

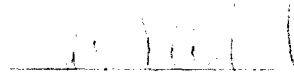


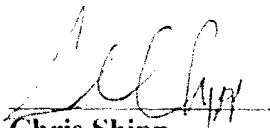
NM OIL CONSERVATION
ARTESIA DISTRICT
FEB 15 2018

State of New Mexico
Eddy County

30-015-44495 RECEIVED

I, **James Dowdell**, certify that: I am employed by Accel Directional; that I did on the day(s) of **01/06/18** through **01/13/18** conduct or supervise the taking of MWD survey(s) from a depth of **184'** feet to a depth of **4176'** 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 **Terry 14G No. 7**, 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



Enclosed, please find the original and one copy of the survey performed on the referenced well by Accel Directional, (Operator No. 301287) supervised by James Dowdell. Other information required by your office is as follows:

Name & Title of Supervisor	Drainhole Number	Surveyed Depths	Dates Performed	Type of Survey
James Dowdell		184' - 4176'	01/06/18 - 01/13/18	MWD

If any other information is required, please contact the undersigned.

A handwritten signature in black ink, appearing to read "James Dowdell", written over a horizontal line.

James Dowdell
Supervisor
jdowdell@acceldirectional.com
832-401-3400

A handwritten signature in black ink, appearing to read "Chris Shipp", written over a horizontal line.

Chris Shipp
President
Cshipp@acceldirectional.com
936-900-6204



SURVEY CALCULATION PROGRAM

Minimum Curvature

File:

OPERATOR: Lime Rock Resources										Target Information					VS Referenced to Offset from Surface																								
WELL: Terry 14G No. 7										TARGET KBTVD:		4300.00			NORTH/SOUTH:		0.00																						
LOCATION: Eddy County, New Mexico										TARGET INCL:		0.00			EAST/WEST:		0.00																						
RIG: United 33										TARGET AZM:		309.55			(Enter 0' N and 0' E for Surface)																								
JOB NUMBER: Tx-18-003																																							
SURVEY COMPANY							DIRECTIONAL COMPANY			PROPOSED DIRECTION:		309.55		Dec / Total Corr.(+/-):			7.30																						
Accel Directional							Accel Directional			COMMENTS:																													
Directional Drillers							COORDINATORS																																
Chad Bass							Chris Shipp																																
Dillon Dowdell							Corey Treadwell																																
Lime Rock Resources							Terry 14G No. 7																																
															Target Calculations																								
										TRUE		TEMP		API		Course		Surface		CLOSURE		DLS/		BUR/		TVD AT 0'		ABOVE (+)		RIGHT(+)									
										AZM		°F		Gamma		Length		TVD		N-S		E-W		Vert Sect		DIST		DIR		100		100'		V. SEC.		BELOW (-)		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										184		0.4		49.2		184		184.00		0.42		0.49		-0.11		0.64		49.20		0.22		0.22		#DIV/0!		#DIV/0!		0.63	
2										275		0.6		71.0		91		275.00		0.78		1.18		-0.41		1.41		56.39		0.30		0.22		#DIV/0!		#DIV/0!		1.35	
3										366		0.9		62.8		91		365.99		1.26		2.26		-0.94		2.59		60.81		0.35		0.33		#DIV/0!		#DIV/0!		2.42	
4										398		0.9		21.9		32		397.98		1.61		2.58		-0.96		3.04		58.00		1.97		0.00		#DIV/0!		#DIV/0!		2.89	
5										431		1.4		338.3		33		430.98		2.23		2.53		-0.53		3.37		48.62		2.95		1.52		#DIV/0!		#DIV/0!		3.33	
6										463		2.4		317.3		32		462.96		3.08		1.93		0.48		3.64		32.04		3.76		3.13		#DIV/0!		#DIV/0!		3.61	
7										494		3.4		307.8		31		493.92		4.12		0.76		2.04		4.19		10.48		3.57		3.23		#DIV/0!		#DIV/0!		3.67	
8										526		4.2		302.6		32		525.85		5.34		-0.97		4.15		5.42		349.65		2.72		2.50		#DIV/0!		#DIV/0!		3.49	
9										558		4.7		299.4		32		557.75		6.61		-3.10		6.60		7.30		334.85		1.74		1.56		#DIV/0!		#DIV/0!		3.12	
10										590		5.0		299.9		32		589.64		7.95		-5.45		9.27		9.64		325.54		0.95		0.94		#DIV/0!		#DIV/0!		2.66	
11										622		5.7		298.6		32		621.50		9.41		-8.06		12.20		12.39		319.41		2.22		2.19		#DIV/0!		#DIV/0!		2.12	
12										654		6.7		299.6		32		653.31		11.09		-11.08		15.60		15.67		315.03		3.14		3.13		#DIV/0!		#DIV/0!		1.50	
13										685		7.9		301.5		31		684.06		13.10		-14.47		19.49		19.51		312.15		3.95		3.87		#DIV/0!		#DIV/0!		0.89	
14										716		9.5		303.9		31		714.70		15.64		-18.41		24.15		24.15		310.35		5.29		5.16		#DIV/0!		#DIV/0!		0.34	
15										748		11.0		306.2		32		746.19		18.91		-23.06		29.82		29.82		309.35		4.86		4.69		#DIV/0!		#DIV/0!		-0.10	
16										780		12.3		306.3		32		777.53		22.73		-28.27		36.28		36.28		308.80		4.06		4.06		#DIV/0!		#DIV/0!		-0.47	
17										812		12.5		307.1		32		808.78		26.84		-33.78		43.14		43.15		308.47		0.82		0.62		#DIV/0!		#DIV/0!		-0.82	
18										844		12.7		307.0		32		840.01		31.05		-39.35		50.11		50.12		308.27		0.63		0.62		#DIV/0!		#DIV/0!		-1.12	
19										908		13.1		306.5		64		902.40		39.59		-50.80		64.38		64.41		307.93		0.65		0.63		#DIV/0!		#DIV/0!		-1.82	
20										940		13.3		306.3		32		933.55		43.93		-56.68		71.68		71.71		307.78		0.64		0.63		#DIV/0!		#DIV/0!		-2.22	
21										971		13.4		306.0		31		963.71		48.15		-62.46		78.82		78.87		307.63		0.39		0.32		#DIV/0!		#DIV/0!		-2.65	
22										1,003		13.3		305.7		32		994.85		52.48		-68.45		86.20		86.25		307.48		0.38		-0.31		#DIV/0!		#DIV/0!		-3.12	
