

# THE MINERAL INDUSTRY OF KYRGYZSTAN

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Kyrgyzstan led the former Soviet Union (FSU) states in the production of two nonferrous metals, mercury, and antimony. Along with some industrial minerals, Kyrgyzstan produced coal, gas, and oil, but it was still significantly dependent on imported energy.

In 1994, Kyrgyzstan's gross domestic product (GDP) reportedly decreased by 26%, while industrial output decreased by almost 25%. The decrease in GDP was almost 10% more than the decreases in each of the 2 preceding years, but the decline in industrial output was comparable to the 2 preceding years.<sup>2</sup> Despite these economic difficulties, Kyrgyzstan was one of the most advanced of the new states of the FSU in pursuing economic reform.

In 1993, Kyrgyzstan launched its own economic reforms, switching to its own currency and beginning a program of rapid privatization. Plans called for attracting large amounts of Western investment to develop the country's gold lode deposits. In October 1992, the major mineral producing enterprises combined to form the Kyrgyzalatyn concern.<sup>3</sup>

In January 1994, Kyrgyzstan announced that it was joining a Central Asian Union with Uzbekistan and Kazakhstan. The goals of this Union included abolishing tariffs on trade among these countries and coordinating fiscal and monetary policies.

The Metal Mining Agency of Japan and Japan International Cooperation Agency announced signing a Japan-Kyrgyzstan Technical Cooperation Project for mineral exploration. The project was for a 3-year term starting in 1994. Exploration would be conducted for copper, gold, lead, and silver deposits.

Based on an edict issued in June 1993, Kyrgyzstan began to privatize and denationalize its economy in July. By yearend 1993, approximately 30% of all state property had been privatized, including 71% of retail trade and services and 41% of industrial property. A more aggressive effort was planned for 1994, particularly for privatizing industry.<sup>4</sup>

Kyrgyzstan produced all of the FSU's antimony metal, although most of the raw material was imported from Russia and some from Tajikistan. Production occurred at the Kadamzhay complex with the capacity to produce 16,000 metric tons per year (mt/a) of antimony.

Makmalzoloto, the country's largest gold-producing enterprise, reportedly increased production in 1994 to 1.7 metric tons (mt) in the first three quarters of 1994.<sup>5</sup> According to Kyrgyzstan's Prime Minister, Kyrgyzstan produced a little more than 2 mt of gold in 1994 which was

according to the Kyrgyzstan State Committee for Economics a 31.4% increase compared with 1993 production.<sup>6</sup>

Kyrgyzstan was engaged in large-scale planning for gold development in order to raise gold output from about 2 mt in 1994 to between 20 to 25 mt by the year 2000. Kyrgyzstan expected to achieve this increase by attracting Western capital investment in its gold mining sector. As of January 1993, Kyrgyzstan had explored and confirmed reserves at 27 deposits, including 13 lode and 14 placer deposits. Five deposits, Dzherui, Ishytamberdy, Levoberezhny, Makmal and Taldy-Bulak, accounted for 90% of the country's reserves, with Kumtor alone assessed as the world's eighth largest gold deposit.<sup>7</sup>

Kyrgyzstan formed a joint venture with Canada's Cameco Corp. to develop the Kumtor deposit having reported reserves of more than 700 mt and reported projected annual production of 15.5 mt from open pit mining. Plans also called for developing underground mining at Kumtor, with a reported projected output of 7.3 mt/a from underground mining.

Kyrgyzstan also had formed a joint venture with the Morrison Knudson Corp. of the United States to develop the Dzherui deposit, Kyrgyzstan's second largest following Kumtor.<sup>8</sup> Morrison Knudson reportedly in 1994 received U.S. Overseas Private Investment Corporation financing for 70% of the development.<sup>9</sup>

Plans called for renovation of the Makmalzoloto mining enterprise, which mined Kyrgyzstan's only gold lode deposit. Production at Makmal had fallen from 3.4 mt/a in 1988 to 1.2 mt/a in 1993. In spring 1994, the Makmalzoloto gold mining complex announced that the Canadian firm, Kilborn Engineering Ltd., would participate in a modernization program, which reportedly would double gold output.

