



Gyroscopic Survey Report  
for  
KPK

Well Location	WELD COUNTY
Well Name	STIEBER GEORGE B-1
Rig Number	KPK
Survey Date	9/22/2014
Latitude	40.0348000°N
Longitude	104.8454300°W
North Reference	True North
Grid Correction	None
Depth Reference	GL (0.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 288.92Azim (deg)
Definitive Survey	STIEBER GEORGE B-1
Operator(s)	C KIRBY

**Well Notes**

API-05-123-09404

# Survey Report

<b>Well Name:</b>		STIEBER GEORGE B-1							
<b>Survey:</b>		STIEBER GEORGE B-1							
<b>Survey Date:</b>		9/22/2014							
MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
86.25	0.44	284.91	86.25	0.33	0.09	-0.32	0.51	0.33	284.91
109.03	0.61	297.39	109.03	0.54	0.16	-0.51	0.88	0.54	287.69
133.95	0.37	291.03	133.94	0.75	0.25	-0.70	0.97	0.75	289.75
159.95	0.38	293.37	159.95	0.92	0.32	-0.86	0.07	0.92	290.21
186.68	0.37	289.53	186.67	1.09	0.38	-1.03	0.10	1.09	290.41
208.93	0.33	291.06	208.93	1.23	0.43	-1.15	0.22	1.23	290.39
234.91	0.31	292.02	234.91	1.37	0.48	-1.29	0.07	1.37	290.51
261.46	0.33	284.12	261.45	1.52	0.53	-1.43	0.19	1.52	290.26
283.01	0.38	293.61	283.01	1.65	0.57	-1.55	0.34	1.65	290.17
309.71	0.36	296.42	309.70	1.82	0.64	-1.71	0.10	1.83	290.62
336.38	0.33	287.06	336.38	1.98	0.70	-1.86	0.24	1.98	290.73
358.05	0.37	295.98	358.04	2.12	0.75	-1.98	0.33	2.12	290.79
384.84	0.30	285.58	384.83	2.27	0.81	-2.13	0.34	2.27	290.83
411.66	0.33	307.22	411.65	2.42	0.87	-2.26	0.46	2.42	291.20
433.32	0.31	310.93	433.31	2.53	0.95	-2.35	0.12	2.54	292.04
459.97	0.34	317.84	459.96	2.67	1.06	-2.46	0.18	2.68	293.28
486.03	0.41	322.61	486.02	2.82	1.19	-2.57	0.31	2.83	294.87
508.40	0.49	329.55	508.39	2.96	1.34	-2.67	0.40	2.98	296.63
535.16	0.56	324.66	535.15	3.15	1.54	-2.80	0.33	3.20	298.85
561.06	0.60	321.54	561.05	3.37	1.75	-2.96	0.20	3.44	300.64
582.68	0.55	326.43	582.66	3.54	1.93	-3.09	0.34	3.64	301.99
608.30	0.58	326.22	608.28	3.75	2.14	-3.23	0.14	3.87	303.54
634.52	0.60	325.74	634.50	3.96	2.36	-3.38	0.05	4.12	304.97
660.88	0.59	323.77	660.86	4.18	2.59	-3.53	0.08	4.38	306.18
686.39	0.57	317.86	686.37	4.40	2.79	-3.70	0.24	4.63	306.99
708.53	0.72	313.49	708.51	4.62	2.96	-3.87	0.69	4.88	307.42
734.75	0.76	308.11	734.73	4.94	3.18	-4.13	0.30	5.21	307.63
760.20	0.82	301.61	760.17	5.27	3.38	-4.42	0.43	5.56	307.45
786.38	0.80	301.35	786.35	5.63	3.58	-4.73	0.07	5.93	307.08
808.46	0.87	301.50	808.43	5.95	3.74	-5.00	0.31	6.25	306.79
833.30	0.86	301.14	833.26	6.31	3.94	-5.33	0.03	6.62	306.48
859.43	0.80	295.52	859.40	6.69	4.12	-5.66	0.39	7.00	306.05
885.03	0.89	286.58	884.99	7.07	4.25	-6.01	0.61	7.36	305.28
911.31	0.88	284.73	911.27	7.47	4.36	-6.40	0.12	7.75	304.27
933.29	0.90	283.44	933.25	7.81	4.45	-6.73	0.13	8.07	303.43

