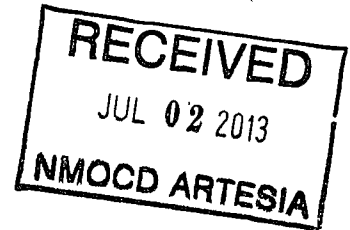




PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

30-015-40400

COG OPERATING, LLC
RECEIVED
MAY 13 2013
ARTESIA WEST



April 23, 2013

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

RE: Cluster State Com #2H
Sec. 16, T26S, R27E
Eddy County, New Mexico

Dear Sir,

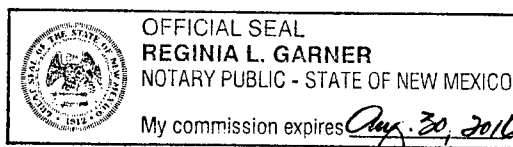
The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Eddie LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 23rd day of April, 2013.

Notary Public

Well Dossier 5804383 - Cluster State Com 2H

# Date	Depth	Deviation	Direction	TVD
4/8/2013	161	1.10	196.20	160.99
4/8/2013	253	1.00	235.80	252.97
4/8/2013	345	1.10	257.70	0.00
4/8/2013	528	0.60	80.90	0.00
4/8/2013	620	1.30	84.20	0.00
4/8/2013	712	2.10	46.80	711.90
4/8/2013	804	2.00	30.80	803.84
4/9/2013	1081	2.20	29.00	1080.71
4/9/2013	1172	1.61	241.60	1171.66
4/9/2013	1264	0.80	115.10	1263.69
4/9/2013	1355	2.10	64.00	0.00
4/9/2013	1447	1.20	331.20	0.00
4/9/2013	1539	2.10	16.20	1538.60
4/9/2013	1730	1.60	75.60	1729.56
4/9/2013	1826	1.50	176.10	1825.54
4/10/2013	1921	1.10	86.10	1920.52
4/10/2013	2003	0.50	331.20	2002.52
4/11/2013	2134	1.70	0.00	0.00
4/11/2013	2418	2.90	0.00	0.00
4/11/2013	2514	0.80	0.00	0.00
4/11/2013	2735	0.60	0.00	0.00
4/11/2013	2894	0.80	0.00	0.00
4/11/2013	3116	1.60	0.00	0.00
4/12/2013	3276	0.50	0.00	0.00
4/12/2013	3752	1.20	0.00	0.00
4/12/2013	4073	0.70	0.00	0.00
4/12/2013	4391	0.80	0.00	0.00
4/12/2013	4897	0.70	0.00	0.00
4/12/2013	5345	1.10	0.00	0.00
4/13/2013	6152	1.00	0.00	0.00
4/14/2013	6630	1.30	0.00	0.00
4/15/2013	6937	1.50	265.30	6935.73
4/15/2013	6968	0.60	311.11	6966.73
4/15/2013	7000	4.30	62.80	6998.70
4/15/2013	7032	8.80	61.40	7030.48
4/15/2013	7064	12.00	61.90	7061.95
4/15/2013	7095	14.20	64.50	7092.14
4/16/2013	7158	18.60	71.20	7152.62
4/16/2013	7190	22.70	73.70	7182.56
4/16/2013	7285	33.90	81.90	7265.48
4/16/2013	7317	34.60	86.70	7291.93
4/16/2013	7571	61.60	92.60	7463.86
4/16/2013	7666	74.60	90.20	7499.48

4/17/2013	7696	78.70	91.40	7506.40
4/17/2013	7854	88.70	91.20	7522.35
4/17/2013	8045	87.80	92.20	7526.76
4/17/2013	8235	87.10	90.40	7535.30
4/17/2013	8426	87.20	90.90	7543.88
4/17/2013	8617	88.40	92.50	7549.54
4/18/2013	8712	89.30	93.00	7551.56
4/18/2013	8903	90.30	92.60	7552.72
4/18/2013	9093	88.50	92.50	7556.20
4/18/2013	9284	88.30	91.80	7561.70
4/18/2013	9475	87.70	90.50	7568.71
4/18/2013	9669	87.70	90.70	7577.04
4/18/2013	9856	88.50	92.10	7582.70
4/18/2013	9952	88.10	92.30	7585.52
4/18/2013	10142	89.00	92.30	7589.75
4/19/2013	10238	89.40	92.10	7591.09
4/19/2013	10522	88.90	91.90	7595.96
4/19/2013	10618	88.50	91.90	7598.14
4/19/2013	10809	88.40	91.60	7604.00
4/19/2013	10904	89.20	91.10	7606.00
4/19/2013	11094	86.50	91.10	7612.00
4/19/2013	11189	87.80	90.20	7616.82
4/19/2013	11285	90.00	89.70	7618.66
4/19/2013	11380	89.80	89.10	7618.83
4/20/2013	11570	89.30	88.30	7620.24
4/20/2013	11761	88.60	88.30	7624.16
4/20/2013	11856	881.00	87.60	7626.89
4/20/2013	12034	86.90	87.00	7634.00

