Results of Directional Survey

API number:	30-025-41590				
OGRID:		Operator:	COG OPERATING LLC		
		Property:	MERLIN STATE COM		# 1H

surface	ULSTR:	N	29	T	21S	R	34E
				1130	FSL	1650	FWL
BH Loc	ULSTR:	N	32	T	21S	R	34E
17720	MD	11885.0	TVD	353	FSL	2069	FWL
				4927	FNL		
Top Perf/OH	ULSTR:	N	29	T	21S	R	34E
12048	MD	11855.4	TVD	723	FSL	1659	FWL
Bot Perf/OH	ULSTR:	N	32	T	21S	R	34E
17595	MD	11879.5	TVD	477	FSL	2052	FWL
				4803	FNL		

	MD	N/S	E/W	VD
	12018	-378.30	4.60	11847.3
TOP PERFS/OH	**12048**	-406.80	9.30	11855.40
	12048	-406.80	9.30	11855.40
	17511	-5850.20	390.30	11877.90
BOT PERFS/OH	**17595**	-5933.38	401.62	11879.45
	17603	-5941.30	402.70	11879.60

NEXT TO LAST	17668	-6005.60	411.50	11882.20
LAST READING	17720	-6057.10	418.60	11885.00
TD	**17720**	-6057.10	418.60	11885.00

Surface Location	1130	FS	1650	FW
Projected BHL	4927	FN	2069	FW
Location of				
Top Perfs/OH	723	FS	1659	FW
Bottom Perfs/OH	4803	FN	2052	FW

SUMMARY of Subsurface Locations

Surface Location	N-29-21S-34E	1130	FS	1650	FW	Vert. Depth
Top Perfs/OH	N-29-21S-34E	723	FS	1659	FW	11855.40
Bottom Perfs/OH	N-32-21S-34E	4803	FN	2052	FW	11879.45
Projected TD	N-32-21S-34E	4927	FN	2069	FW	11885.00

SEP 16 2014

VES SURVEY INTERNATIONAL

June 16, 2014

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

Attn: Kanicia Castillo

RE: **Merlin State Com No. 001H**

Please find enclosed a copy of the survey from 0.00' to 12,137.00' ran on the above referenced well.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
§
COUNTY OF NUECES §

This instrument was acknowledged before me on the 16th day of June, A.D., 2014, by Keith Havelka.

Meredith Darden
Notary Public, State of Texas

MEREDITH DARDEN
Notary Public, State of Texas
My Commission Expires
July 25, 2017

VES Survey International
P.O. Box 261021 Corpus Christi, TX 78426
T (361) 767-0602 F (361) 767-0612
www.vessurvey.com

Company: COG OPERATING, LLC (CONCHO)
Lease/Well: MERLIN STATE COM/NO. 001H

Rig Name: PRECISION 590
State/County: NEW MEXICO/LEA
Latitude: 32.45, Longitude: -103.49
GRID North is 0.45 Degrees East of True North
VS-Azi: 0.00 Degrees

Depth Reference : RKB 26 FEET

DRILLOG HA GYRO SURVEY CALCULATIONS
Filename: e-line gyro survey-de_01.ut
Minimum Curvature Method
Report Date/Time: 6/16/2014 / 09:31

VES Survey International
Woodward, Oklahoma
580-254-5000
Surveyor: Nathan Cranor
Merlin State Com No. 001H / API 30-025-41590

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	0.22	199.12	100.00	-0.18	-0.06	-0.18	0.19	199.12	0.22
200.00	0.21	190.79	200.00	-0.54	-0.16	-0.54	0.56	196.44	0.03
300.00	0.18	274.63	300.00	-0.71	-0.35	-0.71	0.79	206.30	0.26
400.00	0.23	151.06	400.00	-0.87	-0.41	-0.87	0.96	205.31	0.36
500.00	0.14	1.00	500.00	-0.91	-0.31	-0.91	0.96	198.88	0.36
600.00	0.27	97.24	600.00	-0.82	-0.07	-0.82	0.82	185.08	0.32
700.00	0.26	141.46	700.00	-1.03	0.31	-1.03	1.07	163.30	0.20
800.00	0.41	115.93	799.99	-1.36	0.77	-1.36	1.57	150.49	0.20
900.00	0.25	131.08	899.99	-1.66	1.26	-1.66	2.08	142.91	0.18
1000.00	0.31	121.90	999.99	-1.95	1.65	-1.95	2.55	139.72	0.07
1100.00	0.15	205.77	1099.99	-2.21	1.83	-2.21	2.86	140.42	0.33
1200.00	0.29	213.72	1199.99	-2.53	1.63	-2.53	3.01	147.23	0.14
1300.00	0.50	263.91	1299.99	-2.79	1.06	-2.79	2.98	159.23	0.39
1400.00	0.06	323.50	1399.99	-2.79	0.59	-2.79	2.86	168.00	0.47
1500.00	0.10	139.39	1499.99	-2.82	0.62	-2.82	2.89	167.56	0.16
1600.00	0.38	131.18	1599.99	-3.11	0.93	-3.11	3.24	163.34	0.28
1700.00	0.93	206.85	1699.98	-4.05	0.81	-4.05	4.13	168.67	0.92
1800.00	1.73	232.64	1799.95	-5.70	-0.76	-5.70	5.75	187.55	0.98

