



2011 Minerals Yearbook

GEORGIA

THE MINERAL INDUSTRY OF GEORGIA

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Prior to the proclamation of Georgian independence in 1991, a range of mineral commodities were mined in Georgia, including arsenic, barite, bentonite, coal, copper, diatomite, lead, manganese, zeolites, and zinc, among others. The country's metallurgical sector produced ferroalloys and steel. Since 1991, production of many of these mineral commodities had ceased or been significantly reduced.

Following the Rose Revolution of 2003, the Government determined to revive the country's industry. In 2007, Georgia sold its three leading enterprises—Chiatura Manganese, Vartzikhe Hydropower, and Zestafoni Ferroalloys to Stemcor Co. of the United Kingdom. Before the sale, the enterprises were in a difficult financial situation; for example, Zestafoni Ferroalloys owed the Government \$35 million in taxes. Since then, all three enterprises had successfully continued production. Attracting new capital into exploration, development, and mining proved more difficult for the Government. In 2009, the Government announced an auction of 26 mineral deposits, and only 4 of them had buyers (Minerjob.ru, 2007; Rusmining.ru, 2009).

In the past 5 years, the Government of Georgia paid special attention to the sectors of the economy that would provide the country with energy. The policy measures included massive construction of hydropower plants and construction of pipelines to bring oil and gas to Georgia from Azerbaijan and Kazakhstan. Another direction being taken to develop the Georgian economy was construction of various types of infrastructure (highways, pipelines, ports, power lines, railroads) to position the country as a reliable transit hub for the transportation of cargo between Central Asia and Europe (U.S. Central Intelligence Agency, 2012).

Minerals in the National Economy

In 2011, the nominal gross domestic product (GDP) of Georgia increased by 24.1% compared with that of 2010, to \$14.4 billion. The country's real GDP increased by 7.2% in 2011 compared with that of 2010. The share of industrial production in the GDP in 2011 was 17.1%. Mining and quarrying accounted for 3.7% of the value of industrial production. In 2011, the real value of production in mining and quarrying decreased by 8.5% whereas the real value of manufacturing production increased by 13.9%, indicating that the Georgian economy was growing following the economic reforms of the previous decade, but the mining sector was lagging behind (National Statistics Office of Georgia, 2012c).

In 2011, foreign direct investment (FDI) increased by 37% to \$1,117 million from \$815 million in 2010. The Netherlands was the leading investor in Georgia (provided 22% of the total FDI received by Georgia) in 2011, followed by Azerbaijan (12%), Denmark (9%), international organizations (8%), Turkey (7%), and Russia and the United Kingdom (5% each). The FDI

in mining was \$40.2 million, or 3.6% of the total FDI in the country (National Statistics Office of Georgia, 2012b).

In 2011, Georgia ran a substantial trade deficit—the total value of its exports (\$2.19 billion) was greatly exceeded by the total value of its imports (\$7.06 billion). The country's major export trade partners were, in order of value, Azerbaijan (which received 19.5% of Georgia's exports), Turkey (10.4%), Armenia (10.2%), Kazakhstan (7.2%), the United States (6.6%), Ukraine (6.5%), and Canada (5.2%). Its major import trade partners were, in order of value, Turkey (which supplied 18.0% of Georgia's imports), Ukraine (10.0%), Azerbaijan (8.7%), China (7.4%), Germany (6.8%), and Russia (5.5%). Mineral commodities, especially metals, played a significant role in the country's exports. Ferroalloys accounted for 11.6% of the country's total export value; ferrous waste and scrap, 5.3%; unwrought gold, 5.0%; copper ores and concentrates, 3.9%; and bars and rods of iron, 2.8%. Among the country's imports, the largest single category was petroleum, petroleum oils, and petroleum gases, which made up 16.3% of the total (National Statistics Office of Georgia, 2012a).

Production

Most of the data in table 1 were estimated because 2011 production data for most mineral commodities were not available. Despite the reported increases in Georgia's GDP and its industrial output, and the value of output in the mining and refining sectors, the production volumes of metals, industrial minerals, and mineral fuels were estimated to have remained largely unchanged in 2011. Production of steel rebar increased by an estimated 4.8%; that of bituminous coal, by an estimated 3.9%; and ferromanganese, by an estimated 2.3%. At the same time, production of copper decreased by an estimated 5.9%, and that of petroleum, by 2.1%. Other production data are in table 1.

