ATS-11-838

30-015-39732

OCD-ARTESIA

Form 3160-3
(April 2004)

SECRETARY'S POTASH

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NM BHL SHL LC 068905, 030452, 030453

6. If Indian, Allotee or Tribe Name

1a. Type of work. ☑ DRILL ☐ REENTER

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

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

8. Lease Name and Well No.
Poker Lake Unit #340H [306402]

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

9. API Well No.
30-015-39732

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 **SWSE, UL N, 895' FSL, 1410' FWL, Lat N32.212961, Long W103.855222**

At proposed prod. zone **835' FSL, 1440' FWL, Sec24,T24S,R30E,Lat N32.198314, Lg W103.837875**

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 14, 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
895'	**3800**	**520**
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
1845'	**15,167' MD, 7,908 TVD**	**COB000050**
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3424' GL	**09/01/2011**	**30 days**

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
Jeremy Braden	**Jeremy Braden**	**08/09/2011**

Title: **Drilling Engineer Assistant**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Tony J. Herrell	/s/ Tony J. Herrell	NOV 21 2011

Title: FOR ACTING 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)*

Carlsbad Controlled Water Basin

RECEIVED
NOV 29 2011
NMOCD ARTESIA

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator BOPCO OGRID # 260737

30640?

Well Name & # _____ Surface Type (F) (S) (P)

Location: UL N, Sect 14 Twnship 24 s, RNG 30 e, Sub-surface Type (F) (S) (P)

A. Date C101 rec'd 11/28/2011 C101 reviewed 12/1/2011

B. 1. Check mark, Information is OK on Forms:
OGRID ✓, BONDING ✓, PROP CODE ✓, WELL # ✓, SIGNATURE ✓
2. Inactive Well list as of: 12/1/2011 # wells _____, # Inactive wells _____
a. District Grant APD but see number of inactive wells:
No letter required ✓; Sent Letter to Operator ____, to Santa Fe ____
3. Additional Bonding as of: 12/1/2011
a. District Denial because operator needs addition bonding:
No Letter required ✓; Sent Letter to Operator ____, To Santa Fe ____
b. District Denial because of Inactive well list and Financial Assurance:
No Letter required ✓; Sent Letter to Operator ____, To Santa Fe ____

C. C102 YES ✓, NO ____, Signature ✓
1. Pool Poker Lake Unit; Delaware, NW, Code 96046
a. Dedicated acreage _____, What Units _____
b. SUR. Location Standard _____: Non-Standard Location _____
c. Well shares acres: Yes ____, No ____, # of wells ____ plus this well # ____
2. 2nd. Operator in same acreage, Yes _____, No _____
Agreement Letter _____, Disagreement letter _____
3. Intent to Directional Drill Yes ✓, No ____
a. Dedicated acreage 320, What Units _____
b. Bottomhole Location Standard _____, Non-Standard Bottomhole _____
4. Downhole Commingle: Yes _____, No _____
a. Pool #2 _____, Code _____, Acres _____
Pool #3 _____, Code _____, Acres _____
Pool #4 _____, Code _____, Acres _____
5. POTASH Area Yes _____, No ✓,

D. Blowout Preventer Yes ✓, No _____,

E. H2S Yes ✓, No _____,

F. C144 Pit Registration Yes ✓, No _____,

G. Does APD require Santa Fe Approval:
1. Non-Standard Location: Yes _____, No ✓, NSL # _____
2. Non-Standard Proration: Yes _____, No ✓, NSP # _____
3. Simultaneous Dedication: Yes _____, No ✓, SD # _____
Number of wells _____ Plus # _____
4. Injection order Yes _____, No ✓; PMX # _____ or WFX # _____
5. SWD order Yes _____, NO ✓; SWD # _____
6. DHC from SF _____; DHC-HOB _____; Holding _____

7. OCD Approval Date 12/1/2011 API #30-0 15-39732

8. Reviewers _____

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: Poker Lake Unit #340H
LEGAL DESCRIPTION - SURFACE: 895' FSL, 1410' FWL, Section 14, T24S, R30E, Eddy County, NM.
BHL: 835' FSL, 1440' FWL, Section 24, 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 3443' (estimated)
GL 3424'

	TOP FROM KB		SUBSEA TOP	
FORMATION/MARKER	TVD	MD	EST	BEARING
T/FW	400	400	3,043	Fresh Water
T/RUSTLER	544	544	2,899	Barren
T/SALT	2,076	2,076	1,367	Barren
B/SALT	3,736	3,736	-293	Barren
T/LAMAR LIME	3,978	3,978	-535	Barren
T/RAMSEY	4,073	4,073	-630	Oil/Gas
T/LWR CHERRY CANYON	6,146	6,146	-2,703	Oil/Gas
KOP	7,330	7,330	-3,887	Oil/Gas
T/LBC 8A	7,600	7,617	-4,157	Oil/Gas
T/LBC "Y" SAND	7,773	7,897	-4,330	Oil/Gas
EOC	7,808	8,080	-4,365	Oil/Gas
TARGET #1	7,808	8,280	-4,365	Oil/Gas
TD BHL	7,908	15,167	-4,465	Oil/Gas

