

OCD-ARTESIA

Form 3160-5
(April 2004)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.**1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
BOPCO, L. P.3a. Address
P. O. Box 2760, Midland, TX 797023b. Phone No. (include area code)
432-683-2277

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

**Surface: SWNW, UL E, 2250' FNL, 940' FWL, Lat N32.204214, Long W103.874064
Bottom Hole: 1800' FNL, 2350' FWL, Sec 16, T24S, R30E, Lat N32.219925, Lg W103.886781**

5. Lease Serial No.

LC 068431, E5558

6. If Indian, Allottee or Tribe Name

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

Poker Lake Unit, NMNM71016X

8. Well Name and No

Poker Lake Unit #325H

9. API Well No.

30-015-39392

10. Field and Pool, or Exploratory Area

Poker Lake NW (Delaware)

11. County or Parish, State

Sec 22, T24S, R30E, Mer NMP

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 Alter BHL
	☒ 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 recompleat 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 recompleat 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 requests the changes listed below to be approved for the above captioned well.**Revise BHL from 2360' FNL, 2110' FEL, SEC 16, 24S, 30E to 1800' FNL, 2350' FWL SEC 16, 24S, 30E.**

Accepted for record

NMOCD-105
DEC 02 2011*Original COA still Apply*

RECEIVED

NOV 08 2011

NMOCD ARTESIA

APPROVED

NOV 3 2011

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)**Pete Lensing**Title **Drilling Engineer**

Signature

Pete Lensing

Date

10/31/11

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

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.

Title

Date

Office

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

(Instructions on page 2)

BOTTOM HOLE LOCATION
 Lat - N 32°13'11.73"
 Long - W 103°53'12.41"
 NMSPC - E 638098.205
 (NAD-27)

SURFACE LOCATION
DELAWARE PENETRATION PT.
KOP
 Lat - N 32°12'15.17"
 Long - W 103°52'26.63"
 NMSPC - E 642055.496
 (NAD-27)

Scale: 1" = 2000'



Project: Eddy County(NAD27)
Site: Poker Lake Unit
Well: #325H
Wellbore: OH
Plan: Plan #1 (#325H/OH)

PROJECT DETAILS: Eddy County(NAD27)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North Grid

PATHFINDER
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WELL DETAILS #325H

Ground Elevation 3361.0
RKB Elevation Kb = 23 @ 3384 Dufft (Latshaw 3)
Rig Name Latshaw 3

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	438315.902	642055.496	32°12'15.168 N	103°52'26.628 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP (325)	7145.5	0.0	0.0	438315.902	642055.496
EOC (325)	7623.0	392.2	-272.4	438708.102	641783.096
TGT #1(325)	7623.0	574.9	-399.3	438890.846	641656.197
TGT #2(325)	7583.0	2546.2	-1768.3	440862.082	640287.173
TGT #3(325)	7563.0	4106.7	-2852.1	442422.644	639203.362
PBHL (#325H)	7543.0	5698.4	-3957.3	444014.302	638098.285

