

Results of Directional Survey

API number:	30-025-40039			
OGRID:		Operator:	YATES PETROLEUM CORPORATION	
		Property:	MAMBA BQN STATE COM	# 1H

surface	ULSTR:	N	30	T	24S	R	33E
				330	FSL	1980	FWL

BH Loc	ULSTR:	C	30	T	24S	R	33E
13734	MD	9410.0	TVD	361	FNL	1954	FWL
				4919	FSL		

Top Perf/OH	ULSTR:	N	30	T	24S	R	33E
8897	MD	8896.0	TVD	322	FSL	1983	FWL

Bot Perf/OH	ULSTR:	C	30	T	24S	R	33E
13734	MD	9410.0	TVD	361	FNL	1954	FWL
				4919	FSL		

	MD	N/S	E/W	VD
	8893	-8.10	2.60	8892
TOP PERFS/OH	8897	-7.65	2.60	8896.00
	8924	-4.60	2.60	8923.00
	13675	4529.90	-26.00	9407.00
BOT PERFS/OH	13734	4588.80	-26.50	9410.00
	13734	4588.80	-26.50	9410.00

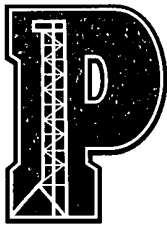
NEXT TO LAST	13675	4529.90	-26.00	9407.00
LAST READING	13734	4588.80	-26.50	9410.00
TD	13734	4588.80	-26.50	9410.00

Surface Location	330	FS	1980	FW
Projected BHL	4919	FS	1954	FW
Location of				
Top Perfs/OH	322	FS	1983	FW
Bottom Perfs/OH	4919	FS	1954	FW

SUMMARY of Subsurface Locations

Surface Location	N-30-24S-33E	330	FS	1980	FW	Vert. Depth
Top Perfs/OH	N-30-24S-33E	322	FS	1983	FW	8896.00
Bottom Perfs/OH	C-30-24S-33E	4919	FS	1954	FW	9410.00
Projected TD	C-30-24S-33E	4919	FS	1954	FW	9410.00

APR 10 2012



HOBBS OCD

MAR 30 2012

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PATRIOT DRILLING, LLC

OPERATOR: Yaets Petroleum Corp.
WELL/LEASE: Mamba "BQN" State Com #1-H
COUNTY: Lea Co., New Mexico
Sec. 30, T24S, R33E

**STATE OF NEW MEXICO
DEVIATION REPORT**

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
208	1/4	5,383	1
448	1/2	5,666	3/4
661	1	6,141	3/4
943	1	6,522	3/4
1,038	1	6,902	1/4
1,226	1/2	7,374	1/4
1,415	1	7,753	1
1,791	3/4	8,037	1/4
2,169	1/2	8,322	3/4
2,548	1/2		
2,925	1		
3,302	1		
3,678	3/4		
4,151	3/4		
4,529	1 1/4		
4,910	1 1/4		

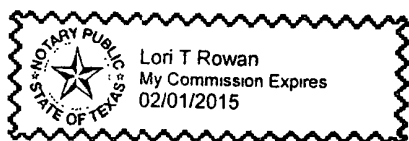
SUR: N-30-24s-33e, 330/S & 1980/W
BHL: C-30-24s-33e, 4919/S & 1954/W
API # 30-025-40039

Patriot Drilling, LLC

M. Leroy Peterson, Executive Vice-
President

The foregoing instrument was acknowledged before me on this 5th day of
December, 2011 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling,

My Commission Expires: 02/01/2015



Lori T. Rowan
Notary Public for Ector Co., Texas



Job Number: SVCO-111396
 Company: Yates Petroleum Corporation
 Lease/Well: MAMBA BQN STATE COM 1H
 Location: Lea County, NM
 Rig Name: Patriot #5
 RKB: 26.5'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.17°
 Grid: East To Grid
 File name: F:\SURVEY\2011SU~1\YATES\MAMBA1H.SVY
 Date/Time: 14-Nov-11 / 16:27
 Curve Name: Surface - 500' M.D. (Rate Gyro)

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WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 359.67
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

