

Company: HRM Resources, LLC  
WellName: Dutton #11-22  
Location: NWNW Sec. 22, T4N, R67W 6 PM

Vertical Section calculated on an Azimuth of: 313.4822

Survey Calculation Method: Minimum Curvature

FileName: F:\WELL REPORTS\HRM Resources LLC\Dutton 11-22\WB PLAN\Dutton 11-22 WB SURV.pl4.sr5

#	Depth Feet	Inc Degrees	Azimuth Degrees	TVD Feet	SubSea Feet	North Feet	East Feet	Section Feet	Dogleg /100 ft	BldRate /100 ft	Trnrate /100 ft	Comment
0	0.00	0.00	313.48	0.00	4870.00	0.00	0.00	0.00	0.00	0.00	0.00	
1	100.00	0.00	313.48	100.00	4770.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	313.48	200.00	4670.00	0.00	0.00	0.00	0.00	0.00	0.00	
3	300.00	0.00	313.48	300.00	4570.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	400.00	0.00	313.48	400.00	4470.00	0.00	0.00	0.00	0.00	0.00	0.00	
5	500.00	0.00	313.48	500.00	4370.00	0.00	0.00	0.00	0.00	0.00	0.00	
6	600.00	0.00	313.48	600.00	4270.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	700.00	0.00	313.48	700.00	4170.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	800.00	0.00	313.48	800.00	4070.00	0.00	0.00	0.00	0.00	0.00	0.00	
9	900.00	0.00	313.48	900.00	3970.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP, B.G. = 2°/100ft												
10	1000.00	0.00	313.48	1000.00	3870.00	0.00	0.00	0.00	0.00	0.00	0.00	
11	1100.00	2.00	313.48	1099.98	3770.02	1.20	-1.27	1.75	2.00	2.00	0.00	
12	1200.00	4.00	313.48	1199.84	3670.16	4.80	-5.06	6.98	2.00	2.00	0.00	
13	1300.00	6.00	313.48	1299.45	3570.55	10.80	-11.39	15.69	2.00	2.00	0.00	
EOB, TAN = 8°												
14	1400.00	8.00	313.48	1398.70	3471.30	19.18	-20.23	27.88	2.00	2.00	0.00	
15	1500.00	8.00	313.48	1497.73	3372.27	28.76	-30.33	41.80	0.00	0.00	0.00	
16	1600.00	8.00	313.48	1596.76	3273.24	38.34	-40.43	55.71	0.00	0.00	0.00	
17	1700.00	8.00	313.48	1695.78	3174.22	47.92	-50.52	69.63	0.00	0.00	0.00	
18	1800.00	8.00	313.48	1794.81	3075.19	57.49	-60.62	83.55	0.00	0.00	0.00	
19	1900.00	8.00	313.48	1893.84	2976.16	67.07	-70.72	97.47	0.00	0.00	0.00	
20	2000.00	8.00	313.48	1992.86	2877.14	76.65	-80.82	111.38	0.00	0.00	0.00	
21	2100.00	8.00	313.48	2091.89	2778.11	86.22	-90.92	125.30	0.00	0.00	0.00	
22	2200.00	8.00	313.48	2190.92	2679.08	95.80	-101.02	139.22	0.00	0.00	0.00	
23	2300.00	8.00	313.48	2289.94	2580.06	105.38	-111.11	153.14	0.00	0.00	0.00	
24	2400.00	8.00	313.48	2388.97	2481.03	114.95	-121.21	167.05	0.00	0.00	0.00	
25	2500.00	8.00	313.48	2488.00	2382.00	124.53	-131.31	180.97	0.00	0.00	0.00	
26	2600.00	8.00	313.48	2587.02	2282.98	134.11	-141.41	194.89	0.00	0.00	0.00	
27	2700.00	8.00	313.48	2686.05	2183.95	143.68	-151.51	208.80	0.00	0.00	0.00	
28	2800.00	8.00	313.48	2785.08	2084.92	153.26	-161.60	222.72	0.00	0.00	0.00	
29	2900.00	8.00	313.48	2884.10	1985.90	162.84	-171.70	236.64	0.00	0.00	0.00	
30	3000.00	8.00	313.48	2983.13	1886.87	172.42	-181.80	250.56	0.00	0.00	0.00	
31	3100.00	8.00	313.48	3082.16	1787.84	181.99	-191.90	264.47	0.00	0.00	0.00	
32	3200.00	8.00	313.48	3181.19	1688.81	191.57	-202.00	278.39	0.00	0.00	0.00	
33	3300.00	8.00	313.48	3280.21	1589.79	201.15	-212.10	292.31	0.00	0.00	0.00	
34	3400.00	8.00	313.48	3379.24	1490.76	210.72	-222.19	306.23	0.00	0.00	0.00	
35	3500.00	8.00	313.48	3478.27	1391.73	220.30	-232.29	320.14	0.00	0.00	0.00	
36	3600.00	8.00	313.48	3577.29	1292.71	229.88	-242.39	334.06	0.00	0.00	0.00	
37	3700.00	8.00	313.48	3676.32	1193.68	239.45	-252.49	347.98	0.00	0.00	0.00	
38	3800.00	8.00	313.48	3775.35	1094.65	249.03	-262.59	361.90	0.00	0.00	0.00	
39	3900.00	8.00	313.48	3874.37	995.63	258.61	-272.69	375.81	0.00	0.00	0.00	
40	4000.00	8.00	313.48	3973.40	896.60	268.18	-282.78	389.73	0.00	0.00	0.00	

