)

SURFACE LOCATION
DELAWARE PP
Lat - N 32°11'42.19"
Long - W 103°51'40.56"
NMSPCE- N 435000.619
E 646028.514
(NAD-27)



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.

Jeremy Braden 10-6-11
Signature Date

Jeremy Braden
Printed Name

JDBraden@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 supervison, and that the same is true and correct to the best of my belief

AUGUST 31, 2011
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 25180

Surface casing is to be set into the Rustler below all fresh water sands at an approximate depth of 1108' and cement circulated to surface.

7" casing will be set at approximately 8122' MD, 7718' TVD (thru curve) and cemented in two stages with DV Tool set at approximately 5,000'. Cement will be circulated 500' into the 9-5/8" intermediate casing.

Per attach drill program

Drilling procedure, BOP diagram, and anticipated tops are attached.

This well is located outside the R111 Potash area and Secretary's Potash area.

The surface location is nonstandard and located inside the Poker Lake Unit.

The bottom hole location is nonstandard and located inside the Poker Lake Unit.

Surface Lease Numbers – LC 068430

Bottom Hole Lease Numbers – LC 068431

BOPCO, L.P., at P. O. Box 2760, Midland, TX, 79702 is a subsidiary of BOPCO, L.P., 201 Main Street, Ft. Worth, TX, 76102. Bond No. COB000050 (Nationwide).

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: Poker Lake Unit 326H
LEGAL DESCRIPTION - SURFACE: 345' FNL, 450' FEL, Section 27, T24S, R30E, Eddy County, NM.
BHL: 1760' FNL, 1070' FWL, Section 22, T24S, R30E, Eddy County, New Mexico.

POINT 1: ESTIMATED FORMATION TOPS (See No. 2 Below)

POINT 2: WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS

Anticipated Formation Tops: KB 3,410' (estimated)
GL 3,388'

FORMATION	ESTIMATED TOP FROM KB TVD	MD	ESTIMATED SUB-SEA TOP	BEARING
T/Fresh Water	400'	400'	+ 3,017'	Fresh Water
T/Rustler	511'	511'	+ 2,897'	Barren
T/Salt	2,043'	2,043'	+ 1,365'	Barren
B/Salt	3,703'	3,703'	- 295'	Barren
T/Lamar	3,945'	3,945'	- 537'	Barren
T/Ramsey	4,040'	4,040'	- 632'	Oil/Gas
T/Lower Cherry Canyon	6,113'	6,113'	- 2,705'	Oil/Gas
KOP	7,241'	7,241'	- 3,833'	Oil/Gas
T\Lwr Brushy Canyon	7,555'	7,533'	-4,125'	Oil/Gas
Target #1	7,718'	9,134'	-4,310'	Oil/Gas
TD	7,668'	12,924'	-4,260'	Oil/Gas

POINT 3: CASING PROGRAM

TYPE	INTERVALS (MD)	Hole Size	PURPOSE	CONDITION
20"	0'- 80'	24"	Conductor	Contractor Discretion
13-3/8", 48#, H-40, or 54.5#, J-55 8rd, ST&C*	0' - 1,108'	17-1/2"	Surface	New
9-5/8", 40#, N-80, 8rd, LT&C	0' - ~~3,965'~~	12-1/4"	Intermediate	New
7", 26#, N-80, Buttress or 8rd LTC*	0' - 8,122'	8-3/4"	Production	New

See COA

Completion System

4-1/2", 11.6#, HCP-110 8rd. LT&C*	8,072' – 12,924'	6-1/8"	Completion System	New
4-1/2", 11 6#, N-80, 8rd, LT&C*	8,072' – 12,924'	6-1/8"	Completion System	New

See COA

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 48#, H-40, 8rd, ST&C*	10.31	1.99	4.12
13-3/8", 54.5#, J-55, 8rd, STC*	24.21	3.10	6.51
9-5/8", 40#, N-80, 8rd, LT&C	5.35	1.31	2.53
7", 26#, N-80, Buttress*	3.49	1.29	1.68
7", 26#, N-80, 8rd, LTC*	2.99	1.23	1.68

Completion System

4-1/2", 11.6#, HCP-110 8rd. LT&C*	3.63	2.09	2.50
4-1/2", 11.6#, N-80, 8rd, LT&C*	2.90	1.45	1.82

*** Depending on availability.**

See COA

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING - (13-3/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.3 design factor with a surface pressure equal to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure a that depth. Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

PROTECTIVE CASING - (9-5/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (10 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.

Burst — A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient.

Production CASING - (7")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

Completion System - (4-1/2")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM 1 & 2) * See COA

The BOPE when rigged up on the 13-3/8" surface casing head (12-1/4" open hole) will consist of 13-5/8" X 5,000 psi dual ram BOP's with mud cross, choke manifold, chokes, and hydril per Diagram 1 (5,000 psi WP). The pipe and blind rams, choke, kill lines, kelly cocks, inside BOP, etc. when installed on the surface casing head will be hydro-tested to 250-300 psig and 2000 psig by independent tester. The hydril when installed on surface casing head will be tested to 1000 psi.

The BOPE when rigged up on the 9-5/8" intermediate casing spool (8-3/4" open hole) will consist of 13-5/8" x 5,000 psi annular, 13-5/8" x 5,000 psi pipe & blind rams with mud cross, choke manifold and chokes as in Diagram 1. The pipe and blind rams, choke, kill lines, kelly cocks inside BOP, etc. will be tested to 3000 psig by independent tester. In addition to the high pressure test, a low pressure (250-300 psig) test will be required. Hydril will be tested to 1500 psig.

