



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

1542391

NM OIL CONSERVATION
ARTESIA DISTRICT

MAY 26 2015

RECEIVED

March 9, 2015

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

RE: Ridge Nose Federal Com 1H
200' FSL & 2310' FEL
Sec. 30, T26S, R29E
Eddy County, New Mexico

Dear Sir,

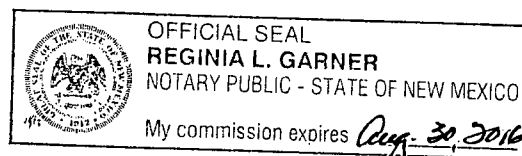
The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Chris Graham
Drilling Superintendent

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 9th day of March, 2015.

Notary Public

RIDGE NOSE FED COM #1-H

Date	Depth	Deviation	Direction	TVD	Horiz Disp
2/11/2015	149	0.20	0.00	0.00	0.00
2/11/2015	378	0.90	0.00	0.00	0.00
2/13/2015	605	0.30	0.00	0.00	0.00
2/13/2015	970	0.70	0.00	0.00	0.00
2/13/2015	1122	1.10	0.00	0.00	0.00
2/13/2015	1355	1.10	0.00	0.00	0.00
2/13/2015	1509	1.10	0.00	0.00	0.00
2/14/2015	1760	1.80	0.00	0.00	0.00
2/14/2015	1859	1.90	0.00	0.00	0.00
2/14/2015	1950	3.00	0.00	0.00	0.00
2/14/2015	1974	3.00	0.00	0.00	0.00
2/14/2015	1976	3.10	56.00	1975.00	30.11
2/14/2015	2067	3.20	67.20	2065.90	32.49
2/14/2015	2098	3.30	62.10	2096.85	33.25
2/15/2015	2128	2.80	61.40	2126.00	34.10
2/15/2015	2158	1.80	49.60	2156.00	34.68
2/15/2015	2189	1.10	50.50	2187.00	35.20
2/15/2015	2439	1.30	103.80	2437.00	0.00
2/15/2015	2502	1.30	250.50	2500.00	0.00
2/15/2015	2534	1.60	251.40	2532.00	0.00
2/17/2015	2752	0.50	0.00	0.00	0.00
2/17/2015	2902	0.60	0.00	0.00	0.00
2/17/2015	3306	0.30	0.00	0.00	0.00
2/18/2015	3756	0.01	0.00	0.00	0.00
2/18/2015	4191	1.10	0.00	0.00	0.00
2/18/2015	4690	0.40	0.00	0.00	0.00
2/18/2015	5172	2.30	0.00	0.00	0.00
2/18/2015	5235	2.10	0.00	0.00	0.00
2/19/2015	5326	1.50	159.40	5325.00	65.13
2/19/2015	5358	0.90	163.60	5357.00	65.76
2/19/2015	5389	0.60	165.30	5388.00	66.15
2/19/2015	5597	1.00	150.50	5578.00	0.00
2/20/2015	5696	7.20	72.30	5695.00	15.94
2/20/2015	5727	4.00	20.40	5726.00	14.82
2/20/2015	5759	7.70	16.70	5757.00	11.72
2/20/2015	5822	14.90	16.80	5819.00	0.00
2/20/2015	5981	33.10	8.80	5964.00	0.00
2/20/2015	6044	39.30	5.80	6014.00	0.00
2/20/2015	6075	42.10	5.50	6038.00	0.00
2/20/2015	6202	52.40	0.20	6124.00	0.00
2/21/2015	6297	57.80	359.00	6178.00	290.99
2/21/2015	6329	61.80	360.00	6194.00	318.64

