VES SURVEY INTERNATIONAL

HOBBS OCD
MAR 05 2015
RECEIVED

August 15, 2014

30-025-40954

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

Attn: Kanicia Castillo

RE: **Corazon State Unit 12**

Please find enclosed a copy of the survey from 0.00' to 10700.00' ran on the above referenced well.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
§
COUNTY OF NUECES §

This instrument was acknowledged before me on the 15 day of August A.D., 2014, by Keith Havelka.

Jennifer Ann Byerly
Notary Public, State of Texas

JENNIFER ANN BYERLY
Notary Public, State of Texas
My Commission Expires
August 16, 2017

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

MAR 10 2015

Company: Concho Oil & Gas
Lease/Well: Corazon State Unit/12H

Rig Name: Precision 590
State/County: New Mexico/Lea
Latitude: 32.52, Longitude: -103.58
GRID North is 0.41 Degrees East of True North
VS-Azi: 0.00 Degrees

30-025-40954

Depth Reference : 25 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS
Filename: gyro survey_mrg 10700.ut
Minimum Curvature Method
Report Date/Time: 8/15/2014 / 11:16

VES Survey International
West Texas
(432) 563-5444
Surveyor: Neil Bates / Chris Bankson
Corazon State Unit 12H / API 30-025-40954

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	246.79	100.00	-0.05	-0.12	-0.05	0.13	246.79	0.15
200.00	0.26	1.14	200.00	0.12	-0.23	0.12	0.26	297.98	0.35
300.00	0.30	152.04	300.00	0.12	-0.10	0.12	0.16	318.00	0.54
400.00	0.17	28.30	400.00	0.01	0.09	0.01	0.09	81.78	0.42
500.00	0.35	65.97	500.00	0.27	0.43	0.27	0.51	58.60	0.24
600.00	0.31	160.28	600.00	0.14	0.80	0.14	0.81	80.42	0.48
700.00	0.41	289.35	700.00	0.00	0.56	0.00	0.56	90.05	0.65
800.00	0.46	257.36	799.99	0.03	-0.17	0.03	0.17	279.74	0.24
900.00	0.26	294.41	899.99	0.03	-0.77	0.03	0.77	272.56	0.30
1000.00	0.49	253.33	999.99	0.00	-1.38	0.00	1.38	270.20	0.34
1100.00	0.33	122.13	1099.99	-0.27	-1.55	-0.27	1.57	259.98	0.75
1200.00	0.65	154.50	1199.98	-0.94	-1.06	-0.94	1.41	228.28	0.41
1300.00	0.45	102.80	1299.98	-1.54	-0.43	-1.54	1.60	195.63	0.51
1400.00	0.40	57.16	1399.98	-1.44	0.24	-1.44	1.46	170.41	0.33
1500.00	0.45	90.85	1499.97	-1.25	0.93	-1.25	1.56	143.54	0.25
1600.00	0.59	68.38	1599.97	-1.07	1.79	-1.07	2.09	120.81	0.25
1700.00	0.22	12.27	1699.97	-0.69	2.31	-0.69	2.41	106.72	0.50
1800.00	0.37	20.10	1799.97	-0.21	2.46	-0.21	2.47	94.79	0.16

VES Survey Date: 08/07/2014

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.06	80.27	1899.97	0.10	2.63	0.10	2.63	87.73	0.34
2000.00	0.20	149.57	1999.97	-0.03	2.77	-0.03	2.77	90.70	0.18
2100.00	0.18	206.58	2099.97	-0.32	2.78	-0.32	2.80	96.63	0.18
2200.00	0.22	351.78	2199.97	-0.27	2.68	-0.27	2.70	95.82	0.39
2300.00	0.28	41.11	2299.96	0.10	2.81	0.10	2.82	87.94	0.21
2400.00	0.21	230.25	2399.96	0.17	2.83	0.17	2.84	86.65	0.49
2500.00	0.28	142.35	2499.96	-0.14	2.84	-0.14	2.84	92.91	0.34
2600.00	0.26	302.77	2599.96	-0.21	2.80	-0.21	2.80	94.39	0.53
2700.00	0.20	100.87	2699.96	-0.13	2.78	-0.13	2.78	92.61	0.45
2800.00	0.25	302.93	2799.96	-0.04	2.77	-0.04	2.77	90.82	0.45
2900.00	0.26	207.38	2899.96	-0.12	2.48	-0.12	2.48	92.83	0.38
3000.00	0.25	47.05	2999.96	-0.18	2.54	-0.18	2.54	93.96	0.51
3100.00	0.19	128.55	3099.96	-0.13	2.83	-0.13	2.83	92.63	0.30
3200.00	0.31	103.33	3199.96	-0.30	3.23	-0.30	3.24	95.28	0.16
3300.00	0.47	20.47	3299.96	0.02	3.63	0.02	3.63	89.65	0.53
3400.00	0.32	26.84	3399.96	0.65	3.90	0.65	3.96	80.49	0.15
3500.00	0.58	75.25	3499.95	1.03	4.52	1.03	4.63	77.13	0.44
3600.00	0.46	40.29	3599.95	1.47	5.27	1.47	5.47	74.43	0.33
3700.00	0.60	55.97	3699.95	2.07	5.96	2.07	6.31	70.86	0.20
3800.00	0.38	39.35	3799.94	2.62	6.61	2.62	7.11	68.39	0.26
3900.00	0.39	334.17	3899.94	3.18	6.67	3.18	7.39	64.48	0.42
4000.00	0.24	26.40	3999.94	3.68	6.61	3.68	7.56	60.90	0.31
4100.00	0.39	19.81	4099.94	4.18	6.82	4.18	8.00	58.47	0.15
4200.00	0.14	166.81	4199.94	4.38	6.96	4.38	8.22	57.82	0.51
4300.00	0.23	48.89	4299.94	4.39	7.14	4.39	8.38	58.42	0.32
4400.00	0.13	126.47	4399.94	4.45	7.38	4.45	8.62	58.91	0.24
4500.00	0.54	16.48	4499.93	4.84	7.61	4.84	9.02	57.57	0.60
4600.00	0.22	42.02	4599.93	5.43	7.87	5.43	9.56	55.41	0.35
4700.00	0.30	70.43	4699.93	5.66	8.25	5.66	10.01	55.55	0.15
4800.00	0.69	23.91	4799.93	6.30	8.75	6.30	10.78	54.23	0.53
4900.00	0.58	63.94	4899.92	7.07	9.44	7.07	11.80	53.17	0.45
5000.00	0.60	19.81	4999.92	7.78	10.07	7.78	12.73	52.30	0.44
5100.00	0.68	13.72	5099.91	8.85	10.39	8.85	13.64	49.57	0.11
5200.00	0.61	51.03	5199.90	9.76	10.94	9.76	14.66	48.27	0.42
5300.00	0.56	15.72	5299.90	10.56	11.49	10.56	15.61	47.40	0.36
Tied into VES Survey									
5371.00	0.79	17.77	5370.89	11.36	11.73	11.36	16.33	45.91	0.33