EOF



A GYRO TECHNOLOGIES INC. COMPANY

PO Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

April 19, 2013

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

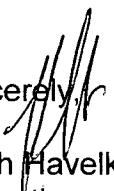


Attn: Kanicia Castillo

RE: **Cluster State Com No. 002H**

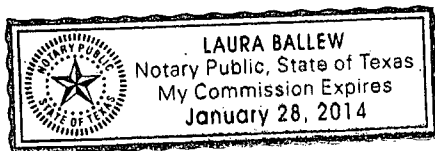
Please find enclosed a copy of the survey from 0.00' to 6897.00' ran on the above referenced well.

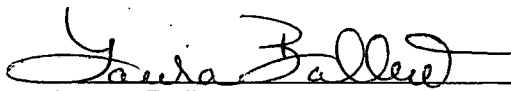
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 19th day of April, A.D., 2013, by Keith Havelka.





Laura Balley
Notary Public, State of Texas



Company: COG Operating LLC (Concho)
Lease/Well: Cluster State Com / No. 002H

Rig Name: Silver Oak 7
State/County: New Mexico / Eddy
Latitude: 32.05, Longitude: -104.20
GRID North is 0.07 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB = 17.8'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut

Minimum Curvature Method

Report Date/Time: 4/19/2013 / 13:43

Vaughn Energy Services

Midland, Texas

432-563-5444

Survey Engineer: Tim Dillon

Cluster State Com No. 002H / API 30-015-40400

