



Gyroscopic Survey Report
for
KPKAUFFMAN

Well Location	WELD
Well Name	GUILDNER #1
Rig Number	
Survey Date	11/26/2014
Latitude	40.1290160°N
Longitude	104.8604140°W
North Reference	True North
Grid Correction	None
Depth Reference	GL (4960.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 291.69Azim (deg)
Definitive Survey	GUILDNER #1 (05-123-07916)
Operator(s)	T CELLAN

Well Notes

API-05-123-07916

Well Name: GUILDNER #1
Survey: GUILDNER #1 (05-123-07916)
Survey Date: 11/26/2014

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	%/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
89.53	0.44	162.36	89.53	-0.22	-0.33	0.10	0.34	162.36	0.49
99.59	0.45	167.33	99.59	-0.27	-0.40	0.12	0.42	162.82	0.39
123.26	0.31	115.49	123.26	-0.38	-0.52	0.20	0.56	158.73	1.50
147.73	0.29	128.82	147.73	-0.51	-0.59	0.31	0.67	152.12	0.30
174.40	0.30	106.35	174.40	-0.64	-0.65	0.43	0.78	146.45	0.44
199.54	0.30	117.94	199.54	-0.77	-0.70	0.55	0.89	141.70	0.24
224.74	0.26	125.41	224.74	-0.90	-0.77	0.66	1.01	139.27	0.21
246.85	0.22	104.06	246.84	-0.99	-0.81	0.74	1.10	137.36	0.45
274.05	0.22	109.84	274.04	-1.09	-0.84	0.84	1.19	134.83	0.08
296.91	0.16	111.03	296.91	-1.17	-0.86	0.91	1.25	133.40	0.24
324.41	0.23	131.43	324.40	-1.26	-0.91	0.99	1.35	132.70	0.36
346.59	0.17	109.02	346.59	-1.33	-0.95	1.05	1.42	132.13	0.45
374.19	0.22	108.60	374.19	-1.42	-0.98	1.14	1.51	130.72	0.18
397.05	0.27	131.74	397.05	-1.52	-1.03	1.22	1.60	130.17	0.49
423.87	0.26	116.87	423.86	-1.64	-1.10	1.33	1.72	129.77	0.26
446.85	0.27	107.44	446.84	-1.74	-1.14	1.42	1.82	128.76	0.19
474.31	0.22	108.76	474.31	-1.86	-1.18	1.53	1.93	127.54	0.17
496.63	0.20	110.49	496.62	-1.94	-1.21	1.61	2.01	126.82	0.10
523.96	0.13	106.63	523.95	-2.02	-1.23	1.69	2.09	126.15	0.24
546.26	0.12	126.15	546.25	-2.07	-1.25	1.73	2.14	125.91	0.21
573.57	0.15	154.57	573.57	-2.12	-1.30	1.77	2.20	126.38	0.28
596.79	0.14	137.70	596.78	-2.17	-1.35	1.80	2.25	126.90	0.20
623.29	0.17	148.63	623.29	-2.23	-1.41	1.84	2.32	127.42	0.16
646.37	0.23	175.65	646.36	-2.28	-1.48	1.86	2.38	128.53	0.46
672.89	0.20	184.84	672.88	-2.32	-1.58	1.86	2.45	130.32	0.17
696.10	0.15	175.66	696.10	-2.34	-1.65	1.86	2.49	131.55	0.25
723.40	0.43	198.14	723.39	-2.36	-1.78	1.83	2.56	134.18	1.09
749.91	0.27	166.67	749.90	-2.41	-1.94	1.82	2.66	136.82	0.91
773.11	0.24	175.19	773.10	-2.46	-2.04	1.84	2.74	138.03	0.20
795.90	0.32	183.44	795.90	-2.50	-2.15	1.84	2.83	139.55	0.38
822.65	0.24	186.48	822.64	-2.54	-2.28	1.82	2.92	141.38	0.29
849.62	0.16	165.46	849.62	-2.58	-2.38	1.83	3.00	142.46	0.41
871.50	0.29	188.46	871.49	-2.61	-2.46	1.83	3.07	143.42	0.69
898.45	0.35	197.12	898.44	-2.63	-2.61	1.79	3.16	145.49	0.30
921.16	0.36	195.51	921.15	-2.64	-2.74	1.75	3.25	147.40	0.05

