

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. **SIL**  
**SIL LC061616A-NM 10697,LC063873A**

6. If Indian, Allottee or Tribe Name

1a. Type of work:  DRILL  REENTER

7. If Unit or CA Agreement, Name and No.  
**NM 71016X**

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

8. Lease Name and Well No. **(306402)**  
**Poker Lake Unit #347H**

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

9. API Well No.  
**30-015-38665**

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

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

10. Field and Pool, or Exploratory **(96209)**  
**CORRAL CANYON, DEL NE**

4. Location of Well (Report location clearly and in accordance with any State requirements.)\*  
At surface **NENW, UL C, 540' FNL, 1440' FWL, Lat N32.150869, Long W103.855125**  
At proposed prod. zone **1315' FNL, 2610' FEL, Sec 3, T25S, R30E, Lat N32.163344, Lg W103.868078**

11. Sec., T. R. M. or Blk. and Survey or Area  
**Sec 11, T25S, R30E, Mer NMP**

14. Distance in miles and direction from nearest town or post office\*  
**17 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) **120'**

16. No. of acres in lease  
**2482**

17. Spacing Unit dedicated to this well  
**520**

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft. **1431'**

19. Proposed Depth  
**13,589' MD, 7738' TVD**

20. BLM/BIA Bond No. on file  
**COB000050**

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
**3339' GL**

22. Approximate date work will start\*  
**04/15/2011**

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.
- 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 **KHOLSTER**

Name (Printed/Typed)  
**Katy Holster**

Date **1/28/11**

Title  
**Administrative Assistant**

Approved by (Signature)  
**/S/ JEANETTE MARTINEZ**

Name (Printed/Typed)  
**/S/ JEANETTE MARTINEZ**

Date **MAR 09 2011**

Title  
**FIELD MANAGER**

Office  
**CARLSBAD FIELD OFFICE**

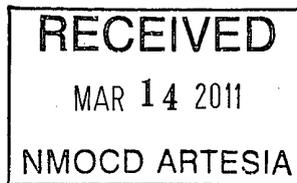
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

**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 APPROVAL

Approval Subject to General Requirements  
& Special Stipulations Attached

Surface casing is to be set into the Rustler below all fresh water sands at an approximate depth of 1233' and cement circulated to surface..

7" casing will be set at approximately 8216' MD, 7738 TVD (thru curve) and cemented in two stages with DV Tool set at approximately 5000'. Cement will be circulated to surface.

Production liner will be 4-1/2" run, with Baker hydraulic packers for zone isolation. Top of 4-1/2" liner will be 150' above 7" casing shoe at an approximate depth of 8066'.

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

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

The surface and bottom hole locations are both 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 #347H**

LEGAL DESCRIPTION - SURFACE: 540' FNL, 1440' FWL, Section 11, T25S, R30E, Eddy County, NM.  
BHL: 1315' FNL, 2610' FEL, Section 3, T25S, 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 3358' (estimated)  
GL 3339'

FORMATION	ESTIMATED TOP FROM KB		ESTIMATED SUB-SEA TOP	BEARING
	TVD	MD		
B/Fresh Water	400'	400'	+ 2,958'	Fresh Water
T/Rustler	946'	946'	+ 2,412'	Barren
T/Salt	1,243'	1,243'	+ 2,115'	Barren
B/Salt	3,803'	3,803'	- 445'	Barren
T/Lamar	4,015'	4,015'	- 657'	Barren
T/Ramsey	4,060'	4,060'	- 702'	Oil/Gas
T/Lower Cherry Canyon	6,074'	6,074'	- 2,716'	Oil/Gas
KOP	7,261'	7,261'	- 3,903'	Oil/Gas
T/Lwr Brushy Canyon	7,551'	7,573'	- 4,193'	Oil/Gas
LBC "Y" Sand	7,718'	7,879'	- 4,360'	Oil/Gas
EOC	7,738'	8,016'	- 4,380'	Oil/Gas
TD Horizontal Hole	7,678'	13,589'	- 4,320'	Oil/Gas

### POINT 3: CASING PROGRAM

TYPE	INTERVALS (MD)	Hole Size	PURPOSE	CONDITION
20"	0' - 60'	24"	Conductor	Contractor Discretion
13-3/8", 48#, H-40, 8rd, ST&C or 54.5#, J-55*	0' - 1233'	17-1/2"	Surface	New
9-5/8", 40#, J-55, 8rd, LT&C	0' - 4035'	12-1/4"	Intermediate	New
7", 26#, N-80, Buttress or LTC*	0' - 8216'	8-3/4"	Production	New
4-1/2", 11.6#, HCP-110, 8rd, LT&C	8066' - 13,590'	6-1/8"	Production	New

### CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 48#, H-40, 8rd, ST&C	6.28	1.27	1.42
13-3/8", 54.5#, J-55, 8rd, STC	8.82	1.94	2.24
9-5/8", 40#, J-55, 8rd, LT&C	15.29	1.32	1.07
7", 26#, N-80, 8rd, LTC	2.97	1.32	1.07
7", 26#, N-80, Buttress	4.32	1.46	1.08
4-1/2", 11.6#, HCP-110, 8rd, LT&C	3.62	1.91	2.19

\* 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.

