



Mack Energy

**Chaves County
Peery Federal #7
Peery Federal #7
OH**

RECEIVED

MAR 20 2009

HOBBSOCD

Plan: Plan #2

Pathfinder X & Y Survey Report

04 March, 2009

PATHFINDER



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well Peery Federal #7
Project:	Chaves County	TVD Reference:	WELL @ 3992.00ft (Original Well Elev)
Site:	Peery Federal #7	MD Reference:	WELL @ 3992.00ft (Original Well Elev)
Well:	Peery Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	Midland Database

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

Site:	Peery Federal #7				
Site Position:		Northing:	722,595.300 ft	Latitude:	32° 59' 9.103 N
From:	Map	Easting:	620,817.600 ft	Longitude:	103° 56' 21.551 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.21 °

Well:	Peery Federal #7					
Well Position	+N-S	0.00 ft	Northing:	722,595.300 ft	Latitude:	32° 59' 9.103 N
	+E-W	0.00 ft	Easting:	620,817.600 ft	Longitude:	103° 56' 21.551 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,974.00 ft

Wellbore:	OH
-----------	----

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	02/16/2009	8.08	60.90	49,289

Design:	Plan #2
---------	---------

Audit Notes:	
Version:	Phase: PLAN Tie On Depth: 7,103.00

Vertical Section:	Depth From (TVD) (ft)	+N-S (ft)	+E-W (ft)	Direction (°)
	0.00	0.00	0.00	269.90



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well Peery Federal #7
Project:	Chaves County	TVD Reference:	WELL @ 3992.00ft (Original Well Elev)
Site:	Peery Federal #7	MD Reference:	WELL @ 3992.00ft (Original Well Elev)
Well:	Peery Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	Midland Database

Survey Tool Program		Date	03/04/2009	
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
5,732.00	7,103.00	MWD (Pilot Hole) (Pilot Hole)	MWD	MWD - Standard
7,103.00	13,033.65	Plan #2 (OH)	MWD	MWD - Standard

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)	
5,621.00	1.30	267.00	5,620.59	1,628.59	9.18	17.14	-17.16	0.00	722,604.48	620,834.74	
5,732.00	1.32	268.73	5,731.56	1,739.56	9.09	14.60	-14.62	0.04	722,604.39	620,832.20	
5,832.00	1.23	266.97	5,831.54	1,839.54	9.00	12.38	-12.40	0.10	722,604.30	620,829.98	
5,922.00	1.41	277.08	5,921.51	1,929.51	9.09	10.32	-10.33	0.33	722,604.39	620,827.92	
6,017.00	1.58	280.06	6,016.48	2,024.48	9.46	7.87	-7.88	0.20	722,604.76	620,825.47	
6,113.00	1.76	278.22	6,112.44	2,120.44	9.90	5.11	-5.12	0.20	722,605.20	620,822.71	
6,208.00	1.32	255.19	6,207.41	2,215.41	9.83	2.60	-2.62	0.79	722,605.13	620,820.20	
6,303.00	1.14	258.09	6,302.38	2,310.38	9.36	0.62	-0.64	0.20	722,604.66	620,818.22	
6,400.00	1.06	263.98	6,399.37	2,407.37	9.06	-1.21	1.20	0.14	722,604.36	620,816.39	
6,494.00	1.06	258.00	6,493.35	2,501.35	8.79	-2.93	2.91	0.12	722,604.09	620,814.67	
6,590.00	0.79	256.25	6,589.34	2,597.34	8.45	-4.44	4.43	0.28	722,603.75	620,813.16	
6,662.00	0.79	263.45	6,661.33	2,669.33	8.28	-5.42	5.40	0.14	722,603.58	620,812.18	
6,779.00	0.70	241.92	6,778.32	2,786.32	7.85	-6.85	6.83	0.25	722,603.15	620,810.75	
6,875.00	0.88	234.80	6,874.31	2,882.31	7.15	-7.97	7.96	0.21	722,602.45	620,809.63	
6,971.00	0.97	240.34	6,970.30	2,978.30	6.32	-9.28	9.27	0.13	722,601.62	620,808.32	
7,045.00	0.88	238.49	7,044.29	3,052.29	5.71	-10.31	10.30	0.13	722,601.01	620,807.29	
7,103.00	0.88	238.49	7,102.28	3,110.28	5.25	-11.07	11.06	0.00	722,600.55	620,806.53	
TIE IN PT - 7103.00'MD,0.88"INC,238.49°AZI,7102.28'TVD											
7,200.00	0.88	238.49	7,199.27	3,207.27	4.47	-12.34	12.33	0.00	722,599.77	620,805.26	
7,300.00	0.88	238.49	7,299.26	3,307.26	3.67	-13.64	13.64	0.00	722,598.97	620,803.96	
7,400.00	0.88	238.49	7,399.25	3,407.25	2.86	-14.95	14.95	0.00	722,598.16	620,802.65	