V.E.S. Survey Date: 06/04/2014

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	2.23	239.93	1899.89	-7.59	-3.64	-7.59	8.41	205.61	0.56
2000.00	1.58	235.16	1999.84	-9.35	-6.45	-9.35	11.35	214.60	0.67
2100.00	0.81	247.82	2099.82	-10.40	-8.23	-10.40	13.26	218.36	0.81
2200.00	0.21	207.61	2199.81	-10.83	-8.97	-10.83	14.06	219.63	0.66
2300.00	0.20	45.33	2299.81	-10.86	-8.93	-10.86	14.06	219.41	0.41
2400.00	0.21	311.33	2399.81	-10.62	-8.94	-10.62	13.88	220.09	0.30
2500.00	0.21	112.25	2499.81	-10.57	-8.91	-10.57	13.82	220.12	0.41
2600.00	0.21	127.85	2599.81	-10.75	-8.59	-10.75	13.76	218.64	0.06
2700.00	0.19	207.49	2699.81	-11.01	-8.52	-11.01	13.92	217.75	0.26
2800.00	0.25	197.10	2799.81	-11.36	-8.66	-11.36	14.29	217.33	0.07
2900.00	0.12	295.87	2899.81	-11.52	-8.82	-11.52	14.51	217.46	0.29
3000.00	0.23	162.07	2999.81	-11.66	-8.86	-11.66	14.64	217.23	0.33
3100.00	0.28	46.86	3099.81	-11.68	-8.62	-11.68	14.52	216.42	0.43
3200.00	0.53	61.43	3199.81	-11.30	-8.04	-11.30	13.87	215.44	0.27
3300.00	0.57	47.31	3299.80	-10.74	-7.27	-10.74	12.97	214.10	0.14
3400.00	0.91	66.75	3399.79	-10.10	-6.18	-10.10	11.84	211.48	0.41
3500.00	0.73	69.86	3499.78	-9.56	-4.86	-9.56	10.73	206.93	0.18
3600.00	0.96	50.39	3599.77	-8.81	-3.62	-8.81	9.52	202.31	0.37
3700.00	0.58	40.73	3699.76	-7.89	-2.64	-7.89	8.32	198.49	0.40
3800.00	0.66	59.43	3799.76	-7.22	-1.82	-7.22	7.44	194.13	0.21
3900.00	0.79	59.28	3899.75	-6.58	-0.73	-6.58	6.62	186.38	0.13
4000.00	0.41	83.54	3999.74	-6.19	0.21	-6.19	6.19	178.06	0.44
4100.00	0.26	58.30	4099.74	-6.03	0.76	-6.03	6.08	172.85	0.21
4200.00	0.26	102.85	4199.74	-5.96	1.16	-5.96	6.07	168.94	0.19
4300.00	0.14	201.10	4299.74	-6.12	1.34	-6.12	6.27	167.66	0.31
4400.00	0.22	181.28	4399.74	-6.43	1.29	-6.43	6.56	168.63	0.11
4500.00	0.04	189.42	4499.74	-6.65	1.28	-6.65	6.78	169.09	0.19
4600.00	0.33	115.61	4599.74	-6.81	1.54	-6.81	6.98	167.28	0.32
4700.00	0.09	357.08	4699.74	-6.85	1.79	-6.85	7.08	165.35	0.38
4800.00	0.33	45.81	4799.74	-6.57	1.99	-6.57	6.87	163.14	0.28
4900.00	0.36	45.43	4899.74	-6.15	2.42	-6.15	6.61	158.55	0.03
5000.00	0.26	58.98	4999.73	-5.82	2.84	-5.82	6.47	153.99	0.12
5100.00	0.23	16.57	5099.73	-5.50	3.09	-5.50	6.31	150.67	0.18
5200.00	0.38	78.99	5199.73	-5.25	3.47	-5.25	6.29	146.49	0.34
5300.00	0.10	313.81	5299.73	-5.13	3.74	-5.13	6.34	143.91	0.44
5400.00	0.25	107.81	5399.73	-5.13	3.88	-5.13	6.44	142.91	0.34
5500.00	0.14	19.81	5499.73	-5.09	4.13	-5.09	6.55	140.96	0.28
5600.00	0.38	211.56	5599.73	-5.26	3.99	-5.26	6.60	142.78	0.51
5700.00	0.41	173.92	5699.73	-5.90	3.86	-5.90	7.05	146.81	0.26

