



Gyroscopic Survey Report  
for  
K. P. KAUFFMAN  
1675 BROADWAY SUITES 2800  
DENVER, CO 80202

Well Location	WELD COUNTY, CO
Well Name	SEBOLD DOROTHY B-2
Rig Number	NABORS 92-0438
Survey Date	7/14/2014
Latitude	40.0309300°N
Longitude	104.8602000°W
North Reference	True North
Grid Correction	None
Depth Reference	GROUND LEVEL (4989.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 322.53Azim (deg)
Definitive Survey	SEBOLD DOROTHY B-2
Operator(s)	C JAQUES

**Well Notes**

# Survey Report

<b>Well Name:</b>		SEBOLD DOROTHY B-2							
<b>Survey:</b>		SEBOLD DOROTHY B-2							
<b>Survey Date:</b>		7/14/2014							
MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft	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
99.31	0.35	314.50	99.31	0.30	0.21	-0.21	0.35	0.30	314.50
124.09	0.34	311.52	124.09	0.44	0.31	-0.32	0.08	0.45	314.01
149.82	0.32	308.51	149.81	0.59	0.41	-0.44	0.10	0.60	313.03
174.99	0.37	296.62	174.99	0.73	0.49	-0.56	0.34	0.75	310.83
199.48	0.35	291.70	199.48	0.86	0.55	-0.70	0.16	0.89	308.03
224.23	0.39	279.81	224.23	0.99	0.59	-0.86	0.35	1.04	304.68
249.99	0.41	288.75	249.99	1.13	0.64	-1.03	0.25	1.21	301.75
274.13	0.42	306.51	274.12	1.29	0.72	-1.18	0.53	1.38	301.25
299.89	0.43	296.98	299.89	1.47	0.82	-1.34	0.28	1.57	301.30
324.50	0.40	305.43	324.49	1.63	0.91	-1.50	0.27	1.75	301.28
349.04	0.54	304.32	349.04	1.82	1.02	-1.66	0.56	1.95	301.65
374.83	0.55	297.88	374.82	2.05	1.15	-1.87	0.24	2.20	301.58
398.96	0.53	291.69	398.95	2.25	1.25	-2.08	0.26	2.42	300.95
424.75	0.59	277.36	424.74	2.45	1.31	-2.32	0.60	2.67	299.39
449.32	0.57	278.16	449.31	2.63	1.34	-2.57	0.09	2.90	297.57
473.99	0.61	274.16	473.98	2.80	1.37	-2.82	0.22	3.14	295.87
499.39	0.45	273.16	499.38	2.96	1.38	-3.06	0.62	3.35	294.36
523.95	0.45	264.71	523.93	3.07	1.38	-3.25	0.27	3.53	293.02
549.82	0.46	264.85	549.80	3.18	1.36	-3.45	0.03	3.71	291.51
574.43	0.37	269.90	574.41	3.28	1.35	-3.63	0.41	3.88	290.42
598.51	0.39	277.47	598.49	3.39	1.36	-3.79	0.24	4.03	289.78
624.36	0.24	316.24	624.34	3.50	1.41	-3.92	0.99	4.16	289.84
648.96	0.37	295.49	648.94	3.62	1.48	-4.02	0.69	4.29	290.25
673.98	0.35	304.05	673.97	3.77	1.56	-4.16	0.23	4.44	290.58
699.78	0.37	313.24	699.76	3.92	1.66	-4.28	0.23	4.59	291.20
724.35	0.43	308.57	724.33	4.09	1.77	-4.41	0.29	4.75	291.89
749.63	0.43	314.52	749.62	4.28	1.90	-4.55	0.18	4.93	292.63
774.00	0.43	308.80	773.98	4.46	2.02	-4.69	0.18	5.11	293.30
799.30	0.43	307.36	799.28	4.64	2.14	-4.84	0.04	5.29	293.83
824.55	0.45	316.64	824.53	4.83	2.27	-4.99	0.29	5.48	294.47
849.05	0.32	303.14	849.02	4.99	2.38	-5.11	0.65	5.63	294.94
874.42	0.33	309.69	874.40	5.13	2.46	-5.22	0.15	5.77	295.22
899.71	0.28	292.22	899.68	5.25	2.53	-5.34	0.41	5.91	295.37
924.99	0.28	305.42	924.97	5.36	2.59	-5.44	0.25	6.03	295.44
949.14	0.21	296.57	949.12	5.46	2.64	-5.53	0.30	6.13	295.54

