OCD Artesia

R-111-POTASH

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. **NM06808, 06807, 06806**

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. **James Ranch Unit #126H** (306407)

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

9. API Well No. 30-015-39254

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

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

10. Field and Pool, or Exploratory **Quahada Ridge (Delaware)** (50470)

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

At surface **SWNE, 1441' FNL, 1821' FEL, Lat N32.380983 , Lon W103.883497** (1341')

At proposed prod. zone **660'FNL,330'FWL, Sec 19-T22S-R30E, Lat N32.383194, Lon W103.928617**

11. Sec., T. R. M. or Blk. and Survey or Area **Sec 21, T22S, R30E, Mer NMP**

14 Distance in miles and direction from nearest town or post office* **12 miles Northeast of Loving, New Mexico**

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) **121'**

16. No. of acres in lease **1760 (total of all leases)**

17. Spacing Unit dedicated to this well **400 acres**

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **12.7'**

19. Proposed Depth 7023' **21,017' MD, 6,943' TVD**

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.) **3169' GL**

22. Approximate date work will start* **04/01/2010**

23. Estimated duration **30 days**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

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

25. Signature K Holster — Name *(Printed/Typed)* **Katy Holster** — Date 1/28/11

Title **Administrative Assistant**

Approved by *(Signature)* **/s/ Tony J. Herrell** — Name *(Printed/Typed)* — Date JUL - 1 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)*

RECEIVED
JUL 15 2011
NMOCD ARTESIA

Ka 07/29/11

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

Surface casing will be set at 543' and cement circulated to surface.

7" casing will be set at approximately 8,650' MD (7,019') TVD – thru curve & turn. Casing will be cemented in two stages with DV Tool at approximately 5000'. Cement will be circulated to surface. Production casing will be 4-1/2" run with Baker hydraulic packers. Top of 4-1/2" liner will be approximately 200' above KOP (+/- 6,345' MD 6,345' TVD).

OK

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

This well is located within the R111 Potash area. Potash waiver attached.

The surface location is unorthodox. The bottom hole location of lateral ending in Sec 19 T22S R30E is orthodox.

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. COB 000050 (Nationwide).

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: JAMES RANCH UNIT #126H

LEGAL DESCRIPTION - SURFACE: 1441' FNL, 1821' FEL, Section 21, T22S, R30E, Eddy County, NM.

Lateral BHL: 660' FNL, 330' FWL, Section 19, T22S, 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 3,188'
GL 3,169'

James Ranch Unit #126H

	Estimated Top From KB		Estimated	
Formation	TVD	MD	Subsea Top	BEARING
T/Rustler	188'	188'	+3,000'	Barren
B/Fresh Water	262'	262'	+2,896	Fresh Water
B/Rustler	553'	553'	+2,635'	Barren
T/Salt	553'	553'	+2,635'	Barren
B/Salt	3,279'	3,279'	-91'	Barren
T/Lamar Lime	3,533'	3,533'	-345'	Barren
T/Ramsey	3,556'	3,556'	-368'	Oil/Gas
KOP #1	6,545'	6,545'	-3,357'	Oil/Gas
Brush Canyon "U" Sand	6,898'	6,942'	-3,710'	Oil/Gas
Brush Canyon Lo "U" Sand	6,978'	7,087'	-3,790'	Oil/Gas
Horizontal Landing Point	7,023'	7,296'	-3,835'	Oil/Gas
KOP #2 (Lo "U" Sand)	7,023'	7,319'	-3,835'	Oil/Gas
Horizontal Landing Point	7,023'	8,450'	-3,835'	Oil/Gas
TD	6,943'	21,017'	-3,755'	Oil/Gas

POINT 3: CASING PROGRAM

TYPE	INTERVALS (MD)	HOLE SIZE	PURPOSE	CONDITION
20" 3/8	0'-80'	26"	Conductor	Contractor Discretion
13-7/8", 48#, H-40, 8rd, STC or 54.5#, J-55*	0'-543' 525	17-1/2"	Surface	New
9-5/8", 40#, J-55, 8rd, LTC	0'-3,553'	12-1/4"	Intermediate	New
7", 26#, N-80, 8rd, LTC or Buttress	0'-8,650'	8-3/4"	Production	New
4-1/2", 11.6#, HCP110, 8rd, LTC	6,495'-21,017' 6345	6-1/8"	Production	New

see COA

*** Depending on availability**

POINT 3: CASING PROGRAM cont'd...

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 48#, J55, 8rd, STC	14.6	2.98	3.30
13-3/8", 54.5#, J-55, 8rd, STC	20.12	4.56	5.21
9-5/8", 40#, J55, 8rd, LTC	3.67	1.39	1.97
7", 26#, N80, 8rd, LTC	3.31	1.63	1.45
7", 26#, J-55, Buttress	4.25	1.63	1.45
4-1/2", 11.6#, HCP110, 8rd, LTC	3.99	2.63	2.14

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

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 1.0 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

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 excavation equal to 1/3 the proposed total depth of the well. The criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.

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.

POINT 3: CASING PROGRAM cont'd...

PRODUCTION 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 1.25 design factor with anticipated maximum tubing pressure (3575 psig) on top of the maximum anticipated packer fluid gradient. Backup on production will be formation pore pressure. The effects of tension on burst will not be utilized.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED BOP DIAGRAM)

The blowout preventer for 12-1/4" intermediate hole will consist of 13-5/8" X 5000 psi dual ram BOP's with mud cross, choke manifold, chokes, and hydril s per Diagram 1 (5000 psi WP). The BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. when installed on the surface casing head will be hydro-tested to 250-300 psig and 2000 psig by independent tester. The BOPE when rigged up on the 9-5/8" intermediate casing spool will consist of annular, pipe & blind rams with choke manifold and chokes as in Diagram 1 and will be tested to 3000 psig by independent tester. In addition to the high pressure test, a low pressure (250-300 psig) test will be required. Hydril will be tested to 2500 psig.

