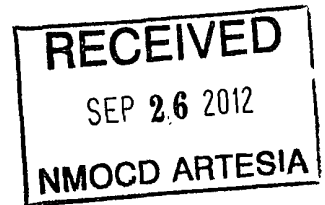




PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

30-015-40162



August 8, 2012

COG, LLC
Fasken Center, Tower II
550 West Texas Ave, Suite 1300
Midland, TX 79701

RE: Bullseye 22 State Com #1H
330' FNL & 990' FWL
Sec. 22, T24S, R27E
Eddy County, New Mexico

Dear Sir,

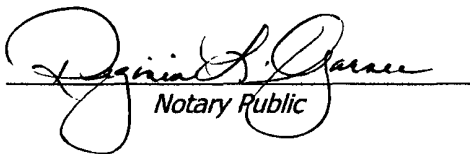
The attached is the Deviation Survey for the above captioned well.

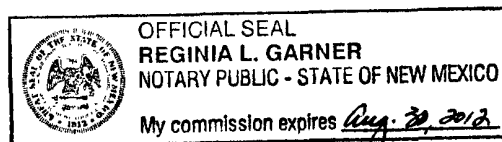
Very truly yours,


Eddie LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 8th day of August, 2012.


Notary Public



Bullseye 22 State Com #1H

Date	Depth	Deviation	Direction	TVD	Horiz. Disp.
7/16/2012	224	0.50			
7/18/2012	560	0.60			
7/18/2012	981	1.00			
7/19/2012	1395	0.30			
7/19/2012	1778	9.60			
7/20/2012	1021	0.60	290.10	1020.00	
7/20/2012	1058	0.60	317.00	1084.00	2.26
7/20/2012	1148	0.80	345.10	1147.00	2.72
7/21/2012	1180	0.70	315.90	1179.00	
7/21/2012	1372	2.50	19.70	1371.00	
7/21/2012	1403	2.80	26.80	1402.00	6.59
7/22/2012	1435	2.70	24.60	1434.00	
7/22/2012	1467	2.30	23.70	1466.00	
7/22/2012	1531	1.60	29.40	1530.00	
7/22/2012	1658	1.80	66.70	1657.00	
7/22/2012	1754	2.50	79.50	1753.00	
7/22/2012	1817	2.30	91.50	1816.00	15.25
7/22/2012	1912	3.10	106.00	1911.00	15.28
7/22/2012	2008	2.30	122.30	2007.00	13.89
7/23/2012	2072	2.40	122.10	2071.00	12.80
7/23/2012	2167	2.00	115.00	2166.00	11.38
7/23/2012	2219	1.70	109.20	2218.00	10.83
7/25/2012	2714	0.90			
7/25/2012	3192	0.90			
7/25/2012	3669	0.60			
7/25/2012	4146	0.80			
7/26/2012	4655	0.70			
7/26/2012	5132	0.70			
7/26/2012	5619	1.10			
7/26/2012	6084	0.80			
7/27/2012	6592	0.80			
7/28/2012	7092	0.60			
7/28/2012	7514	2.10	7992.00		
7/28/2012	7992	2.50			
7/29/2012	8468	1.00			
7/29/2012	8946	0.80			
8/1/2012	6989	0.40	180.80		
8/1/2012	7021	0.80	210.50	7020.00	24.58
8/1/2012	7117	12.80	177.60	7116.00	34.29
8/1/2012	7181	21.50	184.80	7177.00	53.13
8/2/2012	7213	25.10	189.20	7206.00	65.78
8/2/2012	7340	33.10	189.90	7317.00	128.16
8/2/2012	7372	34.80	189.60	7343.00	146.01

Date	Depth	Deviation	Direction	TVD	Horiz. Disp.
8/2/2012	7615	56.40	188.90	7476.00	262.57
8/2/2012	7690	71.10	186.40		375.97
8/2/2012	7754	77.60	186.90	7550.00	737.40
8/3/2012	7914	88.30	188.20	7567.00	628.54
8/3/2012	8264	90.10	186.00	7565.00	946.51
8/3/2012	8359	91.10	185.90	7564.00	1041.49
8/3/2012	8454	89.90	186.20	7563.00	1136.48
8/3/2012	8741	89.50	185.70	7569.00	1423.41
8/3/2012	8931	90.10	184.50	7569.00	1613.33
8/4/2012	9027	88.90	184.80	7570.00	1709.27
8/4/2012	9313	90.00	185.80	7576.00	1995.12
8/4/2012	9409	88.70	183.60	7577.00	2091.10
8/4/2012	9600	88.70	186.10	7579.00	2282.05
8/4/2012	9981	89.30	186.10	7587.00	2662.96
8/4/2012	10076	89.00	186.10	7588.00	2757.00
8/4/2012	10171	89.70	185.50	7589.00	2852.93
8/4/2012	10362	88.20	186.70	7591.00	3043.90
8/4/2012	10553	89.90	186.00	7594.00	3234.86
8/5/2012	10649	89.30	186.60	7595.00	3330.89
8/5/2012	10840	89.00	187.30	7596.00	3521.84
8/5/2012	10936	88.00	187.30	7599.00	3617.80
8/5/2012	11126	90.00	187.10	7602.00	3807.75
8/5/2012	11317	88.60	185.80	7604.00	3998.73
8/5/2012	11412	89.40	185.40	7606.00	4098.00
8/5/2012	11508	88.80	185.80	7607.00	4189.67
8/5/2012	11699	89.20	185.90	7610.00	4380.64
8/5/2012	11794	89.40	185.50	7611.00	4475.62
8/6/2012	11890	90.90	186.30	7611.00	4571.61

