SECRETARY'S POTASH

ATS-11-612

OCD-ARTESIA

Form 3160-3
(April 2004)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007 EA 766

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. LC SH LC 82896, 068905 BH NM

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ✓ ☐ REENTER

7 If Unit or CA Agreement, Name and No

1b. Type of Well. ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. **Poker Lake Unit #330H** 306402

2. Name of Operator **BOPCO, L. P.** 260737

9. API Well No. 30-015-39253

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

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

10. Field and Pool, or Exploratory **Poker Lake NW (Delaware)** 96046

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface **NWNW, Ul D, 130' FNL, 710' FWL, Lat N32.224681, Long W103.840147** UNORTHODOX LOCATION

At proposed prod. zone **315' FNL, 1445' FWL, Sec11,T24S,R30E,Lat N32.238614, Lg W103.855092**

11. Sec., T. R. M. or Blk. and Survey or Area **Sec 13, T24S, R30E, Mer NMP**

14. Distance in miles and direction from nearest town or post office* **8.5 miles east of Malaga, NM**

12. County or Parish **Eddy County**

13 State **NM**

15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17 Spacing Unit dedicated to this well
130'	**2840**	**240**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
652'	**14,431' MD, 7,798 TVD**	**COB000050**
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3487' GL ✓	**07/01/2011**	**30 days**

RECEIVED
JUN 27 2011
NMOCD ARTESIA

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name *(Printed/Typed)*	Date
Katy Holster	**Katy Holster**	4/18/11

Title **Administrative Assistant**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Linda S. C. Rundell	/s/ Linda S. C. Rundell	JUN 14 2011
Title **STATE DIRECTOR**	Office **NM STATE OFFICE**	

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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)*

KZ 07/29/11

CARLSBAD CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

Surface casing is to be set into the Rustler below all fresh water sands at an approximate depth of 798'.

7" casing will be set at approximately 9159' MD (through curve and across 330' hard line) and cemented in two stages with DV Tool set at approximately 5000'. Cement will be circulated 500' into the 9-5/8" casing shoe.

A 4-1/2" production liner will be run with Baker hydraulic packers for zonal isolation. The top of the 4-1/2" liner will be approximately 9009' (150' above 7" casing shoe).

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

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

Both the surface location and bottom hole location are unorthodox.

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

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: Poker Lake Unit #330H
LEGAL DESCRIPTION - SURFACE: 130' FNL, 710' FWL, Section 13, T24S, R30E, Eddy County, NM.
BHL: 315' FNL, 1445' FWL, Section 11, 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 3506' (estimated)
GL 3487'

FORMATION/MARKER	ESTIMATED TOP FROM KB TVD	ESTIMATED TOP FROM KB MD	EST SUBSEA TOP	BEARING
T/Fresh Water	375	375	3,131	Fresh Water
T/Rustler	440	440	3,066	Barren
T/Salt	808	808	2,698	Barren
B/Salt	3,880	3,880	-374	Barren
T/Lamar Lime	4,106	4,106	-600	Barren
T/Ramsey	4,148	4,148	-642	Oil/Gas
T/Lwr Cherry Canyon	6,181	6,181	-2,675	Oil/Gas
KOP	7,143	7,143	-3,637	Oil/Gas
T/Brushy Canyon "U" Sand	7,546	7,572	-4,040	Oil/Gas
T/LBC 8A	7,713	7,795	-4,207	Oil/Gas
T/LBC "Y" Sand	7,877	8,181	-4,371	Oil/Gas
EOC	7,893	8,321	-4,387	Oil/Gas
TARGET #1	7,890	9,159	-4,384	Oil/Gas
TD BHL	7,795	14,431	-4,289	Oil/Gas

POINT 3: CASING PROGRAM

TYPE	INTERVALS (MD)	HOLE SIZE	PURPOSE	CONDITION
20"	0'-60'	24"	Conductor	Unspecified
13-3/8", 48#, H-40 or 54.5#, J-55, 8rd, ST&C*	0'-798'	17-1/2"	Surface	New
9-5/8", 40#, J-55, 8rd, LT&C	0'-4126'	12-1/4"	Intermediate	New
7", 26#, N-80, 8RD, Buttress or LT&C*	0'-9159'	8-3/4"	Production	New
4-1/2", 11.6#, HCP-110, 8rd, LT&C	9009'-14431'	6-1/8"	Production	New

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 48#, H-40, 8rd, ST&C	9.71	2.05	2.20
13-3/8", 54.5#, J-55, 8rd, ST&C	13.71	2.05	3.47
9-5/8", 40#, J-55, 8rd, LT&C	3.72	1.20	1.04
7", 26#, N-80, 8rd, BTC	3.41	1.46	1.08
7", 26#, N-80, 8rd, LT&C	2.93	1.46	1.08
4-1/2", 11.6#, HCP-110, 8rd, LT&C	3.53	2.18	2.14

*** Depending on Availability**

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.

2ND INTERMEDIATE 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.

PRODUCTION CASING - (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) * 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 2,000 psig by an independent tester. The hydril when installed on surface casing will be tested to 1,000 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 and 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 3,000 psig by an independent tester. In addition to the high pressure test, a low pressure test (250-300 psig) test will be required. Hydril will be tested to 1,500 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 and 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 3,000 psig by an independent tester. In addition to the high pressure test, a low pressure test (250-300 psig) test will be required. Hydril will be tested to 1,500 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.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 798'	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	NC	10
798' - 4126'	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	9.5 – 10.5
4126' - 9159'	FW/Gel	8.7 – 9.0	28-36	NC	NC	NC	9.5 – 10.0
9159' - 14,431	FW/Gel/Starch	8.7 – 9.0	28-36	NC	NC	<100	9.5 – 10.0

NOTE: May increase vis for logging purposes only.

