

Results of Directional Survey

API number:	30-025-40714		
OGRID:		Operator:	COG OPERATING LLC
		Property:	CORAZON STATE UNIT # 1H

surface	ULSTR:	X	03	T 21S	R 33E
				100 FSL	330 FEL

BH Loc	ULSTR:	A	03	T 21S	R 33E
18931 MD		11503.7	TVD	358 FNL	509 FEL
				7563 FSL	

Top Perf/OH	ULSTR:	X	03	T 21S	R 33E
11748 MD		11598.4	TVD	398 FSL	338 FEL

Bot Perf/OH	ULSTR:	A	03	T 21S	R 33E
18800 MD		11504.9	TVD	489 FNL	503 FEL
				7432 FSL	

	MD	N/S	E/W	VD
	11717	270.10	1.60	11586.9
TOP PERFS/OH	11748	298.20	-7.50	11598.40
	11748	298.20	-7.50	11598.40
	18737	7269.30	-170.60	11505.60
BOT PERFS/OH	18800	7332.26	-173.23	11504.94
	18881	7413.20	-176.60	11504.10

NEXT TO LAST	18881	7413.20	-176.60	11504.10
LAST READING	18931	7463.10	-178.80	11503.70
TD	18931	7463.10	-178.80	11503.70

Surface Location	100	FS	330	FE
Projected BHL	7563	FS	509	FE
Location of				
Top Perfs/OH	398	FS	338	FE
Bottom Perfs/OH	7432	FS	503	FE

SUMMARY of Subsurface Locations

Surface Location	X-03-21S-33E	100	FS	330	FE	Vert. Depth
Top Perfs/OH	X-03-21S-33E	398	FS	338	FE	11598.40
Bottom Perfs/OH	A-03-21S-33E	7432	FS	503	FE	11504.94
Projected TD	A-03-21S-33E	7563	FS	509	FE	11503.70

APR 17 2013



A GYRO TECHNOLOGIES INC. COMPANY

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

December 19, 2012

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

Attn: Kanicia Castillo

Re: **Corazon State Unit No 001H**

Please find enclosed a copy of the survey from 0' to 11,830' ran on the above referenced well.

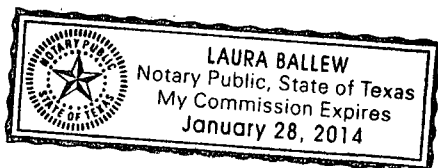
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

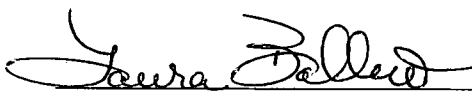
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 19th day of December
A.D., 2012, by Keith Havelka.





Laura Ballew
Notary Public, State of Texas

HOBBS OCD

MAR 28 2013

RECEIVED

SUR: X-03-21s-33e, 100/S & 330/E
BHL: A-03-21s-33e, 7563/S & 509/E
API # 30-025-40714



Company: COG Operating LLC (Concho)
Lease/Well: Corazon State Unit/No 001H
Location: S3 T21s R33e
Rig Name: Precision 77
State/County: New Mexico/Lea
Latitude: 32.50, Longitude: -103.55
GRID North is 0.42 Degrees East of True North
VS-Azi: 0.00 Degrees



HOBBS OCD

RKB : 30 Feet

MAR 28 2013

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...state unit #1h gyro survey.ut

Minimum Curvature Method

Report Date/Time: 12/19/2012 / 09:36

Vaughn Energy Services

(432) 563-5444

Gardendale, TX

Surveyor: Dustin Wedel

Corazon State Unit No 001H / API 30-025-40714

RECEIVED

SUR: X-03-21s-33e, 100/S & 330/E
BHL: A-03-21s-33e, 7563/S & 509/E
API # 30-025-40714

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.67	32.56	100.00	0.49	0.32	0.59	32.56	0.67
200.00	0.68	31.22	199.99	1.50	0.94	1.77	32.11	0.02
300.00	0.64	356.45	299.98	2.56	1.21	2.83	25.36	0.40
400.00	0.57	29.41	399.98	3.54	1.42	3.82	21.85	0.35
500.00	0.38	30.23	499.98	4.27	1.83	4.64	23.26	0.18
600.00	0.46	38.15	599.97	4.87	2.25	5.37	24.80	0.10
700.00	0.58	25.97	699.97	5.64	2.72	6.27	25.75	0.16
800.00	0.32	12.31	799.97	6.37	3.00	7.04	25.24	0.28
900.00	0.31	34.44	899.96	6.86	3.21	7.58	25.10	0.12
1000.00	0.29	24.78	999.96	7.32	3.48	8.10	25.41	0.06
1100.00	0.32	4.24	1099.96	7.83	3.60	8.62	24.71	0.11
1200.00	0.08	40.73	1199.96	8.16	3.67	8.95	24.20	0.26
1300.00	0.22	54.44	1299.96	8.32	3.87	9.18	24.92	0.14
1400.00	0.29	59.80	1399.96	8.56	4.24	9.55	26.35	0.08
1500.00	0.32	13.46	1499.96	8.96	4.53	10.04	26.79	0.24
1600.00	0.34	6.25	1599.96	9.53	4.62	10.60	25.88	0.04
1700.00	0.37	30.03	1699.95	10.11	4.82	11.20	25.49	0.15
1800.00	0.38	50.69	1799.95	10.60	5.24	11.82	26.30	0.13

