

2010 Minerals Yearbook

UZBEKISTAN

THE MINERAL INDUSTRY OF UZBEKISTAN

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Uzbekistan has large mineral reserves, which include more than 1,800 known mineral deposits. The most notable minerals are copper, gold, and uranium. Other significant mineral resources include bentonite, coal, fluorspar, gypsum, iodine, kaolin, lithium, oil and natural gas, silver, sulfur, tungsten, and zinc. Many minerals with known deposits were not being extracted. The volume of mineral production lagged behind the mining potential (based on Uzbekistan's known deposits) because of the country's inefficient infrastructure, remote location with respect to the world markets, and tight regulatory environment that did not attract considerable foreign investment (U.S. Central Intelligence Agency, 2012; U.S. Department of State, 2012; U.S. Energy Information Administration, 2012).

Minerals in the National Economy

In 2010, Uzbekistan's real gross domestic product (GDP) grew by an estimated 8.5%. The volume of exports increased by 10.8% compared with that of 2009, and exports were reported to be valued at \$13.4 billion. The main export commodities were cotton, gold, oil and gas, and uranium. In 2010, the share of industrial production in the GDP was 23.9%. The main industries were the chemical sector, food processing, hydrocarbon extraction, machine building, metallurgy, mining, and textile manufacturing (State Committee of the Republic of Uzbekistan on Statistics, The, 2010; U.S. Central Intelligence Agency, 2012; U.S. Department of State, 2012).

Production

Reported data on the production of most minerals were not available. The estimated production volumes in table 1 were constructed based on a combination of news reports, producer data, and past production levels.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Copper.—The only producer of copper in Uzbekistan was the Almalyk mining and metallurgical complex (Almalyk GMK), which was located in Toshkent Province (Toshkent Viloyati). The two large copper porphyry deposits, the Kalmakyr and the Sary-Cheku deposits, were the main resources for the mining of copper. An additional copper deposit, Dal'nee, was on reserve. The mineral deposits of the Toshkent Viloyati are highly complex and contain more than 170 types of minerals. In addition to copper, the Almalyk GMK mined and processed lead-zinc-barite ores from the Uch-Kulach deposit located in Jizzax Viloyati. The Almalyk GMK produced about 90% of the silver and 20% of the gold output of Uzbekistan (Almalyk Mining-Metallurgical Complex, 2012).

In 2010, the Fund for the Reconstruction and Development of Uzbekistan (FRRU) agreed to provide the Almalyk GMK with a loan of \$30 million for modernization of its copper production. FRRU was created by a decree of the President of Uzbekistan in 2006. The founders of the Fund were the Finance Ministry and the country's five largest commercial banks. Another future project of the Almalyk GMK was the production of 8- to 45-millimeter-sized copper pipes. The total cost of the project was estimated to be \$18.7 million, and production was expected to begin in 2012 or 2013 (Mineral.ru, 2010; MetalDaily.ru, 2011).

Gold.—Uzbekistan's significant reserves of gold were estimated to total 5,300 metric tons (t). According to the Government Committee on Geology (Goskomgeo) of Uzbekistan, the country had 33 primary gold deposits. The main gold producers of the country were two Government-owned mining and metallurgical complexes-the Almalyk GMK and the Navoi mining and metallurgical complex (Navoi GMK). The Muruntau deposit in the Central Qizilgum region is thought to be unique in the world because of the high quality of its ores and the relatively low extraction costs. Another prospective gold deposit was the Tamdybulak, which is located 25 kilometers north of Muruntau. The Navoi GMK, which was the main producer of gold in Uzbekistan, started mining two new deposits in 2007-the Daugyztau and the Kakpatas deposits. The Navoi GMK produced about 60 million metric tons per year of gold (Regnum.ru, 2006; Navoi Mining and Metallurgical Combinat, 2012; Rustunnel.ru, 2012)

Mineral Fuels and Related Materials

Natural Gas and Petroleum.—Uzbekistan had significant hydrocarbon resources and was one of only a few countries that were not dependent on a foreign supply of energy. The country had 171 discovered oil and natural gas fields, 51 of which produced oil and 17 of which produced gas condensate. Because of aging production equipment, however, oil production had been decreasing since 2003, and the currently producing fields were being rapidly depleted. The Bukhara-Khiva region in southwestern Uzbekistan accounted for about 70% of the country's oil production. Uzbekistan signed several production-sharing agreements with foreign oil companies to refurbish existing fields and develop new basins. Two of these major foreign companies were Chinese National Petroleum Corp. (CNPC) of China and OAO Lukoil of Russia. Despite those industry revitalization efforts, Uzbekistan's oil production was expected to continue to decrease through at least 2013.

