

Yates Petroleum Corp.

Eddy County (NAD27)

Shocker 32 State

#3H

OH

30-015-36220

Design: OH

Pathfinder X&Y Report

26 April, 2011

PATHFINDER
A Schlumberger Company



Pathfinder
Pathfinder X&Y Report

PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp	Local Co-ordinate Reference:	Site Shocker, 32 State
Project:	Eddy County (NAD27)	TVD Reference:	WELL @ 3001.00usft (18' KB)
Site:	Shocker 32 State	MD Reference:	WELL @ 3001 00usft (18' KB)
Well:	#3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 1 Single User Db

Project				Eddy County (NAD27)			
Map System:		US State Plane 1927 (Exact solution)		System Datum,		Mean Sea Level	
Geo Datum:		NAD 1927 (NADCON CONUS)					
Map Zone:		New Mexico East 3001					

Site		Shocker 32 State			
Site Position:		Northing:		397,541.400 usft	
From:	Map	Easting:		603,709.900 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
0 00 usft				Latitude:	
				32° 5' 33.052 N	
				Longitude:	
				103° 59' 54.397 W	
				Grid Convergence:	
				0.18 °	

Well:	#3H					
Well Position	+N/-S	0.00 usft	Northing:	397,541.400 usft	Latitude:	32° 5' 33.052 N
	+E/-W	0.00 usft	Easting:	603,709.900 usft	Longitude:	103° 59' 54.397 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,983.00 usft	

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/3/2010	7.90	60.04	48,644

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	180.67	



Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Site Shocker.32.State
Project:	Eddy County (NAD27)	TVD Reference:	WELL @ 3001.00usft (18' KB)
Site:	Shocker.32.State	MD Reference:	WELL @ 3001.00usft (18' KB)
Well:	#3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey Program		Date	4/26/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
200.00	6,050.00	GYRO (OH)	MWD	MWD - Standard	
6,137.00	11,450.00	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)
0.00	0.00	0.00	0.00	-3,001.00	0.00	0.00	0.00	0.00	397,541.40	603,709.90
200.00	1.00	215.25	199.99	-2,801.01	-1.43	-1.01	1.44	0.50	397,539.97	603,708.89
400.00	1.25	186.31	399.95	-2,601.05	-5.02	-2.25	5.04	0.31	397,536.38	603,707.65
600.00	0.75	178.37	599.92	-2,401.08	-8.50	-2.46	8.52	0.26	397,532.90	603,707.44
800.00	0.75	185.42	799.90	-2,201.10	-11.11	-2.54	11.14	0.05	397,530.29	603,707.36
1,000.00	1.00	182.48	999.88	-2,001.12	-14.15	-2.74	14.18	0.13	397,527.25	603,707.16
1,200.00	0.75	230.53	1,199.86	-1,801.14	-16.73	-3.83	16.77	0.37	397,524.67	603,706.07
1,400.00	0.75	202.59	1,399.84	-1,601.16	-18.77	-5.34	18.83	0.18	397,522.63	603,704.56
1,600.00	0.50	234.65	1,599.83	-1,401.17	-20.48	-6.56	20.56	0.21	397,520.92	603,703.34
1,800.00	0.25	298.71	1,799.83	-1,201.17	-20.78	-7.65	20.87	0.23	397,520.62	603,702.25
2,000.00	0.50	116.76	1,999.83	-1,001.17	-20.96	-7.25	21.05	0.37	397,520.44	603,702.65
2,200.00	1.50	90.82	2,199.79	-801.21	-21.39	-3.86	21.44	0.54	397,520.01	603,706.04
2,400.00	2.00	92.87	2,399.70	-601.30	-21.60	2.25	21.58	0.25	397,519.80	603,712.15
2,600.00	1.50	97.93	2,599.61	-401.39	-22.14	8.32	22.04	0.26	397,519.26	603,718.22
2,800.00	0.75	129.99	2,799.57	-201.43	-23.34	11.92	23.20	0.48	397,518.06	603,721.82
3,000.00	0.25	225.05	2,999.56	-1.44	-24.49	12.61	24.34	0.41	397,516.91	603,722.51
3,200.00	0.50	195.10	3,199.56	198.56	-25.64	12.08	25.50	0.15	397,515.76	603,721.98
3,400.00	0.25	191.22	3,399.55	398.55	-26.91	11.77	26.77	0.13	397,514.49	603,721.67
3,600.00	0.25	189.61	3,599.55	598.55	-27.77	11.61	27.63	0.00	397,513.63	603,721.51
3,800.00	0.25	98.67	3,799.55	798.55	-28.27	11.97	28.13	0.18	397,513.13	603,721.87
4,000.00	0.25	349.73	3,999.55	998.55	-27.90	12.32	27.76	0.20	397,513.50	603,722.22