POINT 3: CASING PROGRAM

	INTERVALS			
TYPE	(MD)	HOLE SIZE	PURPOSE	CONDITION
20" Conductor	0'-60'	26"	Conductor	Unspecified
13-3/8", 54.5#, J-55, ST&C See COA	0'-~~1300~~ 775	17-1/2"	Surface	New
9-5/8", 40#, J-55, LT&C	0'-3998	12-1/4"	Intermediate	New
7", 26#, N-80, BTC or LT&C*	0'-8280'	8-3/4"	Production	New
4-1/2", 11.6#, HCP-110, LT&C	8130'-15167'	6-1/8"	Production	New

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 54.5#, J-55, ST&C	14.01	1.77	2.58
9-5/8", 40#, J-55, LT&C	3.84	1.24	1.07
7", 26#, N-80, 8RD, LT&C	2.96	1.48	1.09
4-1/2", 11.6#, HCP-110, 8RD, LT&C	3.96	2.34	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)

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.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 1300' 775	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	NC	10
1300' - 3998'	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	9.5 – 10.5
3998' - 8280'	FW/Gel	8.7 – 9.0	28-36	NC	NC	NC	9.5 – 10.0
8280' - 15167'	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

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' – 800' (100% excess Circ to surface)	650	800	ExtendaCem CZ	8.72	13.70	1.68
Tail: 800' – 1308' (100% excess)	450	500	ExtendaCem CZ	8.72	13.70	1.68
INTERMEDIATE:						
Lead: 0' – 3498' (100% excess Circ to surface)	1000	3498	EconoCem HLC 5% CaCl + 5 #/sk Gilsonite	9.32	12.90	1.85
Tail: 3498' – 3998' (100% excess)	300	500	HalCem C	6.34	14.80	1.33
2ND INTERMEDIATE						
Stage 1: Lead: 4500' - 7330' (50% excess)	250	2830	Tuned Light + 0.75% CFR-3 + 1.5#/sk CaCl	12.41	10.20	2.76
Tail: 7330'-8280' (50% excess)	150	950	VersaCem-PBSH2 + 0.4% Halad-9	8.76	13.0	1.65
DV Tool @ 4,500'						
Stage 2: Lead: 3498'–4400' (50% excess) (TOC 500' into 9-5/8")	150	902	EconoCem HLC + 1% Econolite + 5% CaCl + 5#/sk Gilsonite	10.71	12.60	2.04
Tail: 4400'-4500' (50% excess)	40	100	HalCem C	6.34	14.80	1.33

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 7330' at which a directional hole will be kicked off and drilled at an azimuth of 131.8 degrees, building angle at 11.99 deg/100' to 90.0 degrees at a TVD of 7808' (MD 8080'). This angle and azimuth will be maintained for 200' to a measured depth of 8280' (7808' TVD). At this depth 7", 26#, N80, LTC casing will be installed and cemented in two stages (DV Tool @ approximately 4,500') with cement being circulated 500' into the 9-5/8" annulus. A 6-1/8" open hole lateral will then be drilled out from 7" casing at an azimuth of 134.763 degrees, inclination of 89.183 degrees to a measured depth of 15,167' (7908' TVD). At this depth 4-1/2", 11.6#, HCP110, 8rd, LTC casing will be installed with Baker hydraulic packers installed for zone isolation in the lateral.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 3424 psi (max) or MWE of 8.4 ppg is expected. Lost circulation may exist in the Delaware Section from 4073'-7600' 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

