

PGE 251

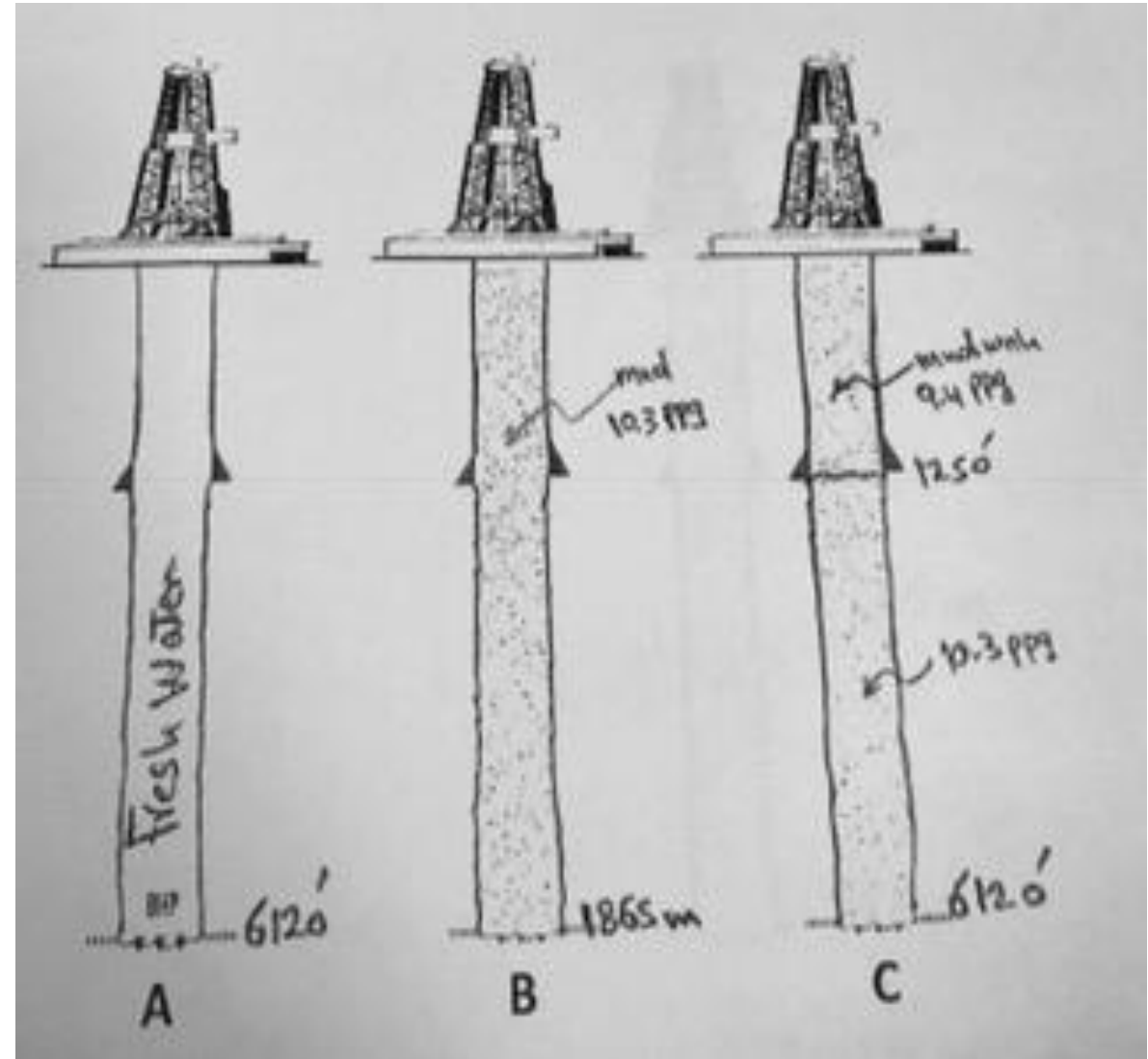
Tutorial#3

- Hydrostatic pressure (psi)= Mud density (ppg) * TVD (ft) * 0.052
- Pressure Gradient (psi/ft)= Mud density (ppg) * 0.052
- Drilling Mud Density (ppg)= hydrostatic pressure (psi)/ (TVD, ft *0.052)