Commodity Review

Metals

Copper.—The Madneuli deposit of polymetallic ores is situated in the Bolnisi region in southern Georgia about 80 kilometers (km) south of Tbilisi near the borders with Armenia and Azerbaijan. The Madneuli Mine was established in 1975 and had a long history as a respected precious metals producer in the region. The main ore types at Madneuli are barite-polymetallic ore, copper-barite ore, copper-zinc ore, gold-copper ore, and quartzite ore (JSC Madneuli, 2012). The Madneuli complex included an open pit mine, a crushing facility, and a processing plant that used flotation to produce copper concentrate. The main pit has a total depth of 350 meters. The plant had a designed throughput capacity of 2.5 million metric tons per year (Mt/yr) of copper sulfide (GeoProMining, Ltd., 2012).

Since 2005, the Madneuli Mine was mostly (99.16%) owned by GeoProMining, Ltd. (GPM); the remaining shares were held by the former and current employees of the Madneuli Mine. GPM was a Russian mining group registered in the United Kingdom. Following the acquisition, GPM invested in Madneuli about \$30 million in 2007 and about \$20 million in 2008. The company automated production processes that enabled a significant increase in production throughput. In 2009, following an increase in gold prices, the company's management made a decision to mine and process lower grade ores to extend the life of the mine (GeoProMining, Ltd., 2012).

At the same time, output of copper at Madneuli continued to decline. After reaching its peak of about 11,000 t in 2008, Madneuli produced 9,800 t in 2009, 6,700 t in 2010, and about 6,300 t in 2011. GPM planned to increase the annual output by implementing a treatment program for mine tailings and by further expanding the mine (Lovejoy, 2011).

In 2011, GPM was planning an initial public offering on the London Stock Exchange but later decided to postpone it indefinitely because of the unfavorable market conditions. Earlier, the company had intended to issue \$200 million worth of stock during the fall of 2011 through Citibank (Gazeta.ru, 2011).

Iron and Steel.—The GeoSteel plant was the leading producer of steel in Georgia; it had an annual capacity of 180,000 metric tons per year (t/yr) of steel. In 2011, the plant exported 62,000 metric tons (t) of its products to Armenia, Azerbaijan, Iran, Sri Lanka, and Turkmenistan. The GeoSteel plant was located in the city of Rustavi, 35 km from Tbilisi. The production infrastructure of the plant occupied 13 hectares (about 32 acres), and the plant employed about 500 people. GeoSteel produced thermo-mechanically reinforced steel from locally available metal scrap; the product was used for the construction of bridges, multistory buildings, and hydropower stations in the Caucasus region. GeoSteel was a joint venture between Georgian Steel Holding Group of the United Kingdom, which owned 49% of the stock, and JSW Steel Ltd. of India, which owned 51%. The European Bank for Reconstruction and Development contributed \$28 million to the plant's financing. The plant was first opened in November 2009 (Steelguru.com, 2010; GeoSteel LLC, 2012).

Another Georgian steel producer Hercules, which was also known as the Kutaisi metallurgical plant, was a new joint venture with Indian steel producer EurAsia Group. The construction of the plant started in 2008 on the site of the former Kutaisi concrete structures plant, and the new plant started production in 2010. In 2011, the plant started producing the A500 type of rebar, which was specially designed for use in construction in seismically active regions and mostly exported. As of 2011, the plant employed 400 people at an average wage of 600 laris per month (about \$356 per month¹). In September 2011, the plant's workers went on strike demanding improvement in working conditions, health and safety plans, and overtime pay and a regular payment schedule. As a result of the strike, some demands of the workers were satisfied

¹Where necessary, values have been converted from Georgian laris (GEL) to U.S. dollars (US\$) at an annual average exchange rate of GEL1.687=US\$1.00 for 2011 and GEL1.651=US\$1.00 for 2010.

(Eurasianet.org, 2011; Kirtstkhaliya, 2011; Metalinfo.ru, 2011; Steelguru.com, 2011).

Manganese.—For more than a century, Georgia had mined manganese ore from the Chiatura deposit. A portion of the ore was used to produce manganese ferroalloys at the Zestafoni ferroalloys plant, which was located 28 km from the Chiatura Mine. Since 2006, both the Chiatura Mine and the Zestafoni plant had been a part of Georgian Manganese LLC (which was owned by the Privat Group of Ukraine). The Chiatura manganese mine included four mines and three open pit quarries; the mine's annual production capacity was about 400,000 t/yr (Felman Trading Inc., 2012).

