



Gyroscopic Survey Report
for
KP KAUFMAN

Well Location	WELD, CO
Well Name	MCCOY PHILLIP #1
Rig Number	
Survey Date	12/15/2014
Latitude	40.1399490°N
Longitude	104.8650270°W
North Reference	True North
Grid Correction	None
Depth Reference	GL (4943.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 305.05Azim (deg)
Definitive Survey	MCCOY PHILLIP #1 (05-123-07881) INRUN
Operator(s)	P HOLBROOK

Well Notes

API-05-123-07881

Well Name: MCCOY PHILLIP #1
Survey: MCCOY PHILLIP #1 (05-123-07881) INRUN
Survey Date: 12/15/2014

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Closure Distance	Closure Direction
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
89.33	0.62	198.72	89.33	-0.14	-0.46	-0.16	0.70	0.49	198.72
125.48	0.60	197.50	125.48	-0.25	-0.83	-0.28	0.07	0.87	198.45
152.04	0.61	193.06	152.03	-0.34	-1.10	-0.35	0.18	1.15	197.68
176.79	0.60	196.19	176.79	-0.44	-1.35	-0.42	0.13	1.42	197.12
200.91	0.48	185.91	200.90	-0.53	-1.58	-0.46	0.64	1.64	196.36
226.95	0.48	181.77	226.94	-0.64	-1.79	-0.48	0.13	1.86	194.89
251.10	0.44	172.95	251.09	-0.76	-1.99	-0.47	0.34	2.04	193.27
277.80	0.38	162.73	277.79	-0.90	-2.18	-0.43	0.35	2.22	191.17
302.58	0.41	162.78	302.57	-1.03	-2.34	-0.38	0.09	2.37	189.20
327.94	0.41	171.01	327.93	-1.17	-2.52	-0.34	0.23	2.54	187.66
353.50	0.25	162.74	353.48	-1.28	-2.66	-0.31	0.68	2.68	186.59
375.55	0.22	165.77	375.53	-1.35	-2.75	-0.28	0.14	2.76	185.88
400.30	0.24	165.16	400.29	-1.42	-2.84	-0.26	0.07	2.85	185.19
427.05	0.18	118.82	427.03	-1.50	-2.91	-0.21	0.64	2.92	184.07
450.46	0.19	152.11	450.45	-1.57	-2.97	-0.16	0.45	2.97	183.03
477.84	0.29	166.70	477.83	-1.67	-3.07	-0.12	0.42	3.08	182.24
502.33	0.31	171.35	502.32	-1.76	-3.20	-0.10	0.14	3.20	181.72
527.05	0.45	189.51	527.03	-1.85	-3.36	-0.10	0.73	3.36	181.73
551.10	0.28	177.73	551.08	-1.92	-3.51	-0.11	0.76	3.52	181.87
575.37	0.24	169.92	575.35	-2.00	-3.62	-0.10	0.22	3.63	181.64
600.84	0.29	216.10	600.83	-2.03	-3.73	-0.13	0.84	3.73	182.04
625.01	0.36	245.94	624.99	-1.99	-3.81	-0.24	0.75	3.82	183.58
653.87	0.52	241.17	653.85	-1.89	-3.91	-0.44	0.57	3.94	186.38
678.88	0.37	258.80	678.86	-1.78	-3.98	-0.62	0.81	4.03	188.81
703.78	0.59	231.27	703.76	-1.69	-4.08	-0.80	1.25	4.15	191.05
727.84	0.45	252.43	727.82	-1.60	-4.18	-0.98	0.98	4.30	193.23
752.84	0.56	247.72	752.82	-1.47	-4.26	-1.19	0.46	4.42	195.61
777.75	0.53	244.64	777.73	-1.35	-4.35	-1.41	0.18	4.58	197.88
801.82	0.55	245.76	801.80	-1.24	-4.45	-1.61	0.12	4.73	199.90
826.86	0.44	261.09	826.84	-1.10	-4.51	-1.82	0.68	4.87	201.92
851.79	0.50	253.43	851.76	-0.97	-4.56	-2.02	0.33	4.99	203.85
875.88	0.56	246.56	875.86	-0.84	-4.64	-2.22	0.36	5.14	205.63
901.68	0.61	244.31	901.65	-0.71	-4.75	-2.46	0.23	5.35	207.43
926.51	0.55	244.12	926.48	-0.59	-4.86	-2.69	0.25	5.55	208.99
950.76	0.51	250.69	950.73	-0.47	-4.94	-2.90	0.32	5.73	210.38