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MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	%/100ft
947.06	0.25	191.99	947.05	-2.66	-2.87	1.72	3.35	149.10	0.44
974.28	0.33	206.57	974.27	-2.66	-3.00	1.67	3.44	150.87	0.42
995.93	0.36	214.78	995.92	-2.64	-3.11	1.61	3.50	152.72	0.26
1023.01	0.33	199.17	1023.00	-2.63	-3.26	1.53	3.60	154.83	0.36
1045.54	0.28	210.74	1045.53	-2.62	-3.37	1.48	3.68	156.25	0.37
1071.70	0.28	209.30	1071.69	-2.60	-3.48	1.42	3.76	157.82	0.03
1098.84	0.34	219.74	1098.83	-2.57	-3.60	1.33	3.84	159.67	0.31
1121.25	0.36	226.45	1121.24	-2.52	-3.70	1.24	3.90	161.46	0.19
1148.96	0.31	191.81	1148.94	-2.50	-3.83	1.16	4.00	163.12	0.73
1170.70	0.44	205.35	1170.69	-2.50	-3.97	1.11	4.12	164.30	0.72
1198.41	0.40	220.40	1198.40	-2.46	-4.14	1.01	4.26	166.33	0.43
1220.19	0.43	212.93	1220.17	-2.42	-4.26	0.91	4.36	167.91	0.28
1247.07	0.44	218.11	1247.05	-2.37	-4.43	0.79	4.50	169.83	0.16
1274.88	0.52	206.17	1274.86	-2.33	-4.63	0.67	4.67	171.74	0.45
1297.01	0.43	208.52	1296.99	-2.32	-4.79	0.59	4.83	173.01	0.40
1324.97	0.47	219.51	1324.95	-2.27	-4.97	0.46	4.99	174.67	0.33
1346.71	0.34	222.54	1346.69	-2.22	-5.09	0.36	5.10	175.91	0.59
1373.63	0.34	209.34	1373.61	-2.18	-5.22	0.27	5.22	177.04	0.29
1399.76	0.25	217.42	1399.75	-2.15	-5.33	0.20	5.33	177.89	0.40
1422.41	0.14	235.46	1422.39	-2.12	-5.39	0.14	5.39	178.47	0.54
1449.18	0.51	216.69	1449.16	-2.08	-5.50	0.05	5.50	179.53	1.40
1470.91	0.62	212.12	1470.89	-2.03	-5.68	-0.07	5.68	180.75	0.57
1498.08	0.50	222.37	1498.06	-1.96	-5.89	-0.23	5.89	182.26	0.59
1523.98	0.44	226.71	1523.96	-1.88	-6.04	-0.38	6.05	183.61	0.24
1546.76	0.43	228.54	1546.74	-1.80	-6.16	-0.51	6.18	184.73	0.09
1573.55	0.46	226.89	1573.53	-1.71	-6.30	-0.66	6.33	186.01	0.12
1599.58	0.42	234.34	1599.56	-1.62	-6.42	-0.82	6.48	187.25	0.26
1622.32	0.34	250.48	1622.30	-1.52	-6.50	-0.95	6.56	188.31	0.58
1649.85	0.45	237.27	1649.82	-1.39	-6.58	-1.12	6.68	189.64	0.51
1671.61	0.44	238.37	1671.58	-1.29	-6.67	-1.26	6.79	190.71	0.06
1697.93	0.46	234.04	1697.90	-1.18	-6.79	-1.43	6.94	191.92	0.14
1724.48	0.44	253.02	1724.45	-1.04	-6.88	-1.62	7.07	193.22	0.56
1745.73	0.55	243.86	1745.70	-0.91	-6.95	-1.79	7.17	194.41	0.62
1772.95	0.53	240.09	1772.92	-0.74	-7.07	-2.01	7.35	195.88	0.15
1799.52	0.55	249.04	1799.49	-0.57	-7.17	-2.24	7.51	197.31	0.33
1824.95	0.58	251.00	1824.92	-0.39	-7.26	-2.47	7.67	198.80	0.14