Uzbekistan produced natural gas from 52 fields located at 12 major deposits. The deposits were concentrated on the Uzbek side of the Amu Darya basin in the southeast and in the Central Ustyurt plateau near the Aral Sea in the western part of the country. Uzbekistan consumed nearly 80% of its gas production for domestic use in the electricity production and heating sectors. Because it was the most populous country in Central Asia (28 million people in 2010), export needs had to compete with domestic demand. Uzbekistan exported about 24% of its gas production to Kazakhstan, Kyrgyzstan, Russia, and Tajikistan. The country hoped to triple its gas exports by 2020. In 2010, Uzbekneftegaz signed new agreements with OAO Gazprom of Russia and CNPC of China that covered imports of Uzbek gas to Russia and China, respectively. In the same year, the Export-Import Bank of China agreed to provide \$74 million to modernize Uzbekistan's gas distribution network to facilitate gas delivery to China (U.S. Energy Information Administration, 2012; Uzbekinvest International Insurance Company Ltd., 2012).

Uranium.—The Navoi GMK had monopoly rights for the mining, beneficiation, and export of uranium as uranium oxide (U_3O_8) . The Navoi GMK had three mining units and Hydrometallurgical Plant #1 (GMZ-1) that serviced the uranium line of business. The mineral base for uranium production at the Navoi GMK consisted of 20 deposits and 10 additional prospective areas. In the past 15 years, uranium production was done using the in situ leaching (ISL) method. As of 2010, six ISL mines were in operation. In the past several years, two new mines were commissioned on the Kendyktube and the Lyavlyakan deposits; pilot works were being conducted on the Sugraly and the Tokhtumbet deposits (Navoi Mining and Metallurgical Combinat, 2012).

In August 2009, the Chinese company CNPC Uranium Resources Co. and Uzbek Goskomgeo formed a 50-50 joint venture, Uz-China Uran, with an initial capital investment of \$4.6 million. According to the joint-venture agreement, the Chinese partner would have priority rights for the purchase of uranium produced as a result of the venture, at world prices. In June 2010, Uz-China Uran started exploration at the Boztaus plateau in the Central Qizilqum region. According to Goskomgeo, uranium reserves at the Boztaus plateau were about 5,500 t. The company has thus far invested \$2 million in mineral exploration (MinerJob.ru, 2010).

Outlook

Uzbekistan will likely seek to increase its production and export of hydrocarbons during the next decade by expanding its pipelines and modernizing its production facilities and infrastructure. The Government is also likely to continue to form partnerships with Asian and Russian firms to help achieve this objective.

The country is also expected to increase its production of uranium and gold. In the past several years, Uzbekistan has tried to modernize its Almalyk and Navoi GMKs and to ramp up production of copper and gold. Barring unforeseen events in the world economy, therefore, Uzbekistan's mineral production is expected to increase during the next decade.

