



Gyroscopic Survey Report
for
K.P. Kauffman

Well Location	Weld County, Colorado
Well Name	Donald M Vynckier #1
Rig Number	KPK 7
Survey Date	10/13/2014
Latitude	40.0897370°N
Longitude	104.8561090°W
North Reference	True North
Grid Correction	None
Depth Reference	Ground Level (4926.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 268.81Azim (deg)
Definitive Survey	KPK Donald M Vynckier #1
Operator(s)	Jon Valenzuela

Well Notes

API-05-123-07898

Well Name: Donald M Vynckier #1
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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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
48.43	0.60	275.88	48.43	0.25	0.03	-0.25	1.24	0.25	275.88
60.90	0.56	254.75	60.90	0.38	0.02	-0.38	1.74	0.38	272.53
84.39	0.61	248.40	84.38	0.61	-0.06	-0.60	0.35	0.61	264.35
111.36	0.61	230.22	111.36	0.85	-0.20	-0.85	0.71	0.87	256.46
135.15	0.53	233.53	135.15	1.04	-0.35	-1.03	0.36	1.09	251.28
159.20	0.54	228.05	159.20	1.22	-0.49	-1.21	0.21	1.30	247.84
183.97	0.62	224.43	183.96	1.40	-0.67	-1.39	0.38	1.54	244.38
208.77	0.71	229.82	208.76	1.62	-0.86	-1.60	0.43	1.82	241.71
236.99	0.64	238.85	236.98	1.89	-1.05	-1.87	0.44	2.14	240.54
261.40	0.53	236.94	261.39	2.10	-1.19	-2.08	0.47	2.39	240.28
286.20	0.55	224.45	286.19	2.29	-1.33	-2.26	0.48	2.62	239.42
310.00	0.64	220.45	309.99	2.46	-1.52	-2.43	0.42	2.86	237.96
334.60	0.71	227.56	334.58	2.66	-1.72	-2.63	0.43	3.14	236.71
359.05	0.73	229.95	359.03	2.90	-1.93	-2.86	0.15	3.45	236.01
386.85	0.71	255.34	386.83	3.20	-2.08	-3.16	1.14	3.78	236.59
411.15	0.62	252.36	411.13	3.47	-2.16	-3.43	0.41	4.05	237.78
435.56	0.65	243.52	435.54	3.73	-2.26	-3.68	0.42	4.32	238.41
459.64	0.69	241.93	459.62	3.98	-2.39	-3.93	0.19	4.60	238.67
484.03	1.05	270.36	484.00	4.34	-2.46	-4.29	2.27	4.94	240.13
508.51	1.06	274.09	508.48	4.79	-2.44	-4.74	0.28	5.33	242.71
536.89	1.02	275.41	536.86	5.30	-2.40	-5.25	0.17	5.77	245.42
560.45	0.97	279.88	560.41	5.70	-2.35	-5.65	0.40	6.12	247.46
584.77	0.88	300.41	584.73	6.06	-2.22	-6.02	1.40	6.41	249.76
609.31	0.88	291.58	609.26	6.39	-2.05	-6.35	0.55	6.68	252.08
633.11	0.92	299.80	633.06	6.73	-1.89	-6.69	0.57	6.95	254.20
661.42	0.99	293.23	661.37	7.14	-1.68	-7.11	0.46	7.31	256.69
685.81	1.05	299.95	685.75	7.53	-1.49	-7.50	0.54	7.64	258.78
709.33	1.05	302.03	709.27	7.89	-1.27	-7.87	0.16	7.97	260.86
733.60	0.94	305.46	733.54	8.24	-1.03	-8.22	0.53	8.28	262.83
757.86	0.96	299.44	757.79	8.57	-0.82	-8.55	0.42	8.59	264.54
786.39	0.92	303.36	786.32	8.96	-0.58	-8.95	0.26	8.97	266.33
810.13	0.92	302.73	810.06	9.28	-0.37	-9.27	0.04	9.28	267.73
834.40	1.07	292.42	834.32	9.65	-0.18	-9.65	0.97	9.65	268.96
858.74	1.00	304.45	858.66	10.03	0.03	-10.03	0.94	10.03	270.18
886.30	1.06	310.55	886.22	10.41	0.33	-10.42	0.44	10.43	271.83

