



30-025-39971

Mack Energy

Lea County
Merlin State Com
#1H
OH

Plan: Plan #1

Pathfinder X & Y Planning Report

29 October, 2010

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PATHFINDER[®]

A Schlumberger Company



Pathfinder
Pathfinder X & Y Planning Report

PATHFINDER
A Schlumberger Company

Company:	Mack Energy	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	WELL @ 4368.00ft (Original Well Elev)
Site:	Merlin State Com	MD Reference:	WELL @ 4368.00ft (Original Well Elev)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

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

Site		Merlin State Com			
Site Position:		Northing:	726,497.400 ft	Latitude:	32° 59' 45.297 N
From:	Map	Easting:	674,222.600 ft	Longitude:	103° 45' 54.330 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.31 °

Well		#1H				
Well Position	+N/-S	0.00 ft	Northing:	726,497.400 ft	Latitude:	32° 59' 45.297 N
	+E/-W	0.00 ft	Easting:	674,222.600 ft	Longitude:	103° 45' 54.330 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,349.00 ft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	09/27/10	7.81	60.90	49,156

Design:	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	8,381.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	0.78



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Survey/Tool/Program		Date	10/29/10		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	8,381.00	Plan #1 (S-Well)	MWD	MWD - Standard	
8,381.00	13,324.14	Plan #1 (OH)			

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	-4,368.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
100.00	0.00	0.00	100.00	-4,268.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
200.00	0.00	0.00	200.00	-4,168.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
300.00	0.00	0.00	300.00	-4,068.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
400.00	0.00	0.00	400.00	-3,968.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
500.00	0.00	0.00	500.00	-3,868.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
600.00	0.00	0.00	600.00	-3,768.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
700.00	0.00	0.00	700.00	-3,668.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
800.00	0.00	0.00	800.00	-3,568.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
900.00	0.00	0.00	900.00	-3,468.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
1,000.00	0.00	0.00	1,000.00	-3,368.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
1,100.00	0.00	0.00	1,100.00	-3,268.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
1,200.00	0.00	0.00	1,200.00	-3,168.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
1,300.00	0.00	0.00	1,300.00	-3,068.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
1,400.00	0.00	0.00	1,400.00	-2,968.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
1,500.00	0.00	0.00	1,500.00	-2,868.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
1,600.00	0.00	0.00	1,600.00	-2,768.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
1,700.00	0.00	0.00	1,700.00	-2,668.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
1,800.00	0.00	0.00	1,800.00	-2,568.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
1,900.00	0.00	0.00	1,900.00	-2,468.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		
2,000.00	0.00	0.00	2,000.00	-2,368.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60		



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MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
2,100.00	0.00	0.00	2,100.00	-2,268.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60
2,200.00	0.00	0.00	2,200.00	-2,168.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60
2,300.00	0.00	0.00	2,300.00	-2,068.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60
2,400.00	0.00	0.00	2,400.00	-1,968.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60
2,500.00	0.00	0.00	2,500.00	-1,868.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60
2,600.00	0.00	0.00	2,600.00	-1,768.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60
2,700.00	0.00	0.00	2,700.00	-1,668.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60
2,800.00	0.00	0.00	2,800.00	-1,568.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60
2,900.00	0.00	0.00	2,900.00	-1,468.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60
2,930.00	0.00	0.00	2,930.00	-1,438.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60
3,000.00	1.40	84.29	2,999.99	-1,368.01	0.09	0.85	0.10	2.00	726,497.49	674,223.45
3,100.00	3.40	84.29	3,099.90	-1,268.10	0.50	5.02	0.57	2.00	726,497.90	674,227.62
3,200.00	5.40	84.29	3,199.60	-1,168.40	1.27	12.65	1.44	2.00	726,498.67	674,235.25
3,300.00	7.40	84.29	3,298.97	-1,069.03	2.37	23.74	2.70	2.00	726,499.77	674,246.34
3,400.00	9.40	84.29	3,397.89	-970.11	3.83	38.28	4.35	2.00	726,501.23	674,260.88
3,439.11	10.18	84.29	3,436.44	-931.56	4.49	44.89	5.10	2.00	726,501.89	674,267.49
3,497.15	10.18	84.29	3,493.56	-874.44	5.51	55.11	6.26	0.00	726,502.91	674,277.71
3,500.00	10.13	84.29	3,496.37	-871.63	5.56	55.60	6.32	2.00	726,502.96	674,278.20
3,600.00	8.13	84.29	3,595.10	-772.90	7.14	71.38	8.11	2.00	726,504.54	674,293.98
3,700.00	6.13	84.29	3,694.32	-673.68	8.37	83.73	9.51	2.00	726,505.77	674,306.33
3,800.00	4.13	84.29	3,793.91	-574.09	9.26	92.61	10.53	2.00	726,506.66	674,315.21
3,900.00	2.13	84.29	3,893.76	-474.24	9.80	98.04	11.14	2.00	726,507.20	674,320.64
4,006.27	0.00	0.00	4,000.00	-368.00	10.00	100.00	11.36	2.00	726,507.40	674,322.60
4,100.00	0.00	0.00	4,093.73	-274.27	10.00	100.00	11.36	0.00	726,507.40	674,322.60
4,200.00	0.00	0.00	4,193.73	-174.27	10.00	100.00	11.36	0.00	726,507.40	674,322.60
4,300.00	0.00	0.00	4,293.73	-74.27	10.00	100.00	11.36	0.00	726,507.40	674,322.60
4,400.00	0.00	0.00	4,393.73	25.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60



