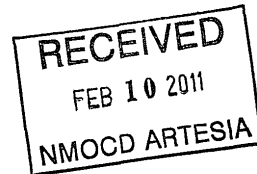




30-005-64142

Mack Energy

Chaves County
Rushmore State Com
1H
OH



Plan: Plan #1

Pathfinder X & Y Planning Report

01 February, 2011

PATHFINDER
A Schlumberger Company



Pathfinder
Pathfinder X & Y Planning Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well 1H
Project:	Chaves County	TVD Reference:	WELL @ 4002.00usft (Original Well Elev)
Site:	Rushmore State Com	MD Reference:	WELL @ 4002.00usft (Original Well Elev)
Well:	1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Project: Chaves 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		Rushmore State Com			
Site Position:		Northing:	903,705.700 usft	Latitude:	33° 29' 1.090 N
From:	Map	Easting:	621,232.400 usft	Longitude:	103° 56' 8.594 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.22 °

Well:	1H					
Well Position	+N/-S	0.00 usft	Northing:	903,705.700 usft	Latitude:	33° 29' 1.090 N
	+E/-W	0.00 usft	Easting:	621,232.400 usft	Longitude:	103° 56' 8.594 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,984.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	02/01/11	7.88	61.31	49,398

Design: Plan #1				
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	0.21

Survey Tool Program		Date 02/01/11		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	12,946.42	Plan #1 (OH)	MWD	MWD - Standard



Pathfinder
Pathfinder X & Y Planning Report



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Well:	1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	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	0.00	4,002.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
100.00	0.00	0.00	100.00	3,902.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
200.00	0.00	0.00	200.00	3,802.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
300.00	0.00	0.00	300.00	3,702.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
400.00	0.00	0.00	400.00	3,602.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
500.00	0.00	0.00	500.00	3,502.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
600.00	0.00	0.00	600.00	3,402.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
700.00	0.00	0.00	700.00	3,302.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
800.00	0.00	0.00	800.00	3,202.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
900.00	0.00	0.00	900.00	3,102.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
1,000.00	0.00	0.00	1,000.00	3,002.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
1,100.00	0.00	0.00	1,100.00	2,902.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
1,200.00	0.00	0.00	1,200.00	2,802.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
1,300.00	0.00	0.00	1,300.00	2,702.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
1,400.00	0.00	0.00	1,400.00	2,602.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
1,500.00	0.00	0.00	1,500.00	2,502.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
1,600.00	0.00	0.00	1,600.00	2,402.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
1,700.00	0.00	0.00	1,700.00	2,302.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
1,800.00	0.00	0.00	1,800.00	2,202.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
1,900.00	0.00	0.00	1,900.00	2,102.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
2,000.00	0.00	0.00	2,000.00	2,002.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
2,100.00	0.00	0.00	2,100.00	1,902.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
2,200.00	0.00	0.00	2,200.00	1,802.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
2,300.00	0.00	0.00	2,300.00	1,702.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
2,400.00	0.00	0.00	2,400.00	1,602.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
2,500.00	0.00	0.00	2,500.00	1,502.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40
2,600.00	0.00	0.00	2,600.00	1,402.00	0.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40



