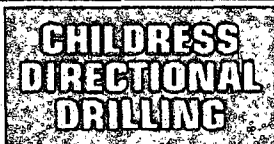


API #: 30-015-41890

Customer: Lime Rock Resources	Rig: UDI #33	SHL X:
Lease, Well No.: Williams A Federal #12	Job No.: CD-14014	SHL Y:
County or Parrish: Eddy County	Location or Area: New Mexico	Mag. Decl.:



Calculated f/ Targets

KBTVD (@ 0° VS)

Dip Angle (+Dn/-Up)

Sensor

TVD

N-S

E-W

Tie-In Survey Co.:						Minimum Curvature Calculations			Rates / 100' M.D.		Dist f/ Target Line	
Surveying Company: Childress Directional						Proposed Azimuth: 270.58°			Build or	R or -L	Course	Above or
Survey No.	M.D.	INCL.	AZML	TVD	N / -S	E / -W	V. SECT.	DLS / 100'	-Drop	-Turn	Length	-Below
Tie-In	0.00	0.00	0.00	0.00'	0.00'	0.00'	0.00'	0.00'				-Left

1	505.00	0.40	287.70	505.00'	0.54'	-1.68'	1.68'	0.08°				
2	599.00	5.40	292.50	598.85'	2.33'	-6.08'	6.10'	5.32°				
3	695.00	8.40	281.70	694.14'	5.48'	-17.12'	17.18'	3.39°				
4	790.00	11.90	273.60	787.65'	7.50'	-33.70'	33.77'	3.97°				
5	887.00	15.60	271.20	881.85'	8.41'	-56.73'	56.81'	3.86°				
6	984.00	18.90	270.30	974.48'	8.76'	-85.49'	85.57'	3.41°				
7	1080.00	23.70	270.80	1,063.89'	9.11'	-120.35'	120.43'	5.00°				
8	1176.00	28.00	269.20	1,150.27'	9.07'	-162.19'	162.27'	4.54°				
9	1272.00	28.40	269.90	1,234.87'	8.71'	-207.55'	207.63'	0.54°				
10	1368.00	27.10	269.40	1,319.83'	8.44'	-252.25'	252.32'	1.38°				
11	1464.00	27.00	270.70	1,405.33'	8.48'	-295.91'	295.98'	0.62°				
12	1561.00	28.10	269.90	1,491.33'	8.71'	-340.77'	340.84'	1.20°				
13	1656.00	26.80	269.70	1,575.63'	8.56'	-384.56'	384.63'	1.37°				
14	1753.00	23.40	268.80	1,663.46'	8.04'	-425.70'	425.76'	3.53°				
15	1849.00	19.80	265.10	1,752.71'	6.25'	-460.97'	461.01'	4.01°				
16	1946.00	18.20	268.40	1,844.42'	4.43'	-492.48'	492.50'	1.99°				
17	2049.00	14.00	275.40	1,943.37'	5.15'	-520.98'	521.01'	4.49°				
18	2145.00	9.40	259.60	2,037.37'	4.83'	-540.27'	540.29'	5.80°				
19	2241.00	5.30	274.10	2,132.57'	3.73'	-552.41'	552.42'	4.65°				
20	2338.00	1.30	234.90	2,229.40'	3.41'	-557.78'	557.78'	4.51°				
21	2434.00	0.70	215.50	2,325.38'	2.31'	-559.01'	559.00'	0.71°				
22	2531.00	1.00	227.10	2,422.37'	1.25'	-559.97'	559.96'	0.36°				
23	2627.00	0.80	234.60	2,518.36'	0.29'	-561.13'	561.11'	0.24°				
24	2723.00	0.80	232.40	2,614.35'	-0.50'	-562.21'	562.18'	0.03°				
25	2820.00	0.30	79.10	2,711.35'	-0.87'	-562.50'	562.46'	1.11°				
26	2916.00	0.40	24.20	2,807.35'	-0.51'	-562.11'	562.08'	0.35°				
27	3012.00	0.40	75.50	2,903.35'	-0.13'	-561.65'	561.62'	0.36°				
28	3108.00	0.20	28.70	2,999.34'	0.11'	-561.25'	561.22'	0.31°				
29	3204.00	0.30	42.30	3,095.34'	0.44'	-561.00'	560.97'	0.12°				
30	3302.00	0.40	77.60	3,193.34'	0.70'	-560.49'	560.47'	0.24°				
31	3398.00	0.20	131.50	3,289.34'	0.66'	-560.04'	560.02'	0.34°				
32	3493.00	0.30	106.60	3,384.34'	0.48'	-559.68'	559.65'	0.15°				
33	3589.00	0.40	69.50	3,480.34'	0.53'	-559.12'	559.10'	0.25°				
34	3655.00	0.40	71.60	3,546.34'	0.68'	-558.69'	558.66'	0.02°				
PTB	3700.00	0.40	71.60	3,591.33'	0.78'	-558.39'	558.37'	0.00°				

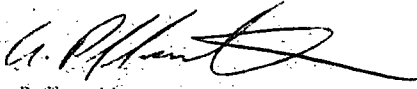
RECEIVED

MAR 07 2014

NMOCD ARTESIA

The above survey data is true and correct, complete and within the limitations of the tool as set forth by Childress Directional Drilling, LLC; that I am authorized and qualified to make this report; that this survey was conducted at the request of Lime Rock Resources; that I reviewed these MWD Surveys and find they conform to the principles and procedures as set forth by Childress Directional Drilling.

Regards,

A handwritten signature in black ink, appearing to read 'A. Poffenroth', with a stylized flourish at the end.

Art Poffenroth
MWD Manager
Childress Directional Drilling, LLC