Date	Depth	Deviation	Direction	TVD	Horiz Disp
2/21/2015	6360	64.80	0.50	6208.00	340.40
2/21/2015	6516	74.20	5.00	6264.00	0.00
2/21/2015	6609	79.50	4.20	6285.00	0.00
2/21/2015	6704	85.40	3.10	6297.00	0.00
2/21/2015	6736	87.40	2.80	6299.00	0.00
2/22/2015	6767	88.50	2.60	6300.00	738.75
2/22/2015	6797	89.30	2.70	6300.00	768.72
2/22/2015	6832	89.40	2.50	6301.00	803.69
2/22/2015	6985	88.30	0.80	6305.00	0.00
2/22/2015	7168	88.80	0.30	6309.00	0.00
2/22/2015	7260	88.70	359.80	6311.00	0.00
2/22/2015	7443	90.10	359.90	6311.00	0.00
2/22/2015	7659	90.00	359.50	6312.00	0.00
2/23/2015	7664	89.80	359.10	6312.00	1635.80
2/23/2015	7760	89.20	359.30	6313.00	1731.46
2/23/2015	7854	88.60	357.70	6315.00	1825.43
2/23/2015	8045	88.70	0.10	6319.00	0.00
2/23/2015	8140	89.80	359.70	6320.00	0.00
2/23/2015	8235	90.50	359.70	6320.00	0.00
2/23/2015	8330	90.50	359.70	6319.00	0.00
2/23/2015	8518	89.30	359.40	6322.00	0.00
2/24/2015	8709	88.80	358.60	6323.00	268.27
2/24/2015	8804	89.40	358.10	632.50	2775.20
2/24/2015	8899	89.90	358.60	6325.00	2870.45
2/24/2015	9089	90.20	358.90	6326.00	0.00
2/24/2015	9185	89.10	359.00	6327.00	0.00
2/24/2015	9375	85.80	356.70	6335.00	0.00
2/24/2015	9470	87.20	358.00	0.00	0.00
2/24/2015	9565	87.60	358.50	0.00	0.00
2/25/2015	9661	91.00	0.40	6346.00	0.00
2/25/2015	9755	92.10	0.20	6344.00	0.00
2/25/2015	9942	91.00	0.40	6340.00	0.00
2/25/2015	10035	91.10	1.30	6339.00	0.00
2/25/2015	10129	90.70	0.90	6337.00	0.00
2/25/2015	10223	88.80	0.90	6338.00	0.00
2/26/2015	10410	90.20	359.70	6340.00	0.00
2/26/2015	10598	88.40	0.10	6341.00	0.00
2/27/2015	10724	88.10	359.90	6345.00	0.00
2/27/2015	10818	88.10	0.10	6348.00	0.00
2/27/2015	10912	88.30	359.70	6351.00	0.00
2/27/2015	11006	87.80	359.60	6354.00	0.00
2/28/2015	11099	88.40	1.20	6358.00	0.00
2/28/2015	11193	89.50	2.00	6359.00	0.00
2/28/2015	11287	89.50	1.80	6360.00	0.00
2/28/2015	11382	89.90	1.40	6361.00	0.00

Date	Depth	Deviation	Direction	TVD	Horiz Disp
2/28/2015	11476	90.50	1.30	6360.70	0.00
2/28/2015	11570	89.70	0.70	6360.00	0.00
3/1/2015	11663	90.10	359.80	6360.00	5632.61
3/1/2015	11757	88.60	3593.00	6361.00	5726.59
3/1/2015	11851	89.20	358.70	6363.00	0.00
3/1/2015	11946	89.50	358.20	0.00	0.00
3/1/2015	11946	89.50	358.20	6364.65	5915.49
3/1/2015	12039	90.00	357.80	6365.05	6008.42
3/2/2015	12133	89.40	365.60	6365.00	6102.28
3/2/2015	12228	88.10	355.40	6367.00	6197.05
3/2/2015	12332	88.00	355.70	6371.00	0.00
3/4/2015	12413	87.30	356.60	6774.00	3481.42
3/4/2015	12601	89.20	358.50	6380.00	0.00
3/4/2015	12695	89.90	357.90	6380.78	6663.07
3/4/2015	12788	90.20	357.60	6380.70	6755.97
3/4/2015	12883	90.90	357.20	6379.79	6850.85
3/5/2015	12974	91.10	356.80	6378.00	6941.68



March 2, 2015

Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

NM OIL CONSERVATION
ARTESIA DISTRICT
MAY 26 2015

Attn: Kanicia Castillo

RECEIVED

RE: Ridge Nose Federal Com 1H

Please find enclosed a copy of the survey from 0' to 5570' ran on the above referenced well.