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: RU mud logger at 100' to pick T/salt.

C) CONVENTIONAL CORING

None anticipated.

POINT 6: TECHNICAL STAGES OF OPERATION

	INTERVAL	SKS	FILL	TYPE	GAL/SK	PPG	FT^3/SK
SURFACE:							
LEAD:	0' – 498'	400	498	Class "C" 35/65+6% gel +3pps star-seal+.04% FL10+0.25% R-38+5% salt	9.95	12.8	1.91
EXCESS:	100% CMT to surface						
TAIL:	498' – 798'	400	300	Class "C" + 2% $CaCl_2$+3lb star-seal+0.25% R-38	6.12	14.8	1.36
EXCESS:	100%						
INTERMEDIATE:							
LEAD:	0' – 3626'	1200	3626	Class "C" 35/65+6% gel +3pps star-seal+.04% FL10+0.25% R-38+5% salt	9.95	12.8	1.91
EXCESS:	100% CMT to surface						
TAIL:	3626' - 4126'	300	500	Class "C" + 2% $CaCl_2$+ 0.25% R-38	6.34	14.8	1.35
EXCESS:	100%						
PRODUCTION							
Stage 1:							
LEAD:	5000' - 7143'	250	2143	RSS Micro+.5% FMS+ 0.3% FL10+0.8% C-12 +3pps Gilsonite+0.25	10.09	10.5	2.41
EXCESS:	50%						
TAIL:	7143' - 9159'	400	2016	RSS Micro+0.2% C-37+ 0.2%+C-12+0.2% FL10+ +0.25% R-38	7.03	13.0	1.38
EXCESS:	50%						
DV Tool @ 5,000'							
Stage 2:							
LEAD:	3626' – 4900'	150	1274	RSS Micro+35% FMS+ 0.5%, C-12+3pps Gilsonite +0.5% R-38	10.16	10.5	2.42
EXCESS:	50% 500' into 9-5/8"						
TAIL:	4900'-5000'	50	100	Class "C" + 0.20% R-38	6.31	14.8	1.33
EXCESS:	50%						

E) 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 7143' at which point a directional hole will be kicked off and drilled at an azimuth of 317.386 degrees, building angle at 7.64 deg/100' to 90 degrees at a TVD of 7893' (MD 8321'). This angle and azimuth will be maintained for 838' to a measured depth of 9159' (7893' TVD). At this depth 7", 26#, N-80, Buttress or LTC casing will be installed and cemented in two stages (DV Tool @ approximately 5000'). A 6-1/8" open hole lateral will then be drilled out from 7" casing at an azimuth of 317.386 degrees, inclination of 91.038 degrees to a measured depth of 14,431', TVD 7798'. At this depth 4-1/2", 11.6#, HCP-110, LTC casing will be installed with Baker hydraulic packers for zonal isolation in the lateral. Top of 4-1/2" liner will be at approximately 9009' (150' above 7" shoe).

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 3418 psi (max) or MWE of 8.4 ppg is expected. Lost circulation may exist in the Delaware Section from 4106'-7713' TVD. No H_2S is anticipated.

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

SMM/keh

BOPCO, L.P.

Location Eddy County, NM
Field Poker Lake Unit
Facility Poker Lake Unit No. 330H

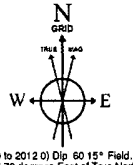
Slot No 330H SHL
Well No 330H
Wellbore No.330H PWB

