



Marbob

Eddy County
SRO State Unit Com
#6 H
OH

Survey: MWD #1

Pathfinder X & Y Survey Report

22 February, 2010

PATHFINDER



Pathfinder
Pathfinder X & Y Survey Report



Company: Marbob
Project: Eddy County
Site: SRO State Unit Com
Well: #6 H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #6 H
TVD Reference: WELL @ 3027.00ft (Original Well Elev)
MD Reference: WELL @ 3027.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Project Eddy County

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

System Datum: Mean Sea Level

Site SRO State Unit Com

Site Position: Northing: 391,812.000 ft Latitude: 32° 4' 37.166 N
From: Map Easting: 572,493.500 ft Longitude: 104° 5' 57.422 W
Position Uncertainty: 0.00 ft Slot Radius: " Grid Convergence: 0.12 °

Well #6 H

Well Position +N/-S 0.00 ft Northing: 391,798.000 ft Latitude: 32° 4' 37.138 N
+E/-W 0.00 ft Easting: 567,171.300 ft Longitude: 104° 6' 59.281 W
Position Uncertainty 0.00 ft Wellhead Elevation: ft Ground Level: 3,005.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/22/2009	7.99	60.01	48,647

Design OH

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	89.85



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Survey Program		Date 02/22/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	6,100.00	GYRO-Scientific (OH)	CT_GYRO_MS	Continuous Gyro Multishot	
6,113.00	10,977.00	MWD #1 (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)
6,100.00	0.83	298.54	6,099.17	3,072.17	19.93	34.58	34.63	0.00	391,817.93	567,205.88
6,113.00	3.96	90.43	6,112.16	3,085.16	19.97	34.94	34.99	36.22	391,817.97	567,206.24
6,145.00	12.40	91.62	6,143.81	3,116.81	19.87	39.49	39.54	26.38	391,817.87	567,210.79
6,176.00	18.03	91.30	6,173.71	3,146.71	19.66	47.62	47.67	18.16	391,817.66	567,218.92
6,207.00	19.35	90.78	6,203.07	3,176.07	19.48	57.55	57.60	4.29	391,817.48	567,228.85
6,239.00	21.10	89.91	6,233.10	3,206.10	19.42	68.61	68.66	5.55	391,817.42	567,239.91
6,270.00	23.74	89.64	6,261.75	3,234.75	19.47	80.44	80.49	8.52	391,817.47	567,251.74
6,301.00	25.59	89.29	6,289.92	3,262.92	19.59	93.37	93.42	5.99	391,817.59	567,264.67
6,332.00	28.14	89.73	6,317.58	3,290.58	19.71	107.38	107.43	8.25	391,817.71	567,278.68
6,364.00	31.13	90.35	6,345.39	3,318.39	19.69	123.20	123.25	9.39	391,817.69	567,294.50
6,395.00	34.47	90.28	6,371.44	3,344.44	19.60	139.99	140.04	10.77	391,817.60	567,311.29
6,426.00	37.64	89.98	6,396.50	3,369.50	19.56	158.23	158.28	10.24	391,817.56	567,329.53
6,458.00	41.06	89.96	6,421.24	3,394.24	19.57	178.52	178.57	10.69	391,817.57	567,349.82
6,489.00	44.67	89.77	6,443.96	3,416.96	19.62	199.60	199.65	11.65	391,817.62	567,370.90
6,521.00	48.36	89.79	6,465.98	3,438.98	19.71	222.82	222.87	11.53	391,817.71	567,394.12
6,553.00	51.88	89.90	6,486.49	3,459.49	19.78	247.37	247.42	11.00	391,817.78	567,418.67
6,584.00	55.40	90.21	6,504.87	3,477.87	19.75	272.33	272.38	11.38	391,817.75	567,443.63
6,616.00	59.09	90.38	6,522.18	3,495.18	19.61	299.24	299.29	11.54	391,817.61	567,470.54
6,648.00	62.87	90.07	6,537.70	3,510.70	19.50	327.21	327.26	11.84	391,817.50	567,498.51
6,679.00	66.74	89.75	6,550.89	3,523.89	19.55	355.26	355.31	12.52	391,817.55	567,526.56
6,711.00	70.52	90.18	6,562.55	3,535.55	19.57	385.05	385.10	11.88	391,817.57	567,556.35