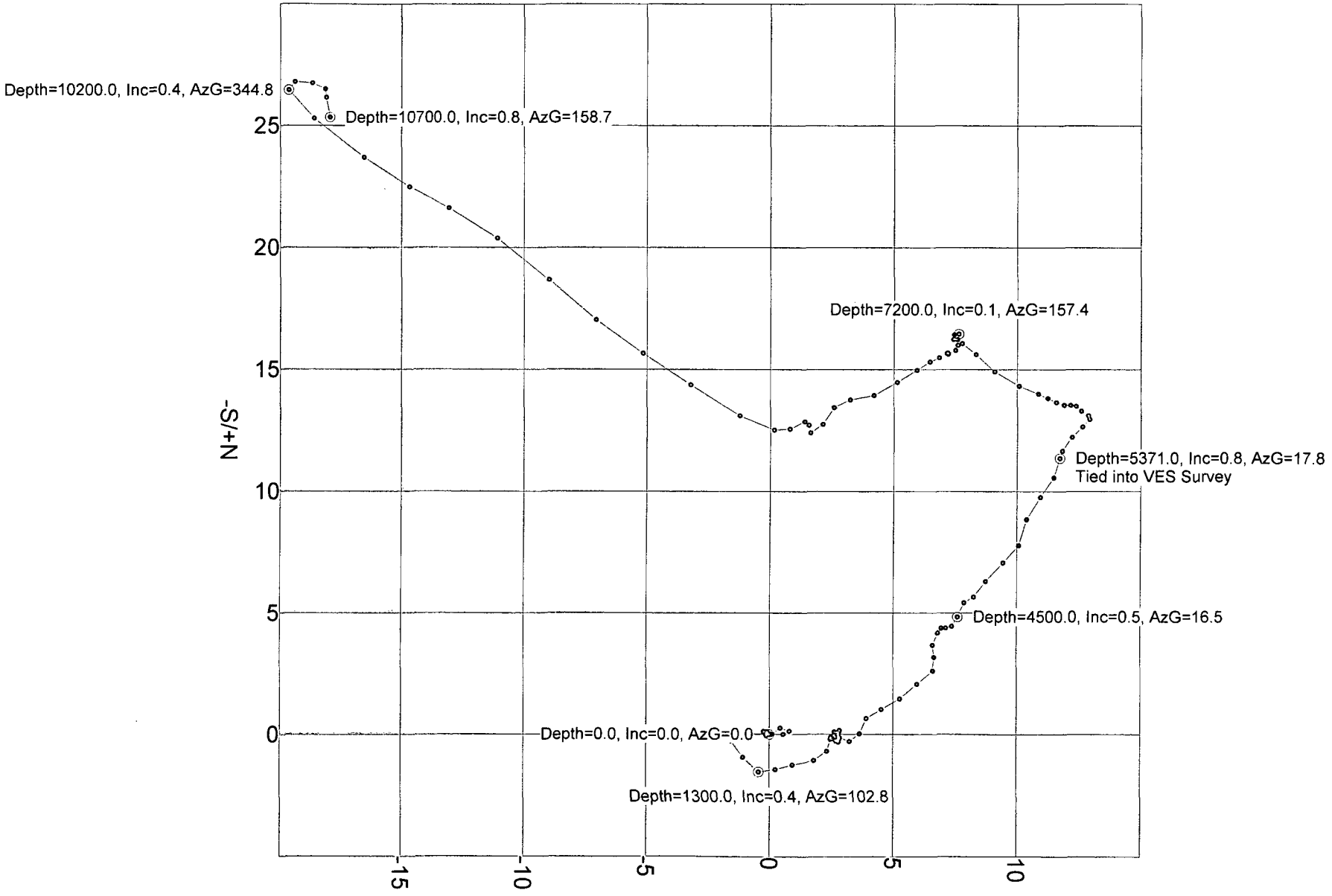
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5400.00	0.44	20.37	5399.89	11.66	11.83	11.66	16.61	45.42	1.23
5500.00	0.38	50.31	5499.89	12.23	12.22	12.23	17.29	44.98	0.22
5600.00	0.30	39.48	5599.89	12.65	12.64	12.65	17.88	44.99	0.10
5700.00	0.18	47.01	5699.89	12.96	12.93	12.96	18.31	44.93	0.13
5800.00	0.21	283.52	5799.89	13.11	12.87	13.11	18.37	44.47	0.34
5900.00	0.22	324.79	5899.89	13.30	12.59	13.30	18.31	43.41	0.15
6000.00	0.11	297.58	5999.89	13.50	12.39	13.50	18.33	42.54	0.13
6100.00	0.16	266.81	6099.89	13.54	12.17	13.54	18.20	41.94	0.09
6200.00	0.14	276.93	6199.89	13.55	11.90	13.55	18.04	41.30	0.03
6300.00	0.24	295.99	6299.89	13.66	11.59	13.66	17.91	40.32	0.12
6400.00	0.20	294.17	6399.88	13.82	11.24	13.82	17.82	39.13	0.05
6500.00	0.29	295.00	6499.88	14.00	10.86	14.00	17.71	37.80	0.09
6600.00	0.68	291.91	6599.88	14.32	10.08	14.32	17.52	35.14	0.39
6700.00	0.66	309.41	6699.87	14.91	9.09	14.91	17.46	31.37	0.20
6800.00	0.54	316.80	6799.87	15.62	8.32	15.62	17.70	28.05	0.14
6900.00	0.29	294.77	6899.87	16.07	7.76	16.07	17.85	25.79	0.29
7000.00	0.15	295.82	6999.86	16.23	7.41	16.23	17.85	24.54	0.14
7100.00	0.23	47.86	7099.86	16.43	7.44	16.43	18.03	24.37	0.32
7200.00	0.13	157.39	7199.86	16.46	7.63	16.46	18.14	24.88	0.29
7300.00	0.18	218.14	7299.86	16.23	7.58	16.23	17.92	25.02	0.16
7400.00	0.17	136.54	7399.86	16.00	7.59	16.00	17.71	25.37	0.23
7500.00	0.25	242.08	7499.86	15.79	7.50	15.79	17.48	25.40	0.35
7600.00	0.13	241.35	7599.86	15.63	7.20	15.63	17.21	24.73	0.12
7700.00	0.15	42.36	7699.86	15.67	7.19	15.67	17.24	24.64	0.28
7800.00	0.20	229.92	7799.86	15.66	7.15	15.66	17.21	24.53	0.35
7900.00	0.21	249.44	7899.86	15.48	6.84	15.48	16.93	23.83	0.07
8000.00	0.26	243.74	7999.86	15.32	6.46	15.32	16.63	22.88	0.05
8100.00	0.48	233.76	8099.86	14.97	5.92	14.97	16.10	21.59	0.23
8200.00	0.59	240.94	8199.85	14.47	5.13	14.47	15.35	19.53	0.13
8300.00	0.66	240.67	8299.85	13.94	4.18	13.94	14.55	16.68	0.07
8400.00	0.53	282.56	8399.84	13.76	3.22	13.76	14.13	13.18	0.44
8500.00	0.53	206.71	8499.84	13.44	2.56	13.44	13.68	10.78	0.65
8600.00	0.42	220.83	8599.84	12.75	2.11	12.75	12.92	9.40	0.16
8700.00	0.30	254.06	8699.83	12.40	1.62	12.40	12.50	7.44	0.24
8800.00	0.49	25.08	8799.83	12.71	1.55	12.71	12.81	6.95	0.72
8900.00	0.49	236.53	8899.83	12.86	1.37	12.86	12.93	6.10	0.94
9000.00	0.28	253.17	8999.83	12.56	0.79	12.56	12.58	3.58	0.24
9100.00	0.46	274.32	9099.83	12.52	0.15	12.52	12.52	0.70	0.23
9200.00	1.30	299.53	9199.81	13.11	-1.24	13.11	13.16	354.61	0.90
9300.00	1.39	305.62	9299.79	14.37	-3.21	14.37	14.72	347.42	0.17