Company: COG Operating LLC (Concho)
Lease/Well: Bullseye 22 State Com / No. 001H



Rig Name: Silver Oak #7
State/County: New Mexico / Eddy

Latitude: 32.21

GRID North is 0.08 Degrees East of True North

VS-Azi: 0.00 Degrees



DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: bullseye 22 state com #1h_ed.ut

Minimum Curvature Method

Report Date/Time: 8/7/2012 / 16:14

Vaughn Energy Services

Fort Worth, Texas

817-741-3610

Surveyor: Danny Spring

Bullseye 22 State Com No. 001H / API 30-015-40162

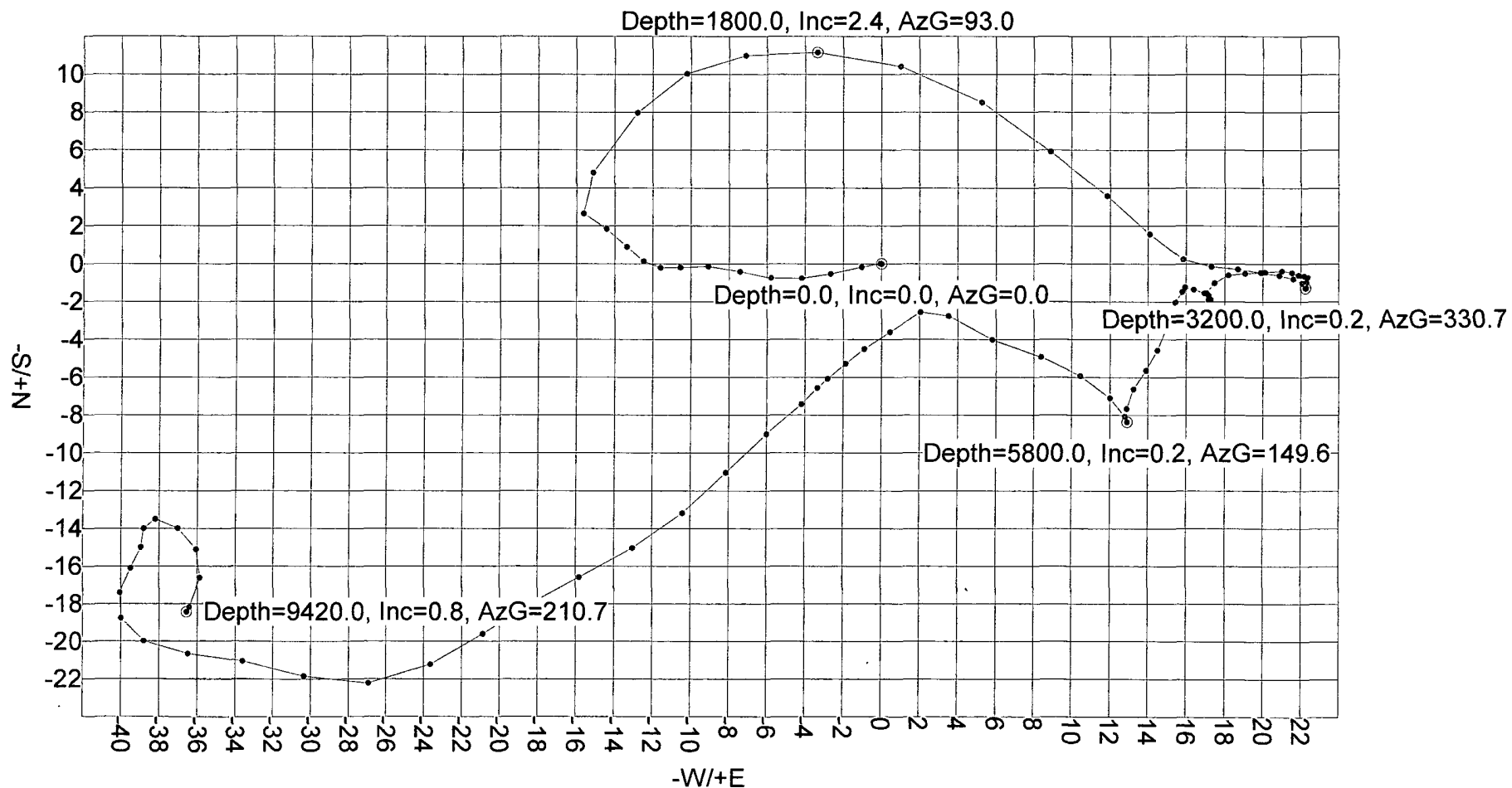
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.08	278.22	100.00	0.01	-0.07	0.07	278.22	0.08
200.00	1.06	257.85	199.99	-0.18	-1.04	1.06	260.44	0.99
300.00	0.85	257.30	299.98	-0.53	-2.67	2.72	258.70	0.21
400.00	0.90	264.57	399.97	-0.77	-4.18	4.25	259.54	0.12
500.00	0.95	276.50	499.96	-0.75	-5.79	5.84	262.60	0.20
600.00	0.97	286.17	599.94	-0.42	-7.43	7.44	266.76	0.16
700.00	0.98	272.68	699.93	-0.14	-9.10	9.10	269.09	0.23
800.00	0.69	260.71	799.92	-0.20	-10.56	10.56	268.90	0.34
900.00	0.52	281.44	899.91	-0.21	-11.60	11.60	268.96	0.28
1000.00	0.58	299.40	999.91	0.13	-12.48	12.48	270.59	0.18
1100.00	0.78	318.08	1099.90	0.88	-13.38	13.41	273.78	0.30
1200.00	0.86	306.20	1199.89	1.84	-14.44	14.56	277.24	0.18
1300.00	0.80	302.73	1299.88	2.66	-15.63	15.86	279.64	0.07
1400.00	2.39	31.54	1399.85	4.81	-15.13	15.88	287.64	2.50
1500.00	2.12	41.61	1499.77	7.97	-12.81	15.09	301.87	0.48
1600.00	1.75	63.55	1599.71	10.03	-10.22	14.32	314.45	0.82
1700.00	1.99	80.75	1699.66	10.98	-7.15	13.10	326.95	0.61
1800.00	2.37	93.00	1799.59	11.15	-3.37	11.65	343.18	0.60
1900.00	2.75	105.30	1899.49	10.41	1.00	10.46	5.50	0.67

