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10/26/2012

To Whom It May Concern:

As a representative of Wellpath Energy Services LLC. I certify that to the best of my knowledge all the survey data contained in the packet for the well listed below is accurate and true.

Lime Rock Resources.

Well: Logan "2" C State 4 30-015-40783

Lease: Eddy County

Thank You,

A handwritten signature in black ink, appearing to read 'Adam Jimenez', written in a cursive style.

Adam Jimenez

Senior MWD Engineer.

Wellpath Energy Services LLC.

OK



LIME ROCK RESOURCES

EDDY COUNTY, NM (NAD 27)

SEC. 2 T18S RGE. 27E

LOGAN "2" C STATE 4

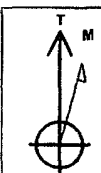
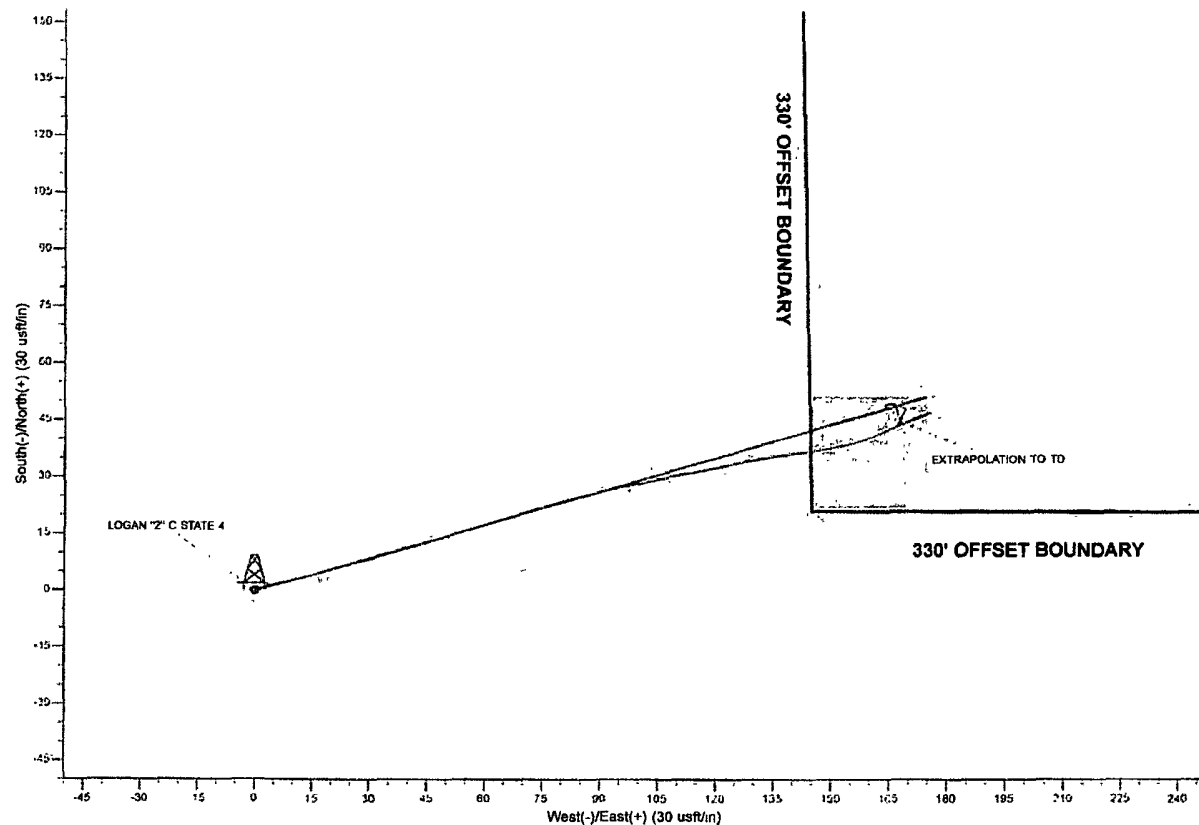
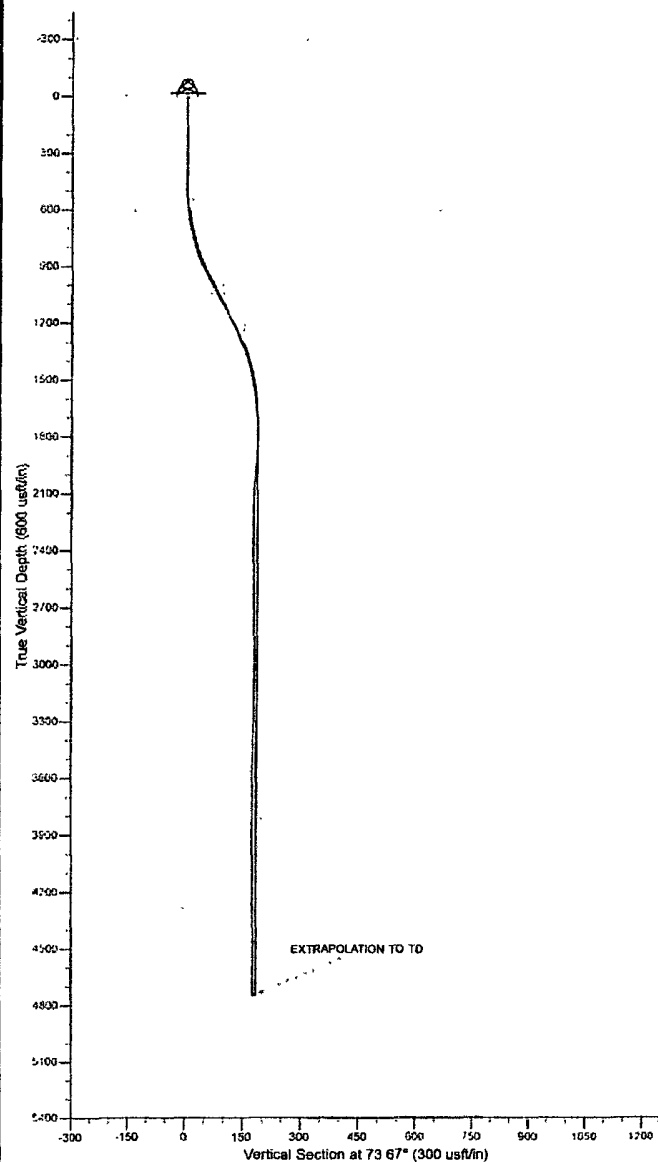
JOB # WPE1221D