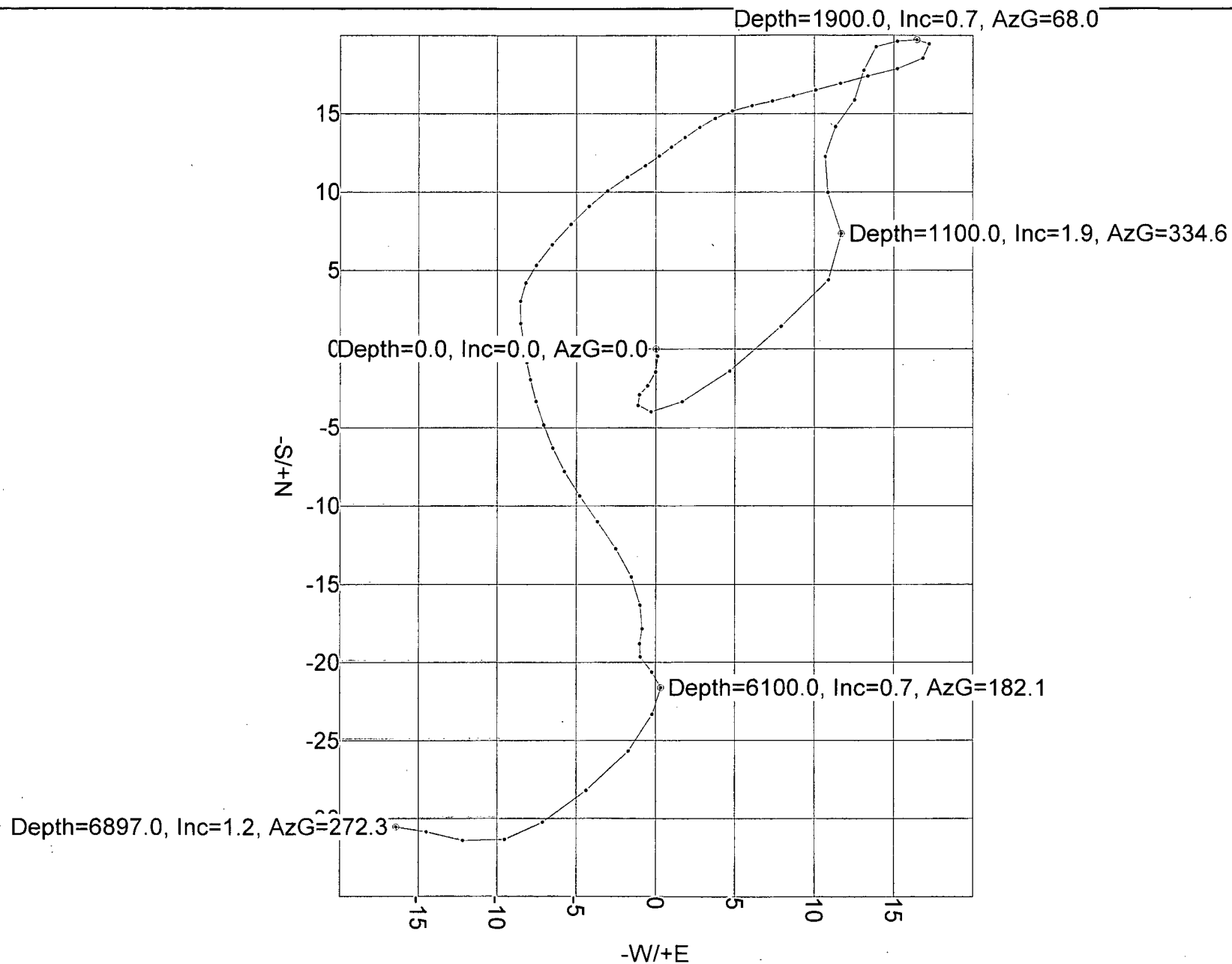
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.53	167.29	100.00	-0.45	0.10	0.47	167.29	0.53
200.00	0.67	203.09	199.99	-1.45	-0.02	1.45	180.98	0.39
300.00	0.52	217.00	299.99	-2.35	-0.53	2.41	192.62	0.21
400.00	0.36	230.91	399.99	-2.90	-1.04	3.08	199.69	0.19
500.00	0.57	163.06	499.98	-3.58	-1.14	3.75	197.62	0.55
600.00	0.78	85.21	599.98	-4.00	-0.31	4.01	184.43	0.87
700.00	1.64	65.36	699.95	-3.34	1.67	3.74	153.45	0.94
800.00	2.49	51.52	799.89	-1.39	4.67	4.88	106.61	0.98
900.00	2.45	45.56	899.80	1.45	7.90	8.03	79.58	0.26
1000.00	2.40	45.60	999.71	4.41	10.92	11.78	68.00	0.05
1100.00	1.87	334.61	1099.65	7.35	11.72	13.83	57.90	2.51
1200.00	1.33	353.63	1199.61	9.98	10.89	14.77	47.50	0.75
1300.00	1.28	357.37	1299.59	12.25	10.71	16.27	41.17	0.10
1400.00	1.22	41.11	1399.57	14.16	11.36	18.16	38.72	0.93
1500.00	1.18	28.18	1499.54	15.88	12.55	20.23	38.32	0.27
1600.00	1.14	5.26	1599.52	17.77	13.12	22.09	36.45	0.46
1700.00	0.96	53.25	1699.51	19.25	13.88	23.74	35.79	0.87
1800.00	0.78	101.24	1799.50	19.62	15.21	24.83	37.79	0.72

