AT5-11-534

OCD-ARTESIA

Form 3160-3
(April 2004)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007 EA571

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. LC 067145

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No.

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

8 Lease Name and Well No. **North Indian Flats 24 Federal #14H**

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

9. API Well No. 30-015-39136

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

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

10. Field and Pool, or Exploratory **Indian Flats, West (Delaware)** 38104

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

At surface **NWNW, UL B, 10' FNL & 2230' FEL, Lat N32.472864, Lon W104.038119**

At proposed prod. zone **NWNW, UL B, 810' FNL&2230' FEL, Lat N32.470667, Lon W104.038131**

11. Sec., T. R. M. or Blk. and Survey or Area **Sec 24, T21S-R28E**

14 Distance in miles and direction from nearest town or post office* **6 miles east of Carlsbad**

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) **10'**

16. No. of acres in lease **1480**

17 Spacing Unit dedicated to this well **40**

18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **2519'**

19. Proposed Depth **3582' MD & 2909' TVD**

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

21. Elevations (Show whether DF, KDB, RT, GL, etc) **3275'**

22. Approximate date work will start* **05/01/2011**

23. Estimated duration **15 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 Katy Holster — Name *(Printed/Typed)* **Katy Holster** — Date 3/11/11

Title **Administrative Assistant**

Approved by *(Signature)* /s/ Don Peterson — Name *(Printed/Typed)* — Date MAY 26 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)

Capitan Controlled Water Basin

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SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

5. Lease Serial No.
LC 068284

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1 Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
North Indian Flats 24 Federal #14H

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

9. API Well No.
30-015-39136

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

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

10. Field and Pool, or Exploratory Area
Indian Flats (Delaware)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*

NWNE, UL B, 10' FNL, 2230' FEL, Lat N32.472864, Long W104.038119, Sec 24, T21S-R28E
BHL: NWNE, UL B, 810' FNL, 2230' FEL, Lat N32.470667, Long W104.038131, Sec 24, T21S-R28E

11. County or Parish, State
Eddy Co., NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☑ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

BOPCO, L.P. requests approval of new BOP description (attached) and plug back cement design. Plug back cement will be as follows: 300 sks (approximately) Rising Star (or similar) Class "C" + 1.5% C-35 (friction reducer) + 0.25% R-38 (defoamer) mixed at 17 ppg, 1.0 cu ft/sk.

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MAY 27 2011
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14 I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Katy Holster Title **Administrative Assistant**

Signature Katy Holster Date 3/15/11

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by /s/ Don Peterson Title Date MAY 26 2011

Conditions of approval, if any, are attached. Approval of this notice 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. Office CARLSBAD FIELD OFFICE

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)

Surface casing to be set into the Rustler below all fresh water sands.

Production casing will be 5-1/2" with ECP (External Casing Packer) and DV Tool set at approximately 2500'. The 5-1/2" casing will be cemented from DV Tool to surface using Rising Star Class "C" plus additives. The 5-1/2" casing will be 17#, J or K-55, perforated with ¼" perforations, 6 SPF, 60 degree phasing and not cemented thru lateral.

Drilling procedure, BOP diagram, anticipated tops and surface plans attached.

This well is located outside the Secretary's Potash area and outside the R-111 Potash area. There are potash leases within 5 miles of the location. (4 miles southeast)

BOPCO, L.P., at P. O. Box 2760, Midland, TX, 79702 is a division office 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: North Indian Flats 24 Federal #14H

LEGAL DESCRIPTION - SURFACE: 10' FNL & 2230' FEL, Section 24, T21S, R28E, Eddy County, New Mexico.
Lateral BHL: 810' FNL & 2230' FEL, Section 24, T21S, R28E, 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 3288'
GL 3275'

