

Results of Directional Survey

API number:	30-025-40947		
OGRID:		Operator:	COG OPERATING LLC
		Property:	CORAZON STATE UNIT # 5H

surface	ULSTR:	M	03	T 21S	R 33E	7898
				100 FSL	330 FWL	

BH Loc	ULSTR:	D	03	T 21S	R 33E	
18828	MD	11445.5	TVD	341 FNL	629 FWL	
				7557 FSL		

Top Perf/OH	ULSTR:	M	03	T 21S	R 33E	
11764	MD	11565.4	TVD	503 FSL	362 FWL	

Bot Perf/OH	ULSTR:	D	03	T 21S	R 33E	
18630	MD	11453.1	TVD	538 FNL	619 FWL	
				7360 FSL		

	MD	N/S	E/W	VD
	11734	374.00	32.10	11557.9
TOP PERFS/OH	11764	403.00	32.00	11565.40
	11764	403.00	32.00	11565.40
	18609	7238.80	288.20	11454.00
BOT PERFS/OH	18630	7259.78	288.98	11453.13
	18701	7330.70	291.60	11450.20

NEXT TO LAST	/	18779	7408.50	295.90	11446.90
LAST READING		18828	7457.40	298.70	11445.50
TD	√	18828	7457.40	298.70	11445.50

Surface Location	100	FS	330	FW
Projected BHL	7557	FS	629	FW
Location of				
Top Perfs/OH	503	FS	362	FW
Bottom Perfs/OH	7360	FS	619	FW

SUMMARY of Subsurface Locations

Surface Location	M-03-21S-33E	100	FS	330	FW	Vert. Depth
Top Perfs/OH	M-03-21S-33E	503	FS	362	FW	11565.40
Bottom Perfs/OH	D-03-21S-33E	7360	FS	619	FW	11453.13
Projected TD	D-03-21S-33E	7557	FS	629	FW	11445.50

OC: 20 2014



A GYRO TECHNOLOGIES INC. COMPANY

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

HOBBS OGD

OCT 16 2014

RECEIVED

May 1, 2014

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

Attn: Kanicia Castillo

Re: **Corazon State Unit No 005H**

Please find enclosed a copy of the survey from 0' to 10,940' ran on the above referenced well.

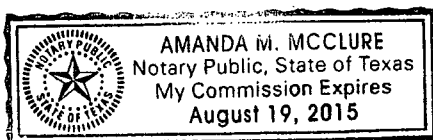
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

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



Amanda McClure
Notary Public, State of Texas



Company: COG OPERATING LLC
Lease/Well: CORAZON STATE UNIT/No 005H

Rig Name: PRECISION RIG # 590
State/County: NEW MEXICO /LEA
Latitude: 32.50, Longitude: -103.57
GRID North is 0.41 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : R.K.B = 25.80 FEET

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...n state unit 5h gyro-de_01.ut
Minimum Curvature Method
Report Date/Time: 5/1/2014 / 14:16

VES Survey International
(432) 563-5444
West Texas

Surveyor: Javier Estrada
Corazon State Unit No 005H / API 30-025-40947

HOBBS OCD

OCT 16 2014

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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	0.15	94.46	100.00	-0.01	0.13	-0.01	0.13	94.46	0.15
200.00	0.19	69.32	200.00	0.04	0.42	0.04	0.42	84.94	0.08
300.00	0.18	335.38	300.00	0.24	0.50	0.24	0.55	64.60	0.27
400.00	0.26	65.80	400.00	0.47	0.64	0.47	0.80	53.49	0.32
500.00	0.12	283.32	500.00	0.59	0.75	0.59	0.95	51.75	0.36
600.00	0.07	66.89	600.00	0.63	0.70	0.63	0.95	47.88	0.17
700.00	0.22	26.45	700.00	0.83	0.84	0.83	1.18	45.36	0.18
800.00	0.10	280.20	800.00	1.02	0.84	1.02	1.32	39.52	0.27
900.00	0.19	230.15	900.00	0.93	0.62	0.93	1.12	33.98	0.15
1000.00	0.16	308.76	1000.00	0.91	0.38	0.91	0.98	22.82	0.23
1100.00	0.18	139.39	1100.00	0.87	0.37	0.87	0.95	23.15	0.35
1200.00	0.05	272.54	1200.00	0.75	0.44	0.75	0.87	30.14	0.22
1300.00	0.14	292.71	1300.00	0.80	0.29	0.80	0.85	19.53	0.10
1400.00	0.15	342.54	1400.00	0.98	0.13	0.98	0.99	7.72	0.12
1500.00	0.24	318.84	1500.00	1.26	-0.05	1.26	1.26	357.93	0.12
1600.00	0.20	315.04	1599.99	1.55	-0.31	1.55	1.58	348.71	0.04
1700.00	0.11	179.56	1699.99	1.57	-0.43	1.57	1.63	344.61	0.29
1800.00	0.12	6.47	1799.99	1.58	-0.42	1.58	1.64	345.14	0.24

