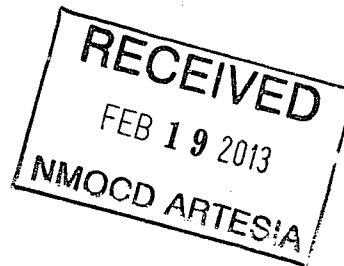




PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288



November 5, 2012

Mack Energy Corporation
PO Box 960
Artesia, NM 88211-0960

30 005 64157

RE: Lear State Com #1
355' FSL & 355' FEL
Sec. 10, T14S, R29E
Chaves County, New Mexico

Dear Sir,

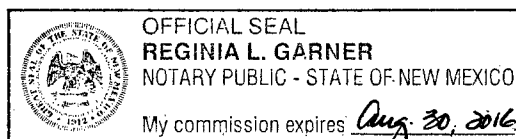
The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Chris Graham
Drilling Superintendent

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 5th day of November, 2012.



SCANNED

Pason DataHub Deviation Survey

Well Dossier 4960720 - Lear State Com # 1

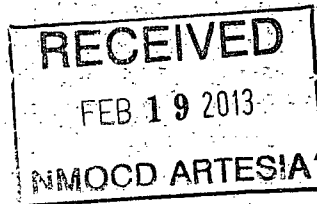
# Date	Depth	Deviation	Direction	TVD
10/18/2012	52	3.00	189.80	0.00
10/19/2012	254	0.50	61.00	0.00
10/19/2012	304	0.90	46.80	0.00
10/20/2012	461	1.70	109.80	0.00
10/20/2012	580	1.10	59.00	0.00
10/21/2012	766	1.00	84.80	0.00
10/21/2012	956	0.70	83.00	0.00
10/21/2012	1146	1.10	88.00	0.00
10/21/2012	1272	0.70	61.80	0.00
10/21/2012	1580	0.10	91.80	0.00
10/22/2012	1770	0.10	337.80	0.00
10/22/2012	1960	0.20	207.80	0.00
10/22/2012	2150	0.40	262.00	0.00
10/22/2012	2199	0.40	253.00	0.00
10/23/2012	2310	0.40	276.40	0.00
10/23/2012	2372	0.50	280.10	0.00
10/24/2012	2434	1.60	62.90	2433.81
10/24/2012	2465	5.80	69.20	2464.74
10/24/2012	2496	10.40	72.90	2495.42
10/24/2012	2527	13.70	76.20	2525.74
10/24/2012	2558	15.00	79.30	2555.77
10/24/2012	2589	16.70	86.60	2585.59
10/24/2012	2682	27.70	86.90	2671.00
10/24/2012	2713	32.60	87.10	2698.00
10/24/2012	2744	37.40	86.60	2724.05
10/24/2012	2775	41.80	84.50	2747.93
10/24/2012	2836	47.80	86.20	2791.25
10/24/2012	2867	51.60	87.30	2811.30
10/24/2012	2898	54.70	88.10	2829.89
10/24/2012	2929	57.30	88.80	2847.22
10/24/2012	2959	60.20	88.50	2862.78
10/24/2012	2990	63.90	87.90	2877.31
10/25/2012	3031	68.60	87.60	2893.82
10/25/2012	3062	72.30	87.30	2904.00
10/25/2012	3155	80.40	88.60	2925.00
10/25/2012	3186	83.80	88.70	2930.12
10/25/2012	3495	89.30	89.40	2938.68
10/26/2012	3618	88.20	90.60	2940.57
10/26/2012	3679	88.10	90.20	2942.54
10/26/2012	3741	88.30	90.20	2944.48
10/26/2012	3803	88.49	90.40	2946.27
10/26/2012	3865	88.70	90.20	2947.84

