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.
BHL: NMLC 0065914

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
Big Eddy Unit 68294X

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

8. Well Name and No.
Big Eddy Unit DI5 4H

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

9. API Well No.
30-015-40397

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
Parallel (Delaware)

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

SWNE, UL G, 1980' FNL, 1848' FEL, Lat:N32.545969, Long:W103.853942
SENE, UL H, 2050' FNL, 330' FEL, Sec 25, T20S-R31E

11. County or Parish, State
Sec 27, T20S-R31E

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. respectfully request to change the target zone for the Big Eddy Unit DI5 4H from the Delaware Brushy Canyon sand to the 2nd Bone Spring Sand.

Attached are the new 8pt drilling program and directional plan.

RECEIVED
MAY 19 2014
NMOCD ARTESIA

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Jeremy Braden Title **Engineering Assistant**

Signature Jeremy Braden Date 8-21-12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Chris Walls Title Eng. Date 5/13/14

DENIED

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 CFO

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 is to be set into the Rustler below all fresh water sands at an approximate depth of 849' and cement circulated to surface.

A Capitan Reef string will be set at an approximate depth of 3,575' and cement circulated to surface.

7" casing will be set at approximately 9,608' MD, 9,406' 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 the R111 Potash area and Secretary's Potash area.

The surface location is nonstandard and located inside the Big Eddy Unit.

The bottom hole location is standard and located inside the Big Eddy Unit.

Surface Lease Numbers – NMLC 0065431

Bottom Hole Lease Numbers – NMLC 0065914

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: Big Eddy Unit DI 5 4H
LEGAL DESCRIPTION - SURFACE: 1980' FNL, 1,848' FEL, Section 27, T20S, R31E, Eddy County, NM.
BHL: 2,050' FNL, 330' FEL, Section 25, T20S, R31E, 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 3,553' (estimated)
GL 3,523'

FORMATION (PILOT HOLE)	TOP EST FROM KB (TVD)	MD	SUB-SEA TOP	BEARING
T/Fresh Water	130'	130'	+ 3,379'	Fresh Water
T/Rustler	677'	677'	+ 2,876'	Barren
T/Salt	859'	859'	+ 2,694'	Barren
T/Tansil	2,804'	2,804'	+ 749'	Barren
T/Reef	2,904'	2,904'	+ 649'	Water
T/Delaware Mnt Group	3,247'	3,249'	+ 306'	Oil/Gas
T/Delaware Sand	3,841'	3,845'	- 288'	Oil/Gas
T/Brushy Canyon	6,457'	6,471'	- 2,604'	Oil/Gas
T/Cobb Pay Zone	6,972'	6,988'	- 3,419'	Oil/Gas
T/Lower Brushy Canyon "8A" Sand	7,277'	7,294'	- 3,724'	Oil/Gas
T/Lower Brushy Canyon "Y" Sand	7,370'	7,370'	- 3,817'	Oil/Gas
T/Bone Spring Lime	7,481'	7,481'	- 3,928'	Oil/Gas
T/1st Bone Spring Sand	8,709'	8,709'	- 5,156'	Oil/Gas
T/2nd Bone Spring A' Sand	9,237'	9,237'	- 5,684'	Oil/Gas
T/2nd Bone Spring A Sand	9,387'	9,387'	- 5,834'	Oil/Gas
T/2nd Bone Spring B Sand	9,463'	9,463'	- 5,910'	Oil/Gas
T/2nd Bone Spring C Sand	9,581'	9,581'	- 6,028'	Oil/Gas
T/2nd Bone Spring Carbonate	9,762'	9,762	- 6,209'	Oil/Gas
TD Pilot Hole	9,920'	9,920'	- 6,367'	Oil/Gas

FORMATION (LATERAL HOLE)	TOP EST FROM KB (TVD)	MD	SUB-SEA TOP	BEARING
Est. KOP	8,885'	8,908'	- 5,332'	Oil/Gas
2nd Bone Spring Sand 2A'	9,239'	9,308'	- 5,686'	Oil/Gas
2nd Bone Spring Sand 2A	9,390'	9,573'	- 5,837'	Oil/Gas
EOC	9,483'	9,908'	- 5,930'	Oil/Gas
Lateral Target #1	9,483'	9,908'	- 5,930'	Oil/Gas
TD Horizontal Hole	9,483'	20,734'	- 5,930'	Oil/Gas

POINT 3: CASING PROGRAM

TYPE	INTERVALS	HOLE SIZE	PURPOSE	CONDITION
30"	0' – 60'	36"	Conductor	Contractor Design
20", 94#, J-55 BT&C	0' – 1,200'	26"	Surface	New
13-3/8", 61#, J-55, BT&C	0' – 2,400'	17-1/2"	Intermediate 1	New
13-3/8", 68#, J-55, BT&C	2,400' – 2,700'	17-1/2"	Intermediate 1	New
9-5/8", 40#, N-80, 8rd, LT&C or 9-5/8", 40#, J-55, 8rd, LT&C*	0' – 4,435'	12-1/4"	Intermediate 2	New
7", 26#, N-80, Buttress or 8rd LTC*	0' – 8,000'	8-3/4"	Production	New
7", 26#, P-110 or HCL-80, HCN-80, LT&C	8,000' – 9,608'	8-3/4"	Production	New
4-1/2", 11.6#, HCP-110 8rd, LT&C	9,558' – 20,734'	6-1/8"	Completion System	New

*** Depending on availability**

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
20", 94#, J-55, BT&C	14.52	1.22	2.29
13-3/8", 61#, J-55, BT&C**	7.78	1.15	2.31
13-3/8", 68#, J-55, BT&C**	6.90	1.28	2.29
9-5/8", 40#, J-55, 8rd, LT&C*	4.12	1.23	1.60
9-5/8", 40#, N-80, 8rd, LT&C*	4.82	1.35	2.32
7", 26#, N-80, Buttress*	3.37	1.23	1.62
7", 26#, N-80, 8rd, LT&C***	2.89	1.18	1.62
7",26# P-110, LT&C***	3.22	1.17	1.86
7",26#, HCL-80, LT&C***	2.14	1.23	1.18
7",26#, HCN-80, LT&C***	2.65	1.37	1.35

Completion System:

TYPE	TENSION	COLLAPSE	BURST
4-1/2", 11.6#, HCP-110 8rd, LT&C	2.94	1.60	2.02

*** Depending on availability.**

****13-3/8", 61#, J-55, BT&C casing will not be run deeper than 2,400'. The 13-3/8", 68#, J-55, BT&C will be run from 2,400' to interval TVD.**

*****7", 26#, N-80, 8rd, LT&C casing will not be run deeper than 8,000'. The 7", 26#, P-110, LT&C or 7", 26#, HCL-80/N80 will be run from 8,000' to interval TVD.**

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING - (20")

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

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

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

PROTECTIVE CASING - (13-3/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (10.2 ppg).

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.

Burst — A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient

PROTECTIVE CASING - (9-5/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg).

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.

Burst — A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient.

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 1.125 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 1.125 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 20" surface casing head (17-1/2" hole) will consist of 20" hydril and diverter system per Diagram B (2,000 psi WP). The hydril when installed on surface casing will be tested to 1,000 psi.

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.

PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM 1 & 2) Cont...

