



30-015-38550

Yates Petroleum Corp.

Eddy County (NAD 83)
Grande Mike "AZK" State
#3H
OH

Design: OH

PathfinderX & Y Report

25 July, 2012

PATHFINDER[®]
A Schlumberger Company



Pathfinder
PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #3H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18'8" @ 3767.8usft (Patterson 511)
Site:	Grande Mike "AZK" State	MD Reference:	KB = 18'8" @ 3767.8usft (Patterson 511)
Well:	#3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project:		Eddy County (NAD 83)	
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Grande Mike "AZK" State							
Site Position:		Northing:	710,780.541	usft	Latitude:	32.954			
From:	Map	Easting:	627,192.321	usft	Longitude:	-104.053			
Position Uncertainty:		0.0	usft	Slot Radius:	13-3/16	"	Grid Convergence:	0.15	°

Well		#3H				
Well Position	+N/-S	0.0 usft	Northing:	711,744.022 usft	Latitude:	32.956
	+E/-W	0.0 usft	Easting:	627,189.006 usft	Longitude:	-104.053
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level:	3,749.0 usft

Wellbore: OH					
Magnetics:	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	1/31/2012	7.78	60.79	48,976

Design:		OH			
Audit Notes:					
Version:		1.0	Phase:		ACTUAL
			Tie On Depth:		0 0
Vertical Section:	Depth From (TVD)	N/S	E/W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0 0	0.0	92.72	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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Survey Program		Date: 7/25/2012			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
200.0	6,445.0	Gyro #1 (OH)	CTG-SR-SS	Continuous gyro - surface ref. s/s	
6,601.0	11,740.0	MWD #1 (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	-3,767.8	0.0	0.0	0.0	0.00	711,744.02	627,189.01
200.0	0.54	82.47	200.0	-3,567.8	0.1	0.9	0.9	0.27	711,744.15	627,189.94
400.0	1.52	32.10	400.0	-3,367.8	2.5	3.3	3.2	0.62	711,746.52	627,192.28
600.0	1.64	30.90	599.9	-3,167.9	7.2	6.2	5.8	0.06	711,751.22	627,195.16
800.0	1.86	41.97	799.8	-2,968.0	12.1	9.8	9.2	0.20	711,756.09	627,198.80
1,000.0	1.77	47.45	999.7	-2,768.1	16.6	14.2	13.4	0.10	711,760.59	627,203.25
1,200.0	1.14	48.71	1,199.6	-2,568.2	20.0	18.0	17.0	0.32	711,763.99	627,207.02
1,400.0	0.82	43.73	1,399.6	-2,368.2	22.3	20.5	19.4	0.17	711,766.34	627,209.50
1,600.0	0.44	38.40	1,599.6	-2,168.2	24.0	22.0	20.8	0.19	711,767.97	627,210.97
1,800.0	0.27	355.04	1,799.6	-1,968.2	25.0	22.4	21.2	0.15	711,769.05	627,211.41
2,000.0	0.29	332.91	1,999.6	-1,768.2	25.9	22.1	20.9	0.05	711,769.97	627,211.14
2,200.0	0.51	313.21	2,199.6	-1,568.2	27.0	21.3	19.9	0.13	711,771.03	627,210.26
2,400.0	0.47	311.61	2,399.6	-1,368.2	28.2	20.0	18.6	0.02	711,772.18	627,208.99
2,600.0	0.59	333.52	2,599.6	-1,168.2	29.6	18.9	17.5	0.12	711,773.65	627,207.92
2,800.0	0.51	334.43	2,799.6	-968.2	31.3	18.1	16.6	0.04	711,775.37	627,207.08
3,000.0	0.62	323.37	2,999.5	-768.3	33.0	17.0	15.5	0.08	711,777.04	627,206.05
3,200.0	0.63	344.67	3,199.5	-568.3	34.9	16.1	14.4	0.12	711,778.97	627,205.11
3,400.0	0.64	351.65	3,399.5	-368.3	37.1	15.7	13.9	0.04	711,781.14	627,204.66
3,600.0	0.49	350.48	3,599.5	-168.3	39.1	15.4	13.5	0.08	711,783.09	627,204.36
3,800.0	0.57	351.42	3,799.5	31.7	40.9	15.1	13.1	0.04	711,784.91	627,204.07
4,000.0	0.67	359.48	3,999.5	231.7	43.0	14.9	12.8	0.07	711,787.07	627,203.91



