



Yates Petroleum Corp.

Lea County
Zapata BQZ State Com
Well #1H
OH

Design: OH

PathFinder X&Y Report

14 July, 2011

PATHFINDER®
A Schlumberger Company

JAN 12 2012



Pathfinder
PathFinder X&Y Report

PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp.	Local/Co-ordinate Reference:	Well/Well #1H
Project:	Lea County	TVD Reference:	RKB to MSL @ 3277.50ft (Patterson 36)
Site:	Zapata BQZ State Com	MD Reference:	RKB to MSL @ 3277.50ft (Patterson 36)
Well:	Well #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	1 Smith Database

Project:	Lea County	System Datum:	Mean Sea Level
Map System:	US State Plane 1983		
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Zapata BQZ State Com		
Site Position:		Northing:	388,394.37 ft
From:	Map	Easting:	753,878.81 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	32 0659186
		Longitude:	-103 6472057
		Grid Convergence:	0.36 °

Well:	Well #1H					
Well Position	+N/-S	0.00 ft	Northing:	388,394.37 ft	Latitude:	32.0659186
	+E/-W	0.00 ft	Easting:	753,878.81 ft	Longitude:	-103.6472057
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,256.00 ft

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	06/24/11	7.61	60.03	48,511

Design:	OH
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Audit Notes:					
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	357.07



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Project:	Lea County	TVD Reference:	RKB to MSL @ 3277.50ft (Patterson 36)
Site:	Zapata BQZ State Corn	MD Reference:	RKB to MSL @ 3277.50ft (Patterson 36)
Well:	Well #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	1 Smith Database

Survey Program		Date 07/14/11			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
200.00	8,576.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
8,674.00	13,660.00	Survey #2 - MWD (OH)	MWD	MWD - Standard	

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0.00	0.00	0.00	-3,277.50	0.00	0.00	0.00	0.00	388,394.37	753,878.81
200.00	0.25	13.32	200.00	-3,077.50	0.42	0.10	0.42	0.12	388,394.79	753,878.91
400.00	0.50	228.39	400.00	-2,877.50	0.27	-0.45	0.29	0.36	388,394.64	753,878.36
600.00	0.25	252.46	599.99	-2,677.51	-0.44	-1.52	-0.36	0.15	388,393.93	753,877.29
800.00	0.50	239.52	799.99	-2,477.51	-1.02	-2.69	-0.88	0.13	388,393.35	753,876.12
1,000.00	0.25	200.59	999.98	-2,277.52	-1.87	-3.59	-1.68	0.17	388,392.50	753,875.22
1,200.00	0.50	209.66	1,199.98	-2,077.52	-3.03	-4.18	-2.82	0.13	388,391.34	753,874.63
1,400.00	0.75	154.73	1,399.97	-1,877.53	-4.98	-4.05	-4.76	0.31	388,389.39	753,874.76
1,600.00	1.00	215.79	1,599.95	-1,677.55	-7.57	-4.51	-7.33	0.46	388,386.80	753,874.30
1,800.00	0.75	205.86	1,799.93	-1,477.57	-10.17	-6.11	-8.84	0.15	388,384.20	753,872.70
2,000.00	1.50	221.91	1,999.89	-1,277.61	-13.29	-8.42	-12.85	0.40	388,381.08	753,870.39
2,200.00	2.00	221.31	2,199.79	-1,077.71	-17.86	-12.48	-17.20	0.25	388,376.51	753,866.33
2,400.00	1.75	231.38	2,399.69	-877.81	-22.39	-17.17	-21.49	0.21	388,371.98	753,861.64
2,600.00	1.25	235.45	2,599.62	-677.88	-25.53	-21.35	-24.41	0.26	388,368.84	753,857.46
2,800.00	1.25	230.52	2,799.57	-477.93	-28.16	-24.83	-26.85	0.05	388,366.21	753,853.98
3,000.00	1.25	233.58	2,999.52	-277.98	-30.84	-28.27	-29.36	0.03	388,363.53	753,850.54
3,200.00	0.25	61.66	3,199.51	-77.99	-31.93	-29.64	-30.37	0.75	388,362.44	753,849.17
3,400.00	1.25	34.72	3,399.49	121.99	-29.93	-28.01	-28.46	0.52	388,364.44	753,850.80
3,600.00	-1.25	34.79	3,599.44	321.94	-26.34	-25.53	-25.01	0.00	388,368.03	753,853.28
3,800.00	1.00	38.85	3,799.40	521.90	-23.19	-23.19	-21.98	0.13	388,371.18	753,855.62
4,000.00	1.25	106.92	3,999.37	721.87	-22.47	-20.01	-21.42	0.64	388,371.90	753,858.80



