



Uniqueness of Oil Extraction in Sedimentary Basin Characterized by Development of Different Dynamical Process

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Regarding petroleum development, Tatarstan is believed to have been thoroughly explored. In 2004, the Republic will produce more than 30M tons of oil. This production level has been possible to achieve through the use of innovation technique of drilling, production and development as well as the up-to-date methods of enhancing oil recovery (EOR). A hydrocarbon potential of Tatarstan is still high. However, the remaining reserves are limited to great depth, the fields that are difficult of access or to hardly recoverable deposits. Their development and production will not be possible or profitable without new exploration and drilling technologies, especially the fractured reservoir development technique that is absolutely necessary for studying the crystalline basement. In contrast to the above data, deficiency in the production of liquid hydrocarbons in Russia during the period of market reforms has reached 1.3B tones of oil and 2.8 trillion m³ of gas. In Tatarstan an oil production rate is 1.7 times higher than that in Russia as a whole, an increase in total reserves exceeding production. For comparison, a growth in newly added reserves in Russia makes only 50 to 75 percent of the produced oil. At the same time, general conditions of petroleum development in Tatarstan are apparently worse than in the rest of Russia. Most fields in Tatarstan are depleted, the regional oil beds have been fully studied, and today's exploration activities have to focus on small fields and the complex, hard-to-access pools located in less promising areas. Also, additional exploration and recalculation of available resources must frequently be done in the previously discovered fields. All these factors make any increases in potential reserves more difficult, but the old petroleum areas in Tatarstan still have some potentials to play an important role in the future. Lower formations of the Romashkino field could be recharged in the above-described way. In this connection, it is necessary to study not only the Archean and Proterozoic of the

ancient platforms but also the Paleozoic basement of the Western Siberia, Mesozoic basement of Caucasus, etc. There is a number of well-known hypotheses that should also be tested without bias. For instance, a theory about the methanoic sphere as a main source of hydrocarbons, enriched with methane in deep sedimentary basins (Yusupov 1982), and the one about thrust dislocations within platforms (Kamaletdinov et al. 1981).