



2015 Minerals Yearbook

KYRGYZSTAN [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF KYRGYZSTAN

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Kyrgyzstan is a landlocked mountainous country with limited energy and transportation infrastructure. In 2014, gold remained the most valuable mineral mined in Kyrgyzstan. Other mineral commodities produced in the country were clay, coal, fluorspar, gypsum, lime, mercury, natural gas, crude petroleum, sand and gravel, and silver (table 1; AZoMining, 2013; Gazprom PJSC, 2015; Reichl and others, 2016).

Minerals in the National Economy

Kyrgyzstan's real gross domestic product (GDP) increased by 3.5% in 2015 compared with an increase of 4.0% (revised) in 2014. The nominal GDP was \$5.58 billion¹ in 2015. Industrial output decreased by 1.4% in 2015 compared with an increase of 5.7% in 2014, and it accounted for 15% of the GDP. Mineral industry output decreased by 1% in 2015 compared with a decrease of 4.4% (revised) in 2014. Construction increased by 13.9% in 2015 compared with an increase of 27.1% in 2014. Total investment [of which domestic investment accounted for 37.4% and foreign direct investment (FDI) accounted for 50.1%] increased by 22% to \$1.2 billion; of this amount, 22% was invested in mining and 15% was invested in manufacturing (National Statistical Committee of the Kyrgyz Republic, 2015a, p. 73–74; 2015b, p. 82, 86, 90, 103; Asian Development Bank, 2016, p. 106).

The total value of exports was \$1.30 billion compared with \$1.46 billion in 2014, and that of imports was \$3.68 billion compared with \$5.07 billion (revised) in 2014. In 2015, the value of gold exports was \$623.8 million, which accounted for 48% of the total export value; coal, \$5.3 million; and silver, \$2.8 million. In 2015, the major export partners were Switzerland (which received 42% of Kyrgyzstan's exports), Kazakhstan (58%), and Russia (38%). In 2015, the value of coal imports was \$36.3 million; fertilizer and natural gas, \$36.1 million each; and cement (portland), \$3.5 million. The country's major import partners were China (which supplied 25% of Kyrgyzstan's imports), Turkey (4%), and the United States (3%) (National Statistical Committee of the Kyrgyz Republic, 2015b, p. 135–136, 138, 182).

Government Policies and Programs

Kyrgyzstan is a founding member of Commonwealth of Independent States. In August, Kyrgyzstan joined the Eurasian Economic Union (EAEU). Joining the EAEU opened up a free trade movement between EAEU members and encouraged new investments in the development of infrastructure projects, including those in the energy and transportation sectors (Ereport.ru, 2014; Eurasian Economic Commission, 2015; Commonwealth of Independent States, 2016).

¹Where necessary, values have been converted from Kyrgyzstani soms (KGS) to U.S. dollars (US\$) at an annual average exchange rate of KGS75.87=US\$1.00 for 2015 and KGS58.86=US\$1.00 for 2014.

On April 23, 2014, the Parliament passed the “Glacier Law,” which prohibits activities that cause damage to glaciers. Under the law, if glaciers are damaged, the companies who are responsible are required to pay compensation at a rate determined by the Government. Centerra Gold Inc. (Centerra) of Canada (the operator of the Kumtor Mine) could be affected by the law because the Kumtor Mine bisects a glacier. The law remained to be signed by the Government before it takes effect, and no signing date had yet been specified (Lazenby, 2014; Marketwired, 2015).

In 2015, the Russian Government approved a bill to create the \$1 billion Russian-Kyrgyz Development Fund. The Russian-Kyrgyz Development Fund is a lending program geared toward the development of infrastructure, small- and medium-size businesses (including manufacturing, metallurgical, and mining industries), trade, and transportation (24.kg, 2015; Abbasova, 2015; Moscow Times, The, 2015).

The State Agency for Geology and Mineral Resources of the Kyrgyz Republic, in cooperation with the WYG Consulting Group and with support from the European Bank for Reconstruction and Development, developed in 2015 a Joint Ore Reserves Committee (JORC) code project for Kyrgyzstan. Kyrgyzstan planned to switch from the Soviet system for classification of reserves to the JORC system. In 2015, the State Agency for Geology and Mineral Resources issued 224 exploration and development licenses for deposits of gold, copper-gold-silver, and copper-gold-antimony (Mineral.ru, 2015a; MinerJob.ru, 2015b).