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MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
958.79	0.98	282.72	958.75	8.22	4.54	-7.14	0.31	8.46	302.45
985.22	0.91	285.88	985.16	8.66	4.65	-7.56	0.32	8.87	301.57
1007.26	0.79	286.06	1007.21	8.98	4.74	-7.87	0.55	9.19	301.03
1034.53	1.03	283.40	1034.48	9.41	4.84	-8.29	0.88	9.60	300.30
1061.67	1.06	284.08	1061.61	9.90	4.96	-8.77	0.12	10.08	299.50
1083.71	1.10	285.40	1083.64	10.32	5.07	-9.17	0.21	10.48	298.92
1110.94	0.98	277.47	1110.87	10.81	5.17	-9.65	0.68	10.95	298.16
1132.96	1.14	290.06	1132.88	11.21	5.27	-10.04	1.30	11.34	297.67
1160.08	1.21	291.82	1160.00	11.76	5.46	-10.56	0.26	11.89	297.36
1182.70	1.16	290.52	1182.62	12.23	5.63	-11.00	0.23	12.36	297.12
1209.32	1.22	291.43	1209.23	12.78	5.83	-11.52	0.25	12.91	296.86
1236.55	1.23	293.01	1236.45	13.37	6.05	-12.06	0.13	13.49	296.66
1259.29	1.26	292.17	1259.19	13.86	6.24	-12.51	0.17	13.98	296.52
1285.68	1.30	292.63	1285.57	14.45	6.47	-13.06	0.15	14.57	296.35
1307.81	1.37	293.06	1307.70	14.97	6.67	-13.53	0.29	15.09	296.23
1335.65	1.33	291.66	1335.53	15.62	6.92	-14.14	0.19	15.74	296.07
1357.65	1.35	292.13	1357.53	16.13	7.11	-14.62	0.14	16.25	295.94
1384.86	1.37	288.75	1384.73	16.78	7.33	-15.22	0.30	16.90	295.73
1411.37	1.40	289.17	1411.23	17.42	7.54	-15.83	0.14	17.53	295.48
1434.10	1.44	289.66	1433.95	17.98	7.73	-16.36	0.17	18.10	295.29
1461.18	1.33	286.27	1461.03	18.64	7.93	-16.98	0.52	18.74	295.04
1483.17	1.41	289.00	1483.01	19.16	8.09	-17.48	0.48	19.27	294.84
1510.36	1.41	290.55	1510.19	19.83	8.32	-18.11	0.14	19.93	294.67
1536.60	1.57	294.03	1536.42	20.51	8.58	-18.74	0.68	20.61	294.59
1559.45	1.41	289.89	1559.26	21.10	8.80	-19.29	0.84	21.21	294.52
1586.64	1.44	290.26	1586.44	21.78	9.03	-19.93	0.13	21.88	294.39
1608.36	1.41	288.27	1608.15	22.32	9.21	-20.44	0.27	22.42	294.26
1635.10	1.45	289.21	1634.89	22.99	9.43	-21.07	0.17	23.08	294.10
1661.77	1.45	289.73	1661.55	23.66	9.65	-21.70	0.06	23.75	293.97
1683.55	1.46	288.22	1683.32	24.21	9.83	-22.23	0.18	24.30	293.86
1710.21	1.65	291.11	1709.97	24.94	10.08	-22.91	0.77	25.03	293.74
1736.99	1.60	292.47	1736.74	25.70	10.36	-23.61	0.26	25.78	293.68
1758.69	1.65	290.97	1758.43	26.31	10.58	-24.18	0.33	26.40	293.64
1785.31	1.57	290.19	1785.04	27.06	10.85	-24.88	0.32	27.15	293.55
1811.36	1.50	289.33	1811.09	27.76	11.08	-25.54	0.27	27.84	293.46
1833.72	1.37	290.30	1833.44	28.32	11.27	-26.07	0.61	28.40	293.39

