

30-015-37145



Pathfinder Pathfinder X & Y Survey Report



Company: Marbob
Project: Eddy County
Site: Nervous Horz Com
Well: #3H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #3H
TVD Reference: WELL @ 3679.00ft (14' KB Correction)
MD Reference: WELL @ 3679.00ft (14' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey Program Date 08/09/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100.00	7,475.00	GYRO (OH)	CT_GYRO_MS	Continuous Gyro Multishot
7,585.00	12,564.00	MWD #1 (OH)	MWD	MWD - Standard

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
7,475.00	0.87	190.37	7,474.15	3,795.15	24.68	-65.59	-25.12	0.00	622,519.98	657,735.51
7,585.00	1.14	204.34	7,584.13	3,905.13	22.86	-66.19	-23.30	0.33	622,518.16	657,734.91
7,617.00	3.17	182.35	7,616.11	3,937.11	21.69	-66.36	-22.13	6.74	622,516.99	657,734.74
7,649.00	4.22	183.60	7,648.04	3,969.04	19.63	-66.47	-20.07	3.29	622,514.93	657,734.63
7,680.00	5.01	179.63	7,678.94	3,999.94	17.14	-66.53	-17.58	2.75	622,512.44	657,734.57
7,712.00	8.35	175.71	7,710.72	4,031.72	13.42	-66.35	-13.86	10.53	622,508.72	657,734.75
7,744.00	12.31	178.12	7,742.20	4,063.20	7.69	-66.06	-8.13	12.45	622,502.99	657,735.04
7,776.00	13.81	179.18	7,773.37	4,094.37	0.47	-65.89	-0.90	4.75	622,495.77	657,735.21
7,807.00	16.53	179.97	7,803.28	4,124.28	-7.65	-65.84	7.21	8.80	622,487.65	657,735.26
7,839.00	20.75	180.74	7,833.60	4,154.60	-17.87	-65.91	17.43	13.21	622,477.43	657,735.19
7,871.00	25.41	181.54	7,863.03	4,184.03	-30.41	-66.17	29.97	14.60	622,464.89	657,734.93
7,903.00	30.25	181.23	7,891.32	4,212.32	-45.34	-66.53	44.90	15.13	622,449.96	657,734.57
7,935.00	32.71	180.52	7,918.61	4,239.61	-62.05	-66.78	61.60	7.77	622,433.25	657,734.32
7,966.00	35.70	179.63	7,944.24	4,265.24	-79.47	-66.80	79.03	9.78	622,415.83	657,734.30
7,998.00	38.25	179.12	7,969.81	4,290.81	-98.71	-66.58	98.27	8.03	622,396.59	657,734.52
8,030.00	41.42	179.03	7,994.38	4,315.38	-119.21	-66.25	118.77	9.91	622,376.09	657,734.85
8,062.00	45.55	179.31	8,017.59	4,338.59	-141.22	-65.93	140.78	12.92	622,354.08	657,735.17
8,094.00	50.65	179.52	8,038.95	4,359.95	-165.03	-65.69	164.59	15.94	622,330.27	657,735.41
8,126.00	55.66	179.82	8,058.14	4,379.14	-190.63	-65.55	190.19	15.67	622,304.67	657,735.55
8,157.00	59.44	179.74	8,074.77	4,395.77	-216.79	-65.45	216.35	12.20	622,278.51	657,735.65
8,189.00	63.84	179.29	8,089.96	4,410.96	-244.94	-65.21	244.50	13.81	622,250.36	657,735.89