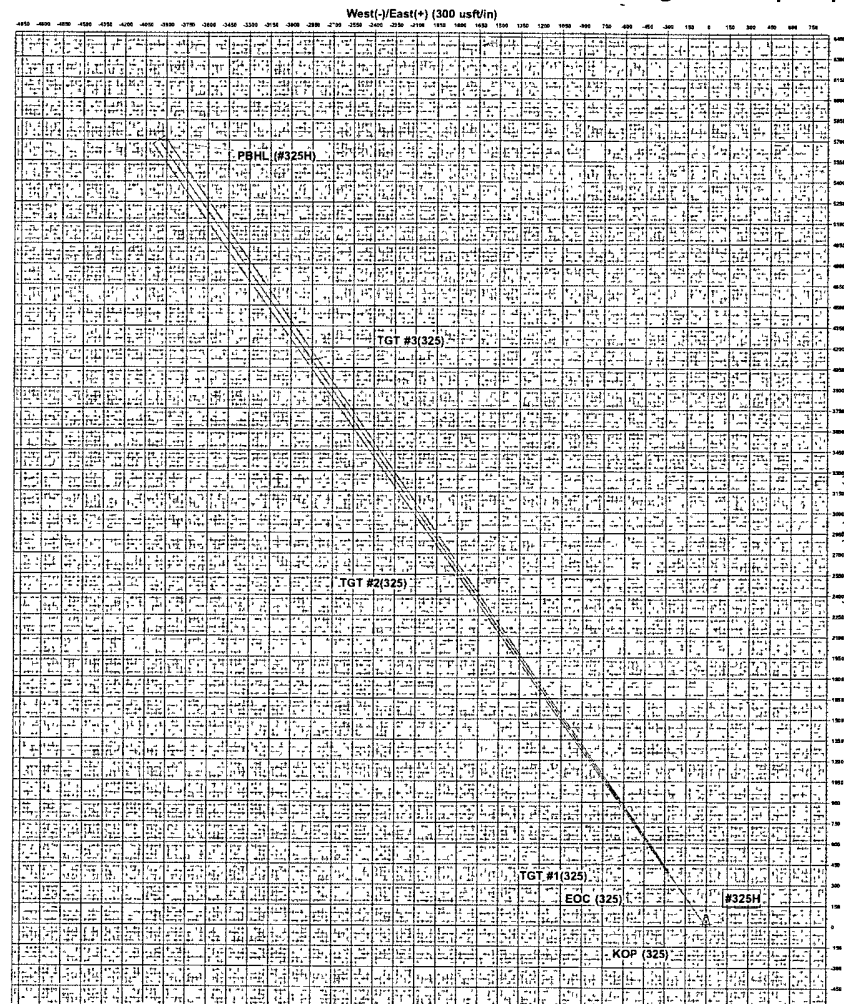
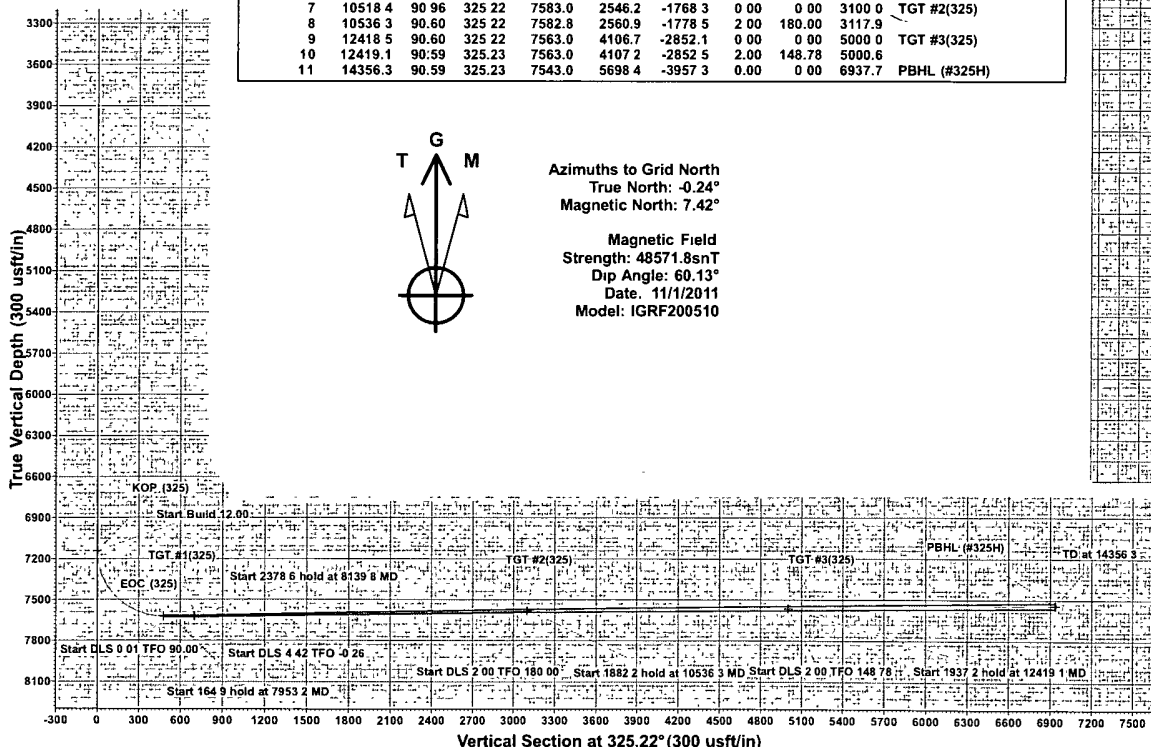
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	7145.5	0.00	0.00	7145.5	0.0	0.0	0.00	0.00	0.0	KOP (325)
3	7895.6	90.00	325.22	7623.0	392.2	-272.4	12.00	325.22	477.5	EOC (325)
4	7953.2	90.00	325.22	7623.0	439.5	-305.3	0.01	90.00	535.1	
5	8118.1	90.00	325.22	7623.0	574.9	-399.3	0.00	0.00	700.0	TGT #1(325)
6	8139.8	90.96	325.22	7622.8	592.8	-411.7	4.42	-0.26	721.7	
7	10518.4	90.96	325.22	7583.0	2546.2	-1768.3	0.00	0.00	3100.0	TGT #2(325)
8	10536.3	90.60	325.22	7582.8	2560.9	-1778.5	2.00	180.00	3117.9	
9	12418.5	90.60	325.22	7563.0	4106.7	-2852.1	0.00	0.00	5000.0	TGT #3(325)
10	12419.1	90.59	325.23	7563.0	4107.2	-2852.5	2.00	148.78	5000.6	
11	14356.3	90.59	325.23	7543.0	5698.4	-3957.3	0.00	0.00	6937.7	PBHL (#325H)