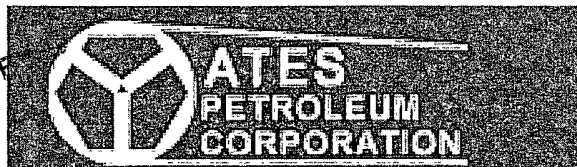
We hereby certify that our survey data from
Surface MD to 500' MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
Dana Jutte 11/14/11
 MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.28	220.44	100.00	-.19	-.16	-.19	.24	220.44	.28
200.00	.36	184.03	200.00	-.69	-.34	-.68	.76	206.32	.21
300.00	.20	146.40	300.00	-1.14	-.26	-1.14	1.17	193.02	.24
400.00	.58	234.48	400.00	-1.58	-.58	-1.58	1.69	200.11	.61
Last Survey Depth Recorded									
500.00	.61	220.96	499.99	-2.28	-1.34	-2.27	2.64	210.46	.14

SUR: N-30-24s-33e, 330/S & 1980/W
 BHL: C-30-24s-33e, 4919/S & 1954/W
 API # 30-025-40039

HOBBS OCD
MAR 30 2012

REC'D



Yates Petroleum Corp.

Lea County

Mamba "BQN" state Com

#1H

OH

Design: OH

Pathfinder X & Y Report

29 November, 2011

SUR: N-30-24s-33e, 330/S & 1980/W
BHL: C-30-24s-33e, 4919/S & 1954/W
API # 30-025-40039

PATHFINDER®

A Schlumberger Company



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp
Project: Lea County
Site: Mamba "BQN" state Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: KB = 26 5 @ 3579 5usft (Palnot 5)
MD Reference: KB = 26 5 @ 3579 5usft (Patriot 5)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

Project: Lea County

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Site: Mamba "BQN" state Com

Site Position:	Map	Northing:	430,814 540 usft	Latitude	32° 10' 56 417 N
From:		Easting:	764,061 400 usft	Longitude	103° 36' 48 317 W
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0 38 °

Well: #1H

Well Position	+N/-S	0 0 usft	Northing:	430,814 540 usft	Latitude:	32° 10' 56 417 N
	+E/-W	0 0 usft	Easting:	764,061 400 usft	Longitude:	103° 36' 48 317 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	3,553 0 usft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/7/2011	7 55	60 16	48,592

Design: OH

Audit Notes.

Version: 1 0 Phase: ACTUAL Tie On Depth: 0 0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0 0	0 0	0 0	359 67



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

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Well: #1H
Wellbore: OH
Design: OH

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North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

Survey Program		Date	11/29/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100 0	500 0	Gyro #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
572 0	13,734 0	MWD #2 (OH)	MWD	MWD - Standard	

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	-3,579 5	0 0	0 0	0 0	0 00	430,814 54	764,061 40
100 0	0 28	220 44	100 0	-3,479 5	-0 2	-0 2	-0 2	0 28	430,814 35	764,061 24
200 0	0 36	184 03	200 0	-3,379 5	-0 7	-0 3	-0 7	0 21	430,813 85	764,061 06
300 0	0 20	146 40	300 0	-3,279 5	-1 1	-0 3	-1 1	0 24	430,813 40	764,061 14
400 0	0 58	234 48	400 0	-3,179 5	-1 6	-0 6	-1 6	0 61	430,812 96	764,060 82
500 0	0 61	220 96	500 0	-3,079 5	-2 3	-1 3	-2 3	0 14	430,812 26	764,060 06
572 0	0 88	238 51	572 0	-3,007 5	-2 9	-2 1	-2 8	0 49	430,811 68	764,059 34
661 0	0 88	246 43	661 0	-2,918 5	-3 5	-3 3	-3 5	0 14	430,811 05	764,058 13
755 0	0 79	240 48	755 0	-2,824 5	-4 1	-4 5	-4 1	0 13	430,810 44	764,056 90
849 0	0 88	243 68	849 0	-2,730 5	-4 7	-5 7	-4 7	0 11	430,809 80	764,055 69
943 0	0 79	240 60	942 9	-2,636 6	-5 4	-6 9	-5 3	0 11	430,809 17	764,054 48
1,038 0	0 79	237 54	1,037 9	-2,541 6	-6 0	-8 0	-6 0	0 04	430,808 49	764,053 36
1,132 0	0 62	241 77	1,131 9	-2,447 6	-6 6	-9 0	-6 6	0 19	430,807 91	764,052 36
1,226 0	0 26	257 93	1,225 9	-2,353 6	-6 9	-9 7	-6 9	0 40	430,807 62	764,051 70
1,321 0	0 44	220 49	1,320 9	-2,258 6	-7 2	-10 1	-7 2	0 30	430,807 30	764,051 26
1,415 0	0 79	255 82	1,414 9	-2,164 6	-7 7	-11 0	-7 6	0 53	430,806 86	764,050 39
1,509 0	1 06	250 73	1,508 9	-2,070 6	-8 1	-12 5	-8 0	0 30	430,806 42	764,048 95
1,603 0	0 26	284 60	1,602 9	-1,976 6	-8 4	-13 5	-8 3	0 91	430,806 19	764,047 92
1,697 0	0 53	31 23	1,696 9	-1,882 6	-7 9	-13 5	-7 9	0 70	430,806 61	764,047 94
1,791 0	0 62	37 14	1,790 9	-1,788 6	-7 2	-12 9	-7 1	0 11	430,807 39	764,048 47
1,886 0	0 44	30 85	1,885 9	-1,693 6	-6 4	-12 4	-6 4	0 20	430,808 11	764,048 97