The Georgian Government announced a tender for the mining rights for manganese at a section of the Schkmer deposit located in the Racha region in northern Georgia. The auction was to take place in July 2011. The starting price of a 20-year license was set at 1 million laris (about \$592,000) with a deposit of 200,000 laris (about \$119,000). The main criteria of the tender were the offered price and a package of environmental measures suggested by the interested companies. The Schkmer deposit is the country's second largest manganese deposit after the Chiatura deposit. The resources of the section to be licensed were estimated to contain more than 1 Mt of manganese. The Government had previously tried to auction the Schkmer deposit in 2008 with a starting price of 910,000 laris (about \$551,000) but was unable to find a buyer (Ukrudprom.ua, 2011; Infogeo.ru, 2012).

Mineral Fuels and Other Sources of Energy

Oil and Natural Gas.—In 2004, the Government announced that it would focus on petroleum production in Georgia and would work on significantly increasing investments in the sector. Canagro of Canada and the United Kingdom was producing oil in Sagarejo village in Eastern Georgia and was at that time producing about 200,000 t/yr of crude (Sulakvelidze, 2004).

In June 2011, a satellite discovered a natural source of petroleum in the southeastern part of the Black Sea close to the Georgia shore. According to the Russian Academy of Sciences, this single source could produce somewhere between 400 and 3,000 t/yr of petroleum (Newsgeorgia.ru, 2011).

The State Oil Company of Azerbaijan Republic (SOCAR) was planning to start construction of an oil refinery in the city of Poti in August 2012. The company expected the construction to last for 2 years. When in operation, the refinery would provide employment for 2,000 people (Trend.az, 2012).

Although Georgia did not produce natural gas on its own territory and produced a limited volume of oil, the country spent the past decade trying to achieve the country's energy independence by diversifying its exports and transit infrastructure. In 2006, the Baku-Tbilisi-Ceyhan oil pipeline opened; it was built to transport Caspian oil to the Turkish city of Ceyhan, which is located on the Mediterranean Sea. It was the first pipeline that would transport Azeri oil to the world market outside of the Russian pipeline network. The pipeline's was 1,768 km in length, 248 km of which was located on the territory of Georgia (Jorbenadze, 2012).

Another pipeline through Georgia, the Baku-Tbilisi-Erzurum gas pipeline, which opened in 2007, was to connect the Shah-Deniz oil and gas field in Azerbaijan to the Turkish city of Erzurum and eventually to transport natural gas to Europe using the Nabucco pipeline that was in the planning stages. The natural gas and crude oil pipelines were constructed in parallel, and some segments of the pipes were put in place simultaneously, which helped to minimize the costs and environmental impact.

In addition to the pipelines, Georgia was engaged in building other types of infrastructure to facilitate the movement of goods from Asia to Europe. A new railroad, the Baku-Tbilisi-Kars line, was under construction and was expected to be opened in 2013; a new highway connecting the same three cities was also under construction. In addition, several new airports with the emphasis on cargo transportation were being built. A new airport in Poti in Western Georgia was to be opened in 2013; another new airport was being constructed in Kutaisi. Georgia was also constructing a new port city, Lazika, that was to become home to 500,000 residents (Jorbenadze, 2012).

Starting in 2007, Georgia switched from importing natural gas from Russia using the Russia-Armenia-Georgia pipeline to importing natural gas from the Shah-Deniz field in Azerbaijan by way of the new Baku-Tbilisi-Ceyhan pipeline (Jorbenadze, 2012).

Hydropower.—Georgia had a sizable hydropower capacity, only a fraction of which was being used. In the past several years, Georgia started a large-scale program aimed to upgrade the country's hydropower capacity. The program included construction of about 20 new powerplants and 6 high-voltage power lines that were intended to connect the country's electric grid with those of Azerbaijan, Armenia, and Turkey. According to the plan, the new powerplants would have 2,000 megawatts (MW) of capacity and would require an investment of \$3.5 billion. Construction was being conducted by companies from China, Georgia, India, Turkey, the United States, and several European countries (Rosbalt.ru, 2011a).

