

Results of Directional Survey

API number:	30-025-41334		
OGRID:		Operator:	COG OPERATING LLC
		Property:	ROY BATTY FEDERAL COM # 4H

surface	ULSTR:	P	11	T	24S	R	33E
				190	FSL	380	FEL

BH Loc	ULSTR:	A	11	T	24S	R	33E
15556	MD	10899.4	TVD	348	FNL	408	FEL
				4932	FSL		

Top Perf/OH	ULSTR:	P	11	T	24S	R	33E
11278	MD	11032.5	TVD	659	FSL	356	FEL

Bot Perf/OH	ULSTR:	A	11	T	24S	R	33E
15350	MD	10910.6	TVD	554	FNL	400	FEL
				4726	FSL		

	MD	N/S	E/W	VD
	11277	468.00	24.10	11032.4
TOP PERFS/OH	11278	468.99	24.05	11032.51
	11307	497.70	22.60	11035.80
	15304	4490.10	-18.00	10913.00
BOT PERFS/OH	15350	4536.00	-19.60	10910.63
	15399	4584.90	-21.30	10908.10

NEXT TO LAST	15493	4678.70	-24.90	10902.90
LAST READING	15556	4741.50	-27.50	10899.40
TD	15556	4741.50	-27.50	10899.40

Surface Location	190	FS	380	FE
Projected BHL	4932	FS	408	FE
Location of				
Top Perfs/OH	659	FS	356	FE
Bottom Perfs/OH	4726	FS	400	FE

SUMMARY of Subsurface Locations

Surface Location	P-11-24S-33E	190	FS	380	FE	Vert. Depth
Top Perfs/OH	P-11-24S-33E	659	FS	356	FE	11032.51
Bottom Perfs/OH	A-11-24S-33E	4726	FS	400	FE	10910.63
Projected TD	A-11-24S-33E	4932	FS	408	FE	10899.40

MAY 28 2014



PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

HOBBS OCD

MAY 19 2014

RECEIVED

January 27, 2014

COG, LLC
One Concho Center
600 W. Illinois Ave.
Midland, TX 79701

RE: Roy Batty Federal Com #4H
190' FSL & 380' FEL
Sec. 11, T24S, R33E
Lea County, New Mexico

Dear Sir,

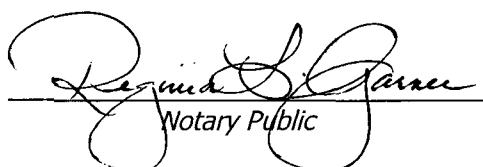
The attached is the Deviation Survey for the above captioned well.

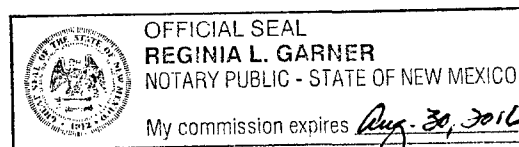
Very truly yours,


Eddie LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 27th day of January, 2014.


Notary Public

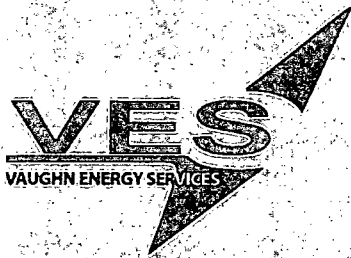


Roy Batty Fed Com #4H

Date	Depth	Deviation	Direction	TVD	Horiz
12/26/2013	274	0.40	0.00	0.00	0.00
12/28/2013	573	0.20	0.00	0.00	0.00
12/28/2013	882	0.50	0.00	0.00	0.00
12/28/2013	1102	0.20	0.00	0.00	0.00
12/29/2013	1376	1.00	0.00	0.00	0.00
12/30/2013	1461	0.60	0.00	0.00	0.00
12/30/2013	1839	1.00	0.00	0.00	0.00
12/30/2013	2217	0.50	0.00	0.00	0.00
12/31/2013	2971	0.30	0.00	0.00	0.00
12/31/2013	3349	0.40	0.00	0.00	0.00
12/31/2013	3774	0.60	0.00	0.00	0.00
12/31/2013	4102	0.60	0.00	0.00	0.00
12/31/2013	4292	0.80	0.00	0.00	0.00
1/1/2014	4481	1.60	0.00	0.00	0.00
1/1/2014	4669	2.40	0.00	0.00	0.00
1/1/2014	4858	1.90	0.00	0.00	0.00
1/1/2014	4953	1.50	0.00	0.00	0.00
1/1/2014	5048	1.00	0.00	0.00	0.00
1/1/2014	5233	0.80	0.00	0.00	0.00
1/3/2014	5378	0.60	0.00	0.00	0.00
1/3/2014	5821	1.40	0.00	0.00	0.00
1/3/2014	6073	0.70	0.00	0.00	0.00
1/4/2014	6577	0.80	0.00	0.00	0.00
1/4/2014	7049	0.50	0.00	0.00	0.00
1/5/2014	7832	0.80	0.00	0.00	0.00
1/5/2014	8135	1.30	0.00	0.00	0.00
1/5/2014	8356	1.40	0.00	0.00	0.00
1/6/2014	8880	0.60	0.00	0.00	0.00
1/7/2014	9300	0.80	0.00	0.00	0.00
1/7/2014	9550	0.50	0.00	0.00	0.00
1/7/2014	9802	2.20	0.00	0.00	0.00
1/8/2014	10074	3.30	0.00	0.00	0.00
1/8/2014	10136	3.20	0.00	0.00	0.00
1/8/2014	10200	2.70	0.00	0.00	0.00
1/8/2014	10326	2.10	0.00	0.00	0.00
1/8/2014	10510	2.50	0.00	0.00	0.00
1/10/2014	10554	2.90	336.20	0.00	0.00
1/10/2014	10585	3.60	340.80	0.00	0.00
1/10/2014	10617	7.60	359.80	0.00	0.00
1/10/2014	10648	12.80	6.10	0.00	0.00
1/10/2014	10711	20.90	8.10	0.00	0.00
1/10/2014	10742	23.60	6.90	0.00	0.00
1/10/2014	10805	30.20	3.50	0.00	0.00

