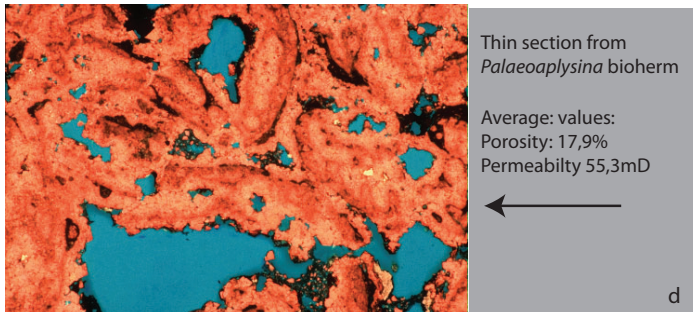




(a): Palaeosol transgressed by ?late Moscovian flooding. The green coloured part of the palaeosol suggests reduction of iron due to percolating sea water. Coral growth initiated above a calcareous transgressive conglomerate i.e., ravinement. Rapid establishing of coral fauna on transgression above an exposed surface seems to be a common feature of the Wordiekammen Formation, suggesting flat ramp profiles and considerable costal onlap and back stepping of siliciclastic input. This transgression occurs all over Svalbard and on the Barents Sea Platform and might be connected to the onset of the “mid” Pennsylvanian interglacial eustatic sea level rise in the Gondwana.

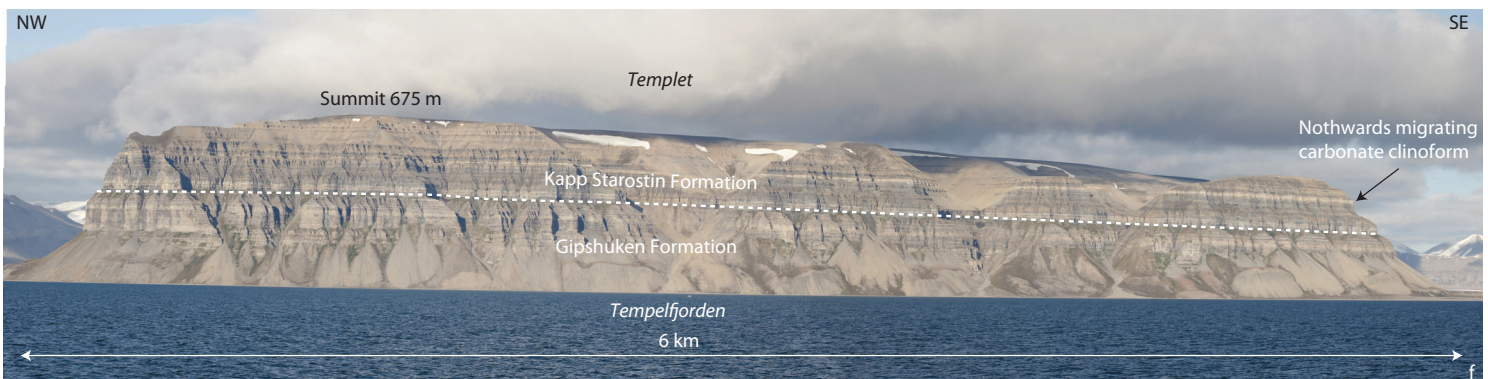
(b): Vuggy moldic porosity in the dolomites of the post rift deposits of the Wordiekammen Formation. Inter-, intraparticle and crystalline (dolomite) porosity is common and overprinted by typical freshwater dissolution as vuggy, mouldic. Fractures enhance permeability. All in all given a complex porosity permeability system. Asvindalen, Billefjorden.



(c): A 3 m thick and 20 m wide porous and permeable floatstones and bindstones forming a *Palaeoaplysina* bioherm. Wordiekammen Formation, Billefjorden.

(d): Thin section from a *Palaeoaplysina* bioherm. Blue stained for porosity.

(e): Lower part shows Lower Permian evaporites (anhydrite /gypsum) intersected by two shallow marine dolomite beds. The evaporites represent salinas.



(f) The warm water carbonates platform deposits with a few gypsum beds of the Gipshuken Formation (TSE 3) overlain by cold water carbonate and spiculites of the Kapp Starostin Formation (TSE 4). Both formations show porous and permeable beds, e.g., intra-, inter particle, vuggy, mouldic and intercrystalline porosity and are commonly extensively fractured. Templet, Sassenfjorden.