Pathfinder
Pathfinder X & Y Planning Report



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Well:	1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
2,700.00	0.00	0.00	2,700.00	1,302.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
2,800.00	0.00	0.00	2,800.00	1,202.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
2,900.00	0.00	0.00	2,900.00	1,102.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
3,000.00	0.00	0.00	3,000.00	1,002.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
3,100.00	0.00	0.00	3,100.00	902.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
3,200.00	0.00	0.00	3,200.00	802.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
3,300.00	0.00	0.00	3,300.00	702.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
3,400.00	0.00	0.00	3,400.00	602.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
3,500.00	0.00	0.00	3,500.00	502.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
3,600.00	0.00	0.00	3,600.00	402.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
3,700.00	0.00	0.00	3,700.00	302.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
3,800.00	0.00	0.00	3,800.00	202.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
3,900.00	0.00	0.00	3,900.00	102.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
4,000.00	0.00	0.00	4,000.00	2.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
4,100.00	0.00	0.00	4,100.00	-98.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
4,200.00	0.00	0.00	4,200.00	-198.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
4,300.00	0.00	0.00	4,300.00	-298.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
4,400.00	0.00	0.00	4,400.00	-398.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
4,500.00	0.00	0.00	4,500.00	-498.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
4,600.00	0.00	0.00	4,600.00	-598.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
4,700.00	0.00	0.00	4,700.00	-698.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
4,800.00	0.00	0.00	4,800.00	-798.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
4,900.00	0.00	0.00	4,900.00	-898.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
5,000.00	0.00	0.00	5,000.00	-998.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
5,100.00	0.00	0.00	5,100.00	-1,098.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
5,200.00	0.00	0.00	5,200.00	-1,198.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
5,300.00	0.00	0.00	5,300.00	-1,298.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	



Pathfinder
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5,400.00	0.00	0.00	5,400.00	-1,398.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
5,500.00	0.00	0.00	5,500.00	-1,498.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
5,600.00	0.00	0.00	5,600.00	-1,598.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
5,700.00	0.00	0.00	5,700.00	-1,698.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
5,800.00	0.00	0.00	5,800.00	-1,798.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
5,900.00	0.00	0.00	5,900.00	-1,898.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
6,000.00	0.00	0.00	6,000.00	-1,998.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
6,100.00	0.00	0.00	6,100.00	-2,098.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
6,200.00	0.00	0.00	6,200.00	-2,198.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
6,300.00	0.00	0.00	6,300.00	-2,298.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
6,400.00	0.00	0.00	6,400.00	-2,398.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
6,500.00	0.00	0.00	6,500.00	-2,498.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
6,600.00	0.00	0.00	6,600.00	-2,598.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
6,700.00	0.00	0.00	6,700.00	-2,698.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
6,800.00	0.00	0.00	6,800.00	-2,798.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
6,900.00	0.00	0.00	6,900.00	-2,898.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
7,000.00	0.00	0.00	7,000.00	-2,998.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
7,100.00	0.00	0.00	7,100.00	-3,098.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
7,200.00	0.00	0.00	7,200.00	-3,198.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
7,300.00	0.00	0.00	7,300.00	-3,298.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
7,400.00	0.00	0.00	7,400.00	-3,398.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
7,500.00	0.00	0.00	7,500.00	-3,498.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
7,600.00	0.00	0.00	7,600.00	-3,598.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
7,700.00	0.00	0.00	7,700.00	-3,698.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
7,800.00	0.00	0.00	7,800.00	-3,798.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
7,900.00	0.00	0.00	7,900.00	-3,898.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
8,000.00	0.00	0.00	8,000.00	-3,998.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	



Pathfinder
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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User.Db