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 ensure that the preventers are operating correctly will be performed on each trip.

BOPCO, L.P. would like to request a variance to use an armored, 3" or 3.5", 5000 psi WP flex hose for the choke line in the drilling of the well if the rig is equip with hose. (See specification for hose that might be used, attached with APD exhibits). This is rig equipment and will help quicken nipple up time thus saving money without a safety problem. The hose itself is rated to 5000 psi ,and has 5000 psi flanges on each end. This well is to be drilled to 20,734' MD (9,483' TVD) and max surface pressure should be +/-2460 psi as prescribed in onshore order #2 shown as max BHP minus 0.22 psi/ft. Thus, 2000 psi BOPE (for 12-1/4" hole) and 3000 psi BOPE (for 8-3/4" and 6-1/8" hole) is all that is needed for this well. **Please refer to diagram 2 for choke manifold and closed loop system layout. If an armored flex hose is utilized, the company man will have all of the proper certified paper work for that hose available on location.**

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 1,200'	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	NC	10.0
1,200' - 2,700'	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	9.5 – 10.5
2,700' - 9,608'	FW/Gel	8.7 – 9.0	28-36	NC	NC	NC	9.5 – 10.0
9,608' – 20,734'	FW/Gel/Starch	8.7 – 9.0	28-36 10-12 18-20	<20	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, CMI in lateral leg open hole as necessary.
Mud Logger: Rigged up at 10.

C) CONVENTIONAL CORING
None anticipated

D) CEMENT

Pilot Hole Plug Back Cement

INTERVAL	AMT SXS	FT OF FILL	TYPE	GAL/SX	PPG	FT^3/SX
8,500' – 9,010'	50	510'	Class H-50/50 POZ + 0.2 FL-52	5.74	14.2	1.26
9,700' – 9,920'	50	220'	Class H + 1.2 CD-32 + 0.1 R3	2.93	18.0	0.89

INTERVAL	AMT SXS	FT OF FILL	TYPE	GAL/SX	PPG	FT^3/SX
Surface:(FW String)						
Lead 0' – 724'	1260	724'	Class C + 2% CaCl + 4% Bentonite + 0.25 lb/sk Cello Flake + 3 lb/sk LCM-1	8.69	13.50	1.75
Tail: 724' – 1,224'	1180	500'	Class C + 2% CaCl + 0.25 lb/sk Cello Flake	6.35	14.80	1.35
1st Int: (Salt String) Lead: 0' – 2,200'	1420	2,200'	EconoCem HLC+ 5% CaCl + 5#/sk Gilsonite	9.32	12.90	1.85
Tail: 2,200' – 2,700'	580	500'	HalCem C	6.34	14.80	1.35
2nd Int: (Reef String)						
Lead: 0' – 3,950'	980	3,950'	EconoCem HLC + 5% CaCl + 5 #/sk Gilsonite	9.32	12.90	1.85
Tail: 3,950' – 4,450'	270	500'	HalCemC	6.34	14.80	1.33
7" Production: Stage:1 Lead: 5,000' – 8,908'	330	3,875'	Tuned Light + 0.75% CFR-3 + 1.5 #sk CaCl	12.41	10.20	2.76
Tail: 8,908' – 9,608'	116	700'	VersaCem-PBSH2 + 0.4% Halad-9	8.76	13.0	1.65
DV Tool @ 5,000'						
Stage 2:						
Lead: 0' – 4,500'	360	4,500'	EconoCem HLC + 1% Econlite + 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 CONT...

BOPCO L.P plans to drill a pilot hole to a total depth of 9,920' (TVD). After drilling pilot hole, BOPCO will set two cement plugs in order to plug back the pilot hole to a depth of 8,908'. The cement plug intervals will be a bottom plug form a depth of 9,920' TVD up to a depth of 9,700' TVD, followed by a top plug from a depth of 9,010' TVD to a depth of 8,500' TVD.

The cement excess pumped will be 100% above gauge hole.

Please see page 7 of the 8pt drilling program for cement plug information.

Cement excesses will be as follow

Surface – 100% excess with cement circulated to surface.

1st and 2nd 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.

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 8,885' at which point a directional hole will be kicked off and drilled at an azimuth of 90.0 degrees, building angle at 10 deg/100' to 60 degrees at a TVD of 8,885' (MD 8,908'). This angle and azimuth will be maintained for 150' to a measured depth of 9,608' (9,406' TVD). At this depth 7", 26#, HCN-80, HCL-80, N-80 or P-110, LTC casing will be installed and cemented in two stages (DV Tool @ approximately 5,000') with cement circulated to surface. A 6-1/8" open hole lateral will then be drilled out from 7" casing at an azimuth of 90 degrees, inclination of 90.000 degrees to a measured depth of 20,734' (9,483' TVD) At this depth a 4-1/2" Completion System with packers installed for zone isolation will be run into the into the production lateral.

G) COMPLETIONS SYSTEM

A 4-1/2" completion system with open hole packers will be run in the production lateral to a depth of 20,734'. The top of the Completion System will be set at approximately 9,558'. Cement will not be required for this system.

H_2S SAFTEY EQUIPMENT

As stated in the BLM Onshore Order 6, for wells located in a known H2S area, H2S equipment will be rigged up after setting surface casing. For the wells located inside known H2S areas the flare pit will be located 150' from the location. For wells located outside known H2S areas the flare 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.) See H2S location layout diagram for location of all H2S equipment on location.

I) CLOSED LOOP AND CHOKE MANIFLOLD

Please see diagram 2.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 4642 psi (max) or MWE of 9.0 ppg is expected. Lost circulation may exist in the Delaware Section from 3,249'-9,920' 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

