

OCD-ARTESIA

Form 3160-3
(April 2004)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No 1004-0137
Expires March 31, 20075. Lease Serial No. **LG 68905** ✓ **SHLNM120897**
6. If Indian, Allottee or Tribe Name1a. Type of work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone8. Lease Name and Well No.
Poker Lake Unit #333H NM 71016X2. Name of Operator
BOPCO, L. P.9. API Well No.
30-015-392943a. Address **P. O. Box 2760
Midland, TX 79702**3b. Phone No. (include area code)
432-683-227710. Field and Pool, or Exploratory
Poker Lake NW (Delaware)4. Location of Well (Report location clearly and in accordance with any State requirements.)*
At surface **NWSW, UL L, 2295' FSL, 325' FWL, Lat N32.216822, Long W103.841425**
At proposed prod. zone **2280' FSL, 330' FWL, Sec 11, T24S, R30E, Lat N32.231250, Lg W103.858689**11. Sec., T. R. M. or Blk. and Survey or Area
Sec 13, T24S, R30E, Mer NMP14. Distance in miles and direction from nearest town or post office*
17 miles east of Malaga, NM12. County or Parish
Eddy County13. State
NM15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)
325'16. No. of acres in lease
128017. Spacing Unit dedicated to this well
40018. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.
2,325'19. Proposed Depth
15,197' MD, 2,758 TVD20. BLM/BIA Bond No. on file
COB00005021. Elevations (Show whether DF, KDB, RT, GL, etc.)
3456' GL22. Approximate date work will start*
07/01/201123. 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:

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

25. Signature **K. Holster** Name (Printed/Typed) **Katy Holster** Date **4/11/11**Title **Administrative Assistant**Approved by (Signature) **/s/ Tony Herrell** Name (Printed/Typed) Date **JUL 20 2011**Title **STATE DIRECTOR** Office **NM STATE OFFICE**

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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

*(Instructions on page 2)

CARLSBAD CONTROLLED WATER BASIN RECEIVED
AUG 4 2011
NMOCD ARTESIASEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

BOPCO, L. P.
6 DESTA DRIVE, SUITE 3700 (79705)
P. O. BOX 2760
MIDLAND, TEXAS 79702

(432) 683-2277

FAX (432) 687-0329

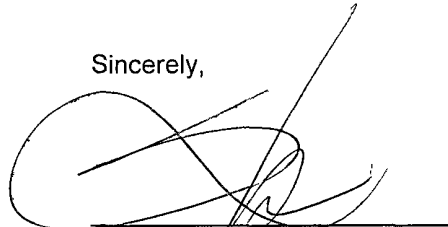
April 5, 2011

Bureau of Land Management
620 E. Greene
Carlsbad, New Mexico 88220
Attn: John Chopp

Dear Mr. Chopp,

BOPCO, L.P. respectfully requests exception to the Prairie Chicken timing restrictions for Poker Lake Unit #333H located 2295' FSL, 325' FWL, of Section 13, T24S, R30E, Eddy County, New Mexico.

Sincerely,



Stephen Martinez
Division Drilling Superintendent

SMM/keh

Surface casing is to be set into the Rustler below all fresh water sands at an approximate depth of 767' and cement circulated to surface.

7" casing will be set at approximately 8700' MD, 7902' TVD (thru curve) and cemented in two stages with DV Tool set at approximately 5000'. Cement top 500' into 9-5/8" intermediate.

Production liner will be 4-1/2" 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 8550'.

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

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

The surface is unorthodox and is located outside the Poker Lake Unit.

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

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 #333H

LEGAL DESCRIPTION - SURFACE: 2295' FSL, 325' FWL, Section 13, T24S, R30E, Eddy County, NM.
BHL: 2280' FSL, 330' FWL, Section 11, T24S, R30E, Eddy County, New Mexico.

POINT 1: ESTIMATED FORMATION TOPS

(See No. 2 Below)

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

Anticipated Formation Tops: KB 3475' (estimated)
 GL 3456'

