



PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288



15-41091

December 16, 2013

RKI Exploration
210 Park Ave.
Suite 900
Oklahoma City, OK 73102

RE: Longview Federal 12-13H
925' FNL & 440' FWL
Sec. 12, T23S, R27E
Eddy County, New Mexico

Dear Sir,

The attached is the Deviation Survey for the above captioned well.

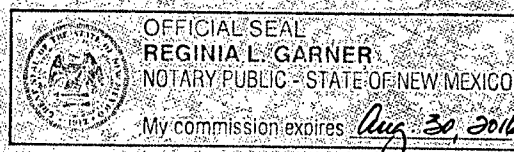
Very truly yours,


Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 16th day of December, 2013.


Regina L. Garner
Notary Public



LONGVIEW FED 12-13H

Date	Depth	Deviation	Direction	TVD
11/17/2013	190	0.40	0.00	0.00
11/19/2013	377	1.80	188.60	468.88
11/19/2013	561	2.60	187.90	560.81
11/19/2013	745	4.00	201.20	744.51
11/19/2013	930	5.50	208.80	928.85
11/19/2013	1113	5.90	202.10	1110.00
11/20/2013	1298	5.30	179.60	1295.99
11/20/2013	1478	6.50	172.60	1474.03
11/20/2013	1664	5.60	166.40	1658.98
11/20/2013	1854	6.10	164.10	1854.00
11/20/2013	2043	6.20	167.30	2035.00
11/21/2013	2138	5.60	170.50	2130.00
11/21/2013	2233	6.70	165.70	2224.00
11/21/2013	2328	6.40	168.20	2319.00
11/21/2013	2423	6.00	176.60	2413.00
11/21/2013	2518	6.10	180.80	2508.13
11/21/2013	2707	5.50	176.40	2696.17
11/21/2013	2896	7.40	176.30	2887.00
11/21/2013	3087	7.80	174.90	3073.00
11/22/2013	3182	8.10	175.60	3167.00
11/22/2013	3277	8.00	176.40	3261.00
11/22/2013	3371	8.20	176.40	3354.00
11/22/2013	3466	8.20	176.30	3448.00
11/22/2013	3562	7.90	174.90	3543.00
11/22/2013	3657	8.10	174.70	3637.00
11/22/2013	3847	7.40	174.30	3825.78
11/22/2013	3942	6.90	175.20	3920.00
11/25/2013	4107	3.40	185.10	4084.00
11/25/2013	4202	1.40	204.20	4179.00
11/25/2013	4392	0.80	154.50	4369.00
11/25/2013	4582	0.90	143.90	4559.20
11/25/2013	4773	0.40	45.30	4750.00
11/25/2013	4963	2.10	357.00	4940.10
11/26/2013	5249	1.40	348.00	5348.00
11/26/2013	5439	0.90	357.50	5415.00
11/26/2013	5629	0.80	355.20	0.00
11/26/2013	5820	0.40	2.60	5796.00
11/27/2013	6104	0.40	1.90	6080.00
11/27/2013	6293	0.40	234.10	6269.00
11/27/2013	6388	0.40	268.50	6364.00
11/27/2013	6578	0.40	28.80	6554.00
11/27/2013	6768	0.70	72.70	6744.00
11/29/2013	6887	5.60	5.90	6863.00

