

Results of Directional Survey

API number:	30-025-41110		
OGRID:		Operator:	COG OPERATING LLC
		Property:	WILD COBRA 1 STATE # 1H

surface	ULSTR:	D	01	T 19S	R 34E
				500 FNL	330 FWL

BH Loc	ULSTR:	A	01	T 19S	R 34E
14975	MD	10702.0	TVD	440 FNL	334 FEL
					4946 FWL

Top Perf/OH	ULSTR:	D	01	T 19S	R 34E
10886	MD	10640.6	TVD	484 FNL	861 FWL

Bot Perf/OH	ULSTR:	A	01	T 19S	R 34E
14890	MD	10701.0	TVD	442 FNL	412 FEL
					4868 FWL

	MD	N/S	E/W	VD
	10854	14.50	499.80	10632.6
TOP PERFS/OH	10886	16.40	530.70	10640.60
	10886	16.40	530.70	10640.60
	14827	56.10	4467.70	10699.70
BOT PERFS/OH	14890	57.99	4537.70	10700.96
	14917	58.80	4567.70	10701.50

NEXT TO LAST	14917	58.80	4567.70	10701.50
LAST READING	14975	60.50	4615.60	10702.00
TD	14975	60.50	4615.60	10702.00

Surface Location	500	FN	330	FW
Projected BHL	440	FN	4946	FW
Location of				
Top Perfs/OH	484	FN	861	FW
Bottom Perfs/OH	442	FN	4868	FW

SUMMARY of Subsurface Locations

Surface Location	D-01-19S-34E	500	FN	330	FW	Vert. Depth
Top Perfs/OH	D-01-19S-34E	484	FN	861	FW	10640.60
Bottom Perfs/OH	A-01-19S-34E	442	FN	4868	FW	10700.96
Projected TD	A-01-19S-34E	440	FN	4946	FW	10702.00

DEC 10 2013

**McVAY DRILLING COMPANY**

P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

HOBBS OCD

Well Name and Num: Wild Cobra 1 State #1H
Location: Sec 1, T19S, R34E
Operator: COG
Drilling Contractor: McVay Drilling Company

COG OPER, LL
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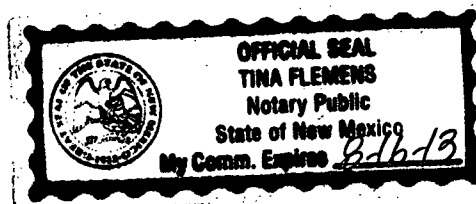
SEP 19 2013

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ARTESIA WEST

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
1.00	607	0.20	9285
1.10	1220	0.20	9763
1.40	1521	4.60	10127
1.30	1867	19.26	10223
1.70	2689	28.60	10345
1.70	3225	45.50	10536
1.40	3510	78.50	10917
1.70	3996	84.00	11045
1.30	4494	90.00	11427
1.60	4972	90.20	11903
1.70	5917	88.20	12468
1.60	6394	90.20	12942
1.40	6871	89.50	13321
0.08	7347	90.10	13890
1.10	7823	89.10	14451
1.30	8320	89.50	14917
1.60	8806		

By: Hunter CrowlSubscribed and sworn to before me this 16th day of September, 2013Tina Flemens
Notary Public, Lea County, New Mexico



A GYRO TECHNOLOGIES INC. COMPANY

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

HOBBS OCD

NOV 27 2013

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September 9, 2013

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

Attn: Kanicia Castillo

RE: **WILD COBRA 1 STATE NO. 001H**

Please find enclosed a copy of the survey from 0.00' to 9970.00' ran on the above referenced well.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 9th day of September A.D., 2013, by Keith Havelka.

