

STUDY OF ENGINEERING AND GEOLOGICAL CONDITIONS IN THE EXPLOITATION OF MINERALS IN THE USTYURT PLAIN OF THE REPUBLIC OF KARAKALPAKSTAN

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Abstract: In this article, natural-climatic conditions, geological, hydrogeological and ecological conditions were observed in the Ustyurt plain of the Republic of Karakalpakstan. In these studies, the issues of learning from perspective are considered. The ecological situation in the Ustyurt plain in the Republic of Karakalpakstan was considered as the main topic. Geoecological region of the Ustyurt Plain analysis of multidisciplinary natural-climatic and geological-hydrogeological data proper use of the regional strategy and conditions for its further development are paid attention to. The strategy of sustainable development of geological exploration processes and minerals in the Ustyurt plain of the Republic of Karakalpakstan is considered.

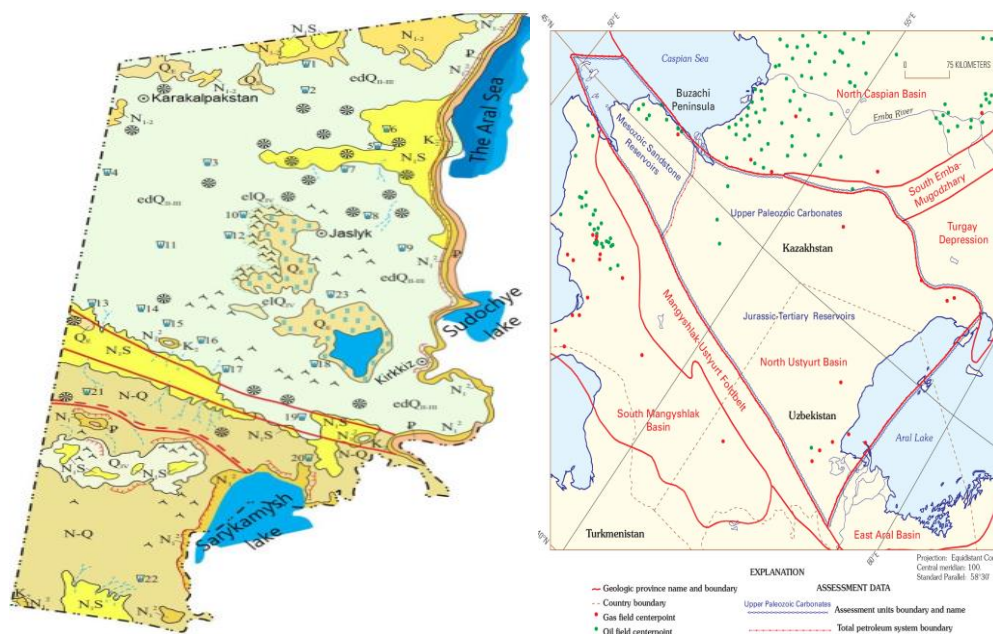
Keywords: Ustyurt plain, geological and hydrogeological studies, engineering-geological conditions, climatic conditions, soil composition, coordination maps, mineral reserves, geological prospecting.

Introduction

To date, the complexity of the natural and climatic conditions is considered as the main situation, the conditions of the ecological situation currently observed in the Ustyurt plain of the Republic of Karakalpakstan are mentioned. Flatness in this with a strong effect of the reduction of the area Aral Sea, which leads to an increase in its area desert ecosystems are incapable of self-recovery after man-made intervention. Ecologically incorrect and uneven is the study of the environment, underground and surface water. Processes of mineral extraction and mine development in the Ustyurt plain of the Republic of Karakalpakstan from the full list of issues to be analyzed, attention is focused on the issues considered in the long research and development. In the territory of the Ustyurt plain of the Republic

of Karakalpakstan, the processes of identifying minerals on the basis of geological exploration are being carried out. The main goal of geological exploration processes research will consist of studying climate, geological, hydrogeological and ecological conditions. Geological engineering and for geocological conditions, it will be possible to carry out research on mineral extraction processes in the region of the Ustyurt Plain of the Republic of Karakalpakstan. A comprehensive study of the Ustyurt plateau will be necessary. The components of the surrounding geological environment - atmospheric air, soil, surface and underground water, vegetation, fauna - rely on cartographic analysis. analyzed from all sides the database has been prepared. The natural features of each flat area in the design of engineering geological conditions should be taken into account. Engineering - based on geological research, geological prospecting shows the area of found minerals. On the Ustyurt plain studies are carried out for justification from an engineering - geological point of view. Only engineering is designed only after careful consideration of geological conditions the part where minerals are located, its dimensions, foundation structures, etc elements must be taken into account. Mineral development and mining processes are negative of various geodynamic processes impact study and cost overrun evaluation and proof allows. Geological engineering – exploration it is necessary to create a project first. Engineering - geological in the project program the main purpose of prospecting is geological, geomorphological, hydrogeological conditions, natural geological, engineering-geological processes, will consist of studying the properties of rocks. It is aimed at objectively determining the indicators of mining processes within the areas where minerals are located on the Ustyurt Plateau limits imposed by environmental components, to study the factors affecting their formation, differentiation and the nature of geocological relations based on the circumstances. Geological engineering is based on the level of geocological stability of natural components. An important feature of the study conducted on the basis of generalization already existing materials and contemporary field survey the components of the natural environment are defined. Of all variety of natural

