

FACTORS INFLUENCING THE CONDITIONS OF OPEN PIT MINING, ORE MASS AND DEFORMATION, PROCESSES THAT LEAD TO IMBALANCE DURING EXCAVATION

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NOTES

Mining enterprises, geotechnological processes in the field, the state of open pit mining, processing processes as a result of the development of mining and extraction processes.

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INTRODUCTION

The perspective on the development of open pit mining is related to the deepening of quarries. The increase in depth is accompanied by a decrease in the parameters of open pit mining. With depth, ventilate the area under natural conditions. Need to assemble to design deep quarries. The database of engineering-geological, structural-tectonic and geological data in the marginal massif includes unbalanced processes that occur in natural deposits. Extraction of the bulk of minerals is large and rare deposits, where reserves are estimated at hundreds. millions and even billions of tons. Improvements in mining and transportation equipment related to open pit mining, such as increasing the unit size of excavators, dump trucks, sharp turn conveyors, explosive gains, innovation in the modern education system, and modern mining methods are now increasing mine productivity. Examples are modern technologies, technologies used in the extraction and transportation of minerals. These processes, which are carried out differently from each other, include the process of bringing them (extracted minerals and components) to a ready state.

1. The need to reduce the cleaning volume, ie. Coefficient overload (current and limit).
2. With a production complex on the surface of the quarry area to provide a freight connection. The solution to the problem of direct rock mass transport is related to the increase and decrease of the excavated pit (reserve amount). The value of the mineral extracted from the deposit. Zoom in; increasing career depth implies a change in transport schemes. The current trend

shows that migration is expedient. Cyclic and periodic flow technologies ensure the most efficient work productivity.

3. Transition to the combined method of ore mining. Open pit mining, determination of the coordinates (boundaries) of the subsoil is determined by the underground method. Examples include ore mining processes, deep quarries with geomechanical substantiation of safe mining. changed) condition and hydrogeology. The condition of the mining mass affects the stability of the structure.

Elements of a career board.

-Computer technologies in the development and use of deep quarries in solid mineral deposits and open-pit mining Geocological problems have a negative impact on the mining industry and lead to environmental change. Assessing this impact and developing methods to reduce it is the main task of relatively newcomers. Open pit mining. Fundamental approaches to the choice of strategy, technical and technological solutions for the development of deep deposits are described as follows:

1. Each area has geologically specific parameters (spatial dimensions, conditions of formation, composition of useful components, etc.), the process of natural and climatic change and socio-economic conditions, the level of development of infrastructure, and so on. Decision-making methods and technologies based on analogs (signals) are adopted only in the initial stages of the feasibility study, and field development technologies are developed.

2. The key issues determining the long-term perspective should include field development strategies and technological solutions and open pit mining processes.

2.1. We can estimate the volume (quantity) of reserves taking into account their complexity and evaluate the composition of the main and relevant useful components. The scale of mining operations, the dynamics of their production conditions, the forecast will determine the technological development, the position of the state in the import markets of raw materials.

2.2. Determining career depth. Historical experience shows that, as a rule, from time to time the design depth of the pit was revised upwards due to reconstruction, changing its spatial parameters (dimensions), re-opening scheme, transport system, etc. It is advisable to consider the processes and status of the stage step by step. In each of the subsequent stages up to the mining boundary, the deposits serve to develop the area, including open mining boundaries, and then the transition to underground or combination.

2.3. The choice of the method and sequence of obtaining the slope dimensions is used in the formation of the transport system of the quarry, the safety of traffic with the weight of the specified vehicles, the weight of the increased load. The challenge here is that as the mining industry develops, it constantly changes its parameters due to the need for work space.

2.4. The substantiation of stable slope angles of deep walls is a gradual development of the industry in the case of limited contours and temporary storage. One question should highlight two points: in the design, determine and accept the maximum allowable vertical angle in accordance with the conditions of stability and technological feasibility reduction of cost-effective cleaning work, but due to insufficient knowledge of physical and mechanical properties and determine the structure of rock massifs.

During excavation, the angle of inclination of the sides can be increased only by drilling and blasting of rocks, transport communications, hydrogeological conditions, etc. factors require constant monitoring.

3. The definition of tasks and solutions varies considerably. Technological issues in the design of the excavation area include the development of a newly developed area and the subsequent development of previously launched deposits, which is especially true for quarries with a long history.

4. A big role in the effective and safe organization of the development of deposits using deep quarries are technical managers of mining enterprises, whose task includes only planning and operational management. Technological processes, but also the development and implementation of analysis with the involvement of periodically technologically qualified specialists technical, technological, organizational and managerial impacts, including the reconstruction of the enterprise, modernization of technological processes, etc. It should be noted that almost every mining company has a lot of problems with operational mines with deep quarries. The concept of "deep career" features that do not have clear parameters; In the 60s, the publications of NV Melnikov, VV Rzhnevsky, Novojilov Vasilev, created the opportunity to dig 100-160 m in a modern way. This period can be considered as 250 m or more, and for these open pits, quarries with an extract depth of more than 250 m with an extract depth of 65 to 90% of all types of mineral raw materials, the problem of further development depends on the number of large depth deposits At present, there are a number of technologies used in modern excavation.

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