Pathfinder
PathFinder X&Y Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Lea County
Site: Zapata BQZ Staté Com
Well: Well #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Well Well #1H
RKB to MSL @ 3277.50ft (Patterson 36)
RKB to MSL @ 3277.50ft (Patterson 36)
Grid
Minimum Curvature
1.Smith Database

Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
4,200.00	1.50	121.00	4,199.32	921.82	-24.45	-15.67	-23.62	0.21	388,369.92	753,863.14	
4,400.00	1.25	130.06	4,399.26	1,121.76	-27.20	-11.76	-26.57	0.17	388,367.17	753,867.05	
4,600.00	0.25	122.12	4,599.24	1,321.74	-28.84	-9.72	-28.31	0.50	388,365.53	753,869.09	
4,800.00	0.75	212.19	4,799.23	1,521.73	-30.18	-10.05	-29.63	0.40	388,364.19	753,868.76	
5,000.00	0.50	266.26	4,999.22	1,721.72	-31.35	-11.62	-30.71	0.31	388,363.02	753,867.19	
5,200.00	0.25	210.32	5,199.22	1,921.72	-31.78	-12.71	-31.09	0.21	388,362.59	753,866.10	
5,400.00	0.50	219.39	5,399.21	2,121.71	-32.83	-13.48	-32.10	0.13	388,361.54	753,865.33	
5,600.00	0.50	249.46	5,599.21	2,321.71	-33.81	-14.85	-33.01	0.13	388,360.56	753,863.96	
5,800.00	0.25	275.52	5,799.20	2,521.70	-34.07	-16.11	-33.21	0.15	388,360.30	753,862.70	
6,000.00	0.25	233.59	5,999.20	2,721.70	-34.29	-16.89	-33.38	0.09	388,360.08	753,861.92	
6,200.00	0.25	287.99	6,199.20	2,921.70	-34.42	-17.66	-33.47	0.11	388,359.95	753,861.15	
6,400.00	0.50	201.06	6,399.19	3,121.69	-35.10	-18.39	-34.11	0.27	388,359.27	753,860.42	
6,600.00	0.50	196.12	6,599.19	3,321.69	-36.75	-18.94	-35.73	0.02	388,357.62	753,859.87	
6,800.00	0.50	232.19	6,799.18	3,521.68	-38.12	-19.87	-37.06	0.15	388,356.25	753,858.94	
7,000.00	0.25	199.26	6,999.18	3,721.68	-39.07	-20.71	-37.96	0.16	388,355.30	753,858.10	
7,200.00	0.50	204.32	7,199.17	3,921.67	-40.28	-21.21	-39.14	0.13	388,354.09	753,857.60	
7,400.00	1.00	226.39	7,399.15	4,121.65	-42.27	-22.83	-41.05	0.28	388,352.10	753,855.98	
7,600.00	0.75	190.46	7,599.13	4,321.63	-44.77	-24.33	-43.46	0.29	388,349.60	753,854.48	
7,800.00	0.75	192.52	7,799.11	4,521.61	-47.33	-24.86	-46.00	0.01	388,347.04	753,853.95	
8,000.00	0.50	191.59	7,999.10	4,721.60	-49.46	-25.32	-48.11	0.13	388,344.91	753,853.49	
8,200.00	1.00	156.66	8,199.09	4,921.59	-51.92	-24.80	-50.59	0.33	388,342.45	753,854.01	
8,400.00	0.75	186.72	8,399.06	5,121.56	-54.82	-24.26	-53.51	0.26	388,339.55	753,854.55	
8,576.00	0.75	184.86	8,575.05	5,297.55	-57.11	-24.49	-55.79	0.01	388,337.26	753,854.32	
KOP - 8576.00' MD, 8575.05' TVD, -57.11' N, -24.49' E											
8,674.00	1.32	339.89	8,673.04	5,395.54	-56.69	-24.94	-55.35	2.07	388,337.68	753,853.87	
8,706.00	3.43	343.38	8,705.01	5,427.51	-55.43	-25.34	-54.06	6.61	388,338.94	753,853.47	
8,738.00	5.72	346.00	8,736.91	5,459.41	-52.97	-26.00	-51.57	7.18	388,341.40	753,852.81	



