

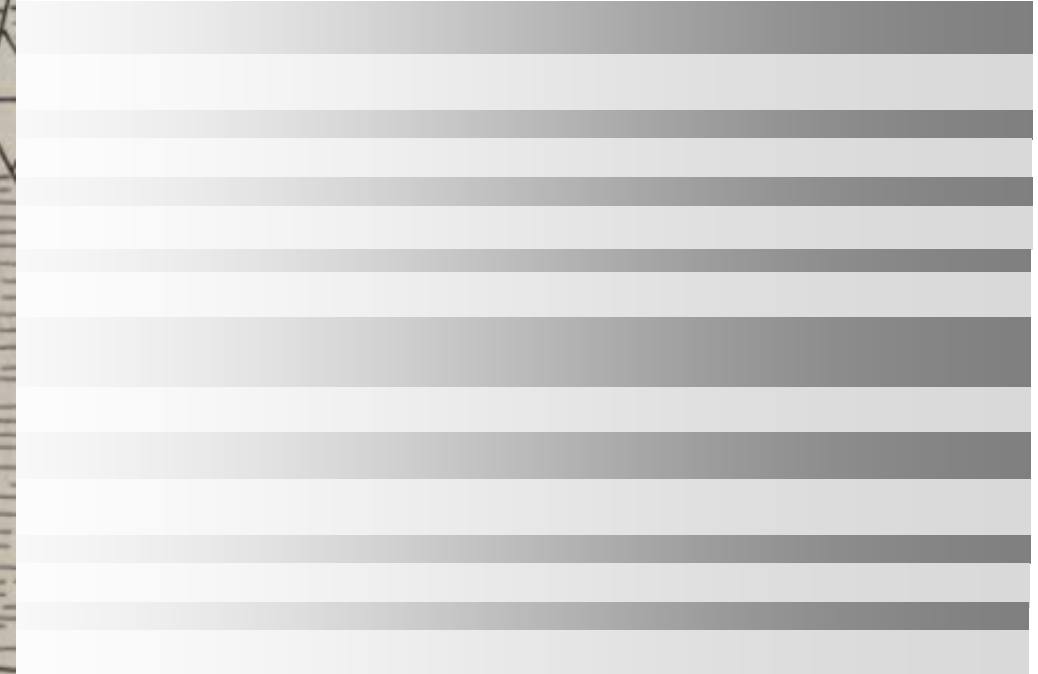
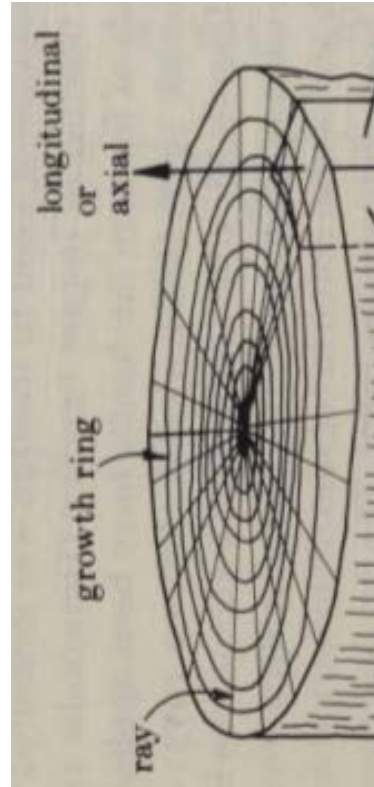
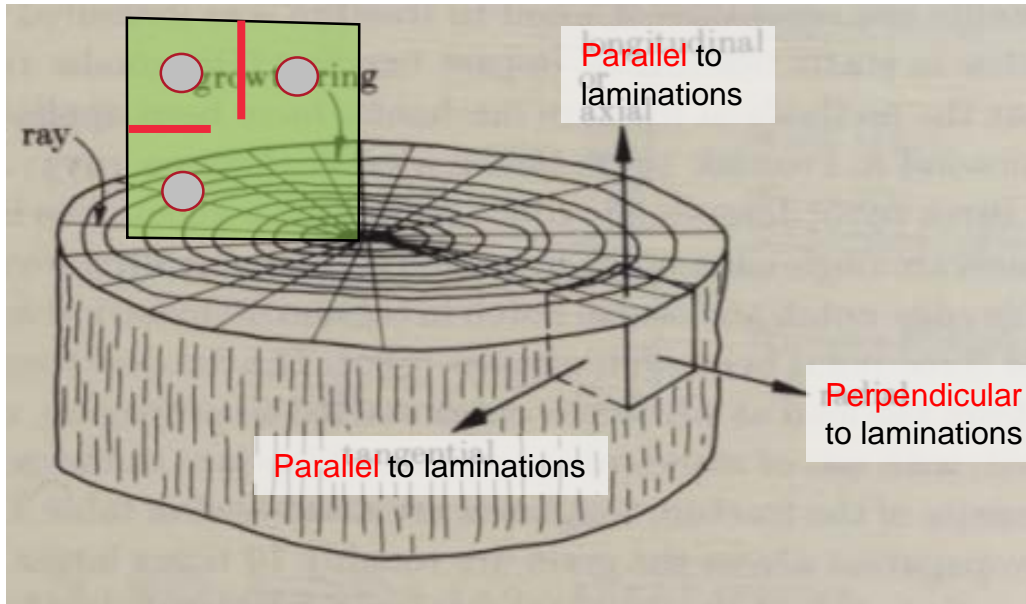


