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## Aspects of scientific research in the search for hydrocarbons

Katarzyna Jarmołowicz-Szulc National Research Institute, Poland

Three case examples may be shown at present from the basins in the Central European area (in Poland, Ukraine and Slovakia). The study areas are: The marine area of the Baltic Sea (Polish sector), a part of the Polish Lowlands in central Poland and the fragment of the Carpathian Mts. at the Polish/Ukrainian/Slovak frontier region. These areas have different geological history, different geological structures, different ages of the deposits ranging from the Middle Cambrian through the Rotliegend to the Tertiary and different rock types. Still they are good and interesting examples for a presentation of the science significance. Detailed research in the Baltic Sea rocks shows a presence of petroleum in the Middle Cambrian sandstones and points to directions of potential oil migration in the reservoir and is an important tool for a prediction of hydrocarbon search directions. Data showing low and high temperature cement generations in the Rotliegend rocks in different boreholes in the Polish Lowlands result in a further discussion on hydrocarbons in the area. A general trend of an increase in oil content trapped in fluid inclusions in the quartz and carbonates in the Carpathian rocks and a reverse gas direction have been pointed out by the research.

## **Biography**

Katarzyna Jarmołowicz-Szulc has been a Scientific Worker in Polish Geological Institute-National Research Institute in Warsaw, Poland, Europe. In her career she was the Head of the Petrological, Mineral Deposits Departments, the Group of Rocks and Mineral Collections, the Centre of Excellence. She has coordinated many projects. She is the author of over 120 papers, a Reviewer and an Editor. She has experience in the fields of isotope studies, fluid inclusions and hydrocarbon migration in the Carpathians in the marine deposits from the Baltic Sea, other hydrocarbon-bearing regions as well. Presently she has been the Head of the National Geological Archives in PGI-NRI, Poland.

kjar@pgi.gov.pl

**Notes:** 

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