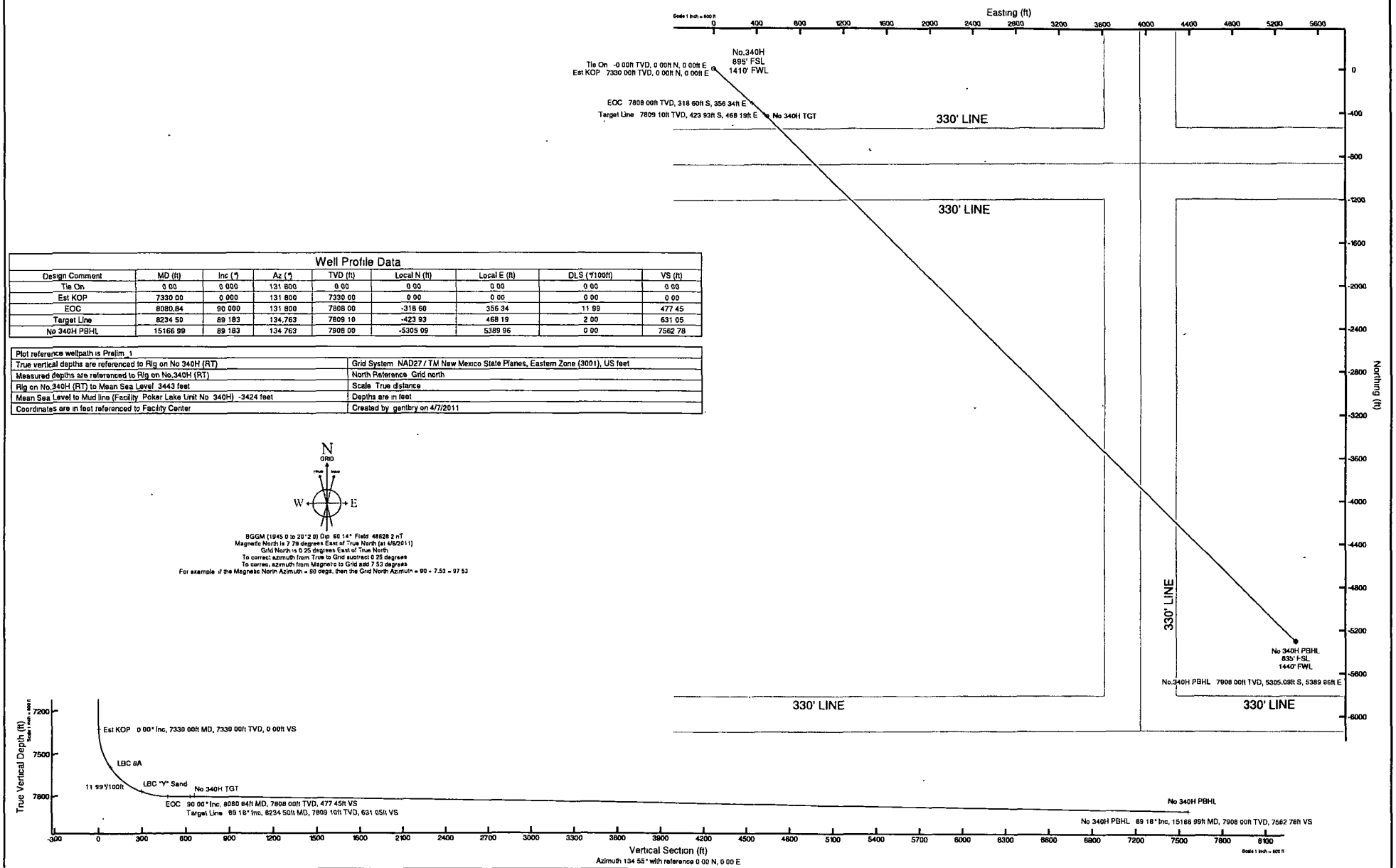
GEG/PL/keh

BOPCO, L.P.

Location Eddy County, NM
Field Poker Lake Unit
Facility Poker Lake Unit No. 340H

Slot No 340H
Well No.340H
Wellbore No.340H 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	0 00	0 000	131 800	0 00	0 00	0 00	0 00	0 00
Est KOP	7330 00	0 000	131 800	7330 00	0 00	0 00	0 00	0 00
EOC	8080.84	90 000	131 800	7808 00	-318 60	356 34	11 99	477 45
Target Line	8234 50	89 183	134.763	7809 10	-423 93	468 19	2 00	631 05
No 340H PBHL	15166 99	89 183	134 763	7908 00	-5305 09	5389 96	0 00	7562 78

Plot reference wellpath is Prelim_1	
True vertical depths are referenced to Rig on No 340H (RT)	Grid System NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.340H (RT)	North Reference Grid north
Rig on No.340H (RT) to Mean Sea Level 3443 feet	Scale True distance
Mean Sea Level to Mud line (Facility Poker Lake Unit No 340H) -3424 feet	Depths are in feet
Coordinates are in feet referenced to Facility Center	Created by gentbry on 4/7/2011

BGGM (1945 0 to 2012 0) Dip 60 14° Field 48628 2 nT
Magnetic North is 7 79 degrees East of True North (at 4/6/2011)
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 53 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.53 = 97 53

Azimuth 134 55° 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.340H**
Area	**Eddy County, NM**	Well	**No.340H**
Field	**Poker Lake Unit**	Wellbore	**No.340H PWB**
Facility	**Poker Lake Unit No. 340H**		

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	**0.999934**	Report Generated	**4/7/2011 at 9:48:14 AM**
Convergence at slot	**0.25° East**	Database/Source file	**WA Midland/No.340H_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**	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W
Facility Reference Pt			**647868.88**	**441523.79**	32°12'46.663"N	103°51'18.802"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.340H (RT) to Facility Vertical Datum	**19.00ft**
Horizontal Reference Pt	**Facility Center**	Rig on No.340H (RT) to Mean Sea Level	**3443.00ft**
Vertical Reference Pt	**Rig on No.340H (RT)**	Facility Vertical Datum to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**Rig on No.340H (RT)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**134.55°**

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.340H
Area	Eddy County, NM	Well	No.340H
Field	Poker Lake Unit	Wellbore	No.340H PWB
Facility	Poker Lake Unit No. 340H		