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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
910.60	1.01	305.61	910.51	10.75	0.60	-10.77	0.41	10.78	273.21
934.79	1.22	299.78	934.70	11.15	0.86	-11.17	1.00	11.20	274.38
958.35	0.98	304.79	958.25	11.52	1.10	-11.55	1.10	11.60	275.42
986.55	0.91	306.52	986.44	11.90	1.37	-11.93	0.27	12.01	276.54
1010.71	0.97	299.03	1010.60	12.23	1.58	-12.26	0.57	12.36	277.35
1034.41	1.02	299.21	1034.29	12.58	1.78	-12.62	0.18	12.75	278.03
1058.54	1.15	300.70	1058.42	12.97	2.01	-13.02	0.55	13.17	278.77
1086.48	1.18	303.52	1086.36	13.45	2.31	-13.50	0.24	13.69	279.71
1109.61	1.10	306.35	1109.49	13.82	2.57	-13.87	0.42	14.11	280.51
1133.20	1.04	308.31	1133.07	14.16	2.84	-14.22	0.31	14.50	281.29
1160.86	1.14	310.76	1160.72	14.56	3.17	-14.63	0.42	14.97	282.24
1185.99	0.94	312.15	1185.85	14.90	3.48	-14.97	0.81	15.37	283.07
1210.69	0.69	299.66	1210.54	15.17	3.69	-15.25	1.23	15.69	283.59
1236.95	0.98	307.79	1236.81	15.48	3.90	-15.57	1.17	16.05	284.07
1261.35	0.97	304.11	1261.20	15.81	4.15	-15.90	0.26	16.43	284.61
1286.29	0.97	302.74	1286.14	16.16	4.38	-16.25	0.09	16.83	285.08
1311.70	1.07	302.29	1311.55	16.54	4.62	-16.64	0.39	17.27	285.53
1336.54	1.13	308.57	1336.38	16.92	4.90	-17.02	0.54	17.71	286.05
1358.06	1.13	308.67	1357.89	17.25	5.16	-17.36	0.02	18.11	286.57
1383.67	1.12	308.73	1383.50	17.63	5.48	-17.75	0.06	18.58	287.16
1408.54	1.06	308.82	1408.37	17.99	5.77	-18.12	0.25	19.02	287.68
1434.07	1.03	302.46	1433.89	18.36	6.05	-18.49	0.46	19.46	288.10
1459.61	1.01	299.90	1459.43	18.75	6.28	-18.88	0.19	19.90	288.40
1484.69	1.08	292.62	1484.50	19.15	6.48	-19.29	0.59	20.35	288.57
1510.28	1.02	293.94	1510.09	19.58	6.67	-19.72	0.24	20.82	288.68
1535.78	1.17	295.47	1535.59	20.02	6.87	-20.16	0.60	21.30	288.81
1560.70	1.19	300.18	1560.50	20.47	7.11	-20.62	0.39	21.81	289.03
1586.20	1.12	302.69	1585.99	20.90	7.38	-21.06	0.32	22.31	289.31
1611.79	1.06	304.72	1611.58	21.30	7.65	-21.46	0.28	22.78	289.61
1636.46	1.08	301.72	1636.24	21.68	7.90	-21.85	0.24	23.23	289.88
1661.91	1.12	299.22	1661.69	22.10	8.15	-22.27	0.24	23.71	290.10
1683.50	1.13	298.09	1683.27	22.46	8.35	-22.64	0.11	24.13	290.25
1708.39	1.12	294.73	1708.16	22.90	8.57	-23.08	0.27	24.62	290.37
1733.81	1.26	295.85	1733.57	23.37	8.79	-23.56	0.57	25.14	290.47
1759.35	1.33	296.73	1759.11	23.88	9.05	-24.07	0.29	25.72	290.60
1784.11	1.23	296.77	1783.87	24.37	9.30	-24.57	0.43	26.27	290.73