Formation	Estimated Top From KB TVD	MD	Estimated Subsea Top	BEARING
T/Rustler	13'	13'	+3,275'	Barren
T/Fresh Water	170'	170'	+3,118'	Fresh Water
B/Rustler	281'	281'	+3,007'	Barren
T/Salt	428'	428'	+2,860'	Barren
B/Salt	2,401'	2,401'	+887'	Barren
T/Delaware Mtn Grp	2,756'	2,756'	+532'	Barren
Clean Carb above R. Sand	2,862'	2,862'	+426'	Oil/Gas
T/Ramsey "74" Sand	2,883'	2,883'	+405'	Oil/Gas
T/"74" Reservoir	2,901'	2,901'	+387'	Oil/Gas
B/"74" Reservoir	2,913'	2,913'	+375'	Oil/Gas
T/Ramsey "66" Sand	2,928'	2,928'	+360'	Oil/Gas
T/Ramsey "66" Sand	3,008'	3,008'	+280'	Oil/Gas
B/Ramsey "66" Sand	3,008'	3,008'	+280'	Oil/Gas
TD	3,200'	3,200'	+88'	Oil/Gas
KOP	2,618'	2,618'	+670'	Oil/Gas
EOC "74" Sand Target	2,906'	3,069'	+383'	Oil/Gas
TD (Horizontal)	2,909'	3,582'	+379'	Oil/Gas

POINT 3: CASING PROGRAM

TYPE	HOLE SIZE	INTERVALS	PURPOSE	CONDITION
14"	20"	0' – 40'	Conductor	Contractor Discretion
8 5/8", 24#, K-55, 8rd STC	12-1/4"	0' – 418'	Surface	New
5-1/2", 17#, J or K-55, 8rd STC	7-7/8"	0' – 3,069'	Production	New
5-1/2", 17#, J or K-55, 8rd, STC Perforated (1/4" holes, 6 SPF, 60 degree phasing)	7-7/8'	3,069'-3,582'	Production	New

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS: 2

SURFACE CASING

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.3 design factor with a surface pressure equal to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure a that depth. Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

PRODUCTION CASING

Tension — A 1.6 design factor utilizing the effects of buoyancy (11.0 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 (0.57 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (5,045 psig) on top of the maximum anticipated packer fluid gradient. Backup on production strings will be formation pore pressure (0.43 psi/ft). The effects of tension on burst will not be utilized.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

A BOP equivalent to Diagram 1 will be nippled up on the surface casing head. The BOP stack, blind and pipe rams, chokes, kill line, Upper and lower Kelly valves, inside BOP, choke manifold when rigged up on the surface casing will be tested to 2000 psig ~~(working pressure of BOPE)~~ and 250 psi by independent tester.

These tests will be preformed:

a) When initially installed
b) Whenever any seal subject to test pressure is broken
c) Following related repairs
d) At 30 day intervals

A function test to insure that the preventers are operating correctly will be performed on each trip. See the attached Diagram 1 for the minimum criteria for the choke manifold.

POINT 4: PRESSURE CONTROL EQUIPMENT cont'd

A function test to insure that the preventers are operating correctly will be performed on each trip. See the attached Diagram 1 for the minimum criteria for the choke manifold.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' – 418'	FW	8.5 - 9.2	45-35	NC	NC	NC	9.5
418' – 3,200'	BW	10.0 - 10.3	28-30	NC	NC	NC	9.5
2,618'–3,582'	BW	10.0 - 10.3	28-34	2-4	2-4	20 or less	9.5

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING

No drill stem tests are planned

B) LOGGING.

Run #1: See COA
PEX (GR-CNL/LDT-AIT) @ TD. GR/CNL to surface.
FMI possible at TD of pilot hole.
Mud Logger: Rig up at surface to assist in picking top of salt.
GR while drilling lateral.

C) CORING

No cores are anticipated.

C) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT3/SX
SURFACE: Lead: 0'-118' (100% excess) (circulate to surface)	75	118	Rising Star Class "C" 35:65+6% gel+5% NaCl	9.95	12.80	1.90
Tail: 118'-418' (100% excess)	225	300	Rising Star Class "C"+2% CaCL2+additives	6.39	14.8	1.36
PRODUCTION: 2nd ~~1st~~ Stage Lead: 0'-2,618' (50% excess circ to surface)	350	2,618	Rising Star Class "C" 35:65+5% NaCl	9.95	12.8	1.90
Tail: 2,618'-3,069' (50% excess)	100	451	Rising Star Class "C	6.39	14.8	1.36

E) DIRECTIONAL DRILLING

BOPCO, L.P. plans to drill out the 8-5/8" surface casing with a 7-7/8" bit to a TVD of approximately 3,200'. Open hole logs will be run and the 7-7/8" hole then plugged back to 2,300'. This cement plug will be drilled out to 2,620', tested and then a directional hole will be kicked off building angle at 20 deg/100' and azimuth of 180 degrees. Azimuth will be maintained to a measured depth of 3,582' (2,909' TVD)'. At this depth 5-1/2", 17#, J or K-55, LTC casing will be installed and cemented with DV Tool and ECP @ approximately 3,069' with cement being circulated to surface. The 5-1/2" casing in the lateral will be 17#, J or K-55, LTC perforated with ¼" perforations, 6 SPF, 60 degree phasing and not cemented.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout the Delaware section. A BHP of 1472 psi (max) or MWE of 8.33 ppg is expected. H_2S contingency plan is attached.

