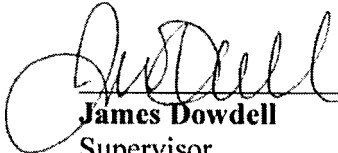


30-015-43754

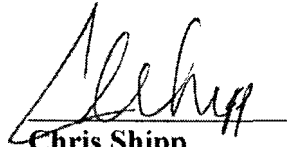


State of New Mexico
Eddy County

I, **James Dowdell**, certify that; I am employed by Accel Directional; that I did on the day(s) of **02/20/18** through **02/27/18** conduct or supervise the taking of MWD survey(s) from a depth of **427'** feet to a depth of **4782'** feet; that the data is true, correct, complete and within the limitations of the tool set forth by Accel Directional; that I am authorized and qualified to make this report; that this report was conducted at the request of **Limerock Resources** for the **Falcon 3A Federal #40**, in **Eddy County, New Mexico**; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Accel Directional.



James Dowdell
Supervisor



Chris Shipp
President



SURVEY CALCULATION PROGRAM

Minimum Curvature

File:

OPERATOR: Lime Rock Resources										Target Information				VS Referenced to Offset from Surface			
WELL: Falcon 3A Federal #40										TARGET KBTVD:		5230.00 <th colspan="2">NORTH/SOUTH:</th> <td colspan="2">0.00</td>		NORTH/SOUTH:		0.00	
LOCATION: Eddy County, New Mexico										TARGET INCL:		0.00		EAST/WEST:		0.00	
RIG: United 33										TARGET AZM:		334.85 <th colspan="4">(Enter 0° N and 0° E for Surface)</th>		(Enter 0° N and 0° E for Surface)			
JOB NUMBER: TX-18-013																	
SURVEY COMPANY					DIRECTIONAL COMPANY					PROPOSED DIRECTION:		334.85 <th colspan="2">Dec / Total Corr.(+/-):</th> <td colspan="2">7.20</td>		Dec / Total Corr.(+/-):		7.20	
Accel Directional					Accel Directional					COMMENTS:				<td colspan="2"></td>			
Directional Drillers					COORDINATORS												
					Chris Shipp												
Lime Rock Resources					Falcon 3A Federal #40									Target Calculations			
SVY	MD	INC	TRUE AZM	TEMP °F	API Gamma	Course Length	TVD	N-S	E-W	Surface Vert Sect	CLOSURE DIST	DIR	DLS/ 100	BUR/ 100'	TVD AT 0' V. SEC.	ABOVE (+) BELOW (-)	RIGHT(+) LEFT(-)
Tie-In	0	0.0	0.0			N/A	0.00	0.00	0.00		0.00	0.00	N/A	N/A			
1	427	0.8	318.7			427	426.99	2.24	-1.97	2.86	2.98	318.70	0.19	0.19	#DIV/0!	#DIV/0!	-0.83
2	459	0.8	327.6			32	458.98	2.60	-2.23	3.30	3.43	319.28	0.39	0.00	#DIV/0!	#DIV/0!	-0.92
3	523	2.6	328.9			64	522.95	4.22	-3.22	5.19	5.31	322.60	2.81	2.81	#DIV/0!	#DIV/0!	-1.13
4	586	5.6	329.0			63	585.78	8.08	-5.55	9.67	9.80	325.52	4.76	4.76	#DIV/0!	#DIV/0!	-1.59