Fracture Growth through Laminations

Liberty Educational Video

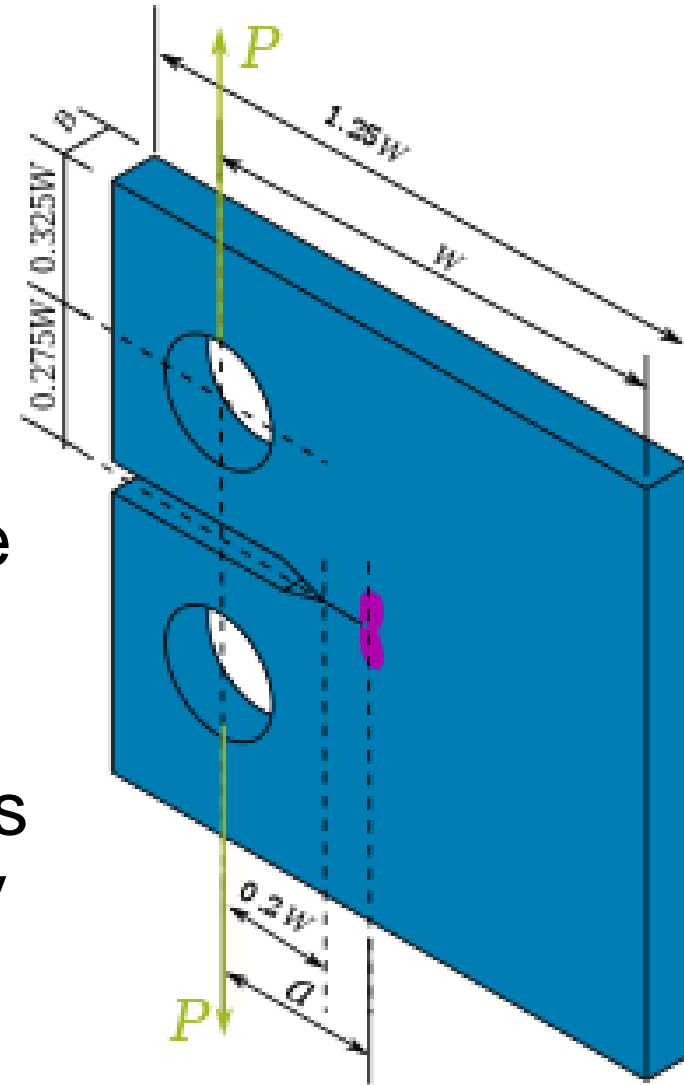


Tree Rings-to-Rock Layers Analogy



"Compact Tension Specimen" (Side View)