Pathfinder PathfinderX & Y Report

PATHFINDER
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Site:	Grande Mike "AZK" State	MD Reference:	KB = 18.8 @ 3767.8usft (Patterson 511)
Well:	#3H	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 (ft/100usft)	Northing (usft)	Easting (usft)	
4,200.0	0.33	351.24	4,199.5	431.7	44.8	14.8	12.7	0.17	711,788.80	627,203.81	
4,400.0	0.49	340.13	4,399.5	631.7	46.2	14.4	12.2	0.09	711,790.18	627,203.43	
4,600.0	0.75	331.55	4,599.5	831.7	48.1	13.5	11.2	0.14	711,792.13	627,202.52	
4,800.0	0.53	336.49	4,799.5	1,031.7	50.1	12.5	10.1	0.11	711,794.13	627,201.52	
5,000.0	0.45	2.12	4,999.4	1,231.6	51.7	12.2	9.7	0.12	711,795.76	627,201.18	
5,200.0	0.57	352.18	5,199.4	1,431.6	53.5	12.1	9.5	0.07	711,797.54	627,201.08	
5,400.0	0.60	354.14	5,399.4	1,631.6	55.5	11.8	9.2	0.02	711,799.56	627,200.84	
5,600.0	0.70	345.55	5,599.4	1,831.6	57.8	11.4	8.7	0.07	711,801.79	627,200.42	
5,800.0	0.84	341.52	5,799.4	2,031.6	60.3	10.6	7.8	0.08	711,804.36	627,199.65	
6,000.0	0.33	350.82	5,999.4	2,231.6	62.3	10.1	7.1	0.26	711,806.32	627,199.10	
6,200.0	0.21	357.76	6,199.4	2,431.6	63.2	10.0	7.0	0.06	711,807.25	627,198.99	
6,400.0	0.46	107.44	6,399.4	2,631.6	63.4	10.7	7.7	0.28	711,807.38	627,199.74	
6,445.0	0.64	105.79	6,444.4	2,676.6	63.2	11.2	8.1	0.40	711,807.26	627,200.16	
6,601.0	1.14	88.53	6,600.4	2,832.6	63.0	13.5	10.5	0.36	711,807.06	627,202.55	
6,728.0	1.41	91.25	6,727.3	2,959.5	63.0	16.4	13.4	0.22	711,807.06	627,205.37	
6,760.0	5.28	93.54	6,759.3	2,991.5	62.9	18.2	15.2	12.10	711,806.96	627,207.24	
6,766.0	5.92	93.54	6,765.2	2,997.4	62.9	18.8	15.8	10.72	711,806.92	627,207.82	
KOP: 6766.0 MD, 6765.2 TVD, 62.9 N, 18.8 E											
6,792.0	8.71	93.54	6,791.0	3,023.2	62.7	22.1	19.1	10.72	711,806.72	627,211.12	
6,823.0	12.49	94.14	6,821.5	3,053.7	62.3	27.8	24.8	12.20	711,806.33	627,216.81	
6,855.0	16.27	95.12	6,852.5	3,084.7	61.7	35.7	32.8	11.84	711,805.68	627,224.73	
6,887.0	20.22	95.65	6,882.9	3,115.1	60.7	45.7	42.8	12.35	711,804.74	627,234.70	
6,919.0	24.09	95.38	6,912.5	3,144.7	59.6	57.7	54.8	12.10	711,803.58	627,246.71	
6,950.0	27.79	94.33	6,940.4	3,172.6	58.4	71.2	68.4	12.03	711,802.44	627,260.22	
6,982.0	31.83	93.62	6,968.1	3,200.3	57.3	87.1	84.3	12.67	711,801.34	627,276.09	
7,014.0	36.05	93.36	6,994.7	3,226.9	56.2	104.9	102.1	13.20	711,800.26	627,293.92	
