



Gyroscopic Survey Report
for
K.P. Kauffman

Well Location	Weld County, Colorado
Well Name	Sidney Strear No.1
Rig Number	KPK 2
Survey Date	3/26/2014
Latitude	40.1182240°N
North Reference	True North
Grid Correction	None
Depth Reference	Ground Level (4966.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 347.73Azim (deg)
Definitive Survey	SIDNEY STREAR UNIT #1
Operator(s)	Jon Valenzuela

Well Notes

Survey Report

Well Name: Sidney Strear No.1
Survey: SIDNEY STREAR UNIT #1
Survey Date: 3/26/2014

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
50.06	0.87	336.38	50.06	0.37	0.35	-0.15	1.75	0.38	336.38
99.99	0.90	323.45	99.98	1.10	1.01	-0.54	0.40	1.15	332.01
149.76	1.02	311.37	149.75	1.81	1.62	-1.10	0.47	1.96	325.74
199.26	1.07	306.88	199.24	2.52	2.18	-1.80	0.19	2.83	320.51
249.05	1.04	306.82	249.02	3.21	2.73	-2.53	0.06	3.72	317.19
298.85	1.08	305.24	298.81	3.89	3.27	-3.27	0.11	4.63	314.98
349.73	1.05	307.46	349.68	4.60	3.83	-4.04	0.11	5.57	313.52
398.98	1.03	305.40	398.93	5.27	4.36	-4.75	0.08	6.45	312.54
449.57	0.89	301.22	449.50	5.88	4.83	-5.46	0.31	7.29	311.49
499.07	0.83	303.67	499.00	6.40	5.22	-6.08	0.14	8.02	310.66
549.56	0.83	302.40	549.49	6.91	5.62	-6.69	0.04	8.74	310.02
599.95	0.71	308.93	599.87	7.41	6.01	-7.24	0.29	9.41	309.69
648.56	0.67	307.57	648.48	7.86	6.37	-7.70	0.08	9.99	309.61
699.57	0.76	308.53	699.48	8.35	6.76	-8.20	0.17	10.63	309.52
749.24	0.66	318.52	749.15	8.86	7.18	-8.65	0.32	11.24	309.72
799.13	0.62	313.71	799.04	9.34	7.59	-9.04	0.13	11.80	310.03
849.00	0.66	311.61	848.91	9.79	7.97	-9.45	0.09	12.36	310.14
899.98	0.65	300.42	899.88	10.23	8.31	-9.92	0.25	12.94	309.96
949.35	0.58	307.63	949.24	10.61	8.60	-10.35	0.21	13.46	309.72
999.11	0.59	302.80	999.00	10.98	8.90	-10.77	0.10	13.97	309.56
1049.57	0.61	305.16	1049.46	11.36	9.19	-11.21	0.07	14.50	309.35
1099.69	0.71	307.74	1099.58	11.80	9.54	-11.67	0.20	15.07	309.25
1149.20	0.72	315.28	1149.08	12.30	9.95	-12.13	0.19	15.69	309.34
1199.72	0.56	315.96	1199.60	12.77	10.35	-12.53	0.32	16.25	309.55
1249.89	0.68	312.95	1249.77	13.23	10.73	-12.92	0.25	16.79	309.71
1299.18	0.77	313.39	1299.06	13.74	11.15	-13.37	0.18	17.41	309.83
1349.00	0.64	319.35	1348.87	14.26	11.60	-13.80	0.30	18.02	310.04
1399.65	0.54	317.99	1399.52	14.72	11.99	-14.14	0.20	18.54	310.29
1448.92	0.60	316.73	1448.79	15.14	12.35	-14.47	0.13	19.02	310.47
1499.00	0.66	325.95	1498.87	15.63	12.78	-14.81	0.24	19.56	310.78
1549.41	0.53	334.31	1549.27	16.13	13.23	-15.08	0.32	20.06	311.26
1599.63	0.33	332.10	1599.49	16.49	13.56	-15.25	0.39	20.41	311.66
1649.43	0.47	341.56	1649.29	16.84	13.88	-15.38	0.31	20.72	312.08
1699.24	0.71	304.83	1699.10	17.27	14.26	-15.70	0.88	21.20	312.25
1749.30	0.48	311.02	1749.15	17.66	14.57	-16.11	0.49	21.72	312.13