Well Name:	MCCOY PHILLIP #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
975.84	0.54	249.09	975.81	-0.34	-5.02	-3.11	0.15	5.91	211.79
1000.69	0.60	244.91	1000.66	-0.21	-5.12	-3.34	0.30	6.11	213.12
1029.76	0.45	251.70	1029.73	-0.06	-5.22	-3.59	0.55	6.33	214.50
1050.07	0.66	240.10	1050.04	0.04	-5.30	-3.76	1.14	6.50	215.37
1078.88	0.62	239.79	1078.84	0.17	-5.46	-4.04	0.14	6.80	216.50
1103.30	0.55	237.34	1103.26	0.27	-5.59	-4.25	0.27	7.03	217.26
1127.13	0.59	245.15	1127.10	0.38	-5.71	-4.46	0.36	7.24	218.03
1151.79	0.61	239.44	1151.76	0.49	-5.83	-4.69	0.26	7.48	218.84
1176.21	0.56	246.49	1176.18	0.61	-5.94	-4.91	0.37	7.71	219.59
1200.05	0.46	244.10	1200.01	0.72	-6.03	-5.10	0.43	7.90	220.26
1225.32	0.56	237.41	1225.28	0.81	-6.14	-5.30	0.47	8.11	220.81
1253.90	0.52	242.30	1253.86	0.93	-6.27	-5.53	0.22	8.37	221.40
1278.37	0.59	237.88	1278.33	1.03	-6.39	-5.74	0.36	8.59	221.91
1302.27	0.67	237.72	1302.22	1.13	-6.53	-5.96	0.31	8.84	222.37
1327.00	0.57	241.55	1326.95	1.24	-6.67	-6.19	0.43	9.10	222.86
1351.50	0.75	237.73	1351.46	1.35	-6.81	-6.43	0.76	9.37	223.35
1375.45	0.49	248.29	1375.40	1.47	-6.93	-6.66	1.18	9.61	223.84
1400.23	0.54	246.86	1400.18	1.59	-7.02	-6.86	0.20	9.82	224.36
1428.92	0.48	249.92	1428.87	1.73	-7.11	-7.10	0.22	10.05	224.95
1454.07	0.56	241.81	1454.01	1.84	-7.21	-7.31	0.42	10.26	225.40
1478.04	0.63	243.06	1477.99	1.96	-7.32	-7.53	0.31	10.50	225.80
1502.27	0.84	238.90	1502.21	2.09	-7.47	-7.80	0.89	10.80	226.22
1527.46	0.74	244.74	1527.40	2.25	-7.64	-8.10	0.51	11.13	226.69
1551.49	0.45	269.14	1551.43	2.40	-7.70	-8.34	1.57	11.35	227.26
1576.36	0.79	245.34	1576.29	2.57	-7.78	-8.59	1.70	11.59	227.84
1601.00	0.54	264.38	1600.93	2.74	-7.86	-8.86	1.35	11.85	228.43
1625.06	0.93	239.19	1625.00	2.91	-7.97	-9.14	2.07	12.13	228.92
1650.01	0.66	253.92	1649.94	3.08	-8.12	-9.46	1.36	12.46	229.36
1679.00	0.68	248.51	1678.93	3.28	-8.22	-9.78	0.23	12.78	229.93
1702.69	0.53	263.63	1702.62	3.44	-8.29	-10.02	0.91	13.00	230.39
1727.70	0.60	256.75	1727.63	3.62	-8.33	-10.26	0.39	13.22	230.92
1752.70	0.59	250.96	1752.63	3.78	-8.40	-10.51	0.25	13.46	231.35
1776.69	0.51	252.77	1776.62	3.92	-8.47	-10.73	0.32	13.67	231.69
1801.80	0.42	240.69	1801.73	4.02	-8.55	-10.91	0.52	13.87	231.92
1826.47	0.49	242.02	1826.39	4.11	-8.65	-11.09	0.26	14.06	232.05
1850.08	0.50	241.54	1850.00	4.20	-8.74	-11.27	0.05	14.26	232.19