The BOPE when rigged up on the 7" intermediate casing spool (6-1/8" open hole) will consist of 13-5/8" x 5,000 psi annular, 13-5/8" x 5,000 psi pipe & blind rams with mud cross choke manifold and chokes as in Diagram 1. The pipe and blind rams, choke, kelly lines, kelly cocks inside BOP, etc. will be tested to 3000 psig by independent tester. In addition to the high pressure test, a low pressure (250-300 psig) test will be required. Hydril will be tested to 1500 psig.

These tests will be performed:

a) Upon installation
b) After any component changes
c) Thirty days after a previous test
d) As required by well conditions

A function test to insure that the preventers are operating correctly will be performed on each trip.

Please refer to diagram 2 for choke manifold and closed loop system layout.

POINT 5: MUD PROGRAM * See COA

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 1108'	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	NC	10.0
1108' - 3,965'	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	9.5 – 10.5
3,965' - 8,122'	FW/Gel	8.7 – 9.0	28-36	NC	NC	NC	9.5 – 10.0
8,122' – 12,924'	FW/Gel/Starch	8.7 – 9.0	28-36	NC	NC	<100	9.5 – 10.0

NOTE: May increase vis for logging purposes only.

See COA

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING

None anticipated.

B) LOGGING * See COA

Run #1: GR with MWD during drilling of build and horizontal portions of 8-3/4" and 6-1/8" hole.

Run #2: Shuttle log w/GR, PE, Density, Neutron, Resistivity in lateral leg open hole.

Mud Logger: Rigged up at 100'.

C) CONVENTIONAL CORING

None anticipated

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
SURFACE:						
Lead: 0' – 808'	650	808	ExtendaCem CZ	8.72	13.70	1.68
Tail: 808' – 1108'	350	300	ExtendaCem CZ	8.72	13.70	1.68
INTERMEDIATE:						
Lead: 0' – 3,465'	1200	3472	EconoCem HLC 5% CaCl + 5 #/sk Gilsonite	9.32	12.90	1.85
Tail: 3,465' – 3,965'	300	500	HalCem C	6.34	14.80	1.33
Production						
Stage 1:						
Lead: 5,000' –7,141'	200	2141	Tuned Light + 0.75% CFR-3 + 1.5#/sk CaCl	12.41	10.20	2.76
Tail: 7,141' – 8,122'	150	981	VersaCem-PBSH2 + 0.4% Halad-9	8.76	13.0	1.65
DV Tool @ 5,000'						
Stage 2:						
Lead: 3,472 – 4,500'	100	1028	EconoCem HLC + 1% Econolite + 5% CaCl + 5#/sk Gilsonite	10.71	12.60	2.04
Tail 4,500' – 5,000'	100	500	HalCem C	6.34	14.80	1.33

Cement excesses will be as follows:

Surface – 100% excess with cement circulated to surface.

1st Intermediate – 50% excess above fluid caliper with cement circulated to surface.

Production – 50% above gauge hole or 35% above electric log caliper with cement circulated 500' up into the 9-5/8" 1st intermediate casing in areas outside the SOPA. Cement will be circulated to surface on areas inside the SOPA.

Cement volumes will be adjusted proportionately for depth changes of the multi stage tool.

E) COMPLETIONS SYSTEM

A 4-1/2" completion system with open hole packers will be run in the producing lateral to a depth of 12,924'. The top of the Completion System will be set at approximately 8,072'. Cement will not be required for this system.

F) DIRECTIONAL DRILLING

BOPCO, L.P. plans to drill out the 9-5/8" intermediate casing with a 8-3/4" bit to a TVD of approximately 7241' at which point a directional hole will be kicked off and drilled at an azimuth of 314.092 degrees, building angle at 12.01 deg/100' to 90 degrees at a TVD of 7,718' (MD 7,990'). This angle and azimuth will be maintained for 132' to a measured depth of 8,122' (7,718' TVD). At this depth 7", 26#, N80, Buttress, or 8rd LTC casing will be installed and cemented in two stages (DV Tool @ approximately 5000') with cement circulated 500' inside the 9-5/8" intermediate casing. A 6-1/8" open hole lateral will then be drilled out from 7" casing at an azimuth of 314.990 degrees, inclination of 90.762 degrees to a measured depth of 12,924', TVD 7,668'. At this depth a 4-1/2" Completion System with packers installed for zone isolation will be run into the producing lateral.

G) H_2S SAFTEY EQUIPMENT

As stated in the BLM Onshore Order 6, for wells located in the SOPA, H_2S equipment will be rigged up after setting surface casing. For the wells located inside the SOPA the flare pit or ½ steel pits will be located 150' from the location. For wells located outside the SOPA the flare pit or ½ steel pit will be located 100' away from the location. **(See page 6 of Survey plat package and diagram 2)** There is not any H_2S anticipated in the area, although in the event that H_2S is encountered, the H_2S contingency plan attached will be implemented. **(Please refer to diagram 2 for choke manifold and closed loop system layout.)**

H) CLOSED LOOP AND CHOKE MANIFLOLD

Please see diagram 2.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 3612 psi (max) or MWE of 9.0 ppg is expected. Lost circulation may exist in the Delaware Section from 3,965'-7,718' TVD.

POINT 8: OTHER PERTINENT INFORMATION

A) Auxiliary Equipment

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

B) Anticipated Starting Date

Upon approval

30 days drilling operations

14 days completion operations

JDB

BOPCO, L.P.

