

Results of Directional Survey

API number:	30-025-40955		
OGRID:		Operator:	COG OPERATING LLC
		Property:	CORAZON STATE UNIT # 13H

7894

surface	ULSTR:	A	04	T 21S	R 33E
				330 FNL	660 FEL

BH Loc	ULSTR:	X	04	T 21S	R 33E
18383 MD		11586.6	TVD	336 FSL	564 FEL
				7558 FNL	

Top Perf/OH	ULSTR:	A	04	T 21S	R 33E
11678 MD		11447.8	TVD	861 FNL	721 FEL

Bot Perf/OH	ULSTR:	X	04	T 21S	R 33E
18215 MD		11588.1	TVD	504 FSL	570 FEL
				7390 FNL	

	MD	N/S	E/W	VD
	11648	-502.50	-61.30	11439.3
TOP PERFS/OH	11678	-531.30	-61.20	11447.80
	11678	-531.30	-61.20	11447.80
	18150	-6995.50	87.70	11587.20
BOT PERFS/OH	18215	-7060.43	89.75	11588.05
	18242	-7087.40	90.60	11588.40

NEXT TO LAST	18321	-7166.40	93.60	11587.70
LAST READING	18378	-7223.30	95.70	11586.70
TD	18383	-7228.29	95.88	11586.61

Surface Location	330	FN	660	FE
Projected BHL	7558	FN	564	FE
Location of				
Top Perfs/OH	861	FN	721	FE
Bottom Perfs/OH	7390	FN	570	FE

SUMMARY of Subsurface Locations

Surface Location	A-04-21S-33E	330	FN	660	FE	Vert. Depth
Top Perfs/OH	A-04-21S-33E	861	FN	721	FE	11447.80
Bottom Perfs/OH	X-04-21S-33E	7390	FN	570	FE	11588.05
Projected TD	X-04-21S-33E	7558	FN	564	FE	11586.61

AUG 13 2014



Stryker Directional Survey Report



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Corazon State Unit #13H
Project:	Lea County, N.M.	TVD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Site:	Section 4-21S-33E Corazon State Unit #13H	MD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Well:	Corazon State Unit #13H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
15,844.0	90.40	176.60	11,545.0	-4,691.9	4.8	4,691.8	1.11	1.09	-0.22
15,936.0	88.90	177.00	11,545.5	-4,783.8	9.9	4,783.7	1.69	-1.63	0.43
16,028.0	87.30	177.70	11,548.6	-4,875.6	14.1	4,875.6	1.90	-1.74	0.76
16,120.0	88.40	177.10	11,552.0	-4,967.5	18.3	4,967.5	1.36	1.20	-0.65
16,212.0	90.20	177.40	11,553.1	-5,059.4	22.7	5,059.4	1.98	1.96	0.33
16,304.0	88.30	177.20	11,554.3	-5,151.3	27.1	5,151.3	2.08	-2.07	-0.22
16,396.0	89.80	177.40	11,555.9	-5,243.1	31.4	5,243.2	1.64	1.63	0.22
16,488.0	89.20	177.50	11,556.7	-5,335.0	35.5	5,335.2	0.66	-0.65	0.11
16,581.0	90.10	177.20	11,557.2	-5,427.9	39.8	5,428.1	1.02	0.97	-0.32
16,673.0	88.40	178.20	11,558.4	-5,519.9	43.5	5,520.0	2.14	-1.85	1.09
16,765.0	88.80	178.00	11,560.7	-5,611.8	46.5	5,612.0	0.49	0.43	-0.22
16,858.0	89.90	177.90	11,561.7	-5,704.7	49.9	5,704.9	1.19	1.18	-0.11
16,950.0	88.40	178.50	11,563.1	-5,796.6	52.7	5,796.9	1.76	-1.63	0.65
17,042.0	89.50	178.30	11,564.8	-5,888.6	55.3	5,888.8	1.22	1.20	-0.22
17,135.0	90.70	178.30	11,564.6	-5,981.6	58.1	5,981.8	1.29	1.29	0.00
17,227.0	88.70	178.80	11,565.1	-6,073.5	60.4	6,073.8	2.24	-2.17	0.54
17,319.0	86.40	179.00	11,569.1	-6,165.4	62.2	6,165.7	2.51	-2.50	0.22
17,413.0	86.70	178.90	11,574.7	-6,259.2	63.9	6,259.5	0.34	0.32	-0.11
17,505.0	87.00	178.20	11,579.8	-6,351.1	66.2	6,351.4	0.83	0.33	-0.76
17,597.0	87.30	177.90	11,584.3	-6,442.9	69.3	6,443.2	0.46	0.33	-0.33
17,689.0	88.90	178.50	11,587.4	-6,534.8	72.2	6,535.1	1.86	1.74	0.65
17,781.0	89.60	178.50	11,588.6	-6,626.7	74.6	6,627.1	0.76	0.76	0.00
17,874.0	90.50	178.30	11,588.5	-6,719.7	77.2	6,720.1	0.99	0.97	-0.22
17,966.0	91.30	177.50	11,587.1	-6,811.6	80.6	6,812.0	1.23	0.87	-0.87
18,058.0	89.90	177.70	11,586.1	-6,903.5	84.4	6,904.0	1.54	-1.52	0.22
18,150.0	88.70	178.20	11,587.2	-6,995.5	87.7	6,995.9	1.41	-1.30	0.54
18,242.0	89.90	178.20	11,588.4	-7,087.4	90.6	7,087.9	1.30	1.30	0.00
18,321.0	91.00	177.70	11,587.7	-7,166.4	93.5	7,166.9	1.53	1.39	-0.63
18,378.0	91.00	177.70	11,586.7	-7,223.3	95.7	7,223.8	0.00	0.00	0.00

18378.0' MD Projected to Bit

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,900.0	10,898.2	-64.2	-72.3	10900' MD VES Gyro Survey
18,378.0	11,586.7	-7,223.3	95.7	18378.0' MD Projected to Bit