5	683	7.4	335.5			97	682.16	17.82	-10.57	20.62	20.72	329.31	2.00	1.86	#DIV/0!	#DIV/0!	-2.00
6	778	7.4	334.9			95	776.37	28.92	-15.71	32.86	32.91	331.50	0.08	0.00	#DIV/0!	#DIV/0!	-1.92
7	875	6.9	332.7			97	872.61	39.76	-21.03	44.93	44.98	332.13	0.59	-0.52	#DIV/0!	#DIV/0!	-2.14
8	970	6.7	332.2			95	966.94	49.73	-26.23	56.16	56.23	332.19	0.22	-0.21	#DIV/0!	#DIV/0!	-2.61
9	1,067	6.0	330.1			97	1063.35	59.13	-31.40	66.87	66.95	332.03	0.76	-0.72	#DIV/0!	#DIV/0!	-3.29
10	1,162	6.6	331.3			95	1157.77	68.23	-36.49	77.27	77.37	331.86	0.65	0.63	#DIV/0!	#DIV/0!	-4.04
11	1,226	6.9	329.7			64	1221.33	74.77	-40.20	84.77	84.89	331.74	0.55	0.47	#DIV/0!	#DIV/0!	-4.61
12	1,322	6.3	328.6			96	1316.69	84.25	-45.85	95.75	95.92	331.44	0.64	-0.63	#DIV/0!	#DIV/0!	-5.70
13	1,387	6.3	341.2			65	1381.30	90.67	-48.86	102.84	102.99	331.68	2.12	0.00	#DIV/0!	#DIV/0!	-5.70
14	1,483	7.8	350.1			96	1476.58	102.07	-51.68	114.36	114.41	333.15	1.93	1.56	#DIV/0!	#DIV/0!	-3.40
15	1,579	7.6	333.8			96	1571.72	114.19	-55.60	126.99	127.00	334.04	2.28	-0.21	#DIV/0!	#DIV/0!	-1.80
16	1,674	7.6	333.9			95	1665.89	125.46	-61.14	139.55	139.57	334.02	0.01	0.00	#DIV/0!	#DIV/0!	-2.02
17	1,770	7.5	332.7			96	1761.06	136.73	-66.81	152.16	152.18	333.96	0.19	-0.10	#DIV/0!	#DIV/0!	-2.36
18	1,866	7.7	333.5			96	1856.21	148.06	-72.55	164.85	164.87	333.89	0.24	0.21	#DIV/0!	#DIV/0!	-2.75
19	1,962	7.8	334.2			96	1951.34	159.68	-78.25	177.80	177.82	333.89	0.14	0.10	#DIV/0!	#DIV/0!	-2.97
20	2,059	7.7	334.2			97	2047.45	171.45	-83.95	190.88	190.90	333.91	0.10	-0.10	#DIV/0!	#DIV/0!	-3.12
21	2,154	7.8	335.5			95	2141.58	183.05	-89.39	203.69	203.71	333.97	0.21	0.11	#DIV/0!	#DIV/0!	-3.12
22	2,250	6.8	336.9			96	2236.80	194.20	-94.32	215.88	215.90	334.10	1.06	-1.04	#DIV/0!	#DIV/0!	-2.84
23	2,314	5.6	337.0			64	2300.43	200.56	-97.03	222.79	222.80	334.18	1.88	-1.88	#DIV/0!	#DIV/0!	-2.59
24	2,379	4.0	339.0			65	2365.20	205.60	-99.08	228.22	228.23	334.27	2.47	-2.46	#DIV/0!	#DIV/0!	-2.31
25	2,442	2.7	350.7			63	2428.09	209.12	-100.11	231.84	231.84	334.42	2.32	-2.06	#DIV/0!	#DIV/0!	-1.74
26	2,507	0.7	60.7			65	2493.06	210.82	-100.01	233.34	233.34	334.62	3.92	-3.08	#DIV/0!	#DIV/0!	-0.93
27	2,602	0.7	38.8			95	2588.06	211.56	-99.14	233.63	233.63	334.89	0.28	0.00	#DIV/0!	#DIV/0!	0.17
28	2,698	0.8	45.3			96	2684.05	212.49	-98.29	234.12	234.12	335.18	0.14	0.10	#DIV/0!	#DIV/0!	1.33