WELLPATH DATA (158 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	131.800	0.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	Tie On
100.00†	0.000	131.800	100.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
200.00†	0.000	131.800	200.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
300.00†	0.000	131.800	300.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
400.00†	0.000	131.800	400.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
500.00†	0.000	131.800	500.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
600.00†	0.000	131.800	600.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
700.00†	0.000	131.800	700.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
800.00†	0.000	131.800	800.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
900.00†	0.000	131.800	900.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
1000.00†	0.000	131.800	1000.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
1100.00†	0.000	131.800	1100.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
1200.00†	0.000	131.800	1200.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
1300.00†	0.000	131.800	1300.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
1400.00†	0.000	131.800	1400.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
1500.00†	0.000	131.800	1500.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
1600.00†	0.000	131.800	1600.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
1700.00†	0.000	131.800	1700.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
1800.00†	0.000	131.800	1800.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
1900.00†	0.000	131.800	1900.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
2000.00†	0.000	131.800	2000.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
2100.00†	0.000	131.800	2100.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
2200.00†	0.000	131.800	2200.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
2300.00†	0.000	131.800	2300.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
2400.00†	0.000	131.800	2400.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
2500.00†	0.000	131.800	2500.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
2600.00†	0.000	131.800	2600.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
2700.00†	0.000	131.800	2700.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
2800.00†	0.000	131.800	2800.00	0.00	0.00	0.00	647868 88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
2900.00†	0.000	131.800	2900.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
3000.00†	0.000	131.800	3000.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
3100.00†	0.000	131.800	3100.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
3200.00†	0.000	131.800	3200.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
3300.00†	0.000	131.800	3300.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
3400.00†	0.000	131.800	3400.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
3500.00†	0.000	131.800	3500.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
3600.00†	0.000	131.800	3600.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
3700.00†	0.000	131.800	3700.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
3800.00†	0.000	131.800	3800.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
3900.00†	0.000	131.800	3900.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
4000.00†	0.000	131.800	4000.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
4100.00†	0.000	131.800	4100.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
4200.00†	0.000	131.800	4200.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
4300.00†	0.000	131.800	4300.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
4400.00†	0.000	131.800	4400.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.340H
Area	Eddy County, NM	Well	No.340H
Field	Poker Lake Unit	Wellbore	No.340H PWB
Facility	Poker Lake Unit No. 340H		

WELLPATH DATA (158 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
4500.00†	0.000	131.800	4500.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
4600.00†	0.000	131.800	4600.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
4700.00†	0.000	131.800	4700.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
4800.00†	0.000	131.800	4800.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
4900.00†	0.000	131.800	4900.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
5000.00†	0.000	131.800	5000.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
5100.00†	0.000	131.800	5100.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
5200.00†	0.000	131.800	5200.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
5300.00†	0.000	131.800	5300.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
5400.00†	0.000	131.800	5400.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
5500.00†	0.000	131.800	5500.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
5600.00†	0.000	131.800	5600.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
5700.00†	0.000	131.800	5700.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
5800.00†	0.000	131.800	5800.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
5900.00†	0.000	131.800	5900.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
6000.00†	0.000	131.800	6000.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
6100.00†	0.000	131.800	6100.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
6200.00†	0.000	131.800	6200.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
6300.00†	0.000	131.800	6300.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
6400.00†	0.000	131.800	6400.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
6500.00†	0.000	131.800	6500.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
6600.00†	0.000	131.800	6600.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
6700.00†	0.000	131.800	6700.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
6800.00†	0.000	131.800	6800.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
6900.00†	0.000	131.800	6900.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
7000.00†	0.000	131.800	7000.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
7100.00†	0.000	131.800	7100.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
7200.00†	0.000	131.800	7200.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
7300.00†	0.000	131.800	7300.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	
7330.00	0.000	131.800	7330.00	0.00	0.00	0.00	647868.88	441523.79	32°12'46.663"N	103°51'18.802"W	0.00	Est KOP
7400.00†	8.391	131.800	7399.75	5.11	-3.41	3.81	647872.69	441520.38	32°12'46.629"N	103°51'18.758"W	11.99	
7500.00†	20.377	131.800	7496.44	29.88	-19.94	22.30	647891.18	441503.86	32°12'46.465"N	103°51'18.544"W	11.99	
7600.00†	32.364	131.800	7585.87	74.16	-49.49	55.35	647924.23	441474.31	32°12'46.171"N	103°51'18.161"W	11.99	
7616.92†	34.392	131.800	7600.00	83.46	-55.69	62.29	647931.17	441468.10	32°12'46.109"N	103°51'18.080"W	11.99	LBC 8A
7700.00†	44.350	131.800	7664.14	136.04	-90.78	101.53	647970.40	441433.02	32°12'45.760"N	103°51'17.625"W	11.99	
7800.00†	56.337	131.800	7727.84	212.80	-142.00	158.82	648027.69	441381.80	32°12'45.251"N	103°51'16.961"W	11.99	
7896.78†	67.938	131.800	7773.00	298.12	-198.93	222.49	648091.36	441324.87	32°12'44.685"N	103°51'16.223"W	11.99	LBC "Y" Sand
7900.00†	68.323	131.800	7774.20	301.10	-200.92	224.72	648093.58	441322.89	32°12'44.665"N	103°51'16.197"W	11.99	
8000.00†	80.310	131.800	7801.18	397.09	-264.98	296.36	648165.22	441258.83	32°12'44.028"N	103°51'15.367"W	11.99	
8080.84	90.000	131.800	7808.00	477.45	-318.60	356.34	648225.19	441205.21	32°12'43.494"N	103°51'14.671"W	11.99	EOC
8100.00†	89.898	132.169	7808.02	496.59	-331.42	370.58	648239.43	441192.40	32°12'43.367"N	103°51'14.506"W	2.00	
8200.00†	89.366	134.097	7808.66	596.55	-399.78	443.55	648312.40	441124.04	32°12'42.687"N	103°51'13.661"W	2.00	
8234.50	89.183	134.763	7809.10	631.05	-423.93	468.19	648337.04	441099.89	32°12'42.447"N	103°51'13.375"W	2.00	Target Line
8300.00†	89.183	134.763	7810.03	696.54	-470.05	514.69	648383.53	441053.77	32°12'41.989"N	103°51'12.836"W	0.00	
8400.00†	89.183	134.763	7811.46	796.53	-540.46	585.68	648454.52	440983.37	32°12'41.289"N	103°51'12.014"W	0.00	