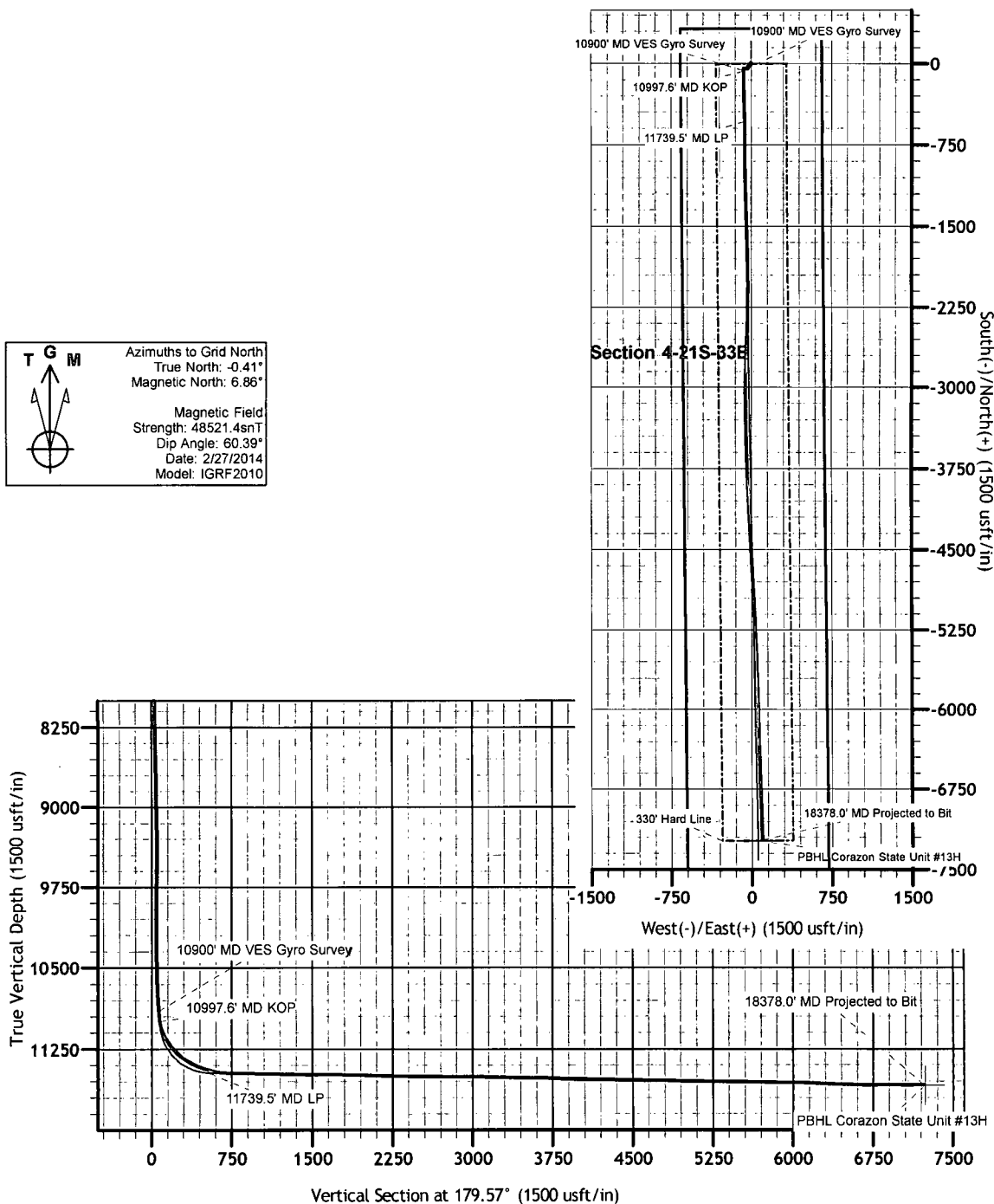
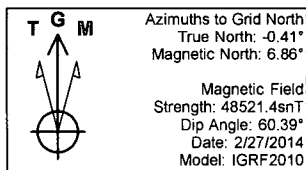
COMPANY: COG Operating, LLC.
WELL: Corazon State Unit #13H
COUNTY: Lea County, N.M.
DATUM: NAD 1927 (NADCON CONUS)
RIG: Precision 590



GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.86°

OFFICE: 936.582.7296

GEODETIC ZONE: New Mexico East 3001 GL 3842.5 + 26 @ 3868.5usft (Precision 590) GROUND ELEVATION: 3842.5										
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot				
0.0	0.0	554202.30	735080.40	32° 31' 16.677 N	103° 34' 14.374 W					
PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	10900.0	4.27	181.76	10898.2	-64.2	-72.3	0.00	0.00	63.6	
2	11035.3	4.27	181.76	11033.2	-74.3	-72.6	0.00	0.00	73.7	
3	11741.6	89.02	178.97	11475.0	-542.1	-65.8	12.00	-2.80	541.6	
4	18435.5	89.02	178.97	11590.0	-7234.0	54.7	0.00	0.00	7234.2	PBHL Corazon State Unit #13H





A GYRO TECHNOLOGIES INC. COMPANY

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

HOBBS OCD

April 1, 2014

AUG 04 2014

COG Operating LLC (Concho)
One Concho Center
600 W. Illinois Avenue
Midland, TX 79701

RECEIVED

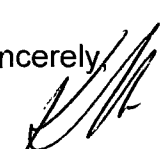
Attn: Kanicia Castillo

Re: **Corazon State Unit 13H**

Please find enclosed a copy of the survey from 0' to 10,900' ran on the above referenced well.

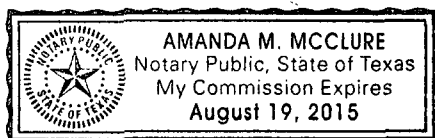
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

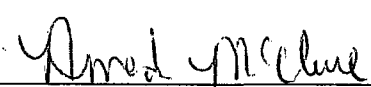
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 1 day of April,
A.D., 2014, by Keith Havelka.




Amanda McClure
Notary Public, State of Texas



Company: COG Operating-Concho
Lease/Well: Corazon State Unit /13H
Location: Sec 4 T21S R33E
Rig Name: Precision 590
State/County: New Mexico/Lea
Latitude: 32.51, Longitude: -103.59
GRID North is 0.40 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB = 25 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...nit #13h gyro survey-de_01.ut

