

## COMPACTION OF SHALE WITH DEPTH

### Instructions

1. Plot the changing porosity, pore diameter and temperature with depth.
2. Comment on the movement of fluids from the source rock into an adjacent sandstone at various depths.
3. What factors are going to make movement of fluids easier, and what factors are going to make it more difficult?

depth (m)	porosity (%)	pore diameters (nm = $10^{-9}\text{m}$ )	Temperature °C
600	27	20	40
2000	15	10	60
3000	9	5	110
4000	6	2.5	160
5000	4	1.5	200

### Teacher's section

#### Answers

High temperature therefore lower viscosity and high pressure make the movement easier whereas small pore size makes it more difficult.