V.E.S. Survey Date: 06/04/2014

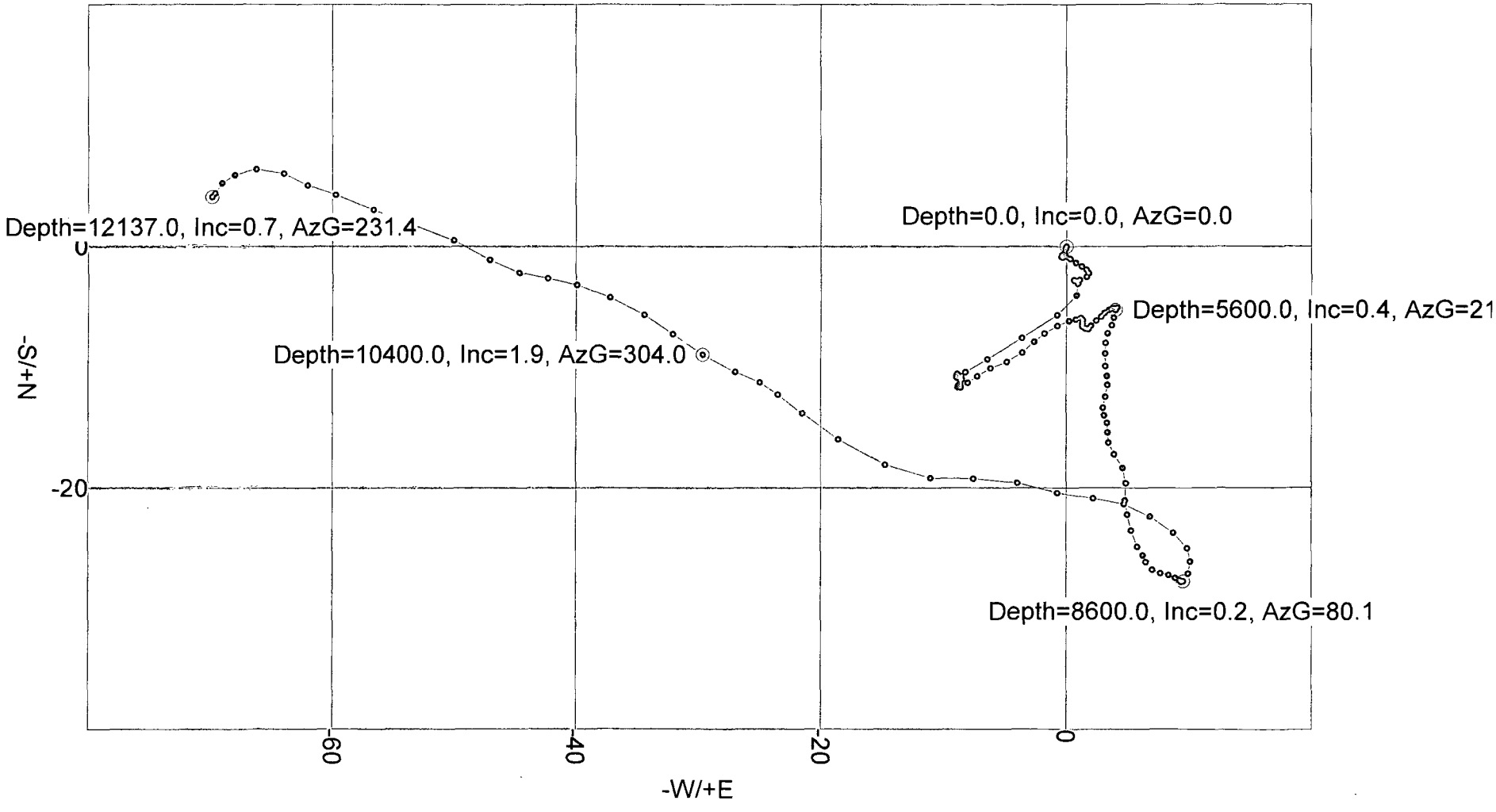
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	0.39	216.02	5799.73	-6.53	3.70	-6.53	7.50	150.50	0.29
5900.00	0.48	197.33	5899.72	-7.21	3.37	-7.21	7.96	154.94	0.17
6000.00	0.44	186.19	5999.72	-7.99	3.20	-7.99	8.61	158.15	0.10
6100.00	0.57	179.30	6099.72	-8.87	3.17	-8.87	9.42	160.34	0.15
6200.00	0.62	179.84	6199.71	-9.91	3.18	-9.91	10.41	162.24	0.05
6300.00	0.35	154.87	6299.71	-10.74	3.31	-10.74	11.24	162.88	0.34
6400.00	0.51	190.24	6399.70	-11.45	3.36	-11.45	11.94	163.64	0.30
6500.00	0.64	190.42	6499.70	-12.44	3.18	-12.44	12.84	165.66	0.14
6600.00	0.43	193.40	6599.70	-13.36	2.99	-13.36	13.69	167.37	0.22
6700.00	0.35	148.39	6699.69	-13.98	3.07	-13.98	14.31	167.62	0.31
6800.00	0.42	166.89	6799.69	-14.60	3.31	-14.60	14.97	167.21	0.14
6900.00	0.51	184.34	6899.69	-15.40	3.36	-15.40	15.76	167.68	0.16
7000.00	0.47	166.19	6999.68	-16.24	3.43	-16.24	16.60	168.08	0.16
7100.00	0.78	146.77	7099.68	-17.21	3.90	-17.21	17.65	167.23	0.37
7200.00	0.74	148.63	7199.67	-18.33	4.61	-18.33	18.90	165.89	0.05
7300.00	0.85	189.07	7299.66	-19.61	4.82	-19.61	20.19	166.18	0.56
7400.00	0.78	175.81	7399.65	-21.02	4.76	-21.02	21.55	167.25	0.20
7500.00	0.59	162.81	7499.64	-22.20	4.96	-22.20	22.75	167.41	0.25
7600.00	0.97	168.77	7599.63	-23.52	5.28	-23.52	24.11	167.36	0.38
7700.00	0.71	146.88	7699.62	-24.87	5.78	-24.87	25.53	166.92	0.41
7800.00	0.23	159.46	7799.62	-25.58	6.19	-25.58	26.32	166.39	0.49
7900.00	0.46	153.55	7899.62	-26.13	6.44	-26.13	26.91	166.15	0.22
8000.00	0.52	130.08	7999.61	-26.78	6.96	-26.78	27.67	165.42	0.21
8100.00	0.37	89.17	8099.61	-27.06	7.64	-27.06	28.12	164.24	0.34
8200.00	0.41	116.30	8199.61	-27.22	8.28	-27.22	28.45	163.07	0.19
8300.00	0.26	106.18	8299.61	-27.44	8.82	-27.44	28.82	162.17	0.16
8400.00	0.22	134.32	8399.61	-27.64	9.18	-27.64	29.12	161.62	0.12
8500.00	0.04	270.15	8499.61	-27.77	9.29	-27.77	29.29	161.51	0.25
8600.00	0.25	80.10	8599.61	-27.74	9.47	-27.74	29.31	161.14	0.28
8700.00	0.73	17.29	8699.60	-27.09	9.88	-27.09	28.84	159.97	0.65
8800.00	0.45	356.13	8799.60	-26.09	10.04	-26.09	27.95	158.95	0.35
8900.00	0.84	345.39	8899.59	-24.98	9.83	-24.98	26.85	158.53	0.40
9000.00	1.27	301.17	8999.57	-23.70	8.69	-23.70	25.24	159.86	0.89
9100.00	1.39	308.20	9099.55	-22.37	6.79	-22.37	23.38	163.13	0.20
9200.00	1.36	284.35	9199.52	-21.33	4.68	-21.33	21.84	167.61	0.57
9300.00	1.55	277.51	9299.49	-20.86	2.20	-20.86	20.97	173.99	0.26
9400.00	1.85	279.73	9399.44	-20.41	-0.74	-20.41	20.42	182.08	0.31
9500.00	2.02	288.57	9499.39	-19.57	-4.00	-19.57	19.98	191.56	0.34
9600.00	2.19	263.79	9599.32	-19.22	-7.57	-19.22	20.66	201.50	0.92

