

Various **methods of clay cake removal from the well** are used at colmatage and well shutdown. The removal of clay cake from aquifers and filters is a key operation in well development, which allows to obtain the maximum possible open flow potential.

The methods of clay cake removal from the well can be divided into four main groups: **hydraulic**, **impulsive**, **vibrational**, **reactant** and **combined** ones.

The most popular methods are *hydraulic ones*, which envisage the removal of deposits that prevent water inflow into the well. For this purpose the intensive movement of water in the filter and near-filter space is created with the help of swabbing, hydraulic washing-out, hydraulic shocks, pumping out, pumping in etc.

Impulsive methods are based on the formation into the filter and in well bottom zone of the instant pressure drop. The combination of impact and uplift forces produces destructive effect on colmatant, cementing openings of filters and grained environment in the well bottom zones.

If the *reactant methods* are used, the wells are treated with corresponding reagents. The reagents are selected in such a way that if they react with the colmatant, the pores and openings of filter, pores of drain fill and fractures of beds will be cleared to the maximum extent, the reaction products will be removed easily from the well and the quality of water will not be worsened in the course of further operation of the well.

In the course of application of *vibration method* of well treatment, a specialized vibrating unit and equipment for air-lift pumping are used. The vibration into the well causes destruction of colmataged rocks in the near-filter zone, destruction of structural relations between clay deposits and water-bearing rocks.

In most cases, clay cake removal allows to achieve the required result. Detailed overhaul (partial replacement of casing etc.) is applied in extreme cases.