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Survey Calculation Method: Minimum Curvature

FileName: F:\WELL REPORTS\HRM Resources LLC\Dutton 11-22\WB PLAN\Dutton 11-22 WB SURV.pl4.sr5

#	Depth Feet	Inc Degrees	Azimuth Degrees	TVD Feet	SubSea Feet	North Feet	East Feet	Section Feet	Dogleg /100 ft	BldRate /100 ft	Trnrate /100 ft	Comment
41	4100.00	8.00	313.48	4072.43	797.57	277.76	-292.88	403.65	0.00	0.00	0.00	
42	4200.00	8.00	313.48	4171.45	698.55	287.34	-302.98	417.56	0.00	0.00	0.00	
43	4300.00	8.00	313.48	4270.48	599.52	296.92	-313.08	431.48	0.00	0.00	0.00	
44	4400.00	8.00	313.48	4369.51	500.49	306.49	-323.18	445.40	0.00	0.00	0.00	
45	4500.00	8.00	313.48	4468.53	401.47	316.07	-333.27	459.32	0.00	0.00	0.00	
46	4600.00	8.00	313.48	4567.56	302.44	325.65	-343.37	473.23	0.00	0.00	0.00	
47	4700.00	8.00	313.48	4666.59	203.41	335.22	-353.47	487.15	0.00	0.00	0.00	
48	4800.00	8.00	313.48	4765.61	104.39	344.80	-363.57	501.07	0.00	0.00	0.00	
49	4900.00	8.00	313.48	4864.64	5.36	354.38	-373.67	514.99	0.00	0.00	0.00	
50	5000.00	8.00	313.48	4963.67	-93.67	363.95	-383.77	528.90	0.00	0.00	0.00	
51	5100.00	8.00	313.48	5062.70	-192.70	373.53	-393.86	542.82	0.00	0.00	0.00	
52	5200.00	8.00	313.48	5161.72	-291.72	383.11	-403.96	556.74	0.00	0.00	0.00	
53	5300.00	8.00	313.48	5260.75	-390.75	392.68	-414.06	570.66	0.00	0.00	0.00	
54	5400.00	8.00	313.48	5359.78	-489.78	402.26	-424.16	584.57	0.00	0.00	0.00	
55	5500.00	8.00	313.48	5458.80	-588.80	411.84	-434.26	598.49	0.00	0.00	0.00	
56	5600.00	8.00	313.48	5557.83	-687.83	421.42	-444.36	612.41	0.00	0.00	0.00	
57	5700.00	8.00	313.48	5656.86	-786.86	430.99	-454.45	626.32	0.00	0.00	0.00	
58	5800.00	8.00	313.48	5755.88	-885.88	440.57	-464.55	640.24	0.00	0.00	0.00	
59	5900.00	8.00	313.48	5854.91	-984.91	450.15	-474.65	654.16	0.00	0.00	0.00	
60	6000.00	8.00	313.48	5953.94	-1083.94	459.72	-484.75	668.08	0.00	0.00	0.00	
