# CHOOSING OF THE OIL OBJECTS IN MULTIHORIZONAL FIELDS IN THE SOUTH CASPIAN BASIN ON THE BASIS OF GEOLOGICAL AND MATHEMATICAL MODELLING

Bagir A. Bagirov1; Rashid M. Aliyev2; Ahmed M. Salmanov1; and Samira A. Nazarova2
1 Azerbaijan State Oil Academy, Azadlig ave., 20, 370010, Baku, Azerbaijan
2 Instıtute of Deep Oil and Gas Deposits, Azerbaijan Academy of Sciences, H. Dijavi; ove.33. 370143. Baku, Azerbaijan. Fax: 97-58-54, E-mail: idagd@baku-az.net

It is offered geological and mathematical technique for optimum choosing operational objects in multi-horizontal fields. The realization of this technique permits to offer a system of reliable allocation of operational objects.

In a initial stage of input of multi-horizontal oil fields in development from number identical fields oil ‘s’ objects are made. On various fields are chosen various number of oil’s objects, which sharply distinguished each other on a complex of attributes. 3ms classification of a complex deposits on separate objects is the basis realization of work on development of fields.

The problem of estimation of identity fields is not limited only at a initial stage of development, because the geological-operational characteristics of neighboring objects, which earlier are distinguished from each other, they can acquire during development significant similarity and on the contrary, the identical objects in process of output can be essentially distinguished on parameters.

For the basis of a technique representation, properties of oil fields are multiple random values of well.

The dimension of random values is determined by a set of parameters, which is necessary for the adequate description of geological objects and depends on characters of a soluble problems and degree of studying of given geological object.

Such representation oil multi-horizontal fields average significances of properties parameters will from some numerical multi-dimensional sequence. Then, the problem of a establishment of borders between oil bearing beds is reduced to revealing of availability of sharp changes in behavior not one, and all set of parameters in a given moment of time.

The problem of choosing of operational objects is decided in two stages. At the first stage a statistical method of differentiation of geological objects on a complex of properties, and on second-method of linear discriminance analysis is used.

The realization of a technique on a number of fields on the South Caspian Basin (Neft Dashlari, Surakhani, Karatchuhur and other) has allowed justifying a new system of choosing of objects that will essentially increase daily well production.