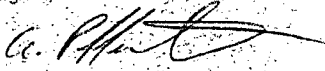


API #: 30-015-42037

		Customer: Lime Rock Resources		Rig: UDL #33		Latitude: 32° 46' 14.229 N				
Well Name: Windfohr 4 O Federal #12		Job No: /		CD-14178		Longitude: 104° 16' 52.747 W				
County/Parish: Eddy County		Location or Area: Artesia, New Mexico		Mag.Decl.: 7.52°						
Tie-In Survey Co.: VES		Minimum Curvature Calculations				Rates / 100' M.D.				
Surveying Company: Childress Directional		Proposed Azimuth: 240.99°				Build or	R or -L			
Survey No.	M.D.	INCL	AZM	TVD	N / -S	E / -W	V. SECT.	DLS / 100'	-Drop	Turn
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
1.	376.00	0.80	159.00	375.99'	-2.45'	0.94'	0.37'	0.21°		
2.	467.00	3.70	225.10	466.92'	-5.12'	-0.91'	3.28'	3.80°		
3.	557.00	7.70	241.20	556.46'	-10.07'	-8.26'	12.11'	4.74°		
4.	653.00	10.50	237.90	651.24'	-17.82'	-21.30'	27.27'	2.97°		
5.	749.00	9.70	237.80	745.75'	-26.78'	-35.56'	44.08'	0.83°		
6.	845.00	12.30	242.50	839.98'	-35.81'	-51.48'	62.38'	2.86°		
7.	941.00	11.10	240.80	933.99'	-45.04'	-68.61'	81.85'	1.30°		
8.	1038.00	10.60	241.00	1,029.25'	-53.92'	-84.57'	100.11'	0.52°		
9.	1134.00	13.40	248.20	1,123.15'	-62.34'	-102.62'	119.98'	3.30°		
10.	1230.00	13.20	245.90	1,216.58'	-70.94'	-122.96'	141.93'	0.59°		
11.	1294.00	10.30	240.20	1,279.23'	-76.77'	-134.59'	154.94'	4.88°		
12.	1358.00	6.70	237.80	1,342.52'	-81.61'	-142.72'	164.39'	5.65°		
13.	1422.00	4.30	237.50	1,406.22'	-84.89'	-147.90'	170.52'	3.75°		
14.	1485.00	2.00	245.10	1,469.12'	-86.62'	-150.89'	173.97'	3.70°		
15.	1550.00	0.50	341.80	1,534.10'	-88.83'	-152.01'	175.05'	3.26°		
16.	1614.00	1.50	43.70	1,598.10'	-85.96'	-151.52'	174.20'	2.09°		
17.	1678.00	1.70	39.70	1,662.07'	-84.62'	-150.34'	172.51'	0.36°		
18.	1774.00	1.50	39.40	1,758.03'	-82.55'	-148.63'	170.02'	0.21°		
19.	1869.00	1.40	33.70	1,853.00'	-80.63'	-147.18'	167.83'	0.18°		
20.	1965.00	1.50	43.20	1,948.97'	-78.74'	-145.68'	165.59'	0.27°		
21.	2060.00	1.50	44.10	2,043.94'	-76.94'	-143.97'	163.22'	0.02°		
22.	2158.00	1.50	35.70	2,141.91'	-74.97'	-142.33'	160.83'	0.22°		
23.	2254.00	1.60	89.50	2,237.88'	-73.94'	-140.25'	158.52'	1.46°		
24.	2350.00	1.70	80.90	2,333.84'	-73.70'	-137.51'	156.00'	0.28°		
25.	2446.00	1.60	77.10	2,429.80'	-73.18'	-134.79'	153.37'	0.15°		
26.	2542.00	0.60	151.60	2,525.78'	-73.32'	-133.25'	152.09'	1.62°		
27.	2639.00	0.70	132.90	2,622.77'	-74.17'	-132.57'	151.91'	0.24°		
28.	2735.00	0.40	113.30	2,718.77'	-74.71'	-131.84'	151.52'	0.36°		
29.	2831.00	0.40	124.90	2,814.77'	-75.03'	-131.25'	151.17'	0.08°		
30.	2928.00	0.40	115.90	2,909.77'	-75.36'	-130.68'	150.84'	0.07°		
31.	3029.00	0.20	140.30	3,012.76'	-75.66'	-130.24'	150.60'	0.23°		
32.	3126.00	0.20	146.40	3,109.76'	-75.93'	-130.04'	150.55'	0.02°		
33.	3221.00	0.20	179.70	3,204.76'	-76.23'	-129.95'	150.62'	0.12°		
34.	3317.00	0.30	104.50	3,300.76'	-76.47'	-129.71'	150.52'	0.33°		
35.	3412.00	1.30	218.80	3,395.75'	-77.37'	-130.14'	151.33'	1.53°		
36.	3508.00	1.40	220.00	3,491.73'	-79.11'	-131.58'	153.44'	0.11°		
37.	3604.00	1.50	230.70	3,587.70'	-80.81'	-133.31'	155.77'	0.30°		
38.	3700.00	0.60	275.20	3,683.68'	-81.56'	-134.78'	157.42'	1.20°		
39.	3796.00	0.70	273.00	3,779.68'	-81.48'	-135.86'	158.33'	0.11°		
40.	3892.00	0.00	271.20	3,875.67'	-81.43'	-137.20'	159.48'	0.21°		
41.	3988.00	0.80	278.80	3,971.66'	-81.32'	-138.62'	160.66'	0.16°		
42.	4084.00	0.20	210.00	4,067.65'	-81.36'	-139.37'	161.34'	0.78°		
43.	4180.00	1.10	30.10	4,163.65'	-80.71'	-138.99'	160.69'	1.36°		
44.	4276.00	0.70	22.10	4,259.63'	-79.37'	-138.31'	159.44'	0.44°		
45.	4372.00	1.10	25.20	4,355.62'	-77.99'	-137.69'	158.24'	0.42°		
46.	4468.00	0.90	27.90	4,451.61'	-76.49'	-136.95'	156.86'	0.21°		
47.	4564.00	0.90	18.10	4,547.60'	-75.11'	-136.36'	155.87'	0.16°		
48.	4669.00	1.10	357.90	4,652.58'	-73.31'	-136.14'	154.61'	0.36°		
PTB	4716.00	1.10	357.90	4,699.57'	-72.41'	-136.17'	154.21'	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,



Art Pottenroth
MWD Manager
Childress Directional Drilling, LLC