MAR 30 2012

Pathfinder

Pathfinder X & Y Report

PATHFINDER®

A Schlumberger Company



RECEIVED

Company: Yates Petroleum Corp
 Project: Lea County
 Site: Mamba "BQN" state Com
 Well: #1H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #1H
 TVD Reference: KB = 26 5 @ 3579 5usft (Patriot 5)
 MD Reference: KB = 26 5 @ 3579 5usft (Patriot 5)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000 1 Single User Db

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (%/100usft)	Northing (usft)	Easting (usft)
1,980 0	0 44	41 92	1,979 9	-1,599 6	-5 9	-12 0	-5 8	0 09	430,808 69	764,049 39
2,075 0	0 44	29 90	2,074 9	-1,504 6	-5 3	-11 6	-5 2	0 10	430,809 28	764,049 82
2,169 0	0 26	62 76	2,168 9	-1,410 6	-4 9	-11 2	-4 8	0 28	430,809 69	764,050 19
2,264 0	0 26	123 47	2,263 9	-1,315 6	-4 9	-10 8	-4 8	0 28	430,809 67	764,050 56
2,358 0	0 18	141 20	2,357 9	-1,221 6	-5 1	-10 6	-5 0	0 11	430,809 43	764,050 83
2,453 0	0 26	149 91	2,452 9	-1,126 6	-5 4	-10 4	-5 3	0 09	430,809 13	764,051 03
2,548 0	0 35	147 95	2,547 9	-1,031 6	-5 8	-10 1	-5 8	0 10	430,808 70	764,051 29
2,642 0	0 53	190 51	2,641 9	-937 6	-6 5	-10 0	-6 5	0 38	430,808 03	764,051 37
2,736 0	0 70	206 93	2,735 9	-843 6	-7 5	-10 4	-7 4	0 26	430,807 09	764,051 03
2,831 0	0 62	185 70	2,830 9	-748 6	-8 5	-10 7	-8 4	0 27	430,806 06	764,050 71
2,925 0	0 79	184 30	2,924 9	-654 6	-9 6	-10 8	-9 6	0 18	430,804 91	764,050 61
3,020 0	1 06	182 76	3,019 8	-559 7	-11 2	-10 9	-11 1	0 29	430,803 38	764,050 52
3,114 0	0 79	168 50	3,113 8	-465 7	-12 7	-10 8	-12 6	0 38	430,801 87	764,050 61
3,208 0	0 88	145 83	3,207 8	-371 7	-13 9	-10 3	-13 8	0 36	430,800 64	764,051 14
3,302 0	0 97	143 00	3,301 8	-277 7	-15 1	-9 4	-15 1	0 11	430,799 41	764,052 03
3,396 0	0 53	152 70	3,395 8	-183 7	-16 2	-8 7	-16 1	0 49	430,798 39	764,052 71
3,490 0	0 26	155 27	3,489 8	-89 7	-16 7	-8 4	-16 7	0 29	430,797 81	764,053 00
3,584 0	0 26	168 06	3,583 8	4 3	-17 1	-8 3	-17 1	0 06	430,797 40	764,053 13
3,678 0	0 70	135 36	3,677 8	98 3	-17 8	-7 8	-17 7	0 53	430,796 79	764,053 58
3,773 0	0 53	47 35	3,772 8	193 3	-17 9	-7 1	-17 8	0 91	430,796 67	764,054 31
3,867 0	1 23	42 40	3,866 8	287 3	-16 8	-6 1	-16 8	0 75	430,797 71	764,055 31
3,962 0	1 14	35 41	3,961 8	382 3	-15 3	-4 9	-15 3	0 18	430,799 23	764,056 54
4,057 0	0 88	22 75	4,056 7	477 2	-13 9	-4 0	-13 8	0 36	430,800 68	764,057 37
4,151 0	0 62	356 40	4,150 7	571 2	-12 7	-3 8	-12 7	0 45	430,801 85	764,057 62
4,246 0	0 26	58 28	4,245 7	666 2	-12 1	-3 6	-12 0	0 58	430,802 48	764,057 77
4,341 0	1 67	111 05	4,340 7	761 2	-12 4	-2 2	-12 4	1 61	430,802 09	764,059 25
4,435 0	2 81	119 49	4,434 6	855 1	-14 1	1 1	-14 1	1 26	430,800 47	764,062 53



