



An Operating Unit of Smith International, Inc.

DIRECTIONAL SURVEY REPORT

BOPCO, L.P.

POKER LAKE UNIT # 199

EDDY COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA

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AUG 10 2009
BOPCO WTD PRODUCTION**

Pathfinder Energy Services, Inc.
6213 W. Interstate 20 • Midland, TX • 79706
(432) 681-6000

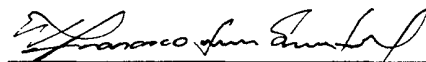
DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) CHRIS CARSON
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 05/23/09 TO 05/26/09
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

BOPCO, LP
POKER LAKE UNIT # 199
EDDY COUNTY, NM
RIG: PATTERSON 488

9. SURVEY CERTIFIED FROM: 16393 TO 16543 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 3.95 FEET ON A BEARING OF 30.48 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 16543 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



FRANCISCO SINISTERRA
M/LWD SERVICE COORDINATOR

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PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 05/22/2009
Date Completed: 05/26/2009

BOPCO, L.P.
POKER LAKE UNIT #199
EDDY COUNTY, NEW MEXICO
Rig:PATTERSON 48
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:HAFFA DONARUMMA
CHRIS CARSON

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.11.1.6470 N LON:103.47.8.9813 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 710719.2750 Y: 431028.8070
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.62° EAST TO GRID
Vertical Section Plane: 0.00
Survey Vert. Reference: 18.00' Kelly Bushing To Ground
Altitude:3458.00' Ground To MSL

Measured Depth	16543.00	(feet)
Inclination	1.14	(deg)
Azimuth	23.80	(deg)
True Vertical Depth	16542.96	(feet)
Vertical Section	3.40	(feet)
Survey X cord	710721.28	(feet)
Survey Y cord	431032.21	(feet)
Survey Lat	32.18380017 N	(deg)
Survey Lon	103.78582161 W	(deg)
Rectangular Corr. N/S	3.40 N	(feet)
Rectangular Corr. E/W	2.00 E	(feet)
Closure Distance	3.95	(feet)
Direction of Closure	30.48	(deg)
Dogleg Severity	0.00	(deg/100ft)

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 Survey Vert. Reference: 18.00' Kelly Bushing To Ground
 Altitude:3458.00' Ground To MSL

Survey Calculations by RX5 V5.11i using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
ASSUMMING VERTICAL HOLE @ 16293'MD.										
16293.00	0.00	0.00	16293.00	0.00	0.00	0.00	0.00	0.00@	0.00	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
16393.00	1.14	37.95	16392.99	100.00	0.78	0.78 N	0.61 E	0.99@	37.95	1.14
16482.00	1.14	23.80	16481.98	89.00	2.29	2.29 N	1.51 E	2.75@	33.43	0.32
STRAIGHT LINE PROJECTION TO BIT @ 16543'MD.										
16543.00	1.14	23.80	16542.96	61.00	3.40	3.40 N	2.00 E	3.95@	30.48	0.00

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PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

BOPCO, L.P.
POKER LAKE UNIT#199
EDDY COUNTY, NEW MEXICO
Rig:PATTERSON 48

Wed May 20 15:44:16 2009

Coordinates

Latitude: 32.183791 N (32 deg. 11 min. 1.6470 sec.)
Longitude: 103.785828 W (-103 deg. 47 min. 8.9813 sec.)
Elevation: 3458.00 feet.
Calculation Date: May/20/2009

Magnetic Calculations

Model: IGRF2005
Dip Angle: 60.1788 degrees
Total Magnetic Field: 0.48803 gauss
Magnetic Declination: 7.916944 degrees
Horizontal Intensity: 0.242696 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.916944 Degr.

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 710719.2750 feet
Y: 431028.8070 feet
True to Grid: (convergence) -0.291628 degrees
Magnetic to Grid: 7.625316 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.625316 Degr.