Planned Wellpath Report

Prelim_1

BAKER HUGHES

INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.340H
Area	Eddy County, NM	Well	No.340H
Field	Poker Lake Unit	Wellbore	No.340H PWB
Facility	Poker Lake Unit No. 340H		

WELLPATH DATA (158 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
8500.00†	89.183	134.763	7812.88	896.52	-610.87	656.68	648525.51	440912.96	32°12'40.589"N	103°51'11.191"W	0.00	
8600.00†	89.183	134.763	7814.31	996.51	-681.28	727.67	648596.51	440842.56	32°12'39.889"N	103°51'10.368"W	0.00	
8700.00†	89.183	134.763	7815.74	1096.50	-751.69	798.67	648667.50	440772.15	32°12'39.189"N	103°51'09.546"W	0.00	
8800.00†	89.183	134.763	7817.16	1196.49	-822.10	869.67	648738.49	440701.75	32°12'38.489"N	103°51'08.723"W	0.00	
8900.00†	89.183	134.763	7818.59	1296.48	-892.51	940.66	648809.48	440631.34	32°12'37.790"N	103°51'07.900"W	0.00	
9000.00†	89.183	134.763	7820.02	1396.47	-962.92	1011.66	648880.47	440560.94	32°12'37.090"N	103°51'07.078"W	0.00	
9100.00†	89.183	134.763	7821.44	1496.46	-1033.33	1082.65	648951.46	440490.53	32°12'36.390"N	103°51'06.255"W	0.00	
9200.00†	89.183	134.763	7822.87	1596.45	-1103.74	1153.65	649022.45	440420.13	32°12'35.690"N	103°51'05.433"W	0.00	
9300.00†	89.183	134.763	7824.30	1696.43	-1174.15	1224.64	649093.44	440349.72	32°12'34.990"N	103°51'04.610"W	0.00	
9400.00†	89.183	134.763	7825.72	1796.42	-1244.56	1295.64	649164.43	440279.32	32°12'34.290"N	103°51'03.787"W	0.00	
9500.00†	89.183	134.763	7827.15	1896.41	-1314.97	1366.64	649235.42	440208.91	32°12'33.590"N	103°51'02.965"W	0.00	
9600.00†	89.183	134.763	7828.58	1996.40	-1385.38	1437.63	649306.41	440138.51	32°12'32.890"N	103°51'02.142"W	0.00	
9700.00†	89.183	134.763	7830.00	2096.39	-1455.79	1508.63	649377.41	440068.10	32°12'32.191"N	103°51'01.320"W	0.00	
9800.00†	89.183	134.763	7831.43	2196.38	-1526.20	1579.62	649448.40	439997.70	32°12'31.491"N	103°51'00.497"W	0.00	
9900.00†	89.183	134.763	7832.86	2296.37	-1596.61	1650.62	649519.39	439927.29	32°12'30.791"N	103°50'59.674"W	0.00	
10000.00†	89.183	134.763	7834.28	2396.36	-1667.02	1721.62	649590.38	439856.89	32°12'30.091"N	103°50'58.852"W	0.00	
10100.00†	89.183	134.763	7835.71	2496.35	-1737.43	1792.61	649661.37	439786.48	32°12'29.391"N	103°50'58.029"W	0.00	
10200.00†	89.183	134.763	7837.14	2596.34	-1807.84	1863.61	649732.36	439716.07	32°12'28.691"N	103°50'57.207"W	0.00	
10300.00†	89.183	134.763	7838.56	2696.33	-1878.25	1934.60	649803.35	439645.67	32°12'27.991"N	103°50'56.384"W	0.00	
10400.00†	89.183	134.763	7839.99	2796.32	-1948.66	2005.60	649874.34	439575.26	32°12'27.291"N	103°50'55.562"W	0.00	
10500.00†	89.183	134.763	7841.42	2896.30	-2019.07	2076.59	649945.33	439504.86	32°12'26.591"N	103°50'54.739"W	0.00	