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MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
1860.46	1.36	290.46	1860.17	28.95	11.49	-26.67	0.02	29.04	293.32
1886.36	1.36	292.73	1886.06	29.57	11.72	-27.24	0.21	29.65	293.28
1908.73	1.35	292.13	1908.43	30.09	11.92	-27.73	0.09	30.18	293.27
1934.75	1.28	292.01	1934.44	30.69	12.15	-28.28	0.26	30.78	293.25
1961.37	1.28	292.56	1961.05	31.28	12.37	-28.83	0.05	31.37	293.23
1983.70	1.18	289.56	1983.38	31.76	12.55	-29.28	0.56	31.85	293.20
2009.02	1.23	294.49	2008.69	32.30	12.75	-29.77	0.47	32.38	293.18
2035.74	1.21	294.07	2035.40	32.86	12.98	-30.29	0.11	32.95	293.20
2061.63	1.22	294.02	2061.29	33.41	13.20	-30.79	0.04	33.50	293.21
2083.94	1.13	296.90	2083.60	33.86	13.40	-31.20	0.46	33.96	293.24
2110.65	1.17	298.90	2110.30	34.39	13.65	-31.68	0.20	34.50	293.31
2136.50	1.09	296.25	2136.14	34.90	13.89	-32.13	0.39	35.00	293.38
2158.94	1.13	297.38	2158.58	35.33	14.08	-32.52	0.22	35.44	293.42
2185.75	1.12	297.75	2185.39	35.85	14.33	-32.98	0.05	35.96	293.48
2207.76	1.17	299.52	2207.39	36.28	14.54	-33.37	0.30	36.40	293.54
2235.61	1.05	297.22	2235.23	36.81	14.80	-33.85	0.48	36.94	293.61
2258.13	1.01	297.54	2257.75	37.21	14.98	-34.20	0.17	37.34	293.65
2285.98	1.02	296.38	2285.60	37.70	15.21	-34.65	0.09	37.84	293.70
2309.25	0.98	290.60	2308.86	38.11	15.37	-35.02	0.47	38.24	293.69
2336.23	0.99	289.50	2335.84	38.57	15.53	-35.46	0.08	38.71	293.65
2359.49	1.06	286.87	2359.09	38.99	15.66	-35.85	0.35	39.12	293.59
2386.59	1.11	270.48	2386.19	39.49	15.73	-36.35	1.15	39.61	293.40
2409.74	1.09	271.11	2409.33	39.91	15.74	-36.80	0.10	40.02	293.16
2433.16	1.24	271.14	2432.75	40.36	15.75	-37.27	0.64	40.46	292.90
2460.03	1.27	269.80	2459.62	40.92	15.75	-37.86	0.15	41.01	292.59
2483.52	1.25	264.20	2483.10	41.40	15.73	-38.37	0.53	41.47	292.28
2511.36	1.42	265.74	2510.94	41.99	15.67	-39.02	0.64	42.05	291.88
2533.86	1.41	267.52	2533.43	42.51	15.64	-39.57	0.20	42.55	291.56
2561.54	1.47	264.56	2561.10	43.15	15.59	-40.27	0.34	43.18	291.16
2583.93	1.53	267.15	2583.48	43.69	15.55	-40.86	0.41	43.71	290.83
2611.25	1.64	265.90	2610.78	44.39	15.50	-41.61	0.41	44.40	290.43
2633.40	1.70	269.19	2632.93	44.99	15.47	-42.26	0.50	45.00	290.11
2660.80	1.73	268.03	2660.32	45.76	15.45	-43.07	0.19	45.76	289.73
2683.65	1.66	271.59	2683.15	46.40	15.45	-43.75	0.57	46.40	289.45
2710.14	1.70	274.96	2709.63	47.14	15.49	-44.52	0.40	47.14	289.19
2733.12	1.68	277.75	2732.60	47.80	15.57	-45.20	0.37	47.80	289.01