Sincerely,

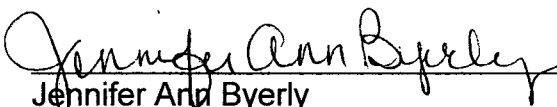

Keith Havelka
Operations

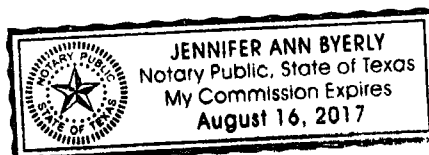
STATE OF TEXAS §

§

COUNTY OF NUECES §

This instrument was acknowledged before me on the 2 day of March,
A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: Cog Operating LLC
Lease/Well: Ridge Nose Federal Com /1H

Rig Name: Silver Oak 1
State/County: New Mexico /Eddy
Latitude: 32.00, Longitude: -104.02
GRID North is 0.16 Degrees East of True North
VS-Azi: 0.29 Degrees



NM OIL CONSERVATION
ARTESIA DISTRICT
MAY 26 2015
RECEIVED

Depth Reference : 17 ft
DRILLOG HA GYRO SURVEY CALCULATIONS
Filename: survey.ut
Minimum Curvature Method
Report Date/Time: 3/2/2015 / 16:28
VES Survey International
(432) 563-5444
West Texas
Surveyor: Javier Estrada
Ridge Nose Federal Com 1H / API 30-015-42391

NM OIL CONSERVATION
ARTESIA DISTRICT
MAY 26 2015
RECEIVED

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.56	94.64	100.00	-0.04	0.49	-0.04	0.49	94.64	0.56
200.00	1.04	101.89	199.99	-0.27	1.86	-0.26	1.88	98.12	0.49
300.00	0.88	111.76	299.97	-0.74	3.46	-0.72	3.54	102.03	0.23
400.00	0.58	117.36	399.97	-1.25	4.62	-1.23	4.79	105.18	0.31
500.00	0.56	108.38	499.96	-1.64	5.53	-1.61	5.77	106.51	0.09
600.00	0.58	108.35	599.96	-1.95	6.47	-1.92	6.76	106.78	0.02
700.00	0.56	97.68	699.95	-2.17	7.44	-2.14	7.75	106.31	0.11
800.00	0.64	131.15	799.95	-2.61	8.34	-2.56	8.74	107.35	0.35
900.00	0.77	124.83	899.94	-3.35	9.31	-3.31	9.89	109.82	0.15
1000.00	0.72	169.27	999.93	-4.36	9.97	-4.31	10.88	113.59	0.56
1100.00	0.94	197.61	1099.92	-5.76	9.84	-5.71	11.40	120.32	0.46
1200.00	0.97	220.29	1199.91	-7.19	9.05	-7.14	11.55	128.46	0.38
1300.00	1.01	280.53	1299.89	-7.67	7.63	-7.63	10.82	135.16	1.00
1400.00	0.58	300.60	1399.89	-7.25	6.32	-7.22	9.62	138.91	0.51
1500.00	0.07	35.19	1499.88	-6.95	5.92	-6.92	9.13	139.55	0.59
1600.00	1.21	67.62	1599.88	-6.50	6.94	-6.46	9.50	133.14	1.15
1700.00	1.37	64.64	1699.85	-5.58	9.00	-5.54	10.59	121.82	0.18
1800.00	1.81	51.57	1799.81	-4.09	11.32	-4.03	12.03	109.85	0.57