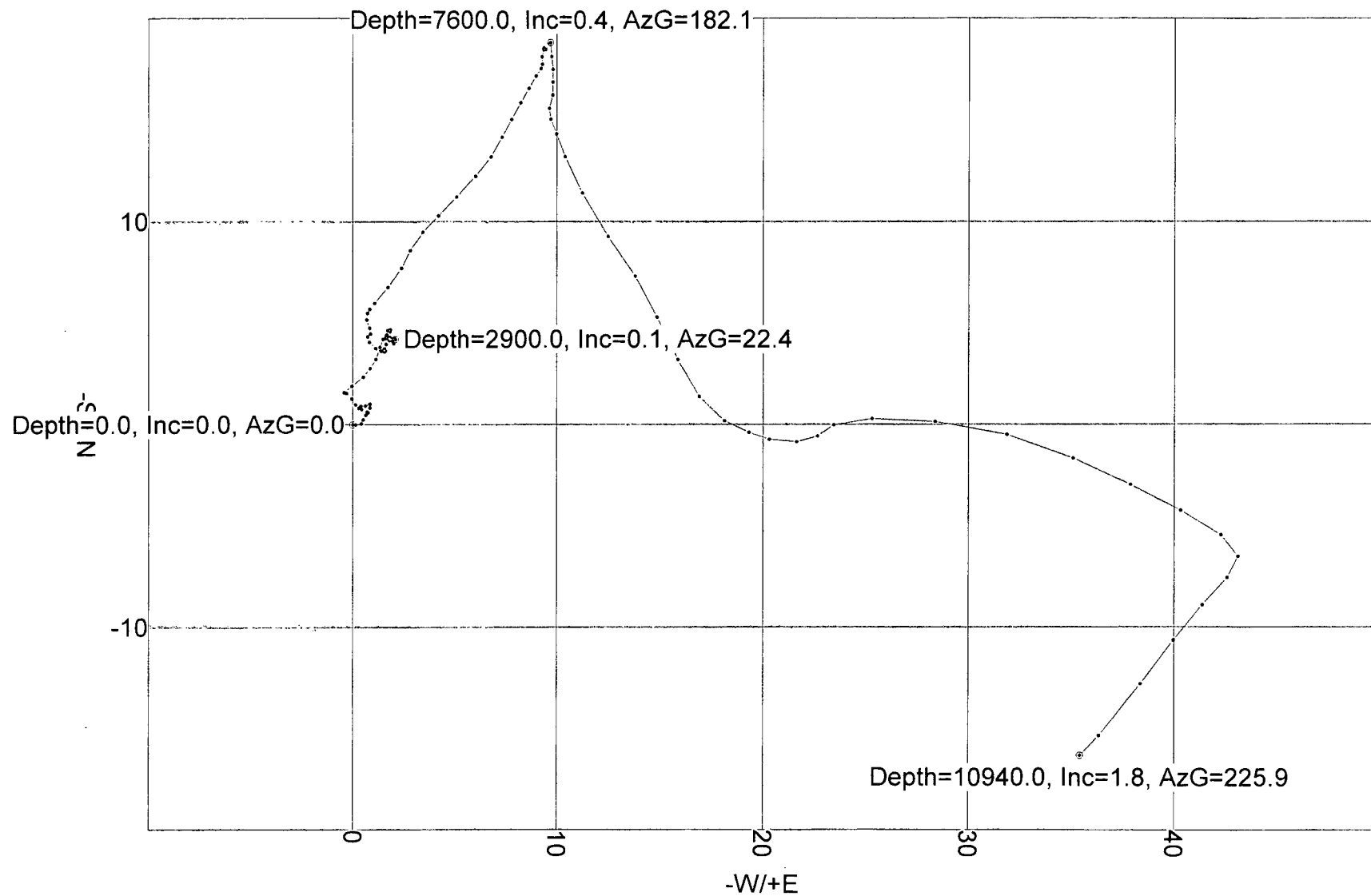
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.47	60.25	1899.99	1.89	-0.05	1.89	1.90	358.48	0.41
2000.00	0.36	39.74	1999.99	2.34	0.51	2.34	2.40	12.28	0.18
2100.00	0.26	36.97	2099.99	2.77	0.85	2.77	2.90	17.07	0.10
2200.00	0.34	27.22	2199.99	3.22	1.12	3.22	3.41	19.25	0.09
2300.00	0.38	10.95	2299.99	3.81	1.32	3.81	4.03	19.16	0.11
2400.00	0.13	49.49	2399.98	4.21	1.47	4.21	4.46	19.29	0.29
2500.00	0.05	132.44	2499.98	4.25	1.59	4.25	4.54	20.56	0.14
2600.00	0.11	84.01	2599.98	4.23	1.72	4.23	4.56	22.14	0.08
2700.00	0.07	353.38	2699.98	4.30	1.80	4.30	4.66	22.79	0.13
2800.00	0.20	136.76	2799.98	4.23	1.92	4.23	4.64	24.38	0.26
2900.00	0.10	22.36	2899.98	4.19	2.07	4.19	4.67	26.32	0.26
3000.00	0.09	259.92	2999.98	4.26	2.03	4.26	4.72	25.48	0.17
3100.00	0.05	242.14	3099.98	4.22	1.91	4.22	4.64	24.36	0.04
3200.00	0.12	147.65	3199.98	4.11	1.93	4.11	4.54	25.15	0.14
3300.00	0.05	180.50	3299.98	3.98	1.99	3.98	4.45	26.53	0.09
3400.00	0.05	3.26	3399.98	3.98	1.99	3.98	4.45	26.55	0.10
3500.00	0.29	298.36	3499.98	4.15	1.77	4.15	4.51	23.09	0.28
3600.00	0.21	37.76	3599.98	4.41	1.65	4.41	4.71	20.56	0.39
3700.00	0.07	58.80	3699.98	4.59	1.82	4.59	4.94	21.65	0.14
3800.00	0.09	326.70	3799.98	4.69	1.83	4.69	5.03	21.33	0.12
3900.00	0.17	216.88	3899.98	4.64	1.70	4.64	4.94	20.12	0.22
4000.00	0.20	177.88	3999.98	4.35	1.62	4.35	4.65	20.40	0.12
4100.00	0.26	180.11	4099.98	3.96	1.63	3.96	4.28	22.33	0.07
4200.00	0.13	198.09	4199.98	3.62	1.59	3.62	3.95	23.71	0.14
4300.00	0.09	343.40	4299.98	3.59	1.53	3.59	3.90	23.10	0.21
4400.00	0.08	21.82	4399.98	3.73	1.53	3.73	4.03	22.35	0.06
4500.00	0.14	195.42	4499.98	3.68	1.53	3.68	3.98	22.54	0.21
4600.00	0.15	296.36	4599.98	3.62	1.38	3.62	3.87	20.87	0.22
4700.00	0.20	297.98	4699.98	3.76	1.11	3.76	3.92	16.50	0.05
4800.00	0.30	325.03	4799.98	4.05	0.81	4.05	4.13	11.33	0.15
4900.00	0.11	42.28	4899.98	4.33	0.73	4.33	4.39	9.50	0.29
5000.00	0.11	45.98	4999.98	4.47	0.86	4.47	4.55	10.84	0.01
5100.00	0.27	335.27	5099.98	4.75	0.82	4.75	4.82	9.83	0.26
5200.00	0.22	347.45	5199.98	5.16	0.68	5.16	5.20	7.53	0.07
5300.00	0.18	30.23	5299.98	5.48	0.72	5.48	5.53	7.48	0.15
5400.00	0.07	18.15	5399.98	5.68	0.82	5.68	5.74	8.22	0.11
5500.00	0.37	42.10	5499.97	5.99	1.06	5.99	6.08	10.04	0.31
5600.00	0.78	39.05	5599.97	6.76	1.71	6.76	6.97	14.19	0.41
5700.00	0.54	28.99	5699.96	7.70	2.37	7.70	8.06	17.10	0.27