Pathfinder
Pathfinder X&Y Report



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Project:	Eddy County (NAD27)	TVD Reference:	WELL @ 3001.00usft (18' KB)
Site:	Shocker 32 State	MD Reference:	WELL @ 3001.00usft (18' KB)
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)	
4,200.00	0.25	329.78	4,199.55	1,198.55	-27.10	12.02	26.96	0.04	397,514.30	603,721.92	
4,400.00	0.25	359.84	4,399.55	1,398.55	-26.28	11.80	26.14	0.06	397,515.12	603,721.70	
4,600.00	0.50	315.90	4,599.54	1,598.54	-25.22	11.19	25.09	0.18	397,516.18	603,721.09	
4,800.00	0.50	323.95	4,799.53	1,798.53	-23.89	10.07	23.77	0.04	397,517.51	603,719.97	
5,000.00	0.75	331.01	4,999.52	1,998.52	-22.04	8.92	21.93	0.13	397,519.36	603,718.82	
5,200.00	0.75	266.06	5,199.51	2,198.51	-20.98	6.98	20.90	0.40	397,520.42	603,716.88	
5,400.00	0.25	259.12	5,399.50	2,398.50	-21.16	5.25	21.09	0.25	397,520.24	603,715.15	
5,600.00	0.50	239.18	5,599.50	2,598.50	-21.69	4.07	21.64	0.14	397,519.71	603,713.97	
5,800.00	0.50	229.23	5,799.49	2,798.49	-22.70	2.66	22.67	0.04	397,518.70	603,712.56	
6,000.00	0.75	216.10	5,999.48	2,998.48	-24.33	1.23	24.31	0.14	397,517.07	603,711.13	
6,050.00	1.00	271.03	6,049.47	3,048.47	-24.59	0.60	24.58	1.67	397,516.81	603,710.50	
6,137.00	1.06	184.28	6,136.46	3,135.46	-25.38	-0.22	25.38	1.63	397,516.02	603,709.68	
6,232.00	0.79	27.92	6,231.46	3,230.46	-25.67	0.02	25.67	1.91	397,515.73	603,709.92	
6,335.00	0.70	23.97	6,334.45	3,333.45	-24.47	0.61	24.46	0.10	397,516.93	603,710.51	
6,430.00	0.70	31.35	6,429.44	3,428.44	-23.45	1.15	23.43	0.09	397,517.95	603,711.05	
6,526.00	0.53	34.08	6,525.44	3,524.44	-22.58	1.70	22.56	0.18	397,518.82	603,711.60	
6,557.00	0.44	34.69	6,556.43	3,555.43	-22.36	1.85	22.34	0.29	397,519.04	603,711.75	
6,589.00	2.20	182.08	6,588.43	3,587.43	-22.87	1.90	22.85	8.07	397,518.53	603,711.80	
6,621.00	6.68	187.97	6,620.32	3,619.32	-25.33	1.62	25.31	14.05	397,516.07	603,711.52	
6,653.00	12.66	189.38	6,651.85	3,650.85	-30.64	0.79	30.63	18.70	397,510.76	603,710.69	
6,685.00	18.38	190.78	6,682.67	3,681.67	-39.06	-0.73	39.07	17.91	397,502.34	603,709.17	
6,717.00	21.63	191.58	6,712.74	3,711.74	-49.80	-2.86	49.83	10.19	397,491.60	603,707.04	
6,748.00	23.65	192.28	6,741.35	3,740.35	-61.47	-5.33	61.53	6.57	397,479.93	603,704.57	
6,780.00	25.94	191.40	6,770.40	3,769.40	-74.61	-8.08	74.70	7.25	397,466.79	603,701.82	
6,812.00	28.31	187.71	6,798.88	3,797.88	-88.99	-10.48	89.11	9.08	397,452.41	603,699.42	
6,844.00	31.04	186.13	6,826.68	3,825.68	-104.72	-12.38	104.85	8.87	397,436.68	603,697.52	
6,876.00	34.47	185.42	6,853.59	3,852.59	-121.94	-14.11	122.10	10.79	397,419.46	603,695.79	