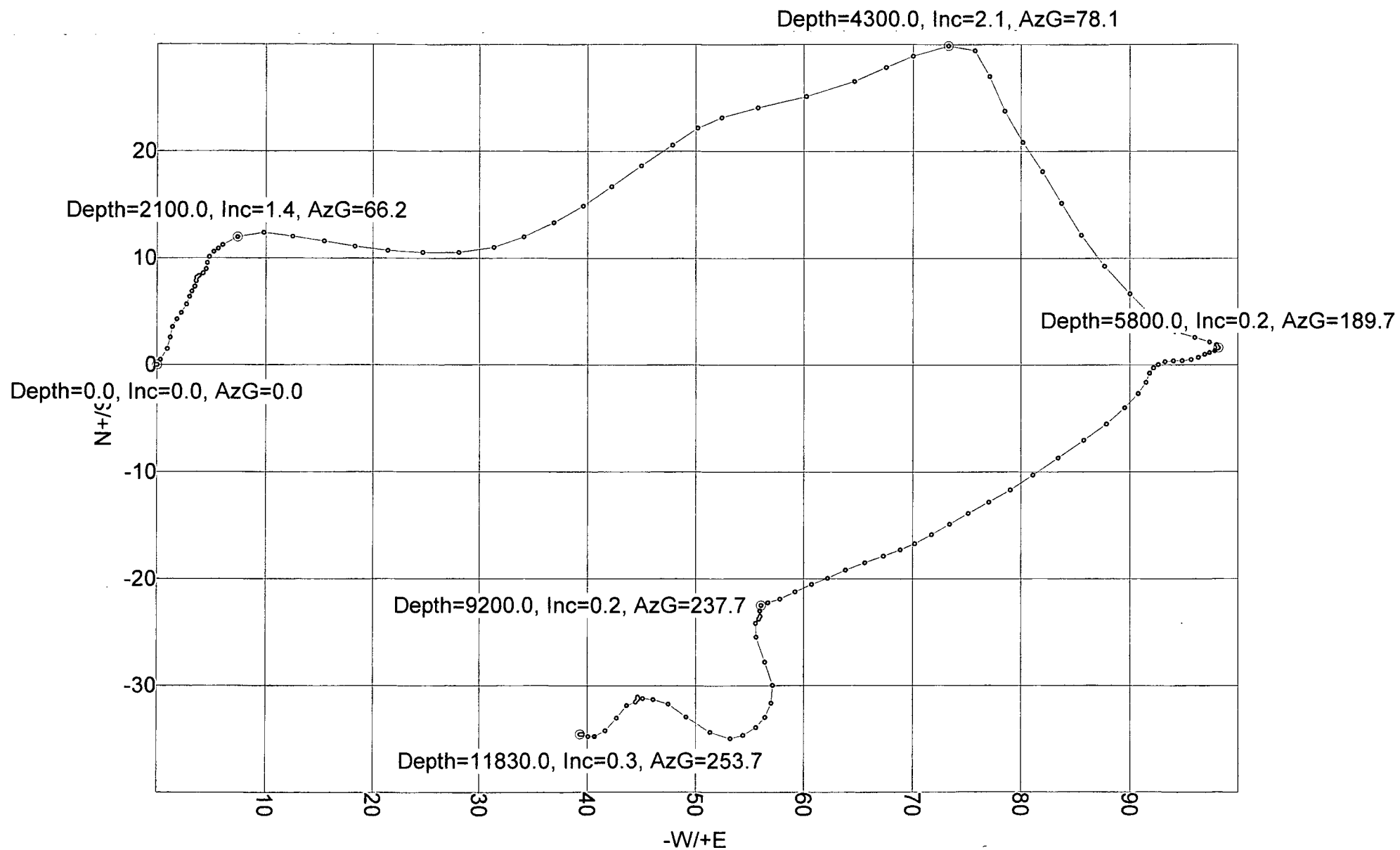
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.19	58.30	1899.95	10.89	5.63	12.26	27.35	0.19
2000.00	0.40	46.82	1999.95	11.22	6.03	12.74	28.26	0.21
2100.00	1.41	66.15	2099.94	11.95	7.41	14.06	31.78	1.04
2200.00	1.45	92.73	2199.91	12.39	9.79	15.79	38.32	0.66
2300.00	1.71	101.63	2299.87	12.03	12.52	17.36	46.15	0.36
2400.00	1.70	95.65	2399.82	11.58	15.46	19.32	53.17	0.18
2500.00	1.62	103.38	2499.78	11.11	18.31	21.42	58.76	0.24
2600.00	1.96	92.36	2599.73	10.71	21.39	23.93	63.41	0.48
2700.00	1.82	93.51	2699.68	10.54	24.69	26.85	66.88	0.14
2800.00	2.05	86.91	2799.62	10.54	28.06	29.98	69.41	0.32
2900.00	1.75	75.28	2899.57	11.02	31.33	33.21	70.61	0.49
3000.00	1.67	66.80	2999.52	11.99	34.14	36.18	70.65	0.26
3100.00	1.84	61.57	3099.48	13.32	36.89	39.22	70.14	0.23
3200.00	1.74	58.88	3199.43	14.87	39.60	42.30	69.42	0.13
3300.00	1.91	51.65	3299.38	16.69	42.20	45.38	68.43	0.29
3400.00	1.97	57.54	3399.32	18.64	44.96	48.67	67.48	0.21
3500.00	2.02	54.97	3499.26	20.58	47.85	52.09	66.73	0.11
3600.00	1.21	57.84	3599.22	22.15	50.19	54.86	66.18	0.82
3700.00	1.60	71.73	3699.19	23.15	52.41	57.30	66.17	0.51
3800.00	2.41	76.95	3799.13	24.07	55.78	60.75	66.66	0.83
3900.00	2.83	76.33	3899.02	25.12	60.22	65.25	67.36	0.42
4000.00	2.45	67.46	3998.92	26.53	64.60	69.83	67.68	0.55
4100.00	1.23	62.57	4098.86	27.84	67.53	73.04	67.59	1.23
4200.00	1.86	68.84	4198.83	28.92	69.99	75.73	67.55	0.65
4300.00	2.07	78.11	4298.77	29.88	73.27	79.13	67.82	0.38
4400.00	1.25	138.75	4398.73	29.43	75.75	81.27	68.77	1.82
4500.00	1.97	158.84	4498.69	27.01	77.09	81.69	70.69	0.91
4600.00	2.08	154.52	4598.63	23.76	78.49	82.01	73.16	0.19
4700.00	1.81	144.99	4698.57	20.83	80.18	82.84	75.44	0.42
4800.00	1.94	148.54	4798.52	18.09	81.97	83.95	77.56	0.17
4900.00	1.99	149.87	4898.46	15.15	83.73	85.09	79.75	0.06
5000.00	2.04	147.46	4998.40	12.15	85.55	86.41	81.92	0.10
5100.00	2.07	140.05	5098.33	9.26	87.67	88.16	83.97	0.27
5200.00	1.93	136.22	5198.27	6.66	90.00	90.24	85.77	0.20
5300.00	1.63	136.44	5298.22	4.42	92.14	92.25	87.26	0.30
5400.00	1.15	103.90	5398.20	3.14	94.10	94.15	88.09	0.91
5500.00	1.09	109.39	5498.18	2.59	95.97	96.01	88.46	0.12
5600.00	0.57	103.06	5598.17	2.16	97.35	97.38	88.73	0.53
5700.00	0.28	126.53	5698.16	1.90	98.03	98.05	88.89	0.34

