



# 2023 Minerals Yearbook

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**CHINA [ADVANCE RELEASE]**

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# THE MINERAL INDUSTRY OF CHINA

By Ji Won Moon

In 2023, China's economy rebounded because of an expansion in services and consumption following the lift of mobility-related restrictions imposed owing to the coronavirus disease 2019 (COVID-19) pandemic in December 2022. The country also had difficulties and challenges, including an approximately 300% ratio of debt to gross domestic product (GDP) in household, corporate, and government sectors; a subdued real estate market; and a net-outflow on investments. Nonetheless, China maintained its position as the world's leading producer and consumer of numerous mineral commodities. In 2023, smelters in China produced a combined total of 74.7 million metric tons (Mt) of 10 commonly used nonferrous metals (aluminum, antimony, copper, lead, magnesium, mercury, nickel, tin, titanium, and zinc), which was an increase of 7.1% compared with that in 2022. The capacity utilization rate of the nonferrous metal smelting and rolling processing industry increased by 0.2% to 79.5%. In 2023, the total export value of nonferrous metals decreased by 9.8% to \$59.6 billion, and the total import value of nonferrous metals increased by 4.3% to \$272 billion. Aluminum, copper, lithium, and silicon accounted for 73.2% of the total export value of nonferrous metals; aluminum, copper, and gold accounted for 86.5% of the total import value of nonferrous metals (Asian Development Bank, 2024, p. 110, 112; China Nonferrous Metals Industry Association, 2024, p. 1, 2, 7, 9; Ministry of Industry and Information Technology, 2024; Xia and Han, 2024; Pettis, 2025).

In 2023, the metals for which China's production accounted for 50% or more of total global production were gallium (98% of world production, estimated), primary magnesium (89%, estimated), mercury (88%, estimated), silicon metal (85%, estimated), tungsten (83%, estimated), refined bismuth (82%, estimated), refined tellurium (77%), titanium sponge (69%, estimated), refined indium (68%), rare earths (68%, estimated), vanadium (67%, estimated), pig iron (66%), smelted aluminum (59%), alumina (58%), and raw steel (54%). The industrial minerals for which China's production accounted for 50% or more of world production were natural graphite (79% of world production), wollastonite (76%, estimated), lime (73%, estimated), fluor spar (63%, estimated), magnesium compounds (59%, estimated), and clinker (53%). Information on China's production of other nonfuel minerals as a percentage of global production in 2023 can be found in the U.S. Geological Survey Mineral Commodity Summaries 2025 (table 1; Apodaca, 2025; Bray, 2025; Cordier, 2025; Dair, 2025a, b; Flanagan, 2025; Harting, 2025; Hatfield, 2025; Klochko, 2025; Londono, 2025a, b; Merrill, 2025a, b; Polyak, 2025; Sangine, 2025; Schnebele, 2025; Sheaffer, 2025; Stewart, 2025; Tolcin, 2025; Tuck, 2025; U.S. Geological Survey, 2025).

In 2023, China was the world's leading producer of coal and accounted for 52% of global production. China's production of natural gas ranked fourth among the world's producers, accounting for 5.8% of world production. The country's

production of crude petroleum, including condensate, ranked sixth, accounting for 5.1% of world production. China was ranked second in petroleum refinery throughput, accounting for 18.2% of the global share. China was the leading consumer of primary energy, accounting for 28% of global consumption (table 1; Energy Institute, 2024, p. 13, 23, 31, 32, 37, 47).

## Minerals in the National Economy

In 2023, China's real GDP increased by 5.2% compared with an increase of 3.0% in 2022. The nominal GDP was \$17.7 trillion.<sup>1</sup> In 2022 (the latest year for which data were available), the mining sector accounted for 3.5% of the GDP. In 2023, the number of people employed in the mining sector was 3.3 million, which accounted for 2.0% of the country's total employment. In 2023, the total domestic investment in fixed assets was \$7.23 trillion, which was an increase of 2.8% from that in 2022. Fixed asset investments in the mineral sector increased by 2.1%, of which mining and processing of nonferrous metal ores increased by 43%; mining and processing of nonmetallic ores, by 16%; extraction of petroleum and natural gas, by 15%; and mining and beneficiation of coal, by 12%. Fixed asset investments in mining and processing of ferrous metal ores decreased by 6.8% (Interesse, 2024; National Bureau of Statistics of China, 2024, secs. 3-1, 3-3, 3-6, 4-5, 10-1, 10-12).

In 2023, the foreign direct investment (FDI) inflows, the investments in China by entities based in other countries, decreased by 14% to \$163 billion compared with that in 2022. Excluding Hong Kong and Macao, Singapore was the leading source of FDI inflows to China (accounting for 6.0% of the total FDI inflows), followed by the Netherlands (3.3%), Japan (2.4%), the Republic of Korea (2.2%), and the United Kingdom (2.1%). At yearend 2023, 3.1% of the total FDI inflows was directed to 32 newly established mining companies. About 28% of the total FDI inflows was directed to 3,624 companies in the manufacturing industry (National Bureau of Statistics of China, 2024, secs. 11-14, 11-15).

In 2023, China's outward direct investment (ODI), which refers to the investment of domestic entities in companies or projects in foreign countries, was \$177 billion compared with \$163 billion in 2022. The ODI in the mining sector was \$9.88 billion compared with \$15.1 billion in 2022. As of yearend 2023, the total accumulated value of China's ODI amounted to \$2.96 trillion, and the mining sector accounted for 6.5% of the total. Africa received 59% (\$13.7 billion) of China's total investment in overseas metal-associated mines and industry and included CMOC Group Ltd.'s total \$3.73 billion in settlement in a dispute, dividends, royalties, and production line expansion for Tenke Fungurume copper-cobalt mine in

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<sup>1</sup>Where necessary, values have been converted from Chinese yuan renminbi (CNY) to U.S. dollars (US\$) at the annual average exchange rate of CNY7.047=US\$1.00 for 2023 and CNY6.726=US\$1.00 for 2022.

Congo (Kinshasa), and China Minmetals Corp.'s \$2.04 billion acquisition of Khoemacau copper mine in Botswana. Southeast Asia accounted for 26% of the total metal-associated investment, South America accounted for 4.6%, and the Middle East accounted for 3.2% (Garcia, 2023b; Tang and Chen, 2023; National Bureau of Statistics of China, 2024, sec. 11–20; American Enterprise Institute, 2025; Nyabiage, 2025).

China's Belt and Road Initiative (BRI) played an important role in determining the country's ODI and aimed to develop overseas infrastructure projects to boost trade and connectivity. In 2023, BRI investments in metals and mining increased by 158% compared with those in 2022. The single largest recipient of BRI investment was Indonesia (which received \$7.3 billion, including renewable energy and infrastructure projects), followed by Hungary (\$4.5 billion, including the Budapest-Belgrade railway project) and Peru (\$2.9 billion, including the Chancay Port project) (Yu and others, 2019; Kawate, 2023; Suroyo and Sulaiman, 2023; Tian, 2024; Yang and Tong, 2024).

### Government Policies and Programs

The principal law that regulates China's mineral industry is the Mineral Resources Law, which was enacted in March 1986 and amended in 1996 and 2009. In 2023, a new amendment consisting of 8 chapters and 76 articles was proposed and was still pending by yearend. The main goals of the revision were to (1) clearly define mineral resources through geologic surveys and increased exploration; (2) strengthen production capacity and mineral storage, emphasizing protection of strategic mineral resources, including in emergency situations; (3) strengthen policy support by improving the mining permit system, including creating a national database of permit distribution; (4) establish a sustainable ecological restoration management system; and (5) remove the provisions for state-owned mining, collective mining, and artisanal mining in current law (NPC Observer, 2023; Wu and Li, 2023).

On July 3, the Ministry of Commerce (MOFCOM) announced a restriction on the export of chipmaking products, including eight gallium products and six germanium products. Effective August 1, this serves as a countermeasure to a restriction imposed by the United States, the Netherlands, and Japan on advanced semiconductor and chipmaking equipment exported to China. Exporters of gallium and germanium are required to obtain an export license for military and civilian (telecommunication, electric vehicles, renewable energy) uses (Cash and others, 2023; Cheng and Li, 2023).

On October 20, the MOFCOM and General Administration of Customs issued Announcement No. 39 of 2023 on export control measures for graphite products. The announcement, effective December 1, would replace Announcement No. 50 of 2006. The new export control measures affected the trade of high-quality artificial graphite with more than 99.9% purity and 1.73-gram-per-cubic-centimeter density, as well as natural flake graphite and its products (spheroidized graphite and expanded graphite). The measures require exporters to submit dual-use items and technology export application forms, including end-user and end-use certification (Ministry of Commerce, 2023a; Yan and others, 2023).

On December 21, the MOFCOM, in conjunction with the Ministry of Science and Technology (MOST), published a newly amended Catalogue for Prohibited and Restricted Export Technologies (Catalogue), as amended in 2001, 2008, and 2020, which banned or restricted the export of technologies through trade, investment, and economic or technical cooperation. The items in the restricted categories can only be exported if the exporter is issued a license. The Catalogue included technologies employed in the manufacture of rare-earth metals, alloys, and magnets and technologies used in rare-earth ore mining, selection, and refining. These Catalogue amendments thus strengthened the existing export ban on extraction and separation technologies for critical minerals. China had a strong upstream and midstream rare-earth industry based on mining and advanced solvent extraction processing of rare earths, whereas the United States and other Western countries struggled with the technical complexities of solvent extraction and pollution issues. China accounted for approximately 90% of global refined rare-earth output and 99.9% of global heavy rare-earth output. The Government's ban on the export of manufacturing technologies that produce rare-earth magnets, such as samarium-cobalt magnets, neodymium-iron-boron magnets, and cerium magnets, play a major role in the downstream rare-earth industry; however, the United States and Japan have been holding core technologies in the downstream (Leng and others, 2021; Liu and Patton, 2023; Ministry of Commerce, 2023b, p. 6; Tabeta, 2023a, c; Baskaran, 2024; Brancaccio, 2024; Combs, 2024).

### Production

Metal commodities for which output increased by 10% or more in 2023 compared with that in 2022 included polysilicon, by 84%; refined manganese (electrolytic), by 71%; nickel chemicals (Ni content), by 43%; refined nickel (electrolytic), by 41%; nickel intermediate, by an estimated 41%; titanium sponge, by 25%; mined and refined rare earths (rare-earth oxide equivalent), by 21% each; refined copper (secondary), by 20%; gallium (metal), by 19%; refined cobalt (metal), by 18%; refined cobalt (other, including powder, oxide, and salts), by an estimated 18%; smelted copper (secondary), by 15%; smelted copper (primary) and refined lead (secondary), by 14% each; silicomanganese, indium (metal), and smelted lead (primary), by 13% each; smelted zinc (secondary), by 12%; and secondary aluminum, by 10%. Metal commodities for which output decreased by 10% or more in 2023 compared with that in 2022 included mined zircon, by 29%; primary magnesium, by 25%; refined bismuth, by 14%; and mined molybdenum (Mo content), by 10%. Data on mineral production are in table 1.

In 2023, among industrial minerals, production increases compared with that in 2022 included that of lithium (brine), by an estimated 58%; lithium ore and concentrate, by an estimated 51%; lithium carbonate, by 31%; lithium hydroxide, by 30%; lithium chloride, by 21%; lithium (metal), by 20%; soda ash, by 12%; and asbestos, by an estimated 11%. Production decreases among industrial minerals compared with that in 2022 included that of diatomite, by an estimated 48%; zeolite, by 25%; and vermiculite, by 15%. In 2023, among the mineral fuels and related materials, production increases compared with that in

2022 included that of coalbed gas, by 21%; liquefied natural gas, by 17%; and refined products, by 15% (table 1).

## Mineral Trade

In 2023, the total value of China's goods exports decreased to \$3.38 trillion compared with \$3.54 trillion in 2022 owing to decreased global demand. Base metals and articles thereof accounted for 7.9% of the total exports compared with 8.3% in 2022, and mineral products accounted for 2.0%, the same share as that in 2022. In 2023, the total value of goods imports was \$2.56 trillion compared with \$2.71 trillion in 2022. Mineral fuel imports accounted for 20% of the total imports, the same as that in 2022; ore, slag, and ash together accounted for 9.3% compared with 8.3% in 2022; and base metals and articles thereof accounted for 5.6% compared with 5.9% in 2022. Detailed information on mineral trade can be found in tables 3 and 4 and in the "Commodity Review" section (National Bureau of Statistics of China, 2023, sec. 11–4; 2024, secs. 11–2, 11–4; Asian Development Bank, 2024, p. 111).

## Structure of the Mineral Industry

In China, most mining and mineral-processing activities were conducted by state-owned or state-controlled enterprises. The share of state ownership was high in the energy sector and the mining and mineral-processing sector. In 2023, most state-owned companies owned a large portion of the mineral industry's assets and a small number of the enterprises, except petroleum and natural gas extraction companies, for which the state owned more than 99% of the assets and 85% of the number of enterprises. State-owned companies collectively owned 86% of the assets and 24% of the number of enterprises for the mining and washing of coal; 77% and 10%, respectively, for the mining and processing of ferrous metal ores; 72% and 25%, respectively, for the mining and processing of nonferrous metal ores; 72% and 14%, respectively, for the processing of petroleum, coal, and other fuels; and 63% and 17%, respectively, for the mining and processing of non-metal ores. In contrast, the share of state ownership was relatively smaller in the downstream smelting, rolling, and metal-product-manufacturing sectors. In these sectors, the state-owned companies owned 56% of the assets and 7.3% of the number of enterprise units for the smelting and rolling of nonferrous metals; 54% and 5.5%, respectively, for the smelting and rolling of ferrous metals; 30% and 6.1%, respectively, for the manufacturing of nonmetallic mineral products; and 21% and 2.4%, respectively, for the manufacturing of metal mineral products (National Bureau of Statistics of China, 2024, secs. 13–4, 13–6).

## Commodity Review

### Metals

**Cobalt.**—In 2023, China produced an estimated 2,000 metric tons (t) of mined cobalt, the same as that in 2022. Eight of the global top ten cobalt-mining enterprises were in Congo (Kinshasa) and accounted for 78% of global supply. Chinese companies owned seven of these eight mining enterprises with

majority shares, including the Luiswishi Mine, which was 100% owned by Zhejiang Huayou Cobalt Co. Ltd.; the Kalongwe Mine, which was 85% owned by Chengtun Mining Group; the Tenke Fungurume Mine and the Kisanfu Mine, which were 80% and 71.25% owned, respectively, by CMOC Group Ltd.; and the Pumpi Mine, which was 75% owned by Norin Mining (Hong Kong) Ltd. China imported 162,000 t of cobalt in refinery feedstock, a 27% increase compared with that in 2022. Of that amount, imports of mixed hydroxide precipitates and other nickel byproducts increased by 216% to 24,570 t, imports of intermediate increased by 23% to 132,440 t, and imports of concentrate decreased by 29% to 1,390 t. In 2023, CMOC Group Ltd. replaced Glencore of Switzerland as the leading global cobalt producer. CMOC's cobalt production increased by 174% to 55,526 t, accounting for more than 25% of global consumption of 213,000 t, because activity ramped up at the new Kisanfu Mine in Congo (Kinshasa) despite a slump in the cobalt price and a global surplus of 12,500 t (table 1; China Fortune Securities Co. Ltd., 2024, p. 1; Darton Commodities Ltd., 2024, p. 8, 30; Home, 2024; S&P Global, 2025).

China's refined cobalt production (cobalt metal equivalent) was 147,000 t in 2023, which was an increase of 18% compared with that in 2022 and accounted for 80% of global production. In 2023, CNGR Advanced Materials Co. Ltd. increased production by 48% to 17,800 t of refined cobalt, Ganzhou Tengyuan Cobalt New Material Co. Ltd. increased production by 90% to 15,800 t, and Greatpower Nickel and Cobalt Materials Co. Ltd. increased production by 97% to 12,600 t. Ganzhou Tengyuan Cobalt New Material completed the second phase of its expansion in December 2022, which added 13,500 metric tons per year (t/yr) to its production capacity and resulted in a total capacity of 20,000 t/yr (table 1; Darton Commodities Ltd., 2024, p. 16).

**Germanium.**—In 2023, germanium metal production (primary and secondary) in China was estimated to be 154 t compared with 151 t in 2022. Production in 2022 consisted of 130 t of primary and 21 t of recycled germanium. China's exports of metallic germanium products decreased by 14.3% to 41.2 t in 2023. The major recipients of germanium product exports included Russia (which received 22%), Hong Kong (20%), Germany (17%), the United States (14%), Belgium (12%), and Japan (7.7%). The export decrease was attributable to the export control of chipmaking materials (table 1; Mysteel.com, 2024).

Yunnan Chihong Zinc and Germanium Co. Ltd. accounted for more than 52% of germanium output in China in 2023. Yunnan Chihong produced germanium products containing 65.9 t of germanium, an increase of 18% compared with that in 2022. Yunnan Lincang Xinyuan Germanium Industrial Co. Ltd. produced 47.7 t of germanium ingot, an increase of 53% compared with that in 2022. According to the company, it had 940 t of germanium reserves, which accounted for 27% of China's germanium reserves. Consumer demands for germanium, especially in infrared optics and the photovoltaic field, increased in 2023 largely owing to increased global geopolitical tensions. As a result, the average price of infrared-grade germanium products (lens and optical system) increased by 307% (Asian Metal Ltd., 2024; Mysteel.com, 2024; Yunnan

Lincang Xinyuan Germanium Industrial Co. Ltd., 2024a; 2024b, p. 12, 14, 16, 20).

**Gold.**—In 2023, production of mined gold increased by 0.84% to 375.2 t, of which 297.3 t was from gold mines and 77.9 t was produced from nonferrous metal byproducts. Total refined gold production increased by 4.3% to 519.3 t in 2023. Production of refined gold from imported gold concentrates accounted for 144.1 t of the total, an increase of 14.6% compared with that in 2022. In 2023, China's gold consumption increased by 8.8% to 1,090 t (China Gold Association, 2024).

Shandong Gold Group Co. Ltd. discovered an additional 200 t of gold reserves grading 4.26 grams per metric ton (g/t) in 2023 at the Xiling gold mine in Laizhou, Shandong Province. The Xiling mine has an estimated mine life of more than 40 years and had become the largest single deposit of gold discovered in China, with total reserves of 592 t. The Xilaokou gold deposit in Weihai, Shandong Province, added 50 t of gold to China's total reserves, and the Tugurige gold deposit in Bayannur, Nei Mongol Autonomous Region, added 38 t of gold. In January, Zijin Mining Group Co. Ltd. acquired a 95% equity interest in Rosebel Gold Mines N.V. of Suriname, which held the Rosebel and Saramacca gold mines in Suriname. The Rosebel Mine, which had a mine life of 18 years and proved and probable reserves of 102 t of gold, produced 7.57 t in 2023 (Global Times, 2023a–c; Lee, 2023; Xinhuanet.com, 2024; Zijin Mining Group Co. Ltd., 2024, p. 33, 40).

**Lead.**—Production of mined lead increased by only 1% owing to decreased ore grade and poor resource continuity. However, production of smelted primary lead increased by 13% to 3.70 Mt. To provide raw materials, imports of lead concentrate (which included high-lead concentrate under the name of silver concentrate) increased by 13% to 1.14 Mt. Of that amount, imports from Russia increased by 13% to 354,000 t, those from India increased by 38% to 109,000 t, those from Italy increased by 96% to 91,000 t, and those from Taiwan increased by 94% to 70,000 t. However, imports from the United States decreased by 15% to 474,000 t, those from the Republic of Korea decreased by 16% to 88,000 t, and those from Indonesia decreased by 51% to 18,000 t. Primary production accounted for 51% of the total 5.69 Mt of refined lead production (tables 1, 4; Feng and others, 2024, p. 7, 8).

In December, China ENFI Engineering Technology Co. Ltd. signed a contract with Xinjiang Kunlun Zinc Industry Co. Ltd. for the Xinjiang Huoshaoyun lead-zinc mine's smelter project, which would be the largest lead smelter in the world after commission. The smelter would process 2.5 million metric tons per year (Mt/yr) of ore concentrate and produce 110,000 t/yr of lead ingot and 560,000 t/yr of zinc ingot. In 2023, Yuguang Gold & Lead Co. Ltd. started construction of a recycling production line in Jiyuan, Henan Province, which would process 540,000 t/yr of lead-acid battery waste (SMM News, 2023, 2024b).

**Nickel.**—In 2023, production of mined nickel increased by 3% to 117,000 t, and Gansu Province accounted for 95% of total production. Production of nickel-containing chemicals increased by 43%, and that of electrolytic and intermediate (matte) increased by 41% each. Ore imports increased by 7% to 49.6 Mt and came mainly from the Philippines. Imports of other intermediates, including that of nickel matte, increased by 63%

to 299,000 t; mixed hydroxide precipitates, by 46% to 1.32 Mt; and nickel pig iron, by 43% to 8.46 Mt (tables 1, 4; Xu and others, 2024, p. 6, 12, 15, 26).

Chinese investors and companies controlled approximately 90% of Indonesia's nickel industry. Nickel ore producers in Indonesia had to sell ore to smelter companies controlled by Chinese investors and companies owing to Indonesia's ban on the export of raw ore and its lack of capital to build smelters. In 2022, 14 Chinese smelters received benefits from the Government of Indonesia, including the exemption from import tax and a 20-year tax holiday (tables 1, 4; Da Costa, 2022; Xu and others, 2024, p. 6, 12, 15, 28).

In January, Tsingshan Holding Group Co. Ltd., which had eight ferronickel production lines in Morowali Industrial Park, Indonesia, discussed with Chinese domestic copper producers the possibility of using copper facilities to process between 150,000 and 200,000 t/yr of refined nickel owing to the high refined nickel price. In June, Zhejiang Huayou Cobalt Co. Ltd. commenced the production of mixed hydroxide precipitates, including 120,000 t/yr of nickel and 15,000 t/yr of cobalt in Weda Bay Industrial Park, Indonesia. In July, Huayou International Investment Pte. Ltd., a subsidiary of Huayou Cobalt, planned to establish PT Huaxiang Refining Indonesia (49% of equity) to produce 50,000 t/yr of nickel sulfate (Ni content) at the same site (Argus Media, 2023; Cang, 2023; Lv and others, 2023).

**Rare Earths.**—China's rare-earth industry continued to be regulated by production quotas jointly determined by the Ministry of Industry and Information Technology and the Ministry of Natural Resources. In 2023, four Government-designated companies shared the 2023 total production quotas, including 255,000 t of rare earths (rare-earth oxide equivalent) from rare-earth mining and 244,000 t from rare-earth smelting and separating compared with 210,000 t and 202,000 t, respectively, in 2022. Unprecedentedly, a third batch quota was assigned in 2023. The mining quota allocated 235,850 t for light rare earths (LRE) and 19,150 t for heavy rare earths (HRE). China Northern Rare Earth (Group) High-Tech Co. Ltd., which was China's leading producer of LRE and had facilities located mainly in the Nei Mongol Autonomous Region, accounted for 178,650 t of the LRE quota. China Rare Earth Group Co. Ltd., which was the leading producer of HRE and had facilities mainly in Jiangxi Province, accounted for 13,010 t of the HRE quota. Production of mined LRE increased by 23.5%, and that of smelting and refining products of all HRE and LRE increased by 21.3%. Production of mined HRE remained unchanged owing to continued import reliance on Burma and Laos. China imported 109,000 t of HRE concentrate in 2023, of which Burma accounted for 72,000 t (a 204% increase from that in 2022), Malaysia accounted for 19,000 t (a 165% increase) by processing ore from Australia, and Laos accounted for 11,000 t (no increase; started producing in 2023) (Tabeta, 2023b, c; CCTV News, 2024; Li, 2024; Merriman, 2024; Zen Innovations AG, 2025).

In September, China Rare Earth and Xiamen Tungsten Industry Co. Ltd. signed an agreement for a joint mining and refining operation in Fujian Province; ownership of the venture was split 51% and 49%, respectively. In December,

Rising Nonferrous Metals Share Co. Ltd. transferred 100% of its directly held shares in Guangdong Rare Earth Industry Group Co. Ltd. to China Rare Earth without compensation. As a result, China Rare Earth controlled 100% of HRE processing in China. Even though major consolidation activities aiming for increased efficiency continued in the year, China's rare-earth industry faced challenges in the economic performance such as new supply chains outside China and a continuous fall in rare-earth products' price on the global market. The net profits of Shenghe Resources Holding Co. Ltd. decreased by 79%; China Northern Rare Earth, by 60%; the rare-earth segment of Xiamen Tungsten, by 54.5%; and China Rare Earth Resources and Technology Co. Ltd., by 45.7% (Merriman, 2023; Jin, 2024; Kawase, 2024).

In 2023, Shenghe Resources acquired a 9.9% stake of Vital Metals Ltd. of Australia, which owned the Nechalacho Mine project in Northwest Territories, Canada, that included a processing plant under construction in Saskatoon. The Nechalacho Mine had measured resources of 7.0 Mt grading 0.267% neodymium oxide and 0.074% praseodymium oxide. As part of this agreement, Shenghe Resources acquired a 50% interest in Vital Metals' Wigu Hill rare-earth project in Tanzania. Shenghe Resources, which held 19.9% of the stocks for Peak Rare Earth Ltd. of Australia, signed a nonbinding agreement in 2022 to buy as much as 100% of the output from Peak Rare Earth's Ngualla rare-earth mine project in Tanzania, which obtained a mining license in 2023. The Ngualla Mine had 18.5 Mt of reserves grading 4.80% rare-earth oxide, including 1.02% neodymium oxide and praseodymium oxide, and had 24 years of mine life (Hui, 2023; Lamberink, 2023; Shenghe Resources Holding Co. Ltd., 2023a, b; Mining.com, 2023; Peak Rare Earth Ltd., 2023, p. 5; 2024; Vital Metals Ltd., 2024, p. 6).