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	2.39	50.87	1899.74	-1.79	14.17	-1.72	14.29	97.19	0.58
2000.00	3.33	51.38	1999.62	1.34	18.06	1.43	18.11	85.76	0.94
2100.00	3.23	53.60	2099.45	4.82	22.60	4.94	23.11	77.95	0.16
2200.00	0.72	57.63	2199.39	6.83	25.40	6.96	26.30	74.94	2.51
2300.00	0.96	104.96	2299.38	6.95	26.74	7.09	27.63	75.42	0.71
2400.00	1.71	116.21	2399.35	6.08	28.89	6.22	29.52	78.12	0.79
2500.00	1.12	251.92	2499.34	5.11	29.30	5.26	29.74	80.10	2.63
2600.00	1.23	252.28	2599.31	4.48	27.34	4.62	27.71	80.69	0.11
2700.00	0.89	259.13	2699.30	4.01	25.55	4.14	25.87	81.08	0.36
2800.00	0.89	228.98	2799.29	3.35	24.20	3.47	24.43	82.12	0.46
2900.00	0.91	271.46	2899.27	2.86	22.82	2.97	23.00	82.86	0.65
3000.00	0.53	278.69	2999.27	2.95	21.57	3.06	21.77	82.21	0.38
3100.00	0.42	293.81	3099.26	3.17	20.77	3.27	21.01	81.33	0.17
3200.00	0.35	258.94	3199.26	3.26	20.14	3.36	20.40	80.81	0.24
3300.00	0.25	220.25	3299.26	3.04	19.70	3.14	19.94	81.24	0.22
3400.00	0.34	225.18	3399.26	2.66	19.35	2.76	19.54	82.16	0.10
3500.00	0.10	249.95	3499.26	2.42	19.06	2.52	19.22	82.75	0.26
3600.00	0.33	196.22	3599.26	2.12	18.90	2.21	19.02	83.61	0.29
3700.00	0.39	207.11	3699.25	1.53	18.66	1.63	18.73	85.31	0.09
3800.00	0.19	202.44	3799.25	1.07	18.44	1.17	18.48	86.67	0.20
3900.00	0.17	64.20	3899.25	0.98	18.51	1.08	18.54	86.96	0.33
4000.00	0.16	11.65	3999.25	1.18	18.67	1.28	18.71	86.38	0.14
4100.00	0.21	27.45	4099.25	1.48	18.79	1.57	18.84	85.50	0.07
4200.00	0.06	98.68	4199.25	1.64	18.93	1.73	19.00	85.06	0.20
4300.00	0.40	159.43	4299.25	1.30	19.10	1.40	19.15	86.11	0.37
4400.00	0.68	107.73	4399.25	0.79	19.79	0.89	19.81	87.71	0.54
4500.00	0.59	127.48	4499.24	0.30	20.77	0.40	20.77	89.18	0.24
4600.00	0.83	103.33	4599.23	-0.18	21.88	-0.07	21.88	90.48	0.38
4700.00	0.56	133.00	4699.23	-0.68	22.94	-0.56	22.95	91.70	0.44
4800.00	0.49	140.60	4799.22	-1.34	23.57	-1.22	23.61	93.25	0.10
4900.00	0.79	148.18	4899.22	-2.26	24.20	-2.13	24.31	95.33	0.32
5000.00	1.18	160.39	4999.20	-3.82	24.92	-3.69	25.21	98.71	0.44
5100.00	1.28	156.79	5099.18	-5.82	25.70	-5.69	26.35	102.75	0.13
5200.00	1.63	156.55	5199.15	-8.15	26.71	-8.02	27.93	106.97	0.35
5300.00	1.23	162.18	5299.11	-10.47	27.60	-10.33	29.52	110.78	0.43
5400.00	0.62	165.38	5399.10	-12.02	28.07	-11.87	30.53	113.18	0.61
5500.00	0.91	158.03	5499.09	-13.28	28.50	-13.14	31.44	114.98	0.31
5570.00	1.08	147.18	5569.08	-14.35	29.07	-14.20	32.42	116.28	0.36



