



Gyroscopic Survey Report
for
KPK

Well Location	WELD
Well Name	SIDNEY STREAR #2
Rig Number	
Survey Date	10/23/2014
Latitude	40.1219160°N
Longitude	104.8697720°W
North Reference	True North
Grid Correction	None
Depth Reference	GL (4994.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 260.87Azim (deg)
Definitive Survey	SIDNEY STREAR #2 OUTRUN
Operator(s)	C KIRBY

Well Notes

05-123-08277

Survey Report

Well Name: SIDNEY STREAR #2
Survey: SIDNEY STREAR #2 OUTFUN
Survey Date: 10/23/2014

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
86.63	0.25	112.09	86.63	-0.16	-0.07	0.17	0.28	0.19	112.09
124.52	0.27	127.01	124.52	-0.29	-0.15	0.32	0.19	0.35	115.83
146.88	0.33	118.57	146.88	-0.38	-0.22	0.42	0.32	0.47	117.45
173.46	0.59	104.92	173.46	-0.56	-0.29	0.61	1.05	0.68	115.08
196.89	0.70	104.87	196.89	-0.80	-0.36	0.87	0.49	0.94	112.24
220.45	0.60	97.26	220.44	-1.05	-0.41	1.13	0.57	1.20	109.84
249.56	0.64	106.79	249.55	-1.34	-0.47	1.44	0.38	1.51	108.26
273.71	0.52	92.03	273.70	-1.57	-0.52	1.67	0.78	1.75	107.15
297.45	0.47	79.00	297.44	-1.77	-0.50	1.88	0.52	1.94	104.97
321.96	0.45	65.84	321.95	-1.97	-0.44	2.06	0.44	2.11	102.13
345.56	0.53	76.45	345.54	-2.16	-0.38	2.25	0.50	2.28	99.57
374.36	0.50	65.64	374.35	-2.42	-0.30	2.49	0.35	2.51	96.79
398.41	0.48	67.50	398.40	-2.62	-0.22	2.68	0.08	2.69	94.59
421.65	0.49	62.80	421.64	-2.81	-0.13	2.86	0.17	2.87	92.64
445.79	0.52	61.83	445.77	-3.01	-0.03	3.05	0.13	3.05	90.62
473.64	0.50	66.19	473.62	-3.25	0.08	3.27	0.16	3.28	88.67
497.76	0.21	47.98	497.74	-3.38	0.15	3.40	1.27	3.41	87.51
520.94	0.11	30.17	520.93	-3.44	0.20	3.45	0.48	3.45	86.73
549.65	0.13	42.09	549.64	-3.48	0.25	3.48	0.11	3.49	85.96
573.60	0.15	34.97	573.59	-3.52	0.29	3.52	0.10	3.53	85.25
596.80	0.13	27.65	596.78	-3.56	0.34	3.55	0.11	3.57	84.52
624.72	0.08	20.76	624.71	-3.59	0.39	3.57	0.18	3.59	83.80
647.90	0.10	164.86	647.88	-3.60	0.38	3.58	0.75	3.60	83.88
671.98	0.11	165.92	671.97	-3.60	0.34	3.59	0.05	3.61	84.56
699.76	0.10	128.89	699.75	-3.62	0.30	3.62	0.24	3.63	85.23
723.81	0.02	276.47	723.79	-3.63	0.29	3.63	0.47	3.64	85.44
746.97	0.08	128.03	746.96	-3.64	0.28	3.64	0.41	3.65	85.59
770.88	0.06	160.61	770.87	-3.65	0.26	3.66	0.18	3.67	85.96
799.52	0.11	164.82	799.50	-3.66	0.22	3.67	0.18	3.68	86.63
822.64	0.10	206.51	822.62	-3.65	0.18	3.67	0.33	3.67	87.25
846.67	0.05	221.32	846.66	-3.63	0.15	3.65	0.23	3.65	87.66
869.79	0.14	160.22	869.77	-3.62	0.12	3.65	0.52	3.65	88.18
898.40	0.13	178.55	898.39	-3.63	0.05	3.66	0.15	3.66	89.18
922.30	0.06	36.31	922.29	-3.63	0.04	3.67	0.73	3.67	89.44
949.85	0.13	76.45	949.83	-3.67	0.05	3.71	0.33	3.71	89.17