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	0.57	22.85	5799.96	8.58	2.79	8.58	9.02	18.03	0.07
5900.00	0.69	44.55	5899.95	9.47	3.41	9.47	10.07	19.80	0.26
6000.00	0.60	42.96	5999.95	10.28	4.19	10.28	11.10	22.16	0.09
6100.00	0.88	44.51	6099.94	11.21	5.08	11.21	12.31	24.38	0.29
6200.00	0.71	41.53	6199.93	12.22	6.03	12.22	13.63	26.27	0.18
6300.00	0.68	34.25	6299.92	13.18	6.78	13.18	14.82	27.22	0.09
6400.00	0.59	23.69	6399.91	14.15	7.32	14.15	15.93	27.36	0.15
6500.00	0.54	32.10	6499.91	15.02	7.78	15.02	16.92	27.38	0.10
6600.00	0.53	24.78	6599.90	15.84	8.23	15.84	17.85	27.44	0.07
6700.00	0.41	35.46	6699.90	16.56	8.63	16.56	18.67	27.53	0.15
6800.00	0.40	23.47	6799.90	17.17	8.98	17.17	19.37	27.61	0.09
6900.00	0.12	66.95	6899.90	17.53	9.21	17.53	19.80	27.72	0.32
7000.00	0.20	350.41	6999.90	17.74	9.28	17.74	20.02	27.61	0.21
7100.00	0.23	5.81	7099.90	18.11	9.27	18.11	20.34	27.11	0.07
7200.00	0.18	21.02	7199.90	18.46	9.35	18.46	20.69	26.86	0.07
7300.00	0.07	228.23	7299.90	18.56	9.36	18.56	20.79	26.75	0.25
7400.00	0.17	109.64	7399.90	18.47	9.44	18.47	20.74	27.08	0.21
7500.00	0.43	8.51	7499.89	18.80	9.64	18.80	21.12	27.14	0.49
7600.00	0.41	182.06	7599.89	18.81	9.68	18.81	21.15	27.23	0.85
7700.00	0.39	167.85	7699.89	18.11	9.74	18.11	20.56	28.26	0.10
7800.00	0.35	180.85	7799.89	17.48	9.81	17.48	20.04	29.30	0.10
7900.00	0.36	180.37	7899.89	16.86	9.80	16.86	19.50	30.17	0.01
8000.00	0.38	181.60	7999.89	16.21	9.79	16.21	18.94	31.12	0.02
8100.00	0.40	204.12	8099.88	15.56	9.64	15.56	18.30	31.77	0.15
8200.00	0.34	134.88	8199.88	15.03	9.70	15.03	17.89	32.84	0.42
8300.00	0.59	172.61	8299.88	14.31	9.98	14.31	17.45	34.88	0.38
8400.00	0.81	149.52	8399.87	13.19	10.40	13.19	16.80	38.26	0.35
8500.00	1.47	157.02	8499.85	11.40	11.26	11.40	16.02	44.64	0.67
8600.00	1.41	142.14	8599.82	9.25	12.52	9.25	15.56	53.53	0.38
8700.00	1.27	150.24	8699.79	7.31	13.82	7.31	15.64	62.12	0.24
8800.00	1.35	155.28	8799.77	5.28	14.87	5.28	15.78	70.45	0.14
8900.00	1.30	152.92	8899.74	3.20	15.88	3.20	16.20	78.62	0.07
9000.00	1.11	147.63	8999.72	1.36	16.92	1.36	16.97	85.39	0.22
9100.00	0.92	117.71	9099.70	0.17	18.14	0.17	18.14	89.45	0.56
9200.00	0.60	112.53	9199.69	-0.40	19.33	-0.40	19.33	91.18	0.33
9300.00	0.60	106.59	9299.69	-0.75	20.31	-0.75	20.33	92.11	0.06
9400.00	0.93	87.55	9399.68	-0.86	21.63	-0.86	21.65	92.28	0.41
9500.00	0.36	38.52	9499.67	-0.58	22.64	-0.58	22.65	91.47	0.75
9600.00	0.78	63.90	9599.67	-0.04	23.45	-0.04	23.45	90.09	0.47

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	1.46	89.63	9699.65	0.27	25.33	0.27	25.33	89.39	0.83
9800.00	2.03	94.44	9799.60	0.14	28.37	0.14	28.37	89.71	0.59
9900.00	2.07	106.43	9899.54	-0.51	31.86	-0.51	31.87	90.91	0.43
10000.00	1.85	114.18	9999.48	-1.68	35.07	-1.68	35.11	92.74	0.34
10100.00	1.69	115.72	10099.43	-2.98	37.87	-2.98	37.98	94.50	0.17
10200.00	1.47	119.24	10199.39	-4.25	40.32	-4.25	40.54	96.01	0.24
10300.00	1.17	124.99	10299.37	-5.46	42.28	-5.46	42.63	97.36	0.33
10400.00	0.54	180.83	10399.36	-6.52	43.11	-6.52	43.60	98.60	0.98
10500.00	0.89	222.58	10499.35	-7.57	42.58	-7.57	43.24	100.08	0.61
10600.00	1.17	221.70	10599.33	-8.90	41.37	-8.90	42.32	102.14	0.27
10700.00	1.42	216.16	10699.31	-10.66	39.96	-10.66	41.36	104.94	0.28
10800.00	1.66	216.70	10799.27	-12.82	38.37	-12.82	40.45	108.48	0.24
10900.00	2.06	220.58	10899.22	-15.34	36.34	-15.34	39.44	112.89	0.42
10940.00	1.83	225.94	10939.20	-16.33	35.41	-16.33	39.00	114.76	0.74



VES Survey International
(432) 563-5444
West Texas
Surveyor: Javier Estrada
Corazon State Unit No 005H / API 30-025-40947



VES Survey Date: 04/22/2014



HOBBS OCD

OCT 16 2014

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COG Operating, LLC.

Lea County, N.M.

Section 3-21S-33E Corazon State Unit #5H

Corazon State Unit #5H

Original Hole

Design: Original Hole

Survey Report - Geographic

05 May, 2014





Stryker Directional Survey Report - Geographic



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Corazon State Unit #5H
Project:	Lea County, N.M.	TVD Reference:	GL 3839.9 + 26 @ 3865.9usft (Precision 590)
Site:	Section 3-21S-33E Corazon State Unit #5H	MD Reference:	GL 3839.9 + 26 @ 3865.9usft (Precision 590)
Well:	Corazon State Unit #5H	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 3-21S-33E Corazon State Unit #5H				
Site Position:		Northing:	546,743.30 usft	Latitude:	32° 30' 2.796 N
From:	Map	Easting:	736,126.80 usft	Longitude:	103° 34' 2.780 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41 °

Well	Corazon State Unit #5H				
Well Position	+N/-S	0.0 usft	Northing:	546,743.30 usft	Latitude: 32° 30' 2.796 N
	+E/-W	0.0 usft	Easting:	736,126.80 usft	Longitude: 103° 34' 2.780 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level: 3,839.9 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/28/2014	7.26	60.37	48,501

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	2.10

Survey Program	Date 5/5/2014				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	10,940.0	Survey #1 (Original Hole)	SRG-GYRO-MS	surface readout gyro multishot	
11,052.0	18,828.0	MWDSurvey #2 (Original Hole)	MWD	MWD - Standard	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	546,743.30	736,126.80	32° 30' 2.796 N	103° 34' 2.780 W
100.0	0.15	94.46	100.0	0.0	0.1	546,743.29	736,126.93	32° 30' 2.796 N	103° 34' 2.778 W
200.0	0.19	69.32	200.0	0.0	0.4	546,743.34	736,127.21	32° 30' 2.796 N	103° 34' 2.775 W
300.0	0.18	335.38	300.0	0.2	0.5	546,743.54	736,127.30	32° 30' 2.798 N	103° 34' 2.774 W
400.0	0.26	65.80	400.0	0.5	0.6	546,743.78	736,127.44	32° 30' 2.800 N	103° 34' 2.772 W
500.0	0.12	283.32	500.0	0.6	0.8	546,743.89	736,127.55	32° 30' 2.802 N	103° 34' 2.771 W
600.0	0.07	66.89	600.0	0.6	0.7	546,743.94	736,127.50	32° 30' 2.802 N	103° 34' 2.771 W
700.0	0.22	26.45	700.0	0.8	0.8	546,744.14	736,127.64	32° 30' 2.804 N	103° 34' 2.770 W
800.0	0.10	280.20	800.0	1.0	0.8	546,744.33	736,127.64	32° 30' 2.806 N	103° 34' 2.770 W
900.0	0.19	230.15	900.0	0.9	0.6	546,744.24	736,127.43	32° 30' 2.805 N	103° 34' 2.772 W
1,000.0	0.16	308.76	1,000.0	0.9	0.4	546,744.22	736,127.20	32° 30' 2.805 N	103° 34' 2.775 W