<u>FORMATION</u>	<u>ESTIMATED TOP FROM KB</u>		<u>ESTIMATED SUB-SEA TOP</u>	<u>BEARING</u>
	<u>TVD</u>	<u>MD</u>		
T/Fresh Water	360'	360'	+ 3,115'	Fresh Water
T/Rustler	409'	409'	+ 3,066'	Barren
T/Salt	777'	777'	+ 2,698'	Barren
B/Salt	3,849'	3,849'	- 374'	Barren
T/Lamar	4,080'	4,080'	- 605'	Barren
T/Ramsey	4,122'	4,122'	- 647'	Oil/Gas
T/Lower Cherry Canyon	6,155'	6,155'	- 2,680'	Oil/Gas
KOP	7,436'	7,436'	- 3,961'	Oil/Gas
T/Lwr Brushy Canyon "U" Sd	7,535'	7,535'	- 4,060'	Oil/Gas
T/Lwr Brushy Canyon "8A" Sd	7,701'	7,717'	- 4,226'	Oil/Gas
T/Lwr Brushy Canyon "Y" Sd	7,867'	7,974'	- 4,392'	Oil/Gas
Target #1	7,903'	8,643'	- 4,428'	Oil/Gas
EOC	7,913'	8,196'	- 4,438'	Oil/Gas
TD Horizontal Hole	7,758'	15,197'	- 4,283'	Oil/Gas

POINT 3: CASING PROGRAM

<u>TYPE</u>	<u>INTERVALS (MD)</u>	<u>Hole Size</u>	<u>PURPOSE</u>	<u>CONDITION</u>
20"	0' - 60'	24"	Conductor	Contractor Discretion
13-3/8", 48#, H-40, or 54.5#, J-55 8rd, ST&C*	0' - 767'	17-1/2"	Surface	New
9-5/8", 40#, J-55, 8rd, LT&C	0' - 4100'	12-1/4"	Intermediate	New
7", 26#, N-80, Buttress or 8rd LTC*	0' - 8700'	8-3/4"	Production	New
4-1/2", 11.6#, HCP-110, 8rd, LT&C	8550' - 15,197'	6-1/8"	Production	New

CASING DESIGN SAFETY FACTORS:

<u>TYPE</u>	<u>TENSION</u>	<u>COLLAPSE</u>	<u>BURST</u>
13-3/8", 48#, H-40, 8rd, ST&C	9.63	1.95	2.18
13-3/8", 54.5#, J-55, 8rd, STC	13.67	2.98	3.43
9-5/8", 40#, J-55, 8rd, LT&C	14.60	1.19	1.04
7", 26#, N-80, Buttress	2.95	1.46	1.09
7", 26#, N-80, 8rd, LTC	3.79	1.46	1.08
4-1/2", 11.6#, HCP-110, 8rd, LT&C	4.65	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 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.

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' - 767'	FW Spud Mud	8.5 - 9.2	38-70	NC	NC	NC	10.0
767' - 4100'	Brine Water	9.8 - 10.2	28-30	NC	NC	NC	9.5 - 10.5
4100' - 8700'	FW/Gel	8.7 - 9.0	28-36	NC	NC	NC	9.5 - 10.0
8700' - 15,197'	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.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)**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 – 467' (100% excess Circ to surface)	375	467	Class "C" 35/65+6% gel +3pps star-seal+.04% FL10+0.25% R-38+5% salt	9.95	12.8	1.91
Tail: 467' – 767' (100% excess)	350	300	Class "C" + 2% CaCl ₂ +3lb star-seal+0.25% R-38	6.12	14.8	1.36
INTERMEDIATE:						
Lead: 0' – 3600' (100% excess Circ to surface)	1200	3600	Class "C" 35/65+6% gel +3pps star-seal+.04% FL10+0.25% R-38+5% salt	9.95	12.8	1.91
Tail: 3600' – 4100' (100% excess)	265	500	Class "C" + 2% CaCl ₂ + 0.25% R-38	6.34	14.8	1.35
2ND INTERMEDIATE						
Stage 1:						
Lead: 5000' - 7436' (50% excess)	250	2436	RSS Micro+.5% FMS+ 0.3% FL10+0.8% C-12 +3pps Gilsonite+0.25 R-38	10.09	10.5	2.41
Tail: 7436'-8700' (50% excess)	210	1264	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: 3600'–4900' (50% excess) (TOC 500' into 9-5/8")	150	1300	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 7436' at which point a directional hole will be kicked off and drilled at an azimuth of 314.25 degrees, building angle at 12 deg/100' to 91.27 degrees at a TVD of 7912' (MD 8196'). This angle and azimuth will be maintained for 504' to a measured depth of 8700' (7902' 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 TOC at 3600' (500' above 9-5/8" casing shoe). A 6-1/8" open hole lateral will then be drilled out from 7" casing at an azimuth of 314.25 degrees, inclination of 91.27 degrees to a measured depth of 15,197', TVD 7758'. 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. Top of 4-1/2" liner at approximately 8246' (150' above 7" casing shoe).

