

Scientific Drilling

MACK ENERGY

Field: Empire
Site: Eddy County, NM
Well: Continental A State #3
Wellpath: DH - Job #32D0606460
Survey: 06/12/06-06/18/06

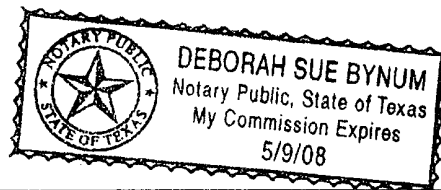
This survey is correct to the best of my knowledge
and is supported by actual field data.

Shanton.....Company Representative

Notorized this date 10th of July, 2006.

Deborah Sue Bynum

Notary Signature
County of Midland
State of Texas





Scientific Drilling International

Survey Report

Company: MACK ENERGY	Date: 07/10/2006	Time: 10:16:13	Page: 1
Field: Empire	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE: 0.0	
Well: Continental A State #3	Section (VS) Reference:	Well: (0.00N,0.00E,356.53Azi)	
Wellpath: VH - Job #32K0606469	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 06/12/06	Start Date: 06/12/2006
Company: Scientific Drilling Internatio	Engineer: Gonzales w/P&M
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	359.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.28	272.80	100.00	0.03	0.01	-0.24	0.28	0.24	272.80
200.00	0.17	260.43	200.00	0.04	0.00	-0.63	0.12	0.63	269.93
300.00	0.24	164.03	300.00	-0.18	-0.23	-0.72	0.31	0.76	252.58
400.00	0.75	176.98	399.99	-1.04	-1.08	-0.63	0.52	1.25	210.25
500.00	0.52	170.02	499.99	-2.15	-2.18	-0.52	0.24	2.24	193.35
600.00	0.44	166.98	599.98	-2.98	-3.00	-0.35	0.08	3.02	186.70
700.00	0.37	111.55	699.98	-3.49	-3.50	0.03	0.38	3.50	179.44
800.00	0.25	76.48	799.98	-3.59	-3.56	0.55	0.22	3.61	171.28
900.00	0.17	59.32	899.98	-3.48	-3.44	0.89	0.10	3.55	165.54
960.00	0.24	59.04	959.98	-3.39	-3.33	1.07	0.12	3.49	162.16



Scientific Drilling International Survey Report

Company: MACK ENERGY	Date: 07/10/2006	Time: 10:11:44	Page: 1
Field: Empire	Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North		
Site: Eddy County, NM	Vertical (TVD) Reference: SITE 0.0		
Well: Continental A State #3	Section (VS) Reference: Well (0.00N,0.00E,356.53Azi)		
Wellpath: DH - Job #32D0606460	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: 06/12/06-06/18/06	Start Date: 06/12/2006
Company: Scientific Drilling Internatio	Engineer: Johns/Ledbetter
Tool: MWD;MWD	Tied-to: From: Definitive Path