Stryker Directional Survey Report - Geographic



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Corazon State Unit #5H
Project:	Lea County, N.M.	TVD Reference:	GL 3839.9 + 26 @ 3865.9usft (Precision 590)
Site:	Section 3-21S-33E Corazon State Unit #5H	MD Reference:	GL 3839.9 + 26 @ 3865.9usft (Precision 590)
Well:	Corazon State Unit #5H	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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,100.0	0.18	139.39	1,100.0	0.9	0.4	546,744.18	736,127.19	32° 30' 2.805 N	103° 34' 2.775 W
1,200.0	0.05	272.54	1,200.0	0.8	0.5	546,744.07	736,127.25	32° 30' 2.803 N	103° 34' 2.774 W
1,300.0	0.14	292.71	1,300.0	0.8	0.3	546,744.12	736,127.09	32° 30' 2.804 N	103° 34' 2.776 W
1,400.0	0.15	342.54	1,400.0	1.0	0.1	546,744.29	736,126.94	32° 30' 2.806 N	103° 34' 2.778 W
1,500.0	0.24	318.84	1,500.0	1.3	0.0	546,744.57	736,126.76	32° 30' 2.808 N	103° 34' 2.780 W
1,600.0	0.20	315.04	1,600.0	1.5	-0.3	546,744.85	736,126.50	32° 30' 2.811 N	103° 34' 2.783 W
1,700.0	0.11	179.56	1,700.0	1.6	-0.4	546,744.88	736,126.38	32° 30' 2.811 N	103° 34' 2.785 W
1,800.0	0.12	6.47	1,800.0	1.6	-0.4	546,744.89	736,126.39	32° 30' 2.812 N	103° 34' 2.784 W
1,900.0	0.47	60.25	1,900.0	1.9	0.0	546,745.20	736,126.76	32° 30' 2.815 N	103° 34' 2.780 W
2,000.0	0.36	39.74	2,000.0	2.3	0.5	546,745.64	736,127.32	32° 30' 2.819 N	103° 34' 2.774 W
2,100.0	0.26	36.97	2,100.0	2.8	0.9	546,746.06	736,127.65	32° 30' 2.823 N	103° 34' 2.770 W
2,200.0	0.34	27.22	2,200.0	3.2	1.1	546,746.51	736,127.92	32° 30' 2.827 N	103° 34' 2.766 W
2,300.0	0.38	10.95	2,300.0	3.8	1.3	546,747.10	736,128.12	32° 30' 2.833 N	103° 34' 2.764 W
2,400.0	0.13	49.49	2,400.0	4.2	1.5	546,747.50	736,128.27	32° 30' 2.837 N	103° 34' 2.762 W
2,500.0	0.05	132.44	2,500.0	4.2	1.6	546,747.54	736,128.39	32° 30' 2.838 N	103° 34' 2.761 W
2,600.0	0.11	84.01	2,600.0	4.2	1.7	546,747.52	736,128.52	32° 30' 2.837 N	103° 34' 2.759 W
2,700.0	0.07	353.38	2,700.0	4.3	1.8	546,747.59	736,128.61	32° 30' 2.838 N	103° 34' 2.758 W
2,800.0	0.20	136.76	2,800.0	4.2	1.9	546,747.53	736,128.72	32° 30' 2.837 N	103° 34' 2.757 W
2,900.0	0.10	22.36	2,900.0	4.2	2.1	546,747.48	736,128.87	32° 30' 2.837 N	103° 34' 2.755 W
3,000.0	0.09	259.92	3,000.0	4.2	2.0	546,747.55	736,128.83	32° 30' 2.838 N	103° 34' 2.756 W
3,100.0	0.05	242.14	3,100.0	4.2	1.9	546,747.51	736,128.71	32° 30' 2.837 N	103° 34' 2.757 W
3,200.0	0.12	147.65	3,200.0	4.1	1.9	546,747.40	736,128.73	32° 30' 2.836 N	103° 34' 2.757 W
3,300.0	0.05	180.50	3,300.0	4.0	2.0	546,747.27	736,128.79	32° 30' 2.835 N	103° 34' 2.756 W
3,400.0	0.05	3.26	3,400.0	4.0	2.0	546,747.27	736,128.79	32° 30' 2.835 N	103° 34' 2.756 W
3,500.0	0.29	298.36	3,500.0	4.1	1.8	546,747.44	736,128.57	32° 30' 2.837 N	103° 34' 2.759 W
3,600.0	0.21	37.76	3,600.0	4.4	1.7	546,747.70	736,128.46	32° 30' 2.839 N	103° 34' 2.760 W
3,700.0	0.07	58.80	3,700.0	4.6	1.8	546,747.88	736,128.62	32° 30' 2.841 N	103° 34' 2.758 W
3,800.0	0.09	326.70	3,800.0	4.7	1.8	546,747.97	736,128.63	32° 30' 2.842 N	103° 34' 2.758 W
3,900.0	0.17	216.88	3,900.0	4.6	1.7	546,747.92	736,128.50	32° 30' 2.841 N	103° 34' 2.759 W
4,000.0	0.20	177.88	4,000.0	4.3	1.6	546,747.63	736,128.42	32° 30' 2.839 N	103° 34' 2.760 W
4,100.0	0.26	180.11	4,100.0	3.9	1.6	546,747.23	736,128.42	32° 30' 2.835 N	103° 34' 2.760 W
4,200.0	0.13	198.09	4,200.0	3.6	1.6	546,746.89	736,128.39	32° 30' 2.831 N	103° 34' 2.761 W
4,300.0	0.09	343.40	4,300.0	3.6	1.5	546,746.86	736,128.33	32° 30' 2.831 N	103° 34' 2.762 W
4,400.0	0.08	21.82	4,400.0	3.7	1.5	546,747.00	736,128.33	32° 30' 2.832 N	103° 34' 2.762 W
4,500.0	0.14	195.42	4,500.0	3.6	1.5	546,746.95	736,128.33	32° 30' 2.832 N	103° 34' 2.762 W
4,600.0	0.15	296.36	4,600.0	3.6	1.4	546,746.89	736,128.18	32° 30' 2.831 N	103° 34' 2.763 W
4,700.0	0.20	297.98	4,700.0	3.7	1.1	546,747.03	736,127.90	32° 30' 2.833 N	103° 34' 2.767 W
4,800.0	0.30	325.03	4,800.0	4.0	0.8	546,747.32	736,127.60	32° 30' 2.836 N	103° 34' 2.770 W
4,900.0	0.11	42.28	4,900.0	4.3	0.7	546,747.61	736,127.51	32° 30' 2.838 N	103° 34' 2.771 W
5,000.0	0.11	45.98	5,000.0	4.4	0.9	546,747.75	736,127.65	32° 30' 2.840 N	103° 34' 2.769 W
5,100.0	0.27	335.27	5,100.0	4.7	0.8	546,748.03	736,127.62	32° 30' 2.843 N	103° 34' 2.770 W
5,200.0	0.22	347.45	5,200.0	5.1	0.7	546,748.43	736,127.48	32° 30' 2.847 N	103° 34' 2.771 W
5,300.0	0.18	30.23	5,300.0	5.4	0.7	546,748.75	736,127.52	32° 30' 2.850 N	103° 34' 2.771 W
5,400.0	0.07	18.15	5,400.0	5.6	0.8	546,748.95	736,127.61	32° 30' 2.852 N	103° 34' 2.770 W
5,500.0	0.37	42.10	5,500.0	5.9	1.1	546,749.24	736,127.85	32° 30' 2.855 N	103° 34' 2.767 W
5,600.0	0.78	39.05	5,600.0	6.7	1.7	546,750.01	736,128.49	32° 30' 2.862 N	103° 34' 2.759 W
5,700.0	0.54	28.99	5,700.0	7.6	2.4	546,750.95	736,129.15	32° 30' 2.871 N	103° 34' 2.752 W
5,800.0	0.57	22.85	5,800.0	8.5	2.8	546,751.82	736,129.57	32° 30' 2.880 N	103° 34' 2.747 W
5,900.0	0.69	44.55	5,900.0	9.4	3.4	546,752.71	736,130.19	32° 30' 2.889 N	103° 34' 2.739 W
6,000.0	0.60	42.96	5,999.9	10.2	4.2	546,753.52	736,130.97	32° 30' 2.897 N	103° 34' 2.730 W
6,100.0	0.88	44.51	6,099.9	11.2	5.1	546,754.45	736,131.86	32° 30' 2.906 N	103° 34' 2.720 W
6,200.0	0.71	41.53	6,199.9	12.2	6.0	546,755.46	736,132.81	32° 30' 2.916 N	103° 34' 2.708 W
6,300.0	0.68	34.25	6,299.9	13.1	6.8	546,756.42	736,133.56	32° 30' 2.925 N	103° 34' 2.700 W
6,400.0	0.59	23.69	6,399.9	14.1	7.3	546,757.38	736,134.10	32° 30' 2.935 N	103° 34' 2.693 W
6,500.0	0.54	32.10	6,499.9	14.9	7.8	546,758.25	736,134.56	32° 30' 2.943 N	103° 34' 2.688 W