Pathfinder
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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)
4,500.00	0.00	0.00	4,493.73	125.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
4,600.00	0.00	0.00	4,593.73	225.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
4,700.00	0.00	0.00	4,693.73	325.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
4,800.00	0.00	0.00	4,793.73	425.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
4,900.00	0.00	0.00	4,893.73	525.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
5,000.00	0.00	0.00	4,993.73	625.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
5,100.00	0.00	0.00	5,093.73	725.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
5,200.00	0.00	0.00	5,193.73	825.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
5,300.00	0.00	0.00	5,293.73	925.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
5,400.00	0.00	0.00	5,393.73	1,025.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
5,500.00	0.00	0.00	5,493.73	1,125.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
5,600.00	0.00	0.00	5,593.73	1,225.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
5,700.00	0.00	0.00	5,693.73	1,325.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
5,800.00	0.00	0.00	5,793.73	1,425.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
5,900.00	0.00	0.00	5,893.73	1,525.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
6,000.00	0.00	0.00	5,993.73	1,625.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
6,100.00	0.00	0.00	6,093.73	1,725.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
6,200.00	0.00	0.00	6,193.73	1,825.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
6,300.00	0.00	0.00	6,293.73	1,925.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
6,400.00	0.00	0.00	6,393.73	2,025.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
6,500.00	0.00	0.00	6,493.73	2,125.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
6,600.00	0.00	0.00	6,593.73	2,225.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
6,700.00	0.00	0.00	6,693.73	2,325.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
6,800.00	0.00	0.00	6,793.73	2,425.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
6,900.00	0.00	0.00	6,893.73	2,525.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
7,000.00	0.00	0.00	6,993.73	2,625.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60
7,100.00	0.00	0.00	7,093.73	2,725.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60



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7,200.00	0.00	0.00	7,193.73	2,825.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
7,300.00	0.00	0.00	7,293.73	2,925.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
7,400.00	0.00	0.00	7,393.73	3,025.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
7,500.00	0.00	0.00	7,493.73	3,125.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
7,600.00	0.00	0.00	7,593.73	3,225.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
7,700.00	0.00	0.00	7,693.73	3,325.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
7,800.00	0.00	0.00	7,793.73	3,425.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
7,900.00	0.00	0.00	7,893.73	3,525.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
8,000.00	0.00	0.00	7,993.73	3,625.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
8,100.00	0.00	0.00	8,093.73	3,725.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
8,200.00	0.00	0.00	8,193.73	3,825.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
8,300.00	0.00	0.00	8,293.73	3,925.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
8,364.00	0.00	0.00	0.00	-4,368.00	0.00	0.00	0.00	0.00	726,497.40	674,222.60	
Start Build 9:55											
8,381.00	0.00	0.00	8,374.73	4,006.73	10.00	100.00	11.36	0.00	726,507.40	674,322.60	
8,400.00	1.84	359.54	8,393.73	4,025.73	10.31	100.00	11.67	9.69	726,507.71	674,322.60	
8,450.00	6.69	359.54	8,443.58	4,075.58	14.02	99.97	15.38	9.69	726,511.42	674,322.57	
8,500.00	11.53	359.54	8,492.93	4,124.93	21.93	99.90	23.30	9.69	726,519.33	674,322.50	
8,550.00	16.38	359.54	8,541.44	4,173.44	33.99	99.81	35.35	9.69	726,531.39	674,322.41	
8,600.00	21.22	359.54	8,588.76	4,220.76	50.09	99.68	51.45	9.69	726,547.49	674,322.28	
8,650.00	26.07	359.54	8,634.55	4,266.55	70.14	99.52	71.49	9.69	726,567.54	674,322.12	
8,700.00	30.91	359.54	8,678.48	4,310.48	93.98	99.33	95.33	9.69	726,591.38	674,321.93	
8,750.00	35.76	359.54	8,720.24	4,352.24	121.45	99.11	122.79	9.69	726,618.85	674,321.71	
8,800.00	40.60	359.54	8,759.54	4,391.54	152.34	98.86	153.68	9.69	726,649.74	674,321.46	
8,850.00	45.45	359.54	8,796.08	4,428.08	186.45	98.58	187.78	9.69	726,683.85	674,321.18	
8,900.00	50.29	359.54	8,829.61	4,461.61	223.52	98.29	224.84	9.69	726,720.92	674,320.89	
8,950.00	55.14	359.54	8,859.89	4,491.89	263.29	97.97	264.60	9.69	726,760.69	674,320.57	



