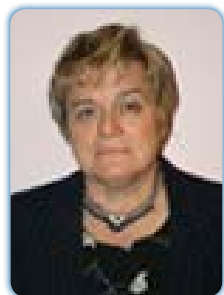


# OIL AND GAS

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### Fluids expelled tectonically and their role in hydrocarbon migration

As it has been postulated by Oliver (1986), when continental margins in zones of convergence are buried beneath thrust sheets, fluids expelled from the margin sediments go to the foreland basin and the continental interior. These fluids play key role in different phenomena, as e.g., faulting, migration of hydrocarbons, and mineral transportation. The North American case is a very good example of this hypothesis, relating both oil and gas fields and their occurrences as well as e.g., lead-zinc deposits to the tectonic belts there (as the Appalachians). In Europe, the Carpathian Mountains chain is a fragment of the orogenic belt that cuts a large part of the continent. Oil and gas fields are present in the Carpathians and the Carpathian Foreland, as well as hydrocarbons are accessible at the microscopic scale in fluid inclusions in minerals in the rocks. Hydrocarbons are very common and widespread in sedimentary rocks in the different Carpathian units and point to mobility and circulation of fluids. Such evidence has been already mentioned in general by Roedder (1984), and it is proved by recent publications concerning brine and hydrocarbon inclusions in the distinct zones at the Polish-Ukrainian boundary. The analysis has been conducted pointing to a presumed HC migration in two directions. The results are important in search for hydrocarbons.

### Biography

Katarzyna Jarmolowicz-Szulc is an Associate Professor and 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, Mineral Deposits Departments, the Group of Rocks and Mineral Collections, the Centre of Excellence and the National Geological Archives in PGI-NRI, Poland. She has been coordinating many projects. She is an author of over 120 papers, a reviewer and an editor. She has an experience in fields of isotope studies, fluid inclusions and hydrocarbon migration in different environments, as the Carpathians, in the marine deposits from the Baltic Sea, other hydrocarbon-bearing regions as well.

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