



Applicability of new technologies in order to enlarge Kelebija deposit reserves

M. Francuski (1), M. Beric (2)

(1)Nis Naftagas, Novi Sad, Serbia, SRB (2)Nis-Naftagas, Geophysical Institute, Belgrad, Serbia, SRB, (mifran.c@mail.nis-naftagas.co.yu)(phone +381214813207)

Kelebija oil field is located in the southeastern part of the Pannonian basin. The deposit is unique geotectonic form. Basis of the structure is made of effusives and pyroclastics as products of intensive volcanic activity performed during the Lower Miocene. Final shape of the structure was made during Neogene, through continual sedimentation, beginning from Sarmatian to recent time, as well as sinking of sediments along dislocation surfaces. Three gravitation faults – NW, NE and the fault at the southern part of the structure present boundaries of the oil field. Kelebija oil field followed by sunk blocks is defined as a hydrodynamic unit, except its southern part, where the hydrodynamic barrier is in the form of W-E oriented fault.

Reservoir rocks of hydrocarbons are limestone, pyroclastites and effusive characterized by porosity of combined type. Oil from the Kelebija deposit belongs to category of heavy type with high viscosity. On the basis of recent exploration, it can be concluded that oil from that field is low-maturated and moderately biodegraded.

According to the complex analysis of the field and physico-chemical characteristics of oil, Kelebija field was the most suitable for application of RWT (resonant-wave technology) method. The method provided the best results at highly saturated deposits containing oil characterized by high density and viscosity. On the basis of detailed analysis of RWT method application at the oil fields in Russia, it can be concluded that application of the method at the Kelebija field will be useful for significant enlargement of the reserves.