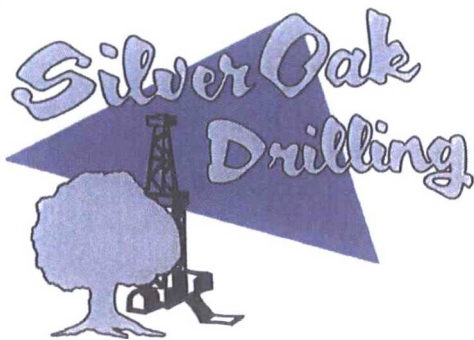




PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

December 14, 2017

Manzano LLC
PO Box 1737
Roswell, NM 88202-1737

RE: Rag Mama 30 19 Fee 001H
25' FSL & 528' FEL
Sec. 30, T9S, R35E
Lea County, New Mexico

Dear Sir,

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

Very truly yours,

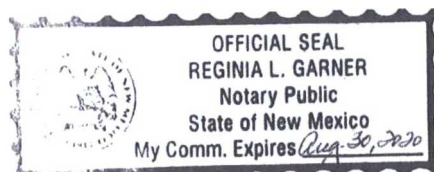
A handwritten signature in black ink that appears to read "Graham".

Chris Graham
Asst. Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 14th day of December, 2017.

A handwritten signature in black ink that appears to read "Regina L. Garner".

Notary Public

RAG MAMA 30 19 FEE 1H

Date	Depth	Deviation	Direction	TVD
11/30/2017	230	0.20	267.00	
11/30/2017	347	0.30	271.00	
11/30/2017	447	0.90	242.50	
11/30/2017	701	0.70	232.50	
11/30/2017	864	0.30	161.50	
11/30/2017	959	0.70	174.50	
11/30/2017	1121	0.20	326.41	
11/30/2017	1612	0.70	217.50	
11/30/2017	1705	1.40	209.50	
12/1/2017	1798	0.60	199.50	
12/1/2017	1891	0.80	234.00	
12/1/2017	1934	0.20	328.00	
12/1/2017	2027	0.80	247.00	
12/1/2017	2119	0.50	254.00	
12/1/2017	2268	0.50	181.50	
12/3/2017	2494	0.20	266.50	2493.00
12/3/2017	2587	0.40	263.20	2586.00
12/3/2017	2680	1.60	41.40	2679.00
12/3/2017	2774	1.50	9.40	2773.00
12/3/2017	2867	1.50	13.10	2866.00
12/3/2017	2961	1.70	347.30	2960.00
12/3/2017	3053	2.20	320.90	3052.00
12/3/2017	3147	2.30	332.30	3146.00
12/3/2017	3240	0.90	55.80	3239.00
12/3/2017	3334	1.20	120.40	3333.00
12/3/2017	3428	0.70	143.80	3427.00
12/3/2017	3522	0.60	327.90	3521.00
12/3/2017	3614	0.70	312.40	3613.00
12/3/2017	3707	0.40	328.80	3706.00
12/3/2017	3893	1.10	266.30	3892.00
12/3/2017	3986	1.10	247.00	4043.00
12/3/2017	4079	1.30	250.30	4078.00
12/3/2017	4172	1.50	263.70	4171.00
12/3/2017	4267	1.00	340.30	4266.00
12/4/2017	4484	30.85	19.40	4477.00
12/4/2017	4516	24.10	20.60	4507.00
12/4/2017	4547	27.30	20.10	4535.00
12/4/2017	4578	30.60	19.20	4562.00
12/4/2017	4609	33.50	17.00	4588.00
12/4/2017	4640	26.50	15.90	4613.00
12/4/2017	4794	53.00	11.00	4722.00
12/4/2017	4825	51.20	8.50	4740.00
12/4/2017	4856	59.80	5.90	4757.00

Date	Depth	Deviation	Direction	TVD
12/4/2017	4887	62.30	3.30	4772.00
12/4/2017	4918	65.80	0.50	4785.00
12/4/2017	4949	65.00	0.00	4797.00
12/5/2017	5025	78.40	1.20	4818.00
12/5/2017	5056	81.10	359.40	4823.00
12/5/2017	5088	82.40	357.30	4828.00
12/5/2017	5119	84.00	356.40	4831.00
12/5/2017	5150	86.30	356.70	4834.00
12/5/2017	5181	87.70	356.40	4836.00
12/5/2017	5218	89.50	357.80	4836.00
12/5/2017	5243	90.70	357.50	4836.00
12/5/2017	5305	91.00	357.50	4835.00
12/5/2017	5399	90.80	358.10	4834.00
12/5/2017	5493	89.10	356.80	4835.00
12/5/2017	5586	88.60	356.30	4836.00
12/5/2017	5680	90.60	357.50	
12/6/2017	5868	89.60	357.20	4837.00
12/6/2017	5961	89.70	357.80	4838.00
12/6/2017	6055	90.10	358.60	4838.00
12/6/2017	6148	89.20	358.30	4839.00
12/6/2017	6242	89.80	359.60	4840.00
12/6/2017	6335	91.90	0.90	4838.00
12/6/2017	6804	89.50	359.80	4631.00
12/6/2017	6897	90.50	0.40	4831.00
12/6/2017	6991	89.30	359.90	4831.00
12/6/2017	7085	91.30	2.30	4831.00
12/6/2017	7178	91.50	2.40	4828.00
12/6/2017	7273	89.90	1.10	4827.00
12/6/2017	7836	91.10	359.90	4825.00
12/7/2017	7929	91.10	0.00	4823.00
12/7/2017	8459	89.80	358.30	4825.00
12/7/2017	8645	90.00	358.90	4820.00
12/7/2017	8926	90.70	1.50	4816.00
12/7/2017	9392	89.90	1.70	4698.00
12/8/2017	9672	90.20	0.50	4812.00
12/8/2017	10141	89.70	359.30	4815.00
12/8/2017	10518	90.50	359.90	4815.00
12/8/2017	10707	90.90	0.60	4813.00
12/8/2017	11180	91.20	1.00	4809.00
12/8/2017	11460	89.80	359.20	4806.00
12/9/2017	11555	90.60	1.80	4806.00
12/9/2017	11931	90.40	1.70	4806.00
12/9/2017	12107	90.60	1.90	4803.00