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

5

Normal pressures are anticipated throughout Delaware section. A BHP of 3427 psi (max) or MWE of 8.4 ppg is expected. Lost circulation may exist in the Delaware Section from 4165'-7914' TVD. No H₂S is anticipated.

POINT 8: OTHER PERTINENT INFORMATION

A) Auxiliary Equipment

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

B) Anticipated Starting Date

Upon approval

30 days drilling operations

14 days completion operations

SMM/keh

BOPCO, L.P.

Poker Lake Unit 333H
Eddy Co, NM

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	314.25	0.00	0.00	0.00	0.00	0.00	0.00	
2	7435.55	0.00	314.25	7435.55	0.00	0.00	0.00	0.00	0.00	
3	8196.14	91.27	314.25	7912.90	340.54	-349.60	12.00	314.25	488.05	
4	8642.87	91.27	314.25	7903.00	652.18	-669.53	0.00	0.00	934.67	Tgt 1
5	15196.79	91.27	314.25	7758.00	5224.15	-5363.13	0.00	-175.41	7486.98	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
333H	0.00	0.00	442947.20	652130.25	32°13'00.559N	103°50'29.125W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	7758.00	5224.15	-5363.13	448171.35	646767.12	Point
Tgt 1	7903.00	652.18	-669.53	443599.38	651460.72	Point

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

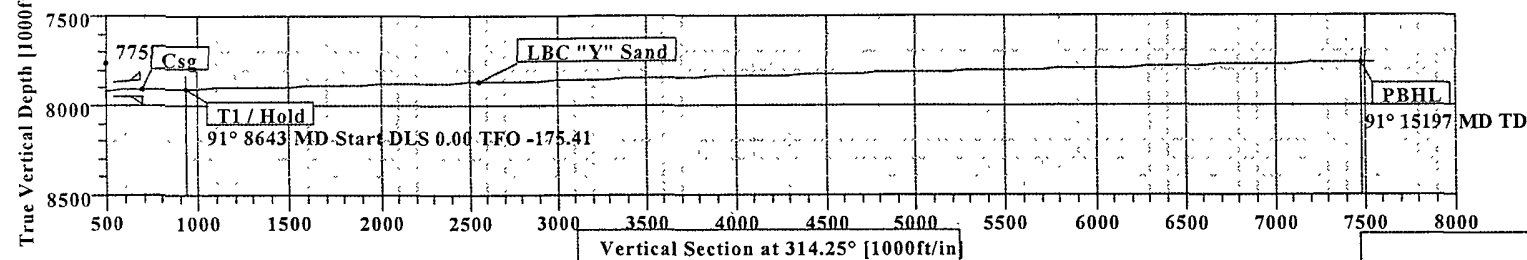
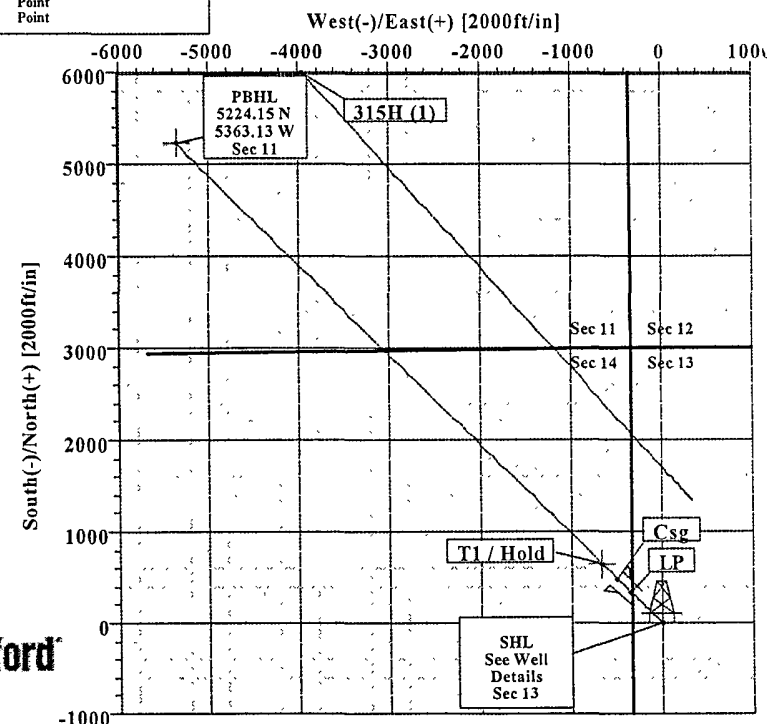
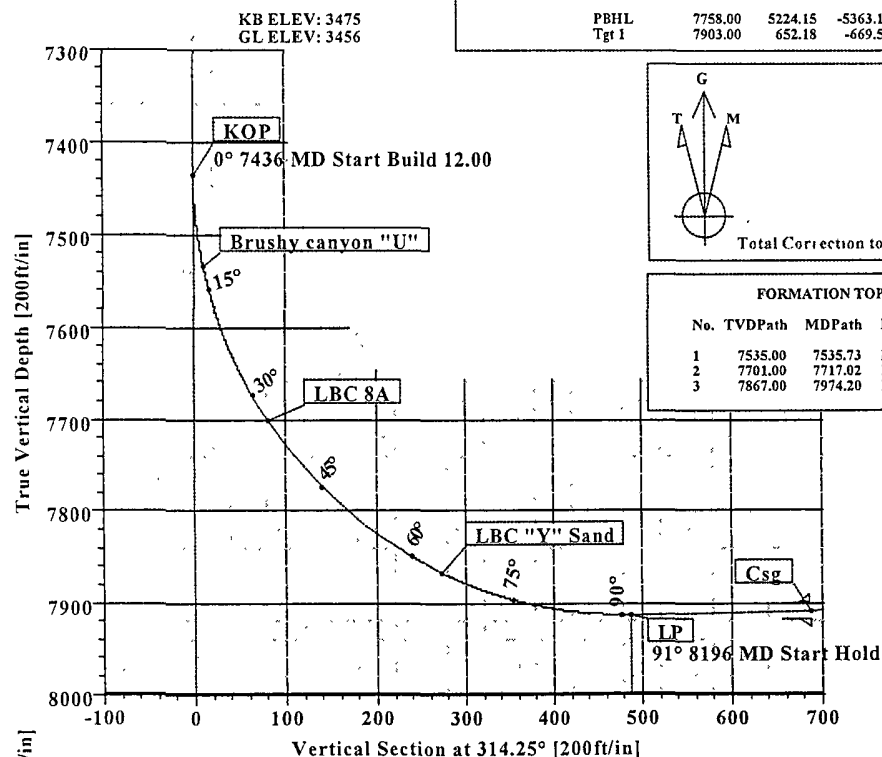
System Datum: Mean Sea Level
Local North: Grid North