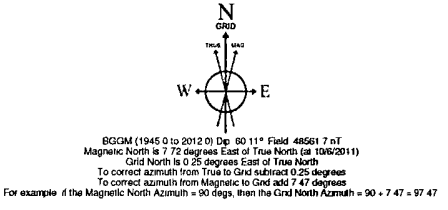
Location	Eddy County, NM	Slot	No 326H SHL
Field	Poker Lake Unit	Well	No 326H
Facility	Poker Lake Unit No 326H	Wellbore	No 326H PWB

BAKER HUGHES

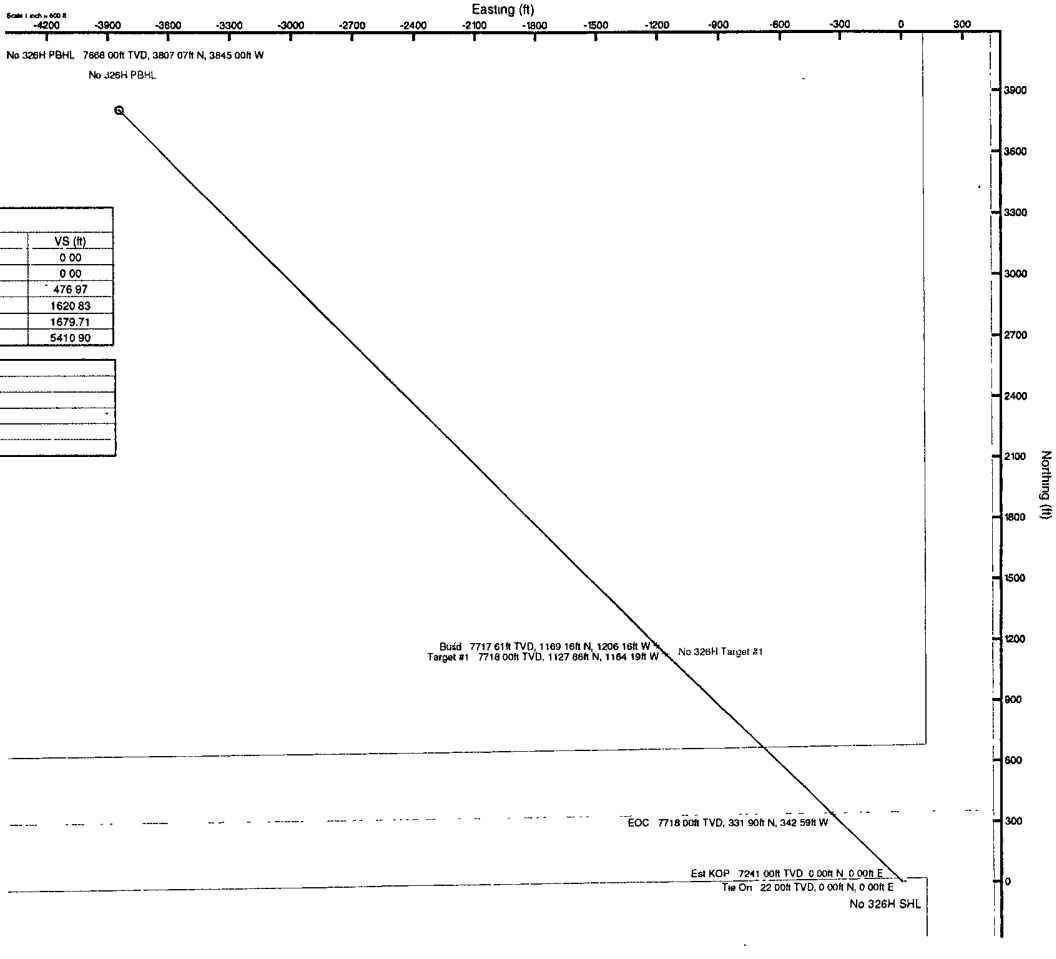
Well Profile Data

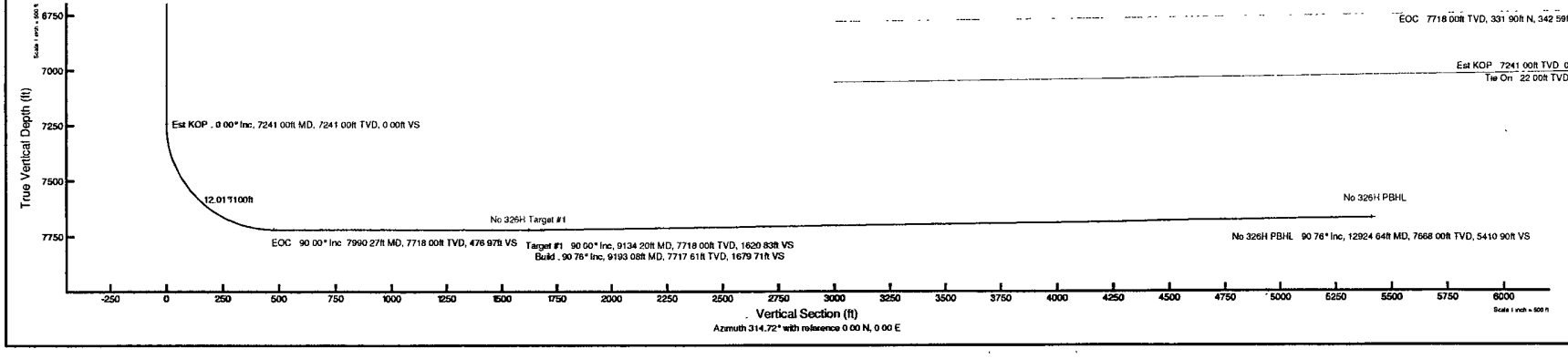
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	22 00	0 000	314 092	22 00	0 00	0 00	0 00	0 00
Est KOP	7241 00	0 000	314 092	7241 00	0 00	0 00	0 00	0 00
EOC	7990 27	90 000	314 092	7718 00	331 90	-342 59	12 01	476 97
Target #1	9134 20	90 000	314 092	7718 00	1127 86	-1164 19	0 00	1620 83
Build	9193 08	90 762	314 990	7717 61	1169 16	-1206 16	2 00	1679.71
No 326H PBHL	12924 64	90 762	314 990	7668 00	3807 07	-3845 00	0 00	5410 90