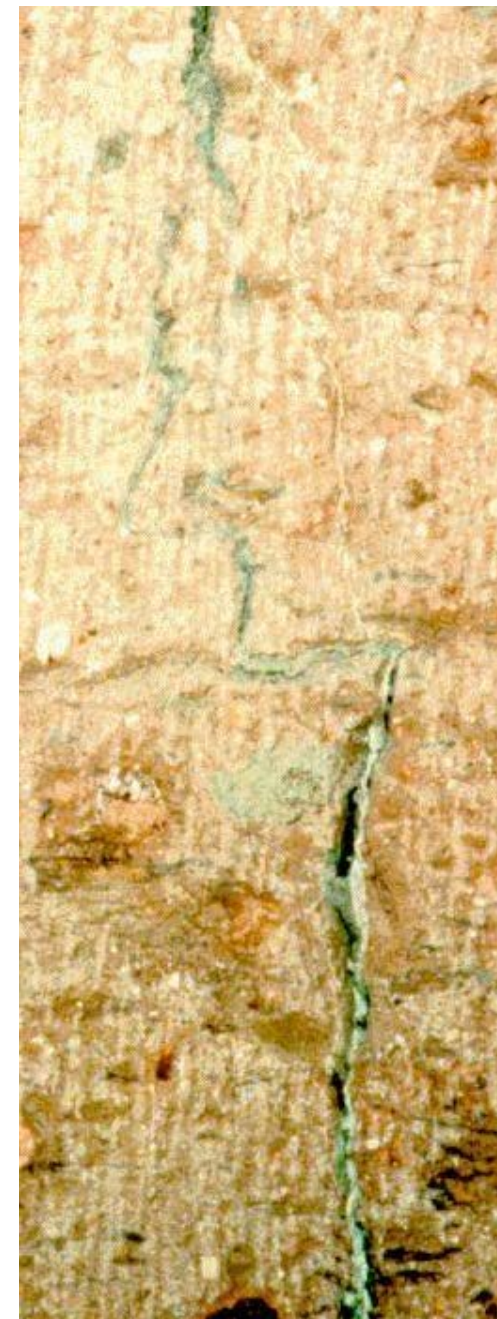
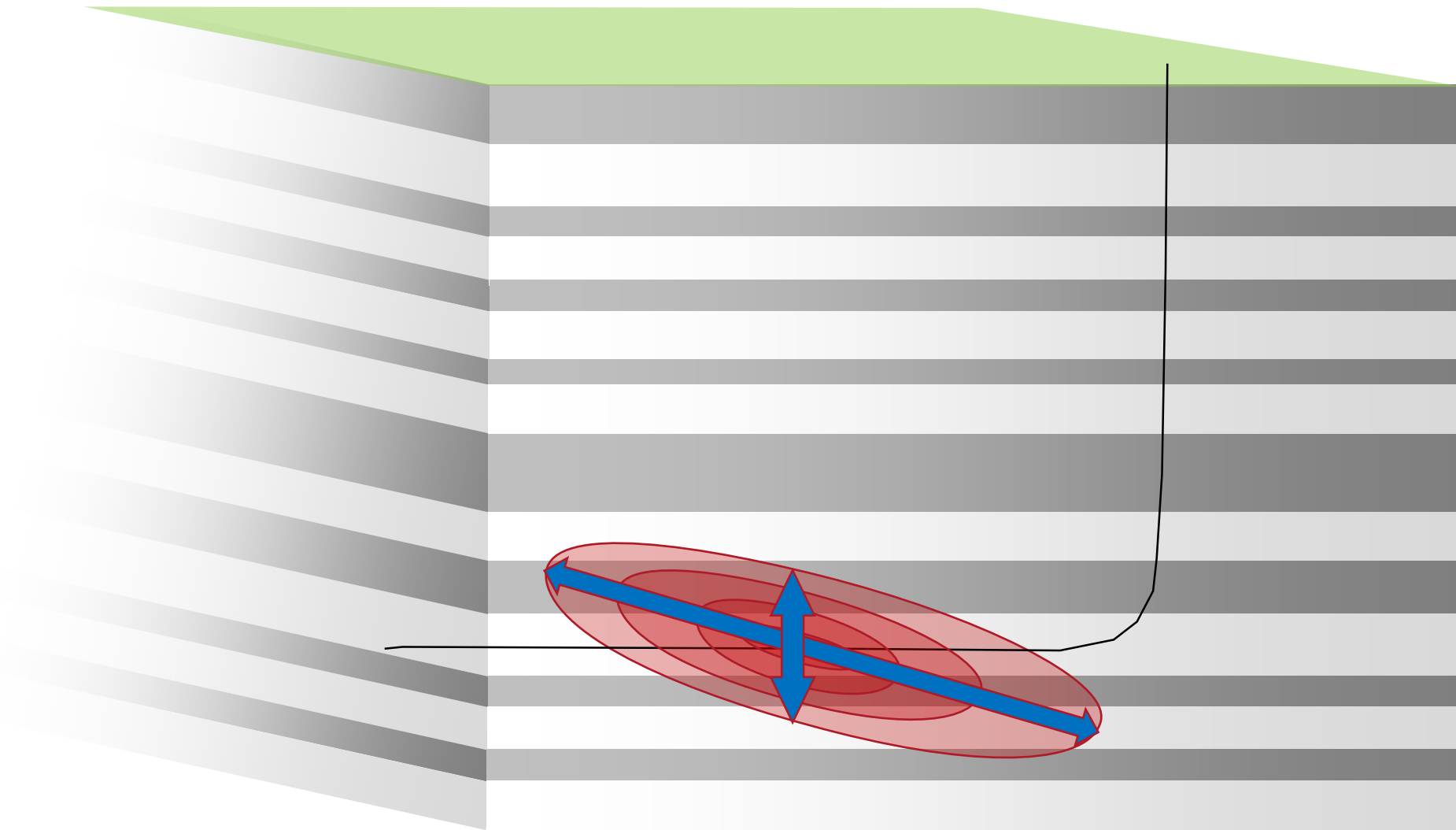
- Test to measure fracture toughness
- All sizes are standardized and scaled to the size of the sample
 - 12x12 inches; $\frac{1}{4}$ to $\frac{3}{4}$ inch thick
- Measure the pulling force by stepping on a scale and measure max weight beyond my body weight
- The force multiple through leverage on the 2x4 is a factor of about 17, and measured before every test



