TURKMENISTAN

By Richard M. Levine

The mineral industry of Turkmenistan is based primarily on the extraction of natural gas with production also of oil and a number of important industrial minerals, including clays, construction materials, gypsum, iodine and bromine, sodium compounds and sodium sulfate, sulfur and table salt.

Turkmenistan's most important reserves are of natural gas, oil, and industrial minerals, including barite, bentonite, bromine, iodine, sodium compounds, and sulfur. Oil reserves are primarily along the Caspian Sea coast, while gas reserves are along the Caspian coast and in the northern and eastern parts of the country. Turkmenistan was actively soliciting foreign investment to develop its hydrocarbon reserves.

Following Russia, Turkmenistan was the second largest producer of natural gas among the republics of the former Soviet Union (FSU). Turkmenistan, with its large production of natural gas and gas and oil reserves, had its own source of fuel and was able to achieve significant earnings from the export of natural gas.

Industrial output in Turkmenistan reportedly decreased by 25% during 1994 after an increase in 1993.² In Turkmenistan's main mineral production sector, its natural gas industry, production in 1994 compared with 1993 reportedly decreased by almost 50% to 35.6 billion cubic meters (m³).³ Production of oil in Turkmenistan in 1994 compared with 1993 reportedly decreased by 8% to 4.1 million metric tons (Mmt).⁴ The oil refineries in Kransovodsk and Chardzhou processed 4.3 Mmt in 1994 compared with 4.5 Mmt in 1993.⁵

The Government of Turkmenistan also reported 1994 production for the following: bischophite, 33,500 metric tons (mt); bromine, 158 mt; epsomite, 31,100 mt; iodine, 251 mt; sodium sulphate, 67,500 mt; native sulfur, 47,600 mt; and sulfuric acid, 69,000 mt.

In November, Turkmenistan adopted a long-term program to develop its oil and gas industry that called for a large increase in production into the next century. The program projected a fivefold increase in oil production by the end of the decade, with oil production targeted to reach 28 million metric tons per year (Mmt/a) by the year 2000. The program also planned for the reconstruction of the Krasnovodsk oil refinery and the Chardzhou refinery which only began operations in 1992. Refining capacity was projected to increase from its current level of 12 Mmt/a to 18 Mmt/a. Natural gas production was projected to reach 130 billion m³ by the year 2000, almost double the current output. Turkmenistan was planning these increases with capital from joint ventures including western firms.

The Turkmenistan Government planned in early June 1994 to offer tenders on oil and gas reserves in seven of its largest geological tracts comprising 23 tender blocks covering about 1.5 million square kilometers. These blocks constituted about one-third of the country's area for oil and gas reserves. Half of the blocks for tender are offshore in the Caspian Sea.⁶

In 1994, Turkmenistan was preparing to embark on a limited program of privatization in trade and industry. Trade enterprises were to be sold at auction while small industrial enterprises with less than 100 persons would be bought by their employees or sold to citizens of Turkmenistan or foreigners. Enterprises with more than 100 employees would be turned into joint stock companies with the state retaining a controlling interest.⁷

Regarding developments in the mineral sector, the Iran Industrial Company planned to build a kaolin clay enrichment plant in Nebit Dag with the capacity to produce 20,000 mt of marketable china clay. Turkmenistan imported considerable quantities of china, earthenware products, and packaging material that used kaolin from other FSU republics. This new plant reportedly will make Turkmenistan self-sufficient in kaolin.⁸

Plans called for Turkmenistan to begin development of its own coal reserves in 1994 in order to eliminate its import dependency on other countries, particularly Russia and Kazakhstan. Turkmenistan was importing about 100,000 mt/a of coal. Development was planned of the Tuarkyrskoye deposit in the northwest, near the Kazakhstan border, with reported reserves of 800 Mmt. In 1994, Turkmenistan planned to begin development of the first section of the deposit with reserves of 25 Mmt tons at a depth of about 200 meters (m). A feasibility study for developing the deposit was being drafted by the Iranian Ministry of the Mining Industry, and Iran was assisting in development plans. After satisfying its own needs, Turkmenistan planned to export coal to nearby parts of Afghanistan, Kazakhstan, Russia, and Uzbekistan.

Construction began on the country's first steel mill, which would produce bars for reinforced concrete for export to other Commonwealth of Independent States (CIS) countries, Iran, and Afghanistan. The plant was being built in conjunction with a Turkish construction company.¹⁰

Turkmenistan was the largest producer of natural gas

among the Central Asian countries of the FSU and was the second largest producer of gas in the FSU. Reserves of natural gas reportedly were 2.8 trillion m³, which reportedly would be sufficient for 30 more years of output at the current rate of extraction. The largest gasfields are the Dauletabad-Donmezskoye field, which had one-half of the country's proven reserves and accounted for almost one-half of the country's gas output; a number of fields in the Chardzhou and Mary regions; fields in western Turkmenistan; and offshore fields in the Caspian Sea, including the Barinov, Livanova-Vostochnaya Bank and the Shafag fields.¹¹

More than 90% of Turkmenistan's gas, mostly light methane, was exported to Russia, Ukraine, and the Caucasus countries of the FSU. Because of a lack of payment from CIS countries, Turkmenistan had already or was considering suspending or curtailing gas exports to a number of these countries. All of Turkmenistan's gas exports were piped through Russia, which had exerted pressure on Turkmenistan to supply other CIS states with gas.

