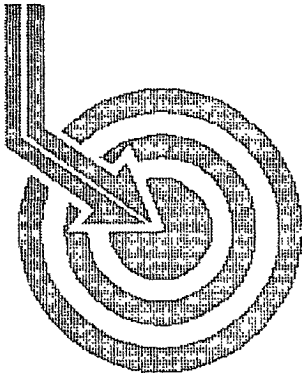
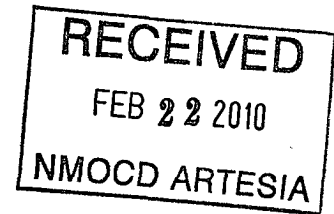


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Scientific Drilling



COG RESOURCES

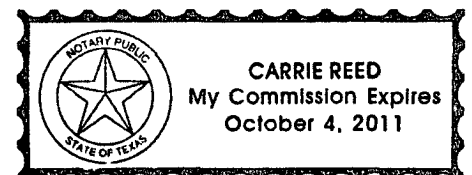
Field: Grayburg Jackson
Site: Eddy County, NM
Well: GJ West Coop #118
Wellpath: VH - Job #32K1009431
Survey: 10/16/09

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

.....*Richard*.....Company Representative

Notorized this date 11th of November, 2009.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: COG RESOURCES	Date: 10/20/2009	Time: 13:39:13	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 #118	Section (VS) Reference:	Well: (0.00N,0.00E,334.07Azi)	
Wellpath: VH - Job #32K1009431	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 10/16/09	Start Date: 10/16/2009
Company: Scientific Drilling Internatio	Engineer: Madrid w/Halliburton
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.58	288.05	100.00	0.35	0.16	-0.48	0.58	0.51	288.05
200.00	0.30	303.63	200.00	0.93	0.46	-1.18	0.30	1.27	291.23
300.00	0.29	322.51	299.99	1.40	0.80	-1.55	0.10	1.75	297.39
400.00	0.18	354.47	399.99	1.80	1.16	-1.72	0.17	2.08	304.01
500.00	0.56	35.79	499.99	2.18	1.71	-1.45	0.44	2.25	319.76
600.00	0.80	36.39	599.98	2.73	2.67	-0.75	0.24	2.78	344.31
700.00	0.79	26.22	699.97	3.48	3.85	-0.03	0.14	3.85	359.52
800.00	0.55	48.14	799.97	4.03	4.79	0.63	0.35	4.83	7.49
900.00	0.21	40.22	899.97	4.24	5.25	1.11	0.34	5.37	11.89
1000.00	0.05	254.36	999.97	4.32	5.38	1.18	0.25	5.51	12.39
1100.00	0.21	208.66	1099.96	4.22	5.21	1.05	0.18	5.31	11.42
1200.00	0.28	206.07	1199.96	3.97	4.83	0.86	0.07	4.90	10.06
1300.00	0.20	238.31	1299.96	3.80	4.52	0.60	0.15	4.56	7.58
1400.00	0.35	243.57	1399.96	3.78	4.29	0.18	0.15	4.29	2.39
1500.00	0.41	242.55	1499.96	3.77	3.99	-0.41	0.06	4.01	354.10
1600.00	0.42	255.13	1599.96	3.83	3.73	-1.08	0.09	3.88	343.79
1700.00	0.38	256.33	1699.95	3.97	3.56	-1.76	0.04	3.97	333.66