Stryker Directional Survey Report - Geographic



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Corazon State Unit #5H
Project:	Lea County, N.M.	TVD Reference:	GL 3839.9 + 26 @ 3865.9usft (Precision 590)
Site:	Section 3-21S-33E Corazon State Unit #5H	MD Reference:	GL 3839.9 + 26 @ 3865.9usft (Precision 590)
Well:	Corazon State Unit #5H	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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,600.0	0.53	24.78	6,599.9	15.8	8.2	546,759.07	736,135.00	32° 30' 2.951 N	103° 34' 2.683 W
6,700.0	0.41	35.46	6,699.9	16.5	8.6	546,759.78	736,135.40	32° 30' 2.958 N	103° 34' 2.678 W
6,800.0	0.40	23.47	6,799.9	17.1	9.0	546,760.39	736,135.75	32° 30' 2.964 N	103° 34' 2.674 W
6,900.0	0.12	66.95	6,899.9	17.5	9.2	546,760.75	736,135.98	32° 30' 2.968 N	103° 34' 2.671 W
7,000.0	0.20	350.41	6,999.9	17.7	9.3	546,760.97	736,136.05	32° 30' 2.970 N	103° 34' 2.670 W
7,100.0	0.23	5.81	7,099.9	18.0	9.2	546,761.34	736,136.04	32° 30' 2.974 N	103° 34' 2.670 W
7,200.0	0.18	21.02	7,199.9	18.4	9.3	546,761.69	736,136.12	32° 30' 2.977 N	103° 34' 2.669 W
7,300.0	0.07	228.23	7,299.9	18.5	9.3	546,761.79	736,136.13	32° 30' 2.978 N	103° 34' 2.669 W
7,400.0	0.17	109.64	7,399.9	18.4	9.4	546,761.70	736,136.22	32° 30' 2.977 N	103° 34' 2.668 W
7,500.0	0.43	8.51	7,499.9	18.7	9.6	546,762.02	736,136.42	32° 30' 2.980 N	103° 34' 2.666 W
7,600.0	0.41	182.06	7,599.9	18.7	9.7	546,762.04	736,136.46	32° 30' 2.981 N	103° 34' 2.665 W
7,700.0	0.39	167.85	7,699.9	18.0	9.7	546,761.35	736,136.52	32° 30' 2.974 N	103° 34' 2.665 W
7,800.0	0.35	180.85	7,799.9	17.4	9.8	546,760.71	736,136.59	32° 30' 2.967 N	103° 34' 2.664 W
7,900.0	0.36	180.37	7,899.9	16.8	9.8	546,760.09	736,136.58	32° 30' 2.961 N	103° 34' 2.664 W
8,000.0	0.38	181.60	7,999.9	16.1	9.8	546,759.44	736,136.57	32° 30' 2.955 N	103° 34' 2.664 W
8,100.0	0.40	204.12	8,099.9	15.5	9.6	546,758.79	736,136.42	32° 30' 2.948 N	103° 34' 2.666 W
8,200.0	0.34	134.88	8,199.9	15.0	9.7	546,758.26	736,136.48	32° 30' 2.943 N	103° 34' 2.665 W
8,300.0	0.59	172.61	8,299.9	14.2	10.0	546,757.54	736,136.76	32° 30' 2.936 N	103° 34' 2.662 W
8,400.0	0.81	149.52	8,399.9	13.1	10.4	546,756.43	736,137.19	32° 30' 2.925 N	103° 34' 2.657 W
8,500.0	1.47	157.02	8,499.9	11.3	11.2	546,754.63	736,138.05	32° 30' 2.907 N	103° 34' 2.647 W
8,600.0	1.41	142.14	8,599.8	9.2	12.5	546,752.48	736,139.30	32° 30' 2.886 N	103° 34' 2.633 W
8,700.0	1.27	150.24	8,699.8	7.2	13.8	546,750.55	736,140.61	32° 30' 2.867 N	103° 34' 2.618 W
8,800.0	1.35	155.28	8,799.8	5.2	14.9	546,748.52	736,141.65	32° 30' 2.846 N	103° 34' 2.606 W
8,900.0	1.30	152.92	8,899.7	3.1	15.9	546,746.44	736,142.66	32° 30' 2.826 N	103° 34' 2.594 W
9,000.0	1.11	147.63	8,999.7	1.3	16.9	546,744.61	736,143.69	32° 30' 2.808 N	103° 34' 2.582 W
9,100.0	0.92	117.71	9,099.7	0.1	18.1	546,743.42	736,144.92	32° 30' 2.796 N	103° 34' 2.568 W
9,200.0	0.60	112.53	9,199.7	-0.5	19.3	546,742.84	736,146.12	32° 30' 2.790 N	103° 34' 2.554 W
9,300.0	0.60	106.59	9,299.7	-0.8	20.3	546,742.49	736,147.10	32° 30' 2.786 N	103° 34' 2.543 W
9,400.0	0.93	87.55	9,399.7	-0.9	21.6	546,742.38	736,148.41	32° 30' 2.785 N	103° 34' 2.527 W
9,500.0	0.36	38.52	9,499.7	-0.6	22.6	546,742.66	736,149.42	32° 30' 2.788 N	103° 34' 2.516 W
9,600.0	0.78	63.90	9,599.7	-0.1	23.4	546,743.20	736,150.23	32° 30' 2.793 N	103° 34' 2.506 W
9,700.0	1.46	89.63	9,699.6	0.2	25.3	546,743.51	736,152.11	32° 30' 2.796 N	103° 34' 2.484 W
9,800.0	2.03	94.44	9,799.6	0.1	28.4	546,743.38	736,155.15	32° 30' 2.795 N	103° 34' 2.449 W
9,900.0	2.07	106.43	9,899.5	-0.6	31.9	546,742.74	736,158.65	32° 30' 2.788 N	103° 34' 2.408 W
10,000.0	1.85	114.18	9,999.5	-1.7	35.1	546,741.56	736,161.86	32° 30' 2.776 N	103° 34' 2.371 W
10,100.0	1.69	115.72	10,099.4	-3.0	37.9	546,740.26	736,164.66	32° 30' 2.763 N	103° 34' 2.338 W
10,200.0	1.47	119.24	10,199.4	-4.3	40.3	546,739.00	736,167.10	32° 30' 2.750 N	103° 34' 2.309 W
10,300.0	1.17	124.99	10,299.4	-5.5	42.3	546,737.78	736,169.06	32° 30' 2.738 N	103° 34' 2.287 W
10,400.0	0.54	180.83	10,399.4	-6.6	43.1	546,736.73	736,169.89	32° 30' 2.728 N	103° 34' 2.277 W
10,500.0	0.89	222.58	10,499.4	-7.6	42.6	546,735.68	736,169.36	32° 30' 2.717 N	103° 34' 2.283 W
10,600.0	1.17	221.70	10,599.3	-9.0	41.4	546,734.35	736,168.15	32° 30' 2.704 N	103° 34' 2.298 W
10,700.0	1.42	216.16	10,699.3	-10.7	39.9	546,732.59	736,166.74	32° 30' 2.687 N	103° 34' 2.314 W
10,800.0	1.66	216.70	10,799.3	-12.9	38.3	546,730.43	736,165.15	32° 30' 2.666 N	103° 34' 2.333 W
10,900.0	2.06	220.58	10,899.2	-15.4	36.3	546,727.90	736,163.11	32° 30' 2.641 N	103° 34' 2.357 W
10,940.0	1.83	225.94	10,939.2	-16.4	35.4	546,726.91	736,162.18	32° 30' 2.631 N	103° 34' 2.368 W
10940' MD VES Gyro Survey									
11,058.0	3.20	19.90	11,057.1	-14.6	35.2	546,728.70	736,161.95	32° 30' 2.649 N	103° 34' 2.371 W
11,089.0	4.60	15.10	11,088.1	-12.6	35.8	546,730.71	736,162.57	32° 30' 2.669 N	103° 34' 2.363 W
11,119.0	9.80	10.50	11,117.8	-8.9	36.6	546,734.38	736,163.35	32° 30' 2.705 N	103° 34' 2.354 W
11,150.0	15.30	10.00	11,148.1	-2.3	37.7	546,741.01	736,164.54	32° 30' 2.770 N	103° 34' 2.339 W
11,181.0	16.40	4.10	11,177.9	6.1	38.8	546,749.41	736,165.56	32° 30' 2.853 N	103° 34' 2.327 W
11,211.0	20.40	4.00	11,206.4	15.5	39.4	546,758.85	736,166.23	32° 30' 2.947 N	103° 34' 2.318 W
11,242.0	22.80	1.70	11,235.2	26.9	40.0	546,770.25	736,166.79	32° 30' 3.060 N	103° 34' 2.311 W
11,273.0	25.50	1.40	11,263.5	39.6	40.3	546,782.92	736,167.13	32° 30' 3.185 N	103° 34' 2.306 W
11,304.0	25.90	359.00	11,291.4	53.1	40.4	546,796.36	736,167.17	32° 30' 3.318 N	103° 34' 2.304 W



