

Company: Foundation Energy Management, Inc.
WellName: Banta Ridge Federal #4A-18
Location:

Vertical Section calculated on an Azimuth of: 178.4268

Survey Calculation Method: Minimum Curvature

FileName: F:\WELL REPORTS\Foundation Energy\Banta Ridge Federal 4A-18\Directional Plan Survey.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	178.43	0.00	6064.00	0.00	0.00	0.00	0.00	0.00	0.00	
1	100.00	0.00	178.43	100.00	5964.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	178.43	200.00	5864.00	0.00	0.00	0.00	0.00	0.00	0.00	
3	300.00	0.00	178.43	300.00	5764.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	400.00	0.00	178.43	400.00	5664.00	0.00	0.00	0.00	0.00	0.00	0.00	
5	500.00	0.00	178.43	500.00	5564.00	0.00	0.00	0.00	0.00	0.00	0.00	
6	600.00	0.00	178.43	600.00	5464.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP, B.G. =2°/100'												
7	620.00	0.00	178.43	620.00	5444.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	700.00	1.60	178.43	699.99	5364.01	-1.12	0.03	1.12	2.00	2.00	0.00	
9	800.00	3.60	178.43	799.88	5264.12	-5.65	0.16	5.65	2.00	2.00	0.00	
10	900.00	5.60	178.43	899.55	5164.45	-13.67	0.38	13.67	2.00	2.00	0.00	
11	1000.00	7.60	178.43	998.89	5065.11	-25.16	0.69	25.17	2.00	2.00	0.00	
12	1100.00	9.60	178.43	1097.76	4966.24	-40.10	1.10	40.12	2.00	2.00	0.00	
13	1200.00	11.60	178.43	1196.05	4867.95	-58.49	1.61	58.51	2.00	2.00	0.00	
EOB, SLANT = 13°												
14	1270.00	13.00	178.43	1264.44	4799.56	-73.40	2.02	73.42	2.00	2.00	0.00	
15	1300.00	13.00	178.43	1293.67	4770.33	-80.14	2.20	80.17	0.00	0.00	0.00	
16	1400.00	13.00	178.43	1391.11	4672.89	-102.63	2.82	102.67	0.00	0.00	0.00	
17	1500.00	13.00	178.43	1488.54	4575.46	-125.12	3.44	125.16	0.00	0.00	0.00	
18	1600.00	13.00	178.43	1585.98	4478.02	-147.60	4.05	147.66	0.00	0.00	0.00	
19	1700.00	13.00	178.43	1683.42	4380.58	-170.09	4.67	170.15	0.00	0.00	0.00	
20	1800.00	13.00	178.43	1780.85	4283.15	-192.58	5.29	192.65	0.00	0.00	0.00	
21	1900.00	13.00	178.43	1878.29	4185.71	-215.06	5.91	215.14	0.00	0.00	0.00	
22	2000.00	13.00	178.43	1975.73	4088.27	-237.55	6.52	237.64	0.00	0.00	0.00	
23	2100.00	13.00	178.43	2073.16	3990.84	-260.04	7.14	260.13	0.00	0.00	0.00	
24	2200.00	13.00	178.43	2170.60	3893.40	-282.52	7.76	282.63	0.00	0.00	0.00	
25	2300.00	13.00	178.43	2268.04	3795.96	-305.01	8.38	305.12	0.00	0.00	0.00	
26	2400.00	13.00	178.43	2365.48	3698.52	-327.50	8.99	327.62	0.00	0.00	0.00	
27	2500.00	13.00	178.43	2462.91	3601.09	-349.98	9.61	350.11	0.00	0.00	0.00	
28	2600.00	13.00	178.43	2560.35	3503.65	-372.47	10.23	372.61	0.00	0.00	0.00	
29	2700.00	13.00	178.43	2657.79	3406.21	-394.96	10.85	395.10	0.00	0.00	0.00	
30	2800.00	13.00	178.43	2755.22	3308.78	-417.44	11.46	417.60	0.00	0.00	0.00	
31	2900.00	13.00	178.43	2852.66	3211.34	-439.93	12.08	440.09	0.00	0.00	0.00	
32	3000.00	13.00	178.43	2950.10	3113.90	-462.42	12.70	462.59	0.00	0.00	0.00	
33	3100.00	13.00	178.43	3047.53	3016.47	-484.90	13.32	485.08	0.00	0.00	0.00	
34	3200.00	13.00	178.43	3144.97	2919.03	-507.39	13.93	507.58	0.00	0.00	0.00	
35	3300.00	13.00	178.43	3242.41	2821.59	-529.88	14.55	530.08	0.00	0.00	0.00	
TOD, D.G. =2°/100'												
36	3365.40	13.00	178.43	3306.13	2757.87	-544.58	14.96	544.79	0.00	0.00	0.00	
37	3400.00	12.31	178.43	3339.89	2724.11	-552.16	15.16	552.37	2.00	2.00	0.00	
38	3500.00	10.31	178.43	3437.95	2626.05	-571.76	15.70	571.97	2.00	2.00	0.00	
39	3600.00	8.31	178.43	3536.62	2527.38	-587.93	16.15	588.15	2.00	2.00	0.00	
40	3700.00	6.31	178.43	3635.81	2428.19	-600.64	16.50	600.87	2.00	2.00	0.00	

May 17, 2011
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PathTracker 5.0.361
Survey Calculation Program

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WellName: Banta Ridge Federal #4A-18
Location:

Vertical Section calculated on an Azimuth of: 178.4268

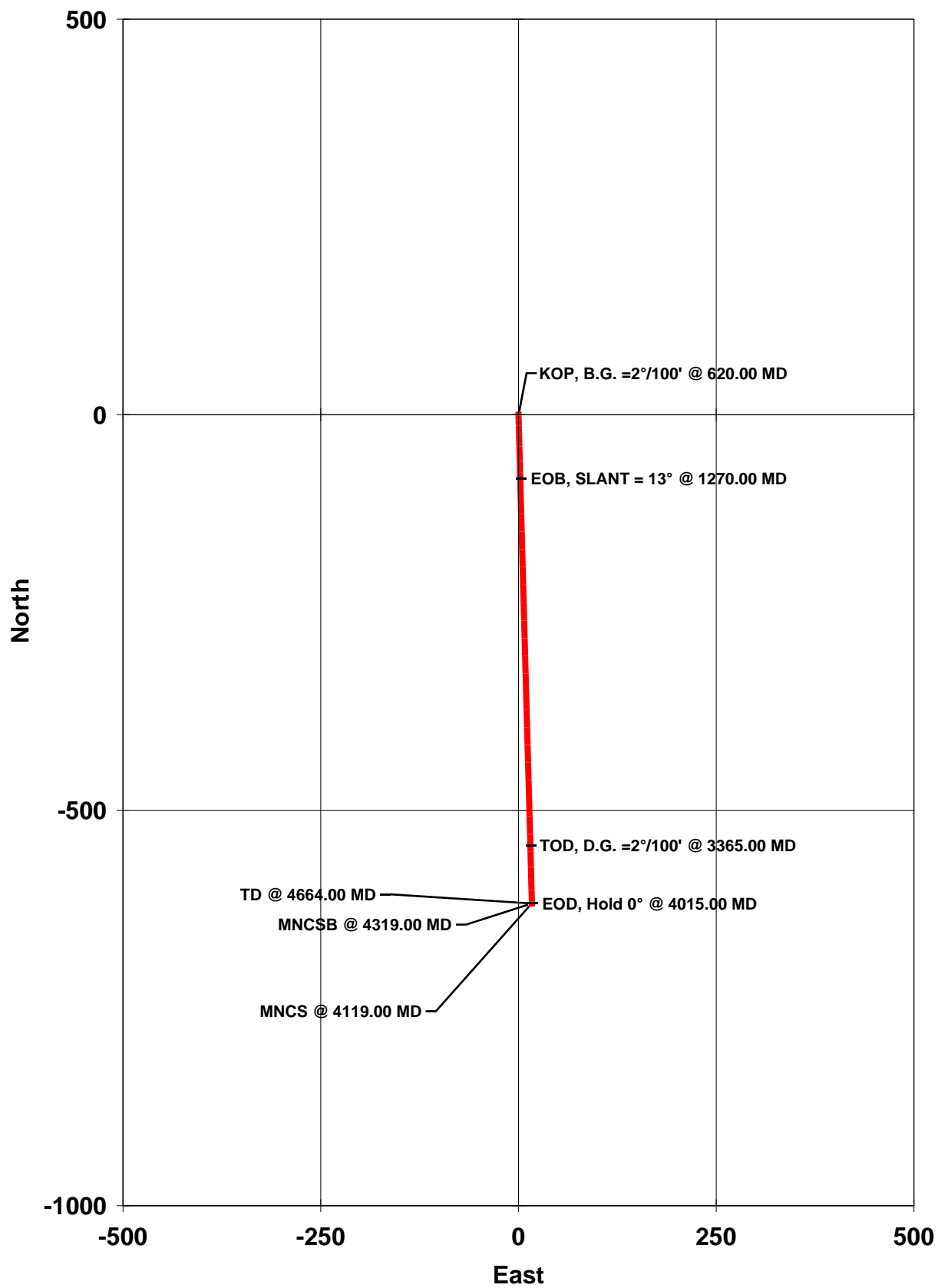
Survey Calculation Method: Minimum Curvature

FileName: F:\WELL REPORTS\Foundation Energy\Banta Ridge Federal 4A-18\Directional Plan Survey.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	3800.00	4.31	178.43	3735.37	2328.63	-609.89	16.75	610.12	2.00	2.00	0.00	
42	3900.00	2.31	178.43	3835.20	2228.80	-615.66	16.91	615.89	2.00	2.00	0.00	
43	4000.00	0.31	178.43	3935.17	2128.83	-617.94	16.97	618.17	2.00	2.00	0.00	
EOD, Hold 0°												
44	4015.40	0.00	178.43	3950.57	2113.43	-617.98	16.97	618.21	2.00	2.00	0.00	
45	4100.00	0.00	178.43	4035.17	2028.83	-617.98	16.97	618.21	0.00	0.00	0.00	
Int	4118.83	0.00	178.43	4054.00	2010.00	-617.98	16.97	618.21	---	---	---	
MNCS												
47	4200.00	0.00	178.43	4135.17	1928.83	-617.98	16.97	618.21	0.00	0.00	0.00	
48	4300.00	0.00	178.43	4235.17	1828.83	-617.98	16.97	618.21	0.00	0.00	0.00	
Int	4318.83	0.00	178.43	4254.00	1810.00	-617.98	16.97	618.21	---	---	---	
MNCSB												
50	4400.00	0.00	178.43	4335.17	1728.83	-617.98	16.97	618.21	0.00	0.00	0.00	
51	4500.00	0.00	178.43	4435.17	1628.83	-617.98	16.97	618.21	0.00	0.00	0.00	
52	4600.00	0.00	178.43	4535.17	1528.83	-617.98	16.97	618.21	0.00	0.00	0.00	
TD												
53	4664.83	0.00	178.43	4600.00	1464.00	-617.98	16.97	618.21	0.00	0.00	0.00	

Closure is 618.2113 feet on an Azimuth of 178.4268

Plan View
Banta Ridge Federal #4A-18



Section View
Banta Ridge Federal #4A-18

