

30-015-37547



Marbob

**Eddy County
Cluster Com State
#1
OH**

Plan: Plan #1

Pathfinder X & Y Planning Report

29 December, 2009

PATHFINDER



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Cluster Corn State
Well: #1
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1
TVD Reference: WELL @ 3305.00ft (Patriot 2)
MD Reference: WELL @ 3305.00ft (Patriot 2)
North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Project	Eddy County		
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	Cluster Corn State		
Site Position:		Northing:	381,057.000 ft
From:	Map	Easting:	545,295.500 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	32° 2' 51.203 N
		Longitude:	104° 11' 13.707 W
		Grid Convergence:	0.08 °

Well	#1		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF200510	12/29/2009	(°)
			8.01
			Dip Angle
			(°)
			59.96
			Field Strength
			(nT)
			48,617

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			270.94

Survey Tool Program	Date 12/29/2009		
From	To	Survey (Wellbore)	Tool Name
(ft)	(ft)		
0.00	10,751.29	Plan #1 (OH)	MWD
			Description
			MWD - Standard



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Cluster Corn State
Well: #1
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1
TVD Reference: WELL @ 3305.00ft (Patriot 2)
MD Reference: WELL @ 3305.00ft (Patriot 2)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (")	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0.00	0.00	0.00	-3,305.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
100.00	0.00	0.00	100.00	-3,205.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
200.00	0.00	0.00	200.00	-3,105.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
300.00	0.00	0.00	300.00	-3,005.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
400.00	0.00	0.00	400.00	-2,905.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
500.00	0.00	0.00	500.00	-2,805.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
600.00	0.00	0.00	600.00	-2,705.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
700.00	0.00	0.00	700.00	-2,605.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
800.00	0.00	0.00	800.00	-2,505.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
900.00	0.00	0.00	900.00	-2,405.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
1,000.00	0.00	0.00	1,000.00	-2,305.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
1,100.00	0.00	0.00	1,100.00	-2,205.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
1,200.00	0.00	0.00	1,200.00	-2,105.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
1,300.00	0.00	0.00	1,300.00	-2,005.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
1,400.00	0.00	0.00	1,400.00	-1,905.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
1,500.00	0.00	0.00	1,500.00	-1,805.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
1,600.00	0.00	0.00	1,600.00	-1,705.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
1,700.00	0.00	0.00	1,700.00	-1,605.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
1,800.00	0.00	0.00	1,800.00	-1,505.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
1,900.00	0.00	0.00	1,900.00	-1,405.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
2,000.00	0.00	0.00	2,000.00	-1,305.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
2,100.00	0.00	0.00	2,100.00	-1,205.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
2,200.00	0.00	0.00	2,200.00	-1,105.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
2,300.00	0.00	0.00	2,300.00	-1,005.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
2,400.00	0.00	0.00	2,400.00	-905.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
2,500.00	0.00	0.00	2,500.00	-805.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
2,600.00	0.00	0.00	2,600.00	-705.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Cluster Com State
Well: #1
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1
TVD Reference: WELL @ 3305.00ft (Patriot 2)
MD Reference: WELL @ 3305.00ft (Patriot 2)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
2,700.00	0.00	0.00	2,700.00	-605.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
2,800.00	0.00	0.00	2,800.00	-505.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
2,900.00	0.00	0.00	2,900.00	-405.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
3,000.00	0.00	0.00	3,000.00	-305.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
3,100.00	0.00	0.00	3,100.00	-205.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
