THE MINERAL INDUSTRY OF

TAJIKISTAN

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Nonferrous metals production was the leading sector of Tajikistan's mineral industry, mining antimony, mercury, molybdenum, tungsten, and rare and precious metals and producing aluminum. Tajikistan also produced oil, gas, coal, and industrial minerals.

Tajikistan's resources included a wide range of metals and industrial minerals as well as mineral fuels. Information was not adequate to estimate the quantities of these resources. Metal resources include alunite, antimony, bauxite, bismuth, copper, gold, iron, lead, manganese, mercury, molybdenum, nepheline syenite, nickel, rare metals, silver, tin, tungsten, and zinc. Nonmetallic resources include barite, boron, construction materials, dolomite, fluorspar, phosphates, precious and semiprecious stones, and salt. Resources of mineral fuels include coal, natural gas, oil shale, peat, petroleum, and uranium. Tajikistan contains one of the world's largest silver deposits, the Adrasmanskoye deposit, which the country hoped to develop with the aid of foreign investment.

In 1994, Tajikistan's gross domestic product (GDP) decreased by 12% compared with 1993, while industrial output decreased by 30.8%. Although GDP fell in 1994, industrial output took a sharp fall in 1994 compared with 1993, when the reported decrease was only 7.8%.[2]

Regarding mineral production, the Tajik aluminum smelter in Turnsunzade, which had a capacity to produce 500,000 metric tons per year (mt/a) of aluminum, reportedly produced about 250,000 metric tons (mt). The Tajik plant reportedly was experiencing reduced supplies of raw materials from the Commonwealth of Independent State (CIS) and also from its main foreign suppliers, the United Kingdom's Woralco Ltd.; Comsup Commodities Inc. of the United States; Norway's Hydro Aluminum S.A.; and Belgium's Euromin S.A., which provided raw materials in exchange for aluminum.[3] Ukraine, one of Tajikistan's main suppliers of alumina, agreed to ship 100,000 mt of alumina to Tajikistan in 1995. Shortages of alumina, all of which was imported, were one of the major reasons for the fall in aluminum production.[4] According to a Tajik plant official, plans called for increasing aluminum production in 1995 to 272,000 mt.

In February 1995, it was announced that Tajikistan and Uzbekistan had signed an agreement to control pollution from the Tajik aluminum smelter that was reportedly causing serious environmental problems in both Tajikistan and neighboring parts of Uzbekistan. In accordance with the agreement, Tajikistan would install automated systems for pollution control and would be responsible for economic damage caused by the pollution. The agreement prescribes developing a program for pollution reduction and for defining ecologically safe rates of pollutants from aluminum production.[4]

The Anzob mining and beneficiaton plant in Tajikistan reportedly extracted 350,000 mt/a of mercury and antimony ore from the Jizhikrut deposit in the Yagnob River basin. The ore was sent to metallurgical plants in Kyrgyzstan for processing. The deposit, which had been under development for 35 years, was estimated to contain 200,000 mt of antimony and 30,000 mt of mercury as well as 10 mt of gold. Plans called for modernizing the mining operation at Anzob and building a metal production facility. However, an immediate concern was cleaning up the environmental damage from mining operations that had contaminated the Yagnob and Zeravshan Rivers.

The United Kingdom's Lonrho PLC had been hired to appraise the Jizhikrut field as well as the Skalnoye field. The Skalnoye field, near Lake Iskander Kul, contains mostly antimony with byproduct mercury, gold, and fluorspar. Antimony reserves reportedly are estimated to be 400,000 mt and gold reserves 100 mt. To develop this field, it was considered necessary to ensure the proper processing technology for the ore, which must be processed differently from the ore at Jizhikrut. It was also necessary to ensure that mining did not harm the environment because the deposit reportedly is in a fragile environment that serves as a unique game reserve.[6]

Tajikistan's gold industry continued to decline, according to the country's major gold producing enterprise, Tajikzoloto. Reasons given were the civil war, generally adverse economic trends, the exodus of qualified personnel, and lack of funds. In 1994, Tajikzoloto reportedly produced 352 kilograms (kg) of gold compared with 382 kg in 1993 and 2.9 mt in 1990. Western investors were critically needed because improving the workings of the gold industry was a government priority.[7]

Tajikistan, which reportedly produced about 1.5 mt of gold in 1994, was expanding gold production through joint-venture development. Darvaz, a joint venture between the United Kingdom's Gold and Minerals Excavation Inc. and Tadzhikzoloto, was awarded licenses to explore and develop the Yakhsu and Pyanj gold placer deposits in the eastern Khation region. Reserves at these deposits reportedly are estimated at 50 mt.

Canada's Gulf International Minerals reportedly signed a letter of intent to process tailings at the Sangak Safarov placer deposit. The placer mine was known as Darvaz until 1994 and had been under development for 25 years. It was projected that the tailings would take 10 years to process and that the joint venture would produce up to 300 kg of gold annually. This is the second joint venture created in Tajikistan by Gulf International, which at the end of 1993 set up a joint venture with the Kairak Kum mining enterprise to develop the Aprelevka gold lode and the Burgunda polymetallic deposits near Leninabad.[8]

Zeravshan, a joint venture set up between Tajikistan's Ministry of Industry, Tajikzoloto, and the United Kingdom's Commonwealth and British Minerals PLC, was awarded rights to explore and develop gold fields in the Matcha, Penjikent, and Aina Districts of northwestern Tajikistan. The Zervashan venture also was involved in a feasibility study to increase ore processing at the Tajik gold plant.