Date	Depth	Deviation	Direction	TVD
11/29/2013	6983	14.60	356.10	6958.00
11/29/2013	7078	22.30	0.30	7047.34
11/29/2013	7172	33.20	354.30	7173.08
11/29/2013	7267	41.80	353.60	7206.00
11/29/2013	7362	43.30	355.20	7275.00
11/29/2013	7457	52.40	357.90	7340.00
11/30/2013	7553	62.50	360.00	7392.00
11/30/2013	7648	72.30	0.70	7428.00
11/30/2013	7838	87.20	1.00	7458.98
11/30/2013	7934	90.00	2.10	7460.93
11/30/2013	8029	91.80	1.20	7459.00
11/30/2013	8124	94.00	0.70	7454.00
11/30/2013	8219	92.10	359.30	7449.00
12/1/2013	8315	91.30	359.40	7446.00
12/1/2013	8410	90.00	3593.30	0.00
12/1/2013	8506	89.30	359.40	7446.00
12/1/2013	8601	90.80	358.60	7446.16
12/1/2013	8696	91.30	357.90	7444.42
12/1/2013	8792	91.90	358.20	7441.74
12/1/2013	8887	90.70	356.40	7439.00
12/1/2013	8982	92.70	355.40	0.00
12/2/2013	9097	91.70	356.40	7432.00
12/2/2013	9193	90.20	357.70	7430.00
12/2/2013	9287	89.10	359.60	7431.00
12/2/2013	9381	90.10	359.40	7431.00
12/3/2013	9569	90.10	360.00	7429.00
12/3/2013	9664	92.00	359.40	0.00
12/3/2013	9759	90.70	359.60	7425.22
12/3/2013	9853	89.40	360.00	7425.14
12/3/2013	9941	90.20	359.40	7424.47
12/3/2013	10042	88.00	0.10	7426.69
12/3/2013	10135	88.90	359.60	7429.47
12/3/2013	10230	89.60	358.90	7430.72
12/4/2013	10324	89.80	1.00	7431.00
12/4/2013	10418	90.70	359.80	7430.00
12/4/2013	10512	91.30	359.60	7429.00
12/4/2013	10607	88.90	859.60	7428.99
12/4/2013	10700	89.90	358.90	7429.97
12/4/2013	10797	91.50	358.40	7428.81
12/4/2013	10890	90.40	357.60	7427.00
12/4/2013	10983	91.50	358.20	7425.49
12/5/2013	11077	90.70	359.80	7423.00
12/5/2013	11171	91.60	359.10	7422.00
12/5/2013	11360	96.60	2.40	7414.71
12/5/2013	11455	91.60	1.70	7415.06

Date	Depth	Deviation	Direction	TVD
12/5/2013	11549	89.70	2.10	7313.99
12/6/2013	11643	90.70	1.70	7413.00
12/7/2013	11734	91.10	0.80	7412.00
12/7/2013	11828	91.60	0.10	7410.00
12/7/2013	11922	90.20	359.80	7408.54
12/7/2013	12015	90.10	359.80	7408.30
12/7/2013	12110	90.40	359.40	7407.88
12/7/2013	12203	91.70	358.90	7406.18
12/8/2013	12297	92.20	358.20	7402.00
12/9/2013	12390	90.80	358.90	7400.55
12/9/2013	12485	90.00	358.20	7399.88
12/9/2013	12579	91.40	358.00	7398.74
12/10/2013	12766	91.20	359.40	739.40
12/10/2013	12860	91.40	359.10	7392.03
12/10/2013	12953	91.70	358.60	7389.00
12/10/2013	13048	89.00	358.90	7388.94
12/11/2013	13142	90.20	358.90	7389.00
12/11/2013	13236	90.30	358.40	7389.00
12/11/2013	13330	91.10	357.90	7388.00
12/11/2013	13425	92.20	357.50	7385.00
12/11/2013	13471	92.70	359.50	7383.33

#EOF

RKI Exploration & Production

Eddy County (NM83E)

Sec 12-T23S-R28E

Longview Fed 12-13H

Wellbore #1

Survey: MWD Surveys

Standard Survey Report

12 December, 2013

Wolverine Directional, LLC

Survey Report

Company:	RKI Exploration & Production	Local Co-ordinate Reference:	Well Longview Fed 12-13H
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 12-T23S-R28E	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	Longview Fed 12-13H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 2003.21 Single User Db