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.70	67.95	1899.49	19.72	16.44	25.67	39.83	0.43
2000.00	0.61	154.67	1999.49	19.46	17.23	25.99	41.53	0.90
2100.00	0.88	235.48	2099.48	18.54	16.83	25.04	42.23	0.99
2200.00	1.15	256.29	2199.47	17.87	15.22	23.47	40.43	0.45
2300.00	1.06	255.22	2299.45	17.40	13.36	21.93	37.53	0.10
2400.00	0.96	254.14	2399.43	16.93	11.66	20.56	34.56	0.09
2500.00	0.89	254.87	2499.42	16.50	10.11	19.35	31.49	0.07
2600.00	0.80	255.60	2599.41	16.12	8.68	18.31	28.31	0.09
2700.00	0.77	257.01	2699.40	15.80	7.36	17.43	24.98	0.04
2800.00	0.75	258.41	2799.39	15.52	6.06	16.66	21.35	0.02
2900.00	0.71	250.04	2899.38	15.18	4.84	15.93	17.69	0.12
3000.00	0.66	241.67	2999.37	14.69	3.76	15.17	14.35	0.11
3100.00	0.65	237.11	3099.37	14.11	2.78	14.39	11.14	0.05
3200.00	0.64	234.54	3199.36	13.48	1.85	13.61	7.80	0.03
3300.00	0.58	234.12	3299.36	12.86	0.98	12.90	4.36	0.07
3400.00	0.53	233.69	3399.35	12.29	0.20	12.29	0.93	0.05
3500.00	0.69	235.80	3499.35	11.68	-0.67	11.70	356.71	0.16
3600.00	0.86	237.91	3599.34	10.94	-1.81	11.09	350.63	0.18
3700.00	0.87	231.53	3699.32	10.07	-3.04	10.52	343.22	0.10
3800.00	0.87	227.15	3799.31	9.08	-4.19	10.00	335.25	0.07
3900.00	0.97	224.18	3899.30	7.96	-5.33	9.58	326.17	0.10
4000.00	1.06	221.21	3999.28	6.66	-6.53	9.33	315.56	0.11
4100.00	0.85	213.16	4099.27	5.34	-7.54	9.24	305.31	0.25
4200.00	0.64	205.11	4199.26	4.22	-8.19	9.21	297.26	0.23
4300.00	0.76	188.59	4299.26	3.05	-8.52	9.05	289.71	0.24
4400.00	0.88	172.07	4399.24	1.63	-8.51	8.67	280.84	0.27
4500.00	0.71	170.90	4499.24	0.25	-8.31	8.31	271.73	0.17
4600.00	0.56	169.74	4599.23	-0.85	-8.12	8.17	264.04	0.15
4700.00	0.72	167.22	4699.22	-1.95	-7.90	8.13	256.14	0.16
4800.00	0.90	164.69	4799.21	-3.32	-7.55	8.25	246.23	0.18
4900.00	0.91	160.57	4899.20	-4.84	-7.08	8.57	235.65	0.07
5000.00	0.90	156.45	4999.19	-6.31	-6.50	9.05	225.86	0.07
5100.00	1.00	151.03	5099.17	-7.79	-5.76	9.69	216.47	0.14
5200.00	1.11	145.61	5199.16	-9.36	-4.79	10.51	207.09	0.15
5300.00	1.16	145.94	5299.14	-10.99	-3.67	11.59	198.48	0.05
5400.00	1.22	146.27	5399.12	-12.72	-2.52	12.97	191.19	0.07
5500.00	1.13	157.51	5499.09	-14.52	-1.55	14.60	186.08	0.25
5600.00	1.04	168.74	5599.08	-16.32	-0.99	16.35	183.47	0.23
5700.00	0.72	184.05	5699.06	-17.84	-0.86	17.86	182.75	0.39

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	0.40	199.36	5799.06	-18.79	-1.02	18.82	183.10	0.35
5900.00	0.62	163.55	5899.06	-19.64	-0.98	19.66	182.86	0.38
6000.00	0.84	127.73	5999.05	-20.60	-0.25	20.61	180.69	0.49
6100.00	0.66	182.11	6099.04	-21.62	0.31	21.63	179.18	0.70
6200.00	1.41	204.24	6199.02	-23.32	-0.22	23.32	180.54	0.84
6300.00	1.81	218.91	6298.99	-25.68	-1.72	25.74	183.83	0.57
6400.00	2.41	231.94	6398.92	-28.21	-4.37	28.55	188.81	0.76
6500.00	1.50	235.81	6498.86	-30.24	-7.11	31.07	193.23	0.92
6600.00	1.55	254.36	6598.82	-31.34	-9.50	32.75	196.86	0.50
6700.00	1.61	281.94	6698.79	-31.42	-12.18	33.70	201.19	0.75
6800.00	1.14	286.37	6798.76	-30.85	-14.50	34.09	205.18	0.48
6897.00	1.16	272.34	6895.74	-30.54	-16.41	34.67	208.25	0.29



Vaughn Energy Services
Midland, Texas
432-563-5444
Survey Engineer: Tim Dillon
Cluster State Com No. 002H / API 30-015-40400



VES Survey Date: 04/14/2013



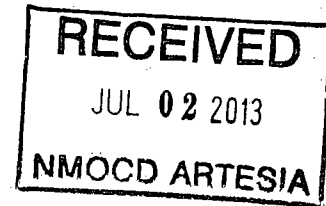
COG PRODUCTION, L.L.C.

