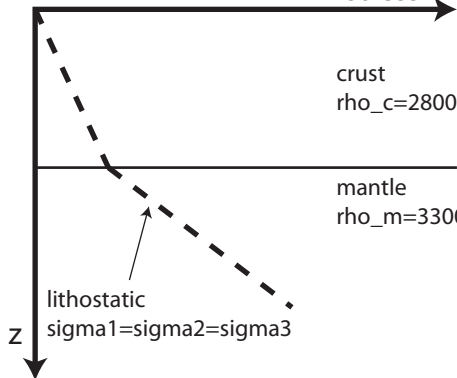


1-

Compressive Stress > 0

stress

crust
 $\rho_c = 2800 \text{ kg/m}^3$ mantle
 $\rho_m = 3300 \text{ kg/m}^3$ lithostatic
 $\sigma_1 = \sigma_2 = \sigma_3$ 

2-

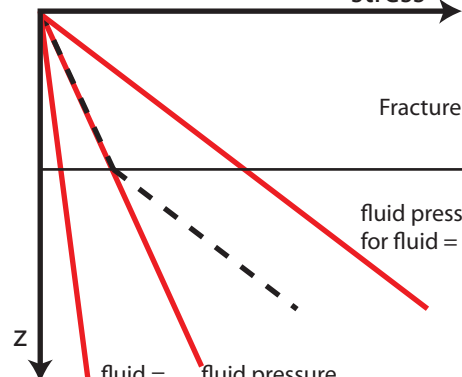
fluid pressure (no overpressure)

stress

Fracture can reach the surface

fluid pressure
for fluid = 3300 kg/m^3 fluid = 2700 kg/m^3 fluid pressure
for fluid = 2800 kg/m^3

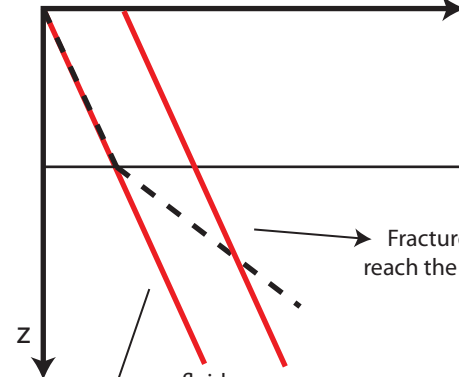
Fracture cannot reach the surface

 z 

3-

+ P_o

stress

Fracture can
reach the surfacefluid pressure
for fluid = 2800 kg/m^3 Fracture cannot
reach the surface z 

4-

- P_o

stress

zone where
fracture is trappedfluid pressure
for fluid = 3100 kg/m^3 z 