Date	Depth	Deviation	Direction	TVD	Horiz
1/10/2014	10868	37.70	2.40	0.00	0.00
1/11/2014	10962	49.10	2.20	0.00	0.00
1/11/2014	10994	52.00	1.20	0.00	0.00
1/11/2014	11025	56.30	358.90	0.00	0.00
1/11/2014	11057	60.70	356.70	0.00	0.00
1/11/2014	11088	63.80	356.50	0.00	0.00
1/11/2014	11151	71.80	356.40	0.00	0.00
1/11/2014	11178	74.40	356.70	0.00	0.00
1/11/2014	11246	79.80	356.70	0.00	0.00
1/11/2014	11277	82.50	357.00	0.00	0.00
1/14/2014	11307	84.30	357.20	11035.00	497.67
1/15/2014	11343	87.50	358.70	0.00	0.00
1/15/2014	11375	90.30	354.30	0.00	0.00
1/15/2014	11437	91.20	358.30	0.00	0.00
1/15/2014	11626	90.20	358.80	0.00	0.00
1/15/2014	11720	87.40	357.80	0.00	0.00
1/16/2014	11814	87.60	357.20	0.00	0.00
1/16/2014	11908	89.10	358.10	0.00	0.00
1/16/2014	12003	89.10	358.00	0.00	0.00
1/16/2014	12097	89.70	359.70	0.00	0.00
1/16/2014	12192	89.00	359.40	0.00	0.00
1/16/2014	12286	90.10	359.40	0.00	0.00
1/16/2014	12380	91.80	359.30	11048.90	1569.92
1/16/2014	12474	92.30	359.40	11045.56	1665.83
1/16/2014	12568	92.40	359.20	11041.71	1755.78
1/17/2014	12756	92.50	358.70	0.00	0.00
1/17/2014	12851	91.60	358.10	0.00	0.00
1/17/2014	12945	92.00	358.10	0.00	0.00
1/17/2014	13039	92.60	359.80	0.00	0.00
1/17/2014	13134	92.00	359.80	11020.47	2323.31
1/18/2014	13323	92.70	1.60	11012.64	2512.40
1/19/2014	13471	92.70	0.90	0.00	0.00
1/19/2014	13511	93.00	0.80	11003.00	2699.00
1/19/2014	13606	93.80	1.10	10997.91	2794.54
1/19/2014	13700	95.20	1.20	10990.00	2888.00
1/20/2014	13889	92.20	0.10	0.00	0.00
1/20/2014	13983	92.70	0.02	0.00	0.00
1/20/2014	14077	93.00	0.20	0.00	0.00
1/21/2014	14172	93.10	1.00	0.00	0.00
1/22/2014	14361	93.80	0.50	10956.60	3548.51
1/22/2014	14645	93.50	359.40	0.00	0.00
1/22/2014	14738	92.20	359.60	0.00	0.00
1/22/2014	14927	92.70	358.90	0.00	0.00
1/22/2014	15021	92.10	357.90	0.00	0.00
1/22/2014	15115	92.10	357.80	0.00	0.00

Date	Depth	Deviation	Direction	TVD	Horiz
1/23/2014	15210	92.50	357.90	10917.30	4396.14
1/23/2014	15304	92.80	358.00	10913.00	4490.00
1/23/2014	15493	93.20	357.60	0.00	0.00



A GYRO TECHNOLOGIES, INC. COMPANY

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

January 23, 2014

HOBBS OCD

MAY 19 2014

RECEIVED

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

Attn: Kanicia Castillo

Re: Roy Batty Federal Com No 004H

Please find enclosed a copy of the survey from 0' to 10,480' ran on the above referenced well.

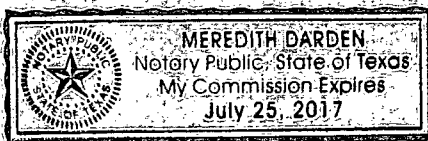
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 23rd day of January A.D., 2014, by Keith Havelka.



Meredith Darden
Notary Public, State of Texas

Company: COG Operating - Concho
Lease/Well: Roy Batty Federal Com/No 004H



Rig Name: Silver Oak #12
State/County: Texas/Lea
Latitude: 32.22, Longitude: -103.54
GRID North is 0.43 Degrees East of True North
VS-Azi: 0.00 Degrees



RKB : 18 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 1/23/2014 / 09:11

Vaughn Energy Services
Fort Worth ,Tx
817- 741-3610
Surveyor: Jason Wilson
Roy Batty Federal Com No 004H / API 30-025-41334

HOBBS OCD

MAY 19 2014

RECEIVED

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	0.50	306.11	100.00	0.25	-0.35	0.25	0.43	306.11	0.50
200.00	0.39	277.55	200.00	0.55	-1.03	0.55	1.17	298.22	0.24
300.00	0.30	275.38	299.99	0.62	-1.62	0.62	1.74	290.98	0.09
400.00	0.34	271.36	399.99	0.65	-2.17	0.65	2.27	286.74	0.04
500.00	0.26	266.01	499.99	0.65	-2.69	0.65	2.77	283.48	0.08
600.00	0.35	321.76	599.99	0.87	-3.10	0.87	3.22	285.61	0.29
700.00	0.34	319.35	699.99	1.33	-3.48	1.33	3.73	290.90	0.01
800.00	0.34	331.51	799.99	1.82	-3.82	1.82	4.23	295.43	0.07
900.00	0.17	332.77	899.99	2.20	-4.03	2.20	4.59	298.69	0.17
1000.00	0.14	309.98	999.99	2.41	-4.18	2.41	4.83	299.94	0.07
1100.00	0.20	304.94	1099.98	2.59	-4.42	2.59	5.12	300.35	0.07
1200.00	0.30	310.08	1199.98	2.86	-4.77	2.86	5.56	300.96	0.10
1300.00	0.34	302.42	1299.98	3.19	-5.22	3.19	6.12	301.42	0.05
1400.00	0.39	303.55	1399.98	3.53	-5.75	3.53	6.75	301.57	0.05
1500.00	0.64	313.36	1499.98	4.10	-6.44	4.10	7.64	302.52	0.27
1600.00	1.03	307.95	1599.97	5.04	-7.56	5.04	9.08	303.72	0.40
1700.00	0.81	305.96	1699.95	6.01	-8.84	6.01	10.69	304.22	0.22
1800.00	0.83	317.15	1799.94	6.96	-9.90	6.96	12.10	305.09	0.16