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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
1878.66	0.46	248.04	1878.58	4.32	-8.85	-11.48	0.23	14.49	232.39
1903.33	0.48	258.96	1903.25	4.45	-8.90	-11.68	0.37	14.68	232.68
1928.00	0.50	252.99	1927.92	4.59	-8.95	-11.88	0.22	14.88	233.00
1951.75	0.50	232.92	1951.67	4.68	-9.05	-12.06	0.74	15.08	233.13
1976.59	0.47	274.99	1976.51	4.80	-9.10	-12.25	1.42	15.27	233.39
2001.08	0.44	280.97	2001.00	4.98	-9.08	-12.45	0.25	15.40	233.89
2028.89	0.54	273.77	2028.81	5.19	-9.05	-12.68	0.44	15.58	234.49
2053.40	0.56	267.80	2053.31	5.38	-9.05	-12.92	0.25	15.77	235.00
2078.14	0.66	273.77	2078.05	5.60	-9.04	-13.18	0.47	15.98	235.55
2102.05	0.63	270.48	2101.97	5.82	-9.03	-13.45	0.21	16.20	236.11
2126.61	0.71	266.64	2126.52	6.05	-9.04	-13.73	0.37	16.44	236.65
2151.41	0.77	268.98	2151.32	6.31	-9.05	-14.05	0.30	16.71	237.21
2175.38	0.73	263.79	2175.29	6.55	-9.07	-14.36	0.34	16.99	237.73
2203.98	0.74	272.43	2203.88	6.84	-9.08	-14.73	0.39	17.30	238.34
2228.79	0.70	264.68	2228.69	7.09	-9.09	-15.04	0.43	17.57	238.86
2252.77	0.68	266.51	2252.67	7.32	-9.11	-15.33	0.13	17.83	239.27
2277.34	0.69	271.52	2277.24	7.55	-9.12	-15.62	0.25	18.09	239.73
2302.05	0.68	262.19	2301.95	7.79	-9.13	-15.92	0.46	18.35	240.15
2326.17	0.68	280.49	2326.06	8.02	-9.13	-16.20	0.90	18.59	240.61
2350.76	0.70	284.63	2350.66	8.29	-9.06	-16.49	0.22	18.81	241.21
2375.46	0.71	276.27	2375.36	8.57	-9.01	-16.78	0.42	19.05	241.78
2403.54	0.77	283.04	2403.43	8.90	-8.94	-17.14	0.39	19.33	242.44
2428.39	0.90	279.39	2428.27	9.23	-8.87	-17.50	0.56	19.62	243.10
2453.03	0.96	284.25	2452.92	9.60	-8.79	-17.89	0.40	19.93	243.83
2477.08	0.97	279.63	2476.96	9.97	-8.71	-18.29	0.33	20.25	244.53
2501.95	1.05	278.69	2501.83	10.37	-8.64	-18.72	0.33	20.62	245.23
2526.73	0.97	281.38	2526.60	10.76	-8.56	-19.15	0.38	20.98	245.91
2550.23	1.19	280.16	2550.09	11.17	-8.48	-19.59	0.95	21.34	246.59
2578.48	1.09	279.66	2578.34	11.68	-8.38	-20.14	0.38	21.82	247.40
2602.89	1.08	281.70	2602.75	12.10	-8.30	-20.60	0.16	22.20	248.06
2627.07	1.03	280.34	2626.93	12.50	-8.21	-21.03	0.25	22.58	248.67
2650.66	1.01	283.57	2650.51	12.89	-8.13	-21.44	0.25	22.93	249.25
2675.08	1.07	283.77	2674.93	13.30	-8.02	-21.88	0.24	23.30	249.87
2703.38	1.10	290.47	2703.22	13.81	-7.86	-22.39	0.46	23.73	250.65
2726.78	1.02	294.03	2726.62	14.24	-7.70	-22.79	0.45	24.05	251.33
2751.24	1.14	290.59	2751.07	14.69	-7.52	-23.22	0.55	24.40	252.04