Pathfinder
Pathfinder X & Y Report



A Schlumberger Company

Company: Yates Petroleum Corp
Project: Lea County
Site: Mamba "BQN" state Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: KB = 26 5 @ 3579 5usft (Patriot 5)
MD Reference: KB = 26 5 @ 3579 5usft (Patriot 5)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

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)
4,529 0	1 14	122 95	4,528 6	949 1	-15 7	3 9	-15 7	1 78	430,798 82	764,065 32
4,624 0	1 85	135 62	4,623 6	1,044 1	-17 3	5 8	-17 4	0 82	430,797 21	764,067 19
4,718 0	1 41	125 87	4,717 5	1,138 0	-19 1	7 8	-19 1	0 55	430,795 45	764,069 18
4,796 0	1 76	101 10	4,795 5	1,216 0	-19 9	9 7	-19 9	0 98	430,794 66	764,071 14
4,910 0	1 14	92 70	4,909 4	1,329 9	-20 3	12 6	-20 3	0 57	430,794 27	764,073 99
5,004 0	0 70	100 45	5,003 4	1,423 9	-20 4	14 1	-20 5	0 49	430,794 12	764,075 49
5,099 0	0 79	90 63	5,098 4	1,518 9	-20 5	15 3	-20 6	0 16	430,794 01	764,076 71
5,195 0	0 35	13 85	5,194 4	1,614 9	-20 3	16 0	-20 3	0 82	430,794 29	764,077 45
5,289 0	0 62	22 69	5,288 4	1,708 9	-19 5	16 3	-19 6	0 30	430,795 03	764,077 71
5,383 0	0 79	341 82	5,382 4	1,802 9	-18 4	16 3	-18 5	0 55	430,796 12	764,077 70
5,478 0	0 97	339 28	5,477 4	1,897 9	-17 0	15 8	-17 1	0 19	430,797 49	764,077 22
5,572 0	0 88	307 42	5,571 4	1,991 9	-15 9	15 0	-16 0	0 55	430,798 68	764,076 36
5,666 0	0 53	316 17	5,665 4	2,085 9	-15 1	14 1	-15 2	0 39	430,799 43	764,075 49
5,761 0	0 44	342 63	5,760 4	2,180 9	-14 4	13 7	-14 5	0 25	430,800 09	764,075 07
5,856 0	0 44	321 04	5,855 4	2,275 9	-13 8	13 3	-13 9	0 17	430,800 72	764,074 73
5,951 0	0 44	320 89	5,950 4	2,370 9	-13 2	12 9	-13 3	0 00	430,801 29	764,074 28
6,046 0	0 62	327 55	6,045 4	2,465 9	-12 5	12 4	-12 6	0 20	430,802 01	764,073 77
6,141 0	0 53	315 50	6,140 4	2,560 9	-11 8	11 8	-11 9	0 16	430,802 76	764,073 19
6,237 0	0 53	301 23	6,236 4	2,656 9	-11 2	11 1	-11 3	0 14	430,803 30	764,072 49
6,332 0	0 62	301 28	6,331 4	2,751 9	-10 7	10 3	-10 8	0 09	430,803 80	764,071 68
6,427 0	0 53	294 83	6,426 4	2,846 9	-10 3	9 4	-10 3	0 12	430,804 25	764,070 84
6,522 0	0 53	319 45	6,521 3	2,941 8	-9 8	8 8	-9 8	0 24	430,804 77	764,070 16
6,617 0	0 53	291 92	6,616 3	3,036 8	-9 3	8 1	-9 3	0 27	430,805 26	764,069 46
6,711 0	0 53	303 30	6,710 3	3,130 8	-8 9	7 3	-8 9	0 11	430,805 67	764,068 70
6,807 0	0 35	312 91	6,806 3	3,226 8	-8 4	6 7	-8 5	0 20	430,806 11	764,068 11
6,902 0	0 18	332 98	6,901 3	3,321 8	-8 1	6 4	-8 1	0 20	430,806 44	764,067 83
6,996 0	0 18	281 56	6,995 3	3,415 8	-7 9	6 2	-8 0	0 17	430,806 60	764,067 62