Production

In 2015, production of construction granite and sandstone increased by 109%; construction marble and limestone, and petroleum, by 30% each; clays (kaolin), by 19%; sand and gravel, by 14%; and coal, by 3%. Production of bituminous coal decreased by 27%; cement, by 14%; sand (other), by 12%; gold, by 6%; and mercury, by 5%. Data on mineral production are in table 1.

Structure of the Mineral Industry

As of 2015, the country had 562 mining enterprises, of which 8 were owned by the Government, 1 was owned by a municipality, and 553 were owned privately. Table 2 is a list of the major mineral industry facilities, their locations, and their annual capacities.

Commodity Review

Metals

Antimony.—Kyrgyzstan did not report antimony production in 2015. The Kadamzhay mining and metallurgical complex, which was the sole antimony producer in Batkenskaya Province,

remained closed until mid-2014 and, in the second half of the year, did not operate at full capacity owing to the lack of raw materials. In 2015, the investment company ATF Invest of Kazakhstan, which owned the Kadamzhay mining and metallurgical complex, was expected to start operations in the Kadamzhay complex, although the startup date was not specified. ATF Invest was negotiating with partners from Tajikistan and Russia to provide the raw material for antimony production to the Kadamzhay complex. Previously, raw materials were obtained from the Novoangarskii processing plant in Russia and from Tajikistan; however, the Novoangarskii processing plant was no longer able to provide the necessary tonnage of raw materials needed by both the Kadamzhay complex and a new antimony processing plant in Russia owing to the limited supply of raw material at the Novoangarskii deposit (MinerJob.ru, 2013; Manasova, 2015; Mir, 2015).

Copper and Gold.—In 2015, Centerra Gold remained the leading gold mining company operating in Central Asia. The company produced 16,200 kilograms (kg) (reported as 520,694 troy ounces) of gold in 2015 compared with 17,700 kg (reported as 567,293 troy ounces) in 2014 owing to the processing of lower grades of ore from cut-back 17 (waste that was produced from stripping to access the ore body) compared with the higher grades of ore processed from cut-back 15. A proposed amendment to the Water Code would allow Centerra Gold to develop deposits at the glacier; if the Supreme Council were not to approve the Water Code amendment by January 2016, however, Centerra Gold could be forced to stop its operations at the Kumtor Mine. The Kumtor Mine's total proven and probable resources in 2015 were estimated to be 69.2 million metric tons (Mt) at a grade of 2.5 grams per metric ton (g/t) gold. The open pit's total measured and indicated resources were estimated to be 29.6 Mt at an average grade of 2.7 g/t gold, and the open pit's inferred resources were estimated to be 3.9 Mt at an average grade of 1.2 g/t gold. According to the Gold and Silver Sale Agreement, Government-owned Kyrgyzaltyn was able to purchase gold dore produced at the Kumtor Mine for processing at its Kara-Balta refinery, and Kyrgyzaltyn was responsible for delivering processed gold within 12 days of dore shipment (Centerra Gold Inc., 2015; 2016, p. 3, 24, 35; Mineral.ru, 2015c).

In 2015, Kyrgyzaltyn's Makmal Mine, which is located at the Makmalzoloto complex, and the Tereksai and Solton Sary Mines, which are located in Jalal-Abad Province, produced a combined total of 300 kg of gold compared with 336 kg of gold in 2014. The decrease was attributed to the depletion of gold ore at the Makmal and Tereksai Mines. The gold reserves at the Makmal Mine were estimated to be 1.5 metric tons (t) and were expected to last for another 3 years. The operations at the Makmal processing plant were stopped from September through October 2015 owing to maintenance issues and a lack of raw material for processing. During the closure of the Makmal processing plant, 30,000 t of ore was extracted, which would be enough for the Makmal processing plant to operate until April 2016. In October 2015, the Makmal Mine resumed its operations. Kyrgyzaltyn was in search of an investor or investors to enable the company to conduct further exploration

at the Makmal and the Tereksai deposits (Mineral.ru, 2015b; Prime Zoloto, 2015; Alymbayev, 2016).