10600.00†	89.183	134.763	7842.84	2996.29	-2089.48	2147.59	650016.32	439434.45	32°12'25.891"N	103°50'53.916"W	0.00	
10700.00†	89.183	134.763	7844.27	3096.28	-2159.89	2218.59	650087.32	439364.05	32°12'25.192"N	103°50'53.094"W	0.00	
10800.00†	89.183	134.763	7845.70	3196.27	-2230.30	2289.58	650158.31	439293.64	32°12'24.492"N	103°50'52.271"W	0.00	
10900.00†	89.183	134.763	7847.12	3296.26	-2300.71	2360.58	650229.30	439223.24	32°12'23.792"N	103°50'51.449"W	0.00	
11000.00†	89.183	134.763	7848.55	3396.25	-2371.12	2431.57	650300.29	439152.83	32°12'23.092"N	103°50'50.626"W	0.00	
11100.00†	89.183	134.763	7849.98	3496.24	-2441.53	2502.57	650371.28	439082.43	32°12'22.392"N	103°50'49.804"W	0.00	
11200.00†	89.183	134.763	7851.40	3596.23	-2511.94	2573.56	650442.27	439012.02	32°12'21.692"N	103°50'48.981"W	0.00	
11300.00†	89.183	134.763	7852.83	3696.22	-2582.35	2644.56	650513.26	438941.62	32°12'20.992"N	103°50'48.159"W	0.00	
11400.00†	89.183	134.763	7854.26	3796.21	-2652.76	2715.56	650584.25	438871.21	32°12'20.292"N	103°50'47.336"W	0.00	
11500.00†	89.183	134.763	7855.68	3896.20	-2723.17	2786.55	650655.24	438800.81	32°12'19.592"N	103°50'46.513"W	0.00	
11600.00†	89.183	134.763	7857.11	3996.18	-2793.58	2857.55	650726.23	438730.40	32°12'18.892"N	103°50'45.691"W	0.00	
11700.00†	89.183	134.763	7858.54	4096.17	-2863.99	2928.54	650797.23	438660.00	32°12'18.192"N	103°50'44.868"W	0.00	
11800.00†	89.183	134.763	7859.96	4196.16	-2934.40	2999.54	650868.22	438589.59	32°12'17.492"N	103°50'44.046"W	0.00	
11900.00†	89.183	134.763	7861.39	4296.15	-3004.81	3070.54	650939.21	438519.19	32°12'16.793"N	103°50'43.223"W	0.00	
12000.00†	89.183	134.763	7862.82	4396.14	-3075.22	3141.53	651010.20	438448.78	32°12'16.093"N	103°50'42.401"W	0.00	
12100.00†	89.183	134.763	7864.24	4496.13	-3145.63	3212.53	651081.19	438378.38	32°12'15.393"N	103°50'41.578"W	0.00	
12200.00†	89.183	134.763	7865.67	4596.12	-3216.04	3283.52	651152.18	438307.97	32°12'14.693"N	103°50'40.756"W	0.00	
12300.00†	89.183	134.763	7867.10	4696.11	-3286.45	3354.52	651223.17	438237.57	32°12'13.993"N	103°50'39.933"W	0.00	
12400.00†	89.183	134.763	7868.52	4796.10	-3356.86	3425.51	651294.16	438167.16	32°12'13.293"N	103°50'39.111"W	0.00	
12500.00†	89.183	134.763	7869.95	4896.09	-3427.27	3496.51	651365.15	438096.76	32°12'12.593"N	103°50'38.288"W	0.00	
12600.00†	89.183	134.763	7871.38	4996.08	-3497.68	3567.51	651436.14	438026.35	32°12'11.893"N	103°50'37.466"W	0.00	
12700.00†	89.183	134.763	7872.80	5096.06	-3568.09	3638.50	651507.13	437955.95	32°12'11.193"N	103°50'36.643"W	0.00	
12800.00†	89.183	134.763	7874.23	5196.05	-3638.50	3709.50	651578.13	437885.54	32°12'10.493"N	103°50'35.821"W	0.00	
12900.00†	89.183	134.763	7875.66	5296.04	-3708.91	3780.49	651649.12	437815.13	32°12'09.793"N	103°50'34.998"W	0.00	