V.E.S. Survey Date: 06/04/2014

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
9700.00	1.87	279.45	9699.26	-19.16	-11.08	-19.16	22.13	210.04	0.64
9800.00	2.56	291.74	9799.18	-18.06	-14.77	-18.06	23.33	219.27	0.84
9900.00	2.48	306.12	9899.09	-15.96	-18.59	-15.96	24.50	229.35	0.64
10000.00	1.71	306.95	9999.02	-13.79	-21.52	-13.79	25.56	237.35	0.77
10100.00	1.15	309.84	10098.99	-12.25	-23.48	-12.25	26.49	242.44	0.56
10200.00	0.90	298.11	10198.97	-11.24	-24.95	-11.24	27.36	245.74	0.32
10300.00	1.58	290.46	10298.95	-10.39	-26.94	-10.39	28.87	248.92	0.70
10400.00	1.93	303.98	10398.90	-8.96	-29.63	-8.96	30.96	253.18	0.54
10500.00	1.50	305.29	10498.86	-7.26	-32.10	-7.26	32.91	257.26	0.43
10600.00	1.75	303.21	10598.82	-5.67	-34.44	-5.67	34.91	260.65	0.25
10700.00	1.85	291.41	10698.77	-4.25	-37.22	-4.25	37.46	263.49	0.38
10800.00	1.48	291.16	10798.73	-3.19	-39.93	-3.19	40.06	265.43	0.37
10900.00	1.35	273.88	10898.70	-2.64	-42.31	-2.64	42.39	266.43	0.45
11000.00	1.36	287.80	10998.67	-2.20	-44.61	-2.20	44.67	267.18	0.33
11100.00	1.66	299.34	11098.63	-1.13	-47.00	-1.13	47.02	268.62	0.42
11200.00	2.18	298.50	11198.58	0.49	-49.93	0.49	49.94	270.56	0.52
11300.00	2.01	283.33	11298.51	1.80	-53.31	1.80	53.34	271.93	0.58
11400.00	2.06	297.39	11398.45	3.03	-56.61	3.03	56.69	273.06	0.50
11500.00	1.81	284.85	11498.39	4.26	-59.73	4.26	59.88	274.08	0.49
11600.00	1.02	295.87	11598.36	5.05	-62.06	5.05	62.26	274.65	0.84
11700.00	1.52	296.41	11698.34	6.03	-64.05	6.03	64.33	275.38	0.51
11800.00	1.27	257.72	11798.31	6.39	-66.32	6.39	66.62	275.50	0.95
11900.00	0.81	250.70	11898.29	5.92	-68.07	5.92	68.32	274.97	0.47
12000.00	0.66	219.20	11998.28	5.24	-69.10	5.24	69.29	274.34	0.43
12100.00	0.52	206.61	12098.28	4.39	-69.66	4.39	69.80	273.60	0.19
12137.00	0.71	231.38	12135.28	4.09	-69.92	4.09	70.04	273.35	0.88

V.E.S. Survey Date: 06/04/2014

VES Survey International
Woodward, Oklahoma
580-254-5000
Surveyor: Nathan Cranor
Merlin State Com No. 001H / API 30-025-41590



V.E.S. Survey Date: 06/04/2014

COG Operating, LLC.

Lea County, N.M.
Section 29/32-21S-34E Merlin State Com #1H
Merlin State Com #1H

Original Hole

Design: Original Hole

Standard Survey Report

23 June, 2014

Stryker Directional
Survey Report

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Merlin State Com #1H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Site:	Section 29/32-21S-34E Merlin State Com #1H	**MD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Well:	Merlin State Com #1H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

Project	Lea County, N.M.		
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 29/32-21S-34E Merlin State Com #1H				
Site Position:		**Northing:**	526,814.20 usft	**Latitude:**	32° 26' 43.918 N
From:	Map	**Easting:**	758,703.60 usft	**Longitude:**	103° 29' 41.006 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.45 °

Well	Merlin State Com #1H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	526,814.20 usft	**Latitude:**	32° 26' 43.918 N
	+E/-W	0.0 usft	**Easting:**	758,703.60 usft	**Longitude:**	103° 29' 41.006 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,721.4 usft

Wellbore	Original Hole

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	4/29/2014	7.21	60.33	48,468

Design	Original Hole

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.0	0.0	0.0	176.37

Survey Program **Date** 6/23/2014

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
100.0	11,300.0	Survey #1 (Original Hole)		
11,311.0	17,720.0	Stryker MWD Survey (Original Hole)		

Survey

Measured Depth (usft)	**Inclination (°)**	**Azimuth (°)**	**Vertical Depth (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Vertical Section (usft)**	**Dogleg Rate (°/100usft)**	**Build Rate (°/100usft)**	**Turn Rate (°/100usft)**
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.22	199.12	100.0	-0.2	-0.1	0.2	0.22	0.22	0.00
200.0	0.21	190.79	200.0	-0.5	-0.2	0.5	0.03	-0.01	-8.33
300.0	0.18	274.63	300.0	-0.7	-0.4	0.7	0.26	-0.03	83.84
400.0	0.23	151.06	400.0	-0.9	-0.4	0.8	0.36	0.05	-123.57
500.0	0.14	1.00	500.0	-0.9	-0.3	0.9	0.36	-0.09	-150.06
600.0	0.27	97.24	600.0	-0.8	-0.1	0.8	0.32	0.13	96.24
700.0	0.26	141.46	700.0	-1.0	0.3	1.1	0.20	-0.01	44.22
800.0	0.41	115.93	800.0	-1.4	0.8	1.4	0.21	0.15	-25.53
900.0	0.25	131.08	900.0	-1.7	1.2	1.8	0.18	-0.16	15.15