The Bozymchak copper-gold mine is located in the Ala-Buka region, Jalal-Abad Province, and was operated by Kaz Minerals plc of Kazakhstan (formerly Kazakhmys Gold Kyrgyzstan LLC). The deposit contained more than 146,000 t of copper, 23,000 kg of gold, and 138,000 kg of silver. In 2015, Kaz Minerals produced the following from the Bozymchak copper-gold mine: 449,000 t of ore at an average grade of 0.97% copper, 3,100 t of copper in concentrate at an average grade of 0.7% copper, 2,200 t of copper cathode, 554 kg of gold in concentrate, 388 kg of gold bars, and 3 t of silver granules. The gold bar production at Bozymchak was expected to increase to between 780 and 900 kg in 2016, and copper cathode production was expected to increase to 6,000 t (Kaz Minerals plc, 2016, p. 2, 16, 21, 41–42).

In 2015, Manas Resources Ltd. completed a feasibility study of the Shambesai gold project in southwestern Kyrgyzstan. Based on the feasibility study, the Shambesai gold mine would be able to produce 2.35 million metric tons per year of ore grading 3.7 g/t gold and containing 8,740 kg of gold. The combined total resources (measured, indicated, and inferred) at the Obdilla and the Shambesai projects were estimated to be 17.3 Mt grading 2.2 g/t gold and containing 37,000 kg of gold. The proved and probable reserves were estimated to be 2.4 Mt of ore grading 3.7 g/t gold and containing 9,000 kg of gold. In 2015, Chaarat Gold Holdings Ltd. of the British Virgin Islands was conducting the feasibility study at its Chaarat gold project. The total resources (measured, indicated, and inferred) were estimated to be 52.9 Mt at an average grade of 2.79 g/t gold and containing 147,000 kg of gold (Manas Resources Ltd., 2014, p. 7–8; 2015, p. 7; Chaarat Gold Holdings Ltd., 2016, p. 13).

In 2015, the Government awarded a tender to Vostok-Geolodobycha Co. of Russia, which was a subsidiary of Amur Zoloto LLC (which was in turn a part of Russia Platinum PLC of Russia), to develop the Jerooy gold mine. Jerooy, which is located west of Bishkek in Talas Province, was estimated to contain 84 t of gold and 10.3 t of silver. Under the terms of the tender, Amur Zoloto needed to make a one-time payment of \$100 million, begin the construction of the gold-processing plant in 3 months, and complete construction of the plant in 2 years. In 2015, 500 people in Talas Province in northern Kyrgyzstan protested the development of the Jerooy gold field and demanded environmental protection. The protestors' demands were passed to the local authorities (Interfax, 2015, p. 5; MinerJob.ru, 2015a).

Mercury.—The Khaydarkan mining and metallurgical complex was the sole mercury producer in Kyrgyzstan. In 2015, production at the complex decreased to 45,500 kg of mercury from 48,000 kg in 2014 owing to the flooding of the low levels of the mine. The mine was 600 meters (m) deep, of which 400 m was flooded in 2009. The complex was hoping to borrow \$14 million from the Russian-Kyrgyz Development Fund to pump water out of the mine to increase production. The mercury produced was exported to Iran, the Republic of Korea, and Russia. The complex employed 520 workers (Ibraev, 2015).

Rare Earths.—Kyrgyzstan had 20 rare-earth deposits and mineralizations; one of the largest rare-earth deposits was Kutessay II, which is located in the central part of the Aktuz ore field in the Kemin region. In 2015, Stans Energy Corp. of Canada appealed the Moscow City Arbitrazh Court's decisions related to payment of \$118 million by the Government to Stans Energy for seizing Stans Energy's Kutessay II rare-earth mine in 2012. The Superior Court of Ontario, Canada, set the date to hear Stans Energy's appeal to the Moscow City Arbitrazh Court decision. In 2009, Stans Energy had acquired 100% of OSC Kutessay Mining LLC, which held a 20-year mining license for the Kutessay II and the Kalesay deposits through its local subsidiary Stans Energy KG and, from 2012 until April 2013, Kutessay II had been under exploration. The total measured and indicated resources of Kutessay II were estimated to have an average grade of 0.26% total rare-earth oxides (TR₂O₃) and to contain 42,980 t of TR₂O₃; additional inferred mineral resources were estimated to have an average grade of 0.20% TR₂O₃ and to contain 3,560 t of TR₂O₃ (Stans Energy Corp., 2012, p. 26–27, 73; Ivleva and Pak, 2013, p. 2; Jamasmie, 2015a, b).