VES Survey Date: 08/07/2014

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
9400.00	1.31	301.19	9399.76	15.66	-5.16	15.66	16.49	341.76	0.13
9500.00	1.40	309.80	9499.73	17.03	-7.08	17.03	18.45	337.44	0.22
9600.00	1.50	311.43	9599.70	18.68	-9.00	18.68	20.74	334.28	0.11
9700.00	1.58	307.01	9699.66	20.38	-11.08	20.38	23.20	331.47	0.14
9800.00	1.09	295.64	9799.64	21.62	-13.04	21.62	25.25	328.91	0.55
9900.00	1.04	300.06	9899.62	22.49	-14.68	22.49	26.85	326.86	0.10
10000.00	1.51	304.43	9999.59	23.69	-16.55	23.69	28.90	325.05	0.48
10100.00	1.48	311.91	10099.56	25.30	-18.61	25.30	31.40	323.67	0.20
10200.00	0.36	344.78	10199.55	26.47	-19.65	26.47	32.96	323.41	1.20
10300.00	0.39	84.99	10299.54	26.80	-19.40	26.80	33.08	324.10	0.57
10400.00	0.45	102.03	10399.54	26.75	-18.68	26.75	32.62	325.08	0.14
10500.00	0.25	139.80	10499.54	26.50	-18.15	26.50	32.12	325.59	0.30
10600.00	0.23	207.71	10599.54	26.16	-18.10	26.16	31.81	325.31	0.27
10700.00	0.79	158.70	10699.54	25.34	-17.95	25.34	31.05	324.69	0.66

VES Survey Date: 08/07/2014

VES Survey International
West Texas
(432) 563-5444
Surveyor: Neil Bates / Chris Bankson
Corazon State Unit 12H / API 30-025-40954



VES Survey Date: 08/07/2014

COG Operating, LLC.

Lea County, N.M.
Section 4 T21-S R33-E Corazon State Unit #12H
Corazon State Unit #12H

Original Hole

30-025-40954

Design: Original Hole

Survey Report - Geographic

19 August, 2014

Stryker Directional

Survey Report - Geographic

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Corazon State Unit #12H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3801+26 @ 3827.0usft (Precision 590)
Site:	Section 4 T21-S R33-E Corazon State Unit #12H	**MD Reference:**	GL 3801+26 @ 3827.0usft (Precision 590)
Well:	Corazon State Unit #12H	**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 4 T21-S R33-E Corazon State Unit #12H

Site Position:		**Northing:**	554,036.90 usft	**Latitude:**	32° 31' 15.177 N
From:	Map	**Easting:**	733,151.30 usft	**Longitude:**	103° 34' 36.917 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.41 °

Well Corazon State Unit #12H

Well Position	**+N/-S**	0.0 usft	**Northing:**	554,036.90 usft	**Latitude:**	32° 31' 15.177 N
	+E/-W	0.0 usft	**Easting:**	733,151.30 usft	**Longitude:**	103° 34' 36.917 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,801.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/17/2014	7.23	60.38	48,482

Design Original Hole

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	174.64

Survey Program **Date** 8/19/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	10,700.0	VES Gyro Survey (Original Hole)	SRG-GYRO-MS	surface readout gyro multishot
10,749.0	18,503.0	MWD Survey #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	554,036.90	733,151.30	32° 31' 15.177 N	103° 34' 36.917 W
100.0	0.15	246.79	100.0	-0.1	-0.1	554,036.85	733,151.18	32° 31' 15.176 N	103° 34' 36.919 W
200.0	0.26	1.14	200.0	0.1	-0.2	554,037.03	733,151.06	32° 31' 15.178 N	103° 34' 36.920 W
300.0	0.30	152.04	300.0	0.1	-0.1	554,037.02	733,151.19	32° 31' 15.178 N	103° 34' 36.919 W
400.0	0.17	28.30	400.0	0.0	0.1	554,036.92	733,151.38	32° 31' 15.177 N	103° 34' 36.916 W
500.0	0.35	65.97	500.0	0.3	0.4	554,037.18	733,151.73	32° 31' 15.179 N	103° 34' 36.912 W
600.0	0.31	160.28	600.0	0.1	0.8	554,037.05	733,152.10	32° 31' 15.178 N	103° 34' 36.908 W
700.0	0.41	289.35	700.0	0.0	0.6	554,036.91	733,151.85	32° 31' 15.177 N	103° 34' 36.911 W
800.0	0.46	257.36	800.0	0.0	-0.2	554,036.94	733,151.12	32° 31' 15.177 N	103° 34' 36.919 W
900.0	0.26	294.41	900.0	0.0	-0.8	554,036.95	733,150.53	32° 31' 15.177 N	103° 34' 36.926 W