2<sup>ND</sup> 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 blowout preventer for 12-1/4" intermediate hole will consist of 13-5/8" X 5000 psi dual ram BOP's with mud cross, choke manifold, chokes, and hydril s per Diagram 1 (5000 psi WP). The BOP stack, 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 BOPE when rigged up on the 9-5/8" intermediate casing spool will consist of annular, pipe & blind rams with choke manifold and chokes as in Diagram 1 and 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 2500 psig.

The BOPE when rigged up on the 7" intermediate casing spool will consist of annular, pipe & blind rams with choke manifold and chokes as in Diagram 1 and 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 2500 psig. These tests will be performed:

- a) Upon installation
- b) After any component changes
- c) 30 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

<u>DEPTH</u>	<u>MUD TYPE</u>	<u>WEIGHT</u>	<u>FV</u>	<u>PV</u>	<u>YP</u>	<u>FL</u>	<u>Ph</u>
0' - 1233'	FW Spud Mud	8.5 - 9.2	38-70	NC	NC	NC	10.0
1233' - 4035'	Brine Water	9.8 - 10.2	28-30	NC	NC	NC	9.5 - 10.5
4035' - 8216'	FW/Gel	8.7 - 9.0	28-36	NC	NC	NC	9.5 - 10.0
8216' - 13,589'	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 will be rigged up at 3800'.

##### 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>FT<sup>3</sup>/SX</u>
<b>SURFACE:</b>						
Lead: 0 – 933' (100% excess Circ to surface)	700	933	Class "C" 35/65+6% gel +3pps star-seal+.04% FL10+0.25% R-38+5% salt	9.95	12.8	1.91
Tail: 933' – 1233' (100% excess)	350	300	Class "C" + 2% CaCl <sub>2</sub> +3lb star-seal+0.25% R-38	6.12	14.8	1.36
<b>INTERMEDIATE:</b>						
Lead: 0' – 3535' (100% excess Circ to surface)	1200	3535	Class "C" 35/65+6% gel +3pps star-seal+.04% FL10+0.25% R-38+5% salt	9.95	12.8	1.91
Tail: 3535' – 4035' (100% excess)	300	500	Class "C" + 2% CaCl <sub>2</sub> + 0.25% R-38	6.34	14.8	1.35
<b>2<sup>ND</sup> INTERMEDIATE</b>						
Stage 1:						
Lead: 5000' - 7261' (50% excess)	250	2261	RSS Micro+.5% FMS+ 0.3% FL10+0.8% C-12 +3pps Gilsonite+0.25 R-38	10.09	10.5	2.41
Tail: 7261'-8216' (50% excess)	175	955	RSS Micro+0.2% C-37+ 0.2%+C-12+0.2% FL10+ +0.25% R-38	7.03	13.0	1.38
DV Tool @ 5,000'						
Stage 2:						
Lead: 0' – 4900' (50% excess) (TOC 500' into 9-5/8")	500	4900	RSS Micro+35% FMS+ 0.5% C-12+3pps Gilsonite +0.5% R-38	10.16	10.5	2.42
Tail: 4900'-5000' (50% excess)	50	100	Cass "C" + 0.20% R-38	6.31	14.8	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 7261' at which a directional hole will be kicked off and drilled at an azimuth of 138.29 degrees, building angle at 12 deg/ 100' to 90.62 degrees at a TVD of 7738' (MD 8015'). This angle and azimuth will be maintained for 200' to a measured depth of 8015' (7738' TVD). At this depth 7", 26#, N80, Buttress, casing will be installed and cemented in two stages (DV Tool @ approximately 5000') with cement being circulated to surface. A 6-1/8" open hole lateral will then be drilled out from 7" casing at an azimuth of 318.29 degrees, inclination of 90.62 degrees to a measured depth of 13,589', TVD 7678'. 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**

5

Normal pressures are anticipated throughout Delaware section. A BHP of 3581 psi (max) or MWE of 8.4 ppg is expected. Lost circulation may exist in the Delaware Section from 4094'-7660' TVD. No H<sub>2</sub>S 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



**Weatherford<sup>®</sup>**

## **Drilling Services**

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## **Proposal**

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### **BOPCO, L.P.**

POKER LAKE UNIT #347H

EDDY CO NM

WELL FILE: **PLAN 1**

DECEMBER 29, 2010

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**Weatherford International, Ltd.**

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**BOPCO, L.P.**

**Poker Lake Unit 347H  
Eddy Co, NM**

**SECTION DETAILS**

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	318.29	0.00	0.00	0.00	0.00	0.00	0.00	
2	7260.56	0.00	318.29	7260.56	0.00	0.00	0.00	0.00	0.00	
3	8015.70	90.62	318.29	7738.00	360.26	-321.13	12.00	318.29	482.60	
4	13589.33	90.62	318.29	7678.00	4520.65	-4029.61	0.00	0.00	6055.91	Pbhl

**FIELD DETAILS**

Eddy County, NM (Nad 27)  
 Geodetic System: US State Plane Coordinate System 1927  
 Ellipsoid: NAD27 (Clarke 1866)  
 Zone: New Mexico, Eastern Zone  
 Magnetic Model: IGRF2010  
 System Datum: Mean Sea Level  
 Local North: Grid North

