

11-987
30-015-39731Form 3160-3
(April 2004)

R-111-POTASH

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007EA1418
5112-008431UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work ☒ DRILL ☐ REENTER <i>was rec'd 9/2/11</i>		5. Lease Serial No. <i>5112-008431</i> BHL - LC 068905 (See box six)
1b. Type of Well. ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name See pg 1 of 8pt DP for lease info.
2. Name of Operator BOPCO, L. P.		7. If Unit or CA Agreement, Name and No. Poker Lake Unit NMNM71016X
3a. Address P. O. Box 2760 Midland, TX 79702		8. Lease Name and Well No. Poker Lake Unit 318H
3b. Phone No. (include area code) 432-683-2277		9. API Well No. <i>260737</i> <i>30-015-39731</i>
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface SENE, UL H, 2175' FNL & 305' FEL, Lat:N32.247958, Long:W103.878064 At proposed prod. zone 2540' FNL, 85' FEL, Sec 10, T24S-R30E, Lat:N32.232486, Lg:W103.860033		10. Field and Pool, or Exploratory <i>per 3160-3</i> <i>Remuda Basin (Delaware)</i> <i>9/16</i> <i>Poker Lake</i> <i>Delaware</i> <i>NW</i> <i>[96046]</i>
14. Distance in miles and direction from nearest town or post office* 20 miles east of Malaga, NM		11. Sec., T R. M. or Blk and Survey or Area Sec 4, T24S-R30E, Mer NMP
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg unit line, if any) 305'	16. No. of acres in lease 7,483	12. County or Parish Eddy
17. Spacing Unit dedicated to this well 480	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 1279' (PLU 318H)	19. Proposed Depth 15,370' MD, 7,722' TVD	20. BLM/BIA Bond No. on file COB000050
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,428'	22. Approximate date work will start* 07/01/2012	23. Estimated duration 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 | 4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2 A Drilling Plan. | 5 Operator certification |
| 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) | 6 Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Jeremy Braden</i>	Name (Printed/Typed) Jeremy Braden	Date 9-13-11
Title Engineering Assistant		
Approved by (Signature) <i>/s/ Tony J. Herrell</i>	Name (Printed/Typed) /s/ Tony J. Herrell	Date NOV 21 2011
ACTING STATE DIRECTOR	Office NM STATE OFFICE	

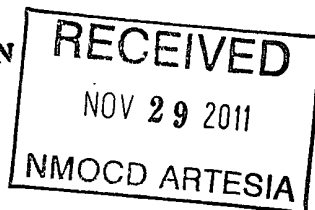
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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

SEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

Catt

DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

306402 Operator BOPCO OGRID # 260737
 Well Name & # POKER LAKE UNIT 318H Surface Type (F) (S) (P)
 Location: UL H, Sect 4, Township 24 s, RNG 30 e, Sub-surface Type (F) (S) (P)

A. Date C101 rec'd 11/29/2011 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 430, # Inactive wells 3

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 POKER LAKE, Delaware NW, Code 96046

1. Pool POKER LAKE, 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 480, 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 12/7/2011

API #30-0 15-39731

8. Reviewers 105

Surface casing is to be set into the Rustler below all fresh water sands at an approximate depth of 646' and cement circulated to surface.

7" casing will be set at approximately 8,022' MD, 7,652' TVD (thru curve) and cemented in two stages with DV Tool set at approximately 5,000'. Cement will be circulated to surface.

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

This well is located inside 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 068431, LC 068545

Bottom Hole Lease Numbers – LC 068905

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 318H

LEGAL DESCRIPTION - SURFACE: 2175' FNL, 305' FEL, Section 4, T24S, R30E, Eddy County, NM.

BHL: 2450' FNL, 85' FEL, Section 10, 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 3450' (estimated)
GL 3428'

FORMATION	ESTIMATED TOP FROM KB		ESTIMATED SUB-SEA TOP	BEARING
	TVD	MD		
T/Fresh Water	150'	150'	+ 3,300'	Fresh Water
T/Rustler	345'	345'	+ 3,105'	Barren
T/Salado	495'	495'	+ 2,955'	Barren
T/Salt	656'	656'	+ 2,794'	Barren
B/Salt	3,659'	3,659'	- 209'	Barren
T/Lamar	3,881'	3,881'	- 431'	Barren
T/Ramsey	3,931'	3,931'	- 481'	Oil/Gas
T/Lower Cherry Canyon	5,909'	5,909'	- 2,459'	Oil/Gas
KOP	7,175'	7,175'	- 3,725'	Oil/Gas
LBC 8A Sand	7,434'	7,448'	- 3,984'	Oil/Gas
Target #1	7,652'	8,652'	- 4,202'	Oil/Gas
EOC	7,652'	7,924'	- 4,202'	Oil/Gas
TD Horizontal Hole	7,722'	15,370'	- 4,271'	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' - 646'	17-1/2"	Surface	New
9-5/8", 40#, N-80, 8rd, LT&C	0' - 3,900'	12-1/4"	Intermediate	New
7", 26#, N-80, Buttress or 8rd LTC*	0' - 8,022'	8-3/4"	Production	New

Completion System

4-1/2", 11.6#, HCP-110 8rd. LT&C*	7,972' - 15,370'	6-1/8"	Completion System	New
4-1/2", 11.6#, N-80, 8rd, LT&C*	7,972' - 15,370'	6-1/8"	Completion System	New

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 48#, H-40, 8rd, ST&C*	12.01	2.32	4.80
13-3/8", 54.5#, J-55, 8rd, STC*	28.19	3.62	7.57
9-5/8", 40#, N-80, 8rd, LT&C	5.60	1.38	2.64
7", 26#, N-80, Buttress*	3.89	1.33	1.70
7", 26#, N-80, 8rd, LTC*	3.02	1.26	1.70

Completion System

4-1/2", 11.6#, HCP-110 8rd. LT&C*	3.61	2.07	2.48
4-1/2", 11.6#, N-80, 8rd, LT&C*	2.88	1.52	1.80

* 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 at 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. 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.