Stryker Directional

Survey Report

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Merlin State Com #1H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Site:	Section 29/32-21S-34E Merlin State Com #1H	**MD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Well:	Merlin State Com #1H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.0	0.31	121.90	1,000.0	-2.0	1.6	2.1	0.07	0.06	-9.18
1,100.0	0.15	205.77	1,100.0	-2.2	1.8	2.3	0.33	-0.16	83.87
1,200.0	0.29	213.72	1,200.0	-2.6	1.6	2.6	0.14	0.14	7.95
1,300.0	0.50	263.91	1,300.0	-2.8	1.0	2.9	0.39	0.21	50.19
1,400.0	0.06	323.50	1,400.0	-2.8	0.6	2.8	0.47	-0.44	59.59
1,500.0	0.10	139.39	1,500.0	-2.8	0.6	2.9	0.16	0.04	175.89
1,600.0	0.38	131.18	1,600.0	-3.1	0.9	3.2	0.28	0.28	-8.21
1,700.0	0.93	206.85	1,700.0	-4.1	0.8	4.1	0.91	0.55	75.67
1,800.0	1.73	232.64	1,800.0	-5.7	-0.8	5.6	0.98	0.80	25.79
1,900.0	2.23	239.93	1,899.9	-7.6	-3.7	7.3	0.56	0.50	7.29
2,000.0	1.58	235.16	1,999.8	-9.4	-6.5	8.9	0.67	-0.65	-4.77
2,100.0	0.81	247.82	2,099.8	-10.4	-8.3	9.9	0.81	-0.77	12.66
2,200.0	0.21	207.61	2,199.8	-10.8	-9.0	10.2	0.66	-0.60	-40.21
2,300.0	0.20	45.33	2,299.8	-10.9	-9.0	10.3	0.41	-0.01	-162.28
2,400.0	0.21	311.33	2,399.8	-10.6	-9.0	10.0	0.30	0.01	-94.00
2,500.0	0.21	112.25	2,499.8	-10.6	-8.9	10.0	0.41	0.00	160.92
2,600.0	0.21	127.85	2,599.8	-10.8	-8.6	10.2	0.06	0.00	15.60
2,700.0	0.19	207.49	2,699.8	-11.0	-8.6	10.5	0.26	-0.02	79.64
2,800.0	0.25	197.10	2,799.8	-11.4	-8.7	10.8	0.07	0.06	-10.39
2,900.0	0.12	295.87	2,899.8	-11.5	-8.9	11.0	0.29	-0.13	98.77
3,000.0	0.23	162.07	2,999.8	-11.7	-8.9	11.1	0.32	0.11	-133.80
3,100.0	0.28	46.86	3,099.8	-11.7	-8.6	11.1	0.43	0.05	-115.21
3,200.0	0.53	61.43	3,199.8	-11.3	-8.1	10.8	0.27	0.25	14.57
3,300.0	0.57	47.31	3,299.8	-10.8	-7.3	10.3	0.14	0.04	-14.12
3,400.0	0.91	66.75	3,399.8	-10.1	-6.2	9.7	0.42	0.34	19.44
3,500.0	0.73	69.86	3,499.8	-9.6	-4.9	9.3	0.19	-0.18	3.11
3,600.0	0.96	50.39	3,599.8	-8.8	-3.6	8.6	0.36	0.23	-19.47
3,700.0	0.58	40.73	3,699.8	-7.9	-2.6	7.7	0.40	-0.38	-9.66
3,800.0	0.66	59.43	3,799.8	-7.2	-1.8	7.1	0.22	0.08	18.70
3,900.0	0.79	59.28	3,899.7	-6.6	-0.7	6.5	0.13	0.13	-0.15
4,000.0	0.41	83.54	3,999.7	-6.2	0.2	6.2	0.45	-0.38	24.26
4,100.0	0.26	58.30	4,099.7	-6.0	0.8	6.1	0.21	-0.15	-25.24
4,200.0	0.26	102.85	4,199.7	-6.0	1.2	6.0	0.20	0.00	44.55
4,300.0	0.14	201.10	4,299.7	-6.1	1.4	6.2	0.31	-0.12	98.25
4,400.0	0.22	181.28	4,399.7	-6.4	1.3	6.5	0.10	0.08	-19.82
4,500.0	0.04	189.42	4,499.7	-6.7	1.3	6.7	0.18	-0.18	8.14
4,600.0	0.33	115.61	4,599.7	-6.8	1.5	6.9	0.32	0.29	-73.81
4,700.0	0.09	357.08	4,699.7	-6.9	1.8	7.0	0.38	-0.24	-118.53
4,800.0	0.33	45.81	4,799.7	-6.6	2.0	6.7	0.28	0.24	48.73
4,900.0	0.36	45.43	4,899.7	-6.2	2.4	6.3	0.03	0.03	-0.38
5,000.0	0.26	58.98	4,999.7	-5.8	2.9	6.0	0.12	-0.10	13.55
5,100.0	0.23	16.57	5,099.7	-5.5	3.1	5.7	0.18	-0.03	-42.41
5,200.0	0.38	78.99	5,199.7	-5.3	3.5	5.5	0.34	0.15	62.42