26 October, 2012

Survey: FINAL SURVEYS



Project: EDDY COUNTY, NM (NAD 27)
 Site: SEC. 2 T18S RGE. 27E
 Well: LOGAN "2" C STATE 4
 Wellbore: JOB # WPE1221D
 Design: FINAL SURVEYS



Azimuths to True North
 Magnetic North: 7.78°
 Magnetic Field
 Strength: 48743.9 nT
 Dip Angle: 60.55°
 Date: 03/10/2012
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	V Sect	Annotation
4753.0	4770.0	0.80	170.10	44.2	168.3	173.9	EXTRAPOLATION TO TD

Survey Report



Company: LIME ROCK RESOURCES
Project: EDDY COUNTY, NM (NAD 27)
Site: SEC. 2 T18S RGE. 27E
Well: LOGAN "2" C STATE 4
Wellbore: JOB # WPE1221D
Design: FINAL SURVEYS

Local Co-ordinate Reference: Well LOGAN "2" C STATE 4
TVD Reference: KB-EST @ 3602.7usft (Original Well Elev)
MD Reference: KB-EST @ 3602.7usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM_5000_1_7

Project: EDDY COUNTY, NM (NAD 27)
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
Using geodetic scale factor

Site: SEC. 2 T18S RGE 27E
Site Position:
From: Lat/Long
Position Uncertainty: 0.0 usft

Northing: 647,693.35 usft
Easting: 524,851.48 usft
Slot Radius: 13-3/16"

Latitude: 32° 46' 50.067 N
Longitude: 104° 15' 8.904 W
Grid Convergence: 0.04 °

Well: LOGAN "2" C STATE 4
Well Position: +N-S 0.0 usft
Position Uncertainty: 0.0 usft

Wellhead Elevation: usft
Ground Level: 3,586.7 usft

Northing: 647,693.35 usft
Easting: 524,851.48 usft
Latitude: 32° 46' 50.067 N
Longitude: 104° 15' 8.904 W