Plot reference wellpath is Prelim_3	
True vertical depths are referenced to Rig on No 326H SHL (KB)	Grid System NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No 326H SHL (KB)	North Reference Grid north
Rig on No 326H SHL (KB) to Mean Sea Level, 3410 feet	Scale True distance
Mean Sea Level to Mud line (At Slot No 326H SHL) -3388 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by gentbry on 10/7/2011



BGGM (1945 0 to 2012 0) Dip 60 11° Field 48561 7 nT
Magnetic North is 7 72 degrees East of True North (at 10/6/2011)
Grid North is 0 25 degrees East of True North
To correct azimuth from True to Grid subtract 0.25 degrees
To correct azimuth from Magnetic to Grid add 7 47 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7 47 = 97 47





Planned Wellpath Report

Prelim_3

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.326H SHL**
Area	**Eddy County, NM**	Well	**No.326H**
Field	**Poker Lake Unit**	Wellbore	**No.326H PWB**
Facility	**Poker Lake Unit No. 326H**		

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	**0.999934**	Report Generated	**10/7/2011 at 2:11:03 PM**
Convergence at slot	**0.25° East**	Database/Source file	**WA Midland/No.326H_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**	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W
Facility Reference Pt			**646028.51**	**435000.62**	32°11'42.190"N	103°51'40.557"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.326H SHL (KB) to Facility Vertical Datum	**22.00ft**
Horizontal Reference Pt	**Slot**	Rig on No.326H SHL (KB) to Mean Sea Level	**3410.00ft**
Vertical Reference Pt	**Rig on No.326H SHL (KB)**	Rig on No.326H SHL (KB) to Mud Line at Slot (No.326H SHL)	**22.00ft**
MD Reference Pt	**Rig on No.326H SHL (KB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**314.72°**

Planned Wellpath Report

Prelim_3

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.326H SHL
Area	Eddy County, NM	Well	No.326H
Field	Poker Lake Unit	Wellbore	No.326H PWB
Facility	Poker Lake Unit No. 326H		

WELLPATH DATA (143 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	314.092	0.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
22.00	0.000	314.092	22.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	Tie On
122.00†	0.000	314.092	122.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
222.00†	0.000	314.092	222.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
322.00†	0.000	314.092	322.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
422.00†	0.000	314.092	422.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
511.00†	0.000	314.092	511.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	Rustler
522.00†	0.000	314.092	522.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
622.00†	0.000	314.092	622.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
722.00†	0.000	314.092	722.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
822.00†	0.000	314.092	822.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
922.00†	0.000	314.092	922.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
1022.00†	0.000	314.092	1022.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
1122.00†	0.000	314.092	1122.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
1222.00†	0.000	314.092	1222.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
1322.00†	0.000	314.092	1322.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
1422.00†	0.000	314.092	1422.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
1522.00†	0.000	314.092	1522.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
1622.00†	0.000	314.092	1622.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
1722.00†	0.000	314.092	1722.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
1822.00†	0.000	314.092	1822.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
1922.00†	0.000	314.092	1922.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
2022.00†	0.000	314.092	2022.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
2043.00†	0.000	314.092	2043.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	Salt
2122.00†	0.000	314.092	2122.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
2222.00†	0.000	314.092	2222.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
2322.00†	0.000	314.092	2322.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
2422.00†	0.000	314.092	2422.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
2522.00†	0.000	314.092	2522.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
2622.00†	0.000	314.092	2622.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
2722.00†	0.000	314.092	2722.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
2822.00†	0.000	314.092	2822.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
2922.00†	0.000	314.092	2922.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3022.00†	0.000	314.092	3022.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3122.00†	0.000	314.092	3122.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3222.00†	0.000	314.092	3222.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3322.00†	0.000	314.092	3322.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3422.00†	0.000	314.092	3422.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3522.00†	0.000	314.092	3522.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3622.00†	0.000	314.092	3622.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3703.00†	0.000	314.092	3703.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	Base/Salt
3722.00†	0.000	314.092	3722.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3822.00†	0.000	314.092	3822.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3922.00†	0.000	314.092	3922.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
3945.00†	0.000	314.092	3945.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	Lamar

Planned Wellpath Report

Prelim_3

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.326H SHL
Area	Eddy County, NM	Well	No.326H
Field	Poker Lake Unit	Wellbore	No.326H PWB
Facility	Poker Lake Unit No. 326H		