BAKER HUGHES
INTEQ

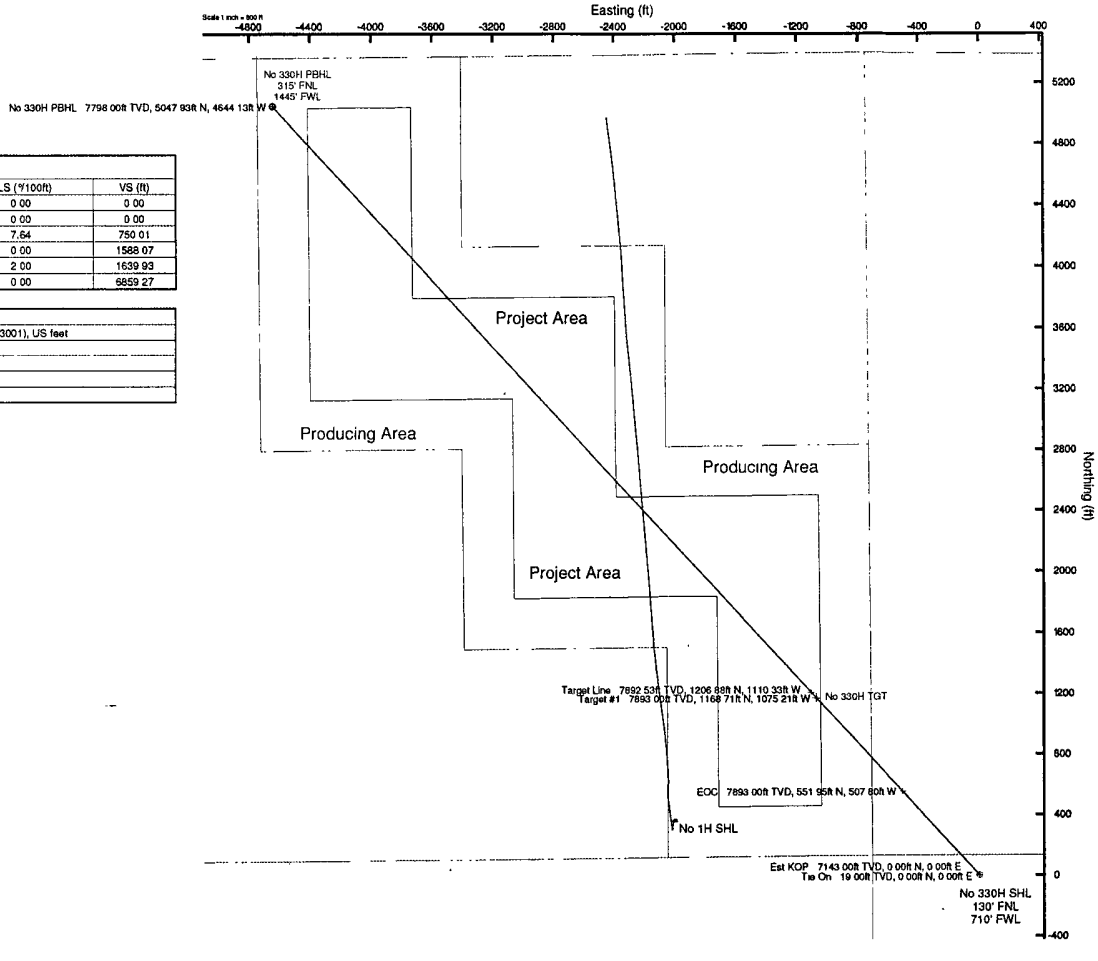
Well Profile Data

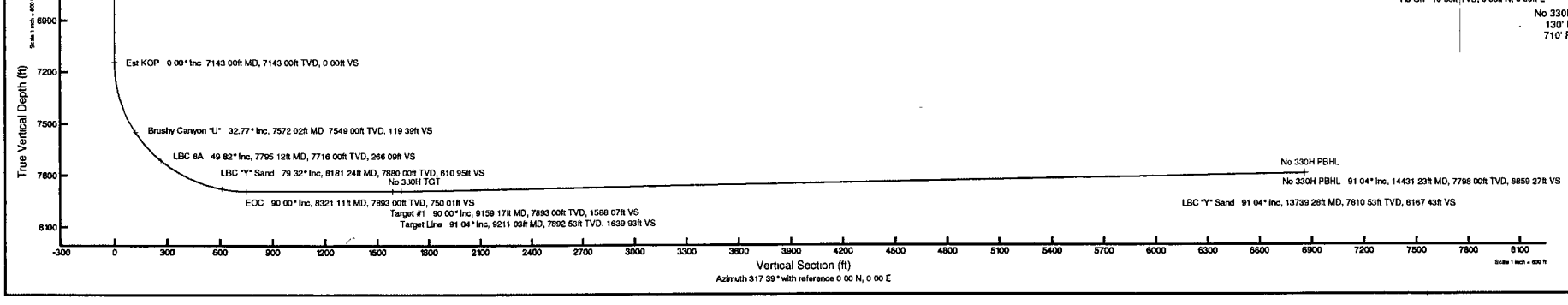
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	19 00	0 000	317 386	19 00	0 00	0 00	0 00	0 00
Est KOP	7143 00	0 000	317 386	7143 00	0 00	0 00	0 00	0 00
EOC	8321 11	90 000	317 386	7893 00	551 95	-507 80	7 64	750 01
Target #1	9159 17	90 000	317 386	7893 00	1168 71	-1075 21	0 00	1588 07
Target Line	9211 03	91 038	317 386	7892 53	1206 88	-1110 33	2 00	1639 93
No 330H PBHL	14431 23	91 038	317 386	7798 00	5047 93	-4644 13	0 00	6859 27

Plot reference wellpath is Prelim_1	
True vertical depths are referenced to Rig on No 330H SHL (KB)	Grid System NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No 330H SHL (KB)	North Reference Grid north
Rig on No 330H SHL (KB) to Mean Sea Level 3506 feet	Scale True distance
Mean Sea Level to Mud line (Facility Poker Lake Unit No 330H) -3487 feet	Depths are in feet
Coordinates are in feet referenced to Facility Center	Created by gentbry on 3/31/2011



BGGM (1945 0 to 2012 0) Dip 60 15° Field 48640 4 nT
Magnetic North is 7 79 degrees East of True North (at 3/25/2011)
Grid North is 0 26 degrees East of True North
To correct azimuth from True to Grid subtract 0 26 degrees
To correct azimuth from Magnetic to Grid add 7 52 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7 52 = 97 52





Azimuth 317 39° with reference 0 00 N, 0 00 E

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.330H SHL**
Area	**Eddy County, NM**	Well	**No.330H**
Field	**Poker Lake Unit**	Wellbore	**No.330H PWB**
Facility	**Poker Lake Unit No. 330H**		

REPORT SETUP INFORMATION			
Projection System	**NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 2.0**
North Reference	**Grid**	User	**Gentbry**
Scale	**0.999936**	Report Generated	**3/31/2011 at 2:28:42 PM**
Convergence at slot	**0.26° East**	Database/Source file	**WA Midland/No.330H_PWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[USft]**	**Northing[USft]**	**Latitude**	**Longitude**
Slot Location	**0.00**	**0.00**	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W
Facility Reference Pt			**652511.54**	**445807.94**	32°13'28.851"N	103°50'24.534"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.330H SHL (KB) to Facility Vertical Datum	**19.00ft**
Horizontal Reference Pt	**Facility Center**	Rig on No.330H SHL (KB) to Mean Sea Level	**3506.00ft**
Vertical Reference Pt	**Rig on No.330H SHL (KB)**	Facility Vertical Datum to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**Rig on No.330H SHL (KB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**317.39°**