Industrial Minerals

Cement.—In 2015, cement production in Kyrgyzstan decreased by 14% to 1.49 Mt from 1.73 Mt in 2014. In August 2015, Gansu Shangfeng Cement Co. Ltd. of China announced that its subsidiary Tongling Shangfeng Cement Co. Ltd. had signed a cooperation letter of intent with Zhu Rongjun of China to acquire shares and further invest in Zeth Cement Ltd. in Kyrgyzstan. Tongling Shangfeng would hold 58% of Zeth Cement and Zhu Rongjun would hold the remaining 42%. Tongling Shangfeng and Zhu Rongjun were expected to invest in the construction of a new cement plant in Kemin, Chuy Province, which would be located 13 kilometers east of Bishkek. The cost of the plant construction was projected to be \$70 million, and the construction was expected to be completed within 15 months (Cementchina.net, 2014; Global Cement, 2014; Bishkek Post, 2015; International Cement Review, 2015, p. 204).

In 2015, Jinlong Group of China was planning to invest \$65 million in the construction of an 800,000-t single-line cement plant in Issykl'-Kul Province. The cement plant was expected to be operated by a Jinglong Group's subsidiary, Yatai Cement, which planned to hire 400 workers (Global Cement, 2015).

Mineral Fuels and Related Materials

Coal.—According to the State Enterprise Kyrgyzkomir, in 2015, coal production increased by 3% to 1.88 Mt from 1.83 Mt in 2014. In addition to bituminous coal and lignite, the country had resources of coking coal. In 2015, Celsius Coal Ltd. of Australia was not able to continue its work on the Uzgen basin coking coal project owing to lack of funding and low coal prices. As of the end of 2015, Celsius Coal no longer had assets in Kyrgyzstan (Celsius Coal Ltd., 2015a; 2015b, p. 2).

Uranium.—Karabalta Ore Processing Plant JSC (KOPP) was one of the leading processors of uranium raw materials for the nuclear industry in Kyrgyzstan. In 2013, KOPP had requested

that NAC Kazatomprom JSC of Kazakhstan (acting on behalf of the Government of Kazakhstan) provide it with between 2,500 and 3,000 t of uranium concentrates, but Kazatomprom agreed to provide only 1,500 t. In 2015, Kazatomprom terminated the agreement with KOPP for the processing of uranium concentrate and, in November 2015, KOPP halted operations owing to the lack of raw material and orders from Kazakhstan. KOPP was in search of a new raw material supplier (Denisenko, 2013; Central Asia.ru, 2014; Ibraev, 2014; Kudryavtseva, 2016; World Nuclear Association, 2016).

Outlook

The GDP was projected to increase by 2.2% in 2016 compared with the increase of 3.5% in 2015. The Government of Kyrgyzstan is expected to intensify its efforts to increase its mineral production, including by holding additional mining tenders and by trying to attract more foreign investment for its mining and manufacturing industries. The creation of the Russian-Kyrgyz Development Fund in 2015 could help provide more funding support to the mineral industry. The country is trying to further develop its mineral industry by adopting a new mining code and improving transparency in the process of issuing licenses for exploration, prospecting, development, and mining of its natural resources. The progress in gold production most likely will depend on Government policy and the startup of operations at new projects. In 2015, coal and uranium companies ceased operations owing to the disputes over the ownership of mines, lack of investor funds, and lack of raw materials.