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well Peery Federal #7
Project:	Chaves County	TVD Reference:	WELL @ 3992.00ft (Original Well Elev)
Site:	Peery Federal #7	MD Reference:	WELL @ 3992.00ft (Original Well Elev)
Well:	Peery Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	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)	
7,500.00	0.88	238.49	7,499.24	3,507.24	2.06	-16.26	16.26	0.00	722,597.36	620,801.34	
7,600.00	0.88	238.49	7,599.22	3,607.22	1.26	-17.57	17.57	0.00	722,596.56	620,800.03	
7,700.00	0.88	238.49	7,699.21	3,707.21	0.46	-18.88	18.88	0.00	722,595.76	620,798.72	
7,800.00	0.88	238.49	7,799.20	3,807.20	-0.35	-20.19	20.19	0.00	722,594.95	620,797.41	
7,900.00	0.88	238.49	7,899.19	3,907.19	-1.15	-21.50	21.50	0.00	722,594.15	620,796.10	
8,000.00	0.88	238.49	7,999.18	4,007.18	-1.95	-22.81	22.81	0.00	722,593.35	620,794.79	
8,100.00	0.88	238.49	8,099.16	4,107.16	-2.76	-24.12	24.12	0.00	722,592.54	620,793.48	
8,126.00	0.88	238.49	8,125.16	4,133.16	-2.96	-24.46	24.47	0.00	722,592.34	620,793.14	
KOP-8126.00'MD,0.88°INC,238.49°AZI											
8,150.00	3.27	261.89	8,149.14	4,157.14	-3.16	-25.29	25.30	10.35	722,592.14	620,792.31	
8,200.00	8.42	266.87	8,198.87	4,206.87	-3.56	-30.36	30.37	10.35	722,591.74	620,787.24	
8,250.00	13.59	268.07	8,247.93	4,255.93	-3.96	-39.90	39.91	10.35	722,591.34	620,777.70	
8,300.00	18.77	268.62	8,295.94	4,303.94	-4.35	-53.82	53.83	10.35	722,590.95	620,763.78	
8,350.00	23.94	268.94	8,342.49	4,350.49	-4.73	-72.02	72.02	10.35	722,590.57	620,745.58	
8,400.00	29.11	269.15	8,387.21	4,395.21	-5.10	-94.34	94.35	10.35	722,590.20	620,723.26	
8,450.00	34.29	269.30	8,429.73	4,437.73	-5.46	-120.60	120.61	10.35	722,589.84	620,697.00	
8,500.00	39.46	269.41	8,469.72	4,477.72	-5.79	-150.59	150.60	10.35	722,589.51	620,667.01	
8,550.00	44.64	269.51	8,506.83	4,514.83	-6.10	-184.07	184.08	10.35	722,589.20	620,633.53	
8,600.00	49.81	269.58	8,540.77	4,548.77	-6.40	-220.76	220.77	10.35	722,588.90	620,596.84	
8,650.00	54.99	269.65	8,571.27	4,579.27	-6.66	-260.36	260.37	10.35	722,588.64	620,557.24	
8,700.00	60.16	269.71	8,598.07	4,606.07	-6.90	-302.55	302.56	10.35	722,588.40	620,515.05	
8,750.00	65.34	269.76	8,620.95	4,628.95	-7.10	-346.99	347.00	10.35	722,588.20	620,470.61	
8,800.00	70.51	269.81	8,639.74	4,647.74	-7.27	-393.31	393.32	10.35	722,588.03	620,424.29	
8,850.00	75.69	269.85	8,654.27	4,662.27	-7.41	-441.13	441.14	10.35	722,587.89	620,376.47	
8,900.00	80.86	269.90	8,664.42	4,672.42	-7.52	-490.07	490.08	10.35	722,587.78	620,327.53	
8,950.00	86.04	269.94	8,670.12	4,678.12	-7.59	-539.73	539.74	10.35	722,587.71	620,277.87	
9,000.00	91.22	269.98	8,671.32	4,679.32	-7.63	-589.70	589.71	10.35	722,587.67	620,227.90	