**FORMATION TOP DETAILS**

No.	TVDPath	MDPath	Formation
1	7551.00	7572.78	Lower Brushy Canyon

**WELL DETAILS**

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Poker Lake Unit 347H	0.00	0.00	418936.56	647999.81	32°09'03.132N	103°51'18.447W	N/A

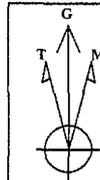
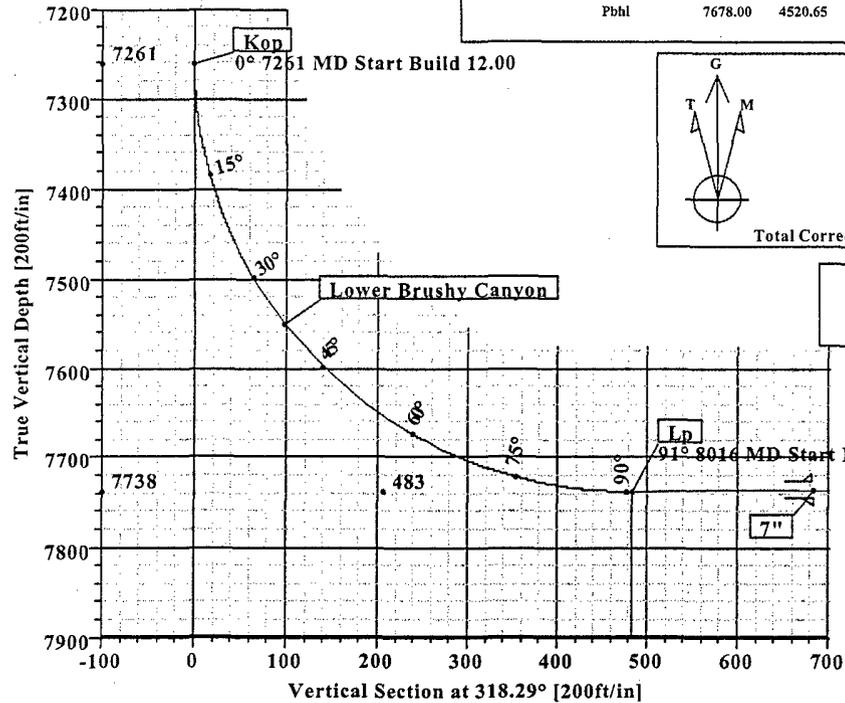
**SITE DETAILS**

Poker Lake Unit 347H  
 Site Centre Northing: 418936.56  
 Easting: 647999.81  
 Ground Level: 3339.00  
 Positional Uncertainty: 0.00  
 Convergence: 0.25

**TARGET DETAILS**

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Pbhl	7678.00	4520.65	-4029.61	423457.21	643970.19	Point

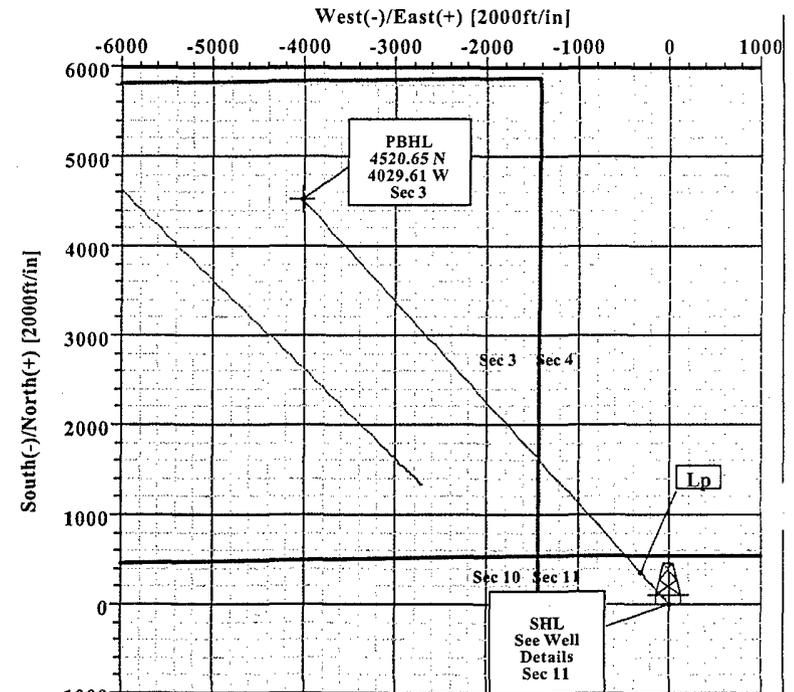
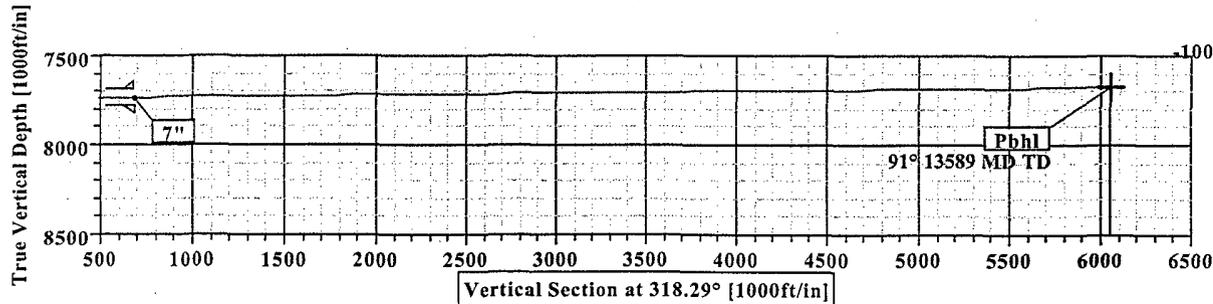
KB ELEV: 3358  
 GL ELEV: 3339