Pathfinder
PathFinder X&Y Report

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Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well Well #1H
Project:	Lea County	TVD Reference:	RKB to MSL @ 3277.50ft (Patterson 36)
Site:	Zapata BQZ State Com.	MD Reference:	RKB to MSL @ 3277.50ft (Patterson 36)
Well:	Well #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	1. Smith Database

Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
8,769.00	8.79	350.83	8,767.66	5,490.16	-49.13	-26.75	-47.70	10.09	388,345.24	753,852.06	
8,801.00	12.22	353.49	8,799.12	5,521.62	-43.35	-27.52	-41.88	10.82	388,351.02	753,851.29	
8,832.00	15.83	354.65	8,829.19	5,551.69	-35.87	-28.29	-34.38	11.68	388,358.50	753,850.52	
8,864.00	19.43	356.36	8,859.68	5,582.18	-26.21	-29.03	-24.70	11.36	388,368.16	753,849.78	
8,897.00	22.60	356.97	8,890.48	5,612.98	-14.40	-29.72	-12.86	9.63	388,379.97	753,849.09	
8,928.00	26.29	357.33	8,918.70	5,641.20	-1.59	-30.35	-0.04	11.91	388,392.78	753,848.46	
8,959.00	29.90	355.95	8,946.04	5,668.54	12.98	-31.22	14.56	11.83	388,407.35	753,847.59	
8,991.00	33.59	355.57	8,973.25	5,695.75	29.77	-32.46	31.39	11.55	388,424.14	753,846.35	
9,023.00	37.55	356.01	8,999.27	5,721.77	48.33	-33.83	49.99	12.40	388,442.70	753,844.98	
9,054.00	42.03	357.64	9,023.09	5,745.59	68.13	-34.91	69.82	14.84	388,462.50	753,843.90	
9,086.00	47.13	356.00	9,045.87	5,768.37	90.55	-36.17	92.28	16.34	388,484.92	753,842.64	
9,118.00	52.23	354.74	9,066.57	5,789.07	114.86	-38.15	116.65	16.22	388,509.23	753,840.66	
9,149.00	57.68	354.88	9,084.37	5,806.87	140.12	-40.45	142.00	17.58	388,534.49	753,838.36	
9,181.00	63.40	355.49	9,100.10	5,822.60	167.87	-42.78	169.84	17.95	388,562.24	753,836.03	
9,220.00	70.35	357.02	9,115.41	5,837.91	203.64	-45.11	205.68	18.18	388,598.01	753,833.70	
9,252.00	75.53	357.13	9,124.79	5,847.29	234.18	-46.67	236.26	16.19	388,628.55	753,832.14	
9,284.00	78.61	356.92	9,131.95	5,854.45	265.33	-48.29	267.45	9.65	388,659.70	753,830.52	
9,315.00	81.34	355.99	9,137.35	5,859.85	295.79	-50.17	297.97	9.29	388,690.16	753,828.64	
9,347.00	84.06	354.72	9,141.41	5,863.91	327.42	-52.75	329.69	9.37	388,721.79	753,826.06	
9,378.00	87.76	355.02	9,143.62	5,866.12	358.22	-55.51	360.58	11.97	388,752.59	753,823.30	
LP = 9378.00' MD, 9143.62' TVD, 358.22' N, -55.51' E											
9,410.00	91.10	354.99	9,143.94	5,866.44	390.09	-58.30	392.56	10.44	388,784.46	753,820.51	
9,473.00	92.59	355.05	9,141.91	5,864.41	452.82	-63.76	455.48	2.37	388,847.19	753,815.05	
9,567.00	93.56	355.98	9,136.87	5,859.37	546.39	-71.10	549.31	1.43	388,940.76	753,807.71	
9,662.00	91.89	357.03	9,132.35	5,854.85	641.10	-76.89	644.19	2.08	389,035.47	753,801.92	
9,757.00	91.01	357.63	9,129.95	5,852.45	735.97	-81.31	739.16	1.12	389,130.34	753,797.50	
9,851.00	90.57	0.34	9,128.65	5,851.15	829.93	-82.97	833.09	2.92	389,224.30	753,795.84	