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TABLE 1 UZBEKISTAN: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	2006	2007	2008	2009	2010
METALS					
Aluminum, secondary ^e	3,000	3,000	3,000	3,000	3,000
Copper:					
Mine output, Cu content	100,000	95,000	95,000	95,000 r	90,000
Metal: ^e					
Blister	95,000	92,000	92,000	92,000 r	92,000
Refined	92,300	89,655 ²	71,000 ^r	80,000 r	90,000
Gold ^e kilograms	85,000 ^r	85,000	85,000	90,000 ^r	90,000
Molybdenum, mine output, Mo content ^e	600	600	500	500	500
Rhenium ^e kilograms	NA ^r	NA ^r	NA ^r	NA ^r	NA
Silver, mine output do.	62,207 r	77,759 ^r	74,648 ^r	52,876 ^r	59,097
Steel:					
Crude	592,450	740,000 ^e	685,700 ^r	716,400	745,000 ^e
Rolled	560,000	700,000	640,000	670,000	700,000 ^e
Zinc, metal, smelter, primary	45,000 e	71,800	70,445	40,000 ^{r, e}	40,000 ^e
INDUSTRIAL MINERALS					
Cement ^e	5,700,000	6,500,000 ²	6,600,000	6,850,000 ^r	6,872,000 ²
Clavs: ^e					
Bentonite	15,000	15,000	15,000	15,000	15,000
Kaolin	5,500,000 r	5,500,000 r	5,500,000 r	5,500,000 r	5,500,000
Feldspar ^e	4,300	4,300	4,300	4,300	4,300
Fluorspar ^e	88,000 ²	90,000	90,000	90,000	90,000
Granhite ^e	60	60	60	60	60
Gupune	80.000	80.000	80.000	80.000	80.000
Lodine ^e kilograms	2 000	2 000	2 000	2 000	2 000
Nitragen N content of emmonie ^e	940.000	1 000 000	1 000 000	1,000,000	1 000 000
Dhamhata analu ^e	740,000	1,000,000	1,000,000	1,000,000	1,000,000
Prosphale fock:	600.000	600.000	600.000	600.000	800.000
P.O. content	140.000	140,000	140,000	140,000	187,000
	140,000	140,000	140,000	140,000	187,000
Sulfur:					
Matalluma	170.000	170.000	170.000	170.000	170.000
Netanurgy	170,000	170,000	170,000	170,000	170,000
	520,000	520,000	530,000	520,000	520,000
	520,000 600,000 ²	520,000	520,000	520,000	520,000
	000,000	800,000	000,000	000,000	800,000
Cool:					
Pituminous	100.000	160.000	108 000	101.000	108 000
	2 126 000	2 282 000	2 002 000 r	2 552 000 r	2 102 000
	3 235 000	3,282,000	3 290 000	3 654 000	3 300 000
Natural gas dry million cubic meters	62 750	65 186	67 593	5,054,000	59.439
Petroleum:	02,750	05,100	01,575	05,000	57,457
Crude:					
In gravimetric units thousand metric tons	3 007	3 017	2 533	2 331	1 866
In volumetric units ^e thousand 42-gallon barrels	21.861	21.934	18 415	16 946	13 566
Petroleum refinery products:	21,001	21,951	10,115	10,910	15,500
In gravimetric units thousand metric tons	7 323	6 000 r	4 000 r	4 000 ^r	3 296
In volumetric units thousand 42-gallon barrels	52.308	48.873	33.100	33,100	26.480
Uranium:	,=	-,	,	,	-,
U content	2.270	2.320	2.338	2.429 r	2.400
U_3O_8 content	2.677	2.736	2.757	2.865 r	2.830

^eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ^rRevised. do. Ditto. NA Not available. ¹Table includes data available through March 22, 2012.

²Reported figure.

TABLE 2

UZBEKISTAN: STRUCTURE OF THE MINERAL INDUSTRY IN 2010^1

(Metric tons unless otherwise specified)

Major operating companies, main facilities,			
Commodity	or deposits	Location or deposit names	capacity ^e
Bismuth	Ustarassay deposit (depleted)	Chotqol and Kuraminskiy Khrebet	NA
Cesium, lithium, rubidium	Shava-Say deposit	NA	NA
Clays:	5 1		
Bentonite	Arab-Dasht and Khaudag deposits	NA	NA
Kaolin	Angren deposit	Angren region	8,000,000
Coal:			
Bituminous	JSC Shargunugol	Baysunskoye and Shargunskoye deposits, Surkhandarya region	1,000,000 2
Lignite	OJSC Uzbekcoal and OJSC Apartak	Angren deposit, Toshkent Viloyati	6,000,000
Copper:			
Mine output, Cu content	Almalyk mining and metallurgical complex	Dalneye, Kalmakyr, and Sary-Cheku deposits	100,000 2
Metal	Almalyk refinery	Olmaliq	130,000
Diamond	Karashok and Kok-Say deposits	Navoi Viloyati	NA
Feldspar	Karichasayskoye and other deposits	Deposits in Samarqand and Toshkent	120,000 ²
		Viloyati; Qoraqalpog'iston Respublikasi	
Fertilizers	Ammophos production association	Olmaliq	NA
Do.	Azot production association	Fergana area	NA
Do.	Elektrokhimprom production association	Chirchiq	NA
Do.	Kokand superphosphate plant	Qo'qon	NA
Do.	Naviazot production association	Navoiy Viloyati	NA
Do.	Samarkand chemicals plant	Samarqand Viloyati	NA
Fluorspar	Agata-Chibargata, Aurakhmat, Kengutan,	East of Toshkent Viloyati	150,000
	Kyzylbaur, Naugarzan, and Nugisken deposits		
Do.	Syrpatash deposit	Namangan Viloyati	NA
Gold kilograms	Adzhi-Bugutty, Amantaytau, Balpantau, Bulutkan, Donguz-Tau, Muruntau, and Taurbay deposits	Central Qizilqum region	85,000 ²
Do.	Navoi mining and metallurgical complex (Uzbekistan State Committee for Geology and Mineral Resources)	Muruntau deposit	65
Do.	Kochbulak and Kyzyl-Al'ma-Say deposits	Toshkent Viloyati	NA
Do.	Almalyk mining and metallurgical complex	Dalneye, Kalmakyr, and	NA
		Sary-Cheku deposits	
Graphite	Tadzhi-Kazgan deposit	Navoiy Viloyati	NA
Iron ore	Syurenata deposit	Toshkent Viloyati	NA
Lead, mine output, Pb content	Almalyk mining and metallurgical complex; Altyn-Topkan and Uchkulach deposits	Uchkulach deposit in Toshkent Viloyati [Altyn-Topkan deposit is located in Tajikistan (in 1999, Altyn-Topkan was transferred to the control of Tajikistan)]	40,000 ²
Manganese	Dautashskoye deposit	Qashqadaryo Viloyati	40,000
Molybdenum:	* *		
Mine output, Mo content	Almalyk mining and metallurgical complex; Kalmakyr and Sary-Cheku deposits	Toshkent Viloyati	900 ²
Metal	Uzbek refinery and hard metals plant	Chirchiq	NA
Natural gas million cubic meters	Gazli, Kandym, Khauzak, Kokdumalak, Pamuk, and Shurtan-Say deposits (major)	Amu-Dar'ya Basin; Muborak region	70,000 ²
Do.	Itera Oil and Gax Co., OAO Lukoil, and Uzbekneftegaz JSC	Kan-Dam field	NA
Natural gas condensate	Trinity Energy	Ustyurt Platosi region	NA