45 days drilling operations

14 days completion operations

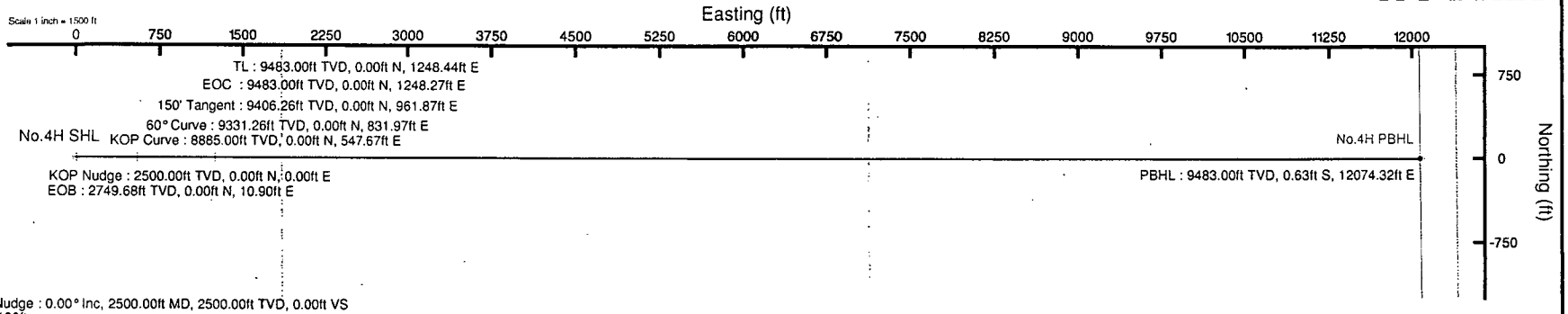
JDB

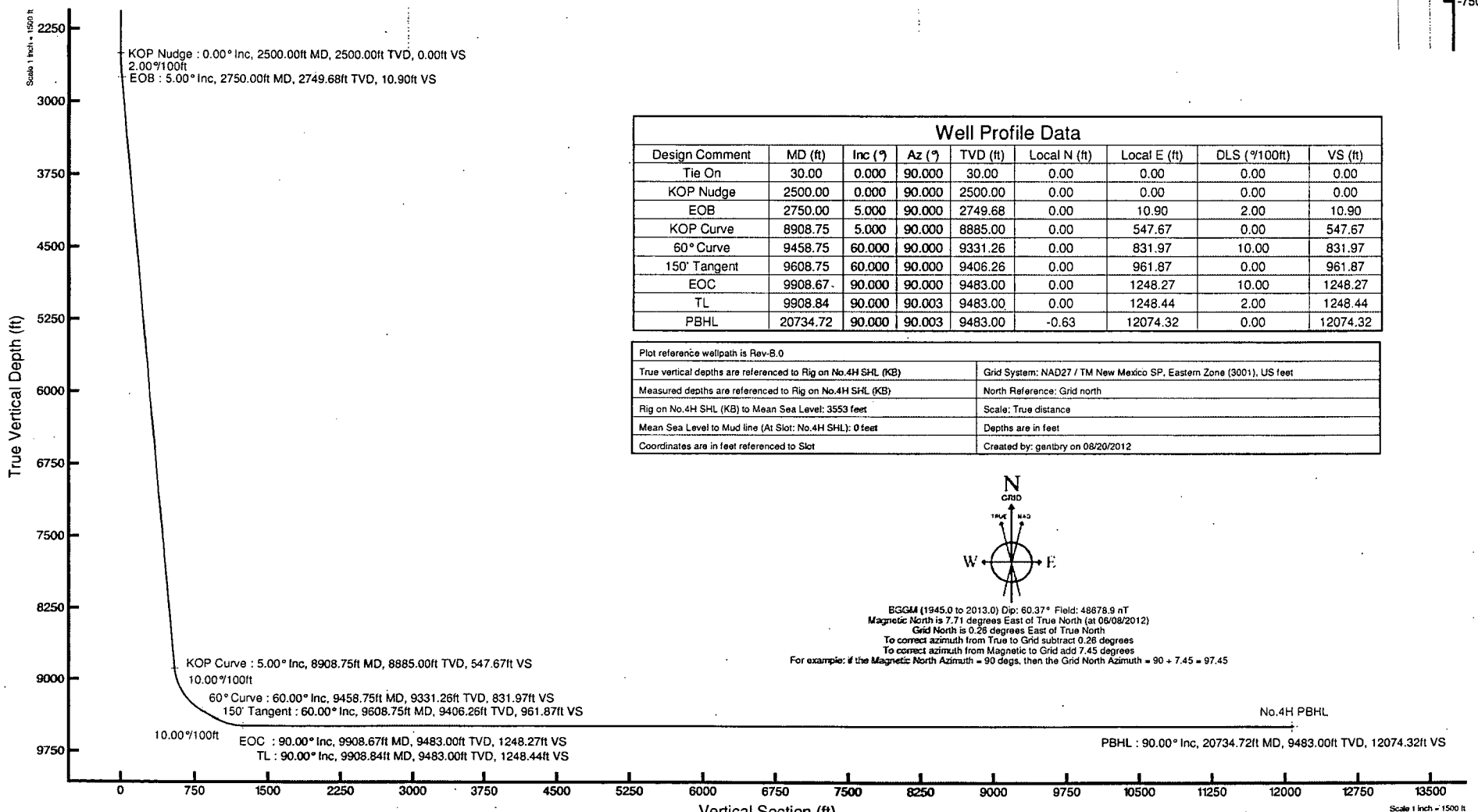
BOPCO, L.P.

Location: Eddy County, NM
Field: Big Eddy Unit Drilling Island 5
Facility: Big Eddy Unit DI5

Slot: No.4H SHL
Well: No.4H
Wellbore: No.4H PWB

BAKER HUGHES





Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	30.00	0.000	90.000	30.00	0.00	0.00	0.00	0.00
KOP Nudge	2500.00	0.000	90.000	2500.00	0.00	0.00	0.00	0.00
EOB	2750.00	5.000	90.000	2749.68	0.00	10.90	2.00	10.90
KOP Curve	8908.75	5.000	90.000	8885.00	0.00	547.67	0.00	547.67
60° Curve	9458.75	60.000	90.000	9331.26	0.00	831.97	10.00	831.97
150' Tangent	9608.75	60.000	90.000	9406.26	0.00	961.87	0.00	961.87
EOC	9908.67	90.000	90.000	9483.00	0.00	1248.27	10.00	1248.27
TL	9908.84	90.000	90.003	9483.00	0.00	1248.44	2.00	1248.44
PBHL	20734.72	90.000	90.003	9483.00	-0.63	12074.32	0.00	12074.32

Plot reference wellpath is Rev-B.0	
True vertical depths are referenced to Rig on No.4H SHL (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.4H SHL (KB)	North Reference: Grid north
Rig on No.4H SHL (KB) to Mean Sea Level: 3553 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No.4H SHL): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gantbry on 08/20/2012

BGGM (1945.0 to 2013.0) Dip: 60.37° Field: 48678.9 nT
Magnetic North is 7.71 degrees East of True North (at 08/08/2012)
Grid North is 0.26 degrees East of True North
To correct azimuth from True to Grid subtract 0.26 degrees
To correct azimuth from Magnetic to Grid add 7.45 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.45 = 97.45

Rev-B.0

Planned Wellpath Report

Rev-B.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.4H SHL**
Area	**Eddy County, NM**	Well	**No.4H**
Field	**Big Eddy Unit Drilling Island 5**	Wellbore	**No.4H PWB**
Facility	**Big Eddy Unit DI5**		

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	**0.999934**	Report Generated	**08/20/2012** at **10:41:27 AM**
Convergence at slot	**0.26° East**	Database/Source file	**WA Midland/No.4H_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**	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W
Facility Reference Pt			**647722.36**	**562668.48**	32°32'45.492"N	103°51'14.189"W
Field Reference Pt			**647722.35**	**562788.51**	32°32'46.679"N	103°51'14.183"W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on No.4H SHL (KB) to Facility Vertical Datum	**3553.00ft**
Horizontal Reference Pt	**Slot**	Rig on No.4H SHL (KB) to Mean Sea Level	**3553.00ft**
Vertical Reference Pt	**Rig on No.4H SHL (KB)**	Rig on No.4H SHL (KB) to Mud Line at Slot (No.4H SHL)	**3553.00ft**
MD Reference Pt	**Rig on No.4H SHL (KB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**90.00°**

Planned Wellpath Report

Rev-B.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	Big Eddy Unit Drilling Island 5	Wellbore	No.4H PWB
Facility	Big Eddy Unit DI5		

