



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

July 9, 2018

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

30.005-64308

RE: Thunder Bay Fed Com 1H
10' FSL & 1650' FWL
Sec. 22, T15S, R29E
Chaves County, New Mexico

Dear Sir,

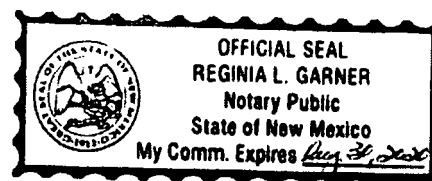
The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Chris Graham
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 9th day of July, 2018

Notary Public

Thunder Bay Federal Com 1H

MD(ftKB) Incl(deg) Azm(deg) TVD(ftKB)

335	2.99	215.79	334.85
551	1.01	207.35	550.71
926	1.58	44.14	925.67
1114	1.41	43.44	1113.6
1495	0.57	46.32	1494.54
1684	0.40	32.69	1683.54
1872	0.18	309.20	1871.54
2061	0.18	342.33	2060.53
2259	0.09	299.53	2258.53
2439	0.09	296.37	2438.53
2506	0.26	206.81	2505.53
2565	0.92	147.66	2564.53
2596	2.95	156.62	2595.51
2628	0.13	148.71	2627.5
2628	6.42	158.03	2627.5
2722	15.30	170.16	2719.73
2817	20.84	172.97	2810.01
2817	0.22	341.19	2810.01
3005	0.26	10.81	2998.01
3006	31.96	174.02	2998.96
3101	38.86	174.90	3076.34
3195	0.04	10.99	3163.3
3196	47.34	173.85	3164.19
3291	53.23	173.58	3224.87
3300	53.98	173.85	3230.21
3322	55.16	173.58	3242.96
3337	55.69	173.93	3251.48
3353	56.09	173.50	3260.45
3368	56.57	173.23	3268.76
3384	0.35	46.23	3282.3
3384	56.97	173.23	3282.3
3400	58.33	173.67	3290.86
3479	67.78	176.75	3326.62
3530	0.35	9.58	3366.59
3574	76.35	177.80	3398.73
3668	84.04	179.56	3414.73
3762	90.51	180.44	3419.19
3856	90.15	179.91	3418.65
3951	89.54	178.33	3418.91
4045	91.30	177.71	3418.22
4235	87.30	178.24	3420.54
4329	88.70	178.51	3423.82

MD(ftKB) Incl(deg) Azm(deg) TVD(ftKB)

4518	89.76	180.35	3426.36
4612	91.38	180.44	3425.42
4707	91.16	180.61	3423.32
4801	90.33	180.44	3422.1
4895	89.01	179.21	3422.64
4989	88.88	179.30	3424.37
5084	89.93	179.30	3425.36
5178	89.32	178.94	3425.97
5273	91.12	180.09	3425.61
5368	90.73	179.47	3424.07
5462	89.10	178.68	3424.21
5557	88.35	178.68	3426.33
5651	89.23	179.12	3428.31
5671	89.71	179.03	3428.5
5766	90.20	178.86	3428.57
5860	88.70	180.18	3429.47
6049	90.81	181.32	3430.28
6237	91.65	179.03	3426.24
6436	89.01	179.65	3425.1
6522	90.37	179.47	3425.56
6805	89.80	178.33	3425.14
6899	92.18	179.03	3423.52
7088	90.24	178.24	3419.53
7373	89.85	180.70	3419.31
7562	90.64	180.97	3418.5
7942	90.95	177.45	3413.22
8037	90.07	178.59	3412.38
8132	89.63	179.12	3412.63
8284	91.21	180.35	3411.51

EOF