7,046.0	39.92	93.89	7,019.9	3,252.1	55.0	124.6	121.8	12.14	711,799.01	627,313.57	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)
7,077.0	42.91	95.25	7,043.1	3,275.3	53.3	145.0	142.3	10.07	711,797.37	627,334.01
7,109.0	45.02	96.81	7,066.2	3,298.4	51.0	167.1	164.5	7.41	711,795.03	627,356.10
7,141.0	47.31	97.60	7,088.3	3,320.5	48.1	190.0	187.5	7.37	711,792.13	627,378.99
7,173.0	49.95	97.86	7,109.5	3,341.7	44.9	213.8	211.4	8.27	711,788.90	627,402.79
7,205.0	53.29	97.94	7,129.3	3,361.5	41.4	238.6	236.4	10.44	711,785.45	627,427.63
7,237.0	56.72	98.44	7,147.7	3,379.9	37.7	264.6	262.5	10.79	711,781.72	627,453.57
7,268.0	59.79	98.74	7,164.0	3,396.2	33.8	290.6	288.7	9.94	711,777.78	627,479.64
7,300.0	62.52	99.13	7,179.4	3,411.6	29.4	318.3	316.6	8.60	711,773.42	627,507.32
7,332.0	64.72	98.77	7,193.7	3,425.9	24.9	346.6	345.1	6.95	711,768.97	627,535.64
7,364.0	67.18	98.43	7,206.7	3,438.9	20.6	375.5	374.1	7.75	711,764.60	627,564.53
7,395.0	68.85	97.86	7,218.3	3,450.5	16.5	404.0	402.7	5.65	711,760.53	627,592.99
7,427.0	71.75	97.45	7,229.1	3,461.3	12.5	433.8	432.8	9.14	711,756.51	627,622.84
7,459.0	74.92	97.90	7,238.3	3,470.5	8.4	464.2	463.3	10.00	711,752.42	627,653.22
7,491.0	77.21	98.44	7,246.0	3,478.2	4.0	495.0	494.2	7.34	711,748.01	627,683.96
7,523.0	78.61	98.72	7,252.7	3,484.9	-0.7	525.9	525.3	4.46	711,743.34	627,714.90
7,555.0	81.60	98.57	7,258.2	3,490.4	-5.4	557.1	556.7	9.36	711,738.60	627,746.06
7,587.0	84.86	97.42	7,261.9	3,494.1	-9.8	588.5	588.3	10.79	711,734.18	627,777.53
7,618.0	86.70	95.87	7,264.2	3,496.4	-13.4	619.2	619.2	7.75	711,730.60	627,808.23
7,650.0	87.58	95.33	7,265.8	3,498.0	-16.5	651.0	651.1	3.23	711,727.49	627,840.04
7,708.0	87.58	95.57	7,268.3	3,500.5	-22.0	708.7	709.0	0.41	711,721.98	627,897.73
7,772.0	90.22	94.37	7,269.5	3,501.7	-27.6	772.5	772.9	4.53	711,716.44	627,961.47
LP: 7772.0 MD: 7269.5 TVD: 27.6 N, 772.5 E										
7,835.0	90.04	94.67	7,269.4	3,501.6	-32.5	835.3	835.9	0.56	711,711.47	628,024.27
7,899.0	90.31	94.52	7,269.2	3,501.4	-37.7	899.1	899.8	0.48	711,706.35	628,088.06
7,962.0	91.54	93.84	7,268.1	3,500.3	-42.3	961.9	962.8	2.23	711,701.76	628,150.89
8,026.0	91.45	93.67	7,266.5	3,498.7	-46.5	1,025.7	1,026.8	0.30	711,697.57	628,214.73
8,089.0	91.54	92.77	7,264.8	3,497.0	-50.0	1,088.6	1,089.7	1.44	711,694.03	628,277.61