Stryker Directional

Survey Report - Geographic

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Corazon State Unit #12H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3801+26 @ 3827.0usft (Precision 590)
Site:	Section 4 T21-S R33-E Corazon State Unit #12H	**MD Reference:**	GL 3801+26 @ 3827.0usft (Precision 590)
Well:	Corazon State Unit #12H	**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
1,000.0	0.49	253.33	1,000.0	0.0	-1.4	554,036.92	733,149.91	32° 31' 15.177 N	103° 34' 36.934 W
1,100.0	0.33	122.13	1,100.0	-0.3	-1.6	554,036.64	733,149.74	32° 31' 15.174 N	103° 34' 36.935 W
1,200.0	0.65	154.50	1,200.0	-0.9	-1.1	554,035.98	733,150.23	32° 31' 15.168 N	103° 34' 36.930 W
1,300.0	0.45	102.80	1,300.0	-1.5	-0.4	554,035.38	733,150.86	32° 31' 15.162 N	103° 34' 36.923 W
1,400.0	0.40	57.16	1,400.0	-1.4	0.2	554,035.48	733,151.54	32° 31' 15.163 N	103° 34' 36.915 W
1,500.0	0.45	90.85	1,500.0	-1.2	0.9	554,035.66	733,152.22	32° 31' 15.164 N	103° 34' 36.907 W
1,600.0	0.59	68.38	1,600.0	-1.1	1.8	554,035.85	733,153.09	32° 31' 15.166 N	103° 34' 36.896 W
1,700.0	0.22	12.27	1,700.0	-0.7	2.3	554,036.22	733,153.61	32° 31' 15.170 N	103° 34' 36.890 W
1,800.0	0.37	20.10	1,800.0	-0.2	2.5	554,036.72	733,153.76	32° 31' 15.175 N	103° 34' 36.889 W
1,900.0	0.06	80.27	1,900.0	0.1	2.6	554,037.03	733,153.93	32° 31' 15.178 N	103° 34' 36.887 W
2,000.0	0.20	149.57	2,000.0	0.0	2.8	554,036.89	733,154.07	32° 31' 15.176 N	103° 34' 36.885 W
2,100.0	0.18	206.58	2,100.0	-0.3	2.8	554,036.59	733,154.08	32° 31' 15.173 N	103° 34' 36.885 W
2,200.0	0.22	351.78	2,200.0	-0.3	2.7	554,036.64	733,153.99	32° 31' 15.174 N	103° 34' 36.886 W
2,300.0	0.28	41.11	2,300.0	0.1	2.8	554,037.02	733,154.12	32° 31' 15.178 N	103° 34' 36.884 W
2,400.0	0.21	230.25	2,400.0	0.2	2.8	554,037.09	733,154.14	32° 31' 15.178 N	103° 34' 36.884 W
2,500.0	0.28	142.35	2,500.0	-0.1	2.9	554,036.77	733,154.15	32° 31' 15.175 N	103° 34' 36.884 W
2,600.0	0.26	302.77	2,600.0	-0.2	2.8	554,036.70	733,154.11	32° 31' 15.174 N	103° 34' 36.885 W
2,700.0	0.20	100.87	2,700.0	-0.1	2.8	554,036.79	733,154.09	32° 31' 15.175 N	103° 34' 36.885 W
2,800.0	0.25	302.93	2,800.0	0.0	2.8	554,036.88	733,154.08	32° 31' 15.176 N	103° 34' 36.885 W
2,900.0	0.26	207.38	2,900.0	-0.1	2.5	554,036.80	733,153.79	32° 31' 15.175 N	103° 34' 36.888 W
3,000.0	0.25	47.05	3,000.0	-0.2	2.5	554,036.74	733,153.84	32° 31' 15.175 N	103° 34' 36.888 W
3,100.0	0.19	128.55	3,100.0	-0.1	2.8	554,036.79	733,154.13	32° 31' 15.175 N	103° 34' 36.884 W
3,200.0	0.31	103.33	3,200.0	-0.3	3.2	554,036.62	733,154.53	32° 31' 15.174 N	103° 34' 36.880 W
3,300.0	0.47	20.47	3,300.0	0.0	3.6	554,036.95	733,154.93	32° 31' 15.177 N	103° 34' 36.875 W
3,400.0	0.32	26.84	3,400.0	0.7	3.9	554,037.58	733,155.20	32° 31' 15.183 N	103° 34' 36.872 W
3,500.0	0.58	75.25	3,500.0	1.1	4.5	554,037.96	733,155.82	32° 31' 15.187 N	103° 34' 36.864 W
3,600.0	0.46	40.29	3,599.9	1.5	5.3	554,038.39	733,156.57	32° 31' 15.191 N	103° 34' 36.856 W
3,700.0	0.60	55.97	3,699.9	2.1	6.0	554,038.99	733,157.26	32° 31' 15.197 N	103° 34' 36.848 W
3,800.0	0.38	39.35	3,799.9	2.6	6.6	554,039.54	733,157.90	32° 31' 15.202 N	103° 34' 36.840 W
3,900.0	0.39	334.17	3,899.9	3.2	6.7	554,040.10	733,157.97	32° 31' 15.208 N	103° 34' 36.839 W
4,000.0	0.24	26.40	3,999.9	3.7	6.6	554,040.60	733,157.91	32° 31' 15.213 N	103° 34' 36.840 W
4,100.0	0.39	19.81	4,099.9	4.2	6.8	554,041.10	733,158.12	32° 31' 15.218 N	103° 34' 36.837 W
4,200.0	0.14	166.81	4,199.9	4.4	7.0	554,041.31	733,158.26	32° 31' 15.220 N	103° 34' 36.836 W
4,300.0	0.23	48.89	4,299.9	4.4	7.1	554,041.32	733,158.44	32° 31' 15.220 N	103° 34' 36.834 W
4,400.0	0.13	126.47	4,399.9	4.5	7.4	554,041.38	733,158.68	32° 31' 15.220 N	103° 34' 36.831 W
4,500.0	0.54	16.48	4,499.9	4.9	7.6	554,041.77	733,158.91	32° 31' 15.224 N	103° 34' 36.828 W
4,600.0	0.22	42.02	4,599.9	5.5	7.9	554,042.36	733,159.17	32° 31' 15.230 N	103° 34' 36.825 W
4,700.0	0.30	70.43	4,699.9	5.7	8.3	554,042.59	733,159.55	32° 31' 15.232 N	103° 34' 36.821 W
4,800.0	0.69	23.91	4,799.9	6.3	8.7	554,043.23	733,160.04	32° 31' 15.239 N	103° 34' 36.815 W
4,900.0	0.58	63.94	4,899.9	7.1	9.4	554,044.00	733,160.74	32° 31' 15.246 N	103° 34' 36.807 W
5,000.0	0.60	19.81	4,999.9	7.8	10.1	554,044.72	733,161.37	32° 31' 15.253 N	103° 34' 36.799 W
5,100.0	0.68	13.72	5,099.9	8.9	10.4	554,045.79	733,161.69	32° 31' 15.264 N	103° 34' 36.795 W
5,200.0	0.61	51.03	5,199.9	9.8	10.9	554,046.70	733,162.24	32° 31' 15.273 N	103° 34' 36.789 W
5,300.0	0.56	15.72	5,299.9	10.6	11.5	554,047.50	733,162.79	32° 31' 15.281 N	103° 34' 36.782 W
5,371.0	0.79	17.77	5,370.9	11.4	11.7	554,048.30	733,163.03	32° 31' 15.289 N	103° 34' 36.779 W
5,400.0	0.44	20.37	5,399.9	11.7	11.8	554,048.60	733,163.13	32° 31' 15.292 N	103° 34' 36.778 W
5,500.0	0.38	50.31	5,499.9	12.3	12.2	554,049.17	733,163.52	32° 31' 15.297 N	103° 34' 36.774 W
5,600.0	0.30	39.48	5,599.9	12.7	12.6	554,049.58	733,163.94	32° 31' 15.301 N	103° 34' 36.769 W
5,700.0	0.18	47.01	5,699.9	13.0	12.9	554,049.89	733,164.22	32° 31' 15.304 N	103° 34' 36.765 W
5,800.0	0.21	283.52	5,799.9	13.1	12.9	554,050.04	733,164.16	32° 31' 15.306 N	103° 34' 36.766 W
5,900.0	0.22	324.79	5,899.9	13.3	12.6	554,050.24	733,163.87	32° 31' 15.308 N	103° 34' 36.769 W
6,000.0	0.11	297.58	5,999.9	13.5	12.4	554,050.45	733,163.67	32° 31' 15.310 N	103° 34' 36.772 W
6,100.0	0.16	266.81	6,099.9	13.6	12.2	554,050.48	733,163.45	32° 31' 15.310 N	103° 34' 36.774 W
6,200.0	0.14	276.93	6,199.9	13.6	11.9	554,050.49	733,163.19	32° 31' 15.310 N	103° 34' 36.777 W