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)

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" ^{production} 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

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 646'	FW Spud Mud	8.5 - 9.2	38-70	NC	NC	NC	10.0
646' - 3,900'	Brine Water	9.8 - 10.2	28-30	NC	NC	NC	9.5 - 10.5
3,900' - 8,022'	FW/Gel	8.7 - 9.0	28-36	NC	NC	NC	9.5 - 10.0
8,022' - 15,370'	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: Rigged up at 100'.

C) CONVENTIONAL CORING

None anticipated

D) CEMENT

<u>INTERVAL</u>	<u>AMOUNT SXS</u>	<u>FT OF FILL</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT³/SX</u>
SURFACE:						
Lead: 0' – 546'	460	546	ExtendaCem CZ	8.72	13.70	1.68
Tail: 546' – 646'	110	100	ExtendaCem CZ	8.72	13.70	1.68
INTERMEDIATE:						
Lead: 0' – 3,400'	1070	3400	EconoCem HLC 5% CaCl + 5 #/sk Gilsonite	9.32	12.90	1.85
Tail: 3,400' – 3,900'	270	500	HalCem C	6.34	14.80	1.33
Production						
Stage 1:						
Lead: 5,000' – 7,075'	310	2075	Tuned Light + 0.75% CFR-3 + 1.5#/sk CaCl	12.41	10.20	2.76
Tail: 7,075' – 8,022'	150	947	VersaCem-PBSH2 + 0.4% Halad-9	8.76	13.0	1.65
DV Tool @ 5,000'						
Stage 2: <i>See POA</i>						
Lead: 0' – 4,500'	380	4500	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 15,370'. The top of the Completion System will be set at approximately 7,972'. 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 7,175' at which point a directional hole will be kicked off and drilled at an azimuth of 135.025 degrees, building angle at 12.01 deg/100' to 90 degrees at a TVD of 7,652' (MD 7,924'). This angle and azimuth will be maintained for 100' to a measured depth of 8,022' (7,652' 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 to surface. A 6-1/8" open hole lateral will then be drilled out from 7" casing at an azimuth of 135.025 degrees, inclination of 89.402 degrees to a measured depth of 15,370', TVD 7,722'. At this depth a 4-1/2" Completion System with packers installed for zone isolation will be run into the producing lateral.

G) H₂S SAFETY EQUIPMENT

As stated in the BLM Onshore Order 6, for wells located in the SOPA, H₂S equipment will be rigged up after setting surface casing. For the wells located inside the SOPA the flare pit or 1/2 steel pits will be located 150' from the location. For wells located outside the SOPA the flare pit or 1/2 steel pit will be located 100' away from the location. **(See page 6 of Survey plat package and diagram 2)** There is not any H₂S anticipated in the area, although in the event that H₂S is encountered, the H₂S contingency plan attached will be implemented. **(Please refer to diagram 2 for choke manifold and closed loop system layout.)**

H) CLOSED LOOP AND CHOKE MANIFOLD

Please see diagram 2.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 3613 psi (max) or MWE of 9.0 ppg is expected. Lost circulation may exist in the Delaware Section from 3,881'-7,722' TVD.