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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
1809.63	1.20	299.92	1809.37	24.84	9.56	-25.04	0.28	26.80	290.89
1835.02	1.20	301.70	1834.77	25.29	9.83	-25.50	0.15	27.33	291.08
1859.79	1.09	300.29	1859.53	25.71	10.08	-25.92	0.45	27.81	291.25
1885.23	1.03	300.50	1884.97	26.11	10.32	-26.33	0.22	28.28	291.40
1910.56	0.94	296.04	1910.29	26.49	10.53	-26.71	0.47	28.71	291.51
1935.12	1.02	297.89	1934.84	26.86	10.72	-27.09	0.36	29.13	291.59
1960.01	1.04	291.36	1959.73	27.26	10.90	-27.49	0.48	29.58	291.63
1985.03	1.07	292.02	1984.75	27.68	11.07	-27.92	0.13	30.04	291.64
2009.29	1.06	293.02	2009.00	28.10	11.25	-28.34	0.10	30.49	291.65
2034.31	1.09	299.17	2034.02	28.51	11.45	-28.76	0.48	30.95	291.72
2059.20	1.06	293.63	2058.90	28.92	11.66	-29.17	0.44	31.42	291.79
2083.49	1.05	308.88	2083.19	29.30	11.89	-29.55	1.15	31.85	291.92
2108.48	1.01	320.50	2108.18	29.61	12.20	-29.87	0.85	32.27	292.22
2133.37	0.91	319.39	2133.06	29.87	12.52	-30.14	0.40	32.64	292.56
2161.65	0.80	316.88	2161.34	30.15	12.84	-30.42	0.41	33.02	292.88
2186.51	0.82	315.52	2186.20	30.38	13.09	-30.66	0.09	33.34	293.12
2211.45	0.86	316.38	2211.14	30.63	13.35	-30.92	0.20	33.68	293.36
2235.71	0.80	316.12	2235.40	30.87	13.61	-31.16	0.26	34.00	293.59
2260.52	0.85	318.46	2260.20	31.11	13.87	-31.40	0.24	34.33	293.83
2285.45	0.96	312.75	2285.13	31.38	14.15	-31.68	0.57	34.70	294.07
2309.61	0.85	317.35	2309.28	31.64	14.42	-31.95	0.54	35.05	294.29
2334.52	0.87	313.50	2334.20	31.90	14.69	-32.21	0.25	35.40	294.51
2359.43	0.81	319.31	2359.09	32.15	14.95	-32.46	0.42	35.74	294.73
2383.53	0.88	322.44	2383.19	32.36	15.23	-32.69	0.35	36.06	294.98
2408.29	0.82	316.27	2407.95	32.60	15.51	-32.93	0.45	36.39	295.22
2433.03	0.60	309.59	2432.69	32.81	15.72	-33.15	0.92	36.68	295.37
2461.35	0.65	307.99	2461.01	33.05	15.91	-33.39	0.18	36.99	295.48
2486.22	0.50	293.62	2485.88	33.26	16.04	-33.60	0.83	37.23	295.52
2510.94	0.60	308.03	2510.59	33.46	16.16	-33.80	0.70	37.47	295.56
2535.10	0.60	285.11	2534.76	33.68	16.27	-34.02	0.99	37.71	295.56
2559.83	0.44	286.29	2559.48	33.89	16.34	-34.24	0.61	37.94	295.51
2584.52	0.49	282.68	2584.18	34.09	16.39	-34.43	0.22	38.13	295.45
2608.69	0.49	273.45	2608.34	34.29	16.41	-34.64	0.33	38.33	295.36
2633.53	0.46	270.59	2633.18	34.49	16.42	-34.84	0.17	38.52	295.24
2658.98	0.42	283.57	2658.63	34.69	16.44	-35.04	0.41	38.70	295.14
2682.45	0.54	263.07	2682.11	34.88	16.45	-35.23	0.87	38.88	295.03

