

THE MINERAL INDUSTRY OF

AZERBAIJAN

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Azerbaijan's gross domestic product (GDP) reportedly fell in 1994 by 22% compared with 1993, while industrial output dropped by almost 25%. These official statistics indicate that the downward economic trends reported in the past 2 years were persisting.² In Azerbaijan's main mineral sector, its oil and gas industry, production of crude oil in 1994 reportedly decreased by 7.1% compared with 1993 to 9.56 million metric tons (Mmt); production of natural gas likewise dropped by 6.3% to 6.38 billion cubic meters (m³). Petroleum products accounted for most of the country's export revenues, while the country mainly imported foodstuffs.²

Since the late 19th century, Azerbaijan has been an important oil producer. It also is a producer of alunite, alumina and aluminum, copper, iron ore, molybdenum, lead and zinc, and industrial minerals, including bromine and iodine, clays, gypsum, limestone, marble, sand and gravel, decorative building stones, and precious and semiprecious stones.

The country's most significant reserves in terms of value are its oil reserves; a number of foreign firms are involved in negotiations and projects to develop these reserves. Azerbaijan also has numerous other mineral resources, including such metals as alunite, arsenic, cobalt, copper, chromite, iron ore, lead and zinc, manganese, mercury, molybdenum, and tungsten; industrial minerals and nonmetallic minerals, such as barite, clays, refractory-grade dolomite, gypsum, kaolin, limestone, pyrite, salt, and zeolites; and semiprecious stones, including amethyst, andalusite, and garnet, as well as a range of building materials.

For 1994, Azerbaijan prepared a draft privatization program calling for privatizing not only 8,000 enterprises in the service, trade, and health care sectors, but also a number of production enterprises and unfinished construction projects. Large- and medium-sized enterprises were to be converted to joint stock companies. A type of voucher system would be used to enable citizens to spend certain allocated funds only to purchase stock in enterprises being privatized.³

Azerbaijan produced aluminum from native alunite ore mined from open pits. It normally required about 6 metric tons (mt) of alunite ore to produce 1 mt of alumina, and alunite processing is very energy-intensive compared with processing bauxite. Alunite processing was started under

the former Soviet system that made mineral production a priority irrespective of production costs. Nevertheless, the 450,000-metric-ton-per-year-(mt/a) capacity Gyandzha refinery in Azerbaijan, originally built to process alunite, was expanded in the late 1970's to process imported bauxite rather than alunite. Presently, only one section at Gyandzha, with a capacity to produce 100,000 mt/a of alumina, processed alunite. The alumina from Gyandzha was shipped to the Sumgait aluminum smelter in Azerbaijan and to the Tajik aluminum smelter in Tajikistan. Political unrest in the Caucasus, however, interfered with shipments to Tajikistan, sharply reducing the amount of alumina shipped.

The Sumgait smelter, which has the capacity to produce 55,000 mt/a of aluminum, was only producing at the rate of 15,000 mt/a in 1994. Azerbaijan was engaged in a project with Kaiser Engineering of the United States to double the capacity at Sumgait and switch from Soderberg to prebake technology. According to the plans to renovate Sumgait, during the first 2-1/2 one-half years of renovation, 50% of the plant's pots would be shut down. Full production was to be achieved after 4 years. Plans also called for upgrading the Gyandzha alumina refinery to improve the quality of the alumina, but not to increase capacity. Half of the alumina was being shipped to plants in Russia, and these shipments were expected to continue.⁴

Plans also called for the construction of Azerbaijan's first bullion plant in Baky (Baku)⁵ that would produce gold of 99.9% purity, with the capacity to produce 5 mt of bullion per year. Other precious metals, including silver, also would be produced at this plant. The plant was projected to produce at design capacity in 3 to 4 years.⁶

The United States-Canadian firm International Gold Resources announced plans to establish a joint venture with Azergyzy, an association of exploration, mining, and construction companies, to develop gold lode deposits in Azerbaijan with reported reserves of 50 to 55 mt and prospective reserves of up to 500 mt. The company projected that Azerbaijan could produce up to 5 mt of gold annually. The gold reportedly could only be refined economically in Azerbaijan and, therefore, it would also be necessary to construct refining facilities. Financing was being sought for this planned joint venture.⁷

Iron ore was mined at the Dashkesan open pit, Azerbaijan's sole source of iron ore. Reserves at

Dashkesan are reportedly 230 Mmt. Azerbaijan was planning to increase iron ore output, but lacked customers for its ore. A former customer, the Rustavi steel mill in Georgia, had halved its output. Azerbaijan has one steel mill in Sumgait, but it was operating at at one-third capacity.

In terms of energy, Azerbaijan annually consumed about 16 billion m³ of natural gas, of which previously 7 billion m³ had come from Russia and Turkmenistan and 3 billion m³ was imported from Iran. Azerbaijan had been supplying itself with more than 6 billion m³, but was deeply in debt to Turkmenistan and Russia for gas shipments.

In September, Azerbaijan signed an agreement with representatives of a consortium of 10 foreign oil companies to develop the Azeri, Chirag, and Gyuneshli offshore oilfields. The consortium members reportedly would repatriate all profits; supplies and materials needed for development would be provided duty-free. The offshore fields reportedly contain estimated reserves in excess of 500 Mmt of crude oil, with production projected to peak at about 100,000 mt per day.