Azimuths to Grid North
True North: -0.24°
Magnetic North: 7.42°

Magnetic Field
Strength: 48571.8snT
Dip Angle: 60.13°
Date: 11/1/2011
Model: IGRF200510



Plan Plan #1 (#325H/OH)
Created By: Sam Biffle Date: 14 43, November 02 2011



BOPCO, L.P.

Eddy County(NAD27)

Poker Lake Unit

#325H

OH

Plan: Plan #1

Pathfinder X & Y Report

02 November, 2011

PATHFINDER®

A Schlumberger Company



Smith International, Inc.
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company:	BOPCO, L.P.	Local Co-ordinate Reference:	Well #325H
Project:	Eddy County(NAD27)	TVD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Site:	Poker Lake Unit	MD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Well:	#325H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Project:	Eddy County(NAD27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Poker Lake Unit		
Site Position:		Northing:	431,785.905 usft
From:	Map	Easting:	669,777.503 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 11' 9.261 N
		Longitude:	103° 47' 4.373 W
		Grid Convergence:	0.29 °

Well:	#325H		
Well Position	+N/-S	0.0 usft	Northing: 438,315.902 usft
	+E/-W	0.0 usft	Easting: 642,055.496 usft
Position Uncertainty	0.0 usft		Latitude: 32° 12' 15.168 N
			Longitude: 103° 52' 26.628 W
			Wellhead Elevation: usft
			Ground Level: 3,361.0 usft

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/1/2011	7.67	60.13	48,572

Design:	Plan #1
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Audit Notes:	
Version:	Phase: PLAN Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft) +N/-S (usft) +E/-W (usft) Direction (°)
	0.0 0.0 0.0 325.22

Survey Tool Program		Date 11/2/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0 0	14,356.3	Plan #1 (OH)	MWD	MWD - Standard



Smith International, Inc.
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company:	BOPCO, L.P.	Local Co-ordinate Reference:	Well #325H
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Site:	Poker Lake Unit	MD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Well:	#325H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.0	0.00	0.00	0.0	-3,384.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
limit											
100.0	0.00	0.00	100.0	-3,284.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
200.0	0.00	0.00	200.0	-3,184.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
300.0	0.00	0.00	300.0	-3,084.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
342.0	0.00	0.00	342.0	-3,042.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
Top of Rustler											
400.0	0.00	0.00	400.0	-2,984.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
Top of Fresh Water											
500.0	0.00	0.00	500.0	-2,884.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
600.0	0.00	0.00	600.0	-2,784.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
700.0	0.00	0.00	700.0	-2,684.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
800.0	0.00	0.00	800.0	-2,584.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
900.0	0.00	0.00	900.0	-2,484.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
1,000.0	0.00	0.00	1,000.0	-2,384.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
1,100.0	0.00	0.00	1,100.0	-2,284.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
1,200.0	0.00	0.00	1,200.0	-2,184.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
1,300.0	0.00	0.00	1,300.0	-2,084.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
1,400.0	0.00	0.00	1,400.0	-1,984.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
1,500.0	0.00	0.00	1,500.0	-1,884.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
1,600.0	0.00	0.00	1,600.0	-1,784.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
1,700.0	0.00	0.00	1,700.0	-1,684.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
1,800.0	0.00	0.00	1,800.0	-1,584.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
1,900.0	0.00	0.00	1,900.0	-1,484.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
2,000.0	0.00	0.00	2,000.0	-1,384.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
2,100.0	0.00	0.00	2,100.0	-1,284.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
2,108.0	0.00	0.00	2,108.0	-1,276.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
Top of Salt											



Smith International, Inc.