Design:	Wellbore #1
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	359.30	

Survey Program		Date 2013/12/12			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
377.0	13,517.0	MWD Surveys (Wellbore #1)	MWD	MWD - Standard	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
377.0	1.80	188.60	376.9	-5.9	-0.9	-5.8	0.48	0.48	0.00
First MWD Survey									
469.0	2.10	187.70	468.9	-9.0	-1.3	-8.9	0.33	0.33	-0.98
561.0	2.60	187.90	560.8	-12.7	-1.8	-12.7	0.54	0.54	0.22
652.0	3.20	197.00	651.7	-17.2	-2.9	-17.1	0.83	0.66	10.00
745.0	4.00	201.20	744.5	-22.7	-4.8	-22.6	0.91	0.86	4.52
838.0	4.90	205.30	837.2	-29.3	-7.7	-29.2	1.03	0.97	4.41
930.0	5.50	208.80	928.8	-36.7	-11.5	-36.6	0.74	0.65	3.80
1,021.0	6.30	210.50	1,019.4	-44.8	-16.1	-44.6	0.90	0.88	1.87
1,113.0	5.90	202.10	1,110.8	-53.6	-20.4	-53.3	1.06	-0.43	-9.13
1,205.0	5.40	191.90	1,202.4	-62.2	-23.1	-61.9	1.22	-0.54	-11.09
1,299.0	5.30	179.60	1,296.0	-70.8	-24.0	-70.5	1.22	-0.11	-13.09
1,389.0	6.00	171.00	1,385.6	-79.6	-23.2	-79.4	1.22	0.78	-9.56
1,478.0	6.50	172.60	1,474.0	-89.2	-21.9	-89.0	0.59	0.56	1.80
1,572.0	6.10	168.70	1,567.5	-99.4	-20.2	-99.2	0.62	-0.43	-4.15
1,664.0	5.60	166.40	1,659.0	-108.6	-18.2	-108.3	0.60	-0.54	-2.50
1,759.0	5.80	169.10	1,753.5	-117.8	-16.2	-117.6	0.35	0.21	2.84
1,854.0	6.10	164.10	1,848.0	-127.4	-13.9	-127.2	0.63	0.32	-5.26
1,949.0	6.30	160.30	1,942.4	-137.1	-10.8	-137.0	0.48	0.21	-4.00
2,043.0	6.20	167.30	2,035.9	-146.9	-7.9	-146.8	0.82	-0.11	7.45
2,138.0	5.60	170.50	2,130.4	-156.5	-6.0	-156.4	0.72	-0.63	3.37
2,233.0	6.70	165.70	2,224.8	-166.4	-3.9	-166.4	1.28	1.16	-5.05
2,328.0	6.40	168.20	2,319.2	-177.0	-1.4	-177.0	0.44	-0.32	2.63
2,423.0	6.00	176.60	2,413.7	-187.1	0.0	-187.1	1.04	-0.42	8.84
2,518.0	6.10	180.80	2,508.1	-197.1	0.2	-197.1	0.48	0.11	4.42
2,612.0	5.80	178.00	2,601.6	-206.9	0.3	-206.9	0.44	-0.32	-2.98
2,707.0	5.50	176.40	2,696.2	-216.2	0.7	-216.2	0.36	-0.32	-1.68
2,801.0	6.40	177.30	2,789.7	-225.9	1.3	-225.9	0.96	0.96	0.96
2,896.0	7.40	176.30	2,884.0	-237.3	1.9	-237.3	1.06	1.05	-1.05
2,991.0	7.60	176.80	2,978.2	-249.7	2.6	-249.7	0.22	0.21	0.53
3,087.0	7.80	174.90	3,073.3	-262.5	3.6	-262.6	0.34	0.21	-1.98
3,182.0	8.10	175.60	3,167.4	-275.6	4.7	-275.7	0.33	0.32	0.74
3,277.0	8.00	176.40	3,261.4	-288.9	5.6	-289.0	0.16	-0.11	0.84
3,371.0	8.20	176.40	3,354.5	-302.1	6.4	-302.2	0.21	0.21	0.00
3,466.0	8.20	176.30	3,448.5	-315.7	7.3	-315.7	0.02	0.00	-0.11
3,562.0	7.90	174.90	3,543.6	-329.1	8.3	-329.1	0.37	-0.31	-1.46
3,657.0	8.10	174.70	3,637.7	-342.2	9.5	-342.3	0.21	0.21	-0.21
3,752.0	8.40	175.60	3,731.7	-355.8	10.7	-355.9	0.34	0.32	0.95