The BOPE when rigged up on the 7" intermediate casing spool will consist of annular, pipe & blind rams with choke manifold and chokes as in Diagram 1 and will be tested to 3000 psig by independent tester. In addition to the high pressure test, a low pressure (250-300 psig) test will be required. Hydril will be tested to 2500 psig.
These tests will be performed:

a) Upon installation
b) After any component changes
c) 30 days after a previous test
d) As required by well conditions

A function test to insure that the preventers are operating correctly will be performed on each trip.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0'-~~543'~~ 525'	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	NC	10.0
~~543'~~-3,553'	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	9.5-10.0
3,553'-8,650'	FW/Gel	8.7 – 9.2	28-36	NC	NC	20	9.5-10.0
8,650'-21,017'	FW/Gel	8.7 – 9.2	28-36	NC	NC	20	9.5-10.0

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" hole and 6-1/8" hole. Mud logger will be used from 3000' to TD.

Run #2: Drill pipe conveyed GR/PE/NL/Density/Resistivity/Caliper log run from TD to KOP.

Mud Logger: 3000' to TD.

C) CONVENTIONAL CORING

None anticipated.

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT3/SX
SURFACE: Lead: 0'-243' (100% excess circ to surface)	180	243	Class "C" 35/65+6% gel+3 pps star-seal+0.4% FL10+0.25% R-38+5% salt	9.95	12.8	1.91
Tail: 235'-~~543'~~ 525' (100% excess)	300	300	Class "C"+2% CaCL2+3 lb star-seal+0.25% R-38	6.12	14.8	1.36
INTERMEDIATE: Lead: 0'-3,053' (100% circ to surface)	1,000	3,053	Class "C" 35/65+6% gel+3 pps star-seal+0.4% FL10+0.25% R-38+5% salt	9.95	12.8	1.91
Tail: 3,053'-3,553' (100% excess)	250	500	Class "C"+2% CaCL2+0.25% R-38	6.34	14.8	1.35

POINT 6: TECHNICAL STAGES OF OPERATION cont'd...

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT3/SX
~~2nd~~ INTERMEDIATE Stage 1: Lead: 5,000'-6,545' (50% excess)	175	1,545	RSS Micro+35% FMS+0.3% FL10+0.8% C-12+3 pps Gilsonite+0.25% R38	10.09	10.5	2.41
Tail: 6,545'-8,650' (50% excess)	350	2,105	RSS Micro+0.2% C-37+0.2%+C-12+0.2% FL10+0.25% R38	7.03	13.0	1.38
DV Tool @ 5,000'						
Stage 2: Lead: 0'-4,900' (50% excess)	500	4,900	RSS Micro+35% FMS+0.5% C-45+0.5%+C-12+3 pps gilsonite+0.2% R38	10.16	10.5	2.42
Tail: 4,900'-5,000' (50% excess)	100	100	Class "C"+0.25% 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 an 8-3/4" bit to a TVD of approximately 6,545' at which point a directional hole will be kicked off and drilled at an azimuth of 316 degrees, building angle at 12 deg/100' to a maximum angle of 90 degrees at a TVD of 7,023' (MD 7,296'). At this point the hole direction will be turned at a rate of 4 deg/100' to a final azimuth of 269.9 degrees at a TVD of 7,019', MD 8,449.5'. this angle and azimuth will be maintained for 200' to a measured depth of 8,650'. At this depth 7", 26#, N80, 8rd, LTC casing will be installed and cemented in two stages (DV Tool @ approximately 5,000') with cement being circulated to surface. A 6-1/8" open hole lateral will then be drilled out from 7" casing at an azimuth of 269.9 degrees, inclination of 90.348 degrees to a measured depth of 21,017', TVD 6,943 degrees. 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. Liner hanger will be set at approximately 6,345'.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 3,533 psi (max) or MWE of 9.0 ppg is expected. Lost circulation may exist in the Delaware Section from 3,844'-7,550' TVD. No H_2S is expected.

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

20 days completion operations

SMM/keh

BOPCO, L.P.

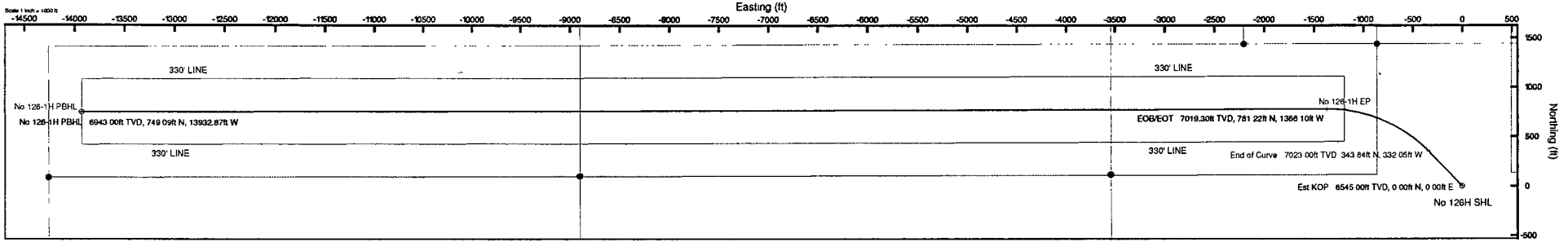
Location Eddy County, NM
Field: JRU Project
Facility JRU 126H

Slot: No.126H SHL
Well: No.126H
Wellbore No.126-1H PWB

BAKER HUGHES INTEQ

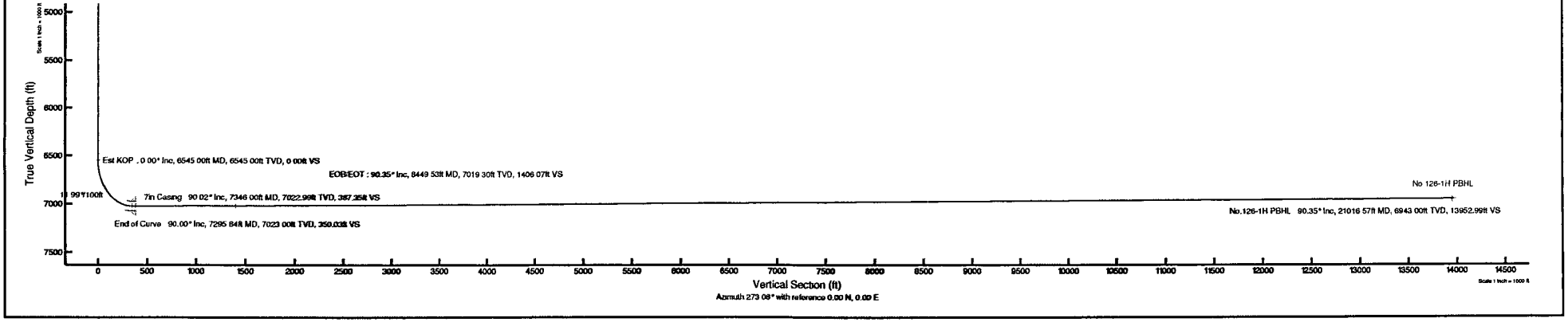
Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0 00	0.000	316 000	0 00	0.00	0 00	0.00	0 00
Est KOP	6545.00	0.000	316.000	6545 00	0.00	0 00	0.00	0 00
End of Curve	7295.84	90.000	316 000	7023 00	343.84	-332 05	11.99	350.03
EOB/EOT	8449.53	90.348	269.854	7019.30	781.22	-1366.10	4.00	1406 07
No.126-1H PBHL	21016 57	90.348	269.854	6943 00	749.09	-13932 87	0.00	13952.99



