

MONGOLIA

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Despite 2 consecutive years with declining exports and a disastrous winter that killed millions of livestock, the economy continued to grow at a moderate rate of 1.5% in 2001. The agriculture sector, which accounted for about one-third of the total gross domestic product (GDP), declined by about 16%. The growth in the economy was due to the expansion of the industry sector by 11.8%, which was mainly driven by the manufacturing and mining sectors, which registered growth rates of 23% and 10%, respectively (National Statistical Office of Mongolia, 2001, p. 85; Mining Journal, 2002a).

The Government continued to follow its Action Program of the Government of Mongolia for 2000-04. The program emphasized stabilizing the macroeconomic situation, reducing Government spending while improving service delivery, and restructuring the industrial sector by privatizing state-owned enterprises. The Asian Development Bank and the World Bank have provided loans and assistance to the Mongolian Government to reform the public sector. Assistance was concentrated in the sectors of education, health, social welfare, and urban development. A systematic public reform system was implemented to improve public administration and public financial management. The privatization of large state-owned enterprises, which was scheduled for 2001, was postponed to 2002-03. The Government increased the value-added tax to 15% from 13% in June 2001 to offset the expansion of social programs without putting greater pressure on the overall budget deficit. The Government planned to introduce legislation to freeze corporate taxes for 4 years to attract foreign investments and to cut taxes slightly on imported goods to help the processing sector create more trade opportunities (Asian Development Bank, 2001; Far Eastern Economic Review, 2001).

Mongolia has extensive and largely untapped natural resources. The Government adopted a number of long-term programs to explore for and develop metallic and nonmetallic minerals, such as coal, copper, fluor spar, gold, oil, and silver. The mining and quarrying sector accounted for 11.7% of the GDP. Foreign investment and participation in exploration, exploitation, and processing of minerals were encouraged. Initially, a mineral exploration license is valid for 3 years and can be extended to a maximum for 7 years. The exploration license then can be converted to a mining license for a 60-year period and renewable for up to an additional 40 years. Companies are required to pay a per-hectare fee annually to maintain their mineral rights.

In 2001, Mongolia's total trade decreased by 13% to \$940.0 million. Exports declined to \$385.2 million, and imports decreased to \$554.8 million. Mongolia exported nearly all its output of copper concentrates mainly to China and Russia and nearly all its fluor spar to Russia. Petroleum and its products

remained the leading imported commodity followed by cement and fertilizer. China and Russia were two major trading partners that accounted for more than 50% of total trade. China accounted for 55% of Mongolian total exports followed by the United States with 22% (National Statistical Office of Mongolia, 2001, p. 196).

Ivanhoe Mines Ltd. continued working in its Turquoise Hill (Oyu Tolgoi) project at Oyutolgoi in the southern Gobi area. Initially, the Turquoise Hill project covered an area of 1,120 square kilometers (km²). In 2001, Ivanhoe acquired 100% ownership of four new porphyry copper-gold exploration projects—Oyut Ulaan and Chandman Uul in southeastern of Mongolia and Oyut Ovoo and Saran Uul in central of Mongolia. Ivanhoe's subsidiary Ivanhoe Mines Mongolia held the right to explore a total area of 15,600 km² at the Gobi porphyry copper-gold belt. Analysis of samples from exploratory drill holes indicated that the Oyu Tolgoi deposit had an inferred resource of 821 million metric tons (Mt) of copper-gold at a grade of 0.38% copper and 0.52 gram per metric ton (g/t) gold. The company planned to complete a feasibility study on the potential development of a large open pit mine in the southeastern and central zones to recover about two-thirds of the resource by mining down to 500 meters below the surface. The company also discussed with Chinese and Mongolian officials the construction of a 290-kilometer (km) railroad to link Oyu Tolgoi to Bayan Obo (Baiyunebo) in Nei Mongol Autonomous Region, China, and a connection to the Chinese national railway network. China was one of the leading copper-concentrate-importing countries in the world, and Mongolia exported more than one-third of its copper concentrate output to China. The proposed railway would provide efficiently delivered copper concentrate to markets in China and to export terminals where the concentrate could be transported to other Asian countries, such as Japan and the Republic of Korea (Metal Bulletin, 2002a, b; Mining Journal, 2002b).

Cameco Gold Inc. (CGI) (a subsidiary of Cameco Corp. of Canada) agreed to acquire interest on the Australian-based AGR Limited's Boroo gold deposit in Mongolia. The Boroo gold deposit, approximately 120 km north of Ulaanbaatar, is within 35 km of CGI's Gatsuurt gold exploration property. The Boroo deposit has probable resources of 9.4 Mt at an average grade of 3.76 g/t gold. AGR owned 95% of the Boroo deposit. CGI will invest \$12 million and contribute 60% interest in the Gatsuurt properties to obtain a 52% interest in AGR. Mine construction of Boroo was scheduled to begin in spring 2002 and was designed to have throughput of 1.75 million metric tons per year of ore. Production was expected to begin in 2003 at an average of 150,000 ounces (4.7 metric tons per year), and the production cost would be less than \$200 per ounce (Mining Journal, 2002a).

