

Zhila 31 deposit

Abay region

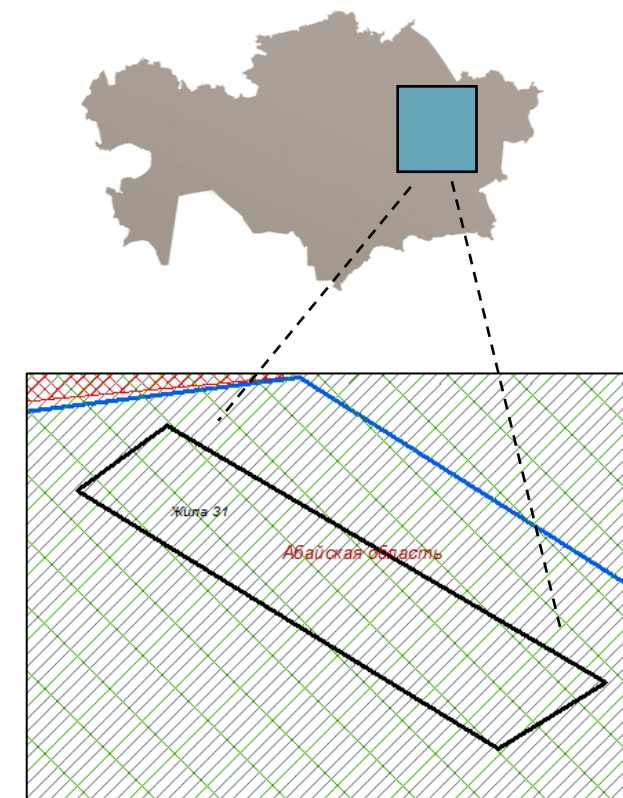
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Location: The site of the Zhila No. 31 Bakyrchik ore field is located in the Zharminsky district, 51 km east of the Shar railway station.

The site was discovered during geological exploration in 1953-1972 within the Kyzylvorskaya shear zone of the Alaigyr ore field.

Brief geological characteristics: The site is confined to the Alaigyr ore field, which is a component of the larger Bakyrchik ore field. The main ore-controlling role is played by the south-eastern tectonic faults, conjugated with the Kyzylvorskaya shear zone. The geological structure of the area includes Paleozoic deposits, represented mainly by terrigenous-sedimentary rocks of the Carboniferous system. From the surface, Paleozoic formations are transformed into weathering crusts. Oxidized gold-bearing ores, which are hypogene -altered rocks of quartz-carbonate composition with vein-disseminated gold-sulfide mineralization. The oxidized ore zone, the lower boundary of which is located at a depth of 20-40 m, is confined to the siltstone -sandstone layer, covered by a thin cover of eluvial-deluvial deposits of the Cenozoic. The boundary of the oxidation zone was determined based on a visual inspection of the core and sludge samples. The shape of the ore bodies is lenticular.

According to the complexity of the geological structure, the Zhila No. 31 site is assigned to group 3. The material composition of oxidized ores was studied using three large process samples in the laboratory of the VNIITsVETMET State Research Institute of Mineral Resources. The ores are characterized by quartz-sericite and quartz-chlorite-sericite composition with an admixture of kaolinite and oxidized ore minerals. Native gold is unevenly distributed and is in a microscopic or submicroscopic state, forming inclusions in quartz and limonite-goethite- scorodite mass. Based on the results of testing small process samples (31 samples) for the degree of gold leaching with sodium cyanide, the extraction rates for different samples ranged from 40% to 93%. Process studies on the processing of oxidized ores were carried out using the chemical enrichment method based on leaching gold with a solution of sodium cyanide and precipitating it with activated carbon. The maximum possible degree of gold extraction into the solution for the studied technological samples was: with a gold content of 0.3 g/t - 60%; with a content of 0.5 g/t - 67.2%; with a content of 0.8 g/t - 83.6%.



Extract from the state inventory records as of 01.01.2024.		
Useful component	Balance reserves	Off-balance sheet reserves
gold	A+B+C1 – 161.2; C2 – 19.8 kg	15.0 kg

-  - the territory included in the PUGFN for solid mineral extraction (Zhila 31 field), for further auctioning
-  - licenses for GIN