**Silicon.**—In 2023, China's production of silicon metal (industrial grade) increased by 9% to 3.80 Mt, and the production capacity increased by 1.1% to 6.4 Mt/yr. China accounted for 81% of the global production capacity in 2022 owing to the country's large quartzite reserves and the low cost of electricity. The following companies contributed to China's increased production capacity through their own expansion projects: Hoshine Silicon Industry (Shanshan) Co. Ltd., which contributed for 400,000 t/yr; Inner Mongolia Xinyuan Silicon Material Technology Co. Ltd., 100,000 t/yr; and Longling Yonglong Ferroalloys Co. Ltd., 50,000 t/yr (table 1; Aleina, 2023; Asian Metal Ltd., 2023b, c; Sun, 2024, p. 11, 12).

China's production of polysilicon increased by 84% to 1.50 Mt and accounted for approximately 93% of the global production in 2023. Solar-grade polysilicon was estimated to account for 98% of the country's total, and electronic-grade polysilicon, 2%. An estimated 1.46 Mt/yr of polysilicon production capacity was under construction in 2023, including 100,000 t/yr each at Hubei Xingrui Silicon Materials Co. Ltd., Inner Mongolia Stellar Chemical Co. Ltd., Inner Mongolia Xingfa Technology Co. Ltd., Jiangxi Lanxinghuo Silicone Co. Ltd., and Tangshan Sanyou Silicon Industry Co. Ltd. and 75,000 t/yr at Zhongtian Oriental Fluorosilicon Materials Co. Ltd. Production was expected to commence in 2024. Consumption in 2023 was 1.86 Mt of polysilicon, which was expected to increase by approximately 30% in 2024 (table 1;

Aleina, 2023; Asian Metal Ltd., 2023a; Fang and others, 2023, p. 2, 11; Sun, 2024, p. 19, 20).

**Titanium.**—In 2023, production of titanium mineral concentrates (TiO<sub>2</sub> content) increased by 3% to 3.25 Mt, which accounted for 35% of global production of ilmenite and rutile. Production of titanium dioxide increased by 6.3% to 4.16 Mt. Production of titanium sponge increased by 25% to 218,000 t, accounting for 67% of global production. Production of titanium ingot increased by 4.1% to 151,000 t. Titanium dioxide was produced by 42 companies, of which 86.5% produced rutile, 10.1% produced anatase, and 3.4% produced other titanium oxide minerals. The Panzhihua-Xichang area of Sichuan Province accounted for more than 89% of the total titanium concentrate produced in China. Anhui, Guangxi, Henan, Shandong, and Sichuan Provinces accounted for more than 66% of the country's titanium dioxide production. Liaoning, Xinjiang, and Yunnan Provinces accounted for more than 65% of titanium sponge production. Jiangsu, Shaanxi, and Zhejiang Provinces mainly produced titanium-processing materials, of which Shaanxi accounted for 48%. The value of titanium imports (mainly that of titanium ore) was \$1.77 billion. China received these imports mostly from Mozambique (which supplied 45% of the titanium imports, by value), followed by Norway (9%), Kenya (8%), Vietnam (7%), and the United States (4%). The value of titanium exports (mainly that of titanium dioxide) increased by 16.7% to \$3.6 billion (table 1; An and others, 2024; Sohu.com, 2024).

### *Industrial Minerals*

**Graphite.**—In 2023, China's production of graphite increased by 13% to 2.61 Mt. Petroleum-based synthetic graphite accounted for 54% of total production, and natural graphite accounted for the remainder. Production of natural graphite increased to 1.21 Mt from 1.16 Mt in 2022, which was attributable to the increase of the country's production capacity by 600,000 t/yr to 1.8 Mt/yr. China Minmetals Co. Ltd. started pilot production at its 200,000-t/yr natural graphite processing facility in Hegang, Heilongjiang Province, in late August. BTR New Material Group Co. Ltd. added 50,000 t/yr of natural graphite production capacity and 200,000 t/yr of synthetic graphite production capacity in Heilongjiang as the first phase of a multi-phase expansion that aimed for total capacities of 200,000 t/yr of natural graphite and 400,000 t/yr of synthetic graphite. Jixi Northeast Mineral Resources Co. Ltd. completed the construction of a 100,000-t/yr-capacity graphite flake plant. The trend of supply chain integration by synthetic graphite producers had recently been adopted by natural graphite producers and combined natural and synthetic graphite producers, resulting in increased production of value-added products and resiliency against price and capacity volatility (table 1; Argus Media, 2022, 2024; Benchmark, 2022; EnergyTrend, 2022; Pan, 2023; Yan, 2024).

Under the new export control measures established by Announcement No. 39 of 2023, exports of natural and synthetic graphite increased to 1.20 Mt in 2023 compared with 1.05 Mt in 2022. Exports to Indonesia accounted for 18% of total graphite exports in 2023; to the Republic of Korea, 15%; to Japan, 14%; and to the United States, 9.2%. In 2023, the export value of

natural graphite decreased by 25%, whereas that of synthetic graphite increased by 3.8% despite the oversupplied market and low prices owing to Chinese companies increasing their production capacity to expand their respective market shares (table 3; Silva, 2023; Zen Innovations AG, 2025).

**Lithium.**—In 2023, China’s lithium carbonate production capacity was 1.1 Mt/yr, and the output increased by 31% to 517,900 t. The country’s lithium hydroxide production capacity was 700,000 t/yr, and the output increased by 30% to 319,600 t. Its lithium chloride production capacity was 25,000 t/yr, and the output decreased by 21% to 17,500 t. In 2023, Xinjiang Zhicun Lithium Industry Co. Ltd. commenced a 60,000-t/yr battery-grade lithium carbonate production line as phase one of a multi-phase construction that aimed for a total capacity of 120,000 t/yr. Jiangxi Chunpeng Lithium Industry Co. Ltd., a subsidiary of Sinomine Resources Group Co. Ltd., commenced an approximately 35,000-t/yr lithium carbonate–fluorite–hydroxide production facility and achieved a total capacity of 66,000 t/yr of battery-grade lithium salts. Fengxin Times New Energy Materials Co. Ltd.’s 30,000-t/yr lithium carbonate production line was under construction as the first phase of a capacity expansion program that aimed for a total capacity of 100,000 t/yr. Tianqi Lithium Industry Co. Ltd. planned to construct a 30,000-t/yr battery-grade lithium hydroxide production line (table 1; Asian Metal Ltd., 2023d; CINF Engineering Co. Ltd., 2023; Li, 2023; Mysteel.net, 2023; SHMET News, 2024).

Major refiners of lithium carbonate in China mainly processed imported resources, including spodumene and lithium-bearing minerals. In Zimbabwe, Chengxin Lithium Group Co. Ltd. commissioned a 290,000-t/yr lithium concentrate plant at the Sabi Star Mine in May, and Zhejiang Huayou Cobalt Co. Ltd. commissioned a 450,000-t/yr lithium concentrate [50,000-t/yr lithium carbonate equivalent (LCE)] plant at the Arcadia Mine in July, which was acquired from Prospect Resources Inc. of Australia in April 2022. Sinomine Resources Group Co. Ltd. also completed the construction of a 300,000-t/yr spodumene concentrate plant at the Bikita Mine in Zimbabwe in July, which was acquired from Bikita Minerals Ltd. in January 2022 (Banya, 2023a, b; Chen, 2023; Chingono, 2023; Chengxin Lithium Group Co. Ltd., undated).

Ganfeng Lithium Co. Ltd. planned to invest in the Goulamina lithium project in Mali, which was owned by Mali Lithium BV indirectly through Leo Lithium Ltd. of Australia and included mining and processing facilities that had a capacity of 506,000 t/yr of spodumene concentrates. In Argentina, Ganfeng Lithium commenced a pilot plant in March at the PPG salt project at two salt lake blocks, Pozuelos and Pastos Grands, which would have a production capacity of approximately 255,000 t/yr. Ganfeng Lithium also commenced production at the Cauchari-Olaroz salt lake project in June. Phase 1 capacity was 40,000 t/yr of LCE and would be followed by phase 2 capacity of 20,000 t/yr. The Government of Mexico cancelled nine mining concessions of the Sonora project, including a lithium hydroxide plant held by Ganfeng Lithium, based on Mexico’s amended mining law, effective in April 2022. The law prohibited granting the exclusive right to lithium mines to foreign entities, which were instead required to partner with the

upstart LitoMx (wholly owned by the Government of Mexico) on lithium projects. Bacanora Lithium Plc., a subsidiary of Ganfeng Lithium, was appealing the decision in a Mexican state court. Contemporary Amperex Technology Co. Ltd. (CATL) agreed to invest \$1.4 billion in the Uyuni and Oruro salt flats and two 25,000-t/yr battery-grade lithium carbonate plants in Bolivia (Averbuch and Attwood, 2023; Ganfeng Lithium Co. Ltd., 2023a, b; Garcia, 2023a; Ramos and Elliott, 2023; Suárez, 2023; Tang, 2023; Mining Weekly, 2024; SMM News, 2024a).

## Reserves and Resources

In 2023, China’s investment in geologic exploration for petroleum and natural gas totaled \$13.3 billion, which was an increase of 14% compared with the amount invested in 2022. The country’s investment in geologic exploration for nonfuel minerals and coal was \$2.85 billion, which was an increase of 7.7%. The leading commodities receiving exploration investment in 2023 were coal (\$280 million), gold (\$199 million), copper (\$124 million), lead-zinc (\$122 million), iron ore (\$78 million), bauxite (\$38 million), tungsten (\$26 million), and graphite (\$14 million). Notable increases in exploration investment in 2023 included that in nickel, by 100%; lead-zinc, by 51%; copper, by 33%; molybdenum and silver, by 32% each; gold, by 31%; iron ore, by 30%; and tungsten, by 26%. The exploration investment in graphite decreased by 32% in 2023, that in phosphate rock decreased by 31%, and that in manganese decreased by 15%. The number of newly discovered mineral deposits in 2023 was 124. Table 5 shows China’s reserves of major mineral commodities as of 2023 (Ministry of Natural Resources, 2024, p. 10, 13, 15).

## Outlook

According to the International Monetary Fund, China’s GDP growth is projected to gradually decrease to 3.6% by 2027 owing to economic uncertainties caused by deterioration in the property market, financial market disturbance, and increased trade tension. China’s mineral commodity output is expected to continue to increase in the next few years owing to recent activities such as an increase of ODI in the mining sector through BRI, expansion of domestic and overseas production capacity, continuous acquisition of foreign deposits and mining and mineral-processing facilities. In the long term, China is expected to continue to rely on imports for metallic ores and intermediate materials to feed its large metal-processing industry and to strengthen its dominance in the global supply chain in upstream and midstream applications. Considering global geopolitical competition, the Government is also expected to continue to use the export control measures of critical minerals that are important for manufacturing technologies for downstream applications (Asian Development Bank, 2024, p. 116–117; Brancaccio, 2024; Huld, 2024; Interesse, 2024; International Monetary Fund, 2024).

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TABLE 1  
CHINA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>2</sup>	2019	2020	2021	2022	2023
<b>METALS</b>					
<b>Aluminum:</b>					
Bauxite	73,320	62,800 <sup>c</sup>	86,000 <sup>e</sup>	90,000 <sup>e</sup>	91,300 <sup>e</sup>
Alumina	72,474	73,786	77,475	81,303 <sup>f</sup>	82,441
<b>Metal:</b>					
Primary	35,044	36,740	38,503	40,110 <sup>f</sup>	41,594
Secondary	7,250	7,250	8,300	8,650 <sup>f</sup>	9,500
Total	42,300	44,000	46,800	48,800 <sup>f</sup>	51,100
Metal products	52,522	56,845	61,052	59,635 <sup>f</sup>	63,034
<b>Antimony:</b>					
Mine, Sb content	79,900	61,000	38,100 <sup>e</sup>	61,000 <sup>f,e</sup>	66,200 <sup>e</sup>
Refinery, metal	222,609	218,400	170,500	174,200	189,000 <sup>e</sup>
<b>Beryllium, mine, beryl:</b>					
Gross weight	1,750	1,750 <sup>e</sup>	1,740 <sup>e</sup>	1,880 <sup>e</sup>	1,950 <sup>e</sup>
Be content	69	69 <sup>e</sup>	68 <sup>e</sup>	74 <sup>e</sup>	77 <sup>e</sup>
<b>Bismuth:</b>					
Mine, Bi content	1,800	1,800	1,800	1,800 <sup>e</sup>	1,800 <sup>e</sup>
Refinery	15,450	15,500 <sup>e</sup>	16,000 <sup>e</sup>	15,500 <sup>e</sup>	13,300 <sup>e</sup>
Cadmium, refinery, primary	8,689	8,700 <sup>e</sup>	8,700 <sup>e</sup>	8,700 <sup>e</sup>	9,300 <sup>e</sup>
Chromium, mine, chromite	84,400	128,000	130,000 <sup>e</sup>	136,000 <sup>f</sup>	130,000 <sup>e</sup>
<b>Cobalt, Co content:</b>					
Mine, concentrate, byproduct from polymetallic ore	1,742	2,000 <sup>e</sup>	2,000 <sup>e</sup>	2,000 <sup>e</sup>	2,000 <sup>e</sup>
<b>Refinery:</b>					
Metal	8,752	11,500	7,480 <sup>f</sup>	7,000 <sup>f</sup>	8,230
Other, including powder, oxide, salts <sup>e</sup>	86,200	94,500	121,000	118,000 <sup>f</sup>	139,000
Total <sup>e</sup>	95,000	106,000	128,000	125,000 <sup>f</sup>	147,000
<b>Copper:</b>					
<b>Mine, Cu content:</b>					
Concentrates	1,628,000	1,673,000	1,758,000	1,835,000 <sup>f</sup>	1,750,000
Solvent extraction <sup>3</sup>	55,700	50,100	60,000	64,200	65,000
Total	1,680,000	1,720,000	1,820,000	1,900,000 <sup>f</sup>	1,820,000
<b>Smelter:</b>					
Primary	7,400,000	7,907,000	8,200,000	8,390,000	9,533,000
Secondary	1,688,400	1,749,800	1,850,000	2,000,000	2,300,000
Total	9,090,000	9,660,000	10,100,000	10,400,000	11,800,000
<b>Refinery:</b>					
<b>Primary:</b>					
Leaching, electrowon	55,700	50,100	60,000	64,200	65,000
Other	7,556,400	8,005,500 <sup>f</sup>	8,149,000	8,350,000 <sup>f</sup>	9,085,000
Total	7,610,000	8,060,000 <sup>f</sup>	8,210,000 <sup>f</sup>	8,410,000 <sup>f</sup>	9,150,000
Secondary	2,170,800	1,975,500	2,257,000	2,346,000	2,805,000
Grand total	9,780,000	10,000,000	10,500,000	10,800,000 <sup>f</sup>	12,000,000
Products, manufactured copper	20,172,000	21,433,000	21,632,000	21,134,000 <sup>f</sup>	22,170,000
<b>Ferroalloys:</b>					
Ferrochromium	6,030,000	6,230,000	6,410,000	7,340,000 <sup>e</sup>	7,750,000 <sup>e</sup>
<b>Ferromanganese:<sup>e</sup></b>					
Blast furnace	290,000	281,000	294,000	294,000 <sup>f</sup>	302,000
Electric furnace	1,770,000	1,730,000	1,810,000	1,810,000	1,860,000
Ferromolybdenum	144,000	166,000	194,400	201,340	192,100
Ferronickel, nickel pig iron <sup>c</sup>	15,400,000	12,900,000	11,000,000	9,950,000	9,340,000
Ferrosilicon	5,490,000	5,320,000	5,860,000	5,970,000 <sup>f</sup>	5,557,000
Ferrovandium	43,600	40,900	41,000 <sup>e</sup>	36,105 <sup>f</sup>	36,000 <sup>e</sup>
Silicomanganese	12,600,000	11,380,000	10,650,000	10,010,000	11,300,000
Gallium, metal	338	336	423	524 <sup>f</sup>	621
Germanium, metal	119	120	125	151 <sup>f</sup>	154 <sup>e</sup>

See footnotes at end of table.

TABLE 1—Continued  
CHINA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>2</sup>	2019	2020	2021	2022	2023
METALS—Continued					
Gold:					
Mine, Au content kilograms	380,230	365,340	328,980	372,048	375,155
Refinery, primary do.	500,420	479,500	443,600	497,800	519,300
Indium, refinery, primary, In content do.	534,000 <sup>e</sup>	590,000 <sup>r</sup>	600,000 <sup>r</sup>	667,000 <sup>r</sup>	756,000
Iron ore, mine:					
Crude ore thousand metric tons	844,000	898,000	978,000	925,000 <sup>r</sup>	991,000
Usable ore:					
Gross weight do.	252,649	284,151	274,817	259,894 <sup>r</sup>	278,346
Fe content do.	157,653	177,310	171,486	162,174 <sup>r</sup>	173,688
Iron and steel:					
Pig iron do.	808,494	888,976 <sup>r</sup>	868,568	864,958 <sup>r</sup>	871,013
Steel:					
Raw steel do.	995,419	1,064,730	1,032,788	1,013,003	1,019,081
Products, rolled do.	1,204,569	1,328,716	1,336,668	1,295,325 <sup>r</sup>	1,362,682
Lead:					
Mine, Pb content do.	2,006	1,942	1,964	1,946	1,966
Smelter, primary do.	2,882	3,010	3,186 <sup>r</sup>	3,278 <sup>r</sup>	3,697
Refinery:					
Primary do.	2,734	2,800 <sup>e</sup>	2,750	2,806	2,925
Secondary do.	2,225	2,200 <sup>e</sup>	2,450	2,420	2,762
Total do.	4,960	5,000 <sup>e</sup>	5,200	5,230	5,690
Magnesium, primary, metal and alloy	930,600	961,000 <sup>r</sup>	888,700 <sup>r</sup>	945,000 <sup>r</sup>	709,000
Manganese:					
Mine, ore:					
Gross weight thousand metric tons	10,325	12,856	8,000	6,500	6,710
Mn content do.	1,311	1,670	880	715	738
Refinery, metal, electrolytic do.	1,530	1,370	1,230	685	1,170
Mercury, mine, Hg content	2,232	1,993	1,280	1,000 <sup>e</sup>	1,000 <sup>e</sup>
Molybdenum, mine, Mo content	116,000	107,000 <sup>e</sup>	106,000 <sup>e</sup>	107,000 <sup>r,e</sup>	96,400 <sup>e</sup>
Nickel, Ni content:					
Mine, concentrate	108,700	109,000 <sup>e</sup>	109,000 <sup>e</sup>	114,000 <sup>e</sup>	117,000 <sup>e</sup>
Intermediate, matte	159,300	149,000 <sup>e</sup>	135,000 <sup>e</sup>	147,000 <sup>e</sup>	208,000 <sup>e</sup>
Chemicals	41,300	64,000	84,000	235,000	335,000
Ferronickel, nickel pig iron	600,340	504,000	432,000	392,000	368,000
Refinery, metal, electrolytic	188,600	176,000	159,000	174,000 <sup>r</sup>	244,800
Niobium, mine, mineral concentrate, Nb content	45 <sup>e</sup>	44	45 <sup>e</sup>	45 <sup>e</sup>	43 <sup>e</sup>
Platinum-group metals, mine:					
Palladium, Pd content kilograms	1,300	2,800 <sup>r</sup>	2,800 <sup>r,e</sup>	2,800 <sup>r,e</sup>	2,800 <sup>e</sup>
Platinum, Pt content do.	2,500	2,800 <sup>r</sup>	4,200 <sup>r</sup>	4,100 <sup>r</sup>	4,000 <sup>e</sup>
Rare earths, rare-earth-oxide equivalent:					
Mineral concentrates	132,000	140,000	168,000	210,000	255,000
Compounds	127,000	135,000	162,000	202,000	243,850
Rhenium, Re content, in NH <sub>4</sub> ReO <sub>5</sub> kilograms	2,500 <sup>e</sup>	2,500 <sup>e</sup>	5,100 <sup>r</sup>	5,200 <sup>r,e</sup>	5,300 <sup>e</sup>
Selenium	1,350 <sup>r,e</sup>	1,680 <sup>r</sup>	1,700 <sup>r</sup>	1,750 <sup>r</sup>	1,775
Silicon:					
Metal	2,248,900 <sup>r</sup>	2,100,000	2,910,000	3,503,000	3,800,800
Polysilicon	344,000	396,000	487,300	817,300	1,503,900
Silver, mine, Ag content	3,443	3,405	3,511	3,477	3,399
Tantalum, mine, mineral concentrate, Ta content	76 <sup>e</sup>	74 <sup>e</sup>	76	75 <sup>r,e</sup>	78 <sup>e</sup>
Tellurium, refinery	450 <sup>r,e</sup>	575 <sup>r</sup>	650 <sup>r</sup>	675 <sup>r</sup>	725
Tin:					
Mine, Sn content	91,100	94,500	76,000 <sup>e</sup>	71,000 <sup>e</sup>	70,000 <sup>e</sup>
Smelter, primary	181,200	203,000	180,000 <sup>e</sup>	181,800	168,900

See footnotes at end of table.

TABLE 1—Continued  
CHINA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>2</sup>	2019	2020	2021	2022	2023	
<b>METALS—Continued</b>						
<b>Titanium:</b>						
<b>Ilmenite and leucoxene, concentrate:</b>						
Gross weight	4,600,000	5,442,000	5,714,000	6,288,000	6,494,000	
TiO <sub>2</sub> content	2,290,000	2,721,000	2,857,000	3,144,000	3,247,000	
Sponge	88,101	122,958	139,929	175,000	218,000	
Tungsten, mine, concentrate, W content <sup>c</sup>	69,000	71,000	71,000	66,000	66,000	
Vanadium, V content	60,000	70,200	76,200 <sup>r</sup>	79,300 <sup>r</sup>	83,600 <sup>e</sup>	
<b>Zinc:</b>						
Mine, Zn content	thousand metric tons	4,213	4,058	4,136	4,041	4,060
<b>Smelter:</b>						
Primary	do.	5,372	5,462	5,558	5,541	5,931
Secondary, remelt	do.	790	880	850	817	919
Total	do.	6,160	6,340	6,410	6,360	6,850
Zirconium, mine, zircon <sup>c</sup>		140,000	133,000	140,000	140,000	100,000
<b>INDUSTRIAL MINERALS</b>						
Arsenic trioxide		24,000 <sup>e</sup>	24,000 <sup>e</sup>	25,000 <sup>r</sup>	25,000 <sup>r</sup>	24,000
Asbestos		140,000 <sup>e</sup>	130,000 <sup>e</sup>	160,000 <sup>r,e</sup>	196,000	218,000 <sup>e</sup>
Barite <sup>c</sup>		2,300,000	1,700,000	2,100,000	1,900,000	2,000,000
Boron, B <sub>2</sub> O <sub>3</sub> content		383,000	12,700	304,000 <sup>r</sup>	344,000 <sup>r</sup>	344,000 <sup>e</sup>
Bromine		69,600	70,000 <sup>e</sup>	92,900 <sup>r</sup>	97,500 <sup>r</sup>	101,000
Celestite		83,600	83,500	80,000 <sup>e</sup>	80,000 <sup>e</sup>	80,000 <sup>e</sup>
Cement, hydraulic	thousand metric tons	2,340,000	2,377,000	2,337,000	2,130,000	2,020,000
<b>Clay:</b>						
Bentonite	do.	2,475	2,086	2,100 <sup>e</sup>	2,100	2,100 <sup>e</sup>
Kaolin	do.	6,867	6,500	7,240 <sup>r</sup>	7,822	7,800 <sup>e</sup>
<b>Diamond:</b>						
Gem, unspecified	thousand carats	51	21	--	--	--
Synthetic, industrial	do.	15,400,000	15,000,000 <sup>e</sup>	16,235,000	16,295,000	14,900,000 <sup>e</sup>
Diatomite		141,400	273,700	270,000 <sup>r,e</sup>	270,000 <sup>r,e</sup>	140,000 <sup>e</sup>
Dolomite <sup>c</sup>	thousand metric tons	15,000	15,000	15,000	15,000	15,000
Feldspar	do.	2,626	2,386	2,450 <sup>r,e</sup>	3,730 <sup>r</sup>	3,700 <sup>e</sup>
Fluorspar	do.	5,447	5,651	5,900 <sup>e</sup>	6,100 <sup>e</sup>	6,300
Garnet, industrial		310,000	310,000	310,000	310,000	310,000 <sup>e</sup>
<b>Graphite:</b>						
Amorphous, aphanitic		473,600	170,000	179,000	174,000 <sup>r</sup>	181,000
Crystalline flake		711,400	920,000	1,010,000	987,000 <sup>r</sup>	1,030,000
Total		1,190,000	1,090,000	1,190,000	1,160,000 <sup>r</sup>	1,210,000
<b>Gypsum:</b>						
Mine	thousand metric tons	12,640	11,839	12,000 <sup>e</sup>	11,800 <sup>e</sup>	12,000 <sup>e</sup>
Synthetic, industrial byproduct	do.	196,000	196,000 <sup>e</sup>	196,000 <sup>e</sup>	196,000 <sup>e</sup>	193,000 <sup>e</sup>
Kyanite and related materials, andalusite <sup>c</sup>		153,000	348,000	100,000	100,000	100,000
Lime <sup>c</sup>	thousand metric tons	310,000	310,000	310,000	310,000	310,000
<b>Lithium:</b>						
<b>Mine, lithium carbonate equivalent:</b>						
Ore and concentrate		24,500 <sup>e</sup>	30,900 <sup>e</sup>	30,100	53,100	80,300
Brine		33,000 <sup>e</sup>	39,700 <sup>e</sup>	40,500	67,000	106,000
Total		57,500 <sup>e</sup>	70,600 <sup>e</sup>	70,600	120,000	186,000
<b>Refinery:</b>						
<b>Compounds:</b>						
Lithium carbonate		159,000	171,000	298,000	395,000	517,900
Lithium chloride		28,000	28,000 <sup>e</sup>	30,500	20,600 <sup>r</sup>	25,000
Lithium hydroxide		91,000	92,800	190,000	245,700 <sup>r</sup>	319,600
Metal		2,903	3,000 <sup>e</sup>	3,000 <sup>e</sup>	3,000 <sup>e</sup>	3,600
Magnesite	thousand metric tons	10,917	14,044	14,000 <sup>e</sup>	13,000 <sup>e</sup>	13,000 <sup>e</sup>

See footnotes at end of table.