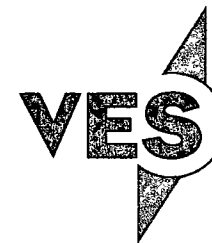
VES Survey International

(432) 563-5444

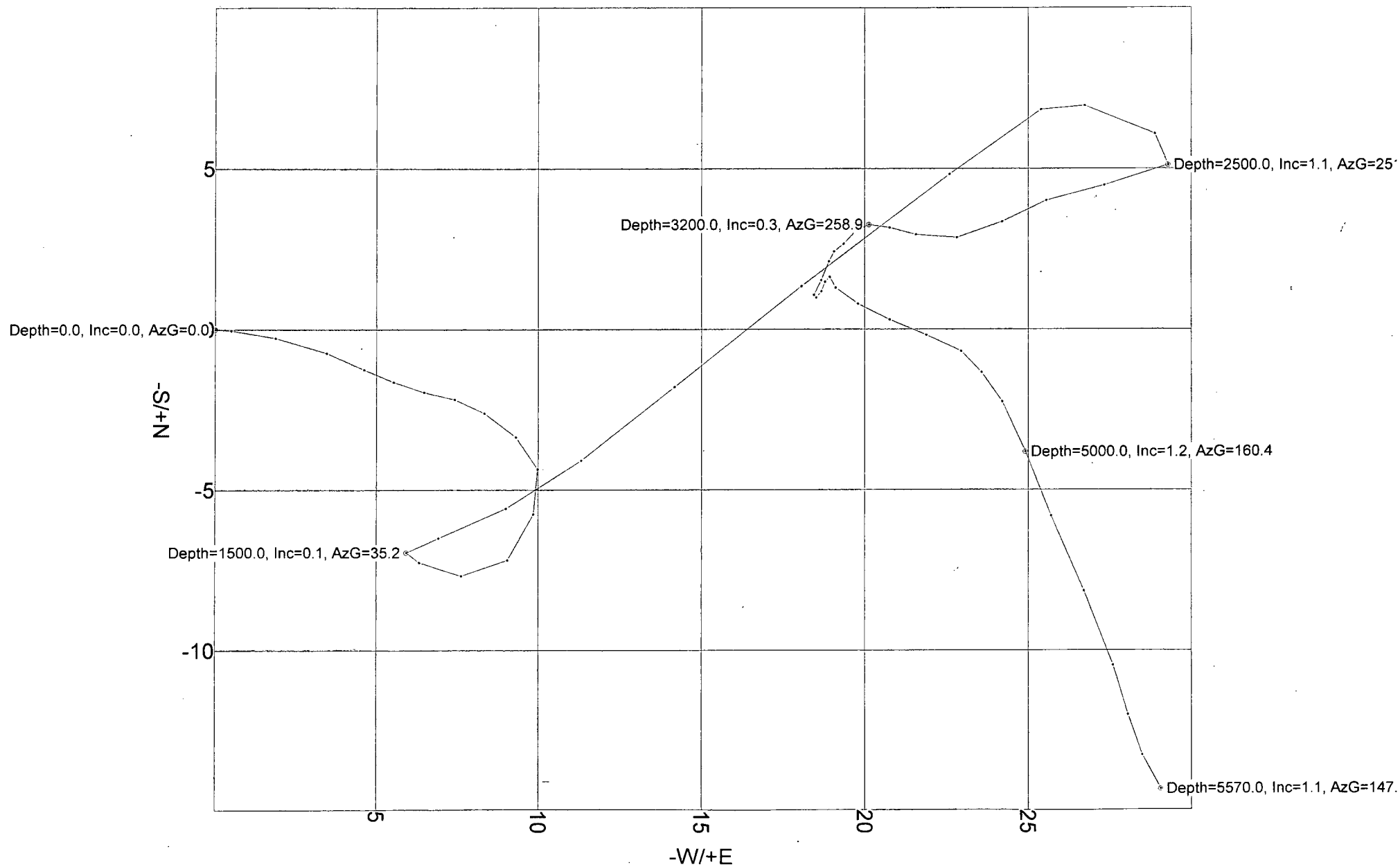
West Texas

Surveyor: Javier Estrada

Ridge Nose Federal Com 1H / API 30-015-42391



SURVEY
INTERNATIONAL



VES Survey Date: 2/19/2015



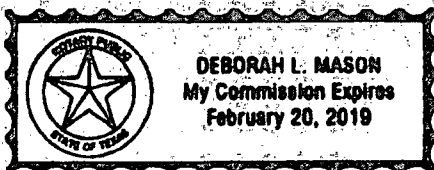
State of New Mexico
County of Lea

I, Donald D. Mason, certify that: I am employed by Terra Directional Services LLC; that I did on the day(s) of 03/16/2015 through 03/21/2015 conduct or supervise the taking of a MWD survey from a depth of 1265 feet to a depth 5342 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Terra Directional Services LLC; that I am authorized and qualified to make this report; that this survey was conducted at the request of Concho Oil & Gas for the Macho Nacho 7 State SWD 1 Well API 30-025-42463 in Lea County, New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Terra Directional Services LLC.

Donald D. Mason
President

State of Texas
County of Burnet

Before me, a notary public, on this day personally appeared Donald D Mason, known to me to be the person whose name is subscribed to the foregoing document and, being by me first duly sworn, declared that the statements therein contained are true and correct.