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	0.85	319.33	1899.93	8.05	-10.88	8.05	13.54	306.50	0.04
2000.00	0.88	319.79	1999.92	9.20	-11.86	9.20	15.01	307.81	0.03
2100.00	0.56	324.25	2099.91	10.19	-12.64	10.19	16.24	308.86	0.33
2200.00	0.45	330.13	2199.91	10.92	-13.12	10.92	17.08	309.77	0.12
2300.00	0.43	315.96	2299.91	11.53	-13.58	11.53	17.81	310.34	0.11
2400.00	0.49	318.45	2399.90	12.12	-14.12	12.12	18.60	310.64	0.07
2500.00	0.52	319.76	2499.90	12.78	-14.70	12.78	19.48	311.02	0.04
2600.00	0.58	328.44	2599.89	13.56	-15.25	13.56	20.41	311.64	0.10
2700.00	0.57	323.35	2699.89	14.39	-15.82	14.39	21.38	312.30	0.05
2800.00	0.52	344.23	2799.88	15.23	-16.24	15.23	22.26	313.17	0.20
2900.00	0.28	348.07	2899.88	15.91	-16.41	15.91	22.86	314.11	0.24
3000.00	0.25	330.60	2999.88	16.34	-16.57	16.34	23.27	314.60	0.09
3100.00	0.38	347.45	3099.88	16.86	-16.75	16.86	23.77	315.18	0.16
3200.00	0.25	15.39	3199.88	17.39	-16.76	17.39	24.16	316.05	0.20
3300.00	0.48	22.82	3299.88	17.99	-16.54	17.99	24.44	317.40	0.23
3400.00	0.38	18.04	3399.87	18.69	-16.28	18.69	24.79	318.95	0.10
3500.00	0.50	21.47	3499.87	19.42	-16.01	19.42	25.17	320.49	0.12
3600.00	0.49	10.89	3599.87	20.25	-15.77	20.25	25.67	322.09	0.09
3700.00	0.46	26.30	3699.86	21.04	-15.51	21.04	26.14	323.59	0.13
3800.00	0.54	21.66	3799.86	21.83	-15.16	21.83	26.58	325.23	0.09
3900.00	0.48	30.77	3899.85	22.63	-14.77	22.63	27.03	326.87	0.10
4000.00	0.12	179.89	3999.85	22.89	-14.56	22.89	27.13	327.55	0.58
4100.00	0.70	164.68	4099.85	22.20	-14.40	22.20	26.46	327.04	0.59
4200.00	0.76	169.89	4199.84	20.95	-14.12	20.95	25.26	326.03	0.09
4300.00	0.88	160.18	4299.83	19.58	-13.74	19.58	23.92	324.94	0.18
4400.00	1.15	165.10	4399.82	17.89	-13.22	17.89	22.25	323.53	0.28
4500.00	1.72	146.71	4499.79	15.67	-12.14	15.67	19.82	322.23	0.73
4600.00	2.21	135.80	4599.73	13.03	-9.97	13.03	16.40	322.57	0.61
4700.00	2.48	134.96	4699.64	10.12	-7.10	10.12	12.36	324.96	0.27
4800.00	2.11	121.70	4799.56	7.62	-4.00	7.62	8.61	332.30	0.64
4900.00	1.80	116.21	4899.50	5.96	-1.03	5.96	6.05	350.22	0.36
5000.00	1.42	119.47	4999.46	4.66	1.46	4.66	4.88	17.45	0.39
5100.00	1.04	118.93	5099.44	3.61	3.34	3.61	4.92	42.82	0.38
5200.00	0.88	135.46	5199.43	2.62	4.68	2.62	5.36	60.78	0.32
5300.00	0.71	119.58	5299.42	1.76	5.76	1.76	6.02	72.98	0.28
5400.00	0.67	110.27	5399.41	1.26	6.84	1.26	6.96	79.60	0.12
5500.00	0.58	129.29	5499.41	0.73	7.78	0.73	7.82	84.63	0.22
5600.00	0.66	113.81	5599.40	0.18	8.70	0.18	8.70	88.82	0.18
5700.00	0.59	120.34	5699.39	-0.31	9.67	-0.31	9.68	91.86	0.10