Meredith Darden
Meredith Darden
Notary Public, State of Texas



Company: COG OPERATING LLC (CONCHO)

Well: WILD COBRA 1 STATE NO. 001H



Rig Name: MCVAY 7

State/County: NEW MEXICO/LEA

Latitude: 32.70, Longitude: -103.52

GRID North is 0.44 Degrees East of True North

VS-Azi: 89.49 Degrees



Depth Reference : 17'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: wildcobra1state1hgyro_int.ut

Minimum Curvature Method

Report Date/Time: 9/9/2013 / 09:53

Vaughn Energy Services

Corpus Christi, Texas

800-606-4976

Survey Engineer: Matt Gilchrist

WILD COBRA 1 STATE NO. 001H / API 30-025-41110

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HOBBS OGD

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	0.70	239.17	100.00	-0.31	-0.52	-0.52	0.61	239.17	0.70
200.00	0.96	243.01	199.99	-1.00	-1.79	-1.80	2.05	240.74	0.27
300.00	0.85	244.12	299.97	-1.71	-3.20	-3.22	3.63	241.95	0.12
400.00	0.73	245.23	399.97	-2.30	-4.45	-4.47	5.01	242.69	0.12
500.00	0.76	237.39	499.96	-2.92	-5.59	-5.61	6.31	242.39	0.11
600.00	0.79	229.54	599.95	-3.73	-6.67	-6.71	7.65	240.80	0.11
700.00	0.79	218.80	699.94	-4.71	-7.63	-7.67	8.97	238.30	0.15
800.00	0.78	208.07	799.93	-5.85	-8.38	-8.44	10.22	235.08	0.15
900.00	0.85	200.36	899.92	-7.15	-8.96	-9.03	11.47	231.42	0.13
1000.00	0.91	192.66	999.91	-8.62	-9.40	-9.47	12.75	227.45	0.14
1100.00	1.15	181.84	1099.89	-10.41	-9.60	-9.70	14.16	222.69	0.31
1200.00	1.40	171.02	1199.87	-12.62	-9.45	-9.56	15.76	216.81	0.34
1300.00	1.24	174.71	1299.84	-14.90	-9.16	-9.29	17.49	211.57	0.18
1400.00	1.08	178.40	1399.82	-16.92	-9.03	-9.18	19.18	208.09	0.17
1500.00	1.16	183.27	1499.80	-18.87	-9.06	-9.23	20.93	205.65	0.12
1600.00	1.23	188.13	1599.78	-20.94	-9.27	-9.46	22.90	203.88	0.13
1700.00	1.19	182.11	1699.76	-23.04	-9.46	-9.67	24.91	202.32	0.13
1800.00	1.16	176.10	1799.73	-25.09	-9.43	-9.65	26.80	200.60	0.13