Pathfinder
Pathfinder X&Y Report



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Site:	Shocker 32 State	MD Reference:	WELL @ 3001.00usft (18' KB)
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)	
6,908.00	38.08	184.19	6,879.38	3,878.38	-140.80	-15.69	140.98	11.51	397,400.60	603,694.21	
6,939.00	41.68	185.34	6,903.17	3,902.17	-160.61	-17.35	160.80	11.85	397,380.79	603,692.55	
6,971.00	44.49	185.95	6,926.54	3,925.54	-182.36	-19.50	182.57	8.88	397,359.04	603,690.40	
7,003.00	47.13	186.65	6,948.84	3,947.84	-205.16	-22.02	205.40	8.40	397,336.24	603,687.88	
7,035.00	49.86	187.36	6,970.04	3,969.04	-228.94	-24.95	229.22	8.69	397,312.46	603,684.95	
7,066.00	52.76	187.27	6,989.42	3,988.42	-252.94	-28.03	253.25	9.36	397,288.46	603,681.87	
7,098.00	56.01	186.30	7,008.05	4,007.05	-278.77	-31.10	279.11	10.45	397,262.63	603,678.80	
7,130.00	58.92	185.34	7,025.26	4,024.26	-305.60	-33.83	305.98	9.44	397,235.80	603,676.07	
7,162.00	61.91	184.72	7,041.06	4,040.06	-333.32	-36.27	333.72	9.49	397,208.08	603,673.63	
7,193.00	64.72	184.28	7,054.98	4,053.98	-360.93	-38.44	361.36	9.15	397,180.47	603,671.46	
7,225.00	67.88	184.19	7,067.84	4,066.84	-390.15	-40.60	390.60	9.88	397,151.25	603,669.30	
7,257.00	71.67	184.54	7,078.90	4,077.90	-420.08	-42.89	420.56	11.89	397,121.32	603,667.01	
7,289.00	75.27	184.72	7,088.00	4,087.00	-450.66	-45.36	451.16	11.26	397,090.74	603,664.54	
7,320.00	78.88	184.98	7,094.93	4,093.93	-480.76	-47.92	481.28	11.67	397,060.64	603,661.98	
7,352.00	82.83	184.98	7,100.02	4,099.02	-512.22	-50.66	512.78	12.34	397,029.18	603,659.24	
7,362.00	84.15	184.90	7,101.15	4,100.15	-522.12	-51.52	522.69	13.22	397,019.28	603,658.38	
7,394.00	88.20	185.25	7,103.29	4,102.29	-553.92	-54.34	554.52	12.70	396,987.48	603,655.56	
7,426.00	89.78	184.98	7,103.85	4,102.85	-585.79	-57.19	586.42	5.01	396,955.61	603,652.71	
7,458.00	90.40	184.46	7,103.80	4,102.80	-617.68	-59.83	618.33	2.53	396,923.72	603,650.07	
7,489.00	90.22	183.49	7,103.63	4,102.63	-648.60	-61.97	649.28	3.18	396,892.80	603,647.93	
7,553.00	89.96	182.43	7,103.53	4,102.53	-712.52	-65.28	713.23	1.71	396,828.88	603,644.62	
7,648.00	89.16	180.85	7,104.26	4,103.26	-807.47	-68.00	808.21	1.86	396,733.93	603,641.90	
7,744.00	89.96	180.50	7,105.00	4,104.00	-903.46	-69.13	904.21	0.91	396,637.94	603,640.77	
7,839.00	90.48	180.85	7,104.64	4,103.64	-998.45	-70.25	999.21	0.66	396,542.95	603,639.65	
7,934.00	89.96	179.97	7,104.27	4,103.27	-1,093.45	-70.93	1,094.20	1.08	396,447.95	603,638.97	
8,030.00	90.31	181.29	7,104.04	4,103.04	-1,189.44	-71.98	1,190.20	1.42	396,351.96	603,637.92	
8,125.00	89.34	180.06	7,104.33	4,103.33	-1,284.43	-73.10	1,285.20	1.65	396,256.97	603,636.80	