# Survey Report

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<b>Survey:</b>		SEBOLD DOROTHY B-2							
<b>Survey Date:</b>		7/14/2014							
MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft	Closure Distance ft	Closure Direction deg
974.35	0.22	311.95	974.33	5.55	2.70	-5.61	0.23	6.22	295.67
999.37	0.21	337.69	999.35	5.64	2.77	-5.66	0.38	6.30	296.08
1024.65	0.19	312.92	1024.63	5.73	2.84	-5.71	0.35	6.38	296.47
1049.94	0.21	315.72	1049.91	5.82	2.91	-5.77	0.10	6.46	296.71
1073.98	0.12	330.46	1073.96	5.89	2.96	-5.82	0.44	6.53	296.96
1099.65	0.19	338.24	1099.62	5.95	3.02	-5.85	0.31	6.58	297.33
1124.89	0.23	12.93	1124.86	6.03	3.11	-5.85	0.52	6.63	298.00
1148.98	0.34	335.99	1148.95	6.13	3.22	-5.87	0.88	6.70	298.78
1173.81	0.31	328.30	1173.78	6.27	3.35	-5.93	0.22	6.81	299.44
1199.04	0.30	325.36	1199.01	6.40	3.46	-6.01	0.07	6.93	299.95
1224.34	0.30	315.53	1224.31	6.53	3.56	-6.09	0.20	7.06	300.33
1249.43	0.43	340.55	1249.40	6.69	3.70	-6.17	0.81	7.19	300.95
1274.26	0.35	318.77	1274.23	6.85	3.84	-6.25	0.67	7.34	301.59
1298.51	0.52	337.25	1298.48	7.03	4.00	-6.34	0.91	7.50	302.25
1349.31	0.47	314.14	1349.28	7.46	4.36	-6.58	0.40	7.89	303.53
1373.68	0.46	310.95	1373.65	7.66	4.50	-6.73	0.12	8.09	303.75
1398.87	0.45	316.57	1398.84	7.86	4.63	-6.87	0.18	8.29	303.99
1424.63	0.46	295.55	1424.59	8.05	4.75	-7.04	0.65	8.49	304.04
1448.89	0.49	294.98	1448.86	8.23	4.84	-7.22	0.11	8.69	303.83
1474.63	0.47	287.37	1474.60	8.42	4.92	-7.42	0.27	8.90	303.53
1499.01	0.46	285.32	1498.97	8.57	4.97	-7.61	0.07	9.09	303.17
1524.18	0.51	269.88	1524.14	8.72	5.00	-7.82	0.55	9.28	302.60
1548.80	0.52	274.78	1548.76	8.86	5.01	-8.04	0.18	9.47	301.92
1573.86	0.43	267.53	1573.82	8.99	5.01	-8.24	0.42	9.65	301.30
1599.94	0.45	269.33	1599.90	9.11	5.01	-8.44	0.10	9.82	300.67
1623.81	0.43	268.59	1623.77	9.22	5.00	-8.63	0.11	9.97	300.12
1649.81	0.40	259.39	1649.77	9.32	4.99	-8.81	0.27	10.13	299.49
1673.83	0.44	273.21	1673.80	9.42	4.98	-8.99	0.46	10.27	298.96
1699.34	0.43	270.15	1699.29	9.54	4.98	-9.19	0.10	10.45	298.47
1724.07	0.41	269.76	1724.03	9.65	4.98	-9.37	0.07	10.61	298.00
1748.76	0.42	277.18	1748.72	9.77	4.99	-9.55	0.22	10.77	297.60
1773.89	0.41	275.98	1773.85	9.90	5.01	-9.73	0.05	10.94	297.26
1799.15	0.39	286.06	1799.11	10.03	5.05	-9.90	0.29	11.11	297.01
1824.29	0.38	285.75	1824.24	10.16	5.09	-10.06	0.06	11.28	296.84
1849.44	0.44	284.17	1849.40	10.30	5.14	-10.24	0.27	11.45	296.66
1873.30	0.42	288.08	1873.26	10.45	5.19	-10.41	0.15	11.63	296.49

