

FEB 19 2019

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REFERENCED TO GRID NORTH



SURVEY CALCULATION PROGRAM

V09.04.02

Company:	RKI Exploration & Production, LLC
Well Name:	Bindel 4 Fee 001H - Sidetrack
Location:	Eddy County, NM
Rig:	Orion Phoenix #10
Job Number:	MSMO-56550
API #:	30-015-45042

Magnetic Declination: 7.10

Vertical Section Azimuth: 268.89

Proposed Direction: 268.89

Survey Calculation Method: Minimum Curvature

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	14,731	88.3	270.2	9584	-548.95	-4354.57	4364.39

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'
TIE IN	8,922	4.30	264.60	8834.20	-472.28	931.84		1044.69	116.88		
1	8,953	9.00	270.30	8864.98	-472.38	928.26	-918.93	1041.54	116.97	15.29	15.16
2	8,985	10.50	274.40	8896.52	-472.14	922.85	-913.53	1036.61	117.09	5.16	4.69
3	9,017	10.00	274.00	8928.01	-471.72	917.17	-907.86	1031.37	117.22	1.58	-1.56
4	9,112	9.20	270.50	9021.68	-471.08	901.34	-892.05	1017.02	117.59	1.04	-0.84
5	9,208	8.50	267.60	9116.54	-471.31	886.58	-877.28	1004.07	118.00	0.86	-0.73
6	9,260	14.60	269.60	9167.46	-471.52	876.18	-866.88	995.00	118.29	11.75	11.73
7	9,302	20.10	272.40	9207.53	-471.25	863.66	-854.37	983.87	118.62	13.24	13.10
8	9,397	26.80	275.70	9294.64	-468.44	826.00	-816.77	949.58	119.56	7.18	7.05
9	9,492	31.80	272.60	9377.47	-465.17	779.65	-770.49	907.88	120.82	5.50	5.26
10	9,586	39.60	262.90	9453.81	-467.76	725.05	-715.86	862.84	122.83	10.23	8.30
11	9,681	50.50	265.10	9520.82	-474.65	658.28	-648.97	811.56	125.79	11.59	11.47
12	9,776	59.40	268.80	9575.34	-478.65	580.72	-571.33	752.55	129.50	9.89	9.37
13	9,871	70.90	269.70	9615.20	-479.74	494.66	-485.28	689.09	134.12	12.14	12.11
14	9,918	77.70	272.30	9627.91	-478.94	449.46	-440.09	656.80	136.82	15.42	14.47
15	9,965	79.60	272.20	9637.16	-477.13	403.41	-394.09	624.82	139.79	4.05	4.04
16	10,061	83.90	270.10	9650.93	-475.23	308.45	-299.19	566.56	147.01	4.97	4.48
17	10,079	86.90	270.20	9652.38	-475.19	290.51	-281.25	556.96	148.56	16.68	16.67
18	10,160	92.90	269.80	9652.52	-475.19	209.55	-200.31	519.34	156.20	7.42	7.41
19	10,255	91.30	269.50	9649.04	-475.77	114.62	-105.38	489.38	166.45	1.71	-1.68
20	10,350	91.50	267.30	9646.71	-478.42	19.69	-10.42	478.82	177.64	2.32	0.21
21	10,445	92.90	267.30	9643.07	-482.89	-75.13	84.47	488.70	188.84	1.47	1.47
22	10,540	87.70	267.00	9642.57	-487.61	-169.98	179.39	516.39	199.22	5.48	-5.47
23	10,634	88.70	267.90	9645.52	-491.79	-263.84	273.32	558.09	208.21	1.43	1.06
24	10,729	87.90	266.60	9648.34	-496.35	-358.68	368.23	612.38	215.85	1.61	-0.84
25	10,823	89.50	268.30	9650.47	-500.53	-452.56	462.17	674.79	222.12	2.48	1.70
26	10,918	87.40	267.30	9653.04	-504.17	-547.45	557.11	744.24	227.36	2.45	-2.21
27	11,012	88.00	268.70	9656.82	-507.45	-641.31	651.02	817.79	231.65	1.62	0.64
28	11,107	92.00	272.50	9656.82	-506.45	-736.27	745.95	893.64	235.48	5.81	4.21
29	11,202	91.90	272.40	9653.58	-502.40	-831.13	840.71	971.17	238.85	0.15	-0.11
30	11,296	91.40	272.20	9650.88	-498.62	-925.02	934.50	1050.85	241.67	0.57	-0.53
31	11,390	93.40	272.60	9646.94	-494.69	-1018.85	1028.24	1132.59	244.10	2.17	2.13
32	11,485	94.40	269.30	9640.48	-493.12	-1113.60	1122.94	1217.89	246.12	3.62	1.05
33	11,517	95.70	269.80	9637.66	-493.37	-1145.47	1154.81	1247.21	246.70	4.35	4.06

