

Palynostratigraphy and Carbon Isotope Stratigraphy of Permian-Triassic (P-T) Strata in the Timan-Pechora basin.

W.M. Kürschner, E. E. van Soelen, A. Rusinovich, O.I. Suprunenko

w.m.kurschner@geo.uio.no

Permian-Triassic (PT) strata were studied in 4 cores located alongside an E-W transect from the eastern Barents Sea to the eastern part of the Pechora Sea. Twenty-five samples were analyzed for palynology, palynofacies and bulk C-isotope composition to improve the stratigraphic correlation of the P-T transition. P-T sediments comprise shallow marine to continental mixed siliciclastic sediments with some limestone intercalations deposited on a shallow shelf with deltaic complexes and fluvial-estuarine sediments. All samples show a C-isotope composition of about -27 per mill. We did not find negative CIE. Some of the mud-siltstone samples yielded well preserved palynomorph assemblages dominated by taeniate and bisaccate pollen and spores. The maturity of the organic matter is low, TAS 1-2. The presence of acritarchs and amorphous organic matter particularly in the Upper Permian indicates a shallow marine depositional environment. Reduviasporonites and taeniate pollen (Weylandites, Vittatina) are indicative of the P-T boundary interval. The Early Triassic palynofacies is dominated by wood remains, cuticle fragments and some degraded amorphous matter characteristic for fluvio-deltaic sediments. However, we did not find any interval with spore dominated assemblages, as reported from Greenland, the Barents Sea or Svalbard. Our preliminary data may indicate a sedimentary hiatus at the P-T boundary in the Timan-Pechora basin or the absence of P-T boundary features reflects the rather low sampling density in the cores.