It was announced that Turkmenistan entered into an agreement with an international consortium representing Iran, Kazakhstan, Russia, and Turkey to construct a 30 billion-m³-per-year gas pipeline to export gas to European markets via Iran and Turkey. Turkemistan agreed to begin supplying Turkey with 15 billion m³ of natural gas annually for a 30-year period commencing in 1997 with the completion of the new pipeline.¹² Turkmenistan also was considering plans to supply China and Japan with gas. This would require construction of a pipeline that would cross the territory of Kazakhstan, Uzbekistan, and China and pass along the shores of the Yellow Sea. The gas would be shipped to Japan by tankers.¹³

Turkmenistan borders the Caspian Sea to the west, Iran and Afghanistan to the south, and Uzbekistan and

Kazakhstan to the north. Turkmenistan is landlocked because the Caspian Sea lacks direct outlets to the world's oceans. Turkmenistan, slightly larger in area than the State of California, as of 1990 had 2,120 kilometers (km) of rail lines and 23,000 km of highways, 18,300 km of which was hard surfaced. The terrain in Turkmenistan is flat to rolling sandy desert with dunes. Cotton was grown in the irrigated western region of the country where the Karakumskiy canal is fed by the Amu Darya River.

Owing to its large reserves of natural gas, which apparently would be developed with the aid of foreign investment, Turkmenistan would be able to derive significant revenues from this industry as well as have adequate domestic fuel supplies. Turkmenistan's revenues should increase further if Turkmenistan builds an alternate pipeline route that bypasses the countries of the FSU and enables Turkmenistan to more freely export natural gas and seek new export markets. Turkmenistan also has large reserves of sodium compounds, which it may be able to market both outside and within the countries of the FSU.

¹¹Pravda, Jan. 18, 1995, p. 1.
 ¹²Interfax Business Report, Denver, Colorado, Nov. 3, 1994, p. 5.

¹³Work cited in footnote 10.

¹Text prepared June 1995.

²Interfax Business Report, Feb.7, 1995, p. 4.

³____, p. 5.

⁴____, p. 5.

⁵Summary of World Broadcasts, British Broadcasting Corp., Reading England, SUW/0367, p. WD4, Jan. 20,1995, Interfax News Agency, Moscow, in English 1132 gmt, Jan 13, 1995.

⁶Interfax Petroleum Report, Denver, Colorado, June 3-10, 1994, p. 12.

_____, p. WB/1, May 20, 1994, ITAR-TASS, May 14, 1994.

⁸Interfax Mining Report, Dec. 10-17, 1993, p. 4.

⁹Selskaya zhizn, Moscow. Mar. 24, 1994, p. 5.

¹⁰Summary of World Broadcasts, British Broadcasting Corp., Reading England, June 18, 1993, p.A/12, Radio Moscow World Service, June 13, 1993.

TABLE 1 TURKMENISTAN: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity		1992	1993	1994
Bentonite		70,000	50,000	40,000
Bromine		200	175	158 2/
Cement		1,000,000	1,000,000	800,000
Gypsum		300,000	200,000	150,000
Iodine		300	275	251 2/
Natural gas	million cubic meters	60,000	65,000	35,600 2/
Petroleum				
Crude		5,200,000	4,400,000	4,100,000 2/
Refined		5,800,000	4,500,000	4,300,000 2/
Sodium sulfate		100,000	70,000	67,500 2/
Sulfur		300,000	50,000	47,599 2/

1/ Table includes estimates and data based on information available through June 30, 1995.

2/ Reported figure.

TABLE 2 TURKMENISTAN: STRUCTURE OF THE MINERAL INDUSTRY FOR 1994

(Thousand metric tons unless otherwise specified)

		Location of main	Annual
Commodity	Major operating company	facilities	capacity e/
Bentonite	Oglaninskoye deposit	Oglany	100,000
Gysum	Krasnovodsk deposit	Krasnovodsk	250,000
Do.	Wastes from Gaurdak sulfur deposit	Gaurdak	400,000
Iodine and Bromine	Chelleken, Nebit Dag plants	Cheleken, Nebit Dag	NA
Natural gas billion cubic me	eters Deposits:		
	Achakskoye, Gygyrlinskoye, East and	Northeastern, eastern southeastern,	90
	West Shatlykskiye, North and South	and southwestern part of country	total
	Naipskiye, Dauletabad-Donmezskoye		
Petroleum:	Deposits:		
Crude	Nebit Dag, Cheleken, Kum Dag,	Southwestern part of country	5,500,000
	Koturtepinskoye, Barsa-Gelmesskoye,	On Caspian Sea	total
	Burunskoye, Kuydzhikskoye,		
	Gograndagskoye, Okaremskoye,		
	Kamyshldzhinskoye		
Refined	Chardzhou refinery	Chardzhou	6,000,000
	Krasnovodsk refinery	Krasnovodsk	5,000,000
Sodium sulfate	Karabogaz Sulfate Association	Kara-Bogaz-Gol (Gararbogazköl)* Gulf	150,000
Sulfur	Gaurdak deposit	Gaurdak	350,000
e/Estimated *New spellings in parent	heses		

e/ Estimated *New spellings in parentheses.

NA Not available.