Geomechanical case study: Cook Inlet Alaska

To case or not to case?

© Cambridge University Press Zoback, Reservoir Geomechanics (Fig. 10.21, pp. 334)
Emperical strength model from cores

\[ C_0 = 1.745 \times 10^{-9} \rho V_p^2 - 21 \]

© Cambridge University Press Zoback, Reservoir Geomechanics (Table 4.1, Eq. 5, pp. 113)
Pressure drawdown and sand production

500 psi slow drawdown  ~ 60° breakouts
Preventing sand production by limiting production rate

© Cambridge University Press Zoback, *Reservoir Geomechanics* (Fig. 10.23, pp. 336)
Preventing sand production with perforation orientation

© Cambridge University Press Zoback, *Reservoir Geomechanics* (Fig. 10.24a, pp. 337)
© Cambridge University Press Zoback, *Reservoir Geomechanics* (Fig. 10.25, pp. 338)
Preventing sand production with azimuth changes

Considering fixed horizontal perforations

© Cambridge University Press Zoback, *Reservoir Geomechanics* (Fig. 10.24b, pp. 337)