61	6100.00	8.00	313.48	6052.96	-1182.96	469.30	-494.85	681.99	0.00	0.00	0.00	
62	6166.90	8.00	313.48	6119.21	-1249.21	475.71	-501.60	691.30	0.00	0.00	0.00	
63	6200.00	7.34	313.48	6152.02	-1282.02	478.75	-504.81	695.72	2.00	2.00	0.00	TOD, D.G. = 2"/100ft
64	6300.00	5.34	313.48	6251.40	-1381.40	486.34	-512.82	706.76	2.00	2.00	0.00	
65	6400.00	3.34	313.48	6351.11	-1481.11	491.55	-518.30	714.32	2.00	2.00	0.00	EOD, Start Vertical Section
66	6500.00	1.34	313.48	6451.02	-1581.02	494.35	-521.26	718.40	2.00	2.00	0.00	
67	6566.90	0.00	313.48	6517.91	-1647.91	494.89	-521.83	719.18	2.00	2.00	0.00	
68	6600.00	0.00	313.48	6551.01	-1681.01	494.89	-521.83	719.18	0.00	0.00	0.00	
69	6700.00	0.00	313.48	6651.01	-1781.01	494.89	-521.83	719.18	0.00	0.00	0.00	
70	6800.00	0.00	313.48	6751.01	-1881.01	494.89	-521.83	719.18	0.00	0.00	0.00	
71	6900.00	0.00	313.48	6851.01	-1981.01	494.89	-521.83	719.18	0.00	0.00	0.00	
Int	6948.99	0.00	313.48	6900.00	-2030.00	494.89	-521.83	719.18	---	---	---	Niobrara Top
73	7000.00	0.00	313.48	6951.01	-2081.01	494.89	-521.83	719.18	0.00	0.00	0.00	
74	7100.00	0.00	313.48	7051.01	-2181.01	494.89	-521.83	719.18	0.00	0.00	0.00	
75	7200.00	0.00	313.48	7151.01	-2281.01	494.89	-521.83	719.18	0.00	0.00	0.00	
Int	7258.99	0.00	313.48	7210.00	-2340.00	494.89	-521.83	719.18	---	---	---	Codell Top
77	7300.00	0.00	313.48	7251.01	-2381.01	494.89	-521.83	719.18	0.00	0.00	0.00	
78	7400.00	0.00	313.48	7351.01	-2481.01	494.89	-521.83	719.18	0.00	0.00	0.00	
79	7500.00	0.00	313.48	7451.01	-2581.01	494.89	-521.83	719.18	0.00	0.00	0.00	
80	7600.00	0.00	313.48	7551.01	-2681.01	494.89	-521.83	719.18	0.00	0.00	0.00	

January 14,2010  
11:29 AM

PathTracker Survey 5.0.361  
Survey Calculation Program

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Company: HRM Resources, LLC  
WellName: Dutton #11-22  
Location: NWNW Sec. 22, T4N, R67W 6 PM

