



Gyroscopic Survey Report
for
K.P. Kauffmann

Well Location	Weld County, Colorado
Well Name	DeVore No. 3
Rig Number	KPK 3
Survey Date	3/20/2014
Latitude	40.1326000°N
North Reference	True North
Grid Correction	None
Depth Reference	Ground Level (4903.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 317.15Azim (deg)
Definitive Survey	Devore #3
Operator(s)	Jon Valenzuela

Well Notes

Survey Report

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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
49.57	0.14	290.00	49.57	0.05	0.02	-0.06	0.28	0.06	290.00
98.83	0.07	323.62	98.83	0.14	0.07	-0.13	0.18	0.15	296.59
148.99	0.17	339.56	148.99	0.24	0.16	-0.18	0.22	0.24	312.61
198.83	0.20	334.15	198.83	0.39	0.31	-0.24	0.06	0.39	322.31
248.86	0.17	337.67	248.86	0.55	0.46	-0.31	0.06	0.55	326.23
299.85	0.13	353.83	299.85	0.67	0.59	-0.34	0.11	0.68	329.79
349.71	0.30	19.98	349.71	0.77	0.77	-0.30	0.39	0.83	338.42
398.78	0.29	0.09	398.78	0.92	1.02	-0.26	0.21	1.05	345.65
449.61	0.21	14.76	449.61	1.07	1.24	-0.24	0.20	1.26	349.22
498.78	0.38	17.12	498.77	1.20	1.48	-0.16	0.33	1.49	353.65
549.10	0.47	5.74	549.09	1.42	1.85	-0.10	0.26	1.85	357.04
599.15	1.21	295.85	599.14	2.05	2.28	-0.55	2.27	2.35	346.45
649.17	1.20	297.58	649.15	3.03	2.76	-1.49	0.07	3.13	331.60
699.89	1.31	297.56	699.86	4.08	3.27	-2.47	0.21	4.10	322.89
749.86	1.50	292.18	749.81	5.21	3.78	-3.59	0.47	5.21	316.52
799.27	1.33	296.27	799.21	6.33	4.28	-4.70	0.41	6.36	312.32
849.73	1.67	300.00	849.65	7.58	4.91	-5.86	0.71	7.65	309.93
899.52	1.64	296.29	899.42	8.94	5.59	-7.13	0.23	9.06	308.07
948.57	1.69	301.11	948.45	10.29	6.27	-8.38	0.31	10.46	306.81
999.36	1.83	297.69	999.21	11.78	7.03	-9.74	0.34	12.01	305.84
1049.71	1.74	301.70	1049.54	13.27	7.81	-11.10	0.31	13.57	305.13
1099.60	1.89	299.69	1099.41	14.79	8.61	-12.46	0.32	15.14	304.66
1149.51	1.82	303.10	1149.29	16.34	9.45	-13.83	0.26	16.75	304.35
1199.92	1.82	306.51	1199.68	17.90	10.37	-15.15	0.22	18.36	304.39
1249.06	1.62	302.97	1248.80	19.34	11.21	-16.36	0.46	19.83	304.42
1299.42	1.70	305.71	1299.13	20.77	12.03	-17.56	0.22	21.29	304.42
1349.72	1.73	301.61	1349.41	22.23	12.87	-18.81	0.25	22.79	304.37
1398.69	1.46	306.62	1398.36	23.55	13.62	-19.94	0.62	24.15	304.34
1448.22	1.53	303.63	1447.88	24.82	14.37	-21.00	0.21	25.44	304.38
1499.42	1.39	301.77	1499.06	26.08	15.07	-22.10	0.29	26.75	304.30
1548.74	1.25	304.86	1548.36	27.18	15.69	-23.05	0.31	27.88	304.25
1598.92	1.23	304.34	1598.53	28.24	16.31	-23.94	0.05	28.97	304.27
1649.75	1.02	299.21	1649.35	29.20	16.84	-24.79	0.45	29.97	304.19
1699.15	0.86	303.07	1698.74	29.98	17.26	-25.48	0.34	30.78	304.11
1748.94	0.96	309.04	1748.52	30.76	17.73	-26.12	0.28	31.57	304.16

