

## Badania paleomagnetyczne i rock-magnetyczne skał triasowych Archipelagu Svalbard (Palaeomagnetic and rock-magnetic investigations of the Triassic rocks from Svalbard Archipelago)

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The main objective of the project is to determine the magnetic properties of the Lower Triassic rocks within the Sassendalen group and to connect them with the diversity of facies forms and with the diversified thermal history. Lithology and the tectonic history of the study area are diversified – in the western part of Spitsbergen, investigated rocks are associated with the West Spitsbergen Fold and Thrust Belt (WSFTB), whereas in central part these deposits are not remarkably deformed but were partially heated in the wake of contact with dolerite intrusions. The complex thermal history of the study area and the facies forms have had a significant impact on the course of diagenetic processes, the thermal maturity of organic matter and the mineralization in this area. Preliminary rock-magnetic studies of rock samples collected from the WSFTB have demonstrated certain variation in respect of the quantity and the type of magnetic minerals. AMS outcomes show correlation between orientation of main structures along the WSFTB and AMS axes. Paleomagnetic methods, using secondary magnetic minerals present in these rocks, will be also applied for estimating the age of mineralization. Analysis of the directions of magnetic remanence in areas with a low tectonic impact (Central Spitsbergen) and highly tectonised areas may enable the drawing of conclusions regarding the tectonic origin of the study area, and particularly degree of possible rotation within the WSFTB.