Well Name: SIDNEY STREAR #2
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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
973.96	0.07	86.11	973.94	-3.71	0.06	3.75	0.26	3.75	89.07
997.02	0.03	59.64	997.00	-3.73	0.07	3.77	0.17	3.77	89.01
1020.97	0.03	32.92	1020.95	-3.74	0.07	3.78	0.06	3.78	88.88
1049.38	0.02	183.29	1049.36	-3.74	0.07	3.78	0.17	3.78	88.87
1072.56	0.08	140.99	1072.55	-3.75	0.06	3.79	0.27	3.79	89.13
1096.09	0.05	151.11	1096.07	-3.76	0.04	3.80	0.14	3.80	89.44
1124.06	0.06	86.98	1124.04	-3.78	0.03	3.83	0.22	3.83	89.58
1147.74	0.05	96.59	1147.73	-3.81	0.03	3.85	0.06	3.85	89.59
1170.88	0.07	6.99	1170.86	-3.82	0.04	3.86	0.38	3.86	89.40
1199.35	0.18	121.57	1199.33	-3.86	0.03	3.90	0.77	3.90	89.50
1221.70	0.12	79.41	1221.68	-3.91	0.02	3.96	0.55	3.96	89.71
1245.34	0.06	33.30	1245.32	-3.94	0.03	3.99	0.38	3.99	89.51
1273.81	0.09	11.38	1273.80	-3.96	0.07	4.00	0.17	4.00	89.02
1296.78	0.04	315.16	1296.76	-3.96	0.09	4.00	0.35	4.00	88.67
1320.59	0.04	306.86	1320.58	-3.95	0.10	3.98	0.03	3.99	88.51
1348.23	0.08	284.41	1348.21	-3.93	0.11	3.96	0.15	3.96	88.34
1371.23	0.08	248.19	1371.21	-3.90	0.11	3.93	0.21	3.93	88.36
1398.98	0.08	229.14	1398.97	-3.86	0.09	3.90	0.10	3.90	88.64
1421.70	0.11	282.79	1421.68	-3.83	0.09	3.86	0.39	3.86	88.72
1448.91	0.01	308.89	1448.90	-3.80	0.09	3.84	0.36	3.84	88.60
1471.67	0.04	263.69	1471.66	-3.79	0.09	3.83	0.16	3.83	88.60
1499.50	0.10	280.99	1499.49	-3.76	0.10	3.79	0.23	3.79	88.53
1521.32	0.12	281.04	1521.30	-3.72	0.11	3.75	0.09	3.75	88.38
1549.26	0.19	296.71	1549.25	-3.65	0.13	3.68	0.27	3.68	87.94
1572.00	0.30	293.04	1571.98	-3.57	0.17	3.59	0.48	3.60	87.26
1599.79	0.26	290.05	1599.77	-3.46	0.22	3.47	0.14	3.47	86.35
1624.73	0.28	293.62	1624.71	-3.36	0.27	3.36	0.11	3.37	85.48
1648.05	0.21	279.64	1648.03	-3.27	0.30	3.26	0.39	3.28	84.83
1674.97	0.24	285.36	1674.95	-3.17	0.32	3.16	0.13	3.17	84.24
1698.52	0.25	282.38	1698.50	-3.08	0.34	3.06	0.06	3.08	83.61
1721.29	0.28	290.69	1721.27	-2.98	0.37	2.96	0.22	2.98	82.82
1748.91	0.29	287.00	1748.89	-2.86	0.42	2.83	0.08	2.86	81.60
1772.29	0.23	267.77	1772.27	-2.76	0.43	2.72	0.47	2.76	80.96
1799.31	0.24	277.90	1799.29	-2.65	0.44	2.61	0.16	2.65	80.47
1822.72	0.24	281.79	1822.70	-2.56	0.46	2.52	0.07	2.56	79.74
1845.74	0.21	287.47	1845.72	-2.48	0.48	2.43	0.16	2.48	78.86