3,200.00	0.00	0.00	3,200.00	-105.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
3,300.00	0.00	0.00	3,300.00	-5.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
3,400.00	0.00	0.00	3,400.00	95.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
3,500.00	0.00	0.00	3,500.00	195.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
3,600.00	0.00	0.00	3,600.00	295.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
3,700.00	0.00	0.00	3,700.00	395.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
3,800.00	0.00	0.00	3,800.00	495.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
3,900.00	0.00	0.00	3,900.00	595.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
4,000.00	0.00	0.00	4,000.00	695.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
4,100.00	0.00	0.00	4,100.00	795.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
4,200.00	0.00	0.00	4,200.00	895.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
4,300.00	0.00	0.00	4,300.00	995.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
4,400.00	0.00	0.00	4,400.00	1,095.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
4,500.00	0.00	0.00	4,500.00	1,195.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
4,600.00	0.00	0.00	4,600.00	1,295.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
4,700.00	0.00	0.00	4,700.00	1,395.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
4,800.00	0.00	0.00	4,800.00	1,495.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
4,900.00	0.00	0.00	4,900.00	1,595.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
5,000.00	0.00	0.00	5,000.00	1,695.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
5,100.00	0.00	0.00	5,100.00	1,795.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
5,200.00	0.00	0.00	5,200.00	1,895.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
5,300.00	0.00	0.00	5,300.00	1,995.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Cluster Corn State
Well: #1
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1
TVD Reference: WELL @ 3305.00ft (Patriot 2)
MD Reference: WELL @ 3305.00ft (Patriot 2)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	North (ft)	Easting (ft)
5,400.00	0.00	0.00	5,400.00	2,095.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
5,500.00	0.00	0.00	5,500.00	2,195.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
5,600.00	0.00	0.00	5,600.00	2,295.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
5,700.00	0.00	0.00	5,700.00	2,395.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
5,800.00	0.00	0.00	5,800.00	2,495.00	0.00	0.00	0.00	0.00	381,057.00	545,295.50
5,822.50	0.00	0.00	5,822.50	2,517.50	0.00	0.00	0.00	0.00	381,057.00	545,295.50
5,825.00	0.30	270.94	5,825.00	2,520.00	0.00	-0.01	0.01	12.00	381,057.00	545,295.49
5,850.00	3.30	270.94	5,849.98	2,544.98	0.01	-0.79	0.79	12.00	381,057.01	545,294.71
5,875.00	6.30	270.94	5,874.89	2,569.89	0.05	-2.88	2.88	12.00	381,057.05	545,292.62
5,900.00	9.30	270.94	5,899.66	2,594.66	0.10	-6.27	6.28	12.00	381,057.10	545,289.23
5,925.00	12.30	270.94	5,924.21	2,619.21	0.18	-10.96	10.96	12.00	381,057.18	545,284.54
5,950.00	15.30	270.94	5,948.49	2,643.49	0.28	-16.92	16.92	12.00	381,057.28	545,278.58
5,975.00	18.30	270.94	5,972.42	2,667.42	0.40	-24.14	24.15	12.00	381,057.40	545,271.36
6,000.00	21.30	270.94	5,995.94	2,690.94	0.54	-32.61	32.61	12.00	381,057.54	545,262.89
6,025.00	24.30	270.94	6,018.98	2,713.98	0.69	-42.29	42.30	12.00	381,057.69	545,253.21
6,050.00	27.30	270.94	6,041.49	2,736.49	0.87	-53.17	53.18	12.00	381,057.87	545,242.33
6,075.00	30.30	270.94	6,063.40	2,758.40	1.07	-65.21	65.22	12.00	381,058.07	545,230.29
6,100.00	33.30	270.94	6,084.64	2,779.64	1.29	-78.38	78.39	12.00	381,058.29	545,217.12
6,125.00	36.30	270.94	6,105.17	2,800.17	1.52	-92.64	92.66	12.00	381,058.52	545,202.86
6,150.00	39.30	270.94	6,124.92	2,819.92	1.77	-107.96	107.98	12.00	381,058.77	545,187.54
6,175.00	42.30	270.94	6,143.84	2,838.84	2.04	-124.29	124.31	12.00	381,059.04	545,171.21
6,200.00	45.30	270.94	6,161.89	2,856.89	2.32	-141.59	141.61	12.00	381,059.32	545,153.91
6,225.00	48.30	270.94	6,179.00	2,874.00	2.62	-159.81	159.83	12.00	381,059.62	545,135.69
6,250.00	51.30	270.94	6,195.14	2,890.14	2.94	-178.90	178.92	12.00	381,059.94	545,116.60
6,275.00	54.30	270.94	6,210.25	2,905.25	3.26	-198.81	198.83	12.00	381,060.26	545,096.69
6,300.00	57.30	270.94	6,224.30	2,919.30	3.60	-219.48	219.51	12.00	381,060.60	545,076.02
6,325.00	60.30	270.94	6,237.25	2,932.25	3.95	-240.85	240.89	12.00	381,060.95	545,054.85