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MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
8,100.00	0.00	0.00	8,100.00	-4,098.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
8,200.00	0.00	0.00	8,200.00	-4,198.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
8,300.00	0.00	0.00	8,300.00	-4,298.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
8,400.00	0.00	0.00	8,400.00	-4,398.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
8,500.00	0.00	0.00	8,500.00	-4,498.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
8,555.00	0.00	0.00	8,555.00	-4,553.00	0.00	0.00	0.00	0.00	903,705.70	621,232.40	
8,600.00	4.30	0.21	8,599.96	-4,597.96	1.69	0.01	1.69	9.55	903,707.39	621,232.41	
8,650.00	9.07	0.21	8,649.60	-4,647.60	7.51	0.03	7.51	9.55	903,713.21	621,232.43	
8,700.00	13.85	0.21	8,698.59	-4,696.59	17.44	0.06	17.44	9.55	903,723.14	621,232.46	
8,750.00	18.62	0.21	8,746.59	-4,744.59	31.41	0.12	31.41	9.55	903,737.11	621,232.52	
8,800.00	23.40	0.21	8,793.25	-4,791.25	49.33	0.18	49.33	9.55	903,755.03	621,232.58	
8,850.00	28.17	0.21	8,838.26	-4,836.26	71.07	0.26	71.07	9.55	903,776.77	621,232.66	
8,900.00	32.94	0.21	8,881.30	-4,879.30	96.48	0.35	96.48	9.55	903,802.18	621,232.75	
8,950.00	37.72	0.21	8,922.08	-4,920.08	125.39	0.46	125.39	9.55	903,831.09	621,232.86	
9,000.00	42.49	0.21	8,960.31	-4,958.31	157.59	0.58	157.59	9.55	903,863.29	621,232.98	
9,050.00	47.27	0.21	8,995.73	-4,993.73	192.86	0.71	192.87	9.55	903,898.56	621,233.11	
9,100.00	52.04	0.21	9,028.09	-5,026.09	230.96	0.85	230.96	9.55	903,936.66	621,233.25	
9,150.00	56.82	0.21	9,057.16	-5,055.16	271.62	1.00	271.62	9.55	903,977.32	621,233.40	
9,200.00	61.59	0.21	9,082.76	-5,080.76	314.56	1.15	314.56	9.55	904,020.26	621,233.55	
9,250.00	66.37	0.21	9,104.68	-5,102.68	359.48	1.32	359.48	9.55	904,065.18	621,233.72	
9,300.00	71.14	0.21	9,122.80	-5,120.80	406.06	1.49	406.07	9.55	904,111.76	621,233.89	
9,350.00	75.92	0.21	9,136.97	-5,134.97	454.00	1.66	454.00	9.55	904,159.70	621,234.06	
9,400.00	80.69	0.21	9,147.10	-5,145.10	502.95	1.84	502.95	9.55	904,208.65	621,234.24	
9,450.00	85.47	0.21	9,153.12	-5,151.12	552.57	2.03	552.57	9.55	904,258.27	621,234.43	
9,499.26	90.17	0.21	9,155.00	-5,153.00	601.78	2.21	601.78	9.55	904,307.48	621,234.61	
9,600.00	90.17	0.21	9,154.70	-5,152.70	702.52	2.57	702.52	0.00	904,408.22	621,234.97	
9,700.00	90.17	0.21	9,154.40	-5,152.40	802.51	2.94	802.52	0.00	904,508.21	621,235.34	