Vertical Section calculated on an Azimuth of: 313.4822

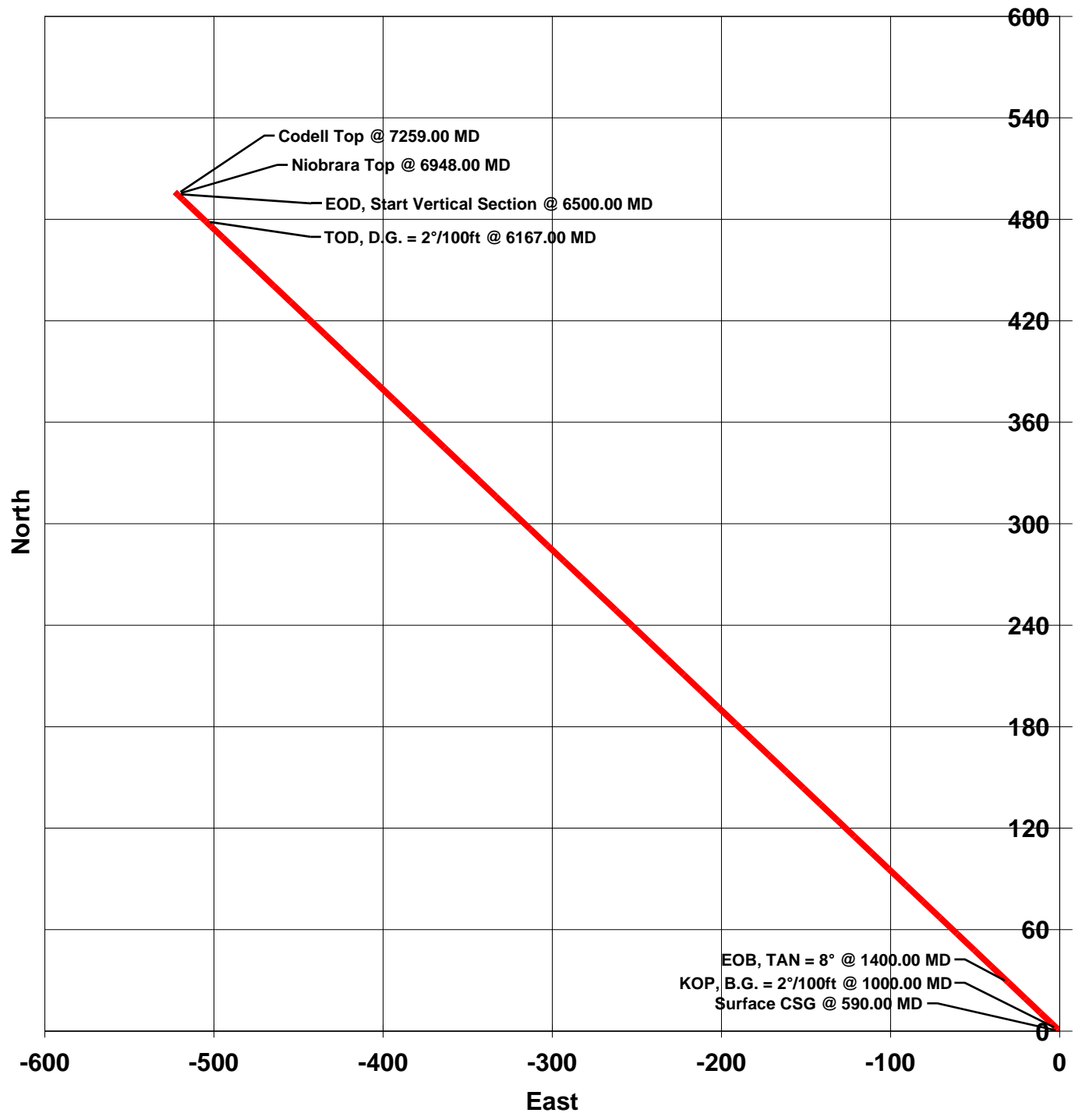
Survey Calculation Method: Minimum Curvature

FileName: F:\WELL REPORTS\HRM Resources LLC\Dutton 11-22\WB PLAN\Dutton 11-22 WB SURV.pl4.sr5

#	Depth Feet	Inc Degrees	Azimuth Degrees	TVD Feet	SubSea Feet	North Feet	East Feet	Section Feet	Dogleg /100 ft	BldRate /100 ft	Trnrate /100 ft	Comment
81	7700.00	0.00	313.48	7651.01	-2781.01	494.89	-521.83	719.18	0.00	0.00	0.00	

Closure is 719.1841 feet on an Azimuth of 313.4822

Plan View  
Dutton #11-22



Section View  
Dutton #11-22

