

Utah Energy Corporation  
***BLM Plan of Operations UTU-74631***  
Item E. Rock Fall/Collapse Calculations

Roof support to prevent caving while working if complete extraction, with broken rock expansion at 40% the 8 ft back height will cave to a height of:

$$\begin{aligned} 8 + (8 \times 1.4) &= 11.2 \text{ ft} &= 16 - 11.2 &= 4.8 \text{ ft} \\ 16 + (4.8 \times 1.4) &= 6.7 \text{ ft} &= 20.8 - 17.9 &= 2.9 \text{ ft} \\ 20.8 + (2.9 \times 1.4) &= 4.1 &= 23.7 - 22.0 &= 1.7 \text{ ft} \\ 23.7 + (2.5 \times 1.4) &= 3.5 &= 25.4 - 25.5 &= 0 \end{aligned}$$

$$\text{Maximum Height} = 25.4 \text{ ft}$$