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	0.17	189.67	5798.16	1.61	98.20	98.21	89.06	0.25
5900.00	0.39	246.13	5898.16	1.33	97.86	97.87	89.22	0.33
6000.00	0.22	262.38	5998.16	1.16	97.35	97.36	89.32	0.19
6100.00	0.35	241.95	6098.16	1.00	96.89	96.90	89.41	0.16
6200.00	0.40	244.85	6198.16	0.70	96.31	96.31	89.58	0.06
6300.00	0.43	261.66	6298.15	0.50	95.62	95.62	89.70	0.12
6400.00	0.52	264.57	6398.15	0.40	94.81	94.81	89.76	0.10
6500.00	0.43	274.63	6498.15	0.39	93.98	93.99	89.76	0.12
6600.00	0.48	253.72	6598.14	0.30	93.21	93.21	89.81	0.17
6700.00	0.30	235.65	6698.14	0.04	92.60	92.60	89.98	0.21
6800.00	0.31	233.00	6798.14	-0.27	92.16	92.16	90.17	0.02
6900.00	0.41	204.13	6898.14	-0.77	91.80	91.80	90.48	0.21
7000.00	0.64	199.02	6998.13	-1.62	91.47	91.48	91.01	0.23
7100.00	0.87	224.79	7098.13	-2.68	90.75	90.79	91.69	0.40
7200.00	1.22	221.11	7198.11	-4.02	89.52	89.61	92.57	0.36
7300.00	1.36	233.72	7298.08	-5.52	87.87	88.04	93.59	0.32
7400.00	1.61	234.06	7398.05	-7.04	85.78	86.07	94.69	0.25
7500.00	1.69	235.94	7498.01	-8.69	83.42	83.87	95.95	0.10
7600.00	1.54	234.91	7597.97	-10.29	81.10	81.75	97.23	0.15
7700.00	1.32	237.79	7697.94	-11.68	79.03	79.89	98.40	0.24
7800.00	1.30	242.80	7797.91	-12.81	77.05	78.11	99.44	0.12
7900.00	1.20	238.85	7897.89	-13.87	75.15	76.41	100.45	0.13
8000.00	1.10	240.78	7997.87	-14.88	73.41	74.90	101.45	0.11
8100.00	1.14	238.73	8097.85	-15.86	71.72	73.45	102.47	0.06
8200.00	0.86	245.13	8197.83	-16.70	70.19	72.14	103.38	0.30
8300.00	0.80	247.92	8297.82	-17.28	68.85	70.99	104.09	0.07
8400.00	1.08	249.77	8397.81	-17.87	67.32	69.65	104.86	0.28
8500.00	1.00	251.06	8497.79	-18.48	65.61	68.16	105.73	0.09
8600.00	1.21	245.84	8597.78	-19.19	63.82	66.64	106.74	0.24
8700.00	0.88	243.34	8697.76	-19.97	62.17	65.29	107.81	0.33
8800.00	0.91	253.64	8797.75	-20.54	60.72	64.10	108.69	0.16
8900.00	1.02	237.60	8897.73	-21.24	59.21	62.90	109.73	0.29
9000.00	0.77	253.63	8997.72	-21.90	57.81	61.82	110.75	0.35
9100.00	0.55	251.97	9097.71	-22.24	56.71	60.91	111.42	0.22
9200.00	0.23	237.72	9197.71	-22.49	56.09	60.43	111.85	0.33
9300.00	0.47	172.07	9297.71	-23.01	55.98	60.52	112.34	0.43
9400.00	0.11	194.21	9397.71	-23.51	56.01	60.74	112.77	0.38
9500.00	0.23	213.55	9497.71	-23.77	55.87	60.72	113.05	0.14
9600.00	0.33	219.85	9597.71	-24.16	55.58	60.60	113.50	0.11

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
9700.00	1.25	167.90	9697.70	-25.45	55.62	61.16	114.59	1.07
9800.00	1.60	155.35	9797.67	-27.79	56.43	62.90	116.22	0.47
9900.00	1.04	172.40	9897.64	-29.96	57.13	64.51	117.67	0.68
10000.00	0.93	197.13	9997.62	-31.64	57.01	65.20	119.03	0.44
10100.00	0.73	211.20	10097.61	-32.96	56.44	65.36	120.28	0.28
10200.00	0.76	230.15	10197.61	-33.93	55.61	65.14	121.39	0.25
10300.00	0.84	246.17	10297.60	-34.65	54.43	64.52	122.48	0.24
10400.00	0.60	268.01	10397.59	-34.96	53.23	63.69	123.30	0.36
10500.00	1.70	295.25	10497.57	-34.35	51.37	61.79	123.77	1.20
10600.00	1.38	310.69	10597.53	-32.93	49.11	59.13	123.84	0.52
10700.00	0.98	300.85	10697.51	-31.71	47.47	57.08	123.74	0.44
10800.00	0.76	266.71	10797.50	-31.31	46.07	55.70	124.20	0.55
10900.00	0.38	295.50	10897.49	-31.20	45.10	54.84	124.68	0.47
11000.00	0.19	273.85	10997.49	-31.05	44.63	54.37	124.82	0.21
11100.00	0.34	146.73	11097.49	-31.29	44.63	54.50	125.03	0.49
11200.00	0.40	271.60	11197.49	-31.53	44.44	54.49	125.35	0.66
11300.00	0.68	234.15	11297.49	-31.87	43.61	54.01	126.16	0.44
11400.00	1.05	208.14	11397.48	-33.02	42.69	53.97	127.72	0.53
11500.00	0.86	236.72	11497.46	-34.24	41.63	53.91	129.44	0.51
11600.00	0.42	252.44	11597.46	-34.77	40.66	53.49	130.53	0.47
11700.00	0.29	293.75	11697.45	-34.77	40.07	53.06	130.95	0.28
11800.00	0.39	287.10	11797.45	-34.57	39.51	52.50	131.18	0.11
11830.00	0.32	253.70	11827.45	-34.56	39.33	52.36	131.31	0.72



Vaughn Energy Services
(432) 563-5444
Gardendale, TX
Surveyor: Dustin Wedel
Corazon State Unit No 001H / API 30-025-40714



VES Survey Date: 12/05/2012



COG Operating LLC

**Lea County, NM
Corazon State Unit
#1H**

HOBBS OCD

MAR 28 2013

ST2

RECEIVED

Design: ST2

**SUR: X-03-21s-33e, 100/S & 330/E
BHL: A-03-21s-33e, 7563/S & 509/E
API # 30-025-40714**

Survey Report - Geographic

04 January, 2013





Survey Report - Geographic



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM	TVD Reference:	WELL @ 3848.0usft (Precision #77 - 30' KB)
Site:	Corazon State Unit	MD Reference:	WELL @ 3848.0usft (Precision #77 - 30' KB)
Well:	#1H	North Reference:	Grid
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	Houston R5000 Database

Project	Lea County, NM		
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	Corazon State Unit		
Site Position:		Northing:	546,756.11 usft
From:	Map	Easting:	740,765.92 usft
Position Uncertainty:	2.0 usft	Slot Radius:	8-1/2 "
		Latitude:	32° 30' 2.590 N
		Longitude:	103° 33' 8.613 W
		Grid Convergence:	0.42 °

Well	#1H		
Well Position	+N/-S	0.0 usft	Northing: 546,756.11 usft
	+E/-W	0.0 usft	Easting: 740,765.92 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Ground Level:	3,818.0 usft

Wellbore	ST2		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	12/27/2012	7.41
			Dip Angle (°)
			60.41
			Field Strength (nT)
			48,629

Design	ST2		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	15,507.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°)
			359.07