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MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
2760.37	1.63	277.47	2759.85	48.57	15.67	-45.98	0.18	48.57	288.82
2786.91	1.66	281.20	2786.38	49.32	15.80	-46.73	0.42	49.32	288.68
2809.87	1.65	280.31	2809.32	49.98	15.92	-47.38	0.12	49.98	288.57
2831.97	1.54	280.60	2831.41	50.59	16.03	-47.98	0.49	50.59	288.48
2859.21	1.54	282.09	2858.64	51.31	16.18	-48.70	0.15	51.32	288.37
2885.83	1.49	280.21	2885.25	52.01	16.31	-49.39	0.25	52.02	288.28
2907.93	1.42	282.39	2907.35	52.57	16.42	-49.94	0.41	52.57	288.20
2935.13	1.48	283.47	2934.54	53.26	16.58	-50.61	0.25	53.26	288.13
2961.73	1.36	282.51	2961.13	53.91	16.73	-51.26	0.47	53.92	288.07
2984.46	1.42	286.64	2983.86	54.46	16.86	-51.79	0.52	54.47	288.04
3011.72	1.45	285.27	3011.11	55.14	17.05	-52.45	0.15	55.15	288.01
3033.78	1.41	283.57	3033.16	55.69	17.19	-52.98	0.26	55.70	287.98
3061.32	1.41	282.72	3060.69	56.37	17.34	-53.64	0.08	56.37	287.92
3083.40	1.33	283.62	3082.77	56.89	17.46	-54.15	0.34	56.90	287.87
3110.56	1.30	282.41	3109.92	57.51	17.60	-54.76	0.15	57.52	287.82
3133.35	1.24	282.39	3132.70	58.02	17.71	-55.26	0.27	58.03	287.77
3159.88	1.24	283.17	3159.22	58.59	17.84	-55.82	0.06	58.60	287.72
3182.66	1.26	281.94	3182.00	59.08	17.95	-56.30	0.14	59.10	287.68
3209.94	1.21	280.29	3209.27	59.66	18.06	-56.88	0.23	59.68	287.62
3236.34	1.09	282.03	3235.67	60.19	18.16	-57.40	0.47	60.21	287.56
3259.13	1.11	282.01	3258.45	60.62	18.25	-57.83	0.08	60.64	287.52
3285.66	1.10	277.72	3284.98	61.12	18.34	-58.33	0.31	61.14	287.46
3308.45	1.16	280.56	3307.76	61.57	18.41	-58.77	0.35	61.59	287.40
3334.12	1.12	280.84	3333.43	62.07	18.51	-59.27	0.15	62.09	287.34
3361.11	1.10	276.92	3360.41	62.59	18.59	-59.79	0.29	62.61	287.27
3384.00	1.03	280.43	3383.30	63.00	18.65	-60.21	0.43	63.03	287.21
3410.25	1.03	272.60	3409.55	63.46	18.71	-60.68	0.54	63.49	287.13
3433.23	1.02	275.53	3432.53	63.86	18.74	-61.09	0.24	63.90	287.05
3459.72	1.05	275.59	3459.01	64.33	18.78	-61.56	0.11	64.36	286.97
3486.80	1.01	275.75	3486.09	64.80	18.83	-62.04	0.13	64.84	286.88
3509.53	0.73	278.51	3508.81	65.14	18.87	-62.39	1.24	65.18	286.83
3535.98	0.72	277.49	3535.25	65.47	18.92	-62.72	0.05	65.51	286.78
3558.62	0.70	283.73	3557.90	65.74	18.97	-63.00	0.36	65.79	286.76
3585.38	0.62	295.78	3584.65	66.05	19.07	-63.28	0.59	66.10	286.77
3611.33	0.45	298.26	3610.61	66.29	19.18	-63.50	0.66	66.33	286.81
3633.72	0.39	307.10	3633.00	66.45	19.27	-63.64	0.40	66.49	286.84