Survey

MD ft	Incl deg	Azlm deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
960.00	0.24	59.04	959.98	-3.39	-3.33	1.07	0.00	3.49	162.16
1060.00	2.49	8.20	1059.95	-1.18	-1.11	1.22	2.34	1.65	132.21
1160.00	4.92	5.64	1159.73	5.19	5.33	2.14	2.43	5.74	21.85
1260.00	6.75	3.34	1259.19	15.41	15.63	3.16	1.85	15.95	11.44
1360.00	8.14	353.22	1358.37	28.15	28.36	2.65	1.91	28.49	5.33
1460.00	10.69	351.98	1457.02	44.40	44.50	0.37	2.55	44.50	0.48
1560.00	10.76	349.96	1555.27	62.92	62.88	-2.58	0.38	62.94	357.65
1660.00	10.79	351.83	1653.53	81.43	81.23	-5.65	0.35	81.43	356.02
1760.00	11.36	358.26	1751.62	100.84	100.59	-7.15	1.36	100.84	355.94
1860.00	8.63	359.82	1849.97	118.85	118.62	-7.47	2.75	118.85	356.40
1960.00	6.78	0.02	1949.10	131.98	131.77	-7.59	1.85	131.98	356.70
2060.00	5.91	358.49	2048.49	142.95	142.75	-7.57	0.89	142.95	356.97
2160.00	4.87	359.73	2148.03	152.54	152.35	-7.77	1.05	152.54	357.08
2260.00	2.74	354.20	2247.82	158.87	158.66	-8.16	2.16	158.87	357.06
2360.00	1.20	325.15	2347.76	162.07	161.82	-9.12	1.78	162.07	356.78
2460.00	0.81	336.75	2447.75	163.74	163.43	-10.05	0.44	163.74	356.48
2560.00	0.62	322.40	2547.74	164.66	164.33	-10.46	0.25	164.66	356.36
2660.00	0.38	41.92	2647.74	165.42	165.07	-10.78	0.67	165.42	356.26
2760.00	0.43	63.76	2747.73	165.61	165.30	-10.07	0.16	165.61	356.52
2860.00	0.40	58.78	2847.73	166.13	165.85	-9.60	0.04	166.13	356.69
2960.00	0.26	69.79	2947.73	166.30	166.06	-8.98	0.16	166.31	356.90
3060.00	0.07	42.76	3047.73	166.42	166.19	-8.80	0.20	166.42	356.97
3160.00	0.09	99.75	3147.73	166.45	166.23	-8.69	0.08	166.46	357.01
3260.00	0.37	122.38	3247.73	166.25	166.04	-8.34	0.29	166.25	357.12
3360.00	0.28	167.60	3347.73	165.80	165.62	-7.96	0.26	165.81	357.25
3460.00	0.37	169.81	3447.72	165.26	165.09	-7.97	0.10	165.28	357.24
3560.00	0.57	148.50	3547.72	164.50	164.34	-7.65	0.26	164.52	357.33
3660.00	0.63	149.64	3647.71	163.56	163.43	-7.09	0.06	163.59	357.52
3760.00	0.64	167.69	3747.71	162.53	162.43	-6.65	0.20	162.56	357.66
3860.00	0.06	98.91	3847.71	161.80	161.70	-6.53	0.62	161.83	357.69
3960.00	0.54	10.99	3947.70	162.42	162.33	-6.41	0.55	162.45	357.74
4060.00	0.69	18.27	4047.70	163.44	163.37	-6.13	0.17	163.48	357.85
4160.00	0.51	1.82	4147.69	164.47	164.41	-5.90	0.25	164.52	357.94
4260.00	0.35	338.30	4247.69	165.20	165.14	-6.05	0.24	165.25	357.90
4360.00	0.14	332.26	4347.69	165.60	165.53	-6.22	0.20	165.64	357.85
4460.00	0.32	295.26	4447.69	165.81	165.72	-6.48	0.23	165.85	357.76
4560.00	0.50	288.15	4547.68	166.14	166.01	-7.24	0.18	166.17	357.50
4660.00	0.24	270.79	4647.68	166.32	166.15	-7.86	0.28	166.33	357.29
4760.00	0.24	303.06	4747.68	166.37	166.18	-8.18	0.13	166.39	357.18
4860.00	0.41	326.19	4847.68	166.85	166.63	-8.57	0.22	166.85	357.05
4960.00	0.15	328.81	4947.68	167.28	167.05	-8.84	0.26	167.28	356.97
5060.00	0.18	314.28	5047.68	167.42	167.18	-8.94	0.05	167.42	356.94
5160.00	0.46	310.59	5147.68	167.81	167.55	-9.36	0.29	167.81	356.80
5260.00	0.38	302.43	5247.67	168.37	168.07	-10.02	0.10	168.37	356.59
5360.00	0.16	256.74	5347.67	168.54	168.22	-10.43	0.29	168.54	356.45
5375.00	0.15	241.01	5362.67	168.53	168.21	-10.47	0.29	168.53	356.44



Field: Empire
Site: Eddy County, NM
Well: Continental A State #3
Wellpath: DH - Job #32D0606460
Survey: 06/12/06-06/18/06

