



ATES
PETROLEUM
CORPORATION



Yates Petroleum Corp.

Eddy County
Rudolph ATX State Com
#4H
OH

30-015-38565

Design: OH

Pathfinder X&Y Report

19 May, 2011

PATHFINDER
A Schlumberger Company



Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County	TVD Reference:	RKB-18' @ 3505.00usft (Silver Oak #10)
Site:	Rudolph ATX State Com	MD Reference:	RKB-18' @ 3505.00usft (Silver Oak #10)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000-1 Single User Db

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

Site:	Rudolph ATX State Com		
Site Position:		Northing:	601,991.190 usft
From:	Map	Easting:	682,252.394 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 39' 14.709 N
		Longitude:	103° 52' 31.705 W
		Grid Convergence:	0.25 °

Well	#4H					
Well Position	+N/-S	0.00 usft	Northing:	601,991.190 usft	Latitude:	32° 39' 14.709 N
	+E/-W	0.00 usft	Easting:	682,252.394 usft	Longitude:	103° 52' 31.705 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level:	3,487.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	4/7/2011	7.78	60.54	48,861

Design:	OH			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	355.92

Survey Program	Date	5/19/2011		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
8,200.00	13,286.00	Survey #1 - MWD (OH)	MWD	MWD - Standard



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Well:	#4H	North Reference:	Gnd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)	
8,100.00	1.25	267.81	8,098.65	4,593.65	7.31	-68.04	12.13	0.00	601,998.50	682,184.35	
8,200.00	1.14	310.44	8,198.63	4,693.63	7.91	-69.89	12.87	0.87	601,999.10	682,182.51	
8,294.00	1.32	296.68	8,292.61	4,787.61	9.01	-71.57	14.08	0.37	602,000.20	682,180.83	
8,388.00	1.14	294.79	8,386.59	4,881.59	9.88	-73.38	15.08	0.20	602,001.07	682,179.01	
8,419.00	1.23	296.90	8,417.58	4,912.58	10.16	-73.96	15.40	0.32	602,001.35	682,178.43	
8,450.00	3.25	336.58	8,448.56	4,943.56	11.12	-74.61	16.40	7.85	602,002.31	682,177.79	
8,482.00	8.44	348.41	8,480.38	4,975.38	14.26	-75.44	19.59	16.56	602,005.45	682,176.96	
8,513.00	14.77	353.03	8,510.73	5,005.73	20.41	-76.38	25.80	20.62	602,011.60	682,176.02	
8,545.00	20.84	355.77	8,541.19	5,036.19	30.15	-77.29	35.57	19.14	602,021.34	682,175.10	
8,576.00	23.48	356.59	8,569.89	5,064.89	41.81	-78.07	47.26	8.57	602,033.00	682,174.33	
8,607.00	26.20	357.69	8,598.02	5,093.02	54.82	-78.71	60.28	8.90	602,046.01	682,173.68	
8,639.00	29.02	359.62	8,626.38	5,121.38	69.64	-79.05	75.09	9.24	602,060.83	682,173.35	
8,670.00	31.74	0.41	8,653.12	5,148.12	85.32	-79.04	90.73	8.87	602,076.51	682,173.36	
8,702.00	33.68	1.29	8,680.04	5,175.04	102.61	-78.78	107.95	6.24	602,093.80	682,173.62	
8,733.00	35.61	2.34	8,705.54	5,200.54	120.22	-78.21	125.48	6.52	602,111.41	682,174.18	
8,764.00	39.13	3.13	8,730.18	5,225.18	139.01	-77.31	144.16	11.46	602,130.20	682,175.08	
8,795.00	42.03	2.70	8,753.72	5,248.72	159.15	-76.29	164.17	9.40	602,150.34	682,176.11	
8,826.00	46.08	2.61	8,775.99	5,270.99	180.68	-75.29	185.58	13.07	602,171.87	682,177.10	
8,857.00	49.42	2.70	8,796.83	5,291.83	203.60	-74.23	208.36	10.78	602,194.79	682,178.17	
8,888.00	51.79	3.05	8,816.51	5,311.51	227.52	-73.03	232.14	7.69	602,218.71	682,179.37	
8,920.00	54.61	3.84	8,835.67	5,330.67	253.09	-71.48	257.54	9.03	602,244.28	682,180.91	
8,950.00	58.30	3.75	8,852.25	5,347.25	278.04	-69.83	282.30	12.30	602,269.23	682,182.57	
8,982.00	62.34	3.75	8,868.09	5,363.09	305.78	-68.01	309.84	12.62	602,296.97	682,184.38	
9,013.00	66.48	3.66	8,881.48	5,376.48	333.67	-66.20	337.54	13.36	602,324.86	682,186.19	
9,045.00	70.87	3.58	8,893.11	5,388.11	363.41	-64.32	367.07	13.72	602,354.60	682,188.07	
9,075.00	74.04	3.58	8,902.15	5,397.15	391.96	-62.54	395.41	10.57	602,383.15	682,189.86	
9,107.00	77.12	3.49	8,910.12	5,405.12	422.89	-60.63	426.13	9.63	602,414.08	682,191.77	