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Cluster Com State
Well: #1
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #1
WELL @ 3305.00ft (Patriot 2)
WELL @ 3305.00ft (Patriot 2)
Grid
Minimum Curvature
Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
6,350.00	63.30	270.94	6,249.07	2,944.07	4.31	-262.88	262.92	12.00	381,061.31	545,032.62
6,375.00	66.30	270.94	6,259.71	2,954.71	4.68	-285.49	285.53	12.00	381,061.68	545,010.01
6,400.00	69.29	270.94	6,269.16	2,964.16	5.06	-308.63	308.68	12.00	381,062.06	544,986.87
6,425.00	72.29	270.94	6,277.38	2,972.38	5.45	-332.24	332.28	12.00	381,062.45	544,963.26
6,450.00	75.29	270.94	6,284.36	2,979.36	5.84	-356.24	356.29	12.00	381,062.84	544,939.26
6,475.00	78.29	270.94	6,290.07	2,985.07	6.24	-380.57	380.62	12.00	381,063.24	544,914.93
6,500.00	81.29	270.94	6,294.50	2,989.50	6.65	-405.17	405.22	12.00	381,063.65	544,890.33
6,525.00	84.29	270.94	6,297.63	2,992.63	7.05	-429.97	430.02	12.00	381,064.05	544,865.53
6,550.00	87.29	270.94	6,299.47	2,994.47	7.46	-454.89	454.95	12.00	381,064.46	544,840.61
6,572.56	90.00	270.94	6,300.00	2,995.00	7.83	-477.44	477.50	12.00	381,064.83	544,818.06
6,601.85	90.00	270.94	6,300.00	2,995.00	8.31	-506.73	506.80	0.01	381,065.31	544,788.77
6,700.00	90.00	270.94	6,300.00	2,995.00	9.93	-604.86	604.94	0.00	381,066.93	544,690.64
6,800.00	90.00	270.94	6,300.00	2,995.00	11.58	-704.85	704.94	0.00	381,068.58	544,590.65
6,900.00	90.00	270.94	6,300.00	2,995.00	13.22	-804.84	804.94	0.00	381,070.22	544,490.66
7,000.00	90.00	270.94	6,300.00	2,995.00	14.87	-904.82	904.94	0.00	381,071.87	544,390.68
7,100.00	90.00	270.94	6,300.00	2,995.00	16.51	-1,004.81	1,004.94	0.00	381,073.51	544,290.69
7,200.00	90.00	270.94	6,300.00	2,995.00	18.16	-1,104.80	1,104.94	0.00	381,075.16	544,190.70
7,300.00	90.00	270.94	6,300.00	2,995.00	19.80	-1,204.78	1,204.94	0.00	381,076.80	544,090.72
7,400.00	90.00	270.94	6,300.00	2,995.00	21.45	-1,304.77	1,304.94	0.00	381,078.45	543,990.73
7,500.00	90.00	270.94	6,300.00	2,995.00	23.10	-1,404.75	1,404.94	0.00	381,080.10	543,890.75
7,600.00	90.00	270.94	6,300.00	2,995.00	24.74	-1,504.74	1,504.94	0.00	381,081.74	543,790.76
7,700.00	90.00	270.94	6,300.00	2,995.00	26.39	-1,604.73	1,604.94	0.00	381,083.39	543,690.77
7,800.00	90.00	270.94	6,300.00	2,995.00	28.03	-1,704.71	1,704.94	0.00	381,085.03	543,590.79
7,900.00	90.00	270.94	6,300.00	2,995.00	29.68	-1,804.70	1,804.94	0.00	381,086.68	543,490.80
8,000.00	90.00	270.94	6,300.00	2,995.00	31.32	-1,904.69	1,904.94	0.00	381,088.32	543,390.81
8,100.00	90.00	270.94	6,300.00	2,995.00	32.97	-2,004.67	2,004.94	0.00	381,089.97	543,290.83
8,200.00	90.00	270.94	6,300.00	2,995.00	34.61	-2,104.66	2,104.94	0.00	381,091.61	543,190.84