WELLPATH DATA (226 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	90.000	0.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
30.00	0.000	90.000	30.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	Tie On
130.00†	0.000	90.000	130.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
230.00†	0.000	90.000	230.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
330.00†	0.000	90.000	330.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
430.00†	0.000	90.000	430.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
530.00†	0.000	90.000	530.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
630.00†	0.000	90.000	630.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
677.00†	0.000	90.000	677.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	Rustler
730.00†	0.000	90.000	730.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
830.00†	0.000	90.000	830.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
859.00†	0.000	90.000	859.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	T/Salt
930.00†	0.000	90.000	930.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1030.00†	0.000	90.000	1030.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1130.00†	0.000	90.000	1130.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1230.00†	0.000	90.000	1230.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1330.00†	0.000	90.000	1330.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1430.00†	0.000	90.000	1430.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1530.00†	0.000	90.000	1530.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1630.00†	0.000	90.000	1630.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1730.00†	0.000	90.000	1730.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1830.00†	0.000	90.000	1830.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
1930.00†	0.000	90.000	1930.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2030.00†	0.000	90.000	2030.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2130.00†	0.000	90.000	2130.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2230.00†	0.000	90.000	2230.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2330.00†	0.000	90.000	2330.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2430.00†	0.000	90.000	2430.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
2500.00	0.000	90.000	2500.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	KOP Nudge
2530.00†	0.600	90.000	2530.00	0.16	0.00	0.16	647722.52	562668.48	32°32'45.492"N	103°51'14.187"W	2.00	
2630.00†	2.600	90.000	2629.96	2.95	0.00	2.95	647725.31	562668.48	32°32'45.492"N	103°51'14.155"W	2.00	
2730.00†	4.600	90.000	2729.75	9.23	0.00	9.23	647731.59	562668.48	32°32'45.491"N	103°51'14.082"W	2.00	
2750.00	5.000	90.000	2749.68	10.90	0.00	10.90	647733.26	562668.48	32°32'45.491"N	103°51'14.062"W	2.00	EOB
2804.52†	5.000	90.000	2804.00	15.65	0.00	15.65	647738.01	562668.48	32°32'45.491"N	103°51'14.006"W	0.00	T/Tansill
2830.00†	5.000	90.000	2829.38	17.87	0.00	17.87	647740.23	562668.48	32°32'45.491"N	103°51'13.981"W	0.00	
2904.91†	5.000	90.000	2904.00	24.40	0.00	24.40	647746.76	562668.48	32°32'45.491"N	103°51'13.904"W	0.00	T/Reef
2930.00†	5.000	90.000	2929.00	26.59	0.00	26.59	647748.95	562668.48	32°32'45.491"N	103°51'13.879"W	0.00	
3030.00†	5.000	90.000	3028.62	35.30	0.00	35.30	647757.66	562668.48	32°32'45.490"N	103°51'13.777"W	0.00	
3130.00†	5.000	90.000	3128.24	44.02	0.00	44.02	647766.38	562668.48	32°32'45.490"N	103°51'13.675"W	0.00	
3230.00†	5.000	90.000	3227.86	52.74	0.00	52.74	647775.09	562668.48	32°32'45.489"N	103°51'13.573"W	0.00	
3249.22†	5.000	90.000	3247.00	54.41	0.00	54.41	647776.77	562668.48	32°32'45.489"N	103°51'13.554"W	0.00	T/DMG
3330.00†	5.000	90.000	3327.48	61.45	0.00	61.45	647783.81	562668.48	32°32'45.489"N	103°51'13.471"W	0.00	
3430.00†	5.000	90.000	3427.10	70.17	0.00	70.17	647792.52	562668.48	32°32'45.489"N	103°51'13.370"W	0.00	
3530.00†	5.000	90.000	3526.71	78.88	0.00	78.88	647801.24	562668.48	32°32'45.488"N	103°51'13.268"W	0.00	
3630.00†	5.000	90.000	3626.33	87.60	0.00	87.60	647809.95	562668.48	32°32'45.488"N	103°51'13.166"W	0.00	

Planned Wellpath Report

Rev-B.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.4H SHL**
Area	**Eddy County, NM**	Well	**No.4H**
Field	**Big Eddy Unit Drilling Island 5**	Wellbore	**No.4H PWB**
Facility	**Big Eddy Unit DI5**		

