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Shale-gas potential in Poland

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Shale-gas formations are known to be associated with source rocks. Major oil and gas provinces in Poland have been reviewed with respect to source rock quality using a petroleum play concept. As a result, three potential shale-gas plays were distinguished: (1) Silurian of the western slope of the East European Craton, (2) Carboniferous of the Fore-Sudetic Monocline, (3) Miocene of the Carpathian Foredeep Basin.
Only the Silurian of the East European Craton and the Carboniferous of the Fore-Sudetic Monocline were further evaluated to delineate prospective areas as the Carpathian Foredeep Basin was not available for exploration license. The screening criteria used in this evaluation were main geochemical parameters: total organic carbon (TOC), thermal maturity and kerogen type, as well as depth, thickness and lateral extent of potential organic-rich shale formations. Three prospective areas have been delineated within the Silurian of the East European Craton: (1) Baltic Basin, (2) Podlasie Depression and (3) Lublin Basin, whereas one prospective area was high graded in the Carboniferous of the Fore-Sudetic Monocline. This evaluation was carried out based on the existing data gathered for the most part by the Polish Geological Institute.
The four shale-gas prospective areas have been characterized using lithology and depositional environments, geochemical data, structural evolution and burial history of Silurian and Carboniferous strata, as well as thickness of the organic-rich shales.
Published data concerning successful shale gas plays in the U.S. were collected to make a comparison with the prospective shale-gas formations of Poland.
The Polish government granted several exploration concessions over the last two years in each of the prospective areas. In the initial stage of exploration activities, EurEnergy have been focused on acquisition of more detailed geochemical data (based on existing core samples), preparation of geological and structural studies as well as determination of appropriate drilling strategy.