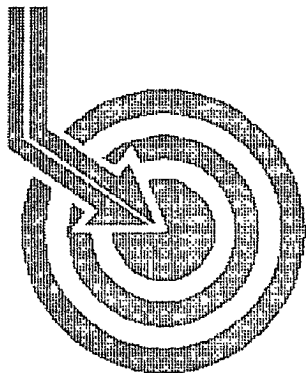




Scientific Drilling

RECEIVED

SEP 23 2009

HOBBSOCD

APACHE CORPORATION

Field: Eunice
Site: Lea County, NM
Well: New Mexico S State #55
Wellpath: DH - Job #32D0709277
Survey: 07/29/09-08/02/09

SUR: M-2-22s-37e, 185/S & 595/W
BHL: M-2-22s-37e, 350/S & 357/W
API # 30-025-39013

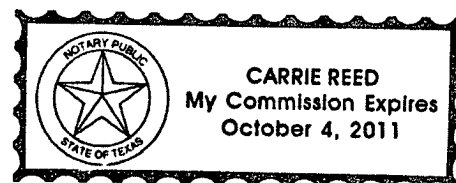
This survey is correct to the best of my knowledge
and is supported by actual field data.

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

Notorized this date 2nd of September, 2009.

Carrie Reed
Notary Signature
County of Midland
State of Texas

Ka





Scientific Drilling International Survey Report

Company: APACHE CORPORATION	Date: 09/02/2009	Time: 10:31:22	Page: 1
Field: Eunice	Co-ordinate(NE) Reference: Site: Lea County, NM, Grid North		
Site: Lea County, NM	Vertical (TVD) Reference: SITE 0.0		
Well: New Mexico S State #55	Section (VS) Reference: Well (0.00N,0.00E,304.72Azi)		
Wellpath: VH - Job #32K0709282	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: 07/28/09	Start Date: 07/28/2009
Company: KSRG 0'-1096'	
Tool: Scientific Drilling Internatio	Engineer: Guebara
Keeper;Keeper Gyro	Tied-to: From Surface

Site: Lea County, NM

Site Position:	Northing:	ft	Latitude:
From: Local Only	Easting:	ft	Longitude:
Position Uncertainty:			North Reference: Grid
Ground Level:	0.00 ft		Grid Convergence: deg