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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
1873.10	0.21	279.39	1873.08	-2.38	0.50	2.33	0.11	2.39	77.87
1896.23	0.27	285.81	1896.21	-2.29	0.52	2.24	0.30	2.30	76.84
1923.48	0.24	289.10	1923.46	-2.18	0.56	2.12	0.14	2.20	75.22
1946.71	0.29	285.73	1946.69	-2.09	0.59	2.02	0.23	2.11	73.68
1972.80	0.33	295.55	1972.78	-1.97	0.64	1.89	0.26	1.99	71.23
1996.29	0.41	289.65	1996.27	-1.84	0.70	1.75	0.36	1.88	68.20
2024.08	0.40	295.96	2024.06	-1.67	0.77	1.57	0.16	1.75	63.72
2046.57	0.26	289.57	2046.55	-1.56	0.83	1.45	0.64	1.67	60.38
2074.38	0.51	291.33	2074.36	-1.40	0.89	1.28	0.93	1.56	55.07
2096.82	0.46	289.10	2096.79	-1.24	0.96	1.10	0.25	1.46	48.89
2123.85	0.49	302.39	2123.82	-1.05	1.06	0.90	0.41	1.39	40.41
2146.31	0.45	281.66	2146.29	-0.90	1.12	0.73	0.76	1.34	33.02
2174.08	0.39	284.91	2174.06	-0.71	1.17	0.53	0.24	1.29	24.40
2197.23	0.48	287.42	2197.20	-0.55	1.22	0.36	0.39	1.27	16.53
2224.22	0.38	287.34	2224.19	-0.37	1.28	0.17	0.38	1.29	7.54
2247.39	0.42	285.72	2247.36	-0.22	1.33	0.01	0.20	1.33	0.63
2274.84	0.37	273.04	2274.81	-0.05	1.36	-0.17	0.37	1.37	352.85
2297.08	0.31	272.71	2297.05	0.08	1.36	-0.30	0.27	1.40	347.56
2324.40	0.30	266.32	2324.37	0.22	1.36	-0.45	0.13	1.44	341.86
2346.59	0.32	268.63	2346.56	0.35	1.36	-0.57	0.10	1.47	337.30
2373.18	0.33	257.76	2373.15	0.50	1.34	-0.72	0.24	1.52	331.79
2399.02	0.45	284.95	2398.99	0.67	1.35	-0.89	0.84	1.62	326.59
2421.67	0.31	259.76	2421.64	0.81	1.36	-1.04	0.95	1.71	322.69
2448.34	0.34	269.95	2448.31	0.96	1.35	-1.19	0.24	1.80	318.60
2471.11	0.39	268.91	2471.07	1.10	1.35	-1.34	0.22	1.90	315.27
2498.39	0.35	281.30	2498.36	1.27	1.36	-1.51	0.34	2.03	312.08
2520.44	0.39	288.69	2520.40	1.40	1.40	-1.65	0.30	2.16	310.38
2547.67	0.22	238.50	2547.64	1.53	1.40	-1.78	1.11	2.26	308.27
2574.18	0.27	267.22	2574.14	1.64	1.37	-1.88	0.51	2.33	306.08
2596.91	0.37	283.39	2596.87	1.76	1.39	-2.01	0.56	2.44	304.62
2624.14	0.35	268.12	2624.11	1.93	1.40	-2.18	0.35	2.59	302.84
2646.14	0.29	256.47	2646.10	2.05	1.39	-2.30	0.40	2.68	301.18
2673.32	0.24	240.47	2673.28	2.17	1.35	-2.41	0.32	2.76	299.16
2695.75	0.30	258.25	2695.71	2.27	1.31	-2.51	0.47	2.83	297.55
2722.42	0.34	262.01	2722.38	2.42	1.28	-2.66	0.17	2.95	295.78
2749.45	0.36	248.91	2749.41	2.59	1.24	-2.82	0.30	3.08	293.79

