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OCT 18 2011

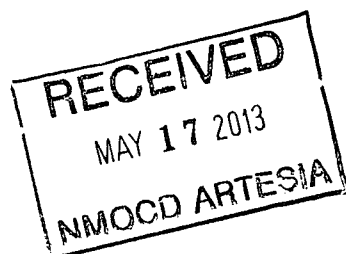
OPERATOR
WELL/LEASE
COUNTY

RKI EXPLORATION & PRODUCTION
RDU FEDERAL 22-2H
EDDY

STATE OF NEW MEXICO
DEVIATION REPORT

30-015-39262

212	0.23
464	0.67
717	1.68
839	0.00
998	1.58
1,181	2.15
1,467	0.77
1,751	1.37
2,034	1.43
2,318	1.53
2,602	1.17
2,885	0.58
3,169	3.75
3,264	4.36
3,484	4.63
3,708	2.33
3,898	2.22
4,087	2.16
4,276	1.82
4,465	1.45
4,748	0.69
5,027	0.75
5,316	0.60
5,599	0.75
5,883	0.67
6,167	1.09
6,450	1.19
6,883	1.20



BY:

STATE OF TEXAS

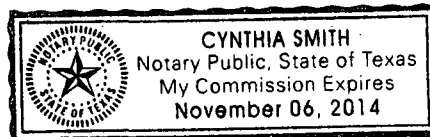
COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on
Robinson on behalf of Patterson-UTI Drilling Company LLC.

10/14/11

, by Linda

Notary Public for Midland County, Texas
My Commission Expires:



RKI Exploration & Production

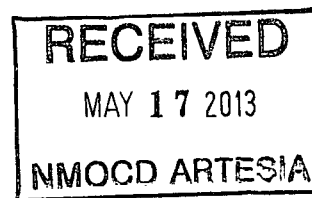
Eddy County (NM83E)

Sec 22-T26S-R30E

RDU 22-2H

Wellbore #1

Survey: MWD Surveys



Standard Survey Report

27 September, 2011

Wolverine Directional, LLC

Survey Report

Company:	RKI Exploration & Production	Local Co-ordinate Reference:	Well RDU:22:2H
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 22-T26S-R30E	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	RDU 22-2H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 2003.21 Single User Db

