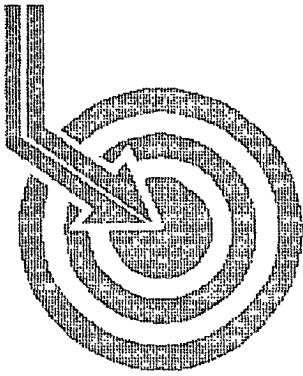




Scientific Drilling

COG RESOURCES

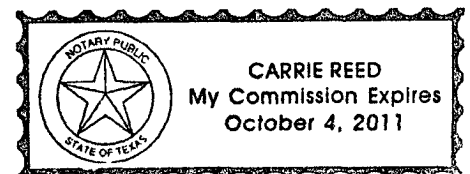
Field: Fren
 Site: Eddy County, NM
 Well: Skelly Unit #637
 Wellpath: DH - Job #32D1109503
 Survey: 11/22/09-11/28/09

This survey is correct to the best of my knowledge
 and is supported by actual field data.

.....*R. Wharton*..... Company Representative

Notorized this date 10th of December, 2009.

Carrie Reed
 Notary Signature
 County of Midland
 State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

Company: COG.RESOURCES	Date: 11/24/2009	Time: 15:08:05	Page: 1
Field: Fren	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Skelly Unit #637	Section (VS) Reference:	Well (0.00N,0.00E,296.89Azi)	
Wellpath: VH- Job #32K1109508	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 11/22/09	Start Date: 11/22/2009
Company: KSRG 0'-1694'	
Tool: Scientific Drilling Internatio	Engineer: Guebara w/Gray
Tool: MWD;MWD	Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	359.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.32	273.52	100.00	0.26	0.02	-0.28	0.32	0.28	273.52
200.00	0.74	248.91	200.00	0.94	-0.20	-1.16	0.47	1.18	260.31
300.00	1.51	240.47	299.98	2.11	-1.08	-2.91	0.79	3.10	249.63
400.00	2.40	238.24	399.92	3.92	-2.83	-5.84	0.89	6.49	244.12
500.00	2.53	237.67	499.82	6.14	-5.11	-9.48	0.13	10.77	241.66
600.00	2.10	236.99	599.74	8.19	-7.29	-12.88	0.43	14.80	240.49
700.00	2.07	236.95	699.68	10.01	-9.28	-15.93	0.03	18.44	239.79
800.00	1.86	236.32	799.62	11.72	-11.16	-18.80	0.21	21.86	239.30
900.00	1.54	237.51	899.57	13.20	-12.78	-21.28	0.32	24.82	239.01
1000.00	1.34	240.19	999.54	14.53	-14.09	-23.43	0.21	27.34	238.99
1100.00	1.15	242.78	1099.52	15.76	-15.13	-25.34	0.20	29.51	239.16
1200.00	0.86	249.07	1199.50	16.85	-15.85	-26.93	0.31	31.25	239.52
1300.00	0.27	322.51	1299.50	17.56	-15.93	-27.77	0.82	32.02	240.16
1400.00	0.40	355.16	1399.50	17.96	-15.40	-27.95	0.23	31.91	241.14
1500.00	0.55	29.25	1499.49	18.12	-14.63	-27.74	0.31	31.36	242.19
1600.00	0.71	47.60	1599.49	17.88	-13.80	-27.05	0.26	30.36	242.98
1694.00	0.77	37.64	1693.48	17.56	-12.90	-26.23	0.15	29.23	243.81



Scientific Drilling International Survey Report

Company: COG RESOURCES	Date: 11/30/2009	Time: 16:42:21	Page: 1
Field: Fren	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Skelly Unit #637	Section (VS) Reference:	Well (0.00N,0.00E,296.89Azi)	
Wellpath: DH - Job #32D1109503	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 11/22/09-11/28/09	Start Date: 11/22/2009
MWD 1854'-5056'	
Company: Scientific Drilling Internatio	Engineer: Calvert/Becker
Tool: MWD;MWD	Tied-to: From: Definitive Path

