



## **Increasing exploitation of oil reserves on the field Velebit with the method of rational enrichment of the well's net**

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The oil-and-gas field Velebit is on the south-east of the Pannonian basin. At the moment it is the most productive oil field in SCG.

Pannonian basin is the region of low deformity, characterized by block faulting, located between quite distinct zones created by overthrusting. The recent researches based on the well's data show that the region of Pannonian basin was significantly deformed with Mesozoic overthrust, and then rented apart with complex Cenozoic sistem, of normal and transcurrent faulting.

Five faults are clearly noticable on Velebit structure, which have had an impotant part in creating present appearance of Velebit structure.  $R_1$  fault is the first level fault, aged low pontonian, which was used as a barrier during the migration, i.e. during the hydrocarbon accumulation.

The main-primari hydrocarbons bearer on the oil-and-gas field Velebit is deposit II, which makes 99 % of oil's production on the field. The deposit II is lithologically present in the form of lowpontonian sand and sandstone.

After 33 years of oil exploitation on the field Velebit 3D seizmic survey was done. By the synthesis of the geological interpretation of the deposit II and a detailed un-terpretation of 3D seizmic survey the existence of two local maximum on the deposit were identified. The identified local maximums were located on the north-east and south-west section of the deposit. With the aim of precise defining of field Velebit new geological models of these sections of the deposit have been made and new geological oil reserve has been calculated.

As the result of new calculations, considerably bigger oil geological reserves were estimated, which resulted in rational enrichment of the well's net in these part of the deposit.

On the north-east section of the deposit, where the identified local maximums were found in the domain of fault R1, two wells were drilled, V-162 and V-168.

The effective thickness of oil zone on this wells is about 15 m. The wells V-162 and V-168 are distinguished by their great production characteristics, as their daily production of 20 m<sup>3</sup> oil qualifies them among the most productive wells on Velebit field.

On the south-west section of the deposit, two wells, V-171 and V-181, have been drilled. These two wells, besides their very good productive characteristics, completely border the deposit II in the south-west direction.

With the aim of these facts it could be concluded that method of rational condensing well's net significantly increasing exploitation reserve on oil Velebit field.