

Company: HRM RESOURCES, LLC
WellName: BINDER #13-20
Location: 20-4N-67W

Vertical Section calculated on an Azimuth of: 253.3649

Survey Calculation Method: Minimum Curvature

FileName: F:\WELL REPORTS\HRM Resources LLC\Binder 13-20\Binder #13-20 Directional Surveys.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	253.36	0.00	4918.00	0.00	0.00	0.00	0.00	0.00	0.00	
1	100.00	0.00	253.36	100.00	4818.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	253.36	200.00	4718.00	0.00	0.00	0.00	0.00	0.00	0.00	
3	300.00	0.00	253.36	300.00	4618.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	400.00	0.00	253.36	400.00	4518.00	0.00	0.00	0.00	0.00	0.00	0.00	
5	500.00	0.00	253.36	500.00	4418.00	0.00	0.00	0.00	0.00	0.00	0.00	
6	600.00	0.00	253.36	600.00	4318.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	700.00	0.00	253.36	700.00	4218.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	800.00	0.00	253.36	800.00	4118.00	0.00	0.00	0.00	0.00	0.00	0.00	
9	850.00	0.00	253.36	850.00	4068.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	900.00	1.25	253.36	900.00	4018.00	-0.16	-0.52	0.55	2.50	2.50	0.00	
11	1000.00	3.75	253.36	999.89	3918.11	-1.40	-4.70	4.91	2.50	2.50	0.00	
12	1100.00	6.25	253.36	1099.50	3818.50	-3.90	-13.05	13.62	2.50	2.50	0.00	
13	1200.00	8.75	253.36	1198.64	3719.36	-7.64	-25.56	26.67	2.50	2.50	0.00	
14	1300.00	11.25	253.36	1297.11	3620.89	-12.61	-42.19	44.04	2.50	2.50	0.00	
15	1400.00	13.75	253.36	1394.74	3523.26	-18.80	-62.93	65.68	2.50	2.50	0.00	
16	1500.00	16.25	253.36	1491.32	3426.68	-26.21	-87.73	91.56	2.50	2.50	0.00	
17	1570.00	18.00	253.36	1558.21	3359.79	-32.11	-107.48	112.17	2.50	2.50	0.00	
18	1600.00	18.00	253.36	1586.75	3331.25	-34.77	-116.36	121.44	0.00	0.00	0.00	
19	1700.00	18.00	253.36	1681.85	3236.15	-43.61	-145.97	152.34	0.00	0.00	0.00	
20	1800.00	18.00	253.36	1776.96	3141.04	-52.46	-175.57	183.24	0.00	0.00	0.00	
21	1900.00	18.00	253.36	1872.06	3045.94	-61.30	-205.18	214.15	0.00	0.00	0.00	
22	2000.00	18.00	253.36	1967.17	2950.83	-70.15	-234.79	245.05	0.00	0.00	0.00	
23	2100.00	18.00	253.36	2062.27	2855.73	-79.00	-264.40	275.95	0.00	0.00	0.00	
24	2200.00	18.00	253.36	2157.38	2760.62	-87.84	-294.01	306.85	0.00	0.00	0.00	
25	2300.00	18.00	253.36	2252.49	2665.51	-96.69	-323.62	337.75	0.00	0.00	0.00	
26	2400.00	18.00	253.36	2347.59	2570.41	-105.54	-353.23	368.65	0.00	0.00	0.00	
27	2500.00	18.00	253.36	2442.70	2475.30	-114.38	-382.83	399.56	0.00	0.00	0.00	
28	2600.00	18.00	253.36	2537.80	2380.20	-123.23	-412.44	430.46	0.00	0.00	0.00	
29	2700.00	18.00	253.36	2632.91	2285.09	-132.08	-442.05	461.36	0.00	0.00	0.00	
30	2800.00	18.00	253.36	2728.01	2189.99	-140.92	-471.66	492.26	0.00	0.00	0.00	
31	2900.00	18.00	253.36	2823.12	2094.88	-149.77	-501.27	523.16	0.00	0.00	0.00	
32	3000.00	18.00	253.36	2918.23	1999.77	-158.62	-530.88	554.06	0.00	0.00	0.00	
33	3100.00	18.00	253.36	3013.33	1904.67	-167.46	-560.48	584.97	0.00	0.00	0.00	
34	3200.00	18.00	253.36	3108.44	1809.56	-176.31	-590.09	615.87	0.00	0.00	0.00	
35	3300.00	18.00	253.36	3203.54	1714.46	-185.15	-619.70	646.77	0.00	0.00	0.00	
36	3400.00	18.00	253.36	3298.65	1619.35	-194.00	-649.31	677.67	0.00	0.00	0.00	
37	3500.00	18.00	253.36	3393.75	1524.25	-202.85	-678.92	708.57	0.00	0.00	0.00	
38	3600.00	18.00	253.36	3488.86	1429.14	-211.69	-708.53	739.47	0.00	0.00	0.00	
39	3700.00	18.00	253.36	3583.97	1334.03	-220.54	-738.13	770.38	0.00	0.00	0.00	
40	3800.00	18.00	253.36	3679.07	1238.93	-229.39	-767.74	801.28	0.00	0.00	0.00	
41	3900.00	18.00	253.36	3774.18	1143.82	-238.23	-797.35	832.18	0.00	0.00	0.00	