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	0.86	118.99	5799.39	-0.94	10.77	-0.94	10.81	94.97	0.26
5900.00	0.79	101.69	5899.38	-1.44	12.09	-1.44	12.18	96.78	0.26
6000.00	0.93	123.38	5999.36	-2.02	13.44	-2.02	13.59	98.55	0.35
6100.00	0.76	106.30	6099.35	-2.66	14.76	-2.66	15.00	100.20	0.30
6200.00	0.93	97.84	6199.34	-2.95	16.20	-2.95	16.47	100.33	0.21
6300.00	0.77	94.92	6299.33	-3.12	17.67	-3.12	17.94	100.02	0.16
6400.00	0.92	85.40	6399.32	-3.11	19.14	-3.11	19.39	99.24	0.21
6500.00	0.66	88.19	6499.31	-3.03	20.51	-3.03	20.73	98.41	0.27
6600.00	0.86	81.94	6599.30	-2.91	21.82	-2.91	22.02	97.59	0.22
6700.00	0.76	77.92	6699.29	-2.66	23.21	-2.66	23.37	96.55	0.11
6800.00	0.65	80.47	6799.28	-2.43	24.42	-2.43	24.54	95.69	0.11
6900.00	0.76	63.29	6899.28	-2.04	25.57	-2.04	25.65	94.56	0.24
7000.00	0.57	48.95	6999.27	-1.42	26.54	-1.42	26.57	93.06	0.25
7100.00	0.49	72.16	7099.27	-0.96	27.32	-0.96	27.33	92.01	0.23
7200.00	0.52	58.60	7199.26	-0.60	28.11	-0.60	28.11	91.21	0.12
7300.00	0.37	95.41	7299.26	-0.39	28.81	-0.39	28.82	90.78	0.31
7400.00	0.25	96.96	7399.26	-0.45	29.36	-0.45	29.36	90.88	0.12
7500.00	0.64	136.13	7499.26	-0.88	29.96	-0.88	29.98	91.68	0.48
7600.00	1.07	156.44	7599.24	-2.14	30.72	-2.14	30.80	93.98	0.52
7700.00	1.00	154.29	7699.23	-3.78	31.48	-3.78	31.70	96.85	0.08
7800.00	1.02	141.15	7799.21	-5.26	32.41	-5.26	32.84	99.22	0.23
7900.00	1.05	146.00	7899.20	-6.71	33.49	-6.71	34.15	101.34	0.09
8000.00	1.09	134.40	7999.18	-8.14	34.68	-8.14	35.62	103.21	0.22
8100.00	1.30	119.52	8099.16	-9.37	36.35	-9.37	37.53	104.45	0.38
8200.00	1.21	121.28	8199.13	-10.48	38.24	-10.48	39.65	105.32	0.10
8300.00	1.28	114.27	8299.11	-11.48	40.16	-11.48	41.77	105.96	0.17
8400.00	1.18	122.83	8399.09	-12.50	42.04	-12.50	43.86	106.56	0.21
8500.00	1.07	109.59	8499.07	-13.37	43.79	-13.37	45.78	106.98	0.28
8600.00	1.08	103.79	8599.05	-13.91	45.58	-13.91	47.66	106.97	0.11
8700.00	1.15	106.03	8699.03	-14.41	47.46	-14.41	49.60	106.89	0.08
8800.00	0.94	104.17	8799.01	-14.89	49.22	-14.89	51.42	106.83	0.21
8900.00	0.66	101.76	8899.00	-15.20	50.58	-15.20	52.81	106.73	0.29
9000.00	0.58	103.14	8999.00	-15.44	51.63	-15.44	53.89	106.64	0.07
9100.00	0.60	115.32	9098.99	-15.77	52.60	-15.77	54.92	106.69	0.13
9200.00	0.68	126.14	9198.99	-16.35	53.55	-16.35	55.99	106.98	0.15
9300.00	0.75	110.08	9298.98	-16.92	54.65	-16.92	57.21	107.21	0.21
9400.00	0.63	102.98	9398.97	-17.27	55.80	-17.27	58.41	107.20	0.14
9500.00	0.49	325.08	9498.97	-17.05	56.09	-17.05	58.63	106.90	1.05
9600.00	0.74	321.94	9598.96	-16.19	55.45	-16.19	57.77	106.28	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
9700.00	1.20	305.68	9698.95	-15.07	54.21	-15.07	56.26	105.54	0.54
9800.00	2.16	310.33	9798.91	-13.24	51.92	-13.24	53.58	104.31	0.97
9900.00	3.11	304.45	9898.80	-10.49	48.25	-10.49	49.38	102.27	0.98
10000.00	3.66	305.68	9998.62	-7.10	43.43	-7.10	44.00	99.29	0.56
10100.00	3.44	314.36	10098.43	-3.14	38.69	-3.14	38.82	94.64	0.58
10200.00	3.05	320.47	10198.27	1.01	34.85	1.01	34.87	88.35	0.52
10300.00	2.59	324.93	10298.15	4.91	31.86	4.91	32.23	81.23	0.51
10400.00	2.36	329.44	10398.06	8.54	29.51	8.54	30.72	73.86	0.30
10480.00	2.64	344.93	10477.98	11.74	28.19	11.74	30.54	67.39	0.91