Design:	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	174.27

Survey Program	Date 2011/09/27			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100.0	12,110.0	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
4.4	0.01	127.65	4.4	0.0	0.0	0.0	0.22	0.22	0.00
RDU #21									
100.0	0.22	127.65	100.0	-0.1	0.2	0.1	0.22	0.22	0.00
200.0	0.09	78.00	200.0	-0.2	0.4	0.3	0.18	-0.13	-49.65
300.0	0.10	133.26	300.0	-0.3	0.5	0.3	0.09	0.01	55.26
400.0	0.09	66.22	400.0	-0.3	0.7	0.4	0.11	-0.01	-67.04
500.0	0.33	109.22	500.0	-0.4	1.0	0.5	0.27	0.24	43.00
600.0	0.97	42.45	600.0	0.2	1.8	0.0	0.89	0.64	-66.77
700.0	1.39	31.44	700.0	1.8	3.0	-1.5	0.48	0.42	-11.01
800.0	1.59	40.99	799.9	3.9	4.6	-3.4	0.32	0.20	9.55
900.0	1.52	50.64	899.9	5.8	6.5	-5.1	0.27	-0.07	9.65
1,000.0	1.65	41.53	999.9	7.7	8.5	-6.8	0.28	0.13	-9.11
1,100.0	1.21	48.56	1,099.8	9.5	10.3	-8.4	0.47	-0.44	7.03
1,200.0	1.08	40.21	1,199.8	10.9	11.7	-9.7	0.21	-0.13	-8.35
1,300.0	0.68	26.28	1,299.8	12.2	12.5	-10.9	0.45	-0.40	-13.93
1,400.0	0.54	34.61	1,399.8	13.1	13.1	-11.7	0.17	-0.14	8.33
1,500.0	0.46	337.52	1,499.8	13.9	13.2	-12.5	0.48	-0.08	-57.09
1,600.0	0.68	315.04	1,599.8	14.6	12.6	-13.3	0.31	0.22	-22.48
1,700.0	1.11	269.49	1,699.8	15.1	11.2	-13.9	0.80	0.43	-45.55
1,800.0	1.61	264.04	1,799.7	14.9	8.8	-13.9	0.52	0.50	-5.45
1,900.0	2.12	268.04	1,899.7	14.7	5.6	-14.1	0.53	0.51	4.00
2,000.0	1.86	255.85	1,999.6	14.2	2.2	-13.9	0.50	-0.26	-12.19
2,100.0	0.93	229.78	2,099.6	13.3	0.0	-13.2	1.10	-0.93	-26.07
2,200.0	1.32	185.61	2,199.6	11.6	-0.8	-11.7	0.92	0.39	-44.17
2,300.0	1.42	169.17	2,299.6	9.3	-0.6	-9.3	0.40	0.10	-16.44
2,400.0	1.46	168.21	2,399.5	6.8	-0.1	-6.8	0.05	0.04	-0.96
2,500.0	1.47	180.29	2,499.5	4.3	0.1	-4.2	0.31	0.01	12.08
2,600.0	0.81	189.95	2,599.5	2.3	0.0	-2.3	0.69	-0.66	9.66
2,700.0	0.67	182.32	2,699.5	1.0	-0.2	-1.0	0.17	-0.14	-7.63
2,800.0	0.62	228.62	2,799.5	0.1	-0.6	-0.1	0.51	-0.05	46.30
2,900.0	0.30	132.12	2,899.5	-0.5	-0.8	0.4	0.72	-0.32	-96.50
3,000.0	2.33	115.85	2,999.4	-1.5	1.2	1.6	2.04	2.03	-16.27
3,100.0	2.51	116.80	3,099.3	-3.4	5.0	3.9	0.18	0.18	0.95
3,200.0	3.63	121.11	3,199.2	-6.0	9.7	6.9	1.14	1.12	4.31
3,300.0	4.42	117.36	3,298.9	-9.4	15.8	10.9	0.83	0.79	-3.75
3,400.0	4.62	119.40	3,398.6	-13.2	22.7	15.4	0.26	0.20	2.04
3,500.0	3.94	119.27	3,498.4	-16.8	29.2	19.7	0.68	-0.68	-0.13
3,600.0	2.41	117.41	3,598.2	-19.5	34.1	22.8	1.53	-1.53	-1.86