Planned Wellpath Report

Prelim_1

BAKER HUGHES

INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.330H SHL
Area	Eddy County, NM	Well	No.330H
Field	Poker Lake Unit	Wellbore	No.330H PWB
Facility	Poker Lake Unit No. 330H		

WELLPATH DATA (155 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	317.386	0.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
19.00	0.000	317.386	19.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	Tie On
119.00†	0.000	317.386	119.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
219.00†	0.000	317.386	219.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
319.00†	0.000	317.386	319.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
419.00†	0.000	317.386	419.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
519.00†	0.000	317.386	519.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
619.00†	0.000	317.386	619.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
719.00†	0.000	317.386	719.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
819.00†	0.000	317.386	819.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
919.00†	0.000	317.386	919.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
1019.00†	0.000	317.386	1019.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
1119.00†	0.000	317.386	1119.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
1219.00†	0.000	317.386	1219.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
1319.00†	0.000	317.386	1319.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
1419.00†	0.000	317.386	1419.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
1519.00†	0.000	317.386	1519.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
1619.00†	0.000	317.386	1619.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
1719.00†	0.000	317.386	1719.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
1819.00†	0.000	317.386	1819.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
1919.00†	0.000	317.386	1919.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
2019.00†	0.000	317.386	2019.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
2119.00†	0.000	317.386	2119.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
2219.00†	0.000	317.386	2219.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
2319.00†	0.000	317.386	2319.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
2419.00†	0.000	317.386	2419.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
2519.00†	0.000	317.386	2519.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
2619.00†	0.000	317.386	2619.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
2719.00†	0.000	317.386	2719.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
2819.00†	0.000	317.386	2819.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
2919.00†	0.000	317.386	2919.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
3019.00†	0.000	317.386	3019.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
3119.00†	0.000	317.386	3119.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
3219.00†	0.000	317.386	3219.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
3319.00†	0.000	317.386	3319.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
3419.00†	0.000	317.386	3419.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
3519.00†	0.000	317.386	3519.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
3619.00†	0.000	317.386	3619.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
3719.00†	0.000	317.386	3719.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
3819.00†	0.000	317.386	3819.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
3919.00†	0.000	317.386	3919.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
4019.00†	0.000	317.386	4019.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
4119.00†	0.000	317.386	4119.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
4219.00†	0.000	317.386	4219.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
4319.00†	0.000	317.386	4319.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.330H SHL**
Area	**Eddy County, NM**	Well	**No.330H**
Field	**Poker Lake Unit**	Wellbore	**No.330H PWB**
Facility	**Poker Lake Unit No. 330H**		

WELLPATH DATA (155 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4419.00†	0.000	317.386	4419.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
4519.00†	0.000	317.386	4519.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
4619.00†	0.000	317.386	4619.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
4719.00†	0.000	317.386	4719.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
4819.00†	0.000	317.386	4819.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
4919.00†	0.000	317.386	4919.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
5019.00†	0.000	317.386	5019.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
5119.00†	0.000	317.386	5119.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
5219.00†	0.000	317.386	5219.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
5319.00†	0.000	317.386	5319.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
5419.00†	0.000	317.386	5419.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
5519.00†	0.000	317.386	5519.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
5619.00†	0.000	317.386	5619.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
5719.00†	0.000	317.386	5719.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
5819.00†	0.000	317.386	5819.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
5919.00†	0.000	317.386	5919.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
6019.00†	0.000	317.386	6019.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
6119.00†	0.000	317.386	6119.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
6219.00†	0.000	317.386	6219.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
6319.00†	0.000	317.386	6319.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
6419.00†	0.000	317.386	6419.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
6519.00†	0.000	317.386	6519.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
6619.00†	0.000	317.386	6619.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
6719.00†	0.000	317.386	6719.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
6819.00†	0.000	317.386	6819.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
6919.00†	0.000	317.386	6919.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
7019.00†	0.000	317.386	7019.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
7119.00†	0.000	317.386	7119.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	
7143.00	0.000	317.386	7143.00	0.00	0.00	0.00	652511.54	445807.94	32°13'28.851"N	103°50'24.534"W	0.00	Est KOP
7219.00†	5.806	317.386	7218.87	3.85	2.83	-2.60	652508.94	445810.77	32°13'28.879"N	103°50'24.565"W	7.64	
7319.00†	13.445	317.386	7317.39	20.56	15.13	-13.92	652497.62	445823.07	32°13'29.002"N	103°50'24.696"W	7.64	
7419.00†	21.085	317.386	7412.81	50.21	36.95	-34.00	652477.55	445844.89	32°13'29.219"N	103°50'24.928"W	7.64	
7519.00†	28.724	317.386	7503.45	92.29	67.92	-62.49	652449.06	445875.86	32°13'29.526"N	103°50'25.258"W	7.64	
7572.02†	32.774	317.386	7549.00	119.39	87.87	-80.84	652430.71	445895.80	32°13'29.724"N	103°50'25.471"W	7.64	Brushy Canyon "U"
7619.00†	36.364	317.386	7587.68	146.05	107.48	-98.88	652412.66	445915.41	32°13'29.919"N	103°50'25.680"W	7.64	
7719.00†	44.003	317.386	7664.02	210.52	154.93	-142.54	652369.01	445962.86	32°13'30.391"N	103°50'26.185"W	7.64	
7795.12†	49.818	317.386	7716.00	266.09	195.82	-180.16	652331.40	446003.75	32°13'30.797"N	103°50'26.621"W	7.64	LBC 8A
7819.00†	51.642	317.386	7731.12	284.58	209.43	-192.67	652318.88	446017.35	32°13'30.932"N	103°50'26.766"W	7.64	
7919.00†	59.282	317.386	7787.77	366.89	270.01	-248.40	652263.15	446077.93	32°13'31.534"N	103°50'27.411"W	7.64	
8019.00†	66.921	317.386	7832.98	456.00	335.59	-308.74	652202.82	446143.51	32°13'32.186"N	103°50'28.110"W	7.64	
8119.00†	74.561	317.386	7865.94	550.34	405.01	-372.61	652138.95	446212.92	32°13'32.876"N	103°50'28.850"W	7.64	
8181.24†	79.315	317.386	7880.00	610.95	449.62	-413.65	652097.92	446257.53	32°13'33.319"N	103°50'29.325"W	7.64	LBC "Y" Sand
8219.00†	82.200	317.386	7886.06	648.22	477.04	-438.88	652072.69	446284.95	32°13'33.592"N	103°50'29.618"W	7.64	
8319.00†	89.839	317.386	7893.00	747.90	550.40	-506.37	652005.20	446358.31	32°13'34.321"N	103°50'30.399"W	7.64	
8321.11†	90.000	317.386	7893.00	750.01	551.95	-507.80	652003.78	446359.86	32°13'34.336"N	103°50'30.416"W	7.64	EOC