SITE DETAILS

Poker Lake Unit #333H

Site Centre Northing: 442947.20
Easting: 652130.25

Ground Level: 3456.00
Positional Uncertainty: 0.00
Convergence: 0.26



LEGEND

4 (1)
315H (1)
Plan #1

Created By: Russell W. Joyner

Date: 3/11/2011

Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: BOPCO, L.P		Date: 3/11/2011		Time: 05:32:06		Page: 1	
Field: Eddy County, NM (Nad 27)		Co-ordinate(NE) Reference:		Well: 333H, Grid North			
Site: Poker Lake Unit #333H		Vertical (TVD) Reference:		SITE 3475.0			
Well: 333H		Section (VS) Reference:		Well (0.00N,0.00E,314.25Azi)			
Wellpath: 1		Survey Calculation Method:		Minimum Curvature		Db: Sybase	

Plan: Plan #1		Date Composed: 3/7/2011	
Principal: Yes		Version: 1	
		Tied-to: From Surface	

Field: Eddy County, NM (Nad 27)			
Map System: US State Plane Coordinate System 1927		Map Zone: New Mexico, Eastern Zone	
Geo Datum: NAD27 (Clarke 1866)		Coordinate System: Well Centre	
Sys Datum: Mean Sea Level		Geomagnetic Model: IGRF2010	

Site: Poker Lake Unit #333H					
Site Position:		Northing: 442947.20 ft		Latitude: 32 13 0.559 N	
From: Map		Easting: 652130.25 ft		Longitude: 103 50 29.125 W	
Position Uncertainty: 0.00 ft				North Reference: Grid	
Ground Level: 3456.00 ft				Grid Convergence: 0.26 deg	

Well: 333H		Slot Name:	
Well Position: +N-S 0.00 ft		Northing: 442947.20 ft	
+E-W 0.00 ft		Easting: 652130.25 ft	
Position Uncertainty: 0.00 ft			
		Latitude: 32 13 0.559 N	
		Longitude: 103 50 29.125 W	