It was also reported that Tadzhikzoloto and the Tajikistan Ministry of Industry had formed a joint venture with the United Kingdom's Donnovan Group to process tailings for gold at the Kaira Kum gold beneficiation plant in northern Tajikistan.[9]

Tajikistan is a landlocked country bordered on the west by Uzbekistan, on the north by Kyrgyzstan, on the east by China, and on the south by Afghanistan. As of 1990, the country had 29,900 kilometers (km) of highways, of which 24,400 km was hard surfaced. It had 480 km of broad-gauge railroads and 420 km of narrow-gauge railroads. A railroad connects the capital of Tajikistan, Dushanbe, with Termez, Uzbekistan, on the Afghanistan border; from there, rail lines connect to Tashkent from where connections can be made to other countries of the former Soviet Union. The terrain consists of mountains and valleys dominated by the Pamir and Altay Mountains, the western Fergana Valley in the north, and the Kafirnigan and Vakhsh Valleys in the southeast. The climate ranges from semiarid to polar in the Pamir Mountains.

Despite the problems of civil warfare and the concomitant issues of economic and political stability, Tajikistan had succeeded in attracting investment in its gold mining industry. Also, the country retained a large aluminum-producing industry, which was both trading with and being supplied by western firms. Investment in these mineral industries and the development of other mineral industries could provide for increased revenues from Tajikistan's mineral sector.

Nevertheless, despite Tajikistan's variety of mineral resources, its distant location from world markets and major transport arteries still would result in transport and infrastructure development costs being major factors in assessing the viability of mineral development in Tajikistan.

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[1]Text prepared June 1995.

[2]Interfax Business Report, Denver, Colorado, Feb. 7, 1995, p. 4. Interfax Mining and Metals Report, Denver, Colorado., Dec. 30, 1994 -Jan. 6, 1995, p. 7.

[3]American Metal Market, New York, New York, Mar. 1, 1995, p. 7.

[4]Interfax Mining and Metals Report, Denver, Colorado, Feb. 3-10, 1995, p. 3.

[5]Foreign Broadcast Information Service, U.S. Government. publication, SOV-95-038, Feb. 27, 1995, p. 79, Khalq Sozi,in Uzbek, Feb. 24, 1995, p. 6.

[6]Interfax Mining and Metals Report, Denver, Colorado, Nov. 25-Dec. 2, 1994, p. 7.

[7]Interfax Business Report, Denver, Colorado, Mar. 24, 1995, p. 4.

[8]Work cited in footnote 5.

[9]Work cited in footnote 4, p. 5.

TABLE 1
TAJIKISTAN: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity		1992	1993	1994
Aluminum		400,000	250,000	250,000
Antimony, metal content of ore		1,500	1,200	1,000
Bismuth		20	16	12
Cement		500,000	300,000	200,000
Coal		220,000	200,000	150,000
Gold	kilograms	1,700	1,600	1,500
Gypsum		500,000	400,000	300,000
Lead, metal content of ore		2,000	1,600	1,200
Mercury, metal content of ore		100	80	70
Natural gas	million cubic meters	85	50	40
Petroleum, crude		60,000	40,000	30,000
Sand and gravel	cubic meters	4,000,000	3,500,000	3,000,000

1/ Estimates based on information available through June 30, 1995.
2/ Data are rounded by the U.S. Bureau of Mines to three significant digits.

TABLE 2
TAJIKISTAN: STRUCTURE OF THE MINERAL INDUSTRY FOR 1994

(Metric tons unless otherwise specified)

Commodity		Major operating companies	Location of main facilities	Annual capacity
Aluminum		Tajik aluminum plant	Tursunzade	500,000.
Antimony		Anzob mining and beneficiation complex	Dzhizhikrutskoye deposit	2,000.
Bismuth, metal		Leninabad mining and beneficiation complex	Yuzhno-Yangikanskiy deposit	25.
Do.		Isfara hydrometallurgical plant	Isfara	
Coal		Shurabskoye brown coal	Shurab region	700,000.
Do.		Fan-Yagnobskoye hard coal, deposits	Pyandzh region	
Copper		Leninabad mining and beneficiation complex	Yuzhno-Yangikanskiy deposit	NA.
Gold		Tajikzoloto mining-beneficiation complex, Pamir Artel	Darvazy, Rankul placer deposits, placers in central and southern part of country	3.
Lead		Leninabad mining and metallurgical complex	Yuzhno-Yangikanskiy deposit	2,500.
Mercury		Anzob mining and beneficiation complex	Dzhizhikrutskoye deposit	150.
Molybdenum		Leinabad mining and beneficiation complex	Yuzhno-Yangikanskiy deposit	NA.
Petroleum and natural gas	cubic meters	16 oil-gas deposits under exploration, including Ravatskoye, Ayritanskoye, Madaniyatskoye	Fergana depression	100,000 (petroleum), 100,000,000 (natural gas).
Do.	do.	Shaambary Beshtentyakskoye, Uzunkhorskoye, Kichik-Bel-skoye	Southern Tajik depression	
Zinc		Leninabad mining and beneficiation complex	Yuzho-Yangikanskiy deposit	NA.

e/ Estimated. NA Not available.