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

Spud date is 5/01/2011.

15 days drilling operations

7 days completion operations

GEG/jdb

Weatherford®

Drilling Services

Proposal

BOPCO, L.P.

NORTH INDIAN FLATS 24 FED #14

EDDY CO, NM

WELL FILE: **PLAN 4**

MARCH 1, 2011

Weatherford International, Ltd.
P.O. Box 61028
Midland, TX 79711 USA
+1.432.561.8892 Main
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BOPCO, L.P.

North Indian Flats 24 Fed #14
Eddy Co., New Mexico

Weatherford

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	2619.54	0.00	0.00	2619.54	0.00	0.00	0.00	0.00	0.00	
2	3067.88	89.67	180.05	2906.01	-284.82	-0.25	20.00	180.05	284.82	
3	3583.01	89.67	180.05	2909.00	-799.94	-0.70	0.00	0.00	799.94	Pbhl

G T M

Azimuths to Grid North
True North: -0.16°
Magnetic North: 7.69°

Magnetic Field
Strength: 48760nT
Dip Angle: 60.34°
Date: 4/1/2011
Model: IGRF2010

Total Correction to Grid North: 7.69°

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
24 Fed #14	0.00	0.00	535867.16	591041.95	32°28'22.312N	104°02'17.232W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Pbhl	2909.00	-799.94	-0.70	535067.22	591041.25	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

North Indian Flats 24 Fed #14

Site Centre Northing: 535867.16
Easting: 591041.95

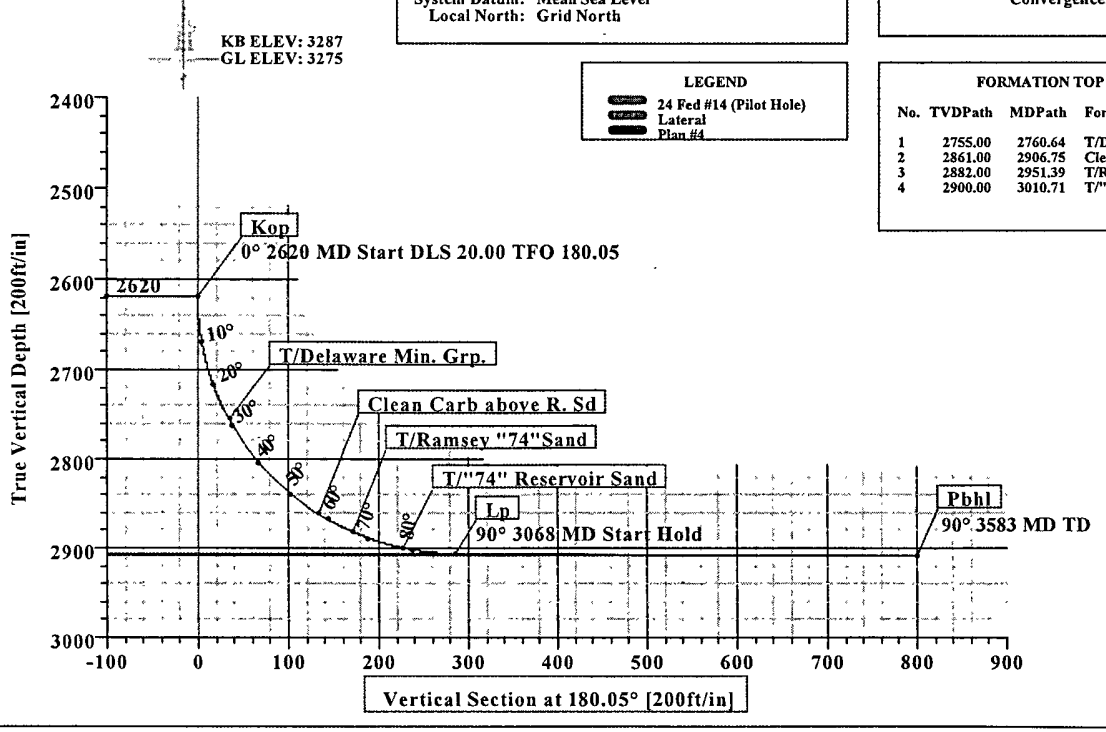
Ground Level: 3275.00
Positional Uncertainty: 0.00
Convergence: 0.16