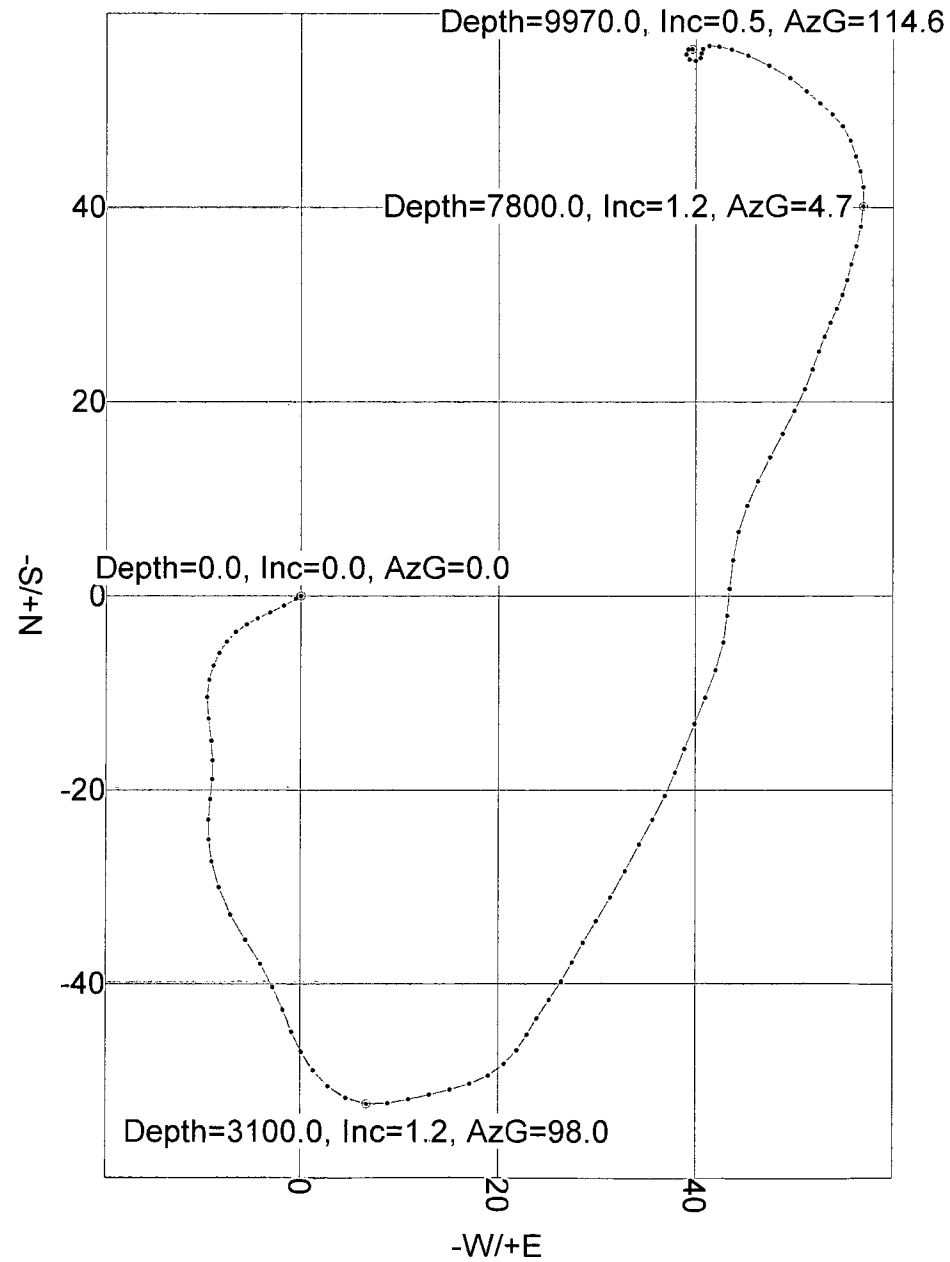
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	1.45	168.81	1899.71	-27.34	-9.12	-9.36	28.82	198.44	0.34
2000.00	1.75	161.53	1999.67	-30.03	-8.38	-8.65	31.18	195.60	0.36
2100.00	1.75	153.34	2099.62	-32.85	-7.22	-7.51	33.63	192.39	0.25
2200.00	1.75	145.15	2199.58	-35.46	-5.66	-5.98	35.91	189.07	0.25
2300.00	1.62	150.46	2299.53	-37.94	-4.10	-4.43	38.16	186.16	0.20
2400.00	1.49	155.78	2399.50	-40.35	-2.87	-3.23	40.45	184.06	0.19
2500.00	1.42	156.79	2499.46	-42.68	-1.84	-2.22	42.72	182.47	0.07
2600.00	1.36	157.80	2599.44	-44.91	-0.91	-1.31	44.92	181.16	0.07
2700.00	1.32	150.97	2699.41	-47.02	0.10	-0.32	47.02	179.88	0.16
2800.00	1.29	144.14	2799.38	-48.94	1.32	0.88	48.96	178.46	0.16
2900.00	1.26	130.52	2899.36	-50.57	2.81	2.36	50.64	176.81	0.30
3000.00	1.23	116.89	2999.33	-51.77	4.61	4.15	51.97	174.91	0.30
3100.00	1.24	98.00	3099.31	-52.41	6.65	6.18	52.83	172.77	0.41
3200.00	1.25	79.12	3199.29	-52.35	8.79	8.33	53.08	170.46	0.41
3300.00	1.24	78.16	3299.26	-51.92	10.93	10.46	53.06	168.12	0.02
3400.00	1.23	77.20	3399.24	-51.46	13.04	12.58	53.09	165.78	0.02
3500.00	1.21	74.62	3499.22	-50.94	15.10	14.65	53.14	163.49	0.06
3600.00	1.18	72.05	3599.20	-50.35	17.10	16.66	53.17	161.24	0.06
3700.00	1.17	59.41	3699.18	-49.51	18.97	18.53	53.02	159.04	0.26
3800.00	1.16	46.77	3799.15	-48.30	20.58	20.15	52.50	156.92	0.26
3900.00	1.11	37.73	3899.14	-46.84	21.91	21.49	51.71	154.93	0.19
4000.00	1.05	28.70	3999.12	-45.27	22.94	22.54	50.75	153.13	0.18
4100.00	1.21	31.80	4099.10	-43.57	23.94	23.55	49.71	151.21	0.17
4200.00	1.36	34.89	4199.07	-41.69	25.17	24.80	48.70	148.88	0.17
4300.00	1.30	31.09	4299.05	-39.74	26.44	26.09	47.74	146.36	0.11
4400.00	1.25	27.28	4399.02	-37.80	27.53	27.19	46.76	143.94	0.10
4500.00	1.41	29.63	4498.99	-35.77	28.64	28.32	45.82	141.32	0.17
4600.00	1.58	31.98	4598.96	-33.53	29.97	29.67	44.97	138.20	0.18
4700.00	1.71	29.69	4698.92	-31.07	31.44	31.16	44.20	134.66	0.15
4800.00	1.84	27.40	4798.87	-28.35	32.92	32.66	43.44	130.74	0.15
4900.00	1.72	27.79	4898.82	-25.60	34.36	34.13	42.84	126.69	0.12
5000.00	1.60	28.18	4998.78	-23.03	35.72	35.51	42.50	122.82	0.12
5100.00	1.53	24.56	5098.74	-20.58	36.93	36.75	42.28	119.13	0.12
5200.00	1.46	20.93	5198.71	-18.17	37.95	37.78	42.07	115.59	0.12
5300.00	1.55	21.52	5298.67	-15.73	38.90	38.75	41.96	112.01	0.08
5400.00	1.63	22.11	5398.64	-13.16	39.93	39.81	42.04	108.24	0.08
5500.00	1.70	20.77	5498.59	-10.46	40.98	40.89	42.30	104.31	0.08
5600.00	1.76	19.43	5598.55	-7.62	42.02	41.95	42.71	100.28	0.08
5700.00	1.65	11.96	5698.50	-4.76	42.83	42.79	43.09	96.35	0.25