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well Peery Federal #7
Project:	Chaves County	TVD Reference:	WELL @ 3992.00ft (Original Well Elev)
Site:	Peery Federal #7	MD Reference:	WELL @ 3992.00ft (Original Well Elev)
Well:	Peery Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	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)	
9,010.31	92.28	269.99	8,671.00	4,679.00	-7.63	-600.00	600.01	10.35	722,587.67	620,217.60	
TGT-1 #7											
9,010.39	92.29	269.99	8,671.00	4,679.00	-7.63	-600.08	600.09	10.35	722,587.67	620,217.52	
EOC-9010.39°MD,92.29°INC,269.99°AZI,10.35°DLS, 600.09°VS, -7.63°N, -600.08°E											
9,034.60	92.29	269.99	8,670.03	4,678.03	-7.63	-624.28	624.29	0.00	722,587.67	620,193.32	
9,100.00	92.29	269.99	8,667.42	4,675.42	-7.64	-689.62	689.63	0.00	722,587.66	620,127.98	
9,200.00	92.29	269.99	8,663.42	4,671.42	-7.66	-789.54	789.55	0.00	722,587.64	620,028.06	
9,300.00	92.29	269.99	8,659.43	4,667.43	-7.68	-889.46	889.47	0.00	722,587.62	619,928.14	
9,400.00	92.29	269.99	8,655.43	4,663.43	-7.70	-989.38	989.39	0.00	722,587.60	619,828.22	
9,410.63	92.29	269.99	8,655.01	4,663.01	-7.70	-1,000.00	1,000.01	0.00	722,587.60	619,817.60	
LT#2 -9410.63°MD,92.29°INC,269.99°AZI, 8655.00°TVD, 1000.01°VS, -7.69°N, -1000.00°E - TGT2 #7											
9,460.49	91.29	269.99	8,653.44	4,661.44	-7.70	-1,049.84	1,049.85	2.00	722,587.60	619,767.76	
9,500.00	91.29	269.99	8,652.55	4,660.55	-7.70	-1,089.34	1,089.35	0.00	722,587.60	619,728.26	
9,600.00	91.29	269.99	8,650.29	4,658.29	-7.72	-1,189.31	1,189.32	0.00	722,587.58	619,628.29	
9,700.00	91.29	269.99	8,648.04	4,656.04	-7.73	-1,289.29	1,289.30	0.00	722,587.57	619,528.31	
9,800.00	91.29	269.99	8,645.78	4,653.78	-7.75	-1,389.26	1,389.27	0.00	722,587.55	619,428.34	
9,900.00	91.29	269.99	8,643.53	4,651.53	-7.76	-1,489.23	1,489.25	0.00	722,587.54	619,328.37	
10,000.00	91.29	269.99	8,641.27	4,649.27	-7.78	-1,589.21	1,589.22	0.00	722,587.52	619,228.39	
10,100.00	91.29	269.99	8,639.01	4,647.01	-7.79	-1,689.18	1,689.19	0.00	722,587.51	619,128.42	
10,200.00	91.29	269.99	8,636.76	4,644.76	-7.81	-1,789.16	1,789.17	0.00	722,587.49	619,028.44	
10,300.00	91.29	269.99	8,634.50	4,642.50	-7.82	-1,889.13	1,889.14	0.00	722,587.48	618,928.47	
10,400.00	91.29	269.99	8,632.25	4,640.25	-7.84	-1,989.11	1,989.12	0.00	722,587.46	618,828.49	
10,410.90	91.29	269.99	8,632.00	4,640.00	-7.84	-2,000.00	2,000.01	0.00	722,587.46	618,817.60	
LT#3 -10410.90°MD,91.29°INC,269.99°AZI, 8632.00°TVD, 2000.02°VS, -7.84°N, -2000.00°E - TGT3 #7											
10,460.84	90.29	269.99	8,631.31	4,639.31	-7.85	-2,049.94	2,049.95	2.00	722,587.45	618,767.66	
10,500.00	90.29	269.99	8,631.11	4,639.11	-7.85	-2,089.10	2,089.11	0.00	722,587.45	618,728.50	
10,600.00	90.29	269.99	8,630.59	4,638.59	-7.86	-2,189.10	2,189.11	0.00	722,587.44	618,628.50	
10,700.00	90.29	269.99	8,630.08	4,638.08	-7.88	-2,289.10	2,289.11	0.00	722,587.42	618,528.50	