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TABLE 1
KYRGYZSTAN: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2011	2012	2013	2014	2015
METALS					
Antimony, metal and compounds	892	924	422 ^r	105	--
Gold, mine output, Au content kilograms	18,647	10,332	19,000	18,000	16,900
Mercury, metal do.	112,700	74,700	70,500	48,000 ^r	45,500
Silver, granules	--	--	--	--	3
INDUSTRIAL MINERALS					
Cement, hydraulic	1,022,000	1,239,000	1,675,800	1,730,200 ^r	1,494,400
Clay, kaolin	108,900	113,900	133,500	1,121,800 ^r	1,332,600
Gypsum	57	59	37 ^r	39	40
Lime ^e	2,600	3,000	5,700	5,800	5,900
Salt, rock	800	2,640 ^r	1,622 ^r	1,600 ^{r,e}	1,600 ^{r,e}
Sand and gravel	745,900	566,500	1,160,100	1,165,000	1,332,600
Sand, other cubic meters	850,000	800,000	934,000	724,800 ^r	637,800
Stone:					
Construction granite and sandstone	NA	169,500	33,602,300	31,119,000	65,124,600
Construction marble and limestone	NA	NA	1,199,900	74,400	97,000
MINERAL FUELS AND RELATED MATERIALS					
Coal:					
Bituminous	94,000	132,600	167,800	323,300 ^r	236,200
Lignite	745,000	1,051,400	1,256,800	1,506,600 ^r	1,646,500
Total	839,000	1,184,000	1,424,600	1,829,900 ^r	1,882,700
Gas, natural: thousand cubic meters	26,600	18,500	32,500	33,800	31,600
Petroleum, crude:					
In gravimetric units	77,000	83,600	83,700	82,900	107,100
In volumetric units 42-gallon barrels	564,000 ^r	612,800	613,500	607,636 ^r	785,016
Uranium, processed:					
U content	1,700 ^r	1,500 ^r	1,300 ^r	1,200	1,100 ^e
U ₃ O ₈ content ^e	2,000 ^r	1,800 ^r	1,500 ^r	1,700	1,600

^eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ^rRevised. do. Ditto. NA Not available. -- Zero.

¹Table includes data available through July 26, 2016.

²In addition to the commodities listed, Kyrgyzstan is thought to have produced a number of other mineral commodities, including copper, fluor spar, mined mercury, molybdenum, silver, tin, and tungsten, but available information was inadequate to make reliable estimates of output.

Source: National Statistical Committee of the Kyrgyz Republic, 2016

TABLE 2
KYRGYZSTAN: STRUCTURE OF THE MINERAL INDUSTRY IN 2015¹

(Metric tons unless otherwise specified)