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

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Project: Lea County
Site: Mamba "BQN" state Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: KB = 26.5 @ 3579.5usft (Patnot 5)
MD Reference: KB = 26.5 @ 3579.5usft (Patnot 5)
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	D. Leg (°/100usft)	Northing (usft)	Easting (usft)
7,090.0	0.18	271.24	7,089.3	3,509.8	-7.9	5.9	-7.9	0.03	430,806.63	764,067.33
7,185.0	0.09	309.98	7,184.3	3,604.8	-7.9	5.7	-7.9	0.13	430,806.68	764,067.12
7,280.0	0.26	247.40	7,279.3	3,699.8	-7.9	5.5	-7.9	0.24	430,806.65	764,066.86
7,374.0	0.18	248.18	7,373.3	3,793.8	-8.0	5.1	-8.1	0.09	430,806.51	764,066.53
7,469.0	0.44	266.45	7,468.3	3,888.8	-8.1	4.6	-8.1	0.29	430,806.43	764,066.03
7,563.0	0.26	294.80	7,562.3	3,982.8	-8.0	4.1	-8.1	0.26	430,806.50	764,065.47
7,658.0	0.44	244.58	7,657.3	4,077.8	-8.1	3.5	-8.1	0.36	430,806.44	764,064.95
7,753.0	0.79	248.57	7,752.3	4,172.8	-8.5	2.6	-8.5	0.37	430,806.04	764,064.01
7,848.0	0.53	174.11	7,847.3	4,267.8	-9.2	2.0	-9.2	0.87	430,805.36	764,063.45
7,942.0	0.44	194.90	7,941.3	4,361.8	-10.0	2.0	-10.0	0.21	430,804.58	764,063.40
8,037.0	0.09	194.81	8,036.3	4,456.8	-10.4	1.9	-10.4	0.37	430,804.16	764,063.28
8,132.0	0.09	199.55	8,131.3	4,551.8	-10.5	1.8	-10.5	0.01	430,804.02	764,063.24
8,227.0	0.53	115.29	8,226.3	4,646.8	-10.8	2.2	-10.8	0.56	430,803.76	764,063.61
8,322.0	0.53	347.78	8,321.3	4,741.8	-10.5	2.5	-10.6	1.00	430,804.00	764,063.92
8,417.0	0.35	354.53	8,416.3	4,836.8	-9.8	2.4	-9.8	0.20	430,804.72	764,063.80
8,511.0	0.18	40.48	8,510.3	4,930.8	-9.4	2.5	-9.4	0.28	430,805.12	764,063.86
8,606.0	0.00	88.73	8,605.3	5,025.8	-9.3	2.6	-9.3	0.19	430,805.23	764,063.96
8,701.0	0.09	70.77	8,700.3	5,120.8	-9.3	2.6	-9.3	0.09	430,805.25	764,064.03
8,796.0	0.09	357.88	8,795.3	5,215.8	-9.2	2.7	-9.2	0.11	430,805.35	764,064.10
8,820.0	0.18	217.33	8,819.3	5,239.8	-9.2	2.7	-9.2	1.07	430,805.34	764,064.08
8,861.0	0.18	336.21	8,860.3	5,280.8	-9.2	2.6	-9.2	0.76	430,805.35	764,064.01
8,893.0	3.61	0.87	8,892.3	5,312.8	-8.1	2.6	-8.2	10.77	430,806.40	764,064.01
8,924.0	9.32	0.40	8,923.1	5,343.6	-4.6	2.6	-4.7	18.42	430,809.89	764,064.04
8,956.0	14.95	359.63	8,954.3	5,374.8	2.1	2.6	2.1	17.60	430,816.62	764,064.03
8,988.0	18.99	359.86	8,984.9	5,405.4	11.4	2.6	11.4	12.63	430,825.95	764,063.99
9,019.0	21.98	0.12	9,014.0	5,434.5	22.3	2.6	22.2	9.65	430,836.80	764,063.99
9,051.0	25.50	359.19	9,043.3	5,463.8	35.1	2.5	35.1	11.06	430,849.68	764,063.91