SCANNED

#	Date	Depth	Deviation	Direction	TVD
	10/26/2012	3927	91.00	90.20	2948.00
	10/26/2012	3989	91.20	90.80	2946.00
	10/26/2012	4112	88.60	90.50	2946.00
	10/26/2012	4174	88.90	90.20	2948.00
	10/26/2012	4298	87.30	89.80	2952.00
	10/26/2012	4421	87.60	89.60	2958.00
	10/26/2012	4483	87.60	89.10	2960.00
	10/26/2012	4545	88.40	89.30	2962.00
	10/26/2012	4607	89.00	89.10	2964.00
	10/27/2012	4669	89.00	88.50	2965.39
	10/27/2012	4731	88.20	90.00	2966.00
	10/27/2012	4793	89.60	90.80	2968.00
	10/27/2012	4855	89.70	90.60	2968.00
	10/27/2012	4917	89.50	90.70	2968.00
	10/28/2012	5041	88.70	90.50	2970.75
	10/28/2012	5103	88.40	90.80	2972.32
	10/28/2012	5164	88.90	90.60	2973.75
	10/28/2012	5226	90.10	90.60	2474.58
	10/28/2012	5288	90.00	90.20	2974.00
	10/28/2012	5350	89.80	90.10	2974.00
	10/29/2012	5411	89.80	89.70	2974.56
	10/29/2012	5472	90.30	89.90	2974.51
	10/29/2012	5534	89.50	90.90	2974.62
	10/29/2012	5596	89.70	91.50	2975.05
	10/29/2012	5658	88.60	91.00	2975.27
	10/29/2012	5720	88.50	90.80	2977.00
	10/29/2012	5781	89.20	90.70	2978.00
	10/29/2012	5843	88.80	90.20	2979.00
	10/29/2012	6029	89.00	90.70	2983.52
	10/29/2012	6153	89.10	90.00	2985.83
	10/29/2012	6277	88.80	89.00	2988.50
	10/30/2012	6401	89.20	88.50	2990.00
	10/30/2012	6463	90.10	88.60	2991.00
	10/30/2012	6586	89.60	89.50	2992.00
	10/30/2012	6648	90.10	88.70	2992.00
	10/30/2012	6771	89.80	86.90	2992.00
	10/30/2012	6883	89.80	87.10	2993.00
	10/30/2012	6957	89.30	87.30	2994.18
	10/30/2012	7018	89.10	87.80	2995.03
	10/31/2012	7223	90.00	89.60	2998.00

EOF

SCANNED



Archer

Archer Directional Drilling Services.
911 Regional Park Drive
Houston, Texas 77060
Tel: 281-934-9600
Fax: 281-951-2101

Mack Energy Corporation
125 W. Missouri
Midland, Texas 79701

RECEIVED

NOV 18 2012

MAILROOM

November 1, 2012

Re: Lear State Com #1
Rig: Silver Oak #2
Chavez County, New Mexico
API # 30-005-64157

Enclosed pChavezse find the original of the survey performed on the referenced well by Archer Directional Drilling Services. Other information required by your office is as follows:

<u>Name & Title Of Surveyor</u>	<u>Wellhole Number</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
Jared Jackson Field Engineer	Original Hole	2310-7277	10/23/12-10/31/12	MWD

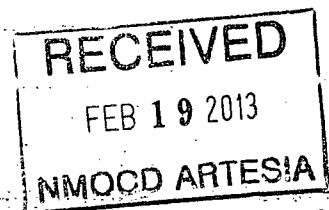
If additional information is required, please contact the undersigned at the letterhead address and phone number.

Martin Campbell
MWD Coordinator



Archer Directional Drilling Services.
911 Regional Park Drive
Houston, Texas 77060
Tel: 281-934-9600
Fax: 281-951-2101

MWD Survey Certification



State of New Mexico
County of Chavez

I, Martin Campbell, certify that; I am employed by Archer Directional Drilling Services; that I did on the day(s) of 10/23/12 through 10/31/12, conduct or supervise the taking of MWD surveys from a depth of 2310 feet to a depth of 7277 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Archer Directional Drilling Services; that I am authorized and qualified to make this report; that these surveys were conducted at the request of Mack Energy Corporation for the Lear State Com #1 (API # 30-005-64157) Well located in Chavez County, New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Archer Directional Drilling Services.