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
1694.00	0.77	37.64	1693.48	17.56	-12.90	-26.23	0.00	29.23	243.81
1854.00	0.80	36.66	1853.46	17.17	-11.16	-24.91	0.02	27.29	245.88
1917.00	1.73	350.15	1916.45	17.67	-9.87	-24.81	2.09	26.70	248.31
1980.00	2.72	332.79	1979.40	19.45	-7.60	-25.66	1.88	26.76	253.50
2044.00	4.04	321.45	2043.29	22.73	-4.49	-27.76	2.30	28.12	260.82
2107.00	5.01	320.75	2106.09	27.26	-0.62	-30.88	1.54	30.89	268.85
2171.00	5.54	307.91	2169.82	32.85	3.44	-35.08	2.02	35.25	275.60
2234.00	6.63	299.27	2232.47	39.47	7.09	-40.66	2.26	41.27	279.89
2298.00	7.03	291.57	2296.02	47.06	10.34	-47.52	1.56	48.63	282.27
2393.00	6.42	287.70	2390.36	58.09	14.09	-57.99	0.80	59.68	283.66
2518.00	6.42	300.00	2514.58	71.97	19.71	-70.70	1.10	73.39	285.58
2615.00	5.80	295.79	2611.03	82.28	24.55	-79.81	0.79	83.50	287.10
2710.00	6.60	293.15	2705.48	92.53	28.79	-89.15	0.89	93.68	287.89
2805.00	7.02	304.94	2799.81	103.73	34.26	-98.93	1.53	104.69	289.10
2932.00	6.33	304.31	2925.95	118.35	42.65	-111.08	0.55	118.98	291.00
3059.00	7.48	309.40	3052.03	133.37	51.84	-123.25	1.02	133.71	292.81
3122.00	7.13	309.63	3114.52	141.18	56.94	-129.43	0.56	141.40	293.75
3249.00	6.51	307.91	3240.62	155.94	66.39	-141.18	0.51	156.01	295.19
3376.00	6.32	306.08	3366.82	169.91	74.93	-152.51	0.22	169.92	296.17
3503.00	7.83	305.01	3492.85	185.37	84.01	-165.24	1.19	185.37	296.95
3630.00	6.68	297.46	3618.83	201.32	92.38	-178.88	1.17	201.33	297.31
3756.00	7.46	299.30	3743.88	216.82	99.76	-192.52	0.64	216.83	297.39
3883.00	7.56	290.51	3869.79	233.36	106.72	-207.53	0.91	233.37	297.21
4010.00	7.56	290.42	3995.69	249.97	112.57	-223.19	0.01	249.97	296.76
4137.00	6.95	294.38	4121.67	265.95	118.65	-238.02	0.62	265.95	296.50
4264.00	7.30	290.51	4247.69	281.64	124.65	-252.57	0.47	281.66	296.27
4391.00	6.33	307.83	4373.80	296.54	131.77	-265.66	1.78	296.55	296.38
4517.00	6.07	310.29	4499.07	309.84	140.34	-276.23	0.29	309.84	296.93
4644.00	7.65	301.06	4625.16	324.80	149.05	-288.59	1.51	324.81	297.31
4676.00	7.74	301.06	4656.87	329.07	151.26	-292.26	0.28	329.08	297.36
4739.00	6.77	295.79	4719.37	337.02	155.06	-299.24	1.87	337.03	297.39
4803.00	5.45	288.84	4783.00	343.80	157.68	-305.51	2.36	343.81	297.30
4866.00	4.48	282.23	4845.77	349.14	159.17	-310.75	1.79	349.14	297.12
4930.00	3.08	285.77	4909.62	353.25	160.17	-314.85	2.22	353.25	296.96
4993.00	2.20	298.16	4972.56	356.12	161.20	-317.54	1.66	356.12	296.91
5056.00	0.79	302.82	5035.53	357.76	162.01	-318.97	2.24	357.76	296.93