1800.00	0.53	267.02	1799.95	4.22	3.45	-2.54	0.17	4.29	323.62
1900.00	0.62	289.94	1899.95	4.79	3.61	-3.51	0.24	5.04	315.80
2000.00	0.64	289.52	1999.94	5.57	3.99	-4.55	0.02	6.05	311.22
2100.00	0.71	317.01	2099.93	6.56	4.63	-5.50	0.33	7.19	310.07
2200.00	0.76	308.74	2199.93	7.76	5.49	-6.44	0.12	8.46	310.47
2300.00	0.82	317.53	2299.92	9.04	6.44	-7.44	0.14	9.84	310.87
2400.00	0.85	319.63	2399.91	10.45	7.53	-8.40	0.04	11.28	311.86
2500.00	0.83	319.28	2499.89	11.86	8.64	-9.36	0.02	12.74	312.73
2600.00	0.67	305.28	2599.89	13.08	9.53	-10.31	0.24	14.04	312.76
2700.00	0.59	302.72	2699.88	14.03	10.15	-11.22	0.08	15.12	312.13
2800.00	0.54	313.14	2799.88	14.91	10.75	-11.99	0.11	16.10	311.86
2900.00	0.53	321.20	2899.87	15.80	11.43	-12.63	0.08	17.03	312.15
3000.00	0.46	331.93	2999.87	16.65	12.14	-13.11	0.12	17.87	312.82
3100.00	0.36	300.73	3099.86	17.32	12.66	-13.56	0.24	18.55	313.02
3200.00	0.39	284.17	3199.86	17.80	12.90	-14.16	0.11	19.16	312.33
3300.00	0.40	289.84	3299.86	18.27	13.10	-14.82	0.04	19.78	311.48
3400.00	0.40	297.63	3399.86	18.80	13.38	-15.46	0.05	20.45	310.88
3500.00	0.39	296.57	3499.86	19.35	13.70	-16.07	0.01	21.12	310.44
3600.00	0.29	320.94	3599.85	19.86	14.05	-16.54	0.17	21.70	310.35
3700.00	0.31	338.31	3699.85	20.38	14.50	-16.80	0.09	22.19	310.79
3800.00	0.41	0.86	3799.85	20.97	15.10	-16.89	0.17	22.66	311.80
3900.00	0.39	35.42	3899.85	21.45	15.74	-16.69	0.24	22.94	313.32
4000.00	0.49	71.52	3999.85	21.56	16.15	-16.09	0.29	22.80	315.12
4100.00	0.49	39.58	4099.84	21.68	16.62	-15.41	0.27	22.66	317.16
4200.00	0.53	27.61	4199.84	22.13	17.36	-14.92	0.11	22.89	319.31
4300.00	0.61	34.99	4299.83	22.67	18.20	-14.40	0.11	23.21	321.65
4400.00	0.42	23.35	4399.83	23.17	18.98	-13.95	0.22	23.55	323.68
4500.00	0.39	350.82	4499.83	23.73	19.65	-13.86	0.23	24.04	324.80
4600.00	0.59	1.58	4599.82	24.51	20.50	-13.90	0.22	24.77	325.86
4700.00	0.33	28.42	4699.82	25.14	21.27	-13.75	0.33	25.32	327.12
4800.00	0.33	52.11	4799.82	25.37	21.70	-13.38	0.14	25.49	328.33



