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## Characteristics of Hydrocarbons and Brines Trapped in the Minerals in the Polish Oil and Gas Field

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Oil fields are usually built of rocks of high permeability and porosity, sealed with not permeable rocks. So petrological studies are important in the search for hydrocarbon accumulations. In those studies - fluid inclusion analyses in the rock-forming minerals are significant. The tiny portions of fluids have been under studies in rock samples from different wells from the selected oil and gas field in Poland - the BMB oil field (onshore). Comparative is the Łeba Block (offshore). Sampling was performed at the relatively high depth in the Main Dolomite formation. Different types of minerals have revealed a presence of aqueous (AQFI) and hydrocarbon (HCFI) inclusions, the differentiation of which is relatively easy to be checked by means of fluorescence. Results of microthermometric measurements, when performed, comprise the information on different temperatures (for AQFI), that further give an input to characterization of fluids trapped in the mineral and the possible sequence of the mineral formation and/or fluid trapping. Based on the results obtained, the character of basic types of inclusions in the minerals may be described and discussed in the context of hydrocarbon migration and possible accumulation. The aim of the presentation is to show the importance of basic studies in the search for hydrocarbon accumulations.

### Biography:

Katarzyna Jarmolowicz-Szulc (Assoc. Prof) has been a scientific worker in Polish Geological Institute – National Research Institute in Warsaw, Poland. In her career, she was the head of the Petrological Department, Mineral Deposits Departments, a co-coordinator of the project "Support for the integration in the European Research Area" (REA), the head of Centre of Excellence, the head of the National Geological Archives, PGI-NRI, Poland. She is an author of over 130 papers. She has an experience in the field of isotope analyses, fluid inclusion studies in minerals, and hydrocarbon migration based on fluid inclusion research in the Carpathians, in marine deposits in the Baltic Sea and in onshore sedimentary basins. She has been a reviewer and an editor. At present she has been involved in two hydrocarbon projects.