Pathfinder
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Site:	Shocker 32 State	MD Reference:	WELL @ 3001.00usft (18' KB)
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)	
8,220.00	88.72	180.32	7,105.94	4,104.94	-1,379.41	-73.42	1,380.18	0.71	396,161.99	603,636.48	
8,316.00	89.16	179.01	7,107.72	4,106.72	-1,475.39	-72.86	1,476.15	1.44	396,066.01	603,637.04	
8,411.00	90.04	179.36	7,108.38	4,107.38	-1,570.38	-71.51	1,571.11	1.00	395,971.02	603,638.39	
8,506.00	91.28	179.36	7,107.29	4,106.29	-1,665.37	-70.44	1,666.08	1.31	395,876.03	603,639.46	
8,601.00	92.59	179.62	7,104.08	4,103.08	-1,760.31	-69.60	1,761.00	1.41	395,781.09	603,640.30	
8,697.00	89.78	177.95	7,102.09	4,101.09	-1,856.25	-67.56	1,856.92	3.40	395,685.15	603,642.34	
8,792.00	89.25	177.25	7,102.90	4,101.90	-1,951.16	-63.59	1,951.77	0.92	395,590.24	603,646.31	
8,888.00	88.99	176.99	7,104.37	4,103.37	-2,047.03	-58.76	2,047.58	0.38	395,494.37	603,651.14	
8,983.00	90.48	177.16	7,104.81	4,103.81	-2,141.90	-53.92	2,142.39	1.58	395,399.50	603,655.98	
9,078.00	91.19	177.34	7,103.43	4,102.43	-2,236.78	-49.36	2,237.21	0.77	395,304.62	603,660.54	
9,173.00	92.15	178.30	7,100.66	4,099.66	-2,331.67	-45.75	2,332.05	1.43	395,209.73	603,664.15	
9,268.00	91.80	179.71	7,097.39	4,096.39	-2,426.60	-44.10	2,426.95	1.53	395,114.80	603,665.80	
9,363.00	89.96	178.39	7,095.93	4,094.93	-2,521.57	-42.52	2,521.89	2.38	395,019.83	603,667.38	
9,458.00	89.69	176.90	7,096.22	4,095.22	-2,616.49	-38.62	2,616.76	1.59	394,924.91	603,671.28	
9,554.00	90.57	178.92	7,096.00	4,095.00	-2,712.42	-35.12	2,712.64	2.30	394,828.98	603,674.78	
9,649.00	90.04	180.94	7,095.49	4,094.49	-2,807.41	-35.00	2,807.63	2.20	394,733.99	603,674.90	
9,744.00	90.84	181.56	7,094.76	4,093.76	-2,902.38	-37.07	2,902.62	1.07	394,639.02	603,672.83	
9,840.00	90.13	181.64	7,093.95	4,092.95	-2,998.34	-39.75	2,998.60	0.74	394,543.06	603,670.15	
9,935.00	90.04	181.56	7,093.81	4,092.81	-3,093.30	-42.41	3,093.59	0.13	394,448.10	603,667.49	
10,030.00	88.81	179.53	7,094.76	4,093.76	-3,188.29	-43.31	3,188.58	2.50	394,353.11	603,666.59	
10,126.00	91.63	180.41	7,094.39	4,093.39	-3,284.28	-43.26	3,284.56	3.08	394,257.12	603,666.64	
10,221.00	91.89	181.47	7,091.48	4,090.48	-3,379.22	-44.82	3,379.51	1.15	394,162.18	603,665.08	
10,316.00	92.07	181.91	7,088.19	4,087.19	-3,474.12	-47.62	3,474.44	0.50	394,067.28	603,662.28	
10,412.00	91.71	181.91	7,085.03	4,084.03	-3,570.01	-50.82	3,570.36	0.37	393,971.39	603,659.08	
10,507.00	90.57	181.82	7,083.14	4,082.14	-3,664.94	-53.91	3,665.32	1.20	393,876.46	603,655.99	
10,602.00	89.60	179.18	7,083.00	4,082.00	-3,759.93	-54.74	3,760.31	2.96	393,781.47	603,655.16	
10,698.00	91.01	180.41	7,082.49	4,081.49	-3,855.92	-54.39	3,856.30	1.95	393,685.48	603,655.51	