Stryker Directional Survey Report - Geographic



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Project:	Lea County, N.M.	TVD Reference:	GL 3839.9 + 26 @ 3865.9usft (Precision 590)
Site:	Section 3-21S-33E Corazon State Unit #5H	MD Reference:	GL 3839.9 + 26 @ 3865.9usft (Precision 590)
Well:	Corazon State Unit #5H	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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,334.0	29.90	357.30	11,317.9	67.1	39.9	546,810.39	736,166.71	32° 30' 3.457 N	103° 34' 2.308 W
11,365.0	32.80	356.70	11,344.4	83.2	39.1	546,826.49	736,165.86	32° 30' 3.616 N	103° 34' 2.317 W
11,396.0	35.10	355.80	11,370.1	100.5	37.9	546,843.77	736,164.72	32° 30' 3.787 N	103° 34' 2.328 W
11,426.0	39.60	357.50	11,393.9	118.6	36.9	546,861.93	736,163.67	32° 30' 3.967 N	103° 34' 2.339 W
11,457.0	44.00	358.80	11,417.0	139.3	36.2	546,882.58	736,163.02	32° 30' 4.171 N	103° 34' 2.345 W
11,488.0	46.90	0.30	11,438.8	161.4	36.1	546,904.66	736,162.85	32° 30' 4.390 N	103° 34' 2.345 W
11,518.0	50.70	1.80	11,458.5	183.9	36.5	546,927.23	736,163.27	32° 30' 4.613 N	103° 34' 2.338 W
11,549.0	53.90	1.20	11,477.5	208.4	37.1	546,951.74	736,163.91	32° 30' 4.856 N	103° 34' 2.329 W
11,580.0	57.80	359.40	11,494.9	234.1	37.2	546,977.39	736,164.04	32° 30' 5.110 N	103° 34' 2.325 W
11,611.0	61.30	358.80	11,510.6	260.8	36.8	547,004.11	736,163.61	32° 30' 5.374 N	103° 34' 2.328 W
11,641.0	64.40	357.60	11,524.3	287.5	36.0	547,030.79	736,162.77	32° 30' 5.638 N	103° 34' 2.336 W
11,672.0	66.60	356.70	11,537.1	315.7	34.6	547,058.96	736,161.37	32° 30' 5.917 N	103° 34' 2.350 W
11,703.0	70.80	357.00	11,548.4	344.5	33.0	547,087.79	736,159.78	32° 30' 6.202 N	103° 34' 2.366 W
11,734.0	73.50	359.60	11,557.9	374.0	32.1	547,117.28	736,158.91	32° 30' 6.494 N	103° 34' 2.373 W
11,764.0	77.50	359.80	11,565.4	403.0	32.0	547,146.32	736,158.76	32° 30' 6.781 N	103° 34' 2.373 W
11,795.0	81.40	0.40	11,571.1	433.5	32.0	547,176.79	736,158.81	32° 30' 7.083 N	103° 34' 2.370 W
11,826.0	84.40	2.00	11,574.9	464.2	32.7	547,207.54	736,159.46	32° 30' 7.387 N	103° 34' 2.359 W
11,856.0	87.70	2.40	11,577.0	494.1	33.8	547,237.44	736,160.61	32° 30' 7.683 N	103° 34' 2.344 W
11,887.0	89.70	4.30	11,577.7	525.1	35.6	547,268.38	736,162.42	32° 30' 7.989 N	103° 34' 2.320 W
11,913.0	90.10	3.40	11,577.7	551.0	37.4	547,294.32	736,164.17	32° 30' 8.245 N	103° 34' 2.297 W
11,973.0	91.40	3.20	11,577.0	610.9	40.8	547,354.21	736,167.62	32° 30' 8.838 N	103° 34' 2.252 W
12,065.0	90.70	3.50	11,575.3	702.7	46.2	547,446.04	736,172.99	32° 30' 9.746 N	103° 34' 2.181 W
12,157.0	92.00	3.30	11,573.1	794.5	51.7	547,537.85	736,178.45	32° 30' 10.654 N	103° 34' 2.110 W
12,249.0	91.20	3.90	11,570.5	886.3	57.4	547,629.63	736,184.22	32° 30' 11.562 N	103° 34' 2.035 W
12,341.0	90.20	4.00	11,569.4	978.1	63.8	547,721.40	736,190.56	32° 30' 12.470 N	103° 34' 1.953 W
12,434.0	92.00	3.70	11,567.6	1,070.9	70.0	547,814.17	736,196.80	32° 30' 13.387 N	103° 34' 1.873 W