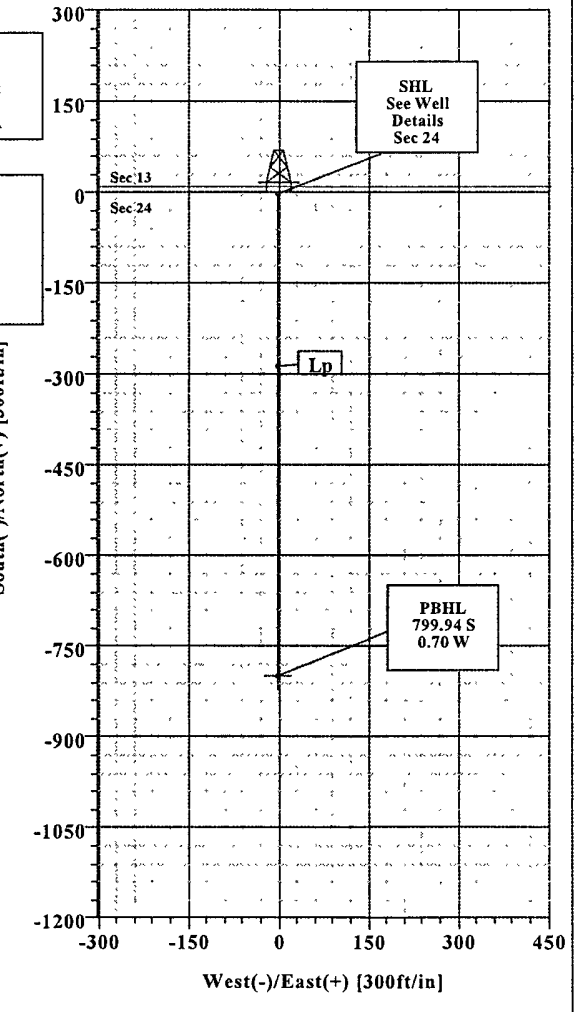
LEGEND

24 Fed #14 (Pilot Hole)
Lateral
Plan #4

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	2755.00	2760.64	T/Delaware Min. Grp.
2	2861.00	2906.75	Clean Carb above R. Sd
3	2882.00	2951.39	T/Ramsey "74"Sand
4	2900.00	3010.71	T/"74" Reservoir Sand





Plan: Plan #4 (24 Fed #14/Lateral)

Created By: Russell W. Joyner Date: 3/1/2011

Weatherford International Ltd.

WFT Plan Report - X & Y's

Weatherford

Company:	BOPCO, L.P.	**Date:** 3/1/2011 **Time:** 13:25:17	**Page:** 1
Field:	Eddy County, NM (Nad 27)	**Co-ordinate(NE) Reference:**	Well: 24 Fed #14, Grid North
Site:	North Indian Flats 24 Fed #14	**Vertical (TVD) Reference:**	SITE 3287.0
Well:	24 Fed #14	**Section (VS) Reference:**	Well (0.00N,0.00E,180.05Azi)
Wellpath:	Lateral	**Survey Calculation Method:**	Minimum Curvature **Db:** Sybase

Plan:	Plan #4	**Date Composed:**	2/28/2011
		Version:	1
Principal:	Yes	**Tied-to:**	User Defined

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: North Indian Flats 24 Fed #14

Site Position:		**Northing:**	535867.16 ft	**Latitude:**	32 28 22.312 N		
From:	Map	**Easting:**	591041.95 ft	**Longitude:**	104 2 17.232 W		
Position Uncertainty:	0.00 ft			**North Reference:**	Grid		
Ground Level:	3275.00 ft			**Grid Convergence:**	0.16 deg		

Well: 24 Fed #14 **Slot Name:**

Well Position:	+N/-S	0.00 ft	**Northing:**	535867.16 ft	**Latitude:**	32 28 22.312 N	
	+E/-W	0.00 ft	**Easting:**	591041.95 ft	**Longitude:**	104 2 17.232 W	
Position Uncertainty:		0.00 ft					