Plot reference wellpath is Prelim_1	
True vertical depths are referenced to Rig on No.126H SHL (RT)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.126H SHL (RT)	North Reference: Grid north
Rig on No.126H SHL (RT) to Mean Sea Level 3188 feet	Scale True distance
Mean Sea Level to Mud line (Facility: JRU 126H) -3188 feet	Depths are in feet
Coordinates are in feet referenced to Facility Center	Created by gomeoscr on 11/29/2010

BGGM (1945 0 to 2011 0) Dip 60 31° Field 48802.1 nT
Magnetic North is 7 84 degrees East of True North (at 11/28/2010)
Grid North is 0.24 degrees East of True North
To correct azimuth from True to Grid subtract 0 24 degrees
To correct azimuth from Magnetic to Grid add 7 60 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7 60 = 97 60



Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.126H SHL**
Area	**Eddy County, NM**	Well	**No.126H**
Field	**JRU Project**	Wellbore	**No.126-1H PWB**
Facility	**JRU 126H**		

REPORT SETUP INFORMATION			
Projection System	**NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 2.0**
North Reference	**Grid**	User	**Gomeoscr**
Scale	**0.999931**	Report Generated	**12/6/2010 at 11:44:56 AM**
Convergence at slot	**0.24° East**	Database/Source file	**WA Midland/No.126-1H_PWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[USft]**	**Northing[USft]**	**Latitude**	**Longitude**
Slot Location	**0.00**	**0.00**	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W
Facility Reference Pt			**680202.40**	**502625.00**	32°22'51.538"N	103°53'00.588"W
Field Reference Pt			**697621.65**	**485218.03**	32°19'58.517"N	103°49'38.415"W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on No.126H SHL (KB) to Facility Vertical Datum	**19.00ft**
Horizontal Reference Pt	**Facility Center**	Rig on No.126H SHL (KB) to Mean Sea Level	**3188.00ft**
Vertical Reference Pt	**Rig on No.126H SHL (KB)**	Facility Vertical Datum to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**Rig on No.126H SHL (KB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**273.08°**

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.126H SHL
Area	Eddy County, NM	Well	No.126H
Field	JRU Project	Wellbore	No.126-1H PWB
Facility	JRU 126H		

WELLPATH DATA (218 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	316.000	0.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
19.00	0.000	316.000	19.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	Tie On
119.00†	0.000	316.000	119.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
219.00†	0.000	316.000	219.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
319.00†	0.000	316.000	319.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
419.00†	0.000	316.000	419.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
519.00†	0.000	316.000	519.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
619.00†	0.000	316.000	619.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
719.00†	0.000	316.000	719.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
819.00†	0.000	316.000	819.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
919.00†	0.000	316.000	919.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
1019.00†	0.000	316.000	1019.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
1119.00†	0.000	316.000	1119.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
1219.00†	0.000	316.000	1219.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
1319.00†	0.000	316.000	1319.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
1419.00†	0.000	316.000	1419.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
1519.00†	0.000	316.000	1519.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
1619.00†	0.000	316.000	1619.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
1719.00†	0.000	316.000	1719.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
1819.00†	0.000	316.000	1819.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
1919.00†	0.000	316.000	1919.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
2019.00†	0.000	316.000	2019.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
2119.00†	0.000	316.000	2119.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
2219.00†	0.000	316.000	2219.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
2319.00†	0.000	316.000	2319.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
2419.00†	0.000	316.000	2419.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
2519.00†	0.000	316.000	2519.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
2619.00†	0.000	316.000	2619.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
2719.00†	0.000	316.000	2719.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
2819.00†	0.000	316.000	2819.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
2919.00†	0.000	316.000	2919.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
3019.00†	0.000	316.000	3019.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
3119.00†	0.000	316.000	3119.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
3219.00†	0.000	316.000	3219.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
3319.00†	0.000	316.000	3319.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
3419.00†	0.000	316.000	3419.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
3519.00†	0.000	316.000	3519.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
3619.00†	0.000	316.000	3619.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
3719.00†	0.000	316.000	3719.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
3819.00†	0.000	316.000	3819.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
3919.00†	0.000	316.000	3919.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
4019.00†	0.000	316.000	4019.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
4119.00†	0.000	316.000	4119.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
4219.00†	0.000	316.000	4219.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
4319.00†	0.000	316.000	4319.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.126H SHL
Area	Eddy County, NM	Well	No.126H
Field	JRU Project	Wellbore	No.126-1H PWB
Facility	JRU 126H		