Survey Report

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Survey Date: 3/26/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
1798.95	0.61	346.63	1798.80	18.09	14.96	-16.33	0.72	22.15	312.50
1849.24	0.63	322.75	1849.08	18.61	15.45	-16.56	0.51	22.64	313.01
1899.41	0.22	291.56	1899.25	18.92	15.70	-16.82	0.92	23.01	313.04
1948.45	0.59	340.64	1948.30	19.22	15.97	-16.99	0.97	23.32	313.24
1999.11	0.44	341.64	1998.95	19.67	16.41	-17.13	0.29	23.72	313.76
2049.41	0.42	309.47	2049.26	20.01	16.71	-17.34	0.48	24.08	313.94
2099.89	0.35	330.80	2099.73	20.30	16.96	-17.55	0.31	24.41	314.01
2149.99	0.59	300.39	2149.83	20.63	17.22	-17.85	0.67	24.81	313.98
2198.83	0.45	344.26	2198.67	20.99	17.54	-18.12	0.84	25.22	314.06
2249.19	0.45	358.90	2249.03	21.39	17.93	-18.18	0.23	25.54	314.60
2299.17	0.22	323.17	2299.00	21.67	18.21	-18.24	0.61	25.77	314.94
2349.26	0.85	8.18	2349.09	22.10	18.65	-18.25	1.42	26.09	315.62
2398.92	0.76	9.22	2398.74	22.75	19.34	-18.14	0.18	26.51	316.83
2449.03	0.39	340.92	2448.86	23.23	19.82	-18.14	0.90	26.87	317.54
2498.96	1.01	36.40	2498.78	23.69	20.34	-17.94	1.71	27.12	318.60
2548.93	0.78	29.59	2548.75	24.24	20.99	-17.51	0.51	27.34	320.18
2599.77	0.65	52.04	2599.58	24.62	21.47	-17.11	0.60	27.46	321.46
2649.99	0.53	88.08	2649.80	24.70	21.66	-16.65	0.76	27.32	322.45
2699.97	0.38	18.22	2699.78	24.80	21.82	-16.37	1.06	27.28	323.12
2749.40	0.89	48.96	2749.21	25.13	22.23	-16.03	1.20	27.41	324.20
2799.24	0.55	12.58	2799.04	25.53	22.72	-15.69	1.10	27.61	325.37
2849.04	0.44	151.60	2848.84	25.57	22.78	-15.54	1.87	27.58	325.70
2899.74	0.60	348.94	2899.54	25.65	22.87	-15.50	2.04	27.63	325.87
2949.60	0.48	105.83	2949.40	25.81	23.08	-15.35	1.86	27.72	326.37
2999.79	0.82	338.47	2999.59	26.06	23.35	-15.28	2.34	27.90	326.80
3048.79	0.82	301.25	3048.58	26.65	23.86	-15.71	1.07	28.56	326.64
3099.29	0.44	142.24	3099.08	26.73	23.89	-15.90	2.46	28.70	326.36
3149.68	0.96	347.32	3149.47	26.97	24.15	-15.87	2.71	28.90	326.69
3199.84	0.53	247.00	3199.62	27.35	24.47	-16.18	2.34	29.33	326.53
3249.59	0.72	48.37	3249.37	27.46	24.59	-16.15	2.47	29.42	326.70
3299.80	1.08	336.01	3299.58	28.08	25.23	-16.11	2.20	29.94	327.44
3349.69	0.58	309.30	3349.46	28.74	25.83	-16.50	1.25	30.65	327.43
3398.76	1.10	30.08	3398.53	29.29	26.39	-16.45	2.37	31.10	328.06
3449.85	0.04	217.44	3449.61	29.64	26.80	-16.22	2.24	31.33	328.82
3499.95	0.89	352.32	3499.71	30.01	27.18	-16.28	1.83	31.68	329.08
3549.82	1.19	4.06	3549.57	30.90	28.07	-16.30	0.74	32.46	329.87

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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
3599.90	0.53	264.54	3599.65	31.42	28.57	-16.49	2.76	32.99	330.01
3649.72	1.00	60.19	3649.47	31.58	28.77	-16.34	3.01	33.08	330.40
3699.30	0.32	313.48	3699.05	31.83	29.08	-16.06	2.29	33.22	331.08
3749.05	0.85	120.02	3748.80	31.69	28.99	-15.84	2.33	33.03	331.34
3798.42	0.58	328.34	3798.17	31.68	29.02	-15.66	2.80	32.97	331.65
3849.42	0.76	37.68	3849.16	32.14	29.50	-15.59	1.53	33.37	332.16
3899.11	0.68	325.37	3898.85	32.63	30.01	-15.55	1.72	33.80	332.61
3949.71	0.87	10.56	3949.45	33.26	30.63	-15.65	1.23	34.40	332.94
3999.39	0.83	8.97	3999.12	33.94	31.36	-15.52	0.10	34.99	333.66
4049.03	0.76	13.89	4048.75	34.57	32.03	-15.39	0.20	35.54	334.34
4099.53	0.79	24.20	4099.25	35.15	32.67	-15.17	0.28	36.02	335.10
4149.73	0.67	16.49	4149.45	35.68	33.27	-14.94	0.29	36.47	335.81
4199.66	0.67	41.80	4199.38	36.11	33.77	-14.66	0.59	36.82	336.53
4249.94	0.65	27.79	4249.65	36.51	34.24	-14.33	0.32	37.12	337.29
4298.54	0.65	49.87	4298.25	36.85	34.66	-13.99	0.51	37.38	338.02
4349.88	0.71	38.49	4349.58	37.18	35.10	-13.57	0.29	37.63	338.86
4399.90	1.01	64.53	4399.60	37.48	35.54	-12.98	0.97	37.83	339.94
4449.42	1.04	58.42	4449.11	37.73	35.96	-12.20	0.23	37.97	341.26
4499.22	1.03	69.86	4498.90	37.94	36.35	-11.39	0.42	38.09	342.60
4549.06	1.17	70.49	4548.73	38.07	36.68	-10.49	0.27	38.15	344.04
4599.76	0.98	70.53	4599.43	38.19	36.99	-9.59	0.36	38.22	345.46
4649.88	0.61	63.26	4649.54	38.31	37.26	-8.95	0.77	38.32	346.49
4699.92	0.73	90.31	4699.57	38.30	37.37	-8.39	0.67	38.31	347.34
4720.60	0.71	79.38	4720.25	38.27	37.40	-8.13	0.67	38.27	347.73