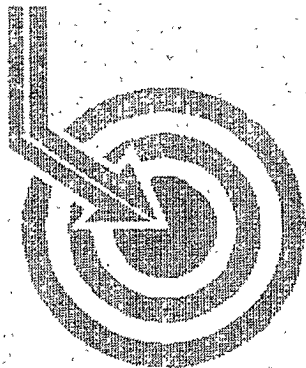




Scientific Drilling

COG RESOURCES

Field: Fren
Site: Eddy County, NM
Well: Skelly Unit #622
Wellpath: DH - Job #32D0809295
Survey: 08/09/09-08/28/09

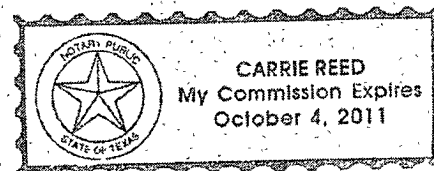
This survey is correct to the best of my knowledge
and is supported by actual field data.

.....*Robert*.....Company Representative

Notorized this date 14th of September, 2009.

Carrie Reed

Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

Company: COG RESOURCES Date: 08/10/2009 Time: 16:45:50 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 #622 Section (VS) Reference: Well (0.00N,0.00E,318.86Azi)
Wellpath: VH - Job #32K0809298 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 08/09/09 Start Date: 08/09/2009
Company: Scientific Drilling Internatio Engineer: Madrid/Rowe/Parades
Tool: Keeper;Keeper Gyro 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	0.22	183.58	100.00	-0.14	-0.19	-0.01	0.22	0.19	183.58
200.00	0.30	177.27	200.00	-0.48	-0.64	-0.01	0.08	0.64	181.02
300.00	0.21	208.44	300.00	-0.75	-1.07	-0.09	0.16	1.07	184.62
400.00	0.25	201.71	400.00	-0.91	-1.43	-0.25	0.05	1.45	190.07
500.00	0.27	204.47	500.00	-1.11	-1.85	-0.43	0.02	1.90	193.17
600.00	0.44	180.00	599.99	-1.49	-2.45	-0.53	0.22	2.50	192.23
700.00	0.42	164.98	699.99	-2.11	-3.18	-0.44	0.11	3.21	187.78
800.00	1.04	128.94	799.98	-3.34	-4.11	0.37	0.74	4.13	174.91
900.00	0.34	159.04	899.98	-4.51	-4.96	1.18	0.77	5.09	166.63
1000.00	0.30	139.14	999.97	-5.05	-5.43	1.46	0.12	5.62	165.00
1100.00	0.25	142.24	1099.97	-5.53	-5.80	1.76	0.05	6.06	163.13
1200.00	0.30	105.20	1199.97	-5.96	-6.04	2.15	0.18	6.41	160.45
1300.00	0.38	79.35	1299.97	-6.35	-6.05	2.72	0.17	6.64	155.76
1400.00	0.37	75.36	1399.97	-6.66	-5.91	3.36	0.03	6.80	150.35
1500.00	0.56	83.96	1499.96	-7.09	-5.77	4.16	0.20	7.12	144.22
1600.00	0.75	85.06	1599.96	-7.75	-5.67	5.30	0.19	7.76	136.92
1700.00	0.96	88.66	1699.95	-8.68	-5.59	6.79	0.22	8.79	129.47
1777.00	0.88	100.85	1776.94	-9.56	-5.69	8.01	0.27	9.83	125.36



Scientific
Drilling

Scientific Drilling International Survey Report

Company: COG RESOURCES
Field: Fren
Site: Eddy County, NM
Well: Skelly Unit #622
Wellpath: DH - Job #32D0809295

Date: 08/31/2009 Time: 17:45:17 Page: 1
Co-ordinate(NE) Reference: Site: Eddy County, NM, Gnd North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,318.86Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 08/09/09-08/28/09
MWD 1855'-5348'

Start Date: 08/09/2009

Company: Scientific Drilling Internatio
Tool: MWD,MWD

Engineer: Calvert/Elger
Tied-to: From: Definitive Path

Site: Eddy County, NM

Site Position:
From: Local Only

Northing:
Easting:

ft
ft

Latitude:
Longitude:

Position Uncertainty:

0.00 ft

North Reference:

Grid

Ground Level:

0.00 ft

Grid Convergence:

deg

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
1777.00	0.88	100.85	1776.94	-9.56	-5.69	8.01	0.00	9.83	125.36
1855.00	0.72	89.94	1854.93	-10.35	-5.80	9.09	0.28	10.78	122.53
1951.00	0.59	351.46	1950.93	-10.33	-5.31	9.62	1.04	10.99	118.89
2046.00	3.39	355.28	2045.86	-7.66	-2.03	9.32	2.95	9.54	102.27
2141.00	5.39	344.79	2140.58	-1.38	5.08	7.92	2.26	9.41	57.32
2236.00	7.28	332.19	2235.00	8.49	14.71	3.94	2.46	15.23	14.99
2331.00	8.59	319.45	2329.09	21.44	25.43	-3.48	2.30	25.66	352.20
2522.00	9.41	317.76	2517.74	51.32	47.82	-23.25	0.45	53.18	334.07
2712.00	8.83	315.83	2705.34	81.41	69.78	-43.86	0.35	82.42	327.85
2905.00	10.21	317.02	2895.67	113.30	92.92	-65.84	0.72	113.89	324.68
3092.00	8.81	317.69	3080.10	144.18	115.64	-86.78	0.75	144.58	323.11
3282.00	9.19	322.11	3267.76	173.88	138.37	-105.89	0.42	174.24	322.57
3477.00	9.96	322.56	3460.05	206.25	164.05	-125.71	0.40	206.68	322.54
3662.00	8.65	321.30	3642.61	236.12	187.61	-144.13	0.72	236.59	322.47
3789.00	10.75	314.83	3767.79	257.48	203.42	-158.51	1.86	257.88	322.07
3979.00	10.65	312.54	3954.49	292.61	227.78	-184.01	0.23	292.82	321.07
4050.00	10.54	312.30	4024.27	305.58	236.59	-193.65	0.17	305.73	320.70
4144.00	12.61	293.42	4116.39	323.39	246.46	-209.43	4.56	323.42	319.64
4303.00	12.59	295.38	4271.56	354.96	260.78	-241.01	0.27	355.10	317.26
4461.00	11.70	294.01	4426.03	385.29	274.68	-271.20	0.59	386.01	315.37
4588.00	11.45	296.80	4550.44	408.66	285.61	-294.22	0.48	410.04	314.15
4714.00	11.31	296.29	4673.97	431.66	296.72	-316.46	0.14	433.81	313.16
4746.00	11.92	297.39	4705.31	437.63	299.63	-322.21	2.03	439.99	312.92
4841.00	10.51	292.99	4798.50	454.56	307.53	-338.89	1.74	457.63	312.22
4936.00	7.90	293.26	4892.26	468.25	313.49	-352.87	2.75	472.01	311.62
5031.00	5.96	293.86	4986.57	478.60	318.06	-363.38	2.04	482.92	311.20
5126.00	4.45	292.71	5081.17	486.38	321.48	-371.29	1.59	491.13	310.89
5200.00	3.14	292.49	5155.01	490.78	323.37	-375.81	1.77	495.78	310.71
5253.00	1.74	273.53	5207.96	492.64	323.97	-377.96	3.01	497.80	310.60
5348.00	0.79	71.38	5302.95	493.41	324.27	-378.78	2.62	498.62	310.57