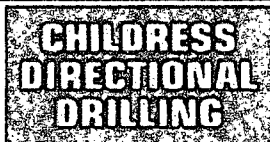


API # 30-015-41983

Customer: Lime Rock Resources	Rig: UDI #33	SHL X:
Lease, Well No.: Williams A Federal #11	Job No.: CD-14017	SHL Y:
County or Parrish: Eddy County, N.M.	Location or Area: Red Lake So. Artesia, N.M.	Mag Decl.: 7.58



Calculated f/ Targets

KBTVD (@ 0° VS)

Dip Angle (+Dn/-Up)

Sensor

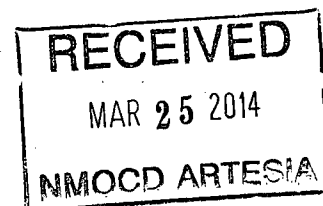
TVD

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: 188.26°	Build or R or -L Course Above or Right or -Drop -Turn Length -Below -Left	
Survey No. Tie-In	M.D. INCL. AZM. TVD N / -S E / -W V. SECT. DLS / 100'		
	0.00 0.00 0.00 0.00' 0.00' 0.00' 0.00' 0.00' 0.00°		

1.	471.00	0.70	249.30	470.99'	-1.02'	-2.69'	1.39'	0.15°
2.	561.00	4.30	223.80	560.89'	-3.65'	-5.54'	4.41'	4.09°
3.	657.00	9.40	230.60	656.17'	-11.23'	-14.10'	13.14'	5.37°
4.	753.00	14.00	223.80	750.16'	-24.59'	-28.20'	28.39'	4.99°
5.	850.00	17.00	212.70	843.64'	-45.00'	-43.99'	50.85'	4.34°
6.	947.00	16.60	204.30	936.51'	-69.57'	-57.35'	77.08'	2.53°
7.	1044.00	17.40	185.10	1,029.35'	-96.66'	-64.35'	104.90'	5.82°
8.	1140.00	16.20	184.20	1,121.25'	-124.32'	-66.61'	132.60'	1.28°
9.	1235.00	14.10	177.20	1,212.95'	-149.10'	-67.01'	157.18'	2.93°
10.	1331.00	13.10	170.50	1,306.26'	-171.51'	-64.65'	179.02'	1.94°
11.	1428.00	12.00	168.60	1,400.94'	-192.23'	-60.84'	198.98'	1.21°
12.	1524.00	12.70	182.30	1,494.74'	-212.57'	-59.29'	218.88'	3.13°
13.	1621.00	11.40	184.40	1,589.60'	-232.78'	-60.45'	239.05'	1.41°
14.	1716.00	10.70	177.00	1,682.85'	-250.95'	-60.71'	257.07'	1.66°
15.	1812.00	9.60	164.60	1,777.35'	-267.57'	-58.12'	273.14'	2.54°
16.	1908.00	7.60	159.50	1,872.27'	-281.23'	-53.77'	286.04'	2.23°
17.	2004.00	2.60	148.00	1,967.86'	-289.03'	-50.39'	293.27'	5.29°
18.	2106.00	0.20	185.80	2,069.83'	-291.17'	-49.18'	295.22'	2.40°
19.	2201.00	0.50	199.50	2,164.82'	-291.73'	-49.34'	295.79'	0.33°
20.	2296.00	0.40	200.10	2,259.82'	-292.43'	-49.59'	296.52'	0.11°
21.	2392.00	0.40	211.80	2,355.82'	-293.03'	-49.88'	297.15'	0.08°
22.	2488.00	0.40	231.00	2,451.82'	-293.52'	-50.32'	297.71'	0.14°
23.	2583.00	0.50	211.30	2,546.81'	-294.09'	-50.79'	298.33'	0.19°
24.	2678.00	0.60	219.60	2,641.81'	-294.82'	-51.32'	299.14'	0.13°
25.	2773.00	1.10	160.70	2,736.80'	-296.07'	-51.34'	300.37'	0.99°
26.	2870.00	1.10	158.60	2,833.78'	-297.81'	-50.69'	302.01'	0.04°
27.	2965.00	1.20	159.30	2,928.76'	-299.59'	-50.01'	303.67'	0.11°
28.	3061.00	1.20	165.80	3,024.74'	-301.51'	-49.40'	305.48'	0.14°
29.	3157.00	1.40	166.50	3,120.72'	-303.62'	-48.88'	307.50'	0.21°
30.	3254.00	0.80	147.20	3,217.70'	-305.34'	-48.24'	309.11'	0.72°
31.	3350.00	0.80	123.10	3,313.69'	-306.27'	-47.32'	309.89'	0.35°
32.	3446.00	0.80	124.80	3,409.68'	-307.02'	-46.20'	310.48'	0.02°
33.	3542.00	0.70	129.00	3,505.67'	-307.77'	-45.20'	311.07'	0.12°
34.	3651.00	0.80	133.80	3,614.66'	-308.72'	-44.13'	311.86'	0.11°
PTB	3696.00	0.80	133.80	3,659.66'	-309.15'	-43.68'	312.22'	0.00°



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
