Functions of Drilling Fluids
   1) Clean the bit and hole of cuttings
   2) Hydrostatic pressure to control formation pressures
   3) Hole stabilization, keep the hole open till casing
   4) Cool and lubricate the bit and drill string
   5) Prep the hole for formation evaluation

Do this without
   1) Damaging the productive formations
   2) Cause corrosion on drilling equipment
   3) Breaking down downhole formations

Types of Fluids Used

   Pneumatic systems
       1) air
       2) mist
       3) foam

   Liquid systems
       1) clear water
       2) water based muds
           Fresh water
           Salt water
           Oil
       3) Oil based muds
       4) Synthetic muds

Selection of Drilling Fluids
   Types of formations drilled
   Downhole Temperatures
   Pore pressure anticipated during operations
Logging procedures (Formation Evaluation)
Water that is available
Eco problems

Properties of the Fluids (liquid)
Weight  #/gal
Viscosity (Newtonian and Nonnewtonian)
  Marsh Funnel  sec
  Apparent, plastic viscosity  cp
  Yield point  #/100 ft²
  Gel Strength  #/100 ft²
Water Loss  cc’s
Filter Cake  cm
Ph
Solid content % vol
Chlorides  ppm  mg/l

Type3s of components
  Active solids react with the water phase
  Inactive do not react with the water phase