WELLPATH DATA (218 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4419.00†	0.000	316.000	4419.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
4519.00†	0.000	316.000	4519.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
4619.00†	0.000	316.000	4619.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
4719.00†	0.000	316.000	4719.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
4819.00†	0.000	316.000	4819.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
4919.00†	0.000	316.000	4919.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
5019.00†	0.000	316.000	5019.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
5119.00†	0.000	316.000	5119.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
5219.00†	0.000	316.000	5219.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
5319.00†	0.000	316.000	5319.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
5419.00†	0.000	316.000	5419.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
5519.00†	0.000	316.000	5519.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
5619.00†	0.000	316.000	5619.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
5719.00†	0.000	316.000	5719.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
5819.00†	0.000	316.000	5819.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
5919.00†	0.000	316.000	5919.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
6019.00†	0.000	316.000	6019.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
6119.00†	0.000	316.000	6119.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
6219.00†	0.000	316.000	6219.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
6319.00†	0.000	316.000	6319.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
6419.00†	0.000	316.000	6419.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
6519.00†	0.000	316.000	6519.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	
6545.00	0.000	316.000	6545.00	0.00	0.00	0.00	680202.40	502625.00	32°22'51.538"N	103°53'00.588"W	0.00	Est KOP
6619.00†	8.870	316.000	6618.70	4.19	4.11	-3.97	680198.43	502629.11	32°22'51.579"N	103°53'00.635"W	11.99	
6719.00†	20.857	316.000	6715.18	22.94	22.53	-21.76	680180.64	502647.53	32°22'51.762"N	103°53'00.841"W	11.99	
6819.00†	32.843	316.000	6804.24	55.95	54.96	-53.07	680149.33	502679.96	32°22'52.084"N	103°53'01.205"W	11.99	
6919.00†	44.830	316.000	6881.99	101.79	99.99	-96.56	680105.85	502724.98	32°22'52.531"N	103°53'01.709"W	11.99	
6942.14†	47.603	316.000	6898.00	114.02	112.00	-108.16	680094.25	502737.00	32°22'52.651"N	103°53'01.844"W	11.99	Brushy Canyon U Sand
7019.00†	56.816	316.000	6945.05	158.45	155.65	-150.31	680052.10	502780.64	32°22'53.084"N	103°53'02.333"W	11.99	
7086.77†	64.939	316.000	6978.00	201.76	198.20	-191.40	680011.02	502823.18	32°22'53.507"N	103°53'02.811"W	11.99	Brushy Canyon Lo U Sand
7119.00†	68.803	316.000	6990.66	223.47	219.52	-211.99	679990.43	502844.50	32°22'53.719"N	103°53'03.050"W	11.99	
7219.00†	80.789	316.000	7016.84	294.00	288.81	-278.90	679923.52	502913.79	32°22'54.407"N	103°53'03.826"W	11.99	
7295.84	90.000	316.000	7023.00	350.03	343.84	-332.05	679870.38	502968.82	32°22'54.954"N	103°53'04.443"W	11.99	End of Curve
7319.00†	90.008	315.074	7023.00	367.11	360.37	-348.27	679854.16	502985.35	32°22'55.118"N	103°53'04.632"W	4.00	
7419.00†	90.041	311.074	7022.96	443.71	428.65	-421.30	679781.13	503053.62	32°22'55.797"N	103°53'05.480"W	4.00	
7519.00†	90.075	307.074	7022.85	524.60	491.67	-498.92	679703.52	503116.64	32°22'56.424"N	103°53'06.382"W	4.00	
7619.00†	90.108	303.074	7022.69	609.39	549.12	-580.74	679621.70	503174.09	32°22'56.995"N	103°53'07.333"W	4.00	
7719.00†	90.140	299.074	7022.48	697.67	600.73	-666.38	679536.07	503225.69	32°22'57.510"N	103°53'08.329"W	4.00	
7819.00†	90.172	295.074	7022.20	789.00	646.23	-755.40	679447.05	503271.19	32°22'57.964"N	103°53'09.365"W	4.00	
7919.00†	90.203	291.074	7021.88	882.96	685.42	-847.38	679355.08	503310.37	32°22'58.355"N	103°53'10.436"W	4.00	
8019.00†	90.233	287.074	7021.50	979.06	718.09	-941.87	679260.60	503343.04	32°22'58.682"N	103°53'11.536"W	4.00	
8119.00†	90.262	283.075	7021.06	1076.86	744.09	-1038.41	679164.07	503369.04	32°22'58.944"N	103°53'12.661"W	4.00	
8219.00†	90.290	279.075	7020.58	1175.86	763.30	-1136.52	679065.96	503388.24	32°22'59.138"N	103°53'13.804"W	4.00	
8319.00†	90.316	275.075	7020.05	1275.60	775.61	-1235.74	678966.75	503400.56	32°22'59.264"N	103°53'14.960"W	4.00	
8419.00†	90.341	271.075	7019.48	1375.58	780.97	-1335.58	678866.92	503405.92	32°22'59.321"N	103°53'16.124"W	4.00	

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.126H SHL
Area	Eddy County, NM	Well	No.126H
Field	JRU Project	Wellbore	No.126-1H PWB
Facility	JRU 126H		