Azimuths to Grid North  
 True North: -0.25°  
 Magnetic North: 7.46°  
 Magnetic Field Strength: 48570nT  
 Dip Angle: 60.07°  
 Date: 6/1/2011  
 Model: IGRF2010  
 Total Correction to Grid North: 7.46°

**LEGEND**

Poker Lake Unit 348H (1) Plan #1



Plan: Plan #1 (Poker Lake Unit 347H/1)  
 Created By: Russell W. Joyner  
 Date: 12/29/2010

# Weatherford International Ltd.

## WFT Plan Report - X & Y's



Weatherford

<b>Company:</b> BOPCO, L.P. <b>Field:</b> Eddy County, NM (Nad 27) <b>Site:</b> Poker Lake Unit 347H <b>Well:</b> Poker Lake Unit 347H <b>Wellpath:</b> 1	<b>Date:</b> 12/29/2010 <b>Co-ordinate(NE) Reference:</b> Well: Poker Lake Unit 347H, Grid North <b>Vertical (TVD) Reference:</b> SITE 3358.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,318.29Azi) <b>Survey Calculation Method:</b> Minimum Curvature	<b>Time:</b> 13:43:35 <b>Page:</b> 1 <b>Db:</b> Sybase								
<b>Plan:</b> Plan #1 <b>Principal:</b> Yes	<b>Date Composed:</b> 12/29/2010 <b>Version:</b> 1 <b>Tied-to:</b> From Surface									
<b>Field:</b> Eddy County, NM (Nad 27)										
<b>Map System:</b> US State Plane Coordinate System 1927 <b>Geo Datum:</b> NAD27 (Clarke 1866) <b>Sys Datum:</b> Mean Sea Level	<b>Map Zone:</b> New Mexico, Eastern Zone <b>Coordinate System:</b> Well Centre <b>Geomagnetic Model:</b> IGRF2010									
<b>Site:</b> Poker Lake Unit 347H										
<b>Site Position:</b> <b>From:</b> Map <b>Position Uncertainty:</b> 0.00 ft <b>Ground Level:</b> 3339.00 ft	<b>Northing:</b> 418936.56 ft <b>Easting:</b> 647999.81 ft	<b>Latitude:</b> 32 9 3.132 N <b>Longitude:</b> 103 51 18.447 W <b>North Reference:</b> Grid <b>Grid Convergence:</b> 0.25 deg								
<b>Well:</b> Poker Lake Unit 347H										
<b>Well Position:</b> +N/-S 0.00 ft +E/-W 0.00 ft <b>Position Uncertainty:</b> 0.00 ft	<b>Northing:</b> 418936.56 ft <b>Easting:</b> 647999.81 ft	<b>Slot Name:</b> <b>Latitude:</b> 32 9 3.132 N <b>Longitude:</b> 103 51 18.447 W								
<b>Wellpath:</b> 1										
<b>Current Datum:</b> SITE <b>Magnetic Data:</b> 6/1/2011 <b>Field Strength:</b> 48570 nT <b>Vertical Section:</b> Depth From (TVD) ft	<b>Height:</b> 3358.00 ft +N/-S ft +E/-W ft	<b>Drilled From:</b> Surface <b>Tie-on Depth:</b> 0.00 ft <b>Above System Datum:</b> Mean Sea Level <b>Declination:</b> 7.72 deg <b>Mag Dip Angle:</b> 60.07 deg <b>Direction:</b> deg								
0.00	0.00	0.00 318.29								
<b>Plan Section Information</b>										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	318.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7260.56	0.00	318.29	7260.56	0.00	0.00	0.00	0.00	0.00	0.00	
8015.70	90.62	318.29	7738.00	360.26	-321.13	12.00	12.00	0.00	318.29	
13589.33	90.62	318.29	7678.00	4520.65	-4029.61	0.00	0.00	0.00	0.00	Pbhl
<b>Survey</b>										
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
7200.00	0.00	318.29	7200.00	0.00	0.00	0.00	0.00	418936.56	647999.81	
7260.56	0.00	318.29	7260.56	0.00	0.00	0.00	0.00	418936.56	647999.81	Kop
7300.00	4.73	318.29	7299.96	1.22	-1.08	1.63	12.00	418937.78	647998.72	
7400.00	16.73	318.29	7398.03	15.09	-13.45	20.22	12.00	418951.65	647986.36	
7500.00	28.73	318.29	7490.09	43.88	-39.12	58.79	12.00	418980.45	647960.69	
7572.78	37.47	318.29	7551.00	73.52	-65.54	98.49	12.00	419010.09	647934.27	Lower Brushy Canyo
7600.00	40.73	318.29	7572.12	86.34	-76.96	115.66	12.00	419022.90	647922.85	
7700.00	52.73	318.29	7640.54	140.59	-125.32	188.34	12.00	419077.16	647874.48	
7800.00	64.73	318.29	7692.35	204.28	-182.09	273.66	12.00	419140.85	647817.71	
7900.00	76.73	318.29	7725.28	274.62	-244.79	367.89	12.00	419211.18	647755.01	
8000.00	88.73	318.29	7737.91	348.54	-310.68	466.90	12.00	419285.10	647689.13	
8015.70	90.62	318.29	7738.00	360.26	-321.13	482.60	12.00	419296.82	647678.68	Lp
8100.00	90.62	318.29	7737.09	423.18	-377.21	566.90	0.00	419359.74	647622.59	
8200.00	90.62	318.29	7736.02	497.82	-443.75	666.89	0.00	419434.39	647556.06	
8215.70	90.62	318.29	7735.85	509.54	-454.20	682.59	0.00	419446.11	647545.61	7"
8300.00	90.62	318.29	7734.94	572.47	-510.29	766.89	0.00	419509.03	647489.52	
8400.00	90.62	318.29	7733.86	647.11	-576.82	866.88	0.00	419583.68	647422.98	