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6,742.00	74.74	90.50	6,571.80	3,544.80	19.39	414.63	414.68	13.65	391,817.39	567,585.93
6,773.00	79.05	91.16	6,578.83	3,551.83	18.95	444.82	444.86	14.06	391,816.95	567,616.12
6,805.00	81.69	91.42	6,584.18	3,557.18	18.24	476.35	476.40	8.29	391,816.24	567,647.55
6,837.00	82.57	91.72	6,588.57	3,561.57	17.37	508.04	508.08	2.90	391,815.37	567,679.84
6,875.00	83.89	90.54	6,593.04	3,566.04	16.63	545.77	545.81	4.64	391,814.63	567,717.07
6,907.00	86.79	90.11	6,595.64	3,568.64	16.45	577.66	577.70	9.16	391,814.45	567,748.96
6,938.00	88.29	89.92	6,596.97	3,569.97	16.44	608.63	608.67	4.88	391,814.44	567,779.93
6,970.00	89.69	89.43	6,597.54	3,570.54	16.62	640.62	640.66	4.64	391,814.62	567,811.92
7,001.00	90.22	89.68	6,597.56	3,570.56	16.86	671.62	671.66	1.89	391,814.86	567,842.92
7,063.00	89.34	89.66	6,597.80	3,570.80	17.22	733.62	733.66	1.42	391,815.22	567,904.92
7,126.00	89.25	89.51	6,598.58	3,571.58	17.68	796.61	796.65	0.28	391,815.68	567,967.91
7,189.00	89.43	89.69	6,599.30	3,572.30	18.12	859.61	859.65	0.40	391,816.12	568,030.91
7,252.00	89.43	89.57	6,599.93	3,572.93	18.52	922.60	922.65	0.19	391,816.52	568,093.90
7,316.00	89.08	89.57	6,600.76	3,573.76	19.00	986.59	986.64	0.55	391,817.00	568,157.89
7,376.00	89.78	89.19	6,601.36	3,574.36	19.65	1,046.59	1,046.63	1.33	391,817.65	568,217.89
7,441.00	90.40	89.20	6,601.26	3,574.26	20.56	1,111.58	1,111.63	0.95	391,818.56	568,282.88
7,504.00	89.25	89.53	6,601.45	3,574.45	21.26	1,174.57	1,174.63	1.90	391,819.26	568,345.87
7,566.00	89.34	89.63	6,602.21	3,575.21	21.72	1,236.57	1,236.62	0.22	391,819.72	568,407.87
7,629.00	89.78	89.72	6,602.69	3,575.69	22.07	1,299.56	1,299.62	0.71	391,820.07	568,470.86
7,692.00	90.48	89.31	6,602.55	3,575.55	22.61	1,362.56	1,362.62	1.29	391,820.61	568,533.86
7,755.00	89.96	89.93	6,602.31	3,575.31	23.03	1,425.56	1,425.62	1.28	391,821.03	568,596.86
7,818.00	89.08	90.36	6,602.84	3,575.84	22.87	1,488.56	1,488.61	1.55	391,820.87	568,659.86
7,882.00	88.90	90.00	6,603.97	3,576.97	22.67	1,552.55	1,552.60	0.63	391,820.67	568,723.85
7,945.00	89.43	89.53	6,604.88	3,577.88	22.92	1,615.54	1,615.59	1.12	391,820.92	568,786.84
8,008.00	89.87	88.75	6,605.27	3,578.27	23.87	1,678.53	1,678.59	1.42	391,821.87	568,849.83
8,071.00	88.99	89.87	6,605.90	3,578.90	24.63	1,741.52	1,741.58	2.26	391,822.63	568,912.82
8,134.00	88.90	90.33	6,607.06	3,580.06	24.52	1,804.51	1,804.57	0.74	391,822.52	568,975.81



