

FLOOR-EXCAVATION SYSTEM WITH CAMERAS

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Annotation: The content of the article is to study the mining system, in the article, to choose a mining system depending on the thickness of the layer, to divide the layer into blocks, to extract minerals from the blocks by blasting, to pass wells, to pass wells in a certain scheme, the advantages of this system and the improvement of the system is mentioned.

Keywords: Mineral, layer, block, massif, horizontal well, vertical well, inclined well, system, recharge, loss, well deviation, parallel circuit, fan-shaped circuit, subfloor stretch.

In floor-chamber mining systems, the separation of ore from the massif is carried out with horizontal, inclined, and vertically drilled wells. The layer mining system is widely used in the mining of stable and solid ore and rock deposits such as iron and copper. If the thickness of the ore is 25–30 m, the chambers are placed transversely to the length of the ore body. If the elements of the ore deposit are flat and of the same size, it may be appropriate to use the layer chamber mining system, and the ore body is less thick (8–10 m). In general, the ore body must be strong and stable to use a chamber mining system because the mass of charges detonated in the chamber at one time can be quite large. According to its structural features, this system is a chamber, and the option of transverse placement of the ore body in the longitudinal direction can be included in the combined mining system. where the floor is divided into chambers and interchamber storage units of equal or similar size.

- Option of separating ore from the massif with deep horizontal wells in the layer-chamber mining system.

In this version of the mining system, the separation of ore from the massif is carried out with horizontal wells. These drills are drilled from special preparatory mine slags, which are drilled in inter-chamber slags or in loose rocks on the side of the ore bed. Preparing the camera for mining is done in the same way as for low-level mining systems. Only subfloor lines are not included in the camera. ore is separated from the massif in a horizontal layer from bottom to top. After the completion of preparation and cutting from the bottom over the entire area of the chamber, deep wells drilled in a parallel or fan-shaped pattern are gradually blasted. This version of the system has the following advantages over mining systems with subfloor lines: labor safety conditions will be improved due to the fact that mine workers work in

small mine fields and the maintenance time of the chamber ceiling is sharply reduced; due to the use of deep wells, the volume of preparation-cutting works is sharply

reduced; loss and degradation of ore is
reduced; scope of application is wider;

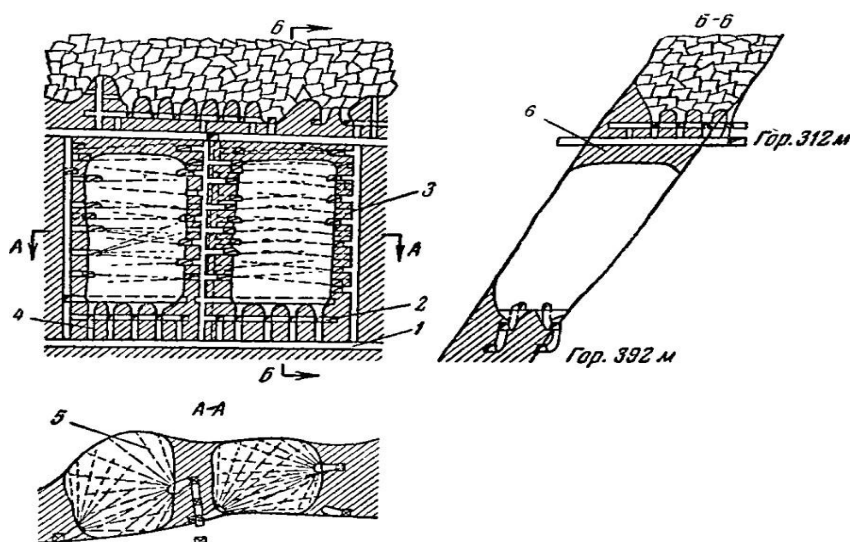
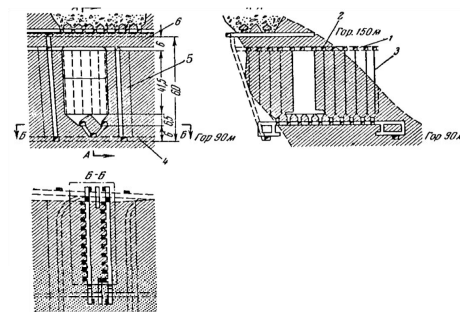
reduction of dust generated during drilling operations; high blasting efficiency.

in this version of the system, the ore massif, which has been mined for a certain period of time, acts as a ceiling, as a result, the width of the chamber can be increased from 5-7

m to 15-30 m. this situation expands the scope of the system.

•intheminingsystemwithfloor-chambers,theoptionofseparatingorefromthe massifwithinclinedwells.

The essence of the extraction system for this option is shown in Fig. 119a. In this case, the chamber is passed along the thickness of the ore body in a direction perpendicular to the subfloor lines under the ceiling. The ore is separated from the massif by means of inclined wells drilled from the back.



systemofminingthelayerwithdee p wells:

1- transport line; 2-thrust is horizontal; Block 3 raising plaster; ; 4-ore unloader; 5- deep wells; 6- roof rack.

In this case, it is advisable to separate the ore from the massif with deep wells drilled in a fan-shaped pattern downwards from the subfloor lines passed under the chamber ceiling basket (Fig. 119b). This mining system is widely used in the mining of ore bodies with a

thickness of 5–30 m, located on a steep slope.

- separation of ore from the massif with vertical wells in the mining system with floor-chambers.

The essence of this version of the mining system is in 120 pictures. One line is followed by two lines. Vertical screws were drilled from these lines along the entire height of the chamber. The camera base is prepared as usual. The shortest line of resistance is from 4 m to 4.5 m. The distance between the screws is equal to the shortest resistance line. When we compare mining systems with floor chambers and low-floor lines, we can find many similar signs. almost the same with its shortcomings. However, in the mining system with floor chambers, all drilling operations are carried out under a single roof.

The main measures to improve the mining system with floor chambers are: 1) Allow for a change in the direction given when drilling wells due to the correct organization of drilling operations and compliance with its procedure not to eat. In massifs with sharp changes in ore layers and layers of different strengths, the depth of the well is limited, so it is necessary to drill the 25-meter layer into two sub-layers.

2) widespread use of serial detonation schemes with longer intervals to reduce the seismic impact of the blast force on the massif. 3) reducing the diameter of wells to 50 mm in the formation of inter-chamber and ceiling slime in massifs with high cracking.

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