

Abstract

Rocks with red, green and yellow colour, overlying coal seams reduced in thickness occur locally in the south-western part of the Upper Silesian Coal Basin. Macroscopic description of these rocks indicate weathering changes and thermal transformations which genesis is not clear. These rocks may have formed at the contact of the igneous intrusions or as a result of coal fire. The project assumes the origin of variegated rocks as remains of peat burned-out in the Carboniferous.

The main scientific aim of the project is to present geochemical, petrographical, mineralogical and palynological characteristics of coal-bearing rocks and overlying variegated rocks occurring in the area of thinning and disappearing coal seams in the Upper Silesian Coal Basin and explore their magnetism. Such spectrum of planned studies have not been performed for this type of rocks so far and they should provide conclusive evidence to identify the cause of coal reduction.

The authors of the project will use methods and experience achieved in similar studies conducted on coal-wastes dumps which underwent selfheating and selfignition. We are planning to examine 100 samples of coal and altered gangue rocks as well as studies of archive materials from the coal mines.