WELLPATH DATA (143 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
4022.00†	0.000	314.092	4022.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
4040.00†	0.000	314.092	4040.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	Ramsey
4122.00†	0.000	314.092	4122.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
4222.00†	0.000	314.092	4222.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
4322.00†	0.000	314.092	4322.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
4422.00†	0.000	314.092	4422.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
4522.00†	0.000	314.092	4522.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
4622.00†	0.000	314.092	4622.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
4722.00†	0.000	314.092	4722.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
4822.00†	0.000	314.092	4822.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
4922.00†	0.000	314.092	4922.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
5022.00†	0.000	314.092	5022.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
5122.00†	0.000	314.092	5122.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
5222.00†	0.000	314.092	5222.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
5322.00†	0.000	314.092	5322.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
5422.00†	0.000	314.092	5422.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
5522.00†	0.000	314.092	5522.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
5622.00†	0.000	314.092	5622.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
5722.00†	0.000	314.092	5722.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
5822.00†	0.000	314.092	5822.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
5922.00†	0.000	314.092	5922.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
6022.00†	0.000	314.092	6022.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
6113.00†	0.000	314.092	6113.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	Lower Cherry Canyon
6122.00†	0.000	314.092	6122.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
6222.00†	0.000	314.092	6222.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
6322.00†	0.000	314.092	6322.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
6422.00†	0.000	314.092	6422.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
6522.00†	0.000	314.092	6522.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
6622.00†	0.000	314.092	6622.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
6722.00†	0.000	314.092	6722.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
6822.00†	0.000	314.092	6822.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
6922.00†	0.000	314.092	6922.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
7022.00†	0.000	314.092	7022.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
7122.00†	0.000	314.092	7122.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
7222.00†	0.000	314.092	7222.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	
7241.00	0.000	314.092	7241.00	0.00	0.00	0.00	646028.51	435000.62	32°11'42.190"N	103°51'40.557"W	0.00	Est KOP
7322.00†	9.729	314.092	7321.61	6.86	4.77	-4.93	646023.58	435005.39	32°11'42.237"N	103°51'40.614"W	12.01	
7422.00†	21.741	314.092	7417.69	33.93	23.61	-24.37	646004.14	435024.23	32°11'42.424"N	103°51'40.839"W	12.01	
7522.00†	33.753	314.092	7506.03	80.40	55.94	-57.75	645970.77	435056.56	32°11'42.746"N	103°51'41.226"W	12.01	
7555.24†	37.746	314.092	7533.00	99.81	69.46	-71.69	645956.82	435070.07	32°11'42.880"N	103°51'41.388"W	12.01	Lower Brushy Canyon
7622.00†	45.765	314.092	7582.76	144.23	100.36	-103.60	645924.92	435100.98	32°11'43.187"N	103°51'41.757"W	12.01	
7722.00†	57.776	314.092	7644.53	222.64	154.92	-159.91	645868.61	435155.53	32°11'43.730"N	103°51'42.410"W	12.01	
7822.00†	69.788	314.092	7688.63	312.18	217.23	-224.23	645804.30	435217.84	32°11'44.349"N	103°51'43.155"W	12.01	
7922.00†	81.800	314.092	7713.12	408.94	284.56	-293.73	645734.80	435285.16	32°11'45.018"N	103°51'43.960"W	12.01	
7990.27	90.000	314.092	7718.00	476.97	331.90	-342.59	645685.94	435332.50	32°11'45.489"N	103°51'44.527"W	12.01	EOC

Planned Wellpath Report

Prelim_3

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.326H SHL
Area	Eddy County, NM	Well	No.326H
Field	Poker Lake Unit	Wellbore	No.326H PWB
Facility	Poker Lake Unit No. 326H		