TABLE 1—Continued  
CHINA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>2</sup>	2019	2020	2021	2022	2023	
<b>INDUSTRIAL MINERALS—Continued</b>						
Mica	98,000	80,000	84,000 <sup>e</sup>	80,000 <sup>e</sup>	80,000 <sup>e</sup>	
Nitrogen, N content:						
Compounds:						
Ammonia	thousand metric tons	38,922	42,063	42,657	43,789 <sup>r</sup>	47,725
Urea	do.	24,660	25,900	25,300	26,700 <sup>r</sup>	29,100
Fertilizer	do.	35,560	37,020	37,975 <sup>r</sup>	38,213 <sup>r</sup>	39,663
Perlite		1,472,100	1,422,200	1,500,000 <sup>e</sup>	1,500,000 <sup>e</sup>	1,500,000 <sup>e</sup>
Phosphate:						
Mine, phosphate rock:						
Gross weight	thousand metric tons	93,320	90,000	104,107	104,745	105,300
P <sub>2</sub> O <sub>5</sub> content	do.	28,000	27,000	31,200	31,400	31,600
Fertilizers, P <sub>2</sub> O <sub>5</sub> content	do.	13,080	10,570	11,390	9,840 <sup>r</sup>	9,857
Potash, marketable, K <sub>2</sub> O content	do.	5,900	5,570 <sup>e</sup>	5,190 <sup>e</sup>	5,890 <sup>e</sup>	6,320 <sup>e</sup>
Salt	do.	67,014	58,527	57,065	53,599	52,686
Sand and gravel, industrial	do.	85,240	87,650	95,000 <sup>e</sup>	91,500 <sup>e</sup>	91,230
Sodium, compounds:						
Caustic soda	do.	34,579	36,739	38,913	39,805	41,691
Mirabilite	do.	4,430	4,020	4,130 <sup>e</sup>	4,120 <sup>e</sup>	4,240 <sup>e</sup>
Soda ash, natural and synthetic	do.	29,865	28,124	29,133	29,202	32,828
Sulfur, S content:						
Byproduct:						
Metallurgy <sup>e</sup>	do.	5,700	5,700	5,700	5,700	5,700
Natural gas and petroleum	do.	7,660	7,910	8,490	9,450 <sup>r</sup>	9,500 <sup>e</sup>
Pyrites	do.	5,700	5,240	5,200 <sup>e</sup>	5,200 <sup>e</sup>	5,200 <sup>e</sup>
Total	do.	19,100	18,900	19,400 <sup>e</sup>	20,400 <sup>r,e</sup>	20,400 <sup>e</sup>
Sulfur, compounds, sulfuric acid	do.	91,192	92,382	93,827	95,046	97,709
Talc	do.	1,357	1,100	1,100 <sup>e</sup>	1,400 <sup>r,e</sup>	1,400 <sup>e</sup>
Vermiculite <sup>e</sup>		40,000 <sup>r</sup>	42,000 <sup>r</sup>	47,000 <sup>r</sup>	46,000 <sup>r</sup>	39,000
Wollastonite <sup>e</sup>	thousand metric tons	850 <sup>r</sup>	850 <sup>r</sup>	890 <sup>r</sup>	770 <sup>r</sup>	770
Zeolites		51,800	149,500	150,000 <sup>e</sup>	200,000 <sup>e</sup>	150,000 <sup>e</sup>
<b>MINERAL FUELS AND RELATED MATERIALS</b>						
Coal:						
Anthracite <sup>e</sup>	thousand metric tons	411,000	423,000	448,000	495,000	512,000
Bituminous <sup>e</sup>	do.	2,540,000	2,540,000	2,650,000	2,920,000	3,030,000
Lignite <sup>e</sup>	do.	259,000	269,000	285,000	315,000	326,000
Metallurgical <sup>e</sup>	do.	637,000	653,000	692,000	764,000	792,000
Total	do.	3,850,000	3,890,000	4,080,000	4,490,000	4,660,000
Coke, metallurgical	do.	471,300	471,160	464,458	473,436	492,600
Liquefied natural gas	do.	11,650	13,329	15,251	17,427	20,371
Natural gas:						
All forms	million cubic meters	176,000	190,000	205,000	218,000	230,000
Coalbed gas, only	do.	8,880	9,940	10,500	11,500	13,900
Petroleum:						
Crude, including from oil shale	million 42-gallon barrels	1,400	1,420	1,460	1,500	1,530
Refinery, throughput	do.	4,910	5,080	5,300	5,090	5,530
Uranium, mine, U content <sup>e</sup>		1,890	1,890	1,600	1,700	1,700

<sup>e</sup>Estimated. <sup>r</sup>Revised. do. Ditto. -- Zero.

<sup>1</sup>Table includes data available through January 13, 2025. All data are reported unless otherwise noted. Totals and estimated data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>In addition to the commodities listed, iodine and a variety of construction stone and sand and gravel may have been produced, but available information was inadequate to make reliable estimates of output.

<sup>3</sup>The copper content of solvent extraction output at the mine level is the same as electrowinning output because copper produced in the solvent extraction and electrowinning process was typically reported only at the refinery level.

TABLE 2  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
Aluminum:			
Bauxite	Aluminum Corporation of China (Chinalco)	Mines in multiple Provinces	30,400
Do.	Guangxi Tiandong Jinxin Chemical Co. Ltd.	Guangxi, Tiandong	1,000
Do.	Huayang New Material Technology Group Co. Ltd.	Shanxi, Yangquan, Pingan	2,200
Do.	Luoyang Xiangjiang Wanji Aluminum Industry Co. Ltd.	Henan, Xin'an	2,000
Do.	Yunnan Aluminium Co. Ltd.	Yunnan, Kunming	2,500
Do.	Yunnan Wenshan Aluminum Co. Ltd.	Yunnan, Wenshan	3,000
Alumina	Aluminum Corporation of China (Chinalco)	Plants in multiple Provinces	21,900
Do.	East Hope (Sanmenxia) Aluminium Co. Ltd. (East Hope Group Co. Ltd.)	Henan, Sanmenxia, Mianchi; Shanxi, Jinzhong, Zuoquan	2,200 2,400
Do.	Guangxi Huayin Aluminium Industry Co. Ltd.	Guangxi, Baise, Debao	2,200
Do.	Guangxi Tiandong Jinsheng Chemical Co. Ltd. (Hangzhou Jinjiang Group Co. Ltd., 100%)	Guangxi, Baise, Tiandong	1,000
Do.	Huayang New Material Technology Group Co. Ltd.	Shanxi, Yangquan	1,100
Do.	Jingxi Tianguai Aluminum Co. Ltd. (Tianshan Aluminum Co. Ltd., 100%)	Guangxi, Baise, Jingxi	800
Do.	Longkou Donghai Alumina Co. Ltd. (Shandong Nanshan Group Co. Ltd., 100%)	Shandong, Yantai, Longkou	1,400
Do.	Luoyang Xiangjiang Wanji Aluminium Industry Co. Ltd.	Henan, Luoyang, Xin'an	1,400
Do.	Nanchuan Pioneer Alumina Refinery Co. Ltd. (Bosai Minerals Group Co. Ltd., 100%)	Chongqing, Nanchuan, Wenfeng	800
Do.	Shandong Weiqiao Aluminum and Power Co. Ltd. (China Hongqiao Group Ltd., 100%)	Shandong, Binzhou, Zouping	15,000
Do.	SPIC Shanxi Aluminium Co. Ltd.	Shanxi, Xinzhou, Yuaping	2,900
Do.	Xinfa Aluminium Group Co. Ltd.	Plants in multiple Provinces	15,800
Do.	Yunnan Wenshan Aluminum Co. Ltd. [Aluminum Corporation of China (Chinalco), 100%]	Yunnan, Wenshan	1,400
Metal	Aluminum Corporation of China (Chinalco)	Plants in multiple Provinces	6,900
Do.	China Hongqiao Group Ltd., of which: Shandong Weiqiao Aluminum and Power Co. Ltd.	Shandong, Binzhou, Zouping	6,500
Do.	Yunnan Hongtai New Material Co. Ltd.	Yunnan, Wenshan	1,000
Do.	East Hope Group Co. Ltd., of which: Baotou Rare Earth Aluminum Co. Ltd.	Nei Mongol, Baotou	860
Do.	Baotou Xinhengfeng Energy Co. Ltd.	do.	500
Do.	East Hope (Sanmenxia) Aluminium Co. Ltd.	Xinjiang Uyghur, Urumqi	800
Do.	Gansu Dongxing Aluminum Co. Ltd. [Jiuquan Iron and Steel (Group) Co. Ltd., 100%]	Gansu, Lanzhou, Anning	1,350
Do.	Gansu Zhongrui Aluminum Co. Ltd.	Gansu, Baiyin, Lichuan	100
Do.	Henan Yugang Longquan Aluminium Co. Ltd.	Henan, Luoyang, Yichuan	600
Do.	Henan Zhongfu Industry Co. Ltd. (Vimetco N.V., 100%)	Henan, Zhengzhou, Gongyi	490
Do.	do.	Henan, Anyang, Linzhou	250
Do.	Huayang New Material Technology Group Co. Ltd.	Shanxi, Yangquan	230
Do.	Jiaozuo Wanfang Aluminum Co. Ltd.	Henan, Jiaozuo, Macun	420
Do.	Luoyang Xiangjiang Wanji Aluminum Industry Co. Ltd.	Henan, Luoyang, Xin'an	580
Do.	Ningxia Power Investment Corp.	Ningxia, Wuzhong, Qingtongxia	990
Do.	Shandong Nanshan Aluminum Co. Ltd.	Shandong, Yantai, Longkou	820
Do.	Shandong Xinfa Aluminium Group Co. Ltd.	Plants in multiple Provinces	3,480
Do.	State Power Investment Corp. Ltd.	do.	3,200
Do.	Tianshan Aluminum Co. Ltd.	Xinjiang Uyghur, Shihezi	1,200
Do.	Yidian Holding Group Co. Ltd.	Plants in Henan Province	2,010
Do.	Yunnan Hongtai New Material Co. Ltd.	Yunnan, Wenshan, Yanshan	2,030
Do.	Yunnan Shenhuo Aluminium Co. Ltd.	Yunnan, Wenshan	900
Do.	Yunnan Wenshan Aluminium Co. Ltd.	do.	500

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
<b>Antimony:</b>				
<b>Mine:</b>				
Ore		Hsikwangshan Twinkling Star Co. Ltd. (China Minmetals Corp., 100%)	Hunan, Lengshuijiang	600
Concentrate		Hunan Gold Corp. Ltd.	Hunan, Yuanling	8
Do.		Tibet Huayu Mining Co. Ltd.	Xizang, Lhasa	NA
Metal, including intermediate		Guangxi Huaxi Nonferrous Metals Co. Ltd.	Guangxi, Hechi	40
Do.		Hsikwangshan Twinkling Star Co. Ltd. (China Minmetals Corp., 100%)	Hunan, Lengshuijiang	40
Do.		Hunan Chenzhou Mining Co. Ltd. (Hunan Gold Corp. Ltd.)	Hunan, Yuanling	20
Do.		Hunan Yuteng Nonferrous Metals Co. Ltd.	Hunan, Chenzhou	5
Do.		Jiyuan Wangyang Smelting (Group) Co. Ltd.	Henan, Jiaozuo	10
Arsenic		Chenzhou Chenxi Metal Co. Ltd.	Hunan, Chenzhou	6
Do.		China Arsenic Industries Co. Ltd.	Guangdong, Zhuhai	NA
Do.		Jianghua Jinhui Arsenic Co. Ltd.	Hunan, Chenzhou	3
Do.		Shandong Humon Smelting Co. Ltd.	Shandong, Yantai	NA
Do.		Yangtao Chemical Industry Co. Ltd.	Hunan, Chenzhou	3
Asbestos		China National Nonmetallic Industry Corp.	Nei Mongol, Baotou; Shanxi, Laiyuan and Luliang	130
Barite		9X Minerals LLC	Guizhou, Dejiang	60
Do.		China National Nonmetallic Industry Corp.	Guizhou, Xiangshou	NA
Do.		Guizhou Saboman Import & Export Co. Ltd.	Guizhou, Guiding	1,000
<b>Beryllium:</b>				
Metal	metric tons	Fuyun Hengsheng Beryllium Industry Co. Ltd. (Xinjiang Xinxin Mining Industry Co. Ltd.)	Xinjiang Uyghur, Fuyun	2
Do.	do.	Hunan Shuikoushan Nonferrous Metals Group Co. Ltd.	Hunan, Hengyang, Changning	5
Oxide	do.	Fuyun Hengsheng Beryllium Industry Co. Ltd. (Xinjiang Xinxin Mining Industry Co. Ltd.)	Xinjiang Uyghur, Fuyun	100
Do.	do.	Hunan Shuikoushan Nonferrous Metals Group Co. Ltd.	Hunan, Hengyang, Changning	150
Do.	do.	Northwest Rare Metal Materials Research Institute Ningxia Co. Ltd. [CNMC (Ningxia) Oriental Group Co. Ltd.]	Ningxia, Shizuishan, Dawukou	NA
Bismuth, metal	do.	Beijing GeoEnviron Engineering & Technology Inc. (BGE)	Beijing	3,600
Do.	do.	Chinalco Yunnan Copper Group Co. Ltd.	Nei Mongol, Chifeng	300
Do.	do.	Guangzhou Smelter Co. Ltd. (China Great Wall Aluminium Industry Co. Ltd.)	Guangdong, Guangzhou	300
Do.	do.	Hunan Jinwang Bismuth Industry Co. Ltd.	Hunan, Chenzhou	8,000
Do.	do.	Jiyuan Wangyang smelting (Group) Co. Ltd.	Henan, Jiaozuo	200
Do.	do.	Shizhuyuan Nonferrous Metals Co. Ltd.	Hunan, Shizhuyuan	1,200
Do.	do.	Yunnan Chihong Zinc and Germanium Co. Ltd.	Yunnan, Qujing	300
Do.	do.	Zhuzhou Smelter Group Co. Ltd.	Hunan, Zhuzhou	350
Boron, ore		Liaoning Dashiqiao Maolong Boron Industry Co. Ltd.	Liaoning, Dashiqiao	70
Do.		Liaoning Jinma (Kuandian) Boron Mine Co. Ltd.	Liaoning, Dandong	40
Do.		Qinghai Zhongtian Boron-Lithium Mining Co. Ltd.	Qinghai, Haixi	300
Cadmium, refinery, primary	metric tons	Yunnan Chihong Zinc and Germanium Co. Ltd.	Yunnan, Qujing	1,000
Do.	do.	Zhuzhou smelter (Zhuye Torch Metals Co. Ltd.)	Hunan, Zhuzhou	1,000
Cement		Anhui Conch Cement Co. Ltd.	Anhui, Wuhu	388,000
Do.		Asia Cement (China) Holding Corp.	Jiangxi, Ruichang	37,200
Do.		BBMG Corp.	Beijing	180,000
Do.		China Building Materials Group Co. Ltd.	do.	500,000
Do.		China Resources Cement Holdings Ltd.	Southern China	90,100
Do.		China Shanshui Cement Group Ltd. (Sunnys Group)	Shandong, Jinan, Changqing	103,000
Do.		Gezhouba Group Cement Co. Ltd. (GGCC)	Hubei, Wuhan	17,500

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>	
Cement—Continued	Henan Tongli Cement Co. Ltd.	Henan, Zhengzhou	12,000	
Do.	Hongshi Holding Group Co. Ltd.	Zhejiang, Jinhua	100,000	
Do.	Huaxin Cement Co. Ltd. (Holcim Group, 41.8%, and others, 58.2%)	Hubei, Huangshi	118,000	
Do.	Jiangsu Jinfeng Cement Group Co. Ltd.	Jiangsu, Changzhou, Liyang	31,000	
Do.	Jiangxi Wannianqing Cement Co. Ltd.	Jiangxi, Shangra, Wannin	26,000	
Do.	Jilin Yatai Group Co. Ltd.	Jilin, Changchun	20,000	
Do.	Shandong Shanshui Cement Group Co. Ltd.	Shandong, Jinan	100,000	
Do.	Sichuan Esheng Cement Co. Ltd.	Sichuan, Emeishan, Jiuli	25,000	
Do.	Taiwan Cement Corp.	Zhejiang, Hangzhou	67,500	
Do.	Tangshan Jidong Cement Co. Ltd.	Hebei, Tangshan	176,000	
Do.	Tianrui Group Cement Co. Ltd.	Henan, Ruzhou	56,400	
Do.	Xinjiang Qingsong Building Material Chemical Co. Ltd.	Xinjiang Uyghur, Aksu	16,000	
Do.	Yaobai Special Cement Group Co. Ltd.	Shaanxi, Xi'an	20,000	
Do.	Yunnan Cement Building Materials Group Co. Ltd.	Yunnan, Kunming	16,000	
Do.	West China Cement Ltd.	Shaanxi, Xi'an, Chang'an	19,600	
Chromium, chromite	Tibet Mineral Development Co. Ltd. (China Baowu Steel Group Co. Ltd., 100%)	Xizang, Qusong	130	
Clay, kaolin	Longyan Kaolin Co. Ltd.	Fujian, Longyan	600	
Do.	Yankuang Beihai Kaolin Co. Ltd.	Guangxi, Beihai	300	
Coal	China Coal Energy Co. Ltd. (China National Coal Group)	Mines in Jiangsu, Nei Mongol, Shanxi, and other Provinces	115,000	
Do.	Datong Coal Mine Group Co. Ltd.	Shanxi, Datong	180,000	
Do.	Henan Energy and Chemical Industry Group Co. Ltd.	Henan, Zhengzhou	80,700	
Do.	Jinneng Group Co. Ltd.	Shanxi, Datong	92,200	
Do.	Jizhong Energy Group Co. Ltd.	Hebei, Handan	75,400	
Do.	Kailuan (Group) Co. Ltd.	Hebei, Tangshan	24,800	
Do.	National Energy Investment Group Co. Ltd.	Mines in Nei Mongol, Xinjiang Uyghur, and other Provinces	665,000	
Do.	Shaanxi Coal and Chemical Industry Group Co. Ltd.	Shaanxi, Chengcheng	178,000	
Do.	Shandong Energy Group Co. Ltd.	Shandong, Jinan	340,000	
Do.	Shanxi Coking Coal Energy Group Co. Ltd.	Shanxi, Taiyuan	105,000	
Do.	Shanxi Lu'an Mining Group Co. Ltd.	Shanxi, Changzhi	83,500	
Do.	Yangquan Coal Industry Group Co. Ltd.	Shanxi, Yangquan	83,800	
Do.	Yanzhou Coal Mining Co. Ltd.	Shandong, Jining	166,000	
Cobalt, Co content:				
Mine	metric tons	Hainan Mining Co. Ltd.	Hainan, Changjiang	110
Do.	do.	Jinchuan Group Co. Ltd.	Gansu, Jinchang, Jinchuan	6,000
Do.	do.	Shandong Jinling Mining Co. Ltd.	Shandong, Yantai, Zhaoyuan	110
Do.	do.	Xinjiang Xinxin Mining Industry Co. Ltd.	Xinjiang Uyghur, Fuyun	100
Do.	do.	Yuanjiang Nickel Industry Co. Ltd. (Yunnan Tin Industry Group Co. Ltd.)	Yunnan, Yuxi, Yuanjiang	80
Refined:				
Primary	metric tons	Anhui Hanrui New Materials Co. Ltd. (Nanjing Hanrui Cobalt Co. Ltd., 100%)	Anhui, Chuzhou, Langya	3,000
Do.	do.	CNGR Advanced Materials Co. Ltd.	Guizhou, Tongren, Dalong	17,600
Do.	do.	Dalian Aote Cobalt Nickel New Materials Co. Ltd.	Liaoning, Dalian, Puwan	1,600
Do.	do.	Ganzhou Tengyuan Cobalt New Material Co. Ltd.	Jiangxi, Ganzhou, Ganxian	20,000
Do.	do.	Ganzhou YiHao Umicore Industries Co. Ltd.	Jiangxi, Ganzhou, Zhanggong, Xihe	6,000
Do.	do.	Greatpower Nickel and Cobalt Materials Co. Ltd. (Greatpower Jinchuan Advanced Battery Materials Corp.)	Zhejiang, Shaoxing, Shangyu	7,000
Do.	do.	Guangdong Jiana Energy Technology Co. Ltd.	Guangdong, Qingyuan, Yingde	10,000
Do.	do.	Hefei Rongjie Metal Technology Co. Ltd.	Anhui, Hefei	4,500
Do.	do.	Hunan Yacheng New Materials Co. Ltd.	Hunan, Changsha, Ningxiang	2,800
Do.	do.	Jiangsu Huayou Energy Technology Co. Ltd.	Jiangsu, Nanjing, Jiangning	38,000

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
Cobalt, Co content:—Continued				
Refined:—Continued				
Primary—Continued	metric tons	Jiangsu Jiangwu Cobalt Industry Co. Ltd. [Jiangxi Tungsten Group (JXTC)]	Jiangsu, Ganzhou	2,000
Do.	do.	Jiangsu Xiongfeng Technology Co. Ltd.	Jiangsu, Nantong, Haimen	1,200
Do.	do.	Lanzhou Jinchuan Advanced Materials Technology Co. Ltd. (Jinchuan Group Co. Ltd.)	Gansu, Lanzhou, Heping	12,000
Do.	do.	Nantong Xinwei Nickel and Cobalt Hightech Development Co. Ltd.	Jiangsu, Nantong, Haimen	2,000
Do.	do.	Quzhou Huayou Cobalt New Material Co. Ltd.	Zhejiang, Quzhou, Kecheng	39,000
Do.	do.	Sichuan Wanbang Shenghui New Energy Technology Co. Ltd.	Sichuan, Meishan, Shishu	1,300
Do.	do.	Tianjin Maolian Technology Co. Ltd. (Beijing Hezong Science & Technology Co. Ltd., 100%)	Tianjin, Binhai, Nangang	4,800
Do.	do.	Yantai Kaishi Industrial Co. Ltd.	Shandong, Yantai, Zhifu	4,000
Do.	do.	Zhejiang Huayou Cobalt Co. Ltd.	Zhejiang, Tongxiang	39,000
Do.	do.	Zhongwei New Materials Co. Ltd.	Hunan, Changsha, Ningxiang	6,000
Do.	do.	Zhuhai Kelixin Metal Material Co. Ltd. (Chengtun Mining Group Co. Ltd., 100%)	Guangdong, Zhuhai, Jinwan	4,000
Secondary	do.	Chizhou Xian New material Technology Co. Ltd.	Anhui, Chizhou, Guichi	600
Do.	do.	CNGR Advanced Materials Co. Ltd.	Guizhou, Tongren	17,000
Do.	do.	GEM (Jiangsu) Cobalt Industry Co. Ltd. (GEM Co. Ltd.)	Jiangsu, Taizhou, Taixing	35,000
Do.	do.	GEM (Wuxi) Energy Materials Co. Ltd. (GEM Co. Ltd., 100%)	Jiangsu, Wuxi, Xinwu	15,000
Do.	do.	Hunan Jinyuan New Material Co. Ltd.	Hunan, Yiyang, Anhua	4,000
Do.	do.	Zhejiang New Era Zhongneng Recycling Technology Co. Ltd.	Zhejiang, Shaoxing, Shangyu	10,000
Coke, metallurgical				
		China Risun Coal Chemicals Group Ltd.	Beijing, Fengtai	5,680
Do.		Hebei Kailuan Energy Chemical Co. Ltd.	Hebei, Tangshan	4,270
Do.		Heilongjiang Baotailong New Material Co. Ltd.	Heilongjiang, Qitaihe	1,580
Do.		Shaanxi Heimao Coking Co. Ltd.	Shaanxi, Hancheng	3,240
Do.		Shandong Jinneng Technology Co. Ltd.	Shandong, Qihe	2,300
Do.		Shanxi Antai Group Co. Ltd.	Shanxi, Jinzhong	1,800
Do.		Shanxi Coking Co. Ltd.	Shanxi, Taiyuan	3,600
Do.		Shanxi Meijin Energy Co. Ltd.	do.	5,040
Do.		Yunnan Coal Energy Co. Ltd.	Yunnan, Kunming	1,980
Copper:				
Mine, Cu content		Anhui Tongling Nonferrous Metals Group Co. Ltd.	Anhui, Anqing	47
Do.		Baiyin Nonferrous Group Co. Ltd.	Gansu, Baiyin	30
Do.		China Daye Non-Ferrous Metals Mining Ltd.	Hubei, Huangshi	26
Do.		China Gold International Resources Corp. Ltd.	Central Xizang	87
Do.		China National Gold Group Co. Ltd.	Xinjiang Uyghur, Wunuketushan	61
Do.		Chinalco Yunnan Copper Group Co. Ltd.	Yunnan, Kunming	113
Do.		Gansu Yangba Copper Industry Co. Ltd.	Gansu, Yangba	20
Do.		Heilongjiang Liujiu Mining Co. Ltd.	Heilongjiang, Longjiang	22
Do.		Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Dexing	190
Do.		Jinchuan Group Co. Ltd.	Gansu, Jinchang	100
Do.		Shanxi Zhongtiaoshan Nonferrous Metal Group Co. Ltd.	Shanxi, Zhongtiaoshan	30
Do.		Tibet Julong Copper Co. Ltd. (Zijin Mining Group Co. Ltd., 50.1%)	Xizang, Julong	150
Do.		Tongling Nonferrous Metals Group Holding Co. Ltd.	Anhui, Tongling	52
Do.		Western Mining Co. Ltd., 58%, and Zijin Copper Co. Ltd., 22%	Xizang, Chamdo	150
Do.		Xinjiang Ashele Copper Co. Ltd. (Zijin Mining Group Co. Ltd.)	Xinjiang Uyghur, Habahe	50
Do.		Yunnan Copper Co. Ltd., 51%, and Shanghai Oriental Pearl Group, 49%	Xinjiang Uyghur, Hami, Yizhou	16
Do.		Yunnan Diqing Nonferrous Metals Co. Ltd.	Yunnan, Diqing	98
Do.		Zijin Mining Group Co. Ltd.	Heilongjiang, Heihe	110
Do.		do.	Fujian, Longyan	86