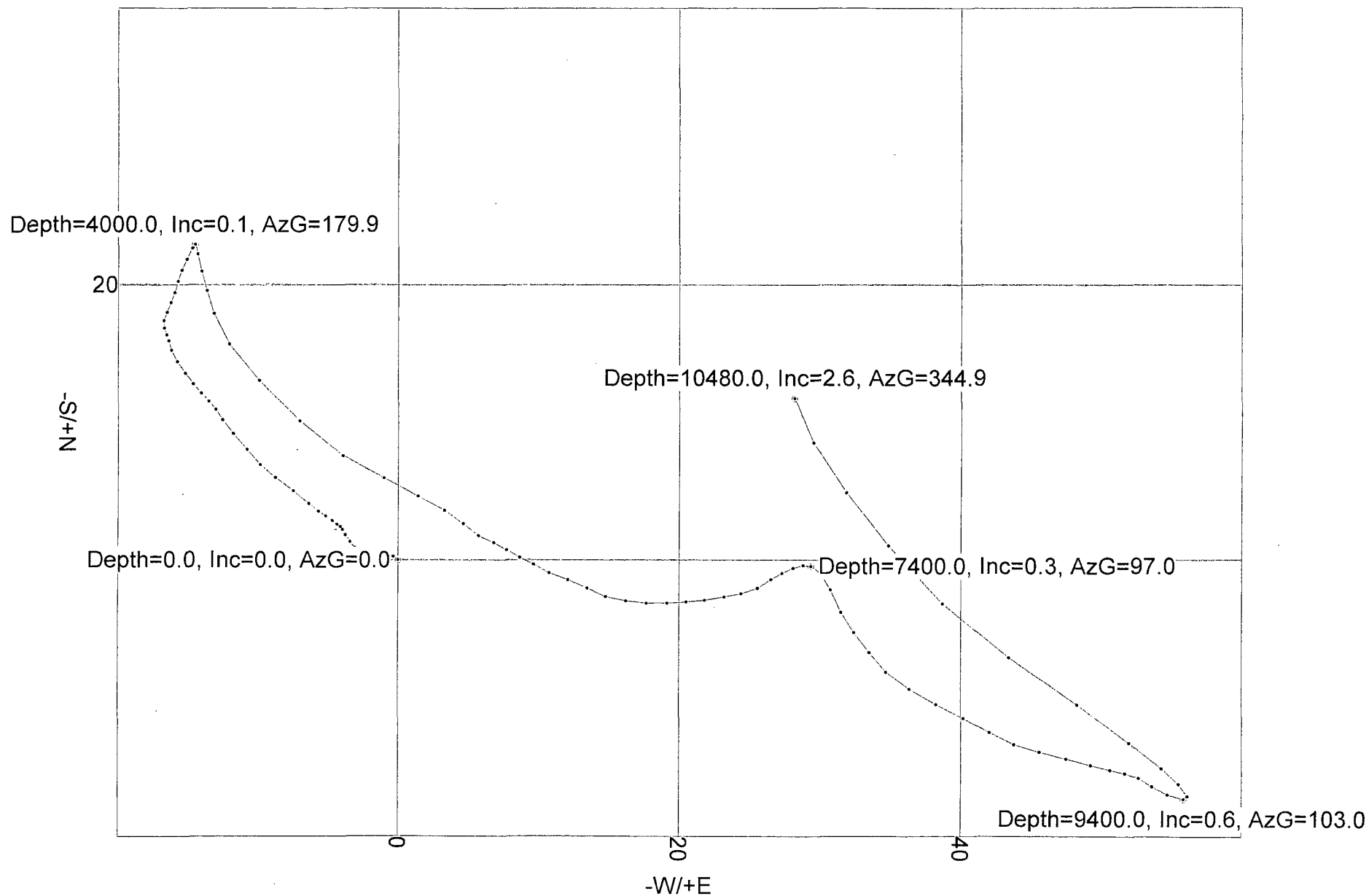
Vaughn Energy Services

Fort Worth, Tx

817-741-3610

Surveyor: Jason Wilson

Roy Batty Federal Com No 004H / API 30-025-41334



VES Survey Date: 01/08/2014

COG Production LLC

Lea County, NM (NAD27 NME)

Roy Batty Fed Com

4H

OH

Design: OH

Standard Survey Report

27 January, 2014

Nexus Directional Solutions, LP

Survey Report

Company:	COG Production LLC	Local Co-ordinate Reference:	Well 4H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3623.4usft (Original Well Elev)
Site:	Roy Batty Fed Com	MD Reference:	WELL @ 3623.4usft (Original Well Elev)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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:	Roy Batty Fed Com			
Site Position:		Northing:	446,694.70 usft	Latitude: 32° 13' 32.331 N
From:	Map	Easting:	742,531.00 usft	Longitude: 103° 32' 56.565 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.42 °

Well:	4H			
Well Position	+N/-S	0.0 usft	Northing:	446,583.30 usft
	+E/-W	0.0 usft	Easting:	746,765.80 usft
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft
			Ground Level:	3,605.4 usft

Wellbore:	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	12/20/2013	7.26	60.13	48,368

Design:	OH			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	359.48

Survey Program	Date	1/27/2014		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.0	10,480.0	Gyro Surveys (OH)	Gyro	Gyro Survey
10,554.0	15,556.0	Nexus MWD Surveys (OH)	MWD	MWD - Standard

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate	
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.50	306.11	100.0	0.3	-0.4	0.3	0.50	0.50	0.00	
200.0	0.39	277.55	200.0	0.6	-1.0	0.6	0.24	-0.11	-28.56	
300.0	0.30	275.38	300.0	0.6	-1.6	0.6	0.09	-0.09	-2.17	
400.0	0.34	271.36	400.0	0.7	-2.2	0.7	0.05	0.04	-4.02	
500.0	0.26	266.01	500.0	0.7	-2.7	0.7	0.08	-0.08	-5.35	
600.0	0.35	321.76	600.0	0.9	-3.1	0.9	0.30	0.09	55.75	
700.0	0.34	319.35	700.0	1.3	-3.5	1.4	0.02	-0.01	-2.41	
800.0	0.34	331.51	800.0	1.8	-3.9	1.9	0.07	0.00	12.16	
900.0	0.17	332.77	900.0	2.2	-4.1	2.3	0.17	-0.17	1.26	

Nexus Directional Solutions, LP

Survey Report

Company:	COG Production LLC	Local Co-ordinate Reference:	Well 4H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3623.4usft (Original Well Elev)
Site:	Roy Batty Fed Com	MD Reference:	WELL @ 3623.4usft (Original Well Elev)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,000.0	0.14	309.98	1,000.0	2.4	-4.2	2.5	0.07	-0.03	-22.79	
1,100.0	0.20	304.94	1,100.0	2.6	-4.5	2.6	0.06	0.06	-5.04	
1,200.0	0.30	310.08	1,200.0	2.9	-4.8	2.9	0.10	0.10	5.14	
1,300.0	0.34	302.42	1,300.0	3.2	-5.3	3.3	0.06	0.04	-7.66	
1,400.0	0.39	303.55	1,400.0	3.6	-5.8	3.6	0.05	0.05	1.13	
1,500.0	0.64	313.36	1,500.0	4.1	-6.5	4.2	0.26	0.25	9.81	
1,600.0	1.03	307.95	1,600.0	5.1	-7.6	5.1	0.40	0.39	-5.41	
1,700.0	0.81	305.96	1,700.0	6.0	-8.9	6.1	0.22	-0.22	-1.99	
1,800.0	0.83	317.15	1,799.9	7.0	-9.9	7.1	0.16	0.02	11.19	
1,900.0	0.85	319.33	1,899.9	8.1	-10.9	8.2	0.04	0.02	2.18	
2,000.0	0.88	319.79	1,999.9	9.2	-11.9	9.3	0.03	0.03	0.46	
2,100.0	0.56	324.25	2,099.9	10.2	-12.7	10.3	0.32	-0.32	4.46	
2,200.0	0.45	330.13	2,199.9	10.9	-13.2	11.1	0.12	-0.11	5.88	
2,300.0	0.43	315.96	2,299.9	11.5	-13.6	11.7	0.11	-0.02	-14.17	
2,400.0	0.49	318.45	2,399.9	12.1	-14.2	12.3	0.06	0.06	2.49	
2,500.0	0.52	319.76	2,499.9	12.8	-14.7	12.9	0.03	0.03	1.31	
2,600.0	0.58	328.44	2,599.9	13.6	-15.3	13.7	0.10	0.06	8.68	
2,700.0	0.57	323.35	2,699.9	14.4	-15.9	14.6	0.05	-0.01	-5.09	
2,800.0	0.52	344.23	2,799.9	15.2	-16.3	15.4	0.20	-0.05	20.88	
2,900.0	0.28	348.07	2,899.9	15.9	-16.4	16.1	0.24	-0.24	3.84	
3,000.0	0.25	330.60	2,999.9	16.4	-16.6	16.5	0.09	-0.03	-17.47	
3,100.0	0.38	347.45	3,099.9	16.9	-16.8	17.0	0.16	0.13	16.85	
3,200.0	0.25	15.39	3,199.9	17.4	-16.8	17.6	0.20	-0.13	27.94	
3,300.0	0.48	22.82	3,299.9	18.0	-16.6	18.1	0.23	0.23	7.43	
3,400.0	0.38	18.04	3,399.9	18.7	-16.3	18.8	0.11	-0.10	-4.78	
3,500.0	0.50	21.47	3,499.9	19.4	-16.1	19.6	0.12	0.12	3.43	
3,600.0	0.49	10.89	3,599.9	20.2	-15.8	20.4	0.09	-0.01	-10.58	
3,700.0	0.46	26.30	3,699.9	21.0	-15.6	21.2	0.13	-0.03	15.41	
3,800.0	0.54	21.66	3,799.9	21.8	-15.2	22.0	0.09	0.08	-4.64	
3,900.0	0.48	30.77	3,899.9	22.6	-14.8	22.8	0.10	-0.06	9.11	
4,000.0	0.12	179.89	3,999.9	22.9	-14.6	23.0	0.59	-0.36	149.12	
4,100.0	0.70	164.68	4,099.9	22.2	-14.4	22.3	0.59	0.58	-15.21	
4,200.0	0.76	169.89	4,199.8	20.9	-14.2	21.1	0.09	0.06	5.21	
4,300.0	0.88	160.18	4,299.8	19.6	-13.8	19.7	0.18	0.12	-9.71	
4,400.0	1.15	165.10	4,399.8	17.9	-13.3	18.0	0.28	0.27	4.92	
4,500.0	1.72	146.71	4,499.8	15.6	-12.2	15.8	0.73	0.57	-18.39	
4,600.0	2.21	135.80	4,599.7	13.0	-10.0	13.1	0.61	0.49	-10.91	
4,700.0	2.48	134.96	4,699.6	10.1	-7.1	10.2	0.27	0.27	-0.84	
4,800.0	2.11	121.70	4,799.6	7.6	-4.0	7.6	0.64	-0.37	-13.26	
4,900.0	1.80	116.21	4,899.5	5.9	-1.1	6.0	0.36	-0.31	-5.49	
5,000.0	1.42	119.47	4,999.5	4.6	1.4	4.6	0.39	-0.38	3.26	
5,100.0	1.04	118.93	5,099.4	3.6	3.3	3.6	0.38	-0.38	-0.54	
5,200.0	0.88	135.46	5,199.4	2.6	4.6	2.6	0.32	-0.16	16.53	