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June 3, 2009

BOPCO, L.P.
P.O. BOX 2760
MIDLAND TX 79702

RE: BOPCO, L.P.
POKER LAKE UNIT # 199
EDDY COUNTY, NM
RIG: PATTERSON 488
FIELD: WILDCAT (DEVONIAN)
PES FILE NO.: 101008534-WT-WT

To whom it may concern:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

DIRECTIONAL SURVEY DATA
1 – Original survey report
2 – Survey report copies

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (432) 687-1647

Sincerely,

FRANCISCO SINISTERRA
M/LWD Service Coordinator
PathFinder Energy Services

ML:sh

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BOPCO WTD PRODUCTION



ATS-08 - 722

OCD-ARTESIA

AUG 12 2008

OCD-ARTESIA

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5 Lease Serial No NM0522 A	
1b Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6 If Indian, Allottee or Tribe Name	
2 Name of Operator BEPCO, L. P.		7 If Unit or CA Agreement, Name and No. Poker Lake Unit #199 NMN	
3a Address P. O. Box 2760 Midland, TX 79702		8 Lease Name and Well No Poker Lake Unit #199	
3b Phone No (include area code) 432-683-2277		9 API Well No 30-015-36506	
4 Location of Well (Report location clearly and in accordance with any State requirements *) At surface SESW, UL N. 1000' FSL, 1685' FWL, Lat N32.183792, Lon W103.785828 At proposed prod zone Carlsbad Controlled Water Basin		10 Field and Pool, or Exploratory Wildcat (Devonian)	
11 Sec, T R M or Blk and Survey or Area Sec 28, T24S, R31E, Mer NMP		12 County or Parish Eddy County	
13 State NM		14 Distance in miles and direction from nearest town or post office* 21 miles East of Malaga, NM	
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) 1000'	16 No. of acres in lease 960'	17 Spacing Unit dedicated to this well 320	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 1650'	19 Proposed Depth 16,600'	20 BLM/BIA Bond No. on file NM 2204	
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3458' GL.	22 Approximate date work will start* 10/15/2008	23 Estimated duration 75 days	

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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 | 4 Bond to cover the operations unless covered by an existing bond on file (see item 20 above) |
| 2 A Drilling Plan | 5 Operator certification |
| 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) | 6 Such other site specific information and/or plans as may be required by the authorized officer |

25 Signature Annette Childers	Name (Printed/Typed) Annette Childers	Date 5-16-08
Title Administrative Assistant		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) /s/ Don Peterson	Date AUG - 8 2008
Title FIELD MANAGER		
Office CARLSBAD FIELD OFFICE		

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

Conditions of approval, if any, are attached

Title 18 USC Section 1001 and Title 43 USC Sect States any false, fictitious or fraudulent statements

*(Instructions on page 2)

NOTE: NEW PIT RULE
19-15-17 NMAC PART 17
A form C-144 must be approved
before starting drilling operations.

APPROVAL FOR TWO YEARS

make to any department or agency of the United

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 1/2 Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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☐ AMENDED RETURN

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BOPCO WTD PRODUC

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name	
		96061	Wildcat (Devonian)	
Property Code	Property Name			Well Number
001776	POKER LAKE UNIT			199
OGRID No.	Operator Name			Elevation
001801	BEPCO, L.P.			3458'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	28	24 S	31 E		1000	SOUTH	1685	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres		Joint or Infill	Consolidation Code		Order No.				
320		N							

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Carl Bird</i> 5/8/08 Signature Date</p> <p><i>Carl Bird</i> Printed Name</p>
	<p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>MARCH 17 2008 Date Surveyed</p> <p><i>Gary L. Jones</i> Signature of Professional Surveyor</p> <p>W.O. 7977</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>
	<p>SURFACE LOCATION LAT - N32°11'01.65" LONG - W103°47'08.98" N.: 431028.807 SPC- E.: 710719.275 (NAD-83)</p>