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>e</sup>
Copper:—Continued				
Refined		Baiyin Nonferrous Group Co. Ltd.	Gansu, Baiyin	400
Do.		Chifeng Fubang Copper Industry Co. Ltd.	Nei Mongol, Chifeng, Linxi	100
Do.		Chifeng Jinfeng Copper Co. Ltd.	Yunnan, Kunming, Wuhua	400
Do.		Chifeng Yunnan Copper Nonferrous Metals Co. Ltd.	Nei Mongol, Chifeng, Harqin	400
Do.		Chinalco Luoyang Copper Processing Co. Ltd.	Henan, Luoyang, Jianxi	400
Do.		Daye Nonferrous Metals Co. Ltd.	Hubei, Huangshi, Xialu	600
Do.		Guangxi Nanguo Copper Industry Co. Ltd.	Guangxi, Chongzuo, Fusui	700
Do.		Guangxi Non-Ferrous Metal Group	Guangxi, Wuzhou, Longxu	150
Do.		Heilongjiang Zijin Copper Smelter Co. Ltd.	Heilongjiang, Qiqihar, Hulan-Ergi	170
Do.		Henan Yuguang Gold Lead Co. Ltd.	Henan, Jiyuan, Kejing	100
Do.		Huilu Kumpeng Co. Ltd.	Sichuan, Huili	100
Do.		Huludao Dongfang Copper Industry Co. Ltd. (Huludao Nonferrous Metals Group Co. Ltd.)	Liaoning, Huludao, Longgang	100
Do.		Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Yingtan, Guixi	1,800
Do.		Jilin Zijin Copper Smelter Co. Ltd. (Zijin Mining Group Co. Ltd.)	Jilin, Hunchun	140
Do.		Jinchuan Group Co. Ltd.	Gansu, Jinchang, Jinchuan	600
Do.		do.	Guangxi, Fangchenggang	400
Do.		Linyi Jinsheng Non-Ferrous Metal Industry Co. Ltd.	Shandong, Linyi	200
Do.		Ningbo Jintian Copper Co. Ltd.	Zhejiang, Ningbo, Jiangbei	150
Do.		Shandong Dongying Fangyuan Nonferrous Metals Co. Ltd.	Shandong, Dongying	700
Do.		Tianjin Datong Copper Co. Ltd.	Tianjin	200
Do.		Tongling Nonferrous Metals Group Holding Co. Ltd.	Anhui, Tongling, Tongguang	1,600
Do.		do.	Anhui, Tongling, Yi'an	200
Do.		Yanggu Xiangguang Copper Co. Ltd. (Shandong Fengxiang Group Co. Ltd.)	Shandong, Liaocheng, Yanggu	500
Do.		Yunnan Copper Co. Ltd. (Chialco)	Yunnan, Honghe, Gejiu	500
Do.		do.	Yunnan, Kunming, Wuhua	500
Do.		Zhangjiagang United Copper Co. (Tongling Nonferrous Metals Group Holding Co. Ltd.)	Jiangsu, Zhangjiagang	300
Do.		Zhongjin Gold Corp. Ltd. (China National Gold Group Co. Ltd.)	Henan, Sanmenxia, Hubin	350
Do.		Zhongtiaoshan Nonferrous Metals Group Co. Ltd.	Shanxi, Yuncheng, Yuanqu	185
Do.		Zijin Copper Co. Ltd. (Zijin Mining Group Co. Ltd.)	Fujian, Shanghang	420
Do.		do.	Jilin, Yanbian, Hunchun	150
Do.		Zijin Mining Group Co. Ltd.	Xinjiang Uyghur, Changji, Fukang	100
Diamond, synthetic	million carats	Henan Huanghe Whirlwind Co. Ltd.	Henan, Zhengzhou	2,520
Do.	do.	Zhengzhou Sino-Crystal Diamond Co. Ltd.	Henan, Zhengzhou, Zhongyuan	2,500
Do.	do.	Zhongnan Diamond Co. Ltd.	Henan, Nanyang	6,570
Ferroalloys:				
Ferrochromium		Anyang Hongyan Ferroalloys Co. Ltd.	Henan, Anyang, Long'an	100
Do.		Fengzhen Xintai New Material Technology Co. Ltd. (Xinganglian Metallurgical Co. Ltd.)	Nei Mongol, Ulanqab, Fengzhen	1,300
Do.		Hebei Taiheng Special Steel Co. Ltd.	Hebei, Cangzhou	430
Do.		Huade County Zhongtai Ferronickel Co. Ltd.	Nei Mongol, Huade	600
Do.		Inner Mongolia Kehan Metallurgy Co. Ltd.	Nei Mongol, Ulanqab, Fengzhen	120
Do.		Inner Mongolia Ulanqab Xufeng Xinchuang Industrial Co. Ltd. (Henan Xibao Metallurgical Materials Group Co. Ltd.)	Nei Mongol, Ulanqab	550
Do.		Inner Mongolia Xintaiyuan New Material Co. Ltd.	Nei Mongol, Ulanqab, Fengzhen	500
Do.		Jiangxian Mingmaite Co. Ltd.	Shanxi, Yuncheng, Jiangxian	170
Do.		Mintal Group Cleantech Development Co. Ltd.	Nei Mongol, Baotou	650
Do.		Ningxia Tianjing Manganese Industry Group Co. Ltd.	Ningxia, Zhongwei, Zhongning	300
Do.		Qinghai Tianyi Metallurgy Co. Ltd.	Qinghai, Xining, Huangzhong	290
Do.		Shanxi Jiang County Minmetal Co. Ltd.	Shanxi, Yuncheng, Jiangxian	350

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
<b>Ferroalloys:—Continued</b>			
Ferrochromium—Continued	Shanxi Taigang Wanbang Furnace Charge Co. Ltd.	Shanxi, Jinzhong, Yuci	300
Do.	Sichuan Ehui Group	Nei Mongol, Fengzhen	170
Do.	Sichuan Leshan Xinhe Electric Power Comprehensive Development Co. Ltd.	Sichuan, Leshan, Jinkouhe	150
Do.	Sichuan Mingda Ebian Alloy Co. Ltd.	Sichuan, Leshan, Ebian	110
Do.	Sichuan Yingjing Yiming Special Alloy Co. Ltd.	Sichuan, Ya'an, Yingjing	100
Do.	Sichuan Yuanda Juhua Industrial Co. Ltd.	Sichuan, Chengdu	310
Do.	Ulanqab Xiongwei Guangda New Material Co. Ltd.	Nei Mongol, Ulanqab, Huade	200
Do.	Yihui Group Co. Ltd.	Sichuan, Chengdu	220
Ferromanganese	CITIC Dameng Mining Co. Ltd.	Guangxi, Chongzuo, Daxin	300
Do.	CITIC Jinzhou Metal Co. Ltd. (CITIC United Asia Investments Ltd.)	Liaoning, Jinzhou, Taihe	150
Do.	Guangxi Ferroalloy Co. Ltd.	Guangxi, Laibin	60
Do.	Guangxi Guikang New Materials Co. Ltd.	Guangxi, Guilin, Lingchuan	120
Do.	Guangxi Qinzhou Hengxing Manganese Industry Co. Ltd.	Guangxi, Qinzhou	70
Do.	Henan Xibao Metallurgical Materials Group Co. Ltd.	Henan, Nanyang, Xixia	150
Do.	Inner Mongolia Chayouqianqi Mengfa Ferroalloy Co. Ltd.	Nei Mongol, Ulanqab	310
Do.	Inner Mongolia Erdos Resources Co. Ltd.	Nei Mongol, Erdos, Dongsheng	25
Do.	Jiaocheng Yiwang Ferroalloy Co. Ltd.	Shanxi, Jiaocheng	220
Do.	Minmetal Hunan Ferroalloy Co. Ltd.	Hunan, Xiangxiang	110
Do.	Ningxia Shengyan Industrial Group Fuhua Metallurgical Co. Ltd.	Ningxia, Yinchuan	240
Do.	Qinzhou City Jincheng Manganese Industry Co. Ltd.	Guangxi, Qinzhou	50
Do.	Shandong Shengrong New Material Co. Ltd.	Shandong, Heze	80
Do.	Shanxi Dongfang Resources Development Co. Ltd.	Shanxi, Yuncheng, Jishan	600
Do.	Sichuan Chuantou Emei Ferroalloy (Group) Co. Ltd.	Sichuan, Leshan, Emeishan	240
Do.	Ulanqab Xiongwei Guangda New Materials Co. Ltd.	Nei Mongol, Ulanqab	120
Do.	Ulanqab Xufeng Xinchuang Industrial Co. Ltd. (Henan Xibao Metallurgical Materials Group Co. Ltd.)	Nei Mongol, Ulanqab	240
Do.	Yunnan Wenshan Dounan Manganese Industry Co. Ltd.	Yunnan, Yanshan	210
Ferromolybdenum	Beipiao Wanhong Molybdenum Industry Co. Ltd.	Liaoning, Chaoyang, Beipiao	15
Do.	Chaoyang Jinda Molybdenum Industry Co. Ltd.	Liaoning, Chaoyang	20
Do.	China Molybdenum Co. Ltd.	Henan, Luoyang, Luanchuan	25
Do.	Deyang Yuanjian Ferroalloy Co. Ltd.	Sichuan, Deyang	19
Do.	Huludao Wanfeng Metal Co. Ltd.	do.	12
Do.	Jinduicheng Molybdenum Industry Co. Ltd.	Shaanxi, Weinan, Huazhou	32
Do.	Jinzhou Xinghe Metal Co. Ltd.	Liaoning, Jinzhou	9
Do.	Liaoning Xinhualong Dayou Molybdenum Industry Co. Ltd.	Liaoning, Jinzhou, Linghai	15
Do.	Liaoning Xintai Molybdenum Industry Co. Ltd.	Liaoning, Jinzhou, Yixian	20
Do.	Linghai Hengtai Molybdenum Industry Co. Ltd.	Liaoning, Linghai, Shuangyang	15
Do.	Luoyang Bohua Industrial Co. Ltd.	Henan, Luoyang	6
Do.	Luoyang Duohua Molybdenum Industry Co. Ltd.	do.	5
Ferronickel, nickel pig iron	Baosteel Desheng Stainless Steel Co. Ltd. (Baowu Group)	Fujian, Fuzhou, Luoyuan	1,200
Do.	Fujian Dingxin Nickel Industry Co. Ltd.	Fujian, Fu'an, Wuwan	1,120
Do.	Guangdong Century Tsingshan Nickel Industry Co. Ltd.	Guangdong, Yangjiang	210
Do.	Guangdong Guangqing Metal Technology Co. Ltd.	do.	2,300
Do.	Guangxi Beigang New Material Co. Ltd. (Guangxi Chengde Group Co. Ltd.)	Guangxi, Beihai, Tieshangang	1,500
Do.	Huaxiao Stainless Steel Corporation Ltd., of which: Fujian Dingxin Nickel Industry Co. Ltd.	Fujian, Fu'an	1,120
Do.	Henan Jinhui Stainless Steel Co. Ltd.	Henan, Xuchang, Changge	570
Do.	Inner Mongolia Heyi Nickel-Chrome Composite Co. Ltd.	Nei Mongol, Tongliao, Naiman	210
Do.	Inner Mongolia Huade Wuzhou Steel Co. Ltd.	Nei Mongol, Ulanqab, Huade	120

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
Ferroalloys:—Continued			
Ferronickel, nickel pig iron—Continued	Inner Mongolia Shuofeng Industry Co. Ltd.	Nei Mongol, Ulanqab, Fengzhen	120
Do.	Jiangsu Delong Nickel Industry Co. Ltd.	Jiangsu, Yangcheng, Xiangshui	1,050
Do.	Jiangsu Huiran Industrial Co. Ltd. (Zhejiang Liqin Investment Co. Ltd.)	Jiangsu, Suqian	180
Do.	Liaoning Guorun Metal Group Co. Ltd.	Liaoning, Yingkou, Shagang	140
Do.	Liaoning Shengyun Industry Development Co. Ltd.	Liaoning, Yingkou, Dashiqiao	150
Do.	Liaoning Treasure Platinum Technology Co. Ltd.	Liaoning, Liaoyang, Liuerbao	140
Do.	Shandong Xinhai Technology Co. Ltd.	Shandong, Linyi	1,900
Do.	Suqian Xiangxiang Industrial Co. Ltd.	Jiangsu, Suqian	120
Do.	Yangjiang Yichuan Metal Science and Technology Co. Ltd.	Guangdong, Yangjiang, Gangkou	150
Do.	Yangzhou Yichuan Nickel Industry Co. Ltd.	Jiangsu, Yangzhou, Lidian	210
Ferrosilicon	Blue Star Silicon Materials Co. Ltd. [China National Chemical Corp. Ltd. (ChemChina), 79.5%]	Gansu, Lanzhou, Zhongbao	NA
Do.	Gansu Hongyu Ferroalloy Co. Ltd.	Gansu, Baiyin, Jingtai	100
Do.	Inner Mongolia Erdos Resources Co. Ltd.	Nei Mongol, Erdos, Otog	1,600
Do.	Inner Mongolia Junzheng Energy & Chemical Co. Ltd.	Nei Mongol, Wuhai	300
Do.	Ningxia Darshan Silicon Industry Co. Ltd.	Ningxia, Wuzhong	36
Do.	Ningxia Rongsheng Ferroalloy Group Co. Ltd.	Ningxia, Rongsheng	90
Do.	Ningxia Sanyuan Zhongtai Metallurgical Co. Ltd.	Ningxia, Zhongwei, Shapotou	214
Do.	Ningxia Tianjing Manganese Industry Group Co. Ltd.	Ningxia, Zhongwei, Zhongning	440
Do.	Ningxia Xinhua Industrial Group Co. Ltd.	Ningxia, Zhongwei	110
Do.	Ningxia Zhongwei Maoye Metallurgical Co. Ltd.	Ningxia, Zhongwei, Shapotou	113
Do.	Ningxia Zhongwei Yinhe Smelting Co. Ltd.	do.	117
Do.	Qinghai Belden High Purity Materials Development Co. Ltd.	Qinghai, Xining	150
Do.	Qinghai Huadian Ferroalloy Co. Ltd.	Qinghai, Xining, Huangyuan	310
Do.	Qinghai Kaiyuan Metal Materials Co. Ltd.	Qinghai, Xining	96
Do.	Qinghai Tongli Ferroalloys Co. Ltd.	Qinghai, Haidong, Lebu	100
Do.	Qinghai Wutong (Group) Industry Co. Ltd.	Qinghai, Xining, Chengbei	300
Do.	Qinzhou City Jincheng Manganese Industry Co. Ltd.	Guangxi, Qinzhou	50
Do.	Sichuan Chuantou Emei Ferroalloy (Group) Co. Ltd.	Sichuan, Emeishan	100
Do.	Sichuan Leshan Xinhe Electric Power Comprehensive Development Co. Ltd.	Sichuan, Leshan, Jinhe	65
Do.	Tengda Xibei Ferroalloy Co. Ltd.	Gansu, Lanzhou, Yongdeng	250
Do.	Tengzhou Delifu Casting Materials Co. Ltd. (Feng Erda Group)	Ningxia, Shizuishan and Nei Mongol, Baotou	NA
Ferrotitanium	Hebei Jindu Ferroalloy Group Co. Ltd.	Hebei, Xingtai, Qinghe	3
Do.	Jinzhou Hengli Ferroalloy Co. Ltd.	Liaoning, Jinzhou, Guta	4
Do.	Jinzhou Hengtai Special Alloy Co. Ltd.	Liaoning, Jinzhou, Taihe	6
Ferrotungsten	Anhua Tiangong Jinyuan Alloy Materials Co. Ltd.	Hunan, Yiyang, Anhua	NA
Do.	Ganzhou Jiangwu Ferrotungsten Co. Ltd. [Jiangxi Tungsten Industry Group Co. Ltd. (JWYX)]	Jiangxi, Ganzhou, Ganxian	6
Do.	Hunan Chuangda Vanadium Tungsten Co. Ltd. (HCVT)	Hunan, Hengyang, Hengdong	14
Do.	Shinwon Tungsten (Fujian Shanghang) Co. Ltd.	Fujian, Longyan	5
Ferrovandium	Chaoyang Boyuan Metal Industry Co. Ltd.	Liaoning, Chaoyang	3
Do.	HBIS Chengde Iron & Steel Co. (HBIS Chengsteel)	Hebei, Chengde	6
Do.	Huludao Mingxin Ferroalloy Co. Ltd.	Liaoning, Huludao	1
Do.	Jiangxi Yonsheng Mining and Metallurgy Co. Ltd.	Jiangxi, Xinyu	2
Do.	Jinzhou Guangda Ferroalloy Co. Ltd.	Liaoning, Jinzhou, Guta	3
Do.	Jinzhou Hongding Metal Co. Ltd.	Liaoning, Jinzhou, Yixian	1
Do.	Jinzhou Xinrong Vanadium Industry Co. Ltd.	Liaoning, Jinzhou	2
Do.	Jinzhou Xinwanbo Metal Materials Co. Ltd.	do.	4
Do.	Liaoning Huatai Metal Industry Co. Ltd.	Liaoning, Chaoyang	2
Do.	Pangang Group Vanadium & Titanium Resources Co. Ltd.	Sichuan, Panzhihua	18

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
<b>Ferroalloys:—Continued</b>				
Ferrovandium—Continued		Pangang Group Xichang Steel & Vanadium Co. Ltd.	Sichuan, Xichang, Jingjiu	18
Do.		Yingkou Shengdong Refractories Co. Ltd.	Liaoning, Yingkou	2
Silicomanganese		Chahar Right Front Banner Tengfei FerroAlloy Co. Ltd.	Nei Mongol, Ulanqab	230
Do.		Chongqing Dalang Metallurgical New Materials Co. Ltd. (Bosai Group, 78%, and Fuling Nengyuan Shiye Group, 22%)	Chongqing, Fuling, Qingxi	550
Do.		CITIC Dameng Mining Co. Ltd.	Guangxi, Chongzuo, Daxin	300
Do.		CITIC Jinzhou Metal Co. Ltd. (CITIC United Asia Investments Ltd.)	Liaoning, Jinzhou, Taihe	100
Do.		Dushan Hengxing Ferroalloy Co. Ltd.	Guizhou, Qiannan, Dushan	120
Do.		Guangxi Baise Bisheng Mining. Co. Ltd.	Guangxi, Baise	200
Do.		Guangxi Ferroalloy Co. Ltd.	Guangxi, Laibin	300
Do.		Guangxi Jimeng Manganese Industry Co. Ltd., of which: Cengong Jimeng Manganese Industry Co. Ltd.	Guizhou, Cengong	130
Do.		Dushan Jimeng Manganese Industry Co. Ltd.	Guizhou, Dushan, Mawei	500
Do.		Guangxi Yizhou Jimeng Manganese Industry Co. Ltd.	Guangxi, Hechi, Yizhou	135
Do.		Qinzhou City Jincheng Manganese Industry Co. Ltd.	Guangxi, Qinzhou	150
Do.		Guangxi Tiandong Shengjin New Materials Co. Ltd.	Guangxi, Tiandong	340
Do.		Guizhou Jinyuan Suiyang Industry Co. Ltd.	Guizhou, Zunyi	280
Do.		Huade Tiancheng Ferroalloys Co. Ltd.	Nei Mongol, Ulanqab, Huade	200
Do.		Inner Mongolia Erdos Resources Co. Ltd.	Nei Mongol, Ordos, Dongsheng	500
Do.		Inner Mongolia Puyuan Ferroalloys Co. Ltd.	Nei Mongol, Ulanqab, Fengzhen	255
Do.		Inner Mongolia Ruihao New Material Technology Co. Ltd.	Nei Mongol, Xilingol, Zhurihe	300
Do.		Inner Mongolia Ulanqab Xufeng Xinchuang Industrial Co. Ltd.	Sichuan, Leshan, Emeishan	240
Do.		Inner Mongolia Xinchuang Metallurgical Co. Ltd.	do.	550
Do.		Jilin Ferroalloy Co. Ltd.	Jilin, Jilin, Changyi	350
Do.		Minmetal Hunan Ferroalloy Co. Ltd.	Nei Mongol	180
Do.		Ningxia Jiacheng Metallurgy & Chemical Co. Ltd.	Ningxia, Yinchuan	120
Do.		Ningxia Jiyuan Metallurgical Group Co. Ltd.	Ningxia, Shizuishan	380
Do.		Ningxia Pingluo Wanshun Metal and Chemical Co. Ltd.	Ningxia, Shizuishan, Pingluo	300
Do.		Ningxia Shengyan Industrial Group Fuhua Metallurgical Co. Ltd.	Ningxia, Yinchuan	650
Do.		Shizuishan Huiyi Metallurgical Industry and Trade Co. Ltd.	Ningxia, Shizuishan	350
Do.		Ulanqab Xiongwei Guangda New Materials Co. Ltd.	Nei Mongol, Ulanqab	120
Do.		Zhuhai SEZ Fangyuan Inc.	6 plants in Guangxi, Jingxi	130
Fluorspar		Inner Mongolia Huasheng Fluorite Mining Co. Ltd.	Nei Mongol, Ulanqab	300
Do.		Jinshi Resources Group Co. Ltd.	Zhejiang, Hangzhou	500
Do.		Zhejiang Wuyi Shenlong Flotation Co. Ltd.	Zhejiang, Wuyi	300
Gallium, metal	metric tons	Aluminum Corporation of China (Chinalco), of which: Chalco Zunyi Aluminum Co. Ltd.	Guizhou, Zunyi	150
Do.	do.	Pingguo Aluminum Co. Ltd.	Guangxi, Pingguo	40
Do.	do.	East Hope Group Co. Ltd., of which: East Hope Jinzhong Aluminum Co. Ltd.	Shanxi, Lingshi	60
Do.	do.	East Hope Mianchi Gallium Industry Co. Ltd.	Henan, Sanmenxia	80
Do.	do.	Shandong Aluminium Industry Co. Ltd.	Shandong, Zibo	20
Do.	do.	Shanxi Zhaofeng Aluminum & Power Co. Ltd.	Shanxi, Yangquan	25
Do.	do.	Xiaoyi Xing'an Gallium Industry Co. Ltd.	Shanxi, Xiaoyi	130
Do.	do.	Zhuhai SEZ Fangyuan Inc.	6 plants in multiple Provinces	130
Do.	do.	Zhuzhou Keneng New Material Co. Ltd.	Hunan, Zunyi	50
Gas, natural	million cubic meters	China National Offshore Oil Corp. (CNOOC)	Offshore fields at Bohai, East China Sea, and South China Sea	9,000
Do.	do.	China National Petroleum Corp. (CNPC) (PetroChina Ltd.)	Nei Mongol, Qinghai, Sichuan, and Xinjiang Uyghur	110,000
Do.	do.	China Petroleum & Chemical Corp. (Sinopec Corp.)	Gasfields in multiple Provinces	35,000
Gas, liquefied natural gas		Inner Mongolia Xingsheng Natural Gas Co. Ltd.	Nei Mongol, Erdos	500
Do.		Shaanxi Zhongyuan Green Energy Natural Gas Co. Ltd.	Shaanxi, Yulin	810
Do.		Xinjiang Guanghui New Energy Co. Ltd.	Xinjiang Uyghur, Hami	550