Minimum Curvature Method

Report Date/Time: 4/1/2014 / 12:47

Vaughn Energy Services

West Texas

Surveyor: Chris Bankson

432-563-5444

Corazon State Unit 13H / API 30-025-40955

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	0.18	277.52	100.00	0.02	-0.15	0.02	0.15	277.52	0.18
200.00	0.31	266.07	200.00	0.02	-0.58	0.02	0.58	272.12	0.15
300.00	0.46	255.68	300.00	-0.10	-1.24	-0.10	1.24	265.57	0.16
400.00	0.86	247.73	399.99	-0.48	-2.32	-0.48	2.37	258.35	0.41
500.00	0.61	245.47	499.98	-0.98	-3.49	-0.98	3.63	254.29	0.25
600.00	0.30	250.97	599.98	-1.29	-4.23	-1.29	4.42	253.04	0.31
700.00	0.50	272.27	699.98	-1.36	-4.91	-1.36	5.09	254.54	0.24
800.00	0.19	274.84	799.97	-1.33	-5.51	-1.33	5.67	256.47	0.31
900.00	0.38	210.43	899.97	-1.60	-5.85	-1.60	6.06	254.70	0.35
1000.00	0.14	204.74	999.97	-2.00	-6.07	-2.00	6.39	251.75	0.24
1100.00	0.26	202.44	1099.97	-2.32	-6.21	-2.32	6.63	249.48	0.12
1200.00	0.36	188.72	1199.97	-2.84	-6.34	-2.84	6.95	245.86	0.12
1300.00	0.41	160.07	1299.97	-3.49	-6.26	-3.49	7.17	240.90	0.20
1400.00	0.26	145.88	1399.97	-4.02	-6.01	-4.02	7.23	236.26	0.17
1500.00	0.44	111.51	1499.96	-4.35	-5.53	-4.35	7.03	231.83	0.27
1600.00	0.31	74.34	1599.96	-4.41	-4.91	-4.41	6.61	228.08	0.27
1700.00	0.34	43.93	1699.96	-4.12	-4.45	-4.12	6.07	227.16	0.17
1800.00	0.22	40.34	1799.96	-3.76	-4.11	-3.76	5.57	227.57	0.12

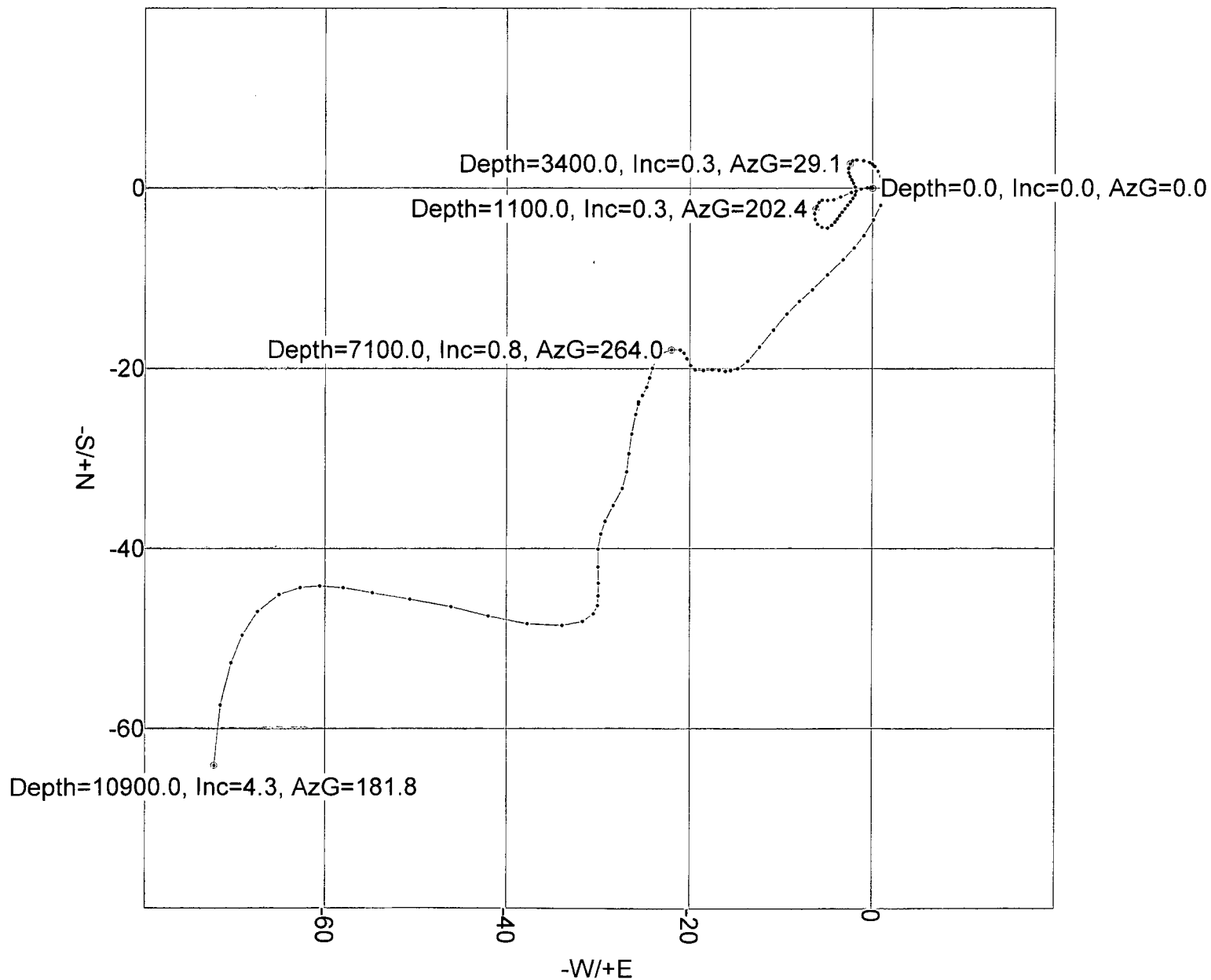
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.28	32.77	1899.96	-3.40	-3.85	-3.40	5.14	228.55	0.07
2000.00	0.23	35.63	1999.96	-3.04	-3.60	-3.04	4.71	229.90	0.06
2100.00	0.29	39.87	2099.96	-2.68	-3.33	-2.68	4.27	231.15	0.07
2200.00	0.28	35.32	2199.95	-2.28	-3.02	-2.28	3.78	232.93	0.03
2300.00	0.28	38.13	2299.95	-1.89	-2.73	-1.89	3.32	235.29	0.01
2400.00	0.27	39.25	2399.95	-1.51	-2.43	-1.51	2.86	238.03	0.01
2500.00	0.28	31.90	2499.95	-1.13	-2.15	-1.13	2.43	242.33	0.04
2600.00	0.24	32.44	2599.95	-0.74	-1.91	-0.74	2.05	248.71	0.03
2700.00	0.28	356.27	2699.95	-0.32	-1.81	-0.32	1.84	259.94	0.17
2800.00	0.26	340.89	2799.95	0.14	-1.90	0.14	1.91	274.12	0.07
2900.00	0.26	332.79	2899.95	0.55	-2.08	0.55	2.15	284.89	0.04
3000.00	0.21	333.52	2999.95	0.92	-2.27	0.92	2.45	292.09	0.05
3100.00	0.26	333.43	3099.95	1.29	-2.45	1.29	2.77	297.76	0.05
3200.00	0.26	346.46	3199.94	1.72	-2.61	1.72	3.12	303.39	0.06
3300.00	0.28	9.79	3299.94	2.19	-2.62	2.19	3.41	309.86	0.11
3400.00	0.34	29.13	3399.94	2.69	-2.43	2.69	3.63	317.85	0.12
3500.00	0.16	45.02	3499.94	3.05	-2.19	3.05	3.75	324.30	0.19
3600.00	0.39	90.89	3599.94	3.14	-1.75	3.14	3.59	330.94	0.30
3700.00	0.51	103.31	3699.94	3.03	-0.97	3.03	3.19	342.28	0.15
3800.00	0.24	114.82	3799.93	2.84	-0.35	2.84	2.87	353.03	0.28
3900.00	0.20	130.28	3899.93	2.65	-0.03	2.65	2.65	359.39	0.07
4000.00	0.21	136.07	3999.93	2.40	0.23	2.40	2.41	5.58	0.03
4100.00	0.53	151.16	4099.93	1.86	0.59	1.86	1.95	17.49	0.33
4200.00	0.18	150.77	4199.93	1.32	0.89	1.32	1.59	33.85	0.35
4300.00	0.27	142.56	4299.93	0.99	1.11	0.99	1.49	48.10	0.10
4400.00	0.33	158.87	4399.93	0.54	1.35	0.54	1.46	68.33	0.10
4500.00	0.14	163.67	4499.93	0.16	1.49	0.16	1.50	84.06	0.19
4600.00	0.23	164.38	4599.93	-0.15	1.58	-0.15	1.59	95.54	0.09
4700.00	0.58	203.93	4699.92	-0.80	1.43	-0.80	1.64	119.39	0.43
4800.00	0.82	207.57	4799.92	-1.90	0.89	-1.90	2.10	154.80	0.25
4900.00	1.26	205.01	4899.90	-3.53	0.10	-3.53	3.53	178.40	0.44
5000.00	1.05	217.23	4999.88	-5.25	-0.92	-5.25	5.33	189.95	0.32
5100.00	0.94	218.79	5099.86	-6.62	-1.99	-6.62	6.91	196.72	0.12
5200.00	1.13	226.12	5199.85	-7.94	-3.21	-7.94	8.57	202.02	0.23
5300.00	1.58	224.34	5299.82	-9.61	-4.89	-9.61	10.78	206.95	0.45
5400.00	1.11	226.92	5399.79	-11.26	-6.56	-11.26	13.03	210.22	0.47
5500.00	1.08	229.24	5499.77	-12.54	-7.98	-12.54	14.86	212.48	0.06
5600.00	1.17	219.78	5599.75	-13.94	-9.35	-13.94	16.78	213.85	0.21
5700.00	1.48	219.29	5699.73	-15.72	-10.82	-15.72	19.08	214.53	0.30