# Weatherford International Ltd.

## WFT Plan Report - X & Y's



Weatherford

<b>Company:</b> BOPCO, L.P.	<b>Date:</b> 12/29/2010	<b>Time:</b> 13:43:35	<b>Page:</b> 2
<b>Field:</b> Eddy County, NM (Nad 27)	<b>Co-ordinate(NE) Reference:</b>	<b>Well:</b> Poker Lake Unit 347H, Grid North	
<b>Site:</b> Poker Lake Unit 347H	<b>Vertical (TVD) Reference:</b>	<b>SITE</b> 3358.0	
<b>Well:</b> Poker Lake Unit 347H	<b>Section (VS) Reference:</b>	<b>Well</b> (0.00N,0.00E,318.29Azi)	
<b>Wellpath:</b> 1	<b>Survey Calculation Method:</b>	<b>Minimum Curvature</b>	<b>Db:</b> Sybase

**Survey**

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
8500.00	90.62	318.29	7732.79	721.76	-643.36	966.87	0.00	419658.32	647356.45	
8600.00	90.62	318.29	7731.71	796.40	-709.90	1066.87	0.00	419732.96	647289.91	
8700.00	90.62	318.29	7730.63	871.05	-776.43	1166.86	0.00	419807.61	647223.37	
8800.00	90.62	318.29	7729.56	945.69	-842.97	1266.86	0.00	419882.25	647156.84	
8900.00	90.62	318.29	7728.48	1020.33	-909.50	1366.85	0.00	419956.90	647090.30	
9000.00	90.62	318.29	7727.40	1094.98	-976.04	1466.84	0.00	420031.54	647023.77	
9100.00	90.62	318.29	7726.33	1169.62	-1042.58	1566.84	0.00	420106.18	646957.23	
9200.00	90.62	318.29	7725.25	1244.27	-1109.11	1666.83	0.00	420180.83	646890.69	
9300.00	90.62	318.29	7724.17	1318.91	-1175.65	1766.83	0.00	420255.47	646824.16	
9400.00	90.62	318.29	7723.10	1393.56	-1242.19	1866.82	0.00	420330.12	646757.62	
9500.00	90.62	318.29	7722.02	1468.20	-1308.72	1966.82	0.00	420404.76	646691.08	
9600.00	90.62	318.29	7720.95	1542.84	-1375.26	2066.81	0.00	420479.41	646624.55	
9700.00	90.62	318.29	7719.87	1617.49	-1441.80	2166.80	0.00	420554.05	646558.01	
9800.00	90.62	318.29	7718.79	1692.13	-1508.33	2266.80	0.00	420628.69	646491.48	
9900.00	90.62	318.29	7717.72	1766.78	-1574.87	2366.79	0.00	420703.34	646424.94	
10000.00	90.62	318.29	7716.64	1841.42	-1641.40	2466.79	0.00	420777.98	646358.40	
10100.00	90.62	318.29	7715.56	1916.07	-1707.94	2566.78	0.00	420852.63	646291.87	
10200.00	90.62	318.29	7714.49	1990.71	-1774.48	2666.78	0.00	420927.27	646225.33	
10300.00	90.62	318.29	7713.41	2065.35	-1841.01	2766.77	0.00	421001.92	646158.79	
10400.00	90.62	318.29	7712.33	2140.00	-1907.55	2866.76	0.00	421076.56	646092.26	
10500.00	90.62	318.29	7711.26	2214.64	-1974.09	2966.76	0.00	421151.20	646025.72	
10600.00	90.62	318.29	7710.18	2289.29	-2040.62	3066.75	0.00	421225.85	645959.19	
10700.00	90.62	318.29	7709.10	2363.93	-2107.16	3166.75	0.00	421300.49	645892.65	
10800.00	90.62	318.29	7708.03	2438.57	-2173.69	3266.74	0.00	421375.14	645826.11	
10900.00	90.62	318.29	7706.95	2513.22	-2240.23	3366.73	0.00	421449.78	645759.58	
11000.00	90.62	318.29	7705.87	2587.86	-2306.77	3466.73	0.00	421524.43	645693.04	
11100.00	90.62	318.29	7704.80	2662.51	-2373.30	3566.72	0.00	421599.07	645626.50	
11200.00	90.62	318.29	7703.72	2737.15	-2439.84	3666.72	0.00	421673.71	645559.97	
11300.00	90.62	318.29	7702.64	2811.80	-2506.38	3766.71	0.00	421748.36	645493.43	
11400.00	90.62	318.29	7701.57	2886.44	-2572.91	3866.71	0.00	421823.00	645426.89	
11500.00	90.62	318.29	7700.49	2961.08	-2639.45	3966.70	0.00	421897.65	645360.36	