Notary Public's Signature



Customer Name: COG
Well Name: Ridge Nose Federal Com #1H
API Number: 30-015-42391
County / Parish: Eddy Co, NM

M.W.D. Operator: Justin Campos
Directional Driller: John Overton
Total Magnetic Correction: 7.17
Job #: NM-515

Vertical Section: 0.29

Tie In Survey(s) Provided By:

VES

	Meas. Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N / -S	+E / -W	Dist.	Angle	DLS
Tie - In										
0	5570.00	1.08	147.18	5569.08	-14.20	-14.35	29.07	32.42	116.28	0.36
1	5636.00	1.20	147.60	5635.07	-15.31	-15.46	29.78	33.55	117.43	0.18
2	5664.00	1.20	141.60	5663.06	-15.78	-15.93	30.12	34.07	117.88	0.45
3	5696.00	1.20	72.30	5695.06	-15.94	-16.09	30.64	34.61	117.71	4.26
4	5727.00	4.00	20.40	5726.02	-14.82	-14.98	31.33	34.73	115.56	10.95
5	5759.00	7.70	16.70	5757.85	-11.72	-11.88	32.34	34.45	110.18	11.62
6	5791.00	11.30	15.10	5789.41	-6.63	-6.80	33.77	34.45	101.38	11.28
7	5822.00	14.90	16.80	5819.60	0.13	-0.05	35.71	35.71	90.08	11.68
8	5854.00	18.80	18.90	5850.22	8.97	8.77	38.57	39.56	77.19	12.33
9	5886.00	22.20	17.10	5880.19	19.64	19.43	42.02	46.30	65.18	10.80
10	5918.00	25.90	14.20	5909.40	32.22	31.99	45.52	55.63	54.90	12.13
11	5950.00	29.80	11.90	5937.69	46.80	46.55	48.87	67.49	46.39	12.64
12	5981.00	33.10	8.80	5964.14	62.72	62.46	51.76	81.12	39.65	11.85
13	6012.00	36.60	6.70	5989.57	80.28	80.01	54.13	96.60	34.08	11.93
14	6044.00	39.30	5.80	6014.80	99.85	99.57	56.27	114.37	29.47	8.61
15	6075.00	42.10	5.50	6038.30	119.98	119.68	58.26	133.11	25.95	9.05
16	6107.00	44.70	5.90	6061.55	141.86	141.56	60.44	153.92	23.12	8.17
17	6138.00	47.40	6.40	6083.07	164.06	163.75	62.83	175.39	20.99	8.79
18	6170.00	50.50	3.70	6104.08	188.11	187.78	64.94	198.69	19.08	11.59
19	6202.00	52.40	0.20	6124.03	213.11	212.78	65.79	222.72	17.18	10.41
20	6234.00	54.40	359.40	6143.10	238.80	238.47	65.69	247.35	15.40	6.56
21	6265.00	55.80	359.20	6160.84	264.22	263.89	65.38	271.87	13.92	4.55
22	6297.00	57.80	359.00	6178.36	290.99	290.67	64.96	297.84	12.60	6.27
23	6329.00	61.80	360.00	6194.46	318.64	318.32	64.72	324.83	11.49	12.79
24	6360.00	64.80	0.50	6208.38	346.33	346.01	64.85	352.03	10.61	9.78
25	6392.00	66.20	1.90	6221.65	375.44	375.12	65.46	380.79	9.90	5.92
26	6424.00	67.60	2.90	6234.21	404.86	404.52	66.69	409.99	9.36	5.23
27	6455.00	69.90	3.90	6245.44	433.70	433.36	68.41	438.73	8.97	8.01
28	6485.00	72.10	4.80	6255.21	462.00	461.64	70.56	467.01	8.69	7.86
29	6516.00	74.20	5.00	6264.20	491.57	491.20	73.10	496.61	8.46	6.80
30	6545.00	75.90	4.90	6271.68	519.49	519.12	75.51	524.58	8.28	5.87
31	6577.00	77.80	4.50	6278.96	550.56	550.17	78.07	555.68	8.08	6.06
32	6609.00	79.50	4.20	6285.25	581.85	581.45	80.44	586.99	7.88	5.39
33	6641.00	81.90	3.80	6290.42	613.36	612.95	82.65	618.50	7.68	7.60
34	6672.00	84.00	3.30	6294.23	644.08	643.66	84.55	649.19	7.48	6.96
35	6704.00	85.40	3.10	6297.18	675.90	675.47	86.33	680.97	7.28	4.42
36	6736.00	87.40	2.80	6299.19	707.80	707.36	87.97	712.81	7.09	6.32
37	6770.00	88.50	2.60	6300.41	741.75	741.30	89.57	746.70	6.89	3.29
38	6800.00	89.30	2.70	6300.99	771.72	771.27	90.96	776.61	6.73	2.69
39	6832.00	89.40	2.50	6301.35	803.69	803.23	92.41	808.53	6.56	0.70
40	6863.00	88.90	1.90	6301.81	834.67	834.21	93.60	839.44	6.40	2.52
41	6894.00	88.10	1.40	6302.62	865.65	865.18	94.49	870.33	6.23	3.04
42	6985.00	88.30	0.80	6305.48	956.59	956.12	96.24	960.95	5.75	0.69
43	7077.00	88.90	0.20	6307.73	1048.57	1048.09	97.04	1052.57	5.29	0.92
44	7168.00	88.80	0.30	6309.55	1139.55	1139.07	97.44	1143.23	4.89	0.16