Wellpath: 1		Drilled From: Surface	
Current Datum: SITE		Tie-on Depth: 0.00 ft	
Magnetic Data: 11/15/2011		Above System Datum: Mean Sea Level	
Field Strength: 48566 nT		Declination: 7.66 deg	
Vertical Section: Depth From (TVD)		Mag Dip Angle: 60.12 deg	
ft		+N-S ft	
+E-W ft		Direction deg	
0.00		0.00	
		0.00	
		314.25	

Plan Section Information										
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	314.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7435.55	0.00	314.25	7435.55	0.00	0.00	0.00	0.00	0.00	0.00	
8196.14	91.27	314.25	7912.90	340.54	-349.60	12.00	12.00	0.00	314.25	
8642.87	91.27	314.25	7903.00	652.18	-669.53	0.00	0.00	0.00	0.00	Tgt 1
15196.79	91.27	314.25	7758.00	5224.15	-5363.13	0.00	0.00	0.00	-175.41	PBHL

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
7400.00	0.00	314.25	7400.00	0.00	0.00	0.00	0.00	442947.20	652130.25	
7435.55	0.00	314.25	7435.55	0.00	0.00	0.00	0.00	442947.20	652130.25	KOP
7500.00	7.73	314.25	7499.80	3.03	-3.11	4.34	12.00	442950.23	652127.14	
7535.73	12.02	314.25	7535.00	7.31	-7.50	10.47	12.00	442954.50	652122.75	Brushy canyon "U"
7600.00	19.73	314.25	7596.77	19.57	-20.09	28.04	12.00	442966.76	652110.16	
7700.00	31.73	314.25	7686.69	49.81	-51.13	71.38	12.00	442997.00	652079.12	
7717.02	33.78	314.25	7701.00	56.23	-57.73	80.59	12.00	443003.43	652072.52	LBC 8A
7800.00	43.73	314.25	7765.63	92.43	-94.89	132.47	12.00	443039.63	652035.36	
7900.00	55.73	314.25	7830.14	145.58	-149.45	208.63	12.00	443092.77	651980.80	
7974.20	64.64	314.25	7867.00	190.45	-195.52	272.95	12.00	443137.65	651934.73	LBC "Y" Sand
8000.00	67.73	314.25	7877.41	206.92	-212.42	296.55	12.00	443154.12	651917.82	
8100.00	79.73	314.25	7905.37	273.78	-281.06	392.37	12.00	443220.98	651849.18	
8196.14	91.27	314.25	7912.90	340.54	-349.60	488.05	12.00	443287.74	651780.65	LP
8200.00	91.27	314.25	7912.82	343.24	-352.37	491.91	0.00	443290.44	651777.88	
8300.00	91.27	314.25	7910.60	413.00	-423.98	591.88	0.00	443360.20	651706.27	
8396.14	91.27	314.25	7908.47	480.06	-492.83	688.00	0.00	443427.26	651637.42	CSG

Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: BOPCO, L P	Date: 3/11/2011	Time: 05:32:06	Page: 2
Field: Eddy County, NM (Nad 27)	Co-ordinate(N/E) Reference: Well, 333H, Grid North		
Site: Poker Lake Unit #333H	Vertical (TVD) Reference: SITE 3475 0		
Well: 333H	Section (VS) Reference: Well (0.00N,0 00E,314.25Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: 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
8400.00	91.27	314.25	7908.38	482.76	-495.60	691.86	0.00	443429.95	651634.65	
8500.00	91.27	314.25	7906.17	552.52	-567.21	791.84	0.00	443499.71	651563.04	
8600.00	91.27	314.25	7903.95	622.28	-638.83	891.81	0.00	443569.47	651491.42	
8642.87	91.27	314.25	7903.00	652.18	-669.53	934.67	0.00	443599.38	651460.72	Tgt 1
8700.00	91.27	314.25	7901.73	692.04	-710.44	991.79	0.00	443639.23	651419.81	Capt.
8800.00	91.27	314.25	7899.52	761.80	-782.06	1091.76	0.00	443708.99	651348.19	
8900.00	91.27	314.25	7897.30	831.55	-853.67	1191.74	0.00	443778.75	651276.58	
9000.00	91.27	314.25	7895.09	901.31	-925.29	1291.71	0.00	443848.51	651204.96	
9100.00	91.27	314.25	7892.87	971.07	-996.90	1391.69	0.00	443918.27	651133.35	
9200.00	91.27	314.25	7890.65	1040.83	-1068.52	1491.66	0.00	443988.03	651061.73	
9300.00	91.27	314.25	7888.44	1110.59	-1140.13	1591.64	0.00	444057.79	650990.12	
9400.00	91.27	314.25	7886.22	1180.35	-1211.75	1691.61	0.00	444127.55	650918.50	
9500.00	91.27	314.25	7884.01	1250.11	-1283.36	1791.59	0.00	444197.31	650846.89	
9600.00	91.27	314.25	7881.79	1319.87	-1354.98	1891.57	0.00	444267.07	650775.27	
9700.00	91.27	314.25	7879.58	1389.63	-1426.59	1991.54	0.00	444336.83	650703.66	
9800.00	91.27	314.25	7877.36	1459.39	-1498.21	2091.52	0.00	444406.59	650632.04	
9900.00	91.27	314.25	7875.15	1529.15	-1569.82	2191.49	0.00	444476.35	650560.43	
10000.00	91.27	314.25	7872.93	1598.91	-1641.44	2291.47	0.00	444546.11	650488.81	
10100.00	91.27	314.25	7870.72	1668.67	-1713.05	2391.44	0.00	444615.87	650417.20	
10200.00	91.27	314.25	7868.50	1738.43	-1784.67	2491.42	0.00	444685.63	650345.58	
10300.00	91.27	314.25	7866.29	1808.19	-1856.28	2591.39	0.00	444755.39	650273.97	
10400.00	91.27	314.25	7864.07	1877.95	-1927.90	2691.37	0.00	444825.14	650202.35	
10500.00	91.27	314.25	7861.86	1947.71	-1999.51	2791.34	0.00	444894.90	650130.74	
10600.00	91.27	314.25	7859.65	2017.47	-2071.13	2891.32	0.00	444964.66	650059.12	
10700.00	91.27	314.25	7857.43	2087.23	-2142.74	2991.30	0.00	445034.42	649987.51	
10800.00	91.27	314.25	7855.22	2156.98	-2214.36	3091.27	0.00	445104.18	649915.89	
10900.00	91.27	314.25	7853.00	2226.74	-2285.97	3191.25	0.00	445173.94	649844.28	
11000.00	91.27	314.25	7850.79	2296.50	-2357.59	3291.22	0.00	445243.70	649772.66	
11100.00	91.27	314.25	7848.58	2366.26	-2429.20	3391.20	0.00	445313.46	649701.05	
11200.00	91.27	314.25	7846.36	2436.02	-2500.82	3491.17	0.00	445383.22	649629.43	
11300.00	91.27	314.25	7844.15	2505.78	-2572.43	3591.15	0.00	445452.98	649557.82	
11400.00	91.27	314.25	7841.94	2575.54	-2644.05	3691.12	0.00	445522.74	649486.20	
11500.00	91.27	314.25	7839.72	2645.30	-2715.66	3791.10	0.00	445592.50	649414.59	
11600.00	91.27	314.25	7837.51	2715.06	-2787.28	3891.08	0.00	445662.26	649342.97	
11700.00	91.27	314.25	7835.30	2784.82	-2858.89	3991.05	0.00	445732.02	649271.36	
11800.00	91.27	314.25	7833.09	2854.58	-2930.51	4091.03	0.00	445801.78	649199.74	
11900.00	91.27	314.25	7830.87	2924.34	-3002.12	4191.00	0.00	445871.54	649128.12	
12000.00	91.27	314.25	7828.66	2994.10	-3073.74	4290.98	0.00	445941.30	649056.51	
12100.00	91.27	314.25	7826.45	3063.86	-3145.35	4390.95	0.00	446011.05	648984.89	
12200.00	91.27	314.25	7824.24	3133.62	-3216.97	4490.93	0.00	446080.81	648913.28	
12300.00	91.27	314.25	7822.02	3203.38	-3288.58	4590.90	0.00	446150.57	648841.66	
12400.00	91.27	314.25	7819.81	3273.13	-3360.20	4690.88	0.00	446220.33	648770.05	
12500.00	91.27	314.25	7817.60	3342.89	-3431.81	4790.85	0.00	446290.09	648698.43	
12600.00	91.27	314.25	7815.39	3412.65	-3503.43	4890.83	0.00	446359.85	648626.82	
12700.00	91.27	314.25	7813.18	3482.41	-3575.05	4990.81	0.00	446429.61	648555.20	
12800.00	91.27	314.25	7810.97	3552.17	-3646.66	5090.78	0.00	446499.37	648483.59	
12900.00	91.27	314.25	7808.76	3621.93	-3718.28	5190.76	0.00	446569.13	648411.97	
13000.00	91.27	314.25	7806.54	3691.69	-3789.89	5290.73	0.00	446638.89	648340.36	
13100.00	91.27	314.25	7804.33	3761.45	-3861.51	5390.71	0.00	446708.65	648268.74	
13200.00	91.27	314.25	7802.12	3831.21	-3933.12	5490.68	0.00	446778.41	648197.13	
13300.00	91.27	314.25	7799.91	3900.97	-4004.74	5590.66	0.00	446848.17	648125.51	
13400.00	91.27	314.25	7797.70	3970.73	-4076.35	5690.63	0.00	446917.93	648053.90	
13500.00	91.27	314.25	7795.49	4040.49	-4147.97	5790.61	0.00	446987.68	647982.28	

Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: BOPCO, L P	Date: 3/11/2011	Time: 05:32:06	Page: 3
Field: Eddy County, NM (Nad 27)	Co-ordinate(NE) Reference:	Well: 333H, Grnd North	
Site: Poker Lake Unit #333H	Vertical (TVD) Reference:	SITE 3475.0	
Well: 333H	Section (VS) Reference:	Well (0.00N,0.00E,314.25Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: 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
13600.00	91.27	314.25	7793.28	4110.25	-4219.58	5890.59	0.00	447057.44	647910.67	
13700.00	91.27	314.25	7791.07	4180.01	-4291.20	5990.56	0.00	447127.20	647839.05	
13800.00	91.27	314.25	7788.86	4249.76	-4362.81	6090.54	0.00	447196.96	647767.43	
13900.00	91.27	314.25	7786.65	4319.52	-4434.43	6190.51	0.00	447266.72	647695.82	
14000.00	91.27	314.25	7784.44	4389.28	-4506.04	6290.49	0.00	447336.48	647624.20	
14100.00	91.27	314.25	7782.23	4459.04	-4577.66	6390.46	0.00	447406.24	647552.59	
14200.00	91.27	314.25	7780.02	4528.80	-4649.28	6490.44	0.00	447476.00	647480.97	
14300.00	91.27	314.25	7777.81	4598.56	-4720.89	6590.42	0.00	447545.76	647409.36	
14400.00	91.27	314.25	7775.60	4668.32	-4792.51	6690.39	0.00	447615.52	647337.74	
14500.00	91.27	314.25	7773.39	4738.08	-4864.12	6790.37	0.00	447685.28	647266.13	
14600.00	91.27	314.25	7771.18	4807.84	-4935.74	6890.34	0.00	447755.04	647194.51	
14700.00	91.27	314.25	7768.97	4877.60	-5007.35	6990.32	0.00	447824.80	647122.90	
14800.00	91.27	314.25	7766.76	4947.36	-5078.97	7090.29	0.00	447894.56	647051.28	
14900.00	91.27	314.25	7764.55	5017.12	-5150.58	7190.27	0.00	447964.31	646979.66	
15000.00	91.27	314.25	7762.35	5086.88	-5222.20	7290.24	0.00	448034.07	646908.05	
15100.00	91.27	314.25	7760.14	5156.63	-5293.81	7390.22	0.00	448103.83	646836.43	
15196.79	91.27	314.25	7758.00	5224.15	-5363.13	7486.98	0.00	448171.35	646767.12	PBHL

Targets

Name	Description Dip.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec			Longitude Deg Min Sec		
PBHL		7758.00	5224.15	-5363.13	448171.35	646767.12	32	13	52.496 N	103	51	31.285 W
Tgt 1		7903.00	652.18	-669.53	443599.38	651460.72	32	13	7.043 N	103	50	36.884 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
8396.14	7908.47	0.000	0.000	Csg

Annotation

MD ft	TVD ft	
7435.55	7435.55	KOP
8196.14	7912.90	LP
8642.87	7903.00	T1 / Hold
15196.78	7758.00	PBHL

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
7535.73	7535.00	Brushy canyon "U"		0.00	0.00
7717.02	7701.00	LBC 8A		0.00	0.00
7974.20	7867.00	LBC "Y" Sand		0.00	0.00

**Weatherford****Weatherford Drilling Services**

GeoDec v5.03

Report Date: March 07, 2011
Job Number: _____
Customer: BOPCO
Well Name: Poker Lake Unit #333H
API Number: _____
Rig Name: McVay Rig #5
Location: Eddy Co., NM
Block: _____
Engineer: KRN

