The optimal processing flow designing for seismic data of the Black Sea region

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Nowadays the Black Sea and Azov region is considered to be challenging for gas and oil searching. Hydrocarbon resources mastering in the Ukrainian Black Sea sector will help to strengthen the energy potential of our country.

One of the main and most popular among geophysics methods in exploration oil and gas prospective fields is the seismic methods. But it should be said that in the conditions of shallow waters and massive sedimentary stratum with horizontal rock field, all the seismic field results are overloaded with different sorts of noise waves. For the interpretation process the multiple reflections (one of the sorts) is the most destructive.

In order to reduce the multiple reflection influence it is proposed to use the optimal processing flow. So, in this research some of the multiples attenuation methods are given. They are based on the differences in the kinematics of multiples and primaries reflection. The effectiveness of FK-filter and high-resolution Radon-filter, τ-p deconvolution application are well illustrated and compared. In conclusions, a set of procedures which is optimal for this observation system was emphasized.

The application of the elaborated processing flow of seismic data in the water areas conditions gives a possibility to rise the accuracy and reliability in futures structural and dynamic interpretation.