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	2.75	105.30	1899.49	10.41	1.00	10.46	5.50	0.67
2000.00	2.65	123.19	1999.38	8.52	5.25	10.00	31.65	0.84
2100.00	2.47	128.06	2099.28	5.93	8.88	10.67	56.27	0.28
2200.00	1.87	128.85	2199.21	3.58	11.84	12.37	73.17	0.60
2300.00	1.60	135.39	2299.16	1.57	14.08	14.17	83.66	0.33
2400.00	0.97	113.46	2399.14	0.24	15.84	15.84	89.15	0.79
2500.00	0.80	94.55	2499.13	-0.15	17.30	17.30	90.51	0.33
2600.00	0.78	96.57	2599.12	-0.29	18.67	18.68	90.88	0.03
2700.00	0.62	100.28	2699.11	-0.46	19.89	19.89	91.33	0.16
2800.00	0.51	97.51	2799.11	-0.62	20.86	20.87	91.70	0.12
2900.00	0.36	112.14	2899.10	-0.80	21.60	21.61	92.11	0.18
3000.00	0.24	120.78	2999.10	-1.02	22.07	22.10	92.65	0.13
3100.00	0.17	165.99	3099.10	-1.27	22.29	22.32	93.27	0.17
3200.00	0.17	330.70	3199.10	-1.29	22.25	22.29	93.31	0.33
3300.00	0.23	32.68	3299.10	-0.99	22.29	22.31	92.54	0.21
3400.00	0.12	335.82	3399.10	-0.73	22.36	22.37	91.86	0.19
3500.00	0.15	265.18	3499.10	-0.64	22.19	22.19	91.66	0.16
3600.00	0.21	285.76	3599.10	-0.60	21.88	21.89	91.58	0.09
3700.00	0.23	296.46	3699.10	-0.47	21.52	21.53	91.24	0.05
3800.00	0.39	268.36	3799.10	-0.39	21.00	21.01	91.06	0.22
3900.00	0.62	264.34	3899.09	-0.45	20.12	20.13	91.28	0.23
4000.00	0.61	268.76	3999.09	-0.51	19.05	19.06	91.55	0.05
4100.00	0.39	257.13	4099.08	-0.60	18.19	18.20	91.90	0.24
4200.00	0.59	228.99	4199.08	-1.01	17.47	17.50	93.32	0.30
4300.00	0.23	190.73	4299.08	-1.55	17.05	17.12	95.19	0.43
4400.00	0.25	131.83	4399.08	-1.89	17.17	17.27	96.28	0.24
4500.00	0.18	337.72	4499.08	-1.89	17.27	17.37	96.24	0.42
4600.00	0.09	320.06	4599.08	-1.68	17.16	17.24	95.60	0.09
4700.00	0.20	291.65	4699.08	-1.55	16.94	17.01	95.24	0.13
4800.00	0.47	287.77	4799.07	-1.36	16.39	16.44	94.75	0.27
4900.00	0.07	268.53	4899.07	-1.24	15.93	15.98	94.45	0.40
5000.00	0.29	196.32	4999.07	-1.49	15.79	15.86	95.37	0.28
5100.00	0.48	222.54	5099.07	-2.04	15.44	15.58	97.52	0.25
5200.00	0.38	183.46	5199.07	-2.67	15.14	15.37	100.01	0.30
5300.00	0.62	201.81	5299.06	-3.50	14.92	15.33	103.21	0.28
5400.00	0.70	202.55	5399.06	-4.57	14.48	15.19	107.51	0.09
5500.00	0.70	215.35	5499.05	-5.64	13.89	14.99	112.08	0.16
5600.00	0.66	211.19	5599.04	-6.63	13.24	14.81	116.60	0.06
5700.00	0.62	186.60	5699.04	-7.67	12.88	14.99	120.77	0.28