Pathfinder PathfinderX & Y Report



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Site:	Grande Mike "AZK" State	MD Reference:	KB = 18.8 @ 3767.8usft (Patterson 511)
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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)	Northings (usft)	Easting (usft)	
8,153.0	91.45	92.89	7,263.2	3,495.4	-53.2	1,152.5	1,153.7	0.23	711,690.87	628,341.51	
8,217.0	91.45	92.50	7,261.5	3,493.7	-56.2	1,216.4	1,217.7	0.61	711,687.86	628,405.41	
8,280.0	91.45	92.62	7,259.9	3,492.1	-59.0	1,279.3	1,280.7	0.19	711,685.05	628,468.33	
8,344.0	91.63	92.80	7,258.2	3,490.4	-62.0	1,343.2	1,344.7	0.40	711,682.02	628,532.24	
8,407.0	91.63	92.56	7,256.4	3,488.6	-64.9	1,406.1	1,407.6	0.38	711,679.08	628,595.14	
8,471.0	91.71	92.13	7,254.6	3,486.8	-67.6	1,470.1	1,471.6	0.68	711,676.46	628,659.06	
8,534.0	91.36	91.46	7,252.9	3,485.1	-69.5	1,533.0	1,534.6	1.20	711,674.49	628,722.01	
8,598.0	91.36	91.20	7,251.4	3,483.6	-71.0	1,597.0	1,598.5	0.41	711,673.00	628,785.97	
8,662.0	90.75	92.21	7,250.2	3,482.4	-72.9	1,660.9	1,662.5	1.84	711,671.10	628,849.93	
8,725.0	90.66	92.06	7,249.4	3,481.6	-75.3	1,723.9	1,725.5	0.28	711,668.75	628,912.88	
8,789.0	90.57	92.04	7,248.7	3,480.9	-77.6	1,787.8	1,789.5	0.14	711,666.46	628,976.84	
8,852.0	90.57	91.78	7,248.1	3,480.3	-79.7	1,850.8	1,852.5	0.41	711,664.36	629,039.80	
8,916.0	90.57	91.57	7,247.5	3,479.7	-81.5	1,914.8	1,916.5	0.33	711,662.49	629,103.77	
8,979.0	90.57	91.69	7,246.8	3,479.0	-83.3	1,977.7	1,979.5	0.19	711,660.70	629,166.74	
9,043.0	90.48	91.58	7,246.2	3,478.4	-85.1	2,041.7	2,043.4	0.22	711,658.88	629,230.71	
9,106.0	90.57	91.45	7,245.7	3,477.9	-86.8	2,104.7	2,106.4	0.25	711,657.21	629,293.69	
9,170.0	90.57	91.67	7,245.0	3,477.2	-88.6	2,168.7	2,170.4	0.34	711,655.47	629,357.66	
9,234.0	90.04	92.83	7,244.7	3,476.9	-91.1	2,232.6	2,234.4	1.99	711,652.96	629,421.61	
9,298.0	90.13	92.82	7,244.6	3,476.8	-94.2	2,296.5	2,298.4	0.14	711,649.80	629,485.53	
9,361.0	90.22	92.97	7,244.4	3,476.6	-97.4	2,359.4	2,361.4	0.28	711,646.62	629,548.45	
9,424.0	89.60	92.66	7,244.5	3,476.7	-100.5	2,422.4	2,424.4	1.10	711,643.52	629,611.37	
9,488.0	89.08	91.82	7,245.2	3,477.4	-103.0	2,486.3	2,488.4	1.54	711,641.02	629,675.32	
9,552.0	88.99	92.83	7,246.3	3,478.5	-105.6	2,550.3	2,552.4	1.58	711,638.43	629,739.26	
9,615.0	89.60	93.51	7,247.1	3,479.3	-109.1	2,613.2	2,615.4	1.45	711,634.94	629,802.16	
9,679.0	89.78	93.67	7,247.4	3,479.6	-113.1	2,677.0	2,679.4	0.38	711,630.94	629,866.03	
9,742.0	90.57	94.06	7,247.2	3,479.4	-117.3	2,739.9	2,742.4	1.40	711,626.69	629,928.89	
9,806.0	90.84	93.75	7,246.5	3,478.7	-121.7	2,803.7	2,806.3	0.64	711,622.33	629,992.73	