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	1.54	4.49	5798.47	-2.02	43.23	43.21	43.28	92.67	0.24
5900.00	1.65	5.89	5898.43	0.74	43.49	43.49	43.49	89.02	0.12
6000.00	1.76	7.30	5998.38	3.69	43.83	43.86	43.98	85.19	0.12
6100.00	1.66	14.40	6098.34	6.62	44.38	44.44	44.87	81.52	0.23
6200.00	1.57	21.51	6198.30	9.30	45.25	45.33	46.19	78.38	0.22
6300.00	1.58	24.73	6298.26	11.83	46.33	46.43	47.82	75.67	0.09
6400.00	1.59	27.94	6398.22	14.31	47.55	47.68	49.66	73.25	0.09
6500.00	1.54	27.29	6498.19	16.72	48.82	48.96	51.60	71.09	0.05
6600.00	1.49	26.64	6598.15	19.07	50.01	50.18	53.53	69.12	0.05
6700.00	1.33	22.67	6698.12	21.30	51.04	51.23	55.31	67.34	0.18
6800.00	1.18	18.70	6798.10	23.35	51.82	52.03	56.84	65.74	0.18
6900.00	1.03	20.05	6898.08	25.17	52.46	52.68	58.18	64.37	0.15
7000.00	0.88	21.41	6998.06	26.72	53.04	53.28	59.39	63.26	0.15
7100.00	0.89	22.90	7098.05	28.14	53.62	53.87	60.56	62.31	0.03
7200.00	0.90	24.40	7198.04	29.57	54.25	54.51	61.79	61.40	0.03
7300.00	0.90	19.56	7298.03	31.03	54.84	55.11	63.01	60.50	0.08
7400.00	0.89	14.73	7398.02	32.52	55.30	55.58	64.15	59.54	0.08
7500.00	1.03	14.96	7498.00	34.14	55.73	56.03	65.36	58.50	0.14
7600.00	1.17	15.19	7597.98	36.00	56.23	56.55	66.77	57.37	0.14
7700.00	1.19	9.92	7697.96	38.01	56.67	57.01	68.24	56.15	0.11
7800.00	1.21	4.66	7797.94	40.09	56.94	57.29	69.64	54.85	0.11
7900.00	1.05	354.67	7897.92	42.06	56.94	57.31	70.79	53.55	0.25
8000.00	0.89	344.69	7997.91	43.73	56.65	57.04	71.56	52.34	0.23
8100.00	0.95	342.07	8097.89	45.26	56.19	56.59	72.15	51.15	0.07
8200.00	1.00	339.46	8197.88	46.86	55.63	56.05	72.74	49.89	0.07
8300.00	0.95	325.75	8297.86	48.37	54.86	55.29	73.14	48.60	0.24
8400.00	0.90	312.05	8397.85	49.58	53.81	54.25	73.17	47.35	0.23
8500.00	1.01	312.58	8497.84	50.70	52.58	53.03	73.04	46.04	0.12
8600.00	1.13	313.11	8597.82	51.97	51.21	51.67	72.96	44.58	0.12
8700.00	1.32	305.46	8697.80	53.31	49.55	50.03	72.78	42.91	0.26
8800.00	1.52	297.80	8797.77	54.60	47.44	47.92	72.33	40.98	0.27
8900.00	1.18	292.84	8897.74	55.62	45.31	45.80	71.74	39.17	0.36
9000.00	0.85	287.87	8997.72	56.25	43.65	44.15	71.20	37.82	0.35
9100.00	0.68	277.63	9097.71	56.55	42.37	42.87	70.66	36.84	0.22
9200.00	0.51	267.39	9197.71	56.61	41.34	41.84	70.10	36.14	0.20
9300.00	0.38	216.63	9297.71	56.32	40.70	41.20	69.49	35.85	0.40
9400.00	0.26	165.87	9397.71	55.83	40.56	41.05	69.01	36.00	0.30
9500.00	0.33	212.95	9497.70	55.37	40.46	40.95	68.57	36.15	0.24
9600.00	0.40	260.03	9597.70	55.07	39.96	40.45	68.04	35.97	0.30

