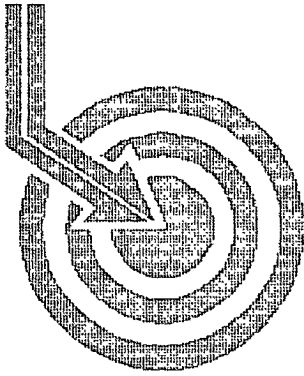




Scientific Drilling



COG RESOURCES

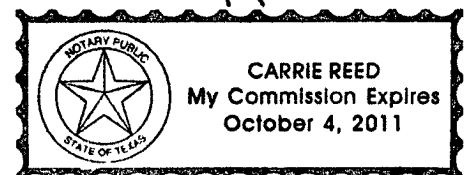
Field: Grayburg Jackson
Site: Eddy County, NM
Well: GJ West Coop #201
Wellpath: DH - Job #32K1109504
Survey: 11/21/09-11/25/09

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

.....*L. Wharton*..... Company Representative

Notorized this date 10th of December, 2009.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: COG RESOURCES Date: 11/24/2009 Time: 14:59:08 Page: 1
Field: Grayburg Jackson Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Site: Eddy County, NM Vertical (TVD) Reference: SITE 0.0
Well: GJ West Coop #201 Section (VS) Reference: Well (0.00N,0.00E,102.44Azi)
Wellpath: VH - Job #32K1109506 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 11/22/09 Start Date: 11/22/2009
KSRG 0'-755'
Company: Scientific Drilling Internatio Engineer: Madrid w/Gray
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	359.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.77	86.53	100.00	0.65	0.04	0.67	0.77	0.67	86.53
200.00	1.54	72.73	199.98	2.46	0.48	2.62	0.81	2.67	79.63
300.00	2.37	77.16	299.92	5.50	1.34	5.92	0.84	6.07	77.27
400.00	2.64	68.53	399.82	9.28	2.64	10.08	0.46	10.42	75.32
500.00	2.84	63.82	499.71	13.12	4.58	14.45	0.30	15.16	72.42
600.00	2.94	63.18	599.58	17.05	6.83	18.96	0.11	20.15	70.20
700.00	2.93	59.05	699.45	20.89	9.30	23.44	0.21	25.22	68.36
755.00	2.54	65.06	754.39	22.88	10.54	25.75	0.88	27.82	67.75



Scientific Drilling International Survey Report

Company: COG RESOURCES	Date: 11/30/2009	Time: 11:21:43	Page: 1
Field: Grayburg Jackson	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: GJ West Coop #201	Section (VS) Reference:	Well (0.00N,0.00E,102.44Azi)	
Wellpath: DH - Job #32K1109504	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 11/21/09-11/25/09	Start Date: 11/21/2009
MWD 930'-4148'	
Company: Scientific Drilling Internatio	Engineer: Foster/Decatur MWD
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
755.00	2.54	65.06	754.39	22.88	10.54	25.75	0.00	27.82	67.75
930.00	2.90	59.24	929.19	29.19	14.43	33.07	0.26	36.09	66.42
994.00	2.44	70.21	993.12	31.52	15.72	35.75	1.07	39.05	66.26
1058.00	3.04	81.62	1057.05	34.26	16.43	38.71	1.26	42.05	67.00
1122.00	3.66	96.13	1120.94	37.87	16.46	42.42	1.63	45.50	68.79
1185.00	4.27	104.30	1183.79	42.22	15.67	46.69	1.32	49.25	71.45
1249.00	4.23	107.39	1247.61	46.95	14.37	51.25	0.36	53.23	74.33
1345.00	3.94	106.49	1343.37	53.77	12.38	57.79	0.31	59.10	77.91
1441.00	3.35	100.42	1439.17	59.86	10.94	63.71	0.73	64.64	80.26
1504.00	3.54	102.41	1502.06	63.65	10.19	67.42	0.36	68.19	81.41
1568.00	3.91	115.79	1565.93	67.74	8.81	71.32	1.47	71.86	82.96
1631.00	4.11	120.00	1628.77	71.99	6.75	75.21	0.56	75.51	84.87
1727.00	3.75	120.00	1724.55	78.26	3.46	80.90	0.37	80.98	87.55
1823.00	3.59	109.90	1820.35	84.23	0.87	86.45	0.69	86.45	89.43
1887.00	3.37	109.57	1884.23	88.09	-0.45	90.11	0.35	90.11	90.28
1983.00	3.70	102.67	1980.05	93.98	-2.07	95.79	0.56	95.81	91.24
2046.00	3.25	103.26	2042.93	97.80	-2.93	99.51	0.72	99.55	91.68
2141.00	3.37	100.27	2137.78	103.29	-4.04	104.88	0.22	104.95	92.21
2205.00	3.25	101.40	2201.67	106.98	-4.74	108.51	0.21	108.61	92.50
2268.00	5.12	104.16	2264.50	111.57	-5.78	112.98	2.98	113.13	92.93
2332.00	5.62	105.00	2328.22	117.56	-7.29	118.78	0.79	119.00	93.51
2428.00	5.27	104.88	2423.78	126.66	-9.64	127.58	0.36	127.94	94.32
2524.00	5.07	105.03	2519.39	135.30	-11.87	135.94	0.21	136.45	94.99
2619.00	5.02	104.35	2614.02	143.65	-13.99	144.02	0.08	144.70	95.55
2715.00	4.63	111.52	2709.69	151.67	-16.45	151.69	0.75	152.58	96.19
2809.00	4.70	110.30	2803.37	159.24	-19.18	158.83	0.13	159.99	96.88
2906.00	4.89	110.72	2900.03	167.26	-22.02	166.43	0.20	167.88	97.54
3002.00	4.56	112.31	2995.71	175.07	-24.91	173.79	0.37	175.56	98.16
3098.00	4.22	118.51	3091.43	182.23	-28.05	180.42	0.61	182.59	98.84
3193.00	4.32	118.01	3186.16	189.03	-31.40	186.65	0.11	189.27	99.55
3288.00	4.21	119.95	3280.90	195.80	-34.82	192.83	0.19	195.95	100.24
3415.00	4.12	118.14	3407.56	204.64	-39.30	200.89	0.13	204.70	101.07
3543.00	4.07	116.66	3535.24	213.47	-43.50	209.01	0.09	213.49	101.76
3607.00	3.50	118.15	3599.10	217.55	-45.45	212.76	0.90	217.56	102.06
3670.00	2.49	113.44	3662.01	220.75	-46.90	215.71	1.65	220.75	102.27
3734.00	1.18	93.91	3725.98	222.76	-47.50	217.64	2.24	222.77	102.31
3798.00	0.64	48.33	3789.97	223.63	-47.30	218.57	1.35	223.63	102.21
3925.00	0.27	346.32	3916.97	223.91	-46.54	219.03	0.45	223.92	102.00
4052.00	0.41	26.99	4043.96	223.89	-45.84	219.16	0.21	223.91	101.81
4148.00	0.24	25.78	4139.96	224.02	-45.36	219.41	0.18	224.04	101.68