

| Well Name: Paramount et al Netla M-23 | | | | Onshore |
|---------------------------------------|---------------------------------|------------|---------|---|
| | RT (m) | | 4.50 | |
| | Water Depth (m) | | 0.00 | |
| | Total Depth (TVD , (m)) | | 2300.00 | |
| | Mud Weight (kg/cu. m) | | 1150.00 | |
| Line # in Casing Database | 243 | 96 | 11 | NOTES: In well M-23: Schematic shows an intermediate 244.5mm but not mentioned in casing description.. I am assuming they are not running an intermediate in my calculations? Casing indicates a TD of 2330, I used 2300 Td because that is what is in the Approval. In their underbalance drilling section pg 10, an equivalent mud weigh for a pressure of 17306 kPa @ 1957m is 901 not 1130 kg/m3: however I used a gradient of 11 kPa/m (1121 kg/m3 EMD) until I noticed that an EMD of 1150 was expected in the Arnica at 1960m. Anyway this is the pressures I used but will be less because they are drilling underbalanced. Collapse could be more of an issue than burst. |
| Type | Surface | Production | Liner | |
| Mud Weight (kg/cu. m) | 1150.00 | 1150.00 | 1150.00 | |
| Next Casing Mud Weight | 1150.00 | 1150.00 | 1150.00 | |
| Top Depth (m RT) | 4.50 | 4.50 | 1897.00 | |
| Bottom Depth (TVD , (m RT)) | 499.08 | 1997.00 | 2300.00 | |
| Next Casing Depth (m RT) | 1997.00 | 2300.00 | 2300.00 | |
| Grade | K-55 | L-80 | L-80 | |
| Casing Size, O.D. (mm) | 339.70 | 177.80 | 114.30 | |
| Casing Weight (kg/m) | 81.10 | 34.23 | 17.26 | |
| Collapse (kPa) | 7800 | 26400 | 43800 | |
| Burst (kPa) | 18800 | 43700 | 53600 | |
| Tensile (kN) | 243300 | 193500 | 94300 | |
| % Cased | 24.99% | 86.83% | 100.00% | |
| Safety Factor | | | | |
| Collapse | 1.39 | 1.17 | 3.38 | |
| Burst | 1.71 | 1.94 | 5.64 | |
| Tensile | 6.18 | 2.89 | 13.82 | |
| Satisfaction | | | | |
| Collapse | OK | OK | OK | |
| Burst | OK | OK | OK | |
| Tensile | OK | OK | OK | |

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