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well Peery Federal #7
Project:	Chaves County	TVD Reference:	WELL @ 3992.00ft (Original Well Elev)
Site:	Peery Federal #7	MD Reference:	WELL @ 3992.00ft (Original Well Elev)
Well:	Peery Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	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)	
10,800.00	90.29	269.99	8,629.57	4,637.57	-7.89	-2,389.09	2,389.11	0.00	722,587.41	618,428.51	
10,900.00	90.29	269.99	8,629.06	4,637.06	-7.90	-2,489.09	2,489.10	0.00	722,587.40	618,328.51	
10,910.91	90.29	269.99	8,629.00	4,637.00	-7.90	-2,500.00	2,500.01	0.00	722,587.40	618,317.60	
LT#3.5 -10910.91°MD,90.29°INC,269.99°AZI, 8629.00°TVD, 2500.01°VS, -7.90°N, -2500.00°E - TGT3.5 #7											
10,931.77	89.88	269.99	8,628.97	4,636.97	-7.90	-2,520.86	2,520.87	2.00	722,587.40	618,296.74	
11,000.00	89.88	269.99	8,629.12	4,637.12	-7.91	-2,589.09	2,589.10	0.00	722,587.39	618,228.51	
11,100.00	89.88	269.99	8,629.33	4,637.33	-7.92	-2,689.09	2,689.10	0.00	722,587.38	618,128.51	
11,200.00	89.88	269.99	8,629.55	4,637.55	-7.93	-2,789.09	2,789.10	0.00	722,587.37	618,028.51	
11,300.00	89.88	269.99	8,629.76	4,637.76	-7.95	-2,889.09	2,889.10	0.00	722,587.35	617,928.51	
11,400.00	89.88	269.99	8,629.98	4,637.98	-7.96	-2,989.09	2,989.10	0.00	722,587.34	617,828.51	
11,410.91	89.88	269.99	8,630.00	4,638.00	-7.96	-3,000.00	3,000.01	0.00	722,587.34	617,817.60	
LT#4 -11410.91°MD,89.88°INC,269.99°AZI, 8630.00°TVD, 3000.01°VS, -7.96°N, -3000.00°E - TGT4 #7											
11,411.34	89.89	269.99	8,630.00	4,638.00	-7.96	-3,000.44	3,000.44	2.00	722,587.34	617,817.16	
11,500.00	89.89	269.99	8,630.18	4,638.18	-7.97	-3,089.09	3,089.10	0.00	722,587.33	617,728.51	
11,600.00	89.89	269.99	8,630.38	4,638.38	-7.98	-3,189.09	3,189.10	0.00	722,587.32	617,628.51	
11,700.00	89.89	269.99	8,630.58	4,638.58	-7.99	-3,289.09	3,289.10	0.00	722,587.31	617,528.51	
11,800.00	89.89	269.99	8,630.78	4,638.78	-8.01	-3,389.09	3,389.10	0.00	722,587.29	617,428.51	
11,900.00	89.89	269.99	8,630.98	4,638.98	-8.02	-3,489.09	3,489.10	0.00	722,587.28	617,328.51	
11,910.90	89.89	269.99	8,631.00	4,639.00	-8.02	-3,499.99	3,500.00	0.00	722,587.28	617,317.61	
LT#4.5 -11910.90°MD,89.89°INC,269.99°AZI, 8631.00°TVD, 3500.00°VS, -8.02°N, -3499.99°E - TGT4.5 #7											
11,940.42	89.30	270.00	8,631.21	4,639.21	-8.02	-3,529.51	3,529.52	2.00	722,587.28	617,288.09	
12,000.00	89.30	270.00	8,631.94	4,639.94	-8.03	-3,589.09	3,589.09	0.00	722,587.27	617,228.51	
12,100.00	89.30	270.00	8,633.17	4,641.17	-8.03	-3,689.08	3,689.09	0.00	722,587.27	617,128.52	
12,200.00	89.30	270.00	8,634.40	4,642.40	-8.04	-3,789.07	3,789.08	0.00	722,587.26	617,028.53	
12,300.00	89.30	270.00	8,635.64	4,643.64	-8.04	-3,889.06	3,889.07	0.00	722,587.26	616,928.54	
12,400.00	89.30	270.00	8,636.87	4,644.87	-8.05	-3,989.06	3,989.06	0.00	722,587.25	616,828.54	
12,410.95	89.30	270.00	8,637.00	4,645.00	-8.05	-4,000.00	4,000.01	0.00	722,587.25	616,817.60	
LT#5 -12410.95°MD,89.30°INC,270.00°AZI, 8637.00°TVD, 4000.01°VS, -8.05°N, -4000.00°E - TGT5 #7											