Officials from the Irkutsk region of Russia signed a memorandum of understanding with the Ministry of Natural Resources of Mongolia to develop jointly mineral resources in Mongolia. The Mongolian Government was looking for investors to develop the Asgat silver deposit, which had confirmed reserves of 8,000 t of silver. About \$50 million in investment will be required to develop this deposit. Other possible projects included the Bumbat gold deposit and the Kumyr tin deposit. Bumbat Joint Venture Company Ltd. [a joint venture between Tyhee Development Corp. of Canada and Mongolyn Alt Corp. of Mongolia (MAC)] owned the Bumbat deposit. Since 1998, MAC and Tyhee have discussed the purchase by MAC of Tyhee's interest in Bumbat. Finally, MAC agreed to pay \$600,000 for Tyhee's 100% interest in Bumbat and to finalize the settlement before June 30, 2002 (Metal Bulletin, 2001).

Coal is the main fuel source for energy and accounts for about 80% of primary commercial energy use. Petroleum and its products have been imported from Russia and accounted for about 19%, and electricity imports from Russia accounted for the remaining. In 2001, Mongolia produced only a small amount of oil, but domestic production was expected to grow as local oilfields are developed. Mongolia has significant undeveloped hydropower resources. The main objective for the Government will to develop a reliable coal power and heating supply system by providing quality and cost effectiveness of heat and electricity supplies.

Because of disastrous winters, electricity demand had grown at a rate of 8% in the past 2 years. As the industrial sector continuously expands, demand for electricity was expected to increase modestly during the next several years. The central electricity supply system was based on five coal-fired heat-and-powerplants, which were interconnected by a 220-kilovolt line with Russia's Siberian grid. The central system supplied Ulaanbaatar, Darkhan, Baganuur, Erdenet, and six surrounding Aimags (Provinces) and accounted for 90% of the total electricity used. Small towns (aimag centers) outside the central system were serviced by either small coal-fired heat-and-power or coal-fired heat-only boilers and diesel-fueled power generation units. The Mongolian Energy Authority manages the central system and Aimag power systems.

SOCO International plc of the United Kingdom conducted four well drilling projects in the Tamtsag Basin in Mongolia in

2001. Initial analysis indicated that the Tamtsag Basin contained about 1.5 billion barrels of oil. Huabei Oilfield Services (a subsidiary of PetroChina Co. Ltd.) provided the service for SOCO in Mongolia. Huabei can exercise the right to obtain a 10% working interest in contract areas 19, 21, and 22. SOCO had contracted an independent engineering company to perform further testing on the 19-13 and 19-14 wells. The test results were encouraging and these two wells were expected to be put on production after the completion of the construction of production facilities (Oil & Gas Journal, 2001).

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Major Source of Information

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Major Publication

National Statistical Office of Mongolia, Ulaanbaatar:
Statistical Bulletin, monthly.
Mongolian Statistical Yearbook, annual.

TABLE 1
MONGOLIA: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1997	1998	1999	2000	2001
Cement, hydraulic thousand tons	112	109	104	92	68
Coal do.	4,924	5,057	4,952	5,185 r/	5,141
Copper:					
Mine output, Cu content	124,400 3/	125,400 3/	126,700 3/	125,227	133,503
Metal, refined	2,703	2,322	1,545	641	1,476
Fluorspar:					
Acid grade thousand tons	130	123	100	111	127
Submetallurgical and other grade do.	41	46	55	87	72
Total do.	171	169	155	198	199
Gold, mine output, Au content 4/ kilograms	8,451	9,531	10,146	11,808 r/	13,675
Gypsum e/ thousand tons	25	10	25	25	25
Lime, hydrated and quicklime do.	58	56	50	37	30
Molybdenum, mine output, Mo content e/	2,000	2,000	1,910	1,335 3/	1,514 3/
Petroleum, crude thousand 42-gallon barrels	--	50	72	65	74
Salt, mine output	1,354	1,400 e/	1,516	1,293	877
Silver, mine output, Ag content e/ 5/ kilograms	22,800	19,700	19,900	25,000	27,200
Steel, crude	22,700	16,300	13,100	13,000	10,000
Tin, mine output, Sn content e/	10	40	--	--	--
Tungsten, mine output, W content	26 e/	35 e/	27	52	63

e/ Estimated, estimated data are rounded to no more than three significant digits. r/ Revised. -- Zero.

1/ Table includes data available through August 30, 2002.

2/ In addition to the commodities listed, crude construction materials, such as sand and gravel; varieties of stone, such as limestone; and silica are produced, but available information is inadequate to make reliable estimates of output levels.

3/ Reported figure based on 27.5% Cu and 50% Mo content, on copper and molybdenum concentrates, respectively.

4/ Reported raw gold production but excluded gold contained in copper concentrate.

5/ Based on 55 grams of silver per metric ton of copper concentrate.

Sources: National Statistical Office of Mongolia (Ulaanbaatar). Mongolian Statistical Yearbook 1997-2001. Mineral Resources Authority of Mongolia, Mining Office, Output of Mineral Commodities (minerals questionnaire 1997-2001).