Wellbore: JOB # WPE1221D
Magnetics: Model Name Sample Date Declination (°) Dip Angle (°) Field Strength (nT)

IGRF2010 03/10/2012 7.78 60.55 48,744

Design: FINAL SURVEYS
Audit Notes:
Version: 1.0
Phase: ACTUAL
Tie On Depth: 0.0

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

0.0 0.0 0.0 73.67

Survey Program: Date 26/10/2012
From (usft): 393.0
To (usft): 4,770.0
Survey (Wellbore): FINAL SURVEYS (JOB # WPE1221D)
Tool Name: MWD
Description: MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	3,602.7	0.0	0.0	0.0	0.00	0.00	0.00
393.0	0.40	286.38	393.0	3,209.7	0.4	-1.3	-1.2	0.10	0.10	0.00
423.0	0.50	280.98	423.0	3,179.7	0.4	-1.5	-1.4	0.36	0.33	-18.00
454.0	0.20	344.28	454.0	3,148.7	0.5	-1.7	-1.5	1.44	-0.97	204.19
485.0	0.60	78.68	485.0	3,117.7	0.6	-1.5	-1.3	2.09	1.29	304.52
516.0	1.90	83.08	516.0	3,086.7	0.7	-0.9	-0.6	4.20	4.19	14.19
547.0	3.50	80.48	547.0	3,055.7	0.9	0.6	0.8	5.18	5.16	-8.39
579.0	4.60	75.18	578.9	3,023.8	1.4	2.8	3.1	3.63	3.44	-16.56
611.0	5.10	76.28	610.8	2,991.9	2.1	5.4	5.8	1.59	1.56	3.44
642.0	5.20	78.68	641.6	2,961.1	2.7	8.1	8.5	0.77	0.32	7.74
674.0	5.90	75.30	673.5	2,929.2	3.4	11.1	11.6	2.41	2.19	-10.56
706.0	6.50	75.50	705.3	2,897.4	4.2	14.5	15.1	1.88	1.87	0.62
738.0	7.10	73.20	737.1	2,865.6	5.3	18.1	18.9	2.06	1.87	-7.19

Survey Report



Company: LIME ROCK RESOURCES
Project: EDDY COUNTY, NM (NAD 27)
Site: SEC. 2 T18S RGE. 27E
Well: LOGAN "2" C STATE 4
Wellbore: JOB # WPE1221D
Design: FINAL SURVEYS

Local Co-ordinate Reference: Well LOGAN "2" C STATE 4
TVD Reference: KB-EST @ 3602.7usft (Original Well Elev)
MD Reference: KB-EST @ 3602.7usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM_5000_1_7