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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
2775.60	1.16	286.49	2775.43	15.15	-7.37	-23.68	0.35	24.80	252.71
2803.96	1.17	290.01	2803.78	15.71	-7.19	-24.23	0.25	25.27	253.47
2827.53	1.30	282.70	2827.35	16.19	-7.05	-24.71	0.88	25.70	254.09
2851.95	1.30	283.93	2851.77	16.70	-6.92	-25.25	0.12	26.18	254.68
2876.49	1.19	287.78	2876.29	17.20	-6.77	-25.77	0.54	26.64	255.27
2900.11	1.19	285.81	2899.91	17.67	-6.63	-26.24	0.17	27.06	255.81
2928.44	1.15	283.95	2928.23	18.21	-6.48	-26.80	0.19	27.57	256.40
2953.02	1.09	281.38	2952.81	18.66	-6.38	-27.26	0.34	28.00	256.83
2976.78	0.98	284.82	2976.57	19.06	-6.28	-27.68	0.53	28.39	257.21
3001.14	1.00	287.59	3000.93	19.45	-6.16	-28.08	0.21	28.75	257.62
3025.75	1.06	287.33	3025.52	19.87	-6.03	-28.51	0.27	29.14	258.05
3053.55	1.13	286.32	3053.32	20.38	-5.88	-29.02	0.26	29.60	258.55
3078.06	1.15	291.06	3077.83	20.85	-5.72	-29.48	0.40	30.03	259.02
3102.48	0.99	296.22	3102.25	21.29	-5.54	-29.90	0.79	30.40	259.50
3126.43	1.12	293.16	3126.19	21.73	-5.36	-30.30	0.62	30.77	259.97
3150.99	1.00	292.06	3150.74	22.17	-5.18	-30.72	0.51	31.15	260.42
3175.43	0.94	301.38	3175.19	22.58	-5.00	-31.09	0.70	31.48	260.87
3203.30	0.89	301.46	3203.05	23.02	-4.77	-31.46	0.17	31.82	261.39
3228.00	0.93	308.82	3227.74	23.41	-4.54	-31.78	0.50	32.11	261.87
3252.23	0.85	321.00	3251.98	23.78	-4.28	-32.05	0.84	32.33	262.40
3275.61	0.91	327.72	3275.35	24.12	-3.99	-32.26	0.50	32.50	262.96
3303.63	0.94	328.74	3303.36	24.54	-3.60	-32.50	0.13	32.69	263.68
3327.80	1.25	326.73	3327.53	24.96	-3.21	-32.74	1.31	32.90	264.40
3351.76	1.19	327.69	3351.48	25.44	-2.78	-33.02	0.28	33.14	265.19
3375.13	1.27	335.22	3374.85	25.88	-2.34	-33.26	0.76	33.34	265.97
3403.11	1.25	335.03	3402.83	26.42	-1.78	-33.52	0.06	33.56	266.95
3427.29	1.20	337.12	3427.00	26.86	-1.31	-33.73	0.29	33.75	267.77
3450.42	1.24	332.37	3450.12	27.28	-0.87	-33.94	0.47	33.95	268.53
3478.43	1.14	334.58	3478.13	27.80	-0.35	-34.20	0.38	34.20	269.42
3502.72	1.12	340.58	3502.42	28.20	0.09	-34.38	0.49	34.38	270.16
3526.69	1.06	343.34	3526.38	28.57	0.53	-34.52	0.34	34.53	270.88
3553.89	1.13	346.06	3553.58	28.97	1.03	-34.66	0.30	34.67	271.70
3577.99	1.13	358.80	3577.67	29.28	1.50	-34.72	1.04	34.75	272.47
3602.08	0.97	357.74	3601.76	29.55	1.94	-34.73	0.68	34.79	273.19
3625.49	1.06	356.08	3625.16	29.81	2.35	-34.76	0.43	34.84	273.87
3653.54	1.15	358.09	3653.21	30.14	2.89	-34.78	0.33	34.90	274.76