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Cluster Com State
Well: #1
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1
TVD Reference: WELL @ 3305.00ft (Patriot 2)
MD Reference: WELL @ 3305.00ft (Patriot 2)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,300.00	90.00	270.94	6,300.00	2,995.00	36.26	-2,204.65	2,204.94	0.00	381,093.26	543,090.85
8,400.00	90.00	270.94	6,300.00	2,995.00	37.91	-2,304.63	2,304.94	0.00	381,094.91	542,990.87
8,500.00	90.00	270.94	6,300.00	2,995.00	39.55	-2,404.62	2,404.94	0.00	381,096.55	542,890.88
8,600.00	90.00	270.94	6,300.00	2,995.00	41.20	-2,504.61	2,504.94	0.00	381,098.20	542,790.89
8,700.00	90.00	270.94	6,300.00	2,995.00	42.84	-2,604.59	2,604.94	0.00	381,099.84	542,690.91
8,800.00	90.00	270.94	6,300.00	2,995.00	44.49	-2,704.58	2,704.94	0.00	381,101.49	542,590.92
8,900.00	90.00	270.94	6,300.00	2,995.00	46.13	-2,804.57	2,804.94	0.00	381,103.13	542,490.93
9,000.00	90.00	270.94	6,300.00	2,995.00	47.78	-2,904.55	2,904.94	0.00	381,104.78	542,390.95
9,100.00	90.00	270.94	6,300.00	2,995.00	49.43	-3,004.54	3,004.94	0.00	381,106.43	542,290.96
9,200.00	90.00	270.94	6,300.00	2,995.00	51.07	-3,104.52	3,104.94	0.00	381,108.07	542,190.98
9,300.00	90.00	270.94	6,300.00	2,995.00	52.72	-3,204.51	3,204.94	0.00	381,109.72	542,090.99
9,400.00	90.00	270.94	6,300.00	2,995.00	54.36	-3,304.50	3,304.94	0.00	381,111.36	541,991.00
9,500.00	90.00	270.94	6,300.00	2,995.00	56.01	-3,404.48	3,404.94	0.00	381,113.01	541,891.02
9,600.00	90.00	270.94	6,300.00	2,995.00	57.65	-3,504.47	3,504.94	0.00	381,114.65	541,791.03
9,700.00	90.00	270.94	6,300.00	2,995.00	59.30	-3,604.46	3,604.94	0.00	381,116.30	541,691.04
9,800.00	90.00	270.94	6,300.00	2,995.00	60.95	-3,704.44	3,704.94	0.00	381,117.95	541,591.06
9,900.00	90.00	270.94	6,300.00	2,995.00	62.59	-3,804.43	3,804.94	0.00	381,119.59	541,491.07
10,000.00	90.00	270.94	6,300.00	2,995.00	64.24	-3,904.42	3,904.94	0.00	381,121.24	541,391.08
10,100.00	90.00	270.94	6,300.00	2,995.00	65.88	-4,004.40	4,004.94	0.00	381,122.88	541,291.10
10,200.00	90.00	270.94	6,300.00	2,995.00	67.53	-4,104.39	4,104.94	0.00	381,124.53	541,191.11
10,300.00	90.00	270.94	6,300.00	2,995.00	69.17	-4,204.38	4,204.94	0.00	381,126.17	541,091.12
10,400.00	90.00	270.94	6,300.00	2,995.00	70.82	-4,304.36	4,304.94	0.00	381,127.82	540,991.14
10,500.00	90.00	270.94	6,300.00	2,995.00	72.46	-4,404.35	4,404.94	0.00	381,129.46	540,891.15
10,600.00	90.00	270.94	6,300.00	2,995.00	74.11	-4,504.34	4,504.94	0.00	381,131.11	540,791.16
10,700.00	90.00	270.94	6,300.00	2,995.00	75.76	-4,604.32	4,604.94	0.00	381,132.76	540,691.18
10,751.29	90.00	270.94	6,300.00	2,995.00	76.60	-4,655.60	4,656.23	0.00	381,133.60	540,639.90



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Cluster Corn State
Well: #1
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1
TVD Reference: WELL @ 3305.00ft (Patriot 2)
MD Reference: WELL @ 3305.00ft (Patriot 2)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

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(cluster#1)	0.00	0.00	6,300.00	76.60	-4,655.60	381,133.600	540,639.900	32° 2' 52.020 N	104° 12' 7.800 W
- plan hits target									
- Point									