12,526.0	89.90	3.30	11,566.1	1,162.7	75.6	547,905.98	736,202.42	32° 30' 14.295 N	103° 34' 1.799 W
12,618.0	90.90	3.00	11,565.5	1,254.5	80.7	547,997.84	736,207.47	32° 30' 15.204 N	103° 34' 1.733 W
12,710.0	92.70	3.00	11,562.6	1,346.4	85.5	548,089.66	736,212.29	32° 30' 16.112 N	103° 34' 1.669 W
12,802.0	91.30	3.50	11,559.4	1,438.2	90.7	548,181.46	736,217.50	32° 30' 17.020 N	103° 34' 1.600 W
12,895.0	88.90	2.80	11,559.2	1,531.0	95.8	548,274.31	736,222.61	32° 30' 17.938 N	103° 34' 1.533 W
12,987.0	90.60	2.60	11,559.6	1,622.9	100.1	548,366.20	736,226.94	32° 30' 18.847 N	103° 34' 1.474 W
13,079.0	93.00	2.90	11,556.7	1,714.7	104.6	548,458.05	736,231.35	32° 30' 19.756 N	103° 34' 1.415 W
13,171.0	91.20	3.20	11,553.3	1,806.5	109.4	548,549.85	736,236.25	32° 30' 20.664 N	103° 34' 1.350 W
13,263.0	88.70	2.50	11,553.4	1,898.4	114.0	548,641.73	736,240.82	32° 30' 21.573 N	103° 34' 1.289 W
13,355.0	90.10	2.10	11,554.4	1,990.3	117.7	548,733.65	736,244.51	32° 30' 22.482 N	103° 34' 1.238 W
13,448.0	91.10	1.70	11,553.4	2,083.3	120.8	548,826.59	736,247.60	32° 30' 23.401 N	103° 34' 1.194 W
13,540.0	92.70	1.50	11,550.4	2,175.2	123.4	548,918.50	736,250.16	32° 30' 24.311 N	103° 34' 1.157 W
13,632.0	90.80	1.00	11,547.5	2,267.1	125.4	549,010.43	736,252.17	32° 30' 25.220 N	103° 34' 1.126 W
13,723.0	91.90	0.90	11,545.4	2,358.1	126.9	549,101.39	736,253.68	32° 30' 26.120 N	103° 34' 1.100 W
13,816.0	89.70	1.00	11,544.1	2,451.1	128.4	549,194.36	736,255.22	32° 30' 27.040 N	103° 34' 1.075 W
13,908.0	91.00	1.50	11,543.5	2,543.0	130.4	549,286.34	736,257.23	32° 30' 27.950 N	103° 34' 1.043 W
14,000.0	92.90	1.90	11,540.4	2,634.9	133.2	549,378.24	736,259.95	32° 30' 28.859 N	103° 34' 1.004 W
14,092.0	91.50	2.30	11,536.9	2,726.8	136.5	549,470.11	736,263.32	32° 30' 29.768 N	103° 34' 0.957 W
14,184.0	88.80	1.80	11,536.6	2,818.7	139.8	549,562.04	736,266.61	32° 30' 30.677 N	103° 34' 0.911 W
14,276.0	89.80	1.80	11,537.8	2,910.7	142.7	549,653.99	736,269.50	32° 30' 31.587 N	103° 34' 0.869 W
14,368.0	91.90	1.90	11,536.4	3,002.6	145.7	549,745.92	736,272.47	32° 30' 32.497 N	103° 34' 0.827 W
14,459.0	91.00	1.90	11,534.1	3,093.5	148.7	549,836.84	736,275.49	32° 30' 33.396 N	103° 34' 0.784 W
14,552.0	91.90	0.60	11,531.7	3,186.5	150.7	549,929.79	736,277.52	32° 30' 34.316 N	103° 34' 0.752 W
14,644.0	91.10	0.50	11,529.3	3,278.4	151.6	550,021.75	736,278.40	32° 30' 35.225 N	103° 34' 0.734 W
14,736.0	92.70	1.20	11,526.3	3,370.4	153.0	550,113.69	736,279.76	32° 30' 36.135 N	103° 34' 0.711 W
14,828.0	90.90	359.40	11,523.4	3,462.3	153.4	550,205.63	736,280.24	32° 30' 37.045 N	103° 34' 0.697 W
14,920.0	90.00	0.80	11,522.7	3,554.3	153.6	550,297.63	736,280.40	32° 30' 37.955 N	103° 34' 0.688 W
15,012.0	91.70	1.60	11,521.3	3,646.3	155.5	550,389.59	736,282.33	32° 30' 38.865 N	103° 34' 0.658 W
15,104.0	90.30	359.70	11,519.7	3,738.3	156.6	550,481.57	736,283.37	32° 30' 39.775 N	103° 34' 0.638 W