Pathfinder X & Y Report

PATHFINDER

A Schlumberger Company

Company:	BOPCO, L.P	Local Co-ordinate Reference:	Well #325H
Project:	Eddy County(NAD27)	TVD Reference:	Kb = 23' @ 3384.0usft (Latshaw 3)
Site:	Poker Lake Unit	MD Reference:	Kb = 23' @ 3384.0usft (Latshaw 3)
Well:	#325H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000 1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
2,200.0	0.00	0.00	2,200.0	-1,184.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
2,300.0	0.00	0.00	2,300.0	-1,084.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
2,400.0	0.00	0.00	2,400.0	-984.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
2,500.0	0.00	0.00	2,500.0	-884.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
2,600.0	0.00	0.00	2,600.0	-784.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
2,700.0	0.00	0.00	2,700.0	-684.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
2,800.0	0.00	0.00	2,800.0	-584.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
2,900.0	0.00	0.00	2,900.0	-484.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
3,000.0	0.00	0.00	3,000.0	-384.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
3,100.0	0.00	0.00	3,100.0	-284.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
3,200.0	0.00	0.00	3,200.0	-184.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
3,300.0	0.00	0.00	3,300.0	-84.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
3,400.0	0.00	0.00	3,400.0	16.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
3,500.0	0.00	0.00	3,500.0	116.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
3,572.0	0.00	0.00	3,572.0	188.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
Bottom of Salt											
3,600.0	0.00	0.00	3,600.0	216.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
3,700.0	0.00	0.00	3,700.0	316.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
3,800.0	0.00	0.00	3,800.0	416.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
3,832.0	0.00	0.00	3,832.0	448.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
Top of Lamar											
3,865.0	0.00	0.00	3,865.0	481.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
Top of Ramsey											
3,900.0	0.00	0.00	3,900.0	516.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
4,000.0	0.00	0.00	4,000.0	616.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
4,100.0	0.00	0.00	4,100.0	716.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
4,200.0	0.00	0.00	4,200.0	816.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	



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Pathfinder X & Y Report

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
4,300.0	0.00	0.00	4,300.0	916.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
4,400.0	0.00	0.00	4,400.0	1,016.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
4,500.0	0.00	0.00	4,500.0	1,116.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
4,600.0	0.00	0.00	4,600.0	1,216.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
4,700.0	0.00	0.00	4,700.0	1,316.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
4,800.0	0.00	0.00	4,800.0	1,416.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
4,900.0	0.00	0.00	4,900.0	1,516.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,000.0	0.00	0.00	5,000.0	1,616.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,100.0	0.00	0.00	5,100.0	1,716.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,200.0	0.00	0.00	5,200.0	1,816.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,300.0	0.00	0.00	5,300.0	1,916.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,400.0	0.00	0.00	5,400.0	2,016.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,500.0	0.00	0.00	5,500.0	2,116.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,600.0	0.00	0.00	5,600.0	2,216.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,700.0	0.00	0.00	5,700.0	2,316.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,800.0	0.00	0.00	5,800.0	2,416.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,900.0	0.00	0.00	5,900.0	2,516.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
5,978.0	0.00	0.00	5,978.0	2,594.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
Top of Lower Cherry Canyon											
6,000.0	0.00	0.00	6,000.0	2,616.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
6,100.0	0.00	0.00	6,100.0	2,716.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
6,200.0	0.00	0.00	6,200.0	2,816.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
6,300.0	0.00	0.00	6,300.0	2,916.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
6,400.0	0.00	0.00	6,400.0	3,016.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
6,500.0	0.00	0.00	6,500.0	3,116.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
6,600.0	0.00	0.00	6,600.0	3,216.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	
6,700.0	0.00	0.00	6,700.0	3,316.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50	



Smith International, Inc.
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company:	BOPCO, L.P.	Local Co-ordinate Reference:	Well #325H
Project:	Eddy County(NAD27)	TVD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Site:	Poker Lake Unit	MD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Well:	#325H	North Reference:	Grd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan.#1	Database:	EDM 5000.1 Single User Db