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	0.20	149.59	5799.03	-8.36	12.91	15.38	122.93	0.47
5900.00	0.55	333.09	5899.03	-8.08	12.78	15.12	122.32	0.76
6000.00	0.90	314.64	5999.02	-7.10	12.00	13.95	120.62	0.41
6100.00	1.36	301.91	6099.00	-5.93	10.44	12.00	119.59	0.52
6200.00	1.30	289.22	6198.98	-4.93	8.37	9.71	120.50	0.30
6300.00	1.84	289.62	6298.94	-4.02	5.79	7.05	124.77	0.54
6400.00	1.18	313.92	6398.91	-2.76	3.53	4.49	128.04	0.91
6500.00	1.02	235.48	6498.89	-2.55	2.06	3.28	141.07	1.39
6600.00	1.21	238.20	6598.87	-3.61	0.43	3.64	173.18	0.21
6700.00	0.64	232.84	6698.86	-4.51	-0.91	4.60	191.43	0.58
6800.00	0.79	230.18	6798.85	-5.28	-1.88	5.61	199.62	0.16
6900.00	0.62	228.45	6898.84	-6.08	-2.82	6.71	204.85	0.17
7000.00	0.21	224.97	6998.84	-6.57	-3.35	7.38	207.01	0.41
7100.00	1.16	224.03	7098.83	-7.42	-4.18	8.52	209.37	0.95
7200.00	1.63	232.80	7198.80	-9.01	-6.01	10.83	213.72	0.52
7300.00	1.77	220.50	7298.76	-11.04	-8.15	13.72	216.43	0.39
7400.00	1.83	232.89	7398.71	-13.18	-10.42	16.80	218.34	0.39
7500.00	1.84	236.31	7498.66	-15.03	-13.03	19.89	220.92	0.11
7600.00	1.82	245.28	7598.61	-16.59	-15.81	22.91	223.63	0.29
7700.00	1.65	236.84	7698.56	-18.04	-18.46	25.81	225.66	0.30
7800.00	1.66	238.06	7798.52	-19.59	-20.89	28.64	226.84	0.04
7900.00	2.01	240.59	7898.47	-21.21	-23.64	31.76	228.10	0.36
8000.00	2.02	265.01	7998.41	-22.23	-26.93	34.92	230.46	0.85
8100.00	2.01	288.21	8098.35	-21.83	-30.35	37.39	234.27	0.81
8200.00	1.85	278.66	8198.29	-21.04	-33.61	39.65	237.95	0.36
8300.00	1.50	276.80	8298.25	-20.65	-36.50	41.94	240.51	0.35
8400.00	1.29	297.26	8398.22	-19.97	-38.81	43.65	242.76	0.54
8500.00	0.85	344.85	8498.21	-18.74	-40.00	44.18	244.90	0.96
8600.00	0.76	11.65	8598.20	-17.38	-40.06	43.67	246.55	0.38
8700.00	0.90	34.21	8698.19	-16.09	-39.49	42.64	247.83	0.35
8800.00	0.54	12.17	8798.18	-14.98	-38.95	41.73	248.97	0.44
8900.00	0.60	3.65	8898.17	-13.99	-38.82	41.26	250.18	0.10
9000.00	0.66	92.50	8998.17	-13.49	-38.21	40.52	250.55	0.88
9100.00	0.87	128.28	9098.16	-13.99	-37.04	39.59	249.31	0.51
9200.00	0.86	149.73	9198.15	-15.11	-36.07	39.10	247.27	0.32
9300.00	1.01	191.83	9298.14	-16.62	-35.87	39.53	245.14	0.68
9400.00	0.91	209.30	9398.12	-18.17	-36.44	40.72	243.49	0.31
9420.00	0.76	210.73	9418.12	-18.43	-36.58	40.96	243.27	0.76



Vaughn Energy Services
Fort Worth, Texas
817-741-3610
Surveyor: Danny Spring
Bullseye 22 State Com No. 001H / API 30-015-40162



VES Survey Date: 07/29/2012



COG Operating LLC

Eddy County, NM (NAD 83)

Bullseye 22 State Com 1H

Bullseye 22 State Com 1H

Wellbore #1

Design: surveys

Standard Survey Report

06 August, 2012



Company:	COG Operating LLC	Local Co-ordinate Reference:	Site Bullseye 22 State Com 1H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	WELL @ 3254 00ft (Original Well Elev)
Site:	Bullseye 22 State Com 1H	MD Reference:	WELL @ 3254 00ft (Original Well Elev)
Well:	Bullseye 22 State Com 1H	North Reference:	Grd
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	surveys	Database:	Houston R5000 Database

Project	Eddy County, NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Bullseye 22 State Com 1H		
Site Position:		Northing:	439,833 05 ft
From:	Map	Easting:	587,531 43 ft
Position Uncertainty:	0.00 ft	Slot Radius:	13 200 in
		Latitude:	32 209087
		Longitude:	-104.183979
		Grid Convergence:	0 08 °

Well	Bullseye 22 State Com 1H		
Well Position	+N/-S	0 00 ft	Northing: 439,833.05 ft
	+E/-W	0.00 ft	Easting: 587,531.43 ft
Position Uncertainty	0 00 ft	Wellhead Elevation:	ft
		Latitude:	32 209087
		Longitude:	-104 183979
		Ground Level:	3,236 50 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	7/12/2012	7 72	60 07	48,475

Design	surveys				
Audit Notes:					
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	0 00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0 00	186 64	

Survey Program	Date 8/6/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100 00	6,900 00	Gyro Surveys (Wellbore #1)	MWD	MWD - Standard
6,989 00	12,056 00	MWD Surveys (Wellbore #1)	MWD	MWD - Standard

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0 00	0 00	0.00	0.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
100.00	0.08	278 22	100 00	0.01	-0 07	0 00	0.08	0 08	0 00	0 00
200 00	1.06	257.85	199 99	-0 17	-1 04	0 29	0 99	0 98	-20 37	
300.00	0 85	257 30	299 98	-0 53	-2 67	0 84	0 21	-0 21	-0 55	
400 00	0 90	264 57	399 97	-0 77	-4 18	1 25	0.12	0 05	7 27	
500 00	0 95	276 50	499 96	-0 75	-5 78	1.41	0 20	0 05	11.93	
600.00	0 97	286 17	599 94	-0 42	-7 42	1 28	0 16	0 02	9 67	
700.00	0 98	272 68	699 93	-0.15	-9 09	1.19	0 23	0.01	-13 49	
800 00	0 69	260 71	799 92	-0 20	-10.53	1.42	0 34	-0.29	-11 97	
900.00	0 52	281 44	899 91	-0 21	-11 57	1 55	0 27	-0 17	20.73	

