

## ON IMPROVING THE METHODOLOGY FOR DETERMINING THE DURATION OF SEARCH AND EXPLORATION WORKS ON HYDROCARBONS

This article is devoted to overcoming the crisis in the oil and gas geology by increasing exploration work and reducing their duration.

The major problem of exploration industry - increasing economic and geological efficiency of exploration works, as well as preparation of mineral resources for the state needs in hydrocarbons.

Lack of prepared forecasting and proven reserves cast doubt on the deadlines of the National Program of the mineral resource base on hydrocarbon production in Ukraine for the period till 2030. One of the main problems in expanding hydrocarbon production was their financing is a slight increase oil and gas reserves, although geological preconditions to solve this problem in Ukraine are still enough.

Therefore, investment in exploration now, makes a good base for oil and gas production for the period after 2015 - 2020 years. Conversely, refraining the search process will inevitably lead to a critical drop in production in the coming years.

The theoretical and methodological basis of the study is research and development of domestic and foreign scientists relating to matters of theory and practice to overcome the crisis in the oil and gas geology, legislative and normative acts of Ukraine in this area, materials of specialized scientific conferences and symposiums. The study used the following methods: grouping the factual material on various grounds, its generalization, statistical and mathematical - in assessing the success of solving economic and geological problems.

The dependence between duration of geophysical surveys and hydrocarbon resource growth is substantiated. The value of time log, which show the geophysical surveys and others geological works effectiveness, providing permanent growth of hydrocarbon deposits of C<sub>3</sub> category is given and augured

that it will be achieved after five year term from the beginning geological surveys implementation.

Originality is established the relationship between the amount of exploration works and increase of oil and gas reserves, determining the value of the time duration, setting a five-year period between the beginning of geological works and their completion in preparation resources of category  $C_3$  that must be considered in planning the build-up of oil and gas.

The impact of calculated lag time must be considered in strategic planning and increase hydrocarbon reserves.

Considering the five-year time lag, it is also necessary to take into account the increasing of costs during the exploration, adjusted coefficient of effectiveness of capital investments in exploration and development of industrial fields.

To determine the value of geophysical investigations in the cost of work to prepare oil and gas deposits used discounted cash flow method. This method is widely used in the valuation of investment purposes, which is very important for mineral projects. This approach is related to the specific work of prospecting organizations when increase in oil and gas reserves carried out at relatively long period of time, reaching the level of production in a few years. The most typical is for oil and gas deposits. For projects of exploration enterprises term under which all economic indicators are recommended to take the first year of production and sale of hydrocarbons and profit.

Should also pay particular attention on the correction of exploration terms on searching gas and oil structures in view of the significant complications geological surveys and drilling operations as a result of military operations in the Donetsk and Lugansk regions.

The results of research are the basis for solving practical problems on the rational study of national database of hydrocarbons, forecasting of growth and production, the consumption of oil products.

Key words: exploration industry, hydrocarbon reserves, the cost of additions to reserves, the development strategy of oil and gas, the duration of preparation the structures.

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