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)		
6,800.0	0.00	0.00	6,800.0	3,416.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50		
6,900.0	0.00	0.00	6,900.0	3,516.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50		
7,000.0	0.00	0.00	7,000.0	3,616.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50		
7,100.0	0.00	0.00	7,100.0	3,716.0	0.0	0.0	0.0	0.00	438,315.90	642,055.50		
7,145.5	0.00	0.00	7,145.5	3,761.5	0.0	0.0	0.0	0.00	438,315.90	642,055.50		
KOP (325)												
7,150.0	0.54	325.22	7,150.0	3,766.0	0.0	0.0	0.0	12.00	438,315.92	642,055.48		
7,175.0	3.54	325.22	7,175.0	3,791.0	0.7	-0.5	0.9	12.00	438,316.65	642,054.98		
7,200.0	6.54	325.22	7,199.9	3,815.9	2.6	-1.8	3.1	12.00	438,318.45	642,053.72		
7,225.0	9.54	325.22	7,224.6	3,840.6	5.4	-3.8	6.6	12.00	438,321.33	642,051.73		
7,250.0	12.54	325.22	7,249.2	3,865.2	9.4	-6.5	11.4	12.00	438,325.26	642,049.00		
7,275.0	15.54	325.22	7,273.4	3,889.4	14.3	-10.0	17.5	12.00	438,330.24	642,045.54		
7,300.0	18.54	325.22	7,297.3	3,913.3	20.4	-14.1	24.8	12.00	438,336.25	642,041.36		
7,325.0	21.54	325.22	7,320.8	3,936.8	27.4	-19.0	33.3	12.00	438,343.29	642,036.48		
7,350.0	24.54	325.22	7,343.8	3,959.8	35.4	-24.6	43.1	12.00	438,351.32	642,030.89		
7,375.0	27.54	325.22	7,366.3	3,982.3	44.4	-30.9	54.1	12.00	438,360.33	642,024.64		
7,400.0	30.54	325.22	7,388.1	4,004.1	54.4	-37.8	66.2	12.00	438,370.30	642,017.71		
7,425.0	33.54	325.22	7,409.3	4,025.3	65.3	-45.3	79.5	12.00	438,381.19	642,010.15		
7,450.0	36.54	325.22	7,429.8	4,045.8	77.1	-53.5	93.8	12.00	438,392.98	642,001.96		
7,462.9	38.08	325.22	7,440.0	4,056.0	83.5	-58.0	101.6	12.00	438,399.38	641,997.52		
Top of lower Brushy Canyon 8A												
7,475.0	39.54	325.22	7,449.5	4,065.5	89.7	-62.3	109.2	12.00	438,405.63	641,993.18		
7,500.0	42.54	325.22	7,468.3	4,084.3	103.2	-71.7	125.7	12.00	438,419.11	641,983.81		
7,525.0	45.54	325.22	7,486.3	4,102.3	117.5	-81.6	143.0	12.00	438,433.38	641,973.90		
7,550.0	48.54	325.22	7,503.3	4,119.3	132.5	-92.0	161.3	12.00	438,448.40	641,963.47		
7,575.0	51.54	325.22	7,519.4	4,135.4	148.2	-103.0	180.5	12.00	438,464.14	641,952.54		
7,600.0	54.54	325.22	7,534.4	4,150.4	164.6	-114.4	200.5	12.00	438,480.54	641,941.14		