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company: Mack Energy
Project: Chaves County
Site: Peery Federal #7
Well: Peery Federal #7
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well Peery Federal #7
TVD Reference: WELL @ 3992.00ft (Original Well Elev)
MD Reference: WELL @ 3992.00ft (Original Well Elev)
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)
12,437.56	89.83	270.00	8,637.20	4,645.20	-8.05	-4,026.61	4,026.62	2.00	722,587.25	616,790.99
12,500.00	89.83	270.00	8,637.39	4,645.39	-8.06	-4,089.05	4,089.06	0.00	722,587.24	616,728.55
12,600.00	89.83	270.00	8,637.69	4,645.69	-8.06	-4,189.05	4,189.06	0.00	722,587.24	616,628.55
12,700.00	89.83	270.00	8,637.99	4,645.99	-8.07	-4,289.05	4,289.06	0.00	722,587.23	616,528.55
12,800.00	89.83	270.00	8,638.30	4,646.30	-8.08	-4,389.05	4,389.06	0.00	722,587.22	616,428.55
12,900.00	89.83	270.00	8,638.60	4,646.60	-8.09	-4,489.05	4,489.06	0.00	722,587.21	616,328.55
13,000.00	89.83	270.00	8,638.90	4,646.90	-8.10	-4,589.05	4,589.06	0.00	722,587.20	616,228.55
13,033.65	89.83	270.00	8,639.00	4,647.00	-8.10	-4,622.70	4,622.71	0.00	722,587.20	616,194.90

PBHL (Peery Fed #7)



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well Peery Federal #7
Project:	Chaves County	TVD Reference:	WELL @ 3992.00ft (Original Well Elev)
Site:	Peery Federal #7	MD Reference:	WELL @ 3992.00ft (Original Well Elev)
Well:	Peery Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	Midland Database

Targets										
Target Name	hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
TGT-1 #7	- plan hits target	0.00	0.00	8,671.00	-7.63	-600.00	722,587.670	620,217.600	32° 59' 9.049 N	103° 56' 28.596 W
	- Point									
TGT2 #7	- plan hits target	0.00	0.00	8,655.00	-7.69	-1,000.00	722,587.610	619,817.600	32° 59' 9.064 N	103° 56' 33.292 W
	- Point									
TGT5 #7	- plan hits target	0.00	0.00	8,637.00	-8.05	-4,000.00	722,587.250	616,817.600	32° 59' 9.169 N	103° 57' 8.512 W
	- Point									
TGT4 #7	- plan hits target	0.00	0.01	8,630.00	-7.96	-3,000.00	722,587.340	617,817.600	32° 59' 9.134 N	103° 56' 56.772 W
	- Point									
TGT4.5 #7	- plan hits target	0.00	0.00	8,631.00	-8.02	-3,499.99	722,587.280	617,317.610	32° 59' 9.151 N	103° 57' 2.642 W
	- Point									
PBHL (Peery Fed #7)	- plan hits target	0.00	0.00	8,639.00	-8.10	-4,622.70	722,587.200	616,194.900	32° 59' 9.191 N	103° 57' 15.823 W
	- Point									
TGT3.5 #7	- plan hits target	0.00	0.00	8,629.00	-7.90	-2,500.00	722,587.400	618,317.600	32° 59' 9.116 N	103° 56' 50.902 W
	- Point									
TGT3 #7	- plan hits target	0.00	0.00	8,632.00	-7.84	-2,000.00	722,587.460	618,817.600	32° 59' 9.099 N	103° 56' 45.032 W
	- Point									