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Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
8,221.00	68.24	179.05	8,102.95	4,423.95	-274.17	-64.78	273.73	13.77	622,221.13	657,736.32	
8,253.00	70.08	178.63	8,114.34	4,435.34	-304.07	-64.18	303.64	5.88	622,191.23	657,736.92	
8,285.00	73.95	178.97	8,124.22	4,445.22	-334.49	-63.54	334.06	12.14	622,160.81	657,737.56	
8,317.00	78.70	179.27	8,131.78	4,452.78	-365.57	-63.06	365.15	14.87	622,129.73	657,738.04	
8,348.00	83.19	179.28	8,136.66	4,457.66	-396.18	-62.68	395.75	14.48	622,099.12	657,738.42	
8,380.00	84.59	179.39	8,140.06	4,461.06	-427.99	-62.31	427.57	4.39	622,067.31	657,738.79	
8,412.00	84.50	179.42	8,143.11	4,464.11	-459.84	-61.98	459.42	0.30	622,035.46	657,739.12	
8,444.00	85.82	179.11	8,145.81	4,466.81	-491.73	-61.57	491.31	4.24	622,003.57	657,739.53	
8,539.00	89.43	179.09	8,149.74	4,470.74	-586.62	-60.08	586.21	3.80	621,908.68	657,741.02	
8,603.00	89.43	178.87	8,150.38	4,471.38	-650.60	-58.94	650.20	0.34	621,844.70	657,742.16	
8,698.00	89.96	178.83	8,150.88	4,471.88	-745.58	-57.03	745.19	0.56	621,749.72	657,744.07	
8,825.00	90.22	179.04	8,150.68	4,471.68	-872.56	-54.67	872.18	0.26	621,622.74	657,746.43	
8,953.00	90.92	178.31	8,149.41	4,470.41	-1,000.52	-51.71	1,000.15	0.79	621,494.78	657,749.39	
9,048.00	90.92	178.55	8,147.89	4,468.89	-1,095.47	-49.11	1,095.12	0.25	621,399.83	657,751.99	
9,143.00	89.60	178.31	8,147.45	4,468.45	-1,190.43	-46.50	1,190.10	1.41	621,304.87	657,754.60	
9,271.00	90.22	178.87	8,147.66	4,468.66	-1,318.39	-43.36	1,318.08	0.65	621,176.91	657,757.74	
9,366.00	90.84	180.10	8,146.78	4,467.78	-1,413.38	-42.50	1,413.07	1.45	621,081.92	657,758.60	
9,429.00	91.45	180.64	8,145.52	4,466.52	-1,476.37	-42.91	1,476.05	1.29	621,018.93	657,758.19	
9,525.00	92.59	180.12	8,142.13	4,463.13	-1,572.30	-43.54	1,571.98	1.31	620,923.00	657,757.56	
9,620.00	91.54	179.06	8,138.71	4,459.71	-1,667.24	-42.86	1,666.92	1.57	620,828.06	657,758.24	
9,747.00	89.34	177.60	8,137.74	4,458.74	-1,794.17	-39.16	1,793.87	2.08	620,701.13	657,761.94	
9,842.00	88.72	177.53	8,139.34	4,460.34	-1,889.07	-35.13	1,888.79	0.66	620,606.23	657,765.97	
9,938.00	89.96	177.94	8,140.45	4,461.45	-1,984.98	-31.33	1,984.73	1.36	620,510.32	657,769.77	
10,065.00	91.63	177.96	8,138.69	4,459.69	-2,111.89	-26.79	2,111.66	1.32	620,383.41	657,774.31	
10,192.00	91.89	179.38	8,134.79	4,455.79	-2,238.79	-23.85	2,238.58	1.14	620,256.51	657,777.25	
10,287.00	90.48	179.32	8,132.82	4,453.82	-2,333.76	-22.77	2,333.56	1.49	620,161.54	657,778.33	
10,383.00	88.72	178.73	8,133.49	4,454.49	-2,429.74	-21.13	2,429.55	1.93	620,065.56	657,779.97	