Nexus Directional Solutions, LP

Survey Report

Company:	COG Production LLC	Local Co-ordinate Reference:	Well 4H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3623.4usft (Original Well Elev)
Site:	Roy Batty Fed Corn	MD Reference:	WELL @ 3623.4usft (Original Well Elev)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	0.71	119.58	5,299.4	1.7	5.7	1.7	0.28	-0.17	-15.88
5,400.0	0.67	110.27	5,399.4	1.2	6.8	1.2	0.12	-0.04	-9.31
5,500.0	0.58	129.29	5,499.4	0.7	7.7	0.6	0.22	-0.09	19.02
5,600.0	0.66	113.81	5,599.4	0.2	8.7	0.1	0.18	0.08	-15.48
5,700.0	0.59	120.34	5,699.4	-0.3	9.6	-0.4	0.10	-0.07	6.53
5,800.0	0.86	118.99	5,799.4	-1.0	10.7	-1.0	0.27	0.27	-1.35
5,900.0	0.79	101.69	5,899.4	-1.5	12.1	-1.6	0.26	-0.07	-17.30
6,000.0	0.93	123.38	5,999.4	-2.0	13.4	-2.2	0.35	0.14	21.69
6,100.0	0.76	106.30	6,099.4	-2.7	14.7	-2.8	0.30	-0.17	-17.08
6,200.0	0.93	97.84	6,199.3	-3.0	16.2	-3.1	0.21	0.17	-8.46
6,300.0	0.77	94.92	6,299.3	-3.1	17.6	-3.3	0.17	-0.16	-2.92
6,400.0	0.92	85.40	6,399.3	-3.1	19.1	-3.3	0.20	0.15	-9.52
6,500.0	0.66	88.19	6,499.3	-3.0	20.5	-3.2	0.26	-0.26	2.79
6,600.0	0.86	81.94	6,599.3	-2.9	21.8	-3.1	0.22	0.20	-6.25
6,700.0	0.76	77.92	6,699.3	-2.7	23.2	-2.9	0.11	-0.10	-4.02
6,800.0	0.65	80.47	6,799.3	-2.4	24.4	-2.7	0.11	-0.11	2.55
6,900.0	0.76	63.29	6,899.3	-2.1	25.6	-2.3	0.24	0.11	-17.18
7,000.0	0.57	48.95	6,999.3	-1.4	26.5	-1.7	0.25	-0.19	-14.34
7,100.0	0.49	72.16	7,099.3	-1.0	27.3	-1.2	0.23	-0.08	23.21
7,200.0	0.52	58.60	7,199.3	-0.6	28.1	-0.9	0.12	0.03	-13.56
7,300.0	0.37	95.41	7,299.3	-0.4	28.8	-0.7	0.31	-0.15	36.81
7,400.0	0.25	96.96	7,399.3	-0.5	29.3	-0.7	0.12	-0.12	1.55
7,500.0	0.64	136.13	7,499.3	-0.9	29.9	-1.2	0.47	0.39	39.17
7,600.0	1.07	156.44	7,599.2	-2.1	30.7	-2.4	0.52	0.43	20.31
7,700.0	1.00	154.29	7,699.2	-3.8	31.5	-4.1	0.08	-0.07	-2.15
7,800.0	1.02	141.15	7,799.2	-5.3	32.4	-5.6	0.23	0.02	-13.14
7,900.0	1.05	146.00	7,899.2	-6.7	33.5	-7.0	0.09	0.03	4.85
8,000.0	1.09	134.40	7,999.2	-8.1	34.7	-8.5	0.22	0.04	-11.60
8,100.0	1.30	119.52	8,099.2	-9.4	36.3	-9.7	0.37	0.21	-14.88
8,200.0	1.21	121.28	8,199.1	-10.5	38.2	-10.8	0.10	-0.09	1.76
8,300.0	1.28	114.27	8,299.1	-11.5	40.1	-11.8	0.17	0.07	-7.01
8,400.0	1.18	122.83	8,399.1	-12.5	42.0	-12.9	0.21	-0.10	8.56
8,500.0	1.07	109.59	8,499.1	-13.4	43.8	-13.8	0.28	-0.11	-13.24
8,600.0	1.08	103.79	8,599.0	-13.9	45.6	-14.3	0.11	0.01	-5.80
8,700.0	1.15	106.03	8,699.0	-14.4	47.4	-14.8	0.08	0.07	2.24
8,800.0	0.94	104.17	8,799.0	-14.9	49.2	-15.3	0.21	-0.21	-1.86
8,900.0	0.66	101.76	8,899.0	-15.2	50.6	-15.7	0.28	-0.28	-2.41
9,000.0	0.58	103.14	8,999.0	-15.4	51.6	-15.9	0.08	-0.08	1.38
9,100.0	0.60	115.32	9,099.0	-15.8	52.6	-16.3	0.13	0.02	12.18
9,200.0	0.68	126.14	9,199.0	-16.4	53.5	-16.8	0.14	0.08	10.82
9,300.0	0.75	110.08	9,299.0	-16.9	54.6	-17.4	0.21	0.07	-16.06
9,400.0	0.63	102.98	9,399.0	-17.3	55.8	-17.8	0.15	-0.12	-7.10
9,500.0	0.49	325.08	9,499.0	-17.0	56.1	-17.6	1.05	-0.14	-137.90

