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DEVELOPMENT OF THE METHODOLOGY OF MINE SURVEYING MANAGEMENT OF LOSSES OF RUBBLE RAW MATERIALS AND THEIR ACCOUNTING

Despite the high security of our state mineral raw materials, it should always be born in mind that it is non-revolving, and therefore its rational use without the assumption of unjustifiably high losses becomes very relevant.

Before considering definitions, accounting for losses and depletion of minerals in the course of its extraction, it is necessary beforehand to have an idea of the classification of losses.

Losses of minerals are part of the balance reserves of minerals, which inevitably disappears in the development of deposits and processing of minerals.

In the process of extraction and processing of minerals, the following losses occur:

- losses and depletion during extraction;
- loss of useful minerals in its enrichment;
- losses in metallurgical processing.

By sources of occurrence distinguish the following types of losses and depletion:

- under underground development - losses on the area in the hills near the preparatory workings (inter-block, over-stretch, sub-trapezoidal) and in the supporting hills inside the excavation areas; in the extracted parts or apophyses of ore bodies; by power - in packs of minerals left in a sole or a roof, between layers at the ball or selective design; repulsed minerals in the produced space and in the lodge, and also taken out with the breed in the dump; depletion as a result of cuttings of lateral rocks to create the required width of the treatment space; because of the inclusion in the contour of the working block of layers of rocks, not included in the stock of the block; at the release of ore on its contact with the decomposed pores-ladies of spent blocks (sections); a common occurrence of losses and depletion in the development of tectonically broken sections of deposits (layers) and ore bodies (coal seams) of complex configuration; due to the complexity of the contact of the minerals under the collapsed and overlying rocks;

- with open development - losses during excavation, loading and transportation; joint appearance of losses and depletion during extraction in contour zones; on the contacts of minerals from the breed-layers that are not included in the estimated reserves; in blasting works.

All of the above types of losses and impurities are subject to determination, valuation, planning and accounting.

The most common methods for determining rubble losses are direct, indirect and combined.

The essence of the direct (main) accounting method is to determine losses and depletion on the basis of sampling and measurements, volumes of losses of minerals and impurities; comparison of contours of bodies or coal-bearing layers, depicted in

geological surveying plans and sections, with contours of actual disposal. The quality of lost stocks is determined by direct testing. Losses and depletion along the contour of the body or the formation are determined by measuring the areas of the outcrop of minerals and the areas of off-beaten and layered rocks. The power of the lost part of the body is determined by measuring and testing the mines, hollows and wells passed on the contact. Indirect methods of determining losses are used only when it is impossible to determine loss and depletion of the ore directly by direct measurement. Indirect methods include determining losses and depletion of ore by the difference between the amount of recovered balance stocks and extracted ore and the content of useful components in them, as well as petrographic, weight, graph-analytical methods, etc. The petrographic method for determining the combustion of ore is used provided the visual difference between the ore and the rock contained in the pre-tracked ore mass. From the extracted mass, a sample is taken and a large fraction (greater than 5-7 mm) is allocated, which is sorted into ore and nourishing breeds. The weight determination method for determining the depletion of ore is mainly used for operational control. It is based on the difference of masses of trolleys with pure and impure ore. The technology of crushed stone production on granite quarries includes the following technological processes: drilling operations, crushing of the oversized fraction, transportation of rock mass by self-propelled cams to crusher of primary crushing in the working area of the quarry, primary grinding in a gravity crusher and transporting crushed miner from Primary crushing crusher for secondary crushing crusher with a steep inclined conveyor. In order to minimize the loss of raw materials, the drilling and drilling operations are proposed to be carried out on an expanded network of wells, which will provide a fractional composition of the rock mass (the size of the oversized steel is more than 1300 mm, the output of the oversized volume is less than 8%), which corresponds to the technological capabilities of high-performance primary crushing crushing equipment.