29	2,769	0.7	52.4			71	2755.04	213.10	-97.60	234.38	234.39	335.39	0.19	-0.14	#DIV/0!	#DIV/0!	2.22
30	2,865	0.8	54.0			96	2851.03	213.85	-96.59	234.63	234.65	335.69	0.11	0.10	#DIV/0!	#DIV/0!	3.45
31	2,961	0.7	60.6			96	2947.03	214.53	-95.54	234.80	234.85	335.99	0.14	-0.10	#DIV/0!	#DIV/0!	4.69
32	3,056	0.7	65.0			95	3042.02	215.06	-94.51	234.84	234.91	336.28	0.06	0.00	#DIV/0!	#DIV/0!	5.85
33	3,152	0.8	68.0			96	3138.01	215.56	-93.35	234.80	234.91	336.58	0.11	0.10	#DIV/0!	#DIV/0!	7.11
34	3,248	1.0	85.0			96	3234.00	215.89	-91.90	234.48	234.63	336.94	0.35	0.21	#DIV/0!	#DIV/0!	8.56
35	3,343	0.7	141.8			95	3328.99	215.50	-90.71	233.63	233.82	337.17	0.90	-0.32	#DIV/0!	#DIV/0!	9.47
36	3,439	0.9	168.4			96	3424.98	214.30	-90.20	232.32	232.51	337.17	0.43	0.21	#DIV/0!	#DIV/0!	9.43
37	3,535	0.8	163.9			96	3520.97	212.92	-89.86	230.93	231.11	337.12	0.13	-0.10	#DIV/0!	#DIV/0!	9.15
38	3,599	0.9	159.8			64	3584.96	212.02	-89.56	229.98	230.16	337.10	0.18	0.16	#DIV/0!	#DIV/0!	9.03
39	3,663	1.0	233.9			64	3648.96	211.22	-89.84	229.38	229.53	336.96	1.79	0.16	#DIV/0!	#DIV/0!	8.44
40	3,759	1.0	243.5			96	3744.94	210.35	-91.27	229.20	229.30	336.54	0.17	0.00	#DIV/0!	#DIV/0!	6.78
41	3,823	0.9	245.4			64	3808.93	209.89	-92.23	229.19	229.26	336.28	0.16	-0.16	#DIV/0!	#DIV/0!	5.72
42	3,919	1.0	246.9			96	3904.92	209.25	-93.68	229.23	229.26	335.88	0.11	0.10	#DIV/0!	#DIV/0!	4.13
43	4,014	1.0	250.3			95	3999.90	208.65	-95.23	229.34	229.35	335.47	0.06	0.00	#DIV/0!	#DIV/0!	2.47
44	4,111	0.9	259.7			97	4096.89	208.22	-96.77	229.61	229.61	335.07	0.19	-0.10	#DIV/0!	#DIV/0!	0.90
45	4,206	1.1	275.4			95	4191.88	208.18	-98.41	230.27	230.27	334.70	0.36	0.21	#DIV/0!	#DIV/0!	-0.61
46	4,302	1.0	292.1			96	4287.86	208.58	-100.11	231.35	231.36	334.36	0.33	-0.10	#DIV/0!	#DIV/0!	-1.97
47	4,398	0.5	1.7			96	4383.85	209.31	-100.87	232.34	232.35	334.27	0.99	-0.52	#DIV/0!	#DIV/0!	-2.35
48	4,494	0.6	7.3			96	4479.85	210.23	-100.79	233.14	233.14	334.38	0.12	0.10	#DIV/0!	#DIV/0!	-1.89
49	4,590	0.4	22.9			96	4575.85	211.04	-100.60	233.78	233.79	334.51	0.25	-0.21	#DIV/0!	#DIV/0!	-1.37
50	4,686	0.4	35.2			96	4671.84	211.62	-100.28	234.17	234.18	334.65	0.09	0.00	#DIV/0!	#DIV/0!	-0.83
51	4,782	0.4	18.9			96	4767.84	212.21	-99.97	234.58	234.58	334.77	0.12	0.00	#DIV/0!	#DIV/0!	-0.31
PTB	4,883	0.4	18.9			101	4868.84	212.88	-99.75	235.09	235.09	334.89	0.00	0.00	#DIV/0!	#DIV/0!	0.18