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	359.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55.20	0.27	158.22	55.20	-0.11	-0.12	0.05	0.49	0.13	158.22
83.80	0.48	251.63	83.80	-0.09	-0.22	-0.04	1.97	0.22	190.36
116.00	0.49	196.55	116.00	-0.05	-0.40	-0.21	1.39	0.45	207.70
177.80	0.62	169.03	177.80	-0.38	-0.98	-0.22	0.47	1.00	192.65
207.20	0.68	184.64	207.19	-0.58	-1.31	-0.20	0.63	1.32	188.83
236.60	0.71	186.79	236.59	-0.75	-1.66	-0.24	0.14	1.68	188.18
267.50	0.79	181.17	267.49	-0.96	-2.07	-0.27	0.35	2.08	187.33
297.10	0.92	179.94	297.09	-1.21	-2.51	-0.27	0.44	2.52	186.14
327.20	1.00	177.20	327.18	-1.50	-3.01	-0.26	0.31	3.02	184.87
358.00	1.01	178.60	357.98	-1.83	-3.55	-0.24	0.09	3.56	183.82
388.90	1.06	178.01	388.87	-2.16	-4.11	-0.22	0.17	4.11	183.07
418.60	1.10	181.18	418.57	-2.48	-4.67	-0.22	0.24	4.67	182.66
447.70	1.11	183.93	447.66	-2.78	-5.23	-0.24	0.19	5.23	182.65
478.40	1.12	188.95	478.36	-3.06	-5.82	-0.31	0.32	5.83	183.04
507.40	1.09	193.59	507.35	-3.28	-6.37	-0.42	0.33	6.38	183.75
537.00	1.17	197.13	536.94	-3.48	-6.93	-0.57	0.36	6.96	184.72
566.90	1.25	196.54	566.84	-3.67	-7.54	-0.76	0.27	7.57	185.73
596.80	1.38	195.75	596.73	-3.89	-8.20	-0.95	0.44	8.25	186.59
627.50	1.63	197.22	627.42	-4.14	-8.97	-1.18	0.82	9.05	187.47
658.50	1.90	197.95	658.40	-4.42	-9.88	-1.46	0.87	9.99	188.43
688.70	2.08	198.18	688.59	-4.72	-10.88	-1.79	0.60	11.02	189.35
717.80	2.23	200.32	717.67	-5.01	-11.91	-2.15	0.58	12.10	190.24
748.10	2.38	200.33	747.94	-5.32	-13.05	-2.57	0.50	13.30	191.16
778.50	2.44	203.99	778.31	-5.59	-14.23	-3.06	0.54	14.56	192.12
810.60	2.43	208.15	810.38	-5.80	-15.46	-3.66	0.55	15.88	193.31
842.60	2.38	209.47	842.36	-5.94	-16.63	-4.30	0.23	17.18	194.50
874.60	2.11	212.74	874.33	-6.02	-17.71	-4.95	0.93	18.39	195.61
906.50	1.85	209.45	906.21	-6.09	-18.65	-5.52	0.89	19.45	196.48
937.60	1.78	211.53	937.30	-6.16	-19.50	-6.02	0.31	20.41	197.15
969.20	1.75	213.22	968.88	-6.20	-20.32	-6.54	0.19	21.35	197.84
1000.80	1.81	215.47	1000.47	-6.21	-21.13	-7.09	0.29	22.29	198.56
1032.40	1.85	219.25	1032.05	-6.16	-21.93	-7.71	0.40	23.25	199.36
1064.10	1.95	221.97	1063.73	-6.05	-22.73	-8.39	0.42	24.23	200.26
1096.00	2.04	224.73	1095.61	-5.88	-23.54	-9.15	0.41	25.25	201.25



Scientific Drilling International Survey Report

Company: APACHE CORPORATION	Date: 09/02/2009	Time: 10:36:03	Page: 1
Field: Eunice	Co-ordinate(NE) Reference:	Site: Lea County, NM, Grid North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: New Mexico S State #55	Section (VS) Reference:	Well (0.00N,0.00E,304.72Azi)	
Wellpath: DH - Job #32D0709277	Survey Calculation Method:	Minimum Curvature	Db: Sybase

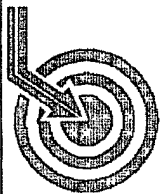
Survey: 07/29/09-08/02/09	Start Date: 07/29/2009
MWD 1203'-4641'	
Company: Scientific Drilling Internatio	Engineer: Foster/Glass
Tool: MWD;MWD	Tied-to: From: Definitive Path

Site: Lea County, NM

Site Position:	Northing:	ft	Latitude:
From: Local Only	Easting:	ft	Longitude:
Position Uncertainty:			North Reference:
Ground Level:	0.00 ft		Grid Convergence:
			Grid
			deg