According to the plans, there were a total of 18 hydropower plants that were planned to be built through 2015. The largest of them was the Khudoni powerplant, which was to be built by Continental Energy of India. The Khudoni powerplant would cost about \$1 billion to complete and was expected to have a capacity of 650 MW. The construction of the Khudoni plant originally started in 1985 but was stopped because of the environmental concerns (Rosbalt.ru, 2011a).

Another large powerplant project was underway in Ajaria. Clean Energy Invest of Norway was planning to invest \$600 million to build a hydropower plant on the Ajaristskali River. The powerplant would have 300 MW of capacity and was expected to be able to produce 1,200 million kilowatt-hours per year of electricity (Rosbalt.ru, 2011b).

According to Government officials, the goal of the massive powerplant construction efforts was not to reduce domestic energy prices but to export clean hydropower energy to neighboring countries and to Europe. As of 2011, Georgia was exporting hydropower-based electricity to Russia and Balkan countries, and was planning to start exporting it to Armenia, Iran, and Iraq in the near future (Jorbenadze, 2012).

Outlook

After the Rose Revolution of 2003, the new Georgian Government set out to reorient the economy toward privatization and free markets. The country conducted a sweeping tax reform by reducing the types of taxes from 26 in 2003 to 6 in 2008, significantly cut the number of ministries and state agencies, and dramatically reduced corruption. According to The World Bank, Georgia is one of the world's fastest reforming economies, and, in 2011, it ranked as the world's 16th easiest country in which to do business (U.S. Department of State, 2012). During the past decade, the country also focused on attracting foreign capital, primarily in the form of FDI. The mineral industry, however, did not benefit from the steady economic growth of the past 7 years as much as did other sectors, such as the financial services and manufacturing sectors. In the next 3 to 5 years, the mineral industry of Georgia is expected to have moderate but stable growth. Copper, ferroalloys, manganese, and steel are likely to remain the dominant mineral commodities in the short and medium terms.

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TABLE 1
GEORGIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2007	2008	2009	2010	2011 ^c
METALS					
Copper, mine output, Cu content of concentrate	11,000	11,000	9,800 ^r	6,700 ^r	6,300
Gold kilograms	2,000	2,000	2,000	2,000	2,000
Iron and steel:					
Ferroalloys, electric furnace:					
Ferromanganese	5,000	5,000	4,500	8,700	8,900
Silicomanganese	120,000	120,000	112,016 ³	203,464 ³	205,000
Total	125,000	125,000	116,516 ³	212,164 ³	213,900
Steel, rebar	NA	NA	70,000	84,000	88,000
Lead, mine output, Pb content	400	400	400	400	400
Manganese ore, marketable:^c					
Gross weight	350,000 ³	400,000	400,000	400,000	400,000
Mn content	102,000	116,000	116,000	116,000	116,000
Silver kilograms	1,200	1,360	1,200	1,200	1,200
Zinc, mine output, Zn content of concentrate	400	400	300	300	300
INDUSTRIAL MINERALS					
Cement ^c	450,000	450,000	870,368 ³	856,880 ³	860,000
Clays, bentonite ^c	5,000	5,000	5,000	5,000	5,000
Gypsum ^c	125	125	100	120	120
Nitrogen, N content of ammonia	150,000	150,000	150,000	150,000	150,000
Perlite	45,000	45,000	45,000	45,000	45,000
Salt	30,000	30,000	30,000	30,000	30,000
MINERAL FUELS AND RELATED MATERIALS					
Coal, bituminous ^c	8,280	11,000	168,451	240,628 ³	250,000
Natural gas thousand cubic meters	9,890	7,910	12,200	7,900	7,900
Petroleum:					
Crude: ^c					
In gravimetric units	63,500	63,500	53,942 ³	51,050 ³	50,000
In volumetric units 42-gallon barrels	462,000	462,000	392,000	371,000	363,400 ³
Refinery products:					
In gravimetric units	244	313	NA	NA	--
In volumetric units 42-gallon barrels	1,960	2,520	NA	NA	--

See footnotes at end of table.

TABLE 1—Continued
 GEORGIA: PRODUCTION OF MINERAL COMMODITIES¹

⁶Estimated data are rounded to no more than three significant digits; may not add to totals shown. ^fRevised. NA Not available. -- Zero.

¹Table includes data available through November 28, 2012.