Wolverine Directional, LLC

Survey Report

Company:	RKI Exploration & Production	Local Co-ordinate Reference:	Well RDU 22-2H
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 22-T26S-R30E	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	RDU 22-2H	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)
3,700.0	2.52	121.38	3,698.1	-21.6	37.8	25.3	0.20	0.11	3.97
3,800.0	2.38	127.58	3,798.0	-24.0	41.4	28.0	0.30	-0.14	6.20
3,900.0	2.52	126.52	3,897.9	-26.6	44.8	30.9	0.15	0.14	-1.06
4,000.0	2.15	120.59	3,997.8	-28.8	48.2	33.5	0.44	-0.37	-5.93
4,100.0	1.92	124.29	4,097.8	-30.7	51.2	35.7	0.26	-0.23	3.70
4,200.0	1.88	133.12	4,197.7	-32.8	53.7	38.0	0.30	-0.04	8.83
4,300.0	1.78	125.05	4,297.7	-34.8	56.2	40.2	0.28	-0.10	-8.07
4,400.0	1.65	124.81	4,397.6	-36.5	58.7	42.2	0.13	-0.13	-0.24
4,500.0	1.45	122.35	4,497.6	-38.0	60.9	43.9	0.21	-0.20	-2.46
4,600.0	1.22	133.46	4,597.6	-39.4	62.8	45.5	0.35	-0.23	11.11
4,700.0	0.77	120.22	4,697.5	-40.5	64.1	46.7	0.50	-0.45	-13.24
4,800.0	0.78	120.45	4,797.5	-41.2	65.3	47.5	0.01	0.01	0.23
4,900.0	0.84	137.39	4,897.5	-42.1	66.4	48.5	0.25	0.06	16.94
5,000.0	0.61	171.56	4,997.5	-43.1	66.9	49.6	0.48	-0.23	34.17
5,100.0	0.99	162.78	5,097.5	-44.5	67.3	51.0	0.40	0.38	-8.78
5,200.0	0.51	162.15	5,197.5	-45.7	67.7	52.3	0.48	-0.48	-0.63
5,300.0	0.68	165.04	5,297.5	-46.7	68.0	53.3	0.17	0.17	2.89
5,400.0	0.60	196.13	5,397.5	-47.8	68.0	54.4	0.35	-0.08	31.09
5,500.0	0.69	166.90	5,497.5	-48.9	68.0	55.4	0.34	0.09	-29.23
5,600.0	0.68	193.00	5,597.5	-50.1	68.0	56.6	0.31	-0.01	26.10
5,700.0	0.87	188.44	5,697.5	-51.4	67.7	57.9	0.20	0.19	-4.56
5,800.0	0.66	207.01	5,797.5	-52.7	67.3	59.1	0.32	-0.21	18.57
5,900.0	0.37	194.96	5,897.5	-53.5	67.0	59.9	0.31	-0.29	-12.05
6,000.0	0.39	181.93	5,997.5	-54.1	66.9	60.5	0.09	0.02	-13.03
6,100.0	0.62	164.44	6,097.4	-55.0	67.0	61.4	0.27	0.23	-17.49
6,200.0	1.23	182.86	6,197.4	-56.6	67.1	63.0	0.67	0.61	18.42
6,300.0	1.06	181.02	6,297.4	-58.6	67.1	65.0	0.17	-0.17	-1.84
6,400.0	1.03	175.75	6,397.4	-60.4	67.1	66.8	0.10	-0.03	-5.27
6,500.0	1.27	181.93	6,497.4	-62.4	67.1	68.8	0.27	0.24	6.18
6,600.0	1.46	180.60	6,597.3	-64.8	67.1	71.2	0.19	0.19	-1.33
6,700.0	1.37	182.65	6,697.3	-67.3	67.0	73.6	0.10	-0.09	2.05
6,800.0	1.52	181.92	6,797.3	-69.8	66.9	76.1	0.15	0.15	-0.73
6,900.0	1.31	190.26	6,897.3	-72.2	66.7	78.5	0.29	-0.21	8.34
Tie on to GYRO									
6,912.0	1.50	186.50	6,909.3	-72.5	66.6	78.8	1.76	1.58	-31.33
First MWD Survey									
6,944.0	1.60	188.10	6,941.2	-73.4	66.5	79.7	0.34	0.31	5.00
6,975.0	1.50	187.70	6,972.2	-74.2	66.4	80.5	0.32	-0.32	-1.29
7,007.0	1.50	185.80	7,004.2	-75.0	66.3	81.3	0.16	0.00	-5.94
7,038.0	1.50	188.90	7,035.2	-75.8	66.2	82.1	0.26	0.00	10.00
7,070.0	1.50	188.60	7,067.2	-76.7	66.1	82.9	0.02	0.00	-0.94
7,089.0	1.50	191.30	7,086.2	-77.2	66.0	83.4	0.37	0.00	14.21
7,101.0	1.60	192.60	7,098.2	-77.5	65.9	83.7	0.88	0.83	10.83
7,137.0	1.50	188.90	7,134.2	-78.4	65.7	84.6	0.39	-0.28	-10.28
7,165.0	1.50	193.20	7,162.2	-79.2	65.6	85.3	0.40	0.00	15.36
7,196.0	1.90	183.90	7,193.2	-80.1	65.5	86.2	1.56	1.29	-30.00
7,227.0	3.00	177.30	7,224.1	-81.4	65.5	87.5	3.66	3.55	-21.29
7,259.0	5.00	173.10	7,256.0	-83.6	65.7	89.7	6.31	6.25	-13.13
7,290.0	7.10	170.70	7,286.9	-86.8	66.1	93.0	6.82	6.77	-7.74
7,322.0	9.10	169.30	7,318.5	-91.3	66.9	97.5	6.28	6.25	-4.38
7,353.0	11.10	170.00	7,349.1	-96.6	67.9	102.9	6.46	6.45	2.26
7,385.0	13.70	170.10	7,380.3	-103.4	69.1	109.8	8.13	8.13	0.31
7,416.0	16.50	170.50	7,410.2	-111.4	70.5	117.8	9.04	9.03	1.29
7,448.0	19.10	170.40	7,440.7	-121.0	72.1	127.6	8.13	8.13	-0.31