WELLPATH DATA (226 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
3730.00†	5.000	90.000	3725.95	96.31	0.00	96.31	647818.67	562668.48	32°32'45.487"N	103°51'13.064"W	0.00	
3830.00†	5.000	90.000	3825.57	105.03	0.00	105.03	647827.38	562668.48	32°32'45.487"N	103°51'12.962"W	0.00	
3845.49†	5.000	90.000	3841.00	106.38	0.00	106.38	647828.73	562668.48	32°32'45.487"N	103°51'12.947"W	0.00	T/ Del Sd
3930.00†	5.000	90.000	3925.19	113.75	0.00	113.75	647836.10	562668.48	32°32'45.487"N	103°51'12.861"W	0.00	
4030.00†	5.000	90.000	4024.81	122.46	0.00	122.46	647844.81	562668.48	32°32'45.486"N	103°51'12.759"W	0.00	
4130.00†	5.000	90.000	4124.43	131.18	0.00	131.18	647853.53	562668.48	32°32'45.486"N	103°51'12.657"W	0.00	
4230.00†	5.000	90.000	4224.05	139.89	0.00	139.89	647862.24	562668.48	32°32'45.485"N	103°51'12.555"W	0.00	
4330.00†	5.000	90.000	4323.67	148.61	0.00	148.61	647870.96	562668.48	32°32'45.485"N	103°51'12.453"W	0.00	
4430.00†	5.000	90.000	4423.29	157.32	0.00	157.32	647879.67	562668.48	32°32'45.485"N	103°51'12.352"W	0.00	
4530.00†	5.000	90.000	4522.91	166.04	0.00	166.04	647888.39	562668.48	32°32'45.484"N	103°51'12.250"W	0.00	
4630.00†	5.000	90.000	4622.53	174.75	0.00	174.75	647897.10	562668.48	32°32'45.484"N	103°51'12.148"W	0.00	
4730.00†	5.000	90.000	4722.15	183.47	0.00	183.47	647905.82	562668.48	32°32'45.484"N	103°51'12.046"W	0.00	
4830.00†	5.000	90.000	4821.77	192.19	0.00	192.19	647914.53	562668.48	32°32'45.483"N	103°51'11.944"W	0.00	
4930.00†	5.000	90.000	4921.39	200.90	0.00	200.90	647923.25	562668.48	32°32'45.483"N	103°51'11.842"W	0.00	
5030.00†	5.000	90.000	5021.01	209.62	0.00	209.62	647931.96	562668.48	32°32'45.482"N	103°51'11.741"W	0.00	
5130.00†	5.000	90.000	5120.63	218.33	0.00	218.33	647940.68	562668.48	32°32'45.482"N	103°51'11.639"W	0.00	
5230.00†	5.000	90.000	5220.25	227.05	0.00	227.05	647949.39	562668.48	32°32'45.482"N	103°51'11.537"W	0.00	
5330.00†	5.000	90.000	5319.87	235.76	0.00	235.76	647958.11	562668.48	32°32'45.481"N	103°51'11.435"W	0.00	
5430.00†	5.000	90.000	5419.48	244.48	0.00	244.48	647966.82	562668.48	32°32'45.481"N	103°51'11.333"W	0.00	
5530.00†	5.000	90.000	5519.10	253.19	0.00	253.19	647975.54	562668.48	32°32'45.480"N	103°51'11.232"W	0.00	
5630.00†	5.000	90.000	5618.72	261.91	0.00	261.91	647984.25	562668.48	32°32'45.480"N	103°51'11.130"W	0.00	
5730.00†	5.000	90.000	5718.34	270.63	0.00	270.63	647992.97	562668.48	32°32'45.480"N	103°51'11.028"W	0.00	
5830.00†	5.000	90.000	5817.96	279.34	0.00	279.34	648001.68	562668.48	32°32'45.479"N	103°51'10.926"W	0.00	
5930.00†	5.000	90.000	5917.58	288.06	0.00	288.06	648010.40	562668.48	32°32'45.479"N	103°51'10.824"W	0.00	
6030.00†	5.000	90.000	6017.20	296.77	0.00	296.77	648019.11	562668.48	32°32'45.478"N	103°51'10.723"W	0.00	
6130.00†	5.000	90.000	6116.82	305.49	0.00	305.49	648027.83	562668.48	32°32'45.478"N	103°51'10.621"W	0.00	
6230.00†	5.000	90.000	6216.44	314.20	0.00	314.20	648036.54	562668.48	32°32'45.478"N	103°51'10.519"W	0.00	
6330.00†	5.000	90.000	6316.06	322.92	0.00	322.92	648045.26	562668.48	32°32'45.477"N	103°51'10.417"W	0.00	
6430.00†	5.000	90.000	6415.68	331.63	0.00	331.63	648053.97	562668.48	32°32'45.477"N	103°51'10.315"W	0.00	
6471.48†	5.000	90.000	6457.00	335.25	0.00	335.25	648057.59	562668.48	32°32'45.477"N	103°51'10.273"W	0.00	T/ Br. Cnyn
6530.00†	5.000	90.000	6515.30	340.35	0.00	340.35	648062.69	562668.48	32°32'45.477"N	103°51'10.213"W	0.00	
6630.00†	5.000	90.000	6614.92	349.07	0.00	349.07	648071.40	562668.48	32°32'45.476"N	103°51'10.112"W	0.00	
6730.00†	5.000	90.000	6714.54	357.78	0.00	357.78	648080.12	562668.48	32°32'45.476"N	103°51'10.010"W	0.00	
6830.00†	5.000	90.000	6814.16	366.50	0.00	366.50	648088.83	562668.48	32°32'45.475"N	103°51'09.908"W	0.00	
6930.00†	5.000	90.000	6913.78	375.21	0.00	375.21	648097.55	562668.48	32°32'45.475"N	103°51'09.806"W	0.00	
6988.45†	5.000	90.000	6972.00	380.31	0.00	380.31	648102.64	562668.48	32°32'45.475"N	103°51'09.747"W	0.00	T/ Cobb Pay
7030.00†	5.000	90.000	7013.40	383.93	0.00	383.93	648106.26	562668.48	32°32'45.475"N	103°51'09.704"W	0.00	
7130.00†	5.000	90.000	7113.02	392.64	0.00	392.64	648114.98	562668.48	32°32'45.474"N	103°51'09.603"W	0.00	
7230.00†	5.000	90.000	7212.64	401.36	0.00	401.36	648123.69	562668.48	32°32'45.474"N	103°51'09.501"W	0.00	
7294.61†	5.000	90.000	7277.00	406.99	0.00	406.99	648129.32	562668.48	32°32'45.474"N	103°51'09.435"W	0.00	T/ LBC "8A"
7330.00†	5.000	90.000	7312.25	410.07	0.00	410.07	648132.41	562668.48	32°32'45.473"N	103°51'09.399"W	0.00	
7430.00†	5.000	90.000	7411.87	418.79	0.00	418.79	648141.12	562668.48	32°32'45.473"N	103°51'09.297"W	0.00	
7530.00†	5.000	90.000	7511.49	427.51	0.00	427.51	648149.84	562668.48	32°32'45.473"N	103°51'09.195"W	0.00	
7630.00†	5.000	90.000	7611.11	436.22	0.00	436.22	648158.55	562668.48	32°32'45.472"N	103°51'09.094"W	0.00	
7730.00†	5.000	90.000	7710.73	444.94	0.00	444.94	648167.27	562668.48	32°32'45.472"N	103°51'08.992"W	0.00	

Planned Wellpath Report

Rev-B.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	Big Eddy Unit Drilling Island 5	Wellbore	No.4H PWB
Facility	Big Eddy Unit DI5		