Survey Program	Date 1/4/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
100.0	10,900.0	Survey #1 VES1 (OH)	CB-GYRO-MS
11,022.0	15,507.0	Survey #2 - Crescent1 (OH)	MWD
15,599.0	18,881.0	Survey #3 - Crescent3 (ST2)	MWD
18,931.0	18,931.0	Survey #4 - PTB (ST2)	MWD
			Description
			Camera based gyro multishot
			MWD - Standard
			MWD - Standard
			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	546,756.11	740,765.92	32° 30' 2.590 N	103° 33' 8.613 W
100.0	0.67	32.56	100.0	0.5	0.3	546,756.60	740,766.23	32° 30' 2.594 N	103° 33' 8.609 W
200.0	0.68	31.22	200.0	1.5	0.9	546,757.60	740,766.85	32° 30' 2.604 N	103° 33' 8.602 W
300.0	0.64	356.45	300.0	2.6	1.2	546,758.67	740,767.12	32° 30' 2.615 N	103° 33' 8.598 W
400.0	0.57	29.41	400.0	3.5	1.4	546,759.66	740,767.33	32° 30' 2.625 N	103° 33' 8.596 W
500.0	0.38	30.23	500.0	4.3	1.8	546,760.38	740,767.75	32° 30' 2.632 N	103° 33' 8.591 W
600.0	0.46	38.15	600.0	4.9	2.2	546,760.98	740,768.16	32° 30' 2.638 N	103° 33' 8.586 W
700.0	0.58	25.97	700.0	5.6	2.7	546,761.75	740,768.63	32° 30' 2.645 N	103° 33' 8.580 W
800.0	0.32	12.31	800.0	6.4	3.0	546,762.48	740,768.91	32° 30' 2.652 N	103° 33' 8.577 W

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM	TVD Reference:	WELL @ 3848.0usft (Precision #77 - 30' KB)
Site:	Corazon State Unit	MD Reference:	WELL @ 3848.0usft (Precision #77 - 30' KB)
Well:	#1H	North Reference:	Grid
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	Houston R5000 Database

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
900.0	0.31	34.44	900.0	6.9	3.2	546,762.97	740,769.12	32° 30' 2.657 N	103° 33' 8.575 W
1,000.0	0.29	24.78	1,000.0	7.3	3.5	546,763.43	740,769.38	32° 30' 2.662 N	103° 33' 8.571 W
1,100.0	0.32	4.24	1,100.0	7.8	3.6	546,763.94	740,769.51	32° 30' 2.667 N	103° 33' 8.570 W
1,200.0	0.08	40.73	1,200.0	8.2	3.7	546,764.27	740,769.58	32° 30' 2.670 N	103° 33' 8.569 W
1,300.0	0.22	54.44	1,300.0	8.3	3.9	546,764.43	740,769.78	32° 30' 2.672 N	103° 33' 8.567 W
1,400.0	0.29	59.80	1,400.0	8.6	4.2	546,764.67	740,770.15	32° 30' 2.674 N	103° 33' 8.562 W
1,500.0	0.32	13.46	1,500.0	9.0	4.5	546,765.07	740,770.44	32° 30' 2.678 N	103° 33' 8.559 W
1,600.0	0.34	6.25	1,600.0	9.5	4.6	546,765.64	740,770.53	32° 30' 2.684 N	103° 33' 8.558 W
1,700.0	0.37	30.03	1,700.0	10.1	4.8	546,766.21	740,770.73	32° 30' 2.689 N	103° 33' 8.556 W
1,800.0	0.38	50.69	1,800.0	10.6	5.2	546,766.70	740,771.15	32° 30' 2.694 N	103° 33' 8.551 W
1,900.0	0.19	58.30	1,900.0	10.9	5.6	546,767.00	740,771.54	32° 30' 2.697 N	103° 33' 8.546 W
2,000.0	0.40	46.82	2,000.0	11.2	6.0	546,767.32	740,771.94	32° 30' 2.700 N	103° 33' 8.541 W
2,100.0	1.41	66.15	2,099.9	12.0	7.4	546,768.06	740,773.32	32° 30' 2.707 N	103° 33' 8.525 W
2,200.0	1.45	92.73	2,199.9	12.4	9.8	546,768.50	740,775.71	32° 30' 2.711 N	103° 33' 8.497 W
2,300.0	1.71	101.63	2,299.9	12.0	12.5	546,768.14	740,778.43	32° 30' 2.708 N	103° 33' 8.465 W
2,400.0	1.70	95.65	2,399.8	11.6	15.5	546,767.69	740,781.37	32° 30' 2.703 N	103° 33' 8.431 W
2,500.0	1.62	103.38	2,499.8	11.1	18.3	546,767.22	740,784.22	32° 30' 2.698 N	103° 33' 8.398 W
2,600.0	1.96	92.36	2,599.7	10.7	21.4	546,766.82	740,787.31	32° 30' 2.694 N	103° 33' 8.362 W
2,700.0	1.82	93.51	2,699.7	10.5	24.7	546,766.65	740,790.60	32° 30' 2.692 N	103° 33' 8.323 W