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#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'
34	11,548	96.20	269.90	9634.45	-493.45	-1176.30	1185.64	1275.61	247.24	1.64	1.61
35	11,580	95.10	269.80	9631.30	-493.53	-1208.15	1217.48	1305.07	247.78	3.45	-3.44
36	11,611	93.20	270.20	9629.05	-493.53	-1239.07	1248.39	1333.74	248.28	6.26	-6.13
37	11,674	90.30	268.70	9627.13	-494.14	-1302.03	1311.35	1392.64	249.22	5.18	-4.60
38	11,769	88.30	267.60	9628.29	-497.21	-1396.96	1406.33	1482.81	250.41	2.40	-2.11
39	11,864	88.60	267.20	9630.86	-501.51	-1491.83	1501.26	1573.87	251.42	0.53	0.32
40	11,958	92.10	266.70	9630.29	-506.51	-1585.68	1595.19	1664.61	252.28	3.76	3.72
41	12,053	91.30	266.10	9627.47	-512.48	-1680.45	1690.06	1756.86	253.04	1.05	-0.84
42	12,147	92.80	266.10	9624.11	-518.87	-1774.17	1783.89	1848.49	253.70	1.60	1.60
43	12,242	87.70	264.50	9623.69	-526.65	-1868.81	1878.67	1941.60	254.26	5.63	-5.37
44	12,274	87.50	263.90	9625.03	-529.88	-1900.62	1910.53	1973.10	254.42	1.97	-0.63
45	12,305	87.80	263.90	9626.30	-533.17	-1931.42	1941.39	2003.66	254.57	0.97	0.97
46	12,337	88.40	264.50	9627.36	-536.40	-1963.24	1973.26	2035.20	254.72	2.65	1.88
47	12,431	90.10	265.90	9628.59	-544.27	-2056.90	2067.05	2127.69	255.18	2.34	1.81
48	12,525	90.00	266.40	9628.51	-550.58	-2150.68	2160.95	2220.04	255.84	0.54	-0.11
49	12,619	90.90	267.70	9627.77	-555.41	-2244.55	2254.89	2312.25	256.10	1.68	0.96
50	12,714	94.50	271.60	9623.30	-556.00	-2339.41	2349.74	2404.58	256.63	5.58	3.79
51	12,809	93.60	271.00	9616.59	-553.85	-2434.15	2444.42	2496.36	257.18	1.14	-0.95
52	12,903	94.80	270.90	9609.70	-552.29	-2527.88	2538.11	2587.51	257.68	1.28	1.28
53	12,997	92.40	271.10	9603.80	-550.66	-2621.67	2631.85	2678.88	258.14	2.56	-2.55
54	13,092	90.80	270.40	9601.15	-549.41	-2716.63	2726.76	2771.63	258.57	1.84	-1.68
55	13,187	90.10	269.50	9600.40	-549.50	-2811.62	2821.74	2864.81	258.94	1.20	-0.74
56	13,281	89.70	268.30	9600.57	-551.30	-2905.60	2915.74	2957.44	259.26	1.35	-0.43
57	13,376	90.10	268.40	9600.73	-554.04	-3000.56	3010.73	3051.28	259.54	0.43	0.42
58	13,470	90.30	268.00	9600.40	-556.99	-3094.52	3104.72	3144.24	259.80	0.48	0.21
59	13,564	92.20	269.80	9598.35	-558.79	-3188.47	3198.69	3237.06	260.06	2.78	2.02
60	13,659	93.40	268.80	9593.71	-559.95	-3283.34	3293.58	3330.75	260.32	1.64	1.26
61	13,754	90.00	271.00	9590.90	-560.12	-3378.28	3388.50	3424.40	260.59	4.26	-3.58
62	13,849	90.70	270.60	9590.31	-558.79	-3473.27	3483.44	3517.93	260.86	0.85	0.74
63	13,943	92.70	270.50	9587.53	-557.89	-3567.22	3577.36	3610.58	261.11	2.13	2.13
64	14,038	90.30	270.90	9585.04	-556.73	-3662.17	3672.27	3704.25	261.36	2.56	-2.53
65	14,133	91.80	271.60	9583.30	-554.66	-3757.13	3767.17	3797.85	261.60	1.74	1.58
66	14,227	86.50	269.50	9584.69	-553.75	-3851.08	3861.08	3890.69	261.82	6.06	-5.64
67	14,322	87.30	270.20	9589.83	-554.00	-3945.94	3955.93	3984.64	262.01	1.12	0.84

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Vertical Section Azimuth:	268.89	Proposed Direction:	268.89
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#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'
68	14,416	91.40	270.30	9590.90	-553.59	-4039.91	4049.88	4077.66	262.20	4.36	4.36
69	14,511	94.50	271.50	9586.01	-552.10	-4134.76	4144.68	4171.46	262.39	3.50	3.26
70	14,605	90.90	271.20	9581.58	-549.89	-4228.61	4238.47	4264.22	262.59	3.84	-3.83
71	14,663	88.30	270.20	9581.99	-549.18	-4286.60	4296.44	4321.64	262.70	4.80	-4.48
PTB:	14,731	88.30	270.20	9584.00	-548.95	-4354.57	4364.39	4389.04	262.82	0.00	0.00