

Geological and geophysical studies have recently become in Poland quite well recognized. One of the main reasons for this was and is still intense exploration for shale gas, carried out in our country by Polish and foreign oil companies. Results of this exploration are until now not too promising, but one of the very positive effects of all those efforts is acquisition of a huge amount of geophysical and geological data that portrait deep subsurface of Poland. All this data – acquired using exclusively industry funds – can be used not only for exploration for oil and gas but also for research projects, that aim to better understand last several hundreds of millions of years of Earth's geological history. Such research projects based on industry data but focused on scientific problems have been realized in many countries.

Proposed research project will be based on data acquired within unique - on European scale or even globally – seismic project called PolandSPAN, realized in Poland by ION Geophysical from Houston, USA. Data of this seismic project have been acquired above the so-called the East European Craton – vast geological unit extending from Poland and Ukraine to Ural Mountains. In Poland, the East European Craton is located in its northeastern part. Within the project, part of the data located in Pomeranian region, within the so-called Baltic Basin, will be analysed.

Planned studies will focus on very detailed interpretation of seismic data. During interpretation information from deep archive research wells drilled in past decades in this part of Poland will be used. Obtained results supplemented by other publicly available data will form a starting point for very advanced computer modelling of last ca. 540 Ma of geological history of this part of Poland. Very high quality of available geophysical (seismic) data that will be subjected to interpretation, experience of the research teams from two research institutes from the Polish Academy of Sciences (i.e. Institute of Geological Sciences and Institute of Geophysics), access to very modern computer software for analysis of seismic data and for computer modelling of evolution of sedimentary basins guarantee that obtained results will provide new information on numerous aspects of geological evolution of large part of Poland. Research team will include two PhD students, and extensive international co-operation will allow implementing various research techniques so far not used in Poland.