Smith International, Inc.
Pathfinder X & Y Report

PATHFINDER
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Company:	BOPCO, L.P	Local Co-ordinate Reference:	Well #325H
Project:	Eddy County(NAD27)	TVD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Site:	Poker Lake Unit	MD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Well:	#325H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
7,625.0	57.54	325.22	7,548.4	4,164.4	181.7	-126.2	221.2	12.00	438,497.57	641,929.32	
7,650.0	60.54	325.22	7,561.2	4,177.2	199.3	-138.4	242.6	12.00	438,515.18	641,917.09	
7,675.0	63.54	325.22	7,573.0	4,189.0	217.4	-151.0	264.7	12.00	438,533.31	641,904.50	
7,700.0	66.54	325.22	7,583.5	4,199.5	236.0	-163.9	287.4	12.00	438,551.92	641,891.57	
7,706.3	67.30	325.22	7,586.0	4,202.0	240.8	-167.3	293.2	12.00	438,556.72	641,888.24	
Top of lower Brushy Canyon Y Sand											
7,725.0	69.53	325.22	7,592.9	4,208.9	255.1	-177.2	310.5	12.00	438,570.97	641,878.34	
7,750.0	72.53	325.22	7,601.0	4,217.0	274.5	-190.6	334.2	12.00	438,590.38	641,864.86	
7,775.0	75.53	325.22	7,607.9	4,223.9	294.2	-204.3	358.2	12.00	438,610.12	641,851.15	
7,800.0	78.53	325.22	7,613.5	4,229.5	314.2	-218.2	382.6	12.00	438,630.13	641,837.25	
7,825.0	81.53	325.22	7,617.8	4,233.8	334.4	-232.3	407.2	12.00	438,650.35	641,823.21	
7,850.0	84.53	325.22	7,620.8	4,236.8	354.8	-246.4	432.0	12.00	438,670.73	641,809.05	
7,875.0	87.53	325.22	7,622.6	4,238.6	375.3	-260.7	457.0	12.00	438,691.21	641,794.83	
7,895.6	90.00	325.22	7,623.0	4,239.0	392.2	-272.4	477.5	11.99	438,708.10	641,783.10	
EOC (325)											
7,900.0	90.00	325.22	7,623.0	4,239.0	395.8	-274.9	481.9	0.01	438,711.74	641,780.57	
7,953.2	90.00	325.22	7,623.0	4,239.0	439.5	-305.3	535.1	0.01	438,755.42	641,750.23	
8,000.0	90.00	325.22	7,623.0	4,239.0	478.0	-332.0	581.9	0.00	438,793.88	641,723.53	
8,100.0	90.00	325.22	7,623.0	4,239.0	560.1	-389.0	681.9	0.00	438,876.02	641,666.50	
8,118.1	90.00	325.22	7,623.0	4,239.0	574.9	-399.3	700.0	0.00	438,890.85	641,656.20	
TGT #1 (325)											
8,139.8	90.96	325.22	7,622.8	4,238.8	592.8	-411.7	721.7	4.42	438,908.68	641,643.81	
8,200.0	90.96	325.22	7,621.8	4,237.8	642.2	-446.0	781.9	0.00	438,958.14	641,609.46	
8,300.0	90.96	325.22	7,620.1	4,236.1	724.4	-503.1	881.9	0.00	439,040.27	641,552.43	
8,400.0	90.96	325.22	7,618.5	4,234.5	806.5	-560.1	981.9	0.00	439,122.39	641,495.39	
8,500.0	90.96	325.22	7,616.8	4,232.8	888.6	-617.1	1,081.9	0.00	439,204.51	641,438.36	
8,600.0	90.96	325.22	7,615.1	4,231.1	970.7	-674.2	1,181.9	0.00	439,286.64	641,381.32	



