

Information on the activities of JV "Zarafshon" LLC

In accordance with the Tajik SSR gold mining industry development plan of 1990, it was planned to put into operation a gold mining plant for the extraction and processing of ore from the Taror deposit. Due to the lack of confirmation of the Taror ore processing scheme during the semi-industrial test at the Ingichkin experimental methodical technological expedition, it was decided to process the ores of the Dzhilavskoye deposit at the Gold Recovery Factory (GRF) under construction by flotation.

At the end of 1992, the first line of the factory was launched, with a capacity of 250,000 tons of processing per year. Parallel to the work of Phase I, the construction of Phase II of the GRF was envisaged to increase the productivity of the factory to 500,000 tons of ore per year (two lenses).

For ordinary ore with a content of 2.04 g/tn, the project provided for the recovery of up to 88 per cent of gold, which allowed the production of up to 1 ton of gold within a year.

Due to the disruption of banking systems between the Republics of the former USSR, the delayed delivery of spare parts, grinding balls, chemical reagents and mining equipment disrupted the rhythmic production of mining and ore processing due to the shortage of vehicles. Extremely difficult situation has been created with open works on the career «Jilau». Plans to build a hydrometallurgical plant for further processing of the concentrate and GRF Release 2 were foiled. Due to the lack of reserves of ore at the factory warehouse, the factory was mainly fed with ore from «wheels», which made it difficult to work the chemical laboratory and refine the exact quantity spent for the processing process of chemical reagents.

For these reasons, in the period 1993-1994, gold recovery at the gold recovery plant averaged 60%, instead of the 88% provided for by the project. In accordance with the Resolution of the Council of Ministers of the Republic of Tajikistan of May 31, 1994 No. 242, a Joint Tajik-British Enterprise "Zeravshan" was established on the basis of the Tajik GRF.

In 1995, the GRF was reconstructed under a new scheme of processing «coal in alkali» with processing capacity of 750,000 tons of ore/ year from an open quarry Jilau and started to produce almost 2 tons of gold in the form of the «Dore» alloy.

The park of quarry heavy vehicles, mining equipment, loading equipment and vehicles for transporting ore from the quarry to the processing plant has been renovated.

In January 1996, the first phase of the factory was put into operation under the new scheme, with a processing capacity of 750,000 tons and a production capacity of 2 tons of gold per year.

Starting from the second half of 1996, the factory reached the design capacity of 2,200 tons of ore processing per day. The production plan was implemented. At

the end of December 1997, the production capacity of the factory was increased to 5,500 tons of ore per day.

From 1995 to 2008 the main Jilau field and its flanks «Olympic» «Kuduk» and deposit «Hirshona» reserves were exploited, which were exploited up to 80%.

In 2005, preparatory work was started on the processing of poor ores by the method of "leaching from the ground». The main raw material base of the deposit «Taror» was not exploited. Experimentally - operational works on processing of Tarorsky ores began in 2009.

Among the most important tasks envisaged by the economic development of Tajik industry, which require a priority decision, are scientifically based and environmentally sound decisions to involve the Tarorsigo oil field in exploitation.

Since 2008, a serious study of the Tarorsky field has been initiated, simultaneously renovating the main means, restoring and preparing for exploitation of the mining horizons of the field. In the same year, the processing of the sulphide ores of the Tarorsky deposit was completed, a technological regulation was issued, and the flotation line GRF-1 was restored.

1. A workshop with a capacity of -1000 tonnes/year has been built and put into operation.

2. Crushing and marshalling unit with a capacity of 10,000 tonnes/day built and put into operation.

3. GRF built and put into operation for the processing of ore by the method of a cast-off leaching (Jilau quarry), up to 205 million capacity. tons of poor ores.

4. An oxygen workshop was built and put into operation.

5. GRF built and put into operation with a capacity of 2,000 tons of ore per day.

6. An affiliate plant with capacity up to 5000kg to 7000kg of gold per year has been built (gold 99%).

The biggest achievements of JV «Zarafshon» in the years of independence, along with the construction of the above-mentioned objects can be considered the involvement in exploitation of oxidized ores of the Tarorsky deposit in open way. Initially, the opening of the Taror field was planned underground.

Due to limited enrichment technology, oxidized ores at the top of the deposit (over 1500m) were not mined, and this affected the choice of a mining system in the design of lower sulphide mining. Due to poor mining and geological conditions, the performance of sulphide mining under an open-pit mining system is not satisfactory. This has had an impact on the acceleration of the development of oxidized ores, thus not only maximizing resource development, increasing the economic efficiency of the mine, but also creating the conditions for the regulation of the production line and the development of sulphide ores at the bottom.

Due to the high steepness of the open band of empty rocks and the impossibility of raising the drilling equipment for the production of the openings, it was decided to open this band of limestone with chamber charges from underground rods located

in three horizons 1895, 1860, 1830). The project was prepared by the Zhejiang Company. Deputy General Director Sun, Head of BSR SP «Zarafshon» Assistant Director Rabiev B. and Manager of mine Tursunov K., followed by Manager of mine Sodikov M. carried out calculations and the first mass explosion on the site. The discovery of the Taror field was resolved by these three mass explosions. These explosions were calculated especially carefully, practically no ejection was achieved, optimum rockness was achieved and in the condition of Central Asia the following achievement of SP «Zarafshon» was moved for the first time after independence, it is involved in the processing of the poor ores of the Jilau and Hirshon deposits with an average content of 0.9g/t to 0.6g/t by optimizing the cost of extraction, transportation and processing of the ore by building GRF-2 with a capacity of 10,000 tons per day. Construction was completed in the first half of 2010.

Today on JV «Zarafshon» Ltd. 2,242 people work. JV «Zarafshon» has a settlement for 5,000 people with all infrastructures (school, kindergarten, hospital)

**Deputy General Director
LLC JV "Zarafshon»**