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.330H SHL
Area	Eddy County, NM	Well	No.330H
Field	Poker Lake Unit	Wellbore	No.330H PWB
Facility	Poker Lake Unit No. 330H		

WELLPATH DATA (155 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8419.00†	90.000	317.386	7893.00	847.90	624.00	-574.08	651937.50	446431.89	32°13'35.052"N	103°50'31.184"W	0.00	
8519.00†	90.000	317.386	7893.00	947.90	697.59	-641.78	651869.80	446505.48	32°13'35.783"N	103°50'31.968"W	0.00	
8619.00†	90.000	317.386	7893.00	1047.90	771.18	-709.49	651802.10	446579.07	32°13'36.515"N	103°50'32.752"W	0.00	
8719.00†	90.000	317.386	7893.00	1147.90	844.78	-777.19	651734.40	446652.66	32°13'37.246"N	103°50'33.536"W	0.00	
8819.00†	90.000	317.386	7893.00	1247.90	918.37	-844.90	651666.70	446726.25	32°13'37.977"N	103°50'34.321"W	0.00	
8919.00†	90.000	317.386	7893.00	1347.90	991.96	-912.61	651599.00	446799.84	32°13'38.708"N	103°50'35.105"W	0.00	
9019.00†	90.000	317.386	7893.00	1447.90	1065.55	-980.31	651531.29	446873.42	32°13'39.440"N	103°50'35.889"W	0.00	
9119.00†	90.000	317.386	7893.00	1547.90	1139.15	-1048.02	651463.59	446947.01	32°13'40.171"N	103°50'36.673"W	0.00	
9159.17	90.000	317.386	7893.00[1]	1588.07	1168.71	-1075.21	651436.40	446976.57	32°13'40.465"N	103°50'36.988"W	0.00	Target #1
9211.03	91.038	317.386	7892.53	1639.93	1206.88	-1110.33	651401.29	447014.74	32°13'40.844"N	103°50'37.395"W	2.00	Target Line
9219.00†	91.038	317.386	7892.39	1647.90	1212.74	-1115.72	651395.89	447020.60	32°13'40.902"N	103°50'37.457"W	0.00	
9319.00†	91.038	317.386	7890.58	1747.88	1286.32	-1183.41	651328.20	447094.17	32°13'41.633"N	103°50'38.242"W	0.00	
9419.00†	91.038	317.386	7888.76	1847.86	1359.90	-1251.11	651260.51	447167.75	32°13'42.365"N	103°50'39.026"W	0.00	
9519.00†	91.038	317.386	7886.95	1947.85	1433.48	-1318.80	651192.82	447241.33	32°13'43.096"N	103°50'39.810"W	0.00	
9619.00†	91.038	317.386	7885.14	2047.83	1507.06	-1386.50	651125.13	447314.90	32°13'43.827"N	103°50'40.594"W	0.00	
9719.00†	91.038	317.386	7883.33	2147.81	1580.64	-1454.19	651057.44	447388.48	32°13'44.558"N	103°50'41.378"W	0.00	
9819.00†	91.038	317.386	7881.52	2247.80	1654.22	-1521.89	650989.75	447462.05	32°13'45.289"N	103°50'42.162"W	0.00	
9919.00†	91.038	317.386	7879.71	2347.78	1727.80	-1589.58	650922.06	447535.63	32°13'46.020"N	103°50'42.946"W	0.00	
10019.00†	91.038	317.386	7877.90	2447.77	1801.38	-1657.28	650854.37	447609.20	32°13'46.752"N	103°50'43.730"W	0.00	
10119.00†	91.038	317.386	7876.09	2547.75	1874.96	-1724.97	650786.68	447682.78	32°13'47.483"N	103°50'44.515"W	0.00	
10219.00†	91.038	317.386	7874.28	2647.73	1948.55	-1792.67	650718.99	447756.36	32°13'48.214"N	103°50'45.299"W	0.00	
10319.00†	91.038	317.386	7872.47	2747.72	2022.13	-1860.36	650651.30	447829.93	32°13'48.945"N	103°50'46.083"W	0.00	