POINT 8: OTHER PERTINENT INFORMATION**A) Auxiliary Equipment**

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

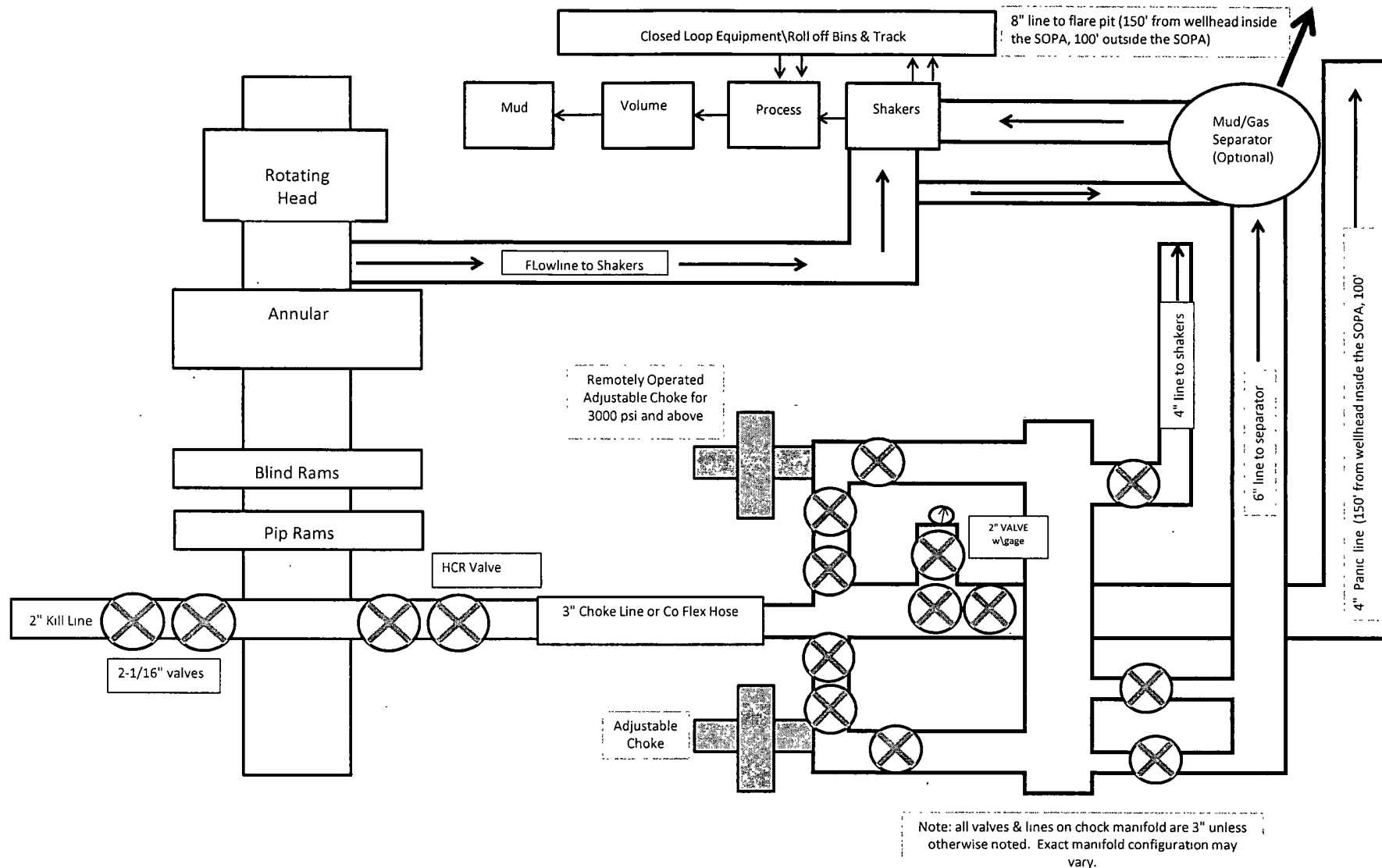
B) Anticipated Starting Date

Upon approval

30 days drilling operations

14 days completion operations

JDB



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



BOPCO, L.P.

Location Eddy County, NM
Field Poker Lake Unit
Facility Poker Lake Unit No. 318H

Slot No. 318H SHL
Well No. 318H
Wellbore No. 318H PWB



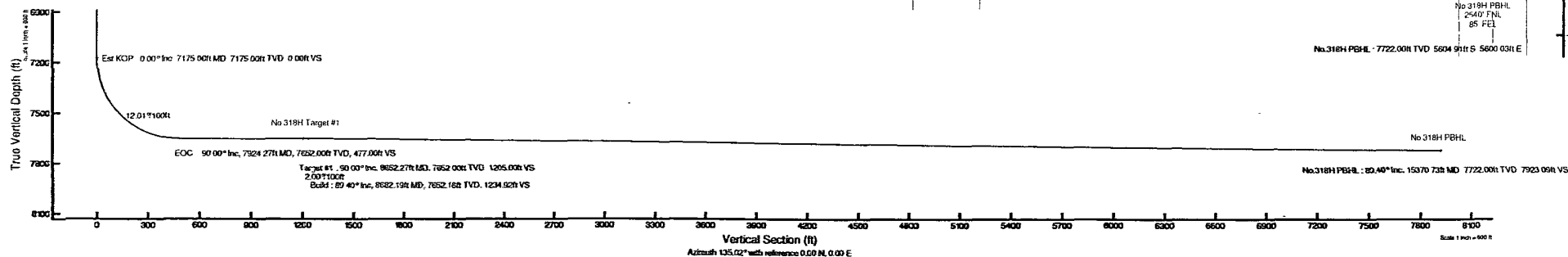
Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°100ft)	VS (ft)
Tie On	22.00	0.000	135.025	22.00	0.00	0.00	0.00	0.00
Est KOP	7175.00	0.000	135.025	7175.00	0.00	0.00	0.00	0.00
EOC	7924.27	90.000	135.025	7652.00	-337.44	337.14	12.01	477.00
Target #1	8652.27	90.000	135.025	7652.00	-852.44	851.69	0.00	1205.00
Build	8682.19	89.402	135.025	7652.16	-873.60	872.84	2.00	1234.92
No 318H PBHL	15370.73	89.402	135.025	7722.00	-5604.91	5600.03	0.00	7923.09

Plot reference wellpath is Prelim 2

True vertical depths are referenced to Rig on No 318H SHL (KB)
Measured depths are referenced to Rig on No 318H SHL (KB)
Rig on No 318H SHL (KB) to Mean Sea Level: 3450 feet
Mean Sea Level to Mud line (At Slot No 318H SHL): -3428 feet
Coordinates are in feet referenced to Slot



BIGM (1945) 0 to 2012 (3) Dep: 80 15° Field: 4800 4 NT
Magnetic North is 7.75 degrees East of True North (at 8/01/2011)
Grid North is 0.24 degrees East of True North
To correct azimuth from True to Grid subtract 0.24 degrees
To correct azimuth from Magnetic to Grid add 7.51 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.51 = 97.51





Planned Wellpath Report

Prelim_2

Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.318H SHL
Area	Eddy County, NM	Well	No.318H
Field	Poker Lake Unit	Wellbore	No.318H PWB
Facility	Poker Lake Unit No. 318H		

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	0.999932	Report Generated	9/9/2011 at 9:57:51 AM
Convergence at slot	0.24° East	Database/Source file	WA Midland/No.318H_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	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W
Facility Reference Pt			640750.35	454224.02	32°14'52.651"N	103°52'41.033"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.318H SHL (KB) to Facility Vertical Datum	22.00ft
Horizontal Reference Pt	Slot	Rig on No.318H SHL (KB) to Mean Sea Level	3450.00ft
Vertical Reference Pt	Rig on No.318H SHL (KB)	Rig on No.318H SHL (KB) to Mud Line at Slot (No.318H SHL)	22.00ft
MD Reference Pt	Rig on No.318H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	135.02°



Planned Wellpath Report

Prelim_2

Page 2 of 6



BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.318H SHL
Area	Eddy County, NM	Well	No.318H
Field	Poker Lake Unit	Wellbore	No.318H PWB
Facility	Poker Lake Unit No. 318H		