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<b>Survey:</b>		SEBOLD DOROTHY B-2							
<b>Survey Date:</b>		7/14/2014							
MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft	Closure Distance ft	Closure Direction deg
1899.31	0.40	292.33	1899.26	10.61	5.25	-10.58	0.15	11.81	296.39
1924.55	0.42	286.24	1924.50	10.76	5.31	-10.75	0.19	11.99	296.29
1949.27	0.36	298.07	1949.23	10.90	5.37	-10.91	0.40	12.16	296.22
1974.93	0.43	273.75	1974.88	11.04	5.42	-11.08	0.70	12.33	296.06
1999.29	0.49	304.10	1999.24	11.20	5.48	-11.25	1.02	12.52	295.97
2024.89	0.43	293.57	2024.84	11.39	5.58	-11.44	0.41	12.73	296.02
2048.85	0.54	300.24	2048.80	11.57	5.68	-11.62	0.50	12.93	296.04
2074.02	0.51	296.89	2073.97	11.78	5.79	-11.82	0.18	13.16	296.09
2098.74	0.54	289.54	2098.69	11.98	5.87	-12.02	0.30	13.38	296.04
2124.77	0.56	295.90	2124.72	12.19	5.97	-12.25	0.25	13.63	295.98
2149.14	0.58	294.12	2149.09	12.41	6.07	-12.47	0.12	13.87	295.96
2174.01	0.61	293.44	2173.95	12.64	6.18	-12.71	0.10	14.13	295.92
2198.30	0.68	291.52	2198.24	12.87	6.28	-12.96	0.30	14.40	295.86
2224.35	0.63	284.80	2224.29	13.12	6.37	-13.24	0.34	14.70	295.70
2249.55	0.59	291.10	2249.49	13.34	6.46	-13.50	0.32	14.96	295.56
2274.27	0.67	301.70	2274.21	13.58	6.58	-13.74	0.59	15.24	295.58
2299.88	0.61	309.18	2299.82	13.86	6.75	-13.98	0.40	15.52	295.76
2324.09	0.68	294.57	2324.03	14.11	6.89	-14.21	0.74	15.79	295.86
2349.20	0.65	287.38	2349.13	14.36	6.99	-14.48	0.36	16.08	295.77
2374.66	0.59	292.46	2374.59	14.59	7.09	-14.74	0.32	16.36	295.67
2399.04	0.76	299.31	2398.97	14.85	7.21	-15.00	0.78	16.64	295.68
2424.12	0.71	289.15	2424.05	15.13	7.35	-15.29	0.57	16.97	295.66
2449.50	0.71	290.90	2449.43	15.40	7.45	-15.59	0.09	17.28	295.56
2473.95	0.75	295.98	2473.87	15.67	7.58	-15.87	0.30	17.59	295.52
2499.40	0.66	296.71	2499.32	15.95	7.72	-16.15	0.32	17.90	295.53
2524.55	0.80	305.42	2524.47	16.25	7.88	-16.43	0.69	18.22	295.64
2548.85	0.77	296.19	2548.77	16.56	8.06	-16.71	0.53	18.55	295.73
2573.93	0.78	299.80	2573.85	16.87	8.21	-17.01	0.20	18.89	295.77
2599.46	0.85	312.72	2599.37	17.22	8.43	-17.30	0.77	19.25	295.97
2623.72	0.84	313.90	2623.63	17.57	8.67	-17.56	0.08	19.59	296.29
2648.80	0.88	309.46	2648.70	17.94	8.92	-17.84	0.30	19.95	296.57
2674.30	1.01	322.46	2674.20	18.35	9.23	-18.13	0.99	20.34	296.97
2699.91	0.94	324.65	2699.81	18.79	9.58	-18.39	0.32	20.73	297.51
2724.90	0.97	325.18	2724.80	19.20	9.92	-18.63	0.15	21.10	298.03
2749.61	1.09	331.37	2749.50	19.64	10.29	-18.86	0.66	21.49	298.63
2773.76	1.07	334.37	2773.65	20.09	10.70	-19.07	0.25	21.87	299.30

