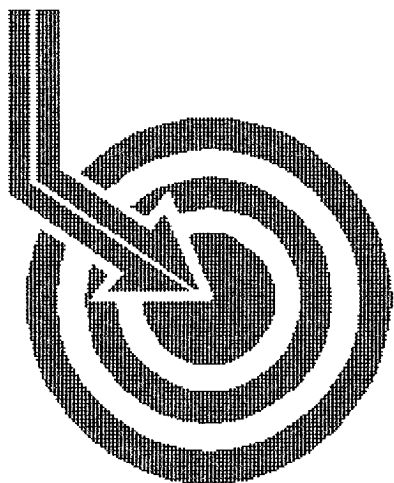




Scientific Drilling

RECEIVED

SEP 10 2010
HOBBSOCD

COG RESOURCES

Field: Maljamar
Site: Lea County, NM
Well: GC Federal #37
Wellpath: DH - Job #32D0610431
Survey: 06/08/10-06/12/10

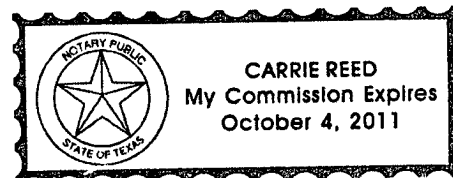
SUR @ J-20-17s-32e, 2550/S & 1970/E
BHL @ J-20-17s-32e, 2303/S & 1662/E
API # 30-025-39697

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

[Signature]
Company Representative

Notarized this date 20th of July, 2010.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Inc.

Survey Report

Company: COG RESOURCES
Field: Maljamar
Site: Lea County, NM
Well: GC Federal #37
Wellpath: VH - Job #32K0610426

Date: 6/14/2010 Time: 16:09:28 Page: 1
Co-ordinate(NE) Reference: Site: Lea County, NM, True North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,128.57Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 06/07/10
KSRG 0'-2100'

Start Date: 6/7/2010

Company: Scientific Drilling Internatio
Tool: Keeper, Keeper Gyro

Engineer: Madrid/Guebara/Renteria
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
0.0	0.00	359.70	0.0	0.0	0.0	0.0	0.00	0.0	0.00
100.0	0.36	178.92	100.0	0.2	-0.3	0.0	0.36	0.3	178.92
200.0	0.63	158.83	200.0	0.9	-1.1	0.2	0.32	1.2	169.55
300.0	1.34	155.88	300.0	2.4	-2.7	0.9	0.71	2.9	161.95
400.0	1.56	157.36	399.9	4.6	-5.0	1.9	0.22	5.4	159.47
500.0	1.61	147.99	499.9	7.1	-7.5	3.2	0.26	8.1	157.15
600.0	1.82	150.30	599.9	9.9	-10.1	4.7	0.22	11.1	155.02
700.0	1.74	144.83	699.8	12.9	-12.7	6.3	0.19	14.2	153.40
800.0	1.70	142.68	799.8	15.8	-15.1	8.1	0.08	17.1	151.73
900.0	1.54	154.69	899.7	18.4	-17.5	9.6	0.37	20.0	151.26
1000.0	1.53	153.75	999.7	20.8	-19.9	10.8	0.03	22.6	151.61
1100.0	1.50	151.97	1099.7	23.2	-22.3	12.0	0.06	25.3	151.74
1200.0	1.43	148.68	1199.6	25.6	-24.5	13.2	0.11	27.8	151.61
1300.0	1.39	148.41	1299.6	27.9	-26.6	14.5	0.04	30.3	151.36
1400.0	1.32	138.71	1399.6	30.2	-28.5	15.9	0.24	32.6	150.81
1500.0	1.42	119.39	1499.5	32.6	-30.0	17.8	0.47	34.8	149.35
1600.0	1.43	104.94	1599.5	34.9	-30.9	20.0	0.36	36.8	147.03
1700.0	1.61	96.54	1699.5	37.3	-31.4	22.6	0.29	38.7	144.18
1800.0	1.90	78.41	1799.4	39.5	-31.2	25.7	0.62	40.4	140.56
1900.0	1.51	83.81	1899.4	41.5	-30.7	28.6	0.42	42.0	137.05
2000.0	1.34	89.77	1999.4	43.4	-30.6	31.1	0.23	43.6	134.54
2100.0	1.22	98.01	2099.3	45.2	-30.7	33.3	0.22	45.3	132.69



Scientific
Drilling

Scientific Drilling International Inc.

