

**Секция «Геология»**

**Potential source rocks of Lower Paleozoic in Volyn-Podolia Basin (Western Ukraine)**

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Rapidly increasing interest in developing of unconventional hydrocarbon resources, including shale gas, stimulated a research of potential source rocks on the Volyn-Podolia margin of the East European craton.

Volyn-Podolia Basin is located in the western Ukraine and covers an area of more than 100 000 sq. km. During the long history of the region evolution from the Riphean to Quaternary 2 km up to 14 km thick sedimentary succession has been accumulated.

The enriched in organic matter sediments were formed during the Late Precambrian (Vendian), Cambrian, Silurian, Devonian and Early Carboniferous. The depth of the basin reaches its maximum in the south-west, and its minimum in the north-east being associated with facies changes from silty-clayey, bathyal, to siliciclastic, very shallow marine or sulfate-carbonate lagoonal.

According to the geochemical data available the organic matter content in Lower Silurian sediments is up to 2.93%, Upper Silurian – to 5.16%, Lower Devonian – to 1.12% giving the possibility to consider these successions as a potential source rocks. The content of organic matter in these sequences is supposedly controlled by lithology and maturity level, and increasing from north-east to south-west within the study area. The evaluation of the hydrocarbon potential of these sediments requires of more detailed study of their geochemical parameters and the maturity of source rocks.

**Слова благодарности**

Thanks to Popaduk I.V. and Karpenko A.N. for their support and instructions.