Stryker Directional

Survey Report

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Merlin State Com #1H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Site:	Section 29/32-21S-34E Merlin State Com #1H	**MD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Well:	Merlin State Com #1H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	0.10	313.81	5,299.7	-5.1	3.8	5.4	0.45	-0.28	-125.18
5,400.0	0.25	107.81	5,399.7	-5.2	3.9	5.4	0.34	0.15	154.00
5,500.0	0.14	19.81	5,499.7	-5.1	4.1	5.4	0.28	-0.11	-88.00
5,600.0	0.38	211.56	5,599.7	-5.3	4.0	5.5	0.52	0.24	-168.25
5,700.0	0.41	173.92	5,699.7	-5.9	3.9	6.1	0.26	0.03	-37.64
5,800.0	0.39	216.02	5,799.7	-6.5	3.7	6.8	0.29	-0.02	42.10
5,900.0	0.48	197.33	5,899.7	-7.2	3.4	7.4	0.17	0.09	-18.69
6,000.0	0.44	186.19	5,999.7	-8.0	3.2	8.2	0.10	-0.04	-11.14
6,100.0	0.57	179.30	6,099.7	-8.9	3.2	9.1	0.14	0.13	-6.89
6,200.0	0.62	179.84	6,199.7	-9.9	3.2	10.1	0.05	0.05	0.54
6,300.0	0.35	154.87	6,299.7	-10.7	3.3	10.9	0.34	-0.27	-24.97
6,400.0	0.51	190.24	6,399.7	-11.4	3.4	11.6	0.30	0.16	35.37
6,500.0	0.64	190.42	6,499.7	-12.4	3.2	12.6	0.13	0.13	0.18
6,600.0	0.43	193.40	6,599.7	-13.3	3.0	13.5	0.21	-0.21	2.98
6,700.0	0.35	148.39	6,699.7	-14.0	3.1	14.1	0.31	-0.08	-45.01
6,800.0	0.42	166.89	6,799.7	-14.6	3.3	14.8	0.14	0.07	18.50
6,900.0	0.51	184.34	6,899.7	-15.4	3.4	15.6	0.17	0.09	17.45
7,000.0	0.47	166.19	6,999.7	-16.2	3.4	16.4	0.16	-0.04	-18.15
7,100.0	0.78	146.77	7,099.7	-17.2	3.9	17.4	0.37	0.31	-19.42
7,200.0	0.74	148.63	7,199.7	-18.3	4.6	18.6	0.05	-0.04	1.86
7,300.0	0.85	189.07	7,299.7	-19.6	4.8	19.9	0.56	0.11	40.44
7,400.0	0.78	175.81	7,399.6	-21.0	4.8	21.3	0.20	-0.07	-13.26
7,500.0	0.59	162.81	7,499.6	-22.2	5.0	22.5	0.24	-0.19	-13.00
7,600.0	0.97	168.77	7,599.6	-23.5	5.3	23.8	0.39	0.38	5.96
7,700.0	0.71	146.88	7,699.6	-24.9	5.8	25.2	0.41	-0.26	-21.89
7,800.0	0.23	159.46	7,799.6	-25.6	6.2	25.9	0.49	-0.48	12.58
7,900.0	0.46	153.55	7,899.6	-26.1	6.5	26.5	0.23	0.23	-5.91
8,000.0	0.52	130.08	7,999.6	-26.8	7.0	27.2	0.21	0.06	-23.47
8,100.0	0.37	89.17	8,099.6	-27.1	7.7	27.5	0.34	-0.15	-40.91
8,200.0	0.41	116.30	8,199.6	-27.2	8.3	27.7	0.19	0.04	27.13
8,300.0	0.26	106.18	8,299.6	-27.4	8.8	27.9	0.16	-0.15	-10.12
8,400.0	0.22	134.32	8,399.6	-27.6	9.2	28.2	0.12	-0.04	28.14
8,500.0	0.04	270.15	8,499.6	-27.8	9.3	28.3	0.25	-0.18	135.83
8,600.0	0.25	80.10	8,599.6	-27.7	9.5	28.3	0.29	0.21	169.95
8,700.0	0.73	17.29	8,699.6	-27.1	9.9	27.6	0.65	0.48	-62.81
8,800.0	0.45	356.13	8,799.6	-26.1	10.0	26.7	0.35	-0.28	-21.16
8,900.0	0.84	345.39	8,899.6	-25.0	9.8	25.5	0.41	0.39	-10.74
9,000.0	1.27	301.17	8,999.6	-23.7	8.7	24.2	0.89	0.43	-44.22
9,100.0	1.39	308.20	9,099.5	-22.4	6.8	22.8	0.20	0.12	7.03
9,200.0	1.36	284.35	9,199.5	-21.3	4.7	21.6	0.57	-0.03	-23.85
9,300.0	1.55	277.51	9,299.5	-20.9	2.2	20.9	0.26	0.19	-6.84
9,400.0	1.85	279.73	9,399.4	-20.4	-0.7	20.3	0.31	0.30	2.22
9,500.0	2.02	288.57	9,499.4	-19.6	-4.0	19.3	0.34	0.17	8.84

Stryker Directional

Survey Report

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Merlin State Com #1H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Site:	Section 29/32-21S-34E Merlin State Com #1H	**MD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Well:	Merlin State Com #1H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,600.0	2.19	263.79	9,599.3	-19.2	-7.6	18.7	0.92	0.17	-24.78
9,700.0	1.87	279.45	9,699.3	-19.2	-11.1	18.4	0.64	-0.32	15.66
9,800.0	2.56	291.74	9,799.2	-18.1	-14.8	17.1	0.83	0.69	12.29
9,900.0	2.48	306.12	9,899.1	-16.0	-18.6	14.7	0.64	-0.08	14.38
10,000.0	1.71	306.95	9,999.0	-13.8	-21.5	12.4	0.77	-0.77	0.83
10,100.0	1.15	309.84	10,099.0	-12.2	-23.5	10.7	0.56	-0.56	2.89
10,200.0	0.90	298.11	10,199.0	-11.2	-24.9	9.6	0.33	-0.25	-11.73
10,300.0	1.58	290.46	10,298.9	-10.4	-26.9	8.7	0.70	0.68	-7.65
10,400.0	1.93	303.98	10,398.9	-9.0	-29.6	7.1	0.54	0.35	13.52
10,500.0	1.50	305.29	10,498.9	-7.3	-32.1	5.2	0.43	-0.43	1.31
10,600.0	1.75	303.21	10,598.8	-5.7	-34.4	3.5	0.26	0.25	-2.08
10,700.0	1.85	291.41	10,698.8	-4.2	-37.2	1.9	0.38	0.10	-11.80
10,800.0	1.48	291.16	10,798.7	-3.2	-39.9	0.7	0.37	-0.37	-0.25
10,900.0	1.35	273.88	10,898.7	-2.6	-42.3	0.0	0.44	-0.13	-17.28
11,000.0	1.36	287.80	10,998.7	-2.2	-44.6	-0.6	0.33	0.01	13.92
11,100.0	1.66	299.34	11,098.6	-1.1	-47.0	-1.9	0.43	0.30	11.54
11,200.0	2.18	298.50	11,198.6	0.5	-49.9	-3.7	0.52	0.52	-0.84
11,300.0	2.01	283.33	11,298.5	1.8	-53.3	-5.2	0.58	-0.17	-15.17
11,311.0	2.00	253.60	11,309.5	1.8	-53.7	-5.2	9.35	-0.09	-270.27
11,342.0	3.60	202.10	11,340.5	0.7	-54.6	-4.2	9.12	5.16	-166.13
11,373.0	6.70	183.80	11,371.3	-2.0	-55.0	-1.5	11.19	10.00	-59.03
11,404.0	9.90	178.80	11,402.0	-6.4	-55.1	2.9	10.57	10.32	-16.13
11,434.0	13.80	175.60	11,431.4	-12.6	-54.8	9.1	13.18	13.00	-10.67
11,465.0	16.40	176.60	11,461.3	-20.6	-54.2	17.2	8.43	8.39	3.23
11,496.0	18.50	177.10	11,490.9	-29.9	-53.7	26.5	6.79	6.77	1.61
11,527.0	21.50	177.20	11,520.0	-40.5	-53.2	37.1	9.68	9.68	0.32
11,557.0	24.40	176.30	11,547.6	-52.2	-52.5	48.8	9.74	9.67	-3.00
11,588.0	26.70	175.30	11,575.6	-65.5	-51.6	62.1	7.55	7.42	-3.23
11,618.0	29.50	174.70	11,602.0	-79.6	-50.3	76.2	9.38	9.33	-2.00
11,649.0	32.40	173.10	11,628.6	-95.4	-48.6	92.2	9.72	9.35	-5.16
11,680.0	35.60	172.00	11,654.3	-112.6	-46.4	109.5	10.51	10.32	-3.55
11,711.0	39.10	171.80	11,679.0	-131.2	-43.7	128.2	11.30	11.29	-0.65
11,741.0	42.90	170.90	11,701.6	-150.7	-40.7	147.8	12.82	12.67	-3.00
11,772.0	46.60	168.90	11,723.6	-172.2	-36.9	169.5	12.77	11.94	-6.45
11,803.0	50.90	167.40	11,744.1	-195.0	-32.1	192.6	14.34	13.87	-4.84
11,834.0	54.50	166.80	11,762.8	-219.0	-26.6	216.9	11.71	11.61	-1.94
11,864.0	56.10	167.40	11,779.9	-243.1	-21.1	241.2	5.58	5.33	2.00
11,895.0	58.00	168.50	11,796.8	-268.5	-15.7	267.0	6.81	6.13	3.55
11,926.0	61.40	169.40	11,812.4	-294.8	-10.5	293.5	11.25	10.97	2.90
11,956.0	65.60	169.50	11,825.8	-321.1	-5.6	320.1	14.00	14.00	0.33
11,987.0	70.00	169.70	11,837.5	-349.4	-0.5	348.6	14.21	14.19	0.65
12,018.0	73.10	170.40	11,847.3	-378.3	4.6	377.9	10.23	10.00	2.26
12,048.0	75.70	170.90	11,855.4	-406.8	9.3	406.6	8.81	8.67	1.67
12,079.0	78.90	171.10	11,862.2	-436.7	14.0	436.7	10.34	10.32	0.65