Wolverine Directional, LLC

Survey Report

Company:	RKI Exploration & Production	Local Co-ordinate Reference:	Well: RDU 22-2H
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 22-T26S-R30E	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	RDU 22-2H	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)
7,480.0	21.70	173.20	7,470.7	-132.0	73.7	138.7	8.68	8.13	8.75
7,511.0	24.30	175.10	7,499.2	-144.1	74.9	150.8	8.72	8.39	6.13
7,543.0	28.00	175.30	7,528.0	-158.1	76.1	164.9	11.57	11.56	0.63
7,574.0	32.30	175.20	7,554.8	-173.7	77.3	180.5	13.87	13.87	-0.32
7,606.0	36.20	174.40	7,581.2	-191.6	79.0	198.5	12.27	12.19	-2.50
7,637.0	40.00	173.20	7,605.6	-210.6	81.1	217.6	12.49	12.26	-3.87
7,669.0	43.80	172.60	7,629.4	-231.8	83.7	239.0	11.94	11.88	-1.88
7,700.0	47.70	171.70	7,651.0	-253.8	86.7	261.2	12.75	12.58	-2.90
7,732.0	50.50	170.90	7,672.0	-277.7	90.4	285.3	8.95	8.75	-2.50
7,763.0	53.10	171.50	7,691.1	-301.8	94.1	309.7	8.52	8.39	1.94
7,795.0	55.10	172.20	7,709.9	-327.4	97.8	335.5	6.50	6.25	2.19
7,826.0	57.20	172.00	7,727.2	-352.9	101.3	361.3	6.80	6.77	-0.65
7,857.0	60.40	172.10	7,743.2	-379.2	105.0	387.8	10.33	10.32	0.32
7,889.0	63.00	171.50	7,758.4	-407.1	109.0	415.9	8.29	8.13	-1.88
7,920.0	65.40	171.50	7,771.9	-434.7	113.1	443.8	7.74	7.74	0.00
7,952.0	68.10	171.30	7,784.5	-463.7	117.5	473.2	8.46	8.44	-0.63
7,984.0	70.10	171.90	7,795.9	-493.3	121.9	503.0	6.49	6.25	1.88
8,015.0	72.30	172.60	7,805.9	-522.4	125.9	532.3	7.41	7.10	2.26
8,047.0	74.90	172.90	7,815.0	-552.8	129.7	563.0	8.17	8.13	0.94
8,078.0	77.20	172.80	7,822.4	-582.7	133.5	593.1	7.43	7.42	-0.32
8,110.0	78.80	173.20	7,829.1	-613.7	137.3	624.4	5.15	5.00	1.25
8,141.0	80.50	173.20	7,834.7	-644.0	140.9	654.9	5.48	5.48	0.00
8,173.0	83.20	172.90	7,839.2	-675.5	144.7	686.5	8.49	8.44	-0.94
8,204.0	86.80	173.40	7,841.9	-706.1	148.4	717.4	11.72	11.61	1.61
8,235.0	90.00	173.40	7,842.8	-736.9	152.0	748.4	10.32	10.32	0.00