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
9700.00	0.38	305.95	9697.70	55.20	39.35	39.84	67.79	35.48	0.31
9800.00	0.37	351.88	9797.70	55.72	39.03	39.52	68.03	35.01	0.30
9900.00	0.36	47.14	9897.70	56.26	39.21	39.71	68.58	34.88	0.34
9970.00	0.45	114.61	9967.69	56.29	39.63	40.13	68.84	35.14	0.65



Vaughn Energy Services
Corpus Christi, Texas
800-606-4976
Survey Engineer: Matt Gilchrist
WILD COBRA 1 STATE NO. 001H / API 30-025-41110



VES Survey Date: 09/04/2013

HOBBS OCD

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COG Operating LLC

Lea County, NM (NAD27 NME)

Wild Cobra State

1H

Original Hole

Survey: Nexus MWD

Survey Report - Geographic

12 September, 2013

NEXUS
DIRECTIONAL SOLUTIONS, L.P.



Nexus Directional Solutions L.P.

Survey Report - Geographic



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3986.0usft (Original Well Elev)
Site:	Wild Cobra State	MD Reference:	WELL @ 3986.0usft (Original Well Elev)
Well:	1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Project	Lea County, NM (NAD27 NME)		
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	Wild Cobra State		
Site Position:		Northing:	0.00 usft
From:	Map	Easting:	0.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	30° 59' 24.512 N
		Longitude:	105° 55' 44.137 W
		Grid Convergence:	-0.82 °

Well	1H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 41' 43.695 N
		Longitude:	103° 31' 14.936 W
		Ground Level:	3,967.8 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/19/13	7.33	60.58	48,683