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	1.33	218.16	5799.70	-17.63	-12.35	-17.63	21.52	215.01	0.15
5900.00	1.02	221.65	5899.68	-19.20	-13.66	-19.20	23.56	215.42	0.31
6000.00	0.62	253.53	5999.67	-20.03	-14.77	-20.03	24.88	216.41	0.59
6100.00	0.32	254.75	6099.66	-20.25	-15.56	-20.25	25.54	217.54	0.30
6200.00	0.35	273.34	6199.66	-20.31	-16.13	-20.31	25.94	218.46	0.11
6300.00	0.45	282.74	6299.66	-20.20	-16.82	-20.20	26.29	219.78	0.12
6400.00	0.42	265.82	6399.66	-20.14	-17.57	-20.14	26.73	221.10	0.13
6500.00	0.69	264.82	6499.65	-20.22	-18.54	-20.22	27.44	222.51	0.27
6600.00	0.37	292.35	6599.65	-20.16	-19.44	-20.16	28.00	223.96	0.40
6700.00	0.50	331.75	6699.64	-19.65	-19.94	-19.65	28.00	225.42	0.32
6800.00	0.44	333.23	6799.64	-18.92	-20.32	-18.92	27.77	227.04	0.07
6900.00	0.37	328.00	6899.64	-18.31	-20.66	-18.31	27.61	228.46	0.08
7000.00	0.28	291.40	6999.64	-17.94	-21.07	-17.94	27.67	229.57	0.22
7100.00	0.82	264.02	7099.63	-17.93	-22.01	-17.93	28.39	230.83	0.58
7200.00	0.56	229.02	7199.62	-18.32	-23.09	-18.32	29.47	231.56	0.48
7300.00	0.69	208.03	7299.62	-19.17	-23.74	-19.17	30.51	231.07	0.26
7400.00	0.34	197.29	7399.61	-19.99	-24.11	-19.99	31.32	230.34	0.36
7500.00	0.94	196.31	7499.61	-21.06	-24.43	-21.06	32.26	229.23	0.60
7600.00	0.27	197.80	7599.60	-22.08	-24.73	-22.08	33.15	228.24	0.67
7700.00	0.91	209.53	7699.60	-23.00	-25.20	-23.00	34.11	227.61	0.64
7800.00	0.04	190.94	7799.59	-23.71	-25.59	-23.71	34.89	227.18	0.87
7900.00	0.24	189.61	7899.59	-23.95	-25.63	-23.95	35.08	226.94	0.21
8000.00	1.11	193.83	7999.58	-25.10	-25.90	-25.10	36.07	225.89	0.87
8100.00	1.44	189.82	8099.56	-27.28	-26.35	-27.28	37.93	224.00	0.34
8200.00	1.10	185.29	8199.53	-29.47	-26.65	-29.47	39.73	222.12	0.36
8300.00	1.23	188.79	8299.51	-31.49	-26.90	-31.49	41.41	220.51	0.16
8400.00	0.96	202.35	8399.49	-33.32	-27.38	-33.32	43.13	219.41	0.38
8500.00	1.49	210.44	8499.47	-35.21	-28.36	-35.21	45.21	218.85	0.56
8600.00	0.77	199.77	8599.45	-36.97	-29.24	-36.97	47.14	218.35	0.74
8700.00	0.93	196.67	8699.44	-38.38	-29.70	-38.38	48.53	217.74	0.16
8800.00	1.05	184.19	8799.43	-40.06	-30.00	-40.06	50.05	216.83	0.25
8900.00	1.21	176.60	8899.41	-42.02	-30.01	-42.02	51.64	215.53	0.22
9000.00	0.87	181.61	8999.39	-43.84	-29.97	-43.84	53.10	214.35	0.35
9100.00	0.74	180.33	9099.38	-45.24	-29.99	-45.24	54.28	213.54	0.14
9200.00	0.51	187.83	9199.37	-46.33	-30.05	-46.33	55.22	212.97	0.24
9300.00	0.71	218.74	9299.37	-47.25	-30.50	-47.25	56.24	212.84	0.38
9400.00	1.01	245.51	9399.36	-48.10	-31.69	-48.10	57.60	213.38	0.50
9500.00	1.63	267.54	9499.33	-48.53	-33.91	-48.53	59.20	214.95	0.79
9600.00	2.76	275.82	9599.26	-48.34	-37.73	-48.34	61.32	217.97	1.17

