OVERVIEW OF THE NORTH CASPIAN BASIN

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Despite of negative results in finding giant and large fields during the last 10-15 years, the North Caspian basin still remains a highly prospective frontier. Complex geology, greath depths to the main subsalt plays, and poor resolution of most seismic surveys owing to the presence of thick deformed salt are responsible for the lack of exploration success. However, the potential for finding world-class fields continue to attract interest of major international oil companies despite of economic and political instability of the region.

Several regional plays, which were defined approximately 15 years ago, are still believed to contain the principal undiscovered potential. Among these plays, carbonate banks of the Tengiz type located offshore are certainly the most obvious prospects. Primary risks related to this play include salt seal integrity and resulting preservation of hydrocarbons and expected oil versus gas hydrocarbon phase. The Kashagan well presently in drilling will soon provide data on some of these uncertainties. Isolated atolls/pinnacle reefs similar to Karachaganak remain the most attractive targets along the entire northern and western basin margins. However, very limited progress has been recorded in pursuing this play since the discovery of the Karachaganak field primarily because of very deep occurrence of the prospects. No significant new fields were found in the structural trap play of the Zhanazhol type on the eastern margin. The Mesozoic salt-dome play is undoubtedly highly potential, but not for giant and very large fields. Presently, there are few players pursuing these prospects.

The lack of significant exploration success in highly prospective frontier basin for so many years suggests insufficient understanding of regional geologic factors controlling formation and preservation of oil and gas fields. Integrated analysis of all collected data is presently necessary to improve the exploration strategy.