



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

NM OIL CONSERVATION
ARTESIA DISTRICT

NOV 25 2014

RECEIVED

15- 40930

April 10, 2014

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

RE: Mammoth Fee #1
2560' FSL & 2440' FWL
Sec. 3, T23S, R27E
Eddy County, New Mexico

Dear Sir,

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

Very truly yours,

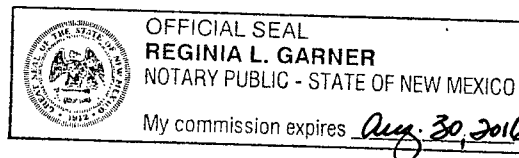
A handwritten signature in cursive script that reads "Chris Graham".

Chris Graham
Drilling Superintendent

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 10th day of April, 2014.

A handwritten signature in cursive script that reads "Regina L. Garner".

Notary Public

MAMMOTH FEE #1

Date	Depth	Deviation	Direction	TVD	Horiz
3/22/2014	190	0.30	193.00	0.00	0.00
3/22/2014	306	0.70	209.00	0.00	0.00
3/22/2014	377	0.70	142.50	0.00	0.00
3/24/2014	503	0.80	137.30	0.00	0.00
3/24/2014	678	1.20	126.60	0.00	0.00
3/24/2014	829	1.20	135.90	0.00	0.00
3/25/2014	1019	1.40	167.40	0.00	0.00
3/25/2014	1207	1.10	166.70	0.00	0.00
3/25/2014	1396	2.20	131.60	0.00	0.00
3/25/2014	1585	2.70	99.40	0.00	0.00
3/25/2014	1744	2.40	98.90	0.00	0.00
3/25/2014	1869	2.00	89.50	0.00	0.00
3/26/2014	1963	1.10	89.50	0.00	0.00
3/27/2014	2056	0.90	125.00	0.00	0.00
3/27/2014	2150	4.20	109.80	0.00	0.00
3/27/2014	2243	8.80	116.20	0.00	0.00
3/27/2014	2337	12.83	116.30	0.00	0.00
3/27/2014	2430	15.10	116.10	0.00	0.00
3/27/2014	2617	14.10	117.10	2605.00	1.24
3/27/2014	2806	13.50	114.90	2789.00	1.70
3/27/2014	2994	16.70	114.10	0.00	0.00
3/27/2014	3089	15.60	110.90	3062.00	1.00
3/27/2014	3182	14.90	110.80	0.00	0.00
3/27/2014	3369	14.00	111.90	0.00	0.00
3/27/2014	3462	15.50	117.10	0.00	0.00
3/27/2014	3555	16.90	114.70	0.00	0.00
3/27/2014	3649	16.50	112.40	0.00	0.00
3/28/2014	3742	15.80	114.40	0.00	0.00
3/28/2014	3927	18.60	116.80	0.00	0.00
3/28/2014	4022	16.20	116.60	0.00	0.00
3/28/2014	4116	15.00	116.20	0.00	0.00
3/28/2014	4209	12.10	116.70	0.00	0.00
3/28/2014	4302	10.50	117.80	0.00	0.00
3/28/2014	4396	9.10	116.50	4323.00	1.51
3/28/2014	4496	7.60	114.40	0.00	0.00
3/28/2014	4589	5.80	114.00	0.00	0.00
3/29/2014	4678	4.50	99.50	0.00	0.00
3/29/2014	4863	2.20	64.80	4788.00	1.35
3/29/2014	4956	0.20	121.80	4881.00	2.26
3/29/2014	5143	1.00	195.50	5068.00	0.52
3/29/2014	5330	0.70	0.00	0.00	0.00
3/29/2014	5517	0.70	0.00	0.00	0.00
3/29/2014	5704	1.10	0.00	0.00	0.00

Date	Depth	Deviation	Direction	TVD	Horiz
3/30/2014	5891	0.80	170.80	5816.00	0.43
3/30/2014	6078	0.50	280.60	6003.00	0.58
3/30/2014	6265	1.30	228.40	6190.00	0.57
3/30/2014	6451	2.70	213.60	0.00	0.00
3/31/2014	6638	0.50	188.40	1.21	0.00
3/31/2014	6825	0.90	163.80	0.00	0.00
4/1/2014	7012	0.40	180.70	6937.00	0.00
4/1/2014	7199	2.20	218.20	7124.00	0.00
4/1/2014	7386	1.90	220.20	7310.00	0.16
4/1/2014	7574	1.00	195.50	0.00	0.00
4/2/2014	7760	1.00	215.90	7684.00	0.00
4/2/2014	7948	1.80	271.90	0.00	0.00
4/2/2014	8135	1.60	251.20	0.00	0.00
4/3/2014	8324	0.90	187.70	8248.00	0.00
4/3/2014	8514	0.60	302.20	0.00	0.00
4/3/2014	8703	0.50	0.00	0.00	0.00
4/5/2014	8892	0.90	295.10	8816.00	0.00
4/5/2014	9081	1.20	264.90	0.00	0.00
4/5/2014	9290	1.30	268.40	0.00	0.00
4/5/2014	9299	1.30	254.40	0.00	0.00

NEXUS

DIRECTIONAL SOLUTIONS, L.P.