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	2.27	288.08	9699.16	-47.48	-42.01	-47.48	63.40	221.50	0.72
9800.00	2.58	281.04	9799.07	-46.44	-46.11	-46.44	65.44	224.80	0.42
9900.00	2.72	279.18	9898.96	-45.63	-50.65	-45.63	68.17	227.99	0.16
10000.00	2.11	280.60	9998.88	-44.91	-54.80	-44.91	70.85	230.66	0.61
10100.00	1.63	279.83	10098.82	-44.33	-58.00	-44.33	73.00	232.61	0.48
10200.00	1.33	267.14	10198.79	-44.15	-60.56	-44.15	74.94	233.91	0.44
10300.00	1.16	263.01	10298.77	-44.33	-62.72	-44.33	76.81	234.75	0.20
10400.00	1.70	244.44	10398.73	-45.09	-65.06	-45.09	79.16	235.28	0.71
10500.00	1.87	220.33	10498.69	-46.97	-67.46	-46.97	82.20	235.15	0.76
10600.00	1.76	205.10	10598.64	-49.61	-69.16	-49.61	85.11	234.35	0.49
10700.00	2.05	199.59	10698.58	-52.68	-70.42	-52.68	87.94	233.20	0.34
10800.00	3.52	190.94	10798.46	-57.38	-71.60	-57.38	91.76	231.29	1.53
10900.00	4.27	181.76	10898.23	-64.12	-72.30	-64.12	96.64	228.43	0.97



Vaughn Energy Services
West Texas
Surveyor: Chris Bankson
432-563-5444
Corazon State Unit 13H / API 30-025-40955



VES Survey Date: 03/21/2014



HOBBS OCD

AUG 04 2014

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COG Operating, LLC.

Lea County, N.M.

Section 4-21S-33E Corazon State Unit #13H

Corazon State Unit #13H

Original Hole

Design: Original Hole

Standard Survey Report

31 March, 2014





Stryker Directional Survey Report



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Corazon State Unit #13H
Project:	Lea County, N.M.	TVD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Site:	Section 4-21S-33E Corazon State Unit #13H	MD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Well:	Corazon State Unit #13H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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 4-21S-33E Corazon State Unit #13H				
Site Position:		Northing:	554,202.30 usft	Latitude:	32° 31' 16.677 N
From:	Map	Easting:	735,080.40 usft	Longitude:	103° 34' 14.374 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41 °

Well	Corazon State Unit #13H					
Well Position	+N/-S	0.0 usft	Northing:	554,202.30 usft	Latitude:	32° 31' 16.677 N
	+E/-W	0.0 usft	Easting:	735,080.40 usft	Longitude:	103° 34' 14.374 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,842.5 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/27/2014	7.27	60.39	48,521

Design	Original Hole				
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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	179.57

Survey Program		Date 3/31/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	10,900.0	VES Gyro Survey #1 (Original Hole)	SRG-GYRO-MS	surface readout gyro multishot	
10,941.0	18,378.0	MWD Survey #2 (Original Hole)	MWD	MWD - Standard	

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	0.18	277.52	100.0	0.0	-0.2	0.0	0.18	0.18	0.00
200.0	0.31	266.07	200.0	0.0	-0.6	0.0	0.14	0.13	-11.45
300.0	0.46	255.68	300.0	-0.1	-1.2	0.1	0.16	0.15	-10.39
400.0	0.86	247.73	400.0	-0.5	-2.3	0.5	0.41	0.40	-7.95
500.0	0.61	245.47	500.0	-1.0	-3.5	1.0	0.25	-0.25	-2.26
600.0	0.30	250.97	600.0	-1.3	-4.2	1.3	0.31	-0.31	5.50
700.0	0.50	272.27	700.0	-1.4	-4.9	1.3	0.25	0.20	21.30
800.0	0.19	274.84	800.0	-1.3	-5.5	1.3	0.31	-0.31	2.57
900.0	0.38	210.43	900.0	-1.6	-5.9	1.6	0.34	0.19	-64.41