In 1994, Kyrgyzstan awarded a tender for the development of the Taldy-Bulak Levoberezhny deposit containing a reported 60 mt of reserves to an international consortium including Switzerland's Adrde & Cie S.A., the U.S.-based Marston and Marston Corp., and a number of other companies.<sup>10</sup>

In 1994, Kyrgyzstan reported commissioning the Salton-Sary gold mining and beneficiation complex, the second largest gold mining complex after Makmal. The complex, according to Western assessments, would add an additional 20% to Kyrgyzstan's gold output. However, it is much smaller than the Dzheuri and Kumtor projects, which when developed, would propel Kyrgyzstan to the third rank in gold

output, after Russia and Uzbekistan, of the FSU countries.<sup>11</sup>

Kyrgyzstan reportedly accounted for 18% of the FSU's tin reserves. The country was developing two tin deposits, the Uchkoshkon with estimated reserves of 30,000 mt of tin in ore averaging 0.54% tin, and the Trudovoye with estimated reserves of 25,000 mt of tin in ore averaging 0.64% tin.<sup>12</sup>

A Kyrgyzstan-Russia joint venture was formed to develop the Sary Dzhaz tin-tungsten deposit on the Sary Dzhaz River, near the village of Inylchek in the Issykkul'skaya region.<sup>13</sup> Development of this deposit began in the early 1980's, but development had been delayed under the Soviet period and further delayed with the breakup of the FSU. Besides tin, tungsten, bismuth, copper, molybdenum and silver would be recovered from this deposit.

The Kara Balta mining complex in Kyrgyzstan had been exploiting the Kavak uranium and coal deposit since the early 1950's. In the early 1970's, Kara Balta reportedly began mining uranium using underground leaching, and by 1985, this method accounted for more than 50% of Kyrgyzstan's uranium output. The Kara Balta complex was planning to increase its output of other mineral commodities, including barite, gold, molybdenum, rhenium, silver, tin, and tungsten.

It was reported in January 1995 that Kazakhstan reached an agreement with Kyrgyzstan to process uranium mined in Kazakhstan at the Kara-Balta hydrometallurgical processing plant near Bishkek, the capital of Kyrgyzstan.<sup>14</sup> The Kara-Balta hydrometallurgical plant, which reportedly had some of the most advanced technology and highly trained personnel in the FSU, had been idle for most of 1994.<sup>15</sup>

Near the town of Maili Say, where uranium had been mined from 1947-67, radioactive wastes reportedly had been buried in 23 sites around the town or left out in the open. In spring 1994, a mud slide reportedly pushed a waste site into the Maili Sai River flowing through the middle of the town and into the Fergana Valley, a heavily populated agricultural region situated mainly in Uzbekistan. The Maili Sai River eventually enters the Syr Darya River, one of the main rivers of Central Asia.<sup>16</sup>

Kyrgyzstan had significant resources of a number of mineral commodities, but data are not yet available to make adequate estimates. Gold was Kyrgyzstan's most significant mineral resource. Kyrgyzstan also had deposits of metals, including antimony, bauxite, copper, iron, lead and zinc, mercury, tin, and tungsten; of industrial minerals, including barite, fluorspar, graphite, magnesite, salt, talc; construction

materials; precious and semiprecious stones, including rubies, topaz, and many others; and fuels, including coal, gas, oil, oil shale, and peat.

Kyrgyzstan is a landlocked country bordering Tajikistan and China to the south, Uzbekistan to the east, and Kazakhstan to the north. The major form of transport was by truck, which handled more than 97% of all freight. As of 1990, Kyrgyzstan had 30,300 kilometers (km) of roads, of which 22,600 km was paved or graveled, and only 370 km of railroad lines. A gas pipeline passes through Kyrgyzstan from Uzbekistan to Kazakhstan. Kyrgyzstan is a mountainous country, with mountains comprising three-fourths of its territory. Many of the major mineral deposits are in mountainous regions and thus present difficult transport problems.