8,267.0	92.00	173.50	7,842.2	-768.7	155.6	780.4	6.26	6.25	0.31
8,298.0	93.20	173.50	7,840.8	-799.5	159.1	811.4	3.87	3.87	0.00
8,329.0	94.60	173.40	7,838.7	-830.2	162.7	842.3	4.53	4.52	-0.32
8,360.0	94.70	173.70	7,836.2	-860.9	166.1	873.2	1.02	0.32	0.97
8,392.0	94.70	173.30	7,833.6	-892.6	169.7	905.1	1.25	0.00	-1.25
8,423.0	94.20	173.10	7,831.2	-923.3	173.4	936.0	1.74	-1.61	-0.65
8,455.0	92.80	172.60	7,829.2	-955.0	177.4	967.9	4.64	-4.38	-1.56
8,486.0	92.30	173.20	7,827.8	-985.7	181.2	998.9	2.52	-1.61	1.94
8,518.0	93.40	172.70	7,826.2	-1,017.4	185.1	1,030.8	3.78	3.44	-1.56
8,550.0	93.50	172.50	7,824.3	-1,049.1	189.2	1,062.7	0.70	0.31	-0.63
8,581.0	92.20	172.30	7,822.8	-1,079.8	193.3	1,093.7	4.24	-4.19	-0.65
8,613.0	90.90	172.00	7,821.9	-1,111.5	197.7	1,125.6	4.17	-4.06	-0.94
8,644.0	91.30	171.20	7,821.3	-1,142.1	202.2	1,156.6	2.88	1.29	-2.58
8,676.0	90.60	171.20	7,820.8	-1,173.7	207.1	1,188.5	2.19	-2.19	0.00
8,708.0	90.70	170.90	7,820.4	-1,205.3	212.1	1,220.5	0.99	0.31	-0.94
8,739.0	91.00	170.90	7,819.9	-1,236.0	217.0	1,251.4	0.97	0.97	0.00
8,771.0	91.50	170.90	7,819.2	-1,267.5	222.1	1,283.4	1.56	1.56	0.00
8,802.0	91.40	170.60	7,818.5	-1,298.1	227.1	1,314.3	1.02	-0.32	-0.97
8,834.0	91.30	170.60	7,817.7	-1,329.7	232.3	1,346.2	0.31	-0.31	0.00
8,865.0	92.10	170.60	7,816.8	-1,360.3	237.3	1,377.2	2.58	2.58	0.00
8,897.0	91.50	170.30	7,815.8	-1,391.8	242.6	1,409.1	2.10	-1.88	-0.94
8,928.0	92.00	170.00	7,814.8	-1,422.3	247.9	1,440.0	1.88	1.61	-0.97
8,960.0	92.20	170.20	7,813.7	-1,453.8	253.4	1,471.9	0.88	0.63	0.63
8,991.0	92.80	170.00	7,812.3	-1,484.3	258.8	1,502.8	2.04	1.94	-0.65
9,023.0	91.60	170.60	7,811.1	-1,515.9	264.2	1,534.7	4.19	-3.75	1.88
9,054.0	92.00	170.40	7,810.1	-1,546.4	269.3	1,565.6	1.44	1.29	-0.65
9,086.0	92.00	170.00	7,809.0	-1,577.9	274.7	1,597.5	1.25	0.00	-1.25
9,117.0	91.40	170.70	7,808.1	-1,608.5	279.9	1,628.4	2.97	-1.94	2.26
9,149.0	90.90	170.60	7,807.4	-1,640.0	285.1	1,660.3	1.59	-1.56	-0.31