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Lea County
Site: Mamba "BQN" state Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: KB = 26 5 @ 3579 5usft (Patriot 5)
MD Reference: KB = 26 5 @ 3579 5usft (Patriot 5)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

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)	
9,082 0	28 93	358 54	9,070 8	5,491 3	49 3	2 2	49 3	11 11	430,863 85	764,063 62	
9,112 0	31 66	359 49	9,096 7	5,517 2	64 4	2 0	64 4	9 24	430,878 98	764,063 36	
9,144 0	35 00	359 96	9,123 5	5,544 0	82 0	1 9	82 0	10 47	430,896 56	764,063 28	
9,175 0	37 90	359 99	9,148 4	5,568 9	100 4	1 9	100 4	9 36	430,914 98	764,063 28	
9,207 0	40 01	0 17	9,173 3	5,593 8	120 6	1 9	120 5	6 60	430,935 10	764,063 30	
9,239 0	42 12	0 40	9,197 4	5,617 9	141 6	2 0	141 6	6 61	430,956 12	764,063 41	
9,270 0	45 20	0 08	9,219 8	5,640 3	163 0	2 1	163 0	9 96	430,977 51	764,063 50	
9,301 0	49 42	359 09	9,240 9	5,661 4	185 8	1 9	185 7	13 81	431,000 29	764,063 33	
9,333 0	53 20	358 26	9,260 9	5,681 4	210 7	1 3	210 7	11 98	431,025 26	764,062 74	
9,364 0	56 37	358 27	9,278 7	5,699 2	236 0	0 6	236 0	10 23	431,050 57	764,061 98	
9,396 0	60 06	358 04	9,295 6	5,716 1	263 2	-0 3	263 2	11 55	431,077 75	764,061 10	
9,427 0	64 54	357 97	9,310 0	5,730 5	290 6	-1 3	290 6	14 45	431,105 18	764,060 15	
9,459 0	68 59	358 61	9,322 7	5,743 2	320 0	-2 1	320 0	12 79	431,134 52	764,059 27	
9,490 0	71 75	359 69	9,333 2	5,753 7	349 1	-2 6	349 1	10 71	431,163 67	764,058 84	
9,521 0	75 45	0 35	9,342 0	5,762 5	378 9	-2 5	378 9	12 11	431,193 41	764,058 85	
9,557 0	80 55	1 58	9,349 5	5,770 0	414 1	-1 9	414 1	14 56	431,228 60	764,059 45	
9,589 0	83 19	1 39	9,354 0	5,774 5	445 7	-1 1	445 7	8 27	431,260 27	764,060 27	
9,620 0	84 15	1 86	9,357 4	5,777 9	476 5	-0 3	476 5	3 44	431,291 07	764,061 14	
9,652 0	85 65	0 50	9,360 2	5,780 7	508 4	0 4	508 4	6 32	431,322 93	764,061 80	
9,684 0	87 49	359 51	9,362 2	5,782 7	540 3	0 4	540 3	6 53	431,354 87	764,061 80	
9,715 0	88 81	359 40	9,363 2	5,783 7	571 3	0 1	571 3	4 27	431,385 85	764,061 51	
9,778 0	88 81	358 53	9,364 5	5,785 0	634 3	-1 0	634 3	1 38	431,448 83	764,060 37	
9,872 0	89 96	359 42	9,365 5	5,786 0	728 3	-2 7	728 3	1 55	431,542 81	764,058 69	
9,967 0	90 48	0 20	9,365 1	5,785 6	823 3	-3 0	823 3	0 99	431,637 80	764,058 37	
10,062 0	89 69	359 41	9,365 0	5,785 5	918 3	-3 3	918 3	1 18	431,732 80	764,058 05	
10,157 0	91 01	0 05	9,364 4	5,784 9	1,013 3	-3 8	1,013 3	1 54	431,827 80	764,057 60	
10,252 0	92 07	1 25	9,361 8	5,782 3	1,108 2	-2 7	1,108 2	1 69	431,922 75	764,058 68	