Pathfinder
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Site:	Rudolph ATX State Com	MD Reference:	RKB-18' @ 3505.00usft (Silver Oak #10)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)
9,138.00	79.58	3.31	8,916.38	5,411.38	453.19	-58.83	456.23	7.96	602,444.38	682,193.57
9,169.00	82.75	2.78	8,921.14	5,416.14	483.78	-57.20	486.62	10.36	602,474.97	682,195.19
9,199.00	85.47	1.55	8,924.22	5,419.22	513.59	-56.07	516.28	9.94	602,504.78	682,196.32
9,231.00	88.81	359.27	8,925.82	5,420.82	545.55	-55.85	548.14	12.63	602,536.74	682,196.55
9,262.00	90.13	357.60	8,926.10	5,421.10	576.53	-56.69	579.10	6.87	602,567.72	682,195.70
9,323.00	90.22	357.98	8,925.92	5,420.92	637.49	-59.04	640.07	0.64	602,628.68	682,193.35
9,417.00	89.87	357.48	8,925.84	5,420.84	731.41	-62.77	734.02	0.65	602,722.60	682,189.63
9,511.00	89.50	357.81	8,926.36	5,421.36	825.33	-66.63	827.98	0.53	602,816.52	682,185.76
9,605.00	89.08	356.98	8,927.52	5,422.52	919.23	-70.90	921.94	0.99	602,910.42	682,181.49
9,698.00	89.52	357.61	8,928.66	5,423.66	1,012.11	-75.29	1,014.91	0.83	603,003.30	682,177.10
9,791.00	88.90	356.23	8,929.94	5,424.94	1,104.97	-80.29	1,107.88	1.63	603,096.16	682,172.11
9,885.00	89.25	356.84	8,931.46	5,426.46	1,198.78	-85.97	1,201.86	0.75	603,189.97	682,166.43
9,978.00	89.78	357.75	8,932.25	5,427.25	1,291.68	-90.36	1,294.83	1.13	603,282.87	682,162.04
10,072.00	88.81	356.48	8,933.40	5,428.40	1,385.55	-95.09	1,388.80	1.70	603,376.74	682,157.31
10,164.00	88.29	356.41	8,935.73	5,430.73	1,477.34	-100.79	1,480.77	0.57	603,468.53	682,151.60
10,258.00	88.02	354.78	8,938.76	5,433.76	1,571.01	-108.01	1,574.71	1.76	603,562.20	682,144.39
10,352.00	88.11	354.98	8,941.93	5,436.93	1,664.58	-116.39	1,668.64	0.23	603,655.77	682,136.00
10,445.00	88.55	356.22	8,944.64	5,439.64	1,757.27	-123.52	1,761.60	1.41	603,748.46	682,128.87
10,538.00	88.37	355.60	8,947.14	5,442.14	1,850.00	-130.15	1,854.57	0.69	603,841.19	682,122.24
10,631.00	88.64	354.87	8,949.57	5,444.57	1,942.64	-137.87	1,947.53	0.84	603,933.83	682,114.52
10,724.00	88.72	355.77	8,951.71	5,446.71	2,035.31	-145.46	2,040.50	0.97	604,026.50	682,106.93
10,817.00	89.87	355.54	8,952.86	5,447.86	2,128.03	-152.51	2,133.49	1.26	604,119.22	682,099.89
10,910.00	90.40	356.33	8,952.64	5,447.64	2,220.79	-159.10	2,226.49	1.02	604,211.98	682,093.30
11,004.00	90.66	357.01	8,951.77	5,446.77	2,314.63	-164.56	2,320.47	0.77	604,305.82	682,087.84
11,097.00	91.19	357.53	8,950.27	5,445.27	2,407.51	-168.99	2,413.44	0.80	604,398.70	682,083.41
11,191.00	92.15	357.85	8,947.53	5,442.53	2,501.40	-172.77	2,507.35	1.08	604,492.59	682,079.62
11,283.00	91.80	357.26	8,944.36	5,439.36	2,593.26	-176.70	2,599.26	0.75	604,584.45	682,075.70