Wolverine Directional, LLC

Survey Report

Company:	RKI Exploration & Production	Local Co-ordinate Reference:	Well RDU 22-2H
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 22-T26S-R30E	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	RDU 22-2H	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)
9,180.0	90.20	171.40	7,807.1	-1,670.7	290.0	1,691.3	3.43	-2.26	2.58
9,212.0	89.70	171.60	7,807.2	-1,702.3	294.7	1,723.2	1.68	-1.56	0.63
9,243.0	89.70	171.20	7,807.3	-1,733.0	299.3	1,754.2	1.29	0.00	-1.29
9,275.0	90.20	171.20	7,807.4	-1,764.6	304.2	1,786.1	1.56	1.56	0.00
9,306.0	90.50	171.50	7,807.2	-1,795.2	308.9	1,817.1	1.37	0.97	0.97
9,338.0	90.80	172.40	7,806.8	-1,826.9	313.4	1,849.1	2.96	0.94	2.81
9,369.0	91.80	172.60	7,806.1	-1,857.6	317.4	1,880.0	3.29	3.23	0.65
9,401.0	91.40	172.60	7,805.2	-1,889.4	321.5	1,912.0	1.25	-1.25	0.00
9,433.0	90.60	172.50	7,804.6	-1,921.1	325.7	1,944.0	2.52	-2.50	-0.31
9,464.0	89.90	172.80	7,804.5	-1,951.8	329.6	1,975.0	2.46	-2.26	0.97
9,496.0	90.60	172.70	7,804.4	-1,983.6	333.7	2,007.0	2.21	2.19	-0.31
9,527.0	90.90	172.80	7,804.0	-2,014.3	337.6	2,038.0	1.02	0.97	0.32
9,559.0	90.10	172.10	7,803.7	-2,046.0	341.8	2,069.9	3.32	-2.50	-2.19
9,590.0	87.70	171.30	7,804.3	-2,076.7	346.3	2,100.9	8.16	-7.74	-2.58
9,622.0	88.00	171.10	7,805.5	-2,108.3	351.2	2,132.8	1.13	0.94	-0.63
9,653.0	89.10	171.30	7,806.3	-2,138.9	355.9	2,163.8	3.61	3.55	0.65
9,684.0	90.00	170.90	7,806.5	-2,169.6	360.7	2,194.7	3.18	2.90	-1.29
9,716.0	91.00	171.00	7,806.2	-2,201.2	365.7	2,226.7	3.14	3.13	0.31
9,748.0	91.30	170.50	7,805.6	-2,232.7	370.9	2,258.6	1.82	0.94	-1.56
9,779.0	90.90	170.20	7,805.0	-2,263.3	376.1	2,289.5	1.61	-1.29	-0.97
9,811.0	90.80	170.30	7,804.5	-2,294.8	381.5	2,321.5	0.44	-0.31	0.31
9,842.0	90.20	171.20	7,804.2	-2,325.4	386.5	2,352.4	3.49	-1.94	2.90
9,874.0	90.70	171.30	7,804.0	-2,357.1	391.3	2,384.3	1.59	1.56	0.31
9,905.0	90.70	172.00	7,803.6	-2,387.7	395.8	2,415.3	2.26	0.00	2.26
9,937.0	91.00	172.20	7,803.1	-2,419.4	400.2	2,447.3	1.13	0.94	0.63