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9,000.00	59.98	359.54	8,886.70	4,518.70	305.47	97.63	306.77	9.69	726,802.87	674,320.23
9,050.00	64.83	359.54	8,909.86	4,541.86	349.77	97.27	351.06	9.69	726,847.17	674,319.87
9,100.00	69.67	359.54	8,929.19	4,561.19	395.86	96.90	397.15	9.69	726,893.26	674,319.50
9,150.00	74.52	359.54	8,944.56	4,576.56	443.42	96.52	444.70	9.69	726,940.82	674,319.12
9,200.00	79.36	359.54	8,955.85	4,587.85	492.11	96.13	493.38	9.69	726,989.51	674,318.73
9,250.00	84.21	359.54	8,962.99	4,594.99	541.58	95.73	542.84	9.69	727,038.98	674,318.33
9,300.00	89.05	359.54	8,965.93	4,597.93	591.48	95.33	592.73	9.69	727,088.88	674,317.93
9,310.37	90.06	359.54	8,966.01	4,598.01	601.85	95.25	603.10	9.69	727,099.25	674,317.85
Start DLS 2.50 TFO -90.00										
9,313.80	90.39	359.54	8,966.00	4,598.00	605.28	95.22	606.53	9.69	727,102.68	674,317.82
9,400.00	90.39	359.54	8,965.41	4,597.41	691.48	94.53	692.70	0.00	727,188.88	674,317.13
9,500.00	90.39	359.54	8,964.73	4,596.73	791.47	93.73	792.68	0.00	727,288.87	674,316.33
9,600.00	90.39	359.54	8,964.05	4,596.05	891.47	92.92	892.65	0.00	727,388.87	674,315.52
9,700.00	90.39	359.54	8,963.37	4,595.37	991.46	92.12	992.62	0.00	727,488.86	674,314.72
9,707.67	90.39	359.54	8,963.32	4,595.32	999.13	92.06	1,000.29	0.00	727,496.53	674,314.66
Start 3623.69 hold at 9707.67 MD										
9,800.00	90.39	359.54	8,962.69	4,594.69	1,091.45	91.32	1,092.60	0.00	727,588.85	674,313.92
9,900.00	90.39	359.54	8,962.01	4,594.01	1,191.45	90.51	1,192.57	0.00	727,688.85	674,313.11
10,000.00	90.39	359.54	8,961.33	4,593.33	1,291.44	89.71	1,292.55	0.00	727,788.84	674,312.31
10,100.00	90.39	359.54	8,960.65	4,592.65	1,391.44	88.91	1,392.52	0.00	727,888.84	674,311.51
10,200.00	90.39	359.54	8,959.97	4,591.97	1,491.43	88.11	1,492.50	0.00	727,988.83	674,310.71
10,300.00	90.39	359.54	8,959.29	4,591.29	1,591.43	87.30	1,592.47	0.00	728,088.83	674,309.90
10,400.00	90.39	359.54	8,958.61	4,590.61	1,691.42	86.50	1,692.44	0.00	728,188.82	674,309.10
10,500.00	90.39	359.54	8,957.93	4,589.93	1,791.42	85.70	1,792.42	0.00	728,288.82	674,308.30
10,600.00	90.39	359.54	8,957.25	4,589.25	1,891.41	84.89	1,892.39	0.00	728,388.81	674,307.49
10,700.00	90.39	359.54	8,956.56	4,588.56	1,991.40	84.09	1,992.37	0.00	728,488.80	674,306.69
10,800.00	90.39	359.54	8,955.88	4,587.88	2,091.40	83.29	2,092.34	0.00	728,588.80	674,305.89