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<b>Survey Date:</b>		7/14/2014							
MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft	Closure Distance ft	Closure Direction deg
2799.35	1.03	325.63	2799.23	20.56	11.10	-19.30	0.65	22.27	299.91
2823.98	1.01	335.62	2823.86	20.99	11.49	-19.52	0.72	22.64	300.48
2849.45	1.08	338.24	2849.33	21.44	11.91	-19.70	0.33	23.02	301.17
2874.18	1.01	335.02	2874.05	21.88	12.33	-19.88	0.39	23.39	301.81
2898.80	1.03	333.98	2898.66	22.31	12.72	-20.07	0.11	23.76	302.38
2924.19	0.94	329.93	2924.06	22.74	13.11	-20.27	0.44	24.14	302.89
2949.39	0.98	331.58	2949.25	23.15	13.48	-20.48	0.18	24.51	303.36
2974.75	0.95	333.59	2974.61	23.57	13.86	-20.67	0.18	24.89	303.84
2999.00	1.15	332.59	2998.86	24.01	14.25	-20.87	0.84	25.28	304.33
3024.08	1.07	332.52	3023.93	24.49	14.69	-21.10	0.33	25.71	304.84
3049.56	1.26	339.21	3049.40	24.99	15.16	-21.31	0.91	26.15	305.43
3073.79	1.20	335.45	3073.62	25.49	15.64	-21.51	0.42	26.59	306.02
3099.85	1.25	338.51	3099.68	26.03	16.15	-21.72	0.31	27.07	306.62
3124.46	1.37	342.88	3124.29	26.56	16.68	-21.91	0.65	27.53	307.28
3149.39	1.34	341.09	3149.21	27.12	17.24	-22.09	0.21	28.02	307.97
3174.41	1.29	344.42	3174.22	27.66	17.79	-22.26	0.36	28.49	308.62
3198.93	1.35	344.52	3198.74	28.18	18.33	-22.41	0.26	28.95	309.28
3223.78	1.30	349.21	3223.57	28.71	18.89	-22.54	0.49	29.41	309.96
3248.86	1.30	351.40	3248.65	29.21	19.45	-22.64	0.20	29.85	310.67
3273.87	1.19	352.82	3273.66	29.68	19.99	-22.71	0.48	30.26	311.35
3299.67	1.15	357.13	3299.45	30.12	20.51	-22.76	0.37	30.64	312.02
3324.59	1.11	359.15	3324.37	30.52	21.00	-22.78	0.23	30.98	312.68
3349.54	0.94	1.74	3349.31	30.88	21.45	-22.77	0.70	31.28	313.28
3374.58	0.84	3.39	3374.35	31.17	21.83	-22.76	0.43	31.54	313.81
3398.25	0.74	5.59	3398.02	31.41	22.16	-22.73	0.41	31.74	314.27
3424.55	0.69	14.09	3424.32	31.64	22.48	-22.68	0.45	31.93	314.75
3449.52	0.63	16.87	3449.28	31.81	22.76	-22.60	0.27	32.07	315.20
3474.57	0.60	9.81	3474.34	31.98	23.02	-22.54	0.33	32.21	315.60
3499.03	0.55	13.00	3498.79	32.14	23.26	-22.49	0.23	32.35	315.96
3524.09	0.50	10.44	3523.85	32.29	23.48	-22.44	0.23	32.48	316.30
3549.07	0.40	7.33	3548.83	32.43	23.68	-22.41	0.40	32.60	316.57
3574.11	0.20	349.78	3573.87	32.53	23.81	-22.41	0.89	32.69	316.73
3599.94	0.10	274.05	3599.70	32.58	23.85	-22.44	0.76	32.75	316.75
3623.77	0.12	270.57	3623.53	32.61	23.85	-22.49	0.09	32.78	316.69
3648.88	0.17	266.16	3648.63	32.65	23.85	-22.55	0.18	32.82	316.61
3673.37	0.19	265.85	3673.13	32.69	23.85	-22.62	0.10	32.87	316.50