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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
2711.20	0.60	276.42	2710.84	35.16	16.45	-35.51	0.51	39.14	294.86
2735.86	0.56	278.45	2735.51	35.41	16.48	-35.76	0.20	39.38	294.75
2760.21	0.59	267.75	2759.86	35.65	16.50	-36.00	0.45	39.60	294.62
2784.03	0.57	268.14	2783.68	35.89	16.49	-36.24	0.09	39.82	294.46
2808.29	0.77	264.02	2807.94	36.17	16.47	-36.52	0.88	40.07	294.27
2836.50	0.73	269.15	2836.14	36.54	16.45	-36.89	0.29	40.39	294.03
2860.18	0.74	268.75	2859.82	36.85	16.44	-37.19	0.05	40.67	293.84
2884.41	0.87	261.79	2884.05	37.18	16.41	-37.53	0.68	40.96	293.62
2911.97	0.86	267.62	2911.61	37.60	16.37	-37.95	0.32	41.33	293.34
2935.64	0.86	269.09	2935.28	37.95	16.36	-38.30	0.09	41.65	293.13
2959.84	0.86	270.61	2959.47	38.31	16.36	-38.66	0.09	41.98	292.94
2984.13	1.01	266.18	2983.75	38.71	16.35	-39.06	0.71	42.34	292.71
3011.40	0.90	268.38	3011.02	39.17	16.33	-39.51	0.43	42.75	292.45
3035.52	0.95	270.50	3035.14	39.55	16.32	-39.90	0.23	43.11	292.25
3060.00	0.90	271.15	3059.62	39.95	16.33	-40.30	0.21	43.48	292.06
3083.52	0.94	277.06	3083.13	40.32	16.36	-40.67	0.44	43.84	291.91
3111.64	0.80	275.70	3111.24	40.75	16.40	-41.10	0.48	44.25	291.76
3135.87	0.73	274.14	3135.47	41.07	16.43	-41.42	0.32	44.56	291.64
3159.22	0.67	275.10	3158.82	41.35	16.45	-41.70	0.27	44.83	291.53
3183.31	0.62	280.00	3182.92	41.62	16.49	-41.97	0.31	45.09	291.45
3211.61	0.61	277.94	3211.21	41.92	16.54	-42.27	0.08	45.39	291.37
3235.71	0.50	288.09	3235.31	42.14	16.59	-42.50	0.62	45.62	291.32
3259.25	0.47	282.03	3258.85	42.33	16.64	-42.69	0.26	45.82	291.29
3283.45	0.49	287.54	3283.05	42.53	16.69	-42.88	0.21	46.02	291.27
3311.28	0.31	288.98	3310.88	42.71	16.75	-43.07	0.63	46.21	291.25
3334.93	0.29	345.10	3334.53	42.78	16.83	-43.14	1.20	46.31	291.31
3359.13	0.29	10.00	3358.73	42.79	16.95	-43.15	0.51	46.36	291.44
3383.83	0.34	39.74	3383.43	42.73	17.06	-43.09	0.68	46.35	291.60
3411.19	0.42	39.95	3410.79	42.61	17.20	-42.98	0.29	46.29	291.82
3434.58	0.36	48.21	3434.17	42.50	17.32	-42.87	0.34	46.23	292.00
3458.61	0.43	50.11	3458.21	42.37	17.43	-42.74	0.30	46.16	292.18
3486.66	0.33	45.87	3486.26	42.23	17.55	-42.60	0.38	46.07	292.39
3510.13	0.21	100.63	3509.73	42.13	17.59	-42.51	1.15	46.00	292.48
3534.12	0.12	79.72	3533.71	42.07	17.59	-42.44	0.46	45.94	292.51
3561.91	0.11	126.43	3561.51	42.02	17.57	-42.39	0.33	45.89	292.52
3584.99	0.07	232.17	3584.59	42.01	17.55	-42.38	0.66	45.87	292.50