Protests were raised by the Russian Foreign Ministry, which claimed that the landlocked Caspian Sea should be exploited jointly by all nations on its shores in accordance with existing agreements. Russia reportedly further demanded that the oil be transported through Russia for export. The route for shipping oil produced by this consortium had not yet been determined. Russia's LUKoil company was a member of the consortium with a 10% interest.⁸

In November, Azerbaijan decided to allot Iran a 5% stake in the international consortium. Azerbaijan already had granted Turkey a 1.75% stake in the consortium.⁹ The agreement with Iran raised concern that it would jeopardize the participation of the five major U.S. oil companies that are part of the consortium. As of March 1995, Turkey's share reportedly had been raised to 5% and Iran's participation was in doubt.¹⁰

Azerbaijan has its eastern border on the Caspian Sea, which is also bordered by Kazakhstan, Russia, and Turkmenistan, and has no direct access to ocean routes. Azerbaijan's main port on the Caspian Sea is in the city of Baky. To the west, Azerbaijan is bordered by Armenia and Georgia; its Nakhichevan District is entirely surrounded by Armenia and Turkey and thus cut off from the rest of the country.

Oil and gas products from the Caspian Sea region are shipped through Azerbaijan to other countries of the former Soviet Union (FSU) via pipelines. Azerbaijan is well situated to maintain commercial relations either via the Caspian Sea, pipelines, or overland routes with Russia and countries of Central Asia and the Caucasus. It is now prevented from fully fulfilling this function because of the political and military turmoil from the warfare in the predominately Armenian enclave of Nagorno-Karabakh within Azerbaijan.

Although Azerbaijan has been an oil producer since before the Russian revolution, significant undeveloped hydrocarbon reserves still exist offshore in the Caspian Sea. Since gaining independence, Azerbaijan has been trying to attract foreign investors to participate in the development of these reserves. Apparently, a number of major companies reportedly will engage in development of Azerbaijan's oil resources, which will be a significant source of revenue for the country.

The development of Azerbaijan's other mineral industries is more problematic. Aluminum production, for example, based in part on domestically mined alunite, may prove unprofitable under market economy conditions. Moreover, development of Azerbaijan's other metallic and industrial mineral industries now will have to be scrutinized in terms of market economic factors, including transport costs, that may impede the development of these industries. Still, there are expected to be domestic markets for a number of Azerbaijan's industrial minerals as well as markets for mineral commodities from Azerbaijan in the newly independent states of the FSU. Yet to be determined is whether Azerbaijan will begin to integrate its economy, including its mineral sector, with Turkey and other countries of the Mideast with which it shares cultural, religious, and geographic affinities. For Azerbaijan to make significant progress in its program for economic development, it will have to resolve issues of political instability brought about to a large extent by the warfare in Nagorno-Karabakh.

¹Text prepared June 1995.

²Interfax Business Report, Denver, Colorado, Feb. 7, 1995, p. 3.

³Bakinskiy Rabochiy, Baky, Mar. 4, 1994, p. 2-3.

⁴———. Apr. 29, 1994, p. 1.

⁵Metal Bulletin, London, May 9, 1994, p. 5.

⁶New names or spellings for locations will be used when available, and the older version will appear in parenthesis following the new name the first time the name appears.

⁷Foreign Broadcast Information Service, Jan. 14, 1994, p. WD 13, Russia, TV channel, Moscow, in Russian, 0530 gmt, Dec. 23, 1993.

⁸Interfax Business Report, Denver, Colorado, Mar. 3, 1995, p. 5.

⁹Financial Times, London, Sept. 21, 1994, p. 1. Interfax Business Report, Sept. 21, 1994, p. 3.

¹⁰Financial Times, London, Dec. 13, 1994.

¹¹Interfax Business Report, Denver, Colorado, Mar. 13, 1995, p. 2.

TABLE 1
AZERBAIJAN: ESTIMATED PRODUCTION OF MINERAL COMMODITIES

(Metric tons unless otherwise specified)

Commodity	1992	1993	1994
Alumina	300,000	200,000	150,000
Aluminum	25,000	20,000	15,000
Alunite	300,000	200,000	
Cement	600,000	400,000	300,000
Gypsum	100,000	7,500	60,000
Iodine	50	40	30
Iron ore, marketable	40,000	300,000	100,000
Fe content	220,000	150,000	50,000
Limestone	1,000,000	700,000	50,000
Natural gas	7,000	6,800	6,380 2/
million cubic meters			
Petroleum	11,000,000	10,300,000	9,560 2/
Salt	80,000	79,200 2/	80,000 2/
Steel,crude	300,000	228,000 2/	36,000 2/

e/ Estimated.

TABLE 2
AZERBAIJAN: STRUCTURE OF THE MINERAL INDUSTRY FOR 1994

(Metric tons unless otherwise specified)

Commodity	Major operating Companies	Location of main facilities	Annual capacity e/
Aluminum	Sumgait smelter	Sumgait	50,000.
Alumina	Gyandzha refinery	Gyandzha	450,000.
Alunite ore	Zaglik alunite mining directorate	Zaglik	600,000.
Cement	Karadag cement plant	Karadag	1,000,000 (total for both plants).
Do.	Tauz	Tauz	
Iodine and bromine	Baku, Karadag, Neftechala plants	Process oil well brines at plants in Baky, Karadag, and Neftechala	30,000 bromine. 100 iodine.
Iron ore, marketable	Dashkesan Mining Directorate	Dashkesan region	1,000,000.
Petroleum	Produced at 40 deposits on land and 12 offshore deposits in Caspian Sea	Land deposits on Ashperon Peninsula, in the Nizhnekurin Valley and at the Muradkhanly and Zagly-Zegva deposits	12.
Natural gas	do.	do.	10.

e/ Estimated.