Stryker Directional

Survey Report - Geographic

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Corazon State Unit #12H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3801+26 @ 3827.0usft (Precision 590)
Site:	Section 4 T21-S R33-E Corazon State Unit #12H	**MD Reference:**	GL 3801+26 @ 3827.0usft (Precision 590)
Well:	Corazon State Unit #12H	**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
6,300.0	0.24	295.99	6,299.9	13.7	11.6	554,050.60	733,162.88	32° 31' 15.311 N	103° 34' 36.781 W
6,400.0	0.20	294.17	6,399.9	13.9	11.2	554,050.76	733,162.53	32° 31' 15.313 N	103° 34' 36.785 W
6,500.0	0.29	295.00	6,499.9	14.0	10.8	554,050.94	733,162.14	32° 31' 15.315 N	103° 34' 36.790 W
6,600.0	0.68	291.91	6,599.9	14.4	10.1	554,051.27	733,161.36	32° 31' 15.318 N	103° 34' 36.799 W
6,700.0	0.66	309.41	6,699.9	14.9	9.1	554,051.85	733,160.37	32° 31' 15.324 N	103° 34' 36.810 W
6,800.0	0.54	316.80	6,799.9	15.7	8.3	554,052.56	733,159.60	32° 31' 15.331 N	103° 34' 36.819 W
6,900.0	0.29	294.77	6,899.9	16.1	7.8	554,053.01	733,159.05	32° 31' 15.335 N	103° 34' 36.825 W
7,000.0	0.15	295.82	6,999.9	16.3	7.4	554,053.17	733,158.70	32° 31' 15.337 N	103° 34' 36.830 W
7,100.0	0.23	47.86	7,099.9	16.5	7.4	554,053.37	733,158.73	32° 31' 15.339 N	103° 34' 36.829 W
7,200.0	0.13	157.39	7,199.9	16.5	7.6	554,053.40	733,158.92	32° 31' 15.339 N	103° 34' 36.827 W
7,300.0	0.18	218.14	7,299.9	16.3	7.6	554,053.17	733,158.87	32° 31' 15.337 N	103° 34' 36.828 W
7,400.0	0.17	136.54	7,399.9	16.0	7.6	554,052.94	733,158.88	32° 31' 15.335 N	103° 34' 36.828 W
7,500.0	0.25	242.08	7,499.9	15.8	7.5	554,052.73	733,158.78	32° 31' 15.333 N	103° 34' 36.829 W
7,600.0	0.13	241.35	7,599.9	15.7	7.2	554,052.57	733,158.49	32° 31' 15.331 N	103° 34' 36.832 W
7,700.0	0.15	42.36	7,699.9	15.7	7.2	554,052.61	733,158.48	32° 31' 15.332 N	103° 34' 36.832 W
7,800.0	0.20	229.92	7,799.9	15.7	7.1	554,052.60	733,158.44	32° 31' 15.331 N	103° 34' 36.833 W
7,900.0	0.21	249.44	7,899.9	15.5	6.8	554,052.42	733,158.13	32° 31' 15.330 N	103° 34' 36.836 W
8,000.0	0.26	243.74	7,999.9	15.4	6.5	554,052.26	733,157.76	32° 31' 15.328 N	103° 34' 36.841 W
8,100.0	0.48	233.76	8,099.9	15.0	5.9	554,051.91	733,157.21	32° 31' 15.325 N	103° 34' 36.847 W
8,200.0	0.59	240.94	8,199.9	14.5	5.1	554,051.41	733,156.43	32° 31' 15.320 N	103° 34' 36.856 W
8,300.0	0.66	240.67	8,299.8	14.0	4.2	554,050.88	733,155.47	32° 31' 15.315 N	103° 34' 36.867 W
8,400.0	0.53	282.56	8,399.8	13.8	3.2	554,050.70	733,154.52	32° 31' 15.313 N	103° 34' 36.879 W
8,500.0	0.53	206.71	8,499.8	13.5	2.6	554,050.38	733,153.86	32° 31' 15.310 N	103° 34' 36.886 W
8,600.0	0.42	220.83	8,599.8	12.8	2.1	554,049.69	733,153.41	32° 31' 15.303 N	103° 34' 36.892 W
8,700.0	0.30	254.06	8,699.8	12.4	1.6	554,049.34	733,152.92	32° 31' 15.300 N	103° 34' 36.897 W
8,800.0	0.49	25.08	8,799.8	12.8	1.6	554,049.66	733,152.85	32° 31' 15.303 N	103° 34' 36.898 W
8,900.0	0.49	236.53	8,899.8	12.9	1.4	554,049.81	733,152.68	32° 31' 15.304 N	103° 34' 36.900 W
9,000.0	0.28	253.17	8,999.8	12.6	0.8	554,049.50	733,152.09	32° 31' 15.301 N	103° 34' 36.907 W
9,100.0	0.46	274.32	9,099.8	12.6	0.2	554,049.46	733,151.45	32° 31' 15.301 N	103° 34' 36.914 W
9,200.0	1.30	299.53	9,199.8	13.2	-1.2	554,050.05	733,150.06	32° 31' 15.307 N	103° 34' 36.931 W
9,300.0	1.39	305.62	9,299.8	14.4	-3.2	554,051.32	733,148.09	32° 31' 15.319 N	103° 34' 36.954 W
9,400.0	1.31	301.19	9,399.8	15.7	-5.2	554,052.62	733,146.13	32° 31' 15.332 N	103° 34' 36.976 W
9,500.0	1.40	309.80	9,499.7	17.1	-7.1	554,053.99	733,144.21	32° 31' 15.346 N	103° 34' 36.999 W
9,600.0	1.50	311.43	9,599.7	18.7	-9.0	554,055.64	733,142.29	32° 31' 15.363 N	103° 34' 37.021 W
9,700.0	1.58	307.01	9,699.7	20.4	-11.1	554,057.33	733,140.21	32° 31' 15.380 N	103° 34' 37.045 W
9,800.0	1.09	295.64	9,799.6	21.7	-13.0	554,058.58	733,138.25	32° 31' 15.392 N	103° 34' 37.068 W
9,900.0	1.04	300.06	9,899.6	22.5	-14.7	554,059.44	733,136.61	32° 31' 15.401 N	103° 34' 37.087 W
10,000.0	1.51	304.43	9,999.6	23.7	-16.6	554,060.64	733,134.74	32° 31' 15.413 N	103° 34' 37.109 W
10,100.0	1.48	311.91	10,099.6	25.3	-18.6	554,062.25	733,132.69	32° 31' 15.429 N	103° 34' 37.133 W
10,200.0	0.36	344.78	10,199.5	26.5	-19.7	554,063.41	733,131.64	32° 31' 15.440 N	103° 34' 37.145 W
10,300.0	0.39	84.99	10,299.5	26.8	-19.4	554,063.75	733,131.90	32° 31' 15.444 N	103° 34' 37.142 W
10,400.0	0.45	102.03	10,399.5	26.8	-18.7	554,063.70	733,132.62	32° 31' 15.443 N	103° 34' 37.133 W
10,500.0	0.25	139.80	10,499.5	26.5	-18.1	554,063.45	733,133.15	32° 31' 15.441 N	103° 34' 37.127 W
10,600.0	0.23	207.71	10,599.5	26.2	-18.1	554,063.10	733,133.20	32° 31' 15.437 N	103° 34' 37.127 W
10,700.0	0.79	158.70	10,699.5	25.4	-17.9	554,062.28	733,133.35	32° 31' 15.429 N	103° 34' 37.125 W
10700' MD VES Gyro Survey									
10,749.0	0.40	173.00	10,748.5	24.9	-17.8	554,061.80	733,133.50	32° 31' 15.424 N	103° 34' 37.123 W
10,841.0	1.00	163.40	10,840.5	23.8	-17.5	554,060.71	733,133.77	32° 31' 15.413 N	103° 34' 37.120 W
10,934.0	3.90	141.60	10,933.4	20.6	-15.3	554,057.45	733,135.96	32° 31' 15.381 N	103° 34' 37.095 W
10,964.0	9.50	134.90	10,963.2	18.0	-12.9	554,054.90	733,138.35	32° 31' 15.356 N	103° 34' 37.067 W
10,995.0	14.10	132.40	10,993.6	13.6	-8.3	554,050.55	733,142.95	32° 31' 15.312 N	103° 34' 37.014 W
11,026.0	16.70	132.60	11,023.4	8.1	-2.3	554,044.99	733,149.02	32° 31' 15.257 N	103° 34' 36.943 W
11,056.0	18.60	137.00	11,052.0	1.7	4.2	554,038.57	733,155.46	32° 31' 15.193 N	103° 34' 36.869 W
11,087.0	21.10	141.30	11,081.2	-6.3	11.0	554,030.60	733,162.32	32° 31' 15.113 N	103° 34' 36.789 W