EDDY COUNTY (NAD27)

SECTION 16

Cluster State Com #2H

Wellbore #1



Survey: Plan v. Actual

Survey Report - Geographic

22 April, 2013





Stryker Directional
Survey Report - Geographic



Company:	COG PRODUCTION, L.L.C.	Local Co-ordinate Reference:	Well Cluster State Com #2H
Project:	EDDY COUNTY (NAD27)	TVD Reference:	WELL @ 18.0usft (Original Well Elev)
Site:	SECTION 16	MD Reference:	WELL @ 18.0usft (Original Well Elev)
Well:	Cluster State Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan v. Actual	Database:	EDM 5000.1 Single User Db

Project	EDDY COUNTY (NAD27), NM-East		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	SECTION 16		
Site Position:		Northing:	376,852.80 usft
From:	Map	Easting:	540,540.20 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 2' 9.656 N
		Longitude:	104° 12' 9.018 W
		Grid Convergence:	0.07 °

Well	Cluster State Com #2H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 2' 54.816 N
		Longitude:	104° 12' 9.454 W
		Ground Level:	0.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	4/3/2013	7.64
			Dip Angle
			(°)
			59.87
			Field Strength
			(nT)
			48,286

Design	Plan v. Actual		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			90.94

Survey Program	Date 4/22/2013		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		Description
161.0	12,097.0	Plan v. Actual (Wellbore #1)	

Survey									
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Map	Map	Latitude	Longitude
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting		
(usft)			(usft)			(usft)	(usft)		
0.0	0.00	0.00	0.0	0.0	0.0	381,416.00	540,497.20	32° 2' 54.816 N	104° 12' 9.454 W
TI @ 0 MD									
161.0	1.10	196.20	161.0	-1.5	-0.4	381,414.51	540,496.77	32° 2' 54.802 N	104° 12' 9.459 W
253.0	1.00	253.80	253.0	-2.6	-1.4	381,413.44	540,495.75	32° 2' 54.791 N	104° 12' 9.471 W
345.0	1.10	257.70	345.0	-3.0	-3.1	381,413.03	540,494.12	32° 2' 54.787 N	104° 12' 9.490 W
436.0	0.20	294.40	436.0	-3.1	-4.1	381,412.91	540,493.12	32° 2' 54.786 N	104° 12' 9.501 W
528.0	0.60	80.90	528.0	-2.9	-3.8	381,413.05	540,493.45	32° 2' 54.787 N	104° 12' 9.498 W
620.0	1.30	84.20	619.9	-2.8	-2.2	381,413.23	540,494.97	32° 2' 54.789 N	104° 12' 9.480 W
712.0	2.10	46.80	711.9	-1.5	0.0	381,414.49	540,497.23	32° 2' 54.802 N	104° 12' 9.454 W
804.0	2.00	30.80	803.8	1.0	2.1	381,417.03	540,499.28	32° 2' 54.827 N	104° 12' 9.430 W
897.0	1.00	87.40	896.8	2.5	3.7	381,418.46	540,500.92	32° 2' 54.841 N	104° 12' 9.411 W
989.0	2.10	42.90	988.8	3.7	5.7	381,419.73	540,502.87	32° 2' 54.853 N	104° 12' 9.388 W