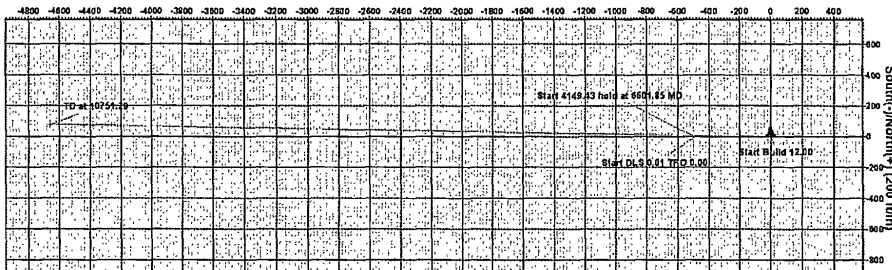
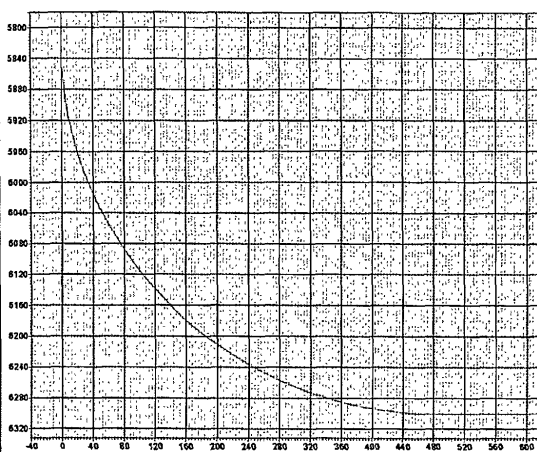
Checked By: _____ Approved By: _____ Date: _____



Azimuths to Grid North
 True North: -0.08°
 Magnetic North: 7.94°
 Magnetic Field
 Strength: 48616.7nT
 Dip Angle: 59.96°
 Date: 12/29/2009
 Model: IGRF200510

PATHFINDER

West(-)/East(+) (200 ft/in)



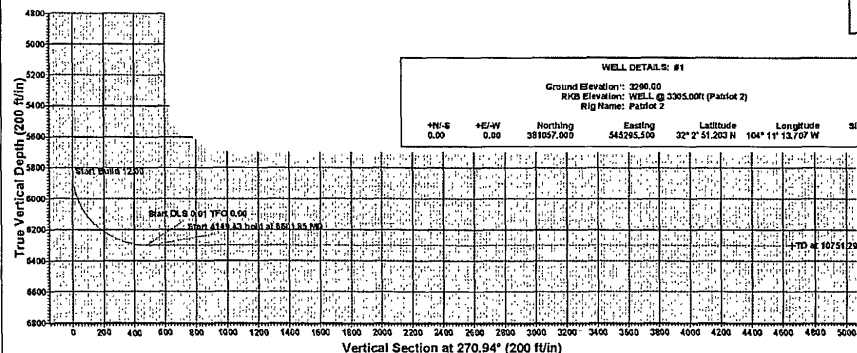
SECTION DETAILS									
Sec	MD	Inc	Act	TVD	+HI-B	+EI-W	Clag	TFace	VSec Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5822.50	0.00	0.00	5822.50	0.00	0.00	0.00	0.00	0.00
3	5572.56	80.00	270.94	5300.00	7.03	-477.44	12.00	270.94	477.50
4	6601.85	98.00	270.94	6300.00	9.31	-506.73	0.01	0.00	506.80
5	10751.29	89.00	270.94	6300.00	78.90	-4555.80	0.00	0.00	4556.73 PBHL(cluster#1)

PROJECT DETAILS: Eddy County
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3601
 System Datum: Mean Sea Level
 Local North: Grid

WELL DETAILS: #1						
Ground Elevation: 3296.00						
RKB Elevation: WELL @ 3305.00ft (Pastot 2)						
Rig Name: Pastot 2						
+N-E	+E-W	Northing	Easting	Latitude	Longitude	Slid
0.00	0.00	381057.005	545295.500	32° 2' 51.203 N	104° 11' 13.707 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N-E	+E-W	Northing	Easting	Shape
PBHL(cluster#1) 3300.00		78.90	-4555.80	381123.600	540638.900	Point

Project: Eddy County
 Site: Cluster Com State
 Well: #1
 Wellbore: OH
 Plan: Plan #1 (#1/OH)



Plan Plot #1 (OH)	
Created By: Naga Bingham	Date: 14.42, December 29 2009
Checked: _____	Date: _____