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Project:	Eddy County	TVD Reference:	RKB-18' @ 3505.00usft (Silver Oak #10)
Site:	Rudolph ATX State Com	MD Reference:	RKB-18' @ 3505.00usft (Silver Oak #10)
Well:	#4H	North Reference:	Gnd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)
11,377.00	91.28	356.48	8,941.83	5,436.83	2,687.08	-181.83	2,693.21	1.00	604,678.27	682,070.57
11,471.00	91.19	357.13	8,939.80	5,434.80	2,780.91	-187.06	2,787.17	0.70	604,772.10	682,065.33
11,564.00	90.57	354.49	8,938.38	5,433.38	2,873.65	-193.86	2,880.16	2.92	604,864.84	682,058.54
11,658.00	90.84	355.62	8,937.22	5,432.22	2,967.29	-201.96	2,974.14	1.24	604,958.48	682,050.43
11,751.00	91.10	356.14	8,935.64	5,430.64	3,060.03	-208.64	3,067.12	0.63	605,051.22	682,043.75
11,844.00	91.36	354.90	8,933.65	5,428.65	3,152.73	-215.90	3,160.10	1.36	605,143.92	682,036.49
11,938.00	91.63	355.15	8,931.20	5,426.20	3,246.34	-224.05	3,254.05	0.39	605,237.53	682,028.34
12,033.00	92.51	356.57	8,927.76	5,422.76	3,341.03	-230.91	3,348.99	1.76	605,332.22	682,021.49
12,125.00	90.92	355.14	8,925.01	5,420.01	3,432.74	-237.55	3,440.94	2.32	605,423.93	682,014.84
12,219.00	91.89	356.09	8,922.71	5,417.71	3,526.43	-244.74	3,534.91	1.44	605,517.62	682,007.66
12,312.00	92.07	356.13	8,919.49	5,414.49	3,619.16	-251.04	3,627.85	0.20	605,610.35	682,001.35
12,406.00	92.07	355.70	8,916.10	5,411.10	3,712.86	-257.74	3,721.79	0.46	605,704.05	681,994.66
12,499.00	92.07	356.10	8,912.74	5,407.74	3,805.56	-264.38	3,814.73	0.43	605,796.75	681,988.01
12,592.00	92.24	357.46	8,909.24	5,404.24	3,898.35	-269.60	3,907.65	1.47	605,889.54	681,982.79
12,685.00	92.46	358.23	8,905.43	5,400.43	3,991.21	-273.09	4,000.52	0.86	605,982.40	681,979.30
12,779.00	91.98	357.81	8,901.79	5,396.79	4,085.08	-276.34	4,094.39	0.68	606,076.27	681,976.05
12,872.00	92.33	358.54	8,898.29	5,393.29	4,177.96	-279.30	4,187.25	0.87	606,169.15	681,973.09
12,965.00	92.15	357.68	8,894.65	5,389.65	4,270.84	-282.36	4,280.11	0.94	606,262.03	681,970.03
13,059.00	92.68	358.39	8,890.69	5,385.69	4,364.70	-285.59	4,373.96	0.94	606,355.89	681,966.81
13,152.00	92.77	358.80	8,886.27	5,381.27	4,457.57	-287.86	4,466.75	0.45	606,448.76	681,964.53
13,227.00	93.03	358.80	8,882.48	5,377.48	4,532.46	-289.43	4,541.56	0.35	606,523.65	681,962.96
13,286.00	93.03	358.80	8,879.36	5,374.36	4,591.36	-290.67	4,600.41	0.00	606,582.55	681,961.73



Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County	TVD Reference:	RKB-18' @ 3505.00usft (Silver Oak #10)
Site:	Rudolph ATX State Com	MD Reference:	RKB-18' @ 3505.00usft (Silver Oak #10)
Well:	#4H	North Reference:	Gnd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,262.00	8,926.10	576.53	-56.69	LP - 9262.00' MD, 8926.10' TVD', 576.53' N, -56.69' E
13,286.00	8,879.36	4,591.36	-290.67	BHL - 13286 00' MD, 8879.36' TVD', 4591 36' N, -290.67' E

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County
Site: Rudolph ATX State Com
Well: #4H
Wellbore: OH
Plan: Design #1 (#4H/OH)

PATHFINDER
A Schlumberger Company

PROJECT DETAILS: Eddy 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



Azimuths to Grid North
True North: -0.25°
Magnetic North: 7.53°
Magnetic Field
Strength: 48860.6snT
Dip Angle: 60.54°
Date: 4/7/2011
Model: IGRF2010

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Diag	TFace	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8447.50	0.00	0.00	8447.50	0.00	0.00	0.00	0.00	0.00
3	9201.58	90.48	355.92	8926.00	480.30	-34.26	12.00	355.92	481.52
4	13351.88	90.48	355.92	8890.23	4619.93	-329.54	0.00	0.00	4631.67
									BHL (RudolphStCom#4H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N/S	+E/W	Northing	Easting
BHL (RudolphStCom#4H)	8890.00	4619.93	-329.50	606611.123	681922.894

WELL DETAILS #4H					
Ground Elevation 3487.00					
RKB Elevation: RKB-18' @ 3505.00usft (Silver Oak #10)					
Rig Name Silver Oak #10					
+N/S	+E/W	Northing	Easting	Latitude	Longitude
0.00	0.00	601991.190	882252.394	32° 39' 14.709 N	103° 52' 31.705 W