See footnotes at end of table.

TABLE 2—Continued UZBEKISTAN: STRUCTURE OF THE MINERAL INDUSTRY IN 2010¹

(Metric tons unless otherwise specified)

Major operating companies, main facilities,				Annual
Commodity		or deposits Location or deposit name		capacity ^e
Natural gas liquids million	cubic meters	Mubarek gas processing plant	Muborak region	28,000
Do.		Shurtan gas-chemical complex	Shurtan-Say deposit, Qashqadaryo Viloyati	137,000
Petroleum:				
Crude		Kokdumalak and Mingbulak deposits (major)	NA	9,000,000 ²
Refinery products		Fergana oil refinery	Fergana area	8,800,000
Do.		Bukhara oil refinery	Buxoro area	2,500,000
Phosphate		Kyzyl Kum complex	Dzheroy-Sardarin Moroccan type; Karaktay, Severnyy, and Dzhetymtau deposits	NA
Polyethylene		Shurtan gas-chemical complex	Shurtan-Say deposit, Qashqadaryo Viloyati	125,000
Potash		Tyubegatan deposit	Southern Uzbekistan	NA
Rhenium		Almalyk mining and metallurgical complex	Toshkent Viloyati	NA
Selenium		do.	do.	NA
Silver		do.	do.	NA
Do.		Kosmanachi, Okzhetpes, and Vysokovoltnoye deposits	Namangan Viloyati	NA
Steel, crude		Bekabad steel mill	Bekobod area	1,100,000
Sulfur		Almalyk mining and metallurgical complex	Dalneye, Kalmakyr, and Sary-Cheku deposits	NA
Do.		Mubarek gas processing plant complex	Muborak region	2,000,000
Tellurium		Almalyk mining and metallurgical complex	Toshkent Viloyati	NA
Tungsten:		Deposits:	Locations:	1,200 2
Mine output, W content		Koytash deposit Ingichka and Lyangar deposits Ugat deposit	Northeastern Uzbekistan Zirabulak Mountains Northern Uzbekistan	
Mine output, WO ₃ content (0).49%)	Sautbay wolframite deposit	Qizilqum region	NA
Metal		Uzbek refractory and hard metals plant	Chirchiq	NA
Uranium, U content		Navoi mining and metallurgical complex	Central Qizilqum region	3,000
Vermiculite	cubic meters	Tebin-Bulak deposit	NA	25,000
Zinc:				
Mine output, Zn content Almalyk mining and metallurgical complex Ki		Khandiza and Uchkulach deposits	NA	
Metal		do.	do.	80,000

^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.

²Capacity estimates are totals for all enterprises that produce that commodity.