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
2771.50	0.32	241.17	2771.46	2.71	1.19	-2.94	0.27	3.17	292.01
2798.50	0.42	245.31	2798.46	2.88	1.11	-3.09	0.37	3.29	289.73
2821.13	0.45	256.81	2821.09	3.05	1.05	-3.26	0.41	3.42	287.94
2847.54	0.49	254.33	2847.50	3.27	1.00	-3.47	0.17	3.61	286.09
2874.50	0.45	245.72	2874.46	3.48	0.92	-3.68	0.30	3.79	284.12
2896.50	0.47	259.40	2896.46	3.66	0.87	-3.85	0.50	3.94	282.78
2923.43	0.53	247.58	2923.39	3.89	0.80	-4.07	0.45	4.15	281.18
2946.12	0.60	256.38	2946.07	4.11	0.74	-4.28	0.48	4.35	279.76
2972.32	0.55	272.42	2972.28	4.37	0.71	-4.54	0.64	4.60	278.88
2999.32	0.56	256.81	2999.27	4.63	0.68	-4.80	0.56	4.85	278.12
3021.84	0.62	256.88	3021.80	4.86	0.63	-5.03	0.24	5.07	277.17
3048.14	0.52	263.34	3048.09	5.12	0.59	-5.28	0.45	5.32	276.33
3070.65	0.60	261.83	3070.60	5.34	0.56	-5.50	0.38	5.53	275.78
3097.62	0.64	257.86	3097.57	5.64	0.51	-5.79	0.21	5.81	274.99
3123.58	0.61	256.12	3123.53	5.92	0.44	-6.06	0.14	6.08	274.17
3146.30	0.68	264.32	3146.24	6.17	0.40	-6.32	0.50	6.33	273.62
3172.37	0.56	254.24	3172.31	6.45	0.35	-6.59	0.62	6.60	273.04
3199.25	0.51	244.45	3199.20	6.70	0.26	-6.83	0.38	6.83	272.21
3221.79	0.37	245.31	3221.73	6.86	0.19	-6.98	0.62	6.98	271.55
3247.58	0.37	260.18	3247.52	7.03	0.14	-7.14	0.37	7.14	271.13
3273.97	0.60	238.98	3273.91	7.24	0.06	-7.34	1.09	7.34	270.43
3295.46	0.74	230.48	3295.40	7.46	-0.09	-7.54	0.81	7.54	269.31
3321.76	0.28	272.87	3321.70	7.67	-0.20	-7.74	2.16	7.74	268.55
3348.02	0.37	127.93	3347.96	7.67	-0.24	-7.73	2.34	7.74	268.19
3373.80	0.78	180.35	3373.73	7.65	-0.47	-7.67	2.43	7.68	266.49
3395.81	0.73	216.09	3395.74	7.77	-0.73	-7.75	2.11	7.79	264.60
3422.56	0.15	227.07	3422.50	7.92	-0.89	-7.88	2.15	7.93	263.52
3448.59	0.94	194.74	3448.53	8.04	-1.12	-7.96	3.13	8.04	261.96
3470.91	0.75	203.66	3470.84	8.19	-1.43	-8.06	1.04	8.19	259.91
3497.62	1.09	202.02	3497.54	8.41	-1.83	-8.23	1.27	8.43	257.47
3523.24	1.56	182.65	3523.16	8.61	-2.40	-8.34	2.52	8.67	253.92
3549.94	0.92	185.19	3549.85	8.74	-2.98	-8.37	2.41	8.89	250.41
3572.47	1.02	225.45	3572.38	8.95	-3.30	-8.53	3.00	9.15	248.85
3598.30	1.51	220.62	3598.21	9.39	-3.72	-8.92	1.91	9.66	247.36
3624.99	1.54	220.78	3624.89	9.94	-4.26	-9.38	0.13	10.30	245.59
3646.65	1.05	216.42	3646.54	10.30	-4.64	-9.69	2.29	10.74	244.42