WELLPATH DATA (143 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
8022.00†	90.000	314.092	7718.00	508.70	353.98	-365.38	645663.15	435354.58	32°11'45.708"N	103°51'44.791"W	0.00	
8122.00†	90.000	314.092	7718.00	608.69	423.56	-437.20	645591.34	435424.15	32°11'46.400"N	103°51'45.623"W	0.00	
8222.00†	90.000	314.092	7718.00	708.69	493.14	-509.03	645519.52	435493.73	32°11'47.091"N	103°51'46.455"W	0.00	
8322.00†	90.000	314.092	7718.00	808.68	562.72	-580.85	645447.70	435563.31	32°11'47.783"N	103°51'47.287"W	0.00	
8422.00†	90.000	314.092	7718.00	908.68	632.31	-652.67	645375.88	435632.88	32°11'48.475"N	103°51'48.120"W	0.00	
8522.00†	90.000	314.092	7718.00	1008.67	701.89	-724.49	645304.07	435702.46	32°11'49.166"N	103°51'48.952"W	0.00	
8622.00†	90.000	314.092	7718.00	1108.66	771.47	-796.32	645232.25	435772.04	32°11'49.858"N	103°51'49.784"W	0.00	
8722.00†	90.000	314.092	7718.00	1208.66	841.05	-868.14	645160.43	435841.61	32°11'50.550"N	103°51'50.616"W	0.00	
8822.00†	90.000	314.092	7718.00	1308.65	910.63	-939.96	645088.61	435911.19	32°11'51.241"N	103°51'51.449"W	0.00	
8922.00†	90.000	314.092	7718.00	1408.65	980.21	-1011.78	645016.80	435980.76	32°11'51.933"N	103°51'52.281"W	0.00	
9022.00†	90.000	314.092	7718.00	1508.64	1049.79	-1083.61	644944.98	436050.34	32°11'52.625"N	103°51'53.113"W	0.00	
9122.00†	90.000	314.092	7718.00	1608.63	1119.37	-1155.43	644873.16	436119.92	32°11'53.316"N	103°51'53.945"W	0.00	
9134.20	90.000	314.092	7718.00[1]	1620.83	1127.86	-1164.19	644864.40	436128.40	32°11'53.401"N	103°51'54.047"W	0.00	Target #1
9193.08	90.762	314.990	7717.61	1679.71	1169.16	-1206.16	644822.44	436169.70	32°11'53.811"N	103°51'54.533"W	2.00	Build
9222.00†	90.762	314.990	7717.22	1708.63	1189.60	-1226.61	644801.99	436190.14	32°11'54.014"N	103°51'54.770"W	0.00	
9322.00†	90.762	314.990	7715.89	1808.62	1260.30	-1297.32	644731.27	436260.83	32°11'54.717"N	103°51'55.590"W	0.00	
9422.00†	90.762	314.990	7714.57	1908.61	1330.99	-1368.04	644660.56	436331.52	32°11'55.419"N	103°51'56.409"W	0.00	
9522.00†	90.762	314.990	7713.24	2008.60	1401.68	-1438.76	644589.85	436402.20	32°11'56.122"N	103°51'57.228"W	0.00	
9622.00†	90.762	314.990	7711.91	2108.59	1472.37	-1509.48	644519.14	436472.89	32°11'56.825"N	103°51'58.048"W	0.00	
9722.00†	90.762	314.990	7710.58	2208.58	1543.06	-1580.19	644448.43	436543.58	32°11'57.527"N	103°51'58.867"W	0.00	
9822.00†	90.762	314.990	7709.25	2308.57	1613.76	-1650.91	644377.71	436614.27	32°11'58.230"N	103°51'59.686"W	0.00	
9922.00†	90.762	314.990	7707.92	2408.56	1684.45	-1721.63	644307.00	436684.95	32°11'58.932"N	103°52'00.506"W	0.00	
10022.00†	90.762	314.990	7706.59	2508.55	1755.14	-1792.34	644236.29	436755.64	32°11'59.635"N	103°52'01.325"W	0.00	
10122.00†	90.762	314.990	7705.26	2608.54	1825.83	-1863.06	644165.58	436826.33	32°12'00.337"N	103°52'02.145"W	0.00	
10222.00†	90.762	314.990	7703.93	2708.53	1896.52	-1933.78	644094.87	436897.01	32°12'01.040"N	103°52'02.964"W	0.00	
10322.00†	90.762	314.990	7702.60	2808.52	1967.22	-2004.49	644024.15	436967.70	32°12'01.742"N	103°52'03.783"W	0.00	
10422.00†	90.762	314.990	7701.27	2908.51	2037.91	-2075.21	643953.44	437038.39	32°12'02.445"N	103°52'04.603"W	0.00	
10522.00†	90.762	314.990	7699.94	3008.50	2108.60	-2145.93	643882.73	437109.08	32°12'03.148"N	103°52'05.422"W	0.00	
10622.00†	90.762	314.990	7698.61	3108.49	2179.29	-2216.64	643812.02	437179.76	32°12'03.850"N	103°52'06.242"W	0.00	
10722.00†	90.762	314.990	7697.28	3208.48	2249.98	-2287.36	643741.31	437250.45	32°12'04.553"N	103°52'07.061"W	0.00	
10822.00†	90.762	314.990	7695.95	3308.47	2320.68	-2358.08	643670.59	437321.14	32°12'05.255"N	103°52'07.880"W	0.00	
10922.00†	90.762	314.990	7694.62	3408.46	2391.37	-2428.79	643599.88	437391.82	32°12'05.958"N	103°52'08.700"W	0.00	
11022.00†	90.762	314.990	7693.29	3508.45	2462.06	-2499.51	643529.17	437462.51	32°12'06.660"N	103°52'09.519"W	0.00	
11122.00†	90.762	314.990	7691.96	3608.44	2532.75	-2570.23	643458.46	437533.20	32°12'07.363"N	103°52'10.339"W	0.00	
11222.00†	90.762	314.990	7690.64	3708.43	2603.44	-2640.94	643387.75	437603.89	32°12'08.065"N	103°52'11.158"W	0.00	
11322.00†	90.762	314.990	7689.31	3808.42	2674.14	-2711.66	643317.03	437674.57	32°12'08.768"N	103°52'11.977"W	0.00	
11422.00†	90.762	314.990	7687.98	3908.41	2744.83	-2782.38	643246.32	437745.26	32°12'09.470"N	103°52'12.797"W	0.00	
11522.00†	90.762	314.990	7686.65	4008.40	2815.52	-2853.10	643175.61	437815.95	32°12'10.173"N	103°52'13.616"W	0.00	
11622.00†	90.762	314.990	7685.32	4108.39	2886.21	-2923.81	643104.90	437886.63	32°12'10.876"N	103°52'14.436"W	0.00	
11722.00†	90.762	314.990	7683.99	4208.38	2956.90	-2994.53	643034.19	437957.32	32°12'11.578"N	103°52'15.255"W	0.00	
11822.00†	90.762	314.990	7682.66	4308.37	3027.60	-3065.25	642963.47	438028.01	32°12'12.281"N	103°52'16.075"W	0.00	
11922.00†	90.762	314.990	7681.33	4408.36	3098.29	-3135.96	642892.76	438098.70	32°12'12.983"N	103°52'16.894"W	0.00	
12022.00†	90.762	314.990	7680.00	4508.35	3168.98	-3206.68	642822.05	438169.38	32°12'13.686"N	103°52'17.713"W	0.00	
12122.00†	90.762	314.990	7678.67	4608.34	3239.67	-3277.40	642751.34	438240.07	32°12'14.388"N	103°52'18.533"W	0.00	
12222.00†	90.762	314.990	7677.34	4708.33	3310.36	-3348.11	642680.63	438310.76	32°12'15.091"N	103°52'19.352"W	0.00	

Planned Wellpath Report

Prelim_3

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.326H SHL**
Area	**Eddy County, NM**	Well	**No.326H**
Field	**Poker Lake Unit**	Wellbore	**No.326H PWB**
Facility	**Poker Lake Unit No. 326H**		