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3677.53	1.09	358.49	3677.19	30.42	3.36	-34.80	0.23	34.96	275.52
3701.19	1.10	357.74	3700.84	30.69	3.82	-34.81	0.07	35.02	276.26
3725.19	0.89	344.33	3724.84	30.98	4.23	-34.87	1.30	35.13	276.91
3753.26	1.06	347.88	3752.91	31.34	4.69	-34.98	0.61	35.30	277.64
3776.70	0.94	1.33	3776.35	31.60	5.09	-35.03	1.10	35.39	278.28
3800.85	0.88	354.61	3800.50	31.83	5.48	-35.04	0.52	35.46	278.89
3825.72	0.98	4.94	3825.36	32.06	5.88	-35.04	0.78	35.53	279.53
3853.74	0.95	1.77	3853.38	32.31	6.35	-35.01	0.21	35.58	280.28
3876.53	0.97	7.85	3876.16	32.50	6.73	-34.98	0.46	35.62	280.89
3900.47	0.93	7.68	3900.10	32.68	7.12	-34.92	0.20	35.64	281.53
3926.23	1.13	10.41	3925.86	32.88	7.58	-34.85	0.81	35.67	282.27
3950.16	0.91	0.62	3949.78	33.09	8.00	-34.81	1.15	35.71	282.95
3976.16	0.97	357.53	3975.78	33.34	8.43	-34.81	0.29	35.82	283.61
3988.52	0.99	357.29	3988.13	33.47	8.64	-34.82	0.19	35.88	283.94
4025.34	1.07	1.03	4024.95	33.86	9.30	-34.83	0.28	36.05	284.96
4051.68	0.98	357.27	4051.29	34.14	9.78	-34.84	0.42	36.18	285.67
4077.15	0.93	6.14	4076.75	34.37	10.20	-34.83	0.61	36.29	286.33
4102.08	0.94	12.93	4101.68	34.55	10.60	-34.76	0.45	36.34	286.96
4127.71	1.15	23.89	4127.30	34.67	11.04	-34.61	1.12	36.33	287.70
4150.54	1.15	22.22	4150.12	34.77	11.46	-34.43	0.15	36.29	288.42
4177.22	1.21	23.90	4176.80	34.88	11.97	-34.21	0.27	36.25	289.28
4203.40	1.21	23.38	4202.98	34.99	12.48	-33.99	0.04	36.21	290.16
4225.56	1.14	21.11	4225.14	35.09	12.90	-33.82	0.37	36.19	290.88
4252.09	1.21	23.56	4251.66	35.21	13.40	-33.61	0.33	36.18	291.74
4275.12	1.24	28.59	4274.68	35.29	13.85	-33.39	0.49	36.15	292.52
4301.81	1.35	27.79	4301.36	35.36	14.38	-33.11	0.39	36.10	293.47
4327.75	1.31	31.44	4327.30	35.42	14.90	-32.81	0.35	36.04	294.43
4350.70	1.31	32.75	4350.25	35.45	15.35	-32.53	0.13	35.97	295.25
4377.34	1.51	32.31	4376.87	35.48	15.90	-32.18	0.73	35.89	296.29
4402.77	1.17	35.78	4402.30	35.49	16.39	-31.85	1.36	35.82	297.23
4426.43	1.24	43.42	4425.96	35.45	16.77	-31.53	0.73	35.72	298.01
4453.23	1.14	45.86	4452.75	35.36	17.17	-31.14	0.41	35.56	298.87
4476.25	1.12	41.83	4475.77	35.29	17.49	-30.83	0.35	35.45	299.57
4503.06	1.35	46.57	4502.57	35.19	17.91	-30.43	0.94	35.30	300.48
4526.30	1.29	50.11	4525.80	35.07	18.26	-30.03	0.44	35.14	301.31
4551.71	0.94	57.48	4551.21	34.92	18.56	-29.63	1.48	34.96	302.05



Well Name: MCCOY PHILLIP #1
Survey: MCCOY PHILLIP #1 (05-123-07881) INRUN
Survey Date: 12/15/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
4575.68	1.05	48.73	4575.17	34.79	18.81	-29.30	0.80	34.82	302.69
4600.69	0.51	57.22	4600.18	34.69	19.02	-29.04	2.22	34.71	303.23
4626.34	0.79	5.14	4625.82	34.74	19.26	-28.92	2.43	34.75	303.65
4651.07	0.95	42.24	4650.55	34.80	19.58	-28.77	2.32	34.80	304.23
4675.46	0.95	45.97	4674.94	34.73	19.87	-28.49	0.26	34.73	304.89
4681.51	0.87	47.70	4680.99	34.71	19.93	-28.42	1.48	34.71	305.05