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8,197.00	89.34	89.87	6,608.02	3,581.02	24.41	1,867.50	1,867.56	1.01	391,822.41	569,038.80
8,260.00	88.72	89.89	6,609.09	3,582.09	24.54	1,930.49	1,930.55	0.98	391,822.54	569,101.79
8,323.00	88.64	89.79	6,610.54	3,583.54	24.72	1,993.47	1,993.53	0.20	391,822.72	569,164.77
8,386.00	88.46	89.82	6,612.14	3,585.14	24.93	2,056.45	2,056.51	0.29	391,822.93	569,227.75
8,449.00	88.81	90.07	6,613.64	3,586.64	24.99	2,119.44	2,119.49	0.68	391,822.99	569,290.74
8,512.00	89.08	90.36	6,614.80	3,587.80	24.75	2,182.43	2,182.48	0.63	391,822.75	569,353.73
8,576.00	88.37	90.49	6,616.22	3,589.22	24.28	2,246.41	2,246.46	1.13	391,822.28	569,417.71
8,639.00	88.29	90.09	6,618.06	3,591.06	23.96	2,309.38	2,309.43	0.65	391,821.96	569,480.68
8,702.00	88.64	89.79	6,619.74	3,592.74	24.03	2,372.36	2,372.41	0.73	391,822.03	569,543.66
8,765.00	88.81	90.38	6,621.15	3,594.15	23.93	2,435.34	2,435.39	0.97	391,821.93	569,606.64
8,828.00	88.90	90.10	6,622.40	3,595.40	23.67	2,498.33	2,498.38	0.47	391,821.67	569,669.63
8,891.00	88.90	89.60	6,623.61	3,596.61	23.83	2,561.32	2,561.37	0.79	391,821.83	569,732.62
8,954.00	89.78	89.91	6,624.34	3,597.34	24.10	2,624.31	2,624.36	1.48	391,822.10	569,795.61
9,017.00	89.08	90.72	6,624.97	3,597.97	23.76	2,687.30	2,687.36	1.70	391,821.76	569,858.60
9,079.00	88.72	90.57	6,626.16	3,599.16	23.06	2,749.29	2,749.34	0.63	391,821.06	569,920.59
9,142.00	88.72	90.71	6,627.56	3,600.56	22.36	2,812.27	2,812.32	0.22	391,820.36	569,983.57
9,204.00	88.81	90.63	6,628.90	3,601.90	21.63	2,874.25	2,874.30	0.19	391,819.63	570,045.55
9,266.00	88.72	90.39	6,630.24	3,603.24	21.08	2,936.23	2,936.28	0.41	391,819.08	570,107.53
9,328.00	89.43	90.11	6,631.24	3,604.24	20.81	2,998.23	2,998.27	1.23	391,818.81	570,169.53
9,391.00	89.78	90.01	6,631.67	3,604.67	20.74	3,061.22	3,061.27	0.58	391,818.74	570,232.52
9,454.00	90.13	89.56	6,631.72	3,604.72	20.98	3,124.22	3,124.27	0.90	391,818.98	570,295.52
9,517.00	89.16	89.58	6,632.11	3,605.11	21.45	3,187.22	3,187.26	1.54	391,819.45	570,358.52
9,581.00	89.16	89.12	6,633.05	3,606.05	22.18	3,251.21	3,251.25	0.72	391,820.18	570,422.51
9,644.00	89.25	89.04	6,633.92	3,606.92	23.19	3,314.19	3,314.24	0.19	391,821.19	570,485.49
9,707.00	89.87	89.12	6,634.41	3,607.41	24.20	3,377.18	3,377.24	0.99	391,822.20	570,548.48
9,770.00	89.87	90.62	6,634.55	3,607.55	24.34	3,440.18	3,440.23	2.38	391,822.34	570,611.48
9,833.00	90.04	90.68	6,634.60	3,607.60	23.63	3,503.18	3,503.23	0.29	391,821.63	570,674.48