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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)	
9,869.0	90.75	93.89	7,245.6	3,477.8	-125.9	2,866.6	2,869.3	0.26	711,618.14	630,055.59	
9,933.0	90.57	93.55	7,244.8	3,477.0	-130.0	2,930.4	2,933.3	0.60	711,613.98	630,119.45	
9,997.0	90.75	93.59	7,244.1	3,476.3	-134.0	2,994.3	2,997.3	0.29	711,610.00	630,183.32	
10,065.0	90.75	93.60	7,243.2	3,475.4	-138.3	3,062.2	3,065.3	0.01	711,605.73	630,251.18	
10,124.0	90.75	93.13	7,242.4	3,474.6	-141.7	3,121.1	3,124.3	0.80	711,602.27	630,310.07	
10,188.0	90.75	93.11	7,241.6	3,473.8	-145.2	3,185.0	3,188.3	0.03	711,598.79	630,373.97	
10,251.0	90.75	93.35	7,240.8	3,473.0	-148.8	3,247.9	3,251.3	0.38	711,595.24	630,436.87	
10,315.0	90.84	93.15	7,239.9	3,472.1	-152.4	3,311.8	3,315.3	0.34	711,591.61	630,500.76	
10,378.0	90.92	92.96	7,238.9	3,471.1	-155.8	3,374.7	3,378.2	0.33	711,588.25	630,563.66	
10,441.0	90.66	92.80	7,238.1	3,470.3	-158.9	3,437.6	3,441.2	0.48	711,585.09	630,626.57	
10,505.0	90.92	92.70	7,237.2	3,469.4	-162.0	3,501.5	3,505.2	0.44	711,582.02	630,690.49	
10,569.0	90.66	92.64	7,236.3	3,468.5	-165.0	3,565.4	3,569.2	0.42	711,579.04	630,754.42	
10,632.0	89.52	92.29	7,236.2	3,468.4	-167.7	3,628.4	3,632.2	1.89	711,576.33	630,817.36	
10,696.0	89.52	92.27	7,236.7	3,468.9	-170.2	3,692.3	3,696.2	0.03	711,573.78	630,881.31	
10,759.0	89.25	92.31	7,237.4	3,469.6	-172.8	3,755.2	3,759.2	0.43	711,571.27	630,944.25	
10,823.0	89.34	92.10	7,238.2	3,470.4	-175.2	3,819.2	3,823.2	0.36	711,568.80	631,008.20	
10,886.0	89.43	92.50	7,238.9	3,471.1	-177.7	3,882.1	3,886.2	0.65	711,566.28	631,071.15	
10,950.0	89.52	92.20	7,239.5	3,471.7	-180.4	3,946.1	3,950.2	0.49	711,563.65	631,135.09	
11,013.0	89.60	92.08	7,239.9	3,472.1	-182.7	4,009.0	4,013.2	0.23	711,561.30	631,198.04	
11,077.0	89.69	91.99	7,240.3	3,472.5	-185.0	4,073.0	4,077.2	0.20	711,559.03	631,262.00	
11,140.0	90.04	92.24	7,240.5	3,472.7	-187.3	4,136.0	4,140.2	0.68	711,556.70	631,324.96	
11,203.0	89.96	91.84	7,240.5	3,472.7	-189.6	4,198.9	4,203.2	0.65	711,554.46	631,387.92	
11,267.0	88.46	92.44	7,241.4	3,473.6	-192.0	4,262.9	4,267.2	2.52	711,552.07	631,451.87	
11,330.0	87.58	92.62	7,243.5	3,475.7	-194.7	4,325.8	4,330.1	1.43	711,549.29	631,514.77	
11,394.0	87.32	93.26	7,246.4	3,478.6	-198.0	4,389.6	4,394.1	1.08	711,546.01	631,578.62	
11,458.0	88.64	94.12	7,248.6	3,480.8	-202.1	4,453.4	4,458.0	2.46	711,541.89	631,642.44	
11,522.0	88.81	93.74	7,250.1	3,482.3	-206.5	4,517.3	4,522.0	0.65	711,537.51	631,706.28	