Wolverine Directional, LLC

Survey Report

Company:	RKI Exploration & Production	Local Co-ordinate Reference:	Well: Longview Fed 12-13H
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 12-T23S-R28E	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	Longview Fed 12-13H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 2003.21 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,847.0	7.40	174.30	3,825.8	-368.8	11.8	-368.9	1.07	-1.05	-1.37
3,942.0	6.90	175.20	3,920.0	-380.6	12.9	-380.7	0.54	-0.53	0.95
4,107.0	3.40	185.10	4,084.3	-395.3	13.3	-395.5	2.18	-2.12	6.00
4,202.0	1.40	204.20	4,179.3	-399.2	12.6	-399.3	2.24	-2.11	20.11
4,298.0	1.30	214.20	4,275.2	-401.2	11.5	-401.3	0.27	-0.10	10.42
4,392.0	0.80	154.50	4,369.2	-402.7	11.2	-402.8	1.20	-0.53	-63.51
4,487.0	0.70	139.50	4,464.2	-403.7	11.8	-403.8	0.23	-0.11	-15.79
4,582.0	0.90	143.90	4,559.2	-404.7	12.6	-404.9	0.22	0.21	4.63
4,678.0	1.10	132.00	4,655.2	-406.0	13.8	-406.1	0.30	0.21	-12.40
4,773.0	0.40	45.30	4,750.2	-406.3	14.7	-406.5	1.21	-0.74	-91.26
4,868.0	2.00	355.40	4,845.2	-404.5	14.8	-404.6	1.86	1.68	-52.53
4,963.0	2.10	357.00	4,940.1	-401.1	14.6	-401.2	0.12	0.11	1.68
5,058.0	1.80	350.50	5,035.0	-397.9	14.2	-398.0	0.39	-0.32	-6.84
5,153.0	1.70	347.80	5,130.0	-395.0	13.7	-395.1	0.14	-0.11	-2.84
5,249.0	1.40	348.00	5,226.0	-392.5	13.1	-392.6	0.31	-0.31	0.21
5,344.0	1.00	349.10	5,320.9	-390.5	12.7	-390.6	0.42	-0.42	1.16
5,439.0	0.90	357.50	5,415.9	-389.0	12.5	-389.1	0.18	-0.11	8.84
5,534.0	1.10	350.10	5,510.9	-387.3	12.3	-387.4	0.25	0.21	-7.79
5,629.0	0.80	355.20	5,605.9	-385.8	12.1	-385.9	0.33	-0.32	5.37
5,724.0	0.50	16.00	5,700.9	-384.7	12.2	-384.8	0.40	-0.32	21.89
5,820.0	0.40	2.60	5,796.9	-384.0	12.3	-384.1	0.15	-0.10	-13.96
5,915.0	0.40	359.60	5,891.9	-383.3	12.3	-383.4	0.02	0.00	-3.16
6,009.0	0.40	359.60	5,985.9	-382.6	12.3	-382.8	0.00	0.00	0.00
6,104.0	0.40	1.90	6,080.9	-382.0	12.3	-382.1	0.02	0.00	2.42
6,198.0	0.00	47.20	6,174.9	-381.6	12.4	-381.8	0.43	-0.43	0.00
6,293.0	0.40	234.10	6,269.9	-381.8	12.1	-382.0	0.42	0.42	0.00
6,388.0	0.40	286.50	6,364.9	-381.9	11.5	-382.1	0.37	0.00	55.16
6,483.0	0.40	256.60	6,459.9	-381.9	10.9	-382.0	0.22	0.00	-31.47
6,578.0	0.40	28.80	6,554.9	-381.7	10.7	-381.8	0.77	0.00	139.16
6,673.0	0.40	73.40	6,649.9	-381.3	11.2	-381.4	0.32	0.00	46.95
6,768.0	0.70	72.70	6,744.9	-381.1	12.0	-381.2	0.32	0.32	-0.74
6,792.0	1.00	64.50	6,768.9	-380.9	12.4	-381.0	1.35	1.25	-34.17
6,824.0	1.10	56.40	6,800.9	-380.6	12.9	-380.8	0.56	0.31	-25.31
6,856.0	2.90	22.50	6,832.8	-379.7	13.4	-379.8	6.50	5.63	-105.94
6,887.0	5.60	5.90	6,863.8	-377.5	13.9	-377.6	9.48	8.71	-53.55
6,919.0	9.00	358.20	6,895.5	-373.4	14.0	-373.6	11.03	10.63	-24.06
6,951.0	12.00	356.40	6,927.0	-367.6	13.7	-367.7	9.43	9.38	-5.63
6,983.0	14.60	356.10	6,958.1	-360.3	13.2	-360.4	8.13	8.13	-0.94
7,014.0	17.10	357.00	6,987.9	-351.8	12.7	-351.9	8.10	8.06	2.90
7,046.0	19.00	359.30	7,018.3	-341.9	12.4	-342.0	6.34	5.94	7.19
7,077.0	22.30	0.30	7,047.3	-331.0	12.4	-331.1	10.71	10.65	3.23
7,109.0	26.20	359.10	7,076.5	-317.8	12.3	-318.0	12.28	12.19	-3.75
7,141.0	29.60	356.80	7,104.8	-302.9	11.7	-303.0	11.14	10.63	-7.19
7,172.0	33.20	354.30	7,131.2	-286.8	10.5	-286.9	12.35	11.61	-8.06
7,204.0	36.50	352.40	7,157.5	-268.6	8.3	-268.7	10.86	10.31	-5.94
7,235.0	39.90	351.90	7,181.9	-249.6	5.7	-249.7	11.01	10.97	-1.61
7,267.0	41.80	353.60	7,206.1	-228.9	3.1	-228.9	6.88	5.94	5.31
7,299.0	42.60	355.60	7,229.8	-207.5	1.1	-207.5	4.89	2.50	6.25
7,330.0	42.90	355.60	7,252.5	-186.5	-0.6	-186.5	0.97	0.97	0.00
7,362.0	43.30	355.20	7,275.9	-164.7	-2.3	-164.7	1.51	1.25	-1.25
7,394.0	44.60	356.10	7,298.9	-142.6	-4.0	-142.5	4.51	4.06	2.81
7,426.0	48.20	356.80	7,321.0	-119.4	-5.4	-119.4	11.36	11.25	2.19
7,457.0	52.40	357.90	7,340.8	-95.6	-6.5	-95.5	13.82	13.55	3.55
7,489.0	55.90	358.70	7,359.5	-69.7	-7.3	-69.6	11.12	10.94	2.50