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

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Site: Mamba "BQN" state Com
Well: #1H
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Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: KB = 26 5 @ 3579 5usft (Palnot 5)
MD Reference: KB = 26 5 @ 3579 5usft (Palnot 5)
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Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

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)
10,347 0	92 68	1 04	9,357 9	5,778 4	1,203 1	-0 8	1,203 1	0 68	432,017 65	764,060 58
10,442 0	91 01	0 18	9,354 8	5,775 3	1,298 1	0 2	1,298 0	1 98	432,112 59	764,061 59
10,537 0	88 46	357 65	9,355 3	5,775 8	1,393 0	-1 6	1,393 0	3 78	432,207 56	764,059 79
10,632 0	87 85	357 90	9,358 3	5,778 8	1,487 9	-5 3	1,487 9	0 69	432,302 44	764,056 10
10,727 0	87 05	358 10	9,362 6	5,783 1	1,582 7	-8 6	1,582 8	0 87	432,397 28	764,052 79
10,822 0	87 67	358 31	9,366 9	5,787 4	1,677 6	-11 6	1,677 6	0 69	432,492 14	764,049 82
10,917 0	88 46	358 96	9,370 2	5,790 7	1,772 5	-13 8	1,772 6	1 08	432,587 05	764,047 56
11,012 0	89 25	359 97	9,372 0	5,792 5	1,867 5	-14 7	1,867 5	1 35	432,682 03	764,046 67
11,107 0	88 90	359 16	9,373 6	5,794 1	1,962 5	-15 5	1,962 5	0 93	432,777 01	764,045 95
11,201 0	88 99	359 59	9,375 3	5,795 8	2,056 5	-16 5	2,056 5	0 47	432,870 99	764,044 92
11,297 0	88 72	0 14	9,377 2	5,797 7	2,152 4	-16 7	2,152 5	0 64	432,966 97	764,044 70
11,392 0	90 40	0 48	9,378 0	5,798 5	2,247 4	-16 2	2,247 5	1 80	433,061 96	764,045 21
11,486 0	91 10	0 27	9,376 7	5,797 2	2,341 4	-15 6	2,341 5	0 78	433,155 95	764,045 83
11,605 0	88 90	359 63	9,376 7	5,797 2	2,460 4	-15 7	2,460 5	1 93	433,274 95	764,045 72
11,699 0	88 81	359 77	9,378 6	5,799 1	2,554 4	-16 2	2,554 4	0 18	433,368 92	764,045 23
11,793 0	89 16	0 29	9,380 3	5,800 8	2,648 4	-16 1	2,648 4	0 67	433,462 91	764,045 28
11,888 0	89 16	1 59	9,381 7	5,802 2	2,743 3	-14 6	2,743 4	1 37	433,557 88	764,046 84
11,983 0	88 64	0 20	9,383 5	5,804 0	2,838 3	-13 1	2,838 3	1 56	433,652 85	764,048 32
12,078 0	89 16	359 63	9,385 3	5,805 8	2,933 3	-13 2	2,933 3	0 81	433,747 83	764,048 18
12,172 0	88 81	359 29	9,387 0	5,807 5	3,027 3	-14 1	3,027 3	0 52	433,841 82	764,047 30
12,266 0	89 69	359 42	9,388 2	5,808 7	3,121 3	-15 2	3,121 3	0 95	433,935 80	764,046 24
12,360 0	89 25	359 95	9,389 1	5,809 6	3,215 3	-15 7	3,215 3	0 73	434,029 79	764,045 72
12,454 0	89 43	359 56	9,390 2	5,810 7	3,309 2	-16 1	3,309 3	0 46	434,123 79	764,045 32
12,549 0	89 52	359 01	9,391 0	5,811 5	3,404 2	-17 3	3,404 3	0 59	434,218 78	764,044 13
12,643 0	88 37	358 42	9,392 8	5,813 3	3,498 2	-19 4	3,498 2	1 37	434,312 73	764,042 03
12,738 0	90 31	0 35	9,393 9	5,814 4	3,593 2	-20 4	3,593 2	2 88	434,407 71	764,041 01
12,827 0	89 60	0 79	9,393 9	5,814 4	3,682 2	-19 5	3,682 2	0 94	434,496 71	764,041 89