Pathfinder
PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp	Local Co-ordinate Reference:	Well #3H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18.8 @ 3767.8usft (Patterson 511)
Site:	Grande Mike "AZK" State	MD Reference:	KB = 18.8 @ 3767.8usft (Patterson 511)
Well:	#3H	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)	
11,585.0	89.52	93.71	7,251.0	3,483.2	-210.6	4,580.1	4,585.0	1.13	711,533.42	631,769.14	
11,649.0	89.87	94.15	7,251.3	3,483.5	-215.0	4,644.0	4,648.9	0.88	711,529.03	631,832.99	
11,667.0	89.96	94.34	7,251.4	3,483.6	-216.3	4,661.9	4,666.9	1.17	711,527.70	631,850.94	
11,740.0	89.96	94.34	7,251.4	3,483.6	-221.8	4,734.7	4,739.9	0.00	711,522.17	631,923.73	
BHL -11740.0 'MD, 7251.4 'TVD, -221.8 'N, 4734.7 'E - FNL: 840, FEL: 368, FSL: 480											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates N/S (usft)	E/W (usft)	Comment
6,766.0	6,765.2	62.9	18.8	KOP - 6766.0 'MD, 6765.2 'TVD, 62.9 'N, 18.8 'E
7,772.0	7,269.5	-27.6	772.5	LP - 7772.0 'MD, 7269.5 'TVD, -27.6 'N, 772.5 'E
11,740.0	7,251.4	-221.8	4,734.7	BHL - 11740.0 'MD, 7251.4 'TVD, -221.8 'N, 4734.7 'E
11,740.0	7,251.4	-221.8	4,734.7	FNL 840, FEL: 368, FSL 480

Checked By: _____ Approved By: _____ Date: _____

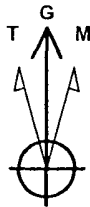


ATES
PETROLEUM
CORPORATION

Project: Eddy County (NAD 83)
Site: Grande Mike "AZK" State
Well: #3H
Wellbore: OH
Plan: Post Gyro Plan #3 (#3H/OH)

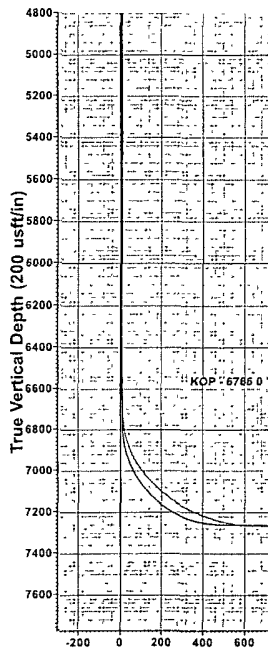
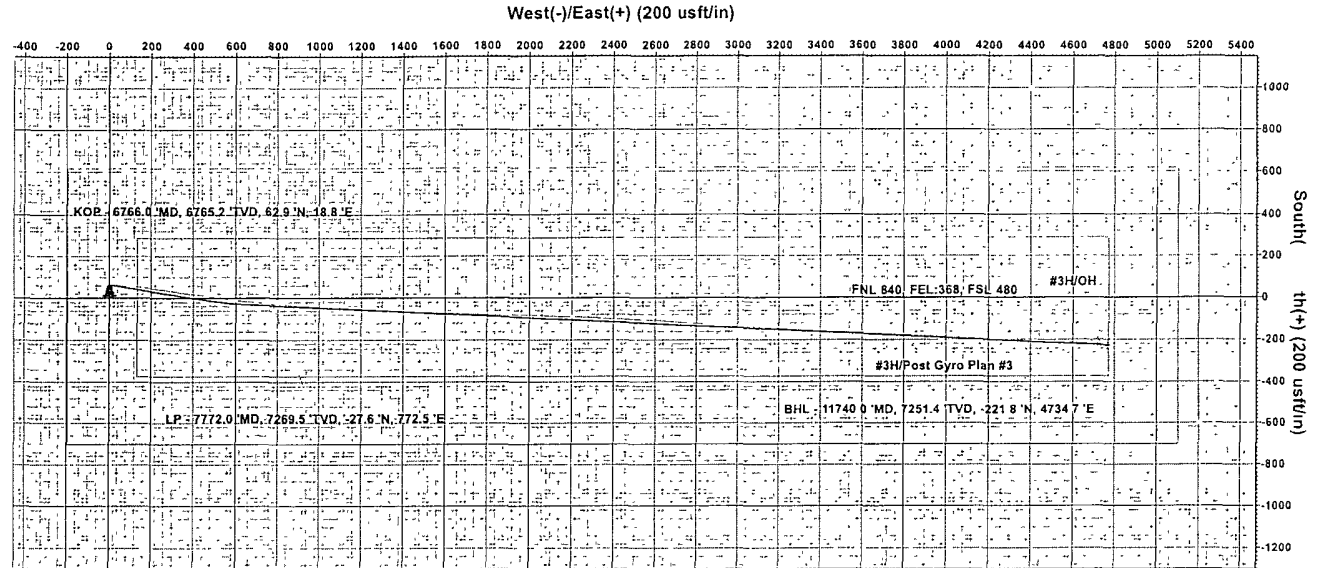
PATHFINDER
A Schlumberger Company

