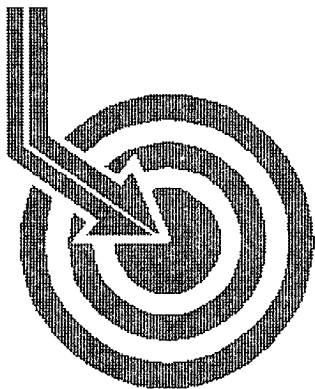




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HOBBSOCD

Scientific Drilling

SUR: L-27-21s-37e, 2205/S & 725/W
BHL: L-27-21s-37e, 1688/S & 390/W
API # 30-025-39556

APACHE CORPORATION

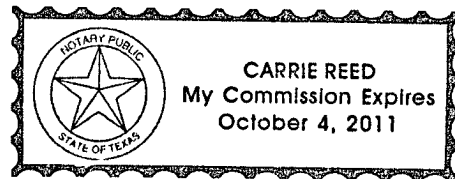
Field: Grayburg
Site: Lea County, NM
Well: Marshall B #12
Wellpath: DH - Job #32D1109468
Survey: 11/20/09-11/26/09

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

Robert.....Company Representative

Notorized this date 1st of December, 2009.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: APACHE CORPORATION	Date: 11/30/2009	Time: 21:27:05	Page: 1
Field: Grayburg	Co-ordinate(NE) Reference:	Site: Lea County, NM, Grid North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Marshall B #12	Section (VS) Reference:	Well (0.00N,0.00E,213.40Azi)	
Wellpath: DH - Job #32D1109468	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 11/20/09-11/26/09	Start Date: 11/20/2009
MWD 0'-4414'	
Company: Scientific Drilling Internatio	Engineer: Melendez.Barbre/Lambert
Tool: MWD;MWD	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
143.00	0.87	60.19	142.99	-0.97	0.54	0.94	0.61	1.09	60.19
232.00	1.13	63.10	231.98	-2.33	1.27	2.31	0.30	2.64	61.16
322.00	1.37	66.15	321.96	-4.01	2.11	4.09	0.28	4.60	62.70
413.00	1.03	63.99	412.94	-5.63	2.91	5.82	0.38	6.50	63.44
535.00	0.57	159.33	534.93	-6.22	2.82	7.02	1.00	7.56	68.10
595.00	1.08	188.34	594.92	-5.53	1.98	7.04	1.07	7.31	74.27
656.00	2.00	198.70	655.90	-3.98	0.41	6.61	1.57	6.63	86.50
717.00	3.28	205.35	716.84	-1.22	-2.18	5.53	2.15	5.94	111.53
778.00	3.40	216.33	777.73	2.31	-5.21	3.71	1.07	6.40	144.59
839.00	3.78	216.22	838.61	6.13	-8.29	1.45	0.62	8.42	170.10
903.00	4.94	219.21	902.43	10.98	-12.13	-1.54	1.85	12.23	187.24
966.00	5.75	218.24	965.15	16.82	-16.71	-5.21	1.29	17.50	197.31
1030.00	6.21	216.74	1028.80	23.47	-22.00	-9.26	0.76	23.87	202.83
1093.00	7.30	217.95	1091.37	30.86	-27.89	-13.76	1.74	31.10	206.27
1156.00	9.88	214.12	1153.65	40.26	-35.52	-19.26	4.19	40.41	208.46
1219.00	10.83	213.04	1215.63	51.58	-44.96	-25.52	1.54	51.70	209.58
1283.00	10.99	212.33	1278.47	63.69	-55.15	-32.06	0.33	63.79	210.17
1346.00	10.59	211.96	1340.36	75.48	-65.14	-38.33	0.64	75.58	210.48
1409.00	11.53	213.37	1402.19	87.57	-75.31	-44.86	1.55	87.66	210.78
1473.00	11.43	213.28	1464.91	100.31	-85.95	-51.86	0.16	100.39	211.10
1536.00	11.29	217.89	1526.67	112.70	-96.04	-59.07	1.46	112.75	211.60
1600.00	11.30	219.17	1589.43	125.18	-105.84	-66.88	0.39	125.20	212.29
1727.00	10.54	226.09	1714.14	148.89	-123.55	-83.11	1.19	148.90	213.93
1811.00	9.80	228.66	1796.82	163.29	-133.60	-94.01	1.03	163.36	215.13
1875.00	10.81	226.89	1859.79	174.38	-141.30	-102.48	1.65	174.55	215.95
1939.00	12.74	222.64	1922.44	187.18	-150.59	-111.64	3.30	187.46	216.55
2002.00	14.14	218.90	1983.71	201.70	-161.69	-121.18	2.61	202.06	216.85
2066.00	16.14	213.94	2045.49	218.38	-175.16	-131.06	3.72	218.76	216.81
2161.00	17.55	212.83	2136.41	245.90	-198.15	-146.20	1.52	246.24	216.42
2255.00	17.07	212.50	2226.15	273.87	-221.69	-161.29	0.52	274.16	216.04
2350.00	17.13	213.72	2316.95	301.80	-245.09	-176.55	0.38	302.06	215.77
2445.00	16.95	215.24	2407.78	329.63	-268.04	-192.31	0.51	329.89	215.66
2540.00	16.39	210.91	2498.80	356.87	-290.85	-207.19	1.43	357.10	215.46
2636.00	15.41	210.54	2591.12	383.14	-313.45	-220.63	1.03	383.31	215.14
2731.00	15.44	208.69	2682.70	408.35	-335.42	-233.11	0.52	408.47	214.80
2826.00	14.23	209.88	2774.53	432.60	-356.64	-245.00	1.31	432.68	214.49
2921.00	12.94	209.30	2866.87	454.87	-376.04	-256.02	1.37	454.92	214.25
3016.00	14.05	208.74	2959.25	476.97	-395.42	-266.77	1.18	477.00	214.01
3112.00	13.20	209.00	3052.55	499.52	-415.23	-277.69	0.89	499.53	213.77
3207.00	12.53	207.90	3145.16	520.59	-433.82	-287.77	0.75	520.59	213.56
3302.00	11.96	209.29	3238.00	540.66	-451.52	-297.41	0.68	540.66	213.37
3396.00	10.49	209.79	3330.20	558.92	-467.44	-306.42	1.57	558.92	213.25
3491.00	8.14	208.47	3423.94	574.25	-480.86	-313.93	2.48	574.26	213.14
3586.00	6.39	207.13	3518.17	586.21	-491.47	-319.55	1.85	586.22	213.03
3681.00	4.92	216.12	3612.71	595.54	-499.47	-324.36	1.80	595.55	213.00
3776.00	4.05	212.97	3707.42	602.96	-505.58	-328.59	0.95	602.97	213.02
3872.00	2.29	211.72	3803.27	608.27	-510.05	-331.44	1.83	608.28	213.02
3967.00	0.86	210.58	3898.23	610.88	-512.28	-332.80	1.51	610.89	213.01