2,800.0	2.05	86.91	2,799.6	10.5	28.1	546,766.65	740,793.97	32° 30' 2.692 N	103° 33' 8.284 W
2,900.0	1.75	75.28	2,899.6	11.0	31.3	546,767.13	740,797.23	32° 30' 2.696 N	103° 33' 8.246 W
3,000.0	1.67	66.80	2,999.5	12.0	34.1	546,768.10	740,800.05	32° 30' 2.706 N	103° 33' 8.213 W
3,100.0	1.84	61.57	3,099.5	13.3	36.9	546,769.43	740,802.80	32° 30' 2.719 N	103° 33' 8.181 W
3,200.0	1.74	58.88	3,199.4	14.9	39.6	546,770.98	740,805.51	32° 30' 2.734 N	103° 33' 8.149 W
3,300.0	1.91	51.65	3,299.4	16.7	42.2	546,772.80	740,808.12	32° 30' 2.752 N	103° 33' 8.118 W
3,400.0	1.97	57.54	3,399.3	18.6	45.0	546,774.76	740,810.88	32° 30' 2.771 N	103° 33' 8.086 W
3,500.0	2.02	54.97	3,499.3	20.6	47.9	546,776.69	740,813.77	32° 30' 2.790 N	103° 33' 8.052 W
3,600.0	1.21	57.84	3,599.2	22.2	50.2	546,778.27	740,816.11	32° 30' 2.805 N	103° 33' 8.025 W
3,700.0	1.60	71.73	3,699.2	23.2	52.4	546,779.27	740,818.33	32° 30' 2.815 N	103° 33' 7.999 W
3,800.0	2.41	76.95	3,799.1	24.1	55.8	546,780.18	740,821.70	32° 30' 2.824 N	103° 33' 7.959 W
3,900.0	2.83	76.33	3,899.0	25.1	60.2	546,781.24	740,826.15	32° 30' 2.834 N	103° 33' 7.907 W
4,000.0	2.45	67.46	3,998.9	26.5	64.6	546,782.64	740,830.52	32° 30' 2.847 N	103° 33' 7.856 W
4,100.0	1.23	62.57	4,098.9	27.8	67.5	546,783.95	740,833.45	32° 30' 2.860 N	103° 33' 7.822 W
4,200.0	1.86	68.84	4,198.8	28.9	70.0	546,785.03	740,835.91	32° 30' 2.871 N	103° 33' 7.793 W
4,300.0	2.07	78.11	4,298.8	29.9	73.3	546,785.99	740,839.19	32° 30' 2.880 N	103° 33' 7.754 W
4,400.0	1.25	138.75	4,398.7	29.4	75.8	546,785.54	740,841.68	32° 30' 2.875 N	103° 33' 7.725 W
4,500.0	1.97	158.84	4,498.7	27.0	77.1	546,783.12	740,843.02	32° 30' 2.851 N	103° 33' 7.710 W
4,600.0	2.08	154.52	4,598.6	23.8	78.5	546,779.88	740,844.42	32° 30' 2.819 N	103° 33' 7.694 W
4,700.0	1.81	144.99	4,698.6	20.8	80.2	546,776.95	740,846.11	32° 30' 2.790 N	103° 33' 7.674 W
4,800.0	1.94	148.54	4,798.5	18.1	82.0	546,774.21	740,847.90	32° 30' 2.763 N	103° 33' 7.654 W
4,900.0	1.99	149.87	4,898.5	15.2	83.7	546,771.26	740,849.65	32° 30' 2.733 N	103° 33' 7.634 W
5,000.0	2.04	147.46	4,998.4	12.2	85.6	546,768.26	740,851.48	32° 30' 2.704 N	103° 33' 7.613 W
5,100.0	2.07	140.05	5,098.3	9.3	87.7	546,765.38	740,853.60	32° 30' 2.675 N	103° 33' 7.588 W
5,200.0	1.93	136.22	5,198.3	6.7	90.0	546,762.78	740,855.92	32° 30' 2.649 N	103° 33' 7.561 W
5,300.0	1.63	136.44	5,298.2	4.4	92.2	546,760.53	740,858.07	32° 30' 2.627 N	103° 33' 7.536 W
5,400.0	1.15	103.90	5,398.2	3.1	94.1	546,759.26	740,860.02	32° 30' 2.614 N	103° 33' 7.514 W
5,500.0	1.09	109.39	5,498.2	2.6	96.0	546,758.70	740,861.89	32° 30' 2.608 N	103° 33' 7.492 W
5,600.0	0.57	103.06	5,598.2	2.2	97.4	546,758.27	740,863.28	32° 30' 2.604 N	103° 33' 7.476 W
5,700.0	0.28	126.53	5,698.2	1.9	98.0	546,758.02	740,863.96	32° 30' 2.601 N	103° 33' 7.468 W
5,800.0	0.17	189.67	5,798.2	1.6	98.2	546,757.72	740,864.13	32° 30' 2.598 N	103° 33' 7.466 W
5,900.0	0.39	246.13	5,898.2	1.3	97.9	546,757.44	740,863.79	32° 30' 2.596 N	103° 33' 7.470 W
6,000.0	0.22	262.38	5,998.2	1.2	97.4	546,757.28	740,863.29	32° 30' 2.594 N	103° 33' 7.476 W
6,100.0	0.35	241.95	6,098.2	1.0	96.9	546,757.11	740,862.83	32° 30' 2.592 N	103° 33' 7.481 W
6,200.0	0.40	244.85	6,198.2	0.7	96.3	546,756.82	740,862.24	32° 30' 2.590 N	103° 33' 7.488 W
6,300.0	0.43	261.66	6,298.2	0.5	95.6	546,756.61	740,861.56	32° 30' 2.588 N	103° 33' 7.496 W