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WellName: BINDER #13-20
Location: 20-4N-67W

Vertical Section calculated on an Azimuth of: 253.3649

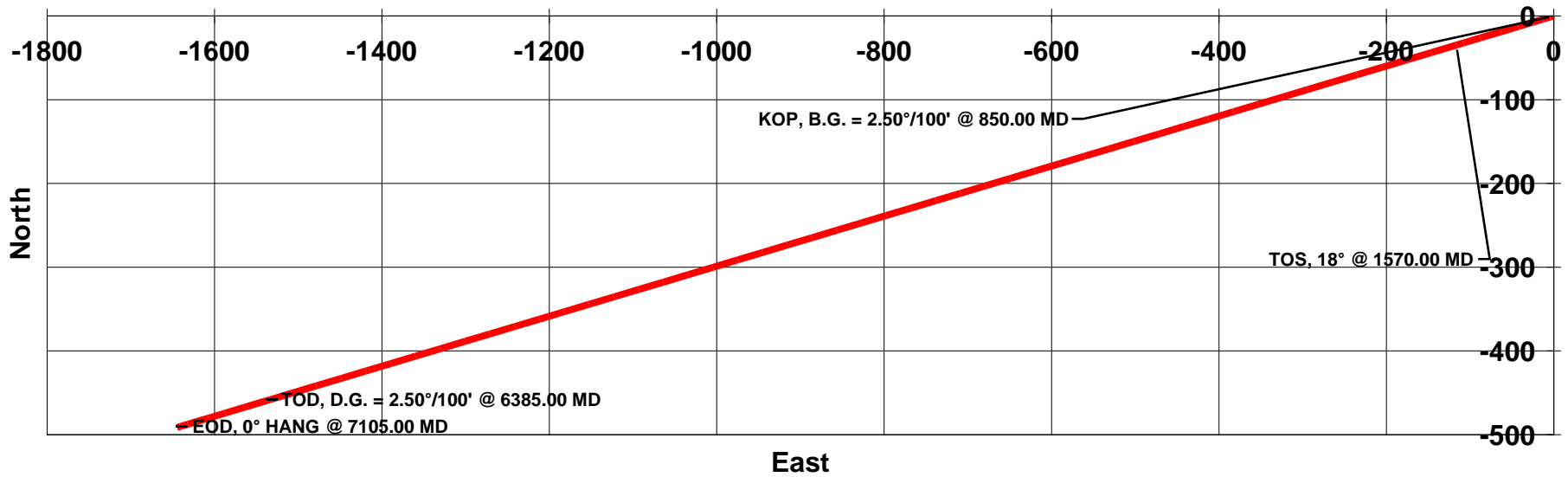
Survey Calculation Method: Minimum Curvature