WELLPATH DATA (218 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8449.53	90.348	269.854	7019.30	1406.07	781.22	-1366.10	678836.40	503406.16	32°22'59.324"N	103°53'16.480"W	4.00	EOB/EOT
8519.00†	90.348	269.854	7018.87	1475.43	781.04	-1435.57	678766.93	503405.99	32°22'59.326"N	103°53'17.290"W	0.00	
8619.00†	90.348	269.854	7018.27	1575.27	780.79	-1535.57	678666.94	503405.73	32°22'59.327"N	103°53'18.456"W	0.00	
8719.00†	90.348	269.854	7017.66	1675.11	780.53	-1635.57	678566.95	503405.48	32°22'59.329"N	103°53'19.622"W	0.00	
8819.00†	90.348	269.854	7017.05	1774.95	780.28	-1735.57	678466.96	503405.22	32°22'59.330"N	103°53'20.788"W	0.00	
8919.00†	90.348	269.854	7016.45	1874.79	780.02	-1835.56	678366.97	503404.96	32°22'59.332"N	103°53'21.955"W	0.00	
9019.00†	90.348	269.854	7015.84	1974.63	779.76	-1935.56	678266.98	503404.71	32°22'59.333"N	103°53'23.121"W	0.00	
9119.00†	90.348	269.854	7015.23	2074.47	779.51	-2035.56	678166.99	503404.45	32°22'59.335"N	103°53'24.287"W	0.00	
9219.00†	90.348	269.854	7014.62	2174.31	779.25	-2135.56	678066.99	503404.20	32°22'59.337"N	103°53'25.453"W	0.00	
9319.00†	90.348	269.854	7014.02	2274.15	779.00	-2235.55	677967.00	503403.94	32°22'59.338"N	103°53'26.619"W	0.00	
9419.00†	90.348	269.854	7013.41	2373.99	778.74	-2335.55	677867.01	503403.69	32°22'59.340"N	103°53'27.785"W	0.00	
9519.00†	90.348	269.854	7012.80	2473.83	778.49	-2435.55	677767.02	503403.43	32°22'59.341"N	103°53'28.951"W	0.00	
9619.00†	90.348	269.854	7012.20	2573.67	778.23	-2535.55	677667.03	503403.18	32°22'59.343"N	103°53'30.117"W	0.00	
9719.00†	90.348	269.854	7011.59	2673.51	777.97	-2635.55	677567.04	503402.92	32°22'59.344"N	103°53'31.283"W	0.00	
9819.00†	90.348	269.854	7010.98	2773.35	777.72	-2735.54	677467.05	503402.66	32°22'59.346"N	103°53'32.449"W	0.00	
9919.00†	90.348	269.854	7010.37	2873.19	777.46	-2835.54	677367.06	503402.41	32°22'59.347"N	103°53'33.615"W	0.00	
10019.00†	90.348	269.854	7009.77	2973.03	777.21	-2935.54	677267.07	503402.15	32°22'59.349"N	103°53'34.781"W	0.00	
10119.00†	90.348	269.854	7009.16	3072.87	776.95	-3035.54	677167.08	503401.90	32°22'59.351"N	103°53'35.947"W	0.00	
10219.00†	90.348	269.854	7008.55	3172.71	776.70	-3135.53	677067.09	503401.64	32°22'59.352"N	103°53'37.114"W	0.00	
10319.00†	90.348	269.854	7007.95	3272.55	776.44	-3235.53	676967.10	503401.39	32°22'59.354"N	103°53'38.280"W	0.00	
10419.00†	90.348	269.854	7007.34	3372.39	776.19	-3335.53	676867.11	503401.13	32°22'59.355"N	103°53'39.446"W	0.00	
10519.00†	90.348	269.854	7006.73	3472.23	775.93	-3435.53	676767.11	503400.87	32°22'59.357"N	103°53'40.612"W	0.00	
10619.00†	90.348	269.854	7006.12	3572.07	775.67	-3535.53	676667.12	503400.62	32°22'59.358"N	103°53'41.778"W	0.00	
10719.00†	90.348	269.854	7005.52	3671.91	775.42	-3635.52	676567.13	503400.36	32°22'59.360"N	103°53'42.944"W	0.00	
10819.00†	90.348	269.854	7004.91	3771.75	775.16	-3735.52	676467.14	503400.11	32°22'59.361"N	103°53'44.110"W	0.00	
10919.00†	90.348	269.854	7004.30	3871.59	774.91	-3835.52	676367.15	503399.85	32°22'59.363"N	103°53'45.276"W	0.00	
11019.00†	90.348	269.854	7003.70	3971.43	774.65	-3935.52	676267.16	503399.60	32°22'59.364"N	103°53'46.442"W	0.00	
11119.00†	90.348	269.854	7003.09	4071.27	774.40	-4035.52	676167.17	503399.34	32°22'59.366"N	103°53'47.608"W	0.00	
11219.00†	90.348	269.854	7002.48	4171.11	774.14	-4135.51	676067.18	503399.09	32°22'59.367"N	103°53'48.774"W	0.00	
11319.00†	90.348	269.854	7001.87	4270.95	773.88	-4235.51	675967.19	503398.83	32°22'59.369"N	103°53'49.940"W	0.00	
11419.00†	90.348	269.854	7001.27	4370.79	773.63	-4335.51	675867.20	503398.57	32°22'59.370"N	103°53'51.107"W	0.00	
11519.00†	90.348	269.854	7000.66	4470.63	773.37	-4435.51	675767.21	503398.32	32°22'59.372"N	103°53'52.273"W	0.00	
11619.00†	90.348	269.854	7000.05	4570.47	773.12	-4535.50	675667.22	503398.06	32°22'59.373"N	103°53'53.439"W	0.00	
11719.00†	90.348	269.854	6999.45	4670.31	772.86	-4635.50	675567.23	503397.81	32°22'59.375"N	103°53'54.605"W	0.00	
11819.00†	90.348	269.854	6998.84	4770.15	772.61	-4735.50	675467.24	503397.55	32°22'59.376"N	103°53'55.771"W	0.00	
11919.00†	90.348	269.854	6998.23	4869.99	772.35	-4835.50	675367.24	503397.30	32°22'59.378"N	103°53'56.937"W	0.00	
12019.00†	90.348	269.854	6997.62	4969.83	772.09	-4935.50	675267.25	503397.04	32°22'59.379"N	103°53'58.103"W	0.00	
12119.00†	90.348	269.854	6997.02	5069.67	771.84	-5035.49	675167.26	503396.78	32°22'59.381"N	103°53'59.269"W	0.00	
12219.00†	90.348	269.854	6996.41	5169.51	771.58	-5135.49	675067.27	503396.53	32°22'59.382"N	103°54'00.435"W	0.00	
12319.00†	90.348	269.854	6995.80	5269.35	771.33	-5235.49	674967.28	503396.27	32°22'59.384"N	103°54'01.601"W	0.00	
12419.00†	90.348	269.854	6995.20	5369.19	771.07	-5335.49	674867.29	503396.02	32°22'59.385"N	103°54'02.767"W	0.00	
12519.00†	90.348	269.854	6994.59	5469.03	770.82	-5435.48	674767.30	503395.76	32°22'59.387"N	103°54'03.933"W	0.00	
12619.00†	90.348	269.854	6993.98	5568.87	770.56	-5535.48	674667.31	503395.51	32°22'59.388"N	103°54'05.100"W	0.00	
12719.00†	90.348	269.854	6993.38	5668.71	770.31	-5635.48	674567.32	503395.25	32°22'59.390"N	103°54'06.266"W	0.00	
12819.00†	90.348	269.854	6992.77	5768.55	770.05	-5735.48	674467.33	503395.00	32°22'59.391"N	103°54'07.432"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.126H SHL
Area	Eddy County, NM	Well	No.126H
Field	JRU Project	Wellbore	No.126-1H PWB
Facility	JRU 126H		

