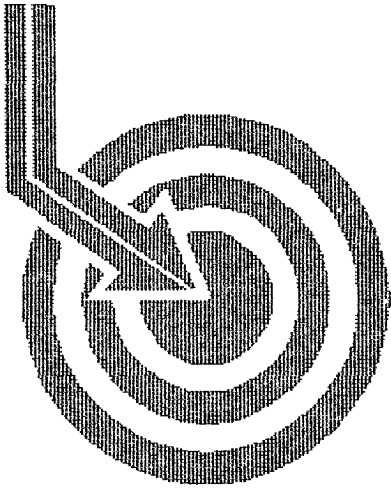
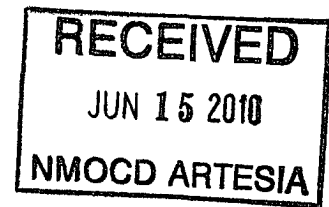


30.015.10825



Scientific Drilling



nr

COG RESOURCES

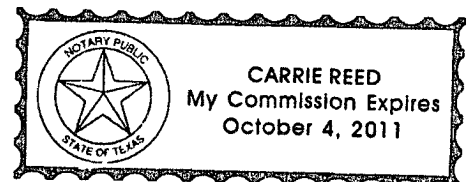
Field: Grayburg Jackson
Site: Eddy County, NM
Well: GJ West Coop #119
Wellpath: VH - Job #32K0310174
Survey: 03/13/10

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

Lu Harton
Company Representative

Notarized this date 29th of March, 2010.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International, Inc.

Survey Report

Company: COG RESOURCES	Date: 3/16/2010	Time: 11 03 10	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 #119	Section (VS) Reference: Well (0 00N,0 00E,190 72Az)		
Wellpath: VH - Job #32K0310174	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: 03/13/10	Start Date: 3/13/2010
KSRG 0'-5446'	
Company: Scientific Drilling Internatio	Engineer: Garza/Rowe/Rentena
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 0	0 00	0 00	0 0	0 0	0 0	0 0	0.00	0 0	0 00
100 0	1 18	169 84	100 0	1 0	-1 0	0 2	1 18	1 0	169 84
200 0	1 01	177 96	200 0	2 8	-2 9	0 4	0 23	2 9	172 27
300 0	1 01	177 59	300 0	4 5	-4 7	0 5	0 01	4 7	174 34
400 0	0.54	168 38	399 9	5 8	-6 0	0 6	0 48	6 0	174 35
500 0	0.51	145 04	499 9	6 5	-6 8	0 9	0 21	6 9	172 13
600 0	0.52	99 13	599 9	6 8	-7 3	1 6	0 40	7 5	167 24
700 0	0.62	104 83	699 9	6 9	-7 5	2 6	0 11	7 9	160 71
800 0	0.71	96 44	799 9	6 9	-7 7	3 8	0 13	8 6	153 97
900 0	0.57	105 20	899 9	6 9	-7 9	4 9	0 17	9 3	148 41
1000 0	0.78	97 49	999 9	6 9	-8 1	6 0	0 23	10.1	143 47
1100 0	0.56	115 61	1099 9	6 9	-8 4	7 1	0 30	11 0	139 74
1200 0	0.52	134 53	1199 9	7 3	-8 9	7 9	0 18	11 9	138 58
1300 0	0.37	162 61	1299 9	7 9	-9 6	8 3	0 26	12 7	139 03
1400 0	0.46	170 52	1399 9	8 5	-10 3	8 5	0 11	13 3	140 49
1500 0	0.33	181 36	1499 9	9 2	-11 0	8 5	0 15	13 9	142 10
1600 0	0.37	208 76	1599 9	9 8	-11 5	8.4	0 17	14 2	144 02
1700 0	0.19	291 60	1699 9	10 0	-11 7	8.1	0 39	14 2	145 55
1800 0	0.34	283 98	1799 9	10.0	-11 6	7 6	0.15	13.9	146 75
1900 0	0.43	298 13	1899 9	9 9	-11 4	7 0	0 13	13 3	148 39
2000 0	0.59	286 96	1999 9	9 7	-11 0	6 2	0 19	12 6	150 79
2100 0	0.71	300 78	2099 9	9 4	-10 6	5 1	0 20	11 8	154 03
2200 0	0.84	295 68	2199 9	9 0	-9 9	4.0	0 15	10 7	158 29
2300 0	0.75	300 43	2299 9	8 6	-9 3	2 7	0 11	9.7	163 62
2400 0	0.94	293 15	2399 9	8 2	-8 6	1 4	0 22	8 7	170 71
2500 0	0.67	286 77	2499 8	8 0	-8 1	0 1	0 28	8 1	179 31
2600 0	0.20	266 56	2599 8	8 0	-8 0	-0 6	0 49	8 0	184 55
2700 0	0.22	287 91	2699 8	8 0	-7 9	-1 0	0 08	8 0	187 13
2800 0	0.18	185 23	2799 8	8 1	-8 0	-1 2	0 31	8 1	188 42
2900 0	0.04	120 54	2899 8	8 3	-8 2	-1 2	0 17	8 3	188 14
3000 0	0.28	183 68	2999 8	8 5	-8 5	-1 2	0 26	8 5	187 79
3100 0	0.36	109 12	3099 8	8 8	-8 8	-0 9	0 39	8 9	185 69
3200 0	0.20	22 87	3199 8	8 7	-8 8	-0 5	0 40	8 8	183 35
3300 0	0.37	131 56	3299 8	8 7	-8 8	-0 2	0 47	8 8	181 33
3400 0	0.28	150 56	3399 8	9 0	-9 2	0 2	0 14	9 2	179 02
3500 0	0.47	136 27	3499 8	9 5	-9 7	0 6	0 21	9 8	176 70
3600 0	0.34	182 33	3599 8	10 0	-10 3	0 8	0 34	10 4	175 40
3700 0	0.22	219 04	3699 8	10 5	-10 8	0 7	0 21	10 8	176 29
3800 0	0.34	232 82	3799 8	10 9	-11 1	0 3	0.14	11 1	178 23
3900 0	0.54	186 36	3899 8	11 5	-11 8	0 1	0 39	11 8	179 74
4000 0	0.48	218 50	3999 8	12 4	-12 6	-0 3	0 29	12 6	181 18
4100 0	0.25	177 63	4099 8	13 0	-13 1	-0 5	0 33	13.1	182 23
4200 0	0.40	169 82	4199 8	13 5	-13 7	-0 4	0 16	13 7	181.84
4300 0	0.54	173 52	4299 8	14 3	-14 5	-0 3	0 14	14 5	181 29
4400 0	1.36	201 06	4399 8	15 9	-16 1	-0 7	0 92	16.1	182 49
4500 0	1 29	211 18	4499 8	18 1	-18 1	-1 7	0 24	18 2	185 38
4600 0	1 39	217 71	4599 7	20 3	-20 0	-3 0	0 18	20 3	188 60
4700 0	1 07	210 80	4699 7	22 2	-21 8	-4 3	0 35	22 2	191 03
4800 0	0 92	193 33	4799 7	23 9	-23 4	-4 9	0.34	23 9	191 87