Gold deposits slated for development in 1994 were expected to provide a significant source of hard currency earnings. The future of several of Kyrgyzstan's other major mineral industries, however, was in doubt. Its antimony industry was dependent on ores imported primarily from Russia. The metal had been exported to Russia, but in the last 2 years, much of the metal was being exported to world markets. Russia, Kyrgyzstan's main customer, also was planning to construct its own metallurgical facilities to process, both antimony and mercury ores to become self-sufficient. As it already had done with antimony, Kyrgyzstan needed, if possible, to find other markets for its mercury production.

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<sup>1</sup>Text prepared July 1995.

<sup>2</sup>Interfax Business Reports, Denver, Colorado, Feb. 7, 1995, p. 3.

<sup>3</sup>Interfax Mining and Metals Report, Dec. 10-17, 1993, p. 9.

<sup>4</sup>Foreign Broadcast Information Service, U.S. Government publication, Sept. 22, 1993, p. 66; Slovo Kyrgyzstana, June 18, 1993, p. 1.

<sup>5</sup>Interfax Mining Report, Oct. 28-Nov. 4, 1994, p. 2.

<sup>6</sup>Summary of World Broadcasts, British Broadcasting Corp., Reading, England SUW/0367, # WD/12, Jan. 20, 1995; Interfax News Agency, Moscow, in English, 188 gmt, Jan. 11, 1995; and Slovo Kyrgyzstana, Bishkek, Dec. 15, 1994, p. 2.

<sup>7</sup>Interfax Mining and Metals Report, Denver, Colorado, Dec. 10-17, 1993, p. 9.

<sup>8</sup>—, Dec. 17-31, 1993, p. 11-13.

<sup>9</sup>—, Oct. 21-28, 1994, p. 6.

<sup>10</sup>—, Sept. 23-30, 1994, p. 4.

<sup>11</sup>—, Aug. 26-Sept. 2, 1994, p. 3.

<sup>12</sup>—, Nov. 26-Dec. 3, 1993, p. 8.

<sup>13</sup>Foreign Broadcast Information Service, SOV-95-014, Jan. 23, 1995, p. 54; ITAR TASS in English, Moscow, 0855 gmt, Jan. 21, 1995.

<sup>14</sup>Interfax Mining and Metals Report, Feb. 17-24, 1995, p. 6.

<sup>15</sup>Foreign Broadcast Information Service, Government publication, Washington, DC, Jan. 23, 1995, p. 54; ITAR TASS in English, 0855 gmt, Jan. 21, 1995.

<sup>16</sup>Economist, London, Dec. 3-9, 1994, p. 46.

TABLE 1  
KYRGYZSTAN: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity	1992	1993	1994
Antimony:			
Mine output, Sb content	2,000	1,600	1,400
Metal	11,000	11,000	9,000
Cement	1,000,000	800,000	600,000
Gold	1,200 kilograms	1,500	2,000
Mercury:			
Mine output, Hg content	300	250	150
Metal	400	350	250
Natural gas	60 million cubic meters	40	30
Petroleum, crude	110,000	90,000	70,000

1/ Estimates based on information available through July 10, 1995.

TABLE 2  
KYRGYZSTAN: STRUCTURE OF THE MINERAL INDUSTRY FOR 1994

(Metric tons unless otherwise specified)

Commodity	Major operating companies	Location of main facilities	Annual capacity e/
Antimony, metal	Kadamzhay mining and metallurgical complex	Kadamzhay	16,000.
Cement	Kantskiy cement plant	Kantskiy region	1,500,000.
Gold	Kyrgyzstan gold mining complex	Toguz-Toro intermontaine basin of Tien Shan Mountains	5.
Mercury, metal	Khaydarkan mining and metallurgical complex	Khaydarkan	650.
Petroleum and natural gas	million cubic meters Approximately 300 wells: major deposits include Changyr-Tashkoye Izbaskentskoye, Mayli-Suyskoe, Chigirchikskoye Karagachskoye Togap-Beshkentskoye, Suzaskoye	Western Kyrgyzstan near Mayli-Say	150,000 (petroleum). 100 (natural gas).

e/ Estimated