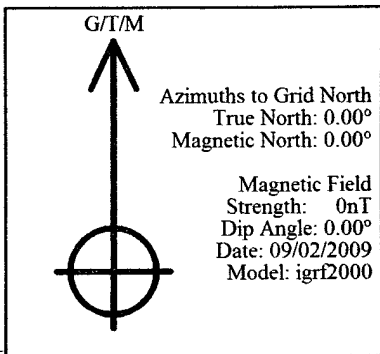
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
1096.00	2.04	224.73	1095.61	-5.88	-23.54	-9.15	0.00	25.25	201.25
1203.00	1.91	237.94	1202.55	-4.85	-25.84	-12.00	0.44	28.49	204.92
1267.00	2.35	271.39	1266.51	-3.33	-26.37	-14.22	2.03	29.96	208.33
1330.00	3.73	293.00	1329.42	-0.25	-25.54	-17.40	2.81	30.90	214.26
1393.00	4.35	298.09	1392.26	4.13	-23.61	-21.39	1.14	31.86	222.17
1457.00	3.97	300.26	1456.10	8.75	-21.35	-25.45	0.64	33.22	230.00
1520.00	4.58	311.05	1518.92	13.43	-18.60	-29.23	1.60	34.65	237.52
1583.00	5.96	316.40	1581.65	19.13	-14.58	-33.38	2.32	36.43	246.40
1646.00	7.60	318.50	1644.21	26.38	-9.09	-38.40	2.63	39.46	256.68
1710.00	9.57	316.23	1707.49	35.70	-2.08	-44.88	3.12	44.93	267.34
1806.00	10.37	313.08	1802.04	52.07	9.58	-56.71	1.01	57.52	279.59
1901.00	9.89	315.45	1895.56	68.55	21.24	-68.68	0.67	71.89	287.18
1996.00	10.06	310.36	1989.13	84.82	32.42	-80.73	0.94	87.00	291.88
2092.00	10.05	310.80	2083.65	101.50	43.33	-93.46	0.08	103.01	294.87
2187.00	9.50	310.74	2177.27	117.53	53.86	-105.67	0.58	118.61	297.01
2283.00	9.68	313.18	2271.93	133.40	64.55	-117.56	0.46	134.12	298.77
2378.00	9.45	312.63	2365.61	149.02	75.30	-129.12	0.26	149.48	300.25
2474.00	8.31	308.24	2460.46	163.75	84.93	-140.37	1.38	164.07	301.18
2569.00	8.13	308.65	2554.48	177.31	93.38	-151.01	0.20	177.55	301.73
2664.00	7.86	311.72	2648.56	190.45	101.90	-161.10	0.53	190.62	302.31
2759.00	9.04	313.32	2742.53	204.28	111.34	-171.38	1.27	204.37	303.01
2854.00	9.67	313.07	2836.26	219.56	121.91	-182.64	0.66	219.59	303.72
2949.00	9.98	310.68	2929.87	235.64	132.72	-194.71	0.54	235.64	304.28
3045.00	8.81	307.41	3024.58	251.26	142.61	-206.86	1.34	251.26	304.58
3141.00	7.24	304.38	3119.64	264.65	150.49	-217.69	1.69	264.65	304.66
3204.00	6.79	304.36	3182.17	272.34	154.84	-224.04	0.71	272.34	304.65
3268.00	5.69	302.25	3245.79	279.30	158.67	-229.85	1.76	279.30	304.62
3330.00	5.17	301.77	3307.51	285.16	161.78	-234.83	0.84	285.16	304.56
3393.00	3.59	303.09	3370.32	289.96	164.35	-238.89	2.51	289.96	304.53
3456.00	2.38	301.31	3433.24	293.24	166.11	-241.66	1.93	293.24	304.50
3519.00	1.17	280.65	3496.21	295.13	166.90	-243.41	2.14	295.14	304.44
3582.00	0.64	165.12	3559.20	295.45	166.68	-243.95	2.47	295.46	304.34
3647.00	0.76	151.41	3624.20	294.79	165.95	-243.65	0.32	294.80	304.26
3710.00	0.81	150.02	3687.19	294.02	165.20	-243.23	0.08	294.03	304.18
3805.00	0.38	106.31	3782.18	293.11	164.53	-242.59	0.63	293.12	304.15
3900.00	0.30	51.02	3877.18	292.74	164.60	-242.10	0.34	292.75	304.21
3993.00	0.40	59.08	3970.18	292.54	164.92	-241.63	0.12	292.55	304.31
4088.00	0.48	46.16	4065.18	292.32	165.37	-241.06	0.13	292.33	304.45
4183.00	0.44	47.52	4160.18	292.16	165.89	-240.50	0.04	292.16	304.60
4278.00	0.51	89.82	4255.17	291.74	166.13	-239.81	0.37	291.74	304.71
4469.00	0.32	148.13	4446.17	290.55	165.68	-238.68	0.23	290.55	304.77
4641.00	0.10	130.56	4618.17	289.96	165.18	-238.31	0.13	289.96	304.73