11600.00	90.62	318.29	7699.42	3035.73	-2705.99	4066.69	0.00	421972.29	645293.82	
11700.00	90.62	318.29	7698.34	3110.37	-2772.52	4166.69	0.00	422046.93	645227.29	
11800.00	90.62	318.29	7697.26	3185.02	-2839.06	4266.68	0.00	422121.58	645160.75	
11900.00	90.62	318.29	7696.19	3259.66	-2905.59	4366.68	0.00	422196.22	645094.21	
12000.00	90.62	318.29	7695.11	3334.31	-2972.13	4466.67	0.00	422270.87	645027.68	
12100.00	90.62	318.29	7694.03	3408.95	-3038.67	4566.67	0.00	422345.51	644961.14	
12200.00	90.62	318.29	7692.96	3483.59	-3105.20	4666.66	0.00	422420.16	644894.60	
12300.00	90.62	318.29	7691.88	3558.24	-3171.74	4766.65	0.00	422494.80	644828.07	
12400.00	90.62	318.29	7690.80	3632.88	-3238.28	4866.65	0.00	422569.44	644761.53	
12500.00	90.62	318.29	7689.73	3707.53	-3304.81	4966.64	0.00	422644.09	644695.00	
12600.00	90.62	318.29	7688.65	3782.17	-3371.35	5066.64	0.00	422718.73	644628.46	
12700.00	90.62	318.29	7687.57	3856.81	-3437.88	5166.63	0.00	422793.38	644561.92	
12800.00	90.62	318.29	7686.50	3931.46	-3504.42	5266.62	0.00	422868.02	644495.39	
12900.00	90.62	318.29	7685.42	4006.10	-3570.96	5366.62	0.00	422942.67	644428.85	
13000.00	90.62	318.29	7684.34	4080.75	-3637.49	5466.61	0.00	423017.31	644362.31	
13100.00	90.62	318.29	7683.27	4155.39	-3704.03	5566.61	0.00	423091.95	644295.78	
13200.00	90.62	318.29	7682.19	4230.04	-3770.57	5666.60	0.00	423166.60	644229.24	
13300.00	90.62	318.29	7681.11	4304.68	-3837.10	5766.60	0.00	423241.24	644162.70	
13400.00	90.62	318.29	7680.04	4379.32	-3903.64	5866.59	0.00	423315.89	644096.17	
13500.00	90.62	318.29	7678.96	4453.97	-3970.17	5966.58	0.00	423390.53	644029.63	
13589.33	90.62	318.29	7678.00	4528.65	-4029.61	6055.91	0.00	423457.21	643970.19	Pbhl

**Weatherford International Ltd.**  
**WFT Plan Report - X & Y's**



**Weatherford**

<b>Company:</b> BOPCO, L.P. <b>Field:</b> Eddy County, NM (Nad 27) <b>Site:</b> Poker Lake Unit 347H <b>Well:</b> Poker Lake Unit 347H <b>Wellpath:</b> 1	<b>Date:</b> 12/29/2010 <b>Time:</b> 13:43:35 <b>Page:</b> 3 <b>Co-ordinate(NE) Reference:</b> Well: Poker Lake Unit 347H, Grid North <b>Vertical (TVD) Reference:</b> SITE 3358.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,318.29Azi) <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase
---	--

**Targets**

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude →			← Longitude →				
								Deg	Min	Sec	Deg	Min	Sec		
Pbhl			7678.00	4520.65	-4029.61	423457.21	643970.19	32	9	48.043	N	103	52	5.091	W

**Casing Points**

MD ft	TVD ft	Diameter in	Hole Size in	Name
4200.00	4200.00	9.625	12.250	9 5/8"
8215.70	7735.85	7.000	8.750	7"

**Annotation**

MD ft	TVD ft	
7260.56	7260.56	Kop
8015.70	7738.00	Lp
13589.33	7678.00	Pbhl

**Formations**

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
7572.78	7551.00	Lower Brushy Canyon		0.00	0.00
	0.00	LBC "Y" Sand		0.00	0.00



**Weatherford**

**Weatherford Drilling Services**

GeoDec v5.03

Report Date: December 29, 2010  
 Job Number: \_\_\_\_\_  
 Customer: BOPCO  
 Well Name: Poker Lake Unit #347H  
 API Number: \_\_\_\_\_  
 Rig Name: \_\_\_\_\_  
 Location: Eddy Co, NM  
 Block: \_\_\_\_\_  
 Engineer: RWJ

