



Survey Calculation Program

Encana Oil & Gas
Precision 209
Kerr 12H-1
Ness Co., KS

M.W.D. OPERATOR: K. Harris/S.Folmar
DIRECTIONAL DRILLERS: R. Snider/ B. Spurgeon

Magnetic Declination:	6.79
Job #:	1209148
Vertical Section Azimuth	180.54

Minimum Curvature Calculation

No.	Survey Depth	INC	AZM	TVD	N-S	E-W	Vertical Section	DLS/100
Tie	1340	0.62	260.92	1339.98	-0.04	-3.24	-0.04	
1	1437	0.5	252.4	1436.98	-0.25	-4.16	0.29	0.15
2	1499	0.5	232.1	1498.97	-0.50	-4.63	0.54	0.28
3	1560	0.7	254.3	1559.97	-0.76	-5.20	0.81	0.50
4	1622	0.8	269.3	1621.96	-0.87	-6.00	0.93	0.35
5	1712	0.6	250.2	1711.96	-1.04	-7.07	1.10	0.34
6	1803	0.6	279.7	1802.95	-1.12	-7.99	1.19	0.34
7	1893	0.7	259.2	1892.95	-1.14	-8.99	1.23	0.28
8	1984	0.6	279.5	1983.94	-1.17	-10.01	1.26	0.27
9	2074	0.6	262.9	2073.94	-1.15	-10.94	1.25	0.19
10	2164	0.6	273.4	2163.93	-1.18	-11.88	1.29	0.12
11	2255	0.6	255.2	2254.93	-1.27	-12.82	1.39	0.21
12	2345	0.4	234.5	2344.92	-1.58	-13.53	1.70	0.30
13	2436	0.4	228.3	2435.92	-1.97	-14.02	2.10	0.05
14	2526	0.3	156.3	2525.92	-2.40	-14.16	2.53	0.47
15	2616	0.5	273.6	2615.92	-2.59	-14.46	2.72	0.77
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