Stryker Directional

Survey Report

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Merlin State Com #1H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Site:	Section 29/32-21S-34E Merlin State Com #1H	**MD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Well:	Merlin State Com #1H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,110.0	81.80	171.30	11,867.4	-466.9	18.7	467.1	9.38	9.35	0.65
12,137.0	85.98	171.04	11,870.3	-493.4	22.8	493.9	15.51	15.48	-0.97
12137' VES Gyro Survey									
12,141.0	86.60	171.00	11,870.5	-497.4	23.5	497.9	15.51	15.48	-0.96
12,165.0	88.30	172.20	11,871.6	-521.1	27.0	521.7	8.67	7.08	5.00
12,258.0	89.70	172.00	11,873.2	-613.2	39.7	614.5	1.52	1.51	-0.22
12,350.0	90.60	171.50	11,873.0	-704.2	52.9	706.2	1.12	0.98	-0.54
12,442.0	86.20	171.30	11,875.5	-795.1	66.7	797.8	4.79	-4.78	-0.22
12,534.0	86.80	171.20	11,881.2	-885.9	80.7	889.2	0.66	0.65	-0.11
12,626.0	90.20	173.10	11,883.6	-977.0	93.2	980.9	4.23	3.70	2.07
12,718.0	91.00	173.90	11,882.6	-1,068.4	103.6	1,072.8	1.23	0.87	0.87
12,811.0	91.60	175.20	11,880.5	-1,160.9	112.5	1,165.7	1.54	0.65	1.40
12,903.0	91.60	176.70	11,877.9	-1,252.7	119.0	1,257.7	1.63	0.00	1.63
12,995.0	90.80	177.40	11,876.0	-1,344.5	123.7	1,349.7	1.16	-0.87	0.76
13,087.0	90.10	175.90	11,875.3	-1,436.4	129.1	1,441.7	1.80	-0.76	-1.63
13,180.0	89.70	175.00	11,875.4	-1,529.1	136.5	1,534.6	1.06	-0.43	-0.97
13,272.0	89.20	176.80	11,876.3	-1,620.8	143.0	1,626.6	2.03	-0.54	1.96
13,364.0	89.70	178.10	11,877.2	-1,712.7	147.1	1,718.6	1.51	0.54	1.41
13,456.0	89.80	177.90	11,877.6	-1,804.7	150.3	1,810.6	0.24	0.11	-0.22
13,548.0	91.80	179.00	11,876.3	-1,896.6	152.8	1,902.5	2.48	2.17	1.20
13,641.0	91.60	179.80	11,873.6	-1,989.6	153.8	1,995.3	0.89	-0.22	0.86
13,733.0	92.00	180.10	11,870.7	-2,081.5	153.9	2,087.1	0.54	0.43	0.33
13,825.0	91.40	179.20	11,867.9	-2,173.5	154.4	2,178.9	1.18	-0.65	-0.98
13,917.0	90.70	178.20	11,866.3	-2,265.4	156.5	2,270.8	1.33	-0.76	-1.09
14,009.0	89.50	177.60	11,866.1	-2,357.4	159.9	2,362.8	1.46	-1.30	-0.65
14,102.0	90.50	176.50	11,866.1	-2,450.3	164.7	2,455.8	1.60	1.08	-1.18
14,194.0	89.10	176.30	11,866.4	-2,542.1	170.5	2,547.8	1.54	-1.52	-0.22
14,286.0	89.40	176.00	11,867.6	-2,633.9	176.6	2,639.8	0.46	0.33	-0.33
14,378.0	89.20	175.90	11,868.7	-2,725.6	183.1	2,731.7	0.24	-0.22	-0.11
14,470.0	90.20	175.30	11,869.2	-2,817.3	190.2	2,823.7	1.27	1.09	-0.65
14,562.0	87.80	175.80	11,870.8	-2,909.1	197.3	2,915.7	2.66	-2.61	0.54
14,654.0	88.10	175.20	11,874.1	-3,000.7	204.5	3,007.6	0.73	0.33	-0.65
14,747.0	88.30	174.90	11,877.0	-3,093.3	212.6	3,100.6	0.39	0.22	-0.32
14,839.0	88.80	174.90	11,879.4	-3,184.9	220.7	3,192.5	0.54	0.54	0.00
14,931.0	90.60	174.80	11,879.9	-3,276.5	229.0	3,284.5	1.96	1.96	-0.11
15,023.0	91.60	173.80	11,878.1	-3,368.1	238.1	3,376.4	1.54	1.09	-1.09
15,115.0	91.10	174.70	11,875.9	-3,459.6	247.3	3,468.3	1.12	-0.54	0.98
15,207.0	90.00	175.30	11,875.0	-3,551.2	255.4	3,560.3	1.36	-1.20	0.65
15,299.0	90.50	177.30	11,874.6	-3,643.0	261.3	3,652.3	2.24	0.54	2.17
15,391.0	91.40	176.50	11,873.1	-3,734.9	266.3	3,744.2	1.31	0.98	-0.87
15,484.0	90.30	176.10	11,871.7	-3,827.7	272.3	3,837.2	1.26	-1.18	-0.43
15,576.0	89.70	176.00	11,871.7	-3,919.5	278.6	3,929.2	0.66	-0.65	-0.11
15,668.0	90.70	175.60	11,871.4	-4,011.2	285.3	4,021.2	1.17	1.09	-0.43