Pathfinder
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Project:	Lea County	TVD Reference:	RKB to MSL @ 3277.50ft (Patterson 36)
Site:	Zapata BQZ State Com	MD Reference:	RKB to MSL @ 3277.50ft (Patterson 36)
Well:	Well #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	1 Smith Database

Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
9,946.00	90.22	0.79	9,128.00	5,850.50	924.93	-82.04	927.91	0.60	389,319.30	753,796.77	
10,042.00	90.04	0.38	9,127.78	5,850.28	1,020.92	-81.06	1,023.73	0.47	389,415.29	753,797.75	
10,135.00	89.25	359.97	9,128.36	5,850.86	1,113.92	-80.77	1,116.59	0.96	389,508.29	753,798.04	
10,229.00	89.96	358.18	9,129.00	5,851.50	1,207.90	-82.29	1,210.53	2.05	389,602.27	753,796.52	
10,324.00	87.85	356.61	9,130.82	5,853.32	1,302.78	-86.61	1,305.50	2.77	389,697.15	753,792.20	
10,418.00	88.64	357.38	9,133.70	5,856.20	1,396.60	-91.53	1,399.45	1.17	389,790.97	753,787.28	
10,513.00	90.04	357.26	9,134.79	5,857.29	1,491.49	-95.97	1,494.44	1.48	389,885.86	753,782.84	
10,606.00	89.25	357.35	9,135.37	5,857.87	1,584.38	-100.35	1,587.44	0.85	389,978.75	753,778.46	
10,700.00	90.22	358.12	9,135.80	5,858.30	1,678.31	-104.06	1,681.43	1.32	390,072.68	753,774.75	
10,795.00	89.87	358.74	9,135.73	5,858.23	1,773.27	-106.66	1,776.40	0.75	390,167.64	753,772.15	
10,889.00	91.10	358.07	9,134.93	5,857.43	1,867.23	-109.28	1,870.37	1.49	390,261.60	753,769.53	
11,015.00	90.48	357.87	9,133.20	5,855.70	1,993.14	-113.74	1,996.34	0.52	390,387.51	753,765.07	
11,078.00	90.31	357.37	9,132.76	5,855.26	2,056.08	-116.36	2,059.34	0.84	390,450.45	753,762.45	
11,172.00	89.52	357.29	9,132.90	5,855.40	2,149.98	-120.74	2,153.34	0.84	390,544.35	753,758.07	
11,267.00	89.16	357.16	9,134.00	5,856.50	2,244.86	-125.34	2,248.33	0.40	390,639.23	753,753.47	
11,361.00	90.04	357.18	9,134.65	5,857.15	2,338.74	-129.98	2,342.33	0.94	390,733.11	753,748.83	
11,456.00	91.36	358.09	9,133.49	5,855.99	2,433.65	-133.90	2,437.31	1.69	390,828.02	753,744.91	
11,550.00	90.04	358.41	9,132.34	5,854.84	2,527.60	-136.77	2,531.28	1.44	390,921.97	753,742.04	
11,664.00	91.10	359.02	9,131.21	5,853.71	2,641.56	-139.32	2,645.23	1.07	391,035.93	753,739.49	
11,759.00	89.25	358.29	9,130.92	5,853.42	2,736.53	-141.55	2,740.19	2.09	391,130.90	753,737.26	
11,853.00	89.43	358.10	9,132.00	5,854.50	2,830.48	-144.52	2,834.16	0.28	391,224.85	753,734.29	
11,947.00	89.87	357.36	9,132.58	5,855.08	2,924.40	-148.24	2,928.15	0.92	391,318.77	753,730.57	
12,042.00	90.48	358.25	9,132.29	5,854.79	3,019.33	-151.88	3,023.15	1.14	391,413.70	753,726.93	
12,137.00	91.19	358.00	9,130.90	5,853.40	3,114.27	-154.98	3,118.12	0.79	391,508.64	753,723.83	
12,231.00	89.78	357.71	9,130.11	5,852.61	3,208.20	-158.50	3,212.10	1.53	391,602.57	753,720.31	
12,336.00	89.87	358.17	9,130.43	5,852.93	3,313.13	-162.28	3,317.09	0.45	391,707.50	753,716.53	
12,430.00	90.57	357.71	9,130.07	5,852.57	3,407.06	-165.66	3,411.08	0.89	391,801.43	753,713.15	



