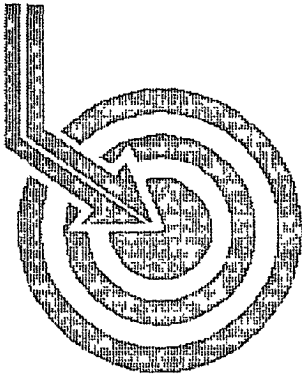




Scientific Drilling

30.015.36944

COG RESOURCES

Field: Loco Hills
Site: Eddy County, NM
Well: Electra Federal #32
Wellpath: DH - Job #32D0409129
Survey: 04/09/09-04/14/09

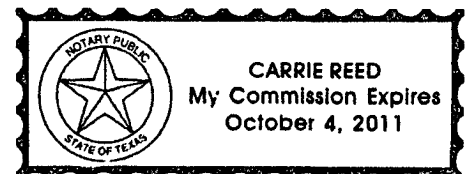
This survey is correct to the best of my knowledge
and is supported by actual field data.

.....Richardson..... Company Representative

Notorized this date 13th of May, 2009.

Carrie Reed

Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

Company: COG RESOURCES Date: 05/04/2009 Time: 11:39 19 Page: 1
Field: Loco Hills Co-ordinate(NE) Reference: Site: Eddy County, NM, Grd North
Site: Eddy County, NM Vertical (TVD) Reference: SITE 0 0
Well: Electra Federal #32 Section (VS) Reference: Well (0 00N,0 00E;237.05Azi)
Wellpath: VH - Job #32K0409130 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 04/09/09 Start Date: 04/09/2009
KSRG 0'-1250'
Company: Scientific Drilling Internatio Engineer: Guebara/Paredes/Williams
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 79	0 00	0.00	0 00	0 00	0 00	0 00	0 00
100 00	0 82	23 69	100 00	-0 60	0 66	0 29	0 82	0 72	23 69
200 00	0 41	254 34	199 99	-0 85	1.21	0.23	1 13	1 24	10 75
300 00	0 23	195 38	299 99	-0 36	0 92	-0 17	0 35	0 94	349 74
400 00	0 43	299 42	399 99	-0 04	0 91	-0 55	0 53	1 07	329 10
500 00	0.40	348 03	499 99	0 01	1 44	-0.95	0 34	1 72	326 69
600 00	0 35	333 60	599.99	-0 15	2.06	-1 15	0.11	2 36	330 67
700 00	0 42	358 47	699 98	-0 37	2.70	-1.30	0.18	2.99	334 25
800 00	0 69	39.04	799.98	-1 14	3.53	-0 93	0.46	3 65	345 23
900 00	1 12	34.17	899 97	-2.61	4 81	0 00	0 44	4 81	359 97
1000 00	0 90	34 22	999 95	-4 24	6 26	0 99	0 22	6 34	8 96
1100 00	1 55	45 69	1099 93	-6.29	7 86	2 40	0 69	8 22	16 97
1200 00	1 29	54 25	1199 90	-8.74	9 46	4 28	0 33	10 38	24 34
1250 00	1 17	39 58	1249 89	-9 79	10 18	5 06	0 67	11 37	26 43



Scientific
Drilling

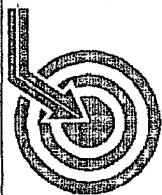
Scientific Drilling International Survey Report

Company: COG RESOURCES	Date: 05/13/2009	Time: 11:11 37	Page: 1
Field: Loco Hills	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Electra Federal #32	Section (VS) Reference:	Well (0.00N,0.00E,237 05Azi)	
Wellpath: DH - Job #32D0409129	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 04/09/09-04/14/09	Start Date: 04/09/2009
MWD 1402'-4470'	
Company: Scientific Drilling Internatio	Engineer: Calvert/Lambert
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
1250 00	1.17	39.58	1249 89	-9 79	10 18	5 06	0.00	11.37	26 43
1402.00	0.86	39 60	1401 86	-12 35	12.26	6.78	0.20	14.01	28 94
1496 00	1.32	300.42	1495.85	-12 54	13.35	6 29	1.79	14 76	25 24
1589 00	3 30	263.15	1588 78	-9 66	13.57	2 71	2 57	13 84	11 29
1683 00	3.89	250.39	1682.59	-4 12	12.18	-2 98	1.05	12.54	346 25
1777 00	6 10	234 14	1776.23	3.97	8 18	-10.03	2 77	12.95	309.21
1870 00	7.37	229 88	1868 59	14.82	1.44	-18.60	1 47	18.65	274 44
1965 00	8.76	230.61	1962.65	28.06	-7 07	-28 85	1 47	29 70	256 22
2150 00	7.06	229 49	2145.88	53 33	-23.40	-48 38	0.92	53 74	244.19
2336 00	8 32	239 15	2330.21	78 11	-37.73	-68 63	0.97	78 31	241.20
2525.00	7 10	232 98	2517 50	103 42	-51.77	-89 69	0.78	103 56	240.01
2712.00	8 53	232.04	2702.76	128.77	-67.26	-109 86	0 77	128 81	238.52
2900 00	9 72	229.66	2888.38	158.40	-86 11	-132.95	0 66	158 40	237.07
3087 00	9 51	239 05	3072.76	189.49	-104.28	-158 23	0 85	189 50	236 61
3278 00	8 85	236.36	3261 32	219.95	-120 53	-183.99	0 41	219 96	236.77
3462 00	9 14	242 98	3443 06	248 64	-135 01	-208 80	0 58	248.64	237.11
3647 00	7 65	246 18	3626 07	275 42	-146 66	-233.15	0 84	275.44	237 83
3838 00	8 14	228 46	3815 29	301 34	-160 76	-254.91	1.29	301 37	237.76
4025 00	8.05	228 28	4000 43	327 38	-178 26	-274 59	0 05	327.38	237 01
4088 00	7.83	228 24	4062 82	335 98	-184.05	-281.08	0 35	335.98	236 78
4182 00	6 46	233.48	4156 09	347 58	-191.46	-290.11	1 61	347 59	236 58
4275 00	5 17	241.05	4248.61	356.98	-196.60	-297 98	1.61	357.00	236 58
4377 00	3.55	241.29	4350.31	364 72	-200.35	-304 77	1 59	364.73	236 68
4470 00	0.83	304 72	4443.25	367 85	-201.35	-307 85	3.51	367 85	236 81