Scientific Drilling International

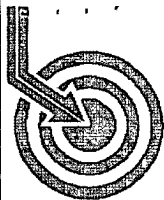
Survey Report

Company: APACHE CORPORATION
Field: Grayburg
Site: Lea County, NM
Well: Marshall B #12
Wellpath: DH - Job #32D1109468

Date: 11/30/2009 Time: 21:27:05 Page: 2
Co-ordinate(NE) Reference: Site: Lea County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,213.40Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

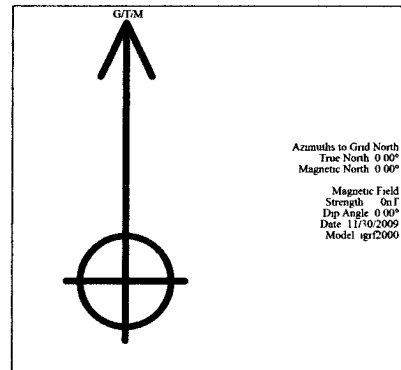
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4062.00	0.92	205.00	3993.22	612.34	-513.59	-333.48	0.11	612.36	213.00
4157.00	0.76	180.16	4088.21	613.62	-514.91	-333.81	0.41	613.64	212.95
4252.00	0.47	193.72	4183.20	614.52	-515.92	-333.90	0.34	614.54	212.91
4347.00	0.51	235.04	4278.20	615.28	-516.54	-334.34	0.37	615.30	212.91
4414.00	0.27	222.05	4345.20	615.71	-516.82	-334.69	0.38	615.73	212.93