Pathfinder
Pathfinder X & Y Planning Report



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Site:	Rushmore State Com	MD Reference:	WELL @ 4002.00usft (Original Well Elev)
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Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
9,800.00	90.17	0.21	9,154.11	-5,152.11	902.51	3.31	902.52	0.00	904,608.21	621,235.71	
9,900.00	90.17	0.21	9,153.81	-5,151.81	1,002.51	3.67	1,002.52	0.00	904,708.21	621,236.07	
10,000.00	90.17	0.21	9,153.51	-5,151.51	1,102.51	4.04	1,102.52	0.00	904,808.21	621,236.44	
10,100.00	90.17	0.21	9,153.22	-5,151.22	1,202.51	4.41	1,202.52	0.00	904,908.21	621,236.81	
10,200.00	90.17	0.21	9,152.92	-5,150.92	1,302.51	4.77	1,302.52	0.00	905,008.21	621,237.17	
10,300.00	90.17	0.21	9,152.62	-5,150.62	1,402.51	5.14	1,402.52	0.00	905,108.21	621,237.54	
10,400.00	90.17	0.21	9,152.33	-5,150.33	1,502.51	5.51	1,502.52	0.00	905,208.21	621,237.91	
10,500.00	90.17	0.21	9,152.03	-5,150.03	1,602.51	5.87	1,602.52	0.00	905,308.21	621,238.27	
10,600.00	90.17	0.21	9,151.73	-5,149.73	1,702.50	6.24	1,702.52	0.00	905,408.20	621,238.64	
10,700.00	90.17	0.21	9,151.44	-5,149.44	1,802.50	6.61	1,802.52	0.00	905,508.20	621,239.01	
10,800.00	90.17	0.21	9,151.14	-5,149.14	1,902.50	6.97	1,902.51	0.00	905,608.20	621,239.37	
10,900.00	90.17	0.21	9,150.84	-5,148.84	2,002.50	7.34	2,002.51	0.00	905,708.20	621,239.74	
11,000.00	90.17	0.21	9,150.55	-5,148.55	2,102.50	7.71	2,102.51	0.00	905,808.20	621,240.11	
11,100.00	90.17	0.21	9,150.25	-5,148.25	2,202.50	8.07	2,202.51	0.00	905,908.20	621,240.47	
11,200.00	90.17	0.21	9,149.95	-5,147.95	2,302.50	8.44	2,302.51	0.00	906,008.20	621,240.84	
11,300.00	90.17	0.21	9,149.66	-5,147.66	2,402.50	8.81	2,402.51	0.00	906,108.20	621,241.21	
11,400.00	90.17	0.21	9,149.36	-5,147.36	2,502.50	9.17	2,502.51	0.00	906,208.20	621,241.57	
11,500.00	90.17	0.21	9,149.06	-5,147.06	2,602.49	9.54	2,602.51	0.00	906,308.19	621,241.94	
11,600.00	90.17	0.21	9,148.77	-5,146.77	2,702.49	9.91	2,702.51	0.00	906,408.19	621,242.31	
11,700.00	90.17	0.21	9,148.47	-5,146.47	2,802.49	10.27	2,802.51	0.00	906,508.19	621,242.67	
11,800.00	90.17	0.21	9,148.17	-5,146.17	2,902.49	10.64	2,902.51	0.00	906,608.19	621,243.04	
11,900.00	90.17	0.21	9,147.88	-5,145.88	3,002.49	11.00	3,002.51	0.00	906,708.19	621,243.40	
12,000.00	90.17	0.21	9,147.58	-5,145.58	3,102.49	11.37	3,102.51	0.00	906,808.19	621,243.77	
12,100.00	90.17	0.21	9,147.28	-5,145.28	3,202.49	11.74	3,202.51	0.00	906,908.19	621,244.14	
12,200.00	90.17	0.21	9,146.99	-5,144.99	3,302.49	12.10	3,302.51	0.00	907,008.19	621,244.50	
12,300.00	90.17	0.21	9,146.69	-5,144.69	3,402.49	12.47	3,402.51	0.00	907,108.19	621,244.87	
12,400.00	90.17	0.21	9,146.39	-5,144.39	3,502.48	12.84	3,502.51	0.00	907,208.18	621,245.24	



Pathfinder
Pathfinder X & Y Planning Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well 1H
Project:	Chaves County	TVD Reference:	WELL @ 4002.00usft (Original Well Elev)
Site:	Rushmore State Com	MD Reference:	WELL @ 4002.00usft (Original Well Elev)
Well:	1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
12,500.00	90.17	0.21	9,146.10	-5,144.10	3,602.48	13.20	3,602.51	0.00	907,308.18	621,245.60	
12,600.00	90.17	0.21	9,145.80	-5,143.80	3,702.48	13.57	3,702.51	0.00	907,408.18	621,245.97	
12,700.00	90.17	0.21	9,145.50	-5,143.50	3,802.48	13.94	3,802.51	0.00	907,508.18	621,246.34	
12,800.00	90.17	0.21	9,145.21	-5,143.21	3,902.48	14.30	3,902.51	0.00	907,608.18	621,246.70	
12,900.00	90.17	0.21	9,144.91	-5,142.91	4,002.48	14.67	4,002.51	0.00	907,708.18	621,247.07	
12,946.42	90.17	0.21	9,144.77	-5,142.77	4,048.90	14.84	4,048.93	0.00	907,754.60	621,247.24	

Checked By: _____	Approved By: _____	Date: _____
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PROJECT DETAILS: Chaves 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: Chaves County
Site: Rushmore State Com
Well: 1H
Wellbore: OH
Plan: Plan #1 (1H/OH)