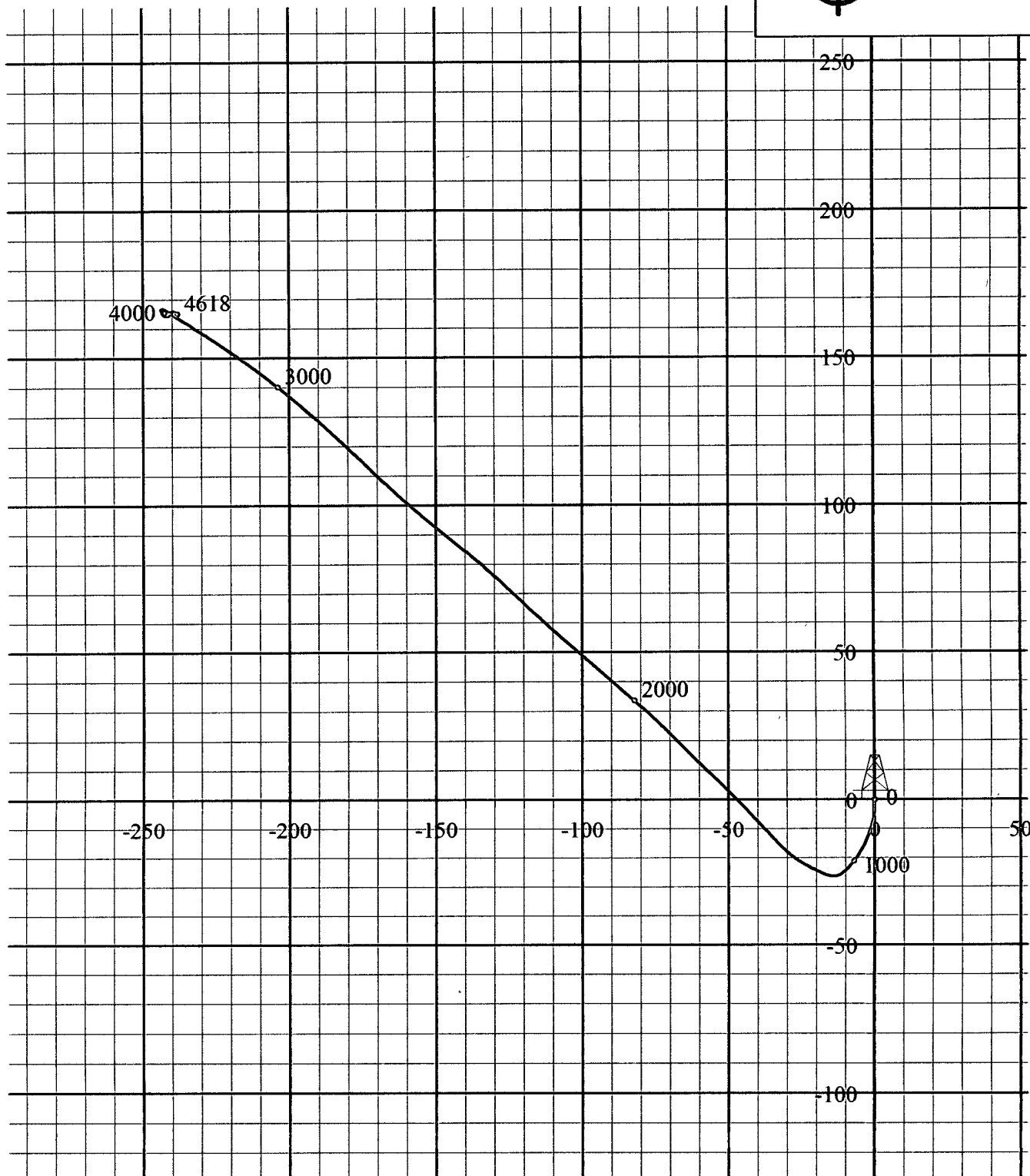


Scientific
Drilling

Field: Eunice
Site: Lea County, NM
Well: New Mexico S State #55
Wellpath: DH - Job #32D0709277
Survey: 07/29/09-08/02/09



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



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