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM	TVD Reference:	WELL @ 3848.0usft (Precision #77 - 30' KB)
Site:	Corazon State Unit	MD Reference:	WELL @ 3848.0usft (Precision #77 - 30' KB)
Well:	#1H	North Reference:	Grid
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	Houston R5000 Database

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,400.0	0.52	264.57	6,398.2	0.4	94.8	546,756.52	740,860.73	32° 30' 2.587 N	103° 33' 7.505 W
6,500.0	0.43	274.63	6,498.1	0.4	94.0	546,756.50	740,859.91	32° 30' 2.587 N	103° 33' 7.515 W
6,600.0	0.48	253.72	6,598.1	0.3	93.2	546,756.42	740,859.13	32° 30' 2.586 N	103° 33' 7.524 W
6,700.0	0.30	235.65	6,698.1	0.0	92.6	546,756.15	740,858.51	32° 30' 2.583 N	103° 33' 7.531 W
6,800.0	0.31	233.00	6,798.1	-0.3	92.2	546,755.84	740,858.08	32° 30' 2.580 N	103° 33' 7.536 W
6,900.0	0.41	204.13	6,898.1	-0.8	91.8	546,755.35	740,857.72	32° 30' 2.575 N	103° 33' 7.541 W
7,000.0	0.64	199.02	6,998.1	-1.6	91.5	546,754.50	740,857.39	32° 30' 2.567 N	103° 33' 7.545 W
7,100.0	0.87	224.79	7,098.1	-2.7	90.8	546,753.43	740,856.67	32° 30' 2.556 N	103° 33' 7.553 W
7,200.0	1.22	221.11	7,198.1	-4.0	89.5	546,752.09	740,855.44	32° 30' 2.543 N	103° 33' 7.568 W
7,300.0	1.36	233.72	7,298.1	-5.5	87.9	546,750.58	740,853.78	32° 30' 2.529 N	103° 33' 7.587 W
7,400.0	1.61	234.06	7,398.1	-7.1	85.8	546,749.06	740,851.69	32° 30' 2.514 N	103° 33' 7.612 W
7,500.0	1.69	235.94	7,498.0	-8.7	83.4	546,747.41	740,849.33	32° 30' 2.497 N	103° 33' 7.639 W
7,600.0	1.54	234.91	7,598.0	-10.3	81.1	546,745.81	740,847.01	32° 30' 2.482 N	103° 33' 7.667 W
7,700.0	1.32	237.79	7,697.9	-11.7	79.0	546,744.42	740,844.93	32° 30' 2.468 N	103° 33' 7.691 W
7,800.0	1.30	242.80	7,797.9	-12.8	77.0	546,743.29	740,842.95	32° 30' 2.457 N	103° 33' 7.714 W
7,900.0	1.20	238.85	7,897.9	-13.9	75.1	546,742.23	740,841.05	32° 30' 2.447 N	103° 33' 7.737 W
8,000.0	1.10	240.78	7,997.9	-14.9	73.4	546,741.22	740,839.31	32° 30' 2.437 N	103° 33' 7.757 W
8,100.0	1.14	238.73	8,097.8	-15.9	71.7	546,740.23	740,837.62	32° 30' 2.427 N	103° 33' 7.777 W
8,200.0	0.86	245.13	8,197.8	-16.7	70.2	546,739.40	740,836.09	32° 30' 2.419 N	103° 33' 7.795 W
8,300.0	0.80	247.92	8,297.8	-17.3	68.9	546,738.82	740,834.77	32° 30' 2.414 N	103° 33' 7.810 W
8,400.0	1.08	249.77	8,397.8	-17.9	67.3	546,738.24	740,833.23	32° 30' 2.408 N	103° 33' 7.828 W
8,500.0	1.00	251.06	8,497.8	-18.5	65.6	546,737.63	740,831.52	32° 30' 2.402 N	103° 33' 7.848 W
8,600.0	1.21	245.84	8,597.8	-19.2	63.8	546,736.91	740,829.74	32° 30' 2.395 N	103° 33' 7.869 W
8,700.0	0.88	243.34	8,697.8	-20.0	62.2	546,736.14	740,828.09	32° 30' 2.387 N	103° 33' 7.888 W
8,800.0	0.91	253.64	8,797.7	-20.5	60.7	546,735.57	740,826.64	32° 30' 2.382 N	103° 33' 7.905 W
8,900.0	1.02	237.60	8,897.7	-21.2	59.2	546,734.87	740,825.12	32° 30' 2.375 N	103° 33' 7.923 W
9,000.0	0.77	253.63	8,997.7	-21.9	57.8	546,734.20	740,823.73	32° 30' 2.369 N	103° 33' 7.939 W
9,100.0	0.55	251.97	9,097.7	-22.2	56.7	546,733.86	740,822.63	32° 30' 2.365 N	103° 33' 7.952 W
9,200.0	0.23	237.72	9,197.7	-22.5	56.1	546,733.61	740,822.00	32° 30' 2.363 N	103° 33' 7.960 W
9,300.0	0.47	172.07	9,297.7	-23.0	56.0	546,733.09	740,821.89	32° 30' 2.358 N	103° 33' 7.961 W
9,400.0	0.11	194.21	9,397.7	-23.5	56.0	546,732.59	740,821.92	32° 30' 2.353 N	103° 33' 7.961 W
9,500.0	0.23	213.55	9,497.7	-23.8	55.9	546,732.33	740,821.79	32° 30' 2.350 N	103° 33' 7.962 W
9,600.0	0.33	219.85	9,597.7	-24.2	55.6	546,731.94	740,821.49	32° 30' 2.346 N	103° 33' 7.966 W
9,700.0	1.25	167.90	9,697.7	-25.5	55.6	546,730.66	740,821.54	32° 30' 2.334 N	103° 33' 7.965 W
9,800.0	1.60	155.35	9,797.7	-27.8	56.4	546,728.32	740,822.35	32° 30' 2.311 N	103° 33' 7.956 W
9,900.0	1.04	172.40	9,897.6	-30.0	57.1	546,726.15	740,823.05	32° 30' 2.289 N	103° 33' 7.948 W
10,000.0	0.93	197.13	9,997.6	-31.6	57.0	546,724.48	740,822.93	32° 30' 2.272 N	103° 33' 7.950 W
10,100.0	0.73	211.20	10,097.6	-33.0	56.4	546,723.16	740,822.36	32° 30' 2.259 N	103° 33' 7.956 W
10,200.0	0.76	230.15	10,197.6	-33.9	55.6	546,722.19	740,821.52	32° 30' 2.250 N	103° 33' 7.966 W
10,300.0	0.84	246.17	10,297.6	-34.6	54.4	546,721.47	740,820.34	32° 30' 2.243 N	103° 33' 7.980 W
10,400.0	0.60	268.01	10,397.6	-35.0	53.2	546,721.15	740,819.15	32° 30' 2.240 N	103° 33' 7.994 W
10,500.0	1.70	295.25	10,497.6	-34.3	51.4	546,721.77	740,817.28	32° 30' 2.246 N	103° 33' 8.016 W
10,600.0	1.38	310.69	10,597.5	-32.9	49.1	546,723.19	740,815.03	32° 30' 2.260 N	103° 33' 8.042 W
10,700.0	0.98	300.85	10,697.5	-31.7	47.5	546,724.41	740,813.38	32° 30' 2.272 N	103° 33' 8.061 W
10,800.0	0.76	266.71	10,797.5	-31.3	46.1	546,724.81	740,811.98	32° 30' 2.277 N	103° 33' 8.077 W
10,900.0	0.38	295.50	10,897.5	-31.2	45.1	546,724.91	740,811.02	32° 30' 2.278 N	103° 33' 8.089 W
11,022.0	0.30	122.00	11,019.5	-31.2	45.0	546,724.92	740,810.93	32° 30' 2.278 N	103° 33' 8.090 W
11,078.0	0.30	177.50	11,075.5	-31.4	45.1	546,724.69	740,811.06	32° 30' 2.275 N	103° 33' 8.088 W
11,213.0	7.70	4.70	11,210.1	-22.7	45.9	546,733.37	740,811.82	32° 30' 2.361 N	103° 33' 8.079 W
11,245.0	12.70	1.00	11,241.6	-17.1	46.1	546,739.03	740,812.05	32° 30' 2.417 N	103° 33' 8.075 W
11,276.0	17.30	0.20	11,271.5	-9.1	46.2	546,747.05	740,812.13	32° 30' 2.497 N	103° 33' 8.074 W
11,307.0	20.30	358.10	11,300.9	0.9	46.1	546,757.03	740,811.97	32° 30' 2.595 N	103° 33' 8.075 W
11,339.0	24.50	355.90	11,330.4	13.1	45.4	546,769.21	740,811.31	32° 30' 2.716 N	103° 33' 8.081 W
11,370.0	28.10	354.90	11,358.2	26.8	44.3	546,782.89	740,810.20	32° 30' 2.851 N	103° 33' 8.093 W
11,402.0	30.90	355.80	11,386.1	42.5	43.0	546,798.60	740,808.93	32° 30' 3.007 N	103° 33' 8.107 W

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM	TVD Reference:	WELL @ 3848.0usft (Precision #77 - 30' KB)
Site:	Corazon State Unit	MD Reference:	WELL @ 3848.0usft (Precision #77 - 30' KB)
Well:	#1H	North Reference:	Grid
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	Houston R5000 Database