23										1,035		13.2		305.8		32		1026.00		56.76		-74.40		93.52		93.59		307.34		0.32		-0.31		#DIV/0!		#DIV/0!		-3.61	
24										1,067		13.2		305.4		32		1057.15		61.02		-80.35		100.81		100.89		307.21		0.29		0.00		#DIV/0!		#DIV/0!		-4.11	
25										1,099		13.2		305.1		32		1088.31		65.24		-86.31		108.09		108.19		307.08		0.21		0.00		#DIV/0!		#DIV/0!		-4.66	
26										1,131		13.1		305.1		32		1119.47		69.42		-92.27		115.35		115.47		306.96		0.31		-0.31		#DIV/0!		#DIV/0!		-5.22	
27										1,163		13.1		304.5		32		1150.64		73.56		-98.23		122.58		122.72		306.83		0.42		0.00		#DIV/0!		#DIV/0!		-5.82	
28										1,195		13.1		303.9		32		1181.80		77.64		-104.22		129.80		129.96		306.68		0.42		0.00		#DIV/0!		#DIV/0!		-6.50	
29										1,292		13.5		303.8		97		1276.20		90.07		-122.76		152.00		152.25		306.27		0.41		0.41		#DIV/0!		#DIV/0!		-8.72	
30										1,356		14.0		311.6		64		1338.37		99.36		-134.75		167.17		167.43		306.40		3.00		0.78		#DIV/0!		#DIV/0!		-9.19	
31										1,388		14.3		312.8		32		1369.40		104.62		-140.55		174.99		175.21		306.66		1.31		0.94		#DIV/0!		#DIV/0!		-8.83	
32										1,420		14.3		312.5		32		1400.41		109.97		-146.36		182.88		183.07		306.92		0.23		0.00		#DIV/0!		#DIV/0!		-8.40	
33										1,452		14.2		313.0		32		1431.42		115.32		-152.15		190.75		190.91		307.16		0.50		-0.31		#DIV/0!		#DIV/0!		-7.96	
34										1,516		12.5		315.6		64		1493.69		125.62		-162.73		205.47		205.58		307.67		2.82		-2.66		#DIV/0!		#DIV/0!		-6.76	
35										1,579		12.1		316.1		63		1555.25		135.25		-172.08		218.81		218.87		308.17		0.66		-0.63		#DIV/0!		#DIV/0!		-5.29	
36										1,643		12.0		315.5		64		1617.84		144.83		-181.40		232.09		232.12		308.60		0.25		-0.16		#DIV/0!		#DIV/0!		-3.83	
37										1,707		11.9		315.2		64		1680.45		154.26		-190.71		245.27		245.29		308.97		0.18		-0.16		#DIV/0!		#DIV/0!		-2.49	
38										1,771		11.8		315.6		64		1743.09		163.62		-199.94		258.35		258.35		309.29		0.20		-0.16		#DIV/0!		#DIV/0!		-1.15	
39										1,835		11.6		314.7		64		1805.76		172.82		-209.09		271.26		271.26		309.57		0.42		-0.31		#DIV/0!		#DIV/0!		0.12	
40										1,899		11.3		314.6		64		1868.48		181.75		-218.13		283.92		283.92		309.80		0.47		-0.47		#DIV/0!		#DIV/0!		1.24	
41										1,963		9.6		321.3		64		1931.42		190.31		-225.93		295.39		295.41		310.11		3.26		-2.66		#DIV/0!		#DIV/0!		2.88	
42										2,027		9.8		319.9		64		1994.51		198.65		-232.78		305.97		306.01		310.48		0.48		0.31		#DIV/0!		#DIV/0!		4.95	
43										2,091		9.7		317.6		64		2057.58		206.79		-239.92		316.67		316.74		310.76		0.63		-0.16		#DIV/0!		#DIV/0!		6.68	
44										2,156		8.1		317.5		65		2121.80		214.21		-246.71		326.63		326.73		310.97		2.46		-2.46		#DIV/0!		#DIV/0!		8.08	
45										2,219		6.5		318.1		63		2184.28		220.14		-252.09		334.55		334.68		311.13		2.54		-2.54		#DIV/0!		#DIV/0!		9.23	
46										2,283		3.8		303.9		64		2248.02		224.02		-256.27		340.24		340.38		311.16		4.63		-4.22		#DIV/0!		#DIV/0!		9.56	
47										2,315		3.3		294.6		32		2279.96		225.00		-257.98		342.19		342.31		311.09		2.38		-1.56		#DIV/0!		#DIV/0!		9.21	
48										2,347		2.8		289.3		32		2311.92		225.64		-259.56		343.81		343.92		311.00		1.79		-1.56		#DIV/0!		#DIV/0!		8.71	
49										2,379		1.6		274.0		32		2343.89		225.93		-260.74		344.91		345.01		310.91		4.14		-3.75		#DIV/0!		#DIV/0!		8.18	
50										2,411		1.3		260.0		32		2375.88		225.89		-261.55		345.51		345.59		310.82		1.44		-0.94		#DIV/0!		#DIV/0!		7.64	
51										2,443		1.2		239.1		32		2407.87		225.66		-262.19		345.86		345.93		310.72		1.45		-0.31		#DIV/0!		#DIV/0!		7.05	
52										2,506		1.0		187.2		63		2470.86		224.78		-262.83		345.78		345.83		310.54		1.55		-0.32		#DIV/0!		#DIV/0!		5.96	