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
Germanium	metric tons	China Germanium Co. Ltd. (CNGE)	Jiangsu, Nanjing	30
Do.	do.	Hengyang Hengrong High Purity Semiconductor Materials Co. Ltd. (Hunan Hengguang Technology Co. Ltd.)	Hunan, Hengyang	30
Do.	do.	Huaihua Hongjiang Hengchang Germanium Industry Technology Co. Ltd.	Hunan, Huaihua	20
Do.	do.	Nei Mongol Xilingol Tongli Germanium Industry Co. Ltd.	Nei Mongol, Xilinhot	20
Do.	do.	Shanghai Lontai Copper Co. Ltd.	Shanghai	10
Do.	do.	Shenzhen Nonfemet Co. Ltd.	Guangdong, Shaoguan	30
Do.	do.	Yunnan Chihong Zinc and Germanium Co. Ltd.	Yunnan, Qujing	70
Do.	do.	Yunnan Lincang Xinyuan Germanium Industrial Co. Ltd.	Yunnan, Lincang	50
Do.	do.	Yunnan Luoping Zinc and Electricity Co. Ltd.	Yunnan, Luoping, Jiulobng	2
Gold:				
Mine, Au content	kilograms	China Gold International Resources Corp.	Nei Mongol and Xizang	7,400
Do.	do.	China National Gold Group Co. Ltd.	Henan, Lingbao	20,200
Do.	do.	Hunan Gold Corp. Ltd.	Hunan, Huaihua, Yuanling	36,000
Do.	do.	Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Dexing	113,000
Do.	do.	Lingbao Gold Group Co. Ltd.	Henan, Nanyang, Tongbai	1,900
Do.	do.	do.	Xinjiang Uyghur, Altay, Habahe	1,600
Do.	do.	Shandong Gold Mining Co. Ltd.	Shandong, Jinan	33,000
Do.	do.	Shandong Humon Smelting Co. Ltd.	Shandong, Yantai	NA
Do.	do.	Shandong Zhongkuang Group Co. Ltd.	do.	5,000
Do.	do.	Tongling Nonferrous Metals Group Co. Ltd.	Anhui, Tongling	NA
Do.	do.	Western Mining Co. Ltd., 58%; Zijin Mining Group. Co. Ltd., 22%; others, 20%	Xizang, Changdu, Jiangda	2,100
Do.	do.	Western Gold Co. Ltd. [Xinjiang Nonferrous Metal Industry (Group) Co. Ltd., 56.5%, and others 43.5%]	Xinjiang Uyghur, Hami, Yizhou	700
Do.	do.	do.	Xinjiang Uyghur, Yili, Ghulja	2,700
Do.	do.	do.	Xinjiang Uyghur, Tacheng, Toli	380
Do.	do.	Xinjiang Nonferrous Metal Industry (Group) Co. Ltd.	Xinjiang Uyghur, Yili, Ghulja	2,000
Do.	do.	Yintai Gold Co. Ltd.	Nei Mongol, Xilingol	5,300
Do.	do.	Zhaojin Mining Industry Co. Ltd.	Shandong, Yantai, Zhaoyuan	10,400
Do.	do.	Zhongjin Gold Corp. Ltd. (China National Gold Group Co. Ltd.)	Beijing	15,300
Do.	do.	Zijin Mining Group Co. Ltd.	Fujian, Shanghang	15,000
Refined	metric tons	China National Gold Group Gold Jewellery Co. Ltd.	Guangdong, Shenzhen	NA
Do.	do.	Daye Nonferrous Metals Co. Ltd.	Hubei, Huangshi	20
Do.	do.	Dongwu Gold Group Co. Ltd.	Jiangsu, Suzhou	50
Do.	do.	Great Wall Gold Silver Refinery (China Banknote Printing and Minting Corp.)	Sichuan, Chengdu	100
Do.	do.	Henan Yuguang Gold Lead Co. Ltd.	Henan, Jiyuan	7
Do.	do.	Henan Zhongyuan Gold Smelter LLC	Henan, Sanmenxia	36
Do.	do.	Heraeus Precious Metal Technology (China) Co. Ltd.	Jiangsu, Nanjing	NA
Do.	do.	Huadian Gold Co. Ltd.	Jilin, Huadian	NA
Do.	do.	Hunan Chenzhou Mining Co. Ltd. (Hunan Gold Corp. Ltd.)	Hunan, Huaihua	50
Do.	do.	Inner Mongolia Qiankun Gold and Silver Refining Co. Ltd.	Nei Mongol, Hohhot	NA
Do.	do.	Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Yintan, Guixi	90
Do.	do.	Jinchuan Group Co. Ltd.	Gansu, Jinchang, Jinchuan	30
Do.	do.	Lingbao Gold Group Co. Ltd.	Henan, Luoyang	14
Do.	do.	Lingbao Jinyuan Tonghui Gold Refinery Co. Ltd.	Henan, Lingbao	36
Do.	do.	Luoyang Zijin Yinhui Gold Smelting Co. Ltd.	Henan, Luoyang	12
Do.	do.	Metalor Precious Metals (Suzhou) Co. Ltd.	Jiangsu, Suzhou	NA
Do.	do.	Shaanxi Gold Group Xi'an Qinjin Co. Ltd.	Shaanxi, Xi'an	NA
Do.	do.	Shandong Gold Smelting Co. Ltd.	Shandong, Yantai	NA
Do.	do.	Shandong Humon Smelting Co. Ltd.	do.	50
Do.	do.	Shandong Zhaojin Gold & Silver Refining Co. Ltd.	Shandong, Zhaoyuan	200

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
Gold:—Continued				
Refined—Continued	metric tons	Shenzhen Cuilu Gold Refinery Co. Ltd.	Guangdong, Shenzhen	NA
Do.	do.	Shenzhen Dianjin Precious Metal Refining Co. Ltd.	do.	NA
Do.	do.	Shenzhen Yuexin Precious Metals Co. Ltd.	do.	NA
Do.	do.	Shenzhen Zhonghenglong Industrial Co. Ltd.	do.	150
Do.	do.	Sichuan Tianze Precious Metals Co. Ltd.	Sichuan, Chengdu	150
Do.	do.	Urumqi Tianshanxing Precious Metal Smelting Co. Ltd.	Xinjiang Uyghur, Urumqi	NA
Do.	do.	Yanggu Xiangguang Copper Industry Co. Ltd.	Shandong, Yanggu, Shifo	NA
Do.	do.	Yantai Guoda Precious Metal Smelting Co. Ltd.	Shandong, Zhaoyuan	10
Do.	do.	Yantai Penggang Gold Industry Co. Ltd.	Shandong, Penglai	NA
Do.	do.	Yunnan Copper Industry Co. Ltd.	Yunnan, Kunming	NA
Do.	do.	Yunnan Gold and Mining Group Co. Ltd.	Yunnan, Qujing	NA
Do.	do.	Yunnan Precious Metals New Materials Holding Group Co. Ltd.	Hunan, Chenzhou, Yongxing	NA
Do.	do.	Zhaoyuan Gold Refining Co. Ltd.	Shandong, Zhaoyuan	15
Do.	do.	Zhejiang Fuye Group Co. Ltd.	Zhejiang, Fuye	12
Do.	do.	Zhuzhou Smelter Group Co. Ltd.	Hunan, Zhuzhou	NA
Do.	do.	Zijin Mining Group Gold Smelting Co. Ltd.	Fujian, Longyan, Shanghang	160
Graphite		Heilongjiang Hegang Graphite Industry Co. Ltd.	Heilongjiang, Luobei	NA
Do.		Hensen Graphite Co. Ltd.	Heilongjiang, Jiangsu and Nei Mongol	30
Do.		Jixi Aoyu Graphite Co. Ltd.	Heilongjiang, Jixi	100
Do.		Jixi Puchen Graphite Co. Ltd.	do.	80
Do.		Luobei Haida Graphite Co. Ltd.	Heilongjiang, Hegang	NA
Do.		Nei Mongol Xinghe Jingyin Graphite Co. Ltd.	Nei Mongol, Xinghe	10
Do.		Qingdao Haida Graphite Co. Ltd.	Shandong, Qingdao, Pingdu	60
Do.		Qingdao Yanxin Graphite Products Co. Ltd.	Shandong, Qingdao	28
Gypsum, mine		Hebei Xingtai Shuanghua Gypsum Products Co. Ltd.	Hebei, Xingtai	NA
Do.		Henan Yongtai Gypsum Co. Ltd.	Henan, Sanmenxia	850
Do.		Hubei Jingmen Yulian Gypsum Co. Ltd.	Hubei, Jingmeng	500
Do.		Ningxia Yanchi Qianyuan Gypsum Mining Co. Ltd.	Ningxia, Yanchi	200
Do.		Pizhou Huanyu Gypsum Co. Ltd.	Jiangsu, Pizhou	NA
Do.		Shanxi Taiyuan Xishan Gypsum Mine Co. Ltd.	Shanxi, Taiyuan	NA
Indium, refinery	metric tons	Guangxi Debang Technology Co. Ltd.	Guangxi, Liuzhou	120
Do.	do.	Guangxi Tanghan Zinc & Indium Co. Ltd.	Guangxi, Hechi	30
Do.	do.	Henan Yuguang Gold Lead Co. Ltd.	Henan, Jiyuan	10
Do.	do.	Hsikwangshan Twinkling Star Co. Ltd. (China Minmetals Corp.)	Hunan, Lengshuijiang	7
Do.	do.	Huludao Nonferrous Metals Group Co. Ltd.	Liaoning, Huludao	50
Do.	do.	Jinshan Indium and Germanium Metallurgical Chemical Co.	Guangxi, Hechi, Nandan	NA
Do.	do.	Liuzhou Huaxi Group Co. Ltd.	Guangxi, Laibin	60
Do.	do.	Liuzhou Zinc Products Co. Ltd.	Guangxi, Liuzhou	120
Do.	do.	Nanjing Germanium Co. Ltd.	Jiangsu, Nanjing	150
Do.	do.	Shenzhen Zhongjin Lingnan Nonfermet Co. Ltd.	Guangdong, Shaoguan	25
Do.	do.	Xiangtan Zhengtan Nonferrous Metal Co. Ltd.	Hunan, Xiangtan	75
Do.	do.	Yintai Technology Co. Ltd.	Guangxi, Liuzhou	40
Do.	do.	Yunnan Chengfeng Nonferrous Metals Co. Ltd.	Yunnan, Gejiu	10
Do.	do.	Yunnan Mengzi Mining and Smelting Co. Ltd.	Yunnan, Honghe	30
Do.	do.	Zhuzhou Smelter Group Co. Ltd.	Hunan, Zhuzhou	60
Iron ore, mine, concentrate		Add New Energy Investment Holdings Group Ltd.	Shandong, Yangzhuang	2,300
Do.		Anshan Mining Co. Ltd.	Liaoning, Anshan	30,000
Do.		Aowei Holding Ltd.	Hebei, Laiyuan	15,800

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>e</sup>
Iron ore, mine, concentrate—Continued	Banshigou Iron Mine Mining Co. Ltd.	Jilin, Hunjiang	1,400
Do.	Baotou Iron and Steel Group Co. Ltd.	Nei Mongol, Baotou	10,000
Do.	Baowu Maanshan Iron and Steel Co. Ltd.	Anhui, Maanshan	5,000
Do.	Benxi Iron and Steel Co. Ltd.	Liaoning, Benxi	8,000
Do.	China Baowu Steel Group Co. Ltd.	Hubei, Wuhan	6,350
Do.	China Hanking Holdings Ltd.	do.	4,000
Do.	China Minmetals Corp.	Mines in multiple Provinces	8,730
Do.	China Vanadium Titano-Magnetite Mining Co. Ltd.	Sichuan, Huili	1,890
Do.	Dabaoshan Mining Co. Ltd.	Guangdong, Qujiang	1,670
Do.	Hainan Mining Co. Ltd.	Hainan, Changjiang	4,600
Do.	Hebei Iron and Steel Group Co. Ltd. (HBIS)	Hebei, Tangshan	29,000
Do.	Huaxia Jianlong Mining Technology Co. Ltd.	Mines in multiple Provinces	5,500
Do.	Jiuquan Iron and Steel Co. Ltd.	Gansu, Zhangye, Sunan Yugur	4,400
Do.	Kunming Iron and Steel Co. Ltd.	Yunnan, Kunming	2,500
Do.	Metallurgical Corporation of China Ltd.	Mines in multiple Provinces	591
Do.	Nanjing Iron & Steel Co. Ltd. (NISCO)	Jiangsu, Nanjing	2,500
Do.	Panzhuhua Fengyuan Mining Co. Ltd. (Panzhuhua Zhenxing Mining Co. Ltd.)	Sichuan, Panzhuhua	13,000
Do.	Shandong Iron and Steel Group Co. Ltd.	Shandong, Jinan	3,000
Do.	Shandong Jinling Mining Co. Ltd.	Shandong, Zibo	650
Do.	Shandong Taishan Sunlight Group Co. Ltd.	Shandong, Laiwu	2,000
Do.	Taiyuan Iron and Steel Co. Ltd.	Shanxi, Taiyuan	12,000
Do.	Tonghua Iron & Steel Group Co. Ltd.	Jilin, Changchun	782
Do.	Xinjiang Yaxing Mining Co. Ltd.	Xinjiang Uyghur, Akto	2,000
Do.	Zijin Mining Group Co. Ltd.	Xinjiang Uyghur, Altay, Fuyun	3,100
Iron and steel, raw steel	Ansteel Group Corp. Ltd.	Liaoning, Anshan	56,000
Do.	Baotou Iron and Steel Group Co. Ltd.	Nei Mongol, Baotou	1,800
Do.	Baowu Steel Group Corp. Ltd.	Anhui, Maanshan; Hubei, Wuhan	115,000
Do.	Beijing Jianlong Heavy Industry Group Co. Ltd.	Beijing	34,000
Do.	Benxi Beiyang Iron and Steel (Group) Co. Ltd.	Liaoning, Benxi, Pingshan	9,000
Do.	Benxi Steel Plates Co. Ltd.	Liaoning, Benxi, Xihu	10,000
Do.	Chengyu Vanadium and Titanium Technology Co. Ltd.	Sichuan, Neijiang, Weiyuan	5,200
Do.	CITIC Pacific Special Steel Holdings Ltd.	Jiangsu, Jiangyin	20,000
Do.	Fujian Dadonghai Industrial Group Co. Ltd.	Fujian, Fuzhou, Changle	20,000
Do.	Fujian Sangang (Group) Co. Ltd.	Fujian, Sanming	12,000
Do.	Fangchenggang Jinxi Section Steel Technology Co. Ltd.	Guangxi, Fangchenggang	10,000
Do.	Guangxi Liuzhou Iron and Steel Group Co. Ltd.	Guangxi, Liuzhou	15,000
Do.	Hebei Iron and Steel Group Co. Ltd. (HBIS)	Hebei, Handan	57,500
Do.	Hunan Valin Iron & Steel Group Co. Ltd.	Hunan, Changsha	25,000
Do.	Inner Mongolia Baotou Steel Union Co. Ltd.	Nei Mongol, Baotou, Hexi	17,500
Do.	Jiangsu Shagang Group Co. Ltd.	Jiangsu, Suzhou, Zhangjiagang	39,000
Do.	Nanjing Iron & Steel Co. Ltd. (NISCO)	Jiangsu, Nanjing, Luhe	10,000
Do.	Rizhao Steel Holding Group Co. Ltd.	Shandong, Rizhao	15,000
Do.	Shandong Iron and Steel Group Co. Ltd.	Shandong, Jinan	31,000
Do.	Shougang Iron and Steel Co. Ltd.	Beijing	34,000
Do.	Taiyuan Iron and Steel (Group) Co. Ltd.	Shanxi, Yaiyuan, Jiancaoping	12,900
Do.	Tangshan Donghai Iron and Steel Group Co. Ltd.	Hebei, Tangshan, Luan	10,000
Do.	Tangshan Yanshan Iron and Steel Co. Ltd.	Hebei, Tangshan, Qian'an	10,000
Do.	Xinyu Iron and Steel Group Co. Ltd. (XinSteel)	Jiangxi, Xinyu, Yushui	10,000
Do.	Zhongtian Iron and Steel Group Co. Ltd.	Jiangsu, Changzhou, Wujin	12,000
Do.	do.	Jiangsu, Nantong, Haimen	8,000

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
<b>Lead:</b>			
Mine, Pb content	Baiyin Nonferrous Group Co. Ltd.	Gansu, Baiyin	15
Do.	do.	Gansu, Changba	30
Do.	do.	Gansu, Lijiagou	5
Do.	China Gold International Resources Corp. Ltd.	Xizang, Maizhokunggar	54
Do.	China Tin Group Co. Ltd. (Guangxi Huaxi Group Co. Ltd.)	Guangxi, Dachang	30
Do.	Dongshengmiao Mining Co. Ltd. (Guocheng Mining Co. Ltd.)	Nei Mongol, Urad Houqi	6
Do.	Greenway Mining Group Ltd.	Yunnan, Dehong and Yingjiang	2
Do.	Guangxi Cenxi Longwan Mining Co. Ltd. (Guangxi Nonferrous Metals Group Co. Ltd.)	Guangxi, Cenxi, Hesun	5
Do.	Guangxi Zhongjin Lingnan Mining Co. Ltd.	Guangxi, Laibin, Wuxuan	NA
Do.	Hunan Baoshan Nonferrous Metals and Mining Co. Ltd.	Hunan, Baoshan	10
Do.	Hunan Shuikoushan Nonferrous Metals Group Co. Ltd. (China Minmetal Corp.)	Hunan, Kangjiawan	17
Do.	do.	Hunan, Chaling, Shuikoushan	19
Do.	Jiangxi Dean Tianbao Mining Group Co. Ltd.	Jiangxi, De'an, Zhangshiba	10
Do.	Jinhui Mining Co. Ltd.	Gansu, Longnan, Hui	25
Do.	Shandong Gold Non-Ferrous Metal Mining Group Co. Ltd.	Nei Mongol, Xilingol, East Ujimqin	12
Do.	Shenzhen Zhongjin Lingnan Nonferrous Metals Co. Ltd.	Guangdong, Shaoguan	93
Do.	Sichuan Xinyuan Mining Industry Co. Ltd.	Sichuan, Xiaocun	25
Do.	Tibet Huaxia Mineral Co. Ltd.	Xizang, Nagqu, Lhari	24
Do.	Tibet Huayu Mining Co. Ltd.	Xizang, Lhasa	14
Do.	Western Mining Co. Ltd.	Qinghai, Xitieshan	50
Do.	Xinjiang Xinxin Mining Industry Co. Ltd.	Xinjiang Uyghur, Fuyun	15
Do.	Yunnan Chihong Zinc and Germanium Co. Ltd.	Yunnan, Huize, Rongda	50
Do.	Yunnan Jinding Zinc Industry Co. Ltd. (Sichuan Hongda Group Co. Ltd.)	Yunnan, Lanping	5
Do.	Zijin Mining Group Co. Ltd.	Nei Mongol, Bayannur	10
Do.	do.	Xinjiang Uyghur, Wuqia	20
<b>Refinery:</b>			
Primary	Anhui Tongguan Chizhou Nonferrous Metals Co. Ltd.	Anhui, Chizhou	100
Do.	Anyang Minshan Nonferrous Metals Co. Ltd. (Yubei Metal Co. Ltd.)	Henan, Anyang	160
Do.	Baiyin Nonferrous Group Co. Ltd.	Gansu, Baiyin	80
Do.	Bayannur Zijin Nonferrous Metals Co. Ltd.	Nei Mongol, Bayannur	100
Do.	Chenzhou Jingui Silver Industry Co. Ltd.	Hunan, Chenzhou	100
Do.	Chifeng Shanjin Silver and Lead Co. Ltd.	Nei Mongol, Chifeng	100
Do.	Guangxi Nandan Nanfang Nonferrous Metal Smelting Co. Ltd.	Guangxi, Hechi	200
Do.	Haicheng Chengxin Nonferrous Metals Co. Ltd.	Liaoning, Chengxin	100
Do.	Hanzhong Zinc Industry Co. Ltd. (Youser Group)	Shaanxi, Mainxian	80
Do.	Henan Jinli Gold and Lead Group Co. Ltd.	Henan, Jiyuan	300
Do.	Henan Yuguang Gold Lead Co. Ltd.	do.	400
Do.	Hulunbuir Chihong Mining Co. Ltd. (Yunnan Chihong Zinc and Germanium Co. Ltd.)	Nei Mongol, Hulunbuir	80
Do.	Hunan Huaxin Rare Technology Co. Ltd.	Hunan, Chenzhou	100
Do.	Hunan Shuikoushan Nonferrous Metals Group Co. Ltd.	Hunan, Changning	150
Do.	Hunan Yuteng Nonferrous Metals Co. Ltd.	Hunan, Chenzhou	180
Do.	Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Jiujiang, Hukou	200
Do.	Jiangxi Jinde Lead Industry Co. Ltd.	Jiangxi, Shangrao, Dexing	80
Do.	Jinchengjiang Chengyuan Mining & Smelting Co. Ltd.	Guangxi, Hechi, Jinchengjiang	60
Do.	Jiyuan Wangyang Smelting (Group) Co. Ltd.	Henan, Jiaozuo	270
Do.	Lingbao Xinling Refining Co. Ltd.	Henan, Lingbao	100
Do.	Lingbao Zhicheng Lead Co. Ltd.	do.	100
Do.	Luoyang Yongning Nonferrous Technology Co. Ltd.	Henan, Luoyang	80

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
<b>Lead:—Continued</b>			
<b>Refinery:—Continued</b>			
Primary—Continued	Nanfang Nonferrous Metal Smelting Co. Ltd.	Guangxi, Hechi	80
Do.	Qinghai Xiyu Nonferrous Metal Co. Ltd.	Qinghai, Golmud	100
Do.	Shaanxi Dongling Group Co. Ltd.	Shaanxi, Baoji, Fengxiang	100
Do.	Shandong Humon Smelting Co. Ltd.	Shandong, Yantai, Mouping	100
Do.	Shenzhen Zhongjin Lingnan Nonfemet Co. Ltd.	Guangdong, Shaoguan	100
Do.	Western Mining Co. Ltd.	Qinghai, Xining	100
Do.	Xingan Silver and Lead Smelting Co. Ltd.	Nei Mongol, Hexigten	100
Do.	Xuzhou Chunxing Alloy Co. Ltd.	Jiangsu, Xuzhou	150
Do.	Yunnan Chihong Zinc and Germanium Co. Ltd.	Yunnan, Qujing	300
Do.	Yunnan Shadian Lead Industry Co. Ltd.	Yunnan, Honghe	100
Do.	Yunnan Xinli Nonferrous Metals Co. Ltd.	Yunnan, Kunming	100
Do.	Zhuzhou Smelter Group Co. Ltd.	Hunan, Zhuzhou	120
Secondary	Anhui Huaxin Lead Industry Group Co. Ltd.	Hunan, Chenzhou	120
Do.	Anyang Jinpeng Lead Industry Co. Ltd.	Henan, Anyang	250
Do.	Anyang Yubei Gold and Lead Co. Ltd.	do.	250
Do.	Baoding Gangan Nonferrous Metals Co.	Hebei, Baoding	250
Do.	Hebei Jinyu Sheng Renewable Resources Utilization Co.	Hebei, Baoding, Xiongqian	100
Do.	Hebei Songhe Renewable Resources Co. Ltd.	Hebei, Anxin	250
Do.	Henan Asia Metal Recycling Co. Ltd.	Henan, Xinxiang	90
Do.	Henan Jinli Gold and Lead Group Co. Ltd.	Henan, Jiyuan	440
Do.	Henan Yuguang Gold Lead Co. Ltd.	do.	200
Do.	Jiangsu New Chunxing Resource Recycling Co. Ltd.	Jiangsu, Xuzhou, Pizhou	100
Do.	Yunnan Xiangyun Feilong Recycling Technology Co. Ltd.	Nei Mongol, Ximeng	80
<b>Lithium, Li<sub>2</sub>CO<sub>3</sub> equivalent:</b>			
Mine	Antai Mining Co. Ltd.	Chongqing	3
Do.	Fujian Zhonghe Co. Ltd.	Sichuan, Maerkang	6
Do.	Ganfeng Lithium Co. Ltd.	Jiangxi, Ganzhou, Ningdu	20
Do.	Ganzhou Rongda Lithium Co. Ltd. (Youngy Co. Ltd.)	Sichuan, Tagong	8
Do.	Jinchuan Aoyinuo Mining Co. Ltd. (Chengxin Lithium Group)	Sichuan, Jinchuan, Yelonggou	13
Do.	Ningxia Non-Ferrous Metals Import and Export Corp. (operator), and Yichun Tantalum Co. Ltd. (owner)	Jiangxi, Yichun, Yifeng	30
Do.	Sichuan Yahua Industrial Group Co. Ltd.	Sichuan, Ya'an	8
Do.	Yichun Yinli New Energy Co. Ltd. (Jiangxi Special Electric Motor Co. Ltd.)	Jiangxi, Yichun, Yifeng	8
Do.	Youngy Investment Holding Group Co. Ltd.	Sichuan, Kangding	9
Brine	Golmud Zangge Mining Co. Ltd. (Zangge Potash Fertilizer Co. Ltd.)	Qinghai, Golmud, Qarhan Lake	10
Do.	Minmetals Salt Lake Co. Ltd. (China Minmetals Corp., 51%, and Qinghai Liangcheng Mining Co. Ltd., 49%)	Qinghai, Mangya, Yiliping Lake	10
Do.	Qinghai CITIC Guoan Lithium Industry Development Co. Ltd.	Qinghai, Xitai Ginel Salt Lake	30
Do.	Qinghai Dongtai Ginel Lithium Resources Co. Ltd. (Western Mining Group Co. Ltd.)	Qinghai, Dongtai Ginel Salt Lake	10
Do.	Qinghai Hengxinrong Lithium Technology Co. Ltd.	Qinghai, Xitai Ginel Salt Lake	20
Do.	Qinghai Jintai Lithium Industry Co. Ltd. (Jintai Potash Fertilizer)	Qinghai, Balun Mahai Lake	7
Do.	Qinghai Qaidam Xinghua Lithium Salt Co. Ltd.	Qinghai, Da Qaidam Salt Lake	10
Do.	Qinghai Salt Lake Industry Co. Ltd.	Qinghai, Golmud, Qarhan Lake	24
Do.	Tibet Guoneng Mining Development Co. Ltd. (Tibet City Development Investment Co. Ltd.)	Xizang, Lungmu Tso Salt Lake	5
Do.	Tibet Mineral Development Co. Ltd. (Baowu Steel Group Group Co. Ltd.)	Xizang, Zhabuye Salt Lake	10