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

Martin Campbell
MWD Coordinator



Company: Mack Energy Corporation
 Well: Lear State Com #1
 Location: Chaves County, New Mexico
 Rig: Silver Oak 2

Job Number: 03901-433-22
 Mag Decl.: 7.54
 Dir Driller: Steve Gray
 MWD Eng: Jared Jackson

Calculation Method
 Proposed Azimuth 89.8
 Depth Reference KBG
 Tie Into: Previous MWD Survey

Job Date: 10/23/2012 - 10/31/2012

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
Tie In	2199.00	0.4	252.8	0	2198.82	18.12	1.90 N	18.12 E					
1	2310	0.4	276.4	111	2309.82	17.37	1.83 N	17.36 E	17.46	83.99	0.15	0.00	21.26
2	2372	0.5	280.1	62	2371.82	16.89	1.90 N	16.88 E	16.99	83.58	0.17	0.16	5.97
3	2403	0.4	292.6	31	2402.81	16.66	1.97 N	16.65 E	16.77	83.27	0.45	-0.32	40.32
4	2434	1.6	62.9	31	2433.81	16.94	2.20 N	16.94 E	17.08	82.58	6.08	3.87	-740.97
5	2465	5.8	69.2	31	2464.74	18.80	2.96 N	18.79 E	19.02	81.05	13.59	13.55	20.32
6	2496	10.4	72.9	31	2495.42	22.94	4.34 N	22.93 E	23.33	79.29	14.93	14.84	11.94
7	2527	13.7	76.2	31	2525.74	29.19	6.04 N	29.17 E	29.79	78.31	10.87	10.65	10.65
8	2558	15.0	79.3	31	2555.77	36.70	7.66 N	36.68 E	37.47	78.21	4.87	4.19	10.00
9	2589	16.7	86.6	31	2585.59	45.10	8.67 N	45.07 E	45.89	79.11	8.44	5.48	23.55
10	2620	19.5	88.8	31	2615.05	54.72	9.04 N	54.69 E	55.43	80.61	9.30	9.03	7.10
11	2651	23.4	86.5	31	2643.90	66.04	9.52 N	66.01 E	66.69	81.79	12.87	12.58	-7.42
12	2682	27.7	86.9	31	2671.86	79.39	10.29 N	79.35 E	80.02	82.61	13.88	13.87	1.29
13	2713	32.6	87.1	31	2698.66	94.94	11.10 N	94.90 E	95.54	83.33	15.81	15.81	0.65
14	2744	37.4	86.6	31	2724.05	112.69	12.08 N	112.65 E	113.29	83.88	15.51	15.48	-1.61
15	2775	41.8	84.5	31	2747.93	132.39	13.63 N	132.34 E	133.04	84.12	14.83	14.19	-6.77
16	2806	44.7	85.0	31	2770.51	153.55	15.57 N	153.49 E	154.28	84.21	9.42	9.35	1.61
17	2836	47.8	86.2	30	2791.25	175.16	17.23 N	175.09 E	175.94	84.38	10.73	10.33	4.00
18	2867	51.6	87.3	31	2811.30	198.76	18.56 N	198.69 E	199.56	84.66	12.55	12.26	3.55
19	2898	54.7	88.1	31	2829.89	223.55	19.56 N	223.47 E	224.33	85.00	10.21	10.00	2.58
20	2929	57.3	88.8	31	2847.22	249.24	20.25 N	249.16 E	249.98	85.35	8.59	8.39	2.26
21	2959	60.2	88.5	30	2862.78	274.88	20.85 N	274.80 E	275.59	85.66	9.70	9.67	-1.00
22	2990	63.9	87.9	31	2877.31	302.25	21.72 N	302.17 E	302.95	85.89	12.06	11.94	-1.94
23	3031	68.6	87.6	41	2893.82	339.74	23.19 N	339.65 E	340.45	86.09	11.48	11.46	-0.73
24	3062	72.3	87.3	31	2904.19	368.92	24.49 N	368.83 E	369.65	86.20	11.97	11.94	-0.97
25	3093	75.3	87.8	31	2912.84	398.67	25.76 N	398.57 E	399.40	86.30	9.80	9.68	1.61
26	3124	77.9	88.3	31	2920.02	428.81	26.79 N	428.71 E	429.54	86.42	8.53	8.39	1.61
27	3155	80.4	88.6	31	2925.86	459.24	27.61 N	459.14 E	459.97	86.56	8.12	8.06	0.97
28	3186	83.8	88.7	31	2930.12	489.94	28.33 N	489.83 E	490.65	86.69	10.97	10.97	0.32
29	3217	86.6	89.0	31	2932.71	520.82	28.95 N	520.71 E	521.52	86.82	9.08	9.03	0.97
30	3247	86.9	88.7	30	2934.41	550.77	29.55 N	550.66 E	551.45	86.93	1.41	1.00	-1.00
31	3278	89.2	89.9	31	2935.46	581.75	29.93 N	581.64 E	582.41	87.05	8.37	7.42	3.87
32	3309	90.1	90.6	31	2935.65	612.75	29.80 N	612.64 E	613.36	87.22	3.68	2.90	2.26
33	3371	88.7	89.8	62	2936.30	674.74	29.58 N	674.63 E	675.28	87.49	2.60	-2.26	-1.29
34	3433	88.8	89.5	62	2937.66	736.72	29.96 N	736.61 E	737.22	87.67	0.51	0.16	-0.48



