

Exploration Opportunities in the Western Part of the Ukrainian Black Sea

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The Ukrainian offshore covers an area of 130,000 sq. km; half of the area is situated within the deep water depths. Eight gas and condensate fields have been discovered within the Odessa shelf (western part of Ukrainian Black Sea). The success factor of drilling is 0.5. The productive horizons are located in Upper Cretaceous and Tertiary sediments. Present-day exploration activity is focused on inverted structural highs within shallow water area (<100 m). The potential resources of the Ukrainian Black Sea are evaluated as much as 2300 million tons of equivalent fuel. Less than 3% of them have been discovered by the present because of low exploration activity. The deepwater area (up to 2000 meters) has not been studied well yet even with seismic survey. Nevertheless, the recent expert appraisal based on interpretation of new regional seismic data by Ukrainian and Western oil-and-gas companies demonstrate very high prospects on discoveries of huge fields in the area.

The further HC prospects within shallow water area relate to traps: formed by pinching out of Paleocene-Eocene layers as well as valleys of Oligocene paleorivers. The main HC reserves are expected within the deep water area, where the potential resources may be much more than suggested earlier. Potential targets are Miocene-Pliocene submarine turbidite fans and Mesozoic buried hills. Gas chimneys are strong evidences for a likely HC generation system. Prospect leads in water depths of 100 m to 2000 m have a potential to contain hundred million barrels of recoverable hydrocarbons.