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## **Effect of Sand Carrier Consumption on the Efficiency of Hydrofracturing**

In the context of the world practice of oil and gas production, hydrofracturing (HF) is the most important technique among methods intensifying processes of oil and gas inflowing. Hydrofracturing is applied for 85% of gas wells and more than 60% of oil wells; that is the technique becomes standard technique for oil and gas wells completion.

Objective of the research is to analyze the effect of sand carrier consumption on the efficiency of hydrofracturing.

Calculation relied upon initial data typical for deposits in Ciscarpathian.

Consumption of sand carrier was varied over the range of  $q_0 = 250\text{--}5000$  cubic meters per day. Operating pressure of YH1-630 × 700A (4AH-700) pumping assemblies is 70 MPa; however, their operation is reliable if only pressure is not higher than 60 MPa.

As the results of the calculations demonstrate, on the one part, increase in consumption of sand carrier improves efficiency of hydrofracturing process as increase in the consumption increases dimensions of a fracture. However, on the other side, increase in the consumption results in increment of pressure on a well mouth.

Consequently, in the context of the predetermined conditions, optimum consumption of sand carrier is almost 3200 cubic meters per day. In terms of such consumption, pumping assemblies perform reliable operations with maximum pressure level; moreover, length of a fracture is quite sufficient for effective implementation of hydrofracturing.