Survey Sheet

Company:	Mack	Job Number:	14-0044
Well:	Mammoth Fee #1	Mag Decl.:	7.54
Location:	Eddy County	Dir Driller:	Pennington/ Hammon
Rig:	Silver Oak #6	MWD Eng:	Ryan Mayfield
Leg:		MWD Eng:	

Calculation Method:	Minimum Curvature
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Proposed Azimuth	115.93
Depth Reference	Rig
Tie Into:	Rig

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
Tie In	0	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	190	0.30	193.00	190	190.00	0.11	0.48 S	0.11 W	0.50	193.00	0.16	0.16	101.58
2	306	0.70	142.00	116	305.99	0.82	1.34 S	0.26 E	1.36	169.17	0.48	0.34	-43.97
3	503	0.80	137.30	197	502.98	3.18	3.30 S	1.93 E	3.82	149.67	0.06	0.05	-2.39
4	678	1.20	126.60	175	677.95	6.12	5.29 S	4.23 E	6.77	141.35	0.25	0.23	-6.11
5	829	1.20	135.90	151	828.92	9.16	7.37 S	6.60 E	9.89	138.15	0.13	0.00	6.16
6	1019	1.40	167.40	190	1018.87	12.47	11.06 S	8.49 E	13.94	142.49	0.38	0.11	16.58
7	1207	1.10	166.70	188	1206.83	15.04	15.06 S	9.41 E	17.75	148.01	0.16	-0.16	-0.37
8	1396	2.20	131.60	189	1395.75	19.68	19.23 S	12.54 E	22.96	146.90	0.76	0.58	-18.57
9	1585	2.70	99.40	189	1584.58	27.44	22.37 S	19.64 E	29.77	138.71	0.76	0.26	-17.04
10	1774	2.40	98.90	189	1773.40	35.50	23.71 S	27.94 E	36.64	130.31	0.16	-0.16	-0.26
11	1869	2.00	89.50	95	1868.33	38.88	24.00 S	31.57 E	39.65	127.25	0.57	-0.42	-9.89
12	1963	1.10	89.50	94	1962.29	41.16	23.98 S	34.11 E	41.69	125.11	0.96	-0.96	0.00
13	2056	0.90	125.00	93	2055.28	42.68	24.39 S	35.60 E	43.15	124.42	0.69	-0.22	38.17
14	2150	4.20	109.80	94	2149.17	46.83	25.98 S	39.44 E	47.23	123.37	3.55	3.51	-16.17
15	2243	8.80	116.20	93	2241.55	57.34	30.28 S	49.04 E	57.63	121.69	5.00	4.95	6.88
16	2337	12.80	116.30	94	2333.87	74.95	38.07 S	64.83 E	75.18	120.42	4.26	4.26	0.11
17	2430	15.10	116.10	93	2424.12	97.37	47.96 S	84.95 E	97.55	119.45	2.47	2.47	-0.22
18	2524	13.50	114.10	94	2515.20	120.58	57.83 S	105.96 E	120.71	118.62	1.78	-1.70	-2.13
19	2617	14.40	117.10	93	2605.46	142.99	67.53 S	126.16 E	143.10	118.16	1.24	0.97	3.23
20	2711	12.10	118.50	94	2696.95	164.52	77.56 S	145.23 E	164.64	118.10	2.47	-2.45	1.49
21	2806	13.50	114.90	95	2789.59	185.56	86.98 S	164.04 E	185.67	117.93	1.70	1.47	-3.79
22	2900	14.70	114.40	94	2880.76	208.45	96.52 S	184.85 E	208.54	117.57	1.28	1.28	-0.53
23	2994	16.70	114.10	94	2971.25	233.87	106.97 S	208.04 E	233.93	117.21	2.13	2.13	-0.32
24	3089	15.60	110.90	95	3062.50	260.24	117.10 S	232.44 E	260.27	116.74	1.49	-1.16	-3.37
25	3182	14.90	110.80	93	3152.22	284.61	125.81 S	255.30 E	284.61	116.23	0.75	-0.75	-0.11
26	3275	13.80	111.10	93	3242.32	307.57	134.04 S	276.82 E	307.57	115.84	1.19	-1.18	0.32
27	3369	14.00	111.90	94	3333.57	330.08	142.32 S	297.83 E	330.09	115.54	0.30	0.21	0.85
28	3462	15.50	117.10	93	3423.50	353.73	152.18 S	319.34 E	353.74	115.48	2.15	1.61	5.59
29	3555	16.90	114.70	93	3512.81	379.67	163.49 S	342.68 E	379.68	115.51	1.67	1.51	-2.58
30	3649	16.50	112.40	94	3602.85	406.66	174.29 S	367.43 E	406.67	115.38	0.82	-0.43	-2.45
31	3742	15.80	114.40	93	3692.18	432.49	184.55 S	391.18 E	432.52	115.26	0.96	-0.75	2.15
32	3836	18.20	116.70	94	3782.06	459.97	196.43 S	415.95 E	460.00	115.28	2.65	2.55	2.45
33	3929	18.60	116.80	93	3870.31	489.32	209.65 S	442.16 E	489.35	115.37	0.43	0.43	0.11