Company:	COG Operating LLC	Local Co-ordinate Reference:	Site Bullseye 22 State Com 1H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	WELL @ 3254 00ft (Original Well Elev)
Site:	Bullseye 22 State Com 1H	MD Reference:	WELL @ 3254 00ft (Original Well Elev)
Well:	Bullseye 22 State Com 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	surveys	Database:	Houston R5000 Database

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,000.00	0.58	299.40	999.91	0.13	-12.46	1.31	0.18	0.06	17.96
1,100.00	0.78	318.08	1,099.90	0.88	-13.35	0.67	0.30	0.20	18.68
1,200.00	0.86	306.20	1,199.89	1.83	-14.41	-0.15	0.19	0.08	-11.88
1,300.00	0.80	302.73	1,299.88	2.65	-15.61	-0.83	0.08	-0.06	-3.47
1,400.00	2.39	31.54	1,399.85	4.81	-15.10	-3.03	2.50	1.59	88.81
1,500.00	2.12	41.61	1,499.77	7.97	-12.78	-6.44	0.48	-0.27	10.07
1,600.00	1.75	63.55	1,599.71	10.03	-10.19	-8.79	0.82	-0.37	21.94
1,700.00	1.99	80.75	1,699.66	10.99	-7.11	-10.10	0.61	0.24	17.20
1,800.00	2.37	93.00	1,799.59	11.16	-3.33	-10.70	0.60	0.38	12.25
1,900.00	2.75	105.30	1,899.49	10.42	1.05	-10.47	0.67	0.38	12.30
2,000.00	2.65	123.19	1,999.38	8.52	5.30	-9.08	0.85	-0.10	17.89
2,100.00	2.47	128.06	2,099.28	5.93	8.93	-6.92	0.28	-0.18	4.87
2,200.00	1.87	128.85	2,199.21	3.58	11.90	-4.93	0.60	-0.60	0.79
2,300.00	1.60	135.39	2,299.16	1.56	14.15	-3.18	0.33	-0.27	6.54
2,400.00	0.97	113.46	2,399.14	0.23	15.90	-2.07	0.79	-0.63	-21.93
2,500.00	0.80	94.55	2,499.13	-0.16	17.38	-1.85	0.34	-0.17	-18.91
2,600.00	0.78	96.57	2,599.12	-0.30	18.75	-1.87	0.03	-0.02	2.02
2,700.00	0.62	100.28	2,699.11	-0.47	19.96	-1.84	0.17	-0.16	3.71
2,800.00	0.51	97.51	2,799.10	-0.63	20.93	-1.80	0.11	-0.11	-2.77
2,900.00	0.36	112.14	2,899.10	-0.80	21.66	-1.71	0.19	-0.15	14.63
3,000.00	0.24	120.78	2,999.10	-1.03	22.13	-1.54	0.13	-0.12	8.64
3,100.00	0.17	165.99	3,099.10	-1.28	22.35	-1.31	0.17	-0.07	45.21
3,200.00	0.17	330.70	3,199.10	-1.29	22.31	-1.29	0.34	0.00	164.71
3,300.00	0.23	32.68	3,299.10	-1.00	22.35	-1.60	0.21	0.06	61.98
3,400.00	0.12	335.82	3,399.10	-0.73	22.41	-1.87	0.19	-0.11	-56.86
3,500.00	0.15	265.18	3,499.10	-0.65	22.24	-1.93	0.16	0.03	-70.64
3,600.00	0.21	285.76	3,599.10	-0.61	21.93	-1.93	0.09	0.06	20.58
3,700.00	0.23	296.46	3,699.10	-0.47	21.58	-2.03	0.05	0.02	10.70
3,800.00	0.39	268.36	3,799.10	-0.39	21.06	-2.05	0.22	0.16	-28.10
3,900.00	0.62	264.34	3,899.09	-0.45	20.18	-1.88	0.23	0.23	-4.02
4,000.00	0.61	268.76	3,999.09	-0.52	19.11	-1.70	0.05	-0.01	4.42
4,100.00	0.39	257.13	4,099.08	-0.60	18.24	-1.51	0.24	-0.22	-11.63
4,200.00	0.59	228.99	4,199.08	-1.02	17.52	-1.02	0.31	0.20	-28.14
4,300.00	0.23	190.73	4,299.08	-1.55	17.10	-0.43	0.43	-0.36	-38.26
4,400.00	0.25	131.83	4,399.07	-1.90	17.22	-0.11	0.24	0.02	-58.90
4,500.00	0.18	337.72	4,499.07	-1.90	17.33	-0.12	0.42	-0.07	-154.11
4,600.00	0.09	320.06	4,599.07	-1.69	17.22	-0.31	0.10	-0.09	-17.66
4,700.00	0.20	291.65	4,699.07	-1.57	17.00	-0.41	0.13	0.11	-28.41
4,800.00	0.47	287.77	4,799.07	-1.38	16.45	-0.54	0.27	0.27	-3.88
4,900.00	0.07	268.53	4,899.07	-1.25	16.00	-0.61	0.40	-0.40	-19.24
5,000.00	0.29	196.32	4,999.07	-1.50	15.87	-0.35	0.28	0.22	-72.21
5,100.00	0.48	222.54	5,099.07	-2.05	15.51	0.24	0.25	0.19	26.22
5,200.00	0.38	183.46	5,199.07	-2.69	15.21	0.91	0.30	-0.10	-39.08