WELLPATH DATA (143 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
12322.00†	90.762	314.990	7676.01	4808.32	3381.06	-3418.83	642609.91	438381.44	32°12'15.793"N	103°52'20.172"W	0.00	
12422.00†	90.762	314.990	7674.68	4908.31	3451.75	-3489.55	642539.20	438452.13	32°12'16.496"N	103°52'20.991"W	0.00	
12522.00†	90.762	314.990	7673.35	5008.30	3522.44	-3560.26	642468.49	438522.82	32°12'17.198"N	103°52'21.811"W	0.00	
12622.00†	90.762	314.990	7672.02	5108.29	3593.13	-3630.98	642397.78	438593.51	32°12'17.901"N	103°52'22.630"W	0.00	
12722.00†	90.762	314.990	7670.69	5208.28	3663.82	-3701.70	642327.07	438664.19	32°12'18.603"N	103°52'23.450"W	0.00	
12822.00†	90.762	314.990	7669.36	5308.27	3734.52	-3772.41	642256.35	438734.88	32°12'19.306"N	103°52'24.269"W	0.00	
12922.00†	90.762	314.990	7668.04	5408.26	3805.21	-3843.13	642185.64	438805.57	32°12'20.008"N	103°52'25.089"W	0.00	
12924.64	90.762	314.990	7668.00[2]	5410.90	3807.07	-3845.00	642183.78	438807.43	32°12'20.027"N	103°52'25.110"W	0.00	No.326H PBHL

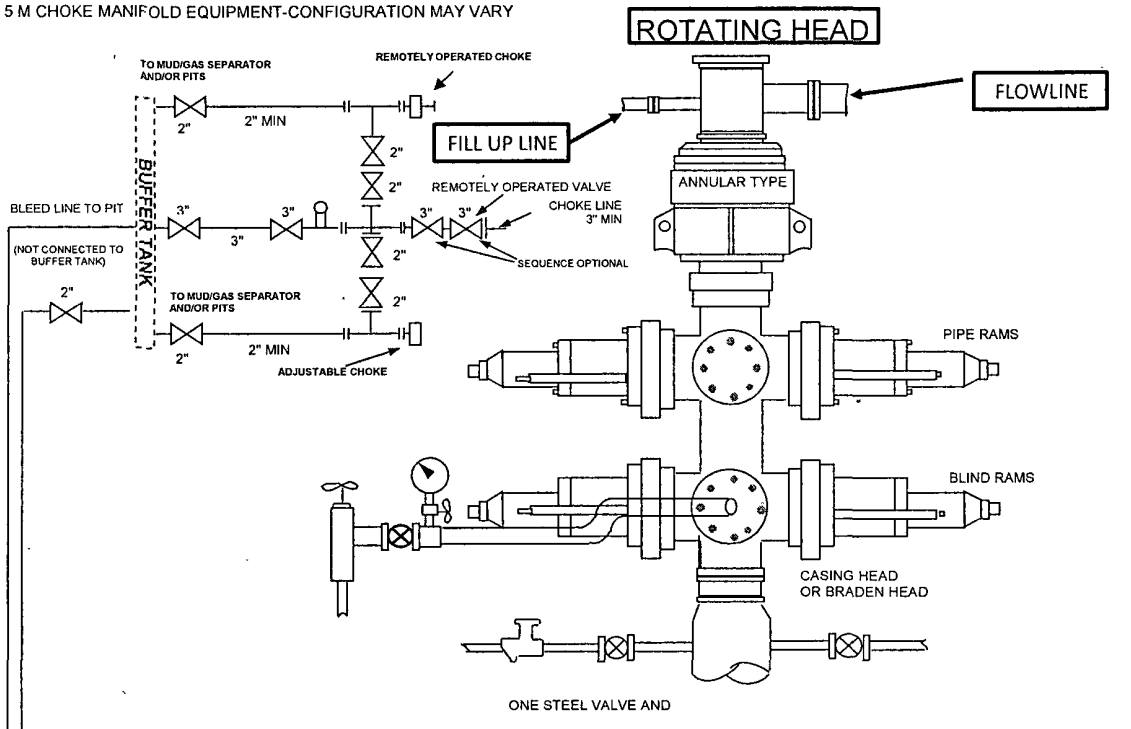
TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
2) No.326H PBHL	12924.64	7668.00	3807.07	-3844.99	**642183.78**	**438807.43**	32°12'20.027"N	103°52'25.110"W	point
1) No.326H Target #1	9134.20	7718.00	1127.86	-1164.19	**644864.40**	**436128.40**	32°11'53.401"N	103°51'54.047"W	point

SURVEY PROGRAM - Ref Wellbore: No.326H PWB Ref Wellpath: Prelim_3

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	12924.64	NaviTrak (Standard)		No.326H PWB