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ft	deg	deg	ft	ft	ft	ft	ft	deg	%/100ft
1847.43	0.58	250.76	1847.40	-0.21	-7.33	-2.69	7.81	200.12	0.02
1873.74	0.49	252.32	1873.71	-0.03	-7.41	-2.92	7.97	201.50	0.35
1899.42	0.55	259.78	1899.38	0.16	-7.47	-3.15	8.10	202.85	0.35
1921.53	0.57	260.20	1921.50	0.35	-7.51	-3.36	8.22	204.11	0.07
1947.69	0.55	260.22	1947.65	0.56	-7.55	-3.61	8.37	205.56	0.07
1973.73	0.54	267.98	1973.69	0.78	-7.57	-3.86	8.50	206.98	0.29
1995.69	0.52	251.14	1995.65	0.95	-7.61	-4.05	8.62	208.04	0.71
2022.22	0.53	252.59	2022.17	1.14	-7.69	-4.28	8.80	209.13	0.07
2047.86	0.61	251.45	2047.81	1.34	-7.77	-4.53	8.99	210.25	0.32
2073.87	0.51	251.26	2073.83	1.53	-7.85	-4.77	9.18	211.29	0.42
2095.56	0.62	255.61	2095.51	1.70	-7.91	-4.97	9.34	212.17	0.55
2121.81	0.66	254.38	2121.77	1.93	-7.98	-5.26	9.56	213.36	0.19
2148.34	0.67	246.30	2148.29	2.17	-8.09	-5.55	9.81	214.45	0.36
2173.96	0.61	245.80	2173.91	2.37	-8.20	-5.81	10.05	215.31	0.24
2199.96	0.61	266.52	2199.91	2.59	-8.27	-6.07	10.26	216.30	0.84
2222.53	0.64	258.97	2222.48	2.80	-8.30	-6.32	10.43	217.28	0.38
2247.92	0.53	265.05	2247.86	3.03	-8.34	-6.57	10.62	218.25	0.47
2274.41	0.46	270.51	2274.35	3.24	-8.35	-6.80	10.77	219.18	0.32
2295.71	0.52	272.48	2295.65	3.41	-8.34	-6.99	10.88	219.95	0.27
2322.21	0.50	271.75	2322.15	3.63	-8.33	-7.22	11.03	220.91	0.08
2349.09	0.44	271.84	2349.03	3.84	-8.33	-7.44	11.17	221.79	0.22
2371.27	0.42	296.84	2371.21	4.00	-8.29	-7.60	11.24	222.53	0.85
2397.02	0.42	307.81	2396.96	4.18	-8.19	-7.76	11.28	223.46	0.31
2423.40	0.39	306.79	2423.34	4.36	-8.07	-7.91	11.30	224.40	0.10
2446.21	0.37	336.68	2446.15	4.49	-7.96	-8.00	11.28	225.13	0.86
2473.33	0.51	334.95	2473.27	4.64	-7.77	-8.08	11.21	226.13	0.52
2498.50	0.50	347.87	2498.44	4.78	-7.56	-8.15	11.12	227.16	0.45
2524.54	0.43	345.88	2524.48	4.90	-7.36	-8.20	11.02	228.11	0.28
2545.47	0.53	350.22	2545.40	5.00	-7.18	-8.24	10.93	228.90	0.52
2571.22	0.55	352.15	2571.16	5.12	-6.95	-8.27	10.80	229.99	0.11
2597.40	0.64	347.48	2597.33	5.27	-6.68	-8.32	10.67	231.26	0.41
2622.40	0.55	355.10	2622.33	5.40	-6.42	-8.36	10.54	232.49	0.49
2648.30	0.64	349.71	2648.23	5.53	-6.15	-8.40	10.41	233.77	0.41
2674.08	0.62	347.84	2674.01	5.69	-5.87	-8.46	10.30	235.21	0.10
2699.35	0.67	354.99	2699.28	5.83	-5.59	-8.50	10.17	236.65	0.37
2721.13	0.65	0.04	2721.05	5.93	-5.34	-8.51	10.05	237.88	0.28