Company:	COG Operating LLC	Local Co-ordinate Reference:	Site Bullseye 22 State Com 1H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	WELL @ 3254 00ft (Original Well Elev)
Site:	Bullseye 22 State Com 1H	MD Reference:	WELL @ 3254 00ft (Original Well Elev)
Well:	Bullseye 22 State Com 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	surveys	Database:	Houston R5000 Database

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,300.00	0.62	201.81	5,299.06	-3.52	14.99	1.76	0.29	0.24	18.35
5,400.00	0.70	202.55	5,399.05	-4.59	14.55	2.87	0.08	0.08	0.74
5,500.00	0.70	215.35	5,499.05	-5.65	13.97	4.00	0.16	0.00	12.80
5,600.00	0.66	211.19	5,599.04	-6.64	13.31	5.06	0.06	-0.04	-4.16
5,700.00	0.62	186.60	5,699.03	-7.67	12.95	6.12	0.28	-0.04	-24.59
5,800.00	0.20	149.59	5,799.03	-8.36	12.98	6.80	0.48	-0.42	-37.01
5,900.00	0.55	333.09	5,899.03	-8.08	12.85	6.54	0.75	0.35	-176.50
6,000.00	0.90	314.64	5,999.02	-7.10	12.08	5.66	0.42	0.35	-18.45
6,100.00	1.36	301.91	6,099.00	-5.92	10.51	4.67	0.52	0.46	-12.73
6,200.00	1.30	289.22	6,198.98	-4.92	8.43	3.91	0.30	-0.06	-12.69
6,300.00	1.84	289.62	6,298.94	-4.01	5.85	3.31	0.54	0.54	0.40
6,400.00	1.18	313.92	6,398.90	-2.76	3.59	2.32	0.91	-0.66	24.30
6,500.00	1.02	235.48	6,498.89	-2.55	2.12	2.28	1.40	-0.16	-78.44
6,600.00	1.21	238.20	6,598.87	-3.61	0.49	3.53	0.20	0.19	2.72
6,700.00	0.64	232.84	6,698.86	-4.50	-0.86	4.57	0.58	-0.57	-5.36
6,800.00	0.79	230.18	6,798.85	-5.28	-1.83	5.46	0.15	0.15	-2.66
6,900.00	0.62	228.45	6,898.84	-6.08	-2.76	6.36	0.17	-0.17	-1.73
6,989.00	0.40	180.80	6,987.84	-6.71	-3.13	7.03	0.52	-0.25	-53.54
7,021.00	0.80	210.50	7,019.84	-7.01	-3.24	7.34	1.54	1.25	92.81
7,053.00	2.80	191.90	7,051.82	-7.97	-3.52	8.33	6.43	6.25	-58.13
7,085.00	8.00	182.40	7,083.67	-10.96	-3.77	11.33	16.43	16.25	-29.69
7,117.00	12.80	177.60	7,115.13	-16.73	-3.72	17.05	15.23	15.00	-15.00
7,149.00	17.40	178.30	7,146.02	-25.06	-3.43	25.29	14.39	14.38	2.19
7,181.00	21.50	184.80	7,176.19	-35.69	-3.78	35.89	14.47	12.81	20.31
7,213.00	25.10	189.20	7,205.58	-48.24	-5.35	48.54	12.49	11.25	13.75
7,245.00	27.90	193.10	7,234.22	-62.24	-8.14	62.76	10.30	8.75	12.19
7,277.00	30.10	193.30	7,262.20	-77.34	-11.68	78.17	6.88	6.88	0.63
7,308.00	31.30	191.50	7,288.86	-92.80	-15.07	93.92	4.88	3.87	-5.81
7,340.00	33.10	189.90	7,315.94	-109.55	-18.23	110.93	6.22	5.63	-5.00
7,372.00	34.80	189.60	7,342.48	-127.16	-21.26	128.77	5.34	5.31	-0.94
7,404.00	38.50	188.50	7,368.15	-146.03	-24.25	147.85	11.74	11.56	-3.44
7,436.00	41.00	189.70	7,392.75	-166.23	-27.50	168.29	8.17	7.81	3.75
7,467.00	45.10	190.10	7,415.40	-187.07	-31.14	189.41	13.26	13.23	1.29
7,499.00	47.60	191.00	7,437.49	-209.83	-35.38	212.51	8.07	7.81	2.81
7,531.00	51.30	189.70	7,458.29	-233.74	-39.74	236.77	11.97	11.56	-4.06
7,563.00	56.40	188.90	7,477.16	-259.24	-43.91	262.57	16.06	15.94	-2.50
7,595.00	61.00	187.80	7,493.78	-286.28	-47.87	289.90	14.67	14.38	-3.44
7,627.00	63.30	186.10	7,508.73	-314.36	-51.29	318.19	8.59	7.19	-5.31
7,658.00	66.00	185.70	7,522.00	-342.23	-54.17	346.20	8.79	8.71	-1.29
7,690.00	71.10	186.40	7,533.70	-371.84	-57.31	375.97	16.07	15.94	2.19
7,722.00	75.30	187.10	7,542.94	-402.25	-60.91	406.60	13.29	13.13	2.19
7,754.00	77.60	186.90	7,550.44	-433.13	-64.70	437.70	7.21	7.19	-0.63
7,786.00	80.10	188.00	7,556.63	-464.25	-68.77	469.09	8.51	7.81	3.44