WELLPATH DATA (218 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12919.00†	90.348	269.854	6992.16	5868.39	769.79	-5835.48	674367.34	503394.74	32°22'59.392"N	103°54'08.598"W	0.00	
13019.00†	90.348	269.854	6991.55	5968.23	769.54	-5935.47	674267.35	503394.48	32°22'59.394"N	103°54'09.764"W	0.00	
13119.00†	90.348	269.854	6990.95	6068.07	769.28	-6035.47	674167.36	503394.23	32°22'59.395"N	103°54'10.930"W	0.00	
13219.00†	90.348	269.854	6990.34	6167.91	769.03	-6135.47	674067.36	503393.97	32°22'59.397"N	103°54'12.096"W	0.00	
13319.00†	90.348	269.854	6989.73	6267.75	768.77	-6235.47	673967.37	503393.72	32°22'59.398"N	103°54'13.262"W	0.00	
13419.00†	90.348	269.854	6989.13	6367.59	768.52	-6335.47	673867.38	503393.46	32°22'59.400"N	103°54'14.428"W	0.00	
13519.00†	90.348	269.854	6988.52	6467.43	768.26	-6435.46	673767.39	503393.21	32°22'59.401"N	103°54'15.594"W	0.00	
13619.00†	90.348	269.854	6987.91	6567.27	768.00	-6535.46	673667.40	503392.95	32°22'59.403"N	103°54'16.760"W	0.00	
13719.00†	90.348	269.854	6987.30	6667.11	767.75	-6635.46	673567.41	503392.69	32°22'59.404"N	103°54'17.926"W	0.00	
13819.00†	90.348	269.854	6986.70	6766.95	767.49	-6735.46	673467.42	503392.44	32°22'59.405"N	103°54'19.092"W	0.00	
13919.00†	90.348	269.854	6986.09	6866.79	767.24	-6835.45	673367.43	503392.18	32°22'59.407"N	103°54'20.259"W	0.00	
14019.00†	90.348	269.854	6985.48	6966.63	766.98	-6935.45	673267.44	503391.93	32°22'59.408"N	103°54'21.425"W	0.00	
14119.00†	90.348	269.854	6984.88	7066.47	766.73	-7035.45	673167.45	503391.67	32°22'59.410"N	103°54'22.591"W	0.00	
14214.57†	90.348	269.854	6984.30	7161.88	766.48	-7131.02	673071.89	503391.43	32°22'59.411"N	103°54'23.705"W	0.00	Brushy Canyon Lo U Sand
14219.00†	90.348	269.854	6984.27	7166.31	766.47	-7135.45	673067.46	503391.42	32°22'59.411"N	103°54'23.757"W	0.00	
14319.00†	90.348	269.854	6983.66	7266.15	766.22	-7235.45	672967.47	503391.16	32°22'59.413"N	103°54'24.923"W	0.00	
14419.00†	90.348	269.854	6983.05	7365.99	765.96	-7335.44	672867.48	503390.91	32°22'59.414"N	103°54'26.089"W	0.00	
14519.00†	90.348	269.854	6982.45	7465.83	765.70	-7435.44	672767.49	503390.65	32°22'59.415"N	103°54'27.255"W	0.00	
14619.00†	90.348	269.854	6981.84	7565.67	765.45	-7535.44	672667.49	503390.39	32°22'59.417"N	103°54'28.421"W	0.00	
14719.00†	90.348	269.854	6981.23	7665.51	765.19	-7635.44	672567.50	503390.14	32°22'59.418"N	103°54'29.587"W	0.00	
14819.00†	90.348	269.854	6980.63	7765.35	764.94	-7735.44	672467.51	503389.88	32°22'59.420"N	103°54'30.753"W	0.00	
14919.00†	90.348	269.854	6980.02	7865.19	764.68	-7835.43	672367.52	503389.63	32°22'59.421"N	103°54'31.919"W	0.00	
15019.00†	90.348	269.854	6979.41	7965.03	764.43	-7935.43	672267.53	503389.37	32°22'59.422"N	103°54'33.085"W	0.00	
15119.00†	90.348	269.854	6978.80	8064.87	764.17	-8035.43	672167.54	503389.12	32°22'59.424"N	103°54'34.252"W	0.00	
15219.00†	90.348	269.854	6978.20	8164.71	763.91	-8135.43	672067.55	503388.86	32°22'59.425"N	103°54'35.418"W	0.00	
15319.00†	90.348	269.854	6977.59	8264.55	763.66	-8235.42	671967.56	503388.60	32°22'59.427"N	103°54'36.584"W	0.00	
15419.00†	90.348	269.854	6976.98	8364.39	763.40	-8335.42	671867.57	503388.35	32°22'59.428"N	103°54'37.750"W	0.00	
15519.00†	90.348	269.854	6976.38	8464.23	763.15	-8435.42	671767.58	503388.09	32°22'59.429"N	103°54'38.916"W	0.00	
15619.00†	90.348	269.854	6975.77	8564.07	762.89	-8535.42	671667.59	503387.84	32°22'59.431"N	103°54'40.082"W	0.00	
15719.00†	90.348	269.854	6975.16	8663.91	762.64	-8635.42	671567.60	503387.58	32°22'59.432"N	103°54'41.248"W	0.00	
15819.00†	90.348	269.854	6974.55	8763.75	762.38	-8735.41	671467.61	503387.33	32°22'59.433"N	103°54'42.414"W	0.00	
15919.00†	90.348	269.854	6973.95	8863.58	762.12	-8835.41	671367.61	503387.07	32°22'59.435"N	103°54'43.580"W	0.00	
16019.00†	90.348	269.854	6973.34	8963.42	761.87	-8935.41	671267.62	503386.82	32°22'59.436"N	103°54'44.746"W	0.00	
16119.00†	90.348	269.854	6972.73	9063.26	761.61	-9035.41	671167.63	503386.56	32°22'59.438"N	103°54'45.912"W	0.00	
16219.00†	90.348	269.854	6972.13	9163.10	761.36	-9135.40	671067.64	503386.30	32°22'59.439"N	103°54'47.078"W	0.00	
16319.00†	90.348	269.854	6971.52	9262.94	761.10	-9235.40	670967.65	503386.05	32°22'59.440"N	103°54'48.245"W	0.00	
16419.00†	90.348	269.854	6970.91	9362.78	760.85	-9335.40	670867.66	503385.79	32°22'59.442"N	103°54'49.411"W	0.00	
16519.00†	90.348	269.854	6970.31	9462.62	760.59	-9435.40	670767.67	503385.54	32°22'59.443"N	103°54'50.577"W	0.00	
16619.00†	90.348	269.854	6969.70	9562.46	760.34	-9535.40	670667.68	503385.28	32°22'59.444"N	103°54'51.743"W	0.00	
16719.00†	90.348	269.854	6969.09	9662.30	760.08	-9635.39	670567.69	503385.03	32°22'59.446"N	103°54'52.909"W	0.00	
16819.00†	90.348	269.854	6968.48	9762.14	759.82	-9735.39	670467.70	503384.77	32°22'59.447"N	103°54'54.075"W	0.00	
16919.00†	90.348	269.854	6967.88	9861.98	759.57	-9835.39	670367.71	503384.51	32°22'59.448"N	103°54'55.241"W	0.00	
17019.00†	90.348	269.854	6967.27	9961.82	759.31	-9935.39	670267.72	503384.26	32°22'59.450"N	103°54'56.407"W	0.00	
17119.00†	90.348	269.854	6966.66	10061.66	759.06	-10035.39	670167.73	503384.00	32°22'59.451"N	103°54'57.573"W	0.00	
17219.00†	90.348	269.854	6966.06	10161.50	758.80	-10135.38	670067.73	503383.75	32°22'59.452"N	103°54'58.739"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.126H SHL**
Area	**Eddy County, NM**	Well	**No.126H**
Field	**JRU Project**	Wellbore	**No.126-1H PWB**
Facility	**JRU 126H**		