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Project:	Eddy County (NAD27)	TVD Reference:	WELL @ 3001:00usft.(18' KB)
Site:	Shocker 32 State	MD Reference:	WELL @ 3001:00usft.(18' KB)
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)	
10,793.00	89.87	179.62	7,081.76	4,080.76	-3,950.92	-54.42	3,951.28	1.46	393,590.48	603,655.48	
10,888.00	88.55	178.39	7,083.07	4,082.07	-4,045.89	-52.77	4,046.23	1.90	393,495.51	603,657.13	
10,984.00	90.31	178.92	7,084.02	4,083.02	-4,141.86	-50.51	4,142.16	1.91	393,399.54	603,659.39	
11,079.00	94.09	180.32	7,080.38	4,079.38	-4,236.76	-49.88	4,237.06	4.24	393,304.64	603,660.02	
11,174.00	94.26	180.59	7,073.46	4,072.46	-4,331.51	-50.64	4,331.80	0.34	393,209.89	603,659.26	
11,270.00	92.95	180.15	7,067.42	4,066.42	-4,427.31	-51.25	4,427.61	1.44	393,114.09	603,658.65	
11,365.00	90.13	179.01	7,064.87	4,063.87	-4,522.27	-50.56	4,522.55	3.20	393,019.13	603,659.34	
11,383.00	90.13	179.36	7,064.83	4,063.83	-4,540.26	-50.30	4,540.54	1.94	393,001.14	603,659.60	
11,450.00	90.13	179.36	7,064.68	4,063.68	-4,607.26	-49.55	4,607.52	0.00	392,934.14	603,660.35	

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,557.00	6,556.43	-22.36	1.85	KOP - 6557.00'MD, 6556.43'TVD', -22.36'N, 1.85'E
7,426.00	7,103.85	-585.79	-57.19	LP - 7426.00'MD, 7103.85'TVD', -585.79'N, -57.19'E
11,450.00	7,064.68	-4,607.26	-49.55	BHL - 11450.00'MD, 7064.68'TVD', -4607.26'N, -49.55'E