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	89.49	

Survey Program	Date 09/11/13				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	9,970.0	Gyro Surevy (Original Hole)	Keeper	Standard Wireline Keeper ver 1.0.2	
10,065.0	14,975.0	Nexus MWD (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
9,970.0	0.45	114.61	9,967.7	56.3	39.6	617,737.02	749,999.70	32° 41' 44.249 N	103° 31' 14.467 W
10,065.0	0.50	108.00	10,062.7	56.0	40.3	617,736.74	750,000.44	32° 41' 44.246 N	103° 31' 14.459 W
10,097.0	0.80	104.40	10,094.7	55.9	40.7	617,736.64	750,000.78	32° 41' 44.245 N	103° 31' 14.454 W
10,127.0	4.60	99.30	10,124.7	55.7	42.1	617,736.39	750,002.17	32° 41' 44.242 N	103° 31' 14.438 W
10,159.0	8.70	106.80	10,156.4	54.8	45.7	617,735.48	750,005.76	32° 41' 44.233 N	103° 31' 14.396 W
10,191.0	14.30	96.90	10,187.8	53.6	51.9	617,734.31	750,012.01	32° 41' 44.221 N	103° 31' 14.323 W
10,223.0	19.60	93.10	10,218.4	52.8	61.2	617,733.54	750,021.30	32° 41' 44.213 N	103° 31' 14.215 W
10,249.0	22.10	94.70	10,242.7	52.2	70.4	617,732.91	750,030.53	32° 41' 44.206 N	103° 31' 14.107 W
10,281.0	24.50	93.30	10,272.1	51.3	83.1	617,732.03	750,043.15	32° 41' 44.196 N	103° 31' 13.959 W
10,313.0	25.70	94.60	10,301.0	50.4	96.6	617,731.09	750,056.69	32° 41' 44.186 N	103° 31' 13.801 W
10,343.0	28.60	94.30	10,327.7	49.3	110.2	617,730.03	750,070.34	32° 41' 44.174 N	103° 31' 13.641 W



Nexus Directional Solutions L.P.