Commodity		Major operating companies, main facilities, or deposits	Location or deposit names	Annual capacity ^e
Antimony, metal and compounds		ATF Invest, a subsidiary of ATF Bank of Kazakhstan	Kadamzhay metallurgical facility Kadamzhayskiy Rayon	105 ²
Cement		United Cement Group	OJSC Kant cement plant, Kant, Ysykaty district, Chuy Province	1,316,000
Do.		China-Kyrgyz Co.	Aravan cement plant, Aravan district, Osh Province	200,000
Do.		United Cement Group	LLC TechnoLin cement plant Kant, Ysykaty district, Chuy Province	359,000
Do.		Verny Capital	South Kyrgyz Cement CJSC Kyzyl-Kiya, Batken Province	1,300,000
Do.		NA	CJSC Kurmentyement, Ak-Bulak village, Issyk-Kul' Province	60,000
Do.		NA	CJSC Yuzno-Kyrgyzkiy Cement, southwestern Kyrgyzstan	825,000
Do.		China-Kyrgyz Co.	Tushtuk Kyrgyz cement plant Kyzyl-Kiya, Batken Province	750,000
Coal		State Enterprise Kyrgyzkomir, 51%, and Bishkek CHP Power Plant Kyrgyzstan and local society, 49%	Seven underground mines and five open pits among the following deposits: Almalyk, Dzhergalan, and, Kok-Yangak, Kyzyl-Kiya, Sulyukta, and Tashkumyr southwestern, central, and northeastern parts of the country	2,200,000
Do.		NA	Kara-Kiche Mine, Naryn Province	NA
Copper		Talas Copper Gold Co. (Gold Fields Ltd., 100%)	Taldybulak, Talas Province	NA
Do.		CJSC Kichi-Chaarat	Kuru-Tegerek, Chatkal region, Jalal-Abad Province	NA
Do.		OcOO Kazakhmys, and Gold Kyrgyzstan LLC	Ala-Buka region, Jalal-Abad Province, Bozymchak deposit	6,000
Fluorspar, concentrate		Khaydarkan mining and metallurgical complex	Khaydarkan deposit	5,000
Gold:				
Au content of ore	thousand kilograms	Kumtor Gold Co. (Centerra Gold Inc., 67%, and OAO Kyrgyzaltyn, 33%)	Kumtor deposit, Jeti-Oguz district, Issyk-Kul' Province	22
Do.	do.	OAO Kyrgyzaltyn (Government, 100%)	Makmal deposit, Toguz-Toro region Jalal-Abad Province	600
Do.	do.	do.	Naryn Province Solton-Sary Mine	170
Do.		do.	Tereksai Mine, Osh Province	NA
Do.		Talas Cooper Gold (Gold Fields Ltd., 100%)	Jerooy-Bashi, Pereval, Kemin region, Chuy Province	NA
Do.	thousand kilograms	AOA Kyrgyzaltyn, 40%, and Superb Pacific Ltd., 60%	Taldy-Bulak Levoberezhny deposit	3
Do.		Highland Gold Mining Ltd., 100%	Jalal Abad Province, Ala-Buka region Unkurtash gold deposit (Unkurtash, Sarytube, Karatube prospects),	NA
Do.	kilograms	Kaz Minerals plc	Bozymchak gold deposit, Ala-Buka region, Jalal-Abad Province	550
Refined		AOA Kyrgyzaltyn (Government, 100%)	Kara-Balta refinery, Chuy Province	NA
Mercury, metal	kilograms	do.	Khaydarkan mining and metallurgical complex	50,000 ³

See footnotes at end of table.

TABLE 2—Continued
 KYRGYZSTAN: STRUCTURE OF THE MINERAL INDUSTRY IN 2015¹

(Metric tons unless otherwise specified)

Commodity	Major operating companies, main facilities, or deposits	Location or deposit names	Annual capacity ^e
Molybdenum, for nonmetallurgical uses	Kara-Balta mining and metallurgical complex	NA	500
Natural gas million cubic meters	Kyrgyzzmunayot	Approximately 300 wells; Changyr-Tash, Chigirchik Pereval, Izbaskentskoye, Kara-Agach, Mayлуу-Suu, Susahoye, and Togap-Beshkenskoye deposits	30 ³
Petroleum	Kyrgyz Petroleum Co. (Kyrgyzneftgaz)	Jalal-Abad Province	150,000
Silver	NA	Karagoyskoye deposit, Osh Province	NA
Do.	NA	Kumyshtag deposit, Talas Province	NA
Tin	NA	Novosibirsk Integrated Tin Works Atdzhaylau deposit	150
Do.	NA	Trudovoye deposit	350
Do.	Tyanshanolovo mining and beneficiation complex	Sary-Dzhas field	NA
Do.	NA	Uchkoshkon deposit	NA
Tungsten	Enil'chek JSC mining enterprise	Atdzhaylau deposit	90
Do.	do.	Trudovoye deposit	9,560
Uranium, processed	GK Renova	Kara-Balta ore processing plant JSC, Zarechnoye deposit, Chuy Province	3,500
Do.	Kyrgyzstan LLC, 100%	Kyzyl Ompul Mine, Naryn Province	NA
Do.	Linia Prava Uranium (LPU) (Nimrodel Resources Ltd., 90%)	Batken Leases, Southern Fergana Valley, Batken Province	NA

^eEstimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto. NA Not available.

¹Many location names have changed since the breakup of the Soviet Union. Many enterprises, however, are still named or commonly referred to based on the former location name, which accounts for discrepancies in the names of enterprises and that of locations.

²Plant stopped operation in November 2015.

³Capacity estimates are the total for all enterprises that produce that commodity.