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well Peery Federal #7:
Project:	Chaves County	TVD Reference:	WELL @ 3992.00ft (Original Well Elev)
Site:	Peery Federal #7	MD Reference:	WELL @ 3992.00ft (Original Well Elev)
Well:	Peery Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	Midland Database

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
TGT-1 #7 - plan hits target - Point	0.00	0.00	8,671.00	-7.63	-600.00	722,587.670	620,217.600	32° 59' 9.049 N	103° 56' 28.596 W
TGT2 #7 - plan hits target - Point	0.00	0.00	8,655.00	-7.69	-1,000.00	722,587.610	619,817.600	32° 59' 9.064 N	103° 56' 33.292 W
TGT5 #7 - plan hits target - Point	0.00	0.00	8,637.00	-8.05	-4,000.00	722,587.250	616,817.600	32° 59' 9.169 N	103° 57' 8.512 W
TGT4 #7 - plan hits target - Point	0.00	0.01	8,630.00	-7.96	-3,000.00	722,587.340	617,817.600	32° 59' 9.134 N	103° 56' 56.772 W
TGT4.5 #7 - plan hits target - Point	0.00	0.00	8,631.00	-8.02	-3,499.99	722,587.280	617,317.610	32° 59' 9.151 N	103° 57' 2.642 W
PBHL (Peery Fed #7) - plan hits target - Point	0.00	0.00	8,639.00	-8.10	-4,622.70	722,587.200	616,194.900	32° 59' 9.191 N	103° 57' 15.823 W
TGT3.5 #7 - plan hits target - Point	0.00	0.00	8,629.00	-7.90	-2,500.00	722,587.400	618,317.600	32° 59' 9.116 N	103° 56' 50.902 W
TGT3 #7 - plan hits target - Point	0.00	0.00	8,632.00	-7.84	-2,000.00	722,587.460	618,817.600	32° 59' 9.099 N	103° 56' 45.032 W

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
7,103.00	7,102.28	5.25	-11.07	TIE IN PT - 7103.00°MD,0.88°INC,238.49°AZI,7102.28°TVD
8,126.00	8,125.16	-2.96	-24.46	KOP-8126.00°MD,0.88°INC,238.49°AZI
9,010.39	8,671.00	-7.63	-600.08	EOC-9010.39°MD,92.29°INC,269.99°AZI,10.35°DLS, 600.09°VS, -7.63'
9,410.63	8,655.00	-7.69	-1,000.00	LT#2 -9410.63°MD,92.29°INC,269.99°AZI, 8655.00°TVD, 1000.01°VS, -



Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well Peery Federal #7
Project:	Chaves County	TVD Reference:	WELL @ 3992.00ft (Original Well Elev)
Site:	Peery Federal #7	MD Reference:	WELL @ 3992.00ft (Original Well Elev)
Well:	Peery Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	Midland Database