45	7260.00	88.70	359.80	6311.56	1231.52	1231.05	97.52	1234.90	4.53	0.55
46	7352.00	90.40	359.30	6312.28	1323.51	1323.04	96.80	1326.57	4.18	1.93
47	7443.00	90.10	359.90	6311.89	1414.50	1414.03	96.16	1417.30	3.89	0.74
48	7505.00	89.50	359.80	6312.10	1476.50	1476.03	96.00	1479.15	3.72	0.98
49	7569.00	90.00	359.50	6312.38	1540.49	1540.03	95.61	1542.99	3.55	0.91
50	7664.00	89.80	359.10	6312.55	1635.48	1635.02	94.45	1637.75	3.31	0.47
51	7760.00	89.20	359.30	6313.38	1731.46	1731.01	93.11	1733.51	3.08	0.66
52	7854.00	88.60	359.70	6315.19	1825.43	1824.99	92.29	1827.32	2.89	0.77
53	7950.00	89.00	0.80	6317.20	1921.41	1920.96	92.71	1923.20	2.76	1.22
54	8045.00	88.70	0.10	6319.11	2016.39	2015.94	93.45	2018.11	2.65	0.80
55	8140.00	89.80	359.70	6320.35	2111.38	2110.93	93.29	2112.99	2.53	1.23
56	8235.00	90.50	359.70	6320.10	2206.37	2205.93	92.79	2207.88	2.41	0.74
57	8330.00	90.50	359.70	6319.27	2301.36	2300.92	92.29	2302.77	2.30	0.00
58	8424.00	88.90	0.20	6319.76	2395.36	2394.92	92.21	2396.69	2.20	1.78
59	8518.00	89.30	359.40	6321.24	2489.34	2488.91	91.88	2490.60	2.11	0.95
60	8613.00	89.40	359.10	6322.32	2584.32	2583.89	90.64	2585.48	2.01	0.33
61	8709.00	88.80	358.60	6323.83	2680.27	2679.86	88.71	2681.33	1.90	0.81
62	8804.00	89.40	358.10	6325.32	2775.21	2774.81	85.98	2776.14	1.77	0.82
63	8899.00	89.90	358.60	6325.90	2870.15	2869.77	83.24	2870.97	1.66	0.74
64	8994.00	89.60	359.00	6326.31	2965.12	2964.74	81.25	2965.86	1.57	0.53
65	9089.00	90.20	358.90	6326.48	3060.09	3059.73	79.51	3060.76	1.49	0.64
66	9185.00	89.10	359.00	6327.07	3156.06	3155.71	77.75	3156.67	1.41	1.15
67	9280.00	87.50	358.40	6329.88	3250.98	3250.64	75.60	3251.52	1.33	1.80
68	9375.00	85.80	356.70	6335.44	3345.70	3345.38	71.55	3346.15	1.23	2.53
69	9470.00	87.20	358.00	6341.24	3440.40	3440.10	67.16	3440.76	1.12	2.01
70	9565.00	87.60	358.50	6345.54	3535.24	3534.96	64.26	3535.54	1.04	0.67
71	9661.00	91.00	0.40	6346.72	3631.20	3630.93	63.34	3631.48	1.00	4.06
72	9755.00	92.10	0.20	6344.17	3725.17	3724.89	63.84	3725.44	0.98	1.19
73	9848.00	90.50	0.60	6342.06	3818.14	3817.86	64.49	3818.40	0.97	1.77
74	9942.00	91.00	0.40	6340.83	3912.13	3911.85	65.31	3912.39	0.96	0.57
75	10035.00	91.10	1.30	6339.13	4005.11	4004.82	66.68	4005.38	0.95	0.97
76	10129.00	90.70	0.90	6337.65	4099.09	4098.79	68.49	4099.36	0.96	0.60