Wolverine Directional, LLC

Survey Report

Company:	RKI Exploration & Production	Local Co-ordinate Reference:	Well Longview Fed 12-13H
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 12-T23S-R28E	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	Longview Fed 12-13H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 2003.21 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,521.0	59.40	359.60	7,376.7	-42.7	-7.7	-42.6	11.19	10.94	2.81
7,553.0	62.50	0.00	7,392.2	-14.7	-7.8	-14.6	9.75	9.69	1.25
7,584.0	66.10	0.10	7,405.6	13.2	-7.7	13.3	11.62	11.61	0.32
7,616.0	69.50	0.50	7,417.7	42.9	-7.6	43.0	10.69	10.63	1.25
7,648.0	72.30	0.70	7,428.2	73.1	-7.3	73.2	8.77	8.75	0.63
7,680.0	75.20	0.30	7,437.2	103.8	-7.0	103.9	9.14	9.06	-1.25
7,711.0	78.50	359.80	7,444.2	134.0	-7.0	134.1	10.76	10.65	-1.61
7,743.0	81.70	0.00	7,449.7	165.5	-7.0	165.6	10.02	10.00	0.63
7,775.0	83.30	0.70	7,453.9	197.2	-6.8	197.3	5.45	5.00	2.19
7,807.0	85.50	0.80	7,457.0	229.1	-6.4	229.1	6.88	6.88	0.31
7,838.0	87.20	1.00	7,459.0	260.0	-5.9	260.1	5.52	5.48	0.65
7,870.0	88.50	2.10	7,460.2	292.0	-5.1	292.0	5.32	4.06	3.44
7,902.0	89.40	2.10	7,460.8	324.0	-3.9	324.0	2.81	2.81	0.00
7,934.0	90.00	2.10	7,460.9	355.9	-2.7	355.9	1.88	1.88	0.00
8,029.0	91.80	1.20	7,459.4	450.9	0.0	450.8	2.12	1.89	-0.95
8,124.0	94.00	0.70	7,454.6	545.7	1.6	545.7	2.37	2.32	-0.53
8,219.0	92.10	359.30	7,449.6	640.6	1.6	640.5	2.48	-2.00	-1.47
8,315.0	91.30	359.40	7,446.7	736.5	0.5	736.5	0.84	-0.83	0.10
8,410.0	90.00	359.30	7,445.7	831.5	-0.6	831.5	1.37	-1.37	-0.11
8,506.0	89.30	359.40	7,446.2	927.5	-1.7	927.5	0.74	-0.73	0.10
8,601.0	90.80	358.60	7,446.2	1,022.5	-3.3	1,022.5	1.79	1.58	-0.84
8,696.0	91.30	357.90	7,444.4	1,117.4	-6.2	1,117.4	0.91	0.53	-0.74
8,792.0	91.90	358.20	7,441.7	1,213.3	-9.5	1,213.4	0.70	0.63	0.31
8,887.0	90.70	356.40	7,439.6	1,308.2	-14.0	1,308.3	2.28	-1.26	-1.89
8,982.0	92.70	355.40	7,436.8	1,402.9	-20.8	1,403.1	2.35	2.11	-1.05