Azimuths to Grid North
True North: -0.22°
Magnetic North: 7.66°

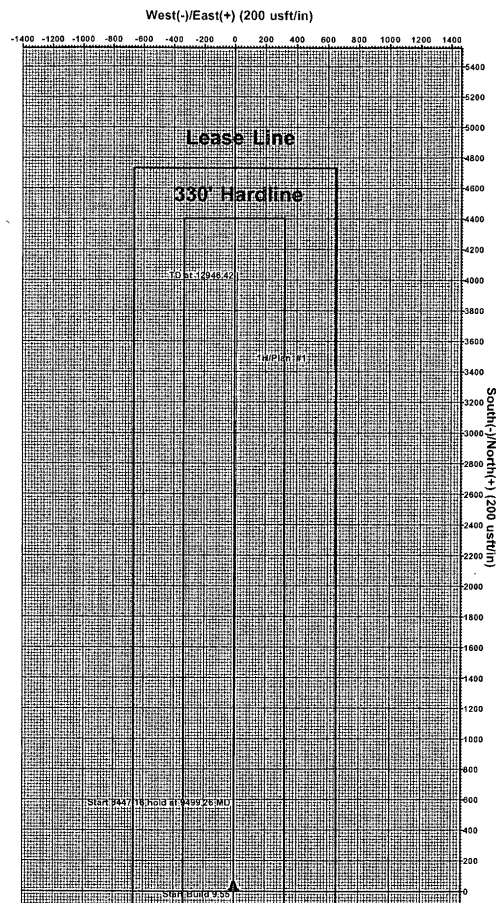
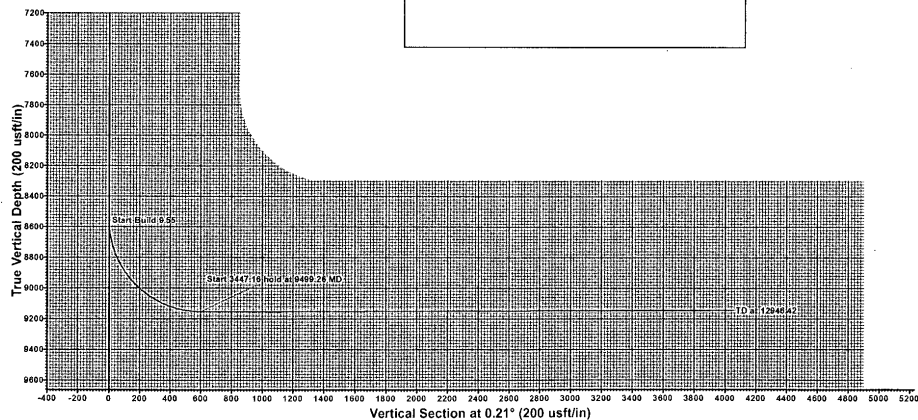
Magnetic Field
Strength: 49398.0snT
Dip Angle: 61.31°
Date: 02/01/2011
Model: IGRF200510

PATHFINDER
A Schlumberger Company

WELL DETAILS: 1H							
Ground Elevation: 3984.00							
RKB Elevation: WELL @ 4002.00usft (Original Well Elev)							
Rig Name: Original Well Elev							
+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot	
0.00	0.00	903765.705	621232.405	33° 29' 1.080 N	103° 56' 8.584 W		

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Target	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	25555.00	0.00	0.00	8555.00	0.00	0.00	0.00	0.00	0.00		
	39499.29	90.17	0.21	9155.00	601.78	2.21	9.55	0.21	601.78		
	42946.42	90.17	0.21	9144.77	4048.90	14.84	0.00	0.00	4048.93	PBHL (RSC1)	

WELLBORE TARGET DETAILS				
Name	TVD	+N-S	+E-W	Shape
PBHL (RSC1)	9145.00	4048.90	15.10	Point



Plan: Plan #1 (1H/OH)
Created By: Nate Bingham Date: 10/31, February 01 2011
Checked: _____ Date: _____