Wellpath: Lateral **Drilled From:** Pilot Hole

Tie-on Depth: 2619.54 ft

Current Datum:	SITE	**Height** 3287.00 ft	**Above System Datum:** Mean Sea Level
Magnetic Data:	4/1/2011		**Declination:** 7.85 deg
Field Strength:	48760 nT		**Mag Dip Angle:** 60.34 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0.00	0.00	0.00	180.05

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
2619.54	0.00	0.00	2619.54	0.00	0.00	0.00	0.00	0.00	0.00	
3067.88	89.67	180.05	2906.01	-284.82	-0.25	20.00	20.00	-40.14	180.05	
3583.01	89.67	180.05	2909.00	-799.94	-0.70	0.00	0.00	0.00	0.00	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
2619.54	0.00	0.00	2619.54	0.00	0.00	0.00	0.00	535867.16	591041.95	Kop
2700.00	16.09	180.05	2698.95	-11.22	-0.01	11.22	20.00	535855.93	591041.94	
2760.64	28.22	180.05	2755 00	-34.05	-0.03	34.05	20.00	535833.11	591041.92	T/Delaware Min. Gr
2800 00	36.09	180.05	2788.30	-54.98	-0.05	54.98	20.00	535812.17	591041.90	
2900.00	56.09	180.05	2857.30	-126.66	-0.11	126.66	20.00	535740.49	591041.84	
2906.75	57.44	180.05	2861.00	-132.31	-0.12	132.31	20.00	535734.84	591041.83	Clean Carb above R
2951.39	66.37	180.05	2882.00	-171.65	-0.15	171.65	20.00	535695.50	591041.80	T/Ramsey "74"Sand
3000.00	76 09	180.05	2897.62	-217.62	-0.19	217.62	20.00	535649.54	591041.76	
3010.71	78.23	180.05	2900.00	-228.06	-0.20	228.06	20.00	535639.09	591041.75	T/"74" Reservoir S
3067.88	89.67	180.05	2906.01	-284.82	-0.25	284.82	20.00	535582.34	591041.70	Lp
3100 00	89.67	180.05	2906.20	-316.94	-0.28	316.94	0.00	535550.22	591041.67	
3200.00	89.67	180.05	2906 78	-416.94	-0.37	416.94	0.00	535450.22	591041.58	
3300.00	89.67	180.05	2907.36	-516.93	-0.45	516.94	0.00	535350.22	591041.49	
3400.00	89.67	180.05	2907.94	-616.93	-0.54	616.93	0.00	535250.22	591041.41	
3500.00	89.67	180.05	2908.52	-716.93	-0.63	716.93	0.00	535150.22	591041.32	
3583 01	89.67	180.05	2909.00	-799.94	-0.70	799.94	0.00	535067.22	591041.25	Pbhl

Weatherford International Ltd.

WFT Plan Report - X & Y's

Weatherford

Company:	BOPCO, L.P.	**Date:**	3/1/2011	**Time:**	13:25:17 **Page:** 2
Field:	Eddy County, NM (Nad 27)	**Co-ordinate(NE) Reference:**	Well: 24 Fed #14, Grid North		
Site:	North Indian Flats 24 Fed #14	**Vertical (TVD) Reference:**	SITE 3287.0		
Well:	24 Fed #14	**Section (VS) Reference:**	Well (0.00N,0.00E,180.05Azi)		
Wellpath:	Lateral	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<— Latitude —> Deg	Min	Sec	<— Longitude —> Deg	Min	Sec
Pbhl			2909.00	-799.94	-0.70	535067.22	591041.25	32	28	14.396 N	104	2	17.266 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
2619.54	2619.54	Kop
3067.88	2906.01	Lp
3583.00	2909.00	Pbhl

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
2760.64	2755.00	T/Delaware Min. Grp.		0.00	0.00
2906.75	2861.00	Clean Carb above R. Sd		0.00	0.00
2951.39	2882.00	T/Ramsey "74"Sand		0.00	0.00
3010.71	2900.00	T/"74" Reservoir Sand		0.00	0.00

Weatherford

Weatherford Drilling Services

GeoDec v5.03

Report Date:	February 03, 2011
Job Number:	
Customer:	BOPCO
Well Name:	North Indian Flats 24 Fed #14
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 535867.160 USFT	Latitude 32.4728644 DEG
East/West 591041.950 USFT	Longitude -104.0381201 DEG
Grid Convergence: .16°	
Total Correction: +7.69°	