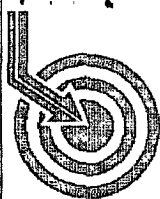
Scientific Drilling International

Survey Report

Company: COG.RESOURCES Date: 10/20/2009 Time: 13:39:13 Page: 2
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 #118 Section (VS) Reference: Well (0.00N,0.00E,334.07Azi)
Wellpath: VH - Job #32K1009431 Survey Calculation Method: Minimum Curvature Db: Sybase

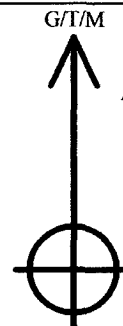
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.00	0.35	44.05	4899.82	25.53	22.09	-12.95	0.05	25.61	329.63
5000.00	0.35	51.46	4999.81	25.70	22.50	-12.49	0.05	25.74	330.96
5100.00	0.27	68.68	5099.81	25.75	22.78	-12.04	0.12	25.76	332.15
5200.00	0.35	108.02	5199.81	25.52	22.77	-11.53	0.22	25.52	333.15
5300.00	0.42	132.21	5299.81	24.97	22.43	-10.96	0.18	24.97	333.95
5350.00	0.54	157.57	5349.81	24.56	22.09	-10.74	0.48	24.56	334.07



**Scientific
Drilling**

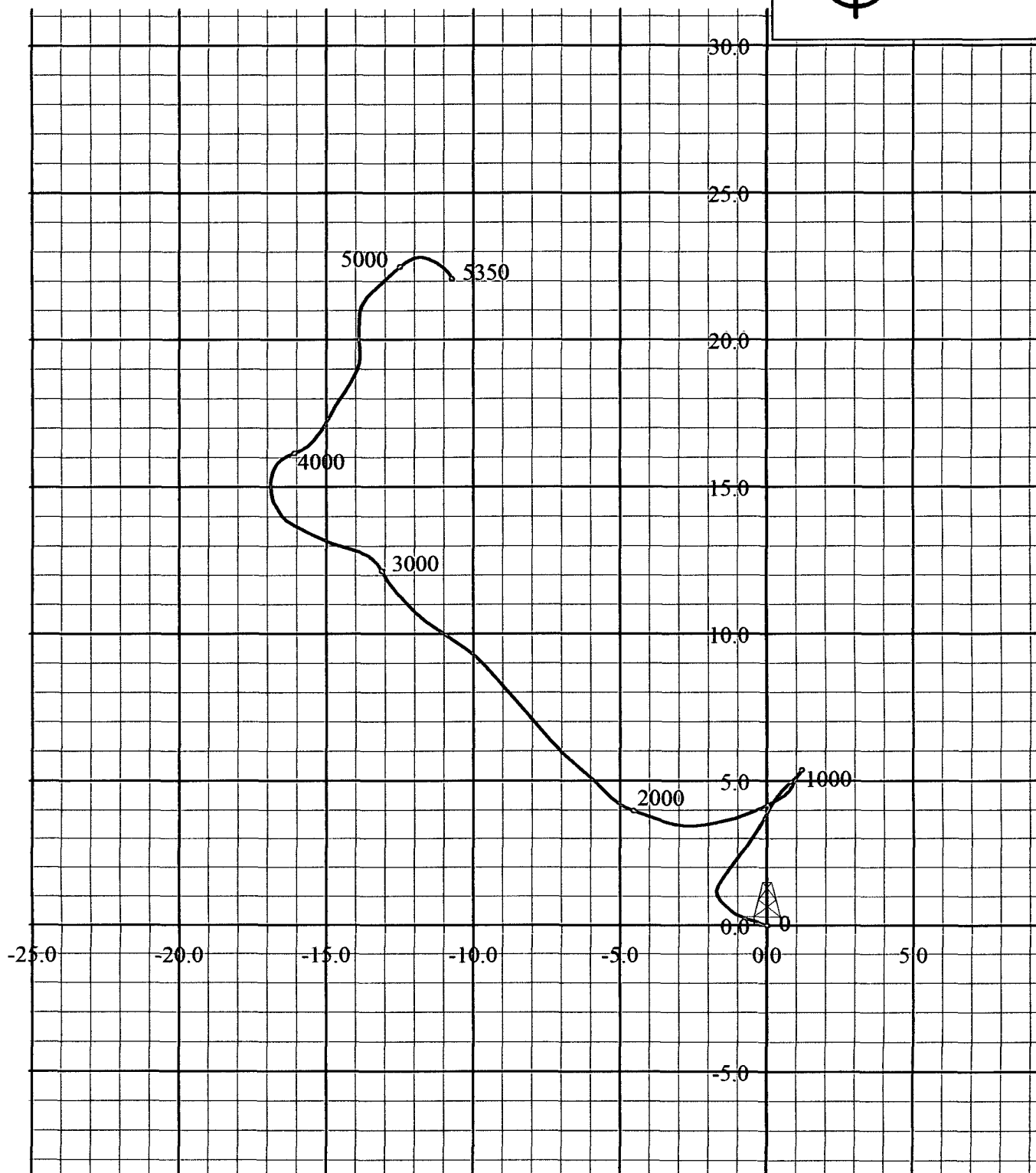
Field: Grayburg Jackson
Site: Eddy County, NM
Well: GJ West Coop #118
Wellpath: VH - Job #32K1009431
Survey: 10/16/09



Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 10/20/2009
Model: igrf2000

South(-)/North(+) [5ft/in]



West(-)/East(+) [5ft/in]