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Pathfinder X & Y Report

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Company:	BOPCO, L.P.	Local Co-ordinate Reference:	Well #325H
Project:	Eddy County(NAD27)	TVD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Site:	Poker Lake Unit	MD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Well:	#325H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000 1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
8,700.0	90.96	325.22	7,613.4	4,229.4	1,052.9	-731.2	1,281.9	0.00	439,368.76	641,324.29	
8,800.0	90.96	325.22	7,611.8	4,227.8	1,135.0	-788.2	1,381.9	0.00	439,450.88	641,267.25	
8,900.0	90.96	325.22	7,610.1	4,226.1	1,217.1	-845.3	1,481.8	0.00	439,533.01	641,210.22	
9,000.0	90.96	325.22	7,608.4	4,224.4	1,299.2	-902.3	1,581.8	0.00	439,615.13	641,153.18	
9,100.0	90.96	325.22	7,606.7	4,222.7	1,381.4	-959.3	1,681.8	0.00	439,697.25	641,096.15	
9,200.0	90.96	325.22	7,605.1	4,221.1	1,463.5	-1,016.4	1,781.8	0.00	439,779.38	641,039.11	
9,300.0	90.96	325.22	7,603.4	4,219.4	1,545.6	-1,073.4	1,881.8	0.00	439,861.50	640,982.08	
9,400.0	90.96	325.22	7,601.7	4,217.7	1,627.7	-1,130.5	1,981.8	0.00	439,943.62	640,925.04	
9,500.0	90.96	325.22	7,600.0	4,216.0	1,709.8	-1,187.5	2,081.8	0.00	440,025.75	640,868.01	
9,600.0	90.96	325.22	7,598.4	4,214.4	1,792.0	-1,244.5	2,181.7	0.00	440,107.87	640,810.97	
9,700.0	90.96	325.22	7,596.7	4,212.7	1,874.1	-1,301.6	2,281.7	0.00	440,189.99	640,753.94	
9,800.0	90.96	325.22	7,595.0	4,211.0	1,956.2	-1,358.6	2,381.7	0.00	440,272.12	640,696.90	
9,900.0	90.96	325.22	7,593.4	4,209.4	2,038.3	-1,415.6	2,481.7	0.00	440,354.24	640,639.87	
10,000.0	90.96	325.22	7,591.7	4,207.7	2,120.5	-1,472.7	2,581.7	0.00	440,436.36	640,582.83	
10,100.0	90.96	325.22	7,590.0	4,206.0	2,202.6	-1,529.7	2,681.7	0.00	440,518.49	640,525.80	
10,200.0	90.96	325.22	7,588.3	4,204.3	2,284.7	-1,586.7	2,781.7	0.00	440,600.61	640,468.77	
10,300.0	90.96	325.22	7,586.7	4,202.7	2,366.8	-1,643.8	2,881.6	0.00	440,682.73	640,411.73	
10,400.0	90.96	325.22	7,585.0	4,201.0	2,449.0	-1,700.8	2,981.6	0.00	440,764.86	640,354.70	
10,500.0	90.96	325.22	7,583.3	4,199.3	2,531.1	-1,757.8	3,081.6	0.00	440,846.98	640,297.66	
10,518.4	90.96	325.22	7,583.0	4,199.0	2,546.2	-1,768.3	3,100.0	0.00	440,862.08	640,287.17	
TGT #2(325)											
10,536.3	90.60	325.22	7,582.8	4,198.8	2,560.9	-1,778.5	3,117.9	2.00	440,876.77	640,276.97	
10,600.0	90.60	325.22	7,582.1	4,198.1	2,613.2	-1,814.9	3,181.6	0.00	440,929.11	640,240.62	
10,700.0	90.60	325.22	7,581.0	4,197.0	2,695.3	-1,871.9	3,281.6	0.00	441,011.24	640,183.58	
10,800.0	90.60	325.22	7,580.0	4,196.0	2,777.5	-1,929.0	3,381.6	0.00	441,093.37	640,126.54	
10,900.0	90.60	325.22	7,578.9	4,194.9	2,859.6	-1,986.0	3,481.6	0.00	441,175.50	640,069.50	
11,000.0	90.60	325.22	7,577.9	4,193.9	2,941.7	-2,043.0	3,581.6	0.00	441,257.63	640,012.46	



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Pathfinder X & Y Report

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Company:	BOPCO, L.P.	Local Co-ordinate Reference:	Well #325H
Project:	Eddy County(NAD27)	TVD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Site:	Poker Lake Unit	MD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Well:	#325H	North Reference:	Grd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
11,100.0	90.60	325.22	7,576.8	4,192.8	3,023.9	-2,100.1	3,681.6	0.00	441,339.76	639,955.43	
11,200.0	90.60	325.22	7,575.8	4,191.8	3,106.0	-2,157.1	3,781.6	0.00	441,421.89	639,898.39	
11,300.0	90.60	325.22	7,574.7	4,190.7	3,188.1	-2,214.2	3,881.6	0.00	441,504.02	639,841.35	
11,400.0	90.60	325.22	7,573.7	4,189.7	3,270.2	-2,271.2	3,981.6	0.00	441,586.15	639,784.31	
11,500.0	90.60	325.22	7,572.6	4,188.6	3,352.4	-2,328.2	4,081.6	0.00	441,668.28	639,727.27	
11,600.0	90.60	325.22	7,571.6	4,187.6	3,434.5	-2,385.3	4,181.6	0.00	441,750.41	639,670.23	
11,700.0	90.60	325.22	7,570.5	4,186.5	3,516.6	-2,442.3	4,281.5	0.00	441,832.54	639,613.19	
11,800.0	90.60	325.22	7,569.5	4,185.5	3,598.8	-2,499.3	4,381.5	0.00	441,914.67	639,556.15	
11,900.0	90.60	325.22	7,568.4	4,184.4	3,680.9	-2,556.4	4,481.5	0.00	441,996.80	639,499.11	
12,000.0	90.60	325.22	7,567.4	4,183.4	3,763.0	-2,613.4	4,581.5	0.00	442,078.93	639,442.07	
12,100.0	90.60	325.22	7,566.3	4,182.3	3,845.2	-2,670.5	4,681.5	0.00	442,161.06	639,385.03	
12,200.0	90.60	325.22	7,565.3	4,181.3	3,927.3	-2,727.5	4,781.5	0.00	442,243.19	639,327.99	
12,300.0	90.60	325.22	7,564.2	4,180.2	4,009.4	-2,784.5	4,881.5	0.00	442,325.32	639,270.95	
12,400.0	90.60	325.22	7,563.2	4,179.2	4,091.6	-2,841.6	4,981.5	0.00	442,407.45	639,213.91	
12,418.5	90.60	325.22	7,563.0	4,179.0	4,106.7	-2,852.1	5,000.0	0.00	442,422.64	639,203.36	
TGT #3(325)											
12,419.1	90.59	325.23	7,563.0	4,179.0	4,107.2	-2,852.5	5,000.6	2.00	442,423.13	639,203.03	
12,500.0	90.59	325.23	7,562.2	4,178.2	4,173.7	-2,898.6	5,081.5	0.00	442,489.59	639,156.88	
12,600.0	90.59	325.23	7,561.1	4,177.1	4,255.8	-2,955.6	5,181.5	0.00	442,571.73	639,099.85	
12,700.0	90.59	325.23	7,560.1	4,176.1	4,338.0	-3,012.7	5,281.5	0.00	442,653.86	639,042.82	
12,800.0	90.59	325.23	7,559.1	4,175.1	4,420.1	-3,069.7	5,381.5	0.00	442,736.00	638,985.79	
12,900.0	90.59	325.23	7,558.0	4,174.0	4,502.2	-3,126.7	5,481.5	0.00	442,818.14	638,928.75	
13,000.0	90.59	325.23	7,557.0	4,173.0	4,584.4	-3,183.8	5,581.5	0.00	442,900.27	638,871.72	
13,100.0	90.59	325.23	7,556.0	4,172.0	4,666.5	-3,240.8	5,681.5	0.00	442,982.41	638,814.69	
13,200.0	90.59	325.23	7,554.9	4,170.9	4,748.6	-3,297.8	5,781.5	0.00	443,064.54	638,757.66	
13,300.0	90.59	325.23	7,553.9	4,169.9	4,830.8	-3,354.9	5,881.5	0.00	443,146.68	638,700.63	
13,400.0	90.59	325.23	7,552.9	4,168.9	4,912.9	-3,411.9	5,981.5	0.00	443,228.82	638,643.60	