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 442947.198 USFT	Latitude 32.2168218 DEG
East/West 652130.248 USFT	Longitude -103.8414237 DEG
Grid Convergence: .26°	
Total Correction: +7.40°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.21682° N	32° 13 min .559 sec
Longitude =	103.84142° W	103° 50 min 29.126 sec

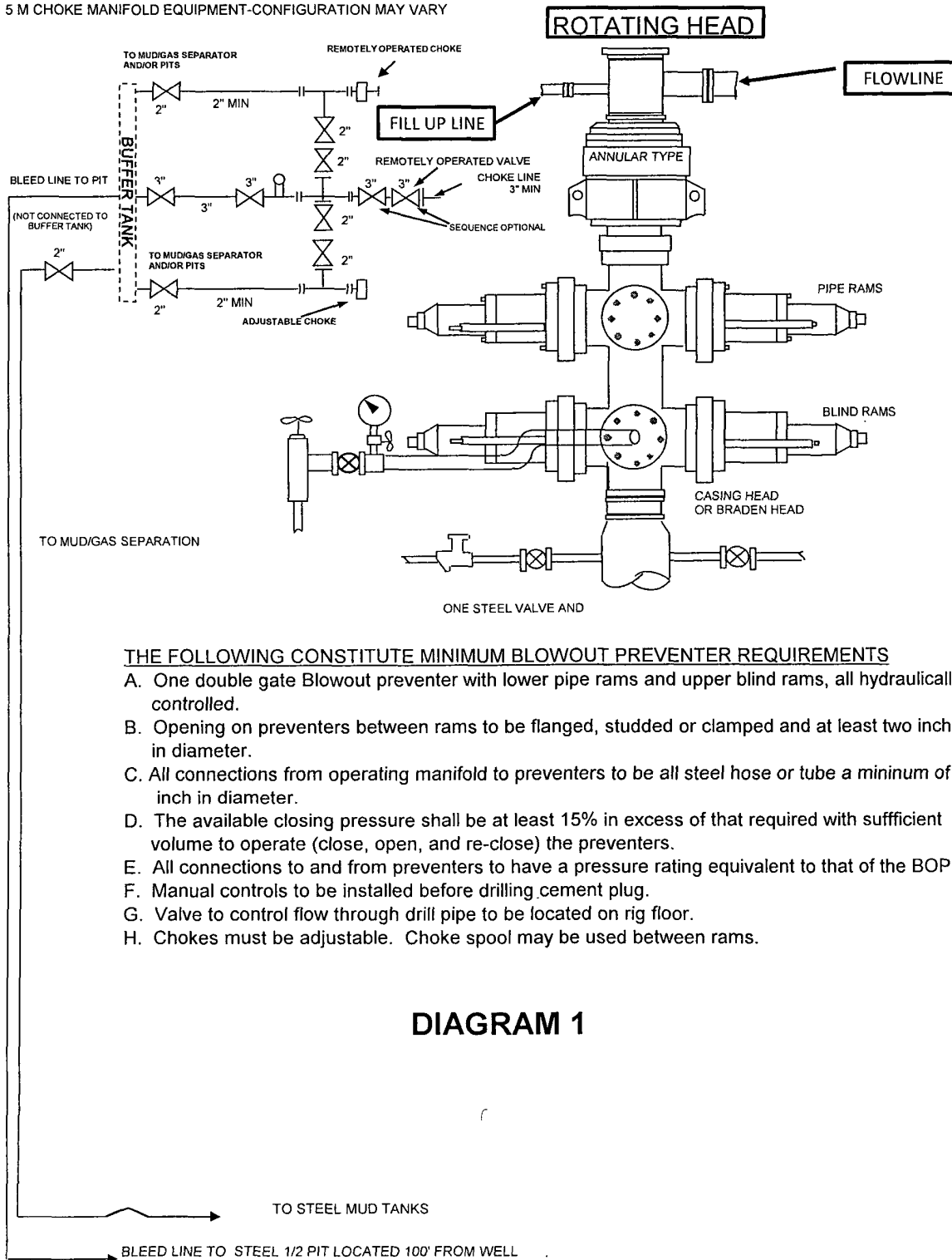
Magnetic Declination =	7.66°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6485
Local Field Strength =	48562 nT	Magnetic Vector X = 23974 nT
Magnetic Dip =	60.12°	Magnetic Vector Y = 3224 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 42108 nT
Spud Date =	Nov 15, 2011	Magnetic Vector H = 24190 nT

Signed: _____

Date: _____

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