SURVEY CALCULATION PROGRAM

Minimum Curvature

File:

OPERATOR: Lime Rock Resources											Target Information				VS Referenced to Offset from Surface				
WELL: Terry 14G No. 7											TARGET KBTVD:		4300.00		NORTH/SOUTH:		0.00		
LOCATION: Eddy County, New Mexico											TARGET INCL:		0.00		EAST/WEST:		0.00		
RIG: United 33											TARGET AZM:		309.55		(Enter 0° N and 0° E for Surface)				
JOB NUMBER: Tx-18-003																			
SURVEY COMPANY							DIRECTIONAL COMPANY				PROPOSED DIRECTION:		309.55		Dec / Total Corr.(+/-):			7.30	
Accel Directional							Accel Directional				COMMENTS:								
Directional Drillers							COORDINATORS												
Chad Bass							Chris Shipp												
Dillon Dowdell							Corey Treadwell												
Lime Rock Resources							Terry 14G No. 7								Target Calculations				
			TRUE	TEMP	API	Course				Surface	CLOSURE		DLS/	BUR/	TVD AT 0°	ABOVE (+)	RIGHT(+)		
SVY	MD	INC	AZM	°F	Gamma	Length	TVD	N-S	E-W	Vert Sect	DIST	DIR	100	100'	V. SEC.	BELOW (-)	LEFT(-)		
53	2,570	1.2	180.2			64	2534.85	223.55	-262.90	345.06	345.10	310.38	0.38	0.31	#DIV/0!	#DIV/0!	4.97		
54	2,634	1.5	173.4			64	2598.84	222.05	-262.80	344.03	344.05	310.20	0.53	0.47	#DIV/0!	#DIV/0!	3.87		
55	2,698	1.4	175.1			64	2662.81	220.44	-262.64	342.88	342.89	310.01	0.17	-0.16	#DIV/0!	#DIV/0!	2.74		
56	2,762	1.3	181.5			64	2726.80	218.93	-262.59	341.88	341.89	309.82	0.28	-0.16	#DIV/0!	#DIV/0!	1.61		
57	2,859	1.4	175.2			97	2823.77	216.65	-262.52	340.38	340.38	309.53	0.18	0.10	#DIV/0!	#DIV/0!	-0.11		
58	2,955	0.4	100.9			96	2919.76	215.42	-262.10	339.26	339.26	309.42	1.40	-1.04	#DIV/0!	#DIV/0!	-0.79		
59	3,025	0.4	64.4			70	2989.76	215.48	-261.64	338.95	338.95	309.47	0.36	0.00	#DIV/0!	#DIV/0!	-0.45		
60	3,089	0.4	82.3			64	3053.76	215.61	-261.21	338.70	338.70	309.54	0.19	0.00	#DIV/0!	#DIV/0!	-0.08		
61	3,152	0.5	73.5			63	3116.75	215.71	-260.73	338.40	338.40	309.60	0.19	0.16	#DIV/0!	#DIV/0!	0.31		
62	3,218	0.3	73.3			66	3182.75	215.84	-260.29	338.14	338.14	309.67	0.30	-0.30	#DIV/0!	#DIV/0!	0.69		
63	3,281	0.6	56.8			63	3245.75	216.07	-259.86	337.95	337.95	309.74	0.51	0.48	#DIV/0!	#DIV/0!	1.14		
64	3,377	0.7	70.6			96	3341.74	216.54	-258.88	337.50	337.51	309.91	0.19	0.10	#DIV/0!	#DIV/0!	2.13		
65	3,441	0.9	70.8			64	3405.74	216.84	-258.04	337.04	337.05	310.04	0.31	0.31	#DIV/0!	#DIV/0!	2.89		
66	3,537	1.0	65.1			96	3501.72	217.44	-256.57	336.29	336.31	310.28	0.14	0.10	#DIV/0!	#DIV/0!	4.29		
67	3,633	1.1	81.0			96	3597.71	217.94	-254.90	335.31	335.36	310.53	0.32	0.10	#DIV/0!	#DIV/0!	5.74		
68	3,697	1.0	95.0			64	3661.70	217.98	-253.73	334.45	334.51	310.67	0.43	-0.16	#DIV/0!	#DIV/0!	6.51		
69	3,729	0.9	97.8			32	3693.69	217.92	-253.21	334.00	334.07	310.72	0.34	-0.31	#DIV/0!	#DIV/0!	6.81		
70	3,793	0.2	8.4			64	3757.69	217.97	-252.69	333.63	333.71	310.78	1.44	-1.09	#DIV/0!	#DIV/0!	7.17		
71	3,857	0.5	303.6			64	3821.69	218.23	-252.91	333.97	334.05	310.79	0.71	0.47	#DIV/0!	#DIV/0!	7.23		
72	3,953	0.7	306.6			96	3917.68	218.81	-253.73	334.97	335.05	310.77	0.21	0.21	#DIV/0!	#DIV/0!	7.16		
73	4,048	0.7	307.0			95	4012.68	219.51	-254.66	336.13	336.21	310.76	0.01	0.00	#DIV/0!	#DIV/0!	7.10		
74	4,144	0.6	305.2			96	4108.67	220.15	-255.54	337.22	337.29	310.75	0.11	-0.10	#DIV/0!	#DIV/0!	7.04		
75	4,176	0.5	307.6			32	4140.67	220.33	-255.78	337.52	337.60	310.74	0.32	-0.31	#DIV/0!	#DIV/0!	7.02		
PTB	4,226	0.5	307.6			50	4190.67	220.60	-256.13	337.96	338.03	310.74	0.00	0.00	#DIV/0!	#DIV/0!	7.01		