Survey Report - Geographic



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3986.0usft (Original Well Elev)
Site:	Wild Cobra State	MD Reference:	WELL @ 3986.0usft (Original Well Elev)
Well:	1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,376.0	31.60	94.40	10,356.3	48.1	126.7	617,728.78	750,086.84	32° 41' 44.161 N	103° 31' 13.448 W
10,408.0	34.60	94.60	10,383.1	46.7	144.2	617,727.40	750,104.26	32° 41' 44.146 N	103° 31' 13.244 W
10,440.0	37.40	94.50	10,409.0	45.2	162.9	617,725.91	750,123.01	32° 41' 44.130 N	103° 31' 13.025 W
10,472.0	40.00	95.20	10,433.9	43.5	182.8	617,724.22	750,142.94	32° 41' 44.111 N	103° 31' 12.792 W
10,504.0	42.20	95.70	10,458.1	41.5	203.8	617,722.22	750,163.88	32° 41' 44.090 N	103° 31' 12.547 W
10,536.0	45.50	96.80	10,481.1	39.1	225.8	617,719.80	750,185.91	32° 41' 44.064 N	103° 31' 12.290 W
10,568.0	48.90	97.00	10,502.9	36.3	249.1	617,716.98	750,209.22	32° 41' 44.035 N	103° 31' 12.017 W
10,599.0	52.00	98.80	10,522.6	33.0	272.8	617,713.68	750,232.89	32° 41' 44.000 N	103° 31' 11.741 W
10,631.0	55.10	98.90	10,541.6	29.0	298.2	617,709.72	750,258.32	32° 41' 43.959 N	103° 31' 11.443 W
10,663.0	58.50	98.00	10,559.1	25.1	324.7	617,705.79	750,284.80	32° 41' 43.918 N	103° 31' 11.134 W
10,695.0	61.80	96.70	10,575.1	21.5	352.2	617,702.25	750,312.32	32° 41' 43.881 N	103° 31' 10.812 W
10,727.0	65.20	95.60	10,589.3	18.5	380.7	617,699.18	750,340.79	32° 41' 43.849 N	103° 31' 10.479 W
10,759.0	67.70	94.00	10,602.1	16.0	409.9	617,696.73	750,370.02	32° 41' 43.822 N	103° 31' 10.138 W
10,790.0	69.90	92.60	10,613.3	14.4	438.8	617,695.07	750,398.87	32° 41' 43.804 N	103° 31' 9.800 W
10,822.0	72.70	90.00	10,623.6	13.7	469.1	617,694.39	750,429.17	32° 41' 43.795 N	103° 31' 9.446 W
10,854.0	74.70	87.00	10,632.6	14.5	499.8	617,695.20	750,459.87	32° 41' 43.800 N	103° 31' 9.086 W
10,886.0	76.40	86.10	10,640.6	16.4	530.7	617,697.06	750,490.80	32° 41' 43.816 N	103° 31' 8.724 W
10,917.0	78.50	86.30	10,647.3	18.4	560.9	617,699.07	750,520.99	32° 41' 43.834 N	103° 31' 8.371 W
10,949.0	80.70	86.10	10,653.1	20.5	592.3	617,701.16	750,552.39	32° 41' 43.852 N	103° 31' 8.003 W
10,981.0	82.80	86.00	10,657.7	22.6	623.9	617,703.34	750,583.98	32° 41' 43.871 N	103° 31' 7.633 W
11,013.0	83.00	85.90	10,661.6	24.9	655.6	617,705.58	750,615.66	32° 41' 43.891 N	103° 31' 7.263 W
11,045.0	84.00	87.00	10,665.2	26.8	687.3	617,707.55	750,647.39	32° 41' 43.908 N	103° 31' 6.891 W
11,077.0	86.10	87.50	10,668.0	28.4	719.1	617,709.08	750,679.23	32° 41' 43.921 N	103° 31' 6.518 W
11,109.0	88.00	88.50	10,669.6	29.5	751.1	617,710.19	750,711.17	32° 41' 43.929 N	103° 31' 6.145 W
11,141.0	88.70	89.20	10,670.6	30.1	783.1	617,710.83	750,743.15	32° 41' 43.933 N	103° 31' 5.770 W
11,236.0	90.00	87.30	10,671.6	33.0	878.0	617,713.74	750,838.09	32° 41' 43.955 N	103° 31' 4.659 W
11,332.0	90.90	87.50	10,670.9	37.4	973.9	617,718.09	750,933.99	32° 41' 43.991 N	103° 31' 3.537 W
11,427.0	90.00	88.40	10,670.1	40.8	1,068.8	617,721.49	751,028.92	32° 41' 44.017 N	103° 31' 2.425 W
11,523.0	88.00	88.70	10,671.8	43.2	1,164.8	617,723.92	751,124.87	32° 41' 44.034 N	103° 31' 1.302 W
11,619.0	88.90	89.00	10,674.4	45.1	1,260.7	617,725.84	751,220.82	32° 41' 44.046 N	103° 31' 0.180 W
11,714.0	89.70	88.70	10,675.6	47.0	1,355.7	617,727.75	751,315.79	32° 41' 44.057 N	103° 30' 59.068 W
11,809.0	90.50	88.60	10,675.4	49.3	1,450.7	617,729.99	751,410.76	32° 41' 44.072 N	103° 30' 57.957 W
11,903.0	90.20	90.30	10,674.8	50.2	1,544.7	617,730.89	751,504.75	32° 41' 44.074 N	103° 30' 56.857 W
11,995.0	90.90	90.40	10,674.0	49.6	1,636.7	617,730.33	751,596.75	32° 41' 44.061 N	103° 30' 55.780 W
12,089.0	89.80	90.70	10,673.4	48.7	1,730.6	617,729.43	751,690.74	32° 41' 44.045 N	103° 30' 54.681 W
12,183.0	88.40	91.30	10,674.9	47.1	1,824.6	617,727.79	751,784.71	32° 41' 44.022 N	103° 30' 53.581 W
12,278.0	89.20	90.90	10,676.8	45.3	1,919.6	617,725.96	751,879.67	32° 41' 43.996 N	103° 30' 52.470 W
12,373.0	87.30	90.70	10,679.7	43.9	2,014.5	617,724.64	751,974.61	32° 41' 43.976 N	103° 30' 51.360 W
12,468.0	88.20	90.90	10,683.5	42.6	2,109.4	617,723.31	752,069.53	32° 41' 43.956 N	103° 30' 50.249 W
12,563.0	89.00	90.80	10,685.8	41.2	2,204.4	617,721.90	752,164.49	32° 41' 43.934 N	103° 30' 49.138 W
12,658.0	92.00	90.60	10,685.0	40.0	2,299.4	617,720.74	752,259.47	32° 41' 43.916 N	103° 30' 48.027 W
12,753.0	90.80	89.70	10,682.6	39.8	2,394.3	617,720.49	752,354.44	32° 41' 43.906 N	103° 30' 46.916 W
12,848.0	91.60	89.50	10,680.7	40.5	2,489.3	617,721.16	752,449.41	32° 41' 43.905 N	103° 30' 45.804 W
12,942.0	90.20	88.40	10,679.2	42.2	2,583.3	617,722.88	752,543.38	32° 41' 43.915 N	103° 30' 44.704 W
13,037.0	88.70	88.40	10,680.1	44.8	2,678.2	617,725.53	752,638.34	32° 41' 43.934 N	103° 30' 43.593 W
13,132.0	89.90	88.30	10,681.3	47.6	2,773.2	617,728.27	752,733.29	32° 41' 43.954 N	103° 30' 42.482 W
13,226.0	91.00	88.50	10,680.5	50.2	2,867.2	617,730.89	752,827.25	32° 41' 43.973 N	103° 30' 41.382 W
13,321.0	89.50	88.60	10,680.1	52.6	2,962.1	617,733.29	752,922.21	32° 41' 43.989 N	103° 30' 40.271 W
13,416.0	87.20	89.80	10,682.8	53.9	3,057.1	617,734.62	753,017.16	32° 41' 43.995 N	103° 30' 39.160 W
13,511.0	88.10	90.20	10,686.7	53.9	3,152.0	617,734.62	753,112.08	32° 41' 43.988 N	103° 30' 38.049 W
13,606.0	89.50	90.00	10,688.7	53.8	3,247.0	617,734.46	753,207.05	32° 41' 43.979 N	103° 30' 36.938 W
13,700.0	88.50	90.60	10,690.4	53.3	3,340.9	617,733.96	753,301.04	32° 41' 43.967 N	103° 30' 35.838 W
13,795.0	89.20	90.70	10,692.3	52.2	3,435.9	617,732.89	753,396.01	32° 41' 43.949 N	103° 30' 34.727 W
13,890.0	90.10	90.40	10,692.8	51.3	3,530.9	617,731.97	753,491.00	32° 41' 43.932 N	103° 30' 33.615 W
13,984.0	88.70	90.70	10,693.8	50.4	3,624.9	617,731.07	753,584.99	32° 41' 43.916 N	103° 30' 32.516 W



