$$\frac{\partial^2 l_{j_{(i)}}^{Ef}}{\partial \Delta_{1,M}^2} = \frac{-\exp(\Delta_{1,i} - \Delta_{1,M}) \left[ \Diamond + \frac{d_j - h_i + 1}{d_j} \right] + \exp(2\Delta_{1,i} - 2\Delta_{1,M})}{\left[ \Diamond + \frac{d_j - h_i + 1}{d_j} \right]^2}$$
(1)