

## **Late Jurassic Biohermal Buildups in the Central Part of the Carpathian Foreland**

By

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The main goal of my investigation is a reconstruction of regional and geodynamical characteristics of Upper Jurassic biohermal buildups, deposited on the northern peri-Tethyan shelf system. This now occurs in the platform substratum of the central part of the Carpathian Foreland, which is one of the main petroleum exploration areas in Poland.

Biohermal limestones, overlain and sealed by the marly intercalations, may be treated here as prospect rocks with reservoir properties enhanced by dolomitization. Stratigraphically, platform strata of this region are relatively poorly documented compared to the outcrops encountered in the SW margin of the Holy Cross Mountains and the Cracow-Wielun Upland where a sedimentological study of Jurassic profiles will be carried out and samples collected for acoustic measurements.

Detailed interpretations of seismic 2D and 3D data, focusing on Jurassic strata, as well as seismostratigraphic analyses (including attribute mapping), supported by the results of boreholes measurements (dipmeter and sonic logging) and core samples, resulted in the identification of several objects corresponding to the conceived depositional model. Correlation mapping accompanied by variance analysis of seismic traces for the whole seismic cube proved useful for emphasizing biohermal objects together with other incoherent features, like faults and flexures.

Seismic modeling in 2D and 3D will be performed using geological models defining an origin and situation of biohermal objects in the depositional system, followed by the creation of seismic models and synthetic sections and comparing them to recorded seismic data. An identification of diagnostic features on seismic image will be made.