9,097.0	91.70	356.40	7,432.3	1,517.5	-29.0	1,517.8	1.23	-0.87	0.87
9,193.0	90.20	357.70	7,430.8	1,613.4	-33.9	1,613.7	2.07	-1.56	1.35
9,287.0	89.10	359.60	7,431.3	1,707.4	-36.1	1,707.7	2.34	-1.17	2.02
9,381.0	90.10	359.40	7,432.0	1,801.4	-37.0	1,801.7	1.08	1.06	-0.21
9,476.0	91.60	359.10	7,430.6	1,896.3	-38.2	1,896.7	1.61	1.58	-0.32
9,569.0	90.10	0.00	7,429.2	1,989.3	-38.9	1,989.6	1.88	-1.61	0.97
9,664.0	92.00	359.40	7,427.5	2,084.3	-39.4	2,084.6	2.10	2.00	-0.63
9,759.0	90.70	359.60	7,425.2	2,179.3	-40.3	2,179.6	1.38	-1.37	0.21
9,853.0	89.40	0.00	7,425.1	2,273.3	-40.6	2,273.6	1.45	-1.38	0.43
9,947.0	90.20	359.40	7,425.5	2,367.3	-41.1	2,367.6	1.06	0.85	-0.64
10,042.0	88.00	0.10	7,427.0	2,462.2	-41.5	2,462.6	2.43	-2.32	0.74
10,135.0	88.90	359.60	7,429.5	2,555.2	-41.7	2,555.5	1.11	0.97	-0.54
10,230.0	89.60	358.90	7,430.7	2,650.2	-43.0	2,650.5	1.04	0.74	-0.74
10,324.0	89.80	1.00	7,431.2	2,744.2	-43.1	2,744.5	2.24	0.21	2.23
10,418.0	90.70	359.80	7,430.8	2,838.2	-42.4	2,838.5	1.60	0.96	-1.28
10,512.0	91.30	359.60	7,429.2	2,932.2	-42.9	2,932.5	0.67	0.64	-0.21
10,607.0	88.90	359.60	7,429.0	3,027.1	-43.6	3,027.4	2.53	-2.53	0.00
10,700.0	89.90	358.90	7,430.0	3,120.1	-44.8	3,120.4	1.31	1.08	-0.75
10,795.0	91.50	358.40	7,428.8	3,215.1	-47.0	3,215.4	1.76	1.68	-0.53
10,890.0	90.40	358.60	7,427.2	3,310.0	-49.5	3,310.4	1.18	-1.16	0.21
10,983.0	91.50	358.20	7,425.7	3,403.0	-52.1	3,403.4	1.26	1.18	-0.43
11,077.0	90.70	359.80	7,423.9	3,497.0	-53.7	3,497.4	1.90	-0.85	1.70
11,171.0	91.60	359.10	7,422.0	3,590.9	-54.6	3,591.3	1.21	0.96	-0.74
11,266.0	91.00	0.10	7,419.8	3,685.9	-55.3	3,686.3	1.23	-0.63	1.05
11,360.0	91.60	2.40	7,417.7	3,779.9	-53.2	3,780.2	2.53	0.64	2.45
11,455.0	91.60	1.70	7,415.1	3,874.8	-49.9	3,875.1	0.74	0.00	-0.74
11,549.0	89.70	2.10	7,414.0	3,968.7	-46.7	3,969.0	2.07	-2.02	0.43
11,643.0	90.70	1.70	7,413.7	4,062.6	-43.6	4,062.9	1.15	1.06	-0.43
11,734.0	91.10	0.80	7,412.2	4,153.6	-41.6	4,153.8	1.08	0.44	-0.99

