

Acidizing fluid based on acid – oil emulsion

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Acidizing fluid based on acid – oil emulsion; to be used in the process of stimulating hydrocarbons production; and especially in the process of acid fracturing and processes of matrix acidizing; in particular in oil deposits located in dolomite rocks, of the temperature over 80 °C.

The acidizing fluid based on the acid – oil emulsion is based on a system of two fluids, in which the continuous phase comprises of stabilised crude oil, having hydrophobic properties, coming from the Debno Oil and Gas mine; together with the addition of an emulsifier and the dispersed phase comprises of a solution of hydrochloric acid (HCL), with an ad-

dition of corrosion inhibitor. The both phases are mixed together to obtain stable emulsion.

The acid – oil emulsion allows to delay the reaction of the hydrochloric acid with the reservoir rock during the process of acidizing of carbonate formations, what allows for a deeper penetration before the acid is spent. In addition, this emulsion tends to penetrate rather the oil formations than the water formations. The advantage of this type of fluid, apart from decelerating the reaction of the acidizing fluid with the reservoir rock, is also the reduction of the contact of the “live acid” with the well completions armature; thus significantly limiting its corrosion.



The acidizing fluid, based on acid – oil emulsion was used in the processes of acidizing oil and gas reservoirs conducted at the wells of the BMB field.

After acidizing the formations with the afore described fluid, the increase of the Productivity Index (PI) from 2,06 to 13,1 was determined.