WELLPATH DATA (168 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	135.025	0.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
22.00	0.000	135.025	22.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	Tie On
122.00†	0.000	135.025	122.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
222.00†	0.000	135.025	222.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
322.00†	0.000	135.025	322.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
345.00†	0.000	135.025	345.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	Rustler
422.00†	0.000	135.025	422.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
495.00†	0.000	135.025	495.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	Salado
522.00†	0.000	135.025	522.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
622.00†	0.000	135.025	622.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
656.00†	0.000	135.025	656.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	Salt
722.00†	0.000	135.025	722.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
822.00†	0.000	135.025	822.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
922.00†	0.000	135.025	922.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
1022.00†	0.000	135.025	1022.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
1122.00†	0.000	135.025	1122.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
1222.00†	0.000	135.025	1222.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
1322.00†	0.000	135.025	1322.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
1422.00†	0.000	135.025	1422.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
1522.00†	0.000	135.025	1522.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
1622.00†	0.000	135.025	1622.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
1722.00†	0.000	135.025	1722.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
1822.00†	0.000	135.025	1822.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
1922.00†	0.000	135.025	1922.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
2022.00†	0.000	135.025	2022.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
2122.00†	0.000	135.025	2122.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
2222.00†	0.000	135.025	2222.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
2322.00†	0.000	135.025	2322.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
2422.00†	0.000	135.025	2422.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
2522.00†	0.000	135.025	2522.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
2622.00†	0.000	135.025	2622.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
2722.00†	0.000	135.025	2722.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
2822.00†	0.000	135.025	2822.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
2922.00†	0.000	135.025	2922.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3022.00†	0.000	135.025	3022.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3122.00†	0.000	135.025	3122.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3222.00†	0.000	135.025	3222.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3322.00†	0.000	135.025	3322.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3422.00†	0.000	135.025	3422.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3522.00†	0.000	135.025	3522.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3622.00†	0.000	135.025	3622.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3659.00†	0.000	135.025	3659.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	Base/Salt
3722.00†	0.000	135.025	3722.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3822.00†	0.000	135.025	3822.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3881.00†	0.000	135.025	3881.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	Lamar



Planned Wellpath Report

Prelim_2
Page 3 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.318H SHL
Area	Eddy County, NM	Well	No.318H
Field	Poker Lake Unit	Wellbore	No.318H PWB
Facility	Poker Lake Unit No. 318H		

WELLPATH DATA (168 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
3922.00†	0.000	135.025	3922.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
3931.00†	0.000	135.025	3931.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	Ramsey
4022.00†	0.000	135.025	4022.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
4122.00†	0.000	135.025	4122.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
4222.00†	0.000	135.025	4222.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
4322.00†	0.000	135.025	4322.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
4422.00†	0.000	135.025	4422.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
4522.00†	0.000	135.025	4522.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
4622.00†	0.000	135.025	4622.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
4722.00†	0.000	135.025	4722.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
4822.00†	0.000	135.025	4822.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
4922.00†	0.000	135.025	4922.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
5022.00†	0.000	135.025	5022.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
5122.00†	0.000	135.025	5122.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
5222.00†	0.000	135.025	5222.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
5322.00†	0.000	135.025	5322.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
5422.00†	0.000	135.025	5422.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
5522.00†	0.000	135.025	5522.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
5622.00†	0.000	135.025	5622.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
5722.00†	0.000	135.025	5722.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
5822.00†	0.000	135.025	5822.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
5909.00†	0.000	135.025	5909.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	LCC
5922.00†	0.000	135.025	5922.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
6022.00†	0.000	135.025	6022.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
6122.00†	0.000	135.025	6122.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
6222.00†	0.000	135.025	6222.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
6322.00†	0.000	135.025	6322.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
6422.00†	0.000	135.025	6422.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
6522.00†	0.000	135.025	6522.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
6622.00†	0.000	135.025	6622.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
6722.00†	0.000	135.025	6722.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
6822.00†	0.000	135.025	6822.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
6922.00†	0.000	135.025	6922.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
7022.00†	0.000	135.025	7022.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
7122.00†	0.000	135.025	7122.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	
7175.00	0.000	135.025	7175.00	0.00	0.00	0.00	640750.35	454224.02	32°14'52.651"N	103°52'41.033"W	0.00	Est KOP
7222.00†	5.645	135.025	7221.92	2.31	-1.64	1.64	640751.98	454222.38	32°14'52.635"N	103°52'41.014"W	12.01	
7322.00†	17.657	135.025	7319.68	22.47	-15.90	15.88	640766.23	454208.12	32°14'52.493"N	103°52'40.849"W	12.01	
7422.00†	29.669	135.025	7411.11	62.53	-44.24	44.20	640794.54	454179.78	32°14'52.211"N	103°52'40.521"W	12.01	
7448.79†	32.887	135.025	7434.00	76.44	-54.08	54.03	640804.37	454169.94	32°14'52.113"N	103°52'40.407"W	12.01	LBC 8A
7522.00†	41.681	135.025	7492.19	120.75	-85.42	85.34	640835.69	454138.60	32°14'51.802"N	103°52'40.044"W	12.01	
7622.00†	53.692	135.025	7559.39	194.56	-137.63	137.51	640887.85	454086.39	32°14'51.283"N	103°52'39.439"W	12.01	
7722.00†	65.704	135.025	7609.75	280.74	-198.60	198.42	640948.76	454025.43	32°14'50.677"N	103°52'38.733"W	12.01	
7822.00†	77.716	135.025	7641.08	375.51	-265.64	265.41	641015.74	453958.39	32°14'50.011"N	103°52'37.956"W	12.01	
7922.00†	89.727	135.025	7651.99	474.73	-335.83	335.54	641085.86	453888.21	32°14'49.314"N	103°52'37.143"W	12.01	



Planned Wellpath Report

Prelim_2
Page 4 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.318H SHL
Area	Eddy County, NM	Well	No.318H
Field	Poker Lake Unit	Wellbore	No.318H PWB
Facility	Poker Lake Unit No. 318H		

