

RECONSTRUCTION OF EARLY STAGE OF FOREDEEP BASINS: AN EXAMPLE FROM THE POLISH CARPATHIANS FORELAND AREA (SE POLAND)

KARNKOWSKI P. H. Institute of Geology, University of Warsaw, Al. Zwirki i Wigury 93, 02-089 Warszawa, Poland,

During the Miocene in the area of the present Eastern Polish Carpathians Foreland the sedimentary basin existed which was created due to loading of the overthrusting Carpathians. Before this episode this area was intensively eroded. The Palaeogene morphology was sharp, diversified and it had an important influence on sedimentation of the Miocene sequences. All hitherto geological works underlined the importance of the Late Palaeogene morphology during the Miocene sedimentary period in the Carpathian Foredeep. Until now, the quantitative pre-Miocene palaeomorphology map was not established in the study area. Reconstruction of this palaeomorphology in the Polish Carpathians Foreland seems to be possible due to dense grid of seismic lines. On the basis of the seismics and boreholes the map of the present top of the pre-Miocene surface was constructed. Due to palinspastic procedure this surface was uplifted by burial value caused by the overthrusting Carpathians. The surface obtained by this operation was the pre-Miocene image in the Late Palaeogene. The maximum height differentiation exceeded 2000m and depth of valleys reached 1000m. Peneplanized and sharply variegated areas are localized. Such differentiation had to influence on the architecture of sediments slowly infilling space of accommodation bordered by the margin of the Miocene Basin: by the Meta-Carpathian Swell to the north and the Carpathians to the south. The image obtained by such procedure give the rise to further speculations on the sedimentological conditions in the Carpathian Foredeep.