Stryker Directional

Survey Report - Geographic

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Corazon State Unit #12H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3801+26 @ 3827.0usft (Precision 590)
Site:	Section 4 T21-S R33-E Corazon State Unit #12H	**MD Reference:**	GL 3801+26 @ 3827.0usft (Precision 590)
Well:	Corazon State Unit #12H	**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
11,118.0	24.00	142.30	11,109.8	-15.6	18.4	554,021.25	733,169.67	32° 31' 15.020 N	103° 34' 36.704 W
11,149.0	27.50	141.70	11,137.7	-26.3	26.7	554,010.64	733,177.96	32° 31' 14.915 N	103° 34' 36.608 W
11,179.0	30.50	139.90	11,164.0	-37.5	35.9	553,999.38	733,187.16	32° 31' 14.803 N	103° 34' 36.502 W
11,210.0	33.20	139.20	11,190.3	-50.0	46.5	553,986.94	733,197.77	32° 31' 14.679 N	103° 34' 36.379 W
11,241.0	35.80	138.00	11,215.8	-63.1	58.1	553,973.77	733,209.39	32° 31' 14.548 N	103° 34' 36.244 W
11,271.0	38.30	137.50	11,239.8	-76.5	70.2	553,960.40	733,221.54	32° 31' 14.415 N	103° 34' 36.103 W
11,302.0	41.90	138.70	11,263.5	-91.4	83.6	553,945.53	733,234.87	32° 31' 14.267 N	103° 34' 35.949 W
11,333.0	45.70	140.00	11,285.9	-107.7	97.5	553,929.25	733,248.84	32° 31' 14.105 N	103° 34' 35.787 W
11,364.0	49.10	141.40	11,306.8	-125.3	112.0	553,911.59	733,263.28	32° 31' 13.929 N	103° 34' 35.620 W
11,394.0	52.00	142.50	11,325.9	-143.6	126.3	553,893.35	733,277.55	32° 31' 13.747 N	103° 34' 35.455 W
11,425.0	54.90	143.10	11,344.4	-163.4	141.3	553,873.51	733,292.61	32° 31' 13.550 N	103° 34' 35.281 W
11,456.0	57.10	142.90	11,361.7	-183.9	156.8	553,852.99	733,308.07	32° 31' 13.346 N	103° 34' 35.102 W
11,486.0	60.70	141.80	11,377.2	-204.2	172.5	553,832.66	733,323.77	32° 31' 13.143 N	103° 34' 34.920 W
11,517.0	64.30	141.50	11,391.5	-225.8	189.5	553,811.10	733,340.83	32° 31' 12.929 N	103° 34' 34.723 W
11,548.0	66.90	141.00	11,404.3	-247.8	207.2	553,789.08	733,358.50	32° 31' 12.710 N	103° 34' 34.518 W
11,578.0	69.20	140.20	11,415.5	-269.3	224.9	553,767.58	733,376.16	32° 31' 12.496 N	103° 34' 34.314 W
11,609.0	72.50	139.30	11,425.7	-291.7	243.8	553,745.24	733,395.08	32° 31' 12.273 N	103° 34' 34.095 W
11,640.0	76.30	139.20	11,434.0	-314.3	263.3	553,722.62	733,414.56	32° 31' 12.048 N	103° 34' 33.869 W
11,670.0	79.20	139.70	11,440.4	-336.6	282.3	553,700.35	733,433.62	32° 31' 11.827 N	103° 34' 33.648 W
11,701.0	82.40	140.20	11,445.3	-360.0	302.0	553,676.93	733,453.31	32° 31' 11.593 N	103° 34' 33.420 W
11,732.0	86.50	141.30	11,448.3	-383.9	321.5	553,653.04	733,472.82	32° 31' 11.356 N	103° 34' 33.194 W
11,763.0	88.70	142.10	11,449.6	-408.2	340.7	553,628.73	733,492.02	32° 31' 11.114 N	103° 34' 32.972 W
11,793.0	88.30	146.30	11,450.4	-432.5	358.3	553,604.41	733,509.56	32° 31' 10.872 N	103° 34' 32.769 W
11,885.0	89.30	149.40	11,452.4	-510.4	407.2	553,526.55	733,558.50	32° 31' 10.098 N	103° 34' 32.204 W
11,977.0	89.70	150.20	11,453.2	-589.9	453.5	553,447.04	733,604.77	32° 31' 9.308 N	103° 34' 31.670 W