Pathfinder
Pathfinder X & Y Planning Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	WELL @ 4368.00ft (Original Well Elev)
Site:	Merlin State Corn	MD Reference:	WELL @ 4368.00ft (Original Well Elev)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	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)
10,900.00	90.39	359.54	8,955.20	4,587.20	2,191.39	82.49	2,192.32	0.00	728,688.79	674,305.09
11,000.00	90.39	359.54	8,954.52	4,586.52	2,291.39	81.68	2,292.29	0.00	728,788.79	674,304.28
11,100.00	90.39	359.54	8,953.84	4,585.84	2,391.38	80.88	2,392.26	0.00	728,888.78	674,303.48
11,200.00	90.39	359.54	8,953.16	4,585.16	2,491.38	80.08	2,492.24	0.00	728,988.78	674,302.68
11,300.00	90.39	359.54	8,952.48	4,584.48	2,591.37	79.27	2,592.21	0.00	729,088.77	674,301.87
11,400.00	90.39	359.54	8,951.80	4,583.80	2,691.37	78.47	2,692.19	0.00	729,188.77	674,301.07
11,500.00	90.39	359.54	8,951.12	4,583.12	2,791.36	77.67	2,792.16	0.00	729,288.76	674,300.27
11,600.00	90.39	359.54	8,950.44	4,582.44	2,891.35	76.87	2,892.13	0.00	729,388.75	674,299.47
11,700.00	90.39	359.54	8,949.76	4,581.76	2,991.35	76.06	2,992.11	0.00	729,488.75	674,298.66
11,800.00	90.39	359.54	8,949.08	4,581.08	3,091.34	75.26	3,092.08	0.00	729,588.74	674,297.86
11,900.00	90.39	359.54	8,948.40	4,580.40	3,191.34	74.46	3,192.06	0.00	729,688.74	674,297.06
12,000.00	90.39	359.54	8,947.72	4,579.72	3,291.33	73.66	3,292.03	0.00	729,788.73	674,296.26
12,100.00	90.39	359.54	8,947.04	4,579.04	3,391.33	72.85	3,392.01	0.00	729,888.73	674,295.45
12,200.00	90.39	359.54	8,946.35	4,578.35	3,491.32	72.05	3,491.98	0.00	729,988.72	674,294.65
12,300.00	90.39	359.54	8,945.67	4,577.67	3,591.32	71.25	3,591.95	0.00	730,088.72	674,293.85
12,400.00	90.39	359.54	8,944.99	4,576.99	3,691.31	70.44	3,691.93	0.00	730,188.71	674,293.04
12,500.00	90.39	359.54	8,944.31	4,576.31	3,791.30	69.64	3,791.90	0.00	730,288.70	674,292.24
12,600.00	90.39	359.54	8,943.63	4,575.63	3,891.30	68.84	3,891.88	0.00	730,388.70	674,291.44
12,700.00	90.39	359.54	8,942.95	4,574.95	3,991.29	68.04	3,991.85	0.00	730,488.69	674,290.64
12,800.00	90.39	359.54	8,942.27	4,574.27	4,091.29	67.23	4,091.82	0.00	730,588.69	674,289.83
12,900.00	90.39	359.54	8,941.59	4,573.59	4,191.28	66.43	4,191.80	0.00	730,688.68	674,289.03
13,000.00	90.39	359.54	8,940.91	4,572.91	4,291.28	65.63	4,291.77	0.00	730,788.68	674,288.23
13,100.00	90.39	359.54	8,940.23	4,572.23	4,391.27	64.82	4,391.75	0.00	730,888.67	674,287.42
13,200.00	90.39	359.54	8,939.55	4,571.55	4,491.27	64.02	4,491.72	0.00	730,988.67	674,286.62
13,300.00	90.39	359.54	8,938.87	4,570.87	4,591.26	63.22	4,591.70	0.00	731,088.66	674,285.82
13,324.14	90.39	359.54	8,938.70	4,570.70	4,615.40	63.02	4,615.83	0.00	731,112.80	674,285.62

PBHL(MS#1)



Pathfinder
Pathfinder X & Y Planning Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	WELL @ 4368.00ft (Original Well Elev)
Site:	Merlin State Corn	MD Reference:	WELL @ 4368.00ft (Original Well Elev)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	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)
13,324.15	90.39	359.54	8,938.70	4,570.70	4,615.41	63.02	4,615.84	0.00	731,112.81	674,285.62

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL(MS#1) - plan hits target center - Point	0.00	0.00	8,938.40	4,615.40	63.40	731,112.800	674,286.000	33° 0' 30.961 N	103° 45' 53.293 W