Company:	COG Operating LLC	Local Co-ordinate Reference:	Site Bullseye 22 State Com 1H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	WELL @ 3254.00ft (Original Well Elev)
Site:	Bullseye 22 State Com 1H	MD Reference:	WELL @ 3254.00ft (Original Well Elev)
Well:	Bullseye 22 State Com 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	surveys	Database:	Houston R5000 Database

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,818.00	85.00	188.90	7,560.78	-495.63	-73.44	500.80	15.56	15.31	2.81
7,850.00	87.10	188.60	7,562.98	-527.18	-78.29	532.70	6.63	6.56	-0.94
7,882.00	87.40	189.00	7,564.52	-558.77	-83.18	564.64	1.56	0.94	1.25
7,914.00	87.40	188.60	7,565.97	-590.36	-88.07	596.58	1.25	0.00	-1.25
7,946.00	88.30	188.20	7,567.17	-621.99	-92.74	628.54	3.08	2.81	-1.25
7,977.00	90.20	187.40	7,567.57	-652.70	-96.95	659.53	6.65	6.13	-2.58
8,073.00	90.20	185.90	7,567.24	-748.05	-108.07	755.53	1.56	0.00	-1.56
8,168.00	91.00	186.10	7,566.24	-842.52	-118.00	850.52	0.87	0.84	0.21
8,264.00	90.10	186.00	7,565.32	-937.98	-128.11	946.51	0.94	-0.94	-0.10
8,359.00	91.10	185.90	7,564.33	-1,032.47	-137.96	1,041.49	1.06	1.05	-0.11
8,454.00	89.90	186.20	7,563.50	-1,126.93	-147.97	1,136.48	1.30	-1.26	0.32
8,550.00	88.30	186.70	7,565.01	-1,222.31	-158.75	1,232.47	1.75	-1.67	0.52
8,645.00	88.70	186.20	7,567.49	-1,316.67	-169.42	1,327.43	0.67	0.42	-0.53
8,741.00	89.50	185.70	7,569.00	-1,412.14	-179.37	1,423.41	0.98	0.83	-0.52
8,836.00	89.80	184.90	7,569.58	-1,506.74	-188.15	1,518.38	0.90	0.32	-0.84
8,931.00	90.10	184.50	7,569.66	-1,601.42	-195.93	1,613.33	0.53	0.32	-0.42
9,027.00	88.90	184.80	7,570.50	-1,697.09	-203.71	1,709.27	1.29	-1.25	0.31
9,122.00	88.10	185.50	7,572.99	-1,791.68	-212.24	1,804.20	1.12	-0.84	0.74
9,218.00	89.00	185.30	7,575.42	-1,887.22	-221.27	1,900.15	0.96	0.94	-0.21
9,313.00	90.00	185.80	7,576.25	-1,981.77	-230.46	1,995.12	1.18	1.05	0.53
9,409.00	88.70	185.60	7,577.34	-2,077.29	-239.99	2,091.10	1.37	-1.35	-0.21
9,504.00	89.80	185.50	7,578.58	-2,171.83	-249.18	2,186.08	1.16	1.16	-0.11
9,600.00	88.70	186.10	7,579.84	-2,267.33	-258.88	2,282.06	1.31	-1.15	0.63
9,695.00	89.30	185.70	7,581.49	-2,361.81	-268.64	2,377.03	0.76	0.63	-0.42
9,790.00	88.60	186.40	7,583.23	-2,456.27	-278.65	2,472.01	1.04	-0.74	0.74
9,885.00	88.60	186.40	7,585.56	-2,550.65	-289.24	2,566.98	0.00	0.00	0.00
9,981.00	89.30	186.10	7,587.31	-2,646.06	-299.69	2,662.96	0.79	0.73	-0.31
10,076.00	89.00	186.10	7,588.72	-2,740.51	-309.78	2,757.95	0.32	-0.32	0.00
10,171.00	89.70	185.50	7,589.80	-2,835.02	-319.38	2,852.93	0.97	0.74	-0.63
10,266.00	89.80	186.10	7,590.22	-2,929.53	-328.98	2,947.92	0.64	0.11	0.63
10,362.00	88.20	186.70	7,591.89	-3,024.91	-339.68	3,043.90	1.78	-1.67	0.63
10,457.00	89.10	186.30	7,594.13	-3,119.27	-350.43	3,138.87	1.04	0.95	-0.42
10,553.00	89.90	186.00	7,594.97	-3,214.72	-360.72	3,234.86	0.89	0.83	-0.31
10,649.00	89.30	186.60	7,595.64	-3,310.13	-371.25	3,330.86	0.88	-0.63	0.63
10,745.00	90.10	187.60	7,596.14	-3,405.39	-383.12	3,426.85	1.33	0.83	1.04
10,840.00	89.00	187.30	7,596.89	-3,499.59	-395.43	3,521.84	1.20	-1.16	-0.32
10,936.00	88.00	187.30	7,599.40	-3,594.78	-407.63	3,617.80	1.04	-1.04	0.00
11,031.00	89.00	186.90	7,601.89	-3,689.01	-419.37	3,712.76	1.13	1.05	-0.42
11,126.00	90.00	187.10	7,602.72	-3,783.30	-430.94	3,807.75	1.07	1.05	0.21
11,221.00	89.50	186.80	7,603.13	-3,877.60	-442.44	3,902.75	0.61	-0.53	-0.32
11,317.00	88.60	185.80	7,604.72	-3,973.01	-452.97	3,998.73	1.40	-0.94	-1.04
11,412.00	89.40	185.40	7,606.38	-4,067.54	-462.24	4,093.70	0.94	0.84	-0.42
11,508.00	88.80	185.80	7,607.89	-4,163.07	-471.61	4,189.67	0.75	-0.63	0.42
11,603.00	89.50	186.10	7,609.30	-4,257.54	-481.45	4,284.66	0.80	0.74	0.32