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MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
3660.47	0.32	322.35	3659.74	66.60	19.38	-63.76	0.44	66.64	286.91
3686.38	0.23	335.04	3685.65	66.69	19.49	-63.82	0.40	66.73	286.98
3708.73	0.25	5.42	3708.01	66.74	19.57	-63.84	0.57	66.77	287.05
3734.77	0.20	56.25	3734.05	66.72	19.66	-63.79	0.76	66.75	287.13
3761.54	0.34	100.41	3760.82	66.61	19.67	-63.68	0.91	66.64	287.16
3783.87	0.43	121.48	3783.14	66.46	19.61	-63.54	0.73	66.50	287.15
3809.76	0.41	149.60	3809.03	66.30	19.48	-63.41	0.79	66.33	287.08
3835.77	0.45	180.36	3835.04	66.20	19.30	-63.36	0.89	66.24	286.94
3861.73	0.41	215.24	3861.00	66.19	19.12	-63.42	1.01	66.24	286.78
3884.03	0.48	228.57	3883.30	66.26	18.99	-63.53	0.56	66.31	286.64
3910.60	0.53	239.64	3909.86	66.39	18.86	-63.72	0.41	66.45	286.48
3936.56	0.57	244.15	3935.82	66.56	18.74	-63.94	0.24	66.63	286.33
3958.09	0.47	248.12	3957.35	66.71	18.66	-64.12	0.53	66.78	286.23
3983.91	0.59	260.41	3983.17	66.90	18.60	-64.35	0.65	66.98	286.12
4010.55	0.53	297.86	4009.82	67.15	18.63	-64.59	1.36	67.23	286.09
4032.08	0.56	315.77	4031.34	67.34	18.75	-64.75	0.80	67.41	286.15
4058.65	0.74	326.09	4057.91	67.59	18.99	-64.94	0.80	67.66	286.30
4085.13	0.79	321.77	4084.39	67.88	19.27	-65.15	0.30	67.94	286.48
4111.02	0.74	323.25	4110.28	68.17	19.55	-65.36	0.22	68.22	286.65
4136.75	0.80	319.68	4136.00	68.46	19.82	-65.57	0.29	68.50	286.82
4158.21	0.80	326.69	4157.46	68.70	20.06	-65.75	0.45	68.74	286.96
4184.78	0.87	320.64	4184.03	69.02	20.37	-65.98	0.44	69.05	287.15
4211.22	0.89	321.29	4210.47	69.37	20.68	-66.24	0.08	69.39	287.34
4232.79	1.02	315.49	4232.03	69.68	20.95	-66.48	0.75	69.70	287.49
4259.19	0.97	313.66	4258.43	70.09	21.27	-66.80	0.21	70.11	287.66
4285.60	0.96	317.34	4284.84	70.49	21.59	-67.12	0.24	70.50	287.83
4311.40	0.94	312.03	4310.63	70.87	21.89	-67.42	0.35	70.88	287.99
4333.41	1.01	310.99	4332.64	71.22	22.14	-67.70	0.34	71.22	288.11
4359.78	1.07	312.64	4359.00	71.66	22.45	-68.05	0.25	71.66	288.26
4385.77	1.29	305.52	4384.99	72.16	22.79	-68.47	1.02	72.16	288.41
4407.87	1.28	299.46	4407.08	72.64	23.05	-68.88	0.61	72.64	288.50
4434.19	1.37	297.63	4433.40	73.24	23.34	-69.42	0.39	73.24	288.59
4459.91	1.52	295.38	4459.11	73.88	23.63	-70.00	0.63	73.88	288.66
4486.30	1.74	291.10	4485.49	74.63	23.93	-70.69	0.95	74.63	288.70
4507.59	1.82	289.28	4506.77	75.29	24.16	-71.31	0.45	75.29	288.71
4533.49	2.10	292.83	4532.65	76.18	24.48	-72.14	1.18	76.18	288.74

**Well Name:** STIEBER GEORGE B-1  
**Survey:** STIEBER GEORGE B-1  
**Survey Date:** 9/22/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
4559.46	2.36	290.80	4558.61	77.19	24.85	-73.08	1.04	77.19	288.78
4585.76	2.48	290.46	4584.88	78.29	25.24	-74.11	0.46	78.29	288.81
4611.63	2.46	291.13	4610.73	79.41	25.64	-75.16	0.14	79.41	288.83
4633.26	2.34	293.67	4632.34	80.31	25.98	-75.99	0.72	80.31	288.87
4658.56	2.06	286.83	4657.61	81.28	26.32	-76.90	1.52	81.28	288.89
4683.65	2.04	289.32	4682.69	82.18	26.60	-77.76	0.37	82.18	288.88
4709.93	2.09	285.30	4708.96	83.12	26.88	-78.66	0.58	83.12	288.87
4735.00	1.66	287.45	4734.01	83.94	27.11	-79.44	1.74	83.94	288.84
4761.44	1.67	298.60	4760.44	84.71	27.41	-80.15	1.23	84.71	288.88
4786.65	1.56	290.71	4785.64	85.41	27.71	-80.79	0.99	85.41	288.93
4808.91	1.65	284.12	4807.89	86.03	27.89	-81.39	0.92	86.03	288.92
4809.72	1.91	291.06	4808.70	86.06	27.90	-81.41	41.79	86.06	288.92