Stryker Directional
Survey Report - Geographic



Company:	COG PRODUCTION, L.L.C.	Local Co-ordinate Reference:	Well Cluster State Com #2H
Project:	EDDY COUNTY (NAD27)	TVD Reference:	WELL @ 18.0usft (Original Well Elev)
Site:	SECTION 16	MD Reference:	WELL @ 18.0usft (Original Well Elev)
Well:	Cluster State Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan v. Actual	Database:	EDM 5000:1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,081.0	2.20	29.00	1,080.7	6.5	7.7	381,422.51	540,504.88	32° 2' 54.881 N	104° 12' 9.365 W
1,172.0	1.60	241.20	1,171.7	7.4	7.4	381,423.42	540,504.61	32° 2' 54.890 N	104° 12' 9.368 W
1,264.0	0.80	115.10	1,263.7	6.5	6.9	381,422.53	540,504.07	32° 2' 54.881 N	104° 12' 9.374 W
1,338.0	0.80	115.10	1,337.7	6.1	7.8	381,422.09	540,505.00	32° 2' 54.877 N	104° 12' 9.363 W
6,897.0	1.16	272.34	6,896.4	-8.1	-13.3	381,407.93	540,483.92	32° 2' 54.737 N	104° 12' 9.608 W
6,937.0	1.50	265.30	6,936.3	-8.1	-14.2	381,407.90	540,483.00	32° 2' 54.736 N	104° 12' 9.619 W
6,968.0	0.60	311.10	6,967.3	-8.0	-14.7	381,407.97	540,482.47	32° 2' 54.737 N	104° 12' 9.625 W
7,000.0	4.30	62.80	6,999.3	-7.4	-13.8	381,408.63	540,483.41	32° 2' 54.744 N	104° 12' 9.614 W
7,032.0	8.80	61.40	7,031.1	-5.6	-10.6	381,410.35	540,486.63	32° 2' 54.761 N	104° 12' 9.577 W
7,064.0	12.00	61.90	7,062.6	-2.9	-5.5	381,413.09	540,491.71	32° 2' 54.788 N	104° 12' 9.518 W
7,095.0	14.20	64.50	7,092.8	0.3	0.8	381,416.25	540,497.99	32° 2' 54.819 N	104° 12' 9.445 W
7,127.0	16.10	66.50	7,123.6	3.7	8.4	381,419.71	540,505.60	32° 2' 54.853 N	104° 12' 9.356 W
7,158.0	18.60	71.20	7,153.2	7.0	17.0	381,423.02	540,514.22	32° 2' 54.886 N	104° 12' 9.256 W
7,190.0	22.70	73.70	7,183.2	10.4	27.8	381,426.40	540,524.99	32° 2' 54.919 N	104° 12' 9.131 W
7,221.0	27.30	75.40	7,211.3	13.9	40.4	381,429.87	540,537.61	32° 2' 54.953 N	104° 12' 8.984 W
7,253.0	31.40	78.20	7,239.2	17.4	55.7	381,433.42	540,552.88	32° 2' 54.988 N	104° 12' 8.807 W
7,285.0	33.90	81.90	7,266.1	20.4	72.7	381,436.39	540,569.88	32° 2' 55.017 N	104° 12' 8.609 W
7,317.0	34.60	86.70	7,292.5	22.2	90.6	381,438.17	540,587.79	32° 2' 55.035 N	104° 12' 8.401 W
7,348.0	36.80	89.10	7,317.7	22.8	108.7	381,438.82	540,605.86	32° 2' 55.041 N	104° 12' 8.191 W
7,380.0	39.90	89.80	7,342.8	23.0	128.5	381,439.01	540,625.72	32° 2' 55.043 N	104° 12' 7.960 W
7,412.0	42.80	89.80	7,366.8	23.1	149.7	381,439.08	540,646.85	32° 2' 55.043 N	104° 12' 7.715 W
7,444.0	46.50	90.40	7,389.6	23.0	172.1	381,439.04	540,669.34	32° 2' 55.042 N	104° 12' 7.453 W
7,476.0	50.00	91.90	7,410.9	22.6	196.0	381,438.55	540,693.20	32° 2' 55.037 N	104° 12' 7.176 W
7,507.0	53.60	92.80	7,430.1	21.5	220.3	381,437.55	540,717.54	32° 2' 55.027 N	104° 12' 6.893 W
7,539.0	57.30	93.20	7,448.2	20.2	246.7	381,436.17	540,743.85	32° 2' 55.013 N	104° 12' 6.588 W