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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
1799.36	1.06	305.31	1798.94	31.64	18.26	-26.83	0.23	32.46	304.24
1849.79	1.00	300.07	1849.36	32.52	18.75	-27.60	0.22	33.37	304.20
1899.93	1.01	302.18	1899.49	33.36	19.21	-28.35	0.07	34.24	304.12
1949.57	0.98	299.30	1949.13	34.19	19.65	-29.09	0.11	35.10	304.04
1999.28	1.06	328.05	1998.83	35.04	20.25	-29.70	1.03	35.95	304.28
2048.95	1.18	323.25	2048.49	36.00	21.05	-30.25	0.30	36.85	304.83
2099.95	1.24	318.94	2099.48	37.08	21.88	-30.93	0.22	37.88	305.28
2149.46	1.23	327.73	2148.97	38.13	22.74	-31.56	0.38	38.90	305.77
2199.22	1.24	326.93	2198.73	39.19	23.64	-32.14	0.04	39.90	306.33
2249.51	1.13	328.70	2249.01	40.21	24.52	-32.70	0.24	40.87	306.87
2298.77	1.31	327.76	2298.26	41.24	25.41	-33.25	0.37	41.85	307.39
2349.07	1.18	340.15	2348.55	42.28	26.38	-33.73	0.59	42.82	308.03
2399.05	1.17	341.69	2398.51	43.22	27.35	-34.07	0.07	43.69	308.76
2449.90	0.85	2.53	2449.35	43.96	28.22	-34.21	0.94	44.35	309.52
2499.65	0.82	5.07	2499.10	44.46	28.95	-34.16	0.10	44.78	310.27
2549.08	0.81	17.38	2548.52	44.87	29.63	-34.03	0.35	45.12	311.05
2599.69	0.76	25.41	2599.13	45.17	30.28	-33.78	0.23	45.36	311.87
2648.89	0.71	36.89	2648.32	45.34	30.82	-33.45	0.32	45.48	312.65
2698.57	0.73	36.46	2698.00	45.46	31.32	-33.08	0.05	45.55	313.43
2748.64	0.83	33.02	2748.06	45.60	31.88	-32.69	0.22	45.66	314.28
2798.92	0.77	33.36	2798.34	45.77	32.47	-32.31	0.11	45.80	315.14
2848.73	0.83	32.04	2848.15	45.95	33.05	-31.93	0.11	45.96	315.99
2899.92	0.88	41.80	2899.33	46.08	33.66	-31.47	0.30	46.08	316.92
2949.69	0.86	60.96	2949.09	46.03	34.13	-30.89	0.58	46.03	317.85
2999.28	0.90	76.75	2998.67	45.75	34.40	-30.19	0.49	45.76	318.73
3048.88	1.21	96.13	3048.27	45.16	34.43	-29.29	0.94	45.20	319.62
3098.81	1.45	102.16	3098.19	44.24	34.24	-28.14	0.56	44.32	320.58
3149.70	1.46	105.70	3149.06	43.16	33.93	-26.89	0.18	43.29	321.61
3199.29	1.11	126.49	3198.63	42.15	33.47	-25.89	1.17	42.31	322.28
3249.92	1.03	135.80	3249.26	41.21	32.85	-25.18	0.38	41.39	322.54
3298.88	0.94	134.20	3298.21	40.37	32.26	-24.58	0.20	40.56	322.69
3349.37	0.68	142.73	3348.69	39.66	31.73	-24.10	0.56	39.85	322.78
3398.85	0.50	180.02	3398.18	39.21	31.28	-23.93	0.83	39.38	322.59
3449.64	0.61	185.50	3448.96	38.86	30.79	-23.95	0.23	39.01	322.12
3498.75	0.57	178.07	3498.07	38.51	30.29	-23.97	0.17	38.62	321.64
3549.99	0.75	172.78	3549.31	38.04	29.70	-23.92	0.38	38.13	321.15

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3598.78	0.97	189.72	3598.09	37.53	28.97	-23.95	0.68	37.59	320.42
3648.66	1.11	176.66	3647.96	36.90	28.07	-23.99	0.56	36.93	319.48
3698.92	1.13	169.59	3698.21	36.10	27.10	-23.87	0.28	36.11	318.62
3748.77	1.25	163.27	3748.05	35.20	26.09	-23.63	0.36	35.20	317.84
3799.69	1.30	165.90	3798.96	34.19	25.00	-23.33	0.14	34.19	316.98
3849.86	1.16	159.26	3849.12	33.23	23.98	-23.01	0.39	33.23	316.18
3899.55	0.98	164.79	3898.80	32.38	23.10	-22.72	0.41	32.40	315.47
3948.98	0.66	149.29	3948.22	31.73	22.44	-22.46	0.79	31.75	314.97
3998.74	0.44	152.20	3997.98	31.27	22.03	-22.23	0.44	31.30	314.74
4049.11	0.75	166.65	4048.35	30.79	21.54	-22.06	0.69	30.83	314.31
4099.92	0.56	145.44	4099.16	30.26	21.01	-21.85	0.61	30.31	313.88
4149.61	0.50	177.14	4148.84	29.85	20.59	-21.70	0.59	29.91	313.50
4199.20	0.30	147.18	4198.43	29.56	20.27	-21.62	0.57	29.63	313.15
4248.65	0.22	43.93	4247.89	29.44	20.23	-21.48	0.83	29.50	313.28
4299.23	0.59	356.81	4298.46	29.64	20.56	-21.43	0.93	29.69	313.81
4349.53	0.96	333.21	4348.76	30.25	21.19	-21.63	0.95	30.28	314.41
4399.28	1.04	325.37	4398.50	31.09	21.93	-22.08	0.32	31.12	314.82
4448.97	1.10	333.88	4448.18	32.00	22.73	-22.54	0.34	32.01	315.24
4499.67	1.31	337.34	4498.87	33.01	23.70	-22.98	0.45	33.01	315.89
4549.55	1.26	336.46	4548.73	34.06	24.73	-23.42	0.10	34.06	316.57
4591.29	1.20	343.24	4590.47	34.89	25.58	-23.73	0.38	34.89	317.15