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Site:	Poker Lake Unit	MD Reference:	Kb = 23 @ 3384.0usft (Latshaw 3)
Well:	#325H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
13,500.0	90.59	325.23	7,551.8	4,167.8	4,995.1	-3,468.9	6,081.4	0.00	443,310.95	638,586.57	
13,600.0	90.59	325.23	7,550.8	4,166.8	5,077.2	-3,526.0	6,181.4	0.00	443,393.09	638,529.54	
13,700.0	90.59	325.23	7,549.8	4,165.8	5,159.3	-3,583.0	6,281.4	0.00	443,475.23	638,472.51	
13,800.0	90.59	325.23	7,548.7	4,164.7	5,241.5	-3,640.0	6,381.4	0.00	443,557.36	638,415.48	
13,900.0	90.59	325.23	7,547.7	4,163.7	5,323.6	-3,697.1	6,481.4	0.00	443,639.50	638,358.45	
14,000.0	90.59	325.23	7,546.7	4,162.7	5,405.7	-3,754.1	6,581.4	0.00	443,721.64	638,301.41	
14,100.0	90.59	325.23	7,545.6	4,161.6	5,487.9	-3,811.1	6,681.4	0.00	443,803.77	638,244.38	
14,200.0	90.59	325.23	7,544.6	4,160.6	5,570.0	-3,868.1	6,781.4	0.00	443,885.91	638,187.35	
14,300.0	90.59	325.23	7,543.6	4,159.6	5,652.1	-3,925.2	6,881.4	0.00	443,968.05	638,130.32	
14,356.3	90.59	325.23	7,543.0	4,159.0	5,698.4	-3,957.3	6,937.7	0.00	444,014.30	638,098.21	
PBHL (#325H)											

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,865.0	3,865.0	Top of Ramsey		0.00		
342.0	342.0	Top of Rustler		0.00		
400.0	400.0	Top of Fresh Water		0.00		
5,978.0	5,978.0	Top of Lower Cherry Canyon		0.00		
3,572.0	3,572.0	Bottom of Salt		0.00		
3,832.0	3,832.0	Top of Lamar		0.00		
7,462.9	7,440.0	Top of lower Brushy Canyon 8A		0.00		
7,706.3	7,586.0	Top of lower Brushy Canyon Y Sand		0.00		
2,108.0	2,108.0	Top of Salt		0.00		

Checked By: _____ Approved By: _____ Date: _____