US State Plane 1927	Geodetic Latitude / Longitude
System: New Mexico East 3001 (NON-EXACT)	System: Latitude / Longitude
Projection: SPC27 Transverse Mercator	Projection: Geodetic Latitude and Longitude
Datum: NAD 1927 (NADCON CONUS)	Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866	Ellipsoid: Clarke 1866
North/South 418936.560 USFT	Latitude 32.1508699 DEG
East/West 647999.810 USFT	Longitude -103.8551241 DEG
Grid Convergence: .25°	
<b>Total Correction: +7.47°</b>	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.15087° N	32° 9 min 3.132 sec
Longitude =	103.85512° W	103° 51 min 18.447 sec

Magnetic Declination =	7.72°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6640
Local Field Strength =	48566 nT	Magnetic Vector X = 24012 nT
Magnetic Dip =	60.07°	Magnetic Vector Y = 3254 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 42089 nT
Spud Date =	Jun 01, 2011	Magnetic Vector H = 24231 nT

Signed: \_\_\_\_\_

Date: \_\_\_\_\_



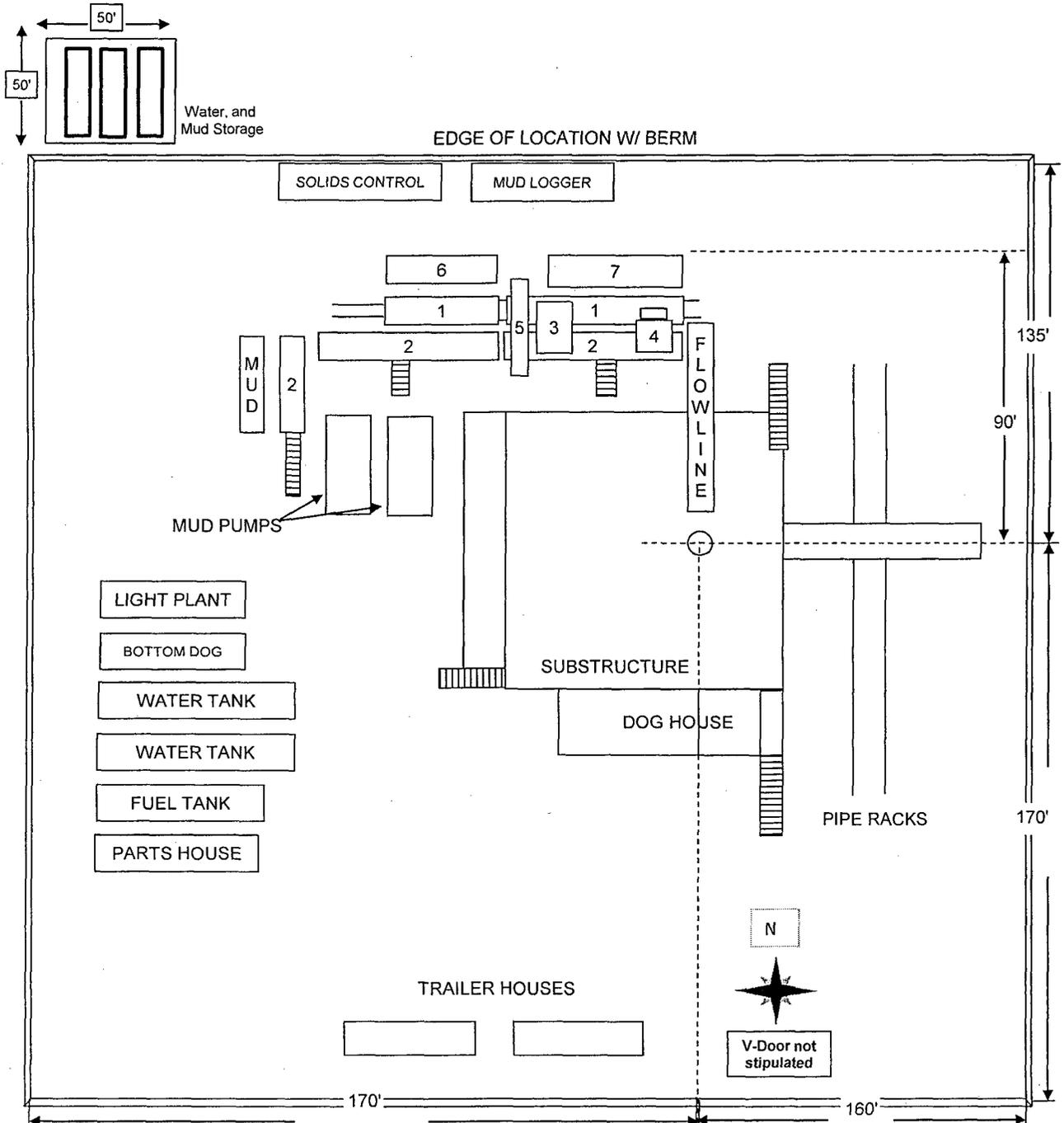
BOPCO, L.P.  
Poker Lake Unit #347H  
Sec 11, T25S-R30E  
Eddy County, NM

Exhibit "D"

