

KAMBI TEXAS LP MWD SURVEY REPORT

Company: Lime Rock Resources
Well: Williams A Federal #13
Location: Eddy Co., N.M.
Rig: UDI 33

Job Number: KTX-147
Magnetic Decl.: 7.68
Grid Corr.:
Total Grid Corr.: 7.68

Calculation Method: Minimum Curvature
Proposed Azimuth: 169.42
WELL API #: 30-015-42303
Tie Into: MWD

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 08 2014

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Survey #	Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')		
								N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)				
Tie	GL	0	0.00	0.00	0	0	0	0	#	0	0	0	0		
1	MWD	468.00	0.50	277.20	468	467.99	-0.62	0.26	N	2.03	W	2.04	277.20	0.11	0.11
2	MWD	558.00	2.00	179.50	90	557.98	0.80	1.27	S	2.40	W	2.71	242.22	2.36	1.67
3	MWD	654.00	5.90	171.20	96	653.73	7.39	7.82	S	1.63	W	7.99	191.79	4.10	4.06
4	MWD	750.00	8.40	169.20	96	748.98	19.33	19.58	S	0.44	E	19.59	178.72	2.62	2.60
5	MWD	846.00	8.10	168.20	96	843.98	33.11	33.09	S	3.13	E	33.24	174.59	0.35	-0.31
6	MWD	942.00	8.70	170.10	96	938.95	47.13	46.87	S	5.77	E	47.22	172.99	0.69	0.63
7	MWD	1039.00	8.30	171.60	97	1034.89	61.46	61.02	S	8.05	E	61.55	172.49	0.47	-0.41
8	MWD	1135.00	7.20	169.10	96	1130.01	74.40	73.78	S	10.20	E	74.48	172.13	1.20	-1.15
9	MWD	1230.00	8.00	166.30	95	1224.17	86.95	86.05	S	12.89	E	87.01	171.48	0.93	0.84
10	MWD	1326.00	8.60	166.60	96	1319.17	100.79	99.52	S	16.14	E	100.82	170.79	0.63	0.63
11	MWD	1423.00	8.50	173.70	97	1415.09	115.19	113.70	S	18.60	E	115.22	170.71	1.09	-0.10
12	MWD	1519.00	7.90	170.10	96	1510.11	128.86	127.26	S	20.52	E	128.90	170.84	0.82	-0.63
13	MWD	1615.00	7.30	165.10	96	1605.27	141.54	139.65	S	23.22	E	141.57	170.56	0.93	-0.63
14	MWD	1711.00	7.60	166.10	96	1700.46	153.96	151.71	S	26.31	E	153.97	170.16	0.34	0.31
15	MWD	1807.00	6.30	168.80	96	1795.75	165.56	163.03	S	28.86	E	165.57	169.96	1.40	-1.35
16	MWD	1903.00	3.10	174.30	96	1891.42	173.42	170.79	S	30.14	E	173.43	169.99	3.36	-3.33
17	MWD	1999.00	0.10	99.30	96	1987.37	176.03	173.38	S	30.48	E	176.04	170.03	3.20	-3.13
18	MWD	2095.00	0.10	193.70	96	2083.37	176.14	173.48	S	30.55	E	176.15	170.01	0.15	0.00
19	MWD	2287.00	0.20	79.80	192	2275.37	176.29	173.58	S	30.84	E	176.30	169.93	0.13	0.05
20	MWD	2453.00	0.30	11.00	166	2441.37	175.89	173.10	S	31.20	E	175.89	169.78	0.18	0.06
21	MWD	2644.00	0.00	39.10	191	2632.37	175.43	172.61	S	31.30	E	175.43	169.72	0.16	-0.16
22	MWD	2836.00	0.40	46.30	192	2824.36	175.06	172.15	S	31.78	E	175.06	169.54	0.21	0.21
23	MWD	3028.00	0.60	78.90	192	3016.36	174.68	171.49	S	33.25	E	174.69	169.03	0.18	0.10
24	MWD	3123.00	0.40	62.10	95	3111.35	174.58	171.24	S	34.04	E	174.59	168.76	0.26	-0.21
25	MWD	3316.00	0.50	120.50	193	3304.35	174.93	171.36	S	35.36	E	174.96	168.34	0.23	0.05
26	MWD	3508.00	0.30	149.70	192	3496.34	175.96	172.21	S	36.33	E	176.01	168.09	0.15	-0.10
27	MWD	3565.00	0.30	243.60	57	3553.34	176.14	172.41	S	36.27	E	176.18	168.12	0.77	0.00
28	PTB	3612.00	0.30	243.60	47	3600.34	176.21	172.52	S	36.05	E	176.25	168.20	0.00	0.00

30-015-42303

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State of New Mexico
County of Eddy

I, Roy Wakefield, certify that: I am employed by Kambi Texas LP; that I did on the day(s) of 11-28-06 through 12-07-06 conduct or supervise the taking of a MWD Survey from a depth of 468.0 feet to a depth of 3612.0 feet and that the data is true, correct, complete and within the limitations of the tool as set forth by Kambi Texas LP; that I am authorized and qualified to make this report; that this survey was conducted at the request of Lime Rock Resources, for the State of New Mexico; Well Williams A Federal # 13 in Eddy County; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Kambi Texas LP.

Regards,

R. Wakefield

Roy Wakefield
VP Operations, USA
Kambi Texas LP

[illegible]