Survey Report

Company: COG RESOURCES
Field: Maljamar
Site: Lea County, NM
Well: GC Federal #37
Wellpath: DH - Job #32D0610431

Date: 6/18/2010 Time: 10:08:19 Page: 1
Co-ordinate(NE) Reference: Site: Lea County, NM, True North
Vertical (TVD) Reference: SITE 0 0
Section (VS) Reference: Well (0.00N,0.00E,128.57Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 06/08/10-06/12/10
MWD 2236'-5350'

Start Date: 6/8/2010

Company: Scientific Drilling Internatio
Tool: MWD,MWD

Engineer: Melendez/Hansen/Colvin
Tied-to: From: Definitive Path

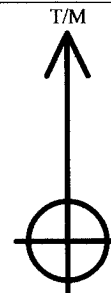
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
2100.0	1.22	98.01	2099.3	45.2	-30.7	33.3	0.00	45.3	132.69
2236.0	1.94	99.15	2235.3	48.4	-31.3	37.0	0.53	48.5	130.21
2330.0	3.20	102.31	2329.2	52.2	-32.1	41.1	1.35	52.2	127.96
2425.0	4.61	104.87	2424.0	58.0	-33.6	47.4	1.50	58.1	125.36
2519.0	5.61	115.82	2517.6	66.0	-36.6	55.2	1.48	66.2	123.55
2614.0	7.14	123.38	2612.0	76.4	-41.9	64.3	1.83	76.7	123.07
2707.0	6.48	121.06	2704.3	87.4	-47.8	73.6	0.77	87.8	122.97
2801.0	7.33	126.83	2797.7	98.6	-54.1	83.0	1.17	99.1	123.10
2895.0	7.91	134.03	2890.8	111.0	-62.2	92.4	1.19	111.4	123.94
2996.0	6.82	133.55	2991.0	123.9	-71.2	101.8	1.08	124.2	124.96
3090.0	7.70	134.56	3084.2	135.8	-79.4	110.3	0.95	135.9	125.75
3183.0	7.09	132.92	3176.5	147.7	-87.7	118.9	0.69	147.8	126.40
3277.0	6.39	132.06	3269.8	158.7	-95.2	127.1	0.75	158.8	126.82
3371.0	7.38	132.13	3363.1	169.9	-102.7	135.4	1.05	170.0	127.17
3465.0	7.24	133.04	3456.4	181.9	-110.8	144.2	0.19	181.9	127.53
3558.0	6.94	132.30	3548.7	193.3	-118.6	152.7	0.34	193.3	127.83
3652.0	6.80	131.86	3642.0	204.5	-126.1	161.0	0.16	204.5	128.07
3746.0	6.69	132.64	3735.3	215.5	-133.5	169.2	0.15	215.6	128.28
3840.0	8.68	130.44	3828.5	228.1	-141.8	178.6	2.14	228.1	128.45
3933.0	8.26	127.18	3920.5	241.8	-150.4	189.3	0.69	241.8	128.48
4027.0	8.15	127.39	4013.5	255.2	-158.6	200.0	0.12	255.2	128.41
4121.0	7.93	125.82	4106.6	268.3	-166.4	210.5	0.33	268.3	128.32
4215.0	7.67	125.70	4199.7	281.1	-173.9	220.9	0.28	281.1	128.21
4309.0	7.82	126.89	4292.9	293.7	-181.4	231.1	0.23	293.8	128.13
4403.0	6.83	134.67	4386.1	305.7	-189.1	240.2	1.49	305.7	128.22
4496.0	7.12	135.01	4478.4	316.9	-197.1	248.2	0.31	316.9	128.46
4590.0	5.76	130.56	4571.8	327.4	-204.3	255.9	1.54	327.4	128.60
4685.0	5.81	127.73	4666.3	337.0	-210.3	263.3	0.30	337.0	128.62
4778.0	5.81	129.01	4758.9	346.4	-216.2	270.7	0.14	346.4	128.61
4872.0	5.54	127.97	4852.4	355.7	-222.0	278.0	0.31	355.7	128.61
4965.0	5.54	130.61	4945.0	364.7	-227.6	284.9	0.27	364.7	128.62
5059.0	5.58	128.48	5038.5	373.8	-233.4	291.9	0.22	373.8	128.65
5153.0	5.52	128.51	5132.1	382.9	-239.1	299.0	0.06	382.9	128.64
5216.0	4.26	131.63	5194.8	388.2	-242.5	303.2	2.04	388.2	128.66
5309.0	2.13	133.76	5287.7	393.4	-246.0	307.0	2.29	393.4	128.71
5350.0	1.50	133.36	5328.7	394.7	-246.9	307.9	1.54	394.7	128.72



Scientific
Drilling

Field: Maljamar
Site: Lea County, NM
Well: GC Federal #37
Survey: 06/08/10-06/12/10



Azimuths to True North
Magnetic North 0 00°

Strength: 0nT
Date: 6/17/2010
Model: igrf2000

West(-)/East(+) [50ft/in]

South(-)/North(+) [50ft/in]