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MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft	Closure Distance ft	Closure Direction deg
3699.49	0.14	260.18	3699.24	32.73	23.84	-22.70	0.22	32.92	316.40
3724.69	0.26	251.50	3724.45	32.76	23.81	-22.78	0.49	32.96	316.27
3749.75	0.11	273.44	3749.50	32.79	23.80	-22.86	0.64	33.00	316.15
3774.33	0.29	244.54	3774.09	32.82	23.77	-22.94	0.81	33.04	316.02
3799.06	0.28	251.92	3798.82	32.86	23.73	-23.05	0.15	33.08	315.82
3823.89	0.25	256.15	3823.65	32.90	23.69	-23.17	0.15	33.14	315.65
3849.19	0.34	253.45	3848.95	32.95	23.66	-23.29	0.36	33.20	315.45
3874.94	0.36	267.77	3874.69	33.02	23.63	-23.45	0.34	33.29	315.23
3899.43	0.41	258.60	3899.18	33.10	23.61	-23.61	0.32	33.39	315.01
3924.03	0.54	265.66	3923.79	33.21	23.59	-23.81	0.58	33.52	314.73
3949.77	0.64	272.19	3949.52	33.36	23.58	-24.07	0.47	33.70	314.41
3974.95	0.74	277.80	3974.70	33.57	23.61	-24.38	0.49	33.94	314.09
3999.60	0.88	294.22	3999.35	33.85	23.71	-24.71	1.08	34.24	313.82
4024.48	1.01	288.49	4024.22	34.20	23.86	-25.09	0.64	34.62	313.56
4049.04	1.19	294.13	4048.79	34.60	24.03	-25.53	0.88	35.06	313.27
4074.76	1.43	295.94	4074.50	35.12	24.28	-26.06	0.92	35.62	312.98
4099.72	1.29	306.38	4099.45	35.67	24.58	-26.56	1.13	36.19	312.78
4124.22	1.34	307.18	4123.94	36.21	24.92	-27.02	0.22	36.75	312.69
4149.94	1.49	319.98	4149.65	36.84	25.36	-27.47	1.35	37.39	312.71
4174.51	1.54	327.72	4174.22	37.49	25.88	-27.85	0.86	38.02	312.90
4199.72	1.63	328.58	4199.41	38.18	26.47	-28.22	0.37	38.69	313.17
4224.20	1.51	331.47	4223.88	38.84	27.05	-28.55	0.60	39.33	313.45
4249.85	1.64	331.64	4249.52	39.54	27.67	-28.89	0.53	40.01	313.77
4274.92	1.78	329.81	4274.58	40.28	28.33	-29.26	0.57	40.72	314.07
4299.46	1.76	330.10	4299.11	41.03	28.98	-29.63	0.07	41.45	314.36
4323.44	2.02	334.15	4323.08	41.81	29.68	-30.00	1.23	42.20	314.69
4349.13	2.01	329.10	4348.75	42.70	30.47	-30.43	0.69	43.07	315.04
4374.91	2.13	329.13	4374.51	43.62	31.27	-30.91	0.48	43.97	315.34
4399.37	2.19	329.72	4398.96	44.54	32.07	-31.38	0.26	44.86	315.62
4424.99	2.28	329.28	4424.56	45.53	32.93	-31.88	0.37	45.84	315.92
4449.17	2.35	328.57	4448.72	46.50	33.76	-32.39	0.29	46.79	316.19
4474.81	2.59	330.29	4474.34	47.60	34.71	-32.95	0.98	47.86	316.49
4499.43	2.77	332.70	4498.93	48.73	35.72	-33.50	0.88	48.97	316.84
4523.90	2.90	334.97	4523.37	49.92	36.81	-34.03	0.71	50.13	317.25
4549.29	2.89	336.70	4548.73	51.17	37.98	-34.56	0.35	51.35	317.70
4574.16	3.04	343.24	4573.56	52.39	39.19	-34.99	1.49	52.54	318.24

**Well Name:** SEBOLD DOROTHY B-2**Survey:** SEBOLD DOROTHY B-2**Survey Date:** 7/14/2014

<b>MD</b>	<b>Inc</b>	<b>Azim</b>	<b>TVD</b>	<b>VS</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>DLS</b>	<b>Closure</b>	<b>Closure</b>
<b>ft</b>	<b>deg</b>	<b>deg</b>	<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>7100ft</b>	<b>Distance</b>	<b>Direction</b>
								<b>ft</b>	<b>deg</b>
4599.36	2.86	348.51	4598.73	53.58	40.45	-35.31	1.30	53.69	318.88
4624.58	2.74	349.63	4623.92	54.68	41.65	-35.55	0.52	54.76	319.52
4649.50	2.80	350.60	4648.81	55.75	42.84	-35.75	0.32	55.80	320.15
4674.04	2.63	357.30	4673.32	56.74	44.00	-35.88	1.47	56.77	320.80
4699.79	2.54	357.22	4699.05	57.70	45.16	-35.93	0.38	57.71	321.49
4724.40	2.04	354.95	4723.64	58.52	46.14	-36.00	2.07	58.52	322.04
4748.82	2.48	353.40	4748.04	59.33	47.09	-36.10	1.84	59.33	322.53