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.340H**
Area	**Eddy County, NM**	Well	**No.340H**
Field	**Poker Lake Unit**	Wellbore	**No.340H PWB**
Facility	**Poker Lake Unit No. 340H**		

WELLPATH DATA (158 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
13000.00†	89.183	134.763	7877.08	5396.03	-3779.32	3851.49	651720.11	437744.73	32°12'09.093"N	103°50'34.176"W	0.00	
13100.00†	89.183	134.763	7878.51	5496.02	-3849.73	3922.48	651791.10	437674.32	32°12'08.393"N	103°50'33.353"W	0.00	
13200.00†	89.183	134.763	7879.94	5596.01	-3920.14	3993.48	651862.09	437603.92	32°12'07.693"N	103°50'32.531"W	0.00	
13300.00†	89.183	134.763	7881.36	5696.00	-3990.55	4064.48	651933.08	437533.51	32°12'06.994"N	103°50'31.709"W	0.00	
13400.00†	89.183	134.763	7882.79	5795.99	-4060.96	4135.47	652004.07	437463.11	32°12'06.294"N	103°50'30.886"W	0.00	
13500.00†	89.183	134.763	7884.22	5895.98	-4131.37	4206.47	652075.06	437392.70	32°12'05.594"N	103°50'30.064"W	0.00	
13600.00†	89.183	134.763	7885.64	5995.97	-4201.78	4277.46	652146.05	437322.30	32°12'04.894"N	103°50'29.241"W	0.00	
13700.00†	89.183	134.763	7887.07	6095.96	-4272.19	4348.46	652217.04	437251.89	32°12'04.194"N	103°50'28.419"W	0.00	
13800.00†	89.183	134.763	7888.50	6195.94	-4342.60	4419.46	652288.04	437181.49	32°12'03.494"N	103°50'27.596"W	0.00	
13900.00†	89.183	134.763	7889.92	6295.93	-4413.01	4490.45	652359.03	437111.08	32°12'02.794"N	103°50'26.774"W	0.00	
14000.00†	89.183	134.763	7891.35	6395.92	-4483.42	4561.45	652430.02	437040.68	32°12'02.094"N	103°50'25.951"W	0.00	
14100.00†	89.183	134.763	7892.78	6495.91	-4553.83	4632.44	652501.01	436970.27	32°12'01.394"N	103°50'25.129"W	0.00	
14200.00†	89.183	134.763	7894.20	6595.90	-4624.24	4703.44	652572.00	436899.87	32°12'00.694"N	103°50'24.306"W	0.00	
14300.00†	89.183	134.763	7895.63	6695.89	-4694.65	4774.43	652642.99	436829.46	32°11'59.994"N	103°50'23.484"W	0.00	
14400.00†	89.183	134.763	7897.06	6795.88	-4765.06	4845.43	652713.98	436759.06	32°11'59.294"N	103°50'22.662"W	0.00	
14500.00†	89.183	134.763	7898.48	6895.87	-4835.47	4916.43	652784.97	436688.65	32°11'58.594"N	103°50'21.839"W	0.00	
14600.00†	89.183	134.763	7899.91	6995.86	-4905.88	4987.42	652855.96	436618.25	32°11'57.894"N	103°50'21.017"W	0.00	
14700.00†	89.183	134.763	7901.34	7095.85	-4976.29	5058.42	652926.95	436547.84	32°11'57.194"N	103°50'20.194"W	0.00	
14800.00†	89.183	134.763	7902.76	7195.84	-5046.70	5129.41	652997.95	436477.44	32°11'56.494"N	103°50'19.372"W	0.00	
14900.00†	89.183	134.763	7904.19	7295.82	-5117.11	5200.41	653068.94	436407.03	32°11'55.794"N	103°50'18.549"W	0.00	
15000.00†	89.183	134.763	7905.62	7395.81	-5187.52	5271.40	653139.93	436336.63	32°11'55.094"N	103°50'17.727"W	0.00	
15100.00†	89.183	134.763	7907.04	7495.80	-5257.93	5342.40	653210.92	436266.22	32°11'54.394"N	103°50'16.905"W	0.00	
15166.99	89.183	134.763	7908.00[1]	7562.78	-5305.09	5389.96	653258.47	436219.06	32°11'53.925"N	103°50'16.354"W	0.00	No.340H PBHL

Planned Wellpath Report

Prelim_1

BAKER HUGHES

INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.340H**
Area	**Eddy County, NM**	Well	**No.340H**
Field	**Poker Lake Unit**	Wellbore	**No.340H PWB**
Facility	**Poker Lake Unit No. 340H**		

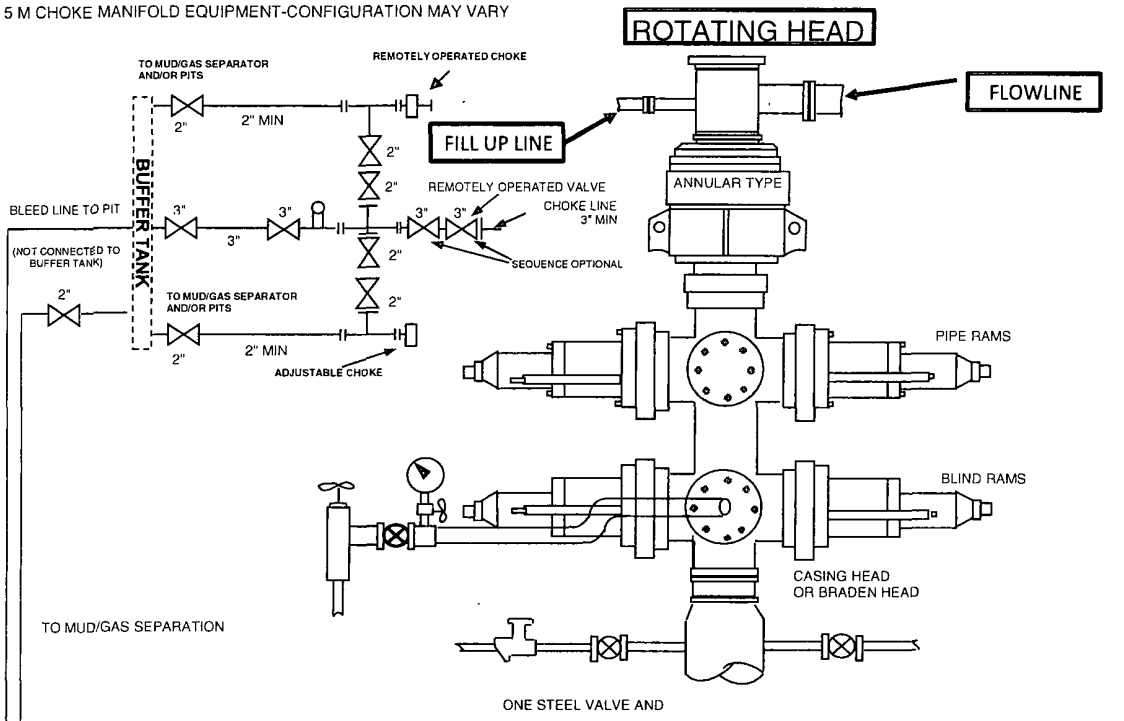
TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No.340H TGT		7808.00	-441.12	491.95	**648360.80**	**441082.70**	32°12'42.276"N	103°51'13.099"W	point
1) No.340H PBHL	15166.99	7908.00	-5305.09	5389.96	**653258.47**	**436219.06**	32°11'53.925"N	103°50'16.354"W	point

