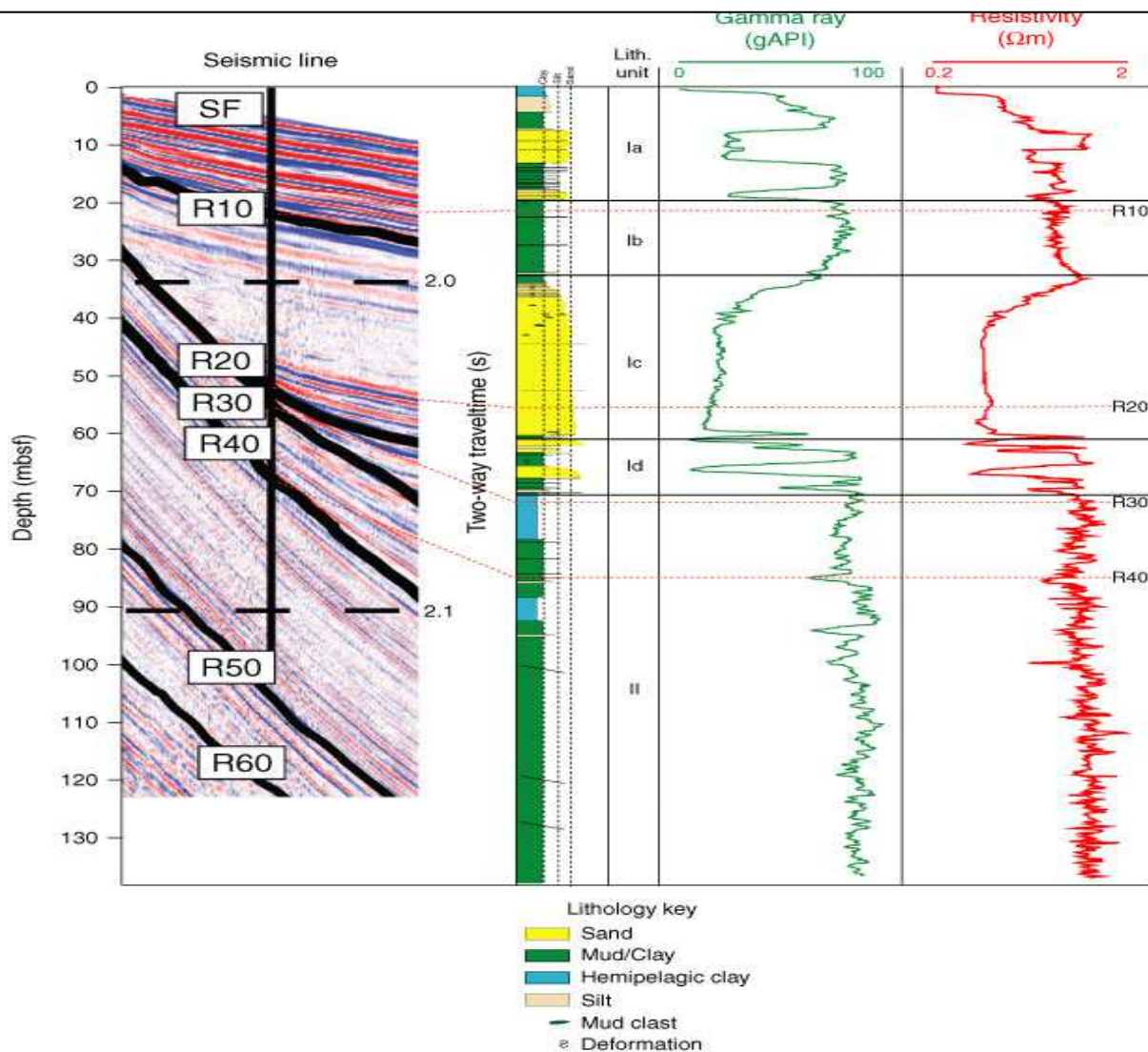


Downhole logging

- Holes drilled by drillbit with diamonds, drill rotates to drill downwards
 - Cooling and lubrication by dense drilling mud
 - Tiny (mm sized) rock chipping brought to surface by returning mud
 - Rock chippings can be analysed to determine rock type and microfossil content
-
- A wireline sonde may be sent down the drill hole to measure how a number of factors vary with depth
 1. Porosity high porosity gives greater ability to store water oil or gas
 2. Resistivity the ability / resistance of the rock to the flow of electricity (high water content = low resistivity; hydrocarbons = high resistivity)
 3. Gamma ray amount of gamma rays produced by radioactive decay is measured (source rocks such as oil shales give high gamma ray counts, sandstones = low gamma ray counts)



Which sandstone layer is potentially best for hydrocarbons and why have you chosen it?