What to know for the exam.

- **Theory: the lecture notes chapter 1 to 9.**
  - How does a logging method work
  - What are specific logs measuring
  - What are the pitfalls
  - How do cross-plots work
  - What are the do's and don'ts for environmental corrections
  - What happens during and after drilling with the well, sidewall samples, cores, etc.
  - Geothermal gradient and effect on fluid resistivity and bottom hole pressure

- **Exercises with the theory and laboratory assignments:**
  - You understand and replicate the exercises Bad Bentheim, Olga, Saturnus, Tuffy, Simple and the field exercise of the last two sessions.
  - You can calculate porosity and permeability with Darcy, Poiseuille, Carman-Kozeny, Pyknometer.
  - You understand and can calculate errors.

- **Equations you must know by heart and know how and when they are used!**
  - ARCHIE 1, 2 (Rw, Ro, Rt, m, n, phi)
  - PRINCIPLE OF WAXMAN-SMITH
  - SHALE VOLUMES BY GR, SP, FDC/CNL
  - Porosity equations: ARCHIE, FDC/CNL (total & effective), SONICS (Whiley), DENSITY
  - Darcy, Poiseuille, Carman-Kozeny
  - Capillary equations (two & combined)
  - Multi-mineral principle (n equations with n unknown).