Survey Report

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3608.59	0.28	203.32	3608.19	42.05	17.49	-42.42	0.94	45.88	292.41
3636.09	0.30	201.64	3635.69	42.10	17.36	-42.47	0.08	45.88	292.23
3659.12	0.50	192.26	3658.72	42.15	17.21	-42.52	0.90	45.86	292.03
3686.56	0.60	212.30	3686.16	42.26	16.97	-42.62	0.78	45.87	291.71
3710.12	0.73	196.04	3709.72	42.37	16.72	-42.72	0.97	45.88	291.37
3733.78	0.83	197.22	3733.37	42.47	16.41	-42.82	0.45	45.85	290.97
3760.58	0.80	196.61	3760.17	42.59	16.04	-42.93	0.11	45.83	290.49
3784.22	0.97	199.26	3783.80	42.71	15.70	-43.04	0.72	45.81	290.04
3811.62	1.25	205.20	3811.20	42.92	15.21	-43.25	1.09	45.84	289.37
3835.17	1.20	208.54	3834.74	43.16	14.76	-43.47	0.36	45.91	288.75
3861.94	1.21	197.73	3861.51	43.39	14.24	-43.69	0.85	45.96	288.05
3885.58	1.34	188.91	3885.14	43.52	13.73	-43.81	1.00	45.91	287.40
3909.07	1.54	193.01	3908.63	43.64	13.15	-43.92	0.95	45.85	286.67
3935.72	1.48	195.88	3935.26	43.83	12.47	-44.10	0.35	45.83	285.79
3959.19	1.57	199.02	3958.73	44.03	11.88	-44.29	0.49	45.85	285.01
3986.03	1.56	195.05	3985.56	44.26	11.18	-44.50	0.40	45.88	284.10
4008.99	1.61	188.72	4008.50	44.40	10.55	-44.63	0.80	45.86	283.30
4036.33	1.66	196.28	4035.84	44.59	9.79	-44.80	0.81	45.86	282.33
4059.90	1.61	194.67	4059.40	44.78	9.15	-44.98	0.30	45.90	281.49
4082.82	1.41	197.18	4082.31	44.96	8.56	-45.15	0.92	45.95	280.74
4110.15	1.50	200.01	4109.63	45.19	7.91	-45.37	0.43	46.05	279.89
4133.69	1.42	203.70	4133.16	45.43	7.35	-45.59	0.55	46.18	279.16
4160.99	1.43	201.85	4160.45	45.70	6.73	-45.85	0.17	46.34	278.34
4183.59	1.50	203.45	4183.04	45.94	6.19	-46.08	0.38	46.49	277.65
4211.11	1.52	201.55	4210.56	46.23	5.52	-46.35	0.19	46.68	276.79
4234.65	1.47	201.50	4234.08	46.47	4.95	-46.58	0.21	46.84	276.07
4261.22	1.48	208.16	4260.65	46.77	4.33	-46.87	0.65	47.06	275.28
4284.65	1.58	207.99	4284.07	47.07	3.78	-47.16	0.45	47.31	274.58
4308.11	1.54	211.51	4307.52	47.40	3.22	-47.48	0.45	47.59	273.88
4335.59	1.78	209.55	4334.99	47.82	2.54	-47.88	0.91	47.95	273.03
4358.23	1.77	212.69	4357.62	48.19	1.94	-48.24	0.43	48.28	272.30
4384.98	1.79	226.33	4384.36	48.73	1.30	-48.77	1.58	48.79	271.53
4411.79	1.92	230.96	4411.15	49.39	0.73	-49.42	0.76	49.43	270.84
4434.88	1.96	238.07	4434.23	50.04	0.28	-50.06	1.05	50.06	270.32
4461.03	1.96	243.96	4460.37	50.83	-0.16	-50.84	0.77	50.84	269.82
4483.96	1.98	251.33	4483.28	51.56	-0.45	-51.56	1.11	51.56	269.49

Well Name: Donald M Vynckier #1
Survey: KPK Donald M Vynckier #1
Survey Date: 10/13/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
4510.67	1.88	261.58	4509.98	52.43	-0.67	-52.43	1.34	52.44	269.27
4536.79	1.87	257.68	4536.08	53.28	-0.82	-53.27	0.49	53.28	269.12
4559.84	1.71	262.31	4559.12	53.99	-0.95	-53.98	0.96	53.99	269.00
4586.52	1.78	264.15	4585.79	54.79	-1.04	-54.78	0.34	54.79	268.91
4609.41	1.69	267.80	4608.67	55.49	-1.09	-55.47	0.61	55.49	268.87
4635.36	1.61	272.75	4634.61	56.23	-1.09	-56.22	0.63	56.23	268.89
4661.03	1.65	261.42	4660.26	56.96	-1.13	-56.95	1.26	56.96	268.87
4686.22	1.66	267.26	4685.45	57.68	-1.20	-57.67	0.67	57.68	268.81
4689.56	1.75	269.56	4688.79	57.78	-1.20	-57.77	3.26	57.78	268.81