Wolverine Directional, LLC

Survey Report

Company:	RKI Exploration & Production	Local Co-ordinate Reference:	Well Longview Fed 12-13H
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 12-T23S-R28E	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	Longview Fed 12-13H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM:2003.21 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
11,828.0	91.60	0.10	7,410.0	4,247.6	-40.9	4,247.8	0.91	0.53	-0.74	
11,922.0	90.20	359.80	7,408.5	4,341.6	-41.0	4,341.7	1.52	-1.49	-0.32	
12,015.0	90.10	359.80	7,408.3	4,434.6	-41.3	4,434.7	0.11	-0.11	0.00	
12,110.0	90.40	359.40	7,407.9	4,529.6	-42.0	4,529.7	0.53	0.32	-0.42	
12,203.0	91.70	358.90	7,406.2	4,622.5	-43.3	4,622.7	1.50	1.40	-0.54	
12,297.0	92.20	358.20	7,403.0	4,716.4	-45.7	4,716.6	0.91	0.53	-0.74	
12,390.0	90.80	358.90	7,400.5	4,809.4	-48.1	4,809.6	1.68	-1.51	0.75	
12,485.0	90.00	358.20	7,399.9	4,904.3	-50.5	4,904.6	1.12	-0.84	-0.74	
12,579.0	91.40	358.00	7,398.7	4,998.3	-53.6	4,998.6	1.50	1.49	-0.21	
12,673.0	91.50	358.40	7,396.4	5,092.2	-56.5	5,092.5	0.44	0.11	0.43	
12,766.0	91.20	359.40	7,394.2	5,185.2	-58.3	5,185.5	1.12	-0.32	1.08	
12,860.0	91.40	359.10	7,392.0	5,279.1	-59.6	5,279.5	0.38	0.21	-0.32	
12,954.0	91.70	358.60	7,389.5	5,373.1	-61.4	5,373.4	0.62	0.32	-0.53	
13,049.0	89.00	358.90	7,388.9	5,468.0	-63.5	5,468.4	2.86	-2.84	0.32	
13,143.0	90.20	358.90	7,389.6	5,562.0	-65.3	5,562.4	1.28	1.28	0.00	
13,237.0	90.30	358.40	7,389.2	5,656.0	-67.5	5,656.4	0.54	0.11	-0.53	
13,331.0	91.10	357.90	7,388.0	5,749.9	-70.6	5,750.4	1.00	0.85	-0.53	
13,426.0	92.20	357.50	7,385.3	5,844.8	-74.4	5,845.3	1.23	1.16	-0.42	
13,471.0	92.70	357.50	7,383.3	5,889.7	-76.3	5,890.2	1.11	1.11	0.00	
Last MWD Survey										
13,517.0	92.70	357.50	7,381.2	5,935.6	-78.3	5,936.2	0.00	0.00	0.00	
Proj to TD - Longview Fed 1-13H PBHL										

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
377.0	376.9	-5.9	-0.9	First MWD Survey	
13,471.0	7,383.3	5,889.7	-76.3	Last MWD Survey	
13,517.0	7,381.2	5,935.6	-78.3	Proj to TD	

Checked By: _____	Approved By: _____	Date: _____
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