10419.00†	91.038	317.386	7870.66	2847.70	2095.71	-1928.06	650583.61	447903.51	32°13'49.676"N	103°50'46.867"W	0.00	
10519.00†	91.038	317.386	7868.84	2947.68	2169.29	-1995.75	650515.92	447977.08	32°13'50.407"N	103°50'47.651"W	0.00	
10619.00†	91.038	317.386	7867.03	3047.67	2242.87	-2063.45	650448.23	448050.66	32°13'51.138"N	103°50'48.435"W	0.00	
10719.00†	91.038	317.386	7865.22	3147.65	2316.45	-2131.14	650380.54	448124.24	32°13'51.870"N	103°50'49.220"W	0.00	
10819.00†	91.038	317.386	7863.41	3247.63	2390.03	-2198.84	650312.85	448197.81	32°13'52.601"N	103°50'50.004"W	0.00	
10919.00†	91.038	317.386	7861.60	3347.62	2463.61	-2266.53	650245.16	448271.39	32°13'53.332"N	103°50'50.788"W	0.00	
11019.00†	91.038	317.386	7859.79	3447.60	2537.19	-2334.23	650177.47	448344.96	32°13'54.063"N	103°50'51.572"W	0.00	
11119.00†	91.038	317.386	7857.98	3547.58	2610.77	-2401.92	650109.78	448418.54	32°13'54.794"N	103°50'52.356"W	0.00	
11219.00†	91.038	317.386	7856.17	3647.57	2684.35	-2469.62	650042.09	448492.12	32°13'55.525"N	103°50'53.141"W	0.00	
11319.00†	91.038	317.386	7854.36	3747.55	2757.93	-2537.31	649974.40	448565.69	32°13'56.256"N	103°50'53.925"W	0.00	
11419.00†	91.038	317.386	7852.55	3847.54	2831.51	-2605.01	649906.71	448639.27	32°13'56.987"N	103°50'54.709"W	0.00	
11519.00†	91.038	317.386	7850.74	3947.52	2905.10	-2672.70	649839.02	448712.84	32°13'57.719"N	103°50'55.493"W	0.00	
11619.00†	91.038	317.386	7848.93	4047.50	2978.68	-2740.40	649771.33	448786.42	32°13'58.450"N	103°50'56.277"W	0.00	
11719.00†	91.038	317.386	7847.11	4147.49	3052.26	-2808.09	649703.64	448859.99	32°13'59.181"N	103°50'57.061"W	0.00	
11819.00†	91.038	317.386	7845.30	4247.47	3125.84	-2875.79	649635.95	448933.57	32°13'59.912"N	103°50'57.846"W	0.00	
11919.00†	91.038	317.386	7843.49	4347.45	3199.42	-2943.48	649568.26	449007.15	32°14'00.643"N	103°50'58.630"W	0.00	
12019.00†	91.038	317.386	7841.68	4447.44	3273.00	-3011.17	649500.56	449080.72	32°14'01.374"N	103°50'59.414"W	0.00	
12119.00†	91.038	317.386	7839.87	4547.42	3346.58	-3078.87	649432.87	449154.30	32°14'02.105"N	103°51'00.198"W	0.00	
12219.00†	91.038	317.386	7838.06	4647.40	3420.16	-3146.56	649365.18	449227.87	32°14'02.836"N	103°51'00.983"W	0.00	
12319.00†	91.038	317.386	7836.25	4747.39	3493.74	-3214.26	649297.49	449301.45	32°14'03.568"N	103°51'01.767"W	0.00	
12419.00†	91.038	317.386	7834.44	4847.37	3567.32	-3281.95	649229.80	449375.03	32°14'04.299"N	103°51'02.551"W	0.00	
12519.00†	91.038	317.386	7832.63	4947.36	3640.90	-3349.65	649162.11	449448.60	32°14'05.030"N	103°51'03.335"W	0.00	
12619.00†	91.038	317.386	7830.82	5047.34	3714.48	-3417.34	649094.42	449522.18	32°14'05.761"N	103°51'04.119"W	0.00	

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.330H SHL
Area	Eddy County, NM	Well	No.330H
Field	Poker Lake Unit	Wellbore	No.330H PWB
Facility	Poker Lake Unit No. 330H		