Stryker Directional Survey Report - Geographic



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Corazon State Unit #5H
Project:	Lea County, N.M.	TVD Reference:	GL 3839.9 + 26 @ 3865.9usft (Precision 590)
Site:	Section 3-21S-33E Corazon State Unit #5H	MD Reference:	GL 3839.9 + 26 @ 3865.9usft (Precision 590)
Well:	Corazon State Unit #5H	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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,197.0	91.70	1.30	11,518.1	3,831.2	157.4	550,574.54	736,284.18	32° 30' 40.695 N	103° 34' 0.620 W
15,289.0	91.50	2.80	11,515.5	3,923.1	160.7	550,666.45	736,287.47	32° 30' 41.604 N	103° 34' 0.574 W
15,381.0	89.50	0.50	11,514.7	4,015.1	163.3	550,758.39	736,290.12	32° 30' 42.514 N	103° 34' 0.536 W
15,473.0	91.10	0.50	11,514.2	4,107.1	164.1	550,850.39	736,290.92	32° 30' 43.424 N	103° 34' 0.519 W
15,565.0	92.50	359.80	11,511.3	4,199.0	164.4	550,942.34	736,291.17	32° 30' 44.334 N	103° 34' 0.508 W
15,657.0	92.90	0.10	11,507.0	4,290.9	164.3	551,034.23	736,291.09	32° 30' 45.243 N	103° 34' 0.501 W
15,749.0	92.70	2.70	11,502.5	4,382.8	166.5	551,126.09	736,293.33	32° 30' 46.152 N	103° 34' 0.467 W
15,841.0	91.40	1.70	11,499.2	4,474.7	170.1	551,217.96	736,296.86	32° 30' 47.061 N	103° 34' 0.418 W
15,933.0	89.50	3.20	11,498.5	4,566.6	174.0	551,309.87	736,300.79	32° 30' 47.970 N	103° 34' 0.365 W
16,026.0	89.60	3.20	11,499.2	4,659.4	179.2	551,402.72	736,305.98	32° 30' 48.888 N	103° 34' 0.296 W
16,118.0	88.40	3.40	11,500.8	4,751.2	184.5	551,494.55	736,311.28	32° 30' 49.797 N	103° 34' 0.227 W
16,210.0	90.20	3.20	11,502.0	4,843.1	189.8	551,586.39	736,316.57	32° 30' 50.705 N	103° 34' 0.157 W
16,302.0	91.70	2.30	11,500.4	4,935.0	194.2	551,678.26	736,320.99	32° 30' 51.614 N	103° 34' 0.098 W
16,394.0	90.60	4.00	11,498.6	5,026.8	199.2	551,770.10	736,326.04	32° 30' 52.522 N	103° 34' 0.031 W
16,486.0	91.80	3.80	11,496.7	5,118.6	205.5	551,861.87	736,332.30	32° 30' 53.430 N	103° 33' 59.951 W
16,578.0	90.60	4.00	11,494.7	5,210.3	211.8	551,953.63	736,338.55	32° 30' 54.337 N	103° 33' 59.870 W
16,670.0	92.00	2.90	11,492.6	5,302.1	217.3	552,045.44	736,344.09	32° 30' 55.245 N	103° 33' 59.797 W
16,763.0	90.80	1.60	11,490.4	5,395.0	220.9	552,138.33	736,347.74	32° 30' 56.164 N	103° 33' 59.747 W
16,855.0	91.90	1.20	11,488.2	5,487.0	223.2	552,230.28	736,349.98	32° 30' 57.074 N	103° 33' 59.713 W
16,947.0	90.80	1.80	11,486.0	5,578.9	225.6	552,322.22	736,352.39	32° 30' 57.983 N	103° 33' 59.677 W
17,039.0	91.60	0.60	11,484.1	5,670.9	227.5	552,414.18	736,354.32	32° 30' 58.893 N	103° 33' 59.647 W
17,131.0	92.70	0.40	11,480.7	5,762.8	228.3	552,506.11	736,355.12	32° 30' 59.803 N	103° 33' 59.630 W
17,224.0	91.10	0.70	11,477.6	5,855.7	229.2	552,599.05	736,356.01	32° 31' 0.722 N	103° 33' 59.612 W
17,317.0	89.70	0.50	11,476.9	5,948.7	230.2	552,692.04	736,356.99	32° 31' 1.642 N	103° 33' 59.592 W
17,409.0	90.80	0.40	11,476.5	6,040.7	230.9	552,784.04	736,357.71	32° 31' 2.553 N	103° 33' 59.576 W
17,501.0	92.00	0.40	11,474.3	6,132.7	231.6	552,876.00	736,358.35	32° 31' 3.463 N	103° 33' 59.561 W
17,593.0	91.00	2.50	11,471.9	6,224.6	233.9	552,967.94	736,360.68	32° 31' 4.372 N	103° 33' 59.526 W
17,685.0	90.40	2.30	11,470.7	6,316.5	237.7	553,059.85	736,364.53	32° 31' 5.281 N	103° 33' 59.473 W
17,778.0	89.50	3.90	11,470.8	6,409.4	242.8	553,152.71	736,369.56	32° 31' 6.200 N	103° 33' 59.407 W
17,870.0	91.00	4.50	11,470.4	6,501.2	249.5	553,244.46	736,376.30	32° 31' 7.107 N	103° 33' 59.321 W
17,962.0	91.50	3.90	11,468.4	6,592.9	256.2	553,336.19	736,383.03	32° 31' 8.014 N	103° 33' 59.234 W
18,056.0	92.00	3.20	11,465.5	6,686.7	262.1	553,429.96	736,388.85	32° 31' 8.942 N	103° 33' 59.158 W
18,148.0	91.20	4.00	11,463.0	6,778.4	267.8	553,521.74	736,394.63	32° 31' 9.850 N	103° 33' 59.083 W
18,240.0	90.10	3.40	11,461.9	6,870.2	273.8	553,613.54	736,400.56	32° 31' 10.758 N	103° 33' 59.006 W
18,332.0	91.10	3.00	11,461.0	6,962.1	278.9	553,705.39	736,405.70	32° 31' 11.666 N	103° 33' 58.938 W
18,424.0	92.10	1.70	11,458.4	7,054.0	282.7	553,797.28	736,409.47	32° 31' 12.575 N	103° 33' 58.887 W
18,516.0	90.90	1.90	11,456.0	7,145.9	285.6	553,889.20	736,412.36	32° 31' 13.484 N	103° 33' 58.845 W
18,609.0	91.60	1.30	11,454.0	7,238.8	288.2	553,982.14	736,414.95	32° 31' 14.404 N	103° 33' 58.807 W
18,701.0	93.10	3.00	11,450.2	7,330.7	291.6	554,073.99	736,418.40	32° 31' 15.313 N	103° 33' 58.759 W
18,779.0	91.70	3.30	11,446.9	7,408.5	295.9	554,151.80	736,422.68	32° 31' 16.082 N	103° 33' 58.703 W
18,828.0	91.70	3.30	11,445.5	7,457.4	298.7	554,200.70	736,425.50	32° 31' 16.566 N	103° 33' 58.666 W

18828' MD Projected to Bit - PBHL Corazon State Unit #5H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,940.0	10,939.2	-16.4	35.4	10940' MD VES Gyro Survey
18,828.0	11,445.5	7,457.4	298.7	18828' MD Projected to Bit