Stryker Directional Survey Report



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Corazon State Unit #13H
Project:	Lea County, N.M.	TVD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Site:	Section 4-21S-33E Corazon State Unit #13H	MD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Well:	Corazon State Unit #13H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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	0.14	204.74	1,000.0	-2.0	-6.1	2.0	0.24	-0.24	-5.69
1,100.0	0.26	202.44	1,100.0	-2.3	-6.2	2.3	0.12	0.12	-2.30
1,200.0	0.36	188.72	1,200.0	-2.8	-6.3	2.8	0.12	0.10	-13.72
1,300.0	0.41	160.07	1,300.0	-3.5	-6.3	3.4	0.20	0.05	-28.65
1,400.0	0.26	145.88	1,400.0	-4.0	-6.0	4.0	0.17	-0.15	-14.19
1,500.0	0.44	111.51	1,500.0	-4.3	-5.5	4.3	0.27	0.18	-34.37
1,600.0	0.31	74.34	1,600.0	-4.4	-4.9	4.4	0.27	-0.13	-37.17
1,700.0	0.34	43.93	1,700.0	-4.1	-4.5	4.1	0.17	0.03	-30.41
1,800.0	0.22	40.34	1,800.0	-3.8	-4.1	3.7	0.12	-0.12	-3.59
1,900.0	0.28	32.77	1,900.0	-3.4	-3.9	3.4	0.07	0.06	-7.57
2,000.0	0.23	35.63	2,000.0	-3.0	-3.6	3.0	0.05	-0.05	2.86
2,100.0	0.29	39.87	2,100.0	-2.7	-3.3	2.7	0.06	0.06	4.24
2,200.0	0.28	35.32	2,200.0	-2.3	-3.0	2.3	0.02	-0.01	-4.55
2,300.0	0.28	38.13	2,300.0	-1.9	-2.7	1.9	0.01	0.00	2.81
2,400.0	0.27	39.25	2,400.0	-1.5	-2.4	1.5	0.01	-0.01	1.12
2,500.0	0.28	31.90	2,500.0	-1.1	-2.2	1.1	0.04	0.01	-7.35
2,600.0	0.24	32.44	2,600.0	-0.7	-1.9	0.7	0.04	-0.04	0.54
2,700.0	0.28	356.27	2,699.9	-0.3	-1.8	0.3	0.17	0.04	-36.17
2,800.0	0.26	340.89	2,799.9	0.1	-1.9	-0.1	0.07	-0.02	-15.38
2,900.0	0.26	332.79	2,899.9	0.5	-2.1	-0.6	0.04	0.00	-8.10
3,000.0	0.21	333.52	2,999.9	0.9	-2.3	-0.9	0.05	-0.05	0.73
3,100.0	0.26	333.43	3,099.9	1.3	-2.5	-1.3	0.05	0.05	-0.09
3,200.0	0.26	346.46	3,199.9	1.7	-2.6	-1.7	0.06	0.00	13.03
3,300.0	0.28	9.79	3,299.9	2.2	-2.6	-2.2	0.11	0.02	23.33
3,400.0	0.34	29.13	3,399.9	2.7	-2.4	-2.7	0.12	0.06	19.34
3,500.0	0.16	45.02	3,499.9	3.0	-2.2	-3.0	0.19	-0.18	15.89
3,600.0	0.39	90.89	3,599.9	3.1	-1.8	-3.1	0.30	0.23	45.87
3,700.0	0.51	103.31	3,699.9	3.0	-1.0	-3.0	0.15	0.12	12.42
3,800.0	0.24	114.82	3,799.9	2.8	-0.4	-2.8	0.28	-0.27	11.51
3,900.0	0.20	130.28	3,899.9	2.6	0.0	-2.6	0.07	-0.04	15.46
4,000.0	0.21	136.07	3,999.9	2.4	0.2	-2.4	0.02	0.01	5.79
4,100.0	0.53	151.16	4,099.9	1.8	0.6	-1.8	0.33	0.32	15.09
4,200.0	0.18	150.77	4,199.9	1.3	0.9	-1.3	0.35	-0.35	-0.39
4,300.0	0.27	142.56	4,299.9	1.0	1.1	-1.0	0.10	0.09	-8.21
4,400.0	0.33	158.87	4,399.9	0.5	1.3	-0.5	0.10	0.06	16.31
4,500.0	0.14	163.67	4,499.9	0.1	1.5	-0.1	0.19	-0.19	4.80
4,600.0	0.23	164.38	4,599.9	-0.2	1.6	0.2	0.09	0.09	0.71
4,700.0	0.58	203.93	4,699.9	-0.8	1.4	0.8	0.43	0.35	39.55
4,800.0	0.82	207.57	4,799.9	-1.9	0.9	1.9	0.24	0.24	3.64
4,900.0	1.26	205.01	4,899.9	-3.6	0.1	3.6	0.44	0.44	-2.56
5,000.0	1.05	217.23	4,999.9	-5.3	-0.9	5.3	0.32	-0.21	12.22
5,100.0	0.94	218.79	5,099.9	-6.7	-2.0	6.6	0.11	-0.11	1.56
5,200.0	1.13	226.12	5,199.8	-8.0	-3.2	8.0	0.23	0.19	7.33



Stryker Directional Survey Report



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Corazon State Unit #13H
Project:	Lea County, N.M.	TVD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Site:	Section 4-21S-33E Corazon State Unit #13H	MD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Well:	Corazon State Unit #13H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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	1.58	224.34	5,299.8	-9.7	-4.9	9.6	0.45	0.45	-1.78
5,400.0	1.11	226.92	5,399.8	-11.3	-6.6	11.3	0.47	-0.47	2.58
5,500.0	1.08	229.24	5,499.8	-12.6	-8.0	12.5	0.05	-0.03	2.32
5,600.0	1.17	219.78	5,599.8	-14.0	-9.4	13.9	0.21	0.09	-9.46
5,700.0	1.48	219.29	5,699.7	-15.8	-10.8	15.7	0.31	0.31	-0.49
5,800.0	1.33	218.16	5,799.7	-17.7	-12.4	17.6	0.15	-0.15	-1.13
5,900.0	1.02	221.65	5,899.7	-19.3	-13.7	19.1	0.32	-0.31	3.49
6,000.0	0.62	253.53	5,999.7	-20.1	-14.8	20.0	0.59	-0.40	31.88
6,100.0	0.32	254.75	6,099.7	-20.3	-15.6	20.2	0.30	-0.30	1.22
6,200.0	0.35	273.34	6,199.7	-20.4	-16.2	20.2	0.11	0.03	18.59
6,300.0	0.45	282.74	6,299.7	-20.2	-16.8	20.1	0.12	0.10	9.40
6,400.0	0.42	265.82	6,399.7	-20.2	-17.6	20.1	0.13	-0.03	-16.92
6,500.0	0.69	264.82	6,499.7	-20.3	-18.6	20.1	0.27	0.27	-1.00
6,600.0	0.37	292.35	6,599.6	-20.2	-19.5	20.1	0.40	-0.32	27.53
6,700.0	0.50	331.75	6,699.6	-19.7	-20.0	19.5	0.32	0.13	39.40
6,800.0	0.44	333.23	6,799.6	-19.0	-20.3	18.8	0.06	-0.06	1.48
6,900.0	0.37	328.00	6,899.6	-18.3	-20.7	18.2	0.08	-0.07	-5.23
7,000.0	0.28	291.40	6,999.6	-18.0	-21.1	17.8	0.22	-0.09	-36.60
7,100.0	0.82	264.02	7,099.6	-18.0	-22.0	17.8	0.59	0.54	-27.38
7,200.0	0.56	229.02	7,199.6	-18.4	-23.1	18.2	0.48	-0.26	-35.00
7,300.0	0.69	208.03	7,299.6	-19.2	-23.8	19.0	0.26	0.13	-20.99
7,400.0	0.34	197.29	7,399.6	-20.0	-24.1	19.9	0.36	-0.35	-10.74
7,500.0	0.94	196.31	7,499.6	-21.1	-24.4	20.9	0.60	0.60	-0.98
7,600.0	0.27	197.80	7,599.6	-22.1	-24.7	21.9	0.67	-0.67	1.49
7,700.0	0.91	209.53	7,699.6	-23.0	-25.2	22.8	0.65	0.64	11.73
7,800.0	0.04	190.94	7,799.6	-23.8	-25.6	23.6	0.87	-0.87	-18.59
7,900.0	0.24	189.61	7,899.6	-24.0	-25.6	23.8	0.20	0.20	-1.33
8,000.0	1.11	193.83	7,999.6	-25.1	-25.9	24.9	0.87	0.87	4.22
8,100.0	1.44	189.82	8,099.6	-27.3	-26.4	27.1	0.34	0.33	-4.01
8,200.0	1.10	185.29	8,199.5	-29.5	-26.7	29.3	0.35	-0.34	-4.53
8,300.0	1.23	188.79	8,299.5	-31.5	-26.9	31.3	0.15	0.13	3.50
8,400.0	0.96	202.35	8,399.5	-33.4	-27.4	33.2	0.37	-0.27	13.56
8,500.0	1.49	210.44	8,499.5	-35.3	-28.4	35.0	0.56	0.53	8.09
8,600.0	0.77	199.77	8,599.5	-37.0	-29.3	36.8	0.75	-0.72	-10.67
8,700.0	0.93	196.67	8,699.4	-38.4	-29.7	38.2	0.17	0.16	-3.10
8,800.0	1.05	184.19	8,799.4	-40.1	-30.0	39.9	0.25	0.12	-12.48
8,900.0	1.21	176.60	8,899.4	-42.1	-30.0	41.9	0.22	0.16	-7.59
9,000.0	0.87	181.61	8,999.4	-43.9	-30.0	43.7	0.35	-0.34	5.01
9,100.0	0.74	180.33	9,099.4	-45.3	-30.0	45.1	0.13	-0.13	-1.28
9,200.0	0.51	187.83	9,199.4	-46.4	-30.1	46.2	0.24	-0.23	7.50
9,300.0	0.71	218.74	9,299.4	-47.3	-30.5	47.1	0.38	0.20	30.91
9,400.0	1.01	245.51	9,399.4	-48.2	-31.7	47.9	0.49	0.30	26.77
9,500.0	1.63	267.54	9,499.3	-48.6	-33.9	48.3	0.79	0.62	22.03