Nexus Directional Solutions L.P.

Survey Report - Geographic



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3986.0usft (Original Well Elev)
Site:	Wild Cobra State	MD Reference:	WELL @ 3986.0usft (Original Well Elev)
Well:	1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,078.0	89.30	90.60	10,695.5	49.3	3,718.9	617,730.01	753,678.97	32° 41' 43.899 N	103° 30' 31.416 W
14,170.0	90.00	90.30	10,696.0	48.6	3,810.9	617,729.28	753,770.97	32° 41' 43.884 N	103° 30' 30.340 W
14,264.0	90.30	90.00	10,695.8	48.3	3,904.9	617,729.04	753,864.96	32° 41' 43.875 N	103° 30' 29.240 W
14,358.0	89.10	89.90	10,696.3	48.4	3,998.9	617,729.12	753,958.96	32° 41' 43.868 N	103° 30' 28.140 W
14,451.0	89.90	89.60	10,697.1	48.8	4,091.9	617,729.52	754,051.96	32° 41' 43.865 N	103° 30' 27.052 W
14,546.0	90.90	89.50	10,696.4	49.6	4,186.9	617,730.27	754,146.95	32° 41' 43.865 N	103° 30' 25.940 W
14,639.0	90.00	88.70	10,695.7	51.0	4,279.8	617,731.73	754,239.93	32° 41' 43.872 N	103° 30' 24.852 W
14,732.0	88.40	88.40	10,697.0	53.4	4,372.8	617,734.08	754,332.89	32° 41' 43.889 N	103° 30' 23.764 W
14,827.0	88.30	88.30	10,699.7	56.1	4,467.7	617,736.82	754,427.81	32° 41' 43.908 N	103° 30' 22.653 W
14,917.0	89.50	88.30	10,701.5	58.8	4,557.7	617,739.49	754,517.75	32° 41' 43.928 N	103° 30' 21.601 W
14,975.0	89.50	88.30	10,702.0	60.5	4,615.6	617,741.21	754,575.73	32° 41' 43.940 N	103° 30' 20.922 W
PBHL Wild Cobra State #1H									

Checked By: _____	Approved By: _____	Date: _____
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