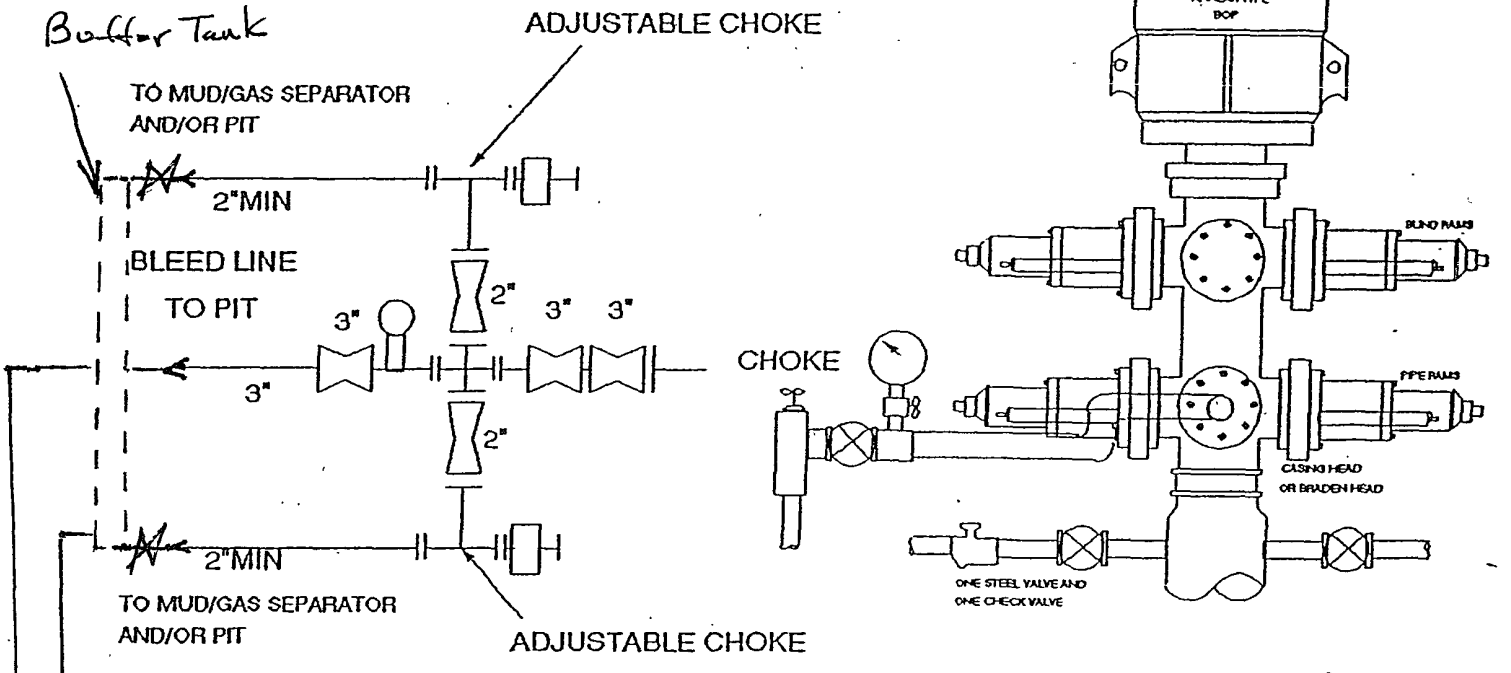
Geodetic Location WGS84	Elevation = 0.0 Meters	
Latitude =	32.47286° N	32° 28 min 22.312 sec
Longitude =	104.03812° W	104° 2 min 17.232 sec

Magnetic Declination =	7.85°	[True North Offset]	
Local Gravity =	.9988 g	CheckSum =	6677
Local Field Strength =	48756 nT	Magnetic Vector X =	23900 nT
Magnetic Dip =	60.34°	Magnetic Vector Y =	3293 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	42369 nT
Spud Date =	Apr 01, 2011	Magnetic Vector H =	24126 nT

Signed:_____ Date:_____

11" x 3000 PSI WP

3/14/11



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

A. One double gate blowout preventer with lower rams for pipe and upper rams blind, 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 BOP's.

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. All chokes will be adjustable. Choke spool may be used between rams.

DIAGRAM 1

→ To steel mud tanks

→ Bleed Line to steel ½ Pit (Approx 100' from well)