

Geodynamic evolution , oil and gas content of the Zond shelf basement

¹GAVRILOV V.P., ²ARESHEV E.G., ³DONGC.L., ³ZAO N.,
²POPOV O.K., ¹POSPELOV V.V., ³SHAN N.T., ¹SHNIP O.A.

¹State Gubkin University of oil and gas, Moscow, Russia; ²RVO "Zarubezhneft", Moscow, Russia; ³JV "Vietsovpetro", Vyingtau, Vietnam.

General direction of Zond shelf geodynamic evolution is determined by progressive propagation of continental areas due to shortening of oceanic basins areas. Basic mechanics of the crust granitic stage forming were subduction processes, leading to accretion masses accumulation their thermal and metasomatic alteration with partial palingenesis.

Zond shelf basement is composed of "packages" of sedimentary-metamorphic and magmatic complexes which have overlaid each other successively.

The origin of oil in Zond shelf basement granites is disputable, especially for Southern shelf of Vietnam (White Tiger, Dragon and other fields). To the authors' opinion hydrocarbons could have been generated practically simultaneously with forming of the crust granitic stage of the region in question as a result of thermal alteration of organic matter contained in primary sedimentary rocks and also as a result of sublimation and thermolysis of biogenic matter, drawn down with oceanic sediments into underthrust zone of lithosphere plates.

The main conclusion is that Earth crust granitic layer which forms platform basement is hydrocarbon bearing within Zond shelf as well as in other regions of continental structures. Consequently granitic layer can be considered as a new potentially hydrocarbon bearing stage of the lithosphere.