WELLPATH DATA (226 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
7830.00†	5.000	90.000	7810.35	453.65	0.00	453.65	648175.98	562668.48	32°32'45.471"N	103°51'08.890"W	0.00	
7930.00†	5.000	90.000	7909.97	462.37	0.00	462.37	648184.70	562668.48	32°32'45.471"N	103°51'08.788"W	0.00	
8030.00†	5.000	90.000	8009.59	471.08	0.00	471.08	648193.41	562668.48	32°32'45.471"N	103°51'08.686"W	0.00	
8130.00†	5.000	90.000	8109.21	479.80	0.00	479.80	648202.13	562668.48	32°32'45.470"N	103°51'08.584"W	0.00	
8230.00†	5.000	90.000	8208.83	488.51	0.00	488.51	648210.84	562668.48	32°32'45.470"N	103°51'08.483"W	0.00	
8330.00†	5.000	90.000	8308.45	497.23	0.00	497.23	648219.56	562668.48	32°32'45.470"N	103°51'08.381"W	0.00	
8430.00†	5.000	90.000	8408.07	505.95	0.00	505.95	648228.27	562668.48	32°32'45.469"N	103°51'08.279"W	0.00	
8530.00†	5.000	90.000	8507.69	514.66	0.00	514.66	648236.99	562668.48	32°32'45.469"N	103°51'08.177"W	0.00	
8630.00†	5.000	90.000	8607.31	523.38	0.00	523.38	648245.70	562668.48	32°32'45.468"N	103°51'08.075"W	0.00	
8730.00†	5.000	90.000	8706.93	532.09	0.00	532.09	648254.42	562668.48	32°32'45.468"N	103°51'07.974"W	0.00	
8830.00†	5.000	90.000	8806.55	540.81	0.00	540.81	648263.13	562668.48	32°32'45.468"N	103°51'07.872"W	0.00	
8908.75	5.000	90.000	8885.00	547.67	0.00	547.67	648269.99	562668.48	32°32'45.467"N	103°51'07.792"W	0.00	KOP Curve
8930.00†	7.125	90.000	8906.13	549.92	0.00	549.92	648272.24	562668.48	32°32'45.467"N	103°51'07.765"W	10.00	
9030.00†	17.125	90.000	9003.77	570.89	0.00	570.89	648293.21	562668.48	32°32'45.466"N	103°51'07.520"W	10.00	
9130.00†	27.125	90.000	9096.29	608.51	0.00	608.51	648330.83	562668.48	32°32'45.465"N	103°51'07.081"W	10.00	
9230.00†	37.125	90.000	9180.87	661.62	0.00	661.62	648383.93	562668.48	32°32'45.462"N	103°51'06.461"W	10.00	
9330.00†	47.125	90.000	9254.95	728.61	0.00	728.61	648450.92	562668.48	32°32'45.459"N	103°51'05.678"W	10.00	
9430.00†	57.125	90.000	9316.26	807.44	0.00	807.44	648529.75	562668.48	32°32'45.456"N	103°51'04.757"W	10.00	
9458.75	60.000	90.000	9331.26	831.97	0.00	831.97	648554.27	562668.48	32°32'45.455"N	103°51'04.471"W	10.00	60° Curve
9530.00†	60.000	90.000	9366.88	893.67	0.00	893.67	648615.97	562668.48	32°32'45.452"N	103°51'03.750"W	0.00	
9608.75	60.000	90.000	9406.26	961.87	0.00	961.87	648684.17	562668.48	32°32'45.449"N	103°51'02.953"W	0.00	150' Tangent
9630.00†	62.125	90.000	9416.54	980.47	0.00	980.47	648702.76	562668.48	32°32'45.448"N	103°51'02.736"W	10.00	
9730.00†	72.128	90.000	9455.36	1072.49	0.00	1072.49	648794.77	562668.48	32°32'45.444"N	103°51'01.661"W	10.00	
9830.00†	82.131	90.000	9477.61	1169.85	0.00	1169.85	648892.13	562668.48	32°32'45.439"N	103°51'00.524"W	10.00	
9908.67	90.000	90.000	9483.00	1248.27	0.00	1248.27	648970.55	562668.48	32°32'45.436"N	103°50'59.607"W	10.00	EOC
9908.84	90.000	90.003	9483.00	1248.44	0.00	1248.44	648970.72	562668.48	32°32'45.436"N	103°50'59.605"W	2.00	TL
9930.00†	90.000	90.003	9483.00	1269.60	0.00	1269.60	648991.88	562668.48	32°32'45.435"N	103°50'59.358"W	0.00	
10030.00†	90.000	90.003	9483.00	1369.60	-0.01	1369.60	649091.87	562668.47	32°32'45.430"N	103°50'58.190"W	0.00	
10130.00†	90.000	90.003	9483.00	1469.60	-0.01	1469.60	649191.86	562668.47	32°32'45.426"N	103°50'57.022"W	0.00	
10230.00†	90.000	90.003	9483.00	1569.60	-0.02	1569.60	649291.86	562668.46	32°32'45.421"N	103°50'55.854"W	0.00	
10330.00†	90.000	90.003	9483.00	1669.60	-0.02	1669.60	649391.85	562668.46	32°32'45.417"N	103°50'54.686"W	0.00	
10430.00†	90.000	90.003	9483.00	1769.60	-0.03	1769.60	649491.84	562668.45	32°32'45.412"N	103°50'53.517"W	0.00	
10530.00†	90.000	90.003	9483.00	1869.60	-0.04	1869.60	649591.84	562668.44	32°32'45.408"N	103°50'52.349"W	0.00	
10630.00†	90.000	90.003	9483.00	1969.60	-0.04	1969.60	649691.83	562668.44	32°32'45.403"N	103°50'51.181"W	0.00	
10730.00†	90.000	90.003	9483.00	2069.60	-0.05	2069.60	649791.82	562668.43	32°32'45.398"N	103°50'50.013"W	0.00	
10830.00†	90.000	90.003	9483.00	2169.60	-0.05	2169.60	649891.82	562668.43	32°32'45.394"N	103°50'48.845"W	0.00	
10930.00†	90.000	90.003	9483.00	2269.60	-0.06	2269.60	649991.81	562668.42	32°32'45.389"N	103°50'47.677"W	0.00	
11030.00†	90.000	90.003	9483.00	2369.60	-0.07	2369.60	650091.80	562668.41	32°32'45.385"N	103°50'46.508"W	0.00	
11130.00†	90.000	90.003	9483.00	2469.60	-0.07	2469.60	650191.80	562668.41	32°32'45.380"N	103°50'45.340"W	0.00	
11230.00†	90.000	90.003	9483.00	2569.60	-0.08	2569.60	650291.79	562668.40	32°32'45.376"N	103°50'44.172"W	0.00	
11330.00†	90.000	90.003	9483.00	2669.60	-0.08	2669.60	650391.78	562668.40	32°32'45.371"N	103°50'43.004"W	0.00	
11430.00†	90.000	90.003	9483.00	2769.60	-0.09	2769.60	650491.78	562668.39	32°32'45.366"N	103°50'41.836"W	0.00	
11530.00†	90.000	90.003	9483.00	2869.60	-0.09	2869.60	650591.77	562668.39	32°32'45.362"N	103°50'40.668"W	0.00	
11630.00†	90.000	90.003	9483.00	2969.60	-0.10	2969.60	650691.76	562668.38	32°32'45.357"N	103°50'39.499"W	0.00	
11730.00†	90.000	90.003	9483.00	3069.60	-0.11	3069.60	650791.76	562668.37	32°32'45.353"N	103°50'38.331"W	0.00	

Planned Wellpath Report

Rev-B.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	Big Eddy Unit Drilling Island 5	Wellbore	No.4H PWB
Facility	Big Eddy Unit DI5		