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Well #3H
WELL @ 3679.00ft (14' KB Correction)
WELL @ 3679.00ft (14' KB Correction)
Grid
Minimum Curvature
Midland 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)
10,509.00	87.14	178.35	8,138.04	4,459.04	-2,555.61	-17.93	2,555.44	1.29	619,939.69	657,783.17
10,605.00	87.67	178.46	8,142.39	4,463.39	-2,651.48	-15.26	2,651.32	0.56	619,843.82	657,785.84
10,700.00	90.75	182.43	8,143.70	4,464.70	-2,746.43	-16.00	2,746.27	5.29	619,748.87	657,785.10
10,764.00	90.57	183.57	8,142.96	4,463.96	-2,810.34	-19.35	2,810.15	1.80	619,684.96	657,781.75
10,859.00	91.45	186.01	8,141.29	4,462.29	-2,904.99	-27.28	2,904.74	2.73	619,590.31	657,773.82
10,955.00	90.66	184.85	8,139.52	4,460.52	-3,000.54	-36.36	3,000.23	1.46	619,494.76	657,764.74
11,050.00	90.31	186.30	8,138.72	4,459.72	-3,095.08	-45.59	3,094.71	1.57	619,400.22	657,755.51
11,145.00	90.13	185.24	8,138.35	4,459.35	-3,189.60	-55.14	3,189.16	1.13	619,305.70	657,745.96
11,241.00	90.22	183.73	8,138.06	4,459.06	-3,285.30	-62.64	3,284.81	1.58	619,210.00	657,738.46
11,336.00	90.31	180.78	8,137.62	4,458.62	-3,380.22	-66.38	3,379.70	3.11	619,115.08	657,734.72
11,432.00	88.64	177.75	8,138.50	4,459.50	-3,476.19	-65.15	3,475.68	3.60	619,019.11	657,735.95
11,527.00	89.16	178.56	8,140.32	4,461.32	-3,571.12	-62.09	3,570.63	1.01	618,924.18	657,739.01
11,591.00	90.13	179.85	8,140.72	4,461.72	-3,635.11	-61.21	3,634.63	2.52	618,860.19	657,739.89
11,686.00	90.04	178.05	8,140.58	4,461.58	-3,730.09	-59.46	3,729.62	1.90	618,765.21	657,741.64
11,813.00	89.34	175.00	8,141.27	4,462.27	-3,856.84	-51.77	3,856.41	2.46	618,638.46	657,749.33
11,940.00	90.40	174.44	8,141.55	4,462.55	-3,983.30	-40.08	3,982.95	0.94	618,512.00	657,761.02
12,035.00	91.28	173.99	8,140.16	4,461.16	-4,077.80	-30.51	4,077.51	1.04	618,417.50	657,770.59
12,131.00	90.13	174.93	8,138.98	4,459.98	-4,173.35	-21.24	4,173.11	1.55	618,321.95	657,779.86
12,258.00	91.45	175.15	8,137.23	4,458.23	-4,299.86	-10.26	4,299.69	1.05	618,195.44	657,790.84
12,385.00	90.92	175.35	8,134.60	4,455.60	-4,426.39	0.25	4,426.30	0.45	618,068.91	657,801.35
12,512.00	89.60	174.85	8,134.03	4,455.03	-4,552.92	11.10	4,552.90	1.11	617,942.38	657,812.20
12,564.00	89.60	174.85	8,134.39	4,455.39	-4,604.71	15.77	4,604.72	0.00	617,890.59	657,816.87

BHL-12564.00°MD,89.60°INC,174.85°AZI, 8134.39°TVD, 4604.72°VS, -4604.71°N, 15.77°E



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Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL(#3H)	0.00	0.00	8,150.00	-4,621.40	30.20	617,873.900	657,831.300	32° 41' 51.303 N	103° 49' 12.979 W
- survey misses target center by 27.03ft at 12564.00ft MD (8134.39 TVD, -4604.71 N, 15.77 E)									
- Point									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
12,564.00	8,134.39	-4,604.71	15.77	BHL-12564.00*MD, 89.60*INC, 174.85*AZI, 8134.39*TVD, 4604.72*VS, -

Checked By: _____ Approved By: _____ Date: _____

Surf: 330' FML, 1980' FEL
EDL: 345' FSL, 1964' FEL