BOPCO, L. P.
13 5/8" X 5-M WP BOPE WITH 5-M WP ANNULAR



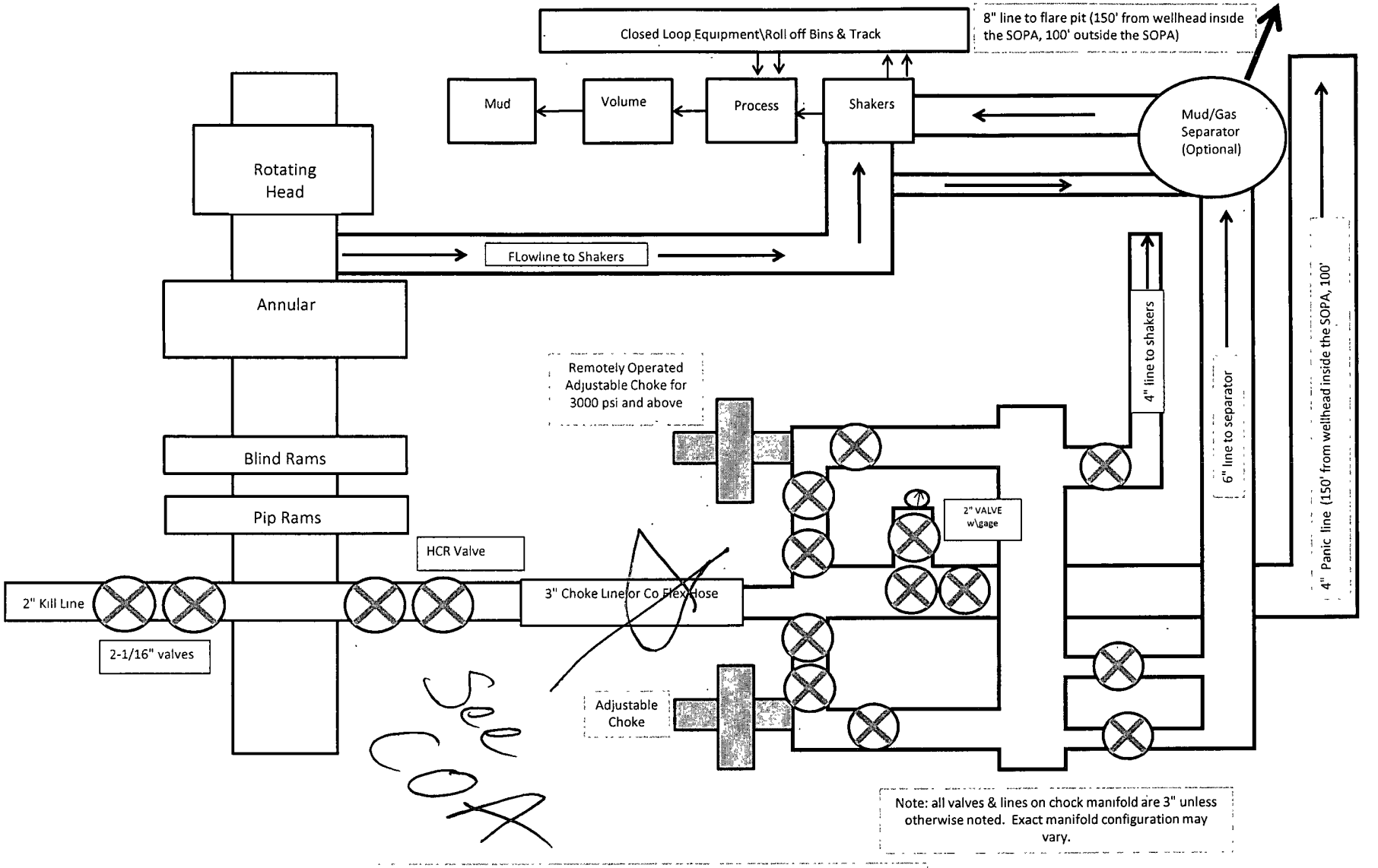
THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

A. One double gate Blowout preventer with lower pipe rams and upper blind rams, all hydraulically controlled.
B. Opening on preventers between rams to be flanged, studded or clamped and at least two inches in diameter.
C. All connections from operating manifold to preventers to be all steel hose or tube a mininum of one inch in diameter
D. The available closing pressure shall be at least 15% in excess of that required with suffficient volume to operate (close, open, and re-close) the preventers.
E. All connections to and from preventers to have a pressure rating equivalent to that of the BOPs.
F. Manual controls to be installed before drilling cement plug.
G. Valve to control flow through drill pipe to be located on rig floor
H. Chokes must be adjustable. Choke spool may be used between rams

DIAGRAM 1

TO STEEL MUD TANKS

BLEED LINE TO STEEL 1/2 PIT LOCATED 100' FROM WELLS LOCATED OUTSIDE THE SOPA, 150' INSIDE THE SOPA



13-5/8" X 5-M BOPE (2 Rams and Rotating Head) & Closed Loop System Equipment Schematic Diagram 2

CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO
LEASE NO.:	LC-068431(NM-71016X)
WELL NAME & NO.:	Poker lake Unit #326H
SURFACE HOLE FOOTAGE:	345' FNL & 450' FEL Sec. 27-24S-30E Unit A
BOTTOM HOLE FOOTAGE	1760' FNL & 1070' FWL Sec. 22 -24S -30E Unit E
COUNTY:	Eddy County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. 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.

4. **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.**

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.
Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Medium Cave/Karst
Possible lost circulation in the Delaware.
Possible water flows in the Castile, Salado and Delaware.

1. The **13-3/8** inch surface casing shall be set **at approximately 1108 feet (in a competent bed below the Magenta Dolomite, a Member of the Rustler, and if salt is encountered, set casing at least 25 feet 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 is to include the lead cement slurry.

    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 **9-5/8** inch intermediate casing, **which is to be set in the castile or Lamar at approximately 3850',** 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.**

3. The minimum required fill of cement behind the **7** inch production casing is:

   a. First stage to DV tool, cement shall:

   ☒ 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 on the next stage.

   b. Second stage above DV tool, cement shall:

   ☒ Cement should tie-back at least **500 feet** into previous casing string. Operator shall provide method of verification.

4. Cement not required on the **4-1/2"** liner. **Packer system being used. Liner will be tied back 100' into previous casing.**

5. 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.

C. 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. **The use of a Co Flex Hose will require prior approval with a sundry notice. The operator is to provide Serial numbers with manufactures specifications.**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi. **Operator installing a 5M but testing as a 2M system.**

   a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **3000 (3M)** psi. **Operator installing a 5M but testing as a 3M system.**

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 or where the float does not hold, the minimum wait time before cut-off is eight hours after bumping the plug or when the cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. BOP/BOPE testing can begin after the above conditions are satisfied.

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. 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 (18 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).

    c. The results of the test shall be reported to the appropriate BLM office.

    d. 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.**

    e. 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.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. 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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