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,434.0	33.20	359.30	11,413.2	59.4	42.3	546,815.56	740,808.22	32° 30' 3.175 N	103° 33' 8.114 W
11,460.0	34.80	0.20	11,434.8	74.0	42.2	546,830.09	740,808.16	32° 30' 3.319 N	103° 33' 8.113 W
11,492.0	39.70	0.00	11,460.2	93.3	42.3	546,849.46	740,808.19	32° 30' 3.510 N	103° 33' 8.111 W
11,529.0	44.30	355.80	11,487.7	118.1	41.3	546,874.18	740,807.24	32° 30' 3.755 N	103° 33' 8.120 W
11,561.0	48.50	351.40	11,509.8	141.1	38.7	546,897.19	740,804.63	32° 30' 3.983 N	103° 33' 8.148 W
11,592.0	53.30	347.90	11,529.3	164.7	34.4	546,920.84	740,800.29	32° 30' 4.217 N	103° 33' 8.197 W
11,653.0	62.70	341.20	11,561.6	214.4	20.5	546,970.56	740,786.38	32° 30' 4.710 N	103° 33' 8.355 W
11,685.0	67.00	341.00	11,575.2	241.8	11.1	546,997.95	740,777.00	32° 30' 4.982 N	103° 33' 8.462 W
11,717.0	70.40	341.70	11,586.9	270.1	1.6	547,026.20	740,767.47	32° 30' 5.262 N	103° 33' 8.571 W
11,748.0	73.80	342.70	11,596.4	298.2	-7.5	547,054.28	740,758.46	32° 30' 5.541 N	103° 33' 8.674 W
11,780.0	76.30	344.30	11,604.6	327.8	-16.2	547,083.92	740,749.68	32° 30' 5.834 N	103° 33' 8.774 W
11,812.0	80.10	345.30	11,611.2	358.0	-24.4	547,114.15	740,741.47	32° 30' 6.134 N	103° 33' 8.867 W
11,843.0	82.70	346.30	11,615.8	387.7	-32.0	547,143.86	740,733.95	32° 30' 6.429 N	103° 33' 8.953 W
11,875.0	85.50	347.00	11,619.1	418.7	-39.3	547,174.82	740,726.61	32° 30' 6.736 N	103° 33' 9.036 W
11,906.0	89.00	347.50	11,620.6	448.9	-46.1	547,205.02	740,719.77	32° 30' 7.035 N	103° 33' 9.113 W
11,938.0	90.80	348.60	11,620.7	480.2	-52.8	547,236.33	740,713.15	32° 30' 7.345 N	103° 33' 9.188 W
11,969.0	91.20	348.70	11,620.1	510.6	-58.9	547,266.71	740,707.05	32° 30' 7.646 N	103° 33' 9.256 W
12,064.0	91.20	350.70	11,618.1	604.0	-75.8	547,360.16	740,690.07	32° 30' 8.572 N	103° 33' 9.447 W
12,159.0	90.60	352.60	11,616.6	698.0	-89.6	547,454.14	740,676.27	32° 30' 9.503 N	103° 33' 9.600 W
12,254.0	91.00	354.30	11,615.3	792.4	-100.5	547,548.50	740,665.44	32° 30' 10.438 N	103° 33' 9.718 W
12,348.0	92.50	355.00	11,612.4	885.9	-109.2	547,642.05	740,656.68	32° 30' 11.364 N	103° 33' 9.812 W
12,443.0	92.40	356.90	11,608.4	980.6	-115.9	547,736.72	740,649.97	32° 30' 12.301 N	103° 33' 9.883 W
12,538.0	91.80	357.40	11,604.9	1,075.4	-120.7	547,831.54	740,645.25	32° 30' 13.240 N	103° 33' 9.930 W
12,633.0	91.90	359.50	11,601.8	1,170.3	-123.2	547,926.45	740,642.69	32° 30' 14.179 N	103° 33' 9.951 W
12,728.0	92.20	359.80	11,598.4	1,265.3	-123.8	548,021.38	740,642.11	32° 30' 15.118 N	103° 33' 9.950 W
12,822.0	90.90	359.60	11,595.9	1,359.2	-124.3	548,115.35	740,641.61	32° 30' 16.048 N	103° 33' 9.948 W
12,917.0	92.00	0.30	11,593.5	1,454.2	-124.4	548,210.31	740,641.53	32° 30' 16.988 N	103° 33' 9.941 W
13,012.0	90.40	359.70	11,591.5	1,549.2	-124.4	548,305.29	740,641.53	32° 30' 17.928 N	103° 33' 9.932 W
13,106.0	91.50	359.30	11,589.9	1,643.2	-125.2	548,399.27	740,640.71	32° 30' 18.858 N	103° 33' 9.934 W
13,201.0	91.90	359.50	11,587.1	1,738.1	-126.2	548,494.22	740,639.72	32° 30' 19.797 N	103° 33' 9.938 W
13,296.0	92.70	359.80	11,583.3	1,833.0	-126.8	548,589.14	740,639.14	32° 30' 20.737 N	103° 33' 9.936 W
13,391.0	91.50	0.00	11,579.8	1,928.0	-126.9	548,684.08	740,638.97	32° 30' 21.676 N	103° 33' 9.930 W
13,486.0	90.20	359.40	11,578.4	2,023.0	-127.4	548,779.06	740,638.47	32° 30' 22.616 N	103° 33' 9.928 W
13,581.0	90.00	359.00	11,578.2	2,117.9	-128.8	548,874.05	740,637.15	32° 30' 23.556 N	103° 33' 9.935 W
13,676.0	89.80	358.70	11,578.4	2,212.9	-130.7	548,969.03	740,635.24	32° 30' 24.496 N	103° 33' 9.949 W
13,771.0	89.70	359.10	11,578.8	2,307.9	-132.5	549,064.02	740,633.42	32° 30' 25.436 N	103° 33' 9.962 W
13,866.0	90.40	359.30	11,578.7	2,402.9	-133.8	549,159.01	740,632.09	32° 30' 26.376 N	103° 33' 9.970 W
13,961.0	90.60	359.40	11,577.9	2,497.9	-134.9	549,254.00	740,631.01	32° 30' 27.316 N	103° 33' 9.974 W
14,056.0	90.90	359.00	11,576.7	2,592.9	-136.2	549,348.98	740,629.69	32° 30' 28.256 N	103° 33' 9.982 W
14,151.0	91.20	359.10	11,574.9	2,687.8	-137.8	549,443.95	740,628.11	32° 30' 29.196 N	103° 33' 9.992 W
14,246.0	91.30	358.90	11,572.9	2,782.8	-139.5	549,538.91	740,626.45	32° 30' 30.136 N	103° 33' 10.003 W
14,341.0	91.80	359.20	11,570.3	2,877.8	-141.0	549,633.86	740,624.88	32° 30' 31.075 N	103° 33' 10.013 W
14,436.0	92.20	358.90	11,567.0	2,972.7	-142.6	549,728.79	740,623.30	32° 30' 32.015 N	103° 33' 10.024 W
14,531.0	92.10	358.80	11,563.4	3,067.6	-144.5	549,823.71	740,621.40	32° 30' 32.954 N	103° 33' 10.038 W
14,626.0	91.60	358.70	11,560.3	3,162.5	-146.6	549,918.63	740,619.33	32° 30' 33.893 N	103° 33' 10.054 W
14,721.0	90.60	357.70	11,558.5	3,257.5	-149.6	550,013.57	740,616.34	32° 30' 34.833 N	103° 33' 10.081 W
14,816.0	89.60	358.70	11,558.4	3,352.4	-152.6	550,108.52	740,613.36	32° 30' 35.773 N	103° 33' 10.107 W
14,911.0	89.30	358.30	11,559.3	3,447.4	-155.0	550,203.48	740,610.87	32° 30' 36.713 N	103° 33' 10.128 W
15,031.0	89.50	358.30	11,560.5	3,567.3	-158.6	550,323.42	740,607.31	32° 30' 37.900 N	103° 33' 10.159 W
15,127.0	90.20	0.40	11,560.8	3,663.3	-159.7	550,419.41	740,606.22	32° 30' 38.850 N	103° 33' 10.164 W
15,222.0	90.70	0.60	11,560.0	3,758.3	-158.9	550,514.40	740,607.05	32° 30' 39.789 N	103° 33' 10.146 W
15,317.0	90.80	0.50	11,558.8	3,853.3	-157.9	550,609.39	740,607.97	32° 30' 40.729 N	103° 33' 10.127 W
15,412.0	90.70	0.60	11,557.5	3,948.3	-157.0	550,704.38	740,608.88	32° 30' 41.669 N	103° 33' 10.109 W
15,507.0	90.40	0.60	11,556.6	4,043.3	-156.0	550,799.37	740,609.87	32° 30' 42.609 N	103° 33' 10.089 W
Tie into OH @ 15507' MD									