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ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
2747.01	0.70	356.55	2746.93	6.05	-5.04	-8.52	9.90	239.40	0.22
2772.13	0.66	354.68	2772.05	6.18	-4.74	-8.54	9.77	240.97	0.15
2798.75	0.58	351.41	2798.68	6.32	-4.45	-8.58	9.66	242.56	0.34
2824.50	0.57	357.26	2824.41	6.44	-4.20	-8.60	9.57	244.00	0.23
2846.26	0.58	352.17	2846.18	6.54	-3.98	-8.62	9.49	245.23	0.24
2871.39	0.62	351.75	2871.31	6.67	-3.72	-8.66	9.42	246.77	0.16
2897.00	0.50	359.45	2896.92	6.78	-3.47	-8.68	9.35	248.23	0.56
2923.10	0.62	2.66	2923.02	6.87	-3.21	-8.67	9.25	249.68	0.48
2948.22	0.68	0.86	2948.13	6.97	-2.93	-8.66	9.15	251.33	0.23
2973.95	0.66	349.33	2973.86	7.10	-2.63	-8.69	9.08	253.15	0.53
2999.67	0.58	348.40	2999.58	7.25	-2.36	-8.74	9.06	254.90	0.28
3020.56	0.64	1.67	3020.47	7.35	-2.14	-8.76	9.02	256.28	0.72
3046.67	0.69	359.17	3046.58	7.46	-1.84	-8.76	8.95	258.16	0.25
3073.39	0.76	354.39	3073.29	7.60	-1.50	-8.78	8.91	260.31	0.34
3098.24	0.60	355.44	3098.14	7.74	-1.21	-8.81	8.89	262.21	0.66
3124.20	0.69	1.02	3124.11	7.85	-0.91	-8.81	8.86	264.08	0.44
3144.97	0.71	349.94	3144.87	7.96	-0.66	-8.83	8.86	265.72	0.66
3171.69	1.00	340.02	3171.59	8.21	-0.28	-8.94	8.95	268.21	1.22
3197.54	0.98	17.13	3197.44	8.37	0.14	-8.95	8.96	270.92	2.44
3223.38	0.43	34.03	3223.27	8.37	0.43	-8.84	8.85	272.82	2.23
3249.84	0.42	2.47	3249.73	8.38	0.61	-8.78	8.80	274.00	0.87
3270.69	0.65	349.38	3270.57	8.47	0.81	-8.79	8.83	275.24	1.26
3297.12	0.84	341.96	3297.01	8.67	1.14	-8.88	8.95	277.30	0.78
3322.66	0.44	4.43	3322.54	8.82	1.41	-8.93	9.04	278.99	1.81
3347.29	0.53	350.60	3347.17	8.91	1.62	-8.94	9.09	280.27	0.60
3372.53	0.63	355.38	3372.42	9.03	1.87	-8.97	9.17	281.80	0.43
3397.87	0.65	4.80	3397.75	9.13	2.16	-8.97	9.23	283.51	0.42
3422.63	0.46	332.02	3422.51	9.25	2.38	-9.01	9.32	284.83	1.46
3447.85	0.60	319.42	3447.73	9.45	2.58	-9.14	9.50	285.73	0.72
3473.32	0.55	341.31	3473.20	9.64	2.79	-9.27	9.68	286.76	0.88
3497.94	0.16	5.67	3497.82	9.73	2.94	-9.30	9.76	287.52	1.66
3523.13	0.40	299.22	3523.00	9.83	3.01	-9.38	9.85	287.82	1.47
3548.55	0.53	287.98	3548.43	10.03	3.09	-9.57	10.06	287.92	0.61
3573.14	0.47	300.35	3573.02	10.25	3.18	-9.76	10.27	288.05	0.51
3598.34	0.41	303.13	3598.22	10.44	3.28	-9.93	10.45	288.29	0.25
3623.75	0.29	237.11	3623.63	10.56	3.30	-10.06	10.58	288.15	1.55