RIG LAYOUT SCHEMATIC  
INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

Solids Control Equipment Legend

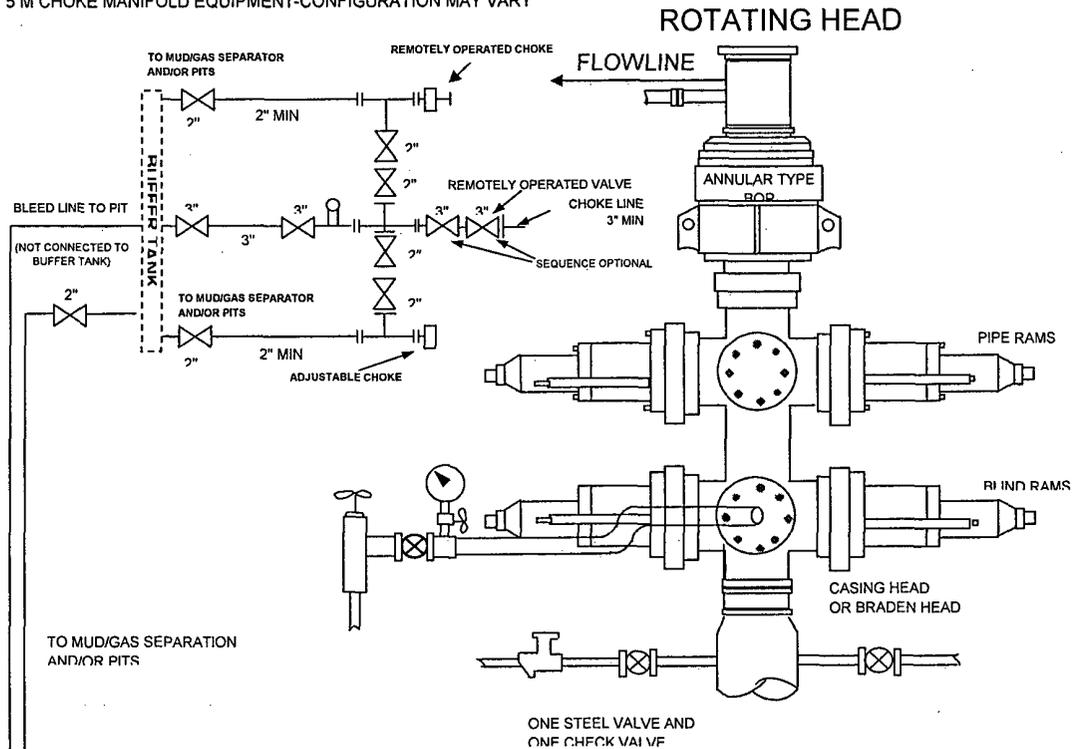
- |                 |                    |
|-----------------|--------------------|
| 1) Roll Off Bin | 5) Centrifuge      |
| 2) Steel Tank   | 6) Dewatering Unit |
| 3) Mud Cleaner  | 7) Catch Tank      |
| 4) Shaker       |                    |



# BOPCO, L. P.

## 5-M WP BOPE WITH 5-M WP ANNULAR

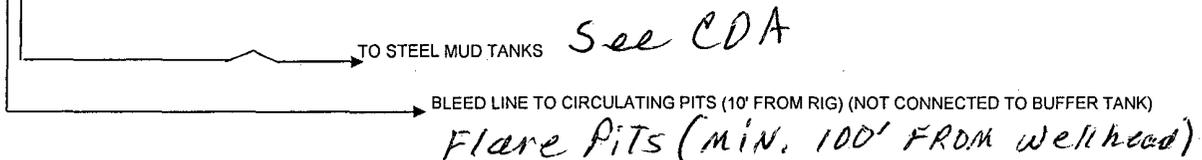
5 M CHOKE MANIFOLD EQUIPMENT-CONFIGURATION MAY VARY



**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**



DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator BOPCO LP OGRID # 260737  
 306402 Well Name & # POKER LAKE UNIT # 347H Surface Type (F) (S) (P)  
 Location: UL C, Sect 11, Township 25 s, RNG 30 e,  
A 3 25 30 Sub-surface Type (F) (S) (P)

A. Date C101 rec'd      /      /      C101 reviewed      /      /     

B. 1. Check mark, Information is OK on Forms:  
 OGRID  BONDING FED PROP CODE  WELL #  SIGNATURE     

2. Inactive Well list as of: 4/4/11 # wells 403 # Inactive wells 6

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:      /      /     

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 CORRAL CANYON, DEL NE, Code 96209  
 a. Dedicated acreage 520, What Units 31 B, C, F, G, H, I, J, P  
 b. SUR. Location Standard  Non-Standard Location      2, 4, M, N  
 c. Well shares acres: Yes     , No     , # of wells      plus this well # 11: C, D

2. 2<sup>nd</sup>. Operator in same acreage, Yes     , No   
 Agreement Letter     , Disagreement letter     

3. Intent to Directional Drill Yes  No       
 a. Dedicated acreage 520, 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  FED

D. Blowout Preventer Yes     , No     

E. H2S Yes     , No     

F. C144 Pit Registration Yes     , No  need

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      /      /     

API #30-015-- 38668

8. Reviewers     

Overlap  
 with M  
 016-27438