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
769.0	8.10	74.60	767.8	2,834.9	6.4	22.1	23.0	3.28	3.23	4.52
801.0	9.10	74.10	799.4	2,803.3	7.7	26.7	27.7	3.13	3.12	-1.56
833.0	10.30	74.80	831.0	2,771.7	9.1	31.9	33.1	3.77	3.75	2.19
864.0	11.40	73.30	861.4	2,741.3	10.7	37.5	39.0	3.66	3.55	-4.84
896.0	12.20	72.50	892.7	2,710.0	12.7	43.7	45.5	2.55	2.50	-2.50
928.0	13.10	72.30	924.0	2,678.7	14.8	50.4	52.5	2.82	2.81	-0.62
959.0	13.60	72.40	954.1	2,648.6	17.0	57.2	59.7	1.61	1.61	0.32
991.0	13.70	72.50	985.2	2,617.5	19.2	64.4	67.2	0.32	0.31	0.31
1,023.0	14.00	73.50	1,016.3	2,586.4	21.5	71.7	74.9	1.20	0.94	3.12
1,055.0	13.50	73.70	1,047.4	2,555.3	23.6	79.0	82.5	1.57	-1.56	0.62
1,086.0	14.00	76.00	1,077.5	2,525.2	25.5	86.1	89.9	2.39	1.61	7.42
1,118.0	14.30	78.30	1,108.5	2,494.2	27.3	93.8	97.7	1.99	0.94	7.19
1,150.0	13.80	77.80	1,139.6	2,463.1	28.9	101.4	105.4	1.61	-1.56	-1.56
1,181.0	13.10	78.70	1,169.7	2,433.0	30.4	108.4	112.6	2.36	-2.26	2.90
1,213.0	12.50	78.60	1,200.9	2,401.8	31.8	115.4	119.7	1.88	-1.87	-0.31
1,245.0	12.00	77.70	1,232.2	2,370.5	33.2	122.0	126.4	1.67	-1.56	-2.81
1,308.0	10.90	80.80	1,293.9	2,308.8	35.5	134.3	138.9	2.00	-1.75	4.92
1,340.0	10.40	82.20	1,325.4	2,277.3	36.4	140.2	144.7	1.76	-1.56	4.37
1,372.0	9.40	80.30	1,356.9	2,245.8	37.2	145.6	150.2	3.29	-3.12	-5.94
1,403.0	8.80	79.50	1,387.5	2,215.2	38.1	150.4	155.1	1.98	-1.94	-2.58
1,435.0	7.60	74.90	1,419.2	2,183.5	39.1	154.9	159.6	4.27	-3.75	-14.37
1,467.0	6.70	71.30	1,450.9	2,151.8	40.2	158.7	163.6	3.14	-2.81	-11.25
1,498.0	6.20	69.10	1,481.7	2,121.0	41.4	162.0	167.1	1.80	-1.61	-7.10
1,530.0	5.60	66.20	1,513.6	2,089.1	42.6	165.0	170.3	2.09	-1.87	-9.06
1,562.0	4.80	62.80	1,545.4	2,057.3	43.9	167.6	173.2	2.68	-2.50	-10.62
1,593.0	4.00	65.90	1,576.4	2,026.3	44.9	169.8	175.5	2.69	-2.58	10.00
1,625.0	2.80	64.80	1,608.3	1,994.4	45.7	171.5	177.4	3.76	-3.75	-3.44
1,689.0	1.50	68.60	1,672.2	1,930.5	46.7	173.7	179.8	2.04	-2.03	5.94
1,752.0	1.50	73.90	1,735.2	1,867.5	47.2	175.2	181.4	0.22	0.00	8.41
1,784.0	1.10	83.00	1,767.2	1,835.5	47.4	176.0	182.2	1.40	-1.25	28.44
1,815.0	0.30	63.30	1,798.2	1,804.5	47.4	176.3	182.5	2.66	-2.58	-63.55
1,847.0	0.80	237.40	1,830.2	1,772.5	47.3	176.2	182.4	3.43	1.56	544.06
1,879.0	1.70	252.20	1,862.2	1,740.5	47.1	175.6	181.7	2.97	2.81	46.25
1,910.0	1.80	246.10	1,893.2	1,709.5	46.7	174.7	180.8	0.68	0.32	-19.68
1,942.0	1.80	242.20	1,925.2	1,677.5	46.3	173.8	179.8	0.38	0.00	-12.19
1,974.0	1.80	244.60	1,957.2	1,645.5	45.9	172.9	178.8	0.24	0.00	7.50
2,006.0	1.70	249.90	1,989.1	1,613.6	45.5	172.0	177.8	0.59	-0.31	16.56
2,037.0	1.80	252.00	2,020.1	1,582.6	45.2	171.1	176.9	0.38	0.32	6.77
2,069.0	1.70	248.80	2,052.1	1,550.6	44.8	170.2	175.9	0.44	-0.31	-10.00
2,100.0	1.80	249.00	2,083.1	1,519.6	44.5	169.3	175.0	0.32	0.32	0.65
2,132.0	1.10	253.70	2,115.1	1,487.6	44.2	168.5	174.2	2.22	-2.19	14.69
2,195.0	0.40	272.00	2,178.1	1,424.6	44.1	167.7	173.3	1.16	-1.11	29.05
2,259.0	0.20	342.00	2,242.1	1,360.6	44.2	167.5	173.1	0.60	-0.31	109.37
2,322.0	0.20	5.20	2,305.1	1,297.6	44.4	167.4	173.2	0.13	0.00	36.83
2,385.0	0.00	0.00	2,368.1	1,234.6	44.5	167.4	173.2	0.32	-0.32	0.00
2,481.0	0.20	54.50	2,464.1	1,138.6	44.6	167.6	173.4	0.21	0.21	0.00
2,575.0	0.60	33.30	2,558.1	1,044.6	45.1	168.0	173.9	0.45	0.43	-22.55
2,670.0	0.50	13.10	2,653.1	949.6	45.9	168.4	174.5	0.23	-0.11	-21.26
2,765.0	0.50	32.00	2,748.1	854.6	46.7	168.7	175.0	0.17	0.00	19.89
2,861.0	0.80	24.50	2,844.1	758.6	47.7	169.2	175.7	0.32	0.31	-7.81
2,956.0	0.30	3.30	2,939.1	663.6	48.5	169.5	176.3	0.56	-0.53	-22.32
3,051.0	0.40	283.70	3,034.1	568.6	48.8	169.1	176.1	0.48	0.11	-83.79
3,146.0	0.30	257.60	3,129.1	473.6	48.9	168.6	175.5	0.20	-0.11	-27.47