SURVEY PROGRAM Ref Wellbore: No.340H PWB Ref Wellpath: Prelim_1

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	15166.99	NaviTrak (Standard)		No.340H 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 minimum 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

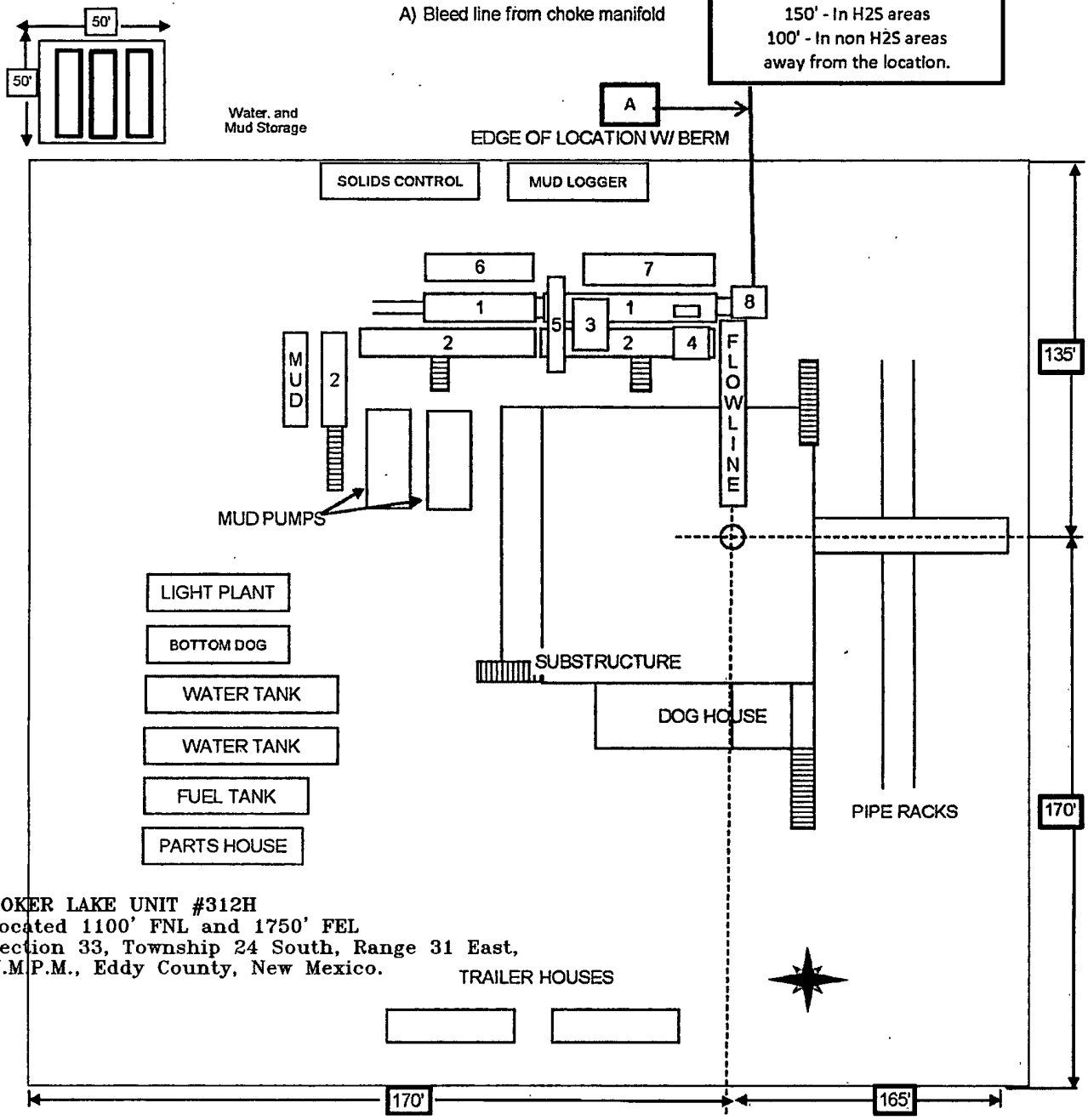
RIG LAYOUT

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

Flare Pit or 1/2 Steel Pit will be located at
150' - In H2S areas
100' - In non H2S areas
away from the location.



POKER LAKE UNIT #312H
Located 1100' FNL and 1750' FEL
Section 33, Township 24 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
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Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 24862
Survey Date: 07-21-2011
Scale: 1" = 2000'
Date: 07-24-2011

N

BOPCO, L.P.

Sheet 6 of 6 Sheets