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2, 3</sup>	Annual capacity <sup>c</sup>
<u>Lithium, Li<sub>2</sub>CO<sub>3</sub> equivalent:—Continued</u>			
Refinery	Chengdu Rongjie Lithium Industry Technology Co. Ltd.	Sichuan, Chengdu	20
Do.	Guangxi Tianyuan New Energy Materials Co. Ltd. (Albemarle Lithium UK Ltd., 100%)	Guangxi, Qinzhou, Qinnan	10
Do.	Hainan Xingzhihai New Material Co. Ltd. (Hainan Mining Co. Ltd.)	Hunan, Danzhou, Yanpu	18
Do.	Huludao Hongjing Technology Co. Ltd. (Liaoning Hongjing Group)	Liaoning, Hongjing, Lianshan	20
Do.	H-Zone Lithium Technology Co. Ltd.	Jiangxi, Yichun	10
Do.	Jiangsu Ronghui General Lithium Co. Ltd.	Jiangsu, Nantong, Haimen	26
Do.	Jiangxi Chunpeng Lithium Industry Co. Ltd.	Jiangxi, Xinyu	4
Do.	Jiangxi Dongpeng New Materials Co. Ltd. (China Mining Resources Group Co. Ltd., 100%)	do.	33
Do.	Jiangxi Ganfeng Battery Technology Co. Ltd. (Jiangxi Lithium Co. Ltd.)	Jiangxi, Xinyu, Yushui	50
Do.	do.	Jiangxi, Ganzhou, Ningdu	50
Do.	Jiangxi Jinhui Lithium Industry Co. Ltd.	Jiangxi, Yichun	20
Do.	Jiangxi Nanshi Lithium New Materials Co. Ltd.	do.	60
Do.	Jiujiang Ronghui Lithium Industry Technology Co. Ltd. [General Lithium (Jiujiang) Tech Corp.]	Jiangxi, Jiujiang, Hukou	15
Do.	Qinghai CITIC Guoan Lithium Industry Development Co. Ltd.	Qinghai, Golmud	5
Do.	Qinghai Hengxinrong Lithium Technology Co. Ltd.	Qinghai, Haixi	20
Do.	Qinghai Lithium Co. Ltd. (Western Mining Group Co. Ltd., 74.54%, and others, 25.46%)	Qinghai, Xining	10
Do.	Qinghai Yanhu Fozhao Lanke Lithium Co. Ltd. (Qinghai Salt Lake Industry Co. Ltd., 51.42%, and Kodak Manufacturing, 43.58%)	Qinghai, Golmud	30
Do.	Shandong Ruifu Lithium Industry Co. Ltd.	Shandong, Feicheng	34
Do.	Sichuan Aba Guangsheng Lithium Co. Ltd.	Sichuan, Wenchuan	2
Do.	Sichuan Changhehua Lithium Technology Co. Ltd. (Rongjie Group)	Sichuan, Chengdu	6
Do.	Sichuan Energy Investment Dingsheng Lithium Technology Co. Ltd.	Sichuan, Meishan	10
Do.	Sichuan Tianqi Lithium Industry Co. Ltd. (Chengdu Tianqi Group Co. Ltd.)	Chongqing, Tongliang	3
Do.	do.	Jiangsu, Zhangjiagang	20
Do.	do.	Sichuan, Chengdu	26
Do.	Sichuan Tianyi Lithium Industry Co. Ltd.	Sichuan, Yibin	45
Do.	do.	Sichuan, Meishan	53
Do.	Sichuan Yahua Lithium Industrial (Ya'an) Co. Ltd.	Sichuan, Ya'an	35
Do.	Sichuan Zhiyuan Lithium Co. Ltd. (Chengxin Lithium Group Co. Ltd.)	Sichuan, Deyang, Mianzhu	38
Do.	Tangshan Xinfeng Lithium Industry Co. Ltd.	Hebei, Tangshan	19
Do.	Tibet Mineral Development Co. Ltd. (China Baowu Steel Group)	Xizang, Lhasa	5
Do.	Wudi Jinhaiwan Lithium Technology Co. Ltd.	Shandong, Binzhou	26
Do.	Xinjiang Haoxin Lithium Salt Development Co. Ltd.	Xinjiang Uyghur, Urumqi	5
Do.	Xinjiang Zhicun Lithium Industry Co. Ltd.	Xinjiang Uyghur, Ruoqiang	6
Do.	Yichun Yinli New Energy Co. Ltd. (Jiangxi Special Electric Motor Co. Ltd.)	Jiangxi, Yichun	25
Do.	Yongxing Special Material Technology Co. Ltd.	do.	10
<u>Magnesium:</u>			
Mine, ore	Baowu Magnesium Technology Co. Ltd.	Jiangsu, Nanjing	1,600
Do.	Liaoning Magnesite Mining Co.	Liaoning, Haicheng	NA
Magnesia	Puyang Refractory Group Co. Ltd.	Qinghai, Haidong	520

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>e</sup>
<b>Magnesium:</b>			
Metal, primary	Baowu Magnesium Technology Co. Ltd.	Jiangsu, Nanjing	200
Do.	Century Sunshine Group Holding Ltd.	Xinjiang Uyghur, Hami	45
Do.	do.	Jilin, Baishan	75
Do.	Fugu County Jinwantong Magnesium Industry Co. Ltd.	do.	42
Do.	Fugu Jingfu Coal Chemical Co. Ltd.	Shaanxi, Yulin	20
Do.	Fugu Taida Coal Chemical Co. Ltd.	do.	20
Do.	Fugu Xintian Magnesium Alloy Co. Ltd.	Shaanxi, Yulin, Fugu, Xintian	30
Do.	Fugu Yihe Magnesium Co. Ltd.	Shaanxi, Yulin, Fugu, Yihe	30
Do.	Shaanxi Fugu Yufeng Magnesium Industry Co. Ltd.	Shaanxi, Yulin, Fugu, Yufeng	25
Do.	Shaanxi Fugu Zhongxin Pvt. Ltd.	Shaanxi, Yulin, Fugu, Zhongxin	20
Do.	Shaanxi Haotian Group Coal Power Metallurgical and Chemical Co. Ltd.	Shaanxi, Yulin, Fugu, Haotin	30
Do.	Shaanxi Sanxin Group Co. Ltd.	Shaanxi, Yulin, Fugu	30
Do.	Shaanxi Tianyu Magnesium Industry Group Co. Ltd.	Jiangsu, Nanjing	50
Do.	Shanxi Bada Magnesium Co. Ltd.	Shanxi, Wenxi	50
Do.	Shanxi Regal Advanced Material Co. Ltd.	do.	55
Do.	Shanxi Wenxi Yinguang Magnesium Industry Group Co. Ltd.	do.	40
Do.	Shanxi Wulong Investment Group Co. Ltd.	Shanxi, Yuncheng, Yuanqu	25
Do.	Shanxi Yinguang Huasheng Magnesium Industry Co. Ltd.	do.	65
Do.	Shenmu Xinqing Co. Ltd.	Shaanxi, Shenmu	25
Do.	Taiyuan Tongxiang Magnesium Metal Co. Ltd.	Shanxi, Taiyuan	45
Do.	Taiyuan Yiwei Magnesium Co. Ltd.	do.	21
Do.	Wenxi Biyun Magnesium Co. Ltd.	Shanxi, Wenxi	30
Do.	Yulin Tianlong Magnesium Industry Co. Ltd.	Shaanxi, Yulin, Fugu, Tianlong	25
Do.	Zunyi Titanium Co. Ltd.	Guizhou, Zunyi	24
Alloy	Baowu Magnesium Technology Co. Ltd.	Jiangsu, Nanjing	200
Do.	Magontec Xi'an Co. Ltd.	Shaanxi, Xi'an	40
Do.	Shaanxi Tianyu Magnesium Industry Group Co. Ltd.	Shaanxi, Yulin	10
Do.	Shanxi Bada Magnesium Industry Co. Ltd.	Shanxi, Wenxi	50
Do.	Shanxi Regal Advanced Material Co. Ltd.	do.	100
Do.	Shanxi Wenxi Zhenxin Magnesium Industry Co. Ltd.	do.	40
<b>Manganese:</b>			
Mine, ore, gross weight	Akto Baiyuanfeng Mining Industry Co. Ltd. (Western Gold Co. Ltd.)	Xinjiang Uyghur, Kashgar	1,200
Do.	Changyang Gucheng Manganese Industry Co. Ltd.	Hubei, Yichang, Changyang	450
Do.	Chongqing Xishuan Sanrun Mining Co. Ltd.	Chongqing, Xiushan	120
Do.	CITIC Dameng Mining Co. Ltd.	Guangxi, Chongzuo, Daxin	260
Do.	Guikang New Materials Co. Ltd.	Guangxi, Guilin, Lingchuan	200
Do.	Guizhou Wuling Manganese Industry Co. Ltd. (Chongqing Wujiang Industry Group Co. Ltd.)	Guizhou, Songtao, Wuluo	6,000
Do.	Huayuan County Yufeng Manganese Industry Co. Ltd.	Hunan, Huayuan	310
Do.	Hubei Changyang Hongxin Industry Group Co. Ltd.	Hubei, Yichang	450
Do.	Hunan Dongfang Mining Co. Ltd.	Hunan, Xiangxi	200
Do.	Jingxi Xinyuan Manganese Industry Co. Ltd.	Guangxi, Baise, Hurun	500
Do.	Linze Hongxin Mineral Industry Co. Ltd.	Gansu, Zhangye, Linze	600
Do.	Nanfeng Manganese Group Ltd.	Guangxi, Nanning	2,700
Do.	Ningxia Shengyan Industrial Group Fuhua Metallurgical Co. Ltd.	Ningxia, Shizuishan, Pingluo	1,000
Do.	Songtao Sanhe Manganese Industry Group Co. Ltd.	Guizhou, Tongren, Songtao	320
Do.	South Manganese Group Ltd., of which:		
	Daxin Dameng Manganese Co. Ltd.	Guangxi, Chongzuo, Daxin	1,900
Do.	Zunyi Hui Changgou Manganese Mine Co. Ltd.	Guizhou, Zunyi, Honghuagang	250
Do.	Tiandeng branch	Guangxi, Chongzuo, Daxin	500
Do.	Xiushan County Jiayuan Mining Co. Ltd.	Chongqing, Xiushan	120
Do.	Xiushan County Tianyuan Mining Industry Co. Ltd.	do.	180

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>	
<b>Manganese:—Continued</b>				
Mine, ore, gross weight—Continued	Yunnan Wenshan Dounan Manganese Industry Co. Ltd.	Yunnan, Wenshan, Yanshan	300	
Do.	Zunyi Tianci Manganese Industry Group Co. Ltd.	Guizhou, Zunyi, Honghuagang	290	
Metal	Akto Kebang Manganese Industry Co. Ltd.	Xinjiang Uyghur, Kashgar	75	
Do.	China Manganese (Hubei) Technology Development Co. Ltd.	Hubei, Changyang, Longzhouping	63	
Do.	Chongqing Dalang Metallurgical New Materials Co. Ltd.	Chongqing, Fuling	550	
Do.	Chongqing Tycoon Manganese Industry Co. Ltd.	Chongqing, Longtan, Wuyu	50	
Do.	Chongqing Wujiang Industry Group Co. Ltd., of which: Chongqing Xiushan Wuling Manganese Industry Corp.	Chongqing	30	
Do.	Guizhou Wuling Manganese Industry Co. Ltd.	Guizhou, Tongren, Songtao	80	
Do.	Chongqing Xishuan Sanrun Mining Co. Ltd.	Chongqing, Xiushan	30	
Do.	CITIC Dameng Mining Co. Ltd.	Guangxi, Chongzuo, Daxin	130	
Do.	Dushan Jinmeng Manganese Industry Co. Ltd.	Guizhou, Dushan, Mawei	30	
Do.	Guangxi Jinmeng Manganese Industry Co. Ltd.	Guangxi, Hechi, Yizhou	15	
Do.	Guangxi Xinzhen Manganese Industry Group Co. Ltd.	Guangxi, Chongzuo, Daxin	60	
Do.	Guizhou Tongren Jinrui Manganese Industry Co. Ltd.	Guizhou, Tongren, Songtao	30	
Do.	Guizhou Wuling Manganese Industry Co. Ltd. (Chongqing Wujiang Industry Group Co. Ltd.)	Guizhou, Tongren, Songtao, Wuluo	81	
Do.	Hubei Changyang Hongxin Industry Group Co. Ltd.	Hubei, Yichang, Changyang	50	
Do.	Hunan Dongfang Mining Co. Ltd.	Hunan, Xiangxi, Baojing	70	
Do.	Jingxi Baikuang Manganese Industry Co. Ltd.	Guangxi, Jingxi	25	
Do.	Jingxi Xinyuan Manganese Industry Co. Ltd.	Guangxi, Baise, Hurun	40	
Do.	Ningxia Tianyuan Manganese Industry Co. Ltd.	Ningxia, Zhongwei, Zhongning	800	
Do.	Songtao Sanhe Manganese Industry Group Co. Ltd.	Guizhou, Tongren, Songtao	60	
Do.	South Manganese Group Ltd.	Guangxi, Chongzuo, Daxin	200	
Do.	Xiushan County Jiayuan Mining Co. Ltd.	Chongqing, Xiushan, Longchi	50	
Do.	Yongzhou Xincheng Manganese Industry Co. Ltd.	Hunan, Yongzhou, Lingling	30	
Do.	Yunnan Wenshan Dounan Manganese Industry Co. Ltd.	Yunnan, Wenshan, Yanshan, Pingyuan	20	
Do.	Zhongmeng (Hubei) Technology Development Co. Ltd.	Hubei, Suizhou, Guangshui	40	
Do.	Zunyi Tianci Manganese Industry (Group) Jinfeng Co. Ltd.	Guizhou, Zunyi	50	
<b>Mercury:</b>				
Mine, ore	Guizhou Dalong Yinxing Mercury Co. Ltd.	Guizhou, Tongren	NA	
Do.	Guizhou Hongling Mercury Co. Ltd.	do.	NA	
Do.	Shaanxi Mercury and Antimony Technology Co. Ltd.	Shaanxi, Xi'an	NA	
Smelter	metric tons	Guizhou Hongjing Mercury Industry Co. Ltd.	Guizhou, Tongren	350
Do.	do.	Guizhou Hongling Mercury Co. Ltd.	do.	NA
Do.	do.	Shaanxi Mercury and Antimony Technology Co. Ltd.	Shaanxi, Xi'an	NA
Chemical products	do.	Guizhou Hongjing Mercury Industry Co. Ltd.	Guizhou, Tongren	7,000
Do.	do.	Guizhou Wanshan Minerals Co. Ltd.	do.	20,000
Molybdenum, mine, concentrate	Chifeng Aolunhua Mining Co. Ltd.	Nei Mongol, Chifeng	6	
Do.	China Gold Inner Mongolia Mining Co. Ltd.	Nei Mongol, Hulunbuir, Manzhouli	14	
Do.	China Molybdenum Co. Ltd.	Henan, Luoyang, Luanchuan	15	
Do.	Fengning Xinyuan Mining Co. Ltd. (Jianlong Group)	Hebei, Chengde	12	
Do.	Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Shangrao, Dexing	8	
Do.	Jilin Daheishan Molybdenum Industry Co. Ltd. (Zhongze Group)	Jilin, Jilin, Yongji	6	
Do.	Jinduicheng Molybdenum Industry Co. Ltd. (Shaanxi Non-ferrous Metals Holding Group Co. Ltd.)	Shaanxi, Weinan, Huaxian, and Henan, Luoyang, Ruyang	39	
Do.	Liaoning Xinhua Longdayou Molybdenum Industry Co. Ltd.	Nei Mongol, Bayannur	NA	
Do.	Luanchuan County Jinding Mining Co. Ltd.	Henan, Luanchuan	6	
Do.	Luanchuan Longyu Molybdenum Industry Co. Ltd.	do.	14	
Do.	Luoyang Fuchuan Co. Ltd. (China Molybdenum Co. Ltd.)	do.	14	
Do.	Yichun Luming Mining Co. Ltd. (China Railway Group Ltd.)	Heilongjiang, Yichun	23	

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
<b>Nickel, Ni content:</b>				
Mine		Jilin Jien Nickel Industry Co. Ltd. (Jilin Zhongze Haorong Group Co. Ltd.)	Jilin, Pangshi	6
Do.		Jinchuan Group Co. Ltd.	Gansu, Jinchuan	90
Do.		Shaanxi Hua'ao Mining Industry Co. Ltd.	Shaanxi, Lueyang	6
Do.		Xinjiang Xinxin Mining Industry Co. Ltd., of which: Xinjiang Hami Tianlong Nickel Industry Ltd.	Xinjiang Uyghur, Hami	1
Do.		Xinjiang Yakesi Resources Ltd.	do.	17
Do.		Yuanjiang Nickel Industry Co. Ltd. (Yunnan Tin Industry Group Co. Ltd.)	Yunnan, Yuxi	5
Do.		Yunnan Henghao Nickel Industry Group Co. Ltd.	Yunan, Kunming	2
Smelter, nickel pig iron		Baosteel Desheng Stainless Steel Co. Ltd. (Baowu Group)	Fujian, Fuzhou, Luoyuan	15
Do.		Fujian Dingxin Industry Co. Ltd.	Fujian, Fu'an	40
Do.		Guangdong Century Nickel Co. Ltd.	Guangdong, Yangjiang	20
Do.		Guangdong Guangxin Suntec Metal Holdings Co. Ltd.	do.	20
Do.		Guangxi Chengde Group Co. Ltd.	Guangxi, Beihai	30
Do.		Henan Jinhui Stainless Steel Co. Ltd.	Henan, Chengge	10
Do.		Inner Mongolia Heyi Nickel Materials Co. Ltd.	Nei Mongol, Tongliao, Naiman	20
Do.		Inner Mongolia Huade Wuzhou Steel Co. Ltd.	Nei Mongol, Wulanchabu, Huade	11
Do.		Inner Mongolia Shuofeng Industry Co. Ltd.	Nei Mongol, Fengzhen, Fuhua	11
Do.		Inner Mongolia Xinyang Metallurgy Chemical Co. Ltd.	Nei Mongol, Ulanqab, Tugui	6
Do.		Jiangsu Delong Nickel Industry Co. Ltd.	Jiangsu, Yangcheng, Xiangshui	100
Do.		Liaoning Guorun Metal Group Co. Ltd.	Liaoning, Yingkou, Shagang	13
Do.		Liaoning Shengyun Industry Development Co. Ltd.	Liaoning, Yingkou, Dashiqiao	11
Do.		Liaoning Treasure Platinum Technology Co. Ltd.	Liaoning, Liaoyang, Liuerbao	13
Do.		Shandong Xinhai Technology Co. Ltd.	Shandong, Linyi	120
Do.		Suqian Xiangxiang Industrial Co. Ltd.	Jiangsu, Suqian	18
Do.		Yangjiang Yichuan Metal Science and Technology Co. Ltd.	Guangdong, Yangjiang, Gangkou	12
Do.		Yangzhou Yichuan Nickel Industry Co. Ltd.	Jiangsu, Yangzhou, Lidian	10
Do.		Zhanhua Weiye Nickel Industrial Co. Ltd.	Shandong, Binzhou, Zhanhua	27
<b>Refined:</b>				
Primary		Chengdu Electrometallurgical Co. Ltd.	Sichuan, Chengdu	5
Do.		China Metallurgical Ramu New Energy Technology Co. Ltd.	Hebei, Tangshan, Caofeidian	9
Do.		Guangdong Century Qingshan Nickel Industry Co. Ltd.	Guangdong, Yangjiang	50
Do.		Guangxi Yinyi Advanced Material Co. Ltd.	Guangxi, Yulin, Longtan	10
Do.		Jiangxi Jiangli Science and Technology Co. Ltd.	Jiangxi, Fenyi	50
Do.		Jilin Jien Nickel Industry Co. Ltd. (Jilin Zhongze Haorong Group Co. Ltd.)	Jilin, Panshi	10
Do.		Jinchuan Nonferrous Metals Co. Ltd.	Gansu, Jinchang, Jinchuan	330
Do.		Tianjiang Maolian Technology Co. Ltd.	Guangxi, Bohai, Longtan	7
Do.		Vale Nickel (Dalian) Co. Ltd. (Vale S.A.)	Liaoning, Dalian	30
Do.		Xinjiang Xinxin Mining Industry Co. Ltd.	Xinjiang Uyghur, Fukang, Fuyun	13
Do.		Yuanjiang Nickel Industry Co. Ltd. (Yunnan Tin Industry Group Co. Ltd.)	Yunnan, Yuxi	5
Secondary		Chizhou CN New Materials Technology Co. Ltd.	Anhui, Chizhou	5
Do.		GEM Cobalt Industry Co. Ltd.	Hubei, Jingman	44
Do.		Hunan Brunp Recycling Technology Co. Ltd.	Hunan, Changsha, Jinzhou	11
Niobium and tantalum, concentrate, gross weight	metric tons	Jiangxi Jiangte Mining Development Co. Ltd.	Jiangxi, Yichun	35
Do.	do.	Jiangxi Jinhui Renewable Resources Co. Ltd.	do.	20
Do.	do.	Jiangxi Tungsten Industry Group Co. Ltd. (China Minmetals Corp.)	do.	500
Palladium, mine, Pd content	kilograms	Danba County Yangliuping Mining Co. Ltd.	Sichuan, Yangliuping	130
Do.	do.	Jinchuan Group Co. Ltd.	Gansu, Jinchang	1,170