Nexus Directional Solutions, LP

Survey Report

Company:	COG Production LLC	Local Co-ordinate Reference:	Well 4H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3623.4usft (Original Well Elev)
Site:	Roy Batty Fed Com	MD Reference:	WELL @ 3623.4usft (Original Well Elev)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,600.0	0.74	321.94	9,599.0	-16.2	55.4	-16.7	0.25	0.25	-3.14	
9,700.0	1.20	305.68	9,698.9	-15.1	54.2	-15.6	0.53	0.46	-16.26	
9,800.0	2.16	310.33	9,798.9	-13.2	51.9	-13.7	0.97	0.96	4.65	
9,900.0	3.11	304.45	9,898.8	-10.5	48.2	-10.9	0.99	0.95	-5.88	
10,000.0	3.66	305.68	9,998.6	-7.1	43.4	-7.5	0.55	0.55	1.23	
10,100.0	3.44	314.36	10,098.4	-3.1	38.6	-3.5	0.58	-0.22	8.68	
10,200.0	3.05	320.47	10,198.3	1.0	34.8	0.7	0.52	-0.39	6.11	
10,300.0	2.59	324.93	10,298.2	4.9	31.8	4.6	0.51	-0.46	4.46	
10,400.0	2.36	329.44	10,398.1	8.5	29.5	8.3	0.30	-0.23	4.51	
10,480.0	2.64	344.93	10,478.0	11.7	28.2	11.5	0.91	0.35	19.36	
Tie-In from VES Gyro										
10,554.0	2.90	336.20	10,551.9	15.1	27.0	14.9	0.67	0.35	-11.80	
10,585.0	3.60	340.80	10,582.8	16.7	26.3	16.5	2.41	2.26	14.84	
10,617.0	7.60	359.80	10,614.7	19.8	26.0	19.6	13.61	12.50	59.38	
10,648.0	12.80	6.10	10,645.2	25.3	26.3	25.0	17.13	16.77	20.32	
10,680.0	17.30	8.10	10,676.1	33.5	27.4	33.3	14.15	14.06	6.25	
10,711.0	20.90	8.10	10,705.4	43.6	28.8	43.3	11.61	11.61	0.00	
10,742.0	23.60	6.90	10,734.1	55.2	30.3	54.9	8.83	8.71	-3.87	
10,774.0	26.60	5.70	10,763.0	68.7	31.8	68.4	9.51	9.38	-3.75	
10,805.0	30.20	3.50	10,790.3	83.4	33.0	83.1	12.09	11.61	-7.10	
10,836.0	33.80	2.70	10,816.6	99.8	33.9	99.5	11.69	11.61	-2.58	
10,868.0	37.70	2.40	10,842.6	118.4	34.7	118.1	12.20	12.19	-0.94	
10,899.0	41.60	1.80	10,866.4	138.2	35.4	137.9	12.64	12.58	-1.94	
10,931.0	45.60	1.70	10,889.6	160.3	36.1	159.9	12.50	12.50	-0.31	
10,962.0	49.10	2.20	10,910.6	183.0	36.9	182.7	11.35	11.29	1.61	
10,994.0	52.00	1.20	10,930.9	207.7	37.6	207.4	9.38	9.06	-3.13	
11,025.0	56.30	358.90	10,949.1	232.9	37.6	232.5	15.12	13.87	-7.42	
11,057.0	60.70	356.70	10,965.8	260.1	36.6	259.8	14.95	13.75	-6.88	
11,088.0	63.80	356.50	10,980.2	287.5	34.9	287.2	10.02	10.00	-0.65	
11,120.0	67.70	356.50	10,993.4	316.6	33.1	316.3	12.19	12.19	0.00	
11,151.0	71.10	356.40	11,004.3	345.6	31.3	345.3	10.97	10.97	-0.32	
11,182.0	74.40	356.70	11,013.5	375.1	29.6	374.8	10.69	10.65	0.97	
11,214.0	77.30	356.30	11,021.3	406.1	27.7	405.8	9.14	9.06	-1.25	
11,246.0	79.80	356.70	11,027.6	437.4	25.8	437.1	7.91	7.81	1.25	
11,277.0	82.50	357.00	11,032.4	468.0	24.1	467.7	8.76	8.71	0.97	
11,307.0	84.30	357.20	11,035.8	497.7	22.6	497.5	6.04	6.00	0.67	
11,343.0	87.50	358.70	11,038.4	533.6	21.3	533.4	9.81	8.89	4.17	
11,375.0	90.30	359.30	11,039.0	565.6	20.7	565.4	8.95	8.75	1.88	
11,437.0	91.20	358.30	11,038.2	627.6	19.4	627.4	2.17	1.45	-1.61	
11,532.0	89.80	358.90	11,037.4	722.5	17.1	722.4	1.60	-1.47	0.63	
11,626.0	90.20	358.80	11,037.4	816.5	15.2	816.4	0.44	0.43	-0.11	
11,720.0	87.40	357.80	11,039.4	910.5	12.4	910.3	3.16	-2.98	-1.06	
11,814.0	87.60	357.20	11,043.5	1,004.3	8.3	1,004.2	0.67	0.21	-0.64	
11,908.0	89.10	358.10	11,046.2	1,098.2	4.5	1,098.1	1.86	1.60	0.96	