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3672.55	1.12	213.45	3672.44	10.64	-5.04	-9.97	0.33	11.17	243.18
3699.10	1.25	226.92	3698.98	11.06	-5.45	-10.32	1.16	11.67	242.15
3724.91	1.09	235.29	3724.78	11.51	-5.78	-10.73	0.92	12.19	241.67
3747.27	1.04	228.85	3747.14	11.87	-6.04	-11.06	0.57	12.60	241.36
3773.18	1.12	219.27	3773.05	12.26	-6.39	-11.39	0.76	13.06	240.72
3799.79	0.87	259.71	3799.65	12.66	-6.63	-11.76	2.73	13.49	240.59
3821.87	0.88	252.27	3821.73	12.99	-6.71	-12.08	0.52	13.82	240.96
3847.88	0.46	231.92	3847.74	13.28	-6.83	-12.36	1.83	14.12	241.05
3874.32	1.11	259.97	3874.18	13.63	-6.95	-12.69	2.79	14.47	241.31
3895.88	1.05	283.31	3895.73	14.03	-6.94	-13.09	2.05	14.82	242.08
3922.29	0.57	280.07	3922.14	14.37	-6.86	-13.46	1.82	15.10	242.99
3947.99	1.02	256.88	3947.83	14.72	-6.89	-13.80	2.10	15.43	243.48
3973.77	1.26	268.27	3973.61	15.23	-6.95	-14.31	1.30	15.91	244.10
3995.90	1.24	291.16	3995.73	15.68	-6.87	-14.78	2.25	16.29	245.07
4021.69	0.96	283.22	4021.52	16.12	-6.72	-15.25	1.22	16.66	246.22
4048.12	1.06	274.44	4047.95	16.56	-6.65	-15.71	0.69	17.06	247.06
4074.42	1.11	276.35	4074.24	17.05	-6.60	-16.20	0.24	17.50	247.84
4095.85	1.30	281.42	4095.67	17.47	-6.53	-16.65	1.00	17.88	248.58
4122.62	1.19	284.91	4122.43	18.01	-6.40	-17.21	0.50	18.36	249.61
4149.62	1.29	288.19	4149.42	18.54	-6.23	-17.77	0.46	18.83	250.68
4171.35	1.26	290.79	4171.15	18.96	-6.07	-18.23	0.30	19.21	251.58
4197.95	1.22	293.66	4197.74	19.45	-5.85	-18.76	0.27	19.65	252.67
4224.65	1.31	294.05	4224.44	19.94	-5.62	-19.30	0.31	20.10	253.78
4246.21	1.17	293.03	4245.99	20.34	-5.43	-19.73	0.62	20.46	254.61
4272.86	1.29	295.32	4272.63	20.82	-5.19	-20.25	0.47	20.90	255.61
4299.37	1.13	292.47	4299.14	21.28	-4.97	-20.76	0.62	21.35	256.55
4320.98	1.22	295.19	4320.75	21.66	-4.79	-21.17	0.47	21.70	257.26
4347.18	1.14	291.97	4346.94	22.11	-4.57	-21.66	0.41	22.14	258.08
4372.06	1.15	285.32	4371.81	22.55	-4.41	-22.13	0.54	22.56	258.73
4396.10	1.02	280.71	4395.85	22.97	-4.31	-22.57	0.66	22.98	259.20
4420.95	0.95	274.58	4420.70	23.38	-4.25	-23.00	0.51	23.39	259.53
4446.32	0.94	271.55	4446.07	23.79	-4.23	-23.42	0.20	23.79	259.76
4473.23	1.09	271.85	4472.97	24.26	-4.21	-23.89	0.55	24.26	260.00
4499.17	1.08	272.66	4498.90	24.74	-4.19	-24.38	0.07	24.74	260.24
4521.85	1.12	270.40	4521.58	25.17	-4.18	-24.82	0.24	25.17	260.43
4548.59	1.05	266.30	4548.32	25.67	-4.20	-25.32	0.38	25.67	260.59



Well Name: SIDNEY STREAR #2
Survey: SIDNEY STREAR #2 OTRUN
Survey Date: 10/23/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
4574.71	0.97	266.67	4574.43	26.13	-4.23	-25.78	0.30	26.13	260.69
4597.06	1.06	264.03	4596.78	26.52	-4.26	-26.18	0.44	26.52	260.76
4623.08	1.13	259.58	4622.79	27.02	-4.33	-26.67	0.43	27.02	260.78
4649.76	1.01	256.58	4649.47	27.52	-4.43	-27.16	0.50	27.52	260.73
4671.52	1.05	260.51	4671.22	27.91	-4.51	-27.54	0.37	27.91	260.70
4697.42	0.86	268.23	4697.12	28.34	-4.55	-27.97	0.88	28.34	260.75
4728.40	0.85	267.72	4728.10	28.80	-4.57	-28.43	0.05	28.80	260.87