PROJECT DETAILS: Eddy County (NAD 83)
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: -0.15°
Magnetic North: 7.62°

Magnetic Field
Strength: 48976.0snT
Dip Angle: 60.79°
Date: 1/31/2012
Model: IGRF200510



WELL DETAILS- #3H					
Ground Elevation: 3749.0					
RKB Elevation: KB = 18.8 @ 3767.8usft (Patterson 511)					
Rig Name Patterson 511					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	711744.022	627189.006	32.956	-104.053

EOW

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
1	6445.0	0.64	105.79	6444.4	63.2	11.2	0.00	0.00	8.1
2	6788.5	0.64	105.79	6787.9	62.2	14.8	0.00	0.00	11.9
3	7526.3	89.17	99.20	7260.0	-13.6	479.2	12.00	-6.59	479.3
4	7688.3	89.17	92.72	7262.3	-30.4	640.3	4.00	-90.07	641.0
5	8147.4	89.17	92.72	7269.0	-52.2	1098.8	0.00	0.00	1100.0
6	8221.8	92.14	92.72	7268.1	-55.7	1173.1	4.00	0.04	1174.4
7	9108.0	92.14	92.72	7235.0	-97.8	2057.7	0.00	0.00	2060.0
8	9213.8	87.91	92.72	7234.9	-102.8	2163.3	4.00	-180.00	2165.8
9	10148.7	87.91	92.72	7269.0	-147.1	3096.5	0.00	0.00	3100.0
10	10237.4	91.46	92.72	7269.5	-151.3	3185.2	4.00	0.00	3188.8
11	10608.8	91.46	92.72	7260.0	-168.9	3556.0	0.00	0.00	3560.0
12	10670.6	88.99	92.73	7259.8	-171.9	3617.7	4.00	179.72	3621.8
13	11821.9	88.99	92.73	7280.0	-226.8	4767.6	0.00	0.00	4773.0

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N/-S	+E/-W	Northing	Easting
TGT#1 (GM #3H)	7269.0	-52.2	1098.8	711891.821	628287.767
TGT#2 (GM #3H)	7235.0	-97.8	2057.7	711646.264	629246.685
TGT#3 (GM #3H)	7269.0	-147.1	3096.5	711596.911	630285.513
TGT#4 (GM #3H)	7260.0	-168.9	3556.0	711575.082	630744.995
PBHL (GM #3H)	7280.0	-226.8	4767.6	711517.270	631956.590

Plan Post Gyro Plan #3 (#3H/OH)	
Created By Sam Brittle	Date 9/16, July 25/2012
Checked _____	Date _____

Notes: Information only.
Not for use in design.
Not for use in construction.
Not for use in legal proceedings.
Not for use in any other way.
Not for use in any other way.