Nexus Directional Solutions, LP

Survey Report

Company:	COG Production LLC	Local Co-ordinate Reference:	Well 4H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3623.4usft (Original Well Elev)
Site:	Roy Batty Fed Com	MD Reference:	WELL @ 3623.4usft (Original Well Elev)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,003.0	89.10	358.00	11,047.7	1,193.1	1.3	1,193.0	0.11	0.00	-0.11
12,097.0	89.70	359.70	11,048.6	1,287.1	-0.6	1,287.0	1.92	0.64	1.81
12,192.0	89.00	359.40	11,049.7	1,382.0	-1.4	1,382.0	0.80	-0.74	-0.32
12,286.0	90.10	359.40	11,050.5	1,476.0	-2.4	1,476.0	1.17	1.17	0.00
12,380.0	91.80	359.30	11,048.9	1,570.0	-3.4	1,570.0	1.81	1.81	-0.11
12,474.0	92.30	359.40	11,045.5	1,663.9	-4.5	1,663.9	0.54	0.53	0.11
12,568.0	92.40	359.20	11,041.7	1,757.9	-5.6	1,757.8	0.24	0.11	-0.21
12,662.0	92.00	358.70	11,038.1	1,851.8	-7.4	1,851.8	0.68	-0.43	-0.53
12,756.0	92.50	358.70	11,034.4	1,945.7	-9.5	1,945.7	0.53	0.53	0.00
12,851.0	91.60	358.10	11,031.0	2,040.6	-12.1	2,040.6	1.14	-0.95	-0.63
12,945.0	92.00	358.10	11,028.0	2,134.5	-15.3	2,134.5	0.43	0.43	0.00
13,039.0	92.60	359.80	11,024.3	2,228.4	-17.0	2,228.4	1.92	0.64	1.81
13,134.0	92.00	359.80	11,020.5	2,323.3	-17.3	2,323.4	0.63	-0.63	0.00
13,229.0	92.40	1.90	11,016.8	2,418.2	-15.9	2,418.3	2.25	0.42	2.21
13,323.0	92.70	1.60	11,012.6	2,512.1	-13.0	2,512.1	0.45	0.32	-0.32
13,417.0	92.70	0.90	11,008.2	2,606.0	-11.0	2,606.0	0.74	0.00	-0.74
13,511.0	93.00	0.80	11,003.5	2,699.8	-9.6	2,699.8	0.34	0.32	-0.11
13,606.0	93.80	1.10	10,997.9	2,794.7	-8.0	2,794.6	0.90	0.84	0.32
13,700.0	95.20	1.20	10,990.5	2,888.3	-6.1	2,888.3	1.49	1.49	0.11
13,794.0	92.10	0.30	10,984.5	2,982.1	-4.9	2,982.1	3.43	-3.30	-0.96
13,889.0	92.20	0.10	10,981.0	3,077.1	-4.6	3,077.0	0.24	0.11	-0.21
13,983.0	92.70	0.20	10,976.9	3,171.0	-4.3	3,170.9	0.54	0.53	0.11
14,077.0	93.00	0.20	10,972.3	3,264.9	-4.0	3,264.8	0.32	0.32	0.00
14,172.0	93.10	1.00	10,967.2	3,359.7	-3.0	3,359.6	0.85	0.11	0.84
14,266.0	93.00	1.20	10,962.2	3,453.6	-1.2	3,453.4	0.24	-0.11	0.21
14,361.0	93.80	0.50	10,956.6	3,548.4	0.2	3,548.2	1.12	0.84	-0.74
14,456.0	92.90	359.80	10,951.0	3,643.2	0.4	3,643.1	1.20	-0.95	-0.74
14,550.0	92.80	359.30	10,946.4	3,737.1	-0.3	3,737.0	0.54	-0.11	-0.53
14,645.0	93.50	359.40	10,941.1	3,832.0	-1.4	3,831.8	0.74	0.74	0.11
14,738.0	92.20	359.60	10,936.5	3,924.8	-2.2	3,924.7	1.41	-1.40	0.22
14,833.0	92.40	359.10	10,932.7	4,019.8	-3.3	4,019.6	0.57	0.21	-0.53
14,927.0	92.70	358.90	10,928.5	4,113.6	-4.9	4,113.5	0.38	0.32	-0.21
15,021.0	92.10	357.90	10,924.6	4,207.5	-7.5	4,207.4	1.24	-0.64	-1.06
15,115.0	92.10	357.80	10,921.1	4,301.4	-11.1	4,301.3	0.11	0.00	-0.11
15,210.0	92.50	357.90	10,917.3	4,396.2	-14.6	4,396.2	0.43	0.42	0.11
15,304.0	92.80	358.00	10,913.0	4,490.1	-18.0	4,490.1	0.34	0.32	0.11
15,399.0	93.10	358.00	10,908.1	4,584.9	-21.3	4,584.9	0.32	0.32	0.00
15,493.0	93.20	357.60	10,902.9	4,678.7	-24.9	4,678.7	0.44	0.11	-0.43
Last Nexus MWD Survey									
15,556.0	93.20	357.60	10,899.4	4,741.5	-27.5	4,741.6	0.00	0.00	0.00
SLPB - PBHL Roy Batty Fee #4H									

Nexus Directional Solutions, LP

Survey Report

Company:	COG Production LLC	Local Co-ordinate Reference:	Well 4H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3623.4usft (Original Well Elev)
Site:	Roy Batty Fed Com	MD Reference:	WELL @ 3623.4usft (Original Well Elev)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,480.0	10,478.0	11.7	28.2	Tie-In from VES Gyro
15,493.0	10,902.9	4,678.7	-24.9	Last Nexus MWD Survey
15,556.0	10,899.4	4,741.5	-27.5	SLPB

Checked By: _____	Approved By: _____	Date: _____
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