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ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
3649.89	0.39	264.49	3649.77	10.68	3.25	-10.20	10.71	287.68	0.71
3673.97	0.49	293.92	3673.85	10.85	3.28	-10.37	10.88	287.57	1.01
3699.51	0.56	302.36	3699.38	11.08	3.40	-10.58	11.11	287.79	0.41
3719.92	0.70	272.10	3719.80	11.30	3.45	-10.79	11.33	287.75	1.73
3749.34	0.60	280.59	3749.20	11.62	3.49	-11.12	11.65	287.42	0.45
3774.73	0.59	318.77	3774.60	11.87	3.61	-11.34	11.90	287.67	1.54
3799.87	0.87	311.97	3799.74	12.16	3.84	-11.56	12.18	288.36	1.16
3824.42	0.89	304.07	3824.29	12.52	4.07	-11.86	12.54	288.94	0.50
3849.81	0.82	285.99	3849.67	12.90	4.23	-12.20	12.91	289.12	1.09
3870.09	0.85	298.56	3869.95	13.19	4.34	-12.47	13.20	289.20	0.91
3899.47	0.84	311.64	3899.33	13.61	4.59	-12.82	13.62	289.69	0.66
3924.86	0.83	306.91	3924.71	13.96	4.82	-13.11	13.97	290.20	0.27
3945.15	0.83	293.28	3945.00	14.25	4.97	-13.36	14.25	290.40	0.97
3974.54	0.74	301.02	3974.39	14.65	5.15	-13.72	14.65	290.58	0.47
3999.93	0.69	307.90	3999.77	14.95	5.33	-13.98	14.96	290.86	0.39
4020.27	0.67	293.67	4020.12	15.19	5.45	-14.18	15.19	291.02	0.83
4049.64	0.62	311.03	4049.48	15.51	5.62	-14.46	15.51	291.25	0.69
4074.99	0.58	307.32	4074.83	15.77	5.79	-14.66	15.77	291.55	0.22
4095.23	0.51	304.53	4095.07	15.95	5.90	-14.82	15.95	291.72	0.39
4124.06	0.41	302.52	4123.89	16.18	6.03	-15.01	16.18	291.89	0.35
4148.97	0.26	321.27	4148.81	16.31	6.12	-15.12	16.31	292.04	0.72
4173.84	0.41	325.20	4173.68	16.43	6.24	-15.20	16.43	292.31	0.60
4197.45	0.36	332.53	4197.29	16.56	6.37	-15.29	16.56	292.63	0.29
4222.46	0.35	327.94	4222.29	16.68	6.51	-15.36	16.68	292.95	0.13
4247.30	0.30	313.68	4247.13	16.80	6.61	-15.45	16.81	293.18	0.37
4274.08	0.37	296.64	4273.91	16.95	6.70	-15.58	16.96	293.28	0.46
4296.67	0.31	313.46	4296.50	17.08	6.78	-15.69	17.09	293.36	0.52
4324.81	0.38	240.98	4324.64	17.21	6.78	-15.83	17.22	293.20	1.47
4348.45	0.32	291.86	4348.28	17.33	6.77	-15.96	17.33	292.99	1.31
4372.79	0.58	350.13	4372.62	17.46	6.92	-16.04	17.47	293.32	2.04
4398.81	0.60	268.54	4398.65	17.66	7.04	-16.20	17.67	293.50	2.97
4423.61	0.72	277.21	4423.44	17.93	7.06	-16.49	17.93	293.18	0.62
4448.51	0.78	277.74	4448.34	18.24	7.10	-16.81	18.25	292.91	0.26
4472.69	0.85	285.61	4472.51	18.58	7.17	-17.15	18.59	292.70	0.54
4497.08	1.02	284.31	4496.91	18.98	7.28	-17.53	18.98	292.54	0.71
4524.94	0.97	279.46	4524.76	19.46	7.38	-18.00	19.46	292.28	0.37



Well Name: GUILDNER #1
 Survey: GUILDNER #1 (05-123-07916)
 Survey Date: 11/26/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Distance ft	Closure Direction deg	DLS °/100ft
4548.67	0.97	262.11	4548.49	19.83	7.38	-18.40	19.83	291.86	1.23
4573.14	0.75	278.53	4572.96	20.16	7.38	-18.77	20.16	291.46	1.35
4598.04	0.93	308.78	4597.86	20.51	7.53	-19.08	20.51	291.52	1.88
4624.05	1.31	285.97	4623.86	21.01	7.74	-19.53	21.01	291.61	2.25
4649.42	1.05	292.75	4649.22	21.53	7.91	-20.03	21.53	291.55	1.19
4674.92	1.09	296.55	4674.72	22.01	8.11	-20.46	22.01	291.62	0.33
4689.45	0.74	302.10	4689.24	22.24	8.22	-20.66	22.24	291.69	2.52