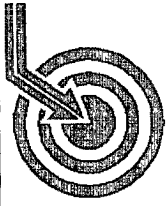
Scientific Drilling International, Inc.

Survey Report

Company: COG RESOURCES Date: 3/16/2010 Time: 11 03 10 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 #119 Section (VS) Reference: Well (0 00N,0.00E,190 72Azi)
Wellpath: VH - Job #32K0310174 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

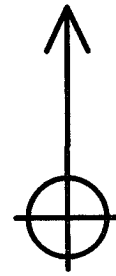
MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900 0	0 76	195 23	4899 7	25 4	-24.8	-5 3	0 16	25 4	192 00
5000 0	1 37	192 82	4999 7	27 2	-26 6	-5 7	0 61	27 2	192 12
5100 0	0 91	184 96	5099 7	29 2	-28 6	-6 0	0 48	29 2	191 95
5200 0	1 09	189 63	5199 6	30 9	-30 3	-6 3	0 20	30 9	191 70
5300 0	1 02	188 00	5299 6	32 8	-32 1	-6 6	0 08	32 8	191 54
5400 0	0 95	182 58	5399 6	34 5	-33 8	-6 7	0 12	34 5	191 23
5446 0	1 24	159 50	5445 6	35 3	-34 7	-6 6	1.14	35 3	190 72



Scientific
Drilling

Field: Grayburg Jackson
Site: Eddy County, NM
Well: GJ West Coop #119
Survey: 03/13/10

G/T/M



Azimuths to Grid North
True North 0 00°
Magnetic North 0 00°
Magnetic Field
Dip Angle 0 00°
Date 3/16/2010
Model igrf2000

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

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