WELLPATH DATA (168 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
7924.27	90.000	135.025	7652.00	477.00	-337.44	337.14	641087.47	453886.60	32°14'49.298"N	103°52'37.125"W	12.01	EOC
8022.00†	90.000	135.025	7652.00	574.73	-406.57	406.22	641156.54	453817.47	32°14'48.611"N	103°52'36.324"W	0.00	
8122.00†	90.000	135.025	7652.00	674.73	-477.31	476.90	641227.21	453746.73	32°14'47.908"N	103°52'35.504"W	0.00	
8222.00†	90.000	135.025	7652.00	774.73	-548.06	547.58	641297.89	453676.00	32°14'47.205"N	103°52'34.685"W	0.00	
8322.00†	90.000	135.025	7652.00	874.73	-618.80	618.26	641368.56	453605.26	32°14'46.502"N	103°52'33.865"W	0.00	
8422.00†	90.000	135.025	7652.00	974.73	-689.54	688.94	641439.24	453534.52	32°14'45.799"N	103°52'33.046"W	0.00	
8522.00†	90.000	135.025	7652.00	1074.73	-760.28	759.62	641509.91	453463.79	32°14'45.096"N	103°52'32.227"W	0.00	
8622.00†	90.000	135.025	7652.00	1174.73	-831.02	830.30	641580.59	453393.05	32°14'44.393"N	103°52'31.407"W	0.00	
8652.27	90.000	135.025	7652.00	1205.00	-852.44	851.69	641601.98	453371.64	32°14'44.180"N	103°52'31.159"W	0.00	Target #1
8682.19	89.402	135.025	7652.16	1234.92	-873.60	872.84	641623.12	453350.48	32°14'43.970"N	103°52'30.914"W	2.00	Build
8722.00†	89.402	135.025	7652.57	1274.73	-901.76	900.98	641651.26	453322.32	32°14'43.690"N	103°52'30.588"W	0.00	
8822.00†	89.402	135.025	7653.62	1374.72	-972.50	971.65	641721.93	453251.58	32°14'42.987"N	103°52'29.768"W	0.00	
8922.00†	89.402	135.025	7654.66	1474.72	-1043.24	1042.33	641792.60	453180.85	32°14'42.284"N	103°52'28.949"W	0.00	
9022.00†	89.402	135.025	7655.70	1574.71	-1113.97	1113.00	641863.27	453110.12	32°14'41.581"N	103°52'28.130"W	0.00	
9122.00†	89.402	135.025	7656.75	1674.71	-1184.71	1183.68	641933.94	453039.39	32°14'40.878"N	103°52'27.310"W	0.00	
9222.00†	89.402	135.025	7657.79	1774.70	-1255.45	1254.36	642004.62	452968.65	32°14'40.175"N	103°52'26.491"W	0.00	
9322.00†	89.402	135.025	7658.84	1874.69	-1326.19	1325.03	642075.29	452897.92	32°14'39.472"N	103°52'25.672"W	0.00	
9422.00†	89.402	135.025	7659.88	1974.69	-1396.92	1395.71	642145.96	452827.19	32°14'38.769"N	103°52'24.852"W	0.00	
9522.00†	89.402	135.025	7660.93	2074.68	-1467.66	1466.38	642216.63	452756.46	32°14'38.066"N	103°52'24.033"W	0.00	
9622.00†	89.402	135.025	7661.97	2174.68	-1538.40	1537.06	642287.30	452685.72	32°14'37.363"N	103°52'23.214"W	0.00	
9722.00†	89.402	135.025	7663.01	2274.67	-1609.14	1607.74	642357.97	452614.99	32°14'36.660"N	103°52'22.394"W	0.00	
9822.00†	89.402	135.025	7664.06	2374.67	-1679.88	1678.41	642428.64	452544.26	32°14'35.957"N	103°52'21.575"W	0.00	
9922.00†	89.402	135.025	7665.10	2474.66	-1750.61	1749.09	642499.31	452473.53	32°14'35.254"N	103°52'20.756"W	0.00	
10022.00†	89.402	135.025	7666.15	2574.66	-1821.35	1819.76	642569.98	452402.79	32°14'34.551"N	103°52'19.936"W	0.00	
10122.00†	89.402	135.025	7667.19	2674.65	-1892.09	1890.44	642640.65	452332.06	32°14'33.848"N	103°52'19.117"W	0.00	
10222.00†	89.402	135.025	7668.24	2774.65	-1962.83	1961.12	642711.33	452261.33	32°14'33.145"N	103°52'18.298"W	0.00	
10322.00†	89.402	135.025	7669.28	2874.64	-2033.56	2031.79	642782.00	452190.59	32°14'32.442"N	103°52'17.478"W	0.00	
10422.00†	89.402	135.025	7670.32	2974.63	-2104.30	2102.47	642852.67	452119.86	32°14'31.739"N	103°52'16.659"W	0.00	
10522.00†	89.402	135.025	7671.37	3074.63	-2175.04	2173.14	642923.34	452049.13	32°14'31.036"N	103°52'15.840"W	0.00	
10622.00†	89.402	135.025	7672.41	3174.62	-2245.78	2243.82	642994.01	451978.40	32°14'30.333"N	103°52'15.020"W	0.00	
10722.00†	89.402	135.025	7673.46	3274.62	-2316.51	2314.50	643064.68	451907.66	32°14'29.630"N	103°52'14.201"W	0.00	
10822.00†	89.402	135.025	7674.50	3374.61	-2387.25	2385.17	643135.35	451836.93	32°14'28.927"N	103°52'13.382"W	0.00	
10922.00†	89.402	135.025	7675.55	3474.61	-2457.99	2455.85	643206.02	451766.20	32°14'28.224"N	103°52'12.562"W	0.00	
11022.00†	89.402	135.025	7676.59	3574.60	-2528.73	2526.52	643276.69	451695.47	32°14'27.521"N	103°52'11.743"W	0.00	
11122.00†	89.402	135.025	7677.63	3674.60	-2599.46	2597.20	643347.37	451624.73	32°14'26.818"N	103°52'10.924"W	0.00	
11222.00†	89.402	135.025	7678.68	3774.59	-2670.20	2667.88	643418.04	451554.00	32°14'26.115"N	103°52'10.105"W	0.00	
11322.00†	89.402	135.025	7679.72	3874.59	-2740.94	2738.55	643488.71	451483.27	32°14'25.412"N	103°52'09.285"W	0.00	
11422.00†	89.402	135.025	7680.77	3974.58	-2811.68	2809.23	643559.38	451412.54	32°14'24.709"N	103°52'08.466"W	0.00	
11522.00†	89.402	135.025	7681.81	4074.57	-2882.41	2879.90	643630.05	451341.80	32°14'24.006"N	103°52'07.647"W	0.00	
11622.00†	89.402	135.025	7682.85	4174.57	-2953.15	2950.58	643700.72	451271.07	32°14'23.303"N	103°52'06.828"W	0.00	
11722.00†	89.402	135.025	7683.90	4274.56	-3023.89	3021.26	643771.39	451200.34	32°14'22.600"N	103°52'06.008"W	0.00	
11822.00†	89.402	135.025	7684.94	4374.56	-3094.63	3091.93	643842.06	451129.61	32°14'21.897"N	103°52'05.189"W	0.00	
11922.00†	89.402	135.025	7685.99	4474.55	-3165.36	3162.61	643912.73	451058.87	32°14'21.194"N	103°52'04.370"W	0.00	
12022.00†	89.402	135.025	7687.03	4574.55	-3236.10	3233.28	643983.41	450988.14	32°14'20.491"N	103°52'03.550"W	0.00	
12122.00†	89.402	135.025	7688.08	4674.54	-3306.84	3303.96	644054.08	450917.41	32°14'19.788"N	103°52'02.731"W	0.00	



