



## **Historical Aspects of Development of Russian-Ukrainian Theory of Deep, Abiotic Origin of Petroleum**

Rinat Gabdrakhmanov (1) and Nail Minibaev (2)

(1) Kazan State University, Kazan, Russia (akhilless@mail.ru), (2) Kazan State University, Kazan, Russia (miniby@mail.ru)

The origin of oil and gas arouses great interest because the success of their search depends on the correct perspective on this issue. Any theory arises on the basis of factual material and works up until new evidence does not begin to contradict her. Just such a situation has developed in the question of the oil and gas genesis nowadays. Collected morden results of geological and geophysical investigation of oil and gas fields and results of deep drilling and well monitoring did not link to traditional concepts about the genesis of hydrocarbons.

The modern Russian-Ukrainian theory of deep, abiotic petroleum genesis developed from the sciences of chemistry and thermodynamics, geology, geochemistry, geophysics. This theory deals with many aspects of deep process in the mantle and earth crust. Development of any theory ore hypothesis has individual history of emergence, main directions of progress.

The history of petroleum science had begun in the 1757 when the Russian person of natural gifts M. Lomonosov suggested the hypothesis that oil might originate from biological detritus. During the end of the nineteenth century famous Russian chemist Dmitriy Mendeleev stated clearly that oil is a primordial, native material from great depth, mantle. The modern Russian-Ukrainian theory of abiotic origin of oil and gas was first enunciated clearly by Nikolay Kudryavtsev at the International petroleum geological congress.

Acquirement of development history of science theoretical base of Russian-Ukrainian theory of abiotic petroleum genesis is the most part of oil geology and geological science. Development of this science theoretical base deals with names of famous scientists and investigators as P. Kropotkin, V. Porfir'yev, N. Kudryavtsev, V. Kraiushkin V.Linetskii, K. Anikiev, and another. Investigation of historical aspect affords an opportunity to demonstrate connection between origin of petroleum and deep structure of the Earth, up-to-date tectonic process, thermodynamic of hydrogen-carbon systems, deggasing of the mantle, reduced fluid system.

Now in Russia there are some scientific school, which continue to expand doctrine of deep oil genesis. Significant results were obtained in Tatarstan. In the mid 70-ies first permeable seal failure zones in the crystalline basement (CB) were identified saturated by reservoir water. In 2000, researchers of Tatarstan (Russia) organized monitoring of 5 deep wells (Ibragimov, Plotnikova, 2009). Influx was obtained in a depth of 5099m in the well number 20000 of Minnibaevskaya field (Muslimov et. al., 1975, 2006) Wells that gave depth highly mineralized fluid confined to zones of tectonic faults (to the boundaries of blocks). Benzene was found in the water derived from wells number 20000, and it is a direct indicator of the possible detection of hydrocarbon deposits. Significant changes occurred in the content of heavy hydrocarbons in the gas composition of basement groundwater. An analysis of the results of the well monitoring showed the relationship between water of CB and seismic activity in this region (Ibragimov, 2007).