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM	TVD Reference:	WELL @ 3848.0usft (Precision #77 - 30' KB)
Site:	Corazon State Unit	MD Reference:	WELL @ 3848.0usft (Precision #77 - 30' KB)
Well:	#1H	North Reference:	Grid
Wellbore:	ST2	Survey Calculation Method:	Minimum Curvature
Design:	ST2	Database:	Houston R5000 Database

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,599.0	90.00	1.10	11,556.3	4,135.2	-154.7	550,891.36	740,611.24	32° 30' 43.519 N	103° 33' 10.065 W
15,694.0	89.70	3.20	11,556.6	4,230.2	-151.1	550,986.28	740,614.80	32° 30' 44.458 N	103° 33' 10.015 W
15,789.0	88.90	5.20	11,557.7	4,324.9	-144.2	551,081.02	740,621.76	32° 30' 45.395 N	103° 33' 9.926 W
15,884.0	89.30	5.20	11,559.2	4,419.5	-135.5	551,175.61	740,630.37	32° 30' 46.330 N	103° 33' 9.817 W
15,980.0	89.60	4.80	11,560.1	4,515.1	-127.2	551,271.24	740,638.73	32° 30' 47.276 N	103° 33' 9.712 W
16,074.0	89.30	3.30	11,561.0	4,608.9	-120.5	551,365.00	740,645.37	32° 30' 48.203 N	103° 33' 9.626 W
16,169.0	90.00	3.30	11,561.6	4,703.7	-115.1	551,459.84	740,650.84	32° 30' 49.141 N	103° 33' 9.554 W
16,265.0	89.20	1.80	11,562.3	4,799.6	-110.8	551,555.74	740,655.11	32° 30' 50.090 N	103° 33' 9.496 W
16,360.0	89.70	1.60	11,563.2	4,894.6	-108.0	551,650.69	740,657.93	32° 30' 51.029 N	103° 33' 9.455 W
16,455.0	90.20	1.40	11,563.3	4,989.6	-105.5	551,745.66	740,660.42	32° 30' 51.969 N	103° 33' 9.418 W
16,550.0	90.70	0.70	11,562.5	5,084.5	-103.8	551,840.64	740,662.16	32° 30' 52.909 N	103° 33' 9.389 W
16,645.0	91.60	0.50	11,560.6	5,179.5	-102.8	551,935.62	740,663.15	32° 30' 53.848 N	103° 33' 9.370 W
16,740.0	91.10	0.30	11,558.4	5,274.5	-102.1	552,030.59	740,663.81	32° 30' 54.788 N	103° 33' 9.354 W
16,835.0	91.50	359.60	11,556.2	5,369.5	-102.2	552,125.56	740,663.73	32° 30' 55.728 N	103° 33' 9.347 W
16,930.0	91.70	359.00	11,553.6	5,464.4	-103.3	552,220.52	740,662.57	32° 30' 56.667 N	103° 33' 9.352 W
17,025.0	91.90	358.70	11,550.6	5,559.3	-105.2	552,315.45	740,660.67	32° 30' 57.607 N	103° 33' 9.366 W
17,120.0	92.30	358.70	11,547.1	5,654.3	-107.4	552,410.36	740,658.51	32° 30' 58.546 N	103° 33' 9.383 W
17,215.0	91.40	358.50	11,544.0	5,749.2	-109.7	552,505.28	740,656.19	32° 30' 59.486 N	103° 33' 9.402 W
17,310.0	91.60	358.40	11,541.6	5,844.1	-112.3	552,600.22	740,653.62	32° 31' 0.425 N	103° 33' 9.424 W
17,405.0	92.20	358.10	11,538.4	5,939.0	-115.2	552,695.12	740,650.72	32° 31' 1.364 N	103° 33' 9.450 W
17,501.0	92.40	358.30	11,534.6	6,034.9	-118.2	552,790.99	740,647.71	32° 31' 2.313 N	103° 33' 9.477 W
17,596.0	92.50	358.10	11,530.5	6,129.8	-121.2	552,885.86	740,644.73	32° 31' 3.252 N	103° 33' 9.503 W
17,691.0	91.20	357.30	11,527.4	6,224.6	-125.0	552,980.73	740,640.92	32° 31' 4.191 N	103° 33' 9.540 W
17,786.0	91.40	357.20	11,525.3	6,319.5	-129.6	553,075.60	740,636.36	32° 31' 5.130 N	103° 33' 9.585 W
17,881.0	91.70	357.30	11,522.7	6,414.3	-134.1	553,170.45	740,631.81	32° 31' 6.069 N	103° 33' 9.630 W
17,976.0	91.60	357.10	11,520.0	6,509.2	-138.7	553,265.30	740,627.17	32° 31' 7.008 N	103° 33' 9.676 W
18,071.0	90.70	357.90	11,518.1	6,604.1	-142.9	553,360.19	740,623.02	32° 31' 7.947 N	103° 33' 9.716 W
18,166.0	90.90	357.70	11,516.7	6,699.0	-146.5	553,455.11	740,619.38	32° 31' 8.887 N	103° 33' 9.751 W
18,261.0	91.40	357.60	11,514.8	6,793.9	-150.4	553,550.01	740,615.48	32° 31' 9.826 N	103° 33' 9.788 W
18,356.0	92.70	357.80	11,511.4	6,888.8	-154.2	553,644.87	740,611.67	32° 31' 10.765 N	103° 33' 9.825 W
18,451.0	91.80	357.40	11,507.7	6,983.6	-158.2	553,739.71	740,607.70	32° 31' 11.704 N	103° 33' 9.863 W
18,547.0	89.90	357.50	11,506.3	7,079.5	-162.5	553,835.60	740,603.43	32° 31' 12.653 N	103° 33' 9.905 W
18,642.0	90.10	357.50	11,506.3	7,174.4	-166.6	553,930.51	740,599.28	32° 31' 13.592 N	103° 33' 9.945 W
18,737.0	90.70	357.70	11,505.6	7,269.3	-170.6	554,025.43	740,595.31	32° 31' 14.532 N	103° 33' 9.983 W
18,831.0	90.50	357.50	11,504.1	7,413.2	-176.6	554,169.29	740,589.28	32° 31' 15.956 N	103° 33' 10.041 W
18,931.0	90.50	357.50	11,503.7	7,463.1	-178.8	554,219.24	740,587.09	32° 31' 16.450 N	103° 33' 10.062 W
ST2 BHL - 18931.0' MD, 11503.7' TVD, 90.50° INC, 7463.1' N, -178.8' E, 7465.1' VS									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
15,507.0	11,556.6	4,043.3	-156.0	Tie into OH @ 15507' MD
18,931.0	11,503.7	7,463.1	-178.8	ST2 BHL - 18931.0' MD, 11503.7' TVD, 90.50° INC, 7463.1' N, -178.8' E, 7465.1' VS

Checked By: _____ Approved By: _____ Date: _____