



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

January 31, 2017

COG, LLC
One Concho Center
600 W. Illinois Ave.
Midland, TX 79701

RE: Carmen 3 Fed Com 13H
1650' FNL & 150' FEL
Sec. 3, T17S, R30E
Eddy County, New Mexico

Dear Sir,

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

Very truly yours,

Chris Graham
Asst. Operations Manager

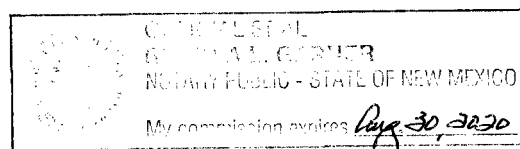
State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 31st day of January, 2017.

NM OIL CONSERVATION
ARTESIA DISTRICT

MAY 24 2017

RECEIVED

Notary Public

CARMEN 3 FED COM #13H

Date	Depth	Deviation	Direction	TVD
1/14/2017	204	0.90	0.00	0.00
1/14/2017	343	1.30	0.00	0.00
1/16/2017	487	1.00	0.00	0.00
1/16/2017	762	0.70	0.00	0.00
1/16/2017	920	1.00	0.00	0.00
1/17/2017	1179	0.90	0.00	0.00
1/19/2017	1503	0.70	88.30	0.00
1/20/2017	1594	2.00	91.70	1593.84
1/20/2017	1685	2.20	92.60	1684.77
1/20/2017	1776	2.10	93.20	1775.00
1/20/2017	1867	3.10	93.60	1866.00
1/20/2017	2143	2.50	89.90	2142.20
1/20/2017	2234	2.20	85.90	2233.20
1/20/2017	2325	2.00	85.90	2324.10
1/20/2017	2418	3.20	92.80	2417.00
1/20/2017	2509	3.00	93.00	2507.90
1/20/2017	2753	3.20	103.30	2751.50
1/20/2017	2848	3.20	104.00	2846.42
1/20/2017	2943	3.00	103.80	2941.28
1/21/2017	3038	3.00	103.90	3036.15
1/21/2017	3133	3.00	103.00	3131.02
1/21/2017	3228	3.00	103.30	3225.59
1/21/2017	3323	3.00	105.40	3320.70
1/21/2017	3418	2.90	107.10	0.00
1/21/2017	3512	2.90	108.80	0.00
1/21/2017	3607	2.80	109.50	0.00
1/21/2017	3702	2.70	111.60	0.00
1/21/2017	3797	2.60	110.60	0.00
1/21/2017	4018	0.40	121.50	4015.00
1/21/2017	4050	0.20	120.80	4047.00
1/21/2017	4082	0.80	270.70	4079.05
1/21/2017	4113	3.00	268.30	4110.30
1/21/2017	4145	6.10	268.10	4141.93
1/21/2017	4208	13.00	269.50	4204.00
1/22/2017	4272	20.30	272.70	4265.30
1/22/2017	4424	31.40	269.90	4349.80
1/22/2017	4461	42.80	268.00	4425.00
1/22/2017	4556	46.60	268.10	4492.00
1/22/2017	4619	46.50	269.10	0.00
1/22/2017	4651	46.50	269.60	0.00
1/22/2017	4683	47.50	269.30	0.00
1/22/2017	4935	72.70	271.00	0.00

Date	Depth	Deviation	Direction	TVD
1/22/2017	4967	76.00	270.30	0.00
1/22/2017	5030	81.00	271.00	4726.10
1/22/2017	5062	83.20	271.00	4730.50
1/22/2017	5093	86.70	270.40	4753.20
1/23/2017	5255	91.60	269.80	4731.80
1/23/2017	5350	91.80	270.30	0.00
1/23/2017	5445	91.30	270.30	0.00
1/23/2017	5540	90.80	270.50	0.00
1/23/2017	5824	90.50	271.10	4720.40
1/23/2017	5919	89.40	269.20	4720.50
1/23/2017	6014	89.40	269.50	4721.50
1/23/2017	6109	88.90	269.60	4722.90
1/24/2017	6204	90.20	268.60	4723.70
1/24/2017	6299	89.20	268.10	4724.00
1/24/2017	6393	90.30	269.00	4724.60
1/24/2017	6488	90.80	269.60	4723.70
1/24/2017	6583	90.40	269.60	0.00
1/24/2017	6678	90.20	270.10	0.00
1/24/2017	6773	90.30	270.30	0.00
1/24/2017	6868	89.50	270.50	0.00
1/24/2017	6962	90.50	269.60	4721.90
1/24/2017	7057	90.90	269.90	4720.70
1/24/2017	7152	90.50	270.30	4719.60
1/24/2017	7247	92.40	269.70	4717.20
1/25/2017	7342	90.90	268.80	4714.00
1/25/2017	7457	89.30	268.00	6714.00
1/25/2017	7531	90.40	269.40	4714.50
1/25/2017	7626	90.90	270.30	4713.50
1/25/2017	7721	90.10	270.00	0.00
1/25/2017	7816	89.80	270.30	0.00
1/25/2017	7911	91.20	269.80	4711.90
1/25/2017	8005	91.10	270.10	4710.00
1/25/2017	8100	91.30	270.30	4708.00
1/26/2017	8290	90.10	269.20	0.00
1/26/2017	8384	90.80	268.40	4704.60
1/26/2017	8479	90.40	268.30	0.00
1/26/2017	8573	91.10	269.50	0.00
1/26/2017	8668	91.40	269.80	0.00
1/26/2017	8763	91.30	270.10	0.00
1/26/2017	8857	91.20	270.60	0.00
1/26/2017	8952	90.50	268.80	4694.60
1/26/2017	9047	89.30	268.50	4694.80
1/27/2017	9141	91.00	268.00	4694.50
1/27/2017	9235	90.70	267.90	4693.10

EOF