7,571.0	61.60	92.60	7,464.5	18.8	274.2	381,434.77	540,771.37	32° 2' 54.999 N	104° 12' 6.268 W
7,602.0	65.60	91.20	7,478.3	17.9	301.9	381,433.86	540,799.12	32° 2' 54.990 N	104° 12' 5.946 W
7,634.0	70.10	90.40	7,490.3	17.5	331.5	381,433.45	540,828.74	32° 2' 54.985 N	104° 12' 5.601 W
7,666.0	74.60	90.20	7,500.0	17.3	362.0	381,433.29	540,859.23	32° 2' 54.983 N	104° 12' 5.247 W
7,727.0	83.20	91.00	7,511.8	16.7	421.8	381,432.66	540,919.03	32° 2' 54.976 N	104° 12' 4.552 W
7,759.0	83.10	91.40	7,515.6	16.0	453.6	381,431.99	540,950.79	32° 2' 54.969 N	104° 12' 4.183 W
7,783.5	84.54	91.35	7,518.2	15.4	477.9	381,431.41	540,975.15	32° 2' 54.963 N	104° 12' 3.900 W
LP Cluster State Com #2H									
7,854.0	88.70	91.20	7,522.4	13.8	548.3	381,429.84	541,045.49	32° 2' 54.947 N	104° 12' 3.083 W
7,950.0	89.10	91.40	7,524.2	11.7	644.2	381,427.67	541,141.44	32° 2' 54.924 N	104° 12' 1.968 W
8,045.0	87.80	91.20	7,526.8	9.5	739.2	381,425.51	541,236.38	32° 2' 54.902 N	104° 12' 0.865 W
8,140.0	87.40	90.90	7,530.8	7.8	834.1	381,423.77	541,331.28	32° 2' 54.883 N	104° 11' 59.762 W
8,235.0	87.10	90.40	7,535.3	6.7	929.0	381,422.70	541,426.17	32° 2' 54.871 N	104° 11' 58.660 W
8,331.0	87.70	91.60	7,539.7	5.0	1,024.9	381,421.02	541,522.05	32° 2' 54.854 N	104° 11' 57.546 W
8,426.0	87.20	90.90	7,543.9	3.0	1,119.7	381,418.95	541,616.93	32° 2' 54.832 N	104° 11' 56.443 W
8,521.0	88.80	92.80	7,547.2	-0.1	1,214.6	381,415.89	541,711.82	32° 2' 54.801 N	104° 11' 55.341 W
8,617.0	88.40	92.50	7,549.6	-4.5	1,310.5	381,411.45	541,807.69	32° 2' 54.755 N	104° 11' 54.227 W
8,712.0	89.30	93.00	7,551.5	-9.1	1,405.4	381,406.89	541,902.56	32° 2' 54.709 N	104° 11' 53.125 W
8,807.0	89.50	92.80	7,552.5	-13.9	1,500.2	381,402.09	541,997.43	32° 2' 54.660 N	104° 11' 52.023 W
8,903.0	90.30	92.60	7,552.6	-18.4	1,596.1	381,397.56	542,093.32	32° 2' 54.615 N	104° 11' 50.908 W
8,998.0	88.50	92.60	7,553.6	-22.7	1,691.0	381,393.26	542,188.22	32° 2' 54.571 N	104° 11' 49.806 W
9,093.0	88.50	92.50	7,556.1	-27.0	1,785.9	381,389.03	542,283.09	32° 2' 54.528 N	104° 11' 48.704 W
9,156.0	88.50	92.50	7,557.8	-29.7	1,848.8	381,386.28	542,346.01	32° 2' 54.500 N	104° 11' 47.973 W
9,188.0	88.30	92.30	7,558.6	-31.1	1,880.8	381,384.94	542,377.97	32° 2' 54.486 N	104° 11' 47.601 W
9,284.0	88.30	91.80	7,561.5	-34.5	1,976.7	381,381.51	542,473.86	32° 2' 54.451 N	104° 11' 46.487 W
9,379.0	87.80	91.40	7,564.7	-37.1	2,071.6	381,378.86	542,568.77	32° 2' 54.423 N	104° 11' 45.384 W
9,475.0	87.70	90.50	7,568.5	-38.7	2,167.5	381,377.27	542,664.68	32° 2' 54.406 N	104° 11' 44.270 W
9,570.0	87.30	90.00	7,572.6	-39.1	2,262.4	381,376.86	542,759.59	32° 2' 54.401 N	104° 11' 43.167 W
9,666.0	87.70	90.70	7,576.8	-39.7	2,358.3	381,376.27	542,855.50	32° 2' 54.394 N	104° 11' 42.053 W
9,761.0	88.50	91.60	7,580.0	-41.6	2,453.2	381,374.36	542,950.42	32° 2' 54.374 N	104° 11' 40.950 W