Plan Annotations

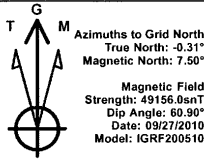
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,364.00	8,364.00	0.00	0.00	Start Build 9.55
9,310.37	8,964.00	596.45	94.47	Start DLS 2.50 TFO -90.00
9,707.67	8,961.45	992.26	122.38	Start 3623.69 hold at 9707.67 MD
13,331.36	8,938.40	4,615.40	63.40	TD at 13331.36

Checked By: _____ Approved By: _____ Date: _____



PROJECT DETAILS: Lea County
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

Project: Lea County
Site: Merlin State Com
Well: #1H
Wellbore: OH
Plan: Plan #1 (#1H/OH)

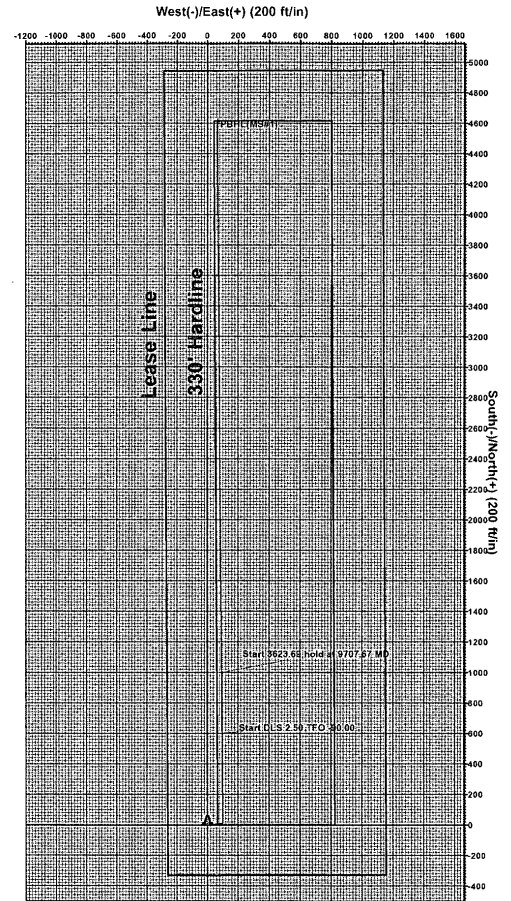
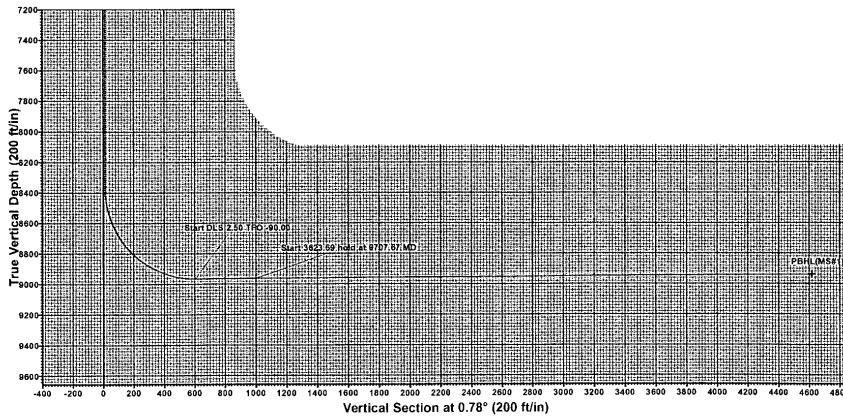


PATHFINDER
A Schlumberger Company

WELL DETAILS: #1H						
Ground Elevation: 4349.00						
RKB Elevation: WELL @ 4388.00ft (Original Well Elev)						
Rig Name: Original Well Elev						
+N/S	+E/W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	728487.400	874222.800	32° 56' 45.281" N	103° 45' 54.338" W	

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	DLeg	TFace	VSec	Target
1	8381.00	0.00	0.00	8374.73	10.00	100.00	0.00	0.00	11.36	
2	9313.00	90.39	359.54	8866.00	605.28	95.22	9.49	359.54	606.53	
3	13324.15	90.39	359.54	6938.70	4615.41	63.02	0.00	0.00	4615.84	PBHL(MS#1)

WELLBORE TARGET DETAILS				
Name	TVD	+N/S	+E/W	Shape
PBHL(MS#1)	8938.40	4615.40	63.40	Point



Plan: Plan #1 (#1H/OH)
Created By: Nate Bingham Date: 8/23, October 20 2010
Checked: _____ Date: _____