Checked By: _____	Approved By: _____	Date: _____
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Project: Eddy County (NAD2)
Site: Shocker 32 State
Well: #3H
Wellbore: OH
Plan: Plan #1 (#3H/OH)



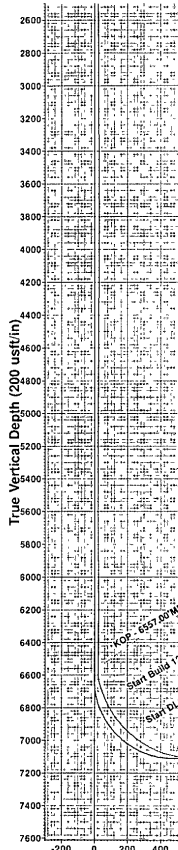
Azimuths to Grid North
True North: -0.18°
Magnetic North: 7.72°

Magnetic Field
Strength: 48644.3nT
Dip Angle: 60.04°
Date: 2010/04/03
Model: IGRF200510

PATHFINDER

A Schlumberger Company

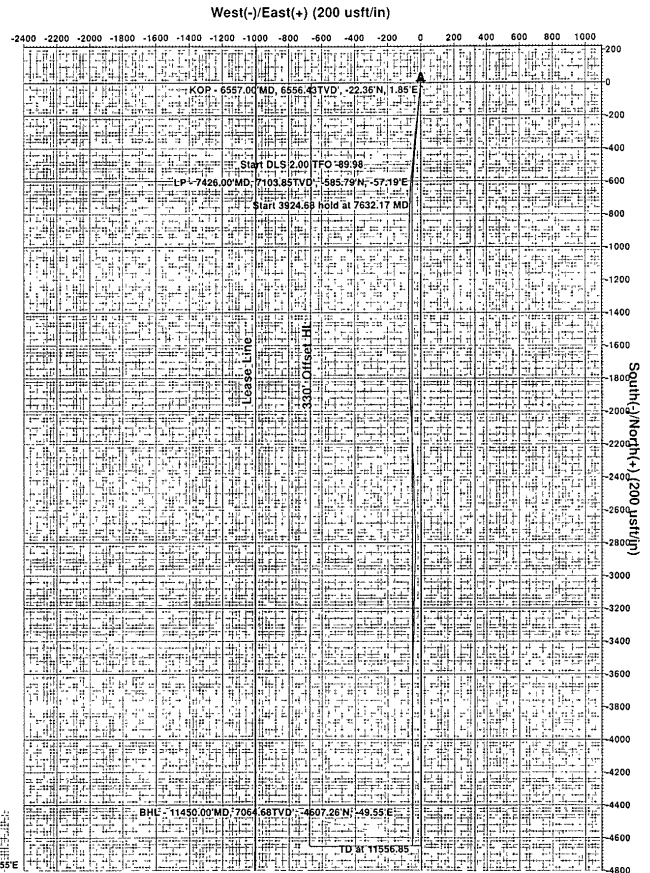
PROJECT DETAILS: Eddy County (NAD27)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6632.50	0.00	0.00	6632.50	0.00	0.00	0.00	0.00	0.00	
7387.17	90.55	184.93	7110.00	-480.32	-41.42	12.00	184.93	480.77	
7632.17	90.55	180.03	7107.65	-725.00	-52.02	2.00	-89.98	725.56	
11556.85	90.55	180.03	7070.00	-4649.50	-54.00	0.00	0.00	4649.81	PBHL(SH#3)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL(SH#3)	7070.00	-4649.50	-54.00	392891.80	603655.90

WELL DETAILS: #3H					
Ground Elevation: 2983.00					
RKB Elevation: WELL @ 3001.00usft (18' KB)					
Rig Name: 18' KB					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	397541.40	603709.90	32° 5' 33.052 N	103° 59' 54.397 W



Plan Plan #1 (#3H/OH)			
Created By	Nate Bingham	Date	16/26, April 26 2011
Checked:		Date	