9,968.0	90.90	172.30	7,802.6	-2,450.1	404.4	2,478.3	0.46	-0.32	0.32
10,000.0	90.50	172.40	7,802.2	-2,481.8	408.7	2,510.2	1.29	-1.25	0.31
10,031.0	90.90	172.80	7,801.9	-2,512.6	412.7	2,541.2	1.82	1.29	1.29
10,063.0	91.60	172.80	7,801.2	-2,544.3	416.7	2,573.2	2.19	2.19	0.00
10,094.0	91.50	173.00	7,800.3	-2,575.1	420.5	2,604.2	0.72	-0.32	0.65
10,126.0	91.70	173.90	7,799.4	-2,606.9	424.2	2,636.2	2.88	0.63	2.81
10,157.0	92.50	174.10	7,798.3	-2,637.7	427.4	2,667.1	2.66	2.58	0.65
10,189.0	92.70	174.00	7,796.8	-2,669.5	430.7	2,699.1	0.70	0.63	-0.31
10,220.0	93.20	173.80	7,795.2	-2,700.2	434.0	2,730.1	1.74	1.61	-0.65
10,252.0	93.50	173.40	7,793.4	-2,732.0	437.6	2,762.0	1.56	0.94	-1.25
10,283.0	93.10	173.30	7,791.6	-2,762.7	441.1	2,793.0	1.33	-1.29	-0.32
10,315.0	93.20	173.30	7,789.8	-2,794.5	444.9	2,824.9	0.31	0.31	0.00
10,346.0	93.70	173.00	7,788.0	-2,825.2	448.6	2,855.8	1.88	1.61	-0.97
10,378.0	93.60	173.40	7,785.9	-2,856.9	452.3	2,887.8	1.29	-0.31	1.25
10,409.0	93.80	174.50	7,783.9	-2,887.7	455.6	2,918.7	3.60	0.65	3.55
10,441.0	93.00	175.70	7,782.0	-2,919.5	458.3	2,950.6	4.50	-2.50	3.75
10,472.0	92.70	175.60	7,780.5	-2,950.4	460.7	2,981.6	1.02	-0.97	-0.32
10,504.0	92.30	176.80	7,779.1	-2,982.3	462.8	3,013.6	3.95	-1.25	3.75
10,535.0	92.30	176.70	7,777.9	-3,013.2	464.6	3,044.5	0.32	0.00	-0.32
10,567.0	91.90	177.30	7,776.7	-3,045.1	466.2	3,076.4	2.25	-1.25	1.88
10,598.0	91.50	177.20	7,775.8	-3,076.1	467.7	3,107.4	1.33	-1.29	-0.32
10,630.0	91.20	178.60	7,775.0	-3,108.0	468.9	3,139.3	4.47	-0.94	4.38
10,661.0	91.70	179.10	7,774.2	-3,139.0	469.5	3,170.2	2.28	1.61	1.61
10,692.0	91.60	179.00	7,773.3	-3,170.0	470.0	3,201.1	0.46	-0.32	-0.32
10,724.0	91.80	179.10	7,772.4	-3,202.0	470.6	3,233.0	0.70	0.63	0.31
10,755.0	91.80	179.10	7,771.4	-3,233.0	471.0	3,263.8	0.00	0.00	0.00
10,787.0	92.10	178.80	7,770.3	-3,264.9	471.6	3,295.7	1.33	0.94	-0.94
10,818.0	92.30	179.90	7,769.1	-3,295.9	472.0	3,326.6	3.60	0.65	3.55
10,850.0	92.60	182.00	7,767.8	-3,327.9	471.4	3,358.3	6.62	0.94	6.56