WELLPATH DATA (226 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
11830.00†	90.000	90.003	9483.00	3169.60	-0.11	3169.60	650891.75	562668.37	32°32'45.348"N	103°50'37.163"W	0.00	
11930.00†	90.000	90.003	9483.00	3269.60	-0.12	3269.60	650991.74	562668.36	32°32'45.343"N	103°50'35.995"W	0.00	
12030.00†	90.000	90.003	9483.00	3369.60	-0.12	3369.60	651091.74	562668.36	32°32'45.339"N	103°50'34.827"W	0.00	
12130.00†	90.000	90.003	9483.00	3469.60	-0.13	3469.60	651191.73	562668.35	32°32'45.334"N	103°50'33.659"W	0.00	
12230.00†	90.000	90.003	9483.00	3569.60	-0.14	3569.60	651291.72	562668.34	32°32'45.329"N	103°50'32.491"W	0.00	
12330.00†	90.000	90.003	9483.00	3669.60	-0.14	3669.60	651391.71	562668.34	32°32'45.325"N	103°50'31.322"W	0.00	
12430.00†	90.000	90.003	9483.00	3769.60	-0.15	3769.60	651491.71	562668.33	32°32'45.320"N	103°50'30.154"W	0.00	
12530.00†	90.000	90.003	9483.00	3869.60	-0.15	3869.60	651591.70	562668.33	32°32'45.316"N	103°50'28.986"W	0.00	
12630.00†	90.000	90.003	9483.00	3969.60	-0.16	3969.60	651691.69	562668.32	32°32'45.311"N	103°50'27.818"W	0.00	
12730.00†	90.000	90.003	9483.00	4069.60	-0.17	4069.60	651791.69	562668.31	32°32'45.306"N	103°50'26.650"W	0.00	
12830.00†	90.000	90.003	9483.00	4169.60	-0.17	4169.60	651891.68	562668.31	32°32'45.302"N	103°50'25.482"W	0.00	
12930.00†	90.000	90.003	9483.00	4269.60	-0.18	4269.60	651991.67	562668.30	32°32'45.297"N	103°50'24.313"W	0.00	
13030.00†	90.000	90.003	9483.00	4369.60	-0.18	4369.60	652091.67	562668.30	32°32'45.292"N	103°50'23.145"W	0.00	
13130.00†	90.000	90.003	9483.00	4469.60	-0.19	4469.60	652191.66	562668.29	32°32'45.288"N	103°50'21.977"W	0.00	
13230.00†	90.000	90.003	9483.00	4569.60	-0.19	4569.60	652291.65	562668.29	32°32'45.283"N	103°50'20.809"W	0.00	
13330.00†	90.000	90.003	9483.00	4669.60	-0.20	4669.60	652391.65	562668.28	32°32'45.278"N	103°50'19.641"W	0.00	
13430.00†	90.000	90.003	9483.00	4769.60	-0.21	4769.60	652491.64	562668.27	32°32'45.274"N	103°50'18.473"W	0.00	
13530.00†	90.000	90.003	9483.00	4869.60	-0.21	4869.60	652591.63	562668.27	32°32'45.269"N	103°50'17.304"W	0.00	
13630.00†	90.000	90.003	9483.00	4969.60	-0.22	4969.60	652691.63	562668.26	32°32'45.264"N	103°50'16.136"W	0.00	
13730.00†	90.000	90.003	9483.00	5069.60	-0.22	5069.60	652791.62	562668.26	32°32'45.260"N	103°50'14.968"W	0.00	
13830.00†	90.000	90.003	9483.00	5169.60	-0.23	5169.60	652891.61	562668.25	32°32'45.255"N	103°50'13.800"W	0.00	
13930.00†	90.000	90.003	9483.00	5269.60	-0.24	5269.60	652991.61	562668.24	32°32'45.250"N	103°50'12.632"W	0.00	
14030.00†	90.000	90.003	9483.00	5369.60	-0.24	5369.60	653091.60	562668.24	32°32'45.246"N	103°50'11.464"W	0.00	
14130.00†	90.000	90.003	9483.00	5469.60	-0.25	5469.60	653191.59	562668.23	32°32'45.241"N	103°50'10.295"W	0.00	
14230.00†	90.000	90.003	9483.00	5569.60	-0.25	5569.60	653291.59	562668.23	32°32'45.236"N	103°50'09.127"W	0.00	
14330.00†	90.000	90.003	9483.00	5669.60	-0.26	5669.60	653391.58	562668.22	32°32'45.232"N	103°50'07.959"W	0.00	
14430.00†	90.000	90.003	9483.00	5769.60	-0.26	5769.60	653491.57	562668.22	32°32'45.227"N	103°50'06.791"W	0.00	
14530.00†	90.000	90.003	9483.00	5869.60	-0.27	5869.60	653591.57	562668.21	32°32'45.222"N	103°50'05.623"W	0.00	
14630.00†	90.000	90.003	9483.00	5969.60	-0.28	5969.60	653691.56	562668.20	32°32'45.218"N	103°50'04.455"W	0.00	
14730.00†	90.000	90.003	9483.00	6069.60	-0.28	6069.60	653791.55	562668.20	32°32'45.213"N	103°50'03.286"W	0.00	
14830.00†	90.000	90.003	9483.00	6169.60	-0.29	6169.60	653891.55	562668.19	32°32'45.208"N	103°50'02.118"W	0.00	
14930.00†	90.000	90.003	9483.00	6269.60	-0.29	6269.60	653991.54	562668.19	32°32'45.204"N	103°50'00.950"W	0.00	
15030.00†	90.000	90.003	9483.00	6369.60	-0.30	6369.60	654091.53	562668.18	32°32'45.199"N	103°49'59.782"W	0.00	
15130.00†	90.000	90.003	9483.00	6469.60	-0.31	6469.60	654191.52	562668.17	32°32'45.194"N	103°49'58.614"W	0.00	
15230.00†	90.000	90.003	9483.00	6569.60	-0.31	6569.60	654291.52	562668.17	32°32'45.190"N	103°49'57.446"W	0.00	
15330.00†	90.000	90.003	9483.00	6669.60	-0.32	6669.60	654391.51	562668.16	32°32'45.185"N	103°49'56.278"W	0.00	
15430.00†	90.000	90.003	9483.00	6769.60	-0.32	6769.60	654491.50	562668.16	32°32'45.180"N	103°49'55.109"W	0.00	
15530.00†	90.000	90.003	9483.00	6869.60	-0.33	6869.60	654591.50	562668.15	32°32'45.175"N	103°49'53.941"W	0.00	
15630.00†	90.000	90.003	9483.00	6969.60	-0.34	6969.60	654691.49	562668.14	32°32'45.171"N	103°49'52.773"W	0.00	
15730.00†	90.000	90.003	9483.00	7069.60	-0.34	7069.60	654791.48	562668.14	32°32'45.166"N	103°49'51.605"W	0.00	
15830.00†	90.000	90.003	9483.00	7169.60	-0.35	7169.60	654891.48	562668.13	32°32'45.161"N	103°49'50.437"W	0.00	
15930.00†	90.000	90.003	9483.00	7269.60	-0.35	7269.60	654991.47	562668.13	32°32'45.156"N	103°49'49.269"W	0.00	
16030.00†	90.000	90.003	9483.00	7369.60	-0.36	7369.60	655091.46	562668.12	32°32'45.152"N	103°49'48.100"W	0.00	
16130.00†	90.000	90.003	9483.00	7469.60	-0.36	7469.60	655191.46	562668.12	32°32'45.147"N	103°49'46.932"W	0.00	
16230.00†	90.000	90.003	9483.00	7569.60	-0.37	7569.60	655291.45	562668.11	32°32'45.142"N	103°49'45.764"W	0.00	

Planned Wellpath Report

Rev-B.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	Big Eddy Unit Drilling Island 5	Wellbore	No.4H PWB
Facility	Big Eddy Unit DI5		