factors determining the condition environment, soils, plants and existing processes are carried out in the wildlife area in question. A large part of the considered area of the Ustyurt Plain of the Republic of Karakalpakstan is located here regions whose zones coincide with tectonic conditions structures should be clarified. In general, this is a flat area with areas the construction of the ridge relief drawing should be determined. Miocene rocks of the Neogene-Quaternary deposits are found on the earth's surface, coordinates filling large depressions in the terrain It is shown on the example of Barsakelmas area. From a geological and geographical point of view, the area of the Ustyurt plain of the Republic of Karakalpakstan is wide, here coordinating landforms, clay plains, extensive dry depressions, and terrestrial soils of ancient and current ephemeral watercourses are common. Quaternary mines are widely developed on the surface of the earth depressions, Neogene and Cretaceous deposits located on the plateau. Cretaceous deposits are exposed in the hills - located on the plain in the form of shell rocks. according to climatic and ecological adaptation conditions, climate, soil and geobotanical conditions, the Ustyurt plain can be divided into three parts (Picture. 1). North Ustyurt occupies the northern part. Karakalpakstan is a plain of Ustyurt and a gently undulating plain. Ustyurt plain is the area with a height of 150-200 m. This It is part of the Neogene plateau, which occupies 80% of the entire area of the study. They are distinguished by plains and depressions.



Picture 1. Drawing of a schematic geological-engineering map of the Ustyurt plain of the Republic of Karakalpakstan.

Ecological adaptation of soils in the Ustyurt plain is high biogenic layer of the daytime surface, necessary researches have been carried out to predict the ecological situation and assess the consequences of man-made effects, and the flora of the Ustyurt Plain will be adapted to the lack of water. Based on the composition of the soil, on the plain summarized information on soil stability determined as a result of geological research. Such parameters in soil adaptation granulometric content, humus reserve, humus the content of the upper horizon, the reaction of the soil the level and strength of the acidity of the environment is determined taking into account the upper horizon. Indicators functional soil acidity, oxidation-reduction potential, etc and depends on the genesis of the breeds. Content reserves of humus in the soil In the Ustyurt plain, it is initially low, at the level of 0.4 2.0%, which the instability of the main characteristics, first of all the ability of the soil to absorb and activate unwanted pollutants it is any natural or anthropogenic agent that pollutes. Ustyurt plain entering the surrounding geological environment amounts that exceed background values and cause thereby polluting it. With a clear effect, the rate of moisture processes and nitrogen accumulation is further reduced. Variability is bound will be interrelated with

climatic conditions, precipitation and temperature, as well as with the influence of internal factors. Soil an indicator that changes due to the release of acidity carbon dioxide during organic decomposition performance of fossils and biota, course chemical and biochemical reactions in the fluid and the solid phases of the soil are separated. Engineering-geological maps are necessary in the studied area information about engineering - geological factors is given. Engineering – geological each map is a set concept that contains the map itself, conditional symbols, will consist of geological sections and an explanatory note. Engineering - various types of topographic, geological mapping geological, hydrogeological studies, rock properties, etc. are used. There are three types of engineering-geological maps:

- * conditions of engineering-geological maps are reflected.
- * engineering - geological zoning and alignment.
- * special engineering - geologic maps size coordinates are set to scale.

Engineering - a map of geological conditions, all constructions on the ground has information calculated by types used for general assessment of the natural conditions of the earth. Engineering - geological zoning map engineering – geological according to general conditions, the area is shown in parts. Special maps for use in a specific type of area is made. They assess the engineering-geological conditions of the construction site and engineering-geological conditions have a prediction of events. Engineering - scales of geological maps, their purpose and composition depends on the details: general explanatory (schematic) maps on a small scale 1:500000 and (smaller than this) and organization of engineering-geological conditions in large areas and reflects general laws of distribution;

Conclusions

The current state of biological resources of the area considered in this article, their high value, the presence of sites with geological engineering and mineral detection specially protected natural areas, as well the presence of rare growth areas or habitats protected species of flora and fauna additionally impose a number of environmental restrictions. On the Ustyurt plain research works on the implementation of geological-engineering prospecting works are being carried out. Studies based on the determination of mineral and mineral reserves It is recommended to use the analysis of data for the development of multi-sector mining fields for the further development of the region. Research should be carried out based on the strategy of sustainable development of the Ustyurt Plain of the Republic of Karakalpakstan. The study of geological and engineering conditions in the mining and exploitation of minerals in the territory of the Ustyurt plain of the Republic of Karakalpakstan will ensure stability in this area. For this purpose, it is necessary to draw a scheme of the location of the minerals on the plain and show the coordinates of the area where minerals are located on the map. Many industry experts, geologists, and mining engineers are involved in identifying minerals in the Ustyurt plain.

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