FileName: F:\WELL REPORTS\HRM Resources LLC\Binder 13-20\Binder #13-20 Directional Surveys.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
42	4000.00	18.00	253.36	3869.28	1048.72	-247.08	-826.96	863.08	0.00	0.00	0.00	
43	4100.00	18.00	253.36	3964.39	953.61	-255.93	-856.57	893.98	0.00	0.00	0.00	
44	4200.00	18.00	253.36	4059.49	858.51	-264.77	-886.18	924.89	0.00	0.00	0.00	
45	4300.00	18.00	253.36	4154.60	763.40	-273.62	-915.78	955.79	0.00	0.00	0.00	
46	4400.00	18.00	253.36	4249.71	668.29	-282.46	-945.39	986.69	0.00	0.00	0.00	
47	4500.00	18.00	253.36	4344.81	573.19	-291.31	-975.00	1017.59	0.00	0.00	0.00	
48	4600.00	18.00	253.36	4439.92	478.08	-300.16	-1004.61	1048.49	0.00	0.00	0.00	
49	4700.00	18.00	253.36	4535.02	382.98	-309.00	-1034.22	1079.39	0.00	0.00	0.00	
50	4800.00	18.00	253.36	4630.13	287.87	-317.85	-1063.83	1110.30	0.00	0.00	0.00	
51	4900.00	18.00	253.36	4725.23	192.77	-326.70	-1093.43	1141.20	0.00	0.00	0.00	
52	5000.00	18.00	253.36	4820.34	97.66	-335.54	-1123.04	1172.10	0.00	0.00	0.00	
53	5100.00	18.00	253.36	4915.44	2.56	-344.39	-1152.65	1203.00	0.00	0.00	0.00	
54	5200.00	18.00	253.36	5010.55	-92.55	-353.24	-1182.26	1233.90	0.00	0.00	0.00	
55	5300.00	18.00	253.36	5105.66	-187.66	-362.08	-1211.87	1264.80	0.00	0.00	0.00	
56	5400.00	18.00	253.36	5200.76	-282.76	-370.93	-1241.48	1295.71	0.00	0.00	0.00	
57	5500.00	18.00	253.36	5295.87	-377.87	-379.78	-1271.09	1326.61	0.00	0.00	0.00	
58	5600.00	18.00	253.36	5390.97	-472.97	-388.62	-1300.69	1357.51	0.00	0.00	0.00	
59	5700.00	18.00	253.36	5486.08	-568.08	-397.47	-1330.30	1388.41	0.00	0.00	0.00	
60	5800.00	18.00	253.36	5581.18	-663.18	-406.31	-1359.91	1419.31	0.00	0.00	0.00	
61	5900.00	18.00	253.36	5676.29	-758.29	-415.16	-1389.52	1450.21	0.00	0.00	0.00	
62	6000.00	18.00	253.36	5771.39	-853.39	-424.01	-1419.13	1481.12	0.00	0.00	0.00	
63	6100.00	18.00	253.36	5866.50	-948.50	-432.85	-1448.74	1512.02	0.00	0.00	0.00	
64	6200.00	18.00	253.36	5961.60	-1043.60	-441.70	-1478.34	1542.92	0.00	0.00	0.00	
65	6300.00	18.00	253.36	6056.71	-1138.71	-450.55	-1507.95	1573.82	0.00	0.00	0.00	
TOD, D.G. = 2.50°/100'												
66	6385.40	18.00	253.36	6137.93	-1219.93	-458.10	-1533.24	1600.21	0.00	0.00	0.00	
67	6400.00	17.63	253.36	6151.83	-1233.83	-459.38	-1537.52	1604.68	2.50	2.50	0.00	
68	6500.00	15.13	253.36	6247.76	-1329.76	-467.46	-1564.54	1632.89	2.50	2.50	0.00	
69	6600.00	12.63	253.36	6344.83	-1426.83	-474.32	-1587.54	1656.88	2.50	2.50	0.00	
70	6700.00	10.13	253.36	6442.86	-1524.86	-479.98	-1606.45	1676.62	2.50	2.50	0.00	
71	6800.00	7.63	253.36	6541.65	-1623.65	-484.40	-1621.25	1692.06	2.50	2.50	0.00	
72	6900.00	5.13	253.36	6641.02	-1723.02	-487.58	-1631.90	1703.18	2.50	2.50	0.00	
73	7000.00	2.63	253.36	6740.78	-1822.78	-489.52	-1638.39	1709.96	2.50	2.50	0.00	
74	7100.00	0.13	253.36	6840.74	-1922.74	-490.21	-1640.71	1712.37	2.50	2.50	0.00	
75	7105.40	0.00	253.36	6846.14	-1928.14	-490.21	-1640.71	1712.38	2.50	2.50	0.00	
EOD, 0° HANG												
76	7200.00	0.00	253.36	6940.74	-2022.74	-490.21	-1640.71	1712.38	0.00	0.00	0.00	
77	7300.00	0.00	253.36	7040.74	-2122.74	-490.21	-1640.71	1712.38	0.00	0.00	0.00	
78	7400.00	0.00	253.36	7140.74	-2222.74	-490.21	-1640.71	1712.38	0.00	0.00	0.00	
79	7500.00	0.00	253.36	7240.74	-2322.74	-490.21	-1640.71	1712.38	0.00	0.00	0.00	
80	7600.00	0.00	253.36	7340.74	-2422.74	-490.21	-1640.71	1712.38	0.00	0.00	0.00	
81	7700.00	0.00	253.36	7440.74	-2522.74	-490.21	-1640.71	1712.38	0.00	0.00	0.00	
82	7720.00	0.00	253.36	7460.74	-2542.74	-490.21	-1640.71	1712.38	0.00	0.00	0.00	

Closure is 1712.3811 feet on an Azimuth of 253.3649

Plan View
BINDER #13-20



**Section View
BINDER #13-20**