WELLPATH DATA (226 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
16330.00†	90.000	90.003	9483.00	7669.60	-0.38	7669.60	655391.44	562668.10	32°32'45.138"N	103°49'44.596"W	0.00	
16430.00†	90.000	90.003	9483.00	7769.60	-0.38	7769.60	655491.44	562668.10	32°32'45.133"N	103°49'43.428"W	0.00	
16530.00†	90.000	90.003	9483.00	7869.60	-0.39	7869.60	655591.43	562668.09	32°32'45.128"N	103°49'42.260"W	0.00	
16630.00†	90.000	90.003	9483.00	7969.60	-0.39	7969.60	655691.42	562668.09	32°32'45.123"N	103°49'41.091"W	0.00	
16730.00†	90.000	90.003	9483.00	8069.60	-0.40	8069.60	655791.42	562668.08	32°32'45.119"N	103°49'39.923"W	0.00	
16830.00†	90.000	90.003	9483.00	8169.60	-0.41	8169.60	655891.41	562668.07	32°32'45.114"N	103°49'38.755"W	0.00	
16930.00†	90.000	90.003	9483.00	8269.60	-0.41	8269.60	655991.40	562668.07	32°32'45.109"N	103°49'37.587"W	0.00	
17030.00†	90.000	90.003	9483.00	8369.60	-0.42	8369.60	656091.40	562668.06	32°32'45.104"N	103°49'36.419"W	0.00	
17130.00†	90.000	90.003	9483.00	8469.60	-0.42	8469.60	656191.39	562668.06	32°32'45.099"N	103°49'35.251"W	0.00	
17230.00†	90.000	90.003	9483.00	8569.60	-0.43	8569.60	656291.38	562668.05	32°32'45.095"N	103°49'34.082"W	0.00	
17330.00†	90.000	90.003	9483.00	8669.60	-0.43	8669.60	656391.38	562668.05	32°32'45.090"N	103°49'32.914"W	0.00	
17430.00†	90.000	90.003	9483.00	8769.60	-0.44	8769.60	656491.37	562668.04	32°32'45.085"N	103°49'31.746"W	0.00	
17530.00†	90.000	90.003	9483.00	8869.60	-0.45	8869.60	656591.36	562668.03	32°32'45.080"N	103°49'30.578"W	0.00	
17630.00†	90.000	90.003	9483.00	8969.60	-0.45	8969.60	656691.35	562668.03	32°32'45.076"N	103°49'29.410"W	0.00	
17730.00†	90.000	90.003	9483.00	9069.60	-0.46	9069.60	656791.35	562668.02	32°32'45.071"N	103°49'28.242"W	0.00	
17830.00†	90.000	90.003	9483.00	9169.60	-0.46	9169.60	656891.34	562668.02	32°32'45.066"N	103°49'27.074"W	0.00	
17930.00†	90.000	90.003	9483.00	9269.60	-0.47	9269.60	656991.33	562668.01	32°32'45.061"N	103°49'25.905"W	0.00	
18030.00†	90.000	90.003	9483.00	9369.60	-0.48	9369.60	657091.33	562668.00	32°32'45.056"N	103°49'24.737"W	0.00	
18130.00†	90.000	90.003	9483.00	9469.60	-0.48	9469.60	657191.32	562668.00	32°32'45.052"N	103°49'23.569"W	0.00	
18230.00†	90.000	90.003	9483.00	9569.60	-0.49	9569.60	657291.31	562667.99	32°32'45.047"N	103°49'22.401"W	0.00	
18330.00†	90.000	90.003	9483.00	9669.60	-0.49	9669.60	657391.31	562667.99	32°32'45.042"N	103°49'21.233"W	0.00	
18430.00†	90.000	90.003	9483.00	9769.60	-0.50	9769.60	657491.30	562667.98	32°32'45.037"N	103°49'20.065"W	0.00	
18530.00†	90.000	90.003	9483.00	9869.60	-0.50	9869.60	657591.29	562667.98	32°32'45.032"N	103°49'18.896"W	0.00	
18630.00†	90.000	90.003	9483.00	9969.60	-0.51	9969.60	657691.29	562667.97	32°32'45.028"N	103°49'17.728"W	0.00	
18730.00†	90.000	90.003	9483.00	10069.60	-0.52	10069.60	657791.28	562667.96	32°32'45.023"N	103°49'16.560"W	0.00	
18830.00†	90.000	90.003	9483.00	10169.60	-0.52	10169.60	657891.27	562667.96	32°32'45.018"N	103°49'15.392"W	0.00	
18930.00†	90.000	90.003	9483.00	10269.60	-0.53	10269.60	657991.27	562667.95	32°32'45.013"N	103°49'14.224"W	0.00	
19030.00†	90.000	90.003	9483.00	10369.60	-0.53	10369.60	658091.26	562667.95	32°32'45.008"N	103°49'13.056"W	0.00	
19130.00†	90.000	90.003	9483.00	10469.60	-0.54	10469.60	658191.25	562667.94	32°32'45.004"N	103°49'11.887"W	0.00	
19230.00†	90.000	90.003	9483.00	10569.60	-0.55	10569.60	658291.25	562667.93	32°32'44.999"N	103°49'10.719"W	0.00	
19330.00†	90.000	90.003	9483.00	10669.60	-0.55	10669.60	658391.24	562667.93	32°32'44.994"N	103°49'09.551"W	0.00	
19430.00†	90.000	90.003	9483.00	10769.60	-0.56	10769.60	658491.23	562667.92	32°32'44.989"N	103°49'08.383"W	0.00	
19530.00†	90.000	90.003	9483.00	10869.60	-0.56	10869.60	658591.23	562667.92	32°32'44.984"N	103°49'07.215"W	0.00	
19630.00†	90.000	90.003	9483.00	10969.60	-0.57	10969.60	658691.22	562667.91	32°32'44.979"N	103°49'06.047"W	0.00	
19730.00†	90.000	90.003	9483.00	11069.60	-0.58	11069.60	658791.21	562667.90	32°32'44.975"N	103°49'04.879"W	0.00	
19830.00†	90.000	90.003	9483.00	11169.60	-0.58	11169.60	658891.21	562667.90	32°32'44.970"N	103°49'03.710"W	0.00	
19930.00†	90.000	90.003	9483.00	11269.60	-0.59	11269.60	658991.20	562667.89	32°32'44.965"N	103°49'02.542"W	0.00	
20030.00†	90.000	90.003	9483.00	11369.60	-0.59	11369.60	659091.19	562667.89	32°32'44.960"N	103°49'01.374"W	0.00	
20130.00†	90.000	90.003	9483.00	11469.60	-0.60	11469.60	659191.19	562667.88	32°32'44.955"N	103°49'00.206"W	0.00	
20230.00†	90.000	90.003	9483.00	11569.60	-0.60	11569.60	659291.18	562667.88	32°32'44.950"N	103°48'59.038"W	0.00	
20330.00†	90.000	90.003	9483.00	11669.60	-0.61	11669.60	659391.17	562667.87	32°32'44.945"N	103°48'57.870"W	0.00	
20430.00†	90.000	90.003	9483.00	11769.60	-0.62	11769.60	659491.16	562667.86	32°32'44.941"N	103°48'56.701"W	0.00	
20530.00†	90.000	90.003	9483.00	11869.60	-0.62	11869.60	659591.16	562667.86	32°32'44.936"N	103°48'55.533"W	0.00	
20630.00†	90.000	90.003	9483.00	11969.60	-0.63	11969.60	659691.15	562667.85	32°32'44.931"N	103°48'54.365"W	0.00	
20730.00†	90.000	90.003	9483.00	12069.60	-0.63	12069.60	659791.14	562667.85	32°32'44.926"N	103°48'53.197"W	0.00	

Planned Wellpath Report

Rev-B.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.4H SHL**
Area	**Eddy County, NM**	Well	**No.4H**
Field	**Big Eddy Unit Drilling Island 5**	Wellbore	**No.4H PWB**
Facility	**Big Eddy Unit DI5**		

WELLPATH DATA (226 stations)

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
20734.72	90.000	90.003	9483.00[1]	12074.32	-0.63	12074.32	659795.86	562667.85	32°32'44.926"N	103°48'53.142"W	0.00	PBHL

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
No.4H Target #1		7468.00	-0.05	937.00	648659.29	562668.43	32°32'45.449"N	103°51'03.244"W	point
No.4H Target #2		7558.00	-0.39	7456.00	655177.85	562668.09	32°32'45.147"N	103°49'47.091"W	point
1) No.4H PBHL	20734.72	9483.00	-0.63	12074.32	659795.86	562667.85	32°32'44.926"N	103°48'53.142"W	point

SURVEY PROGRAM - Ref Wellbore: No.4H PWB Ref Wellpath: Rev-B.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	20734.72	NaviTrak (Standard)		No.4H PWB