WELLPATH DATA (218 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17319.00†	90.348	269.854	6965.45	10261.34	758.55	-10235.38	669967.74	503383.49	32°22'59.454"N	103°54'59.905"W	0.00	
17419.00†	90.348	269.854	6964.84	10361.18	758.29	-10335.38	669867.75	503383.24	32°22'59.455"N	103°55'01.071"W	0.00	
17519.00†	90.348	269.854	6964.23	10461.02	758.03	-10435.38	669767.76	503382.98	32°22'59.456"N	103°55'02.238"W	0.00	
17619.00†	90.348	269.854	6963.63	10560.86	757.78	-10535.37	669667.77	503382.73	32°22'59.458"N	103°55'03.404"W	0.00	
17719.00†	90.348	269.854	6963.02	10660.70	757.52	-10635.37	669567.78	503382.47	32°22'59.459"N	103°55'04.570"W	0.00	
17819.00†	90.348	269.854	6962.41	10760.54	757.27	-10735.37	669467.79	503382.21	32°22'59.460"N	103°55'05.736"W	0.00	
17919.00†	90.348	269.854	6961.81	10860.38	757.01	-10835.37	669367.80	503381.96	32°22'59.462"N	103°55'06.902"W	0.00	
18019.00†	90.348	269.854	6961.20	10960.22	756.76	-10935.37	669267.81	503381.70	32°22'59.463"N	103°55'08.068"W	0.00	
18119.00†	90.348	269.854	6960.59	11060.06	756.50	-11035.36	669167.82	503381.45	32°22'59.464"N	103°55'09.234"W	0.00	
18219.00†	90.348	269.854	6959.98	11159.90	756.24	-11135.36	669067.83	503381.19	32°22'59.465"N	103°55'10.400"W	0.00	
18319.00†	90.348	269.854	6959.38	11259.74	755.99	-11235.36	668967.84	503380.94	32°22'59.467"N	103°55'11.566"W	0.00	
18419.00†	90.348	269.854	6958.77	11359.58	755.73	-11335.36	668867.85	503380.68	32°22'59.468"N	103°55'12.732"W	0.00	
18519.00†	90.348	269.854	6958.16	11459.42	755.48	-11435.35	668767.86	503380.42	32°22'59.469"N	103°55'13.898"W	0.00	
18619.00†	90.348	269.854	6957.56	11559.26	755.22	-11535.35	668667.86	503380.17	32°22'59.471"N	103°55'15.065"W	0.00	
18719.00†	90.348	269.854	6956.95	11659.10	754.97	-11635.35	668567.87	503379.91	32°22'59.472"N	103°55'16.231"W	0.00	
18819.00†	90.348	269.854	6956.34	11758.94	754.71	-11735.35	668467.88	503379.66	32°22'59.473"N	103°55'17.397"W	0.00	
18919.00†	90.348	269.854	6955.73	11858.78	754.46	-11835.35	668367.89	503379.40	32°22'59.474"N	103°55'18.563"W	0.00	
19019.00†	90.348	269.854	6955.13	11958.62	754.20	-11935.34	668267.90	503379.15	32°22'59.476"N	103°55'19.729"W	0.00	
19119.00†	90.348	269.854	6954.52	12058.46	753.94	-12035.34	668167.91	503378.89	32°22'59.477"N	103°55'20.895"W	0.00	
19219.00†	90.348	269.854	6953.91	12158.30	753.69	-12135.34	668067.92	503378.64	32°22'59.478"N	103°55'22.061"W	0.00	
19319.00†	90.348	269.854	6953.31	12258.14	753.43	-12235.34	667967.93	503378.38	32°22'59.480"N	103°55'23.227"W	0.00	
19419.00†	90.348	269.854	6952.70	12357.98	753.18	-12335.34	667867.94	503378.12	32°22'59.481"N	103°55'24.393"W	0.00	
19519.00†	90.348	269.854	6952.09	12457.82	752.92	-12435.33	667767.95	503377.87	32°22'59.482"N	103°55'25.559"W	0.00	
19619.00†	90.348	269.854	6951.48	12557.66	752.67	-12535.33	667667.96	503377.61	32°22'59.483"N	103°55'26.725"W	0.00	
19719.00†	90.348	269.854	6950.88	12657.50	752.41	-12635.33	667567.97	503377.36	32°22'59.485"N	103°55'27.891"W	0.00	
19819.00†	90.348	269.854	6950.27	12757.34	752.15	-12735.33	667467.98	503377.10	32°22'59.486"N	103°55'29.058"W	0.00	
19919.00†	90.348	269.854	6949.66	12857.18	751.90	-12835.32	667367.98	503376.85	32°22'59.487"N	103°55'30.224"W	0.00	
20019.00†	90.348	269.854	6949.06	12957.02	751.64	-12935.32	667267.99	503376.59	32°22'59.488"N	103°55'31.390"W	0.00	
20119.00†	90.348	269.854	6948.45	13056.86	751.39	-13035.32	667168.00	503376.33	32°22'59.490"N	103°55'32.556"W	0.00	
20219.00†	90.348	269.854	6947.84	13156.70	751.13	-13135.32	667068.01	503376.08	32°22'59.491"N	103°55'33.722"W	0.00	
20319.00†	90.348	269.854	6947.24	13256.54	750.88	-13235.32	666968.02	503375.82	32°22'59.492"N	103°55'34.888"W	0.00	
20419.00†	90.348	269.854	6946.63	13356.38	750.62	-13335.31	666868.03	503375.57	32°22'59.493"N	103°55'36.054"W	0.00	
20519.00†	90.348	269.854	6946.02	13456.22	750.37	-13435.31	666768.04	503375.31	32°22'59.495"N	103°55'37.220"W	0.00	
20619.00†	90.348	269.854	6945.41	13556.06	750.11	-13535.31	666668.05	503375.06	32°22'59.496"N	103°55'38.386"W	0.00	
20719.00†	90.348	269.854	6944.81	13655.90	749.85	-13635.31	666568.06	503374.80	32°22'59.497"N	103°55'39.552"W	0.00	
20819.00†	90.348	269.854	6944.20	13755.74	749.60	-13735.30	666468.07	503374.55	32°22'59.498"N	103°55'40.718"W	0.00	
20919.00†	90.348	269.854	6943.59	13855.58	749.34	-13835.30	666368.08	503374.29	32°22'59.499"N	103°55'41.884"W	0.00	
21016.57	90.348	269.854	6943.00[1]	13952.99	749.09	-13932.87	666270.52	503374.04	32°22'59.501"N	103°55'43.022"W	0.00	No.126-1H PBHL