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
TGT-1 #7 - plan hits target - Point	0.00	0.00	8,671.00	-7.63	-600.00	722,587.670	620,217.600	32° 59' 9.049 N	103° 56' 28.596 W
TGT2 #7 - plan hits target - Point	0.00	0.00	8,655.00	-7.69	-1,000.00	722,587.610	619,817.600	32° 59' 9.064 N	103° 56' 33.292 W
TGT5 #7 - plan hits target - Point	0.00	0.00	8,637.00	-8.05	-4,000.00	722,587.250	616,817.600	32° 59' 9.169 N	103° 57' 8.512 W
TGT4 #7 - plan hits target - Point	0.00	0.01	8,630.00	-7.96	-3,000.00	722,587.340	617,817.600	32° 59' 9.134 N	103° 56' 56.772 W
TGT4.5 #7 - plan hits target - Point	0.00	0.00	8,631.00	-8.02	-3,499.99	722,587.280	617,317.610	32° 59' 9.151 N	103° 57' 2.642 W
PBHL (Peery Fed #7) - plan hits target - Point	0.00	0.00	8,639.00	-8.10	-4,622.70	722,587.200	616,194.900	32° 59' 9.191 N	103° 57' 15.823 W
TGT3.5 #7 - plan hits target - Point	0.00	0.00	8,629.00	-7.90	-2,500.00	722,587.400	618,317.600	32° 59' 9.116 N	103° 56' 50.902 W
TGT3 #7 - plan hits target - Point	0.00	0.00	8,632.00	-7.84	-2,000.00	722,587.460	618,817.600	32° 59' 9.099 N	103° 56' 45.032 W
10,410.90	8,632.00	-7.84	-2,000.00	LT#3 -10410.90°MD,91.29°INC,269.99°AZI, 8632.00°TVD, 2000.02°VS,					
10,910.91	8,629.00	-7.90	-2,500.00	LT#3.5 -10910.91°MD,90.29°INC,269.99°AZI, 8629.00°TVD, 2500.01°VS,					
11,410.91	8,630.00	-7.96	-3,000.00	LT#4 -11410.91°MD,89.88°INC,269.99°AZI, 8630.00°TVD, 3000.01°VS,					
11,910.90	8,631.00	-8.02	-3,499.99	LT#4.5 -11910.90°MD,89.89°INC,269.99°AZI, 8631.00°TVD, 3500.00°VS,					
12,410.95	8,637.00	-8.02	-3,529.51	LT#5 -12410.95°MD,89.30°INC,270.00°AZI, 8637.00°TVD, 4000.01°VS,					
13,033.65	8,639.00	-8.05	-4,000.00	TD at 13033.65					

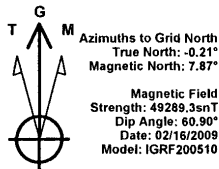


Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company:	Mack Energy	Local Co-ordinate Reference:	Well Peery Federal #7
Project:	Chaves County	TVD Reference:	WELL @ 3992.00ft (Original Well Elev)
Site:	Peery Federal #7	MD Reference:	WELL @ 3992.00ft (Original Well Elev)
Well:	Peery Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	Midland Database