Stryker Directional Survey Report



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Corazon State Unit #13H
Project:	Lea County, N.M.	TVD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Site:	Section 4-21S-33E Corazon State Unit #13H	MD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Well:	Corazon State Unit #13H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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	2.76	275.82	9,599.3	-48.4	-37.7	48.1	1.17	1.13	8.28
9,700.0	2.27	288.08	9,699.2	-47.5	-42.0	47.2	0.73	-0.49	12.26
9,800.0	2.58	281.04	9,799.1	-46.5	-46.1	46.2	0.43	0.31	-7.04
9,900.0	2.72	279.18	9,899.0	-45.7	-50.7	45.3	0.16	0.14	-1.86
10,000.0	2.11	280.60	9,998.9	-45.0	-54.8	44.6	0.61	-0.61	1.42
10,100.0	1.63	279.83	10,098.8	-44.4	-58.0	44.0	0.48	-0.48	-0.77
10,200.0	1.33	267.14	10,198.8	-44.2	-60.6	43.8	0.44	-0.30	-12.69
10,300.0	1.16	263.01	10,298.8	-44.4	-62.8	43.9	0.19	-0.17	-4.13
10,400.0	1.70	244.44	10,398.7	-45.2	-65.1	44.7	0.70	0.54	-18.57
10,500.0	1.87	220.33	10,498.7	-47.0	-67.5	46.5	0.76	0.17	-24.11
10,600.0	1.76	205.10	10,598.6	-49.7	-69.2	49.2	0.49	-0.11	-15.23
10,700.0	2.05	199.59	10,698.6	-52.7	-70.5	52.2	0.34	0.29	-5.51
10,800.0	3.52	190.94	10,798.5	-57.4	-71.6	56.9	1.52	1.47	-8.65
10,900.0	4.27	181.76	10,898.2	-64.2	-72.3	63.6	0.97	0.75	-9.18
10900' MD VES Gyro Survey									
10,941.0	3.30	177.00	10,939.1	-66.9	-72.3	66.3	2.48	-2.37	-11.61
10,972.0	6.70	174.60	10,970.0	-69.6	-72.1	69.0	10.99	10.97	-7.74
11,002.0	11.00	175.60	10,999.7	-74.2	-71.7	73.6	14.34	14.33	3.33
11,033.0	15.20	176.80	11,029.8	-81.2	-71.3	80.6	13.58	13.55	3.87
11,064.0	18.60	180.00	11,059.5	-90.2	-71.0	89.7	11.37	10.97	10.32
11,095.0	20.70	180.80	11,088.7	-100.6	-71.1	100.1	6.83	6.77	2.58
11,125.0	22.90	180.40	11,116.5	-111.8	-71.2	111.2	7.35	7.33	-1.33
11,156.0	27.30	179.60	11,144.6	-124.9	-71.2	124.4	14.24	14.19	-2.58
11,187.0	32.80	179.40	11,171.4	-140.4	-71.1	139.9	17.74	17.74	-0.65
11,218.0	36.30	179.00	11,197.0	-158.0	-70.8	157.5	11.31	11.29	-1.29
11,248.0	37.50	180.80	11,221.0	-176.0	-70.8	175.5	5.38	4.00	6.00
11,279.0	37.20	181.80	11,245.6	-194.8	-71.2	194.3	2.18	-0.97	3.23
11,310.0	41.10	180.60	11,269.6	-214.4	-71.6	213.8	12.82	12.58	-3.87
11,340.0	46.50	179.00	11,291.3	-235.1	-71.5	234.6	18.37	18.00	-5.33
11,371.0	51.50	178.10	11,311.6	-258.5	-70.9	258.0	16.28	16.13	-2.90
11,402.0	54.40	178.20	11,330.3	-283.2	-70.1	282.7	9.36	9.35	0.32
11,433.0	57.70	178.10	11,347.6	-308.9	-69.3	308.4	10.65	10.65	-0.32
11,463.0	59.40	177.50	11,363.2	-334.5	-68.3	334.0	5.92	5.67	-2.00
11,494.0	61.10	176.40	11,378.6	-361.4	-66.9	360.9	6.29	5.48	-3.55
11,525.0	63.80	176.50	11,393.0	-388.8	-65.2	388.3	8.71	8.71	0.32
11,555.0	65.00	176.70	11,405.9	-415.8	-63.6	415.3	4.04	4.00	0.67
11,586.0	67.40	177.90	11,418.4	-444.1	-62.3	443.7	8.51	7.74	3.87
11,617.0	70.50	179.20	11,429.6	-473.1	-61.5	472.6	10.74	10.00	4.19
11,648.0	72.80	179.70	11,439.3	-502.5	-61.3	502.0	7.58	7.42	1.61
11,678.0	74.30	179.90	11,447.8	-531.3	-61.2	530.8	5.04	5.00	0.67
11,709.0	77.50	180.30	11,455.4	-561.3	-61.2	560.8	10.40	10.32	1.29
11,740.0	80.70	180.20	11,461.2	-591.7	-61.3	591.3	10.33	10.32	-0.32
11,771.0	81.70	180.10	11,466.0	-622.4	-61.4	621.9	3.24	3.23	-0.32
11,801.0	84.50	180.00	11,469.6	-652.2	-61.4	651.7	9.34	9.33	-0.33