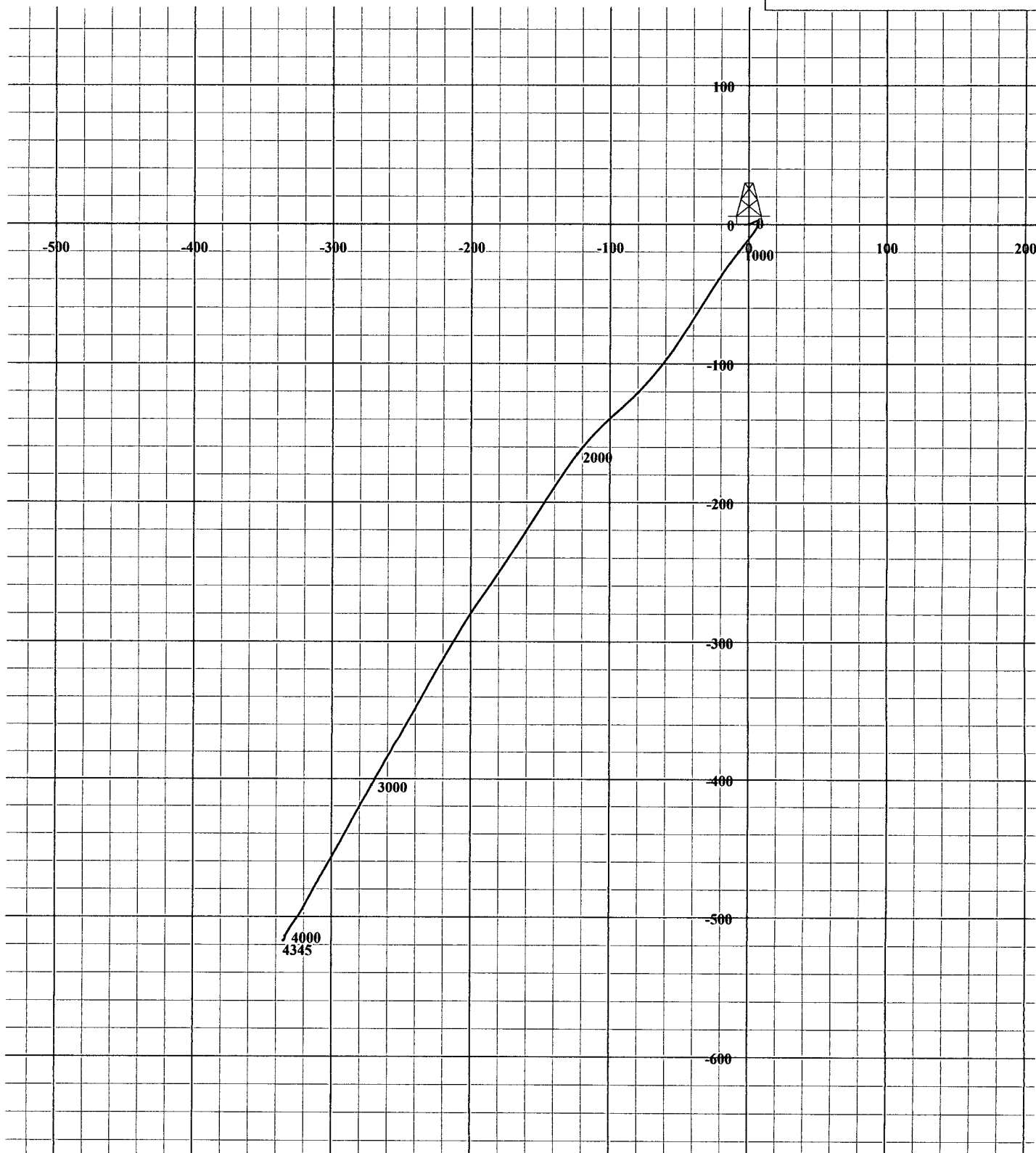


Scientific
Drilling

Field: Grayburg
Site: Lea County, NM
Well: Marshall B #12
Wellpath: DH - Job #32D1109468
Survey: 11/20/09-11/26/09



South(-)/North(+) [100ft/in]



West(-)/East(+) [100ft/in]