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
<b>Petroleum:</b>				
Crude	thousand 42-gallon barrels	China National Offshore Oil Corp. (CNOOC), of which: Bohai Offshore Oil Corp.	Bohai, offshore	29,300
Do.	do.	Nanhai East Corp.	South China Sea, offshore	36,700
Do.	do.	China National Petroleum Corp. (CNPC), of which: Daqing Petroleum Administration Bureau Co. Ltd.	Heilongjiang, Daqing	403,000
Do.	do.	Liaohu Petroleum Administration Bureau Co. Ltd.	Liaoning, Liaohu	110,000
Do.	do.	Shengli Petroleum Administration Co. Ltd. [China Petroleum & Chemical Corp. (Sinopec Corp.)]	Hebei, Shengli	251,000
Refinery	do.	China National Offshore Oil Corp. (CNOOC)	Plants in multiple Provinces	480
Do.	do.	China National Petroleum Corp. (CNPC)	do.	1,500
Do.	do.	China Petroleum & Chemical Corp. (Sinopec Corp.)	do.	2,200
Do.	do.	Hengli Petrochemical Co. Ltd.	Liaoning, Dalian	155
Do.	do.	Zhejiang Petrochemical Co. Ltd.	Zhejiang, Zhoushan	155
Do.	do.	Other refinery facilities	Plants in multiple Provinces	2,300
Phosphate rock		Deyang Haohua Qingping Phosphate Co. Ltd.	Sichuan, Deyang	1,000
Do.		Guizhou Kailin (Group) Co. Ltd.	Guizhou, Guiyang	10,000
Do.		Guzhou Wengfu (Group) Co. Ltd.	do.	8,500
Do.		Sichuan Jinhe Phosphorus Mining Co. Ltd.	Sichuan, Shifang	1,000
Do.		Yunnan Phosphate Chemical Group Co. Ltd.	Yunnan, Kunming	11,500
Do.		Yunnan Tianning Mining Co. Ltd.	Yunnan, Anning	12,000
Platinum, mine, Pt content	kilograms	Danba County Yangliuping Mining Co. Ltd.	Sichuan, Yangliuping	300
Do.	do.	Jinchuan Group Co. Ltd.	Gansu, Jinchang	2,700
Potash		Golmud Zange Potash Fertilizer Co. Ltd.	Qinghai, Golmud	2,000
Do.		Qinghai Salt Lake Industry Group Co. Ltd.	Qinghai, Charhan	9,100
Do.		SDIC Xinjiang Lop Nur Potash Salt Co. Ltd.	Xinjiang Uyghur, Ruoqiang	1,200
<b>Rare earths, rare-earth-oxide equivalent:</b>				
Mine	metric tons	China Northern Rare Earth (Group) High-Tech Co. Ltd. [Baotou Iron and Steel (Group) Co. Ltd.]	Banyan Obo Mine, Nei Mongol, Baotou	179,000
Do.	do.	China Rare Earth Group Co. Ltd. (State-owned Assets Supervision Administration Commission of the State Council, 31.2%; China Minmetals Rare Earth Co. Ltd., 20.3%; China Southern Rare Earth Group Co. Ltd., 20.3%; Chinalco Rare Earth and Metals Co. Ltd., 20.3%; and others, 7.8%), of which: Chinalco Rare Earth and Metals Co. Ltd.	Shandong and Sichuan Provinces	23,900
Do.	do.	China Rare Earth Resources and Technology Co. Ltd.	Jiangxi, Ganzhou	2,000
Do.	do.	China Southern Rare Earth Group Co. Ltd.	Jiangxi and Sichuan Provinces	42,400
Do.	do.	Longyan Rare Earth Development Co. Ltd. (Xiamen Tungsten Industry Co. Ltd.)	Fujian, Longyan, Xinluo	3,400
Do.	do.	Pingyuan Huaqi Rare Earth Industry Co. Ltd. (Guangdong Rare Earth Industry Group Co. Ltd.)	Guangdong, Meizhou, Pingyuan	2,700
Smelter	do.	China Northern Rare Earth (Group) High-Tech Co. Ltd. [Baotou Iron and Steel (Group) Co. Ltd.]	Nei Mongol, Baotou	164,000
Do.	do.	China Rare Earth Group Co. Ltd. (State-owned Assets Supervision Administration Commission of the State Council, 31.2%; China Minmetals Rare Earth Co. Ltd., 20.3%; China Southern Rare Earth Group Co. Ltd., 20.3%; Chinalco Rare Earth and Metals Co. Ltd., 20.3%; and others, 7.8%), of which: Chinalco Rare Earth and Metals Co. Ltd.	Hunan and Shandong Provinces	23,900
Do.	do.	China Rare Earth Resources and Technology Co. Ltd.	Guangdong, Hunan, and Jiangxi Provinces	5,700
Do.	do.	Ganzhou Rare Earth (Longnan) Nonferrous Metals Co. Ltd. [China Southern Rare Earth Group Co. Ltd.]	Jiangxi, Ganzhou	28,300

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
Rare earths, rare-earth oxide equivalent:—Continued				
Smelter—Continued	metric tons	Fujian Changting Jinlong Rare Earth Co. Ltd. (Xiamen Tungsten Industry Co. Ltd.)	Fujian, Longyan, Changting	4,000
Do.	do.	Guangdong Rare Earth Industry Group Co. Ltd., of which: China Nonferrous Metal Industry's Foreign Engineering and Construction Co. Ltd. (NFC)	Guangdong, Guangzhou	3,600
Do.	do.	Guangdong Fuyuan Rare Earth New Material Co. Ltd.	Guangdong, Meizhou, Pingyuan	7,000
Rhenium, rhenate	kilograms	China Molybdenum Co. Ltd.	Henan, Luanchuan	200
Do.	do.	Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Guixi	3,000
Do.	do.	Jinduicheng Molybdenum Industry Group Co. Ltd.	Shaanxi, Huaxian	1,000
Do.	do.	Ligeance Aerospace Technology Co. Ltd.	Shaanxi, Xianyang	NA
Do.	do.	Western Xinxing Metal Materials Co. Ltd.	Shaanxi, Luonan	200
Salt				
Do.		Hubei Changzhou Salt Chemical Co. Ltd.	Hubei, Changzhou	1,400
Do.		Jiangsu Suyan Jingshen Co. Ltd.	Jiangsu, Huai'an	7,000
Do.		Jiangxi Jinghao Salt Chemical Co. Ltd.	Jiangxi, Zhangshu	1,200
Do.		Laizhou Chengyuan Salt Chemical Co. Ltd.	Shandong, Laizhou	2,000
Do.		Lianyungang City Industrial Investment Group Co. Ltd.	Jiangsu, Lianyungang	700
Do.		Shandong Dadi Salt Chemical Group Co. Ltd.	Shandong, Weifang	800
Do.		Shandong Haihua Group Co. Ltd.	do.	1,400
Do.		Sichuan Jiuda Salt Manufacturing Co. Ltd.	Sichuan, Zigong	4,000
Do.		Sichuan Zigong Chiyu Salt Products Co. Ltd.	do.	300
Do.		Tianjin Changlu Hangu Saltworks Co. Ltd.	Tianjin	3,000
Do.		Zhongyan Dongxing Salt Chemical Co. Ltd.	Anhui, Dingyuan	1,500
Sand and gravel, for construction				
Do.		Anhui Conch Cement Co. Ltd.	Anhui, Wuhu	56,000
Do.		Beijing BBMG Group Co. Ltd.	Beijing	38,000
Do.		China Building Materials Group Co. Ltd.	do.	60,000
Do.		China Power Construction Anhui Changjiu New Materials Co. Ltd.	Anhui, Chizhou	70,000
Do.		China Resources Cement Holdings Ltd.	Southern China	20,000
Do.		Huaxin Cement Co. Ltd. (Holcim Group, 41.8%, and others, 58.2%)	Hubei, Huangshi	39,000
Do.		Richangsheng Group Co. Ltd.	Zhejiang, Hangzhou	30,000
Do.		Zhejiang Transportation Investment Group Co. Ltd.	do.	24,000
Do.		Zhoushan Jinxin Mining Investment Co. Ltd.	Zhejiang, Zhoushan	20,000
Do.		Zhoushan Seaport Development Co. Ltd.	do.	22,000
Scandium, scandium oxide		Hunan Oriental Scandium Co. Ltd. (LB Group)	Hunan, Changsha	10
Selenium:				
Primary	metric tons	Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Guixi	300
Do.	do.	Jinchuan Group Co. Ltd.	Gansu, Jinchang	50
Secondary	do.	Vital Materials Co. Ltd. (Guangdong Xiandao Co. Ltd.)	Guangdong, Qingyuan	1,000
Silica (quartz)				
Do.		Gansu Sanyuan Silicon Materials Co. Ltd.	Gansu, Nei Mongol, and Ningxia	20
Do.		Jiangsu Pacific Quartz Co. Ltd.	Jiangsu, Lianyungang, Donghai	100
Silicon, metal				
Do.		Aba Xilong Industrial Silicon Co. Ltd. (Zhejiang Xinan Chemical Group Co. Ltd.)	Sichuan, Wenchuan	25
Do.		Beijing Dadi Zelin Silicon Co. Ltd.	Beijing	20
Do.		Blue Star Silicon Materials Co. Ltd. [China National Chemical Corp. Ltd. (ChemChina), 79.5%]	Gansu, Lanzhou, Zhongbao	80
Do.		Changji Jisheng New Building Materials Co. Ltd. (Xinjiang East Hope Group)	Xinjiang Uyghur, Changji	370
Do.		Inner Mongolia Erdos Power and Metallurgy Group Co. Ltd.	Nei Mongol, Erdos, Qipanjin	800
Do.		Inner Mongolia Xinyuan Silicon Material Technology Co.	Nei Mongol, Baotou	150
Do.		Sichuan Jingyuan Silicon Industry Co. Ltd. (Sichuan Leshan Xinhe Electric Power Comprehensive Development Co. Ltd.)	Sichuan, Leshan, Jinkouhe	35
Do.		Sichuan Maoxian Pandal Silicon Industry Co. Ltd.	Sichuan, Aba, Maoxian	60

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>		Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
Silicon, metal—Continued	Xinjiang China Silicon Technology Co. Ltd.		Xinjiang Uyghur, Yili	46
Do.	Xinjiang GCL Silicon Technology Co.		Xinjiang Uyghur, Changji	100
Do.	Xinjiang Guopeng Technology Co. Ltd.		Xinjiang Uyghur, Yili	NA
Do.	Xinjiang Hoshine Silicon Industry Co. Ltd., including: Hoshine Jinsong Silicon Industry Co. Ltd. Xinjiang Eastern Hoshine Silicon Industry Co. Ltd. Xinjiang Western Hoshine Silicon Industry Co. Ltd.		Xinjiang Uyghur, Karamay Xinjiang Uyghur, Turpan, Shanshan Xinjiang Uyghur, Shihezi	2,100
Do.	Xinjiang Jiagesen New Energy Materials Co. Ltd.		Xinjiang Uyghur, Yili	30
Do.	Xinjiang Jierong Silicon Industry Co. Ltd.		Xinjiang Uyghur, Shihezi	25
Do.	Xinjiang Jingheyuan New Materials Co. Ltd.		Xinjiang Uyghur, Hami	60
Do.	Xinjiang Jingweike New Energy Development Co. Ltd.		Xinjiang Uyghur, Yili, Gongliu	50
Do.	Xinjiang Jingxin Silicon Industry Co. Ltd.		Xinjiang Uyghur, Changji, Manas	100
Do.	Xinjiang Sokesi New Material Co. Ltd.		Xinjiang Uyghur, Changji	NA
Do.	Xinjiang Xintao Silicon Industry Co. Ltd.		Xinjiang Uyghur, Hami	50
Do.	Xinjiang Yugui Technology Co. Ltd.		Xinjiang Uyghur, Yili	15
Do.	Xinjiang Yusi Technology Co. Ltd.		do.	31
Do.	Yili Jinjing Silicon Industry Co. Ltd.		Xinjiang Uyghur, Yining	16
Do.	Yunnan Lushui Jinzhi Silicon Co. Ltd.		Yunnan, Lushui	60
Do.	Yunnan Lushui Kanghua Silicon Industry Co. Ltd.		do.	40
Do.	Yunnan Yongchang Silicon Industry Co. Ltd. (Yunnan Metallurgical Group Co. Ltd.)		Yunnan, Baoshan, Longling	100
Do.	Zhejiang Zhongcheng Silicon Co. Ltd.		Yunnan, Yingjiang	50
Silver:				
Mine, Ag content	metric tons	China Daye Non-Ferrous Metals Mining Ltd.	Xinjiang Uyghur, Wuqia	14
Do.	do.	China Gold International Resources Corp.	Xizang, Lhasa, Maizhokunggar	226
Do.	do.	Government of Gansu, 69.37%, and China Nonferrous Metal Mining (Group) Co. Ltd., 30.53%	Nei Mongol, Chifeng, Bairin	36
Do.	do.	Guocheng Mining Co. Ltd.	Nei Mongol, Chifeng, Bairin	42
Do.	do.	do.	Nei Mongol, Xilingol, Sonid	38
Do.	do.	Inner Mongolia Xingye Group Co.	Nei Mongol, Xilingol	313
Do.	do.	Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Guixi	1,250
Do.	do.	Jianxin Group	Nei Mongol, Chifeng, Bairin	42
Do.	do.	do.	Nei Mongol, Xilingol, Sonid	38
Do.	do.	Jinhui Mining Co. Ltd.	Gansu, Baiyin, Huining	21
Do.	do.	Shandong Gold Mining Co. Ltd.	Shandong, Jinan	20
Do.	do.	Shandong Gold Nonferrous Mining Group Co. Ltd.	Nei Mongol, Chifeng, Ujimqin	18
Do.	do.	Shanxi Diaquan Silver & Copper Mining Co. Ltd., 54%, and Jiangxi Copper Co. Ltd., 46%	Shanxi, Datong, Lingqiu	20
Do.	do.	Shengda Resources Co. Ltd.	Nei Mongol, Chifeng, Hexigten	73
Do.	do.	Shezhen Zhongjin Lingnan Nonfermet. Co. Ltd.	Guangdong, Shaoguan, Renhua	41
Do.	do.	Silvercorp Metals Inc.	Guangdong, Yunfu, Yun'an	21
Do.	do.	Silvercorp Metals Inc., 80%, and Henan Xinhui Mining Co. Ltd., 20%	Henan, Luoyang, Luoning	163
Do.	do.	Silvercorp Metals Inc., 77.5%, and Henan Non-ferrous Geology Bureaus, 22.5%	do.	240
Do.	do.	Tibet Huaxia Mineral Co. Ltd.	Xizang, Nagqu, Lhari	18
Do.	do.	Tibet Huayu Mining Co. Ltd.	Xizang, Lhasa	58
Do.	do.	Tongling Chemical Industry Group Co. Ltd.	Anhui, Tongling, Tongguan	24
Do.	do.	Western Gold Co. Ltd.	Sichuan, Liangshan, Huidong	20
Do.	do.	do.	Sichuan, Garze, Baiyu	124
Do.	do.	Xingye Mining Co. Ltd. (Inner Mongolia Xingye Group Co. Ltd.)	Nei Mongol, Xilingol, West Ujimqin	437
Do.	do.	Yintai Gold Group Co. Ltd.	Xizang, Chamdo, Jomda	150
Do.	do.	Zhongjin Gold Corp.	Nei Mongol, Hulunbuir	46
Do.	do.	Zijin Mining Group Co. Ltd.	Fujian, Shanghang	280

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
Silver:—Continued				
Metal	metric tons	Anhui Tongling Nonferrous Metals Group Co. Ltd.	Anhui, Bengbu, Huayuan	510
Do.	do.	Chenzhou Jingui Silver Industry Co. Ltd.	Hunan, Chenzhou, Suxian	550
Do.	do.	China Banknote Printing and Minting Corp.	Sichuan, Chengdu, Qingyang	230
Do.	do.	Daye Nonferrous Metals Co. Ltd. [China Nonferrous Metal Mining (Group) Co. Ltd., 58%]	Hubei, Huangshi, Xialu	300
Do.	do.	Henan Jinli Gold and Lead Group Co. Ltd.	Henan, Jiyuan, Tiantan	2,000
Do.	do.	Henan Yuguang Gold Lead Co. Ltd.	do.	1,000
Do.	do.	Huludao Nonferrous Metals Group Co. Ltd.	Liaoning, Huludao, Longgang	80
Do.	do.	Hunan Yuteng Nonferrous Metals Co. Ltd.	Hunan, Chenzhou, Beihu	500
Do.	do.	Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Yingtan, Guixi	330
Do.	do.	Jinchuan refinery (Jinchuan Group Co. Ltd.)	Gansu, Jinchang, Jinchuan	600
Do.	do.	Jiyuan Wangyang Smelting (Group) Co. Ltd.	Henan, Jinyuan, Sili	1,600
Do.	do.	Shandong Zhaojin Gold and Silver Refinery Co. Ltd.	Shandong, Yantai, Zhaoyuan	1,000
Do.	do.	Yanggu Xiangguang Copper Co. Ltd. (Shandong Fengxiang Group Co. Ltd.)	Shandong, Liaocheng, Yanggu	600
Do.	do.	Yunnan Chihong Zinc and Germanium Co. Ltd.	Yunnan, Qujing, Qilin	150
Do.	do.	Zijin Copper Co. Ltd. (Zijin Mining Group Co. Ltd.)	Fujian, Longyan, Shanghang	125
Do.	do.	Zijin Mining Group Gold Smelting Co. Ltd.	Fujian, Longyan, Xinluo	300
Strontium, carbonate		Chongqing Kinglong Fine Strontium Chemical Co. Ltd.	Chongqing	20
Do.		Chongqing Tongliang Red Butterfly Strontium Co.	do.	40
Do.		Hebei Xinji Chemical Group Co. Ltd.	Hebei, Xinji	2
Do.		Nanjing Jinyan Strontium Industry Co. Ltd.	Jiangsu, Lishui	2
Do.		Shijiazhuang Zhengding Jinshi Chemical Co. Ltd.	Hebei, Shijiazhuang	3
Do.		Wutai Yunhai Magnesium Industry Co. Ltd.	Shanxi, Wutai	3
Talc		China National Nonmetallic Industry Corp.	Liaoning, Haicheng	50
Do.		Guangxi Longguang Talc Development Co. Ltd.	Guangxi, Longshen	130
Tantalum, products	metric tons	Changsha Nanfang Tantalum and Niobium Co. Ltd.	Hunan, Changsha	NA
Do.	do.	Duoluoshan Sapphire Rare Metal Co. Ltd.	Guangdong, Zhaoqing	NA
Do.	do.	F&X Electro-Materials Ltd. (Uniton Industries Ltd.)	Guangdong, Jiangmen, Xinhui	NA
Do.	do.	FIR Metals & Resource Ltd.	Hunan, Zhuzhou	NA
Do.	do.	Hengyang King Xing Lifeng New Materials Co. Ltd.	Hunan, Hengyang	NA
Do.	do.	Jiangsu Metalink Special Alloys Corp.	Jiangsu, Nanjing, Jiangning	NA
Do.	do.	Jiangxi Dinghai Tantalum & Niobium Co. Ltd.	Jiangxi, Fengxin	NA
Do.	do.	Jiangxi Kingtan Tantalum Co. Ltd.	Jiangxi, Fengcheng	360
Do.	do.	Jiangxi Tuohong New Material Co. Ltd.	Jiangxi, Yichun	NA
Do.	do.	Jiujiang Janny New Material Co. Ltd.	Jiangxi, Jiujiang	NA
Do.	do.	Jiujiang Jinxin Nonferrous Metals Co. Ltd.	do.	NA
Do.	do.	Jiujiang Tanbre Co. Ltd. [Jiangxi Tungsten Industry Group Co. Ltd. (China Minmetals Corp.)]	Jiangxi, Jiujiang	250
Do.	do.	Jiujiang Zhongao Tantalum & Niobium Co. Ltd.	do.	NA
Do.	do.	Metalink International Co. Ltd. (affiliates: Nanjing Metalink International Co. Ltd., and Metalink Special Alloys Corp.)	Jiangsu, Nanjing	NA
Do.	do.	Ningxia Orient Tantalum Industry Co. Ltd. (OTIC)	Ningxia, Shizuishan	NA
Do.	do.	Taike Technology (Suzhou) Co. Ltd.	Jiangsu, Suzhou	NA
Do.	do.	Ximei Resources (Guangdong) Ltd. (Ximei Resources Holding Ltd.)	Guangdong, Yingde	NA
Do.	do.	Xinxing Haorong Electronic Material Co. Ltd.	Guangdong, Yunfu, Xinxing	NA
Do.	do.	Yanling Jincheng Tantalum & Niobium Co. Ltd.	Hunan, Zhuzhou, Yanling	NA
Tellurium, refined:				
Primary	metric tons	Jiangxi Copper Co. Ltd. (Jiangxi Copper Corp. Ltd.)	Jiangxi, Guixi	70
Secondary	do.	Hunan Jinrun Tellurium Industry Co. Ltd.	Hunan, Chenzhou	200
Do.	do.	Vital Materials Co. Ltd. (Guangdong Xiandao Co. Ltd.)	Guangdong, Qingyuan	280
Tin:				
Mine, Sn content		Guangxi Pinggui PGMA Co. Ltd.	Guangxi, Hezhou	4
Do.		Guanxi Huaxi Group Co. Ltd.	Guangxi, Hechi, Nandan	NA

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>e</sup>
<b>Tin:—Continued</b>			
Mine, Sn content—Continued	Inner Mongolia Xingye Mining Co. Ltd. (Xiwuzhumuqin Yinman Mining Co. Ltd.)	Nei Mongol, Xilingol	8
Do.	Liuzhou Huaxi Group Co.	Guangxi, Laibin	11
Do.	Southern Mining Co. Ltd.	Hunan, Chenzhou	3
Do.	Yunnan Hualian Zinc Indium Co. Ltd.	Yunnan, Maguan	NA
Do.	Yunnan Tin Industry Group Co. Ltd.	Yunnan, Gejiu	80
Smelter	Chenzhou Yunxiang Mining and Metallurgy Co. Ltd. (Yunnan Tin Industry Group Co. Ltd.)	Hunan, Chenzhou	20
Do.	Chifeng Dajingzi Tin Industry Co. Ltd.	Nei Mongol, Chifeng	NA
Do.	CNMC (Guangxi) PGMA Co. Ltd. [China Nonferrous Metal Mining (Group) Co. Ltd.]	Guangxi, Hezhou, Pinggui	8
Do.	Gejiu Fengming Metallurgy Chemical Plant	Yunnan, Gejiu	NA
Do.	Gejiu Jinye Renewable Technology Co. Ltd.	do.	3
Do.	Gejiu Kai Meng Industry and Trade Co. Ltd.	do.	8
Do.	Gejiu Nonferrous Metal Processing Co. Ltd.	do.	NA
Do.	Gejiu Yunxin Nonferrous Electrolysis Co. Ltd.	do.	NA
Do.	Gejiu Zili Mining and Smelting Co.	Yunnan, Huogudu	20
Do.	Guangdong Hanhe Non-Ferrous Metal Co. Ltd.	Guangdong, Chaozhou	NA
Do.	Guangxi Huaxi Nonferrous Metals Co. Ltd.	Guangxi, Laibin	25
Do.	Guanyang Guida Nonferrous Metal Smelting Plant	Guangxi, Guanyang	NA
Do.	Huichang Hill Tin Industry Co. Ltd.	Jiangxi, Ganzhou	NA
Do.	Huichang Jinshunda Tin Co. Ltd.	do.	NA
Do.	Jiangxi New Nanshan Technology Co. Ltd.	Guangdong, Chaozhou	NA
Do.	Ma'anshan Weitai Tin Co. Ltd.	Anhui, Maanshan	NA
Do.	Nanshan Tin Co. Ltd.	Jiangxi, Ganzhou	10
Do.	Yunnan Chengfeng Nonferrous Metals Co. Ltd.	Yunnan, Gejiu	20
Do.	Yunnan Tin Industry Group Co. Ltd.	do.	80
Do.	Yunnan Yunfan Nonferrous Metals Co. Ltd.	do.	4
<b>Titanium:</b>			
Mine, concentrate	Pangang Group Vanadium & Titanium Resources Co. Ltd. (Ansteel Group Corp. Ltd.)	Sichuan, Panzhihua	1,000
Do.	Panzhihua Longmang Mineral Products Co. Ltd. (LB Group Co. Ltd.)	Sichuan, Panzhihua, Yanbian	950
Do.	do.	Yunnan, Chuxiong, Wuding	40
Do.	Sichuan Anning Iron and Titanium Co. Ltd.	Sichuan, Panzhihua, Miyi	540
Do.	Xichang Mining Co. (Chongqing Iron and Steel Co. Ltd.)	Sichuan, Chongqing, Xichang	600
Sponge	Anshan Hailiang Nonferrous Metals Material Manufacturing Co. Ltd.	Liaoning, Anshan, Tai'an	8
Do.	Baoji Lixing Titanium Industry Co. Ltd.	Shaanxi, Baoji, Weibin	3
Do.	Baoti Huashen Titanium Industry Co. Ltd. [Baoji Titanium Industry Co. Ltd. (Baoti Group Co. Ltd.), 66.67%]	Liaoning, Jinzhou, Taihe	25
Do.	Chaoyang Baisheng Titanium Co. Ltd.	Liaoning, Chaoyang	15
Do.	Chaoyang Jinda Titanium Co. Ltd.	do.	16
Do.	CITIC Jinzhou Metal Co. Ltd. (CITIC United Asia Investments Ltd.)	Liaoning, Jinzhou, Taihe	2
Do.	Jinchuan Group Co. Ltd.	Gansu, Jinchang, Jinchuan	15
Do.	Longbai Lufeng Titanium Industry Co. Ltd. (operator, Yunnan Metallurgical Xinli Titanium Co. Ltd., and owner, LB Group)	Yunnan, Chuxiong, Lufeng	10
Do.	Luoyang Sunrui Wanji Titanium Industry Co. Ltd.	Henan, Luoyang, Xin'an	16
Do.	Ningbo Chuangrun New Materials Co. Ltd.	Zhejiang, Ningbo, Linshan	1
Do.	Panzhihua Iron and Steel Group Co. Ltd. (Pangang)	Sichuan, Panzhihua	23
Do.	Sichuan Shengfeng Titanium Industry Co. Ltd.	Sichuan, Meishan, Hongya	5
Do.	Xinjiang Xianrun New Material Technology Co. Ltd. (Wujo Group)	Xinjiang Uyghur, Hami	15
Do.	Zunbao Titanium Co. Ltd.	Guizhou, Tongzi	10
Do.	Zunyi Titanium Industry Co. Ltd.	Guizhou, Zunyi, Zhoushuiqiao	15