Pathfinder
PathFinder X&Y Report



Company: Yates Petroleum Corp.
Project: Lea County
Site: Zapata BQZ State Com
Well: Well #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Well Well #1H
RKB to MSL @ 3277.50ft (Patterson 36)
RKB to MSL @ 3277.50ft (Patterson 36)
Grid
Minimum Curvature
1 Smith Database

Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
12,505.00	90.22	357.36	9,129.55	5,852.05	3,481.99	-168.88	3,486.07	0.66	391,876.36	753,709.93	
12,599.00	89.69	357.17	9,129.62	5,852.12	3,575.89	-173.37	3,580.07	0.60	391,970.26	753,705.44	
12,694.00	89.60	356.71	9,130.21	5,852.71	3,670.75	-178.44	3,675.07	0.49	392,065.12	753,700.37	
12,788.00	90.04	357.00	9,130.51	5,853.01	3,764.61	-183.60	3,769.07	0.56	392,158.98	753,695.21	
12,882.00	90.40	356.93	9,130.15	5,852.65	3,858.47	-188.57	3,863.07	0.39	392,252.84	753,690.24	
12,977.00	90.40	356.89	9,129.48	5,851.98	3,953.33	-193.69	3,958.07	0.04	392,347.70	753,685.12	
13,072.00	89.52	356.33	9,129.55	5,852.05	4,048.17	-199.31	4,053.06	1.10	392,442.54	753,679.50	
13,167.00	89.87	356.27	9,130.05	5,852.55	4,142.97	-205.44	4,148.05	0.37	392,537.34	753,673.37	
13,261.00	89.34	356.05	9,130.70	5,853.20	4,236.75	-211.74	4,242.04	0.61	392,631.12	753,667.07	
13,356.00	89.78	355.99	9,131.43	5,853.93	4,331.52	-218.33	4,337.02	0.47	392,725.89	753,660.48	
13,419.00	89.96	356.25	9,131.57	5,854.07	4,394.38	-222.59	4,400.01	0.50	392,788.75	753,656.22	
13,514.00	90.40	356.27	9,131.28	5,853.78	4,489.17	-228.79	4,495.00	0.46	392,883.54	753,650.02	
13,611.00	90.13	356.95	9,130.83	5,853.33	4,586.00	-234.52	4,591.99	0.75	392,980.37	753,644.29	
13,660.00	90.13	356.95	9,130.72	5,853.22	4,634.93	-237.13	4,640.99	0.00	393,029.30	753,641.68	

BHL - 13660.00' MD, 9130.72' TVD, 4634.93' N; -237.13' E - Zapata BQZ BHL



Pathfinder
PathFinder X&Y Report



Company: Yates Petroleum Corp.
Project: Lea County
Site: Zapata BQZ State Corn
Well: Well #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Well Well #1H
RKB to MSL @ 3277.50ft (Patterson 36)
RKB to MSL @ 3277.50ft (Patterson 36)
Grid
Minimum Curvature
1 Smith Database

Targets

Target Name	hit/miss target	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Zapata BQZ BHL		0.00	0.00	9,136.00	4,686.75	-244.13	393,081.12	753,634.68	32.0788057	-103.6478976
- actual wellpath misses target center by 52.56ft at 13660.00ft MD (9130.72 TVD, 4634.93 N, -237.13 E)										
- Point										

Design Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
8,576.00	8,575.05	-57.11	-24.49	KOP - - 8576.00' MD, 8575.05' TVD, -57.11' N, -24.49' E
9,378.00	9,143.62	358.22	-55.51	LP - - 9378.00' MD, 9143.62' TVD, 358.22' N, -55.51' E
13,660.00	9,130.72	4,634.93	-237.13	BHL - 13660.00' MD, 9130.72' TVD, 4634.93' N, -237.13' E

Checked By: _____ Approved By: _____ Date: _____