Planned Wellpath Report

Prelim_2

Page 5 of 6



BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.318H SHL
Area	Eddy County, NM	Well	No.318H
Field	Poker Lake Unit	Wellbore	No.318H PWB
Facility	Poker Lake Unit No. 318H		

WELLPATH DATA (168 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
12222.00†	89.402	135.025	7689.12	4774.54	-3377.58	3374.64	644124.75	450846.67	32°14'19.085"N	103°52'01.912"W	0.00	
12322.00†	89.402	135.025	7690.16	4874.53	-3448.31	3445.31	644195.42	450775.94	32°14'18.382"N	103°52'01.093"W	0.00	
12422.00†	89.402	135.025	7691.21	4974.53	-3519.05	3515.99	644266.09	450705.21	32°14'17.679"N	103°52'00.273"W	0.00	
12522.00†	89.402	135.025	7692.25	5074.52	-3589.79	3586.66	644336.76	450634.48	32°14'16.976"N	103°51'59.454"W	0.00	
12622.00†	89.402	135.025	7693.30	5174.51	-3660.53	3657.34	644407.43	450563.74	32°14'16.273"N	103°51'58.635"W	0.00	
12722.00†	89.402	135.025	7694.34	5274.51	-3731.27	3728.02	644478.10	450493.01	32°14'15.570"N	103°51'57.816"W	0.00	
12822.00†	89.402	135.025	7695.39	5374.50	-3802.00	3798.69	644548.77	450422.28	32°14'14.867"N	103°51'56.997"W	0.00	
12922.00†	89.402	135.025	7696.43	5474.50	-3872.74	3869.37	644619.45	450351.55	32°14'14.164"N	103°51'56.177"W	0.00	
13022.00†	89.402	135.025	7697.47	5574.49	-3943.48	3940.04	644690.12	450280.81	32°14'13.461"N	103°51'55.358"W	0.00	
13122.00†	89.402	135.025	7698.52	5674.49	-4014.22	4010.72	644760.79	450210.08	32°14'12.758"N	103°51'54.539"W	0.00	
13222.00†	89.402	135.025	7699.56	5774.48	-4084.95	4081.40	644831.46	450139.35	32°14'12.055"N	103°51'53.720"W	0.00	
13322.00†	89.402	135.025	7700.61	5874.48	-4155.69	4152.07	644902.13	450068.62	32°14'11.352"N	103°51'52.900"W	0.00	
13422.00†	89.402	135.025	7701.65	5974.47	-4226.43	4222.75	644972.80	449997.88	32°14'10.649"N	103°51'52.081"W	0.00	
13522.00†	89.402	135.025	7702.70	6074.47	-4297.17	4293.43	645043.47	449927.15	32°14'09.946"N	103°51'51.262"W	0.00	
13622.00†	89.402	135.025	7703.74	6174.46	-4367.90	4364.10	645114.14	449856.42	32°14'09.243"N	103°51'50.443"W	0.00	
13722.00†	89.402	135.025	7704.78	6274.45	-4438.64	4434.78	645184.81	449785.69	32°14'08.540"N	103°51'49.624"W	0.00	
13822.00†	89.402	135.025	7705.83	6374.45	-4509.38	4505.45	645255.49	449714.95	32°14'07.837"N	103°51'48.804"W	0.00	
13922.00†	89.402	135.025	7706.87	6474.44	-4580.12	4576.13	645326.16	449644.22	32°14'07.134"N	103°51'47.985"W	0.00	
14022.00†	89.402	135.025	7707.92	6574.44	-4650.85	4646.81	645396.83	449573.49	32°14'06.431"N	103°51'47.166"W	0.00	
14122.00†	89.402	135.025	7708.96	6674.43	-4721.59	4717.48	645467.50	449502.76	32°14'05.728"N	103°51'46.347"W	0.00	
14222.00†	89.402	135.025	7710.00	6774.43	-4792.33	4788.16	645538.17	449432.02	32°14'05.025"N	103°51'45.528"W	0.00	
14322.00†	89.402	135.025	7711.05	6874.42	-4863.07	4858.83	645608.84	449361.29	32°14'04.322"N	103°51'44.709"W	0.00	
14422.00†	89.402	135.025	7712.09	6974.42	-4933.80	4929.51	645679.51	449290.56	32°14'03.619"N	103°51'43.889"W	0.00	
14522.00†	89.402	135.025	7713.14	7074.41	-5004.54	5000.19	645750.18	449219.82	32°14'02.916"N	103°51'43.070"W	0.00	
14622.00†	89.402	135.025	7714.18	7174.41	-5075.28	5070.86	645820.85	449149.09	32°14'02.213"N	103°51'42.251"W	0.00	
14722.00†	89.402	135.025	7715.23	7274.40	-5146.02	5141.54	645891.52	449078.36	32°14'01.510"N	103°51'41.432"W	0.00	
14822.00†	89.402	135.025	7716.27	7374.39	-5216.75	5212.21	645962.20	449007.63	32°14'00.807"N	103°51'40.613"W	0.00	
14922.00†	89.402	135.025	7717.31	7474.39	-5287.49	5282.89	646032.87	448936.89	32°14'00.104"N	103°51'39.794"W	0.00	
15022.00†	89.402	135.025	7718.36	7574.38	-5358.23	5353.57	646103.54	448866.16	32°13'59.401"N	103°51'38.974"W	0.00	
15122.00†	89.402	135.025	7719.40	7674.38	-5428.97	5424.24	646174.21	448795.43	32°13'58.697"N	103°51'38.155"W	0.00	
15222.00†	89.402	135.025	7720.45	7774.37	-5499.70	5494.92	646244.88	448724.70	32°13'57.994"N	103°51'37.336"W	0.00	
15322.00†	89.402	135.025	7721.49	7874.37	-5570.44	5565.59	646315.55	448653.96	32°13'57.291"N	103°51'36.517"W	0.00	
15370.73	89.402	135.025	7722.00†	7923.09	-5604.91	5600.03	646349.99	448619.50	32°13'56.949"N	103°51'36.118"W	0.00	No.318H PBHL