Exercise#1

Calculate the hydrostatic pressure:

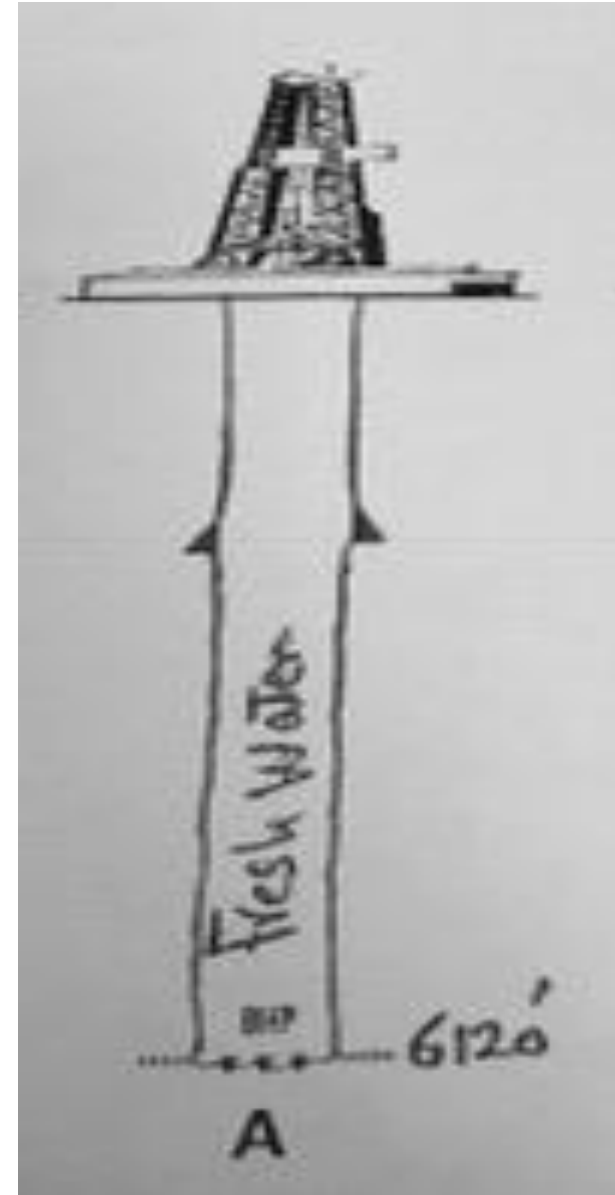
- A) Assuming only fresh water
- B) Assuming the well is filled with 10.3 ppg mud.
- C) Assuming the well is filled with 9.4 ppg mud to a depth of 1250 ft and the rest is filled with 10.3 ppg



Exercise#1

Calculate the hydrostatic pressure:

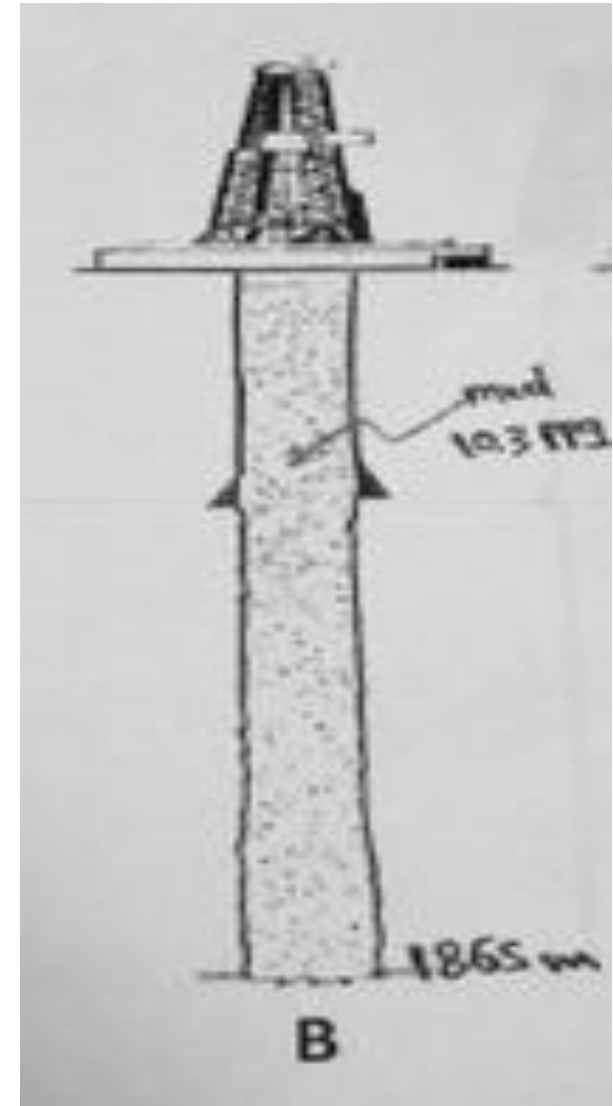
A) Assuming only fresh water



Exercise#1

Calculate the hydrostatic pressure:

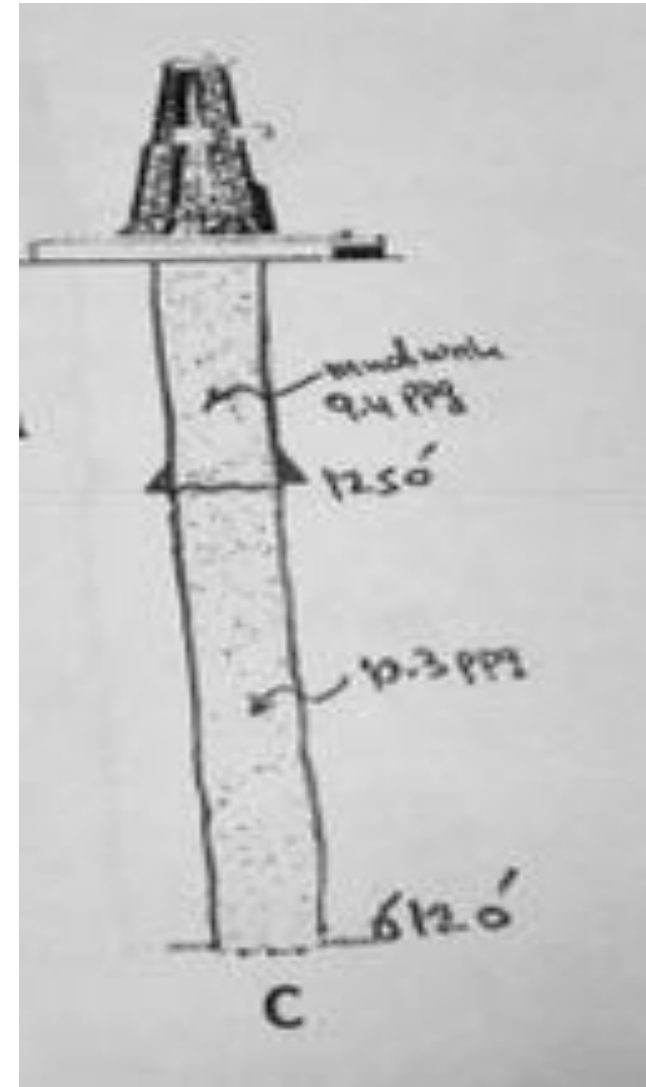
B) Assuming the well is filled with 10.3 ppg mud.



Exercise#1

Calculate the hydrostatic pressure:

C) Assuming the well is filled with 9.4 ppg mud to a depth of 1250 ft and the rest is filled with 10.3 ppg



Exercise#2

- What will be the new mud density if the surface shut in pressure gauge reads 400 psi, assuming safety factor of 150 psi

