

## Abstract:

This master thesis analyzes the facies development of the boundary interval of the Klabava and Šárka formations in the Ordovician of the Prague Basin exemplified by two localities: Ejpovice and Strašice. The literature research of the thesis provides an overview of the studied area containing information about palaeogeography, palaeoecology, palaeontology, stratigraphy, volcanism and tectonics. Origin of the sedimentary units such as oolitic iron ore or phosphate nodules are also discussed, since they are found in the studied rock material.

The research part comprises a detailed field study of the sections focusing on sedimentological phenomena and facies analysis. Each locality represents different environment within the basin. Based on field work the lithotypes were petrographically described and the stratigraphic columns were made. Both sections were sampled for X-ray powder diffraction and optical microscopy analysis. Detailed description of the profiles and the facies including their structures, composition and succession were fundamental for creating a model of the facies evolution in the studied interval.

The position within the basin and the distance from the volcanic centre were crucial in the facies evolution in both localities. The Ejpovice section is characteristic by a rhythmic succession composed of iron ore, reworked tuffs and tuffitic shale strata, which reflect episodes of volcanic activity connected with the seismic activity. The Strašice section was situated in the proximity of the volcanic centre and therefore it is represented mostly by reworked tuffs. Due to the uncertain accurate stratigraphical position of the Strašice section two alternative stratigraphical models related to the period of the intensive accumulation of volcanoclastics: large volumes of volcanoclastics deposited during the beginning of the Oretanian are supposed in the first model, whereas in the second case the volcanoclastic sedimentation had been significantly decreased before the end of the Arenigian.

Key words: Ordovician, Arenigian, Oretanian, Klabava Formation, Šárka Formation, Prague Basin, oolitic iron ore