https://en.wikipedia.org/wiki/Stress_intensity_factor

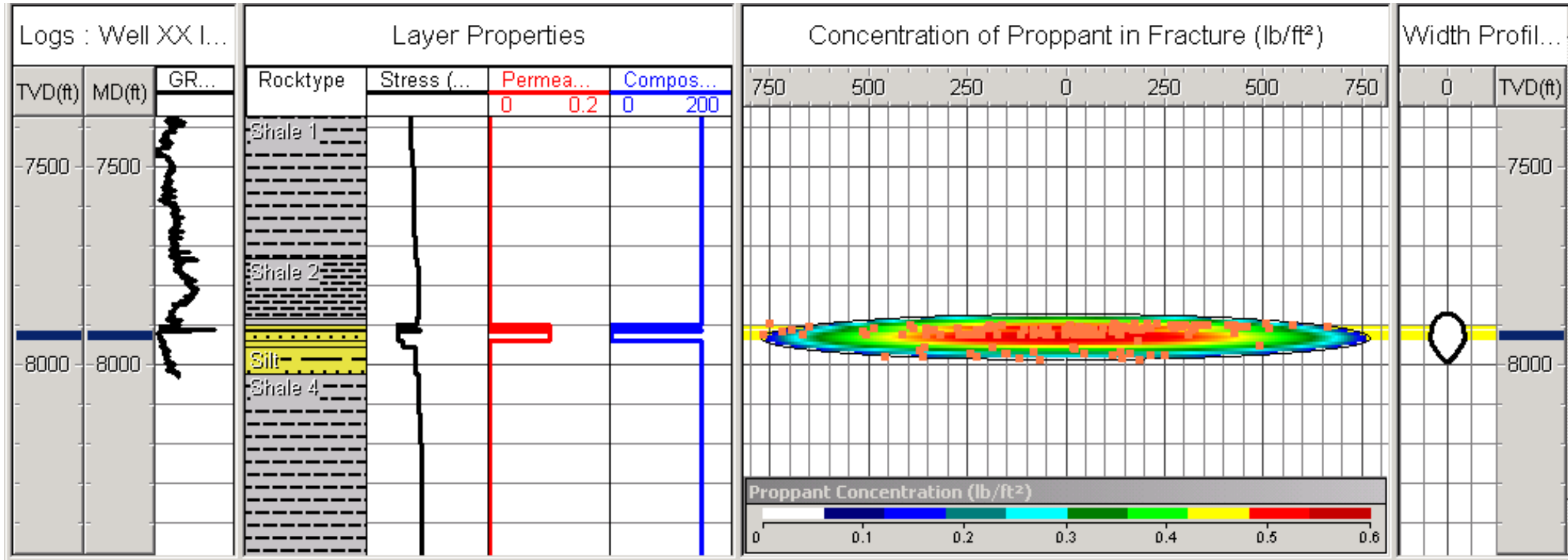
https://en.wikipedia.org/wiki/Compact_tension_specimen

Fracture Growth near Laminations



Mineback by Warpinski et al. (1984)

Composite Layering Creates Confined Fracs





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