Wolverine Directional, LLC

Survey Report

Company:	RKI Exploration & Production	Local Co-ordinate Reference:	Well RDU 22-2H
Project:	Eddy County, (NM83E)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 22-T26S-R30E	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	RDU 22-2H	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)
10,881.0	92.20	181.50	7,766.5	-3,358.8	470.5	3,389.0	2.06	-1.29	-1.61
10,913.0	92.50	181.50	7,765.1	-3,390.8	469.7	3,420.7	0.94	0.94	0.00
10,944.0	92.70	181.90	7,763.7	-3,421.7	468.7	3,451.4	1.44	0.65	1.29
10,976.0	92.80	181.70	7,762.2	-3,453.7	467.7	3,483.1	0.70	0.31	-0.63
11,007.0	92.80	181.30	7,760.7	-3,484.6	466.9	3,513.9	1.29	0.00	-1.29
11,039.0	92.80	181.40	7,759.1	-3,516.6	466.2	3,545.6	0.31	0.00	0.31
11,070.0	93.30	181.30	7,757.5	-3,547.5	465.4	3,576.3	1.64	1.61	-0.32
11,102.0	93.60	181.90	7,755.6	-3,579.5	464.6	3,608.0	2.09	0.94	1.88
11,133.0	93.80	181.70	7,753.6	-3,610.4	463.6	3,638.6	0.91	0.65	-0.65
11,164.0	94.10	181.70	7,751.4	-3,641.3	462.7	3,669.3	0.97	0.97	0.00
11,196.0	93.30	181.80	7,749.4	-3,673.2	461.7	3,701.0	2.52	-2.50	0.31
11,228.0	92.20	181.70	7,747.8	-3,705.2	460.7	3,732.7	3.45	-3.44	-0.31
11,259.0	92.20	181.30	7,746.6	-3,736.1	459.9	3,763.4	1.29	0.00	-1.29
11,291.0	92.40	181.80	7,745.3	-3,768.1	459.0	3,795.1	1.68	0.63	1.56
11,322.0	92.60	181.90	7,744.0	-3,799.1	458.0	3,825.8	0.72	0.65	0.32
11,354.0	93.00	182.00	7,742.4	-3,831.0	457.0	3,857.5	1.29	1.25	0.31
11,385.0	93.10	181.80	7,740.8	-3,861.9	455.9	3,888.2	0.72	0.32	-0.65
11,417.0	93.20	182.00	7,739.0	-3,893.9	454.9	3,919.8	0.70	0.31	0.63
11,448.0	93.40	182.20	7,737.2	-3,924.8	453.7	3,950.5	0.91	0.65	0.65
11,480.0	94.00	182.10	7,735.2	-3,956.7	452.5	3,982.1	1.90	1.88	-0.31
11,511.0	91.90	181.40	7,733.6	-3,987.7	451.6	4,012.8	7.14	-6.77	-2.26
11,543.0	91.90	180.90	7,732.5	-4,019.6	450.9	4,044.6	1.56	0.00	-1.56
11,574.0	92.00	181.10	7,731.5	-4,050.6	450.4	4,075.3	0.72	0.32	0.65
11,606.0	92.20	181.00	7,730.3	-4,082.6	449.8	4,107.1	0.70	0.63	-0.31
11,638.0	92.30	181.30	7,729.0	-4,114.6	449.2	4,138.8	0.99	0.31	0.94
11,669.0	92.40	181.50	7,727.8	-4,145.5	448.4	4,169.6	0.72	0.32	0.65
11,701.0	92.70	181.70	7,726.3	-4,177.5	447.5	4,201.3	1.13	0.94	0.63
11,732.0	92.70	181.40	7,724.9	-4,208.4	446.7	4,232.0	0.97	0.00	-0.97
11,764.0	93.00	181.90	7,723.3	-4,240.4	445.8	4,263.7	1.82	0.94	1.56
11,795.0	93.40	181.80	7,721.6	-4,271.3	444.8	4,294.4	1.33	1.29	-0.32
11,827.0	93.50	181.50	7,719.6	-4,303.2	443.9	4,326.1	0.99	0.31	-0.94
11,858.0	93.80	181.60	7,717.7	-4,334.2	443.0	4,356.7	1.02	0.97	0.32
11,890.0	94.20	181.90	7,715.4	-4,366.1	442.0	4,388.4	1.56	1.25	0.94
11,921.0	94.20	182.20	7,713.2	-4,397.0	440.9	4,419.0	0.97	0.00	0.97
11,953.0	94.60	181.90	7,710.7	-4,428.9	439.8	4,450.6	1.56	1.25	-0.94
11,984.0	94.90	181.80	7,708.1	-4,459.7	438.8	4,481.3	1.02	0.97	-0.32
12,016.0	95.20	182.10	7,705.3	-4,491.6	437.7	4,512.8	1.32	0.94	0.94
12,047.0	95.50	182.10	7,702.4	-4,522.4	436.6	4,543.4	0.97	0.97	0.00
12,059.0	95.50	182.30	7,701.3	-4,534.4	436.1	4,555.3	1.66	0.00	1.67
Last MWD Survey									
12,110.0	95.50	182.30	7,696.4	-4,585.1	434.1	4,605.5	0.00	0.00	0.00
Proj to TD - RDU 22-2H PBHL									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,900.0	6,897.3	-72.2	66.7	Tie on to GYRO
6,912.0	6,909.3	-72.5	66.6	First MWD Survey
12,059.0	7,701.3	-4,534.4	436.1	Last MWD Survey
12,110.0	7,696.4	-4,585.1	434.1	Proj to TD

Wolverine Directional, LLC
Survey Report

Company:	RKI Exploration & Production	Local Co-ordinate Reference:	Well RDU 22-2H
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 22-T26S-R30E	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	RDU 22-2H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 2003.21 Single User Db

Checked By: _____	Approved By: _____	Date: _____
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