12,070.0	90.40	152.00	11,453.1	-671.3	498.4	553,365.63	733,649.72	32° 31' 8.499 N	103° 34' 31.152 W
12,162.0	90.80	155.40	11,452.1	-753.7	539.2	553,283.17	733,690.47	32° 31' 7.680 N	103° 34' 30.683 W
12,254.0	90.20	158.40	11,451.3	-838.3	575.3	553,198.56	733,726.56	32° 31' 6.841 N	103° 34' 30.269 W
12,346.0	88.60	161.00	11,452.3	-924.6	607.2	553,112.28	733,758.47	32° 31' 5.985 N	103° 34' 29.903 W
12,438.0	87.60	163.30	11,455.3	-1,012.1	635.4	553,024.77	733,786.66	32° 31' 5.117 N	103° 34' 29.581 W
12,530.0	89.50	166.60	11,457.6	-1,100.9	659.2	552,935.97	733,810.53	32° 31' 4.236 N	103° 34' 29.310 W
12,622.0	89.30	169.50	11,458.6	-1,190.9	678.3	552,845.98	733,829.58	32° 31' 3.345 N	103° 34' 29.095 W
12,714.0	89.10	172.40	11,459.9	-1,281.8	692.7	552,755.14	733,844.05	32° 31' 2.445 N	103° 34' 28.934 W
12,806.0	89.30	175.50	11,461.2	-1,373.2	702.4	552,663.67	733,853.74	32° 31' 1.539 N	103° 34' 28.828 W
12,899.0	88.60	179.30	11,462.9	-1,466.1	706.7	552,570.80	733,857.96	32° 31' 0.620 N	103° 34' 28.786 W
12,991.0	88.00	182.00	11,465.6	-1,558.0	705.6	552,478.86	733,856.91	32° 30' 59.710 N	103° 34' 28.806 W
13,083.0	89.80	182.40	11,467.4	-1,650.0	702.1	552,386.95	733,853.38	32° 30' 58.801 N	103° 34' 28.855 W
13,175.0	88.70	182.70	11,468.6	-1,741.9	698.0	552,295.05	733,849.29	32° 30' 57.892 N	103° 34' 28.911 W
13,267.0	90.00	182.40	11,469.6	-1,833.8	693.9	552,203.15	733,845.20	32° 30' 56.983 N	103° 34' 28.966 W
13,359.0	89.00	183.20	11,470.4	-1,925.6	689.4	552,111.26	733,840.70	32° 30' 56.074 N	103° 34' 29.026 W
13,451.0	87.40	182.30	11,473.3	-2,017.5	685.0	552,019.42	733,836.29	32° 30' 55.165 N	103° 34' 29.085 W
13,543.0	89.00	182.40	11,476.2	-2,109.4	681.2	551,927.54	733,832.52	32° 30' 54.256 N	103° 34' 29.137 W
13,636.0	88.10	181.50	11,478.6	-2,202.3	678.1	551,834.63	733,829.36	32° 30' 53.337 N	103° 34' 29.182 W
13,728.0	89.00	181.00	11,480.9	-2,294.2	676.1	551,742.68	733,827.35	32° 30' 52.428 N	103° 34' 29.213 W
13,820.0	90.40	180.80	11,481.4	-2,386.2	674.6	551,650.70	733,825.91	32° 30' 51.518 N	103° 34' 29.237 W
13,913.0	89.50	180.80	11,481.5	-2,479.2	673.3	551,557.71	733,824.61	32° 30' 50.597 N	103° 34' 29.260 W
14,005.0	90.50	180.50	11,481.5	-2,571.2	672.3	551,465.71	733,823.57	32° 30' 49.687 N	103° 34' 29.280 W
14,097.0	89.10	180.70	11,481.8	-2,663.2	671.3	551,373.72	733,822.60	32° 30' 48.777 N	103° 34' 29.299 W
14,189.0	87.60	180.80	11,484.4	-2,755.1	670.1	551,281.77	733,821.40	32° 30' 47.867 N	103° 34' 29.321 W
14,281.0	88.60	180.70	11,487.5	-2,847.1	668.9	551,189.83	733,820.19	32° 30' 46.958 N	103° 34' 29.342 W
14,373.0	89.80	180.80	11,488.8	-2,939.1	667.7	551,097.85	733,818.99	32° 30' 46.048 N	103° 34' 29.364 W
14,465.0	88.60	180.50	11,490.0	-3,031.0	666.7	551,005.86	733,817.95	32° 30' 45.137 N	103° 34' 29.384 W
14,557.0	89.20	180.10	11,491.8	-3,123.0	666.2	550,913.88	733,817.47	32° 30' 44.227 N	103° 34' 29.397 W
14,650.0	90.30	179.80	11,492.2	-3,216.0	666.2	550,820.89	733,817.55	32° 30' 43.307 N	103° 34' 29.404 W