Planned Wellpath Report

Prelim_2

Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.318H SHL
Area	Eddy County, NM	Well	No.318H
Field	Poker Lake Unit	Wellbore	No.318H PWB
Facility	Poker Lake Unit No. 318H		

TARGETS

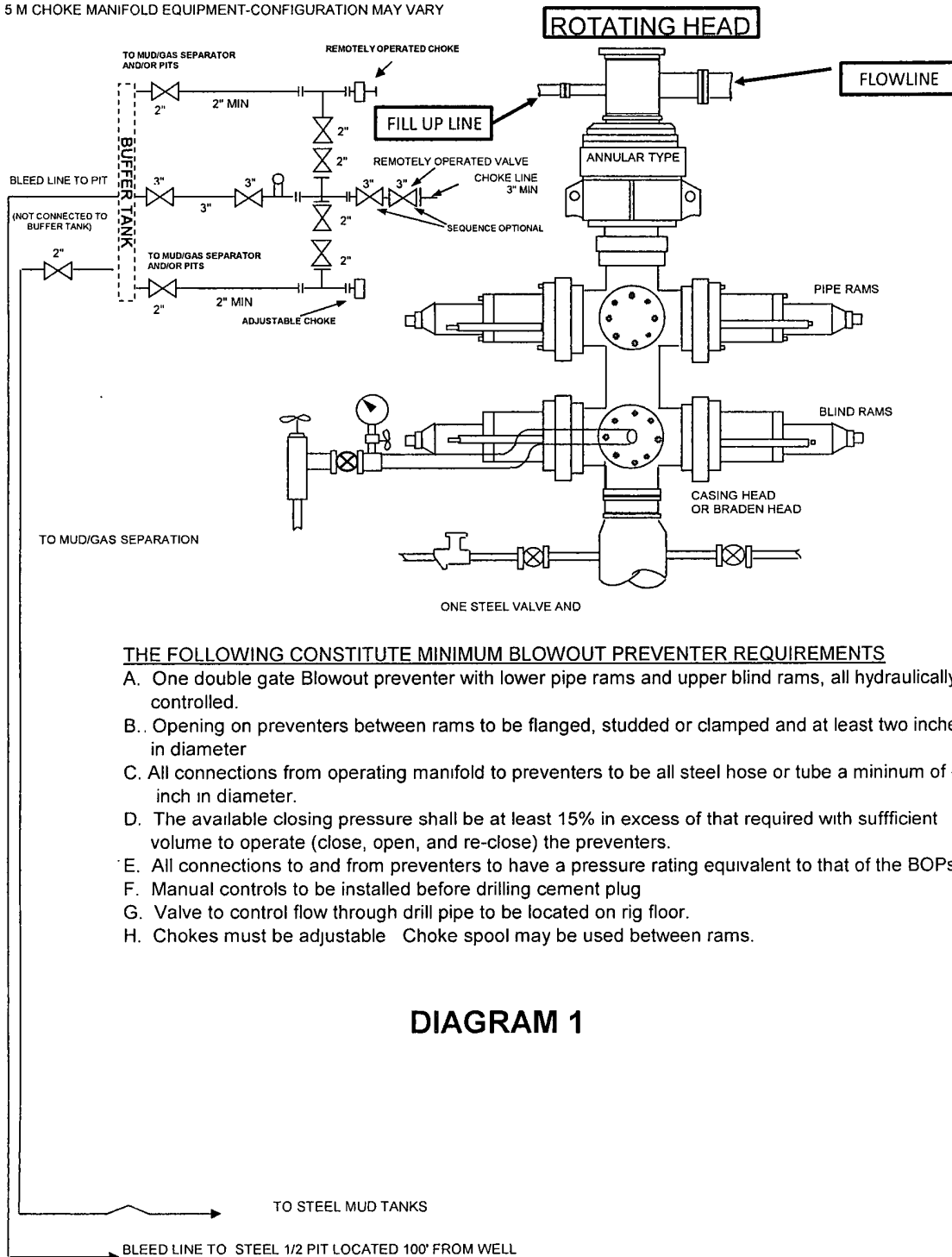
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No.318H Target #1	8652.27	7652.00	-852.44	851.69	641601.98	453371.64	32°14'44.180"N	103°52'31.159"W	point
2) No.318H PBHL	15370.73	7722.00	-5604.91	5600.03	646349.99	448619.50	32°13'56.949"N	103°51'36.118"W	point