Company:	COG Operating LLC	Local Co-ordinate Reference:	Site Bullseye 22 State Com 1H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	WELL @ 3254 00ft (Original Well Elev)
Site:	Bullseye 22 State Com 1H	MD Reference:	WELL @ 3254 00ft (Original Well Elev)
Well:	Bullseye 22 State Com 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	surveys	Database:	Houston R5000 Database

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,699 00	89 20	185 90	7,610 39	-4,353 01	-491 49	4,380 64	0 38	-0 31	-0 21
11,794 00	89 40	185 50	7,611 55	-4,447 54	-500 92	4,475 62	0 47	0 21	-0 42
11,890 00	90 90	186 30	7,611 29	-4,543 02	-510 79	4,571.61	1 77	1 56	0.83
12,007 00	92 30	186 10	7,608 03	-4,659 29	-523 42	4,688 56	1 21	1 20	-0 17
12,056 00	92 30	186 10	7,606 06	-4,707 97	-528 62	4,737.52	0 00	0.00	0 00
Projected to TD @ 12056.00' MD, 92.30°, 186.10° Azi									

Wellbore Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL (Bullseye 22 State	0 00	0 00	7,620 00	-4,707 01	-547.56	435,126 04	586,983 87	32 196150	-104 185770
- actual wellpath misses target center by 23 53ft at 12056 00ft MD (7606 06 TVD, -4707 97 N, -528 62 E)									
- Point									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
12,056.00	7,606.06	-4,707 97	-528 62	Projected to TD @ 12056 00' MD, 92 30°, 186 10° Azi

Checked By: _____	Approved By: _____	Date: _____
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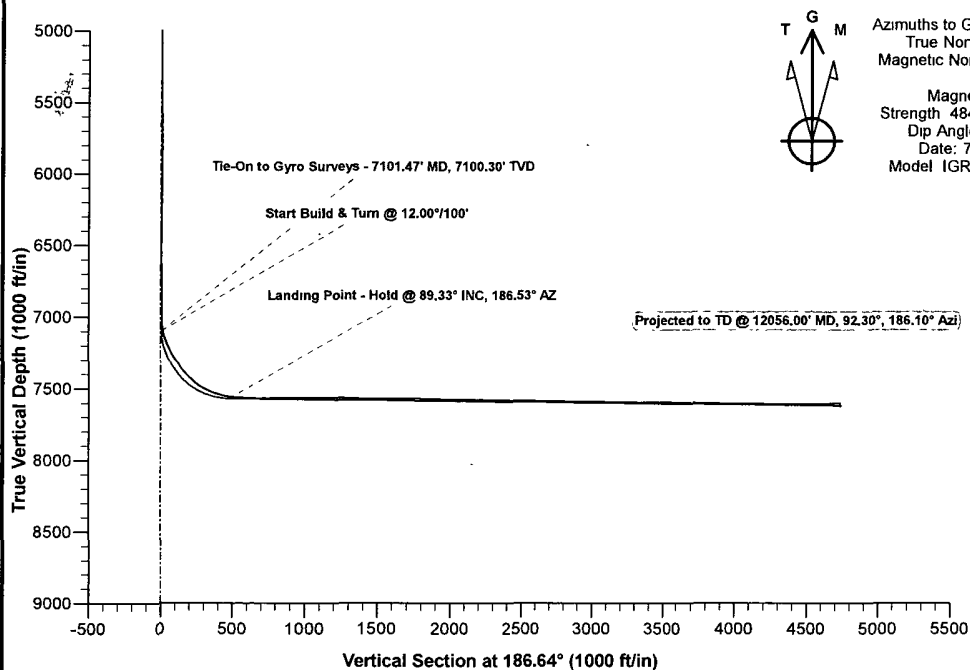
COG Operating LLC
Bullseye 22 State Com 1H
Eddy County, NM (NAD 83)
Plan #2



Surface Location		Ground Elev: 3236.50 WELL @ 3254.00ft (Original Well Elev)			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	439833.05	587531.43	32.209087	-104.183979

TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (Bullseye 22 State Com 1H Plan 2)	7620.00	-4707.01	-547.56	435126.04	586983.87	32.196150	-104.185770

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation	
1	7101.47	1.17	224.21	7100.30	-7.45	-4.15	0.00	0.00	7.88	Tie-On to Gyro Surveys - 7101.47' MD, 7100.30' TVD	
2	7838.17	89.33	186.53	7570.00	-475.53	-63.51	12.00	-37.70	479.69	Landing Point - Hold @ 89.33° INC, 186.53° AZ	
3	12097.54	89.33	186.53	7620.00	-4707.01	-547.56	0.00	0.00	4738.75	TD @ 12097.54' MD, 7620.00' TVD	



Azimuths to Grid North
 True North: -0.08°
 Magnetic North: 7.64°

 Magnetic Field
 Strength: 48475.3snT
 Dip Angle: 60.07°
 Date: 7/12/2012
 Model: IGRF200510