Checked By: _____ Approved By: _____ Date: _____

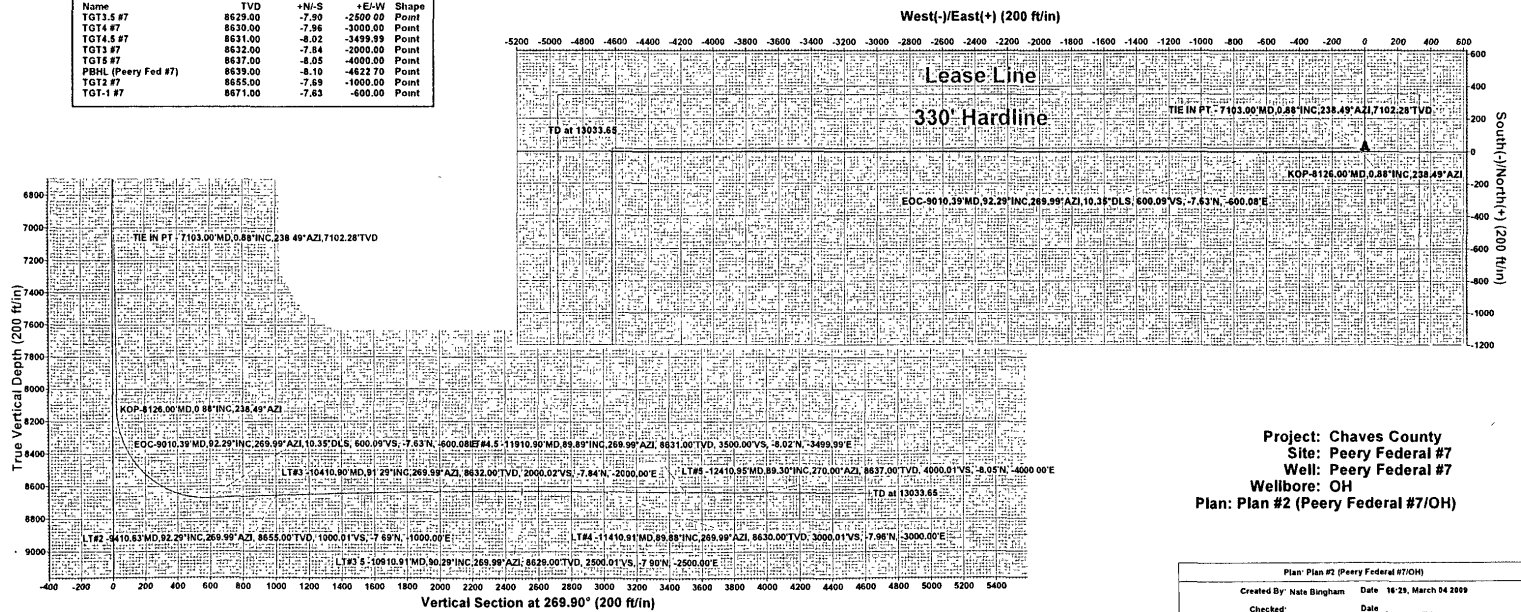


WELL DETAILS Peery Federal #7						
Ground Elevation: 3974.00						
RIG Elevation: WELL @ 3992.00ft (Original Well Elev)						
Rig Name Original Well Elev						
+N-S	+E-W	North	East	Latitude	Longitude	Slot
0 00	0 00	722995.300	620817 600	32° 59' 9.103 N	103° 56' 21.551 W	

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLog	TFace	VSec Target
1	7103.00	0.88	238.49	7102.28	5.25	-11.07	0.00	0.00	11.06
2	8126.00	0.88	238.49	8125.16	-2.96	-24.46	0.00	0.00	24.47
3	9010.39	92.29	269.99	9071.00	-7.63	-600.08	10.35	31.48	600.09
4	9034.60	92.29	269.99	9070.03	-7.63	-624.28	0.00	0.00	624.29
5	9410.63	92.29	269.99	9555.00	-7.69	-1000.00	0.00	0.00	1000.01
6	9460.49	91.29	269.99	9653.44	-7.70	-1049.84	2.00	179.92	1049.85
7	10410.90	91.29	269.99	9632.00	-7.84	-2000.00	0.00	0.00	2000.01
8	10460.84	90.29	269.99	9631.31	-7.85	-2049.84	2.00	179.90	2049.85
9	10910.91	90.29	269.99	9632.00	-7.90	-2500.00	0.00	0.00	2500.01
10	10931.77	89.88	269.99	9628.97	-7.90	-2520.86	2.00	-179.99	2520.87
11	11410.91	89.88	269.99	9630.00	-7.96	-3000.00	0.00	0.00	3000.01
12	11411.34	89.89	269.99	9630.00	-7.96	-3000.44	2.00	0.00	3000.44
13	11910.90	89.89	269.99	9631.00	-8.02	-3499.99	0.00	0.00	3500.00
14	11940.42	89.30	270.00	9631.21	-8.02	-3529.51	2.00	179.66	3529.52
15	12410.95	89.30	270.00	9637.00	-8.05	-4000.00	0.00	0.00	4000.01
16	12437.56	89.83	270.00	9637.20	-8.05	-4026.61	2.00	-0.14	4026.62
17	13033.65	89.83	270.00	9638.00	-8.10	-4622.70	0.00	0.00	4622.71

PROJECT DETAILS: Chaves County
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1886
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

WELLBORE TARGET DETAILS			
Name	TVD	+N-S	+E-W Shape
TGT3.5 #7	8639.00	-7.90	-2500.00 Point
TGT4 #7	8630.00	-7.96	-3000.00 Point
TGT4.5 #7	8631.00	-8.02	-3499.99 Point
TGT3 #7	8632.00	-7.84	-2000.00 Point
TGT5 #7	8637.00	-8.05	-4000.00 Point
PBHL (Peery Fed #7)	8639.00	-8.10	-4622.70 Point
TGT2 #7	8655.00	-7.89	-1000.00 Point
TGT-1 #7	8671.00	-7.83	-600.00 Point



Project: Chaves County
Site: Peery Federal #7
Well: Peery Federal #7
Wellbore: OH
Plan: Plan #2 (Peery Federal #7/OH)

Plan: Plan #2 (Peery Federal #7/OH)	
Created By: Nate Bingham	Date: 16-23, March 04 2009
Checked: _____	Date: _____