Company: Mack Energy Corporation

Job Number:

03901-433-22

Calculation Method

Minimum Curvature

Well: Lear State Com #1

Mag Decl.:

7.54

Proposed Azimuth

89.8

Location: Chaves County, New Mexico

Dir Driller:

Steve Gray

Depth Reference

KBG

Rig: Silver Oak 2

MWD Eng:

Jared Jackson

Tie Into: Previous MWD Survey

Job Date: 10/23/2012 - 10/31/2012

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
35	3495	89.3	89.4	62	2938.68	798.71	30.56 N	798.60 E	799.19	87.81	0.82	0.81	-0.16
36	3556	89.5	90.0	61	2939.32	859.71	30.87 N	859.60 E	860.15	87.94	1.04	0.33	0.98
37	3618	88.2	90.6	62	2940.57	921.69	30.55 N	921.58 E	922.09	88.10	2.31	-2.10	0.97
38	3679	88.1	90.2	61	2942.54	982.66	30.12 N	982.55 E	983.01	88.24	0.68	-0.16	-0.66
39	3741	88.3	90.2	62	2944.48	1044.63	29.91 N	1044.52 E	1044.95	88.36	0.32	0.32	0.00
40	3803	88.4	90.4	62	2946.27	1106.60	29.58 N	1106.49 E	1106.89	88.47	0.36	0.16	0.32
41	3865	88.7	90.2	62	2947.84	1168.57	29.26 N	1168.47 E	1168.84	88.57	0.58	0.48	-0.32
42	3927	91.0	90.2	62	2948.00	1230.57	29.04 N	1230.47 E	1230.81	88.65	3.71	3.71	0.00
43	3989	91.2	90.8	62	2946.81	1292.55	28.50 N	1292.45 E	1292.77	88.74	1.02	0.32	0.97
44	4050	90.1	90.2	61	2946.12	1353.54	27.97 N	1353.44 E	1353.73	88.82	2.05	-1.80	-0.98
45	4112	88.6	90.5	62	2946.82	1415.53	27.59 N	1415.44 E	1415.71	88.88	2.47	-2.42	0.48
46	4174	88.9	90.2	62	2948.17	1477.52	27.21 N	1477.42 E	1477.67	88.94	0.68	0.48	-0.48
47	4236	87.8	89.9	62	2949.96	1539.49	27.16 N	1539.39 E	1539.63	88.99	1.84	-1.77	-0.48
48	4298	87.3	89.8	62	2952.61	1601.43	27.32 N	1601.34 E	1601.57	89.02	0.82	-0.81	-0.16
49	4360	87.4	89.4	62	2955.48	1663.36	27.75 N	1663.27 E	1663.50	89.04	0.66	0.16	-0.65
50	4421	87.6	89.6	61	2958.14	1724.31	28.28 N	1724.21 E	1724.44	89.06	0.46	0.33	0.33
51	4483	87.6	89.1	62	2960.73	1786.25	28.99 N	1786.15 E	1786.39	89.07	0.81	0.00	-0.81
52	4545	88.4	89.3	62	2962.90	1848.21	29.85 N	1848.11 E	1848.35	89.07	1.33	1.29	0.32