Stryker Directional Survey Report



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Corazon State Unit #13H
Project:	Lea County, N.M.	TVD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Site:	Section 4-21S-33E Corazon State Unit #13H	MD Reference:	GL 3842.5 + 26 @ 3868.5usft (Precision 590)
Well:	Corazon State Unit #13H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
11,863.0	89.60	179.00	11,472.8	-714.1	-60.9	713.6	8.38	8.23	-1.61
11,975.0	88.40	179.60	11,474.7	-826.0	-59.5	825.6	1.20	-1.07	0.54
12,067.0	87.60	179.00	11,477.9	-918.0	-58.4	917.5	1.09	-0.87	-0.65
12,159.0	88.30	178.90	11,481.2	-1,009.9	-56.7	1,009.4	0.77	0.76	-0.11
12,251.0	89.10	178.90	11,483.3	-1,101.8	-55.0	1,101.4	0.87	0.87	0.00
12,344.0	88.60	178.90	11,485.2	-1,194.8	-53.2	1,194.4	0.54	-0.54	0.00
12,436.0	88.90	178.00	11,487.2	-1,286.8	-50.7	1,286.3	1.03	0.33	-0.98
12,528.0	89.20	177.50	11,488.7	-1,378.7	-47.1	1,378.3	0.63	0.33	-0.54
12,620.0	90.20	176.90	11,489.2	-1,470.6	-42.6	1,470.2	1.27	1.09	-0.65
12,712.0	89.80	177.90	11,489.2	-1,562.5	-38.4	1,562.1	1.17	-0.43	1.09
12,804.0	89.10	178.80	11,490.1	-1,654.4	-35.8	1,654.1	1.24	-0.76	0.98
12,896.0	87.90	179.40	11,492.5	-1,746.4	-34.3	1,746.1	1.46	-1.30	0.65
12,989.0	88.40	179.50	11,495.5	-1,839.3	-33.4	1,839.0	0.55	0.54	0.11
13,081.0	89.20	179.60	11,497.4	-1,931.3	-32.7	1,931.0	0.88	0.87	0.11
13,173.0	88.10	180.10	11,499.6	-2,023.3	-32.5	2,023.0	1.31	-1.20	0.54
13,265.0	88.70	180.60	11,502.2	-2,115.2	-33.0	2,114.9	0.85	0.65	0.54
13,357.0	89.20	181.20	11,503.8	-2,207.2	-34.5	2,206.9	0.85	0.54	0.65
13,449.0	88.30	181.30	11,505.8	-2,299.2	-36.5	2,298.8	0.98	-0.98	0.11
13,541.0	88.80	181.70	11,508.2	-2,391.1	-38.9	2,390.7	0.70	0.54	0.43
13,633.0	89.50	181.90	11,509.5	-2,483.0	-41.8	2,482.7	0.79	0.76	0.22
13,725.0	90.40	182.30	11,509.6	-2,575.0	-45.1	2,574.6	1.07	0.98	0.43
13,817.0	90.00	182.10	11,509.3	-2,666.9	-48.7	2,666.5	0.49	-0.43	-0.22
13,909.0	89.10	181.70	11,510.0	-2,758.9	-51.7	2,758.4	1.07	-0.98	-0.43
14,001.0	88.10	181.10	11,512.3	-2,850.8	-54.0	2,850.3	1.27	-1.09	-0.65
14,093.0	89.10	181.10	11,514.5	-2,942.8	-55.7	2,942.3	1.09	1.09	0.00
14,186.0	90.30	180.80	11,515.0	-3,035.7	-57.3	3,035.2	1.33	1.29	-0.32
14,278.0	89.10	179.70	11,515.5	-3,127.7	-57.7	3,127.2	1.77	-1.30	-1.20
14,370.0	88.40	179.10	11,517.5	-3,219.7	-56.7	3,219.2	1.00	-0.76	-0.65
14,462.0	89.30	178.90	11,519.3	-3,311.7	-55.1	3,311.2	1.00	0.98	-0.22
14,554.0	88.10	178.00	11,521.4	-3,403.6	-52.6	3,403.1	1.63	-1.30	-0.98
14,646.0	89.10	177.80	11,523.7	-3,495.5	-49.3	3,495.1	1.11	1.09	-0.22
14,738.0	91.00	178.20	11,523.6	-3,587.5	-46.0	3,587.0	2.11	2.07	0.43
14,831.0	89.50	177.90	11,523.2	-3,680.4	-42.9	3,680.0	1.64	-1.61	-0.32
14,923.0	87.60	178.20	11,525.5	-3,772.3	-39.7	3,771.9	2.09	-2.07	0.33
15,015.0	88.20	178.00	11,528.9	-3,864.2	-36.7	3,863.8	0.69	0.65	-0.22
15,107.0	89.50	177.10	11,530.7	-3,956.1	-32.8	3,955.7	1.72	1.41	-0.98
15,199.0	87.60	177.40	11,533.1	-4,048.0	-28.4	4,047.6	2.09	-2.07	0.33
15,291.0	89.00	177.30	11,535.8	-4,139.8	-24.1	4,139.5	1.53	1.52	-0.11
15,383.0	87.80	177.50	11,538.4	-4,231.7	-19.9	4,231.4	1.32	-1.30	0.22
15,475.0	88.80	176.90	11,541.1	-4,323.5	-15.4	4,323.3	1.27	1.09	-0.65
15,567.0	90.10	176.80	11,542.0	-4,415.4	-10.4	4,415.2	1.42	1.41	-0.11
15,660.0	88.50	177.10	11,543.1	-4,508.2	-5.4	4,508.1	1.75	-1.72	0.32
15,752.0	89.40	176.80	11,544.8	-4,600.1	-0.5	4,600.0	1.03	0.98	-0.33