

A stratigraphy problem: answers

The **stratigraphical order**, youngest at the top, is:

Quaternary

Cretaceous

Jurassic - the ammonite is a zonal fossil of the Lower Lias

Permian

Probably Carboniferous

Age uncertain

Devonian age

Ordovician age - the graptolite is a zonal fossil of the Llanvirn Series

The **geological history** is:

1. Marine sediments were deposited in the Ordovician.
2. Either rock F was deposited in the Ordovician, Silurian or Devonian
or there is a gap in the succession which indicates erosion and/ or non-deposition.
3. Igneous activity in the Devonian resulted in either extrusive lava or an intrusive sill.
4. Either rock F was deposited in the Devonian or Carboniferous
or there may have been some erosion and/or non-deposition.
5. Sediments were probably deposited in the Carboniferous.
6. Earth-movements tilted the rocks and a normal fault formed
7. Igneous rock was intruded along the line of the fault in the Permian.
8. Erosion resulted in a flat-levelled surface.
9. Marine sediments were deposited in the Jurassic.
10. Earth movements tilted the rocks.
11. Erosion resulted in a flat-levelled surface.
12. Marine sediments were deposited in the Cretaceous.
13. Erosion, probably with non-deposition.
14. Fluvial sediment was deposited in the Quaternary.
15. Erosion.