53	4607	89.0	89.1	62	2964.30	1910.19	30.72 N	1910.08 E	1910.33	89.08	1.02	0.97	-0.32
54	4669	89.0	88.5	62	2965.39	1972.17	32.02 N	1972.06 E	1972.32	89.07	0.97	0.00	-0.97
55	4731	88.2	90.0	62	2966.90	2034.15	32.83 N	2034.03 E	2034.30	89.08	2.74	-1.29	2.42
56	4793	89.6	90.8	62	2968.09	2096.13	32.39 N	2096.02 E	2096.27	89.11	2.60	2.26	1.29
57	4855	89.7	90.6	62	2968.47	2158.12	31.64 N	2158.01 E	2158.25	89.16	0.36	0.16	-0.32
58	4917	89.5	90.7	62	2968.90	2220.11	30.93 N	2220.01 E	2220.22	89.20	0.36	-0.32	0.16
59	4978	89.2	90.7	61	2969.59	2281.10	30.19 N	2281.00 E	2281.20	89.24	0.49	-0.49	0.00
60	5041	88.7	90.5	63	2970.75	2344.08	29.53 N	2343.99 E	2344.17	89.28	0.85	-0.79	-0.32
61	5103	88.4	90.8	62	2972.32	2406.05	28.83 N	2405.96 E	2406.13	89.31	0.68	-0.48	0.48
62	5164	88.9	90.6	61	2973.75	2467.03	28.08 N	2466.94 E	2467.10	89.35	0.88	0.82	-0.33
63	5226	90.1	90.6	62	2974.30	2529.02	27.43 N	2528.93 E	2529.08	89.38	1.94	1.94	0.00
64	5288	90.0	90.2	62	2974.24	2591.02	27.00 N	2590.93 E	2591.07	89.40	0.67	-0.16	-0.65
65	5350	89.8	90.1	62	2974.35	2653.01	26.84 N	2652.93 E	2653.07	89.42	0.36	-0.32	-0.16
66	5411	89.8	89.7	61	2974.56	2714.01	26.94 N	2713.93 E	2714.06	89.43	0.66	0.00	-0.66
67	5472	90.3	89.9	61	2974.51	2775.01	27.16 N	2774.93 E	2775.06	89.44	0.88	0.82	0.33
68	5534	89.5	90.9	62	2974.62	2837.01	26.72 N	2836.93 E	2837.05	89.46	2.07	-1.29	1.61
69	5596	89.7	91.5	62	2975.05	2898.99	25.42 N	2898.91 E	2899.02	89.50	1.02	0.32	0.97
70	5658	88.6	91.0	62	2975.97	2960.96	24.07 N	2960.89 E	2960.99	89.53	1.95	-1.77	-0.81
71	5720	88.5	90.8	62	2977.54	3022.93	23.10 N	3022.86 E	3022.95	89.56	0.36	-0.16	-0.32
72	5781	89.2	90.7	61	2978.76	3083.91	22.30 N	3083.84 E	3083.92	89.59	1.16	1.15	-0.16
73	5843	88.8	90.2	62	2979.85	3145.89	21.81 N	3145.83 E	3145.91	89.60	1.03	-0.65	-0.81



Company: Mack Energy Corporation

Job Number:

03901-433-22

Well: Lear State Com #1

Mag Decl.:

7.54

Location: Chaves County, New Mexico

Dir Driller:

Steve Gray

Rig: Silver Oak 2

MWD Eng:

Jared Jackson

Calculation Method

Minimum Curvature

Proposed Azimuth

89.8

Depth Reference

KBG

Tie Into: Previous MWD Survey

Job Date: 10/23/2012 - 10/31/2012

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
74	5905	89.2	90.5	62	2980.93	3207.88	21.43 N	3207.82 E	3207.89	89.62	0.81	0.65	0.48
75	5967	88.5	90.6	62	2982.17	3269.86	20.84 N	3269.80 E	3269.87	89.63	1.14	-1.13	0.16
76	6029	89.0	90.7	62	2983.52	3331.84	20.14 N	3331.79 E	3331.85	89.65	0.82	0.81	0.16
77	6091	88.8	89.9	62	2984.71	3393.82	19.81 N	3393.77 E	3393.83	89.67	1.33	-0.32	-1.29
78	6153	89.1	90.0	62	2985.85	3455.81	19.87 N	3455.76 E	3455.82	89.67	0.51	0.48	0.16
79	6215	88.6	89.3	62	2987.09	3517.80	20.24 N	3517.75 E	3517.81	89.67	1.39	-0.81	-1.13
80	6277	88.8	89.0	62	2988.50	3579.78	21.16 N	3579.73 E	3579.79	89.66	0.58	0.32	-0.48
81	6339	88.7	89.0	62	2989.85	3641.76	22.25 N	3641.70 E	3641.77	89.65	0.16	-0.16	0.00
82	6401	89.2	88.5	62	2990.99	3703.74	23.60 N	3703.68 E	3703.75	89.63	1.14	0.81	-0.81
83	6463	90.1	88.6	62	2991.37	3765.72	25.17 N	3765.65 E	3765.74	89.62	1.46	1.45	0.16
84	6524	89.5	89.0	61	2991.58	3826.71	26.44 N	3826.64 E	3826.73	89.60	1.18	-0.98	0.66
85	6586	89.6	89.5	62	2992.07	3888.71	27.26 N	3888.63 E	3888.73	89.60	0.82	0.16	0.81
86	6648	90.1	88.7	62	2992.23	3950.70	28.23 N	3950.62 E	3950.72	89.59	1.52	0.81	-1.29
87	6709	89.7	87.8	61	2992.34	4011.68	30.09 N	4011.59 E	4011.71	89.57	1.61	-0.66	-1.48
88	6771	89.8	86.9	62	2992.61	4073.62	32.96 N	4073.53 E	4073.66	89.54	1.46	0.16	-1.45
89	6833	89.8	87.1	62	2992.82	4135.55	36.20 N	4135.44 E	4135.60	89.50	0.32	0.00	0.32
90	6895	89.2	88.0	62	2993.37	4197.50	38.85 N	4197.38 E	4197.56	89.47	1.74	-0.97	1.45
91	6957	89.3	87.3	62	2994.18	4259.45	41.40 N	4259.32 E	4259.52	89.44	1.14	0.16	-1.13
92	7018	89.1	87.8	61	2995.03	4320.40	44.00 N	4320.26 E	4320.49	89.42	0.88	-0.33	0.82
93	7079	88.7	89.1	61	2996.20	4381.37	45.65 N	4381.23 E	4381.46	89.40	2.23	-0.66	2.13
94	7141	89.0	89.8	62	2997.44	4443.36	46.25 N	4443.21 E	4443.45	89.40	1.23	0.48	1.13
95	7203	89.8	89.6	62	2998.09	4505.35	46.57 N	4505.21 E	4505.45	89.41	1.33	1.29	-0.32
96	7223	90.0	89.6	20	2998.13	4525.35	46.71 N	4525.21 E	4525.45	89.41	1.00	1.00	0.00
Proj.	7277	90.0	89.6	54	2998.13	4579.35	47.09 N	4579.20 E	4579.45	89.41	0.00	0.00	0.00