SURVEY PROGRAM - Ref Wellbore: No.318H PWB Ref Wellpath: Prelim_2

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	15370.73	NaviTrak (Standard)		No.318H PWB

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 minimum of one inch in diameter.
- D. The available closing pressure shall be at least 15% in excess of that required with sufficient 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.

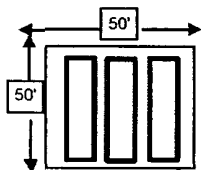
DIAGRAM 1

RIG LAYOUT

RIG LAYOUT SCHEMATIC INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

Solids Control Equipment Legend

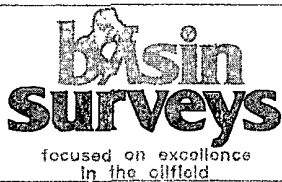
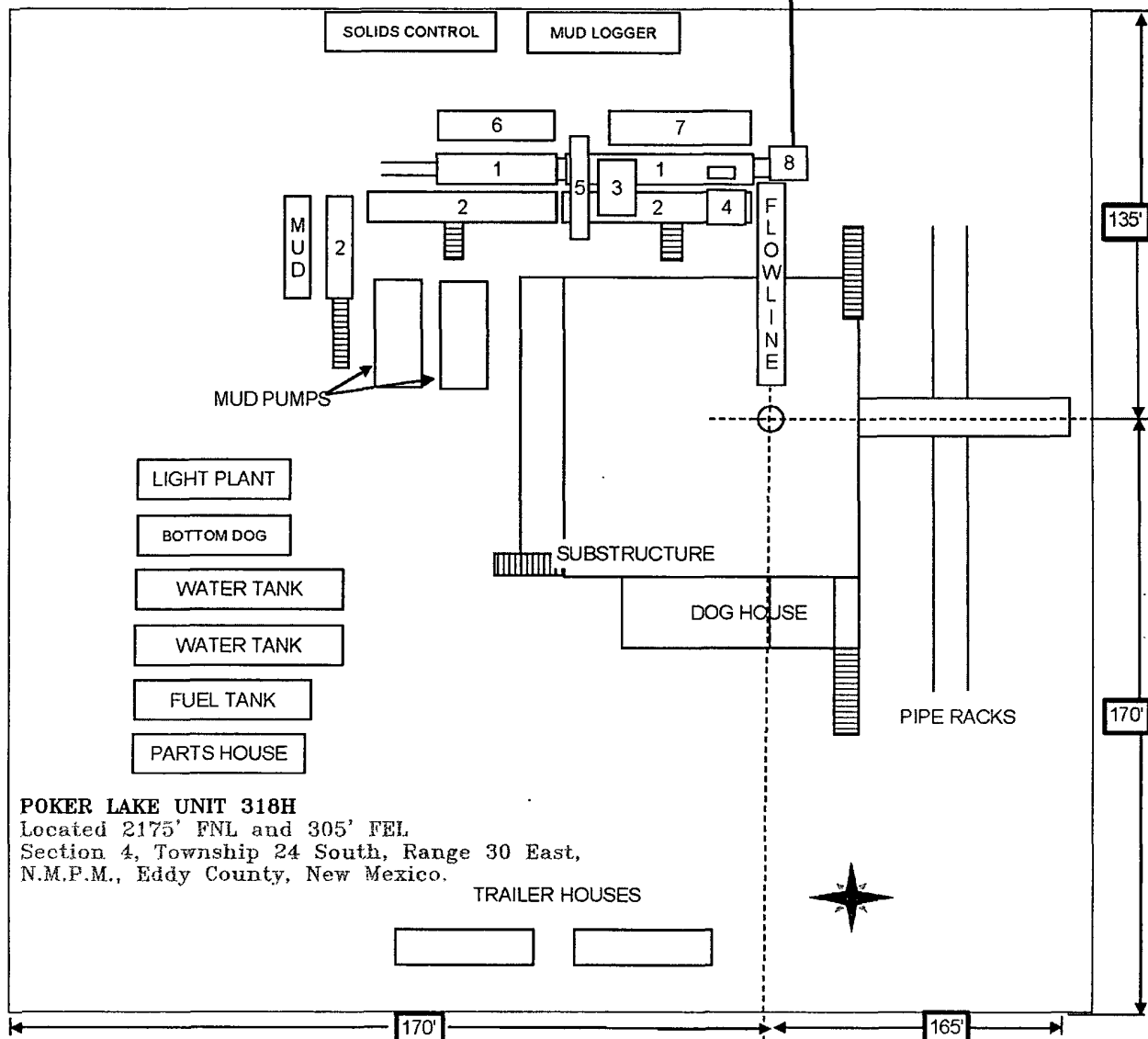
- | | |
|-----------------------------------|--------------------|
| 1) Roll Off Bin | 5) Centrifuge |
| 2) Steel Tank | 6) Dewatering Unit |
| 3) Mud Cleaner | 7) Catch Tank |
| 4) Shaker | 8) Choke Manifold |
| A) Bleed line from choke manifold | |



Water and
Mud Storage

EDGE OF LOCATION W/ BERM

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



P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 24975
Survey Date: 08-27-2011
Scale: 1" = 2000'
Date: 08-29-2011

BOPCO, L.P.

Sheet 6 of 6 Sheets