Stryker Directional
Survey Report - Geographic



Company:	COG PRODUCTION, L.L.C.	Local Co-ordinate Reference:	Well Cluster State Com #2H
Project:	EDDY COUNTY (NAD27)	TVD Reference:	WELL @ 18.0usft (Original Well Elev)
Site:	SECTION 16	MD Reference:	WELL @ 18.0usft (Original Well Elev)
Well:	Cluster State Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan v. Actual	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,856.0	88.50	92.10	7,582.5	-44.7	2,548.1	381,371.30	543,045.34	32° 2' 54.343 N	104° 11' 39.847 W
9,952.0	88.10	92.30	7,585.3	-48.4	2,644.0	381,367.61	543,141.23	32° 2' 54.305 N	104° 11' 38.733 W
10,047.0	88.90	92.10	7,587.8	-52.0	2,738.9	381,363.97	543,236.13	32° 2' 54.268 N	104° 11' 37.631 W
10,142.0	89.00	92.30	7,589.5	-55.7	2,833.8	381,360.32	543,331.04	32° 2' 54.230 N	104° 11' 36.528 W
10,238.0	89.40	92.10	7,590.9	-59.4	2,929.8	381,356.64	543,426.96	32° 2' 54.193 N	104° 11' 35.413 W
10,333.0	89.40	91.90	7,591.9	-62.7	3,024.7	381,353.32	543,521.90	32° 2' 54.159 N	104° 11' 34.310 W
10,428.0	88.50	91.90	7,593.6	-65.8	3,119.6	381,350.17	543,616.83	32° 2' 54.126 N	104° 11' 33.207 W
10,522.0	88.90	91.90	7,595.7	-68.9	3,213.5	381,347.06	543,710.75	32° 2' 54.094 N	104° 11' 32.116 W
10,618.0	88.50	91.90	7,597.9	-72.1	3,309.5	381,343.88	543,806.67	32° 2' 54.061 N	104° 11' 31.002 W
10,713.0	88.00	91.90	7,600.8	-75.3	3,404.4	381,340.73	543,901.58	32° 2' 54.029 N	104° 11' 29.899 W
10,809.0	88.40	91.60	7,603.8	-78.2	3,500.3	381,337.80	543,997.48	32° 2' 53.999 N	104° 11' 28.785 W
10,904.0	89.20	91.10	7,605.8	-80.4	3,595.2	381,335.56	544,092.44	32° 2' 53.975 N	104° 11' 27.681 W
10,999.0	88.50	91.10	7,607.7	-82.3	3,690.2	381,333.74	544,187.40	32° 2' 53.956 N	104° 11' 26.578 W
11,094.0	86.50	91.10	7,611.9	-84.1	3,785.1	381,331.91	544,282.29	32° 2' 53.937 N	104° 11' 25.476 W
11,189.0	87.80	90.20	7,616.6	-85.2	3,880.0	381,330.84	544,377.16	32° 2' 53.925 N	104° 11' 24.373 W
11,285.0	90.00	89.70	7,618.4	-85.1	3,975.9	381,330.92	544,473.14	32° 2' 53.924 N	104° 11' 23.258 W
11,380.0	89.80	89.10	7,618.6	-84.1	4,070.9	381,331.92	544,568.13	32° 2' 53.933 N	104° 11' 22.154 W
11,475.0	89.60	88.60	7,619.1	-82.2	4,165.9	381,333.82	544,663.11	32° 2' 53.951 N	104° 11' 21.051 W
11,570.0	89.30	88.30	7,620.0	-79.6	4,260.9	381,336.39	544,758.07	32° 2' 53.975 N	104° 11' 19.947 W
11,665.0	88.70	87.70	7,621.7	-76.3	4,355.8	381,339.71	544,853.00	32° 2' 54.006 N	104° 11' 18.844 W
11,761.0	88.60	88.30	7,623.9	-72.9	4,451.7	381,343.06	544,948.91	32° 2' 54.038 N	104° 11' 17.730 W
11,856.0	88.10	87.60	7,626.7	-69.5	4,546.6	381,346.45	545,043.81	32° 2' 54.071 N	104° 11' 16.627 W
11,951.0	87.50	87.40	7,630.3	-65.4	4,641.4	381,350.59	545,138.65	32° 2' 54.110 N	104° 11' 15.525 W
12,034.0	86.90	87.00	7,634.4	-61.4	4,724.2	381,354.64	545,221.45	32° 2' 54.149 N	104° 11' 14.563 W
12,097.0	86.90	87.00	7,637.8	-58.1	4,787.1	381,357.94	545,284.27	32° 2' 54.181 N	104° 11' 13.833 W
Bit Proj @ 12097 MD - PBHL Cluster State Com #2H									

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	TI @ 0 MD
12,097.0	7,637.8	-58.1	4,787.1	Bit Proj @ 12097 MD

Checked By: _____ Approved By: _____ Date: _____