WELLPATH DATA (155 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12719.00†	91.038	317.386	7829.01	5147.32	3788.06	-3485.04	649026.73	449595.75	32°14'06.492"N	103°51'04.904"W	0.00	
12819.00†	91.038	317.386	7827.20	5247.31	3861.65	-3552.73	648959.04	449669.33	32°14'07.223"N	103°51'05.688"W	0.00	
12919.00†	91.038	317.386	7825.38	5347.29	3935.23	-3620.43	648891.35	449742.91	32°14'07.954"N	103°51'06.472"W	0.00	
13019.00†	91.038	317.386	7823.57	5447.27	4008.81	-3688.12	648823.66	449816.48	32°14'08.685"N	103°51'07.256"W	0.00	
13119.00†	91.038	317.386	7821.76	5547.26	4082.39	-3755.82	648755.97	449890.06	32°14'09.417"N	103°51'08.041"W	0.00	
13219.00†	91.038	317.386	7819.95	5647.24	4155.97	-3823.51	648688.28	449963.63	32°14'10.148"N	103°51'08.825"W	0.00	
13319.00†	91.038	317.386	7818.14	5747.22	4229.55	-3891.21	648620.59	450037.21	32°14'10.879"N	103°51'09.609"W	0.00	
13419.00†	91.038	317.386	7816.33	5847.21	4303.13	-3958.90	648552.90	450110.79	32°14'11.610"N	103°51'10.394"W	0.00	
13519.00†	91.038	317.386	7814.52	5947.19	4376.71	-4026.60	648485.21	450184.36	32°14'12.341"N	103°51'11.178"W	0.00	
13619.00†	91.038	317.386	7812.71	6047.18	4450.29	-4094.29	648417.52	450257.94	32°14'13.072"N	103°51'11.962"W	0.00	
13719.00†	91.038	317.386	7810.90	6147.16	4523.87	-4161.99	648349.83	450331.51	32°14'13.803"N	103°51'12.746"W	0.00	
13739.28†	91.038	317.386	7810.53	6167.43	4538.79	-4175.71	648336.10	450346.43	32°14'13.951"N	103°51'12.905"W	0.00	LBC "Y" Sand
13819.00†	91.038	317.386	7809.09	6247.14	4597.45	-4229.68	648282.14	450405.09	32°14'14.534"N	103°51'13.531"W	0.00	
13919.00†	91.038	317.386	7807.28	6347.13	4671.03	-4297.38	648214.45	450478.66	32°14'15.265"N	103°51'14.315"W	0.00	
14019.00†	91.038	317.386	7805.46	6447.11	4744.61	-4365.07	648146.76	450552.24	32°14'15.996"N	103°51'15.099"W	0.00	
14119.00†	91.038	317.386	7803.65	6547.09	4818.20	-4432.77	648079.07	450625.82	32°14'16.728"N	103°51'15.883"W	0.00	
14219.00†	91.038	317.386	7801.84	6647.08	4891.78	-4500.46	648011.38	450699.39	32°14'17.459"N	103°51'16.668"W	0.00	
14319.00†	91.038	317.386	7800.03	6747.06	4965.36	-4568.16	647943.69	450772.97	32°14'18.190"N	103°51'17.452"W	0.00	
14419.00†	91.038	317.386	7798.22	6847.04	5038.94	-4635.85	647876.00	450846.54	32°14'18.921"N	103°51'18.236"W	0.00	
14431.23	91.038	317.386	7798.00[2]	6859.27	5047.93	-4644.13	647867.72	450855.54	32°14'19.010"N	103°51'18.332"W	0.00	No.330H PBHL

HOLE & CASING SECTIONS Ref Wellbore: No.330H PWB Ref Wellpath: Prelim_1

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.75in Open Hole	19.00	8521.11	8502.11	19.00	7893.00	0.00	0.00	699.14	-643.21
7in Casing	19.00	8521.11	8502.11	19.00	7893.00	0.00	0.00	699.14	-643.21
6.125in Open Hole	8521.11	14431.23	5910.12	7893.00	7798.00	699.14	-643.21	5047.93	-4644.13

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.330H SHL**
Area	**Eddy County, NM**	Well	**No.330H**
Field	**Poker Lake Unit**	Wellbore	**No.330H PWB**
Facility	**Poker Lake Unit No. 330H**		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
2) No.330H PBHL	14431.23	7798.00	5047.93	-4644.13	**647867.72**	**450855.54**	32°14'19.010"N	103°51'18.332"W	point
1) No.330H TGT	9159.17	7893.00	1168.71	-1075.21	**651436.40**	**446976.57**	32°13'40.465"N	103°50'36.988"W	point

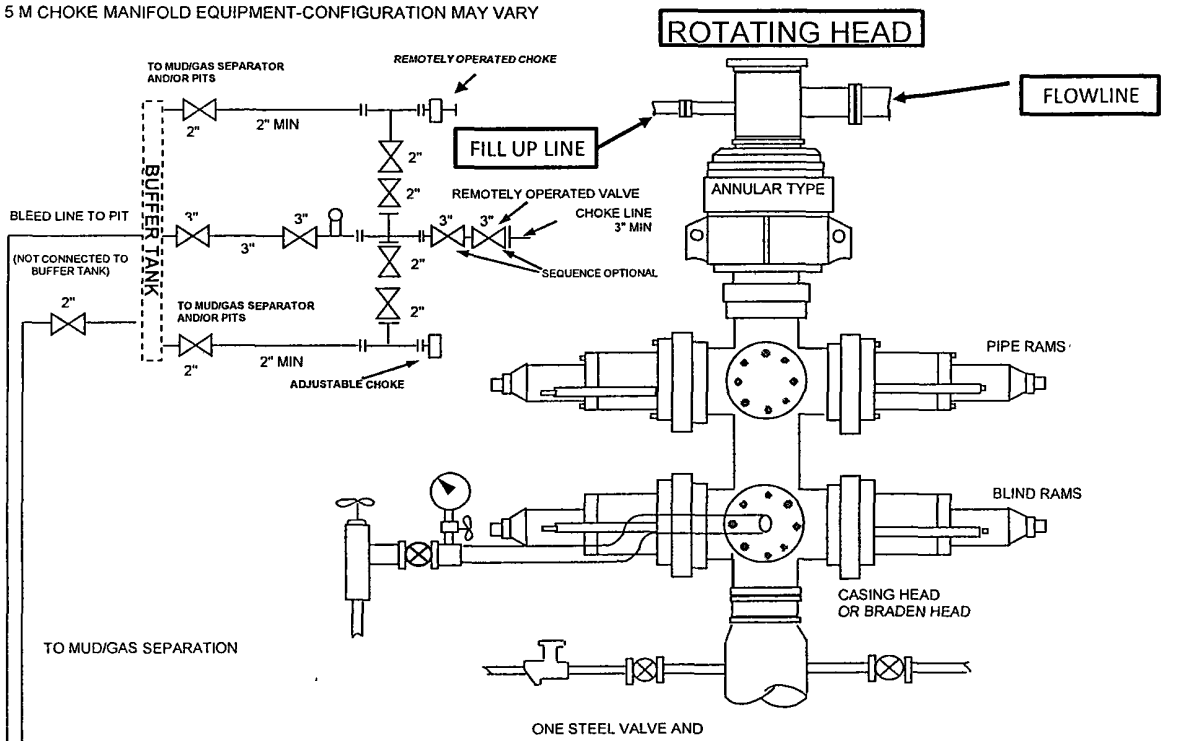
SURVEY PROGRAM Ref Wellbore: No.330H PWB Ref Wellpath: Prelim_1

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	14431.23	NaviTrak (Standard)		No.330H PWB

BOPCO, L. P.