Stryker Directional

Survey Report - Geographic

Company:	COG Operating, LLC.	**Local Co-ordinate Reference:**	Well Corazon State Unit #12H
Project:	Lea County, N.M.	**TVD Reference:**	GL 3801+26 @ 3827.0usft (Precision 590)
Site:	Section 4 T21-S R33-E Corazon State Unit #12H	**MD Reference:**	GL 3801+26 @ 3827.0usft (Precision 590)
Well:	Corazon State Unit #12H	**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
14,742.0	88.90	180.30	11,492.9	-3,308.0	666.2	550,728.89	733,817.47	32° 30' 42.397 N	103° 34' 29.412 W
14,834.0	88.00	180.50	11,495.3	-3,400.0	665.5	550,636.93	733,816.82	32° 30' 41.487 N	103° 34' 29.427 W
14,926.0	89.00	180.20	11,497.8	-3,491.9	665.0	550,544.96	733,816.26	32° 30' 40.577 N	103° 34' 29.442 W
15,018.0	90.10	179.70	11,498.5	-3,583.9	665.0	550,452.97	733,816.34	32° 30' 39.667 N	103° 34' 29.448 W
15,110.0	88.80	179.50	11,499.4	-3,675.9	665.7	550,360.98	733,816.98	32° 30' 38.756 N	103° 34' 29.449 W
15,202.0	90.00	179.70	11,500.3	-3,767.9	666.3	550,268.98	733,817.63	32° 30' 37.846 N	103° 34' 29.449 W
15,294.0	88.80	180.40	11,501.3	-3,859.9	666.3	550,176.99	733,817.55	32° 30' 36.936 N	103° 34' 29.457 W
15,386.0	90.00	180.10	11,502.3	-3,951.9	665.8	550,085.00	733,817.15	32° 30' 36.025 N	103° 34' 29.470 W
15,478.0	88.60	179.30	11,503.4	-4,043.9	666.3	549,993.01	733,817.63	32° 30' 35.115 N	103° 34' 29.472 W
15,570.0	87.70	179.40	11,506.3	-4,135.8	667.4	549,901.07	733,818.67	32° 30' 34.205 N	103° 34' 29.467 W
15,663.0	88.70	179.30	11,509.3	-4,228.8	668.4	549,808.12	733,819.72	32° 30' 33.286 N	103° 34' 29.462 W
15,755.0	90.20	178.80	11,510.2	-4,320.8	670.0	549,716.14	733,821.25	32° 30' 32.375 N	103° 34' 29.452 W
15,847.0	88.70	179.50	11,511.0	-4,412.7	671.3	549,624.16	733,822.61	32° 30' 31.465 N	103° 34' 29.444 W
15,939.0	89.60	179.60	11,512.4	-4,504.7	672.0	549,532.17	733,823.34	32° 30' 30.555 N	103° 34' 29.443 W
16,031.0	90.80	179.30	11,512.1	-4,596.7	672.9	549,440.18	733,824.22	32° 30' 29.644 N	103° 34' 29.441 W
16,123.0	90.20	180.10	11,511.3	-4,688.7	673.4	549,348.18	733,824.70	32° 30' 28.734 N	103° 34' 29.443 W
16,216.0	87.30	180.80	11,513.3	-4,781.7	672.7	549,255.22	733,823.97	32° 30' 27.814 N	103° 34' 29.459 W
16,308.0	88.00	180.80	11,517.1	-4,873.6	671.4	549,163.30	733,822.69	32° 30' 26.905 N	103° 34' 29.481 W
16,400.0	89.10	180.00	11,519.4	-4,965.6	670.8	549,071.34	733,822.05	32° 30' 25.995 N	103° 34' 29.497 W
16,492.0	90.50	179.20	11,519.7	-5,057.6	671.4	548,979.34	733,822.69	32° 30' 25.085 N	103° 34' 29.497 W
16,584.0	89.50	180.10	11,519.7	-5,149.6	672.0	548,887.35	733,823.25	32° 30' 24.174 N	103° 34' 29.498 W
16,676.0	88.50	181.80	11,521.3	-5,241.5	670.4	548,795.38	733,821.73	32° 30' 23.264 N	103° 34' 29.523 W
16,768.0	87.30	181.90	11,524.7	-5,333.4	667.5	548,703.49	733,818.76	32° 30' 22.355 N	103° 34' 29.566 W
16,860.0	88.20	181.50	11,528.3	-5,425.3	664.7	548,611.60	733,816.03	32° 30' 21.446 N	103° 34' 29.605 W
16,953.0	89.10	181.00	11,530.5	-5,518.3	662.7	548,518.65	733,814.00	32° 30' 20.527 N	103° 34' 29.636 W
17,045.0	90.00	180.40	11,531.2	-5,610.2	661.6	548,426.66	733,812.88	32° 30' 19.616 N	103° 34' 29.657 W
17,137.0	91.30	179.80	11,530.2	-5,702.2	661.4	548,334.67	733,812.72	32° 30' 18.706 N	103° 34' 29.667 W
17,229.0	89.90	179.90	11,529.2	-5,794.2	661.7	548,242.68	733,812.96	32° 30' 17.796 N	103° 34' 29.672 W
17,321.0	88.80	180.40	11,530.3	-5,886.2	661.4	548,150.69	733,812.72	32° 30' 16.886 N	103° 34' 29.682 W
17,413.0	88.20	181.30	11,532.7	-5,978.2	660.1	548,058.73	733,811.35	32° 30' 15.976 N	103° 34' 29.706 W
17,505.0	89.60	180.80	11,534.4	-6,070.1	658.4	547,966.77	733,809.67	32° 30' 15.066 N	103° 34' 29.733 W
17,598.0	91.30	179.70	11,533.7	-6,163.1	658.0	547,873.77	733,809.26	32° 30' 14.146 N	103° 34' 29.745 W
17,690.0	90.50	180.40	11,532.3	-6,255.1	657.9	547,781.79	733,809.18	32° 30' 13.236 N	103° 34' 29.754 W
17,782.0	89.00	181.10	11,532.7	-6,347.1	656.7	547,689.80	733,807.98	32° 30' 12.325 N	103° 34' 29.776 W
17,874.0	87.50	180.80	11,535.5	-6,439.0	655.2	547,597.86	733,806.45	32° 30' 11.416 N	103° 34' 29.801 W
17,966.0	88.10	180.80	11,539.0	-6,531.0	653.9	547,505.93	733,805.17	32° 30' 10.506 N	103° 34' 29.824 W
18,058.0	88.90	180.10	11,541.4	-6,622.9	653.2	547,413.97	733,804.45	32° 30' 9.596 N	103° 34' 29.840 W
18,148.0	87.10	180.20	11,544.6	-6,712.9	652.9	547,324.03	733,804.21	32° 30' 8.706 N	103° 34' 29.850 W
18,242.0	88.10	179.70	11,548.5	-6,806.8	653.0	547,230.11	733,804.29	32° 30' 7.777 N	103° 34' 29.857 W
18,334.0	89.60	179.30	11,550.3	-6,898.8	653.8	547,138.14	733,805.10	32° 30' 6.867 N	103° 34' 29.855 W
18,426.0	91.00	179.00	11,549.9	-6,990.8	655.2	547,046.15	733,806.46	32° 30' 5.957 N	103° 34' 29.847 W
18,457.0	91.40	178.60	11,549.2	-7,021.7	655.8	547,015.16	733,807.11	32° 30' 5.650 N	103° 34' 29.842 W
18,503.0	91.40	178.60	11,548.1	-7,067.7	656.9	546,969.19	733,808.23	32° 30' 5.195 N	103° 34' 29.832 W
18503' MD Projected to Bit									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
10,700.0	10,699.5	25.4	-17.9	10700' MD VES Gyro Survey
18,503.0	11,548.1	-7,067.7	656.9	18503' MD Projected to Bit