²In addition to the commodities listed, Georgia had also produced arsenic, barite, diatomite, iron ore, and zeolites, but available information is inadequate to make reliable estimates of output.

³Reported figure.

TABLE 2
 GEORGIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners ¹	Location or deposit names ¹	Annual capacity ^e
Arsenic:	Includes:	Of which:	2,000 ²
As content of ore	Racha mining and chemical plant	Lukhumi deposit, Ambrolauri region	
	Tsana mining and chemical plant	Tsana deposit, Lentekhi region	
Metal and compounds	Racha mining and chemical plant	Racha region	
	Tsana mining and chemical plant	Ts'ana region	
Barite	NA	Chordskoye deposit, Onis Raioni	70,000
Do.	JSC Madneuli [GeoProMining, Ltd. (GPM), 99.16%]	Madneuli deposit	NA
Barite-zinc ore	NA	Kvaisi deposit	NA
Bentonite	Includes:	Of which:	200,000 ²
	Askana LLC (Silver & Baryte Ores Mining Co., 97.7%)	Askanskoye deposit, Ozurget'i	
	NA	Gumbrskoye deposit, Gumbra region	
Cement	LLC Kartuli Cementi (LLC HeidelbergCement Caucasus Shared Services, 70%)	Kaspi and Rustavi	1,100,000
Do.	LLC SaqCementi (LLC HeidelbergCement Caucasus Shared Services, 75%)	Rustavi	500,000
Coal	JSC Tkibulnakhshiri	Akhaltzikhe, Tkibuli-Shaorskoye, and Tkvarchelskoye deposits in Akhalts'ikhis Raioni, Tqibuli, and Tqvarch'eli regions	300,000 ²
Copper, Cu content of ore	JSC Madneuli [GeoProMining, Ltd. (GPM), 99.16%]	Bolnisi region	12,000
Copper-gold ore	Trans-Georgian Resources (GeoProMining, Ltd. (GPM), 50%)	Sakdrisi deposit	NA
Diatomite	NA	Kisatibskoye deposit, K'isat'ibi region	150,000
Ferrous alloys:			
Ferromanganese	Georgian Manganese Holding LLC (Privat Group of Ukraine)	Zestafoni ferrous alloys plant, Zestap'onis Raioni	400,000
Silicomanganese	do.	do.	250,000
Manganese sinter	do.	do.	250,000
Gold, mill	Quartzite Ltd. [GeoProMining, Ltd. (GPM)]	Madneuli deposit	NA
Iron and steel:			
Steel, rebar	Kutaisi metallurgical plant	Kutaisi	100,000
Do.	Rustavi metallurgical plant	Rustavi	125,000
Do.	Geosteel (JSW Steel Ltd., 51%, and Georgian Steel Holding Group, 49%)	do.	180,000
Iron ore	NA	Hrazdan deposit	NA
Do.	NA	Tkibuli-Shaorskoye deposit, Tqibuli region	NA

See footnotes at end of table.

TABLE 2—Continued
 GEORGIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners ¹		Location or deposit names ¹	Annual capacity ²
Lead-zinc:				
Pb content of ore	NA		Kvaisi deposit	1,200
Zn content of ore	NA		do.	3,000
Manganese, marketable ore	Chiaturamanganumi enterprise of Georgian Manganese Holding Limited LLC (Privat Group of Ukraine)		Chiatura deposit	500,000
Nitrogen	JSC Azoti chemical plant		Rustavi	NA
Petroleum:				
Crude	Saknavtobi Oil and Gas Co. and most Georgian petroleum companies in joint ventures with Frontera Resources, Ioris Valley Oil & Gas Ltd., Ninotsminda Oil Co. Ltd., Georgian-British Oil Co. (GBOC), Anadarko Petroleum Corp., and GeoGeroil		About 60 wells that account for 98% of output in Mirzaani, Sup'sa, and Zemo T'lelet'i regions	200,000 ²
Do.	Canagro Ltd.		Sagarejo, Eastern Georgia	NA
Refined	42-gallon barrels per day	LLC Terminal	Batumi refinery, Ajaria	NA
Do.	do.	NA	Georgian American Oil Co. Refinery (GAOR), Sart'ichala	4,000 ³

²Estimated; 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 estimate is the total for all enterprises that could produce that commodity.

³Closed.