Planned Wellpath Report

Prelim_1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.126H SHL**
Area	**Eddy County, NM**	Well	**No.126H**
Field	**JRU Project**	Wellbore	**No.126-1H PWB**
Facility	**JRU 126H**		

HOLE & CASING SECTIONS Ref Wellbore: No.126-1H PWB Ref Wellpath: Prelim_1

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing	19.00	3564.00	3545.00	19.00	3564.00	0.00	0.00	0.00	0.00
8.75in Open Hole	3564.00	7365.00	3801.00	3564.00	7022.99	0.00	0.00	392.41	-381.27
7in Casing	3564.00	7365.00	3801.00	3564.00	7022.99	0.00	0.00	392.41	-381.27
6.125in Open Hole	7365.00	21016.57	13651.57	7022.99	6943.00	392.41	-381.27	749.09	-13932.87

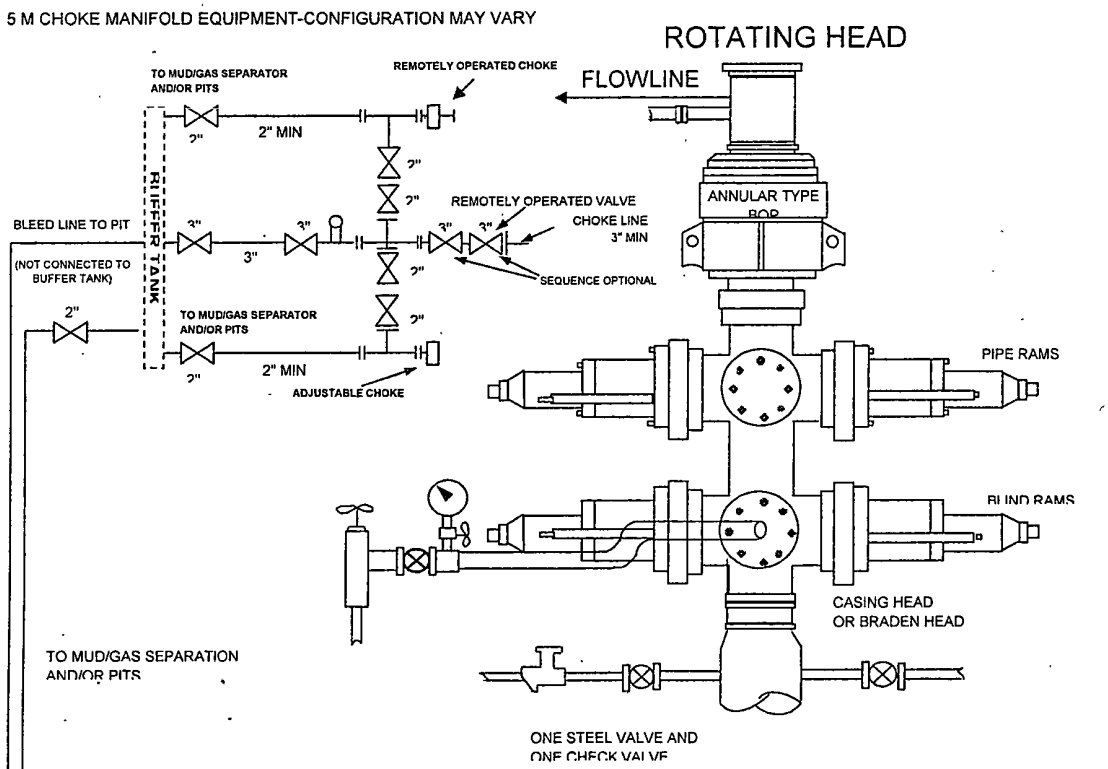
TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No.126-1H PBHL	21016.57	6943.00	749.09	-13932.87	**666270.52**	**503374.04**	32°22'59.501"N	103°55'43.022"W	point
No.126-1H EP		6962.00	778.26	-1192.68	**679009.80**	**503403.20**	32°22'59.288"N	103°53'14.458"W	point

SURVEY PROGRAM Ref Wellbore: No.126-1H PWB Ref Wellpath: Prelim_1

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	21035.57	NaviTrak (Standard)		No.126-1H PWB

BOPCO, L. P.
5-M WP BOPE WITH 5-M WP ANNULAR



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

TO STEEL MUD TANKS

BLEED LINE TO ~~STEEL CIRCULATING PITS (10' FROM RIG)~~ (NOT CONNECTED TO BUFFER TANK
Flare Pit (minimum of 100' from wellhead)