Stryker Directional

Survey Report

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Merlin State Com #1H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Site:	Section 29/32-21S-34E Merlin State Com #1H	**MD Reference:**	GL 3721.4 + 26 @ 3747.4usft (Precision #590)
Well:	Merlin State Com #1H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,760.0	89.40	177.00	11,871.3	-4,103.0	291.3	4,113.2	2.08	-1.41	1.52
15,852.0	89.90	177.40	11,871.9	-4,194.9	295.8	4,205.2	0.70	0.54	0.43
15,944.0	91.10	177.10	11,871.1	-4,286.8	300.2	4,297.2	1.34	1.30	-0.33
16,036.0	89.40	178.20	11,870.7	-4,378.7	304.0	4,389.2	2.20	-1.85	1.20
16,129.0	89.40	177.80	11,871.7	-4,471.6	307.2	4,482.1	0.43	0.00	-0.43
16,221.0	88.60	178.00	11,873.3	-4,563.6	310.6	4,574.1	0.90	-0.87	0.22
16,313.0	88.80	178.30	11,875.4	-4,655.5	313.5	4,666.0	0.39	0.22	0.33
16,405.0	89.20	178.90	11,877.0	-4,747.5	315.8	4,757.9	0.78	0.43	0.65
16,497.0	89.90	178.20	11,877.7	-4,839.4	318.1	4,849.8	1.08	0.76	-0.76
16,590.0	89.80	178.50	11,877.9	-4,932.4	320.8	4,942.8	0.34	-0.11	0.32
16,682.0	88.80	178.20	11,879.1	-5,024.3	323.5	5,034.7	1.13	-1.09	-0.33
16,774.0	89.70	177.80	11,880.3	-5,116.3	326.7	5,126.7	1.07	0.98	-0.43
16,866.0	90.40	177.70	11,880.2	-5,208.2	330.3	5,218.7	0.77	0.76	-0.11
16,958.0	90.60	176.50	11,879.4	-5,300.1	334.9	5,310.6	1.32	0.22	-1.30
17,050.0	91.60	175.00	11,877.6	-5,391.8	341.7	5,402.6	1.96	1.09	-1.63
17,142.0	91.00	174.60	11,875.5	-5,483.4	350.1	5,494.6	0.78	-0.65	-0.43
17,234.0	89.20	174.60	11,875.4	-5,575.0	358.7	5,586.5	1.96	-1.96	0.00
17,326.0	89.50	173.90	11,876.4	-5,666.5	368.0	5,678.4	0.83	0.33	-0.76
17,419.0	89.80	173.10	11,877.0	-5,758.9	378.5	5,771.3	0.92	0.32	-0.86
17,511.0	89.10	172.20	11,877.9	-5,850.2	390.3	5,863.1	1.24	-0.76	-0.98
17,603.0	88.70	172.20	11,879.6	-5,941.3	402.7	5,954.9	0.43	-0.43	0.00
17,668.0	86.80	172.20	11,882.2	-6,005.6	411.5	6,019.6	2.92	-2.92	0.00
17,720.0	87.00	172.20	11,885.0	-6,057.1	418.6	6,071.4	0.38	0.38	0.00
17720' MD Projected to Bit									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
12,137.0	11,870.3	-493.4	22.8	12137' VES Gyro Survey
17,720.0	11,885.0	-6,057.1	418.6	17720' MD Projected to Bit

COMPANY: COG Operating, LLC.
WELL: Merlin State Com #1H
COUNTY: Lea County, N.M.
DATUM: NAD 1927 (NADCON CONUS)
RIG: Precision #590
GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.76°

OFFICE: 936.582.7296

GEODETIC ZONE: New Mexico East 3001
GL 3721.4 + 26 @ 3747.4usft (Precision #590)
GROUND ELEVATION: 3721.4

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	526814.20	758703.60	32° 26' 43.918 N	103° 29' 41.006 W	

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	11300.0	2.01	283.33	11298.5	1.8	-53.3	0.00	0.00	-5.2	
2	11392.2	2.01	283.33	11390.7	2.6	-56.5	0.00	0.00	-6.1	
3	12149.3	90.00	168.32	11875.0	-468.1	25.1	12.00	-115.00	468.7	
4	12564.8	90.00	176.63	11875.0	-879.7	79.5	2.00	90.00	883.0	
5	17765.6	90.00	176.63	11875.0	-6071.5	385.5	0.00	0.00	6083.7	PBHL Merlin State Com #1H