77	10223.00	88.80	0.90	6338.06	4193.08	4192.78	69.97	4193.36	0.96	2.02
78	10316.00	89.10	0.50	6339.77	4286.06	4285.75	71.10	4286.34	0.95	0.54
79	10410.00	90.20	359.70	6340.34	4380.05	4379.75	71.27	4380.33	0.93	1.45
80	10504.00	90.00	359.50	6340.18	4474.05	4473.75	70.61	4474.30	0.90	0.30
81	10598.00	88.40	0.10	6341.49	4568.03	4567.73	70.28	4568.27	0.88	1.82
82	10662.00	88.00	0.40	6343.50	4632.00	4631.70	70.56	4632.24	0.87	0.78
83	10724.00	88.10	359.90	6345.61	4693.96	4693.66	70.72	4694.20	0.86	0.82
84	10818.00	88.10	0.10	6348.73	4787.91	4787.61	70.72	4788.13	0.85	0.21
85	10912.00	88.30	359.70	6351.68	4881.86	4881.57	70.56	4882.08	0.83	0.48
86	11006.00	87.80	359.60	6354.88	4975.80	4975.51	69.98	4976.00	0.81	0.54
87	11100.00	88.40	1.20	6358.00	5069.74	5069.45	70.64	5069.94	0.80	1.82
88	11194.00	89.50	2.00	6359.72	5163.70	5163.40	73.26	5163.92	0.81	1.45
89	11287.00	89.50	1.80	6360.53	5256.66	5256.34	76.35	5256.90	0.83	0.22
90	11382.00	89.90	1.40	6361.03	5351.63	5351.30	79.00	5351.89	0.85	0.60
91	11476.00	90.50	1.30	6360.70	5445.62	5445.28	81.22	5445.88	0.85	0.65
92	11570.00	89.70	0.70	6360.53	5539.61	5539.26	82.86	5539.88	0.86	1.06
93	11663.00	90.10	359.80	6360.70	5632.61	5632.26	83.26	5632.87	0.85	1.06
94	11757.00	88.60	359.30	6361.76	5726.59	5726.25	82.52	5726.84	0.83	1.68
95	11851.00	89.20	358.70	6363.57	5820.55	5820.21	80.88	5820.78	0.80	0.90
96	11946.00	89.50	358.20	6364.65	5915.49	5915.17	78.31	5915.69	0.76	0.61
97	12039.00	90.00	357.80	6365.05	6008.42	6008.11	75.07	6008.58	0.72	0.69
98	12133.00	89.40	356.60	6365.54	6102.28	6102.00	70.48	6102.41	0.66	1.43
99	12228.00	88.10	356.40	6367.62	6197.05	6196.80	64.68	6197.13	0.60	1.38
100	12322.00	88.00	355.70	6370.81	6290.73	6290.52	58.21	6290.79	0.53	0.75
101	12413.00	87.30	356.60	6374.55	6381.42	6381.24	52.10	6381.45	0.47	1.25
102	12507.00	88.40	357.90	6378.07	6475.22	6475.06	47.60	6475.23	0.42	1.81
103	12601.00	89.20	358.50	6380.04	6569.13	6568.99	44.64	6569.14	0.39	1.06
104	12695.00	89.90	357.90	6380.78	6663.07	6662.94	41.69	6663.07	0.36	0.98

105	12788.00	90.20	357.60	6380.70	6755.97	6755.87	38.04	6755.97	0.32	0.46
106	12883.00	90.90	357.20	6379.79	6850.85	6850.76	33.73	6850.85	0.28	0.85
107	12974.00	91.10	356.80	6378.20	6941.68	6941.63	28.97	6941.69	0.24	0.49
PTB	13030.00	91.10	356.80	6377.12	6997.57	6997.53	25.84	6997.58	0.21	0.00