13 5/8" X 5-M WP BOPE WITH 5-M WP ANNULAR

5 M CHOKE MANIFOLD EQUIPMENT-CONFIGURATION MAY VARY



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 WELL

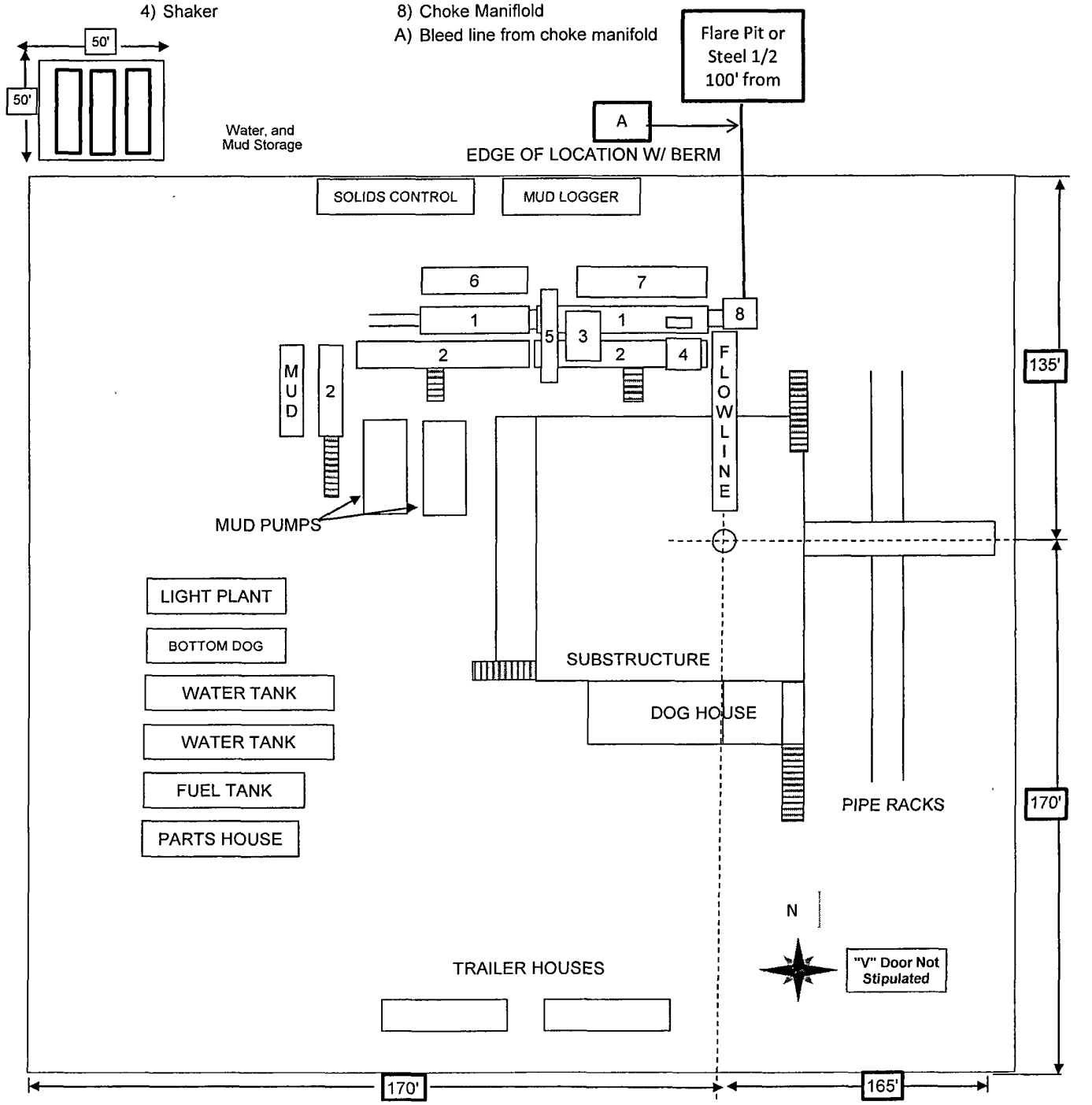
BOPCO, L.P.
Poker Lake Unit #330H
Sec 13, T24S-R30E
Eddy County, NM

Exhibit "D"

RIG LAYOUT SCHEMATIC
INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

Solids Control Equipment Legend

1) Roll Off Bin
2) Steel Tank
3) Mud Cleaner
4) Shaker
5) Centrifuge
6) Dewatering Unit
7) Catch Tank
8) Choke Manifold
A) Bleed line from choke manifold



Wtd-ser/Drilling/DrillingDiagrams/McVay#5 Rig Pad demnsions - Closed Loop Location size. Exhibit DRes Pit Exibit D w-rig