Survey Report



Company: LIME ROCK RESOURCES
Project: EDDY COUNTY, NM (NAD 27)
Site: SEC. 2 T18S RGE. 27E
Well: LOGAN "2" C STATE 4
Wellbore: JOB # WPE1221D
Design: FINAL SURVEYS

Local Co-ordinate Reference: Well LOGAN "2" C STATE 4
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MD Reference: KB-EST @ 3602.7usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM_5000_1_7

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,241.0	0.50	286.70	3,224.1	378.6	48.9	167.9	174.9	0.29	0.21	30.63
3,336.0	0.20	282.80	3,319.1	283.6	49.1	167.4	174.4	0.32	-0.32	-4.11
3,431.0	0.20	303.10	3,414.1	188.6	49.2	167.1	174.2	0.07	0.00	21.37
3,526.0	0.30	321.70	3,509.1	93.6	49.5	166.8	174.0	0.13	0.11	19.58
3,621.0	0.70	198.50	3,604.1	-1.4	49.1	166.5	173.6	0.95	0.42	-129.68
3,716.0	0.40	255.30	3,699.0	-96.3	48.5	165.9	172.9	0.62	-0.32	59.79
3,811.0	0.50	237.70	3,794.0	-191.3	48.2	165.3	172.2	0.18	0.11	-18.53
3,906.0	0.40	325.70	3,889.0	-286.3	48.2	164.7	171.7	0.66	-0.11	92.63
4,001.0	0.30	324.60	3,984.0	-381.3	48.7	164.4	171.5	0.11	-0.11	-1.16
4,096.0	0.40	12.80	4,079.0	-476.3	49.3	164.3	171.6	0.32	0.11	50.74
4,191.0	0.70	82.70	4,174.0	-571.3	49.6	165.0	172.3	0.71	0.32	73.58
4,286.0	0.50	126.60	4,269.0	-666.3	49.5	165.9	173.1	0.51	-0.21	46.21
4,366.0	0.40	66.70	4,349.0	-746.3	49.4	166.4	173.6	0.57	-0.12	-74.87
4,461.0	0.90	166.80	4,444.0	-841.3	48.8	166.9	173.9	1.10	0.53	105.37
4,556.0	1.10	160.70	4,539.0	-936.3	47.2	167.4	173.9	0.24	0.21	-6.42
4,652.0	0.70	158.60	4,635.0	-1,032.3	45.8	167.9	174.0	0.42	-0.42	-2.19
4,726.0	0.80	170.10	4,709.0	-1,106.3	44.9	168.2	174.0	0.24	0.14	15.54
EXTRAPOLATION TO TD										
4,770.0	0.80	170.10	4,753.0	-1,150.3	44.2	168.3	173.9	0.00	0.00	0.00

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- Shape									
BHL - LOGAN "2" C S	0.00	0.00	4,750.0	51.3	175.1	647,744.79	525,026.55	32° 46' 50.575 N	104° 15' 6.853 W
- survey misses target center by 9.8usft at 4766.9usft MD (4749.9 TVD, 44.3 N, 168.2 E)									
- Rectangle (sides W30.0 H30.0 D0.0)									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates:		Comment
+N/-S (usft)	+E/-W (usft)			
4,770.0	4,753.0	44.2	168.3	EXTRAPOLATION TO TD

Checked By: Alan Dineen Approved By: [Signature] Date: 10/26/2012