Scientific
Drilling

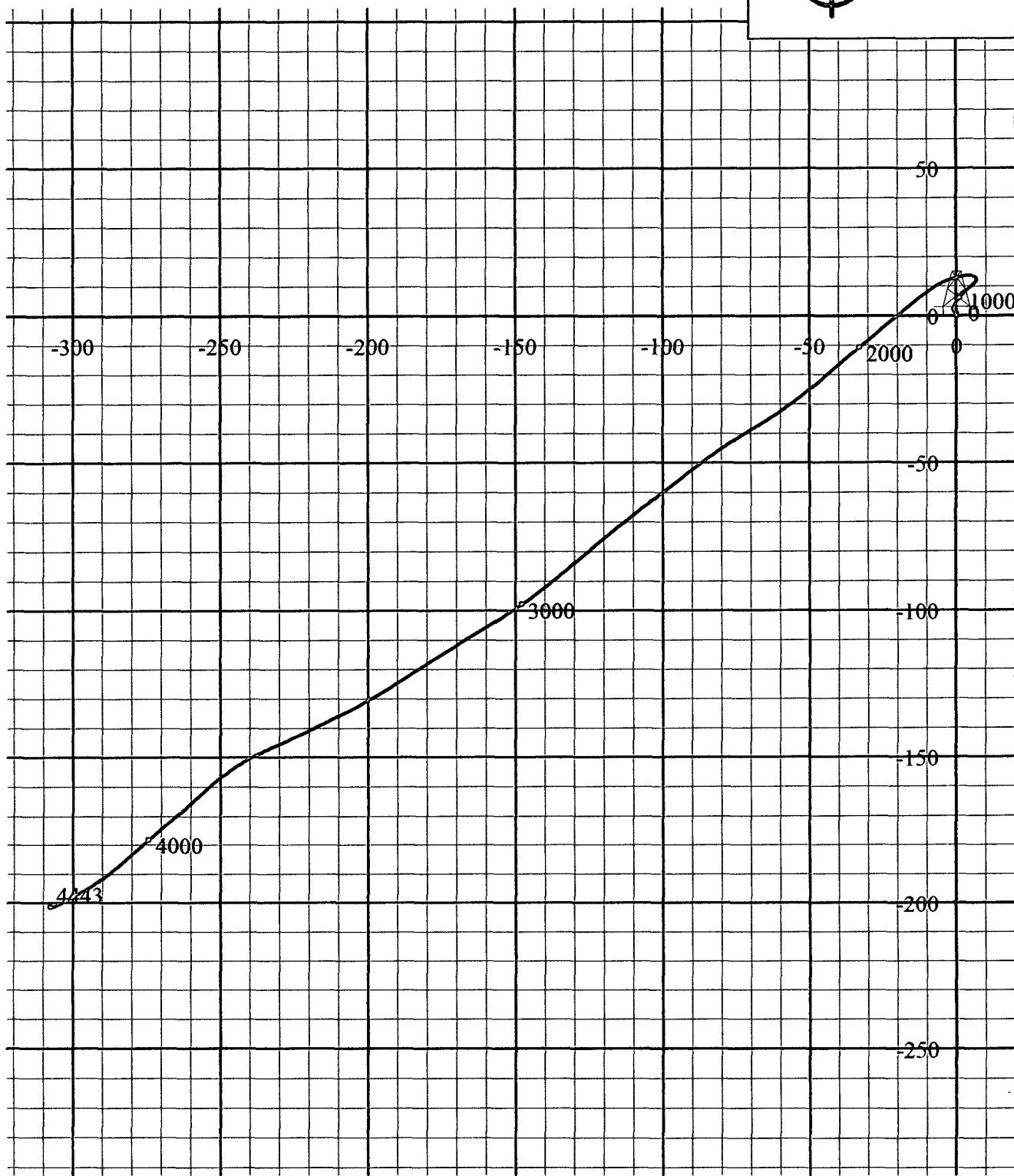
Field: Loco Hills
Site: Eddy County, NM
Well: Electra Federal #32
Wellpath: DH - Job #32D0409129
Survey: 04/09/09-04/14/09



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

Magnetic Field
Strength 0nT
Dip Angle 0.00°
Date: 05/13/2009
Model: igrf2000

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



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