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp
Project: Lea County
Site: Mamba "BQN" state Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: KB = 26 5 @ 3579 5usft (Patriot 5)
MD Reference: KB = 26 5 @ 3579 5usft (Patriot 5)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

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)
12,921 0	90 13	0 39	9,394 1	5,814 6	3,776 2	-18 5	3,776 2	0 71	434,590 70	764,042 86
13,015 0	89 87	359 97	9,394 1	5,814 6	3,870 2	-18 2	3,870 2	0 53	434,684 70	764,043 15
13,110 0	88 72	359 12	9,395 3	5,815 8	3,965 1	-19 0	3,965 2	1 51	434,779 69	764,042 40
13,204 0	89 96	359 42	9,396 4	5,816 9	4,059 1	-20 2	4,059 2	1 36	434,873 67	764,041 20
13,298 0	90 92	359 40	9,395 7	5,816 2	4,153 1	-21 2	4,153 2	1 02	434,967 66	764,040 24
13,393 0	88 20	358 82	9,396 4	5,816 9	4,248 1	-22 6	4,248 2	2 93	435,062 64	764,038 76
13,488 0	87 41	359 25	9,400 0	5,820 5	4,343 0	-24 2	4,343 1	0 95	435,157 56	764,037 16
13,582 0	88 29	359 58	9,403 6	5,824 1	4,436 9	-25 2	4,437 0	1 00	435,251 48	764,036 20
13,675 0	87 32	359 47	9,407 1	5,827 6	4,529 9	-26 0	4,529 9	1 05	435,344 41	764,035 43
13,734 0	87 32	359 47	9,409 9	5,830 4	4,588 8	-26 5	4,588 9	0 00	435,403 34	764,034 89

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
8,924 0	8,923 1	-4 6	2 6	KOP - 8924 0 'MD, 8923 1 'TVD, -4 6 'N, 2 6 'E
9,715 0	9,363 2	571 3	0 1	LP - 9715 0 'MD, 9363 2 'TVD, 571 3 'N, 0 1 'E
13,734 0	9,409 9	4,588 8	-26 5	BHL - 13734 0 'MD, 9409 9 'TVD, 4588 8 'N, -26 5 'E

Checked By. _____ Approved By. _____ Date. _____



Project: Lea County
 Site: Mamba "BQN" state Com
 Well: #1H
 Wellbore: OH
 Plan: Plan #2 (#1H/OH)



Azimuths to Grid North
 True North: -0.38°
 Magnetic North: 7.17°

Magnetic Field
 Strength: 48592 1nT
 Dip Angle: 60.16°
 Date: 10/7/2011
 Model: IGRF200510

PATHFINDER

A Schlumberger Company

West(-)/East(+) (200 usft/in)

PROJECT DETAILS: Lea County
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level
 Local North: Grid

WELL DETAILS #1H

Ground Elevation: 3553.0
 RKB Elevation: KB = 26.5 @ 3579.5usft (Patriot 5)
 Rig Name: Patriot 5

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Site
0.0	0.0	430814.540	764061.400	32°10' 56"417 N	103°36' 48"317 W	

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	8887.5	0.00	0.00	8887.5	0.0	0.0	0.00	0.00	0.0	
3	9635.8	89.79	359.67	9365.0	475.7	-2.7	12.00	359.67	475.7	
4	13779.5	89.79	359.67	9380.0	4619.3	-26.5	0.00	0.00	4619.4	PBHL (MAMBA#1H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL (MAMBA#1H)	9380.0	4619.3	-26.5	435433.870	764034.940	Point

EOW