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>e</sup>
<b>Tungsten:</b>			
Mine, WO <sub>3</sub> in concentrate	China Molybdenum Co. Ltd.	Henan, Luanchuan, Lengshui	8
Do.	China Tungsten High-Tech Materials Co. Ltd. (China Minmetals Corp., 100%)	Jiangxi, Jiujiang, Xiushui	4
Do.	do.	Hunan, Chenzhou, Beihu	1
Do.	Chongyi Zhangyuan Tungsten Co. Ltd.	Jiangxi, Ganzhou, Chongyi	1
Do.	Hunan Chenzhou Mining Co. Ltd. (Hunan Gold Corp. Ltd.)	Hunan, Huaihua, Yuanling	2
Do.	Hunan Yaogangxian Mining Co. Ltd.	Hunan, Yizhang	3
Do.	Jiangxi Rare Earth and Rare Metals Tungsten Group Corp.	Jiangxi, Ganzhou	7
Do.	Jiangxi Tungsten Holding Group Co. Ltd. (JXTC), of which:		
	Jiangxi Dajishan Tungsten Co. Ltd.	Jiangxi, Quannan, Dajishan	2
Do.	Jiangxi Dangping Tungsten Industry Co. Ltd.	Jiangxi, Ganzhou, Yudu	9
Do.	Jiangxi Pangushan Tungsten Co. Ltd.	Jiangxi, Ganzhou, Yudu, Jingshi	1
Do.	Jiangxi Piaotang Tungsten Co. Ltd.	Jiangxi, Ganzhou, Dayu	1
Do.	Jiangxi Tieshanlong Tungsten Co. Ltd.	Jiangxi, Ganzhou, Yudu, Tieshanglong	1
Do.	Jiangxi Xiaolong Tungsten Co. Ltd.	Jiangxi, Ji'an, Taihe	7
Do.	Ninghua Xingluokeng Tungsten Mine Co. Ltd. (Xiamen Tungsten Industry Co. Ltd.)	Fujian, Sanming, Ninghua	5
Do.	Shizhuyuan Nonferrous Metals Co. Ltd. (China Tungsten High-Tech and Materials Co. Ltd.)	Hunan, Chenzhou, Suxian	5
Do.	Wenshan Malipo Zijin Tungsten Co. Ltd. (Zijin Mining Group Co. Ltd.)	Yunnan, Wenshan, Malipo	2
Products	Chaling Dadi Tungsten Co. Ltd.	Hunan, Zhuzhou	NA
Do.	China Nonferrous Metals Group (Guangxi) PGMA Co. Ltd.	Guangxi, Hezhou, Zhongshan	5
Do.	China Tungsten High-Tech Materials Co. Ltd., Chenzhou Tungsten Branch (China Minmetals Corp.)	Hunan, Chenzhou, Suxian	NA
Do.	Chongyi Zhangyuan Tungsten Co. Ltd.	Jiangxi, Ganzhou, Chongyi	10
Do.	Fujian Xinlu Tungsten Industry Co. Ltd. [Xiamen Tungsten Industry Co. Ltd. (XTC), 51%, and Fujian Jinxin Tungsten Industry Co. Ltd., 49%]	Fujian, Longyan, Xinluo, Yanshi	12
Do.	Ganzhou Haichuang Tungsten Co. Ltd.	Jiangxi, Ganzhou, Dayu	5
Do.	Ganzhou Hongfei Tungsten and Molybdenum Co. Ltd.	Jiangxi, Ganzhou	7
Do.	Ganzhou Huaxing Tungsten Products Co. Ltd. [Jiangxi Tungsten Industry Group Co. Ltd. (JWYX)]	do.	NA
Do.	Guangdong Xianglu Tungsten Co. Ltd.	Guangdong, Chaozhou, Xingqiao	5
Do.	H.C. Stark Jiangwu Tungsten Specialties (Ganzhou) Co. Ltd. [Jiangxi Tungsten Industry Holdings Group Co. Ltd. (JXTC), and H.C. Starck GmbH (Masan Group Corp.)]	Jiangxi, Ganzhou, Zhanggong	6
Do.	Hubei Green Tungsten Co. Ltd.	Guangdong, Shenzhen	NA
Do.	Huichang Jinshunda Tin Co. Ltd.	Jiangxi, Ganzhou, Huichang	NA
Do.	Huihuang Tungsten and Molybdenum Product Co. Ltd.	Jiangsu, Dongtai	NA
Do.	Hunan Chenzhou Mining Co. Ltd. (Hunan Gold Corp. Ltd.)	Hunan, Huaihua	5
Do.	Hunan Shizhuyuan Nonferrous Metals Co. Ltd. (Hunan Nonferrous Metals Corp. Ltd.)	Hunan, Chenzhou	20
Do.	Jiangxi Minmetal Gaoan Nonferrous Metals Co. Ltd.	Jiangxi, Gaoan	NA
Do.	Jiangxi Rare Metals Tungsten Holding Group Co. Ltd. (JXHC):		
	Jiangxi Tonggu Non-ferrous Metallurgical & Chemical Co. Ltd.	Jiangxi, Yichun	NA
Do.	Jiangxi Xinsheng Tungsten Industry Co. Ltd.	Jiangxi, Ganzhou, Dingnan	12
Do.	Jiangxi Xianglu Tungsten Co. Ltd.	Jiangxi, Ganzhou, Dayu	NA
Do.	Jiangxi Yaosheng Tungsten Co. Ltd.	Jiangxi, Ganzhou, Chongyi	9
Do.	Malipo Haiyu Tungsten Co. Ltd. (Xiamen Tungsten Co. Ltd.)	Yunnan, Malipo	NA
Do.	Wuning County Bingkun Tungsten Industry Co. Ltd.	Jiangxi, Jiujiang	NA
Do.	Xiamen Jialu Metal Industry Co. Ltd. (Xiamen Tungsten Co. Ltd.)	Fujian, Xiamen, Haicang	NA
Do.	Xiamen Tungsten Industry Co. Ltd., Haicang branch (Xiamen Tungsten Co. Ltd.)	Fujian, Xiamen	6
Do.	Zhongxiang Tungsten Co. Ltd.	Hunan, Chenzhou	NA

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity		Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
Uranium, mine, U content	metric tons	China National Nuclear Corp. (CNNC), of which: China North Nuclear Fuel Co. Ltd.	Liaoning, Benxi	120
Do.	do.	do.	Liaoning, Qinglong	200
Do.	do.	Fuzhou Jin'an Uranium Co. Ltd.	Jiangxi, Fuzhou	500
Do.	do.	Ganzhou Jinrui Uranium Co. Ltd.	Jiangxi, Chongyi	300
Do.	do.	Shaoguan Jinhong Uranium Industry Co. Ltd.	Guangdong, Shaoguan	300
Do.	do.	Tianshan Uranium Co. Ltd.	Xinjiang Uyghur, Yining	800
Do.	do.	Xi'an Lantian Uranium Co. Ltd.	Shaanxi, Lantian	100
Vanadium, V <sub>2</sub> O <sub>5</sub> equivalent	do.	Chengde Jianlong Special Steel Co. Ltd.	Hebei, Chengde	6,300
Do.	do.	Chengyu Vanadium and Titanium Technology Co. Ltd.	Sichuan, Chengdu	9,300
Do.	do.	CITIC Jinzhou Metal Co. Ltd. (CITIC United Asia Investments Ltd.)	Liaoning, Jinzhou	12,000
Do.	do.	HBIS Chengde Vanadium Titanium New Material Co.	Hebei, Chengde	22,000
Do.	do.	Heilongjiang Jianlong Vanadium Industry Co. Ltd.	Heilongjiang, Shungyashan	5,600
Do.	do.	Liaoning Hongjing Industrial Co. Ltd.	Liaoning, Huludao, Lianshan	1,800
Do.	do.	Pangang Group Vanadium & Titanium Resources Co. Ltd.	Sichuan, Panzhihua	44,200
Do.	do.	Pangang Group Xichang Steel and Vanadium Co. Ltd.	Sichuan, Xichang, Jingjiu	19,000
Do.	do.	Sichuan Desheng Group Vanadium and Titanium Co. Ltd.	Sichuan, Chengdu, Leshan	6,700
Do.	do.	Sichuan Neijiang Tranvic Special Steel Co. Ltd. (Tranvic Group)	Sichuan, Neijiang	24,000
Vermiculite		Xinjiang Yuli Inlong Vermiculite Co. Ltd.	Xinjiang Uyghur, Korla	120
Wollastonite		Dalian Huanqiu Minerals Co. Ltd.	Liaoning, Huanqiu	NA
Do.		Jilin Province Lishu Dadingshan Wollastonite Co. Ltd.	Jilin, Lishu, Guojiadiannan	200
Do.		Xinju South Wollastonite Co. Ltd.	Jiangxi, Xinyu, Yushui	250
Zinc:				
Mine, Zn content		Baiyin Nonferrous Group Co. Ltd.	Gansu, Baiyin	53
Do.		do.	Gansu, Changba	120
Do.		China Gold International Resources Corp. Ltd.	Xizang, Maizhokunggar	34
Do.		China Tin Group Co. Ltd. (Guangxi Huaxi Group Co. Ltd.)	Guangxi, Dachang	50
Do.		Guangdong Dabaoshan Mining Co. Ltd. (Rising Nonferrous Metals Share Co. Ltd., 40%)	Guangdong, Shaoguan	NA
Do.		Guangxi Cenxi Longwan Mining Co. Ltd. (Guangxi Nonferrous Metals Group Co. Ltd.)	Guangxi, Cenxi, Hesun	15
Do.		Guangxi Zhongjin Lingnan Mining Co. Ltd.	Guangxi, Laibin, Wuxuan	NA
Do.		Huidong Daliang Mining Co. Ltd. (Western Mining Group Co. Ltd.)	Sichuan, Huidong	43
Do.		Hunan Baoshan Nonferrous Metals and Mining Co. Ltd.	Hunan, Baoshan	20
Do.		Hunan Shuikoushan Nonferrous Metals Group Co. Ltd. (China Minmetal Corp.)	Hunan, Kangjiawan	20
Do.		do.	Hunan, Chaling, Shuikoushan	21
Do.		Inner Mongolia Mining Development	Nei Mongol, Chifeng, Bairendaba	30
Do.		Inner Mongolia Yulong Mining Co. Ltd.	Nei Mongol, Bayanhubogacha	NA
Do.		Jiangxi Dean Tianbao Mining Group Co. Ltd.	Jiangxi, De'an, Zhangshiba	30
Do.		Jinhui Mining Co. Ltd.	Gansu, Longnan, Huixian	65
Do.		Shenzhen Zhongjin Lingnan Nonferrous Metals Co. Ltd.	Guangdong, Shenzhen	190
Do.		Sichuan Xinyuan Mining Industry Co. Ltd.	Sichuan, Xiacun	40
Do.		Tibet Huaxia Mineral Co. Ltd.	Xizang, Nagqu, Lhari	22
Do.		Tibet Huayu Mining Co. Ltd.	Xizang, Lhasa	20
Do.		Western Mining Co. Ltd.	Qinghai, Xining	70
Do.		Xinjiang Xinxin Mining Industry Co. Ltd.	Xinjiang Uyghur, Fuyun	40
Do.		Yunnan Chihong Zinc and Germanium Co. Ltd.	Yunnan, Huize, Rongda	300
Do.		Yunnan Hualian Zinc Indium Co. Ltd.	Yunnan, Maguan	NA
Do.		Yunnan Jinding Zinc Industry Co. Ltd. (Sichuan Hongda Group Co. Ltd.)	Yunnan, Nuijiang, Lanping	200
Do.		Zijin Mining Group Co. Ltd.	Nei Mongol, Bayannur	50
Do.		do.	Xinjiang Uyghur, Habahe	12
Do.		do.	Xinjiang Uyghur, Wuqia	140

See footnotes at end of table.

TABLE 2—Continued  
CHINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2023

(Thousand metric tons unless otherwise specified)

Commodity	Facilities, major operating companies, and major equity owners <sup>1</sup>	Location of main facilities <sup>2,3</sup>	Annual capacity <sup>c</sup>
Zinc:—Continued			
Smelter:			
Primary	Anhui Tongguan Chizhou Nonferrous Metals. Co. Ltd.	Anhui, Chizhou	150
Do.	Baiyin Nonferrous Group Co. Ltd.	Gansu, Baiyin	250
Do.	Bayannur Zijin Nonferrous Metals Co. Ltd.	Nei Mongol, Bayannur	190
Do.	Chifeng NFC Kumba Hongye Zinc Co. Ltd. (China Nonferrous Metals Mining Group Co. Ltd.)	Nei Mongol, Chifeng	210
Do.	Gansu Baohui Industrial Group Co. Ltd.	Gansu, Liulin	90
Do.	Gansu Changba Nonferrous Metals Co. Ltd.	Gansu, Chengxian	100
Do.	Guangxi China Tin Group Co. Ltd.	Guangxi, Laibin	50
Do.	Guangxi Jinhe Mining Co. Ltd.	Gansu, Huanjiang	60
Do.	Guangxi Nandan Nanfang Nonferrous Metal Smelting Co. Ltd.	Guangxi, Hechi	300
Do.	Hanzhong Zinc Industry Co. Ltd. (Youser Group)	Shaanxi, Mainxian	360
Do.	Henan Yuguang Gold Lead Co. Ltd.	Henan, Jiyuan	300
Do.	Huludao Zinc Smelting Co. Ltd. (Huludao Nonferrous Metals Group Co. Ltd.)	Liaoning, Huludao	390
Do.	Hulunbuir Chihong Mining Co. Ltd.	Nei Mongol, Hulunbuir	140
Do.	Hunan Shuikoushan Nonferrous Metals Group Co. Ltd.	Hunan, Changning	150
Do.	Jiangxi Copper Corp. Ltd.	Jiangxi, Guixi	200
Do.	Liuzhou Huaxi Group Co.	Yunnan, Laibin	60
Do.	Liuzhou Longcheng Chemical General Plant	Guangxi, Liuzhou	90
Do.	Liuzhou Zhongse Zinc Products Co. Ltd. (China Nonferrous Metals Mining Group Co. Ltd.)	do.	30
Do.	Qinghai Zhufeng Zinc Industry Co. Ltd.	Jiangsu, Nanjing	40
Do.	Shaanxi Dongling (Lead and Zinc) Smelting Co.	Shaanxi, Baoji	250
Do.	Shenzhen Zhongjin Lingnan Nonferrous Co. Ltd.	Guangdong, Shaoguan	100
Do.	Sichuan Hongda Group	Sichuan, Chengdu	100
Do.	Sichuan Huili Lead and Zinc Co. Ltd.	Sichuan, Huili	200
Do.	Sichuan Sihuan Zinc and Germanium Technology Co. Ltd.	Sichuan, Shimian	120
Do.	Western Mining Co. Ltd.	Qinghai, Xining	100
Do.	Xing'an Copper & Zinc Smelting Co. Ltd.	Nei Mongol, Xilinuole	125
Do.	Xinjiang Jijin Nonferrous Metals Co. Ltd.	Xinjiang Uyghur, Wuqia	100
Do.	Yuguang Zinc Industry Co. Ltd.	Henan, Jiyuan	250
Do.	Yunnan Chihong Zinc and Germanium Co. Ltd.	Yunnan, Qujing	300
Do.	Yunnan Jinding Zinc Industry Co. Ltd. (Sichuan Hongda Group)	Yunnan, Lanping	140
Do.	Yunnan Jingcheng Group Co. Ltd.	Yunnan, Ruili	100
Do.	Yunnan Luoping Zinc and Electricity Co. Ltd.	Yunnan, Xindian	120
Do.	Yunnan Xiangyun Feilong Recycling Technology Co. Ltd.	Yunnan, Xiangyun	180
Do.	Yunnan Youtong Zinc Industry Co. Ltd.	Yunnan, Kunming	110
Do.	Yunnan Wenshan Zinc and Indium Smelting Co. Ltd.	do.	100
Do.	Zhongjin Lingnan Nonferrous Metals Co. Ltd.	Guangdong, Shaoguan	247
Do.	Zhuzhou Smelter Group Co. Ltd.	Hunan, Zhuzhou	560
Secondary	Hanyuan Junlei Technology Co. Ltd.	Sichuan, Hanyuan	100
Do.	Yuanfu Zinc Industry Co. Ltd.	do.	80
Zirconium, zircon	Hainan Wensheng Zirconium Titanium Industry Co. Ltd.	Hainan, Haikou	NA

<sup>a</sup>Estimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto. NA Not available.

<sup>1</sup>Most companies were owned by the central Government or a Provincial government. Not all facilities are listed because the available information was inadequate to provide a complete list for the mineral commodity or because there were too many facilities to list.

<sup>2</sup>Listed by Province or autonomous region, followed by locality. Only headquarter locations are provided for some companies that have numerous facilities throughout the country.

<sup>3</sup>Some locations have different official translations, for example, Nei Mongol is also known as "Inner Mongolia" and Xizang is also known as "Tibet."

TABLE 3  
CHINA: EXPORTS OF SELECTED MINERAL COMMODITIES IN 2022 AND 2023

(Metric tons and thousand dollars)

Commodity	2022		2023	
	Quantity	Value	Quantity	Value
<b>METALS</b>				
Aluminum:				
Alumina	1,007,380	568,690	1,251,869	603,139
Metal and alloys:				
Unwrought	416,916	1,312,762	391,715	992,790
Semimanufactures	6,149,896	24,309,309	5,250,975	17,791,823
Antimony, unwrought	11,183	142,473	5,300	63,029
Cobalt, matte, unwrought, and powder	4,100	258,433	4,880	182,404
Copper, metal and alloys:				
Unwrought	232,100	2,211,402	279,300	2,422,185
Semimanufactures	684,369	7,364,040	679,600	6,625,715
Ferroalloys	1,080,000	3,170,606	680,000	1,839,726
Iron and steel:				
Pig iron and cast iron	206,000	142,411	23,200	13,612
Steel:				
Bars and rods	7,650,000	8,042,162	10,810,000	8,228,121
Shapes and sections	3,640,000	4,202,680	4,850,000	3,713,015
Sheets and plates	42,980,000	55,454,577	59,630,000	50,237,970
Tube and pipe	9,090,000 <sup>r</sup>	16,436,678	10,470,000	13,769,130
Wire of steel or iron	2,030,000	6,055,038	2,430,000	3,404,303
Scrap	1,800	2,330	1,240	628
Lead, unwrought	98,947	236,045	201,052	442,787
Manganese, unwrought	369,000 <sup>r</sup>	1,219,439	379,000	768,221
Molybdenum, ore and concentrate	15,900 <sup>r</sup>	336,995	21,600	586,395
Rare-earth ore, metals, and compounds	48,728	1,063,766	52,307	763,149
Silicon, metal	551,000 <sup>r</sup>	2,339,448	573,000	1,594,801
Tin, metal and alloys, unwrought	10,700 <sup>r</sup>	327,747	12,200	295,194
Tungsten, tungstate salts	4,460 <sup>r</sup>	131,073	2,730	80,768
Zinc:				
Metal and alloys, unwrought	83,200 <sup>r</sup>	313,357	11,900	34,819
Oxide and peroxide	18,300 <sup>r</sup>	59,005	14,800	39,809
<b>INDUSTRIAL MINERALS</b>				
Barite	733,000	133,076	768,000	124,826
Cement and clinker	1,960,000	209,452	3,830,000	287,867
Fluorspar	478,000	212,278	338,000	165,619
Graphite:				
Natural	245,000	385,150	222,000	285,471
Synthesized	802,000	2,001,792	980,000	2,072,333
Lithium:				
Carbonate	10,400 <sup>r</sup>	682,812	9,590	518,292
Oxide and hydroxide	93,500 <sup>r</sup>	3,906,993	130,000	6,217,398
Magnesia, fused	3,100,000 <sup>r</sup>	1,055,205	2,790,000	760,922
Talc	668,000	156,773	595,000	141,807
<b>MINERAL FUELS AND RELATED MATERIALS</b>				
Coal	4,000,000	1,231,848	4,470,000	1,150,496
Coke, semicoke	8,930,000	4,018,721	8,790,000	2,497,890
Petroleum:				
Crude	2,050,000 <sup>r</sup>	1,438,104	1,420,000	843,802
Refinery products	53,690,000	48,301,151	62,690,000	48,325,894

Sources: General Administration of Customs of the People's Republic of China, Major Import Commodities in Quantity and Value, December 2023 and 2022; Antaiké, Alumina and Aluminum Monthly 2024, February; United Nations Comtrade Database.

TABLE 4  
CHINA: IMPORTS OF SELECTED MINERAL COMMODITIES IN 2022 AND 2023

(Metric tons and thousand dollars unless otherwise specified)

Commodity	2022		2023		
	Quantity	Value	Quantity	Value	
<b>METALS</b>					
<b>Aluminum:</b>					
Bauxite	125,471,234	7,378,802	141,382,737	8,590,898	
Alumina	1,989,747	982,787	1,827,096	827,525	
Metal and alloys, unwrought	1,946,038	4,802,595	2,675,530	6,003,011	
Semimanufactures	443,600	2,662,685	383,189	2,101,664	
Scrap	1,516,050	3,290,275	1,751,782	3,445,475	
Chromium, chromite	14,970,000	3,506,701	18,280,000	5,030,374	
Cobalt, matte, unwrought, and powder	360,000	5,950,071	400,000	2,579,293	
<b>Copper:</b>					
Ore and concentrate	25,270,000	56,328,467	27,540,000	60,107,597	
<b>Metal and alloys:</b>					
Unwrought	4,240,000 <sup>r</sup>	37,097,581	4,110,000	34,227,560	
Semimanufactures	1,630,000 <sup>r</sup>	17,209,010	1,390,000	13,455,829	
Scrap	1,770,000 <sup>r</sup>	13,659,435	1,990,000	14,446,924	
Gold	1,350 <sup>r</sup>	76,653,531	1,480	91,915,684	
Iron ore	1,106,860,000	128,096,630	1,179,060,000	133,965,435	
<b>Iron and steel, steel:</b>					
Bars and rods	817,000 <sup>r</sup>	695,729 <sup>r</sup>	210,000	256,977	
Shapes and sections	494,000 <sup>r</sup>	1,303,216 <sup>r</sup>	396,000	1,056,064	
Sheets and plates	8,590,000	11,880,581	6,520,000	8,415,841	
Tube and pipe	280,000 <sup>r</sup>	2,138,175 <sup>r</sup>	221,000	2,129,143	
Scrap	559,000	401,534	533,000	576,718	
Lead, ore and concentrate	1,013,000	1,449,585	1,140,000	1,644,101	
Manganese, ore and concentrate	29,890,000 <sup>r</sup>	5,752,588	31,350,000	4,915,145	
Nickel, ore and concentrate	46,345,000 <sup>r</sup>	6,145,733 <sup>r</sup>	49,636,000	5,131,253	
Rare-earth ore, metals, and compounds	121,487	1,628,796	175,853	2,185,500	
Silicon, polycrystalline	88,015	2,650,962	62,895	1,706,995	
Tin, ore and concentrate	244,000	2,040,245	248,000	1,502,179	
Titanium dioxide	141,000	549,112	101,000	376,565	
Zinc, ore and concentrate	4,128,000	4,771,861	4,713,000	3,976,843	
<b>INDUSTRIAL MINERALS</b>					
Diamond	kilograms	2,045	8,476,606	2,191	5,972,060
<b>Lithium:</b>					
Carbonate		136,000	6,729,763	159,000	6,329,250
Oxide and hydroxide		3,090 <sup>r</sup>	57,766 <sup>r</sup>	3,830	182,978
<b>Nitrogen, phosphorus, and potassium fertilizers:</b>					
Compound fertilizers		700,000	516,978	1,210,000	749,958
Potassium chloride		7,930,000	4,199,036	11,570,000	4,636,071
Potassium sulfate		38,600	23,739	37,700	15,440
Urea		4,800	3,433	3,670	2,786
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Coal		293,200,000	42,615,476	474,420,000	52,966,400
Natural gas		45,810,000	17,826,128	48,650,000	19,390,108
Liquefied natural gas		63,440,000	52,192,681	71,320,000	44,950,781
<b>Petroleum:</b>					
Crude		508,280,000	365,512,020	563,990,000	337,494,051
Refinery products		26,450,000	19,604,589	47,690,000	27,932,299

Sources: General Administration of Customs of the People's Republic of China, Major Import Commodities in Quantity and Value, December 2023 and 2022; Antaike, Alumina and Aluminum Monthly 2024, February; United Nations Comtrade Database.

TABLE 5  
CHINA: RESERVES OF MAJOR MINERAL COMMODITIES IN 2023<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity	Reserves <sup>2,3</sup>
Antimony, Sb content	830
Barite, ore	120,000
Bauxite	710,000
Chromite	2,800
Clay, kaolin, ore	720,000
Coal	million metric tons 220,000
Copper, Cu content	41,000
Fluorspar, CaF <sub>2</sub> content	110,000
Gold, Au content	metric tons 3,200
Graphite, mineral	100,000
Iron ore	million metric tons 17,000
Lead, Pb content	25,000
Lithium, LiO <sub>2</sub> content	6,400
Magnesite, ore	700,000
Manganese, ore	260,000
Mirabilite, Na <sub>2</sub> SO <sub>4</sub> content	million metric tons 920
Molybdenum, Mo content	7,800
Natural gas	billion cubic meters 6,700
Nickel, Ni content	4,400
Petroleum	million 42-gallon barrels 28,000
Phosphate rock	million metric tons 3,400
Potash, KCl content	do. 320
Pyrites, ore	do. 1,000
Salt, NaCl content	do. 16,000
Silver, Ag content	metric tons 67,000
Talc, ore	48,000
Tin, Sn content	1,200
Titanium, TiO <sub>2</sub> content	110,000
Tungsten, WO <sub>3</sub> content	2,900
Vanadium, V <sub>2</sub> O <sub>5</sub> content	10,000
Zinc, Zn content	60,000
do., Ditto.	

<sup>1</sup>Source: 2024 and 2023 China Mineral Resources.

<sup>2</sup>Data have been rounded to no more than two significant digits.

<sup>3</sup>The National Bureau of Statistics of China categorizes these as "basic reserves."